SECRETS

of
PAWN
ENDINGS

FOREWORD BY JOHN NUNN

Secrets of Pawn Endings

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Foreword by John Nunn

EVERYMAN CHESS

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Foreword

The extraordinary complexity of chess is familiar to every player. When most of the pieces are on the board, the number of legal moves is relatively large, and so the tree of analysis expands very quickly the deeper one looks into the position. Humans only look at a tiny part of this tree, but even so a complex piece of tactics can take a long time to calculate; moreover, the result may not be especially accurate. Computers may be more accurate and faster when it comes to tactical analysis, but they have problems when it comes to planning and long-term strategic decisions. Of course, this complexity is what makes chess a game rather than a calculation – if it were possible to evaluate each position definitely, chess would lose its appeal. However, it is fascinating to look at a subset of chess positions which are more amenable to definite analysis. This book is concerned with such a subset – king and pawn endings. At first sight such endings should be quite simple. All the complexity caused by knights, bishops and rooks has disappeared, and queens only put in an appearance in a small percentage of cases. Yet, oddly, this results in a paradox. It is certainly true that the number of legal moves is much less than in a typical middlegame position, and so both computers and humans find it possible to look further into the position. However, this is a double-edged sword; many king and pawn endings are capable of concrete evaluation, so the shades of assessment used for middlegame positions tend to evaporate. No longer can one get away with a 'slight advantage for White', or an 'unclear'.

Instead, the player or analyst has to continue his work until he can state 'Win', 'Loss' or 'Draw'. To reach such a conclusion may require exceptionally deep analysis, and prove more troublesome than evaluating a middlegame position.

Because king and pawn endings are susceptible to concrete analysis, it might seem that they are the ideal area for computer assistance. However, until recently this has not been the case, and it is only now that some tools are appearing which are of value for the analysis of king and pawn endings. Several years ago databases were created for many five-man endings (my own series of endgame books was based on these), but until very recently there was no database available for the ending ♔+2♙ v ♔+♙. One reason for this is that in order to create such a database, it is first of all necessary to create databases for all the endgames which might result after promotion (or underpromotion) of one or more pawns. Clearly, this is a substantial task. However, the appearance of Hiarcs 7.32, with the accompanying Nalimov tablebases, has provided an easily accessible database for ♔+2♙ v ♔+♙. The appearance of this tool led to a flurry of checking by the authors at a late stage in the production of this book; in most cases the database upheld the authors' analysis, but a few errors were revealed which had to be corrected.

Another interesting tool for analysing king and pawn endings is a program written by Lars Rasmussen of Denmark. This program requires you to feed in a pawn structure, then it generates a database

based on that pawn structure and all derivative structures resulting from pawn moves and/or captures. This program has some limitations, the main one being that it is currently unable to evaluate any queen endings which might result. Thus it works best in positions which are unlikely to lead to a queen ending (e.g. endings with all the pawns on one side). Its great advantage is that whereas the Nalimov databases can only cope with three pawns, the Rasmussen program will work with up to seven. I was able to check many of the positions in this book with the Rasmussen program. Once again, I found the authors' analysis to be fundamentally sound, and most of the corrections were quite minor.

While computer assistance can be of help for many basic king and pawn endings, the analyst is more or less on his own when it comes to more complex situations. In the past, analysts and authors have tended to avoid tackling such messy positions and have preferred to concentrate on the basic positions, or on positions with blocked pawn structures, which are far easier to analyse. However, the authors of this book are players rather than theoreticians, and they have ambitiously tackled a large number of complex practical examples with many pawns. The resulting analysis has been an eye-opener for me, and shows how difficult many practical king and pawn endings are. This point is reinforced by the number of errors by leading grandmasters (including resigning in a drawn position) which the authors point out. Even Garry Kasparov is shown giving away half a point on p.223.

If the authors were ambitious in tackling such positions, their decision to write the book using the Nunn convention shows extraordinary bravery. I must admit that I would never have dared to do this myself. The authors explain this convention in more detail on p.12, but basically it requires the author to indicate precisely which moves throw away half a point, and which are 'only' moves. I introduced this convention in my own series of endgame books, in order to display a great deal of information in a compact form. However, in those books I had a database to hand, so in most cases I could obtain the necessary information directly from the database. By contrast, in the vast majority of cases Karsten Müller and Frank Lamprecht had to use their own brains for the same purpose.

Readers may wonder if king and pawn endings are really so important, but the answer is undoubtedly that they are. Looking through this book, you will see that a lot of the examples are from recent tournament play and involve leading players – the frequency of king and pawn endings is higher than one might imagine. Even in cases where a king and pawn ending does not actually arise, the possibility of one often has a profound influence on the play. In many other types of ending, a possibility to exchange the last pieces arises. The question is whether it is better to exchange or to avoid the exchange. The subject of liquidation is an important one in over-the-board play, and the authors quite rightly devote a whole chapter to it, giving examples of both correct and misguided liquidations.

This book scores a number of 'firsts' for king and pawn ending books. It is the first to use the latest computer tools for checking the analysis, where possible. There will undoubtedly still be errors, as much of the analysis could not be checked in this way, but the extra level of checking, applied to what was already very accurate analysis, should have further reduced the error rate. The strong emphasis on practical examples and

over-the-board play is another 'first', and makes this book an exceptionally valuable contribution to the literature of king and pawn endings. There is even a chapter on decision-making in king and pawn endings, which is of particular relevance today as many such endings will arise in quick-play finishes. Finally, there is a high percentage of original analysis. The usual basic positions are here, of course, but these are presented less as an end in themselves and more as stepping-stones to the real content of the book.

I hope this book will give other readers as much pleasure and instruction as it has given me, and provide them with further insight into the subtle beauty of pawn endings.

John Nunn
Chertsey, November 1999

Preface

Pawn endings don't occur quite as often as rook endings but nevertheless every ambitious chess-player should make himself familiar with them. The ability to assess them quickly and correctly plays an especially important role in the case of simplifications. But don't deceive yourself, though the board may be almost empty, pawn endings are full of traps and tricks, as you will certainly have already noticed yourself. When you deal with them in more detail you will even discover a special little chess world with a beauty all of its own. The magician of this world is without doubt Nikolai Dmitrievich Grigoriev, who enchants us with his masterpieces. It is no accident that we have included many of his ideas. Such points and surprising turns have been an encouragement for us throughout our work. Also the use of the Nunn Convention (which will be explained in more detail on the following pages) in dealing with the move evaluations has not only extended the analysis but also produced some surprises. Writing this book was a real matter of teamwork, since each position was analysed by both authors. In this connection we want to express our special thanks to Carl-Christian Buhr, Holger Hebbinghaus, Peter and Stefan Kühn, Werner Müller, Martin Voigt, Georg von Bülow, Christian Wilhelmi, and Claus Dieter Meyer, a trainer in Hamburg for many years, for their many suggestions, analyses and corrections.

Special thanks also go to the ChessBase company, who made it feasible for us to write the book with their program ChessBase for Windows, their databases, the analysis module Fritz 4, the new program Hiarcs 7.32 using the ♔+2♙ vs ♔+♙ tablebase and the Endgame CD-ROM by Ken Thompson and to Gambit Publications, especially to John Nunn and Graham Burgess for their good cooperation.

Though careful work has been done, some mistakes are unavoidable and we offer thanks in advance for any corrections.

Karsten Müller, Frank Lamprecht
Hamburg, November 1999

Introduction

When one thinks about books on pawn endings, the book by Averbakh, the Encyclopaedia (*ECE*) and several standard works with separate chapters on pawn endings come to one's mind immediately. Why does it make sense to add another one? Both authors have many years of experience as chess trainers and grew tired of putting together motifs and themes afresh every time they were required. Therefore our work is primarily conceived as a textbook. The first twelve chapters are in a way the 'basics of pawn endings'. Each one of them builds a separate unit, consisting of explanations and exercises. Chapter 13 deals with general thinking methods in chess on the basis of pawn endings. In Chapter 14 you will find some difficult examples and ideas for your own analysis. That pawn endings don't come out of the blue is documented by Chapter 15. There various aspects of simplification will be discussed. The book is concluded by a final selection of exercises covering all the previous chapters. Those who like things expressed concisely are referred to the 'crash course' after this introduction. Otherwise, you should of course study the examples in each chapter first and then test your own understanding with the help of the exercises. If you are able to solve all the exercises correctly while lying in your bed in the evening you had better give the book away; if not, a chessboard will certainly help you. In this sense we believe we can offer the beginner the necessary knowledge as well as offering masters many new things.

■ Where applicable, we have created rules and principles to help orientate the reader. Since they are formulated in a highly general way, their interpretation demands a good deal of 'good will' to avoid them being distorted into something absurd.

Crash Course

This page is written for those readers who want to acquire the most important basics as quickly as possible. Of course this book would not be so voluminous if things were so easy. The beginner is unlikely to master the subject from this brief presentation; the expert on the other hand will hardly discover anything new. In any case the following list contains all terms that are important for pawn endings:

The Nunn Convention

We have defined the following move evaluations according to the system introduced by John Nunn:

! The only move that does not change the result of the position without regard to possible repetitions of the position. We interpret this in such a way that every move that leads to a position that has to be reached if the defender plays accordingly gets an exclamation mark. (Except that if there is just one legal move it doesn't get an exclamation mark).

!! A particularly beautiful or hard-to-find exclamation-mark move

? A move that changes the result of the position in a negative way

?? An obvious or very unfortunate question-mark move

!? A move that makes one's task easier or that causes problems for the opponent

?! A move with which you cause difficulties for yourself or that makes it too easy for the opponent

To illustrate the convention, we present the following triangulation from Chapter 5:

W
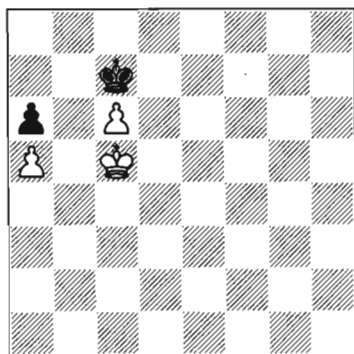
1 ♔d5!
All other moves lose the c6-pawn; therefore this is obviously the only move that keeps a winning position.
1...♔c8!?
This forces White to play precisely. 1...♔d8?! makes White's task easier: 2 ♔d6! +–.
2 ♔d4
This move doesn't get an exclamation mark because the triangulation can also be initiated by 2 ♔c4 (a disadvantage of the Nunn Convention).
2...♔d8 3 ♔c4
Again no exclamation mark because one could play 3 ♔d5 ♔c8 4 ♔c4.
3...♔c8 4 ♔d5!
Here an exclamation mark is necessary because White has to bring about this position in any case if he wants to win (it doesn't matter if the king comes from c4 or d4).
4...♔c7
4...♔d8 5 ♔d6! ♔c8 6 c7! ♔b7 7 ♔d7! ♔a7 8 ♔c6 +– (8 c8♕?? stalemate).
5 ♔c5! ♔c8 6 ♔b6! ♔b8 7 ♔xa6!
After 7 c7+? it's only a draw: 7...♔c8! 8 ♔xa6 ♔xc7! =.
7...♔c7 8 ♔b5! +–
It remains to comment that there is no endgame CD-ROM available for most of the positions in this book so that, unlike Dr Nunn, we have a further potential source of errors!

Other Signs and Symbols

+− White is winning
± White is clearly better and should win
⩱ White is a little bit better but his advantage shouldn't be enough for a win
= The position is equal or drawn
∓ Black is a little bit better but his advantage shouldn't be enough for a win
∓ Black is clearly better and should win
−+ Black is winning

In the diagrams there are the following symbols:
O a critical square
★ a key square
□ marks, particularly in Chapter 12, the key squares so that the numbers can
still be read.
Figures like 1, 1a mark the corresponding squares.

Under the diagrams you can find signs of the following type:
+/= The sign before the slash shows the assessment from the white perspective
    with White to move, while the sign after the slash shows the assessment
    from the black perspective with Black to move.
+/= thus means that White to move wins and Black to move draws.
/− means that Black to move loses. With White to move the position is either
    senseless (the black king could be in check, for example) or not
    interesting for us.
In the exercises +, = or − will be replaced by one to five stars, depending on the level
of difficulty:
* easy
** medium
*** difficult
**** very difficult
***** extremely difficult
For example ***/ means that White is to move in this difficult exercise but you are
not asked to consider the position with Black to move. */*** signifies that with
White to play it is an easy exercise, while the Black-to-play case is difficult.
In the exercises, it is up to the reader to determine whether the task of the side to
move is to win or to draw.

Abbreviations and other symbols:
ECE Encyclopaedia of Chess Endings (pawn endings volume)
BCE Batsford Chess Endings
Av Pawn endings by Averbakh

Inf 63   Chess Informator 63 (etc.)
CBM   ChessBase Magazine
NIC   New in Chess Magazine
Ch   championship
Cht   team championship
Wch   world championship
Echt   European Team Ch
Z   zonal event
IZ   interzonal event
Ct   candidates event
jr   junior event
corr.   correspondence game
OL   olympiad
tt   team tournament
1-0   the game ends in a win for White
½-½   the game ends in a draw
0-1   the game ends in a win for Black
+   check
■   introduces a comment or an anecdote.

Some subsidiary positions are given without a diagram. The method of displaying these is easiest to explain by means of an example. On page 37 you will find the position (w♔c2,△b2,e5; b♚d5,△a4) – this means that White has a king on c2, and pawns on b2 and e5, while Black has a king on d5 and a pawn on a4. The white pieces are always given first, starting with the king; pieces of the same type are separated by a comma (as with the two white pawns in the above example). A semi-colon separates White's pieces from Black's.

1 King and Pawn(s) vs King

At first we will examine the endgame king and pawn vs king with the bishop's pawn, but all our results are also valid for the central and the knight's pawns. Some positions with rook's pawns will follow. Problems with the realization of two extra pawns will then in particular round off the exercises. Important themes are, among others, key squares and connected to them the opposition (also distant, side, diagonal and virtual opposition), simple and reciprocal zugzwang and the square rule, which is also the subject of our first example:

The Rule of the Square
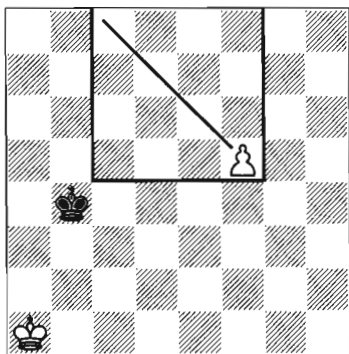
1.01   +/=

The white king is too far away to support his pawn. Therefore everything depends on the right to move. If White is to move, he can directly queen his pawn:
1 f6! ♚c5 2 f7! ♚d6 3 f8♕+ +−

If it is Black to move, he is able to capture the pawn:

1...♚c5! 2 f6 ♚d6! 3 f7 ♚e7! 4 f8♕+ ♚xf8! =

The superimposed square that encloses the pawn's diagonal to the 8th rank serves as a visual aid.

Square rule: if the king is in the square of the pawn (passed pawn) or if he can step into it, then he can capture the pawn. If not, the pawn can be queened without being supported by its own king.

A1.01 (i.e. exercise 1.01) shows a logical exception. In case there are still several pawns left on the board, one has to look out for possibilities to block the king from its way into the square (see A1.03).

We have seen that the black king captures the pawn when it is able to get into the square of the pawn. But what happens if the white king supports his pawn? A simple reflection should us help on:
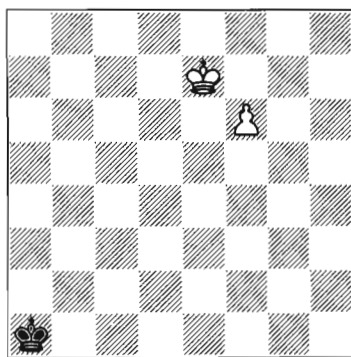
1.02   +/−

From e7 White protects the pawn's way to the 8th rank. Therefore it doesn't

matter where the black king is placed. We describe the e7-square as a key square of the f6-pawn.

Definition: a square is described as a key square when its occupation by the king secures the win (in this case the queening of the f-pawn), no matter who is to move.

One notices at once that g7 is also a key square. From f7 the white king can move to either e7 or g7. Therefore f7 is also a key square. The same applies for the squares e8, f8 and g8. Of course Black then mustn't be able to capture the pawn. So we have determined the six key squares of the f6-pawn:
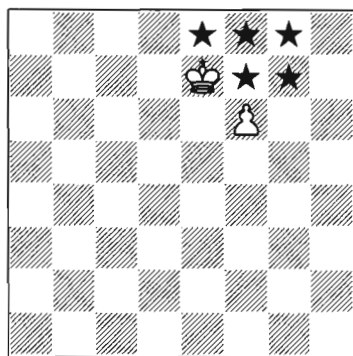

1.02

But what if the black king blocks the direct way to the key squares?

In the following diagram, everything depends on the right to move.

If White is to move, he can't make any progress:

1 f7+

Nor does it help if White retreats with his king: 1 ♔e5!? ♔f7 2 ♔f5 ♔f8! 3 ♔g6 ♔g8! 4 ♔f5 ♔f7 5 ♔e5 ♔f8! 6 ♔e6 ♔e8! and White hasn't achieved anything.

1...♔f8! 2 ♔f6 stalemate
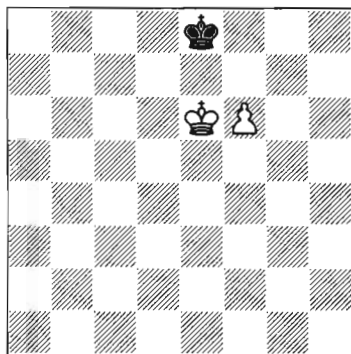
1.03   =/−

If it is Black to move, he loses because the white king gets to the key square e7.

1...♔f8

1...♔d8 2 f7 +−.

2 f7! *(D)*
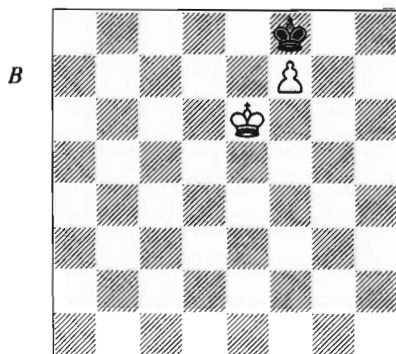
Black is now forced to play ...♔g7 (the pawn advances to the 7th rank without a check). White to move would have to stalemate, as we have seen before, or give up the pawn.

2...♔g7 3 ♔e7! +−

In position 1.03 it was disadvantageous for both sides to have to move.

Definition: We talk about zugzwang, when the mere fact that one side is to

move (has to move) leads to a disadvantage. In other words, to pass on the right to move would be by far the best move.

It follows that 1.03 shows a reciprocal zugzwang, in contrast to the example we have discussed in the introduction (0.01; later 5.08), where Black, no matter who is to move, gets into (simple) zugzwang. Zugzwang situations play an important role in nearly all types of endgames, but in pawn endings they appear particularly often.

With the useful question: "What would my opponent do, if he were to move?" zugzwang situations are often easier to identify. Of course it also helps to detect threats.

Back to the key squares:

The following five diagrams show the key squares of the f-pawn in various stages of advancement:
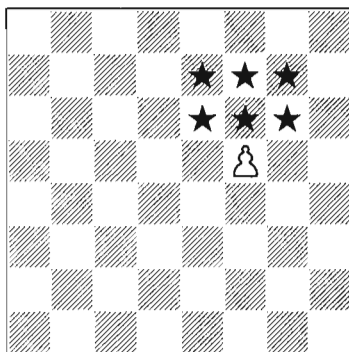
1.04B

1.04C

1.04A

1.04D
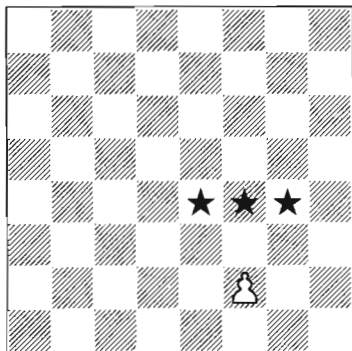
1.04E

A rule of thumb: if the pawn has crossed the middle of the board he has got six key squares; if he is still on his side of the board he only has three. The following two positions will establish that:
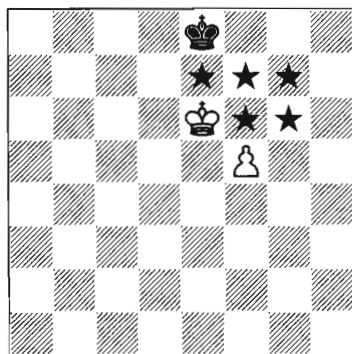
1.05   **+/−**

The white king has occupied a key square. The right to move thus doesn't matter. If White is to move, he uses the zugzwang known from position 1.03: **1 f6 ♔f8 2 f7! +−.**

If Black is to move, he must allow the white king to the 7th rank: **1...♔f8 2 ♔f6!** (but not 2 f6? ♔e8! 3 f7+ ♔f8! 4 ♔f6 stalemate) **2...♔e8 3 ♔g7! +−.**
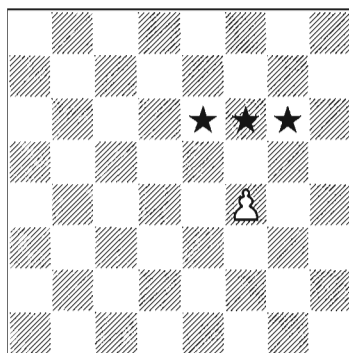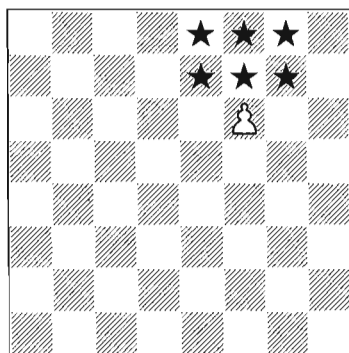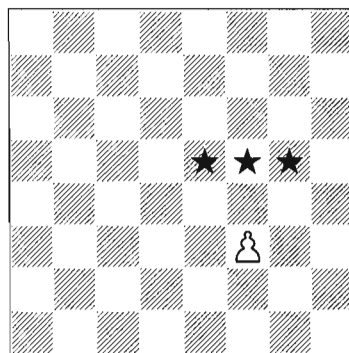
If the king doesn't occupy a key square it is always a draw when the pawn advances to the 7th rank with check.
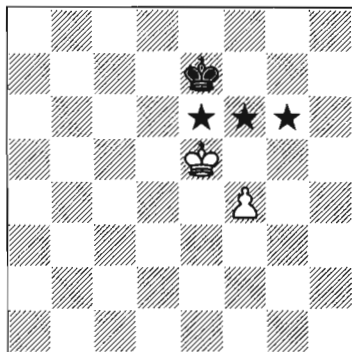
1.06   **=/−**

Here White cannot make use of the zugzwang position 1.03. Therefore White to move can only achieve a draw if the black king defends the key squares on the sixth rank: **1 ♔f5 ♔f7! 2 ♔g5 ♔g7! 3 f5 ♔f7! 4 f6 ♔f8! 5 ♔g6 ♔g8! =.**

If Black is to move, he loses control over the key squares and thus the game: **1...♔f7 2 ♔f5! ♔e7 3 ♔g6! ♔f8 4 ♔f6 ♔g8 5 ♔e7 ♔g7 6 f5 +−.**

The two kings face each other at e5/e7 in 1.06 and that is called *opposition*.

The opposition is the most important means in the fight for three adjacent key squares. Whoever loses the opposition also loses the fight for the key squares.

Let's have a quick look at the most frequent forms of opposition:

The first diagram on the next page shows the *near opposition*. When one talks about opposition, most often this vertical form of opposition is meant.

In the lower diagram, because it's Black to move, White has the *distant*
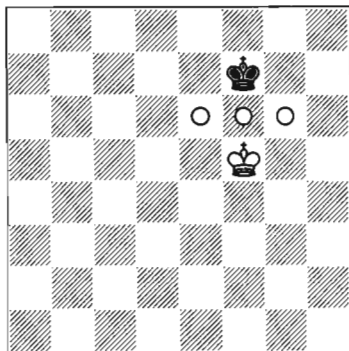
1.07A   *The (near) opposition*
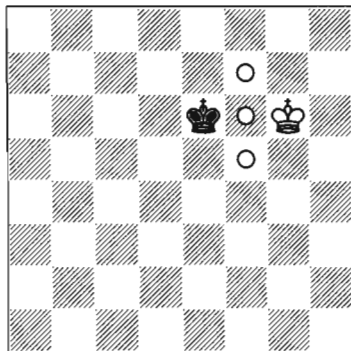
1.07C   *The side opposition*
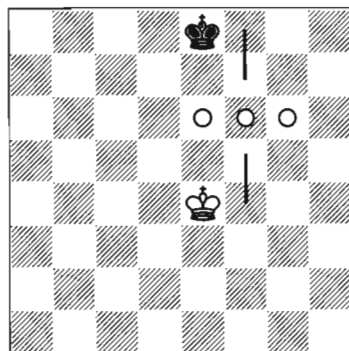
1.07B   *The distant opposition*
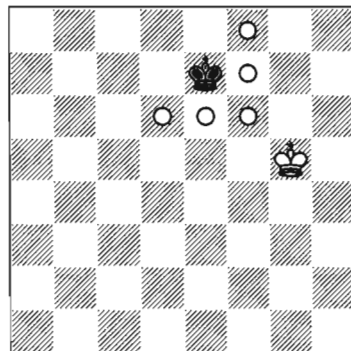
1.07D   *The diagonal opposition*

opposition on the e-file. If the aim is to reach one of the critical squares e6, f6, g6 (thus the main file is the f-file), the first step is to have the distant opposition on the main file. In a second step it will then be transformed into the simple opposition. After **1...♔f8 2 ♔f4! ♔e8 3 ♔g5! ♔f7 4 ♔f5!** White gets at first the normal opposition and after **4...♔e7 5 ♔g6!** one of the critical squares.

The following forms of opposition will only later be of importance (you will, for example, find them in exercise A4.04):
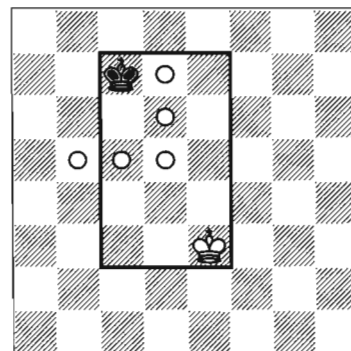
1.07E   *The virtual opposition*

In diagram 1.07D, Black to move has to allow either the near or the side opposition:

1...♔f7
Or 1...♔e6 2 ♔g6! ♔e7 3 ♔g7!.
2 ♔f5! ♔e7 3 ♔e5!

We speak of opposition in general when the square around the kings has corners of the same colour. (Note: all four corners must have the same colour!).

The following two examples show the battle for the key squares, when the kings are still far away. In the first one it is possible to defend them:
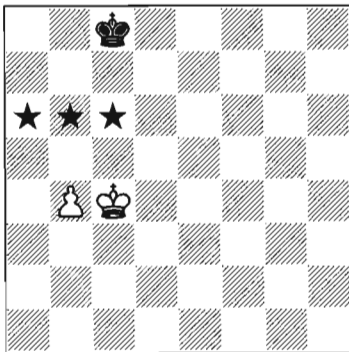
1.08   **=/=**
S.Gligorić – R.J.Fischer
Yugoslavia Ct 1959

Black can easily cover the key squares if he can prevent his opponent from getting the (near) opposition. Due to the b4-pawn he can't get the distant opposition on the main file (1.07B).

1...♔b8!
1...♔c7? 2 ♔c5! +–; 1...♔b7? 2 ♔b5! +–.

2 ♔c5
2 ♔d5 would be the right move if the key squares were b6, c6 and d6, but here it doesn't do any good due to 2...♔b7! =.

2...♔c7! 3 ♔b5 ♔b7! 4 ♔a5 ♔a7!
and Black draws.

The second example is of fundamental importance and should be studied carefully, because it shows how the attacker should proceed with a pawn that is not far advanced:
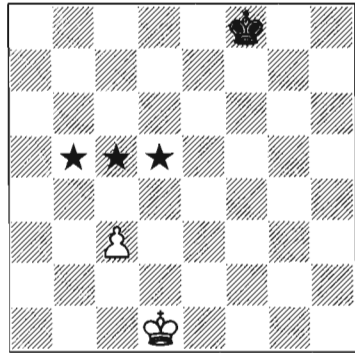
1.09   **+/=**
Drtina
Casopis cesky sahistu, 1908

White is able to occupy the fourth rank in three moves. However, only by advancing to b4 can he avoid Black getting the opposition (it takes four moves to reach b6!).
1 ♔c2! ♔e7 2 ♔b3! ♔d6 3 ♔b4! ♔c6 4 ♔c4! ♔d6 5 ♔b5!
White has occupied a key square and in the following moves he captures still more space before he finally advances his pawn.
5...♔c7 6 ♔c5!
6 c4?? (don't forget: if the pawn moves, the key squares change!) 6...♔b7! 7 ♔c5 ♔c7! 8 ♔d5 ♔d7! 9 c5 ♔c7! 10 c6 ♔c8! 11 ♔d6 ♔d8! 12 c7+ ♔c8! 13 ♔c6 leads only to stalemate.
6...♔d7 7 ♔b6!
White has captured a key square of the c4-pawn (which is also a key square if the

pawn advances to c5) and can finally advance his pawn:

7...♔d6 8 c4! ♔d7 9 c5! ♔c8 10 ♔c6! ♔d8 11 ♔b7! ♔d7 12 c6+! +−

Before we get to the rook's pawn, yet another rule of thumb: The position is drawn if the defender's king is able to occupy one of the two squares in front of the pawn (the only exception is 1.03 with Black to move), as then he can always successfully defend the key squares. From the attacker's point of view, the following rule might also help: one wins when at least two of the following three criteria are fulfilled:

1) King in front of the pawn;
2) Opposition;
3) King on the 6th (or 3rd) rank.

With the rook's pawn the winning prospects go down considerably:
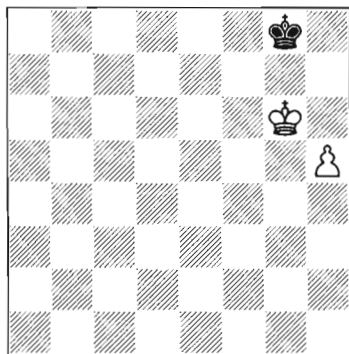
1.10   =/=

If the defending king gets in front of the pawn all winning efforts are in vain.

1...♔h8 2 h6 ♔g8 3 h7+ ♔h8! =

In the following diagram, Black is also able to draw if he succeeds in blocking the white king on the edge:

1...♔f6! 2 ♔h7
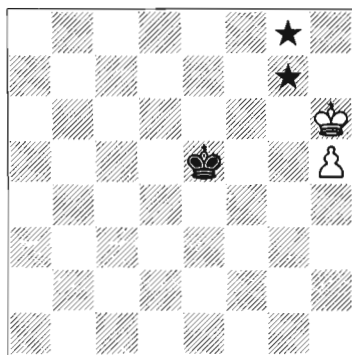
1.11   +/=

The position after 2 ♔h7 would also be drawn with White to move: 1 h6 ♔f7! =, 1 ♔h6 ♔f7! =, 1 ♔g8 ♔g5! =.

2...♔f7! 3 ♔h8 ♔f8 4 ♔h7 ♔f7! 5 h6 ♔f8! 6 ♔g6

By moving the pawn, White could get away from the edge but now the black king reaches the saving queening square.

6...♔g8! 7 h7+ ♔h8! =

White to move would have occupied one of the two key squares of the rook's pawn with 1 ♔g7 and queened it.

From our considerations we can draw the following important **rule**: Black can always draw vs the white h-pawn if he manages to reach the f8-square (or c8 with the a-pawn or f1 or c1 with a black rook's pawn) with his king. He then gets into the corner or he can block the white king. This rule makes a quick evaluation a lot easier. However, it does have a (trivial) exception (see diagram at the top of the following page):

If White is to move, he wins with **1 h7! +−**.

Diagram 1.13 on the following page illustrates the battle for the key squares of the rook's pawn:
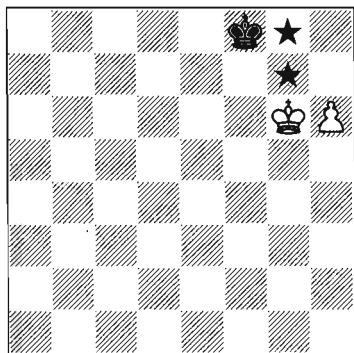
1.12   +/=
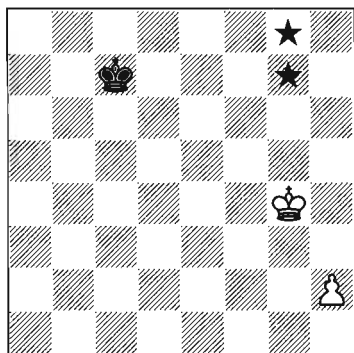
1.13   +/=
O.Panno – M.Najdorf
Buenos Aires 1968

White, to move, wins by occupying the key square g7:

1 ♔g5 1-0

In view of 1...♔d7 2 ♔g6 ♔e7 (2...♔e6 3 h4 {after 3 ♔g7?? ♔f5! = Black captures the pawn} 3...♔e7 4 ♔g7! +–) 3

♔g7! ♔e6 4 h4! ♔f5 5 h5! and White wins.

If Black were to move, he would draw easily by getting his king to the saving square f8: 1...♔d7 2 ♔g5 ♔e7 3 ♔g6 ♔f8! 4 h4 (4 ♔h7 ♔f7! =) 4...♔g8! =

Normally two or more pawns win easily, though sometimes one has to be sacrificed in order to occupy the key squares of the remaining pawn. You will find some examples in this chapter's exercises. Even doubled pawns usually win:
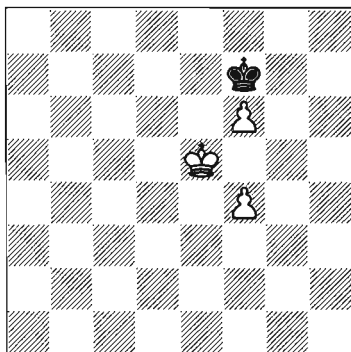
1.14   +/–

1 ♔f5!

1 f5? would be a serious mistake since White still needs the back pawn for a tempo (remember: a pawn move can't be reversed). After this Black manages to draw similarly to 1.03: 1...♔f8! 2 ♔e6 ♔e8! 3 f7+ ♔f8! 4 f6 stalemate.

1...♔f8 2 ♔e6 ♔e8 3 f7+ ♔f8 4 f5 4 ♔e5 ♔e7 5 f8♕+ ♔xf8 6 ♔f6 +–.
4...♔g7 5 ♔e7 +–

Chapter 1 Exercises

Before you dive into the jungle of exercises, some remarks are appropriate. The positions are not ordered by their level of difficulty (number of stars) but after the themes that occur in the chapter. There doesn't always exist one clear solution; it's rather sometimes a particular idea or the right plan that should be discovered. In odd cases the exercise might even be 'unsolvable'. Then it would be sufficient to assess the position correctly.

Pawn endings are very suitable to train the calculation of variations. Even though it demands a great deal of concentration, you should therefore not stop your calculations before you have determined your verdict.
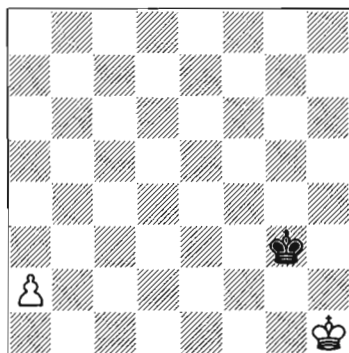
A1.01   */*
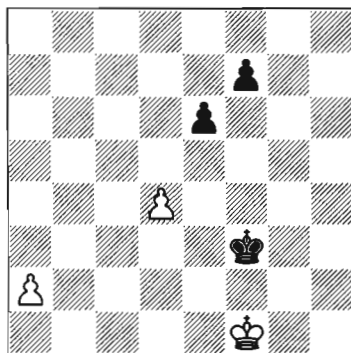
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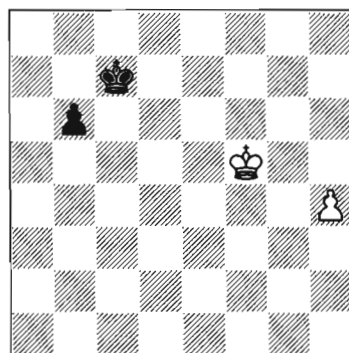
A1.02   /**
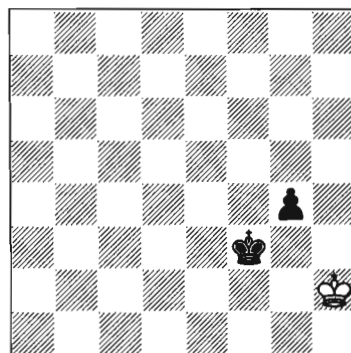
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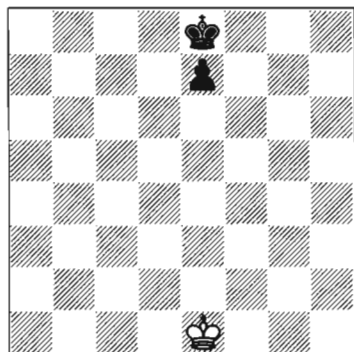
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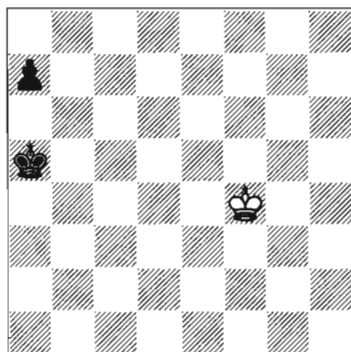
A1.08   */*
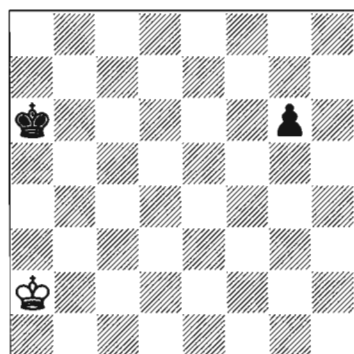
A1.06   **/
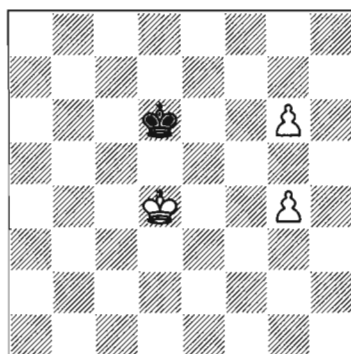
A1.09   /**
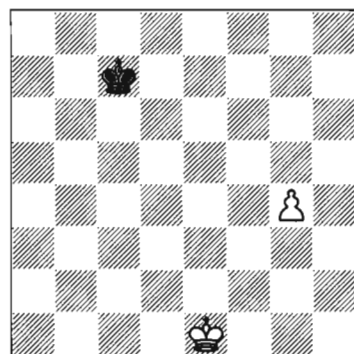
A1.07   **/
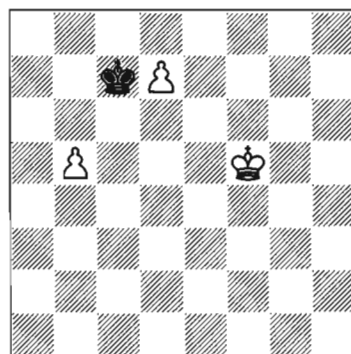
A1.10   **/
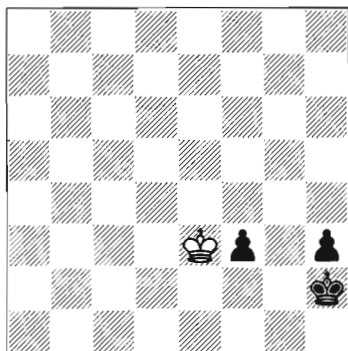
A1.11 */
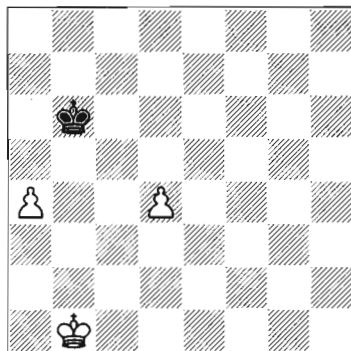
A1.13 /**
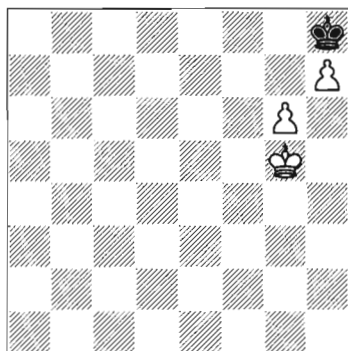
A1.12 */
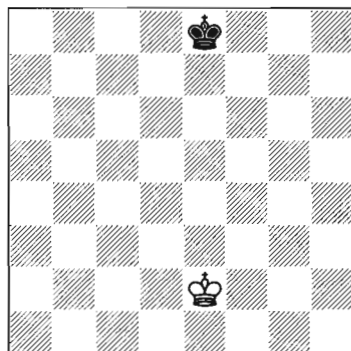
A1.14 /***

Find all combinations of three adjacent squares (horizontal or vertical) that can be defended by the black king. Which ones can be defended by the white king?

Solutions to Chapter 1 Exercises

A1.01

It seems that the black king is in the square of the pawn. However, if the pawn is still in its starting position, then you have to watch out for the possibility of a double step when applying the square rule: **1 a4! ♔f4 2 a5! ♔e5 3 a6! ♔d6 4 a7! ♔c7 5 a8♕ +–.**

If Black is to move, he captures the pawn: **1...♔f4** (1...♔f2?? 2 a4! +–) **2 a4 ♔e5 3 a5 ♔d6 4 a6 ♔c7 5 a7 ♔b7! =** (1.01).

A1.02 I.Rogers – E.Levi, *Canberra 1996*

Actually we deal with these kind of positions in Chapter 3 (race of the pawns) but here the main question is whether Black has to stop the h-pawn (by moving via f8 into the square) or whether he can engage in a race with 1...b5. We assume that you have noticed that White wins after 1...b5? because he is in the square of the pawn after 2 h5!, while Black isn't in the square of the h5-pawn.

1...♔d7

The game actually concluded 1...b5? 2 h5! b4 3 ♔e4! 1-0.

Not 1...♔d8? 2 ♔f6! ♔e8 3 ♔g7! +–, when White queens his pawn with check.

2 ♔f6!? b5!

2...♔e8? 3 ♔g7! +–.

3 h5 b4! =

A1.03 R.Bianchetti, 1925

1 d5!

After this blocking sacrifice the a-pawn can't be stopped. On the other hand 1 a4? is premature because the black king would then get into the square of the a-pawn without any problem: 1...♔e4! 2 a5! ♔d5! =.

1...exd5 2 a4! d4

2...♔e4 3 a5! +–.
3 a5! d3 4 ♔e1! +–

A1.04 G.Maroczy – F.Marshall, *Monte Carlo 1903*

With the knight's pawn, stalemate possibilities have to be considered:
1...♔f2!

1...g3+? 2 ♔h1! =.

2 ♔h1 ♔g3!

2...g3?? stalemate.

3 ♔g1 ♔h3! 0-1

Due to 4 ♔h1 g3! 5 ♔g1 g2! 6 ♔f2 ♔h2! –+.

A1.05 Lolli, *Osservazioni teorico, 1763*

If White is to move, he manages to defend the key squares (d5, e5, f5): **1 ♔e2 ♔d7 2 ♔e3 ♔d6** (2...♔e6 3 ♔e4! =) **3 ♔d4! =.**

Black to move occupies one of the key squares and wins: **1...♔d7 2 ♔e2 ♔d6 3 ♔d3** (3 ♔d2 ♔e5 4 ♔e3 e6 5 ♔d3 ♔f4! –+) **3...♔d5 4 ♔e3 ♔e5! 5 ♔d3 ♔f4! 6 ♔e2 ♔e4 7 ♔d2 ♔f3 –+** (1.06, 1.09).

A1.06 A.Mandler, *Tidskrift för Schack, 1969*

The fight for the key squares (f4, g4, h4) here starts at the edge of the board:
1 ♔b2!

1 ♔b3? ♔b5! 2 ♔c3 ♔c5! 3 ♔d3 ♔d5! 4 ♔e3 ♔e5! 5 ♔f3 ♔f5! 6 ♔g3 ♔g5! 7 ♔h3 ♔f4! –+.

1...♔b6

1...♔b5 2 ♔b3! =.

2 ♔c2! ♔c6 3 ♔d2! ♔d6 4 ♔e2! ♔e6 5 ♔f2! ♔f6 6 ♔g2! =

The distant opposition didn't earn Black anything (1.08).

A1.07 Schiffers, *Samoucitel sahmatnoj igri*

White wins as in diagram 1.09:
1 ♔f2! ♔d6 2 ♔g3! ♔e6 3 ♔h4! ♔f7 4 ♔h5!

4 ♔g5? ♔g7! =.
4...♔g7 5 ♔g5! +—

A1.08 Berger – Mason, *Breslau 1889*
The game actually concluded 1 ♔e4? ♔b4 2 ♔d3 ♔b3! 3 ♔d2 ♔b2! 0-1.
Instead, White has to aim straight for the c1-square: **1 ♔e3! ♔b4 2 ♔d2! ♔b3 3 ♔c1!** = (1.10).
If Black is to move, he occupies the key square b2: **1...♔b4 2 ♔e3 ♔c3** (2...♔b3 —+) **3 ♔e2** (3 ♔e4 a5 —+) **3...a5 4 ♔d1 ♔b2!** —+ (1.13).

A1.09 J.R.Capablanca, *Chess Fundamentals*, 1921
A knowledge of 1.03 and a well-placed pawn sacrifice lead to victory:
1...♔e6
1...♔e7 2 ♔e5! (2 g5? ♔f8! 3 ♔e5 ♔g7 4 ♔f5 ♔g8! =; see 1.14) 2...♔e8 (2...♔f8 3 ♔f6 ♔g8 4 g7 ♔h7 5 ♔f7 ♔h6 6 g8♖ ♔h7 7 ♖g5 ♔h6 8 ♖h5#) 3 g7 ♔f7 4 g8♕+ ♔xg8 5 ♔f6! +—.
2 g5! ♔e7 3 ♔e5! ♔e8 4 ♔e6 4 g7 ♔f7 5 g8♕+ ♔xg8 6 ♔f6! +— (A1.04).
4...♔f8 5 ♔f6! ♔g8 6 g7! ♔h7 7 g8♕+ +— (A1.04)

A1.10 E.Pogosiants, 1961
We hope the stalemate idea didn't mislead you into judging the position to be drawn.
1 ♔e6! ♔d8 2 ♔d5!
2 b6?? stalemate.
2...♔xd7 3 b6! ♔d8 4 ♔d6 4 ♔c6?? ♔c8! =.
4...♔c8 5 ♔c6! +—
Here the knowledge of 1.03 was useful again. If the position were moved one file to the left, White couldn't win because of the rook's pawn (*ECE* 29).

A1.11 Antsigin – N.Zhuravliov, *USSR 1952*

Here White resigned (!!), instead of bringing about a position of reciprocal zugzwang with **1 ♔f2!** (not 1 ♔xf3? ♔g1! —+) and so drawing after **1...♔h1 2 ♔f1!** (2 ♔g3? ♔g1! —+) **2...f2 3 ♔xf2! ♔h2 4 ♔f1! ♔g3 5 ♔g1!** (1.10).

A1.12 After **Ponziani**, 1769
Due to the stalemate, the h-pawn has to be sacrificed:
1 ♔f5
1 ♔f6?? stalemate.
1...♔g7 2 h8♕+ ♔xh8 3 ♔f6! ♔g8 4 g7! +— (1.03)

A1.13
1...♔a5
1...♔c6?! 2 ♔c2 +—.
The a-pawn can't be defended, but White captures the d-pawn's key squares.
2 ♔c2!
Not 2 d5? ♔b6! 3 d6 (3 ♔c2 ♔c5! =) 3...♔c6! 4 a5 ♔xd6! 5 a6 ♔c6 =.
2...♔xa4 3 ♔d3! ♔b5 4 ♔e4! ♔c6 5 ♔e5! ♔d7 6 ♔d5! +— (1.06)

A1.14
All vertical combinations of three squares between the 6th and 8th ranks can be defended. We haven't come across an example for that yet but, as we will see later, this might also be of importance. With all horizontal combinations Black is lost though, e.g. with a7, b7, c7:
1...♔d8 2 ♔d2! ♔c8 3 ♔c2! ♔b8 4 ♔b2!
Gaining the distant opposition on the main file!
4...♔c8 5 ♔a3! ♔c7 6 ♔a4! ♔b8 7 ♔b4! ♔a8 8 ♔c5! ♔b7 9 ♔b5! ♔c7 10 ♔a6! ♔b8 11 ♔b6! ♔c8 12 ♔a7!
White has achieved his aim.
With White defending, on the other hand, White is able to defend all squares (!!) up to the 5th rank because he has the distant opposition.

2 King and Pawn vs King and Pawn

Now that Chapter 1 has described the situation when one side has no pawns at all, we now look at positions with one pawn on each side. To get used to the basic techniques we first look at positions without passed pawns, which means that the pawns are on the same file or on adjacent files (Chapter 3 is dedicated to the race of the passed pawns). Thereby the term key square will be expanded to critical square and we will have a closer look at the special geometry of the board, in which connection we advise the reader to concentrate particularly on the study by Grigoriev (2.05).

A) Pawns on the Same File

Since there are no passed pawns, the winning plan consists of two steps:
1) The opponent's pawn must be captured;
2) A key square of one's own pawn must be occupied.

The position at the top of the following column is in a way critical:

Whoever is to move captures the opponent's pawn, but only for White is this enough to win because by taking the pawn he simultaneously occupies a key square of the f5-pawn:

1 ♔d5!

Opposition!

1...♔e7 2 ♔c6! ♔e8 3 ♔d6! ♔f7 4 ♔d7! ♔f8 5 ♔e6! ♔g7 6 ♔e7! ♔g8 7 ♔xf6! +− (1.05)
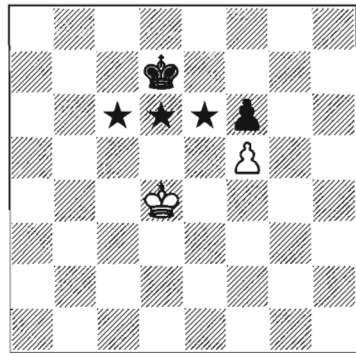
2.01   +/=

This line shows that Black can't defend his pawn any longer after he has to allow White access to c6. This means that the squares c6, d6 and e6 are critical squares of the f6-pawn (their occupation by the white king leads to the loss of the pawn). With blocked pawns the critical squares are always those three directly beside the pawn. For White the critical squares of the f6-pawn are simultaneously key squares since winning the pawn automatically means winning the game.

If it is Black to move, things are different. It is true that the black king can, with the help of the opposition, advance to the critical squares of the f5-pawn (c5, d5, e5) but this is not enough for a win because the white king is able to defend the key squares of the f6-pawn: 1...♔d6 2 ♔e4 ♔c5 3 ♔e3 ♔d5 4 ♔f4 ♔d4 5 ♔f3 ♔e5 6 ♔g4 ♔e4 7 ♔g3!. If Black takes

the pawn, the white king has to move to f3 to get the opposition! **7...♚xf5 8 ♔f3!** = (1.06).

The fight for the critical squares (key squares) might begin at their most far away access:
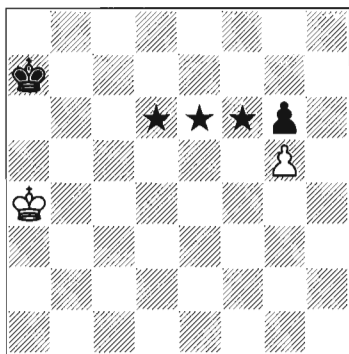
2.02   +/=

Here it starts on the a-file:
1 ♔a5!
1 ♔b5? ♚b7! =.
1...♚b7 2 ♔b5! ♚c7 3 ♔c5! ♚d7 4 ♔d5! ♚e7 5 ♔e5!
5 ♔c6?? ♚e6! −+.
5...♚f7 6 ♔d6! +− (2.01)
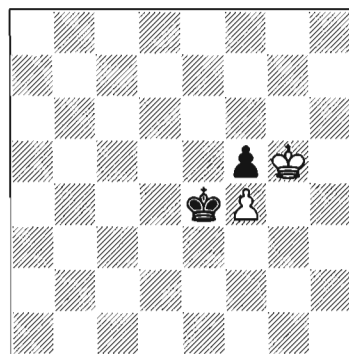
2.03   −/−

If both sides occupy the critical squares directly near the pawn simultaneously, a situation of reciprocal zugzwang exists and the reader should certainly memorize it due to its great practical importance. In the above diagram, whoever is to move loses. With White to play: **1 ♔h4 ♚xf4!** **2 ♔h3 ♚f3 −+**. With Black to play: **1...♚d5 2 ♔xf5! ♚d6 3 ♔f6 +−**.

With the kings one square aside it's just the opposite:
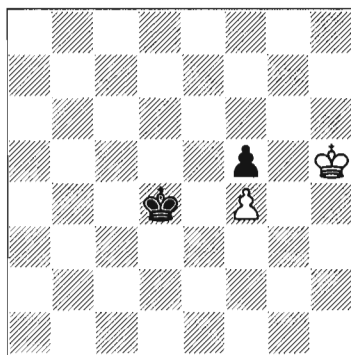
2.04   +/+

Whoever is to move wins! White to play: **1 ♔g6!** (1 ♔g5?? ♚e4! −+) **1...♚e4 2 ♔g5! +−** (2.03). Black to play: **1...♚e3! 2 ♔g5 ♚e4! −+**.

We are now ready for the following position (*see diagram on following page*):
Pure counting shows that White loses if he tries to capture the black pawn. White gets to c7 in five moves (aiming for c8 fails since the b6-pawn wouldn't be protected), but at this very moment Black would move to a6, whereafter White loses due by 2.03. It follows that White loses the b6-pawn in any case. So he must try to defend the key squares of the black b-pawn (a5, b5, c5). Actually after ...♚xb6 he has to play ♔b4. Since
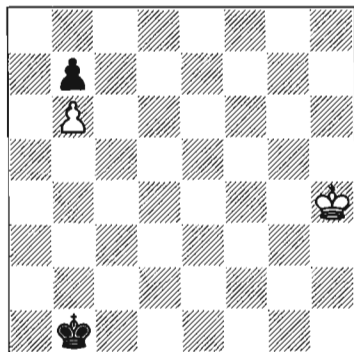
2.05　　　　　　　　　　　=/+

End of a study by **N.Grigoriev**

Shakhmatny listok, 1931

every tempo counts (Black needs five moves to capture the pawn; White needs six moves to get to b4, but he is to move), White must be careful that the black king doesn't hinder him on his way. This is called 'shouldering away' the king.

1 ♔g3!!

White takes a curve to get to b4!

Not 1 ♔g4? ♔c2!:

a) 2 ♔f3 ♔d3!. Shouldering away! White needs one more move to get to b4 and loses, e.g. 3 ♔f2 ♔c4 4 ♔e3 ♔c5 5 ♔d3 ♔xb6! 6 ♔c4 ♔a5! —+.

b) 2 ♔f4 ♔d3! 3 ♔e5 ♔c4! 4 ♔d6 ♔b5! 5 ♔c7 ♔a6! —+ (2.03).

1...♔c2 2 ♔f2! ♔d2 3 ♔f1! ♔d1 4 ♔f2! ♔d2 5 ♔f1! ♔d3 6 ♔e1! ♔c4 7 ♔d2! ♔b5 8 ♔c3! ♔c5 9 ♔b3! ♔xb6 10 ♔b4! = (1.06)

■ The study goes: w♔h4,♖c8,△b5; b♔a1,△b3,b7,c5. White to move draws by 1 b6!! b2! 2 ♖a8+! ♔b1 3 ♖c8! ♔a2 4 ♖xc5!.

Geometry of the Chess Board

It's worth going into this theme in more detail. The idea of shouldering away (the kings try to keep each other from achieving their aims) appears very frequently in

endgames. One should therefore be aware of an important feature of the chessboard, its special geometry:
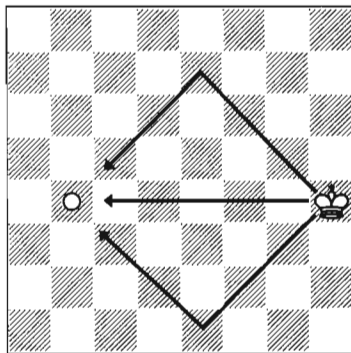
2.06

From our schooldays we know that the shortest connection between two points is a straight line. For the king on the chessboard this rule is only valid for the diagonals. Obviously White has only one possibility to get to e1 in three moves. But should the king, as in 2.05, wish to get to b4 in six moves, White has 141 different routes to choose from, if one doesn't pay attention to the black king. Those are rarely all of the same value. Often it's the outside curve, sometimes only a zigzag course, that leads to success. You should therefore always carefully consider which route is best.

After the short trip to the geometry of the chessboard we now want to examine positions with pawns that are not yet blocked (*see diagram on following page*):

The pawn can't be defended in the long run. Thus the battle for the key squares has to be won:

1 c4!

Not 1 ♔d2? c4! 2 ♔d1 c3! and Black wins.

1...♔c3 2 ♔c1! ♔d4 3 ♔d2
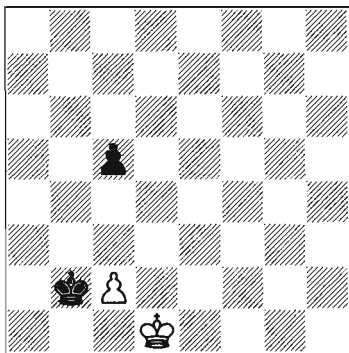
2.07   =/=
L'Hermet – Johnsteyn
corr. 1877

3 ♔c2?? ♔xc4! −+ (1.06).
3...♔xc4 4 ♔c2! = (1.06)
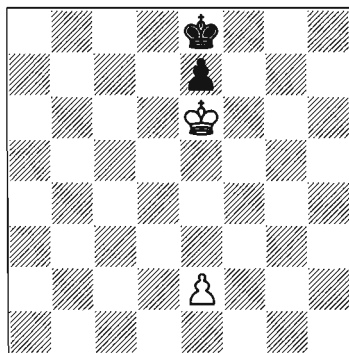
2.08   =/=
J.Kling and B.Horwitz, 1851

White's king is very active, but he still
isn't able to win.
  1 e3
  1 e4 ♔d8 2 ♔f7 e5! = (2...♔d7? 3 e5!
♔d8 4 e6! +−).
  **1...♔d8 2 e4 ♔e8! 3 e5 ♔d8 4 ♔f7
♔d7! 5 ♔f8**
    5 e6+?? ♔d6! −+.
    5...♔e6! 6 ♔e8! =

2.08 would also be a draw with Black
to move. After 1...♔d8 we would more or
less have the same play.

After considering the above, the fol-
lowing difficult study might be mastered:
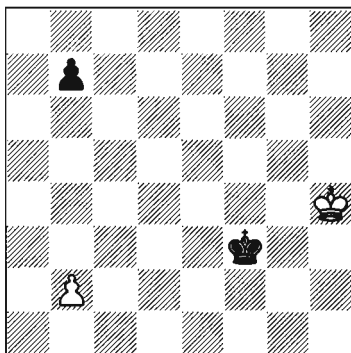
2.09   =/+
N.Grigoriev, 1938

Even though White's king isn't well
placed, he still manages to draw. How-
ever, he has to watch out for both meth-
ods of defence (attack against the black
pawn and defending his own pawn, or the
key squares) to be successful:
  1 ♔g5! ♔e4 2 ♔f6! ♔d5 3 ♔e7! ♔c6
  3...b5 4 ♔d7! b4 5 ♔c7! ♔c5 6 ♔b7!
b3 (6...♔b5 7 b3! =) 7 ♔a6! =.
  4 ♔e6!
  Only that way! The attempt to play on
for a counter-attack fails: 4 ♔d8? b5! 5
♔c8 (5 ♔e7 b4 6 ♔e6 ♔c5! 7 ♔e5 ♔c4!
8 ♔d6 b3! −+) 5...b4! 6 ♔b8 b3 −+.
  **4...b6 5 ♔e5! ♔c5 6 ♔e4! ♔c4 7
♔e3! b5**
  7...♔b3 8 ♔d3 b5 9 ♔d4! b4 10 ♔c5!
=.
  **8 ♔d2! ♔b3 9 ♔c1! ♔a2 10 b4! ♔b3
11 ♔b1! = (2.07)**
  ■ A couple of other placements of the
kings have also been examined; for ex-
ample, White loses with w♔h5 vs b♔f4

(Grigoriev 1938, *ECE* 61, Av 62) no matter who is to move and White wins with w♔a1 vs b♔h1 by 1 ♔b1! (Moravec 1940, *ECE* 62, Av 63). Proceeding from Moravec, Verburg in 1987 placed the b♔ at f1 and moved the pawn from b7 to b5 (1 ♔b1! ♔e2 2 ♔c2! ♔e3 3 ♔c3! +–).

We now get to the rook's pawn:
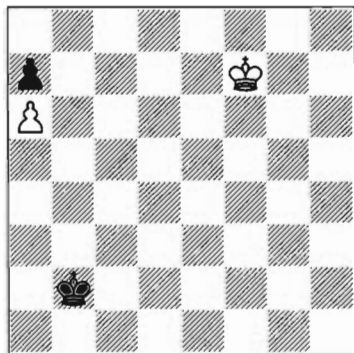
2.10   +/=

Schlage – Ahues
Berlin 1921

Black's defensive idea, to block the white king at the edge of the board, is already known from Chapter 1. However, White manages to avoid the blocking of his king by using the geometry of the chessboard and shouldering away the black king:

1 ♔e6! ♔c3 2 ♔d5!

(Maizelis). The game actually continued 2 ♔d6? ♔d4! 3 ♔c6 ♔e5! 4 ♔b7 ♔d6! 5 ♔xa7 ♔c7! = and was drawn.

2...♔d3

2...♔b4 3 ♔c6! ♔a5 4 ♔b7! +–.

3 ♔c6! ♔e4 4 ♔b7! ♔d5 5 ♔xa7! ♔c6 6 ♔b8! +–

When there are still pawn moves available, the winning chances are less

because the defender has more time on his side:
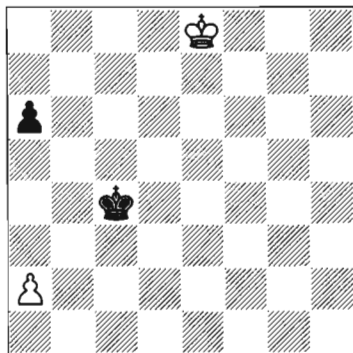
2.11   =/=

Faas – Novikov
USSR 1976

White can easily draw, even though his king is far away:

1...a5

1...♔b4 2 ♔d7 (2 ♔e7 =; 2 ♔d8 =) 2...a5 3 ♔c6 a4 4 ♔d5! ♔a3 5 ♔c4 ♔xa2 6 ♔c3! = (1.11).

2 ♔e7

Alternatively 2 ♔d7 =; even 2 ♔f7 = is playable.

2...a4 3 ♔e6 ♔c3

3...a3 4 ♔e5 ♔c3 5 ♔e4! ♔b2 6 ♔d3! ♔xa2 7 ♔c2! =.

4 ♔e5 ♔b2

4...a3 5 ♔e4! =.

5 ♔d4! ♔xa2 6 ♔c3! = ½-½ (1.11)

B) Pawns on Adjacent Files

In this case the drawing chances for the defender are higher. The draw is already assured if his own pawn is protected or the opponent's pawn is attacked (*see diagram on following page*):

1...♔b4!
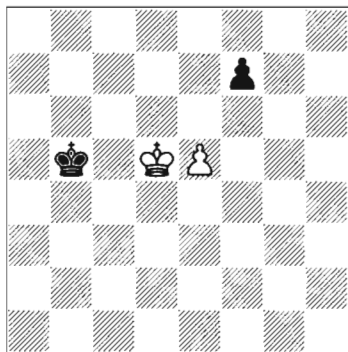
2.12 =/=
O.Panno – R.Silva Nazzari
Pinamar tt 1975

Black's own pawn can't be defended any longer. Therefore he has to go for a counter-attack. 1...♔b6? 2 ♔d6! (shouldering away) 2...♔b5 3 ♔e7! leads to a win for White.
2 ♔d6
2 ♔d4 ♔b3 =.
2...♔c4 3 ♔e7 ♔d5 4 ♔f6 ♔e4 5 ♔xf7 ♔xe5! =

The second important defence is the sacrifice of the pawn followed by a defence of the key squares:
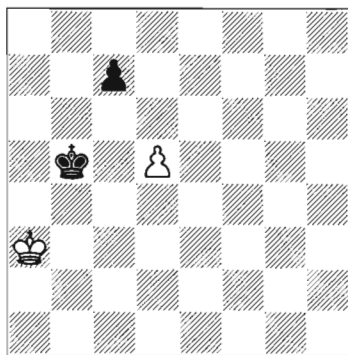
2.13 =/+
End of a study by **P.Duclos**, 1903

1 d6!
1 ♔b3? ♔c5! and now:
a) 2 d6 ♔xd6! (2...cxd6? 3 ♔c3! =) 3 ♔c4 ♔c6! –+.
b) 2 ♔c3 ♔xd5! 3 ♔d3 c6 –+ (1.06).
1...cxd6 2 ♔b3! ♔c5 3 ♔c3! = (1.06)

Of course this is not always possible:
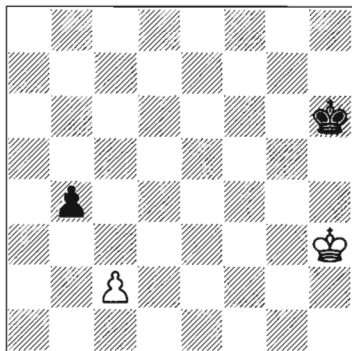
2.14 +/=
R.Bianchetti
Contributo alla teoria di finali di soli pedoni, 1925

White can make the pawn sacrifice worthless:
1 ♔h4!
1 ♔g4? ♔g6 (1...b3 =) 2 ♔f4 ♔f6 3 ♔e4 ♔e6 4 ♔d4 b3! 5 cxb3 ♔d6! =.
1...♔g6 2 ♔g4! ♔f6 3 ♔f4! ♔e6 4 ♔e4! ♔d6
4...♔d7 5 ♔d5! +–.
5 ♔d4! ♔c6 6 ♔c4! b3 7 cxb3! +–
The pawns could also be placed at g2 and f4, when the result would stay the same (though then 1 ♔g4 would also win), but not at b2 and a4 because in this case Black could draw after 1 ♔h4 ♔g6 2 ♔g4 with 2...a3.
■ Also look at Adamson 1915 (ECE 84, Av 75) w♔c8,△g2; b♔a7,△h6: 1 ♔c7! ♔a6 2 ♔c6! ♔a5 3 ♔c5! ♔a4 4 ♔c4! ♔a3 5 ♔c3! ♔a2 6 ♔c2! ♔a3 7 g3! +–.

Chapter 2 Exercises
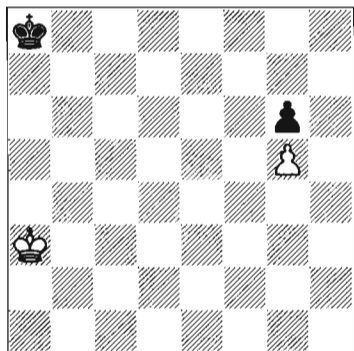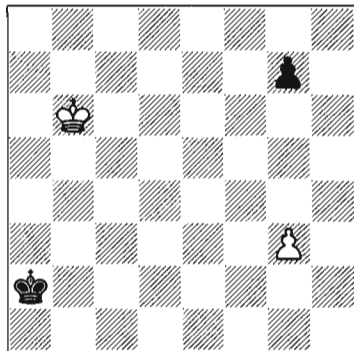
A2.01   **/

A2.04   ***/
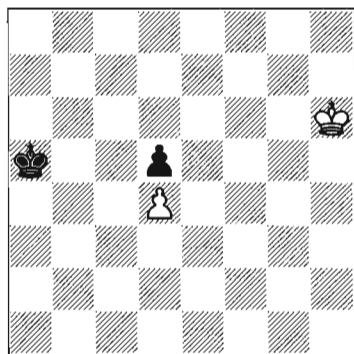
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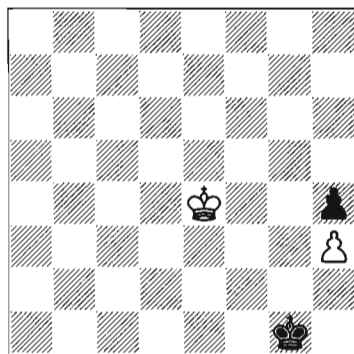
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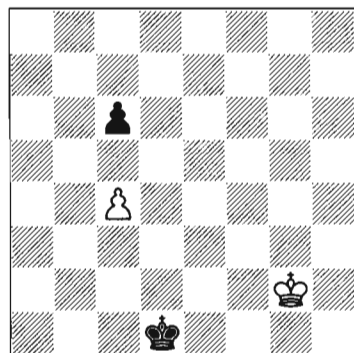
A2.03   **/
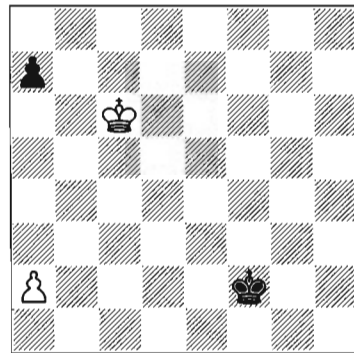
A2.06   **/
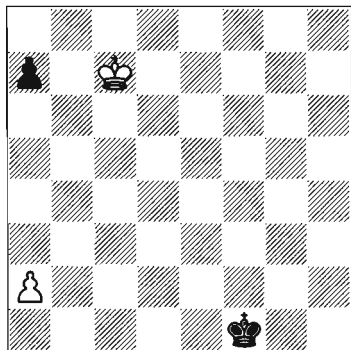
A2.07 /*
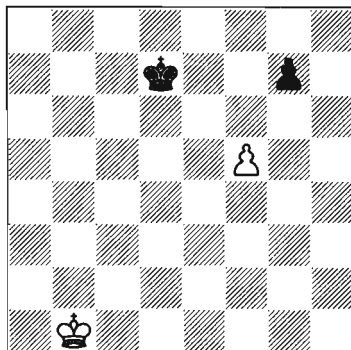
A2.09 **/
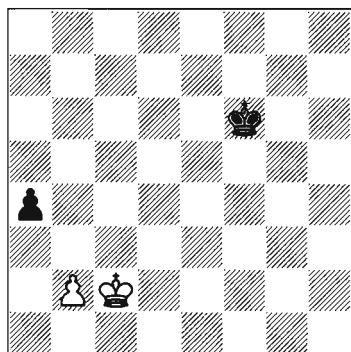
A2.08 **/
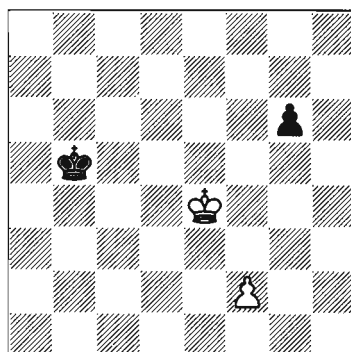
A2.10 ***/

Solutions to Chapter 2 Exercises

A2.01
Hopefully yóu haven't been tricked by 2.02. White gets the distant opposition but this isn't enough for a win, as he can't transform it into the near opposition:

1 ♔a4!?

1 ♔b4 ♔b8! =.

1...♔b8! 2 ♔b4 ♔c8! 3 ♔c4 ♔d8! 4 ♔d4 ♔e8! 5 ♔e4 ♔d8!

The black pawn controls the f5-square. Therefore White doesn't achieve the near opposition.

6 ♔d4

6 ♔d5 ♔d7! =; 6 ♔e5 ♔e7! =.

6...♔e8! 7 ♔c5 ♔e7!

Diagonal opposition.

8 ♔d5

8 ♔c6?? ♔e6! −+.

8...♔d7! 9 ♔e5 ♔e7! =

A2.02
If White tries to capture the pawn, he loses as in 2.04. Thus he must get back as soon as possible to cover the key squares:

1 ♔g5! ♔b4 2 ♔f4! ♔c3

2...♔c4? 3 ♔e5! +−.

3 ♔e3!

3 ♔e5? ♔c4! −+.

3...♔c4 4 ♔e2! ♔xd4 5 ♔d2! = (1.06)

Notice that the position would be lost if it were pushed one rank below because then the black king would automatically reach a key square of the d4-pawn by capturing the d3-pawn.

A2.03 A.Mandler, 1949
We're sure you managed to evade Black's attempts to shoulder the white king away:

1 ♔f2!!

1 ♔f1? c5! 2 ♔f2 ♔d2! −+ (shouldering away); 1 c5? ♔e2! −+ (shouldering

away); 1 ♔f3? ♔d2! 2 ♔e4 (2 c5 ♔d3! −+) 2...♔c3! 3 c5 ♔c4! −+.

1...♔d2

1...c5 2 ♔e3! ♔c2! 3 ♔e2! =.

2 c5! ♔d3 3 ♔e1! = (2.05)

A2.04 J.Moravec, *Ceskoslovensky Sach*, 1950
Shouldering away is again the main idea of this study.

1 ♔c5!

1 g4? ♔b3 2 ♔c5 ♔c3 3 ♔d5 ♔d3 4 ♔e5 ♔e3 5 ♔f5 ♔f3 6 g5 ♔g3! = (2.09).

1...♔b3 2 ♔d4! ♔c2 3 ♔e3! ♔d1

3...♔c3 4 g4! ♔c4 5 ♔e4! ♔c5 6 ♔e5! ♔c6 7 ♔e6! +− (2.09).

4 g4 ♔e1 5 g5 ♔f1 6 ♔f3! ♔g1 7 g6 ♔h2 8 ♔g4! ♔g2 9 ♔f5! ♔g3 10 ♔e6! +− (2.09)

A2.05 End of a study by Kubbel, *Rigaer Tageblatt*, 1914
The following body check appears quite often; thus we have dedicated it its own exercise:

1 ♔f3!

1 ♔f4? ♔f2! 2 ♔g4 ♔e3! =.

1...♔f1 2 ♔g4! ♔f2 3 ♔xh4! ♔f3 4 ♔g5! +−

■ Kubbel's study by the way goes w♔d3,♘e6,△h2; b♔f3,△h4: 1 h3! +−.

A2.06 J.Moravec, 1952
1 ♔b7!

White refuses to be blocked at the edge of the board. 1 a4? ♔e3! 2 a5 ♔d4 3 a6 ♔e5! 4 ♔b7 ♔d6! 5 ♔xa7 ♔c7! is a draw.

1...a5

1...♔e3 2 ♔xa7! (2 a4? a5 =) 2...♔d4 3 ♔b6! +−.

2 ♔b6

2 a4? ♔e3! =.

2...a4 3 ♔b5 a3 4 ♔b4 ♔e3 5 ♔xa3! ♔d4 6 ♔b4! ♔d5 7 ♔b5! ♔d6 8 ♔b6! ♔d7 9 ♔b7! ♔d6 10 a4! +−

A2.07 M.Wahls – J.Eising, *Bundesliga 1986/7*

The black king is fast enough to block the white king at the edge of the board:
1...♚e2!
1...a5? 2 a4 ♚e2 3 ♚b6! +–; 1...♚f2? 2 ♚b7! +– is A2.06.
2 a4
2 ♚b7 ♚d3 3 ♚xa7 ♚c4 =.
2...♚d3 3 a5 ♚c4 4 ♚b7 ♚c5
4...♚b5?? 5 a6! +–.
5 ♚xa7 ♚c6! 6 a6 ♚c7! ½-½
■ Also have a look at P.Keres-K.Richter, Munich OL 1936 (*ECE* 69): w♚g4, △h2; b♚b2,△h7: 1 ♚g5 ♚c3 2 ♚h6! ♚d4 3 ♚xh7! ♚e5 4 ♚g6! 1-0; and Grigoriev, 1938 (*ECE* 71): w♚e5,△h2; b♚b1,△h7: 1 ♚f6! +–.

A2.08 From **C.Tattersall**'s collection, 1910

If you saw the finesse ...a3 there were surely no difficulties.
1 ♚b1!
1 ♚c3? a3! 2 bxa3 (2 b4 ♚e6 3 ♚b3 ♚d5 4 ♚xa3 ♚c6! 5 ♚a4 ♚b6! =; 2 b3 ♚e6 =) 2...♚e6 3 ♚c4 ♚d6 4 ♚b5 ♚c7 =.
1...♚e5
1...a3 2 b3! (2 b4? ♚e5 3 ♚a2 ♚d5 4 ♚xa3 ♚c6! 5 ♚a4 ♚b6! =) 2...♚e5 3 ♚a2! ♚d5 4 ♚xa3! ♚c6 5 ♚a4! ♚b6 6 ♚b4! +– (1.06).
2 ♚a2! ♚d5 3 ♚a3! ♚c5 4 ♚xa4! ♚b6 5 ♚b4! +–
■ By the way, this example has an interesting story, which is told explicitly by Averbakh (who attributes it to Maizelis). In 1884 a position with the same idea (w♚c2,△b2,e5; b♚d5,△a4) was investigated, and "a certain Dr Kassidi showed

the right way to win". Also Horwitz used this finish, while A2.08 shows the version from Tattersall's collection. Some other authors ascribe this study to Dedrle, who uses it in one of his articles (1921) without giving a source.

A2.09 J.Moravec, *Ceskoslovensky Sach*, 1952

Of course you have seen the pawn sacrifice f6 but hopefully you haven't carried it out immediately.
1 ♚c2! ♚d6
1...♚e7 2 ♚d3! ♚f6 3 ♚e4! =.
2 f6! gxf6
2...g6 3 ♚d3 ♚e6 4 ♚e4 ♚xf6 5 ♚f4! =.
3 ♚d2! ♚e6 4 ♚e2! ♚e5 5 ♚e3! = (1.06)
■ Also have a look at H.Mattison (1918, *ECE* 856): w♚h1,△h4,f4; b♚h6, △f7,g5: 1 hxg5+! ♚h5 2 g6! fxg6 3 f5! gxf5 4 ♚g1! ♚g5 5 ♚f1! =.

A2.10 I.Dobias, *Narodni listy*, 1926

White puts Black in zugzwang with **1 ♚d4!!** (shouldering away). Thereby the white king keeps the three-move distance from the g-pawn.
1 ♚e5? ♚c4! 2 ♚f6 (2 f4 ♚d3! =) 2...♚d5 3 ♚xg6 ♚e4! 4 ♚g5 ♚f3! =; 1 ♚d5? ♚b4! 2 ♚d4 ♚b3! 3 f4 ♚c2! =; 1 ♚f4? ♚c5 2 ♚g5 ♚d4 3 ♚xg6 ♚e4! =; 1 f4? ♚c4! 2 ♚e5 ♚d3! = (2.12); 1 f3? ♚c4 2 f4 ♚c3! = (2.12).
1...♚c6 2 ♚e5! ♚c5
2...♚d7 3 ♚f6! +–.
3 f4!
3 f3? ♚c4! = (2.12).
3...♚c4 4 ♚f6! +–

3 Race of the Passed Pawns

In the following chapters there will again and again be lines that end with a race between passed pawns. This chapter provides the basics for a quick evaluation of such variations. Since queen endings actually don't belong in the framework of this book we only will deal with complicated queen endings when they emerge from our chosen pawn endings. We deal with three issues:

A) Both Sides Queen a Pawn

Here we consider cases where the game ends with an early mate, the loss of a queen or with a dead draw. The following diagram shows the position shortly before a vertical or diagonal skewer (of course one could also imagine a horizontal skewer):

3.01   **+/+**

White would win by **1 ♕a8+! ♔b6 2 ♕b8+! +−**.

If Black is to play, he captures the white queen by **1...♕b3+** or **1...♕a2+**.

But back to pawn endings:

3.02   **+/**
A.Mandler
Narodni Osvobozeni, 1938

The white king is more active and he is to move. However, the immediate pawn-race leads to a draw, as does taking the pawn. Since also the blockade of the pawn (♔b6) doesn't achieve anything, using the method of exclusion (see 13.01/02) – without having calculated all consequences – only ♔d6 remains as a candidate with which White keeps an eye on both pawns. (Be careful: of course one has to make sure that ♔d6 doesn't lose immediately. During the game you don't know at once that this position is won for White.)

1 ♔d6!!

1 ♔b6? ♔b3! 2 ♔c5 ♔c3 3 f4 b5 =; 1 ♔xb7? ♔b3! 2 ♔c6 ♔c4! =.

1...♔a3

1...b5 2 ♔c5! ♔b3 3 ♔xb5! ♔c3 4
♔c5! ♔d3 5 ♔d5! +–.
2 ♔c5! ♔a4 3 f4!
3 ♔d4? ♔b5 (3...b5? 4 f4! b4 5 f5! b3
6 ♔c3! ♔a3 7 f6! +– leads to the main
line; 3...♔a5 =) 4 ♔d5 ♔b6! 5 ♔d6 ♔a7!
6 ♔d5 (6 f4 b5! 7 ♔c5 ♔b8 8 ♔xb5
♔b7! = (1.06)) 6...b5 7 ♔c5 ♔a6! 8 f4
b4! 9 ♔xb4 ♔b6! =.
3...b5 4 f5
4 ♔d4 +–.
4...b4 5 ♔c4
5 f6? b3! 6 f7 b2! 7 f8♕ b1♕! 8 ♕a8+
♔b3 9 ♕b7+ ♔a2 =.
5...b3 6 ♔c3! ♔a3 7 f6! b2 8 f7! b1♕
9 f8♕+! ♔a4 10 ♕a8+! ♔b5 11 ♕b7+
+–

The king manoeuvre ♔c4-c3 deserves
special attention since it forces the black
king to the fatal square a3, so as then to
queen with check. We will meet similar
ideas quite often.

We want to draw your attention once
again to the key move of Mandler's
study, 1 ♔d6!!. Thereby White protected
his pawn's way and was simultaneously
able to attack the black pawn. Thus he
pursued two aims with one move. Re-
garding this important issue there exists a
famous study which we don't want to
deny you (*see following diagram*):
It seems that the white position is
hopeless. The c-pawn can't be supported
and the square of the h-pawn is out of
reach, or is it? Let's see.
1 ♔g7! h4 2 ♔f6!
White is now threatening to support
his pawn with his king.
2...♔b6
2...h3 3 ♔e7 =.
3 ♔e5!!
A sort of double attack. Black can't
stop White either entering the square of
the h-pawn or promoting his c-pawn.
3...h3
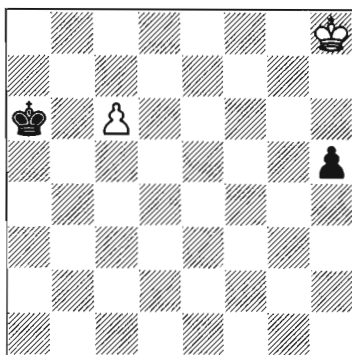
3.03 =/
R.Réti
Kagan's Neueste
Schachnachrichten, 1921

3...♔xc6 4 ♔f4 =.
4 ♔d6! h2 5 c7! h1♕ 6 c8♕! and
White draws.
Maybe this masterpiece will encour-
age you to look for an escape route if you
are in an apparently hopeless position.
By the way, Black would win in the
original position if his king were on a7.
In that case, instead of 2...♔b6, he plays
2...♔b8!.
■ This motif, which the study com-
poser Gurvich called 'The Hunt of Two
Hares', appears in quite a few other stud-
ies and games (!) (see Averbakh 95-103),
from which we select just two: de Feijter
(1939, *ECE* 125, Av 102) w♔a8,△f4;
b♔b5,△a6: 1 ♔b7! a5 2 ♔c7! ♔c5 3 ♔d7!
♔d5 4 ♔e7! ♔e4 5 ♔e6! = and Prokeš
(1946, *ECE* 126, Av 99) w♔g8,△f3;
b♔h4,△a6: 1 ♔f7! a5 2 f4! a4 3 f5! a3 4
f6! a2 5 ♔g8! = (3.08).
In Mandler's study (3.02) the position
of the black king at the edge of the board
was fatal because White was able to di-
rect him in such a way that the f-pawn
could queen with check. Uncomfortable
king and queen positions are characteris-
tic for mate ideas:
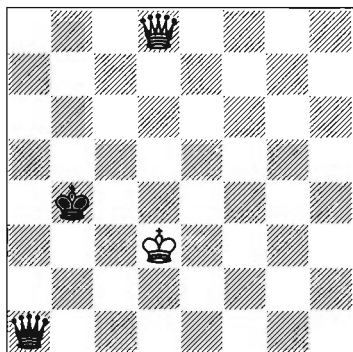
3.04   **+/+**

After **Polerio**, 1590

1 ♕b6+! ♔a3 2 ♕a5+! ♔b2 3 ♕b4+! ♔a2

3...♔c1 4 ♕d2+! ♔b1 5 ♕c2#!.

4 ♔c2! +−

■ This idea was discovered by Polerio as long ago as 1590 and illustrated in the study: w♔e2,△a2; b♔g2,△c7,h7 when Black to move loses because the a-pawn queens with check and the position of Black's pieces at the edge of the board will be fatal for him.
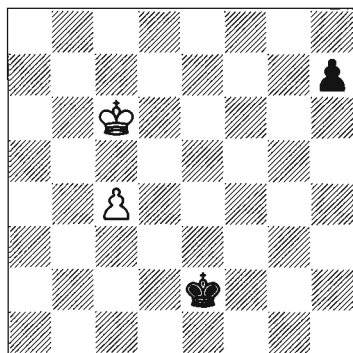
Again a study makes the idea clear:

3.05   **+/**

J.Fritz
Svobodne slovo, 1954

By threatening to capture the h-pawn, White directs the black king into the dangerous corner:

1 ♔d5! h5 2 ♔e4!

2 ♔e5? ♔e3! =.

2...♔f2 3 ♔f4! ♔g2 4 c5!

4 ♔g5? ♔g3! 5 ♔xh5 (5 c5 h4! =) 5...♔f4! = (1.01).

4...h4 5 c6! h3 6 c7! h2 7 c8♕! h1♕ 8 ♕c2+! ♔h3 9 ♕d3+ ♔g2 10 ♕e2+! ♔g1 10...♔h3 11 ♕g4+! ♔h2 12 ♕g3#!. 11 ♔g3!

Mate can't be avoided.

B) Queen vs Pawn(s)

Normally a pawn can only be a threat to a queen when it is on the 7th (2nd) rank and is supported by its king. Then the outcome depends upon the king of the stronger side, whether he can support his queen himself. It is critical which file the passed pawn is on. We start with a central pawn:
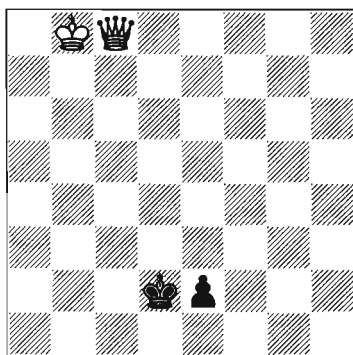
3.06   **+/**

1 ♕d7+

The first step in the winning process is to bring the queen closer to the enemy pawn.

1...♔c2 2 ♕a4+ ♔d2

2...♔d3 3 ♕b4 and ♕e1. If the queen gets in front of the pawn she actually wins every time.

3 ♕d4+ ♔c2 4 ♕e3! ♔d1 5 ♕d3+!

The critical moment. White forces the black king in front of the pawn and thus wins time to get his king nearer the pawn.

5...♔e1 6 ♔b7 ♔f2 7 ♕d4+ ♔f1 8 ♕f4+ ♔g2 9 ♕e3! ♔f1 10 ♕f3+!

The manoeuvre repeats itself.

**10...♔e1 11 ♔c6 ♔d2 12 ♕f4+ ♔d1 13 ♕d4+ ♔c2 14 ♕e3! ♔d1 15 ♕d3+! ♔e1 16 ♔d5 ♔f2 17 ♕d4+ ♔f1 18 ♕f4+ ♔g2 19 ♕e3! ♔f1 20 ♕f3+! ♔e1 21 ♔e4 ♔d2 22 ♕d3+ ♔e1 23 ♔f3 +-**

In this case it didn't matter how far the king was away from the pawn. However, it would only be a draw if the king had been at d5, d6 or d7. Then he would make the approach of the queen impossible. With a knight's pawn the same winning method can be applied.

But with a rook's or bishop's pawn there are often difficulties:
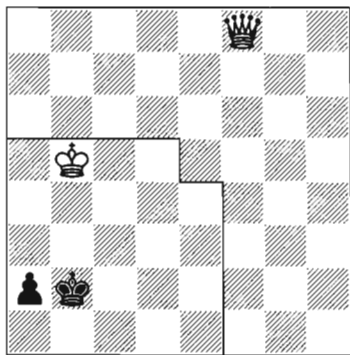
3.07 +/

White only wins because his king is within the winning zone.

1 ♕b4+

1 ♕f2+ ♔b1 (1...♔b3 2 ♕d4 +-) 2 ♔b4 wins more quickly.

1...♔c2 2 ♕a3 ♔b1 3 ♕b3+ ♔a1

White has managed to force the king in front of the pawn. Because of stalemate, the white king can't support in the usual way, but White can use a mate idea that is already familiar to us.

4 ♕d1+ ♔b2 5 ♔b4 a1♕ 6 ♕d2+! ♔b1 7 ♔b3! +-

If you look at the zone carefully you will notice that the white king will either get in two moves to b3 or in one to d3 or d2 to force mate at c2.

A stalemate defence is also possible with a bishop's pawn:
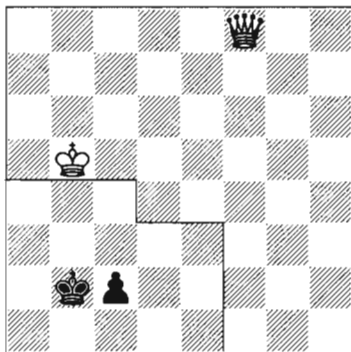
3.08 =/

1 ♕b4+ ♔a2 2 ♕c3 ♔b1! 3 ♕b3+ ♔a1! 4 ♕c3+

4 ♕xc2 stalemate.

4...♔b1! 5 ♕d3 ♔b2 6 ♕e2!? ♔a1! =

6...♔b1? 7 ♔b4 c1♕ 8 ♔b3! wins for White.

The zone makes it clear that White only wins if his king gets to b3 or d2 in one move. If the defending king is on the other side of the pawn, the winning zone will be a lot bigger. This is because White wins another tempo by forcing the king in front of the pawn. Also there might be mate ideas on the right side.
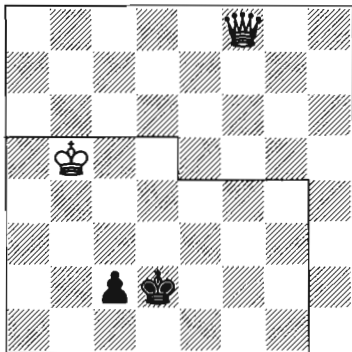
3.09   **+/**

1 ♕f4+ ♔d1
1...♔c3 2 ♕c1 +−.

2 ♕d4+ ♔e2 3 ♕c3! ♔d1 4 ♕d3+!
♔c1 5 ♔c4 ♔b2 6 ♕d2 ♔b1 7 ♔b3!
c1♕ 8 ♕a2#!

The reader can see for himself how
White wins if he starts, for example, with
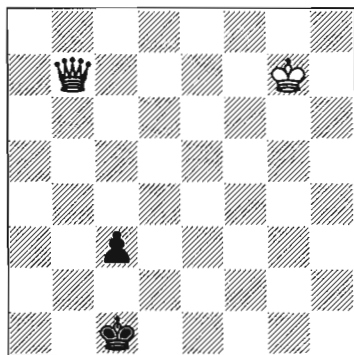his king on g4 (A3.06).

If the pawn hasn't yet reached the 7th
(2nd) rank there are seldom problems in
winning, but no rule is without exception:

3.10   **=/=**
Chess World, 1865

White's own king is in the queen's
way and therefore White can't prevent

the black pawn from advancing to the
2nd rank:

1 ♕h1+ ♔b2! 2 ♕b7+ ♔c1! 3 ♔f6
c2! 4 ♔e5 ♔d2

The white king is outside the winning
zone (3.09). However, Black has to de-
fend accurately.

5 ♕d5+ ♔e1!

5...♔e2? 6 ♕a2! ♔d1 7 ♔e4 c1♕ 8
♔d3! +−; 5...♔c1? 6 ♕a2! +−; 5...♔e3?
6 ♕g2! ♔d3 7 ♕g5! ♔c3 8 ♕c1! +−;
5...♔c3? 6 ♕d4+! ♔b3 7 ♕a1! +−.

6 ♕c4 ♔d1 7 ♕b3

7 ♕d3+ ♔c1! 8 ♔d4 ♔b2! = (3.08).

7...♔d2! 8 ♕a2!? ♔c3! 9 ♕a1+ ♔d2!
10 ♕d4+ ♔e2 11 ♕c3 ♔d1! 12 ♕d3+
♔c1! 13 ♔d4 ♔b2! = (3.08)

If there is a second pawn, this might
even be a disadvantage because the pos-
sibility for a stalemate doesn't exist any
longer.
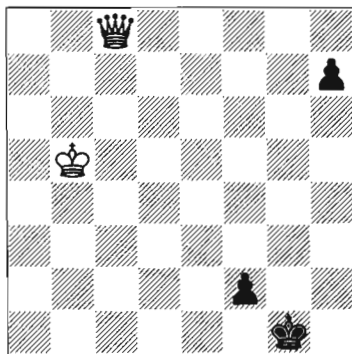
3.11   **+/**

The h-pawn is only disadvantageous.

1 ♕g4+ ♔h2 2 ♕f3! ♔g1 3 ♕g3+!
♔f1 4 ♔c4 +−

The outcome of the endgame 'queen
vs pawns' depends more on the concrete
position than on general principles. You
will find some further examples in the
exercises. It should also be mentioned

that the queen might even lose against several dangerous passed pawns.

C) Transition into a Pawn Ending

If the side with the queen still has a pawn, then often an exchange of queens or a queen sacrifice with a transition into a pawn ending again leads to victory.

3.12   +/
Y.Nesterov – K.Zolnierowicz
Katowice 1993

Both passed pawns queen at the same time and the queen ending with the rook's pawn would only be a draw. But instead White can force the exchange of queens:

1 ♔e5! ♔c3

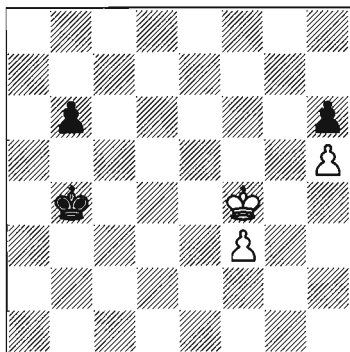1...♔c5 2 f4! ♔c6 3 ♔e6! ♔c7 4 f5! ♔d8 5 ♔f7 (5 f6?? ♔e8! –+) 5...b5 6 f6 b4 7 ♔g7 b3 8 f7 b2 9 f8♕+ +–; 1...♔c4?! 2 f4! b5 3 f5! b4 4 f6! b3 5 f7! b2 6 f8♕! b1♕ 7 ♕c8+! +– and the queens are exchanged; 1...♔a4?! also can't prevent the exchange of queens (3.01).

2 f4! b5 3 f5! b4 4 f6! b3 5 f7! b2 6 f8♕! b1♕ 7 ♕c5+! ♔d2

After 7...♔d3 8 ♕d4+ ♔e2 9 ♕e4+! ♕xe4+ 10 ♔xe4! ♔d2 11 ♔f5! ♔e3 12

♔g6! ♔f4 13 ♔xh6! +– Black is short of one tempo.

8 ♕f2+! 1-0

Due to 8...♔c3 9 ♕d4+! (9 ♕e3+? ♕d3 10 ♕xd3+ ♔xd3! 11 ♔f6 ♔e4 12 ♔g6 ♔e5! 13 ♔xh6 ♔f6! =) 9...♔b3 10 ♕b6+! ♔c2 11 ♕xb1+ ♔xb1 12 ♔f5 +–.
The black king is too far away to be able to block the white king at the edge of the board.

In the next study, a typical staircase manoeuvre leads to victory:
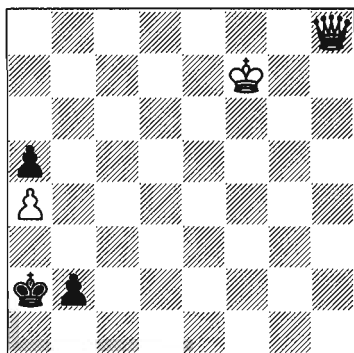
3.13   +/
Y.Averbakh, 1962

1 ♕h2! ♔a1

1...♔a3 2 ♕c2 +–.

2 ♕e5! ♔a2 3 ♕d5+!

3 ♕xa5? b1♕! = would only win if White could then force the exchange of queens.

3...♔a1 4 ♕d4! ♔a2 5 ♕c4+! ♔a1 6 ♕c3! ♔a2 7 ♕c2! ♔a1

White has placed his queen in the best way. With the approach of his king he now forces a transition into a won pawn ending.

8 ♔e6! b1♕ 9 ♕xb1+! ♔xb1 10 ♔d5! ♔c2 11 ♔c4! +–

The black king doesn't get to c5 in time.

Chapter 3 Exercises
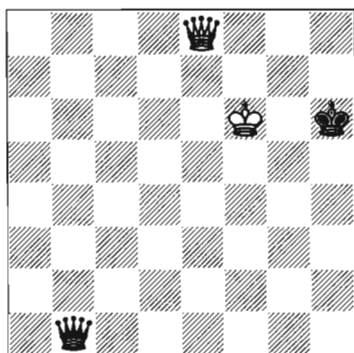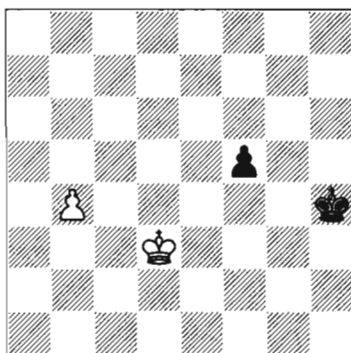
A3.01   */

A3.04   /**
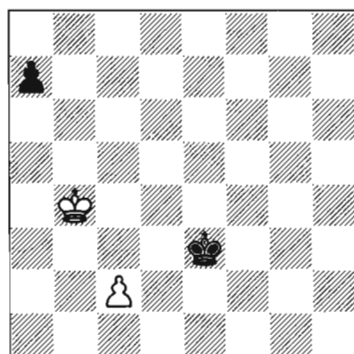
A3.02   ***/
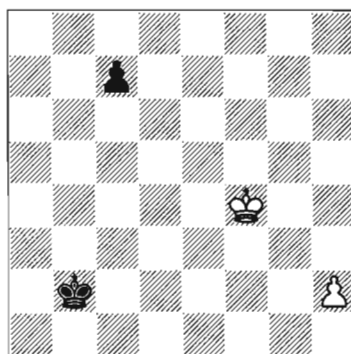
A3.05   ****/
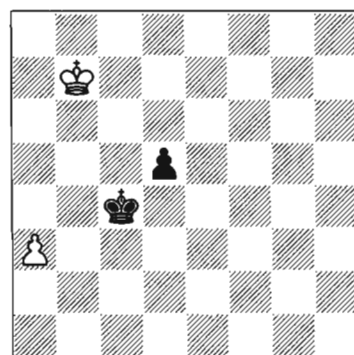
A3.03   **/
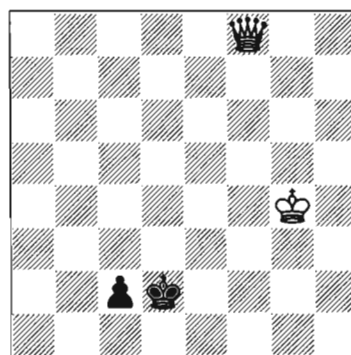
A3.06   */
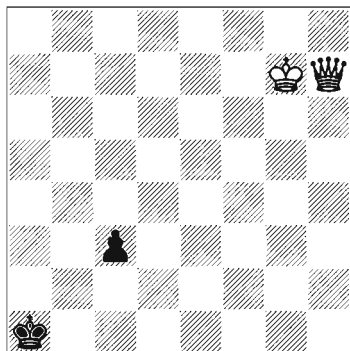
A3.07   ****/**
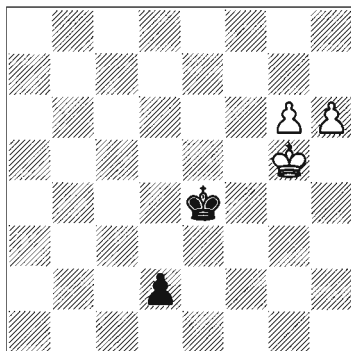
A3.09   *****/**
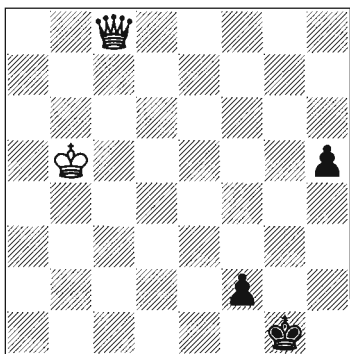
A3.08   ***/**

A3.10   *****/**

Solutions to Chapter 3 Exercises

A3.01 Martens – Grabczewski, *Lund 1968*
No problems:
1 ♕e3+!
1 ♕h8+? ♕h7 =.
1...♔h7
1...♔h5 2 ♕h3#.
2 ♕e7+ ♔h6 3 ♕g7+ ♔h5 4 ♕g5#!

A3.02 N.Grigoriev, 1931
Rather more problems?!
The white king is already well placed because he can support his own pawn as well as stopping the black pawn. So at first White pushes the pawn and then uses his time advantage through skilful king manoeuvres in order to win the fresh black queen with a check on the long diagonal or queen his pawn with check.
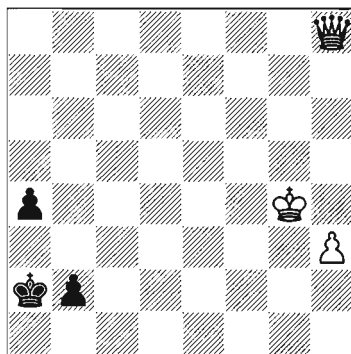**1 c4! ♔d4 2 c5! ♔e5**
2...♔d5 3 ♔b5! +– see the main line; 2...a5+ 3 ♔b5! a4 4 c6! a3 5 c7! a2 6 c8♕! a1♕ 7 ♕h8+! +–.
3 ♔a5!
Not 3 ♔b5? ♔d5! =, when White is in zugzwang.
3...♔e6 4 ♔a6! ♔d5 5 ♔b5!
Now Black is in zugzwang.
5...♔e5
5...♔e6 6 ♔c6! a5 7 ♔b7 a4 8 c6! a3 9 c7! a2 10 c8♕+! +–.
6 ♔c6! a5 7 ♔b7 a4 8 c6! a3 9 c7! a2 10 c8♕! a1♕ 11 ♕h8+! +–
■ The starting position is also won for White with w♔c4 and b♔f3 (Grigoriev 1929, *ECE* 87, Av 82): 1 ♔d4!! +–.

A3.03 C.Schlechter – G.Marco, *Vienna 1893*
Like in the study by Réti (3.03), White manages to support his pawn or to capture the black one.

1 a4!
1 ♔b6? d4! 2 a4 d3! 3 a5 d2! 4 a6 d1♕! 5 a7 ♕d5 –+.
1...♔b4
1...d4 2 a5! =.
2 ♔b6!! ½-½
In view of 2...d4 (2...♔xa4 3 ♔c5! =) 3 a5! =.

A3.04 M.Najdorf – Vinueza, *Mar del Plata 1941*
White threatens to stop the black pawn by ♔e2 and then to queen his pawn in complete safety. Therefore Black has to secure the way to the 8th rank for his pawn.
1...♔h3!
Not 1...♔g3?, when White queens his pawn with check: 2 b5! f4 3 b6! f3 4 b7! f2 5 b8♕+! +–. 1...f4? 2 ♔e2! ♔g3 3 ♔f1! +– (3 b5? ♔g2! =).
2 b5
2 ♔e3 ♔g3! =. Black wins the missing tempo by ...f4+.
2...f4! 3 ♔e4 ♔g3!
Black exploits the misplacement of the white king to draw with his bishop's pawn against the queen. 3...♔g4? 4 b6! f3 5 ♔e3! ♔g3 6 b7! f2 7 b8♕+! +–.
4 b6 f3! 5 b7 f2 6 b8♕+ ♔g2 = ½-½
The white king is not in the winning zone (see 3.08).

A3.05 N.Grigoriev
A difficult one in which the final aim was to queen the pawn with check, and so to avoid the drawn position 3.08.
1 ♔e4!
1 h4? c5! 2 h5 c4! 3 h6 c3 4 h7 c2 5 h8♕+ ♔b1 = (3.08); 1 ♔e5? ♔c3! 2 h4 (2 ♔d5 ♔d3 3 h4 c5 =) 2...c5! 3 h5 c4 4 h6 ♔b2 (4...♔b3 =) 5 h7 c3! 6 h8♕ c2! 7 ♔e4+ ♔b1 = (3.08).
1...♔b3
1...♔c3 2 h4! c5 3 h5 c4 4 h6 ♔b2 (4...♔b3 5 h7 c3 6 h8♕ c2 7 ♕a1! +–;

4...♔d2 5 h7! c3 6 h8♕! c2 (3.09) 7 ♕b2 ♔d1 8 ♔d3 +−) 5 h7 c3 6 h8♕+−; 1...c5 2 ♔d5! ♔c3 3 ♔xc5! ♔d3 4 ♔d5! ♔e3 5 ♔e5! ♔f3 6 ♔f5! +−.

2 ♔d4!
2 ♔d5? ♔b4! 3 h4 (3 ♔c6 ♔c4 =) 3...c5! =.

2...♔b4 3 h4! c5+ 4 ♔e3!
White avoids checks from the c-pawn. 4 ♔d3? ♔b3! 5 ♔d2 ♔b2! 6 ♔d3 ♔b3! 7 h5 c4+! =.

4...♔b3 5 h5! c4 6 h6! c3 7 h7! c2 8 ♔d2! ♔b2 9 h8♕+! +−

■ On this subject there are a whole lot of further studies and games (see *ECE* 87-136), of which we would like to mention L.Ljubojević-W.Browne, Amsterdam 1972 (*ECE* 104): w♔a5,△b3; b♔c6, △f7: 1...♔d5!! (the game actually saw 1...f5? 2 ♔b4! f4 3 ♔c4 with a draw) 2 ♔b4 ♔d4! 3 ♔a5 (3 ♔a3 f5! 4 ♔b2 f4! 5 ♔c2 ♔e3! 6 ♔d1 ♔f2 −+) 3...f5! 4 b4 f4 5 b5 ♔c5 6 b6 ♔c6! −+.

A3.06 Instructive example
If you saw the mate idea at e2 the exercise shouldn't have been too difficult for you.
1 ♕b4+ ♔d1 2 ♕b3
2 ♕d4+ ♔c1 3 ♔f3? (3 ♕a1+ ♔d2 4 ♕b2! ♔d1 5 ♔f3! +−) 3...♔b1 =. White mustn't allow the black king to the short side (3.08).
2...♔d2 3 ♕b2! ♔d1 4 ♔f3! c1♕ 5 ♕e2#!

A3.07 I.Horowitz, 1956
The white king is far away from the c-pawn so it should not advance:
1 ♕h6!
White threatens to occupy the square in front of the pawn. 1 ♕h1+? ♔b2! = (3.10); 1 ♕d3? c2! =; 1 ♕c2?? stalemate.
1...♔b2 2 ♕f6
2 ♕b6+ +−.
2...♔b3 3 ♕d4 ♔c2

3...c2 4 ♕a1! +−.
4 ♔f6 ♔b3 5 ♔e5 ♔c2 6 ♔e4 ♔b3 7 ♔d3 +−

A3.08 After N.Grigoriev
Hopefully you haven't thought for too long to find a win for White – because there is none as the white queen doesn't have access to the g4-square. By the way, the position would also be a draw with the pawn at h4 instead of h5 (then the g3-square is missing).
1 ♕g8+ ♔h2 2 ♕f7 ♔g2 3 ♕g6+ ♔h2 4 ♕f5
4 ♕xh5+ ♔g2 = (3.08).
4...♔g2 5 ♕g5+ ♔h2 6 ♕f4+ ♔g2! =
6...♔g1? 7 ♕g3+! ♔f1 8 ♔c4 h4 9 ♕g4 h3 (9...♔e1 10 ♕xh4 +−) 10 ♔d3 h2 11 ♕f3 ♔g1 12 ♔e2 h1♘ 13 ♕h3 +−.
■ For some similar positions see, for example, *Six Hundred Endings* Nos. 418-20; there it will also be explained why it is sensible to ascribe this position to Grigoriev even though we like to mention that his studies are much more difficult than this position. A practical use of this position appeared in J.C.Diaz-Camacho Penate, Pinar del Rio 1996: w♔a7, △f4,g5; b♔h1,△g7,h5: 1...g6! (after 1...h4? 2 f5! the resulting queen ending is lost for Black) 2 f5 gxf5! 3 g6 f4! 4 g7 f3! 5 g8♕ f2! =.

A3.09 F.Lamprecht, Original
For sure you have quickly noticed that your new queen will be lost through a skewer if you queen one of the pawns immediately. So in two moves you have to build a fortress against the queen:
1 g7!
1 h7? d1♕! 2 h8♕ (2 ♔f6 ♕d4+ 3 ♔f7 ♕h8 −+) 2...♕c1+ 3 ♔g4 (3 ♔f6 ♕a1+ −+) 3...♕g1+ 4 ♔h3 ♕h1+! −+.
1...d1♕! 2 ♔g6!
2 ♔f6? ♕d5 −+; 2 h7? ♕d5+! −+ (after this White loses one of the pawns; not

2...♕d8+? 3 ♔g6! ♕e8+ 4 ♔f6! ♕e5+ 5 ♔f7! ♕f5+ 6 ♔g8! =); 2 g8♕? ♕g1+! –+.

   2...♕d5 3 ♔h7! ♕f7 4 ♔h8 ♕f6 5 ♔h7! =

A3.10 C.Diesen, 1968

The black pawns are already far advanced. Thanks to his h-pawn and the king, which is just near enough, White is still able to win:

   1 ♕g8+!

1 ♕d4? a3! 2 ♕c4+ ♔a1! 3 ♕b3 a2! 4 ♕c3 ♔b1 5 ♕d3+ ♔c1! only leads to a draw.

   1...♔a3

1...♔a1 2 ♕a8 b1♕ 3 ♕xa4+! ♔b2 4 ♕b4+ ♔a2 5 ♕xb1+! +–.

   2 ♕f8+!

2 ♕g6? b1♕! =.

   2...♔a2 3 ♕f7+! ♔a3 4 ♕e7+ 4 ♕f3+ ♔a2 5 ♕d5+! +–.

   4...♔a2 5 ♕e6+ ♔a3 6 ♕d6+ ♔a2 7 ♕d5+! ♔a3 8 ♕d3+! ♔a2 9 ♕c2! a3

9...♔a3 10 ♕b1! ♔b3 11 ♔f3! a3 12 ♕d3+! ♔a2 13 ♕c2! +–.

   10 ♔f3! ♔a1 11 ♕b3! a2 12 ♕c3! ♔b1 13 ♕d3+! ♔c1

13...♔a1 14 ♕d4! ♔b1 15 ♕d1#!.

   14 ♔e2! b1♘

14...a1♕ 15 ♕d1#!; 14...b1♕ 15 ♕d2#!.

   15 ♕d4 +–

4 Small Number of Pawns

Since Chapter 2 has dealt with king and pawn vs king and pawn, we now deal with positions in which one side has two pawns and the other one, but we have excluded rooks' pawns due to the many special cases (Chapter 5 is dedicated to them). In the following we mostly deal with the opposition. But sometimes this restricted way of looking at it is not sufficient and we have to use the more general theory of corresponding squares in anticipation of Chapter 12.

A) Blocked Pair of Pawns and a Passed Pawn

Here the attacker usually wins by sacrificing his passed pawn in order to capture the last of the opponent's pawns. This deflection of the defending king is only unsuccessful if a counter-attack is threatened or the pawns are very close to each other. We start with a straightforward example:
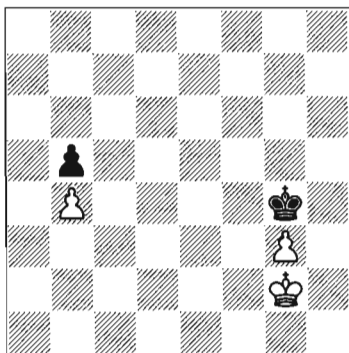
4.01 +/−

White just sacrifices the g-pawn and queens the b-pawn:
1 ⌂f2 ⌂g5 2 ⌂e3 ⌂g4 3 ⌂d4 ⌂xg3 4 ⌂c5 ⌂f4 5 ⌂xb5 ⌂e5 6 ⌂c6 +−

If the passed pawn is only two files away from the blocked pawns, the win is more difficult or even impossible:
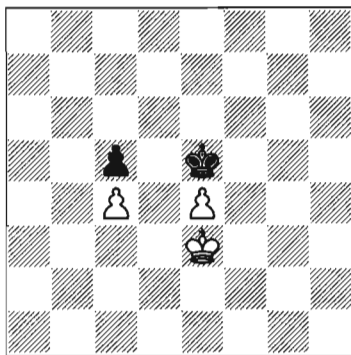
4.02 =/−

If White is to move, he is in zugzwang because the black pawn controls the d4-square, and Black is saved by a counter-attack against the white c-pawn:
1 ⌂f3
1 ⌂d3?! ⌂f4! =.
1...⌂d4! 2 ⌂f4 ⌂xc4! 3 e5 ⌂b3!
3...⌂d5? 4 ⌂f5! +−.
4 e6 c4! 5 e7 c3! 6 e8♕ c2! = (3.08)
It should be noted that Black only achieved a draw here because he had a bishop's pawn. White would win if all pieces were moved by one file.
With Black to move, White wins easily: **1...⌂e6 2 ⌂f4! ⌂f6 3 e5+! ⌂e7** (3...⌂e6 4 ⌂e4! ⌂e7 5 ⌂d5 +−) **4 ⌂f5!**

♚f7 5 e6+! ♚e7 6 ♚e5! ♚e8 7 ♚d6 ♚d8
8 ♚xc5 +−.

Drawn positions also occur when the
defender's pawn is blocked on its starting
point:

4.03   **=/**
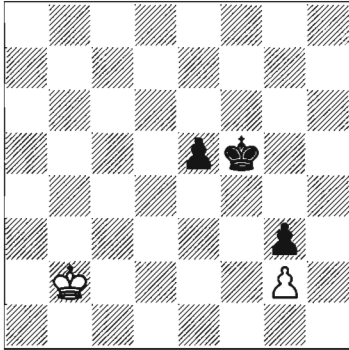**H.Westerinen – V.Smyslov**
Szolnok 1975

Even though the black king gets the
opposition in front of his pawn, Black
isn't able to win:
1 ♚c3 ♚e4 2 ♚d2!
White has to defend the key squares
d3 and e3.
2...♚d4 3 ♚e2! ♚c4 4 ♚d2!
4 ♚e3? ♚c3! 5 ♚e2 (5 ♚e4 ♚d2! –+)
5...♚c2! 6 ♚e1 (6 ♚e3 ♚d1! 7 ♚f3 e4+
–+) 6...♚d3! 7 ♚d1 ♚e3 8 ♚e1 e4! 9
♚f1 ♚d2! –+.
**4...♚d4 5 ♚e2! ♚c3 6 ♚e3! ♚c2! 7
♚e2! e4 8 ♚e1!**
8 ♚e3? ♚d1! 9 ♚xe4 ♚e2! –+.
8...♚d3 9 ♚d1! e3 10 ♚e1! e2 stale-
mate (½-½).

The following study illustrates typical
problems with a passed pawn that is not
far advanced (*see next diagram*):
Here the active black king causes dif-
ficulties. For a better understanding it is
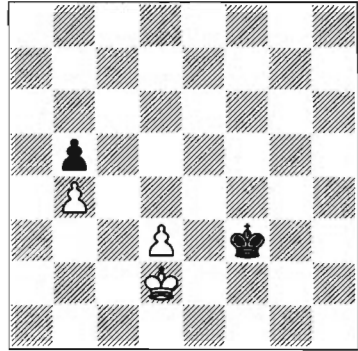
4.04   **+/−**
N.Grigoriev
K novoi armii, 1920

useful to make some preliminary consid-
erations. White wins easily if it is Black
to move in the starting position. Black
has to lose control over e2 and White's
king gets to e3, which enables him to win
in a way that is familiar from 4.02; Black
has a knight's pawn! e2, e3 and obvi-
ously also d4 are therefore key squares.
From the starting position we see that
Black has to answer ♚d2 with ...♚f3 in
order to defend the key squares. We call
such a pair of squares corresponding
squares. Also c3 and e3 are correspond-
ing squares since Black has to defend d4.
Since White can move from c2 to either
d2 or c3, f4 is the corresponding square
since from here Black can get to either f3
or e3. If we examine the adjacent squares
we notice that the squares b2 and b3
(White threatens ♚c3 or ♚c2) only cor-
respond with the f3-square. Because
Black can't stay at f3, we have found the
winning plan:
1 ♚c2
1 d4? ♚e4! 2 ♚c3 ♚f5! 3 ♚d3 ♚f4! is
a draw.
1...♚f4
1...♚e3?! 2 ♚c3! +−.
2 ♚b3 ♚f3 3 ♚b2

Black is in zugzwang.
3...♔f4 4 ♔c2!
Now White occupies the corresponding squares:
4...♔e5
4...♔f3 5 ♔d2! ♔f4 6 ♔e2! ♔e5 7 ♔e3! +− transposes to the main line at move 8.
5 ♔d1!
5 ♔d2?! ♔d4.
5...♔d5 6 ♔e2 ♔d4 7 ♔d2! ♔e5 8 ♔e3! ♔d5 9 d4! ♔c4 10 ♔e4! ♔xb4 11 d5! ♔c5
11...♔a3 12 d6! +− (see 3.06); 11...♔a5 12 ♔e5 b4 13 d6! ♔b6 14 ♔e6 b3 15 d7! ♔c7 16 ♔e7! +−.
12 ♔e5! b4 13 d6! ♔c6 14 ♔e6! b3 15 d7! b2 16 d8♕! b1♕ 17 ♕c8+! +−
If you are now keen to deal with the corresponding squares in detail, we can refer you to Chapter 12, where we examine this position again (12.02).

B) Protected Passed Pawn

The biggest advantage of a protected passed pawn is (as the description implies) that it can't be captured. Therefore the attacking king is free to manoeuvre and that's why most positions are won, but even here there are a few important exceptions.

In example 4.05 White is only able to win by penetrating with his king on the queenside. Black is helpless against that because his king has to stay in the square of the protected passed c4-pawn and he doesn't have access to the b5-square.
1 ♔e2
White is not able to advance on the kingside: 1 ♔g2?! ♔g4 2 ♔h2 ♔f4!? 3 ♔h3 ♔f5 4 ♔h4 ♔f4.
1...♔e5
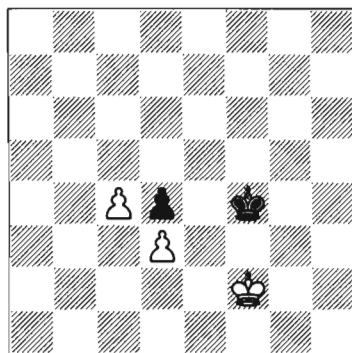
4.05 +/−

1...♔g4 2 ♔d2 ♔f5 3 ♔c2 ♔f4 4 ♔b3 ♔e3 5 c5 ♔xd3 6 c6! +−.
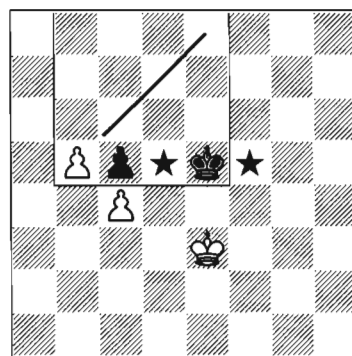**2 ♔d2 ♔d6 3 ♔c2 ♔c6 4 ♔b3 ♔c5 5 ♔a4 ♔b6 6 ♔b4 ♔c6 7 c5 ♔d5**
7...♔c7 8 ♔c4 +−.
8 ♔b5! +−
If you move 4.05 to the left, White cannot win (see 4.07 or A4.04).

The following position is also won:

4.06 +/−

Here, in contrast to 4.05, White cannot penetrate on the side of the protected passed pawn because Black is always able to answer ♔a4 with ...♔b6. Still, Black can't hold the position because he

has to stay in the square of the b5-pawn and he can't prevent White from advancing to the key squares of the c5-pawn.
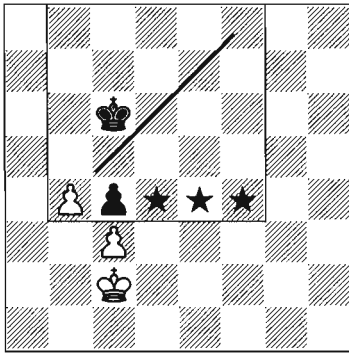
Note: if one key square is not in the square of the passed pawn, the position is lost.

1 ♔f3 ♔d6

1...♔f5 2 b6 +−.

2 ♔f4 ♔e6 3 ♔e4 ♔d6 4 ♔f5 and White wins.

The following example shows a typical drawn position:

4.07   =/=

After **Walker**, 1892

This position is, in contrast to 4.06, a draw since Black can either prevent the white king from penetrating or he can create sufficient counterplay against the c-pawn:
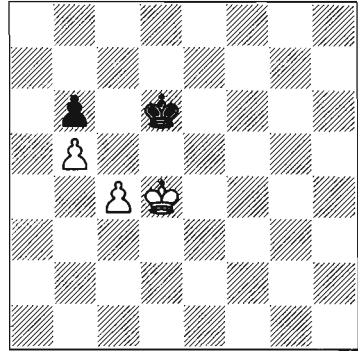
1 ♔d2 ♔d5 2 ♔e3 ♔e5! 3 ♔f3 ♔f5! 4 ♔g3 ♔e5

4...♔e4 5 ♔g4!? ♔e5! (5...♔d3? 6 b5! ♔xc3 7 b6! ♔d2 8 b7! c3 9 b8♕! c2 10 ♕b2! ♔d1 11 ♔f3! +− (3.09)) 6 ♔g5!? ♔e4! 7 ♔f6 ♔d3! 8 b5 ♔xc3! 9 b6 ♔d2! 10 b7 c3! 11 b8♕ c2! = (3.09).

5 ♔g4 ♔e4! =

Note that all the key squares of the c4-pawn are in the square of the protected passed pawn.

C) Backward Pawn

In this case the chances for a successful defence increase:

4.08   =/−

A.Philidor, 1747

If White is to move, he can't win because he doesn't manage to get the opposition.

1 ♔d3!? ♔d7

Distant opposition. 1...♔e7 2 ♔e3 ♔d7! =; 1...♔c5? 2 ♔c3! ♔d6 3 ♔d4! ♔e6 4 c5! bxc5+ (4...♔d7 5 c6+! ♔d6 6 ♔e4 ♔e6 7 c7 ♔d7 8 ♔e5 ♔xc7 9 ♔e6! +− (2.01)) 5 ♔xc5! +− (A1.04).

2 ♔e4 ♔e6 =

Vertical opposition. 2...♔e8 (distant opposition) 3 ♔e5 (3 ♔f5 ♔d7!) = diagonal opposition) 3...♔e7! 4 ♔d5 ♔d7! with a draw.

If Black is to move, he has to give up the opposition, and loses:

1...♔c7

1...♔e6 2 c5! +−.

2 ♔e5!

This gets the diagonal opposition, which is then transformed into a winning near opposition:

2...♔d7 3 ♔d5! ♔c7 4 ♔e6! +−

White has reached one of the key squares of the b6-pawn and would now win even without the c4-pawn (see 2.01). If one moves 4.08 one file to the left, the position would be drawn even with Black to move because b4-b5 wouldn't be a winning idea due to the remaining rook's pawn.

This was discussed in the world championship match in 1894 in a slightly different form:
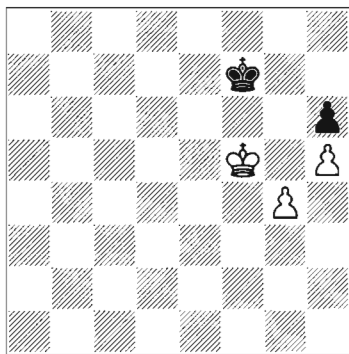
4.08A =/–
W.Steinitz – Em.Lasker
New York Wch (6) 1894

1 ♔e5 ♔e7!
1...♔g7? 2 ♔e6! +–.
2 ♔d5 ♔f6
2...♔d7 3 g5 ♔e7 4 g6 = reveals a further special quality of the rook's pawn (6.01H).
3 ♔e4 ♔e6
3...♔g5 also defends: 4 ♔f3 ♔f6! 5 ♔f4 ♔e6! 6 ♔e4 ♔f6! =.
4 ♔d4 ♔f6 ½-½

The following example, from the practice of modern grandmasters, is more difficult (*see next diagram*):
Here we have the additional possibility of penetrating with the king on the
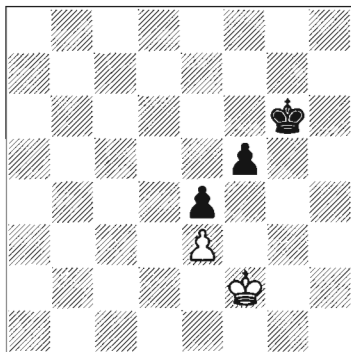
4.09 =/+
J.Timman – A.Yusupov
Amsterdam Donner mem 1994

queenside. But if White is aware of the rules of distant opposition, he can prevent Black from reaching the critical squares of the e3-pawn and his position can't be conquered:
1 ♔g2!
1 ♔g3? ♔g5! 2 ♔f2 ♔h4! 3 ♔g2 ♔g4! 4 ♔f2 ♔h3! –+ (4.08).
1...♔g7 2 ♔g1
2 ♔g3 =.
2...♔f7 3 ♔f1 ♔e6 4 ♔e2 ♔d5 5 ♔d2 ♔d6 6 ♔d1!
Since White has to prevent Black's king from penetrating on both the queenside and the kingside, this is the only move. 6 ♔c2? ♔e6 7 ♔c3 (7 ♔d2 ♔f6 8 ♔e2 ♔g5 9 ♔f2 ♔h4! –+) 7...♔f6 8 ♔d4 ♔g5 9 ♔e5 ♔g4 –+.
6...♔c5 7 ♔c1!
7 ♔d2? ♔b4! 8 ♔c2 ♔c4! 9 ♔d2 ♔b3! –+ (4.08).
7...♔b5 8 ♔b1! ♔a5 9 ♔c1
Here the game was drawn. 9 ♔c2 is also possible since the following attempt to penetrate the position is also useless: 9...♔a4 10 ♔c3! ♔a3 11 ♔d4! ♔b3 12 ♔e5! ♔c4! 13 ♔xf5! ♔d5! = (A2.02). Instead the stereotyped attempt to keep the distant opposition through 9 ♔a1?
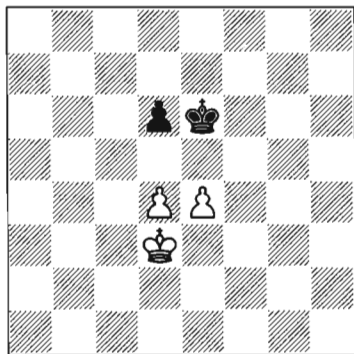
loses because then the breakthrough 9...f4 10 exf4 e3! −+ is possible.
½-½

Black to move would have won easily with 1...♔h5! 2 ♔g1 ♔g5! 3 ♔f2 ♔h4! 4 ♔g2 ♔g4! 5 ♔f2 ♔h3! −+. The corresponding squares to 4.09 will be determined in A12.01.

D) Others

At first we look at flexible pawn-structures:

4.10   **+/−**
J.Berger, 1890

Positions like the one in this example are usually won, thanks to White's spare tempo:
1 ♔c3
1 ♔c4? d5+! =; 1 ♔e3 ♔f7 2 ♔f4 ♔g6 (2...♔f6 3 d5 +− (4.08)) 3 ♔g4 (3 e5? ♔f7! 4 ♔f5 dxe5! 5 ♔xe5 ♔e7! = (1.06)) 3...♔f6 4 ♔h5 +−.
1...♔d7 2 ♔b4
2 d5? ♔c7 = (4.08).
2...♔c6 3 ♔a5 ♔b7
3...d5 4 e5! +− (4.06).
4 ♔b5 ♔c7 5 ♔a6 ♔c6 6 d5+
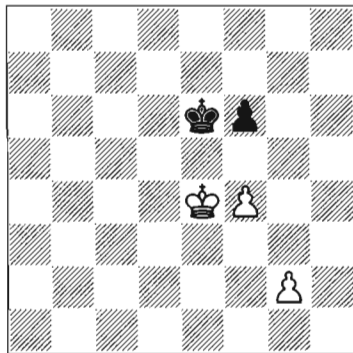Up to now we hardly needed any exclamation marks because a win was

possible on both wings. After using the spare tempo this isn't the case any more:
6...♔c7
6...♔c5 7 ♔b7! ♔d4 8 ♔c6 ♔e5 9 ♔c7 +−.
7 ♔a7 ♔c8 8 ♔b6! ♔d7 9 ♔b7! ♔d8 10 ♔c6! ♔e7 11 ♔c7 +−

Also in the following position there are several ways to win:

4.11   **+/−**
J.Berger, 1890

Since White still has the spare tempo g2-g3 the position is won, no matter who is to move.
1 ♔d4
1 g4? f5+! =.
1 f5+ ♔d6 2 ♔f4! ♔e7 3 ♔g4 ♔f7 4 ♔h5 ♔g7 5 g3! ♔h7 6 ♔g4! and then:
   a) 6...♔h6 7 ♔f3 ♔g5 (7...♔h5 8 ♔f4 ♔h6 9 g4! +−) 8 g4! +− (4.09).
   b) 6...♔g7 7 ♔f4 ♔f7 8 ♔e4! ♔e7 9 ♔d5! ♔d7 10 g4! ♔e7 11 ♔c6! +−.
1...♔f5 2 ♔e3! ♔g4
2...♔e6 3 ♔e4 (now we have the starting position with Black to move) 3...f5+ 4 ♔d4! ♔d6 5 g3! +−.
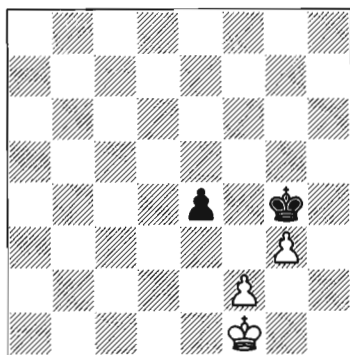**3 ♔e4! ♔h4!? 4 ♔f3!**
4 ♔f5? ♔g3! =.
4...f5 5 ♔f2!
5 g3+? ♔h3! 6 ♔f2 ♔h2! =.

5...♗g4 6 g3! ♔h5 7 ♔f3! ♔g6 8 ♔e3! ♔f6 9 ♔d4 ♔e6 10 ♔c5! +–

The white king has advanced to the key squares of the f5-pawn.

Let's now have a look at positions with pawns on adjacent files:

4.12 +/=

After **N.Grigoriev**

If the stronger side has a passed pawn, he usually wins.

1 ♔e2!

1 ♔g2?! ♔f5 2 ♔h3 ♔g5 3 ♔h2! +– (3 g4? ♔f4! 4 ♔h4 ♔f3! =).

1...♔g5 2 ♔e3 ♔f5 3 ♔d4 +–

If Black is to play, he only manages to draw because he can immediately re-move all the pawns: **1...♔f3!** (1...e3? 2 f4! {2 fxe3? ♔f3!! =} 2...♔f5 3 ♔e1 +–) **2 ♔e1 e3! 3 fxe3 ♔xe3! =.**

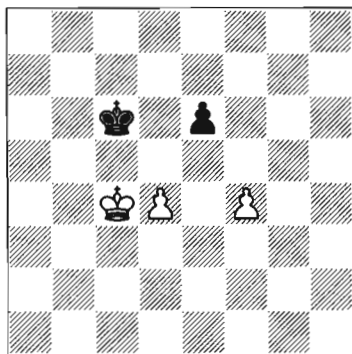With disconnected pawns the drawing chances are higher (*see next diagram*):

If the king isn't able to penetrate, it doesn't even demand very precise play:

1 ♔c3

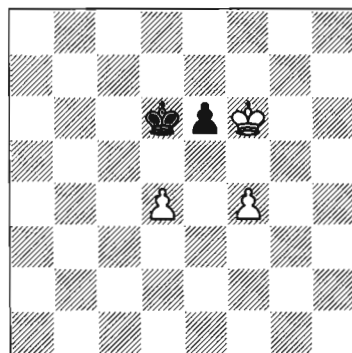1 d5+ exd5+ 2 ♔d4 ♔d6 3 f5 ♔e7 4 ♔xd5 ♔f6 =.

1...♔d5 2 ♔d3 ♔c6

2...♔d6 3 ♔e4 ♔d7! 4 ♔e5 ♔e7! 5 f5 exf5! 6 ♔xf5 ♔d6 =.

4.13 =/=

3 ♔e4 ♔d6 4 d5 exd5+ 5 ♔f5 ♔e7 6 ♔e5 d4 7 ♔xd4 ♔f6 =

In the next diagram the white king is much more active:

4.14 =/–

Here Black mustn't allow the white king to penetrate via e8. He therefore has to keep the side opposition:

1 ♔f7 ♔d7! 2 ♔f8 ♔d8! 3 ♔g8 ♔c8! 4 ♔h7 ♔d7! 5 ♔g7 ♔c7!

5...♔e7? 6 ♔g6 +– or 6 d5 +–.

6 ♔g6 ♔c6! =

This variation shows that the position is lost if it is moved three files to the left because the black king at a6 couldn't

keep the opposition after 1 ♔d6 (Chéron 1926, *ECE* 983).

If Black is to move, he can't prevent penetration via e8: **1...♔d7 2 ♔f7!** (2 ♔e5? ♔e7! = (4.13)) **2...♔d6 3 ♔e8! ♔d5 4 ♔e7 ♔xd4 5 ♔xe6! ♔e4 6 f5! +−.**

E) Doubled Pawns

It's much more difficult to win with doubled pawns than with connected ones, but there are also a lot of winning ideas that shouldn't be underestimated. The doubled pawns take away squares from the opposing king and they can provide spare tempi.
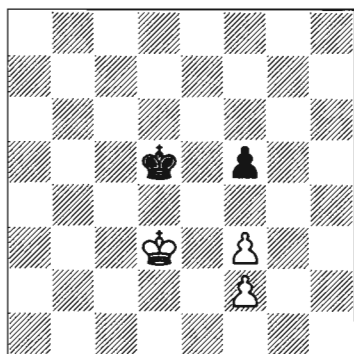
4.15   =/=

Here White can't use his spare tempo in a winning way since Black has enough corresponding squares.

1 ♔e3 ♔e5!

1...♔e6? 2 ♔d4! ♔d6 3 f4! +−.
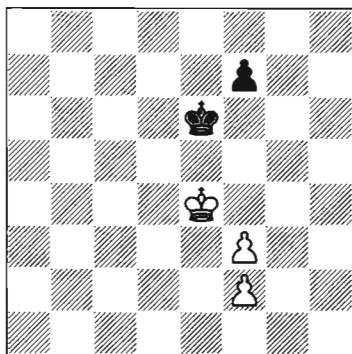
2 f4+ ♔d5! 3 ♔f3 ♔e6!

3...♔d4? 4 ♔g2! ♔d5 5 ♔h3! ♔e4 6 ♔g3! +−.

4 ♔g3 ♔f7 5 ♔h4 ♔g6! 6 f3 ♔h6! 7 ♔g3 ♔h5 8 ♔f2 ♔h4! 9 ♔e3 ♔g3! =

If Black is to play, he holds the draw by just keeping the opposition: **1...f4 2 ♔c3 ♔c5! 3 ♔d3 ♔d5! 4 ♔e2 ♔c4 5** ♔f1 ♔d3! 6 ♔g1 ♔e2 7 ♔g2! ♔e1! 8 ♔g1! =.

When Grigoriev deals with it, it immediately becomes more difficult:

4.16   +/−

N.Grigoriev
64, 1936

The study is won irrespective of whose move it is. However, if White is to move, he has to be very precise:

1 ♔f4!

1 f4? f6! 2 f5+ ♔d6! 3 ♔d4 ♔c6! 4 ♔e3 ♔c5 5 ♔f3 ♔d4! 6 ♔f4 ♔d5! 7 f3 ♔d6! 8 ♔g3 ♔e7! 9 ♔h4 ♔f7 10 ♔g4 ♔f8! =.

1...♔f6 2 ♔g4! ♔g6 3 f4!

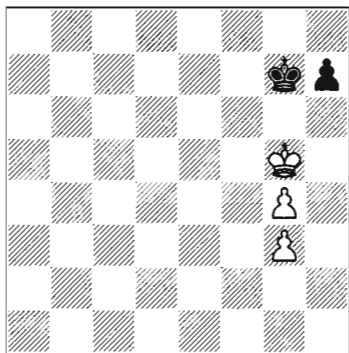Only now, when the black king has less space for manoeuvres, does this lead to victory.

3...f6 4 f5+! ♔f7 5 ♔f4 ♔e7 6 ♔f3 ♔d6

6...♔f7 7 ♔e4! +−.

7 ♔g4! ♔e5 8 f3! ♔d4 9 ♔h5! ♔e5 10 ♔g6! +−

With Black to move it's not that difficult: **1...♔f6 2 ♔f4 ♔e6 3 ♔g5 ♔e5 4 f4+ ♔e4 5 f5 ♔d5 6 f4** (6 f6 ♔e5 7 f3! ♔e6 8 f4! ♔d5 9 ♔h6! +−) **6...♔d4 7 f6 ♔e4 8 ♔h6 ♔f5 9 ♔g7! ♔e6 10 f5+!** and White wins.

The following study by Fine is also attractive:

4.17 +/=
R.Fine
Basic Chess Endings, 1941

Here the doubled pawns are on an adjacent file, which brings another possibility into play, viz. the exchange of pawns. If White is to move, he is able to realize this idea:
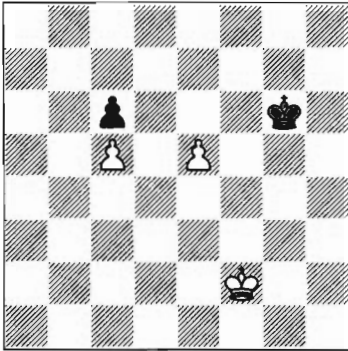
1 ♔h5! ♔g8
1...h6 2 g5! hxg5 3 ♔xg5! +–.
2 ♔h6 ♔h8 3 g5 ♔g8 4 g6 ♔h8 5 g7+
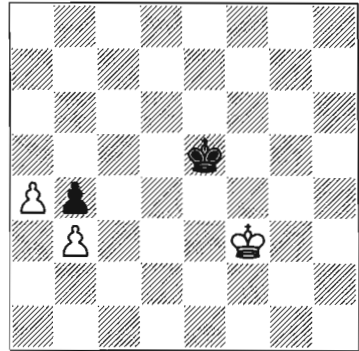5 gxh7?? stalemate.
5...♔g8 6 g4! +–
If Black is to move, though, he draws with a surprising counter-attack: **1...♔f7!
2 ♔h5 ♔e6!!** (2...♔f6? 3 ♔h6! +–) **3
♔h6 ♔f6! 4 g5+ ♔f5! 5 ♔h5 ♔e4! 6
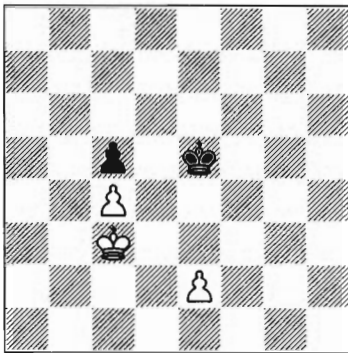♔g4 ♔e5 7 g6!? hxg6! 8 ♔g5 ♔e4! =.**

Chapter 4 Exercises

A4.01   ****/**

A4.04   **/****

A4.02   *****/**
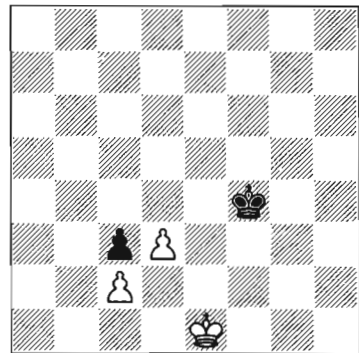
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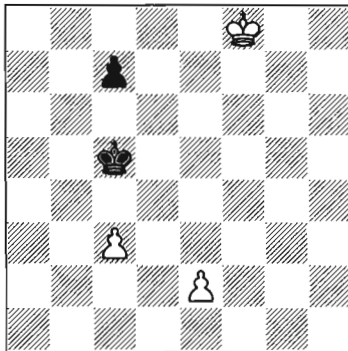
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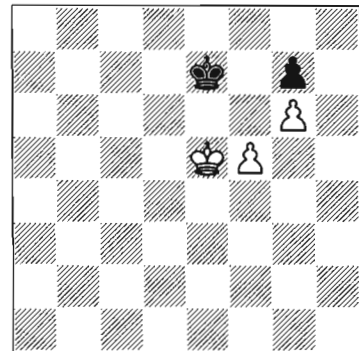
A4.06   ***/**

A4.07   ****/

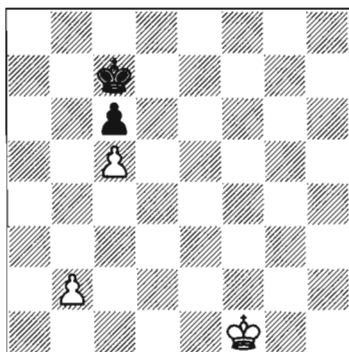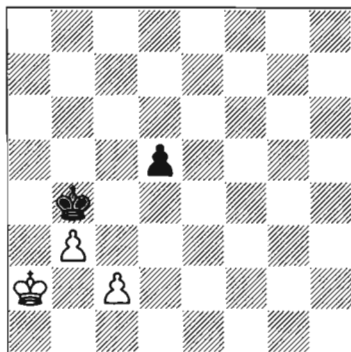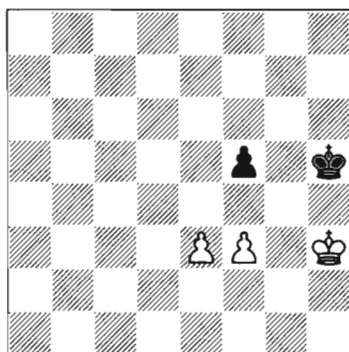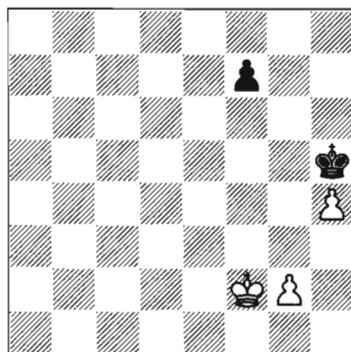A4.10   ***/

A4.08   **/***
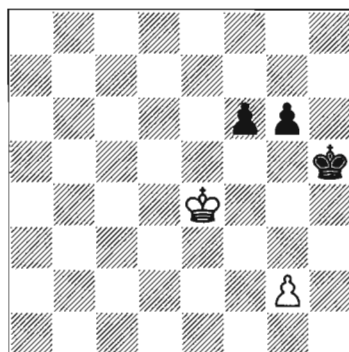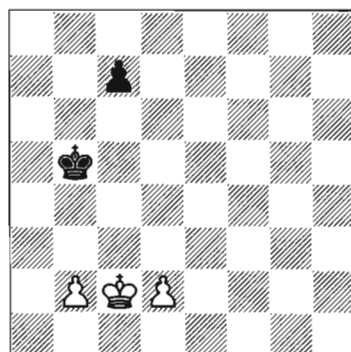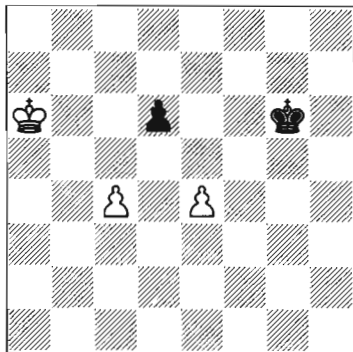

A4.11   **/

A4.09   ****/
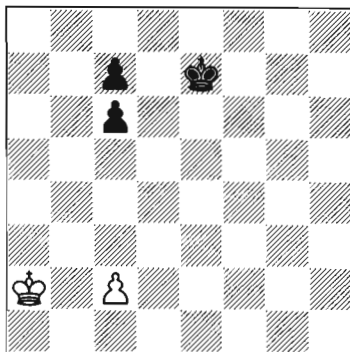

A4.12   **/

A4.13　　　　　***/

A4.14　　　　　***/

Solutions to Chapter 4 Exercises

A4.01 After **J.Berger**, 1922

Black might be able to prevent the white king from advancing to the 5th rank but White just sacrifices his e-pawn in order to advance to the key squares of the c6-pawn:

1 ♔e3! ♔f5 2 ♔d4! ♔g6 3 e6
3 ♔e4 ♔g5 4 e6 +–.
3...♔f6 4 e7! ♔f7 5 ♔e4!
5 e8♕+? ♔xe8! 6 ♔e4 ♔f8! =; 5 ♔e5? ♔xe7! = (2.01).
5...♔e8 6 ♔f5 ♔xe7 7 ♔e5! +– (2.01)

A4.02 **F.Dedrle**, *Deutsches Wochen-schach*, 1921

White only wins by going round from the left. If you have discovered the corresponding squares b3-d4 the exercise wasn't that difficult any more:

1 ♔b2!!
1 e3? ♔e4 2 ♔d2 ♔e5 3 ♔e1 ♔e4 4 ♔e2 ♔f5! (4...♔e5? 5 ♔f3! ♔f5 6 e4+! ♔e5 7 ♔e3! +– (4.02)) 5 ♔f3 ♔e5! 6 e4 ♔d4! 7 ♔f4 ♔xc4! 8 e5 ♔b3! 9 e6 c4! 10 e7 c3! 11 e8♕ c2! = (3.08); 1 ♔d3? ♔f5 (1...♔f4 2 e4 ♔g5! = (4.02)) 2 ♔e3 (2 e4+ ♔f4 =) 2...♔e5! 3 ♔d3 ♔f5 4 ♔c2 ♔e4! 5 ♔b3 ♔d4! =.
1...♔e4 2 ♔a3! ♔d4 3 ♔b3! ♔e3 4 ♔a4! ♔d4 5 ♔b5! +–

A4.03 **M.Zinar**, 1981

This exercise is extremely difficult because at first the white king has to take a very circuitous route. The position with w♔f7 and b♔d5 surprisingly is one of reciprocal zugzwang:

1 ♔g7!!
1 e4? ♔d6! =; 1 e3? ♔d5 =; 1 ♔e7? ♔c4! 2 ♔e6 (2 e4 ♔xc3! 3 e5 c5 4 ♔d6 c4! 5 e6 ♔b2 6 e7 c3! 7 e8♕ c2! = (3.08)) 2...♔xc3! 3 ♔d5 ♔b4! 4 e4 (4 ♔c6 ♔c4!

=) 4...c5! =; 1 ♔f7? ♔d5! 2 ♔f6 ♔c4! 3 e4 ♔xc3 4 e5 c5! 5 e6 c4 6 e7 ♔d2!! 7 e8♕ c3! =; also have a look at 3.10.
1...♔d5 2 ♔f7! ♔e5
2...♔c4 3 e4! ♔xc3 4 e5! c5 5 e6! ♔d2 6 e7! c4 7 e8♕! c3 8 ♕d8+! (the decisive difference from the line with 1 ♔f7? is the fact that now the white king is not in the way of his queen) 8...♔c1 9 ♕g5+! ♔b1 10 ♕b5+ ♔c1 11 ♔e6 c2 12 ♔d5! ♔d2 13 ♕b2 ♔d1 14 ♕d4+ +–.
3 ♔e7 ♔d5 4 ♔d7! ♔c4 5 ♔c6!
5 e4? ♔xc3! 6 e5 c5! 7 e6 ♔d2 8 e7 c4! 9 e8♕ c3! = (3.09).
5...♔xc3 6 ♔c5! +–

A4.04 After **Van Nyevelt**, *Superiorité*, 1792

Black can only manoeuvre within the square of the a-pawn. Nevertheless he manages to defend the key squares c4, d4 and e4-e7 (they are all within the square) if he always takes the most simple form of opposition:

1...♔d5! 2 ♔f4 ♔d4! 3 ♔g5 ♔e5!
3...♔c5? 4 ♔g4! +–; Black has no access to the c4-square.
4 ♔h6 ♔d6! 5 ♔h7 ♔d7! 6 ♔g8 ♔e8
6...♔e6 (the e8-square is not a key square because Black can keep the opposition on the sixth rank) 7 ♔f8 ♔d6! 8 ♔e8 ♔e6! 9 ♔d8 ♔d6! 10 ♔c8 ♔c6! 11 ♔b8 ♔b6! 12 ♔a8 ♔a6 = (12...♔a5 13 ♔b7 stalemate).
7 ♔g7 ♔e7! 8 ♔g6 ♔e6! 9 ♔h5 ♔d5! 10 ♔h4 ♔d4! 11 ♔h3 ♔d5!
Virtual opposition.
12 ♔g3 ♔e5! 13 ♔f2 ♔d4
13...♔e4 14 ♔g2 ♔d4! 15 ♔h2 ♔e4! =; 13...♔e6 = see 12.04.
14 ♔g2 ♔e4! 15 ♔h2 ♔d4! =
Also sacrificing the a-pawn doesn't help since Black is able to defend the key squares of White's b-pawn. The system of corresponding squares in this position will be explained in Chapter 12. 15...♔d5? 16

♔h3! ♚d4 17 ♔h4! ♚d5 18 ♔h5! ♚d4
19 ♔g6 ♚c5 20 ♔g5 ♚c6 21 ♔f4 ♚d5
22 ♔f5! ♚d4 23 ♔e6 ♚c5 24 ♔e5 ♚c6
25 ♔d4 1-0 was the finish in E.Schmitt-
diel-N.Heck, Bad Zwesten 1997.

A4.05 N.Grigoriev, *Izvestia,* 1921
Have you discovered the correspond-
ing squares and how Black adheres to
them exactly?
1...♔f3!
1...♔e3? 2 ♔d1! ♔f3 (2...♔d4 3 ♔e2!
+−) 3 ♔c1! ♔e3 4 ♔b1! ♔d4 5 ♔a2!
♔c5 6 ♔b3 ♔d4 7 ♔b4 +−.
2 ♔d1
2 ♔f1 ♔e3! 3 ♔e1 ♔f3! = blocks the
way to the key squares e2 and f2.
**2...♔e3! 3 ♔c1 ♔d4! 4 ♔b1 ♔c5! 5
♔a2 ♔b4!**
Now White can't occupy the key
square b3.
**6 ♔a1!? ♔b5! 7 ♔b1 ♔c5! 8 ♔c1
♔d4! 9 ♔d1 ♔e3! 10 ♔e1 ♔f3! 11 ♔f1
♔e3! =**
For a detailed explanation see 12.01.
■ If the starting position is moved one
file to the right, White wins because then
he can use the a-file to penetrate with his
king. But if one moves it to the left it be-
comes easier for Black because then
White can't break through on the queen-
side at all. It follows that in this case also
1...♔d3 draws and not only 1...♔e3.

A4.06 G.Walker, 1892
This position is an exception to the
rules in 4.08 and 4.09 due to the addi-
tional very dangerous breakthrough f5-
f6. White wins, whoever is to move:
1 ♔d5
1 f6+? doesn't work immediately:
a) 1...gxf6+? 2 ♔f5! ♚e8 3 ♚e6! ♚f8
(3...f5 4 g7 +−) 4 ♚xf6! +−.
b) 1...♚f8! 2 f7 = (6.01E).
1...♚f6 2 ♚e4! ♚e7 3 ♚e5! ♚f8
3...♚d7 4 f6! ♚e8 5 fxg7! +−.

4 ♚d6 ♚e8
4...♚g8 5 ♚e7 +−.
**5 ♚e6 ♚f8 6 ♚d7! ♚g8 7 ♚e7 ♚h8 8
f6 gxf6 9 ♚f7 +−**

A4.07 N.Grigoriev, *Shakhmatny listok,*
1931
White has two spare tempi. Neverthe-
less he has to be careful since there is not
much space to penetrate on the queen-
side:
1 ♚e2! ♚d7 2 ♚d3! ♚e7
Or 2...♚e6, and now:
a) Not 3 ♚e4? ♚f6! 4 b3 (4 ♚d4
♚f5! 5 ♚c4 ♚e6! 6 ♚b4 ♚d5! 7 b3 ♚d4!
=) 4...♚e6! 5 b4 ♚f6! 6 ♚d4 ♚e6! 7 ♚c4
♚d7! = (4.08).
b) 3 ♚c4! ♚d7 4 ♚b4 +−.
3 ♚c3! ♚e6 4 ♚c4!
And as in 4.11.
4...♚d7
4...♚e5 5 b4! ♚e6 6 b5! +−.
**5 ♚b4 ♚c7 6 ♚a5 ♚b7 7 b3! ♚a7 8
♚b4! ♚b7**
8...♚a6 9 ♚c3 ♚b5 10 b4! ♚a6 11
♚c4! ♚b7 12 ♚d4! +−.
**9 ♚c4 ♚c7 10 ♚d4! ♚d7 11 ♚e5!
♚e7 12 b4! +− (4.09)**

A4.08 Maizelis (after **Dedrle**), 1954
If White is to move, he wins as in 4.10
by marching his king to the queenside: **1
♚g3 ♚g5 2 ♚f2! ♚f6** (2...♚h4 3 ♚e2
♚g3 4 f4! ♚g2 5 e4 +−) **3 ♚e2! ♚e5 4
♚d3! ♚d5 5 f4! +− (4.08).**
If Black is to move, he can just hold
the position by an elegant king ma-
noeuvre. This prevents White from mak-
ing any progress on the kingside, and in
case of an attack on the queenside he
comes just in time with some counter-
play with his f-pawn: **1...♚g5! 2 ♚g2** (2
♚g3?! f4+! =) **2...♚f6! 3 ♚g3 ♚f7! 4
♚f2 ♚e6 5 ♚e2 ♚d5 6 ♚d3 ♚c5! 7 ♚c3**
(7 e4 ♚d6! 8 exf5 ♚e5! 9 f6 ♚xf6! 10
♚e4 ♚e6! =) **7...♚d5! 8 ♚b4!? f4! 9 e4+**

♔d4! 10 ♔b3 ♔e3! 11 e5 ♔xf3! 12 e6 ♔g2 13 e7 f3! 14 e8♕ f2! = (3.08).

A4.09 N.Grigoriev, *La Stratégie*, 1936
In this example only a counter-attack against the black pawns helps. One has to be very precise due to the many positions with reciprocal zugzwang:
1 ♔d5!
1 ♔f4? ♔h4 2 ♔f3 g5 3 ♔f2 ♔g4 4 ♔f1 ♔g3 5 ♔g1 f5 −+.
1...♔g4 2 ♔e6! f5
2...♔g5 3 g3! (3 ♔f7? ♔f5! 4 ♔g7 g5! 5 ♔f7 g4 6 g3 ♔e4 −+) 3...f5 4 ♔f7! ♔h5 5 ♔f6! ♔h6 6 ♔e6! =.
3 ♔f6! g5 4 ♔e5! f4 5 ♔f6! ♔h4 6 ♔f5! ♔h5 7 ♔e5! ♔g6 8 ♔e4! ♔f6 9 g3! with a draw.

A4.10 N.Grigoriev, *64*, 1933
If you have looked at 4.12 carefully it certainly wasn't a problem to find the unusual key move:
1 ♔a1!!
1 ♔b2? d4! 2 ♔c1 ♔c3! 3 ♔d1 d3! 4 cxd3 ♔xd3! =.
1...♔c3
1...d4 2 ♔b2! +−.
2 ♔b1! ♔b4
2...d4 3 ♔c1! +−.
3 ♔c1!
3 ♔b2? d4! =.
3...♔c3 4 ♔d1! d4 5 ♔c1! d3 6 cxd3! ♔xd3 7 ♔b2! ♔d4 8 ♔a3! ♔c5 9 ♔a4! ♔b6 10 ♔b4! +−

A4.11 A.Herberg, 1936
White is only successful with an elegant king manoeuvre:
1 ♔g3!
1 g3? ♔g4! 2 ♔g2 f5 =.
1...f5
1...f6 2 ♔h3! f5 3 ♔g3 +−.
2 ♔f3!!
2 ♔f4? ♔xh4! 3 ♔xf5 ♔g3! =; 2 ♔h3? f4! =.

2...♔xh4 3 ♔f4! +−
If the position is moved one file to the left, then not only does 1 ♔f3 win, but also 1 f3 ♔f4 2 ♔f1 e5 3 ♔f2! e4 4 fxe4! +−.

A4.12 Von der Lasa, 1843
If White is to move, he wins by using his pawn moves in a clever way and finally, according to 4.14, engages in an encirclement.
1 ♔b3!
1 b3? ♔b4 2 d4 ♔a5 3 ♔c3 ♔b5! 4 b4 c6 = (see also 4.13).
Not 1 ♔c3? ♔c5!:
a) 2 b3 ♔b5! 3 d4 (3 b4 c5! =) 3...c6 drawing.
b) 2 b4+ ♔b5! 3 ♔b3 c6! =.
1...♔c5
1...c6 2 d4 +−; 1...c5 2 ♔c3 c4 3 b3 and wins.
2 ♔c3! c6
2...♔d5 3 b4! +−; 2...♔b5 3 d4! +−.
3 b4+ ♔b5 4 ♔b3! ♔a6
4...c5 5 bxc5! ♔xc5 6 ♔c3! +−.
5 ♔c4! ♔b6 6 d3! ♔c7 7 ♔c5! ♔d7
7...♔b7 8 b5 cxb5 9 ♔xb5! and White wins.
8 ♔b6! ♔d6 9 d4 +− (4.14).
If Black is to move, then he can easily draw due to his active king after **1...♔b4** or **1...♔c4.**

A4.13 A.Herberg, 1935
Though White can't go round Black (see 4.14) he can push him so far back that finally a breakthrough becomes possible:
1 ♔a7!
1 ♔b7? ♔f7! 2 ♔a8 ♔e8! 3 e5 ♔e7! = (3...♔d7? 4 ♔b7! +−); 1 ♔b5? ♔f7! (virtual opposition) 2 ♔a5 ♔e7 3 ♔a6 ♔e6! 4 ♔b6 ♔f6! 5 ♔a7 ♔e5 =.
1...♔g7
1...♔f7 2 ♔b7! +−; 1...♔g5 2 ♔b7 +−.

2 ♔a8!! ♚g8 3 e5! dxe5 4 c5! and wins.

White queens with check.

■ In 1929, Mandler placed the kings at h5 and a7 (1 ♔g6! +−).

A4.14 N.Grigoriev, 1936

Since 4.16 was won whoever is to move, White immediately has to get his king to c4:

1 ♔b3! ♚d6 2 ♔c4!

2 ♔c3? ♚c5 −+ (4.16).

2 ♔b4?:

a) 2...c5+?! 3 ♔c4 ♚c6! 4 c3 (4 ♔d3 ♚b5! 5 ♔c3 c4 −+) 4...♚d6 5 ♔d3 ♚d5! −+.

b) 2...♚d5 3 ♔c3 ♚c5 −+.

2...c5 3 ♔d3! ♚d5

3...♚c6 4 c4! ♚b6 5 ♔c2 ♚a5 6 ♔b3! =; 3...♚e5 4 ♔c4! ♚d6 5 ♔d3! =.

4 c3! c4+ 5 ♔e3! ♚c5 6 ♔e4! c6 7 ♔e3! ♚b6!?

7...♚d5 8 ♔f4 ♚c5 9 ♔e3! =.

8 ♔d2! ♚b5 9 ♔c2 ♚a5 10 ♔b1 =

Not, of course, 10 ♔b2? because of 10...♚a4! 11 ♔a2 ♚b5! −+.

5 Unique Features of the Rook's Pawn

We already know from the first two chapters that the chances for defence increase considerably with the existence of rook's pawns. To sharpen the eye of the reader again we have summarized the special features of the rook's pawn in this chapter. In particular, the win of the rook's pawn doesn't necessarily lead to a win, which leads to Bähr's Rule, which is explained in 5.04. Further, the reader is encouraged to study 5.08-5.10 carefully.
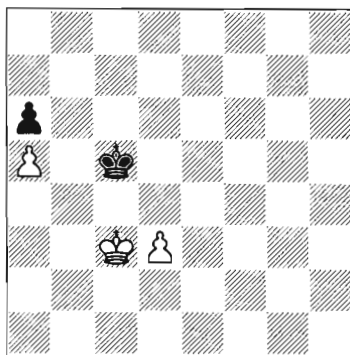
A) Blocked Pair of Pawns and a Passed Pawn

We start the same way we did in Chapter 4.

5.01   **+/–**
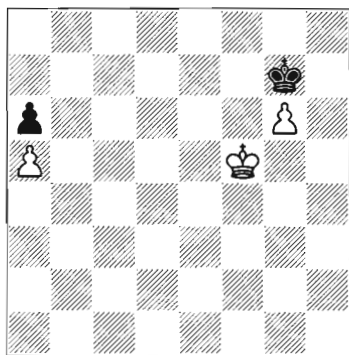
If the blocked rook's pawns are in the defender's half of the board, the sacrifice of the passed pawn in order to deflect the opponent's king usually leads to an easy

win since the white king can immediately occupy the key square b7 after he has taken the pawn. First, however, White has to win an important tempo:

1 ♔g5!
1 ♔e6? ♔xg6! 2 ♔d6 ♔f6 3 ♔c6 ♔e6 4 ♔b6 ♔d6 5 ♔xa6 ♔c6 =.
1...♔g8 2 ♔f6 ♔f8 3 ♔e6
3 g7+? ♔g8! =.
3...♔g7 4 ♔d6 ♔xg6 5 ♔c6 ♔f6 6 ♔b6 ♔e6 7 ♔xa6! ♔d7 8 ♔b7! +−

Since the tempo-gain would fail due to stalemate, 5.01 moved one rank up the board would only be a draw.

If the passed pawn is not far advanced, one has to look out for a counter-attack like in Chapter 4:

5.02   **=/–**

If White is to play, he cannot win: **1 d4+ ♔b5! 2 ♔b3 ♔xa5! 3 ♔c4 ♔b6! 4 ♔d5 ♔c7 5 ♔e6 ♔d8 6 ♔d6 a5!** forcing a draw.

If it is Black to move, the edge of the board will be fatal for him:

1...♔b5
1...♔d5 2 d4 ♔d6 3 ♔c4 ♔c6 4 d5+ ♔d6 5 ♔d4! ♔d7 6 ♔c5 ♔c7 7 d6+ ♔d7 8 ♔d5! ♔d8 9 ♔c6! ♔c8 10 ♔b6! ♔d7 11 ♔xa6! ♔xd6 12 ♔b7 +–.

2 ♔d4! ♔b4
Black resists...

3 ♔d5! ♔xa5 4 ♔c5!
...but is finally blocked. The white d-pawn is too fast:

4...♔a4 5 d4! ♔b3 6 d5! a5 7 d6! a4 8 d7! a3 9 d8♕! a2 10 ♕d4 +–

If the blocked pawns are on the middle ranks, White needs one more move to reach the key square b7 or, to put it the other way around, Black has one more tempo to reach the saving square c8. So everything depends on how far the passed pawn is already advanced.
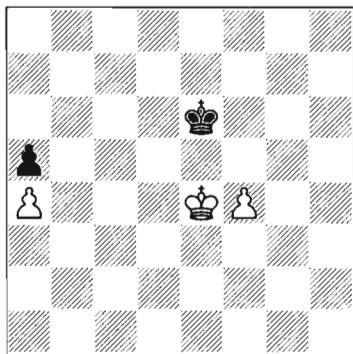
5.03   **+/–**

Here the pawn is just far enough back to enable White to win:

1 ♔d4
After 1 f5+? Black only needs three moves after taking the f-pawn to get to the c8-square: 1...♔f6 2 ♔f4 ♔f7 3 ♔e5 ♔e7! 4 ♔d5 ♔f6! 5 ♔c5 ♔xf5! 6 ♔b5 ♔e6! 7 ♔xa5 ♔d7! 8 ♔b6 ♔c8! =.

1...♔f5 2 ♔c5 ♔xf4 3 ♔b5 ♔e5 4 ♔xa5! ♔d6 5 ♔b6! ♔d7 6 ♔b7! +–

The different pawn formations that are based on this principle made the theorist Bähr in 1936 define a rule that is named after him. It predicts the outcome of these positions, and we will now take a closer look at it:

A1) Bähr's Rule

Of course one could also evaluate the outcome by pure counting. Whoever prefers this can go straight on to the diagram. For our formulation of the rule one always has to evaluate the point of intersection between the diagonal of the pawn to the 8th (1st) rank and the c-file (if there is no point of intersection then it will be the c8-square; in example 5.03 therefore it is the c7-square).

Bähr's Rule (from the defender's viewpoint) states: the position is a draw if the distance between the defender's king and the passed pawn is smaller than the distance between the defender's pawn and the evaluated point of intersection. Otherwise the position is lost if no successful counter-attack (like in 5.02) is possible. Distance of course means the amount of moves that a king needs to make the journey.

For reasons of clarity we again summarize the requirements:

1) The rule is applicable with blocked a-pawns and passed pawns from d- to h-file.

2) The kings must have conquered the maximum space (look at the win of tempo in 5.01).

3) The attacking king mustn't be able to occupy the key squares of his passed pawn.

After so much theory now back to the practice (*see next diagram*):

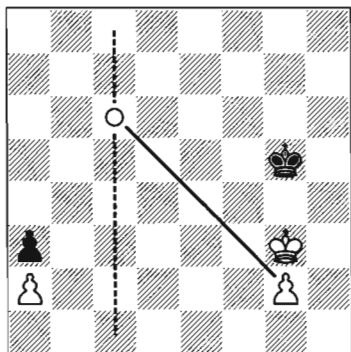The black king is two squares away from the f-pawn; on the other hand the
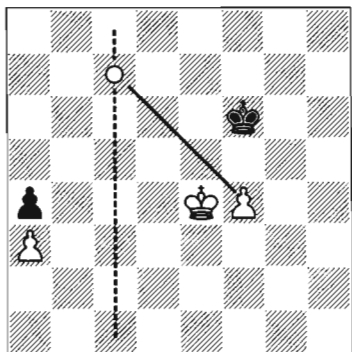
5.04 =/=

point of intersection is three squares away from a4. Therefore the position is a draw:
1 ♔d4 ♔f5! 2 ♔c4 ♔xf4! 3 ♔b4 ♔e5 4 ♔xa4 ♔d6 5 ♔b5 ♔c7 =

The following position also illustrates the rule:

5.05 +/−

Here the point of intersection is c6, and the distances are therefore equal (3 and 3). White wins as follows:
1 ♔f3! ♔f5
1...♔h4 2 ♔f4! and White queens the g-pawn.
2 ♔e3 ♔g4 3 ♔d3 ♔g3 4 ♔c3 ♔xg2 5 ♔b3 ♔f3 6 ♔xa3! ♔e4 7 ♔b4 ♔d5 8

♔b5! ♔d6 9 ♔b6! ♔d7 10 ♔b7! and White wins.

But there are a few exceptions to the rule, when the passed pawn is not too far advanced. Here one has to calculate precisely whether the counterattack is successful:
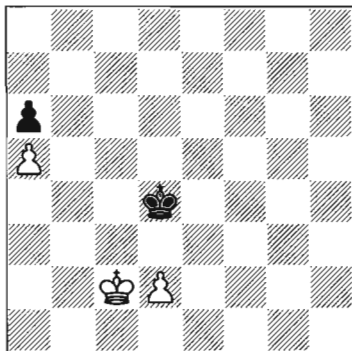
5.06 +/=

If White is to move, he wins (also with the king on e2), though the evaluation (3-2) predicts a draw:
1 d3!
1 ♔b3? ♔d3! (1...♔c5? 2 ♔c3! ♔b5 3 ♔d4! ♔xa5 4 ♔c5! ♔a4 5 d4! ♔b3 6 d5! +− (5.02)) 2 ♔b4 ♔d4! 3 d3 ♔xd3! 4 ♔c5 ♔e4! = (2.10).
1...♔d5 2 ♔d2!
2 ♔c3? ♔c5! 3 d4+ ♔b5! is a draw (5.02).
2...♔d4 3 ♔e2! ♔c5 4 ♔e3! ♔d5
4...♔b5 5 ♔d4! ♔b4 6 ♔d5! ♔xa5 7 ♔c5! +− (5.02).
5 d4! ♔c6 6 ♔e4! ♔d6 7 d5 ♔d7 8 ♔e5 ♔e7 9 d6+ ♔d8 10 ♔d5 ♔d7 11 ♔c5 ♔d8 12 ♔b6 +−
If Black is to move, he draws with **1...♔c4!**, so the position must be an exception in any case since the rule doesn't depend on the right to move.
Further exceptions are:

1) w♔d2,△a5,e2; b♚d4,△a6 is with White to move a draw and not won, as the evaluation (2-2) would predict;

2) w♔e3,△a6,d2; b♚e5,△a7 is won, whoever is to move;

3) 5.02 with White to move is a draw and not won.

Of course there are also exceptions when the kings are still further away from the pawns, e.g.
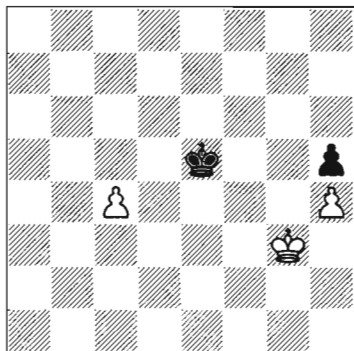
5.06A   **+/=**
P.Motwani – J.Shaw
Scottish Ch 1993

1...♚e4!! =

We have a reciprocal zugzwang with White to move. 5.06A with a pawn at c3 instead of c4 would therefore be won for White after 1...♚e4 2 c4! +−.

In endgame literature **Bähr's Rule** is often formulated in the following way (from the viewpoint of the attacker):

Requirement: the attacking king is next to his passed pawn, and the defending king is in front of the pawn.

1) When the blocked rook's pawn has passed the middle of the board, the attacker will win.

2) If it is still in his half of the board, one has to draw the diagonal of the defender's pawn to the c-file and, from

the point of intersection of the c-file, the 'border diagonal' to the first rank of the attacker. If the passed pawn is below or on the 'border diagonal' the position is won; otherwise it is a draw.
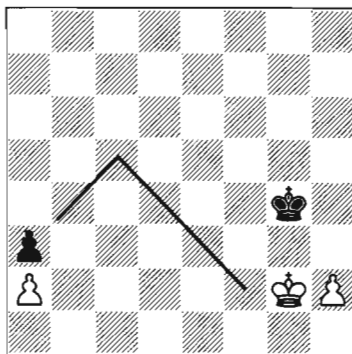
5.06B   **=/=**

The diagonals go from a3 to c5 and from c5 to f2. The passed pawn on h2 is above the border diagonal, therefore the position is drawn. One can also apply the rule if the attacking king has conquered more space but is not placed on a key square. Thus with the kings at g3 and g5 one has to look at the diagonals a4-c6-g2 and with kings at g4 and g6 at the diagonals a5-c7-h2. Of course also for this formulation there exist the corresponding exceptions (see, for example the list following Av 219).
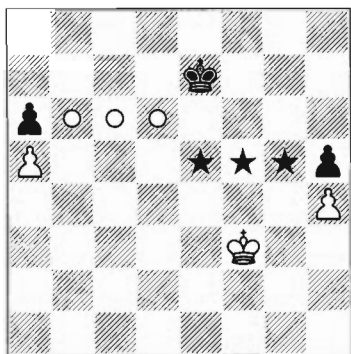
We now want to have a look what consequences our considerations have for the fight for the critical squares (*see following diagram*):
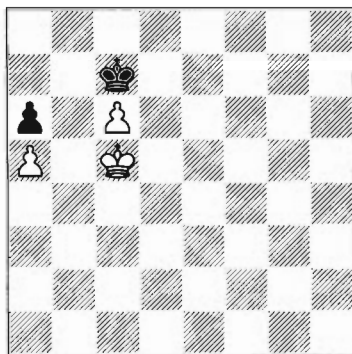
1 ♔e3!?

Though this forces the capture of one of the two pawns, it is Black who decides which one and therefore he can draw.

1...♚f7!

Black has to keep the h5-pawn; otherwise he would lose, due to Bähr's Rule.

5.07 =/=
W.Bähr, 1935

5.08 +/−
H.Fahrni – S.Alapin, 1917

Thus he only fights for the squares e5, f5 and g5.

2 ♔d4 ♔f6! 3 ♔d5!? ♔f5! 4 ♔c6 ♔e6 4...♔g4? 5 ♔b6 +−.

5 ♔b6 ♔d6 6 ♔xa6 ♔c6 7 ♔a7 ♔c7! 8 a6 ♔c8! 9 ♔b6 ♔b8! 10 ♔c6 ♔a7! 11 ♔d6 ♔xa6! 12 ♔e6 ♔b6 13 ♔f6 ♔c6 14 ♔g6 ♔d6 15 ♔xh5 ♔e7! 16 ♔g6 ♔f8! =

■ There are a great many studies concerning this issue (see for example *ECE* 243-68). For instance: w♔e1, △b4, h4; b♔e8,△b5,h5 (Capablanca, 1921, *ECE* 254); whoever is to move wins, e.g. 1 ♔e2! ♔f8 2 ♔d3! ♔e7 3 ♔e3! +−. Furthermore, one must be aware that although it is generally best for the attacker to have the pawn far-advanced, there is a danger of the king being blocked in at the edge of the board. In 1936 Bähr demonstrated this in an extraordinary way: w♔d1,△a2,h3; b♔d5, △a3,h4 (*ECE* 264). White has to defend the key squares of the h3-pawn and block the black king in the corner after ...♔xa2, thus 1 ♔e1!! =.

A2) Bishop's Pawn and Rook's Pawn vs Rook's Pawn

Like in Chapter 4, we also face some problems here because of the proximity of the blocked pawns:

If Black were to move, he would be in zugzwang and would have to allow the white king to b6. However, it is White to move and it seems as if he is in zugzwang. This is not true though, because behind him he has more space available than Black, who always has to answer ♔d5 with ...♔c8 and he can only move to c7 after ♔c5. Therefore c4 or d4 and b8(d8) are further corresponding squares (in Chapter 12 we will deal with the theory of corresponding squares in more detail). Since c4 and d4 are next to each other but b8 and d8 are not, a so-called triangulation leads to victory:

1 ♔d5! ♔c8 2 ♔d4 ♔d8 3 ♔c4 ♔c8 4 ♔d5! ♔c7

4...♔d8 5 ♔d6! ♔c8 6 c7! ♔b7 7 ♔d7! ♔a7 8 ♔c6 +− (8 c8♕?? stalemate; 8 c8♖, ♗ or ♘+ +−; the subject of underpromotion will be covered in Chapter 6).

5 ♔c5!

This produces the starting position with Black to move.

5...♔c8 6 ♔b6! 1-0

Due to 6...♔b8 7 ♔xa6! ♔c7 8 ♔b5! +−.

An exercise for the indefatigable: try to figure out whether the c-pawn fits into our formulation of Bähr's Rule.

If the rook's pawn of the defender is still on its starting square then the winning method we have just seen isn't practicable. But if the attacker's rook's pawn has also not been moved, then he still wins without difficulty. As, for example, Aron Nimzowitsch (in section 4.7 of *My System*) explains brilliantly in his own way, the f-pawn can just be advanced and then be queened:
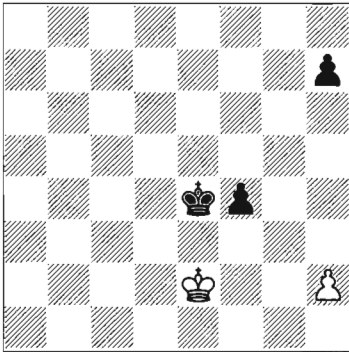
5.09   **–/+**
U.Garbisu – J.M.Gomez Esteban
Pamplona 1993/4

1 ♔f2 f3! 2 ♔f1

2 ♔e1 ♔e3! 3 ♔f1 f2 4 h3 h6 5 h4 h5 6 ♔g2 ♔e2! –+.

2...♔e3! 0-1

The black h-pawn still has the double step so that he can always react accordingly: 3 ♔e1 f2+ 4 ♔f1 ♔f3! 5 h3 (5 h4 h6 6 h5 ♔e3 –+) 5...h5 6 h4 ♔e3 –+.

Play is a lot more complicated if the rook's pawn has already moved (*see diagram 5.10*):

White can draw in a study-like way because he manages to prevent Black from getting the opposition at f4.

In the game, he erred by 1 ♔g3? h5! 2 ♔f3 h4! 3 ♔g2 ♔g4! 4 ♔f2 ♔f4! 5 ♔e2 ♔e4! 6 ♔f2 ♔d3! 7 ♔f3 h3!! and White
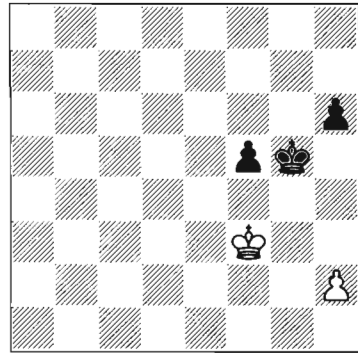
5.10   **=/=**
R.Vaganian – J.Sunye Neto
Rio de Janeiro IZ 1979

resigned. The reader should try to memorize the position after 7...h3!! *(D)*, for only it can explain the nuances of the main variation (see 12.05-12.08 for a detailed discussion of the corresponding squares).
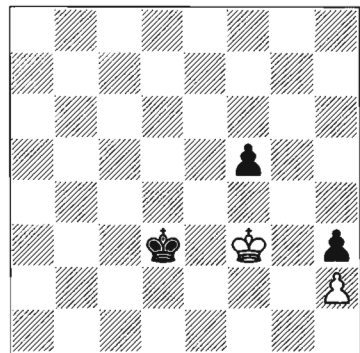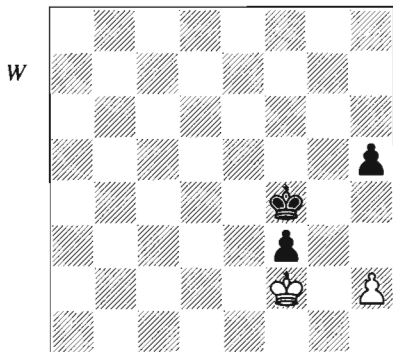

a) 8 ♔f2 ♔d2! 9 ♔f3 (9 ♔f1 ♔e3! 10 ♔e1 f4 11 ♔f1 ♔f3! –+) 9...♔e1! 10 ♔e3 (10 ♔g3 ♔e2 11 ♔xh3 f4 –+) 10...♔f1! 11 ♔f3 ♔g1! 12 ♔g3 f4+! 13 ♔f3 ♔h1 –+.

b) 8 ♔f4 ♔e2! 9 ♔xf5 ♔f3! –+ (A2.03).

This winning manoeuvre was first shown by Maizelis.

Instead, White could have secured a draw as follows:

1 ♔e2!! ♔g4 2 ♔e3!

2 ♔f2? ♔f4 3 ♔e2 ♔e4 4 ♔f2 h5! 5 ♔e2 h4! 6 ♔f2 ♔d3! 7 ♔f3 h3! –+.

2...h5

2...♔h3 3 ♔f4! =.

2...f4+ 3 ♔f2 h5 4 ♔e2 ♔f5 5 ♔f3 ♔e5 6 ♔f2 ♔e4 7 ♔e2! f3+ 8 ♔f2 ♔f4 *(D)*.

W

When the h-pawn is at h6, h5 or h4 White draws by moving his king to a square with the same colour as the h-pawn (if it is still at h7 he will lose in any case and versus the pawn at h3 he always draws). 9 ♔f1! ♔e3 10 ♔e1! f2+ 11 ♔f1! ♔f3 12 h3! =.

3 ♔f2! ♔f4 4 ♔e2! ♔e4 5 ♔f2! h4

5...♔d3 6 ♔f3! h4 7 h3 ♔d2 8 ♔f4 ♔e2 9 ♔xf5 ♔f3 10 ♔e5! = (2.10).

6 ♔e2! f4 7 ♔f2! f3

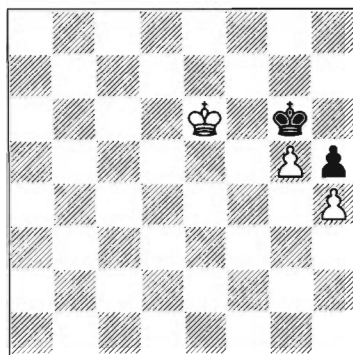The h-pawn is on a dark square, so:

8 ♔e1

Or 8 ♔g1, but not 8 ♔f1? ♔e3! –+.

8...♔e3 9 ♔f1! f2 10 h3! =

B) Protected Passed Pawn

Here one has to watch out for a stalemate *(see next diagram)*.

If White is to move, he can't directly make any progress, thus he once again

5.11 +/–

N.Grigoriev, 1930

has to give Black the move. How can one lose that tempo? Of course, a triangulation offers itself:

1 ♔d6

1 ♔e5 ♔f7 2 ♔f5 ♔g7 3 g6? ♔h6! =. This doesn't lead to a win because of the edge of the board (stalemate).

1...♔f7

1...♔g7 2 ♔e7 ♔g6 3 ♔f8 +–.

2 ♔e5 ♔g7

2...♔g6 3 ♔e6 (now we have the starting position with Black to move) 3...♔g7 4 ♔f5 +–.

3 ♔f5 ♔f7
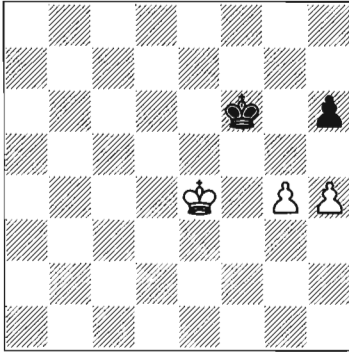
3...♔h7 4 ♔f6 ♔g8 5 ♔g6 +–.

4 g6+ ♔g7 5 ♔g5! +–

If one moves 5.11 one rank up the board, this winning manoeuvre doesn't work any longer and the position is drawn (see in Chapter 6 about fortresses).

C) Others

We now consider cases where there are no passed pawns *(see next diagram)*.

If Black is to move, he draws with 1...♔e6!, while White can get to the key squares of the h6-pawn by means of an encirclement:

5.12   +/=
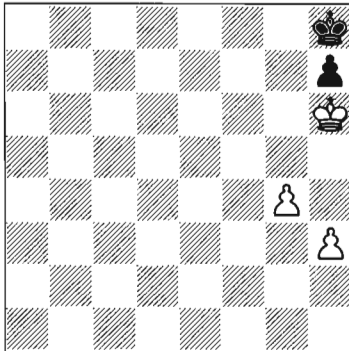
1 ♔d5! ♔e7 2 ♔e5! ♔f7 3 ♔f5!

3 ♔d6?! still wins, but represents a
loss of time: 3...♔f6 4 ♔d5! ♔f7 5 ♔e5!
♔e7 6 h5 +−.

3...♔g7 4 ♔e6! ♔g6

4...h5 5 g5! +− (5.11).

5 h5+ ♔g5 6 ♔f7! ♔xg4 7 ♔g6! and
wins.

With rooks' pawns, even an active
king is no guarantee of a win:

5.13   =/−

Here everything depends on who is to
move. If it is White to play, then he can-
not win:

1 h4

1 ♔g5 ♔g7 2 h4 ♔f7 (2...h6+? 3 ♔f5!
♔f7 4 h5! +−) 3 h5 ♔g7 4 h6+ =; the
black king can't be forced out of the
corner (see Chapter 6). 1 ♔h5!? ♔g8
(1...♔g7 2 ♔g5 ♔g8! 3 ♔f6 ♔f8! 4 h4
♔g8! 5 ♔e6 ♔g7 6 h5 ♔g8 7 ♔f6 ♔f8! 8
g5 ♔g8 9 g6 hxg6 =) 2 ♔g5 ♔g7! =.

**1...♔g8 2 h5 ♔h8! 3 g5 ♔g8 4 g6
hxg6**

4...♔h8 5 ♔g5 hxg6 also leads to a
draw.

5 hxg6 ♔h8! =

If Black is to move, he loses: **1...♔g8
2 h4 ♔h8 3 g5 ♔g8 4 h5! ♔h8 5 g6 hxg6**
(5...♔g8 6 g7! ♔f7 7 ♔xh7! +−) **6 hxg6!**
♔g8 7 g7! +−.

With the white h-pawn still at h2, 5.13
would be won, whoever is to move, due
to the possible double step. But if the
kings were on g5 and g7, even the double
step would not help, for example 1 ♔h5
h6! =, 1 ♔f5 ♔f7 =, 1 h3 ♔g8! = or fi-
nally 1 h4 ♔f7 =.

If the pawns are still further back it be-
comes a lot more complicated:
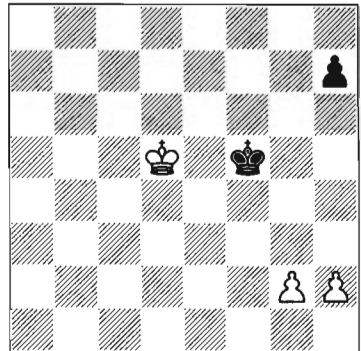
5.14   +/=
F.Dedrle
La Stratégie, 1936

This study is exactly on the borderline
between a win and a draw. With White to

move, the activity of the black king is not sufficient to avoid a loss:

1 ♔d6!

1 ♔d4? ♔f4! 2 ♔d3 h5 3 ♔e2 h4 4 ♔f2 ♔e4! =; 1 h3? ♔f4! 2 ♔e6 ♔g3! 3 ♔f6 ♔xg2! 4 h4 ♔f3! (4...♔g3? 5 h5! ♔f4 6 h6! +−) 5 h5 ♔e4! 6 h6 ♔d5! 7 ♔g7 ♔e6! =.

1...h6

1...♔f6 2 ♔d7 ♔f7 3 h3! ♔f8 4 ♔e6! ♔e8 5 ♔f6 ♔f8 6 ♔g5 ♔g7 7 h4 +− (see 5.13).

1...h5 and now:

a) 2 ♔e7? h4! 3 h3 ♔e5! (a funny situation because the white king is hindered by the opposition to get back to his own pawns) 4 ♔f7 ♔f5! 5 ♔g7 ♔g5! 6 ♔h7 ♔h5! 7 ♔h8!? ♔h6! =. It was important that the black king had access to all necessary squares.

b) 2 ♔d5 h4 3 h3! ♔f4 4 ♔e6! and wins.

2 h3

2 ♔e7 h5 3 ♔f7 h4 4 h3! ♔g5 5 ♔g7 ♔f4 6 ♔f6 ♔g3 7 ♔g5 +−.

After 2 ♔d5? we nearly have the starting position again. Only the h7-pawn is now at h6, but this doesn't change anything with 2...h5! (2...♔f4? doesn't work: 3 ♔e6 ♔e3 4 ♔f5 ♔f2 5 h4 ♔xg2 6 h5 +−), due to 3 ♔d4 ♔f4! 4 ♔d3 h4 5 ♔d4 h3! 6 g3+ ♔f3! 7 ♔d3 ♔g2! =.

2...♔f6!?

2...♔f4 3 ♔e6! ♔g3 4 ♔f5! ♔xg2 5 h4! ♔g3 6 h5! +−.

3 ♔d7!

3 g3? ♔f5! 4 ♔d5!? ♔f6! 5 ♔e4 ♔e6! 6 g4 ♔f6! 7 ♔f4 ♔g6 8 h4 ♔f6! is a draw (5.12).

3...♔f7 4 g3 ♔f6

4...h5 5 h4 ♔f6 6 ♔d6! ♔f5 7 ♔e7! ♔g4 8 ♔f6! ♔xg3 9 ♔g5! +−.

5 ♔e8!

5 ♔d6? ♔f5! 6 ♔d5 ♔f6! =.

5...♔f5 6 ♔f7 ♔e4 7 ♔g6 ♔f3 8 g4 ♔g3 9 ♔xh6! +−

■ The extra pawn also counts when the h-pawn is already far advanced, as long as the attacking king is sufficiently active, e.g. Milošević-Diz Suares, Hamburg 1995: w♔g4,△h5; b♔e5,△g7,h7: 1 ♔g5 h6+! 2 ♔g6 ♔f4! 0-1. 1 h6!? would also have lost: 1...g6! 2 ♔g5 ♔e6! 3 ♔f4 ♔d5 4 ♔g4 ♔e4! 5 ♔g5 ♔e5! 6 ♔g4 ♔f6! 7 ♔f4 g5+! −+.

If the candidate is a rook's pawn, there might also be some problems, as the following example by von der Lasa shows. At his time it was heavily discussed in the literature. In 1925, Nikolai Grigoriev showed that if Black is to move, he manages to draw.
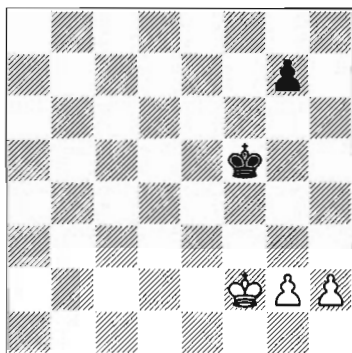
5.15   **+/=**
von der Lasa, 1843; **Grigoriev**, 1925

If White is to move, he wins quite easily:

1 ♔g3 ♔g5 2 ♔f3 ♔f5

2...♔h4 3 ♔f4 ♔h5 4 ♔f5 ♔h6 5 g4 ♔h7 6 ♔g5 ♔h8 7 ♔g6 ♔g8 8 h4 ♔h8 9 ♔f7 ♔h7 10 g5 ♔h8 11 h5 g6 12 ♔xg6 +−.

3 h4 g6 4 ♔g3 g5 5 h5 g4 6 h6 ♔g6 7 ♔xg4 +−

If Black is to move, he can place his king in such an active way that the win becomes impossible:

1...♔f4! 2 ♔e2 ♔e4!
2...g5? 3 ♔d3! g4 4 ♔d4! g3 5 h3! +−.
3 g3 ♔f5!
3...g5? 4 h3! ♔f5 5 ♔d3! ♔e5 6 ♔e3!
♔f5 7 ♔d4! ♔f6 8 g4 ♔e6 9 ♔e4! +−.
4 ♔f3 ♔g5!
4...g5? 5 ♔e3 ♔g4 6 ♔e4! ♔h3 7
♔f5! ♔xh2 8 g4! +−.
5 h3 ♔f5! 6 ♔e3 ♔e5! 7 ♔d3 ♔d5!
7...g6? 8 ♔e2! ♔e4 9 h4 ♔e5 10 ♔e3!
(10 ♔f3? ♔f5! =) 10...g5 11 h5! g4 12
h6! ♔f6 13 ♔f4! +−.
**8 h4 ♔e5! 9 ♔e3 ♔f5! 10 ♔f3 g6! 11
g4+ ♔f6! 12 ♔f4**
12 ♔e4 ♔e6! 13 g5 ♔d6! =; 12 ♔f2
♔f7! (12...♔e6? 13 ♔e2! ♔f6 14 ♔d3!
(see 1.12) 14...♔e7 15 ♔e3! ♔f6 16 ♔d4!
♔e6 17 ♔e4! +−) 13 ♔e3 ♔e7! =. Black
has to defend the key squares d5 and e5
according to the rules of the (distant) op-
position.
   12...g5+! =

D) Doubled Pawns

With doubled rook's pawns, the pros-
pects for a draw are very high. That is be-
cause the winning method of exchanging
the front pawn and winning with the back
pawn here doesn't exist.

In the following diagram, one can only
win because the defending king doesn't
get to his pawn.
   1 ♔g3!!
   1 ♔g5? ♔f2 2 ♔g6 ♔g2 3 h4 ♔h3!
(3...♔f3? 4 ♔f5! ♔g2 5 h5! ♔h3 6 ♔g5!
+−) 4 h5 ♔g4! 5 h3+ ♔h4! = is recipro-
cal zugzwang with White to move.
   1...♔e3
   1...g6 2 h4 ♔e3 3 ♔g4 +−.
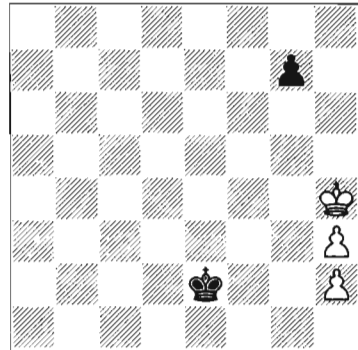
5.16   +/=
N.Grigoriev
64, 1932

1...♔f1 2 h4! g6 and now White can
play:
   a) 3 ♔f4 ♔g2 4 h5! gxh5 5 h4! and
wins.
   This manoeuvre only leads to a win
with rook's pawns. If one moved the po-
sition one file to the left, Black would be
able to defend himself (and more) by
5...♔g3! 6 ♔f5 ♔h4! −+. Therefore we
have made the other method, which also
works with doubled pawns on other files,
our main variation. According to Aver-
bakh, Grigoriev himself mistakenly be-
lieved that the combination 3 ♔f4 and 4
h5! was the only way to win and thus
concluded that the study with the doubled
pawns on other files was only a draw.
   b) 3 h3 ♔g1 (3...♔e2 4 ♔g4 ♔f2 5 h5
gxh5+ 6 ♔xh5! ♔g3 7 h4! +−) 4 h5 gxh5
5 h4 +−.
   **2 h4! ♔e4 3 ♔g4! ♔e5 4 ♔g5! ♔e4 5
h5! ♔f3 6 ♔f5! +−**
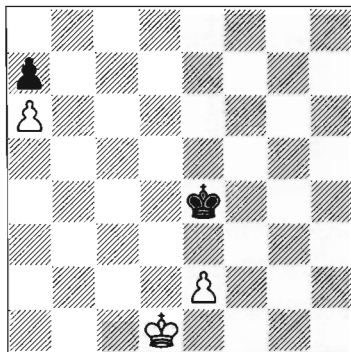   Now the black king can't keep within
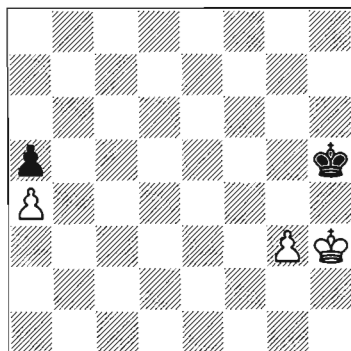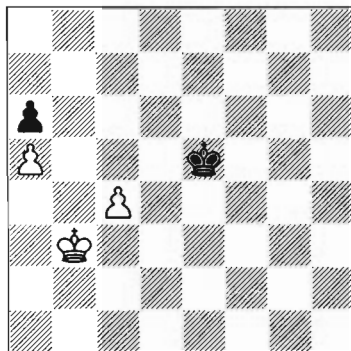two moves of the h5-pawn.

Chapter 5 Exercises
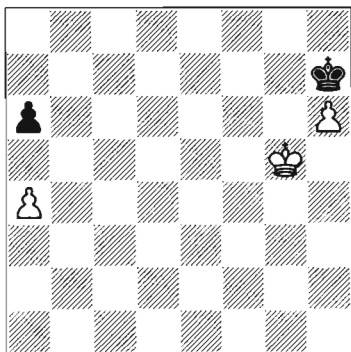
A5.01 */*

A5.04 **/

A5.02 */

A5.05 ***/
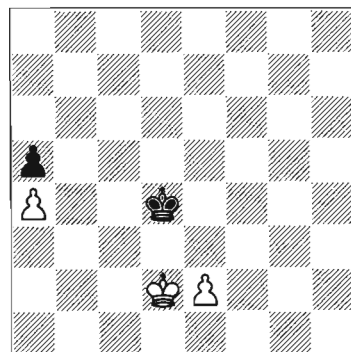
A5.03 **/
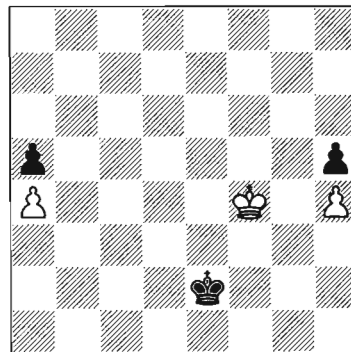
A5.06 /**
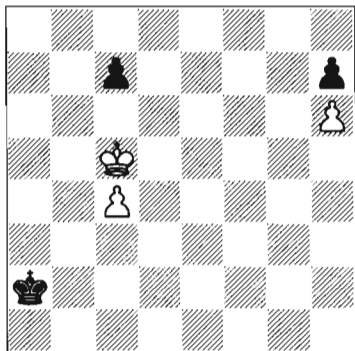
A5.07   *****/
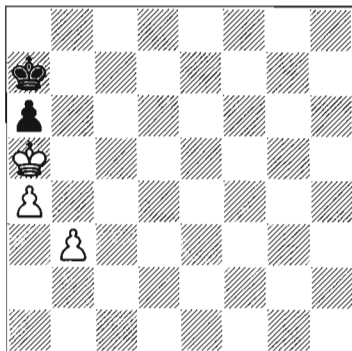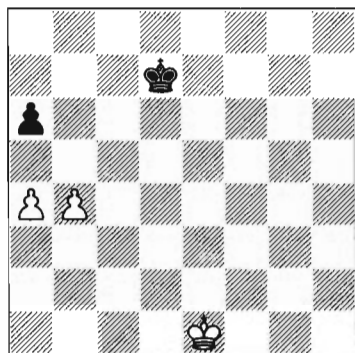

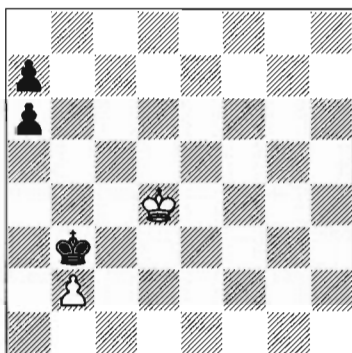**A5.09**   ****/

A5.08   **/

A5.10   ***/

Solutions to Chapter 5 Exercises

A5.01 H.Fahrni, 1917

White has to make sure that his pawn passes the middle line; then he will win as in 5.01:

1 a5!

1 ♔h5? a5! =.

1...♔g8 2 ♔f6 ♔h7 3 ♔e6 ♔xh6 4 ♔d6 ♔g6 5 ♔c6 ♔f7 6 ♔b6 ♔e7 7 ♔xa6! ♔d7 8 ♔b7! +−

If Black is to move, he draws by **1...a5!**.

A5.02 Instructive example

Hopefully you were cautious enough not to advance the pawn.

1 ♔g2

1 g4+? ♔g5 2 ♔g3 ♔g6 3 ♔f4 ♔f6! 4 ♔e4 ♔g5! 5 ♔d5 ♔xg4! 6 ♔c5 ♔f5! 7 ♔b5 ♔e6! 8 ♔xa5 ♔d7! 9 ♔b6 ♔c8! =.

1...♔g4 2 ♔f2 ♔g5 3 ♔e3 ♔g4 4 ♔d4 ♔xg3 5 ♔c5 ♔f4 6 ♔b5 ♔e5 7 ♔xa5! ♔d6 8 ♔b6! ♔d7 9 ♔b7! +−

A5.03 W.Bähr, 1935

White wins as in 5.02 by blocking the black king, and forcing a winning queen vs queen position that is familiar from Chapter 3:

1 e3+ ♔c4 2 ♔c2 ♔b4 3 ♔d3! ♔xa4 4 ♔c4! ♔a3 5 e4! ♔b2 6 e5!

6 ♔b5? ♔b3! 7 ♔xa5 ♔c4! =.

6...a4 7 e6! a3 8 e7! a2 9 e8♕! a1♕ 10 ♕e2+! ♔c1 11 ♕e1+! ♔b2 12 ♕d2+! ♔b1

12...♔a3 13 ♕b4+! +−.

13 ♔b3! +−

A5.04 J.Crum, 1913

This position is another exception to Bähr's Rule. White wins although the black king is only two moves away from the e2-pawn and the distance between a7

and c4 is 3. White manages to prevent his a-pawn from being captured by threatening to queen his e-pawn:

1 ♔e1!

1 ♔d2? ♔d4! with a draw according to Bähr's Rule (3-2). The draw is again based on a counter-attack: 2 e3+ ♔c4 3 ♔e2 ♔b5! =.

1...♔e3 2 ♔f1! ♔d4 3 ♔f2! ♔c5 4 e4! ♔b6 5 e5! ♔c5 6 ♔e3 ♔d5 7 ♔f4! ♔e6 8 ♔e4! +−

A5.05 M.Dvoretsky – A.Nikitin, *Moscow 1974*

White proceeds as in 4.04 and finally reminds himself of the triangulation:

1 ♔a4

1 c5? ♔d5 2 ♔b4 ♔e6! 3 ♔c4 ♔e5! = (4.04).

1...♔e4 2 ♔a3 ♔e5

2...♔d4 3 ♔b4! +−.

3 ♔b3! ♔d6 4 ♔c2! ♔c6

4...♔e5 5 ♔d3! +−.

5 ♔d3 ♔c5 6 ♔c3! ♔d6 7 ♔d4! ♔c6 8 c5! ♔c7

8...♔b5 9 ♔d5! +−.

9 ♔d5! ♔d7 10 c6+! +− (5.08)

A5.06 Based on **E.Colle – E.Grünfeld**, *Karlsbad 1929*

In the game the black king was at f1 and Grünfeld resigned. But with the king at e2 the position is a draw:

1...♔d3! 2 ♔g5 ♔e4! 3 ♔xh5 ♔f5! 4 ♔h6 ♔f6! 5 h5 ♔f7! 6 ♔g5 ♔g7! =

The distance between the black king and the pawn is 2, while the distance between c8 and a5 is 3. Therefore the position is a draw according to Bähr's Rule.

A5.07 F.Prokop, *Sach*, 1943

White is able to exploit the bad position of the black king:

1 ♔b4!!

1 ♔c6? ♔b3 2 ♔xc7 ♔xc4 =; 1 ♔d4? ♔b3! =.

1...♔b2
1...c6 2 c5! +–.
2 c5! ♔c2 3 ♔c4! c6
3...♔d2 4 c6 +–.
4 ♔d4!
4 ♔b4?? ♔d3! –+.
4...♔b3 5 ♔e5! ♔c4 6 ♔f6! ♔d5!?
It seems as if now White can't win since he is to move, but by means of a triangulation he can use his surplus of corresponding squares to give Black the move. Note that here the order of moves is strict (in contrast to 5.08) because the white king has to keep a distance of 2 moves from the h7-pawn due to Black's counterplay.
6...♔xc5 7 ♔g7! +–.
7 ♔f7!!
7 ♔g7? ♔e6! 8 ♔xh7 ♔f7! =; 7 ♔e7? ♔e5 = (7...♔xc5 =).
7...♔e5 8 ♔e7! ♔d5 9 ♔f6! ♔xc5 10 ♔g7! +–
A dozen exclamation marks in 10 moves underline the particular beauty and difficulty of this study.

A5.08 W.Bähr, 1936
At first White has to get the distant opposition, and then transform it, with the help of the familiar procedures, into a near opposition in order to penetrate with the king:
1 ♔d1! ♔c7 2 ♔e2!
2 ♔c2? ♔c8 = (distant opposition).
2...♔d6 3 ♔d2! ♔e6 4 ♔c3! ♔d7 5 ♔d3! ♔e7 6 ♔c4! ♔d6 7 ♔d4! ♔c6 8 ♔e5! ♔d7
8...♔c7 9 ♔d5! ♔d7 10 a5 +–.
9 ♔d5! ♔c7 10 ♔c5! ♔b7 11 ♔d6! ♔b6 12 ♔d7 ♔b7 13 a5 +–
For a detailed discussion of the corresponding squares see A12.03.

A5.09 After **Réti** and **Mandler** (1929) and **Grigoriev** (1930)
In this exercise again the method of exclusion proves to be good, after one has worked through A5.08 and doesn't want to go into a discussion of corresponding squares (see A12.04).
1 ♔b4! ♔b6 2 ♔c3!
2 ♔c4? ♔a5! 3 ♔c3 ♔b6 4 ♔d4 ♔c6 5 ♔c4 a5 = (4.08A).
2...♔a5
2...♔c5 3 b4+! +– (A5.08); 2...♔c6 3 ♔d4! (3 b4? ♔c7! =) 3...a5 4 ♔c4! +– (4.08A); 2...♔c7 3 b4! +–.
3 ♔c4! ♔b6 4 ♔d5! ♔a5 5 ♔c6! ♔b4 6 ♔b6 a5
6...♔xb3 7 a5! +–.
7 ♔a6 ♔xb3 8 ♔xa5 ♔c4 9 ♔b6! and wins.
If Black is to move, he keeps the corresponding squares by **1...♔b7! 2 ♔b4 ♔c6! 3 ♔c3 ♔b6!** and thus draws.
■ In 1929, Réti and Mandler (Av 744) created the position w♔f2,△g3,h4; b♔h7, △h6 (1 g4 +–; 1...♔g7! =) and in 1930 Grigoriev (Av 745) created w♔h4, △g3,h3; b♔h7,△h6: 1 ♔h5! +–; 1...♔g7! =.

A5.10 N.Grigoriev, *64*, 1932
White has to stay with the front a-pawn and must avoid falling into zugzwang:
1 ♔d5!!
1 ♔c5? a5! 2 ♔c6 (2 ♔b5 a4! 3 ♔a5 a6! –+) 2...♔c4! –+ (5.16).
1...♔b4
1...♔xb2 2 ♔c4! ♔a3 3 ♔c3! =; 1...a5 2 ♔c5! a4 3 ♔b5! a6+ 4 ♔a5! =.
**2 ♔c6! a5 3 ♔b7! a4 4 ♔a6! ♔c4 5 ♔a5! ♔b3 6 ♔b5! a6+ 7 ♔a5!** and White draws (5.16).

6 Fortresses, Stalemates and Underpromotion

A) Simple Fortresses

At the edge of the board and especially in the corner there are often positions in which neither a material superiority (extra pawn), nor a positional advantage (active king) can be transformed into a win. If the defence doesn't demand a great deal of precision we characterize such positions as fortresses. The knowledge of such fortresses in complicated endgames can help to find the right defence or it can be the guide for accurate play in a winning position.

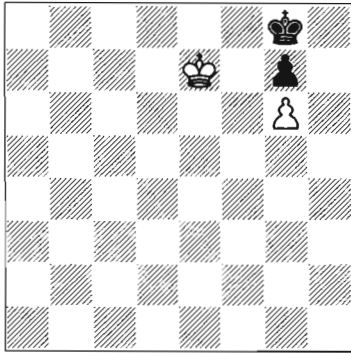Therefore the reader should commit the following eight fortresses to memory:
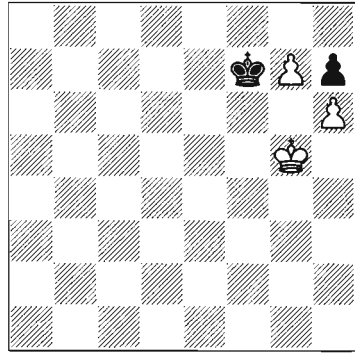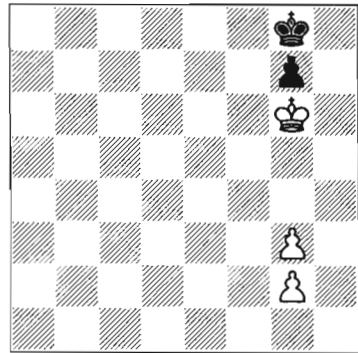

6.01B =/=
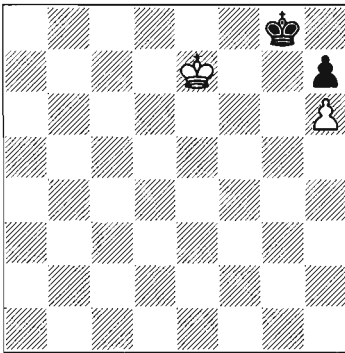
6.01A =/=
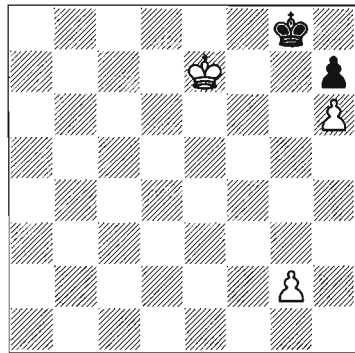
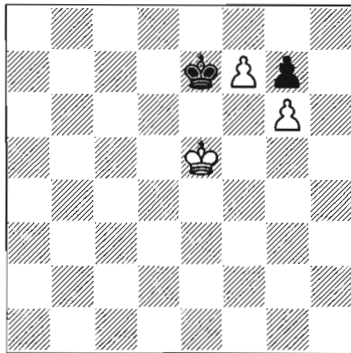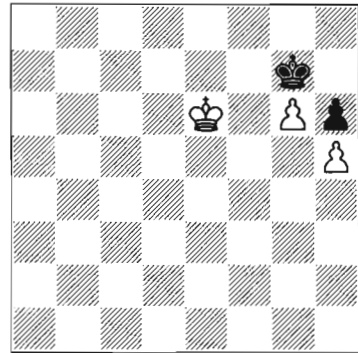**6.01C** =/=

6.01D =/=

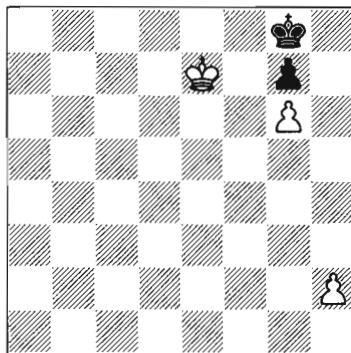**6.01G** =/=

6.01E =/=

6.01H =/=

6.01F =/=

A: **1 ♔e8 ♔h8 2 ♔f7** stalemate

Nothing changes if the blocked pawns build the base or the top of a pawn-chain, e.g. b♙g6,f5 and w♙g5,f4.

B: **1 ♔f5 ♔g8! 2 ♔f6** stalemate. The sacrifice of the g-pawn would only lead to Fortress A.

C: Here again there are no more tricks for White:

1 g4 ♔h8 2 g5 ♔g8 3 ♔f6 ♔h8 4 g6 ♔g8 =

4...hxg6 is also sufficient to draw.

D: **1 ♔e8 ♔h8 2 ♔f7** stalemate

As in 6.01A, the blocked pawns here could also be part of a pawn-chain.

E: As in 6.01B the white king can't attack the g-pawn from the right:

1 ♔d5

1 f8♕+ ♔xf8! 2 ♔d6 ♔e8 3 ♔e6 ♔f8! = (6.01D).

1...♔f8! 2 ♔e6 stalemate

F: Black shouldn't be afraid of the advance of the h-pawn:

1 h3 ♔h8 2 h4 ♔g8 3 h5 ♔h8 4 h6 ♔g8!

4...gxh6?? 5 ♔f7 +−.

5 ♔e6 gxh6! =

G: If Black stays in the corner, he has nothing to be afraid of:
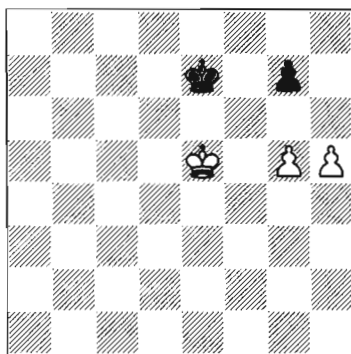
1 g4 ♔h8!

1...♔f8? 2 ♔h7! ♔f7 3 g5! ♔f8 4 g6 +−.

2 ♔f7 ♔h7! 3 g5 ♔h8! 4 g6 stalemate

H: **1 ♔e7 ♔g8 2 ♔f6 ♔h8 3 g7+ ♔g8**

3...♔h7 =.

4 ♔g6 stalemate

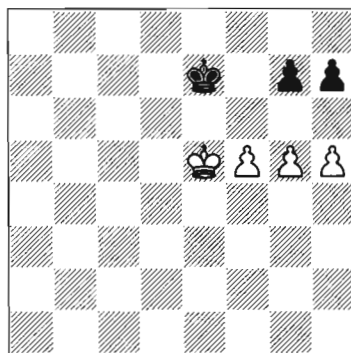As we know from Chapters 4 and 5, Black loses if one moves 6.01H down or to the left.

B) Direct Applications

We now want to examine two positions in which the fortresses above determine the further play (*see next diagram*):

Here it doesn't matter who is to move:

1 ♔d5 ♔f7 2 ♔d6 ♔e8 3 ♔e6

3 ♔e5 ♔f7 4 ♔f5 g6+! =.

3...♔f8! 4 ♔d7

4 ♔f5 ♔f7! =.

4...♔f7!

4...♔g8? (until White has played g6, it's not sufficient just to stay in the corner)

6.02   **=/=**

5 ♔e7 ♔h8 6 ♔f7 ♔h7 7 h6 g6 8 ♔f6 and wins.

5 g6+ ♔g8 = (6.01F).

Not, of course, 5...♔f6?? 6 ♔e8! +−.

6.03   **+/−**

G.Lolli, 1763

In this old position the win is not difficult if White doesn't allow a fortress.

1 g6

Only this pawn move wins: 1 f6+? gxf6+ (1...♔f7 2 fxg7 ♔xg7! 3 ♔e6 h6 4 g6 = (6.01H)) 2 gxf6+ ♔f7 3 ♔f5 ♔e8 = (12.06); 1 h6? gxh6! 2 gxh6 ♔f7! = (12.05).

1...hxg6

1...h6 2 ♔d5 (2 f6+? gxf6+ = (6.01H))
2...♔f8 (2...♔d7 3 f6 ♔e8 4 fxg7! +–;
2...♔f6 3 ♔d6 ♔xf5 4 ♔e7 ♔g5 5 ♔f7
+–) and now:

a) 3 ♔e6 ♔e8 4 ♔d6 (4 f6? ♔f8! =
(6.01E or 6.01H)) 4...♔f8 (4...♔d8 5 f6
+–) 5 ♔d7! +–.

b) 3 ♔d6 ♔e8 4 ♔e6 ♔f8 5 ♔d7!
♔g8 6 ♔e7 ♔h8 7 f6 +–.

2 hxg6! ♔f8 3 ♔d6
3 f6? ♔g8! = (6.01E).
**3...♔e8 4 ♔e6 ♔f8 5 ♔d7! ♔g8 6
♔e7 ♔h8 7 f6 gxf6 8 ♔f7 +–**

The reader can verify that White also
wins with Black to move.

C) Stalemates

With the fortresses it was sufficient to
remain passive because the stalemate sit-
uations came automatically with the op-
ponent's attempts to win. We now want
to look at a few examples in which the
defender must actively build his own
stalemate cage.
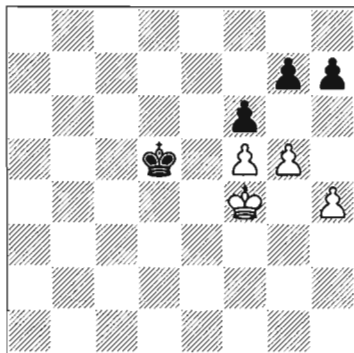
6.04　　　　　**=/=**
Chigorin – S.Tarrasch
Ostend 1905

The black king has already advanced
to the critical squares of the f5-pawn,
which usually would be enough for a
win. However, the proximity to the edge
of the board allows a possible stalemate:
1 ♔g4!?
However, Chigorin missed it, losing
after 1 gxf6? gxf6! 2 ♔g4 ♔e5 3 ♔h3 (3
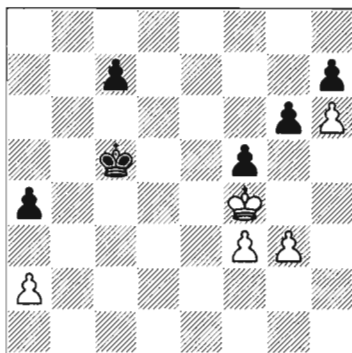♔h5 ♔xf5! 4 ♔h6 ♔g4!? 5 ♔xh7 ♔h5!
–+) 3...♔f4 –+ 0-1.
1 g6? h5! –+; 1 h5? h6! –+.
1...♔e4 2 g6! h6
2...hxg6 3 fxg6! f5+ 4 ♔g3 =.
3 ♔h5!! ♔xf5 stalemate.

A counterattack again forces a draw in
the next position:

6.05　　　　　**–/**
J.Piket – V.Korchnoi
Nijmegen (8) 1993

1 ♔e5!? a3?
After this mistake, which gives a valu-
able tempo away, Piket finds an elegant
solution to neutralize the dangerous c-
pawn. 1...♔c4! would not have lost pre-
cious time: 2 g4 c5! 3 gxf5 (3 g5 ♔d3 4
♔f6 c4! 5 ♔g7 c3! 6 ♔xh7 c2! 7 ♔xg6
c1♕! 8 h7 ♕h1 –+) 3...gxf5! 4 ♔f6 ♔d5!
5 ♔g7 ♔e6! 6 ♔xh7 ♔f7! 7 f4 c4! 8 a3
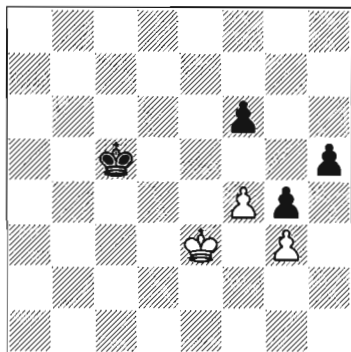c3! 9 ♔h8 c2 10 h7 ♔g6 11 ♔g8 c1♕ –+.
2 g4 f4
2...fxg4 3 fxg4! ♔b4 4 ♔f6! c5! 5
♔g7! c4! 6 ♔xh7! c3! 7 ♔xg6! c2! 8 h7!

c1♕! 9 h8♕! ♕c2+ 10 ♔g5 ♕xa2 11 ♕f8+ =.

3 ♔f6 ♔d6 ½-½

Because of 4 ♔g7 ♔e7 5 ♔xh7 ♔f7! 6 ♔h8 c5 7 h7 c4 8 g5 c3 stalemate.

Stalemates can also occur in the middle of the board:

6.06 =/+
Idea from **N.Grigoriev**, 1934

How should White prepare against the threat of ...f5? If he plays f5 himself the black king is already on its critical squares.

1 f5!

Surprisingly, this works nevertheless. Not 1 ♔e4? ♔b4 2 ♔d3 (2 f5 ♔c4 3 ♔f4 ♔d5 4 ♔e3 ♔e5! −+) 2...f5 3 ♔d4 ♔a4 4 ♔e3 (4 ♔c4?! h4 −+) 4...♔a3 5 ♔e2 ♔b4 6 ♔d2 ♔c4 7 ♔e2 ♔d4 8 ♔d2 ♔e4 9 ♔e2 h4 −+.

1...♔d5

1...♔c4 2 ♔e4! ♔c3 3 ♔e3! ♔b3 4 ♔d3! ♔a2 5 ♔e2! =.

2 ♔f4!

The stalemate cage now saves the game, while all other attempts to win fail, if White takes the side or the diagonal opposition in time. In doing so, he mustn't quit the square of the g4-pawn because of the threat ...h5-h4.

2...♔d6

2...♔d4?! stalemate.

3 ♔e4! ♔c6 4 ♔d4! ♔b6 5 ♔e4! ♔b5 6 ♔d3! ♔a5 7 ♔e3! = (virtual opposition).

A more detailed discussion of the corresponding squares can be found in A12.04. There it will also become clearer why the following moves lose: 7 ♔e2? ♔b4 −+; 7 ♔c3? h4 −+; 7 ♔e4? ♔a4! (7...♔a6? 8 ♔d4! =) 8 ♔e3 ♔a3! 9 ♔e2 ♔b4 10 ♔d2 ♔c4 11 ♔e3 ♔c3! 12 ♔f4 ♔d2 13 ♔e4 ♔e2 −+.
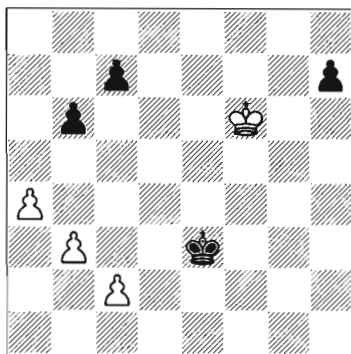
6.07 +/
N.Grigoriev (after **Mattison**), 1934

Since the study from which we took the idea in 6.06 is so beautiful and deep, we don't want to hide it from our readers. Even though in the beginning the black outside passed h-pawn is still on the board, this soon proves to be of no importance. The main focus is to get the opposition in order to break the possible stalemate defence.

1 b4! ♔d4 2 ♔e6!!

2 ♔g5? c5! 3 b5 ♔d5! 4 ♔h6 c4! (4...♔c4? 5 c3! ♔d5 6 ♔xh7! c4 7 ♔g7 +−) 5 c3 ♔d6 6 ♔xh7 ♔d7! = (6.06). Black has the distant opposition and draws.

2...h6

2...♚c4 3 c3! c5 4 b5! h6 (4...h5 5 ♚f5! +–) 5 ♚e5! h5 6 ♚f5 ♚d5 7 ♚g5! c4 8 ♚xh5! +–. Now White has the distant opposition (6.06). Other attempts fail as well: 2...c5?! 3 a5 +–; 2...c6 3 c3+! (3 a5? bxa5! 4 bxa5! ♚c5! 5 c4! h5 6 ♚e5 h4! 7 ♚f4! ♚d6 8 ♚g4! ♚c7 9 ♚xh4! ♚b7 10 ♚g4 ♚a6 11 ♚f5 ♚xa5 12 ♚e5 ♚b4 13 ♚d6 ♚xc4! 14 ♚xc6! =) 3...♚c4 4 ♚e5! c5 5 b5! h6 6 ♚e4! h5 7 ♚f5 +–; 2...h5 3 c3+ ♚c4 (3...♚e4 4 a5! +–) 4 ♚f5! +–.

3 c3+! ♚c4 4 ♚e5! h5

4...c6 5 ♚e4! h5 6 ♚f5 c5 7 b5! h4 8 ♚g4! ♚d5 9 ♚xh4! c4 10 ♚h5! +– (6.06).
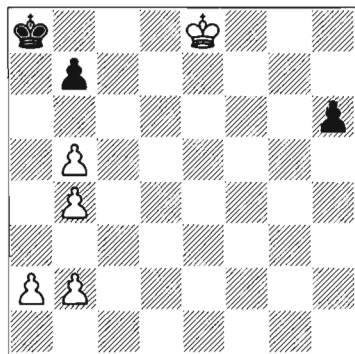
5 ♚f5 ♚d5 6 ♚g5! c6 7 ♚h4!!

7 ♚xh5? c5! 8 b5 c4! = (6.06).

7...c5 8 b5! c4 9 ♚xh5!

White wins the opposition, and thus the position.

9...♚d6 10 ♚h6! ♚d7 11 ♚g5 ♚e6 12 ♚g6! ♚e5 13 ♚f7 ♚d6 14 ♚e8 ♚c5 15 ♚d7 ♚d5 16 a5 +–

For the practical man the following position may seem to be unimportant but the only pawn ending study by Genrikh Kasparian should not be missing here:

6.08   **=/**
G.Kasparian
Shakhmaty v SSSR, 1937

The strange pawn-structure enables White to set up an original stalemate cage:

1 ♚d7!

Threatening to get into the square of the h-pawn. Not 1 ♚d8? ♚b8! –+.

1...h5! 2 ♚c7! h4!

2...♚a7? 3 b6+ ♚a6 4 b5+ ♚a5 5 ♚xb7 h4 6 ♚a7 +–.

3 ♚b6! h3

3...♚b8 4 ♚a5! b6+ 5 ♚a4! h3 6 a3 h2 7 b3! h1♕ stalemate.

4 ♚a5! h2

4...b6+ 5 ♚a4! h2 6 a3 h1♕ 7 b3! ♕b7 stalemate.

5 b6! h1♕ 6 b5!

Even though White still has to make two pawn moves, Black can't prevent White from stalemating himself. Without a doubt this study is a masterpiece.

6...♕a1 7 a4! ♕e1+ 8 b4 =

■ *ECE* contains many further studies that end with the creation of a stalemate cage (for example, 417, 1345, 1358, 1453). Selezniev created one that needed a lot less material than the study by Kasparian:
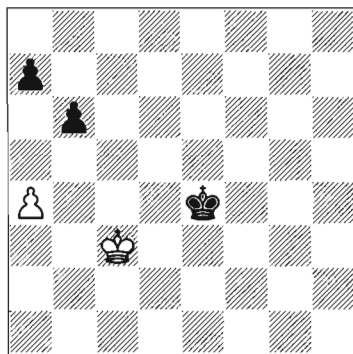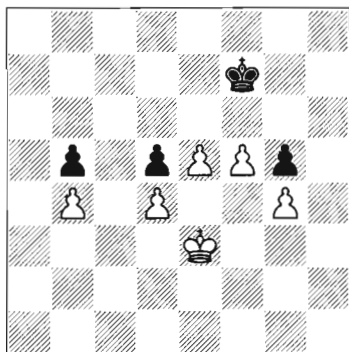

6.08A   **=/+**
Selezniev, 1930

1 a5! b5 2 a6! ♚d5 3 ♚b4! ♚c6 4 ♚a5! ♚c5 stalemate.

D) Blockade

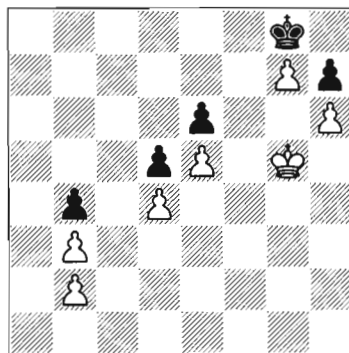Now we deal with a very different kind of fortress:

6.09 =/=

Due to the total blockade, the white king can't lend any support to his passed pawns:

1 e6+ ♔f6 2 ♔f3 ♔e7 =

Also in the following position at first sight there seems no penetration possible.

6.10 +/−
P.Morphy – A.Anderssen (variation)
Paris (11) 1858

However, the stalemate trick that completes the blockade can be easily cracked by a triangulation:
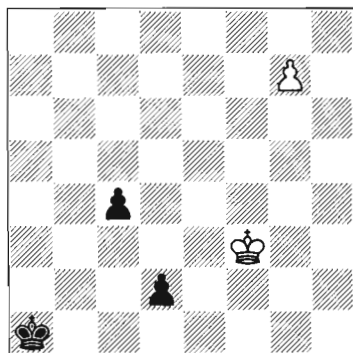
1 ♔g4

1 ♔f6?? stalemate.

1...♔f7 2 ♔h5 ♔g8 3 ♔g5! ♔f7 4 g8♕+ ♔xg8 5 ♔f6! +−

E) Underpromotion

At the end of this chapter let's have a look at three studies in which only underpromotion of the pawn leads to a win because queening would lead to a stalemate. Of course such cases are very rare in practice, but you never know. In the first example, only the rook wins:

6.11 +/
G.Nadareishvili, 1963

1 ♔e2! c3 2 g8♖!

2 g8♕? d1♕+! (2...d1♖? 3 ♕b3! ♖d2+ 4 ♔e1 ♖d3 5 ♕a4+ ♔b2 6 ♕b5+! ♔c2 7 ♕f5! +−) 3 ♔xd1! c2+! 4 ♔d2 c1♕+! 5 ♔xc1 stalemate.

2...♔b2 3 ♖g1!
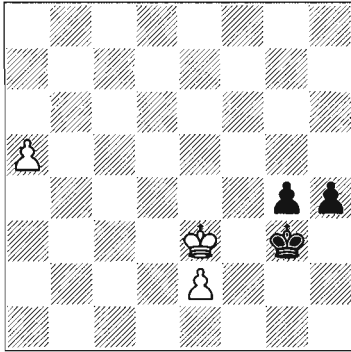
3 ♖c8? ♔c2! 4 ♖d8 ♔c1 =.

3...♔c2 4 ♖f1 ♔b3 5 ♔d3 ♔b2 6 ♖g1 ♔b3

6...d1♕+ 7 ♖xd1! c2 8 ♖d2! +−.

7 ♖b1+! ♔a2 8 ♔c2! +−

■ By the way, the simplest example of a forced underpromotion is w♔a5,♗c7; b♔a7: 1 c8♖! +−.

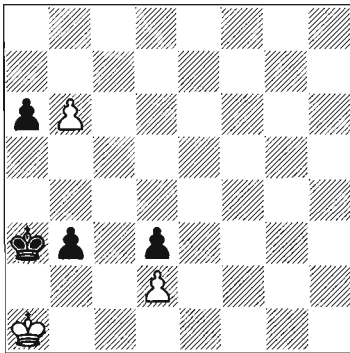In the following only a bishop does it:

6.12   **+/**
P.Joitsa, 1955

1 a6! h3 2 a7! h2 3 a8♗! +−
Not 3 a8♕? h1♕! 4 ♕b8+ ♔h3 5 ♕h8+ ♔g3! 6 ♕xh1 stalemate.

■ If one puts the white a-pawn on h5, then only a promotion to a rook wins.

And finally only the knight:

6.13   **+/**
J.Kling and B.Horwitz, 1851

1...b2+ 2 ♔b1 a5 3 b7 a4 4 b8♘! ♔b3 5 ♘a6 a3
5...♔a3 6 ♘c5 ♔b4 7 ♘xd3+! ♔b3 8 ♘xb2! a3 9 ♘d1! a2+ 10 ♔a1! ♔c2 11 d4! +−.
6 ♘c5+! ♔b4 7 ♘e4! ♔b3 8 ♘c3! +−

■ Of course there are a lot more studies that deal with underpromotion (e.g. *ECE* 288, 1195, 1309, 1375, 1395, 1413, 1416, 1434, 1439, 1440, 1485, 1550, 1552, 1555, 1576), while underpromotions hardly ever occur in practical games. In studies even a multiple underpromotion has been achieved. For example, in 1983 Zinar published the following study: w♔h2,♗b7,c7,d7,f3,g2,g5,h3; b♔h5, ♗h4, g6,c2. 1...c1♕ 2 c8♖! ♕b2 3 b8♗! ♕d4 4 d8♖! +− (4 d8♘? ♕d7! =). (Further examples: *ECE* 1536, 1592, 1602.) But underpromotion does not automatically avoid the draw. An unknown Czech composer refined an exercise, published by Joseph in 1922 in the *British Chess Magazine*, in the following way:
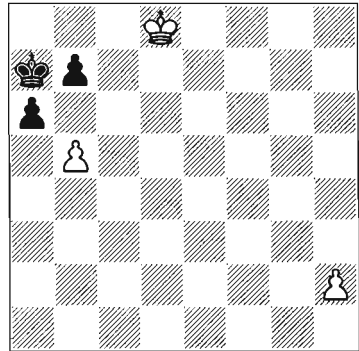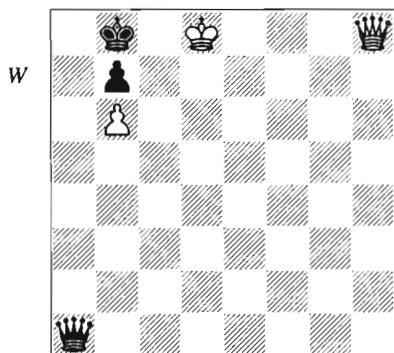

6.13A   **+/**
After **Joseph**, *British Chess Magazine*, 1922

1 b6+!
1 bxa6?? b5! −+.
1...♔b8!?
1...♔xb6 2 h4! +−.

2 h4! a5 3 h5! a4 4 h6! a3 5 h7! a2 6 h8♕!

6 h8♗? a1♕ 7 ♗xa1! avoids the immediate stalemate, but leads to a familiar fortress.
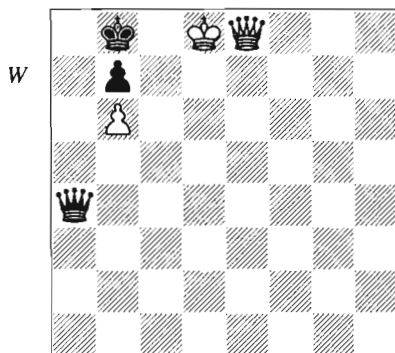
6...a1♕ *(D)*

W

Now White is able to manoeuvre with his queen in such a cunning way that

Black's stalemate defence becomes impossible:

7 ♕g8!

The only winning square. 7 ♕f8? ♕a3! and 7 ♕e8? ♕g7! throw the win away.
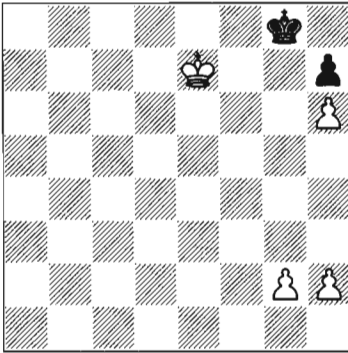
7...♕a2 8 ♕e8! ♕a4 *(D)*
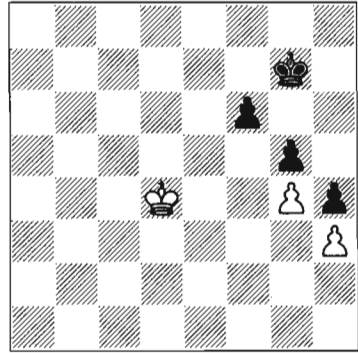

W

9 ♕e5+! ♔a8 10 ♕h8! +−

It is mate in two more moves.
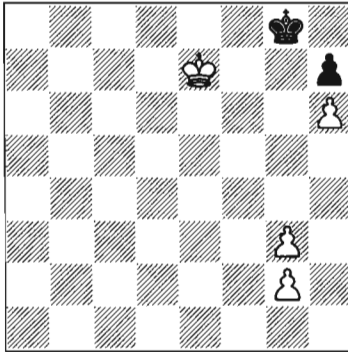
Chapter 6 Exercises

Be careful: A6.10-13 contain some techniques from later chapters. If they are too difficult, you can try them again after you have studied Chapter 11.

A6.01   */
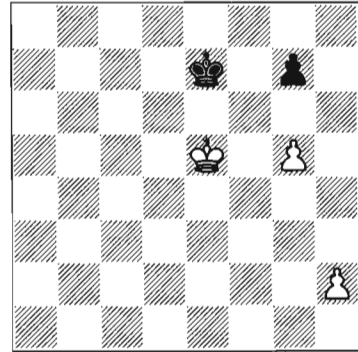
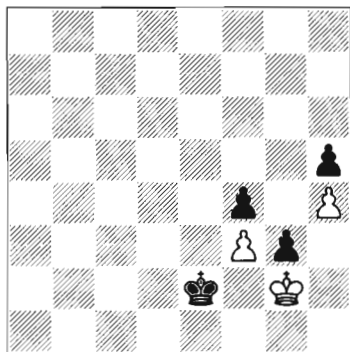**A6.03**   /**

A6.02   */
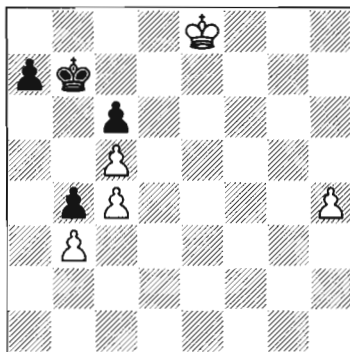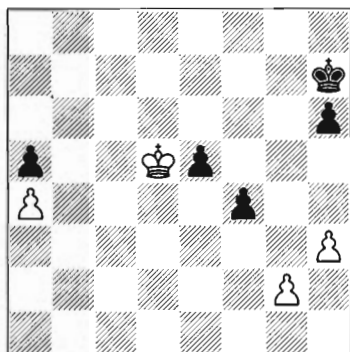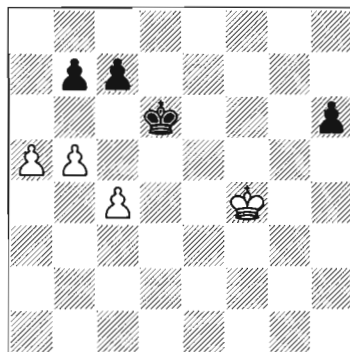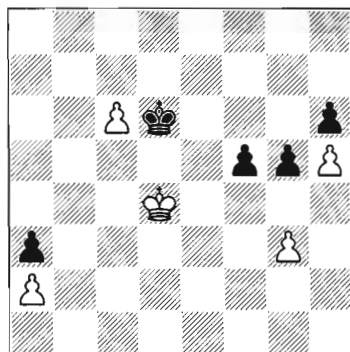
A6.04   **/

A6.05 */

A6.08 ***/

A6.06 /**

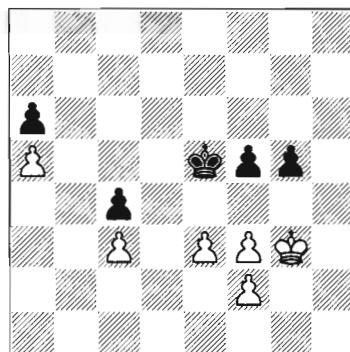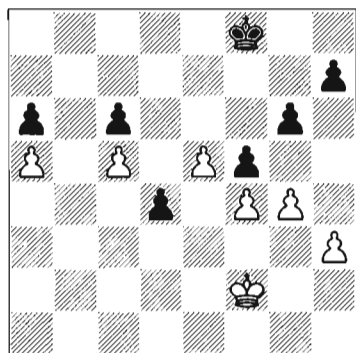
A6.09 /***

A6.07 **/

A6.10 ***/

A6.11   ***/
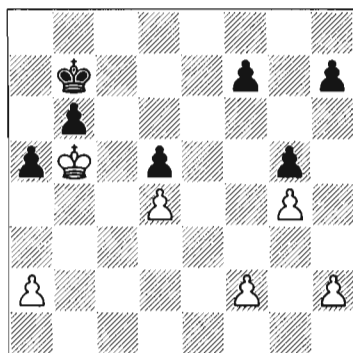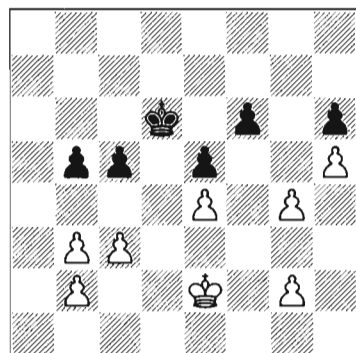
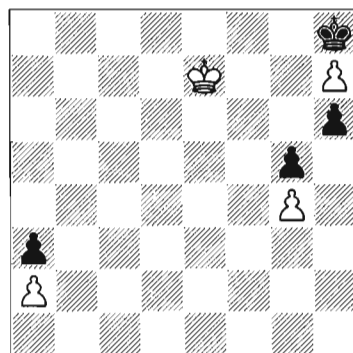

A6.13   ***/

A6.12   ***/

A6.14   ****/

Solutions to Chapter 6 Exercises

A6.01 After **Hasek**, 1928

You have certainly noticed that even two additional h-pawns wouldn't be of any help for White. If Black moves between g8 and h8 the position is a 'dead' draw:

1 h4 ♔h8 2 h5 ♔g8 3 g4 ♔h8 4 g5 ♔g8 5 g6 ♔h8! =

By the way, the final position is a very difficult one for the evaluation function of Fritz 4.

A6.02 Instructive example

Small difference, great consequences. White wins easily by sacrificing his front g-pawn:

1 g4 ♔h8 2 g5 ♔g8 3 g6 ♔h8 4 g4 hxg6 5 ♔f6 ♔h7 6 g5 +−

A6.03 T.Luther – P.Wells, *Graz 1991*

Thomas Luther knew the fortress 6.01H, so he reacted calmly to Black's winning attempt:

1...f5!?

1...♔f7 2 ♔e4 ♔e6 3 ♔d4 f5 4 gxf5+! ♔xf5 5 ♔e3! = (4.08).

2 gxf5! g4 3 ♔e3 ½-½

Because of 3...g3 4 ♔f3 with a draw (6.01H).

■ F.Sämisch-R.Spielmann, Teplice Šanov 1922 (*ECE* 1187), w♔d1,△a2,b3; b♔a5,△a3,b4,c5, features a similar idea: 1...c4!? 2 ♔c2! c3 3 ♔c1 ½-½ and the white king can't be forced away from the squares c1, c2 and d1.

A6.04 Instructive example

Compared to 6.02, here White still has spare tempi with his h-pawn, which enable a penetration via g6 that secures the win:

1 ♔f5!

1 h3? ♔e8 2 ♔f5 ♔f7! 3 h4 g6+! 4 ♔e5 ♔e7! = and Black defends the key squares d6, e6 and f6 through opposition.

1...♔f7 2 h3! ♔f8

2...g6+ 3 ♔e5! ♔e7 4 h4! ♔f7 5 ♔d6! +−; 2...♔g8 3 ♔g6! ♔h8 4 ♔f7 ♔h7 5 h4 ♔h8 6 h5 ♔h7 7 g6+ ♔h8 8 h6! +−.

3 ♔g6! ♔g8 4 h4! ♔h8 5 ♔f7 ♔h7 6 h5 ♔h8 7 ♔f8

7 h6?? ♔h7! =.

7...♔h7 8 g6+ ♔h8 9 h6! +−

As you can see from these variations, A6.04 would be a draw, whoever is to move, if the h-pawn were already at h3 or h4.

A6.05 Dantas – J.Souza Mendes, *Mar del Plata 1951*

You certainly haven't been bluffed by ♔h3 and have just sacrificed the g-pawn:

1 ♔h3!? g2

1...♔xf3?? stalemate.

2 ♔xg2 ♔e3 −+

A6.06 F.Hellers – V.Eingorn, *Debrecen Echt 1992*

Black can only hold the draw by building a stalemate refuge for his king:

1...♔g6! 2 ♔xe5! ♔g5! 3 ♔e4

3 h4+ ♔g4 4 ♔e4 h5 5 ♔e5! ♔xh4 6 ♔xf4! stalemate.

3...h5! 4 ♔e5 ♔h4! 5 ♔xf4 stalemate (½-½)

A6.07 B.Züger – Ru.Rodriguez, *Dubai OL 1986*

Actually we deal with such positions in Chapter 8 on passed pawns. Due to the forced variations the stalemate idea nearly creates itself:

1 c7! ♔xc7 2 ♔e5 f4! 3 gxf4! g4!? 4 ♔e4

4 f5? g3! 5 f6 ♔d7 −+.

4...♔d6 5 ♔e3! ♔d5 6 ♔f2! ♔e4 7 ♔g3! ♔f5! ½-½

Because of 8 ♔h4! ♔xf4! stalemate.

A6.08 Krejcik, *Deutsches Wochenschach*, 1908

If you have noticed the stalemate cage the solution of this study wasn't that difficult any more:

1 ♔d7!

1 h5? ♔a6!! 2 h6 ♔a5! 3 h7 a6! 4 h8♕ stalemate.

1...a5

1...♔a6 2 ♔xc6! ♔a5 3 ♔d6 a6 4 c6! +–.

2 h5! a4 3 h6! axb3 4 h7! b2 5 h8♕! b1♕ 6 ♕c8+! ♔a7 7 ♕c7+! ♔a8 8 ♔xc6 ♕g6+

8...♕e4+ 9 ♔b6 ♕e6+ 10 c6 ♕e3+ 11 c5 +–.

9 ♔b5! ♕e8+ 10 c6 ♕b8+ 11 ♕xb8+! ♔xb8 12 ♔xb4! +–

A6.09 Y.Averbakh

This position, which is very close to 6.07, occurred in a practical game. Because of his detailed analysis we have ascribed it to Averbakh. The drawing manoeuvre is not at all obvious:

1...♔d7!!

1...♔c5? 2 ♔g4 ♔d6 (2...c6 3 b6! +–) 3 a6 bxa6 4 bxa6! ♔c6 5 c5! and White wins.

1...c6? (here this stalemate defence is not sufficient since the black king has to stay in the square of the b6-pawn and therefore isn't able to keep the opposition) 2 b6! c5 3 ♔g4 ♔d7 4 ♔h5 ♔c6 5 ♔xh6 ♔d6 6 ♔g6 ♔c6 7 ♔g7 ♔d6 8 ♔f8 ♔d7 9 ♔f7 ♔c6 10 ♔e8 ♔d6 11 ♔d8 +–.

2 ♔f5 ♔c8! 3 ♔g6 ♔b8! 4 ♔xh6 ♔a7! 5 ♔g6 c6! 6 ♔f6

Not 6 b6+?? ♔a6! –+. The elimination of the move b6 was the idea of the long king-march to a7.

6 bxc6 bxc6! 7 ♔f6 ♔a6! 8 ♔e6 ♔xa5! 9 ♔d6 ♔b4 10 ♔xc6! ♔xc4! =.

6...cxb5! 7 cxb5! ♔b8! 8 ♔e6 ♔c8 9 ♔d6 ♔d8! = (6.02)

A6.10 A.Ermolinsky – D.Komarov, *USSR 1986*

White can only get access to the black position by a timely pawn sacrifice:

1 f4+!

1 ♔g2?! ♔d5 (1...♔e6?! 2 e4 +–) 2 ♔h3 ♔e6!? and now:

a) 3 e4? fxe4! 4 fxe4 ♔e5! 5 f3 ♔f4! 6 e5 (6 ♔g2 g4! 7 fxg4 ♔xg4! =) 6...♔xf3! 7 e6 g4+! 8 ♔h4 g3! 9 e7 g2! 10 e8♕ g1♕! 11 ♕f7+ ♔e4 12 ♕xc4+ ♔f5 =.

b) 3 f4?! gxf4 4 exf4! ♔d5!? (4...♔f6 5 ♔h4! ♔g6 6 f3! ♔h6 7 ♔g3 ♔h5 8 ♔f2 ♔h4 9 ♔g2! ♔h5 10 ♔g3! ♔g6 11 ♔f2! +–) 5 f3! ♔c5 6 ♔h4! and White should win the resulting queen ending. However, it is much clearer to win without allowing a queen ending.

1...gxf4+ 2 ♔f3!!

It is reciprocal zugzwang with Black to move.

2...fxe3 3 fxe3! ♔d5 4 ♔f4! ♔e6 5 e4! fxe4 6 ♔xe4! 1-0

Compare the analysis by Ermolinsky and Livshits in Inf 41.

A6.11 A.Yermolinsky – I.Ivanov, *USA Ch (Parsippany) 1996*

1 g5!

Certainly not 1 ♔e2?? fxg4! 2 hxg4 h5! –+.

The game actually continued 1 gxf5? gxf5! 2 ♔e2 ♔e7 3 ♔d3 h5 4 ♔xd4 h4 5 ♔d3 ½-½.

1...♔f7

1...♔g7 2 e6 (after 2 ♔e2?! h5!? White first has to threaten a penetration on the kingside in order to be successful in the centre: 3 gxh6+! ♔xh6 4 ♔d3 ♔g7 5 ♔xd4 ♔f7 6 ♔e3 ♔e6 7 ♔f3 ♔d5 8 ♔g3 ♔xc5 9 ♔f3 ♔d5 10 h4 c5 11 ♔e3 c4 12 ♔d2 ♔c6 13 ♔c3 ♔d5 14 e6 ♔xe6 15 ♔xc4! ♔d6 16 ♔d4! +–) 2...♔f8 3 ♔e2! ♔e8 4 ♔d3 ♔e7 5 ♔c4! ♔xe6 6 ♔xd4! +–.

2 ♔e2! ♔e7

2...♔e6 3 ♔d3 ♔d5 4 e6! +–.
**3 ♔d3 ♔e6 4 ♔xd4 ♔d7 5 ♔c3 ♔e6
6 ♔c4 ♔d7 7 e6+ ♔e7 8 ♔d3 ♔xe6 9
♔d4! ♔d7 10 ♔e5! ♔e7 11 h4! +–**
See also Christiansen, Hecht in *CBM*
55.

A6.12 Variation of **A.Ryskin – Y.Zeziul-
kin**, *Czestochowa 1992*
The position is nearly closed, so de-
spite the two extra pawns White has to
act very carefully to penetrate with his
king in a winning way:
1 ♔d2
Kingside penetration fails: 1 ♔f3?!
♔e6 2 g5? fxg5! 3 ♔g4 ♔f6! 4 g3 ♔e6! =.
An attempt on the queenside without
support of the king doesn't work either: 1
c4? b4! =; 1 b4? cxb4! 2 ♔d3 (2 cxb4 =)
2...bxc3 3 ♔xc3 (3 bxc3? ♔c5! 4 ♔c2
♔c4! 5 g3 b4! 6 cxb4 ♔xb4! 7 ♔d3 ♔b3!
–+) 3...♔c5 4 b3 b4+ 5 ♔d3! ♔b5! =.
**1...♔c6 2 ♔c2 ♔b6 3 ♔b1 ♔a6 4
♔a2 ♔b6 5 ♔a3**
Thanks to White's spare tempi, Black
now can't prevent a white penetration:
5...♔a5
5...♔a6 6 b4 c4 7 b3 cxb3 (7...♔b6 8
bxc4 bxc4 9 ♔a4 +–) 8 ♔xb3 ♔b6 9 c4
+–.
6 b4+
6 g3 b4+ 7 ♔a2! ♔b5 8 ♔b1!? ♔c6
(8...c4 9 ♔c2 +–) 9 ♔c2 ♔b6 10 ♔d3 ♔b5
11 g5!? fxg5 12 g4! ♔b6 13 ♔c4 +–.
**6...cxb4+ 7 ♔b3! bxc3 8 bxc3! ♔a6 9
♔b4 ♔b6 10 c4 bxc4 11 ♔xc4! ♔c6 12
g5**
12 g3 +–.
12...fxg5 13 g4! ♔d6 14 ♔b5! +–
White has advanced to the key squares
of the e5-pawn.

A6.13 **V.Smyslov – W.Watson**, *New
York 1987*
In contrast to the last example, here
the side that has a material advantage

isn't able to win because the activity of
the white king prevents a penetration on
the queenside, while the centre and king-
side are closed:
1 a3!
1 h3? ♔c7! –+; 1 a4? ♔c7 2 ♔a6 ♔c6!
–+; 1 ♔a4? ♔c6 2 a3 ♔c7 3 ♔b5 ♔b7! 4
h3 h5 5 f3 f6 6 ♔a4 ♔a6 7 ♔b3 ♔b5 8
a4+ ♔a6 9 ♔b2 b5 10 ♔b3 bxa4+ –+
(after 10...b4?? = White would have an
impregnable fortress).
**1...h6 2 h3 ♔c7 3 ♔a6! ♔c6 4 a4!
♔c7 5 ♔a7! ♔c6 6 ♔a6! f6 7 f3! ½-½**
Due to 7...♔c7! 8 ♔a7! ♔c6! 9 ♔a6! =.

A6.14 H.Reddmann
Of course there also has to be an
underpromotion exercise, even though, it
has to be admitted, it is not an easy one.
1 ♔e6!
1 ♔f6? ♔xh7! 2 ♔f7 h5! –+; 1 ♔f7?
h5! 2 gxh5 ♔xh7 –+.
1...h5!?
1...♔xh7 2 ♔f6! h5 3 ♔xg5! hxg4 4
♔xg4 =.
**2 gxh5! g4 3 ♔f5! g3 4 ♔g6! g2 5
♔h6! g1♘**
5...g1♗ =. The blocked pawns on a2
and a3 build a familiar fortress against the
'right' (controlling the queening square)
bishop. White only has to oscillate be-
tween b1 and c2. 5...g1♖ is stalemate.
6 ♔g6 ♘e2 7 ♔f5 ♘c3 8 ♔e5! ♘xa2
To win, Black would have to protect
his passed pawn from b5 or c4, but he
can't manage that.
**9 ♔d4! ♘c1 10 ♔c3! ♔xh7 11 ♔c2
a2 12 ♔b2! =**
■ This stalemate idea has been used in
a whole lot of studies (see, e.g., *ECE* 232,
338, 1171, 1424, 1541, 1610; also *ECE*
1585 shows a related idea). Especially
ECE 1396 (Lazard, 1924) should be
mentioned, in which there are white
pawns at b3 and b4 and a black pawn at
b5 instead of the a2- and a3-pawns.

7 Pawns on One Wing

One can recognize a lot of similarities to our findings of Chapter 2. Especially the difference between critical and key squares here plays an important role. Also the activity of the kings is very important. In this connection the reader should study 7.09 very carefully.

Since there are more pawns on the board, a counter-attack is rather more promising than in Chapter 2 (see 7.02). The importance of the stalemate ideas shown in Chapter 6 becomes clear in 7.08. This example should be studied carefully as well.

A) Fixed Pawn-Structure

Naturally the king is only able to capture the base of the pawn-chain:
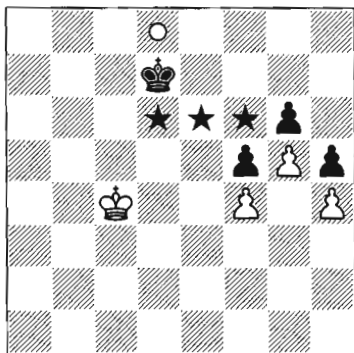
7.01   +/=

Here the g6-pawn is the base of the pawn-chain (f4 and h4 are the white base pawns) with the critical squares f6, e6 and d6. There are two more critical squares,

which we didn't consider in Chapter 2, namely d7 and d8 (in general those two squares from the outside critical square in the direction to the 8th rank). If one doesn't have to take account of a counter-attack towards one's own base, then in general the critical squares are also the key squares, because after capturing the enemy base, the other pawns will also fall.

1 ♔d5! ♔e7 2 ♔e5!

As we already know, in the fight for three adjacent key squares, only taking the opposition on the main line leads to success. 2 ♔c6? would be wrong, since after 2...♔e6! Black has the lateral opposition: 3 ♔c5 ♔e7! (diagonal opposition) 4 ♔d5 ♔d7! (normal opposition) 5 ♔e5 ♔e7! =. After 2 ♔c5? ♔e6! 3 ♔c6 ♔e7! 4 ♔c7 White has the lateral opposition and so conquers one of the critical squares. However, it turns out that Black can save himself with a counterattack. d8 is therefore the only critical square that is not a key square. 4...♔e6! 5 ♔d8!? ♔d5! 6 ♔e7 ♔e4! 7 ♔f6 ♔xf4! 8 ♔xg6 ♔e4 ♔xh5 f4! 10 g6 f3! 11 g7 f2! 12 g8♕ f1♕! =. With accurate defence, the h-pawn is not enough to win.

2...♔f7 3 ♔d6! ♔f8 4 ♔e6! ♔g7 5 ♔e7! ♔g8 6 ♔f6! ♔h7 7 ♔f7! ♔h8 8 ♔xg6! +−

If Black is to move in 7.01, he can make a simple draw by **1...♔c6** (except for 1...♔c7?, every move is playable – even 1...♔e7?!).

Usually a counter-attack is possible if the top of the defender's pawn-chain is far-advanced:

7.02   =/=

7.03   =/=
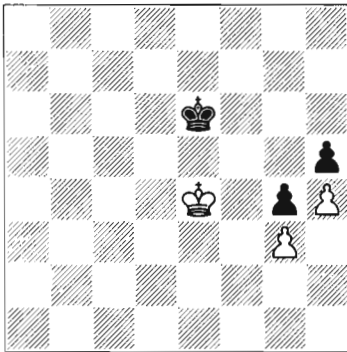
1...♔d6!

1...♔f6? 2 ♔f4! ♔e6 (now the counter-attack is too late because the white king is nearer the h5-pawn; 2...♔g6 3 ♔e5! +–) 3 ♔g5! ♔e5 4 ♔xh5! ♔f5 5 ♔h6 ♔e4 6 ♔g5 ♔f3 7 h5! ♔xg3 8 h6! ♔f3 9 h7! g3 10 h8♕! g2 11 ♕d4 and White wins.

2 ♔f5 ♔d5! 3 ♔g5 ♔e4! 4 ♔xh5! ♔f3! 5 ♔g5 ♔xg3! 6 h5! ♔f3! 7 h6 g3! 8 h7 g2! 9 h8♕ g1♕+! =

■ A further example of such a counter-attack is O.Romanishin-A.Anastasian, Moscow OL 1994: w♔d3,△e2,f3,g4; b♔b5,△e5,f4,g5: 1...♔b4!! 2 e3!? ♔b3 3 exf4 exf4! 4 ♔e4 ♔c3 5 ♔f5 ♔d3 6 ♔xg5 ♔e3! 7 ♔h4 ♔xf3! 8 g5 ♔e2 ½-½.

The following pawn-structure is also of great importance (*see following diagram*):

The pawns are fixed since a move with the g-pawn would obviously mean suicide. The big difference from 7.01 is the fact that White doesn't control f6. This changes the key square situation. These are f6, e6, e7 and e8. d6 here doesn't belong since Black is able to get the side opposition:

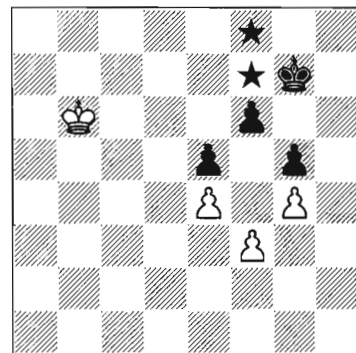**1...♔f7! 2 ♔d6 ♔f6! 3 ♔d7 ♔f7! 4 ♔d8 ♔f8! 5 ♔c7 ♔e7!**
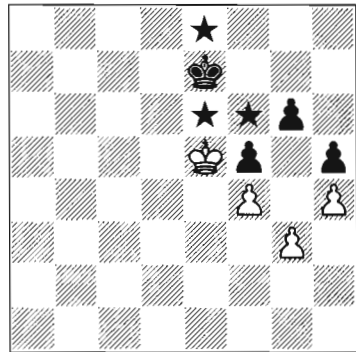
5...♔g7? 6 ♔c6! (since now Black can't get the distant opposition, he loses the fight for the key squares on the e-file) 6...♔f6 7 ♔d6! ♔f7 8 ♔d7! ♔f8 9 ♔e6! ♔g7 10 ♔e7! ♔g8 11 ♔f6! ♔h7 12 ♔f7! ♔h6 13 ♔g8! +–.

6 ♔c6 ♔e6! =

If one moves 7.03 to the left, there is an additional drawing possibility:

7.04   +/=

Here only f8, f7 and the f6-pawn itself are key squares because the h-file gives Black enough space to keep the opposition:

1...♔h6!!

In order to prevent the white king from encircling the base (f6), Black has to take the distant opposition. Not 1...♔h8? 2 ♔c6! ♔g8 3 ♔d6! ♔f8 4 ♔e6! ♔g7 5 ♔e7! ♔g6 6 ♔f8! +–.
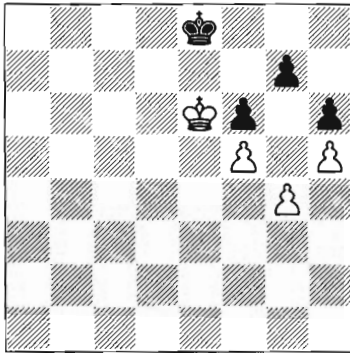
2 ♔c7 ♔g7! 3 ♔b7 ♔h7!

3...♔f7? 4 ♔b6! ♔g6 5 ♔c6! ♔h7 6 ♔d7! ♔h6 7 ♔e8! ♔g7 8 ♔e7! +–.

4 ♔b8 ♔h8! 5 ♔c8 ♔g8! 6 ♔d7 ♔h7! 7 ♔e6 ♔g6! =

We will discuss the corresponding squares in 12.03.

If one moves 7.03 up the board, the position is a clear draw:

7.05   =/=

White is not able to go round the base g7. Therefore also the opposition doesn't play a role since there are only two key squares, g7 and g8.
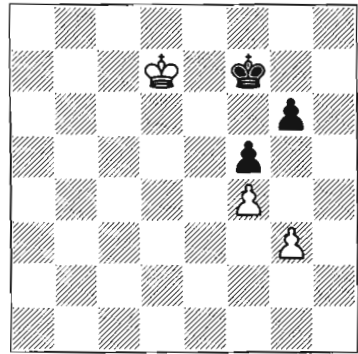
1...♔f8! 2 ♔d7 ♔f7

2...♔g8 3 ♔e8 ♔h7 4 ♔f7 ♔h8! 5 ♔f8 = (5 ♔g6?? ♔g8 –+).

3 ♔d8 ♔f8 =

B) Flexible Pawn-Structure

Since there are still pawn moves available, both sides have more options:

7.06   =/=

V.Rührig – J.Dueball
Bundesliga 1985/6

In contrast to 7.03 an encirclement wouldn't help White because Black escapes with a pawn exchange:

1...♔f6 2 ♔e8 g5!?

With this thematic counter Black reduces the material in such a way that not enough remains. 2...♔g7 3 ♔e7 ♔h6 4 ♔f6 ♔h7! (4...♔h5? 5 ♔g7! g5 6 ♔f6! +– (2.04)) 5 ♔f7 ♔h6! 6 ♔g8 g5! 7 ♔f7 gxf4! 8 gxf4! ♔h7! = (2.07); 2...♔e6 3 ♔f8 ♔f6! 4 ♔g8 g5! 5 ♔h7 gxf4! 6 gxf4! =.

3 ♔d7 gxf4 4 gxf4! ♔f7 5 ♔d6 ♔f6 6 ♔d5 ♔f7 7 ♔e5 ♔e7 ½-½

An exchange that makes the defence easier is impossible in the following study (*see next diagram*):

Black's pawn-chain is seriously weakened by the advanced h-pawn. Playing ...♔f7-f6 followed by ...g5 wouldn't help because White could close things up by h4 and advance to the key squares of the f5-pawn. Also the exchanging attempt ...h4 just fails, as we will see later. Finally, the white h-pawn gives two extra tempi, which are both needed for White to win:

1 ♔f2!
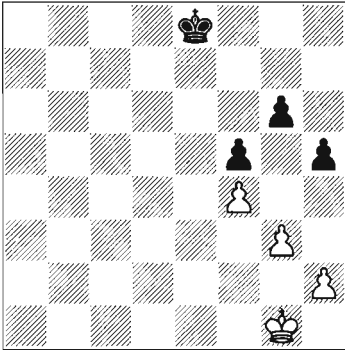
7.07 +/=

N.Grigoriev

Sbornik etiudov, published 1954

1 ♔g2? ♔e7 2 ♔h3 (2 ♔f3 ♔d6 3 ♔e3 ♔c5 =) 2...♔e6 (2...♔f6? 3 ♔h4! ♔f7 4 ♔g5! ♔g7 5 h3! ♔f7 6 ♔h6! ♔f6 7 h4 +– (7.03)) 3 ♔h4 ♔f6! 4 h3 ♔f7! 5 ♔g5 ♔g7! 6 h4 ♔f7! (6...♔h7? 7 ♔f6! ♔h6 8 ♔e6 +–) 7 ♔h6! ♔f6! =. In order to win this way, White would need three extra tempi: one to get to g5, one for ♔h6 and another one for going round the black king.

1...♔f7 2 ♔e3! ♔e6

2...♔f6 3 ♔d4 g5 4 h4! +–; 2...♔g7 3 ♔d4! h4 4 gxh4! ♔h6 5 ♔e5! ♔h5 6 ♔f6! ♔xh4 7 ♔xg6! ♔g4 8 h4! +–. This line shows that the starting position with the black king on f8 would be drawn.

3 ♔d4! ♔d6 4 h3!

White uses the first spare tempo to get his king to the 5th rank.

4...♔e6 5 ♔c5! ♔e7

5...♔d7 6 ♔d5! ♔e7 7 ♔e5 ♔f7 8 ♔d6 +–.

6 ♔c6!

6 ♔d5? ♔d7 (6...♔f6 7 ♔d6 ♔f7! 8 ♔d7 ♔f6! 9 ♔e8 g5! 10 h4! gxh4 11 gxh4! ♔e6! 12 ♔f8! =) 7 ♔e5 ♔e7! 8 h4 ♔f7! 9 ♔d6 ♔f6! = (7.03); 6 h4? ♔d7 7 ♔d5 ♔e7! 8 ♔e5 ♔f7! =.

6...♔e6 7 h4!

The second spare tempo enables the white king to go round the black king:

7...♔e7 8 ♔c7! ♔e6 9 ♔d8! ♔f7

9...♔d5 10 ♔e7 ♔e4 11 ♔f6 ♔f3 12 ♔xg6! ♔xg3 13 ♔g5! +–.

10 ♔d7! ♔f8 11 ♔e6! +–

■ The way analogous to 1 ♔g2 can be followed in the following study by Grigoriev (*ECE* 354; the reader should try to solve it himself): w♔d1,♗f2,g3,h3; b♔c8,♗f5,g6,h5: White to play and win.

If the pawn-structure isn't yet seriously weakened, the defender can usually avoid losing:
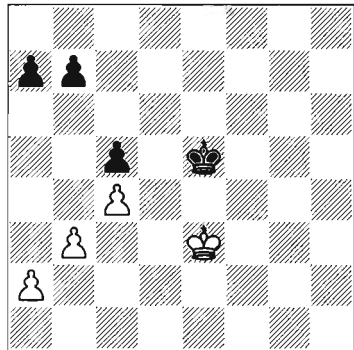
7.08 =/=

S.Homann – L.Borbjerggaard

NATO Ch, Breda 1994

Here there are many ways to draw, although some are quite complicated. Nevertheless (or perhaps because of this), the reader should study them.

1 ♔d3

1 a3 is the simplest way:

a) 1...a5?! and now:

a1) 2 ♔d3 ♔f4 3 a4! (3 b4? b6! –+) 3...♔f3 4 ♔d2! ♔f2 5 ♔d3! =. The threatened counter-attack secures the draw.

a2) 2 a4 b6 3 ♔d3 ♔f4 4 ♔d2 =.

b) 1...a6 2 b4 b6:

b1) 3 bxc5? bxc5! 4 a4 a5! –+.

b2) 3 b5 axb5 (3...a5 4 a4! =) 4 cxb5! ♔d5 5 ♔d3 =.

b3) 3 ♔d3:

b31) 3...a5 4 ♔e3!! cxb4 (4...♔f5 5 b5! =) 5 axb4! axb4 6 ♔d3! ♔d6 7 ♔c2! ♔c6 8 ♔b3 ♔c5 9 ♔a4! ♔xc4 stalemate.

b32) 3...♔f4 4 ♔c3 ♔e3 (4...a5 5 ♔b3 ♔e4 6 ♔a4 axb4 7 axb4! ♔d4 8 ♔b5 cxb4! 9 ♔xb4! =) 5 b5! a5 6 ♔b3! = (6.04).

1...♔f4 2 ♔d2

The immediate construction of a stale-mate refuge by 2 ♔c3 also here seems to be the logical way: 2...♔e3 (2...a5?! 3 ♔b2 a4! =; 2...♔e4 3 b4 cxb4+ 4 ♔xb4 ♔d4 5 a3 a6 6 a4 ♔d3 7 c5 ♔d4 8 ♔a5! =) 3 b4 b6 4 b5 ♔e4 5 ♔b3 ♔d4 6 a3! = (6.04).
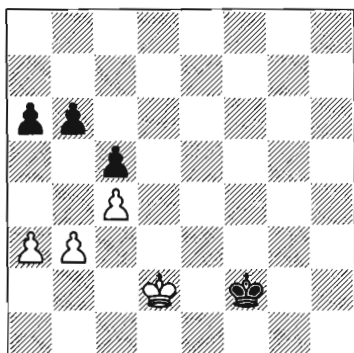
2...♔f3 3 ♔d3

3 ♔c3 ♔e3 4 b4 =.

3...b6 4 ♔d2

4 ♔c3 ♔e3 5 a3 ♔e4 (5...a5 6 a4! =) 6 b4 =.

4...♔f2 5 a3?

For no reason, White weakens his pawn-structure.

5...a6!! (D)

6 ♔d3

6 b4 a5! —+.

In the actual game, White lost as fol-lows: 6 a4?! a5! 7 ♔d3 ♔e1! 8 ♔c3 ♔d1! 9 ♔b2 ♔d2! 10 ♔a3 ♔c3 0-1.

6...♔f3! 7 ♔c3

7 ♔d2 a5 8 ♔d3 a4 9 ♔d2 (for 9 bxa4 ♔f4! —+, see the main line) 9...♔e4! (not 9...axb3? 10 ♔c3! ♔e3 11 ♔xb3! ♔d3 12 ♔a4! ♔xc4! stalemate) 10 ♔c3 ♔e3! 11 ♔c2 (11 bxa4 ♔e4! 12 ♔c2 ♔d4! 13 ♔b3 ♔d3! 14 a5 bxa5! 15 ♔a4 ♔xc4! —+) 11...♔d4 12 ♔b2 ♔d3 —+.

7...a5! 8 ♔d2!? a4!

We now find ourselves in a study by Grigoriev (see, e.g., Av 525 or *ECE* 356). Not 8...♔e4? 9 a4! =.
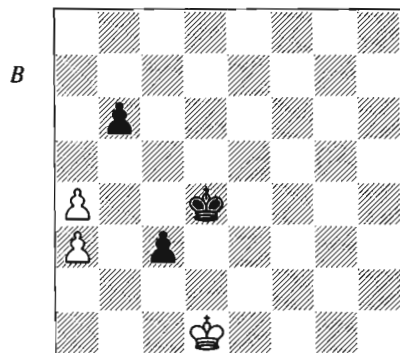
9 ♔d3 ♔f4!

9...axb3? 10 ♔c3! =.

10 ♔c2

10 ♔d2 ♔e4! —+ transposes to the note to White's 7th move (at move 9); for 10 ♔e2 axb3 11 ♔d2 b2! 12 ♔c2 ♔e3! 13 ♔xb2 ♔d2! 14 ♔b3 ♔c1! —+ see the main line.

10...♔e3! 11 ♔c3 ♔e2! 12 ♔c2 ♔e1! 13 ♔c1

13 ♔d3 axb3! 14 ♔c3 b2! —+.

13 ♔c3 ♔d1! 14 bxa4 ♔e2! 15 ♔c2 ♔e3! 16 ♔c3 ♔e4! 17 ♔c2 ♔d4! 18 ♔b3 ♔d3! 19 ♔b2 ♔xc4! 20 ♔c2 ♔d4 21 ♔d2 c4 22 ♔c2 c3 23 ♔d1!? (D).

23...♔d5 (the king retreats – no excla-mation mark, as it is the start of a triangu-lation; 23...♔d3?! 24 ♔c1 c2?? 25 a5! bxa5! 26 a4! =) 24 ♔c1 ♔c5 25 ♔d1 ♔d4! (since White can still lose a tempo
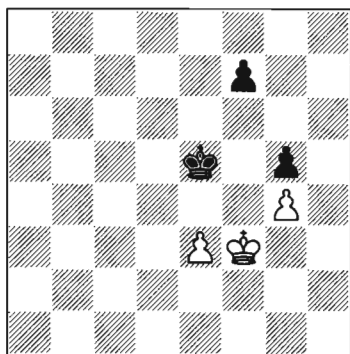
by a5 and a4, here, in contrast to the example Fahrni-Alapin, d4 is the corresponding square to d1) 26 ♔c1 ♔d3! 27 ♔d1 c2+! 28 ♔c1 ♔c3! 29 a5 bxa5! 30 a4 ♔d3 —+.

13...axb3! 14 ♔b2 ♔d2 15 ♔xb3 ♔c1! 16 ♔c3 ♔b1! 17 ♔b3 ♔a1!

Using the whole board.

18 a4 ♔b1! 19 a5 bxa5! 20 ♔a4 ♔b2 21 ♔xa5 ♔c3! 22 ♔b5 ♔d4! —+

The next example features a similar pawn-structure to that near to the end of 7.08; however, there are totally different variations.

7.08A =/=
N.Giertz – B.Kamber
Suhr 1992

Since here Black still has the spare tempo ...f7-f6 particular precision is necessary. In the game, there followed 1 ♔e2? ♔e4! 2 ♔f2 ♔d3! 3 ♔f3 f6 4 ♔f2 ♔d2! 5 ♔f3 ♔e1! 6 e4 ♔f1! 7 e5 fxe5! 8 ♔e4 ♔f2 0-1 (because of 9 ♔xe5 ♔g3! 10 ♔f5 ♔h4! —+). The correct way is:

1 ♔f2! ♔e4 2 ♔e2! f6 3 ♔f2! ♔d3 4 ♔f3! ♔c3 5 ♔e2

5 ♔g3 ♔c2 6 ♔g2! =; 5 ♔e4? ♔d2! 6 ♔d4 ♔e2 7 e4 ♔f3 8 ♔d5 ♔f4! 9 ♔e6 ♔xe4! —+.

5...♔c4

But not 5...♔c2? 6 e4! ♔c3 7 e5!! (7 ♔e3? ♔c4! 8 e5! ♔d5! =) 7...fxe5 8 ♔e3! +—.

6 ♔f2 =

C) Passive Defence

In general a passive defence is only sensible if at least one base pawn is still on its starting position, because such a pawn can't be the object of an encircling manoeuvre from behind. Nevertheless, the attacker has a lot of ideas available. An elegant encirclement is shown in the following game:
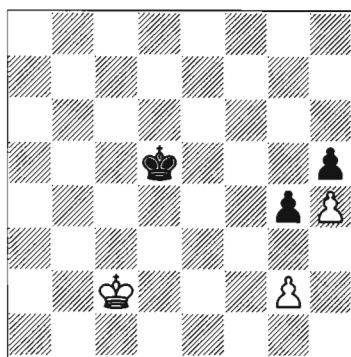
7.09 =/+
G.Tringov – L.Stein
Amsterdam IZ 1964

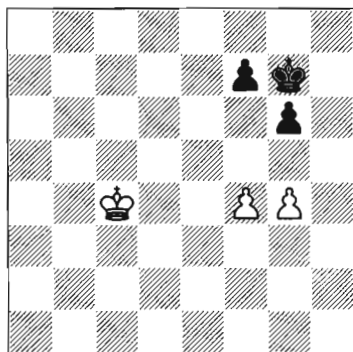Black uses his active king for a winning penetration that finally leads to the win of the g2-pawn:

1...♔e4 2 ♔d2 ♔f4! 3 ♔e2 ♔g3! 4 ♔f1 ♔h2!

Not 4...♔xh4? 5 ♔f2! ♔g5 6 g3 =.

0-1

In view of 5 ♔f2 ♔h1! 6 ♔g3 (6 ♔f1 g3! —+) 6...♔g1 7 ♔f4 ♔xg2 —+.

If there are no blocked pawns, both sides have more options:

7.10   **+/=**

M.Botvinnik

Shakhmaty v SSSR, 1952

White has a space advantage and the more active king. The three-time world champion demonstrates how to use these advantages for a winning encirclement:

1 ♔d5! ♔f8

1...♔h6 2 ♔e5! ♔g7 3 ♔d6! ♔f8 (3...f5 4 g5! +−; 3...g5 4 f5! ♔f6 5 ♔d7 +−) 4 ♔d7! ♔g7 5 ♔e8! ♔g8 6 ♔e7 ♔g7 7 f5! g5 8 ♔e8 +−.

2 ♔d6! ♔e8 3 f5! g5

3...gxf5 4 gxf5! ♔d8 5 f6! +−.

4 ♔c7!

4 f6? ♔d8! 5 ♔e5 ♔d7 6 ♔f5 ♔d6! 7 ♔xg5! ♔e6 =.

4...♔e7 5 ♔c8! ♔d6

5...♔e8 6 f6! +−.

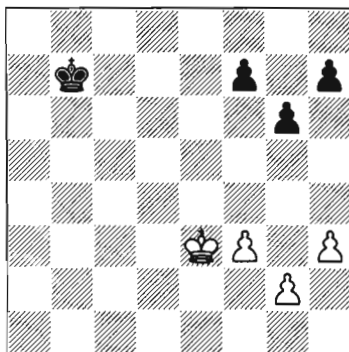**6 ♔d8! ♔e5 7 ♔e7 f6 8 ♔f7! ♔f4 9 ♔xf6! ♔xg4 10 ♔g6 +−**

Botvinnik based this study on his analysis of Troianescu-Botvinnik, Budapest 1952.

Also in the following example the more active king is decisive (*see next diagram*):

The weakness of f6 is fatal for Black:

1 ♔e4

1 ♔f4? f6! 2 g4 ♔c6 (2...h6? 3 h4! ♔c6 4 h5! +−) 3 g5 and then:

7.11   **+/=**

E.Shvidler – F.Maeser

Lenk 1991

a) 3...f5?! 4 ♔e5 ♔c5! 5 h4 (5 ♔f6 ♔d4! 6 ♔g7 ♔e3 7 ♔xh7 ♔xf3 8 ♔xg6 f4 9 ♔h5 ♔e4 =) 5...f4! 6 ♔xf4 ♔d4 =.

b) 3...♔d6 4 gxf6 h6! =.

1...♔c6

1...f6 2 ♔d5! ♔c7 3 ♔e6! and wins, e.g. 3...f5 4 h4 f4 5 ♔e5 ♔d7 6 ♔xf4 ♔e6 7 ♔g5 ♔f7 8 ♔h6 ♔g8 9 h5 gxh5 10 ♔xh5 +−.

2 ♔e5! ♔d7 3 ♔f6! ♔e8 4 g4?

4 ♔g7! is necessary to force the advance of the black h-pawn. We saw in Chapter 5 that it is very difficult to win against a pawn that is at h7. 4...h5 5 ♔f6!? ♔f8 6 h4 ♔g8 7 f4 ♔f8 8 f5 +−.

4...♔f8! 5 h4

5 g5 ♔g8! =; 5 f4 ♔g8! 6 f5 (6 ♔e7 ♔g7! 7 f5?? gxf5! 8 gxf5 h6! −+) 6...♔f8! draws.

5...♔g8!

The game saw 5...h6? 6 f4! ♔g8 7 h5 1-0 (in view of 7...gxh5 8 gxh5! ♔f8 9 f5 ♔e8 10 ♔g7! ♔e7 11 ♔xh6 ♔f6 12 ♔h7 ♔xf5 13 ♔g7 +−).

6 f4

Or 6 h5:

a) 6...♔f8 7 h6!? g5! 8 ♔xg5 ♔e7! 9 ♔f5 f6!:

a1) 10 g5 and then:

a11) 10...♔f7? 11 gxf6! (the analysis is now in the lines of a study by Grigoriev – *ECE* 1549) 11...♔e8 12 ♔e6 ♔f8 13 f4 ♔e8 14 f7+ ♔f8 15 ♔d6!! (this forces Black to capture f7 and thus to enable an encirclement or a penetration by the white king) 15...♔xf7 16 ♔d7! +– (5.10).

a12) 10...fxg5! 11 ♔xg5 ♔e6 12 f4 ♔e7 13 ♔f5 ♔f7! = (12.05).

a2) 10 ♔e4 ♔e6 11 f4 f5+! =.

b) 6...gxh5 7 gxh5 ♔f8! 8 f4 ♔g8! 9 ♔e7 (9 f5 ♔f8! 10 h6 ♔e8! 11 ♔g7 f6! 12 ♔xf6 ♔f8! =) 9...f5!! 10 ♔f6 ♔f8! 11 ♔xf5 ♔f7! = (5.10); 6 ♔e7 ♔g7 7 f4 f5! 8 gxf5 gxf5! 9 ♔e6 ♔g6! 10 h5+ ♔g7! 11 ♔xf5 ♔f7! = (12.06).

6...♔f8! 7 f5 *(D)*
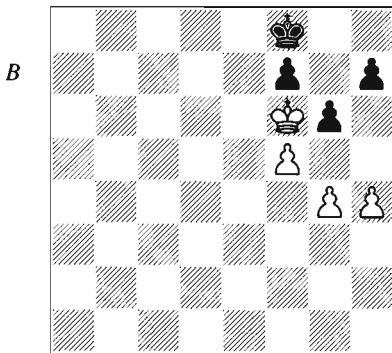
7...h5!!

The saving counter. 7...♔g8? 8 ♔e7! h5 9 fxg6! fxg6 10 g5! +–; 7...gxf5? 8 gxf5! h5!? (8...♔g8 9 ♔e7! +–) 9 ♔g5! ♔g7 10 f6+! (10 ♔xh5? f6! =) 10...♔g8 (after 10...♔h7 the f-pawn can also be captured: 11 ♔f4 ♔h6 12 ♔e4 ♔h7 13 ♔d5 ♔g6 14 ♔e5! ♔h7 15 ♔d6! +–) 11 ♔xh5 ♔h7 12 ♔g5! ♔g8 13 ♔f5 ♔h7 14 ♔e4 ♔h6 15 ♔d5! ♔g6 16 ♔e5! ♔h5 17 ♔d6! +–.
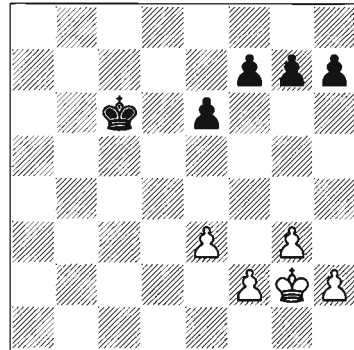
8 g5

8 gxh5 gxf5! =; 8 fxg6?? hxg4! 9 h5 fxg6! 10 h6 ♔g8! –+.

8...gxf5! 9 ♔xf5 =

The practical difficulties of such positions are illustrated by the following example from grandmaster practice:

Though Black is a little bit better due to

7.12 =/=
P.Schlosser – P.Blatny
Brno 1992

his more active king, he really shouldn't be able to win against the best defence.

1 ♔f3 = ♔d5 2 h4 e5

2...g6 3 ♔e2 ♔c4 4 g4 =.

3 g4 f6 4 h5 g6 5 hxg6 hxg6! 6 ♔e2

6 g5?! also draws but a lot of variations have to be calculated precisely:

a) 6...fxg5 7 ♔g4 ♔e4 8 ♔xg5! ♔f3! 9 ♔xg6! ♔xf2! 10 ♔f5! = (10 e4? ♔e3! 11 ♔f5 ♔d4! –+).

b) 6...f5 7 e4+!? ♔e6 8 ♔e3 =.

c) 6...e4+ 7 ♔g3 (7 ♔f4 f5! 8 f3 exf3! 9 ♔xf3! ♔e5 10 ♔f2 =) 7...f5 8 ♔g2 ♔e5:

c1) 9 ♔g3? f4+!:

c11) 10 exf4+ ♔f5! 11 ♔g2 (11 f3 e3! –+) 11...♔xf4! 12 ♔h2 ♔xg5 13 ♔g3 ♔f5! –+.

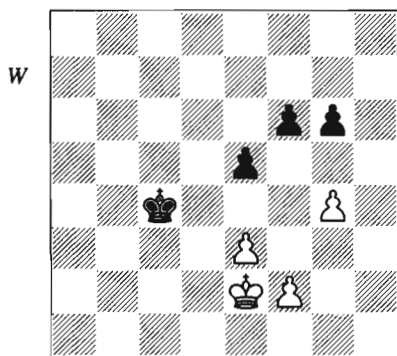c12) 10 ♔g4 f3 11 ♔g3 ♔d6 12 ♔f4 ♔d5! 13 ♔g3 ♔c4! 14 ♔f4 ♔d3! 15 ♔e5 ♔e2 –+.

c2) 9 f3? ♔d5! 10 ♔g3 ♔c4! 11 ♔f4 ♔d3! –+.

c3) 9 ♔f1! f4 10 exf4+! ♔xf4 and now:

c31) 11 ♔e1? ♔xg5! 12 ♔d2 ♔f4 13 ♔e2 g5 14 ♔e1 ♔f3! 15 ♔f1 g4!. In contrast to 4.14, this position is lost since Black has a breakthrough at his disposal due to the proximity to the first rank: 16 ♔e1 ♔g2! 17 ♔e2 ♔g1 18 ♔e1 e3 –+.

c32) 11 ♔e2! ♔xg5 12 ♔e3! ♔f5 13 f3 =.

6...♔c4 (D)

W

7 e4?

This move is the decisive weakening of the white structure. Again we would like to explain why this is the case. Up to now the e-pawn was protected by the base f2 (which one can't encircle from behind). By e3-e4 White forces himself into f2-f3 with a shifting of the base to the 3rd rank. White could keep the balance with 7 ♔d2 ♔b3 (7...f5 8 gxf5 gxf5! 9 f3 =; 7...e4 8 ♔c2 =) 8 ♔d3 f5! 9 gxf5 gxf5! 10 f3 ♔b4! 11 f4 = or 7 f3 ♔c3 8 e4! ♔c2 9 ♔e3! ♔d1 10 f4! g5! 11 fxg5 fxg5! 12 ♔d3! ♔e1! =.

7...♔d4! 8 f3

8 g5 fxg5! 9 ♔f3 ♔d3! 10 ♔g4 ♔e2! (10...♔xe4? 11 ♔xg5! ♔f3 12 ♔xg6! ♔xf2 13 ♔f5! =) 11 ♔xg5 ♔xf2! 12 ♔f6 (12 ♔xg6 ♔e3! –+) 12...g5! 13 ♔xg5 (13 ♔xe5 g4! –+) 13...♔e3! 14 ♔f5 ♔d4! –+.

8...♔c3! 9 f4

After 9 ♔e3 g5 it becomes obvious that the base is on the 3rd rank (see
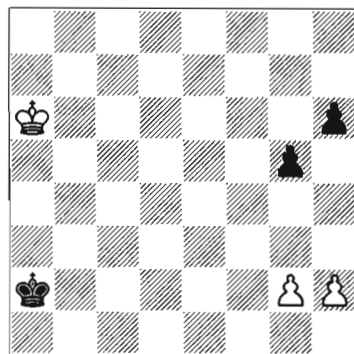
7.03/7.04): 10 ♔e2 ♔c2! 11 ♔e3 ♔d1! –+.

9...g5!

But not 9...♔d4? 10 g5! fxg5! 11 fxe5 =; 9...exf4?? 10 g5! +–.

10 fxg5 fxg5! 11 ♔e3 ♔c4! –+ 0-1

D) Active Defence/ Counter-attack

We now get to positions in which both kings attack the opponent's pawns:

7.13   **+/**

N.Grigoriev
Shakhmaty v SSSR, 1937

White arranges a structural advantage and then exploits it with great precision:

1 g4!

1 ♔b5? ♔b2! 2 ♔c5 ♔c2! 3 ♔d5 ♔d2! 4 ♔e5 ♔e2! 5 ♔f6 (5 ♔f5 ♔f2! 6 g4 ♔f3! =) 5...g4! (5...♔f2? 6 g4! ♔f3 7 ♔f5! +–) 6 ♔f5 (6 g3? ♔f2! 7 ♔f5 ♔f3! 8 ♔g6 ♔g2! 9 ♔h5 ♔h3! –+) 6...g3 7 hxg3! =.

1 ♔b6? ♔b3! 2 ♔c6 (2 ♔c5 ♔c2! =) 2...♔c4 3 ♔d6 ♔d4 4 ♔e6 ♔e3! 5 ♔f6 g4! =.
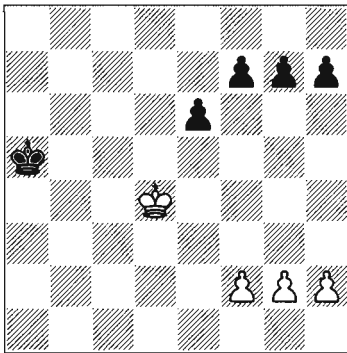
1...♔a3 2 ♔a5!

2 ♔b5? ♔b3! 3 ♔c5 ♔c3! 4 ♔d5 ♔d3! 5 ♔e5 ♔e3! 6 ♔f5 ♔f3! 7 ♔g6! ♔xg4! 8

♔xh6! =; 2 ♔b6? ♚b4! = (2...♚b2? 3 ♔c6! ♚c2 4 ♔d6! ♚d2 5 ♔e6! ♚e2 6 ♔f6! +–).

2...♚b2 3 ♔b6! ♚b3 4 ♔b5! ♚c2 5 ♔c6! ♚c3 6 ♔c5! ♚d2 7 ♔d6! ♚d3 8 ♔d5! ♚e2 9 ♔e6! ♚e3 10 ♔e5! ♚f2 11 ♔f6! ♚f3 12 ♔f5! ♚g2 13 ♔g6! ♚h3 14 ♔h5! +–

A zigzag course full of exclamation marks.

Let's have a look at another practical example, which was annotated by Mufić in *Informator 51*:

7.14 =/

Go.Mufić – N.Ferčec
Yugoslavia 1991

The active white king fully outweighs Black's extra pawn but it just isn't enough for a win:

1 ♔c5!?

1 ♔e5 ♚b5 2 ♔d6! ♚c4 3 ♚e7 ♚d3 4 ♔xf7 ♚e2 5 f4 ♚f2 6 g3 ♚g2 7 ♚xg7 h5! 8 ♚g6 ♚xh2! 9 ♚xh5! ♚xg3! 10 ♚g5! =.

1...e5!!

Black must rely solely on his e-pawn; otherwise he is lost, e.g. 1...h5? 2 ♚d6 ♚b5 3 ♚e7 f6 4 ♚xe6 +–.

2 g4!?

2 ♚d6 ♚b5 3 ♚xe5 (3 ♚e7 e4 4 ♚xf7 ♚c4 5 ♚xg7 ♚d3! =) 3...♚c6 = is clearly

drawn. Also White could have tried playing 2 h4!?.

2...♚a4?

This loses the decisive tempo. Again the king wasn't allowed to move:
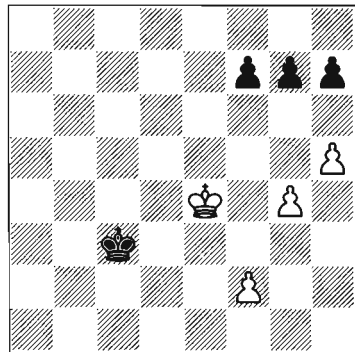
a) 2...f6 3 ♚d5 (3 h4 ♚a4 =) 3...♚b4 4 ♚e6 ♚c4 5 ♚f7:

a1) 5...g6? 6 ♚xf6 ♚d4 7 ♚g7 ♚e4 8 ♚xh7! ♚f3 (8...g5 9 ♚g6 ♚f4 10 h3 +–) 9 ♚xg6! ♚xf2 10 ♚f5! ♚f3 11 g5! +–; White can immediately exchange queens.

a2) 5...♚d3! 6 ♚xg7 ♚e2 7 ♚xf6 ♚xf2 8 ♚xe5 ♚g2! =.

b) 2...e4 3 h4 ♚a4 4 h5:

b1) 4...♚b3? 5 ♚d5 ♚c3 (5...♚b4 6 ♚xe4! ♚c5 7 ♚e5 ♚c6 8 h6 gxh6 9 f4! ♚d7 10 ♚f6! ♚e8 11 ♚g7! ♚e7 12 f5 +–) 6 ♚xe4! *(D)*.

B

Now we have an endgame with the same number of pawns, in which the bad position of the black king is decisive.

b11) 6...♚d2 7 g5 ♚e2 8 f4:

b111) 8...g6 9 h6! ♚f2 10 ♚e5 ♚f3 11 ♚f6 ♚xf4 12 ♚g7! (12 ♚xf7? ♚f5 13 ♚g7 ♚e6! 14 ♚g8 ♚e7! 15 ♚h8 ♚f8 16 ♚xh7 ♚f7! =) 12...♚xg5 13 ♚xh7! and wins.

b112) 8...♚f2 9 f5 ♚g3 10 ♚d5! (the necessary preparation for the following breakthrough) 10...♚g4 (10...g6 11 hxg6! hxg6 12 f6! ♚f4 13 ♚d6! ♚xg5 14 ♚e7! +–) 11 g6!! hxg6 12 f6! gxf6 13 h6! +–.

Chapter 9 deals with pawn breakthroughs.

b12) 6...♔c4 7 g5 ♔c5 8 ♔e5! ♔c6 9 h6! gxh6 10 gxh6! ♔d7 11 ♔f6! ♔e8 12 ♔g7! ♔e7 13 ♔xh7 ♔f8 14 f3 f5 15 ♔g6! ♔g8 16 ♔xf5 +–.

b2) 4...h6! 5 ♔d6 ♔b4 6 ♔e7 ♔c4 7 ♔xf7 ♔d3! 8 ♔xg7 ♔e2! 9 g5 (9 ♔xh6 ♔xf2! 10 g5 e3 11 g6 e2 12 g7 e1♕ 13 g8♕ =) 9...♔xf2! 10 gxh6 e3! 11 h7 e2! 12 h8♕ e1♕! =.

3 ♔d6! ♔b4 4 ♔e7! ♔c4 5 ♔xf7! g5

5...♔d3 6 ♔xg7! ♔e2 7 ♔xh7 ♔xf2 8 g5! e4 9 g6! e3 10 g7! e2 11 g8♕! e1♕ 12 ♕g3+! +–.

6 ♔f6 ♔d4 7 ♔xg5 ♔e4 8 ♔f6 ♔f4 9 g5 e4 10 g6 hxg6 11 ♔xg6! ♔g4

11...♔f3 12 ♔f5! ♔xf2 13 ♔xe4! ♔g2 14 h4! +–.

1-0

As 12 h4 ♔xh4 13 ♔f5! wins.

We have seen that an extra pawn isn't everything; on the other hand it could have saved half a point. Of course, usually the only question is whether an extra pawn wins. This issue, the realization of an extra pawn on one wing, is the subject of the rest of this chapter.

E) Extra Pawn

If the pawn-structure and the position of the king are not too compromised the extra pawn wins (*see next diagram*):

Though the black king is in the corner, his activation can't be prevented. The fact that the e-pawn is backward is unimportant thanks to the spare tempi with the g- and h-pawns.

1...♔g8 2 ♔c3 ♔f7 3 ♔c4 ♔e7 4 ♔c5 ♔d7 5 h3 h6 6 h4 h5

6...e5 is also possible at once, but the activation of the king in the game is more convincing. 7 fxe5 ♔e6! 8 ♔d4 h5 (not 8...g5? 9 hxg5 hxg5! 10 g4! =) 9 ♔e3 ♔xe5! 10 ♔f3 f4! 11 gxf4+ ♔f5 –+.
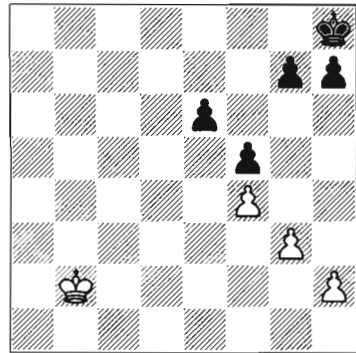
7.15　　　　　　　　　　　–/+

R.Wessmann – L.Schneider
Gothenburg 1990

7 ♔c4 ♔c6 8 ♔d4 ♔d6 9 ♔d3 ♔d5 10 ♔e3 ♔c4 11 ♔e2 ♔d4 12 ♔f2 ♔d3 13 ♔f3 ♔d2 14 ♔f2 g6 15 ♔f3 ♔e1! 16 ♔g2 ♔e2! 0-1

The next example shows an exception, in which one doesn't realize at first sight why the pawn-structure is weakened:
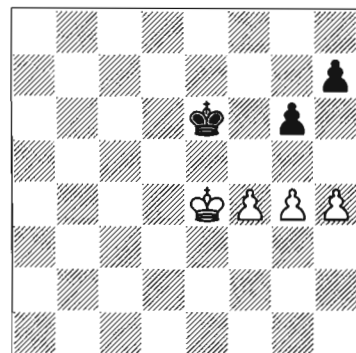
7.16　　　　　　　　　　　=/–

I.Maizelis
Shakhmaty v SSSR, 1954

If White is to move, he can't change the pawn-structure in his favour because he lacks a spare tempo:

1 ♔d4

Both 1 f5+ gxf5+ (1...♔f7?! =) 2 gxf5+
♔f6 = and 1 h5 gxh5! 2 gxh5 ♔f6! = lead
to a drawn f+h against h-pawn ending,
which we have examined in Chapter 5.

Also 1 g5 ♔d6!:

a) 2 h5 gxh5 (2...♔e6 =) 3 f5 h4! 4
♔f4 h3! (for 4...♔d5? 5 ♔g4! ♔e5 6 f6!
+−) 5 ♔g3 ♔e5 6 f6 ♔e6 7 ♔xh3 h6 is a
draw.

b) 2 f5 gxf5+! 3 ♔xf5 ♔e7! = leads to
nothing.

1...♔d6! 2 ♔c4 ♔c6! 3 ♔c3 ♔c7! =

If it is Black to move, he has to retreat
by one rank:

1...♔d6

1...♔f6 2 ♔d5 ♔e7 3 ♔e5 ♔f7 4 ♔d6
♔f6 5 ♔d7 ♔f7 6 g5 +−.

2 ♔d4! ♔e6 3 ♔c5! ♔e7

3...h5 4 g5 (4 gxh5 gxh5 5 ♔d4! +−)
4...♔f5 5 ♔d5 ♔xf4 6 ♔e6! ♔g4 7 ♔f6
♔xh4 8 ♔xg6! +−.

4 ♔d5! ♔d7 5 ♔e5 ♔e7

With the king on e5, the transition into
an ending with f+h vs h wins:

6 h5

6 g5 ♔f7 7 ♔d6! ♔f8 8 ♔e6! ♔e8 9
♔f6! ♔f8 10 h5! gxh5 11 ♔e5!:

a) 11...♔e7 12 f5! h4 (12...♔d7 13
♔f4! ♔d6 14 ♔g3! +−) 13 ♔f4! ♔d6 14
♔g4! ♔e5 15 f6! ♔e6 16 ♔xh4! h6 17
♔h5! hxg5 18 ♔g6! +−.

b) 11...h4 12 ♔e4! ♔e7 13 ♔f3! ♔e6
14 ♔g4! +−.

6...gxh5 7 gxh5! ♔f7 8 ♔d6! +−
(5.10).

If in the starting position the black h-
pawn is at h6, White wins, whoever is to
move (*ECE* 1185; also look at, e.g.,
5.08).

In the study by Maizelis the pawns
were already far advanced. When they
are still further back, usually the win
should be forced:

7.17 **+/**
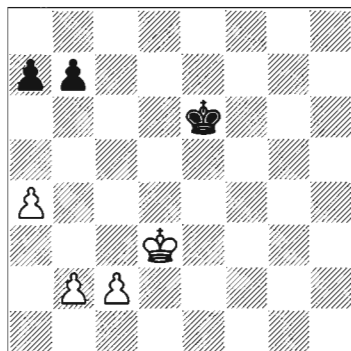
White has already played a4, so the
endgame c+a vs a-pawn again is a draw.
White therefore has to negotiate some
hurdles since the usual procedure 'candi-
date in front', in order to transform the
majority into a passed pawn, doesn't win
here. A pawn in a majority is, according
to Nimzowitsch, called a candidate if it
has no counterpart on its file. The rule
'candidate in front' basically means that
at first the candidate should advance as
far as possible in order then to be sup-
ported by its neighbours to create a
passed pawn. This rule especially serves
the wish to avoid structures with back-
ward pawns, but in the present case an
advance like b4, c4, c5, b5 and c6 only
leads to a draw because of 5.10.

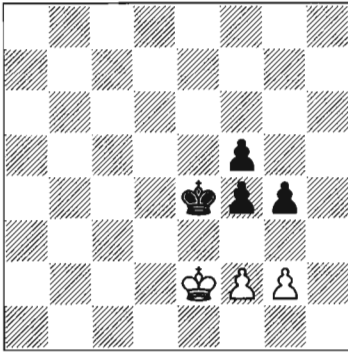**1 ♔c4 ♔d6 2 ♔b5 ♔d5 3 c4+ ♔d6 4
a5 ♔c7 5 c5**

The game actually continued 5 ♔c5
♔d7 6 b4 ♔c7 7 b5? (7 ♔b5! ♔d7 8 c5!
♔c7 9 a6! +−) 7...b6+! (7...♔d7? 8 b6
+−; compare to A4.06 and 6.03) 8 axb6+
axb6+! 9 ♔d5 ♔d7! = (4.08).

5...a6+

5...♔d7 6 a6 +−.

**6 ♔c4 ♔c6 7 b3! ♔c7 8 ♔d5! ♔d7 9
c6+ bxc6+ 10 ♔c5! ♔c7 11 b4! +−**

In the next example the outcome again depends on the right to move:

7.18   =/+

Minev
ECE, 1982

Black is a doubled pawn ahead. Even though it can't be used to build a passed pawn, it can provide the decisive spare tempo!

1...f3+!?

Black wins by exchanging the g-pawn immediately: 1...♔d4 2 f3 (2 ♔d2 f3 –+)

2...♔c4! (2...♔c3? 3 g3!! fxg3 4 fxg4! f4 5 g5! g2! 6 ♔f2! ♔d3 7 g6 f3 8 g7! g1♕+ 9 ♔xg1! ♔e2! =) 3 g3 (3 ♔d2 gxf3 4 gxf3 ♔d4! –+) 3...fxg3! 4 fxg4 f4! –+.

2 gxf3+ gxf3+! 3 ♔d2 ♔f4 4 ♔e1

4 ♔d3 ♔g5! 5 ♔d4 ♔h4 6 ♔e3 ♔g4! also wins for Black.

4...♔g4 5 ♔f1 ♔h4 6 ♔g1 ♔h3! 7 ♔h1 ♔g4! 8 ♔g1 ♔f4! 9 ♔f1 ♔e4! 10 ♔e1 ♔d3! 11 ♔d1 f4! –+

If White is to move, he blockades the doubled pawns and thus takes away the important spare tempo:

1 f3+!

1 ♔e1? f3 2 g3 (2 ♔f1 fxg2+ 3 ♔xg2 ♔f4 –+) 2...♔d3 3 ♔d1 f4 –+.

1...♔d4 2 ♔d2!

2 fxg4? fxg4! 3 ♔d2 (3 g3 f3+! –+) 3...♔e4 4 ♔e2 g3 –+.

2...♔e5

2...g3 3 ♔e2 ♔c3 4 ♔f1 ♔d2 5 ♔g1 =. The white king remains in the corner (6.01D).

3 ♔d3 ♔f6 4 ♔d4

4 ♔e2 ♔g5 5 ♔f1! ♔h4 6 ♔f2! =.

4...♔g6 5 ♔e5 ♔g5 6 ♔e6! =

Chapter 7 Exercises
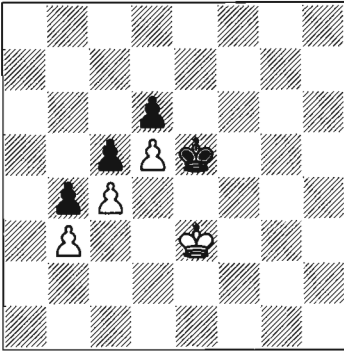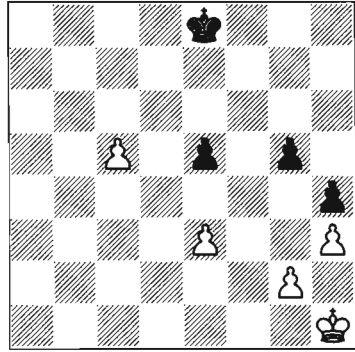
A7.01   */

A7.04   **/
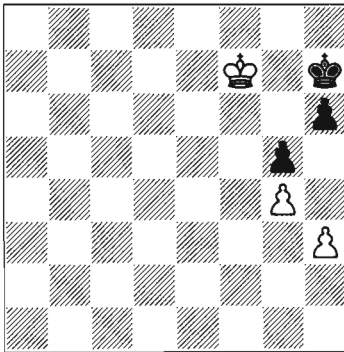
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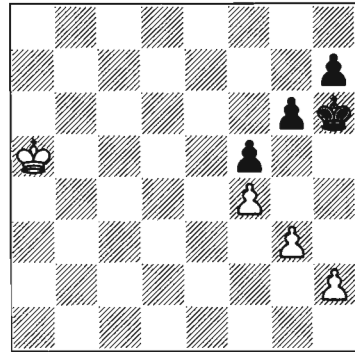
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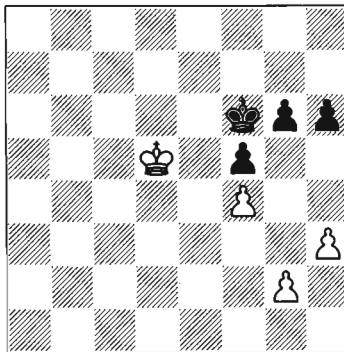
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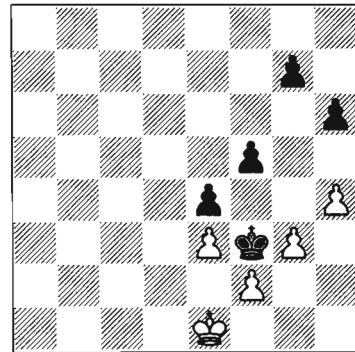
A7.06   */***

A7.07   ***/
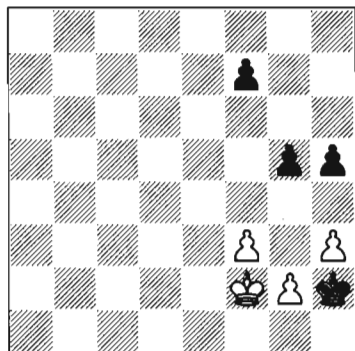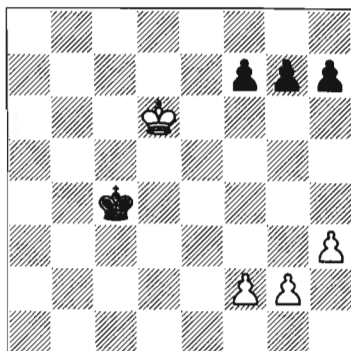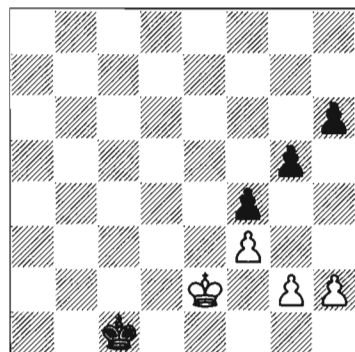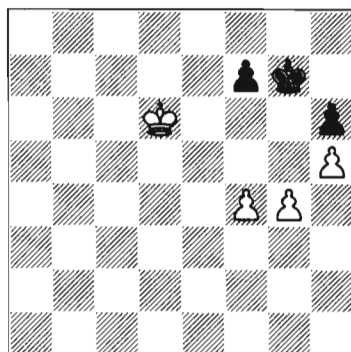

A7.10   ***/

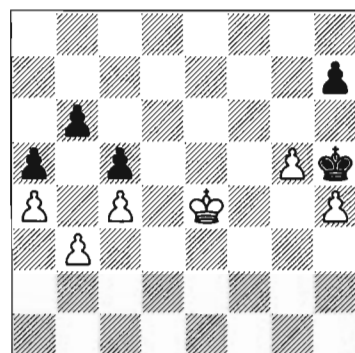
A7.08   **/

A7.11   /**
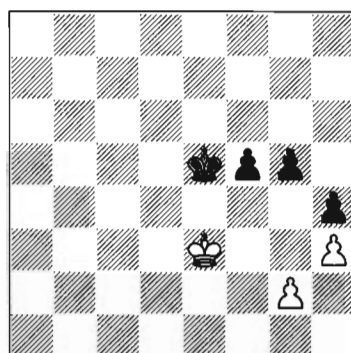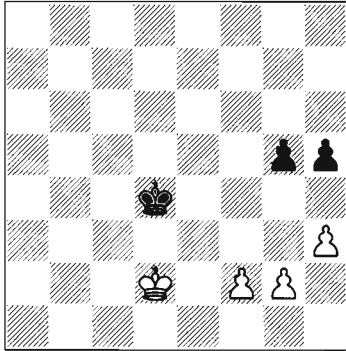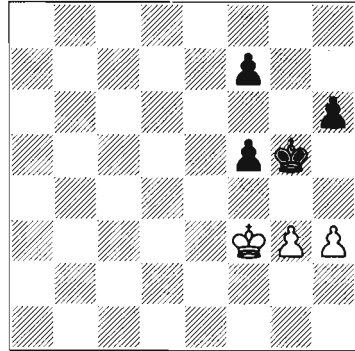

A7.09   */

A7.12   /**

A7.13 **/

A7.14 /****

Solutions to Chapter 7 Exercises

A7.01 Instructive example

White draws easily if he defends the key squares c3, d3, e3, e2 and e1:

1 ♔d3!

Since Black had the opposition, the white king has to retreat in order to get the opposition himself one rank below.

1...♔f4

1...♔f5 2 ♔e3! =.

2 ♔d2! ♔f3

2...♔e4 3 ♔e2! ♔d4 4 ♔d2! =.

3 ♔d3! =

A7.02 F.Teed, 1885

When it is White to move, Black escapes as in 7.06 by an exchange:

1 ♔f6 h5! 2 ♔xg5 hxg4! 3 hxg4 ♔g7!
draws.

If Black is to play, 1...♔h8 loses to 2 ♔g6, so his move is forced:

1...h5!?

The exchange of the last but one pawn fails though due to a surprising counterblow:

2 h4!! ♔h6 3 ♔f6! ♔h7 4 hxg5! hxg4

4...h4 5 ♔f7! +−.

5 ♔f7! g3 6 g6+! +−

The reader who likes tactics can look forward to Chapter 9, which is dedicated to this and similar ideas.

A7.03 C.Barry – D.James, *Dublin Z 1993*

The stalemate idea familiar from Chigorin-Tarrasch also leads to a draw in this position:

1...g5!?

1...♔e7? 2 ♔e5! +−.

The game actually proceeded 1...h5? 2 h4 ♔f7 3 ♔d6! ♔f6 4 ♔d7 ♔f7 5 g3! +− 1-0 (7.03).

1...♔f7 2 ♔d6 and now:

a) 2...g5? 3 ♔e5! ♔g6 4 g3 g4 (4...♔h5?! 5 ♔xf5 g4 6 hxg4#!) 5 hxg4! fxg4 6 ♔e6! +−.

b) 2...♔f6! 3 h4 g5! 4 g3 ♔g6! 5 ♔e5 g4! = (see 7.08).

2 g3 g4! 3 h4 ♔g6! 4 ♔e5 ♔h5! =

A7.04 V.Kupreichik – V.Smyslov, *Moscow 1976*

You may have asked yourself why this exercise is to be found in this chapter. The c-pawn is hopeless and Black can prevent a penetration on the kingside by ...e4. So a fixed structure is forced, in which the key squares of the e4-pawn play the dominant role:

1 ♔g1! ♔d7 2 ♔f2!

2 e4? ♔c6! 3 ♔f2 ♔xc5! 4 ♔e3 ♔c4 −+.

2...e4

2...♔c6 3 ♔f3! ♔xc5 4 ♔g4 ♔d5 5 ♔f5 e4 6 ♔xg5 ♔c4 7 ♔f5 ♔d3 8 ♔f4! ♔e2 9 ♔xe4! ♔f2 10 ♔f4 ♔xg2 11 ♔g4 +−.

3 ♔e2 ♔c6 4 ♔d2! ♔d5!? 5 ♔c2!

5 ♔c3?? ♔xc5! =.

5...♔xc5 6 ♔c3!

Now the key squares b4, c4 and d4 can't be defended any longer. Therefore Smyslov tries a pawn sacrifice:

6...g4!? 7 hxg4! ♔d5 8 g5! ♔e5 9 g6! ♔f6 10 ♔d4 ♔xg6 11 ♔xe4! ♔g5 12 ♔f3! ♔f5 13 e4+! ♔g5 14 ♔e3!

14 e5? ♔f5! 15 e6 h3! 16 e7 h2! 17 e8♕ h1♕! =.

14...♔g4 15 e5! +− 1-0

A7.05 P.van der Sterren – Xie Jun, *Amsterdam Donner mem 1994*

The white king is too far out of play to cause any serious difficulties.

1...g5

1...♔h5!? 2 h3 g5 (2...h6 −+) 3 fxg5 ♔xg5! 4 ♔b4 h5! (4...f4? 5 h4+! ♔g4 6 gxf4! ♔xf4 7 ♔c3 =) 5 ♔c3 h4! −+.

2 ♔b4

2 fxg5+ ♔xg5! 3 ♔b4 ♔g4! 4 ♔c4
♔h3! 5 ♔d4 ♔xh2 6 ♔e5 ♔xg3 7 ♔xf5
h5! —+.
  **2...gxf4! 3 gxf4 ♔h5! 4 ♔c4 ♔g4! 5
♔d3 ♔f3!?**
  5...♔h3? 6 ♔d4! =; 5...♔xf4 also wins
(5.09).
  0-1
  Due to 6 ♔d2 (6 ♔d4 ♔xf4! —+)
6...♔g2 7 ♔e3 ♔xh2 8 ♔d4 ♔g3 9 ♔e5
♔g4 —+.

A7.06 Esser – Davidson, *Amsterdam
1910*
  For a long time this position was sup-
posed to be won, until Réti realized in
1926 that White has enough resources to
draw.
  1...f4!?
  1...g5 2 hxg5! hxg5! 3 ♔f1! =.
  2 gxf4!
  Now White has timely counterplay.
Not 2 exf4? e3! 3 fxe3 ♔xe3! and Black
wins.
  2...♔g4 3 ♔f1!
  The game proceeded instead 3 ♔e2?
h5! 4 ♔f1 (4 f3+ exf3+! 5 ♔f2 g6! —+)
4...♔xh4! 5 ♔g2 ♔g4! 6 ♔h2 ♔f3 7 ♔g1
h4 0-1 (in view of 8 ♔f1 h3 9 ♔g1 h2+ 10
♔xh2 ♔xf2! 11 ♔h3 ♔xe3 —+).
  3...♔xh4
  3...g6?! 4 ♔g2 ♔xh4! (4...h5? 5 f3+!
exf3+ 6 ♔f2! ♔xh4 7 ♔xf3! g5 8 e4! +—)
5 f3! exf3+! 6 ♔xf3! g5 7 e4 ♔h3! =.
  **4 f3! exf3! 5 e4! ♔g4 6 e5! ♔f5 7
♔f2! =**
  If White is to move, he draws much
more easily by **1 ♔f1! =.**

A7.07 P.Schlosser – Sö.Maus, *Budapest
1990*
  Surprisingly this position is a draw
though the black king has penetrated the
white pawn-structure. In the game, Phil-
ipp Schlosser considered his position to
be lost, and resigned!

1 ♔f1!
  1 f4? g4! 2 hxg4 hxg4! 3 f5 f6 4 ♔f1
g3 —+.
  1...f5 2 g4!!
  2 ♔f2? g4! 3 hxg4 hxg4!? 4 f4 ♔h1!
—+; see 7.09.
  2...hxg4
  2...fxg4 3 hxg4! hxg4 4 fxg4! ♔g3 5
♔g1! =.
  3 fxg4! ♔xh3
  3...f4?? 4 h4! +—.
  4 gxf5! ♔h2! =
  Conclusion: with a pawn distribution
as above and a white base at g2, the posi-
tion is nearly always drawn, because no
there is no encirclement possible. Even
w♔f7,△f4,g4,h4; b♔h7,△f6,g7,h6 out of
C.Brumm-M.Ehrke, Germany 1981 is
still a draw: 1 g5 hxg5 2 hxg5! fxg5! 3
fxg5! ♔h8! 4 g6 stalemate.

A7.08 F.Zepernick – R.Fantino, *Ger-
many U-15 tt 1995*
  The base g2 easily holds the draw but
why not try to win?
  1 ♔d3! ♔d1 2 g3!
  The game continued 2 ♔e4? ♔e2! 3
g3 and now:
  a) 3...fxg3? 4 hxg3! ♔f2? (4...h5 =) 5
f4! +— was the game.
  b) 3...g4! 4 fxg4 f3! and Black is win-
ning.
  **2...fxg3 3 hxg3! h5 4 f4 gxf4
  4...h4 5 gxh4 +—.
  5 gxf4! h4 6 ♔e3! +—**

A7.09 V.Korchnoi – T.Petrosian, *Odessa
Ct (3) 1974*
  White wins in a very straightforward
way:
  **1 ♔f5! ♔xh4 2 g6! hxg6+ 3 ♔xg6!
♔g4 4 ♔f6 ♔f4 5 ♔e6 ♔e4 6 ♔d6 ♔d4
7 ♔c6 ♔c3 8 ♔xb6! ♔xb3 9 ♔b5! 1-0**
  Depending on the side to which the
black king retreats, White captures the
according pawn.

A7.10 S.Kalinichev – K.J.Schulz, *Cham 1992*

Also in this game, which was analysed by Kalinichev in *Informator 56*, White could have exploited his more active king position:

1 g4!!

The game continued 1 ♔e7? f5! (one should memorize this advance of the f-pawn; it often saves the defender with such races on one wing) 2 ♔f7 (2 ♔e6 ♔d3 3 ♔xf5 ♔e2! 4 f4 ♔f2! 5 g4 ♔g3! =) 2...♔d3 3 ♔xg7 f4! (3...♔e2? 4 f4! +–) 4 ♔xh7 (4 ♔f6 ♔e2! 5 f3 ♔f2 6 ♔f5 ♔xg2! 7 ♔xf4 ♔xh3! 8 ♔g5 ♔g3 9 f4 h6+ =) 4...♔e2! 5 g4 ♔xf2 6 g5 f3 7 g6 ♔g3 8 g7 f2 9 g8♕+ ♔xh3! = ½-½.

1...♔d3 2 ♔e7! f6

2...f5 3 gxf5! ♔e4 4 ♔f7 ♔xf5 5 ♔xg7! +–.

3 ♔f7 ♔e2 4 f4! ♔f3 5 f5! ♔g3 6 ♔xg7 +–

A7.11 F.Gheorghiu – H.Ardiansyah, *Lucerne OL 1982*

In this position Black only appears to be lost:

1...f5!! 2 gxf5

2 ♔e7 fxg4! 3 f5! g3 4 f6+! ♔h7! 5 f7 g2! 6 f8♕ g1♕! =; 2 g5?? hxg5! 3 fxg5 f4! –+.

2...♔f6! 3 ♔d7 ♔xf5 4 ♔e7 ♔xf4 5 ♔f6 ♔e4! 6 ♔g6 ♔e5! 7 ♔xh6 ♔f6! 8 ♔h7 ♔f7! 9 h6 ♔f8! ½-½

A7.12 L.Alburt – G.Kasparov, *Daugavpils 1978*

As long as one doesn't hurry, a win analogous to 7.17 is possible:

1...♔d5

1...g4? 2 hxg4! fxg4 = (6.02); 1...f4+? 2 ♔f2 =.

2 ♔d3 ♔c5

2...f4 3 ♔e2 ♔e4! 4 ♔f2 f3! –+ (7.17) is also possible at once.

3 ♔c3?!

In addition to ...f4 Black now has the further option ...g4.

3 ♔e3!? ♔c4 4 ♔e2 ♔d4 (4...♔c3?! 5 ♔e3 ♔c4! –+) 5 ♔d2 f4 –+.

3...g4 4 ♔d3 gxh3

4...f4 5 hxg4 f3! –+.

5 gxh3 ♔d5 6 ♔e3 ♔e5! 7 ♔f3 f4! 8 ♔f2 ♔e4! 9 ♔e2 f3+! 10 ♔f1

Now the triangulation shown in 5.08 wins:

10...♔f5 11 ♔g1 ♔e5 0-1

Because of 12 ♔f1 ♔e4! –+.

A7.13 J.Timman

Also in this position, given by Timman in *Het Groot Analyseboek*, White has to be precise during the realization of the extra pawn:

1 g4

a) 1 ♔e2 +–.

b) 1 g3? ♔e4 2 ♔e2 g4! 3 h4 ♔d4 4 f3 gxf3+! 5 ♔xf3! ♔e5! = (4.08).

c) 1 f3? h4! 2 ♔e2 ♔e5! 3 ♔e3 ♔f5! 4 f4 (this breaking-up, which is analogous to 7.17 and A7.12, doesn't work here because the pawns are too far advanced) 4...g4! (4...gxf4+? 5 ♔f3! ♔g5 6 ♔e4! f3 7 gxf3! +–) 5 hxg4+ ♔xg4! 6 ♔e4 ♔g3! =.

d) 1 h4?:

d1) 1...g4? 2 f3 g3 3 ♔e2! ♔e5 4 ♔d3! (4 ♔e3?! ♔f5 5 f4? ♔g4! =) 4...♔d5 5 f4 +–.

d2) 1...gxh4! 2 ♔e2 ♔e4 (2...h3!? 3 gxh3! ♔e4! 4 f3+ ♔f4! 5 ♔f2 h4! = also works) 3 ♔f1 ♔f4 4 ♔g1 ♔f5 5 ♔h2 ♔g4! 6 f3+ ♔f4 7 ♔h3 ♔g5! 8 f4+ ♔f5!! 9 ♔xh4 ♔xf4! =.

1...hxg4

1...h4 2 f3 ♔e5 3 ♔e3! ♔d5 4 f4! +–.

2 hxg4! ♔e4 3 ♔e2! ♔f4 4 f3! ♔e5 5 ♔e3! +–

The position can't be held with Black to move either: 1...g4 2 hxg4 hxg4 3 g3 +– loses, as does 1...h4 2 ♔e2 ♔e4 3 g3 hxg3 4 fxg3! +– (5.15).

A7.14 M.Taimanov – Zakharov, *USSR*
1969
The doubled pawns demand a lot of
work but they win!
1...h5!?
1...♚g6 2 ♚e3 ♚g7 (2...h5? 3 ♚f4!
♚f6 4 h4! ♚e6 5 ♚g5! ♚e5! 6 ♚xh5 f4!
7 gxf4+ ♚xf4 8 ♚h6 ♚g4 9 h5 ♚h4 10
♚g7! ♚xh5! 11 ♚xf7 =) 3 ♚f4 ♚f6 4 g4
♚g6! (4...fxg4? 5 hxg4! ♚g6 6 ♚f3!
♚g5 7 ♚g3! f6 8 ♚f3! = (4.14)) 5 gxf5+
♚h5! 6 ♚e5 ♚g5! 7 f6 ♚g6 8 h4 h5! –+.
2 h4+
2 ♚e3 f4+! 3 gxf4+ ♚h4! 4 ♚f3
♚xh3! 5 f5 f6 –+.

2...♚g6! 3 ♚e3
Alternatively, 3 ♚f4 ♚f6 4 ♚e3 ♚e5
5 ♚f3 f4 6 g4 hxg4+! 7 ♚xg4 ♚e4! 8 h5
f3! 9 ♚g3 ♚e3! 10 h6 f2! 11 h7 f1♛! 12
h8♛ ♛g1+! and Black wins the white
queen.
3...♚g7! 4 ♚f3 f6! 5 ♚f4 ♚g6! 6 ♚f3
♚f7! 7 ♚e3 ♚e7! 8 ♚f3
8 ♚d3 ♚e6 9 ♚e2 ♚e5 10 ♚e3 (10
♚f3 f4! 11 g4 hxg4+! 12 ♚xg4 ♚e4! –+)
10...f4+! 11 gxf4+ ♚d5! 12 ♚d3 f5! 13
♚e3 ♚c4! –+.
8...♚d6 9 ♚f4 ♚e6! 10 ♚e3 ♚e5! 11
♚f3 f4! 12 g4 hxg4+! 13 ♚xg4 ♚e4! 14
h5 f3! 15 h6 f2! 0-1

8 Passed Pawns

Passed pawns have a special significance in pawn endings because usually the king himself has to deal with them. The restrictive effect of a protected passed pawn and the deflective effect of an outside passed pawn are already familiar to us. Now it's time to enhance our knowledge by examining further aspects:

A) Preliminary Considerations

First we now want to examine the fight between the king and several passed pawns without looking at the attacking king:
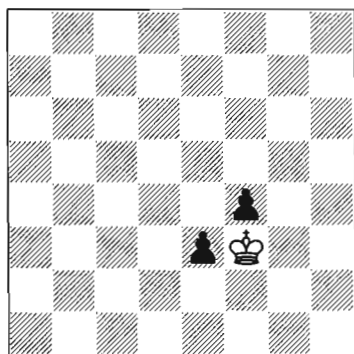
8.01A

The king can easily stop two connected passed pawns, but he can't capture one without leaving the square of the front pawn. Of course he is without a chance if Black is able to support his two pawns with his king. On the other hand though, White will capture both pawns if

Black has to advance the pawns due to zugzwang.

It's a similar case when there is one file between the pawns:
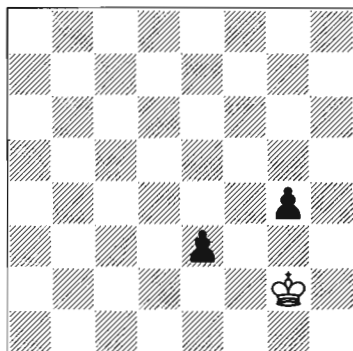
8.01B

By oscillating between g2 and g3, White can easily stop the pawns. But the attempt to capture them fails. This is because in order to capture the pawn that is further back White would have to leave the square of the e-pawn. If he tries to attack the further-advanced pawn from the front, then he will immediately get into zugzwang after **1 ♔f1? g3!**. If, in the diagram position, Black is forced to advance his pawns, they will again be lost.

A new situation arises when there are two files between the pawns (*see following diagram*):

Here the pawns can't protect each other, so with White to move they are lost:

1 ♔g3! e3 2 ♔f3! h4 3 ♔xe3! h3 4 ♔f3

8.01C

8.01D
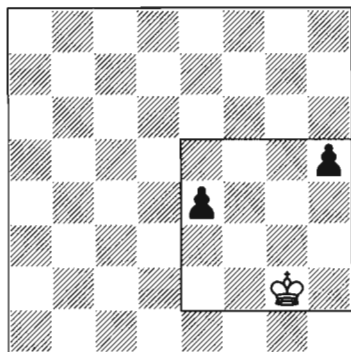
The rule of the common square (draw a line from the back pawn to the file of the front pawn and complete it to a square) might serve as a reminder here: if the common square of two passed pawns has reached the 8th (1st) rank, their promotion can't be prevented.

This is exactly the case with Black to move. One of the pawns queens:

1...h4!

The common square has reached the first rank; that's why the pawns go through on their own.

2 ♔f2 h3! 3 ♔g3 e3! 4 ♔xh3 e2!

If there are three files between the pawns, they can again protect each other. The position at the top of the next column is critical.

White shouldn't try to capture one of the pawns but has to keep both options by playing 1 ♔f4! and an oscillation between f4, f5 and f6. Black only loses the pawns if he has to push them forward: **1 ♔f4!** (1 ♔e4? h5! 2 ♔f4 d5!) **1...d5? 2 ♔e5! h5 3 ♔xd5! h4 4 ♔e4!**.

If Black has the right to move, one of the pawns will queen: **1...d5 2 ♔f4 h5!** (the common square of the pawns has reached the first rank) **3 ♔f5 h4 4 ♔g4 d4! 5 ♔xh4 d3!**.
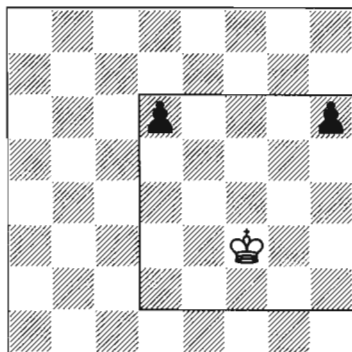
Pawns that are separated by four or more files normally can't be stopped by the king alone. However, we still want to analyse how he deals with three connected passed pawns:
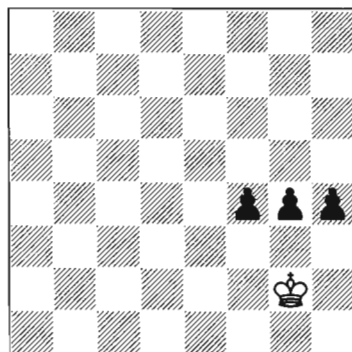
8.01E
Averbakh

Usually three passed pawns are too much for the sole king, but if they are not too far advanced at least he can create a zugzwang position:

1 ♔g1!

1 ♔f1? h3! and the pawns are unstoppable.

1...f3

1...g3 2 ♔g2! is a reciprocal zugzwang.

2 ♔f2! h3 3 ♔g3!

If now Black has a spare move (e.g. with the king) the pawns go through on their own; if not, then the pawns are all lost:

3...h2 4 ♔xh2! f2 5 ♔g2! g3 6 ♔f1! g2+ 7 ♔xg2 f1♕+ 8 ♔xf1!

If it is Black to move, the pawns go through, even without any spare moves:

1...g3!

Zugzwang!

2 ♔g1 h3 3 ♔h1 f3 4 ♔g1 f2+ 5 ♔f1 h2! 6 ♔g2 h1♕+ 7 ♔xh1 f1♕#

■ Averbakh discusses this issue of 8.01E far more extensively (442-59).

B) Battle Between Different Passed Pawns

After these somewhat dry preliminary considerations the black king is now back.

It's difficult to formulate any general rules for the following, as what counts is the exact calculation of variations.

B1) Several Passed Pawns on Both Sides

If both sides have connected passed pawns, the game usually ends in a draw, except when they are so far advanced that they can be promoted with the help of the king (*see following diagram*):

If the king blocks two connected passed pawns, he can't lose a tempo without allowing them to advance. Therefore White has to act carefully in order to block them at the right moment. With some elegant king manoeuvres he finally succeeds:

1 ♔c5!

1 ♔b5? d5! 2 ♔c5 d4! 3 ♔c4 ♔g8! 4 ♔d3 ♔f7 5 ♔e4 ♔g8! 6 ♔f5 ♔f7! =.

1...e4 2 ♔c4!
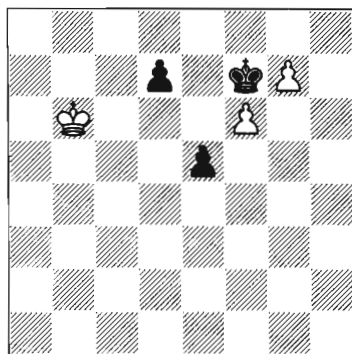
8.02   +/
N.Kopaev
Shakhmaty v SSSR, 1947

2 ♔d4? d5! 3 ♔e3 ♔g8! 4 ♔f4 ♔f7! 5 ♔g5 e3! 6 ♔h6! e2! 7 ♔h7! e1♕ 8 g8♕+! ♔xf6 9 ♕f8+ ♔g5! 10 ♕d8+ =.

2...d6 3 ♔c3! ♔g8 4 ♔d4 d5 5 ♔e3! ♔f7 6 ♔f4! ♔g8 7 ♔g5! ♔h7

7...♔f7 8 ♔h6! e3 9 ♔h7! and White wins.

8 ♔f5! e3 9 ♔e6! e2 10 ♔f7! +−

The following example is very concrete and plays in a beautiful way with the theme: check and avoiding check.
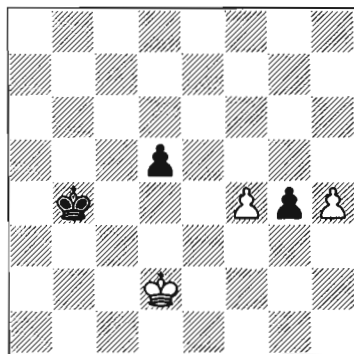
8.03   +/
A.Khachaturov
Shakhmaty v SSSR, 1947

Neither king can stop the opponent's pawns. The resulting race ends in White's favour since he queens with check:

1 f5!

1 h5? g3 2 ♔e1 d4 3 h6! d3 4 h7 g2 5 ♔f2 d2 6 h8♕ g1♕+ 7 ♔xg1! d1♕+! 8 ♔f2 ♕d2+! 9 ♔f3 ♕d3+ 10 ♔g4 ♕d1+ 11 ♔g5 ♕g1+! 12 ♔f5 ♕b1+! 13 ♔e6 ♕a2+! = and Black has a perpetual check.
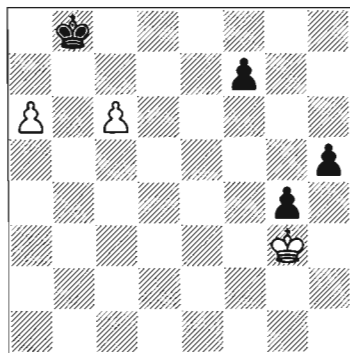
1 ♔e1? d4! (1...♔c3? 2 h5! d4 3 h6! ♔c2 4 h7 d3 5 h8♕ d2+ 6 ♔f2! d1♕ 7 ♕h7+ ♔c3 8 ♕e4! ±) 2 f5 (2 h5 g3 3 h6! g2 4 ♔f2! d3! =) 2...♔c3 3 f6 d3 4 f7 ♔c2! 5 f8♕ d2+! 6 ♔f2 d1♕! ±.

1...♔c5 2 h5! g3 3 ♔e1!!

3 ♔e2? d4! 4 f6 ♔d6 5 h6! d3+ 6 ♔xd3 g2 =.

3...d4 4 f6! ♔d6 5 h6! g2 6 ♔f2! d3 7 f7! ♔e7 8 h7! d2 9 f8♕+! ♔xf8 10 h8♕+! +−

For the following examples, our preliminary considerations again prove to be useful:

8.04 +/−

P.Carrera, 1617

The black king is in zugzwang, so even his three passed pawns can't help him:

1 ♔f4 f6

1...f5 2 ♔g3 +−.

2 ♔g3! f5 3 ♔g2

3 ♔f4? h4! 4 ♔e5 h3! 5 ♔d6 h2! 6 ♔d7 h1♕ 7 c7+ ♔a7! −+.

3...h4 4 ♔h2 f4

4...g3+ 5 ♔h3! g2 6 ♔xg2! f4 7 ♔f2 h3 8 ♔f3 +−; 4...h3 5 ♔g3! f4+ 6 ♔h2! f3 7 ♔g3! +−.

5 ♔g1!

5 ♔g2? g3! 6 ♔f3 h3! −+.

5...h3 6 ♔h2! f3 7 ♔g3! +−

All the pawns are lost due to zugzwang. It remains to say that Black's loss was only due to his fatal immobile king position.

The next example, which is of the same age, is much more difficult. The large number of similar and unclear variations caused at least us great difficulties (quote by Averbakh: "There are a lot more variations but they are all quite simple.").
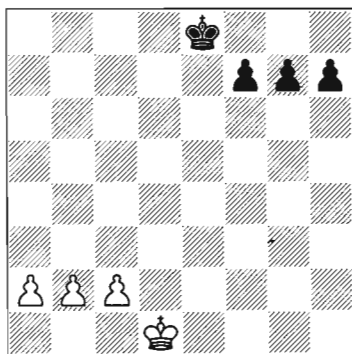
8.05 +/+

P.Carrera, 1617; **Maizelis**, 1956

Again it is White who wins by getting his opponent into zugzwang on both wings:

1 ♔e2

1 a4 +− is also possible immediately.

1...♔d7 2 ♔f3 ♔c6 3 a4!

3 ♔g4? ♔b5 =; 3 c4?? ♔c5! 4 b3 h5! −+.

3...h5 4 c4! f5 5 ♔g3!

5 a5? is premature. Black plays 5...h4 and now:

a) 6 b4? even loses if Black responds correctly:

a1) 6...g5? (now White wins!) 7 ♔f2!! (7 b5+? ♔b7 8 c5 ♔b8! 9 ♔g2 f4! −+; 7 a6? ♔b6! 8 b5 h3! 9 c5+ ♔a7! 10 ♔f2 f4! 11 ♔g1 f3! −+; 7 ♔g2? ♔b7! {reciprocal zugzwang with White to move} 8 b5 f4! 9 c5 ♔b8! −+; 7 c5? ♔b5! 8 ♔g2 f4! −+) 7...♔c7 8 c5! ♔b8 9 ♔g2 (9 b5? h3! −+; 9 a6? ♔a7! 10 b5 h3! −+; 9 ♔f3? g4+ −+; 9 ♔g1? f4 −+; 9 ♔f1 g4 10 ♔g1! +−) 9...g4 10 b5 f4 (10...h3+ 11 ♔g3! f4+ 12 ♔h2! ♔b7 13 b6! +−) 11 ♔g1! +−.

a2) 6...♔b7:

a21) 7 c5 g5! 8 b5 (8 ♔f2 h3! 9 ♔g3 g4! 10 b5 f4+ 11 ♔h2 ♔b8 −+; 8 ♔g2 f4! −+) 8...♔b8! 9 a6 ♔a7! −+.

a22) 7 ♔f2 f4 −+.

a23) 7 b5 g5! 8 ♔g2 f4! −+.

b) 6 ♔g2 f4 7 ♔g1! ♔c5 8 ♔g2! ♔c6! =.

c) 6 ♔f4 ♔b7 (6...♔c5 =) 7 c5! ♔b8! 8 ♔f3! (8 b3? g6! −+) 8...♔b7! = (8...g5? 9 ♔g2 f4 10 ♔g1 h3 11 ♔h2! g4 12 b3! ♔b7 13 b4! +−). As before, neither side is allowed to move the knight's pawn because the flexibility of the double step would be lost.

5...♔b6 6 b4! g5 7 a5+ ♔a6 8 c5 h4+ 8...♔b5 9 ♔g2 +−.

9 ♔g2 ♔b5

9...g4 10 c6 f4 11 b5+ ♔a7 12 b6+ and wins.

10 ♔h3 f4 11 ♔g4 ♔c6 12 a6! ♔c7 13 b5! +−

B2) Protected Passed Pawn vs Two Passed Pawns

The assessment of such examples mainly depends on the place of the square of the protected passed pawn. If the protected passed pawn is already far advanced or the square is far away from the attacker's

passed pawns, then the position is usually drawn. Otherwise there are good winning chances:
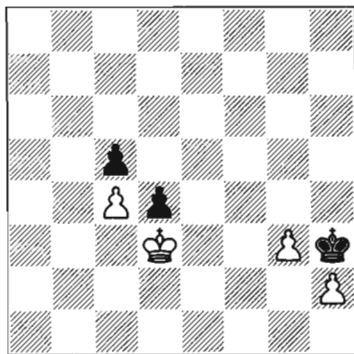
8.06   +/−
J.Kling and B.Horwitz, 1851

Though the d4-pawn limits the radius of the white king it can't prevent him from leading his connected passed pawns to their target:

1 ♔e4 ♔g4 2 h4 ♔h5 3 ♔f4 ♔h6 4 g4 ♔g6 5 h5+ ♔h6 6 ♔e4

Notice that White can move freely within the square while Black is stuck at h6 and g5.

6...♔g5 7 ♔f3 ♔h6 8 ♔f4 ♔h7 9 g5 ♔g7 10 g6

10 h6+? ♔g6 11 ♔g4 ♔h7! =.

10...♔h6

10...♔f8 11 h6 ♔g8 12 ♔f5 d3 13 ♔f6 +−.

11 ♔g4 ♔g7 12 ♔g5!

In order to make any progress White has to leave the square.

12...d3 13 h6+! ♔g8 14 ♔f6!

14 g7? ♔f7! −+.

14...d2 15 h7+! ♔h8 16 ♔f7 d1♕ 17 g7+! ♔xh7 18 g8♕+! ♔h6 19 ♕g6#

■ If in the starting position the d4-pawn were at b4 or if one moves the position to the left it would be a draw, as the reader can verify by himself.

If there are still more pawns on the board there are also more possibilities. Alekhine had no great problems winning the following position:
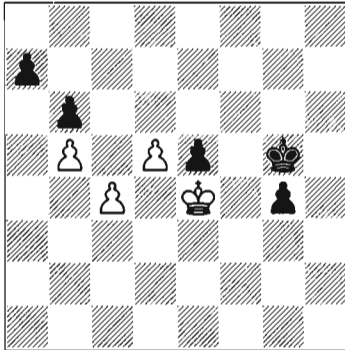
8.07   /+
P.Keres – A.Alekhine
Dresden 1936

Due to the passed d-pawn being protected in an unusual way, there are even two basically very different ways to win. Alekhine won the game after a transition into a winning queen ending by pushing through the g-pawn with the help of the king. Grigoriev later showed that he also had the option of attacking the base of the d5-pawn by playing ...a6 and ...b5.

1...♔f6 2 ♔e3 ♔f5 3 ♔f2 e4 4 ♔e2 g3 5 ♔e3 ♔g4

5...♔e5 6 ♔e2 ♔d6 7 ♔e3 ♔c7 8 ♔e2 ♔b7 9 ♔e3 a5 10 bxa6+ ♔xa6! 11 ♔e2 ♔b7 12 ♔e3 ♔c7 13 ♔e2 ♔d6 14 ♔e3 b5 15 cxb5 ♔xd5 and Black wins (Grigoriev).

6 d6 g2! 7 ♔f2 ♔h3! 8 d7 e3+

8...♔h2?! 9 d8♕ g1♕+! 10 ♔e2 ♕g2+ –+.

9 ♔f3 g1♕! 10 d8♕ ♕f2+ 11 ♔e4 e2! 12 ♕d7+ ♔g2 13 ♕g4+ ♔f1 0-1

It's time to give an example in which the protected passed pawn draws:
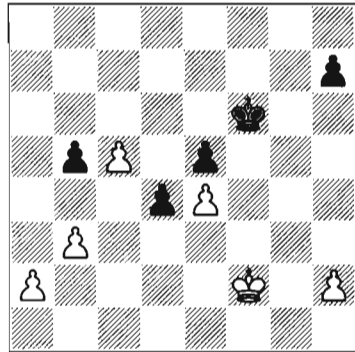
8.08   =/=
A.V.Ivanov – T.Mirabile
New York Open 1994

The best that White can get is an equal queen ending. To make any progress at all, he must first create passed pawns on the queenside:

1 ♔e2 ♔e6 2 ♔d3

The creation of a second isolated passed pawn doesn't help either: 2 a4 bxa4! 3 bxa4! ♔d7 4 a5 ♔c6 5 a6! ♔c7 6 ♔d3 ♔c6 7 ♔c4 ♔c7 8 ♔b5?! d3! 9 c6! d2! 10 a7! d1♕! 11 a8♕! ♕d3+ 12 ♔c5! ♕d4+ 13 ♔b5 ♕d3+ =.

2...♔d7 3 b4 ♔c6 4 ♔c2 h5 5 h4 ♔b7 6 ♔b3 ♔c6 7 a4 bxa4+! 8 ♔xa4!

Now the connected passed pawns are on the board but they are not sufficient for a win.

8...♔b7 9 b5 ♔b8 10 b6 ♔b7! 11 ♔b4 ♔c6 12 ♔c4 ♔b7!

Now White has to leave the square of the d-pawn to make any progress. In a practical game one should of course make sure that one doesn't lose because from this moment on everything is quite forced.

13 ♔b5!? d3 14 c6+! ♔b8 15 ♔a6!

15 b7? ♔a7! –+ (15...d2?? 16 ♔b6! d1♕ 17 c7#!).

15...d2! 16 c7+! ♔c8! 17 ♔a7 d1♕! 18 b7+! ♔xc7! 19 b8♕+! ♔d7?!

Easier was 19...♔c6 20 ♕b6+ (20 ♕c8+ ♔b5! 21 ♕e8+ ♔c4 22 ♕xe5 ♕d4+ =) 20...♔d7 21 ♔b7 ♕d4 (21...♕d6?? 22 ♕xd6+! ♔xd6 23 ♔b6! +−) 22 ♕c6+ ♔e7 = and White can't make any progress.

20 ♕xe5 ♔c6 21 ♕c3+ ♔b5 22 e5

22 ♕b2+ ♔c4 23 ♕a2+ ♔c5 24 ♕a5+ ♔c6 25 ♕b6+ ♔d7 26 ♔b7 ♕a4 is also a draw.

22...♕d7+ 23 ♔b8 ♕d8+ 24 ♔b7 ♕b6+ 25 ♔c8

Now the transition back into a pawn ending secures the draw at once.

25...♕c6+!? 26 ♕xc6+! ♔xc6! ½-½

B3) Protected Passed Pawn vs One Passed Pawn

In the fight versus a single passed pawn, the protected passed pawn nearly always has the advantage. But with reduced material this advantage is only sufficient for a win if its square doesn't allow the opponent's king to defend its own pawn:
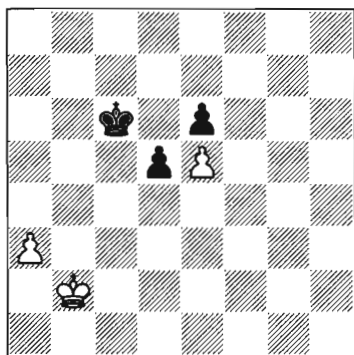
8.09   =/=
K.Bjerring – S.Conquest
Copenhagen 1990

This position is a typical example of a draw:

1 a4 ♔b6 2 ♔c3 ♔c5 3 ♔b3! ♔d4!? 4 a5!

Not 4 ♔b4? ♔xe5! 5 ♔c5 d4! 6 ♔c4 ♔e4! 7 a5 d3! 8 a6 d2! 9 a7 d1♕! 10 a8♕+ ♕d5+! −+.

½-½

In view of 4...♔c5! 5 ♔a4! ♔c6 6 ♔b4! ♔b7 7 ♔b5 ♔a7 8 a6.

On the other hand, the strength of a protected passed pawn shouldn't be underestimated:
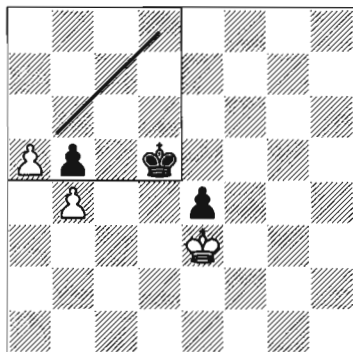
8.10   +/−
M.Zinar, 1984

In this case the critical square e5 of the b5-pawn is not in the square of the a5-pawn, so that if Black is to move, he loses at once. Thus it is necessary for White to shift the right to move to Black. This can be managed by the following fine manoeuvres:

1 ♔f2

1 ♔f4? ♔d4! 2 a6 e3! 3 ♔f3 ♔d3! 4 a7 e2! 5 a8♕ e1♕! 6 ♕d5+ ♔c3 7 ♕xb5 =.

1...♔c6 2 ♔g2 ♔d6 3 ♔h3

3 ♔g3?! ♔d5 doesn't help White.

3...♔c6 4 ♔g4 ♔d5 5 ♔g3! ♔c6 6 ♔f4! ♔d5 7 ♔e3! +−

The position with white pawns at a4 and b5 and black pawns at a5 and e4 would be a draw: 1 ♔f4 ♔d4! 2 b6 e3! 3 ♔f3 ♔d3! =.
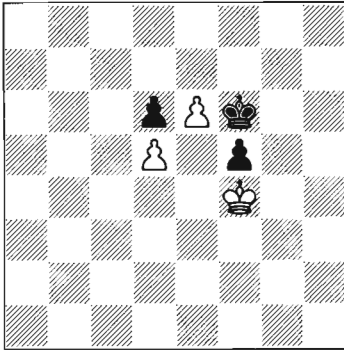
8.11 +/−

N.Grigoriev
Shakhmaty, 1922

Here again the protected passed pawn is enough for a win because the black king is too restricted in his freedom to manoeuvre. But the position would be drawn if one moved it below or to the left edge of the board, and White to move wouldn't be able to win if one moved it one file to the right. Obviously Black to move loses immediately. Against the king at f4 Black thus has to move to f6, and if the king is at h4 he has to move to g6. It follows that ♔g3 must be answered by ...♔g7. There is no square that corresponds with g2, so Black can't keep the corresponding squares (see Chapter 12).

1 ♔g3 ♔g7 2 ♔g2 ♔f6
2...♔g6 3 ♔f3 ♔f6 (3...♔g7 4 ♔g3! +−) 4 ♔f4! +−.
3 ♔h3 ♔g7 4 ♔g3! ♔f6
4...♔g6 5 ♔h4! ♔f6 6 ♔h5! and White wins.
5 ♔f4!
Now we have the starting position with Black to move and it is over:
5...♔g6 6 e7! ♔f7 7 ♔xf5! ♔xe7 8 ♔g6! +−

If there are still more pawns on the board, the protected passed pawn becomes

stronger, because the critical squares are usually also key squares (see Chapter 7).
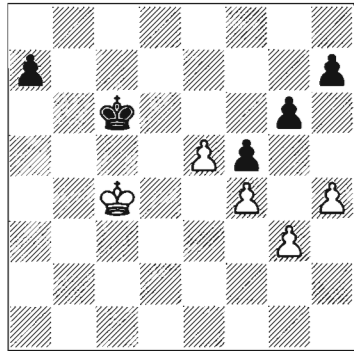
8.12 +/−

R.Fine
Basic Chess Endings, 1941

This position, which was proposed by Fine in order to demonstrate the superiority of a protected passed pawn, is very much deeper than one would think at first sight. In fact White can win but this is not at all easy to manage:
1 ♔d4
For 1 ♔b4 ♔b6 2 ♔a4 a5 3 h5! gxh5 4 e6! ♔c6 5 ♔xa5! ♔d6 6 ♔b6 ♔xe6 7 ♔c6 +− see the main line.
1...♔c7
1...h5 2 ♔c4 ♔c7 3 ♔b5 ♔b7 4 ♔a5 a6 5 e6! ♔c6 6 ♔xa6! ♔d6 7 ♔b6 ♔xe6 8 ♔c6! +− (7.03).
2 ♔c5 ♔d7 3 ♔d5 a6 4 ♔c5 ♔c7 5 ♔c4 ♔c8 6 ♔b4 ♔b8 7 ♔a5 ♔b7 8 h5! gxh5 9 e6!
A typical procedure: at the right time the protected passed pawn is exchanged for the outside passed pawn in order to penetrate with the king.
9...♔c6 10 ♔xa6! ♔d6 11 ♔b6 ♔xe6 12 ♔c6 ♔f6
12...♔f7 13 ♔d7 ♔f8 14 ♔d6! (14 ♔e6? ♔e8! 15 ♔xf5 h4! 16 gxh4 ♔e7! = (5.10, 12.07)) 14...♔g7 15 ♔e7! ♔g6 16

♔e6! h6 17 ♔e5! ♔g7 18 ♔xf5! ♔f7 19
♔e5 +–.
   13 ♔d6! h6 14 ♔d5! ♔f7 15 ♔e5!
♔g6 16 ♔e6! ♔g7 17 ♔xf5! ♔f7 18
♔e5 ♔e7 19 f5 ♔f7 20 f6! ♔e8 21 ♔f4
(see 7.08) 21...♔f8 22 ♔e4 ♔e8 23 ♔e5!
♔f8 24 ♔e6! ♔e8 25 f7+! ♔f8 26 ♔f6!
h4 27 gxh4! h5 28 ♔e6 +–
   ■ Averbakh presents the rich story of
8.12 in more detail.

B4) Outside Passed Pawn
If both sides have a passed pawn, the one
with the passed pawn that is further away
from the other pawns usually has the ad-
vantage. The following instructive exam-
ple is typical:
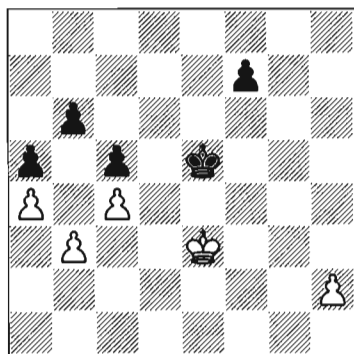
8.13   +/–
M.Euwe
Deutsche Schachzeitung, 1940

White wins due to the outside passed
pawn but he has to be precise:
   1 h4 ♔f5
   1...f5 2 ♔f3 +–; 1...f6 2 ♔f3 ♔f5 3
♔g3 ♔e4 4 h5! ♔f5 5 ♔h4 ♔e6 6 h6
♔f7 7 ♔h5! +–.
   **2 ♔f3! ♔e5 3 ♔g4! ♔e4 4 h5 f5+ 5
♔h3!!**
   Only this beautiful move, suggested
by Euwe in *Das Endspiel*, leads to a win.
Black's counterplay in a queen ending

should be sufficient for a draw: 5 ♔g5?
f4! 6 h6! f3! 7 h7! f2! 8 h8♕! f1♕! 9
♕e8+ ♔d4 10 ♕d8+ ♔e4 (10...♔e5??
11 ♕d5#!) 11 ♕d5+ ♔e3 12 ♕e6+ ♔d4!
13 ♕xb6 ♕f8! 14 ♕c7 (14 ♕f6+??
♕xf6+! 15 ♔xf6 ♔c3! 16 ♔e5 ♔xb3! 17
♔d5 ♔b4! –+) 14...♔e4 =; 5 ♔h4? f4! 6
h6! f3! 7 ♔g3 ♔e3! 8 h7! f2! 9 h8♕! f1♕!
10 ♕h6+! ♔e4 11 ♕e6+ ♔d4! 12 ♕xb6
♕d3+ 13 ♔g4 ♕e4+ 14 ♔g5 ♕e5+ 15
♔g6 ♕e8+! 16 ♔f6 ♕f8+! 17 ♔g5 ♕e7+
=; 5 ♔g3? ♔e3! 6 h6 f4+! 7 ♔g4 f3! 8
h7! f2! 9 h8♕! f1♕! 10 ♕h6+ ♔d4 11
♕xb6 ♕e2+! leads to perpetual check,
analogous to 5 ♔h4.
   **5...♔e5 6 ♔g3 ♔e6 7 ♔f4 ♔f6 8 h6!
♔g6 9 h7 ♔xh7 10 ♔xf5! +–**

   Of course, an outside passed pawn can
be outweighed by other factors:
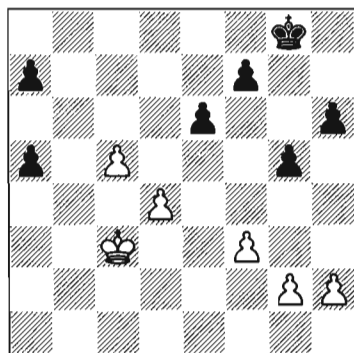
8.14   /=
N.Nikčević – I.Farago
Rome 1990

   Though Black has the outside passed
pawns on the a-file and he can undermine
the c5-pawn by ...e6-e5 White can still
keep the balance due to his more active
king:
   1...♔f8! 2 ♔c4 a6
   2...♔e7 3 ♔b5! ♔d7 4 ♔xa5 ♔c6 5
♔a6! e5 (5...f6 6 ♔xa7! e5 7 dxe5! fxe5!

8 ♔b8! =) 6 dxe5! ♔xc5 7 ♔xa7! ♔d4 8 ♔b6 ♔xe5 9 ♔c5 h5 10 ♔c4 h4 11 ♔d3 ♔f4 12 ♔e2! = (see 7.05 and A7.07).

3 ♔b3 ♔e7 4 ♔a4 ♔d7 5 ♔xa5 ♔c6 6 ♔xa6 e5 7 dxe5

7 ♔a5 exd4 8 ♔b4! ♔d5 9 c6 ♔xc6 10 ♔c4! =.

7...h5 8 ♔a7 ♔xc5 9 ♔b7 ♔d5 10 ♔c7 ♔xe5 11 ♔d7 f5 12 ♔e7 h4 13 h3

13 g3 hxg3 (13...h3 14 ♔f7! f4 15 g4! ♔d4 16 ♔f6 ♔e3 17 ♔xg5! ♔xf3! 18 ♔h4 =) 14 hxg3! f4 15 g4! ♔d4 16 ♔f6! ♔e3 17 ♔xg5! ♔xf3! 18 ♔h5! =.

13...♔f4 14 ♔f6 g4 15 fxg4 fxg4! 16 hxg4! ♔xg4! 17 ♔g6! ½-½

C) Passed Pawn vs Candidate

Here the ideas basically can be compared to the ones we have just dealt with, but the majority allows new options for the defence, e.g. the exchange of all pawns. Normally though these resources are not sufficient:
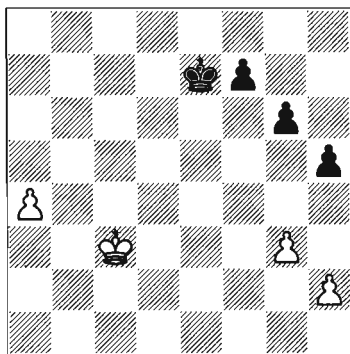
8.15 +/
R.Fischer – B.Larsen
Denver Ct (5) 1971

The black king himself has to deal with the outside passed pawn and is therefore deflected from the defence of his own kingside pawns. White only has to avoid Black using his majority to exchange all the pawns:

1 ♔d4 ♔d6 2 a5 f6 3 a6 ♔c6 4 a7

4 h4 ♔b6 5 ♔d5! ♔xa6 6 ♔e6! g5 7 ♔xf6! gxh4 8 gxh4! ♔b6 9 ♔g5 ♔c6 10 ♔xh5! ♔d7 11 ♔g6 ♔e7 12 ♔g7! +–.

4...♔b7 5 ♔d5 h4!? 6 ♔e6

Or 6 gxh4 ♔xa7 7 ♔e6! f5 8 h5! f4 (8...gxh5 9 ♔xf5! ♔b6 10 ♔g5! ♔c6 11 ♔xh5! ♔d7 12 ♔g6 ♔e7 13 ♔g7! +–) 9 hxg6! f3 10 g7! f2 11 g8♕! f1♕ 12 ♕f7+! winning.

1-0

In view of 6...f5 7 ♔f6 hxg3 8 hxg3 and wins.

What kind of traps lurk in such positions is shown in the following grandmaster game:
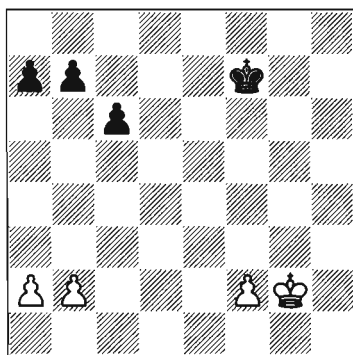
8.16 =/=
M.Gurevich – M.Krasenkow
Jakarta 1996

Black can hold the position if he acts very precisely. Usually it proves to be a good idea to push forward the a-pawn in order to gain space on the queenside and to bring about pawn exchanges. It also has to be noticed that all White's pawns still have the option of a double step. This

is important when zugzwang plays a role and it also causes Black to be careful with his b-pawn.

1 ♔f3 ♔f6 2 ♔e4

2 ♔f4 a5!? 3 a4 (3 b3 b5 4 ♔e4 ♔e6! 5 ♔d4 ♔d6! 6 a4 c5+ 7 ♔c3 bxa4! 8 bxa4! ♔d5 =) 3...b5 4 b3 bxa4 5 bxa4! c5 6 ♔e4 ♔e6! 7 f3 ♔d6! =.

2...♔e6 3 ♔f4 ♔f6

3...a5!? (Krasenkow in *CBM 57*) 4 ♔g5 a4! 5 f4 a3 6 bxa3 = (6 b3?! c5 7 ♔g6 ♔e7! 8 ♔g7 ♔e6! 9 ♔g6! =).

4 ♔e4 ♔e6 5 f3 ♔f6?!

5...a5 =.

6 ♔f4

Krasenkow's suggestion 6 ♔d4!? *(D)* is an interesting alternative.
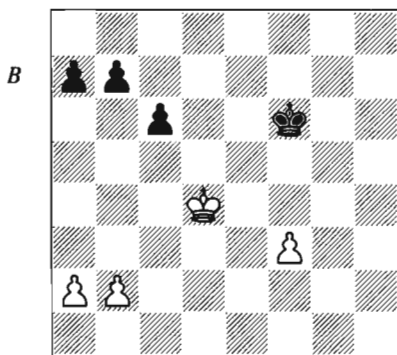
Then Black is once again on the brink of disaster but he can just manage to survive:

a) 6...♔f5? 7 ♔c5!:

a1) 7...♔e6 8 f4! ♔d7 9 f5! ♔e7 10 a4! (10 f6+? ♔d7! 11 f7 b6+! 12 ♔d4! ♔e7! 13 ♔e5! ♔xf7 14 ♔d6! c5! =) 10...♔d7 11 a5! ♔c7 12 ♔d4! ♔d6 13 ♔e4! c5 14 ♔f4! b5 15 axb6! (15 ♔g5? ♔e7! 16 ♔g6 ♔f8! 17 ♔f6 c4 18 ♔e5! a6 =) 15...axb6 16 ♔g5! ♔e7 17 ♔g6! ♔f8 18 ♔f6! +—.

a2) 7...♔f4:

a21) 8 a4? ♔xf3! 9 ♔d6 (9 a5 ♔e4 10 ♔d6 ♔d4 11 ♔c7 b6! 12 a6 ♔d5 13 ♔b7

♔d6! 14 ♔xa7 ♔c7! =) 9...♔e4! 10 ♔c7 b5! 11 a5 b4 =.

a22) 8 ♔d6! ♔xf3 9 ♔c7! +—.

b) 6...b6? 7 ♔e4! +—.

c) 6...♔e6! 7 ♔c5 (7 f4 ♔f5! 8 ♔c5 ♔xf4! 9 ♔d6 ♔e4 10 ♔c7 ♔d3 11 ♔xb7 c5 =) and now:

c1) 7...♔e5? 8 a4! ♔e6 9 f4! ♔d7 10 f5! b6+ 11 ♔d4! ♔d6 12 ♔e4! c5 (12...a5 13 ♔d4! +—) 13 ♔f4! a6 14 ♔g5! ♔e7 15 ♔g6! ♔f8 16 ♔f6! +—.

c2) 7...♔d7! 8 f4 b6+! 9 ♔d4 ♔d6! (9...♔e6? 10 ♔e4! +—) and then:

c21) 10 ♔e3 ♔d5 11 ♔f3 c5! 12 ♔g4 b5 13 f5 c4 =.

c22) 10 f5 c5+! 11 ♔e4 b5! 12 a3 b4 = (12...a5? 13 f6! +—).

c23) 10 ♔e4 ♔e6! 11 f5+ ♔f6! 12 ♔f4 a5! 13 ♔e4 a4! 14 a3 c5! 15 ♔d5 ♔xf5! 16 ♔c6 ♔e4 17 ♔xb6 ♔d5 18 ♔b5 ♔d4! 19 ♔xa4 ♔c4! 20 b4 ♔d5! 21 b5 c4! 22 ♔b4 ♔d4! 23 b6 c3! 24 b7 c2! 25 b8♕ c1♕! =.

6...b6? *(D)*

Under pressure, Krasenkow makes a serious mistake. Correct is 6...a5 7 ♔e4:

a) 7...♔e6 8 a4 b5! = (8...♔f6? 9 f4 ♔e6 10 f5+ ♔f6 11 ♔d4! ♔xf5 12 ♔c5! ♔e5 13 ♔b6! ♔d6 14 ♔xb7! winning (7.08A)).

b) 7...a4 =.
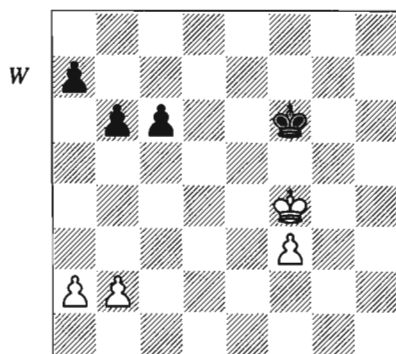
7 ♔e4! ♔e6

7...a5 8 a4! ♔e6 9 f4! +–.

8 f4! a5

8...a6 9 f5+ ♔f6 10 a3! (10 ♔f4? c5 11 ♔e4 b5 =) 10...a5 11 a4! +–; 8...c5 9 f5+ ♔f6 10 a3! c4 (10...b5 11 ♔d5! b4 12 a4! +–) 11 a4 a6 12 ♔d5! ♔xf5 13 ♔c6! +– (Ftačnik in *CBM 56*).

9 f5+

9 a4 b5 (9...♔f6 10 f5! +–) 10 axb5 cxb5 11 f5+! (11 ♔d4? ♔d6! 12 f5 a4! 13 ♔c3 ♔c5! 14 f6 b4+! =) 11...♔d6 12 f6! a4 (12...♔e6 13 ♔d4! +–) 13 ♔f5! b4 14 ♔g6! +–.

9...♔d6

9...♔f6 10 a4! *(D)* is reciprocal zugzwang since Black has created a barrier that doesn't allow the white king to penetrate but he has no moves left.
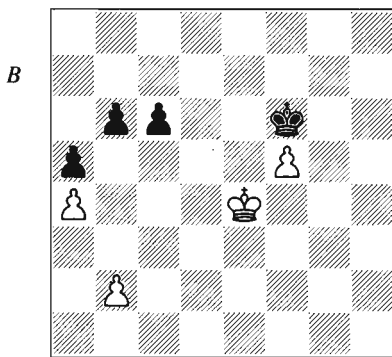
Since the white pieces have also taken ideal positions (b2-b3 would make the exchange of the queenside easier), White to move couldn't win. One should remind oneself of this position during the analysis. 10...b5 (10...♔f7 11 ♔e5! ♔e7 12 f6+! ♔d7 13 ♔f5 ♔e8 14 ♔e6 +–) 11 axb5! cxb5 12 ♔d4 ♔xf5 13 ♔c5! and White wins.

10 ♔f4?

Gurevich returns the favour. Instead 10 a4! b5 11 axb5 cxb5 12 f6! a4 13 ♔f5! b4 14 ♔g6! +– would have won.

10...a4 11 ♔g5 a3 12 bxa3

12 b3 doesn't win either, as Hecht proved in *CBM 56*: 12...♔e7! 13 ♔g6 ♔f8! 14 ♔f6 c5! 15 ♔e5 b5! 16 ♔d5 c4! 17 bxc4! b4!? 18 c5! b3! 19 c6! bxa2 20 c7! a1♕ 21 c8♕+! =.

12...♔e7! 13 ♔g6 ♔f8! 14 ♔f6 c5 15 ♔e5 ♔f7

15...b5 16 a4 bxa4! =.

16 a4 ♔e7!? 17 a5 bxa5! 18 a4 ♔f7 19 ♔d5 ♔f6! 20 ♔xc5 ♔xf5! 21 ♔b6 ♔e6! 22 ♔xa5 ♔d7! 23 ♔b6 ♔c8! ½-½

If the defender has a backward pawn, it can easily prove his undoing because it has to move when the attacking pawn reaches the 7th rank supported by its king.
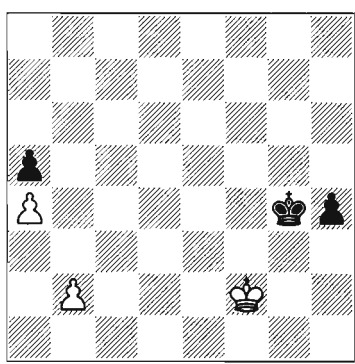
8.16A   **=/+**
A.Aleksandrov – M.Krasenkow
New York 1997

1...h3!
Not 1...♔f4? 2 b4! axb4! 3 a5! =.
0-1
Without the troublesome b2-pawn, White could have drawn by 2 ♔g1!. As it is, it loses as follows: 2 ♔g1 ♔g3! 3 ♔h1 h2! 4 b3 ♔h3! (this zugzwang idea should be memorized well) 5 b4 axb4! 6 a5 b3 7 a6 b2 8 a7 b1♕#.

Concerning the material distribution, our final example doesn't quite belong in

this context, but here again the accurate use of the pawn majority is decisive:
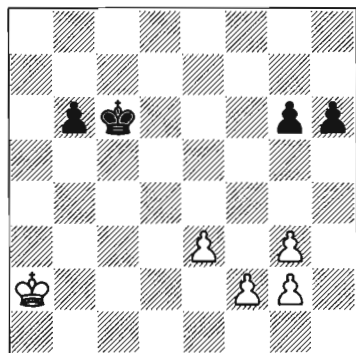
8.17   **+/**
Ye Rongguang – Xie Jun
Kuala Lumpur 1994

The doubled pawns make the creation of two connected passed pawns more difficult. White can only win by allowing the b-pawn to promote:
1 ♔b3
1 g4 +−.
1...♔c5
1...h5!? 2 ♔c4 b5+ 3 ♔d4 ♔d6 4 e4 ♔c6 5 f3 ♔b6 6 e5 ♔c6 7 f4 ♔b6 8 ♔d5 +−.
2 e4
2 g4!? ♔d5 (2...h5 3 gxh5 gxh5 4 f4 +−; 2...g5 3 f4 gxf4 4 exf4! ♔d5 5 ♔b4 ♔e4 6 g3 +−) 3 ♔b4 ♔c6 4 f4 and White wins.
2...h5!? 3 ♔c3 b5 4 f3 *(D)*
The game continued instead 4 f4? ♔c6! (4...♔d6? 5 ♔d4! ♔c6 6 e5! +−;

4...b4+? 5 ♔d3! ♔b5 6 ♔d4! ♔a4 7 f5 gxf5 8 exf5! b3 9 ♔c3! ♔a3 10 f6! b2 11 f7! b1♕ 12 f8♕+! +−) 5 ♔d4 ♔d6! 6 e5+ ♔c6! 7 ♔e3 ♔d5 8 ♔d3 b4 9 ♔d2 ♔c6 10 ♔e2 ♔c5 11 ♔e3 ♔d5 12 ♔d3 ♔c5! 13 ♔c2 ♔c6 14 ♔b3 ♔b5 15 ♔b2 ♔b6 16 ♔b3 ♔b5 17 g4 (17 e6 ♔c6! 18 ♔xb4 ♔d6! 19 ♔c4 ♔xe6! 20 ♔d4 ♔f5 21 ♔e3 ♔g4 22 ♔f2 h4 23 gxh4 ♔xf4! 24 g3+ ♔g4! 25 ♔g2 g5! =) 17...hxg4! 18 g3 ♔c5! 19 ♔a4 ♔d5 (19...♔c4 20 e6 b3! 21 e7 b2! 22 e8♕ b1♕! 23 ♕c8+ ♔d4 24 ♕xg4 ♔e3 =) 20 ♔xb4 g5! ½-½, in view of 21 fxg5 (21 ♔c3? gxf4! 22 gxf4 g3! −+) 21...♔xe5! 22 ♔c5 ♔f5 23 ♔d5 ♔xg5 =.

B
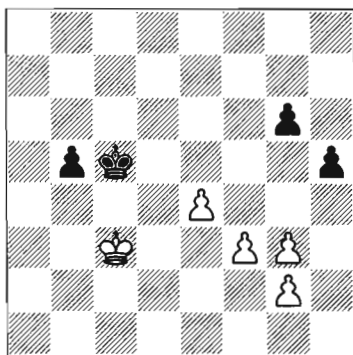
4...b4+
4...g5 5 f4 h4 6 fxg5 +−.
5 ♔d3 ♔b5 6 ♔d4! ♔a4 7 e5! b3
7...♔b5 8 ♔d5 +−.
8 e6! b2 9 e7! b1♕ 10 e8♕+! ♔a3 11 ♕a8+ ♔b2 12 ♕b7+ ♔c1 13 ♕xb1+! +−
(Hecht in *CBM 41*)

Chapter 8 Exercises
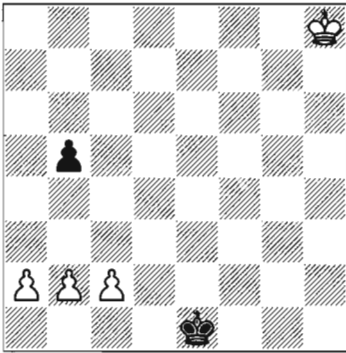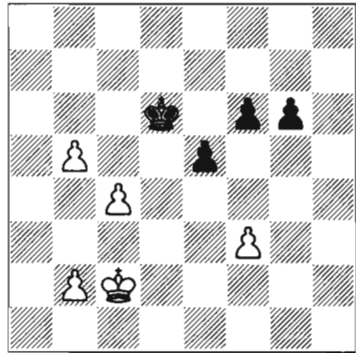
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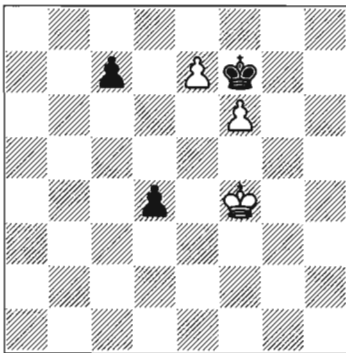
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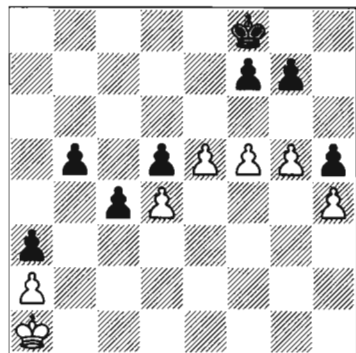
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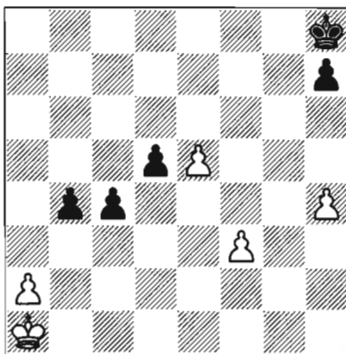
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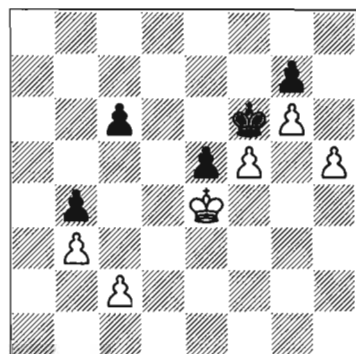
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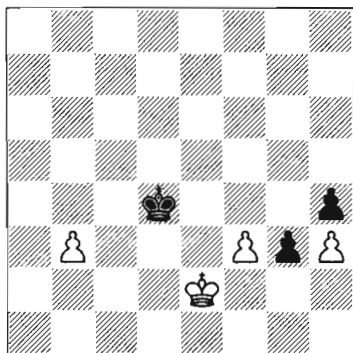
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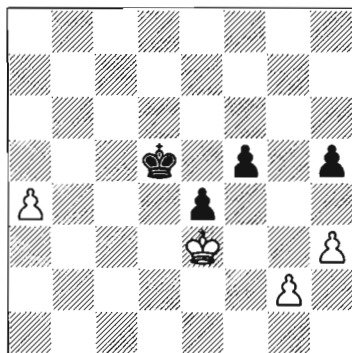
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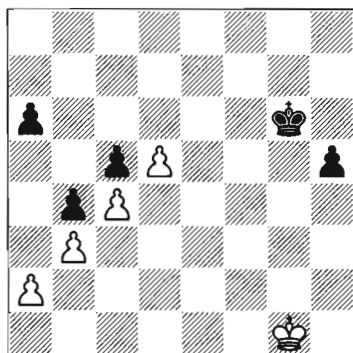
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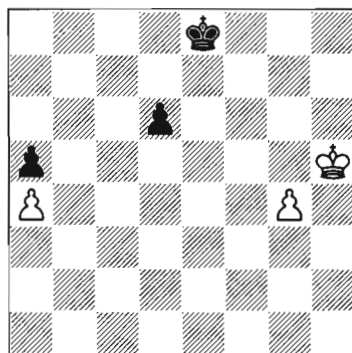
A8.11   *****/**
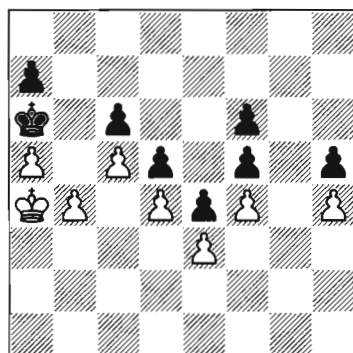
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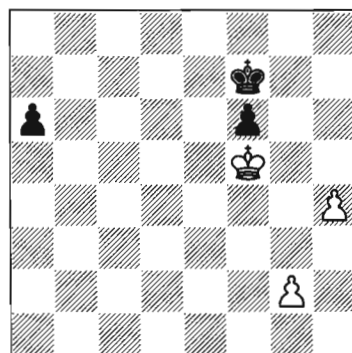
A8.12   **/****
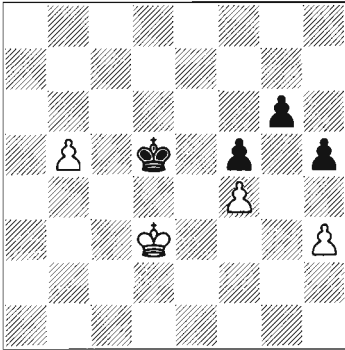
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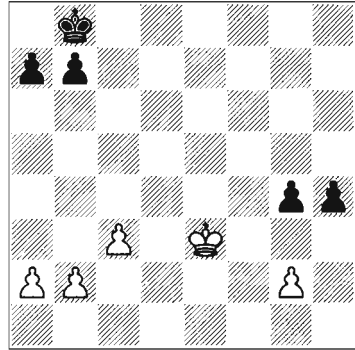
A8.14   /*

Solutions to Chapter 8 Exercises

A8.01 L.Ponce Sala, 1956

This exercise shows again how to proceed with the creation of a passed pawn: first the candidate should advance, then a passed pawn is created, which goes through. But this situation is not typical, in view of the unusual positions of the kings (but then it is a study).

1 a3!

1 b3?? b4! −+; 1 c3? ♔d2! =; 1 c4? bxc4! 2 a4 ♔d2 3 a5 ♔c2 4 a6 ♔xb2! 5 a7 c3! 6 a8♕ c2! = (3.08).

1...♔d2 2 b3! ♔xc2

2...♔c3 3 ♔g7 +−.

3 a4! b4 4 a5! ♔xb3 5 a6! ♔c2 6 a7! b3 7 a8♕! +−

A8.02 Behting, *Rigaer Tageblatt*, 1894

It is Black's undoing that he is not able to lose a tempo:

1 ♔f3!

1 ♔e4? c5! 2 ♔d3 ♔e8! 3 ♔c4 ♔f7 4 ♔xc5?? d3! −+.

1...c6 2 ♔f4! c5 3 ♔e4! ♔e8 4 ♔d5 ♔d7 5 ♔c4! ♔e8 6 ♔xc5! d3 7 ♔d6! d2 8 ♔e6! d1♕ 9 f7#!

A8.03 M.Taimanov – M.Botvinnik, *USSR Ch (Moscow) 1952*

The three far-advanced black pawns win the race as expected:

1...d4! 2 e6

2 ♔b2 d3! 3 ♔c1 b3! −+.

2...♔g7 3 f4 ♔f6 4 f5 d3 5 ♔b1 h5 0-1

In view of 6 ♔b2 ♔e7 7 ♔c1 b3! 8 axb3 (8 a4 c3 9 a5 b2+ 10 ♔b1 d2 11 ♔c2 b1♕+ −+) 8...cxb3! 9 ♔b2 d2! and Black wins.

A8.04 N.de Firmian – Zso.Polgar, *Bermuda 1995*

Passed pawns have to run!

1 b4 f5 2 c5+ ♔d5 3 b6 ♔c6 4 b5+ ♔b7 5 ♔d3 g5 6 ♔e3

Now Black is in zugzwang and must either allow the advance of the white pawns or weaken her own pawns.

6...g4

6...♔c8 7 c6 ♔b8 8 b7 g4 9 fxg4 fxg4 10 b6 g3 11 ♔f3 e4+ 12 ♔xg3 e3 13 ♔f3 e2 14 c7+! ♔xb7 15 ♔xe2 and White wins.

7 fxg4 fxg4 8 ♔e4 ♔b8 9 c6 ♔c8 10 b7+ ♔c7 11 b6+ ♔b8 12 ♔e3 +−

White only has to be careful not to stalemate Black.

1-0

A8.05 V.Savon – I.Novikov, *Belgorod 1991*

The only thing Black has to worry about is to open up a way for the king to the passed pawns on the queenside:

1...b4 2 ♔b1 b3 3 axb3 cxb3! 4 ♔c1 ♔e7 5 ♔b1

5 f6+ gxf6 6 exf6+ ♔e6 7 ♔b1 ♔f5 8 ♔c1 a2 9 ♔b2 ♔e4 10 g6 ♔d3! 11 gxf7 a1♕+! 12 ♔xa1 ♔c2! −+.

5...g6 6 f6+ ♔e6 7 ♔c1 a2 8 ♔b2 ♔f5 9 ♔a1 ♔e4 0-1

Savon resigned because of 10 ♔b2 ♔d3 11 e6 a1♕+ 12 ♔xa1 ♔c2! and Black wins.

A8.06 A.Khalifman – V.Belikov, *Russian Cht (Podolsk) 1992*

1 h6!

The connected passed pawns will now decide the day in favour of White:

1...gxh6 2 ♔f3 h5

2...♔g7 3 ♔g4 ♔f6 4 ♔h5 ♔g7 5 f6+ ♔xf6 6 ♔xh6! +−.

3 ♔g3 c5

3...♔g7 4 ♔h3 ♔h6 5 ♔h4 c5 6 ♔h3 ♔g7 7 ♔g3 ♔f6 8 ♔h4 e4 9 ♔g3! winning for White.

4 ♔h4 e4 5 ♔g3! +− 1-0

The black passed pawns fall.

A8.07 M.Rauch

If you have noticed that if Black is to move, he gets in zugzwang after 1...♔d5 2 ♔e3, the exercise wasn't difficult any more. A triangulation in order to lose a tempo solves the problem:

1 ♔f1! ♔d3 2 ♔g2
2 ♔e1? ♔e3 3 ♔f1! ♔xf3! =.
2...♔d4 3 ♔g1 ♔d3
3...♔e3 4 b4! ♔d4 5 f4! +−.
4 ♔f1! ♔d4 5 ♔e2! ♔d5 6 ♔e3! ♔c6 7 f4! ♔d5 8 b4 ♔c4 9 f5! +−
The pawns can't be stopped (8.01D).

A8.08 Y.Nikolaevsky − M.Taimanov, *USSR Ch (Tbilisi) 1966/7*

With the knowledge of Chapter 6 you could work out that White can't win because Black has the familiar stalemate refuge at a5.

1 ♔f2
1 ♔g2 ♔g5 2 ♔g3 ♔f5! (after 2...h4+? 3 ♔h3 +− Black is in zugzwang and thus either has to leave the square of the d-pawn, give up the h-pawn or brick in his own stalemate refuge by playing 3...a5) 3 ♔f3 ♔e5 =.
1...♔f6 2 ♔g3 ♔g5 3 ♔h3 ♔f5 4 ♔h4 ♔g6! 5 d6
Otherwise White can't make progress.
5...♔f6 6 ♔xh5 ♔e6 7 ♔g5 ♔xd6 8 ♔f5 ♔c6 9 ♔e5 ♔b6 10 ♔d5 *(D)*
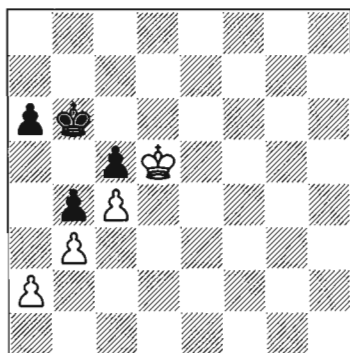
A8.09 Em.Lasker, 1921

Though White has an extra pawn, he has to be careful to avoid the position becoming completely closed. Thus he first has to sacrifice his a-pawn to get a protected passed pawn at c5 by playing b5. Its exchange for the black a-pawn will allow the white king to penetrate successfully.

1 ♔b3!
After 1 b5+? cxb5+! (1...♔b7? 2 bxc6+ ♔xc6 3 a6! +−) 2 ♔b4! ♔b7 3 ♔xb5 a6+! 4 ♔b4 ♔c6 = White can't make any progress (compare to 6.09 and 6.10).
1...♔b5 2 a6! ♔xa6 3 ♔a4! ♔b7 4 b5! a6
4...cxb5+ 5 ♔xb5! ♔c7 6 ♔a6! ♔b8 7 c6 ♔a8 8 ♔b5 ♔b8 9 ♔c5 ♔c7 10 ♔xd5! +−.
5 bxc6+! ♔xc6 6 ♔a5 ♔b7 7 c6+! ♔c7 8 ♔xa6! ♔xc6 9 ♔a5! +−
White has captured a key square of the d5-pawn.

A8.10 Kushnir − Sulim, *USSR 1976*

An outside passed pawn or a candidate doesn't have to be advantageous (though most of the time this is of course the case). This example, which is given by Lothar Nicolaiczuk in his book, is thought to be a warning. White even loses because Black can just go through with his central passed pawn:

1...f4+!!
1...♔c5? 2 g4 fxg4 3 hxg4 hxg4! 4 ♔xe4 =.
2 ♔xf4
2 ♔d2 h4 3 ♔c3 ♔c5 4 a5 ♔b5 5 ♔d4 e3! 6 ♔d3 ♔xa5 7 g4 (7 ♔e2 ♔b4 8 g3 hxg3! 9 ♔f3 ♔c3 −+) 7...hxg3! −+.
2...♔d4! 3 a5 e3! 4 a6
4 ♔f3 ♔d3! 5 a6 e2! 6 a7 e1♕! 7 a8♕ ♕e3#!.

4...e2! 5 a7 e1♕! 6 a8♕ ♕e5+! 7 ♔f3 ♕e3#!

■ Compare with the following:
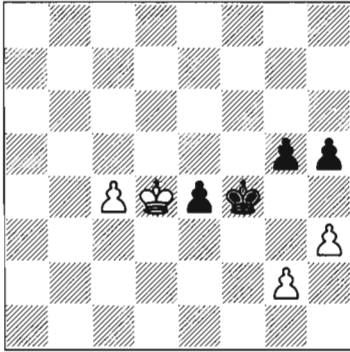
A8.10A   **/=**
M.Andres – J.Vilela
Havana 1992

1...g4! 2 hxg4 h4!! 3 g5! e3 4 ♔d3 h3! 5 gxh3! ♔f3! 6 g6! e2! 7 g7! e1♕! 8 g8♕! ♕e3+ 9 ♔c2 ♕f2+! 10 ♔c3
10 ♔b3 ♕b6+! = (10...♕e3+? 11 ♔a4! ♕a7+ 12 ♔b5! +−).
10...♕e3+! 11 ♔b2 ♕f2+ 12 ♔a3 ♕a7+! 13 ♔b3 ♕b6+! ½-½
The white king cannot escape from the checks (Andres in Inf 56, Ending 2).

A8.11 R.Réti, *Berliner Tageblatt*, 1923
If you noticed that the position w♔g6; b♔e7 is one of reciprocal zugzwang, then the solution became obvious:
1 ♔g5!
1 ♔g6? ♔e7! 2 ♔f5 ♔f7! 3 ♔e4 ♔f6 4 ♔d5 ♔g5! (4...♔e7? 5 ♔c6 ♔e6 6 ♔b5 d5 7 ♔xa5! d4 8 ♔b4! ♔e5 9 ♔b3! ♔e4 10 ♔c2! ♔e3 11 ♔d1! +−) 5 ♔xd6 ♔xg4! =.
1...♔e7
1...♔f7 2 ♔f5! ♔e7 (2...d5 3 ♔e5! +−) 3 ♔g6! +−.
2 ♔g6! d5 3 ♔f5! ♔d6 4 g5! d4 5 ♔e4! ♔e6 6 ♔xd4! +−

A8.12 A.Nimzowitsch – S.Tarrasch, *San Sebastian 1911*
This exercise again shows that connected pawns only obtain their strength by protecting each other:
1...a5! 2 ♔e4 f5+!
Not 2...a4? 3 ♔d4 f5 4 g3! and White draws.
0-1
Nimzowitsch resigned because of 3 ♔d4 f4! −+.

A8.13 R.Hübner – A.Shirov, *Bundesliga 1992/3*
Before Black's king can deal with the b-pawn, he must improve the situation on the kingside so that his counter-attack comes at the right time:
1...h4!!
1...♔c5? is a mistake as White wins by 2 h4! (2 b6? ♔xb6! 3 ♔d4 h4 =) 2...♔xb5 3 ♔d4! +−.
2 b6 ♔c6! 3 ♔d4 ♔xb6! 4 ♔e5 ♔c5 5 ♔f6! ♔d4 6 ♔xg6 ♔e4! 7 ♔g5! ♔f3! 8 ♔xf5! ♔g3! (D)
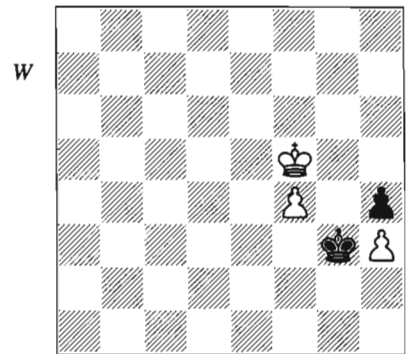
9 ♔e4
After 9 ♔g5 ♔xh3! 10 f5 ♔g3! 11 f6 h3! 12 f7 h2! 13 f8♕ h1♕! = White can't exploit the restricted position of the black king either.
9...♔xh3! 10 ♔f3 ♔h2 11 f5 h3! 12 ♔f2 ♔h1 13 f6 h2! 14 f7 ½-½

A8.14 W.Gscheidlen – H.J.Hecht, *Bundesliga 1983/4*

The white king is so far deflected from the queenside by the black h-pawn that Black is able to penetrate decisively there. This typical example shouldn't have been too difficult.

1...♔c7 2 ♔f4 h3! 3 gxh3 gxh3! 4 ♔g3 ♔c6 5 ♔xh3 ♔d5!

5...♔c5? 6 b3 ♔d5 7 ♔g3 ♔e4 8 ♔f2 ♔d3 9 c4! a5 10 ♔e1 ♔c2 11 c5 ♔b2 12 ♔d2 ♔xa2 13 ♔c2 =.

6 b3

6 ♔g3 ♔e4! (6...♔c4? 7 ♔f4! ♔d3! 8 ♔e5 ♔c2 9 ♔d6 ♔xb2 10 c4 =) 7 c4 ♔d3 8 ♔f2 ♔c2! 9 b3 ♔b2! 10 b4 ♔c3 11 a3 ♔xc4 —+.

6...♔e4 7 c4 ♔d4 8 ♔g4 ♔c3

8...a5 9 ♔f5 ♔c3! 10 ♔e4 ♔b2! 11 ♔d3 ♔xa2 12 ♔c2 b6! 13 ♔c3 ♔b1! 14 c5 bxc5! 15 ♔c4 ♔c2 16 ♔xc5 ♔xb3! —+.

9 ♔f5 0-1

In view of 9...♔b2 10 b4 ♔c3 11 a3 ♔xc4 —+.

9 Breakthrough

The breakthrough (one side sacrifices one or several pawns in order to create a powerful passed pawn) is a very important tactical idea in pawn endings. Since the opponent often gets one or more passed pawns as well, there are often sharp variations in which every tempo counts. In order to be saved from surprises, the following features of the position should ring your inner alarm bells or wake up your killer instinct: far-advanced (still flexible) pawn-structures or a space advantage on one wing; weaknesses in the pawn-structure (for example, doubled pawns); a pawn majority; a king being out of the squares of the potential passed pawns.

A) Far-Advanced Pawns

Breakthrough ideas have been known for a long time and so we shall start with a classic:
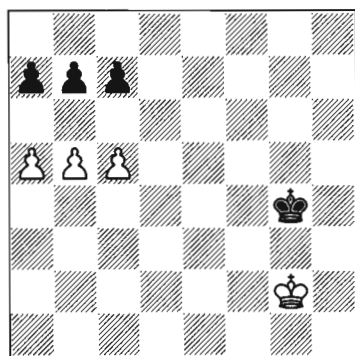
9.01   **+/+**
C.Cozio, 1766

The white pawns have crossed the middle of the board and the black king is not in their square – two important signs for a possible breakthrough.

1 b6! cxb6

1...axb6 2 c6! bxc6 3 a6! +–.

2 a6! bxa6 3 c6! +–

If Black is to move, he wins by stepping into the square of the c-pawn: **1...♔f5! 2 b6 cxb6! 3 axb6 axb6! –+.** Instead 1...b6? = is a draw, while every other move loses (e.g. 1...a6?? 2 c6! +–).

A similar picture is shown in the following diagram:
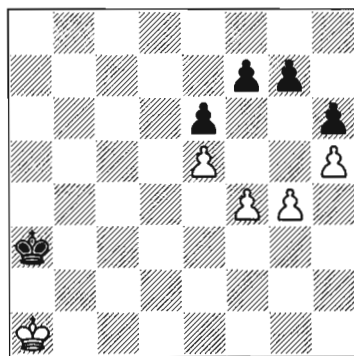
9.02   **+/+**

This arrangement of pawns was dubbed the quartgrip by Kmoch, and is characterized by the following breakthrough possibility:

1 f5 ♔b4 2 g5

2 f6 gxf6 3 exf6 e5 4 g5 hxg5 5 h6! wins for White.

2...exf5

2...hxg5 3 f6! gxf6 4 h6! +–.

3 g6! fxg6 4 e6! +–
If Black is to move, he gets his king
back into the square by 1...♔b4! 2 g5
♔c5! –+ and wins.

Unusual pawn-structures might fa-
vour a breakthrough:
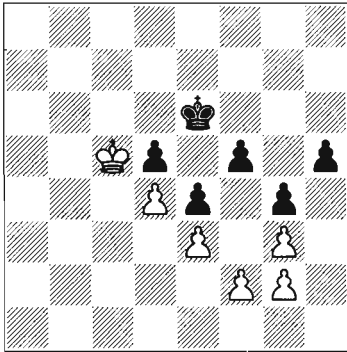
9.03 =/+
Svacina – H.Müller
Vienna 1941

At first sight Black is in zugzwang.
However, the weakened white pawn-
structure (the doubled pawns on g2 and
g3) and the king who is too far advanced
allow a typical breakthrough:
1...f4! 0-1
In view of the lines 2 gxf4 h4! 3 f5+
♔xf5 4 ♔xd5 h3! –+; 2 ♔c6 h4 3 gxh4
g3! 4 fxg3 fxe3 –+; 2 ♔b4 f3 3 gxf3 h4 4
gxh4 g3 5 fxg3 exf3! –+; 2 exf4 h4! 3
gxh4 g3! 4 fxg3 e3! and Black wins.
If White were to move, he could reach
the square of the e-pawn by 1 ♔b4! and
draw. If in 9.03 the g3-pawn were at h4,
White would win since then no break-
through is possible (1...f4 is answered by
2 g3! +–).

In the next example it's a doubled
pawn that enables Black to make a break-
through:
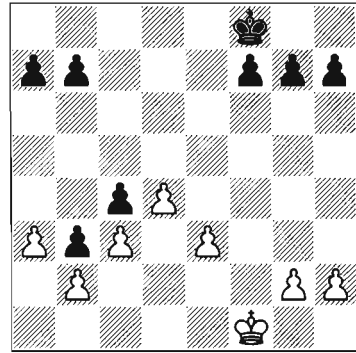
9.04 /+
J.Ambrož – G.Dizdar
Trenčianske Teplice 1985

The later majority breakthrough by
...b5-b4 is already here visible, but at first
Black has to improve the situation in the
centre and on the kingside:
1...f5! 2 ♔e2
After 2 h3 ♔e7 3 g4 fxg4 4 hxg4 b5
–+ Black wins by first getting his pawn
to a4 and then creating an outside passed
pawn on the kingside. White is helpless
because he can't engage in any activities.
2 a4!?, with the idea of frustrating
Black's plan on the queenside, doesn't
save the game either, e.g. 2...♔e7 3 ♔e2
♔e6:
a) 4 a5 ♔d6 5 ♔f3 b5 6 axb6 a5!! 7
♔e2 (7 e4 fxe4+ 8 ♔xe4 a4! –+) 7...a4 8
♔d2 ♔c6! –+.
b) 4 ♔f3 and then:
b1) 4...g5? proves to be premature: 5
g4! fxg4+ 6 ♔xg4! a5 7 e4! (after 7
♔xg5? the black breakthrough wins:
7...b5!! 8 axb5 a4! 9 b6 ♔d7! 10 b7 ♔c7!
11 d5 a3 12 d6+ ♔xb7! 13 ♔f6 ♔c6! 14
♔e7 axb2! 15 d7 b1♕! 16 d8♕ ♕e4+! 17
♔f8 ♕f5+ and Black wins by exchang-
ing queens) 7...♔d7 8 e5! b5! 9 axb5! a4!
10 b6! a3! 11 e6+ =.
b2) 4...a5 5 e4 fxe4+! 6 ♔xe4 b5! 7
d5+ (7 axb5 a4! 8 b6 ♔d7 –+) 7...♔d6 8

&d4 bxa4! 9 &xc4 a3 10 &xb3 axb2! 11
&xb2 &xd5! −+.
    2...b5 3 &d2
    The more active 3 &f3 doesn't help
White either: 3...a5 4 e4?! b4 −+.
    3...&e7 4 &e2
    White is helpless against Black's plan
because his king mustn't be too far away
from the queenside.
    **4...&e6 5 &d2 &d5 6 &e2 &e4 7
&d2 g5 8 &e2 h5 9 &d2**
    9 g3 a5 10 &d2 a4 11 h3 (11 &d1 b4!
12 cxb4 &xe3 13 d5 f4 −+; 11 &e2 b4 12
&d2 bxa3 13 bxa3 h4 14 gxh4 f4 15 exf4
gxf4 −+) 11...b4 12 cxb4 (12 axb4 h4 13
gxh4 g4 14 hxg4 fxg4 15 h5 a3 16 bxa3
b2 −+) 12...h4! 13 gxh4 g4! 14 hxg4 fxg4!
15 b5 g3! 16 b6 g2! 17 b7 g1♕! 18 b8♕
♕xe3+! 19 &d1 ♕g1+ 20 &d2 ♕f2+ 21
&c3 ♕xd4+! 22 &b4 c3+! −+.
    **9...h4 10 &e2 g4 11 &d2 g3 12 hxg3
hxg3! 13 &e2** *(D)*
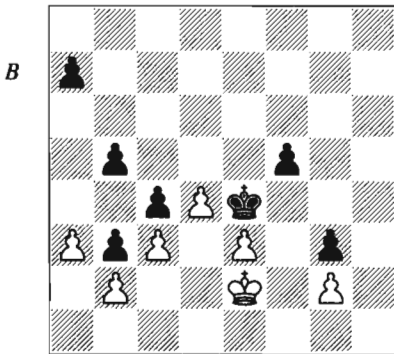
    13...a5!?
    13...a6?! 14 &e1 a5 15 &e2 b4! 16
axb4 a4!! (16...axb4? 17 &d2! bxc3+! 18
&xc3! &d5! 19 &b4!? &e4! 20 &xc4
&xe3! 21 d5! f4! 22 d6! f3! 23 gxf3! g2!
24 d7! g1♕! 25 d8♕! ♕f1+ 26 &c3
♕e1+ 27 &xb3 &xf3! =) 17 &d2 a3! 18
bxa3 b2! 19 &c2 &xe3 20 d5 b1♕+ 21
&xb1 f4! 22 d6 f3! 23 d7 fxg2 24 d8♕
g1♕+! −+.

    **14 &d2 a4! 15 &e2 b4!! 16 &d2
bxa3! 17 bxa3 b2! 18 &c2 &xe3 19 d5
f4 20 d6 f3**
    This second breakthrough on the other
wing finally decides.
    **21 d7 fxg2 22 d8♕ b1♕+! 23 &xb1
g1♕+! 24 &c2 ♕f2+ 25 &b1 g2 0-1**
    There could follow 26 ♕d4+ &e2 27
♕xc4+ &d1 28 ♕xa4+ &d2 29 ♕d7+
&e1 30 ♕e6+ ♕e2 31 ♕b6 ♕f1 −+.

B) Breakthrough of the Majority

If one already has a pawn majority on
one wing it's of course easier to create a
passed pawn. It is worth noting that it is
often better not to play according to the
rule 'candidate in front', but to exploit a
breakthrough idea. Our next example il-
lustrates a typical procedure:
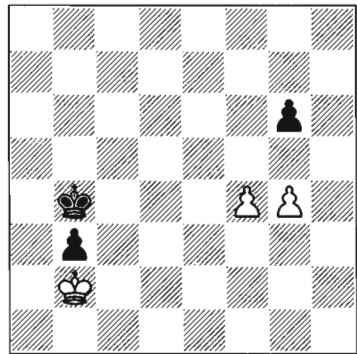
    9.05   +/=

    1 g5!
    Not 1 f5? gxf5! 2 g5 (2 gxf5 &c5! =)
2...f4! 3 g6! f3! =.
    The g-pawn wins an important tempo
on its way to the 8th rank. One should
keep this idea in mind. The existing
structure is very aggressive concerning a
breakthrough (f5-f6 threatens to create a

far-advanced protected passed pawn and if the white king manages to capture the g6-pawn he is already on a key square of the g5-pawn). The temporary backwardness of the f-pawn is insignificant because of the black king being too far away (a weakness that can't be exploited is no weakness!).

1...♔c5 2 f5! ♔d6 3 f6! +−
White wins as in 4.08. If one moves the starting position one file to the right it is a draw because of 6.01H, since a protected passed pawn on g6 doesn't secure a win.

The following beautiful study shows an accurate preparation for the breakthrough of a majority:
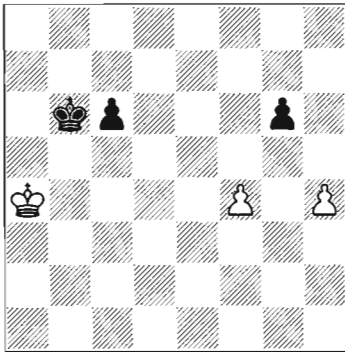
9.06 +/
M.Zinar, 1982

The white pawns on the kingside are separated, with the consequence that during the creation of a passed pawn, a dangerous black passed pawn also arises. Therefore first White's king has to be placed in such a way that he is able to stop the black pawns:

1 ♔b3!
1 ♔b4? c5+! 2 ♔c3 ♔c6 3 f5 gxf5! 4 h5! f4! 5 h6 f3! 6 ♔d2 c4! 7 h7 c3+! =.

1...c5

1...♔c5?! 2 f5! +−.

2 ♔c2! c4 3 ♔d1!! ♔c5
Only now does the breakthrough decide:

4 f5! gxf5 5 h5! f4 6 h6! +−

There are also a great many games featuring this type of idea.
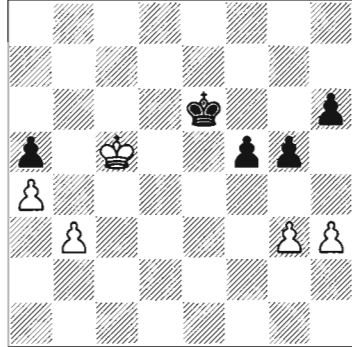
9.07 /+
E.Geller – V.Smyslov
USSR Ch (Moscow) 1952

In this example Black need be in no hurry, and should plan the best time to make a breakthrough on the kingside. A very important nuance is a possible promotion with check at g1. In the end, Smyslov actually breaks through with his h-pawn.

1...h5!?
1...f4?! 2 gxf4 gxf4! 3 ♔d4 ♔f5! (3...♔d6? 4 h4! f3 5 ♔e3! ♔c5 6 ♔xf3! ♔b4! 7 ♔g4 ♔xb3! 8 ♔h5! ♔xa4! 9 ♔xh6! ♔b3 10 h5 a4 11 ♔g7 = (3.07)) 4 b4 f3 5 ♔e3 axb4! 6 a5 b3! 7 a6 b2! 8 a7 b1♕! 9 a8♕ ♕e1+ 10 ♔d3 ♕e2+ 11 ♔c3 ♕e3+ 12 ♔b2 ♕d4+ 13 ♔b3 f2 −+.

2 b4
2 ♔d4 ♔d6 3 h4 g4 4 ♔d3 ♔d5 5 ♔e3 ♔e5 6 ♔d3 f4 7 gxf4+ ♔xf4! wins for Black.

2...f4

2...h4 3 gxh4 g4! 4 hxg4 fxg4! 5 ♔d4 g3 6 ♔e3 axb4 −+.

3 gxf4 g4! 4 hxg4 h4

4...hxg4 5 ♔d4 g3 6 ♔e3 axb4 −+.

5 f5+ ♔d7! 6 g5 h3 7 g6 ♔e7 8 bxa5 h2 9 a6 h1♕ 10 ♔b6 ♔d6 0-1

C) Creation of Two Passed Pawns

The idea of using a breakthrough to create two widely separated passed pawns occurs quite often as well. In the first position, doubled pawns seem to be the cause:
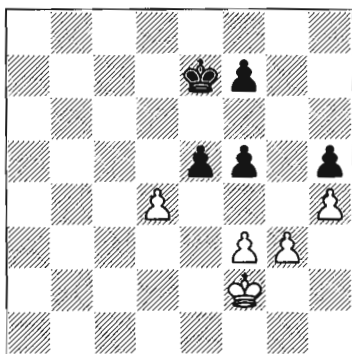
9.08   +/
A.Wohl – S.Solomon
Australian Ch 1985

The d-pawn deflects the black king so that the breakthrough on the kingside leads to a win:
1 d5!!
1 dxe5? ♔e6 2 f4 ♔d5 3 ♔e3 ♔c4 only draws.
1...♔d6
The game actually finished 1...e4 2 g4 1-0. The following line was given by Rogers in *Informator 41*.
2 g4! fxg4 3 fxg4! ♔xd5 4 gxh5! ♔e6 5 h6! ♔f6 6 h5! +−

By the way, without the f7-pawn 1 dxe5! wins, while 1 d5? only leads to a draw.

The reader should well keep in mind the following idea so that he isn't unpleasantly surprised:
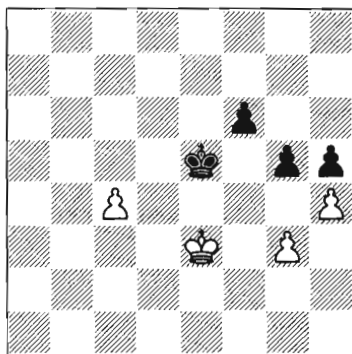
9.09   +/
A.Kharlov – T.Ernst
Haninge 1992

After Black's last move, ...g5?, Kharlov became serious:
1 g4!! hxg4
1...gxh4 2 gxh5! h3 3 ♔f2 and White wins.
2 h5!
The white pawns can't be stopped.
2...f5 3 h6 f4+ 4 ♔f2 g3+ 5 ♔g2 ♔e4 6 h7 1-0

D) Breakthrough Possibilities for the Defence

Of course the mere threat of a breakthrough can dictate the flow of play. The following example is characteristic (*see next diagram*):

The optional breakthrough f4 indirectly protects the h3-pawn and stops the black king from going round the f3-pawn
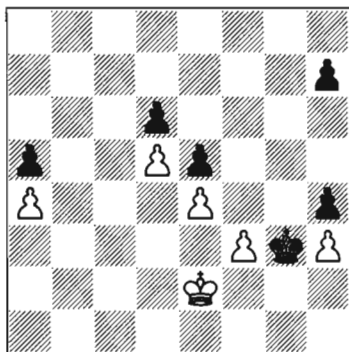
9.10 =/=
L.Psakhis – G.Kasparov
Murcia (3) 1990

from behind. Therefore Garry couldn't
try to win any longer.

1...♔g2
1...♔xh3? 2 ♔f2! h6 3 f4! exf4 4 e5!
dxe5 5 d6 +–.
2 ♔e3! ♔g3! ½-½

In our last example, the threat of a
breakthrough devalues a pawn majority:
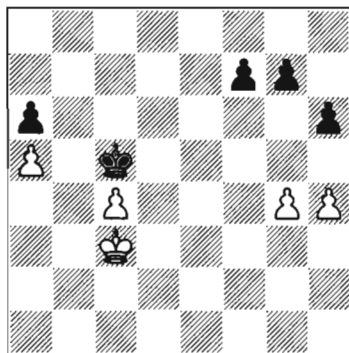
9.11 +/=
K.Müller, Original

After **1 h5!** the black majority cannot
create a passed pawn on its own, so
White wins:

1...♔c6
1...f6?! (now the black kingside pawns
are completely devalued; not even g5 fol-
lowed by f5 is still possible) 2 ♔d3 ♔b4
3 ♔d4! ♔xa5 4 c5 ♔b5 5 ♔d5! +–.
Though the advance 1...g5 fits well
into the chapter on breakthroughs, it does
lose: 2 ♔d3! f6 (2...♔b4 3 ♔d4! ♔xa5 4
c5 +–) 3 ♔e4 ♔xc4 4 ♔f5! ♔b5 5 ♔xf6
+–.
1...g6 2 g5!! hxg5 3 h6! +– is the main
idea of 1 h5.
2 ♔d4! ♔d6 3 c5+! ♔c6
3...♔e6 4 ♔e4! g5 (4...♔f6 5 ♔d5!
+–) 5 ♔d4 f5 6 gxf5+! ♔xf5 7 ♔d5 and
wins.
4 ♔c4! g5 5 ♔d4! f5 6 gxf5! g4 7 f6
wins for White.

If Black is to move, he immediately
has to create a passed pawn; otherwise he
can't hold the position:
1...h5!!
1...♔d6? 2 ♔d4! h5 3 c5+ ♔c6 4 gxh5!
+–; 1...g5? 2 h5 f6 3 ♔d3! ♔b4 4 ♔d4
♔xa5 5 c5 +–; 1...g6? 2 g5! hxg5 3 hxg5!
♔c6 4 ♔d4! ♔d6 5 c5+ ♔e6 6 ♔e4! f5+
7 gxf6! ♔xf6 8 ♔d5! ♔e7 9 ♔c6! g5 10
♔b7! g4 11 c6! g3 12 c7! g2 13 c8♕!
g1♕ 14 ♕c7+! ♔e8 15 ♔xa6! ♕d1 16
♔a7! +–.
2 gxh5
2 g5 f5 3 g6!? f4 4 ♔d3! f3 (4...♔b4 5
♔e4! ♔xa5 6 ♔xf4! ♔b4 7 ♔e5! =) 5
♔e3! ♔xc4 6 ♔xf3! =.
2...f5!? 3 ♔d3! ♔b4!
3...f4? 4 ♔e4! ♔b4 5 ♔xf4! ♔xa5 6
♔e5! ♔b6 (6...♔b4 7 ♔d5 a5 8 c5 +–) 7
♔d6! ♔b7 8 c5! ♔c8 9 ♔c6! and White
wins.
**4 ♔d4 ♔xa5 5 ♔e5 ♔b4 6 ♔xf5 a5 7
♔g6 a4 8 c5!**
White has to sacrifice the c-pawn in
order to make possible the stalemate de-
fence that is known from Chapter 3.
8...♔xc5 9 ♔xg7! =

Chapter 9 Exercises
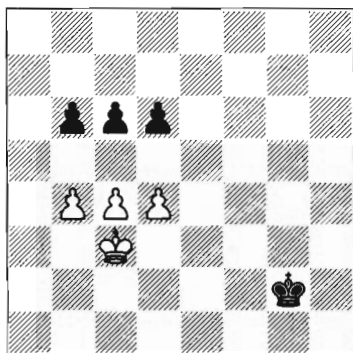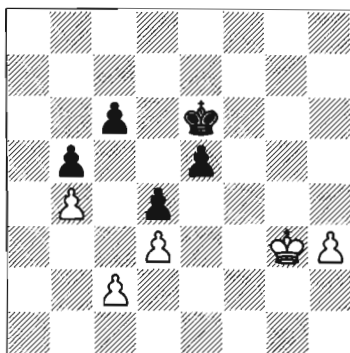
A9.01   ***/

A9.04   /**
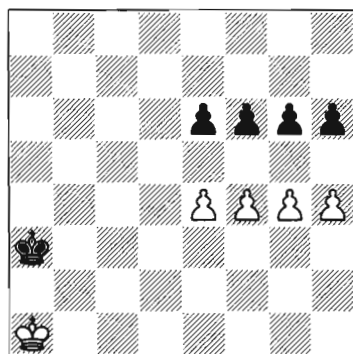
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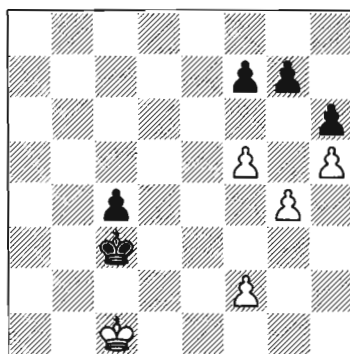
A9.05   **/
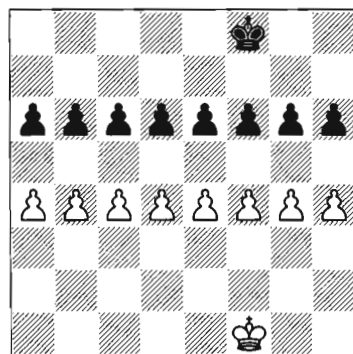
A9.03   ****/
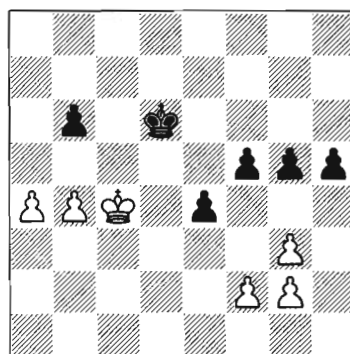
A9.06   /**
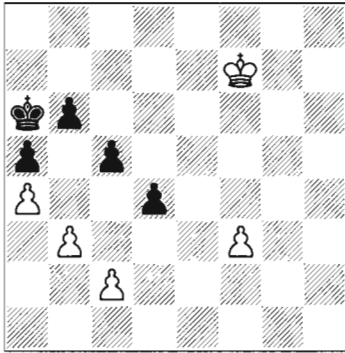
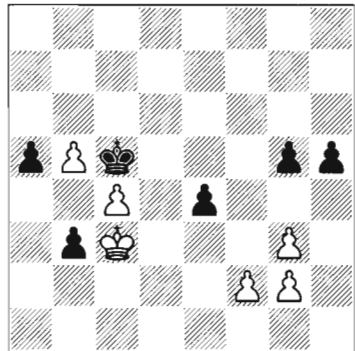**A9.07** /***
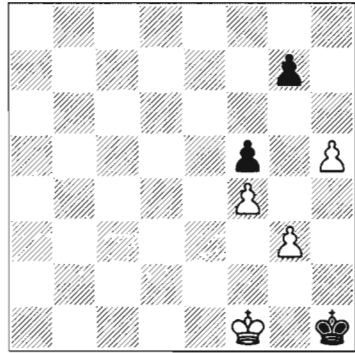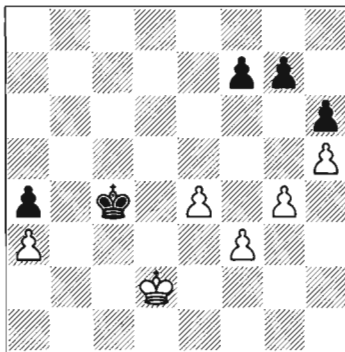

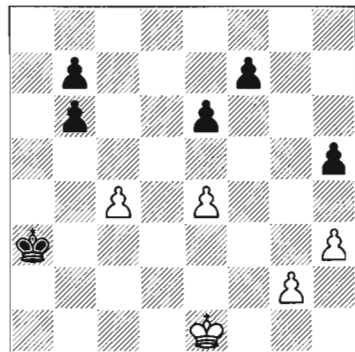**A9.10** ***/
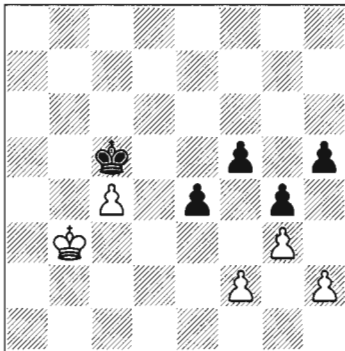
A9.08 /***

A9.11 /***

A9.09 ***/

A9.12 ****/

Solutions to Chapter 9 Exercises

A9.01 T.Kok, *Schaakvereld*, 1939

At first White has to improve his king's position before he can break through as in 9.01:

1 ♔d2!

1 b5?? cxb5 2 cxb5 d5 −+.

1 ♔b2? ♔f2 2 c5 bxc5 3 dxc5! = (3 d5? cxd5! 4 b5 d4! 5 b6 d3! −+).

1 ♔c2? ♔f3 2 c5 bxc5 3 dxc5! = (3 d5? cxd5 4 b5 ♔e2 5 b6 d4 6 b7 d3+ −+).

1 c5? dxc5 2 bxc5 bxc5! 3 dxc5 ♔f3 draws.

1 d5? c5! (1...cxd5? 2 ♔d4! dxc4 3 ♔xc4! ♔f3 4 ♔d5! +−) 2 bxc5 bxc5! 3 ♔b3 ♔f3 4 ♔a4 ♔e4 5 ♔b5 ♔d4 6 ♔c6 ♔xc4! 7 ♔xd6! ♔b4 8 ♔e7 c4 =.

1 ♔d3? ♔f3 2 c5 bxc5! 3 d5 cxd5! 4 b5! c4+! 5 ♔d4 c3! =.

1...♔f3

1...b5 2 d5 cxd5 3 cxb5 +−; 1...d5 2 b5 +−; 1...c5 2 dxc5 dxc5 3 bxc5! bxc5 4 ♔e3 +−.

2 c5! dxc5

2...bxc5 3 d5! cxd5 4 b5! +−.

3 b5! cxb5 4 d5! +−

A9.02 J.Kling and B.Horwitz, 1851

Since only the f-pawn would queen with check, it has to be freed:

1 h5!

1 g5? fxg5 2 h5 gxf4! −+; 1 e5? fxe5! 2 h5 exf4! −+.

1...gxh5

1...g5 2 e5! fxe5 (2...gxf4 3 exf6! +−; 2...f5 3 gxf5! +−) 3 f5 e4 4 fxe6 and White wins.

2 e5! fxe5 3 f5! hxg4 4 f6! g3 5 f7! g2 6 f8♕+! +−

A9.03 P.Cathignol, *Thèmes-64*, 1981

Of course it seems improbable that this position would occur in a practical

game but still we didn't want to hide this little masterpiece from our readers since it is somehow amazing that White is only able to break through in one successful way:

1 d5!

1 a5? bxa5! = (1...b5? 2 d5! exd5 3 exd5! bxc4 4 dxc6 ♔e7 5 b5 c3 6 ♔e2 +−); 1 b5? cxb5! = (1...axb5? 2 c5! dxc5 3 dxc5! ♔e7 4 cxb6! ♔d7 5 a5! +−); 1 c5? dxc5 =; 1 g5? fxg5 =.

1...exd5 2 exd5! cxd5 3 a5!

3 cxd5? b5 =.

3...bxa5 4 b5! axb5 5 cxb5! ♔e7 6 b6! ♔d7 7 b7 ♔c7 8 g5! fxg5 9 h5! gxh5 10 f5! a4 11 f6 a3 12 f7 a2 13 b8♕+! ♔xb8 14 f8♕+! +−

A9.04 L.Barillaro – B.Björnsson, *Reykjavik 1994*

Hopefully you have noticed that the black breakthrough doesn't work, but it's the best he can try:

1...e4!? 2 dxe4

2 ♔f2?! e3+ (2...exd3 3 cxd3! ♔d5 4 h4 +−) 3 ♔f3 ♔f5 4 c3! dxc3 (4...c5 5 bxc5! dxc3 6 ♔xe3! b4 7 d4 b3 8 ♔d3 +−) 5 ♔xe3! ♔g5 6 d4! ♔h4 7 ♔d3! ♔xh3 8 ♔xc3 ♔g4 9 d5! ♔f5 10 ♔d4! +−.

2 ♔f4? exd3! (for 2...e3? 3 ♔f3 +− see under 2 ♔f2) 3 cxd3! ♔d5! (3...c5? 4 ♔e4! cxb4 5 ♔xd4! ♔f5 6 ♔e3! +−) ♔f3 (4 h4 c5! 5 bxc5 b4 =) 4...c5! and then:

a) 5 ♔e2 cxb4! 6 ♔d2 ♔e5 7 ♔c2 ♔f4! 8 h4 (8 ♔b3 ♔e3! =) 8...♔g4! =.

b) 5 bxc5 ♔xc5! 6 h4 (6 ♔e2 ♔b4! 7 h4 ♔c3 =) 6...b4! 7 ♔e2 b3! 8 ♔d2 ♔b4! 9 ♔c1 ♔c3! =.

2...c5!?

2...d3 3 cxd3! c5 4 ♔f2 cxb4 5 ♔e3 +−.

3 ♔f2

3 ♔f4?? cxb4! 4 h4 d3 5 ♔e3 dxc2! 6 ♔d2 b3! −+.

In the game, White went wrong by 3 bxc5?? d3! 4 cxd3 b4! 5 ♔f4 b3! 6 d4 b2 7 d5+ ♔e7 8 ♔e5 b1♕ 9 d6+ ♔d7 10 ♔d5 ♕d3+ 11 ♔e5 ♕c4 0-1.

3...c4 4 h4 ♔e5 5 h5 ♔f6 6 ♔f3 ♔g5 7 e5 ♔xh5 8 ♔e4 d3 9 cxd3! +−

A9.05 Ed.Lasker – Moll, *Berlin 1904*

In this well-known example, White is successful because Black hasn't yet played ...f6:

1 f6!

The majority is used to weaken the black pawn-structure.

In the game, there actually followed 1 f4? f6! 2 g5 ♔d4 0-1.

1...gxf6 2 f4 ♔d4 3 g5 fxg5 4 fxg5! ♔e5 5 gxh6! ♔f6 6 ♔c2 +−

Black soon has to leave the square of the h6-pawn.

A9.06 N.Weinstein – M.Rohde, *Lone Pine 1977*

At first sight it looks as if White has the advantage due to his outside majority. The game proceeded 1...h4?? 2 gxh4! gxh4 3 ♔d4! ♔c6 4 a5 bxa5 5 bxa5! ♔d6 6 a6 ♔c6 7 ♔e5 ♔b6 8 ♔xf5 ♔xa6 9 ♔xe4 1-0. However, the white pawn-structure on the kingside is weakened and therefore...

1...f4! 2 gxf4

2 ♔d4 f3 3 gxf3 h4! 4 gxh4 gxh4! 5 ♔xe4 h3 −+.

2...gxf4! 3 ♔d4 e3! 4 fxe3

4 ♔d3 f3 5 gxf3 h4 6 ♔xe3 h3 wins for Black.

4...f3! 5 gxf3 h4! −+

With a pawn at h2 instead of g3 the outside majority would in fact have won.

A9.07 Zubarev – N.Grigoriev, *USSR Ch (Leningrad) 1925*

This example has already been analysed in a detailed way in a couple of books, for example in Nunn's *Tactical*

Chess Endings and of course in Averbakh and in *ECE*.

1...b5! 2 axb5+ ♔b6

2...♔xb5? 3 f4 c4 4 bxc4+! ♔xc4 5 f5 a4 6 f6 a3 7 ♔e6 a2 8 f7! a1♕ 9 f8♕! =.

However, 2...♔b7 is even more clear-cut, as White's pawns have to advance further before they start gaining tempi with checks.

3 ♔e6 (D)

3 ♔e7 a4 4 bxa4 c4 5 f4 d3 6 cxd3 c3! (Nunn; 6...cxd3? 7 a5+ ♔c5 8 b6 ♔c6 9 a6 d2 10 a7 ♔b7 11 f5 d1♕ 12 f6 = Nunn) 7 f5 c2 8 f6 c1♕ 9 f7 ♕c5+ 10 ♔e8 ♕e5+ 11 ♔d7 ♕f6 12 ♔e8 ♕e6+ 13 ♔f8 ♔c5 −+.

B
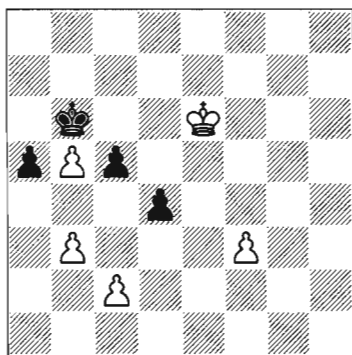
3...a4! 4 bxa4 c4! 5 f4 d3 6 cxd3 cxd3 7 f5 d2! 8 f6 d1♕! 9 f7 ♕d8 10 ♔f5 ♕d6 −+ 0-1

A9.08 F.Cruz – Y.Seirawan, *Moscow OL 1994*

The black f- and h-pawns are backward, but they are also far-advanced and the white king is far away on the queen-side. Nevertheless the black breakthrough demands very precise play since the white pawns become dangerous as well. Our compliments if you found the main line:

1...f4!!

1...♔d4? 2 ♔b4! f4 3 gxf4! h4 4 c5! g3 5 hxg3 hxg3 6 c6! =.

2 gxf4
2 ♔c3 e3 (2...f3 −+) 3 fxe3 fxg3! 4 hxg3 h4! 5 gxh4 g3! −+.

2...e3 3 fxe3 h4! 4 f5 ♔d6!
4...g3? 5 f6 ♔d6 6 c5+ ♔e6 7 hxg3 hxg3! 8 c6! =.

5 ♔b4 ♔e5! 0-1
Cruz resigned in view of 6 c5 ♔xf5! 7 c6 ♔e6! 8 ♔c5 g3! 9 hxg3 h3! 10 ♔b6 h2! 11 c7 ♔d7! −+ (Seirawan in Inf 62/542).

A9.09 P.Haba − Z.Krcmar, *Czech Cht 1994*
Though the black king is very active, which makes the realization of the extra pawn more difficult, White is nevertheless able to win thanks to his far-advanced pawns:

1 ♔e3!
1 ♔c2?! ♔d4 (1...f6 2 ♔d2! ♔b3 3 f4 ♔xa3 4 ♔c3! ♔a2 5 e5 a3 6 ♔c2 +−) 2 ♔d2! ♔c4 3 ♔e3! +−; 1 ♔e2 ♔d4 2 ♔f2 ♔c4 3 f4? ♔b3! 4 g5 ♔xa3! 5 f5 ♔b4 6 f6 gxf6! 7 gxh6 a3! =.

1...♔b3 2 ♔d3 ♔xa3 3 ♔c3! ♔a2 4 ♔c2! ♔a3 5 e5 ♔b4 6 f4! ♔c4 7 f5 ♔d5 8 g5! hxg5
8...♔xe5 9 f6! gxf6 10 gxh6! +−.

9 f6! gxf6 10 h6 fxe5 11 h7 f5 12 h8♕ ♔e4 13 ♔d2 g4 14 ♔e2 f4 15 ♕h7+ +− 1-0

A9.10 J.Behting, 1905
Certainly you have guessed on a king move but was it the right one?

1 ♔e1!!
1 ♔e2? ♔g2! 2 g4 fxg4! 3 f5 g3! 4 f6 gxf6! 5 h6! f5! 6 h7 f4! 7 h8♕ f3+! 8 ♔d3 f2! 9 ♕b2 ♔g1! =; 1 ♔f2? ♔h2! 2 ♔f3 ♔h3! =; 1 g4?? fxg4! 2 ♔f2 ♔h2! −+.

1...♔g2
1...♔h2 2 ♔f2! +−.

2 g4!
2 h6? gxh6! 3 g4! fxg4! 4 f5 ♔h2 =.

2...fxg4 3 f5! g3 4 f6! gxf6 5 h6! ♔f3
After 5...♔h2 White promotes with check. 5...f5 6 h7! f4 7 h8♕! f3 8 ♕a8 +−.

6 ♔f1! +−

A9.11 Kuznetsov − Zelenskikh, *corr. 1971*
Since an immediate 1...h4? doesn't work because of 2 gxh4! g4 3 g3 +−, the breakthrough has to be prepared:

1...g4!!
1...a4? 2 g4!! h4 (2...hxg4 3 g3! =) 3 ♔b2 = ♔b4? 4 b6! a3+ 5 ♔b1 and White wins.

2 ♔xb3 h4 3 gxh4 g3 4 fxg3 e3 5 ♔c2 e2 6 ♔d2 a4! 0-1

A9.12 N.Grigoriev, 1938
One of the many masterpieces by Grigoriev, in which the knowledge of Chapter 8 has to be applied as well.

1 e5!
1 h4? f5! −+.

1...♔b4 2 h4! ♔xc4 3 g4! ♔d5 4 gxh5! ♔xe5 5 h6! ♔f6 6 h5!
The duel is now decided by precise play from the white king:

6...b5 7 ♔d2!
7 ♔e2? b4! 8 ♔d3 b5! 9 ♔c2 e5! 10 ♔b3 e4! 11 ♔xb4 e3! 12 ♔c3 b4+! 13 ♔d3 b3! −+.

7...b4
7...e5 8 ♔c3 b6 9 ♔d3 b4 10 ♔c4! e4 11 ♔xb4! +−.

8 ♔c2! e5 9 ♔b3! e4 10 ♔xb4! b5 11 ♔c3! e3 12 ♔d3! b4 13 ♔xe3!
Have you found all 13 exclamation-mark moves?

13...b3 14 ♔d2 b2 15 ♔c2! b1♕+ 16 ♔xb1! ♔g5 17 h7! +−

10 Pawns on Both Wings

Now that we have made ourselves famil-
iar with the fundamental techniques and
methods, we move on to examples with
pawns on both wings, which are very im-
portant from a practical point of view.
The next two chapters are dedicated to
this issue and we have arranged them as
follows. In this chapter there are exam-
ples in which outside passed pawns or
pawn majorities play the important role;
first the extreme cases will be discussed
and then pawn-structures which become
more and more symmetrical will be dealt
with. Chapter 11 deals with the question
of whether the kings are able to pene-
trate. There we will also examine situa-
tions in which both sides fight for tempi.

A) Extra Pawn

First here is an instructive example to
warm up:
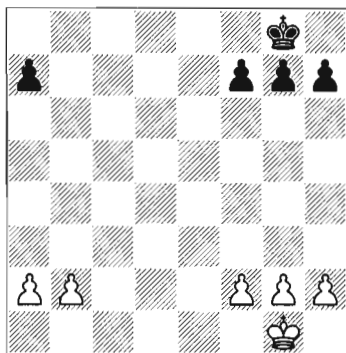
10.01   +/−

White's plan is very simple:

1) Advance the king as far as possi-
ble;

2) Push the queenside pawns forward
('candidate in front');

3) Because the passed pawn that
White creates deflects the black king, the
white king can penetrate on the kingside
and capture several of the black pawns
(transformation of one advantage into an-
other), so that finally the white kingside
pawns secure the win.

**1 ♔f1 ♔f8 2 ♔e2 ♔e7 3 ♔d3 ♔d6 4
♔c4 ♔c6**

The first phase of the plan is com-
pleted; now White has to create a passed
pawn.

5 b4

'Candidate first'. Because of his great
superiority, White could also play a4
since it doesn't matter that after ...a5 the
b-pawn becomes backward.

**5...h5 6 a4 h4 7 b5+ ♔b6 8 ♔b4 g5 9
a5+ ♔b7 10 ♔c5 ♔c7 11 b6+ axb6+ 12
axb6+! ♔b7 13 ♔d6**

Finally the king goes to the black
kingside pawns, which leads to a win.

**13...♔xb6 14 ♔e7 f5 15 ♔f6 g4 16
♔xf5 g3 17 fxg3 hxg3 18 hxg3 +−**

In the following example, Adorjan
demonstrates that one can also realize an
extra pawn if the circumstances are not
so favourable as in the previous example
(see Inf 47/637):

The extra pawn is a backward, and the
pawn sacrifice ...g6-g5 is an important
resource for the defence. Nevertheless it is
possible to break through as in Chapter 9:

1...♔f6 2 f3! g5+!?

2...♔e6 3 ♔g5 ♔f7 4 f4 ♔g7 5 f5 +−.
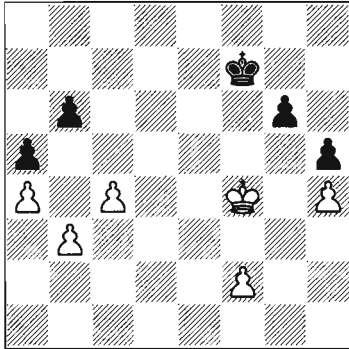
10.02   **+/−**

A.Adorjan – G.Sax
Hungary 1989

3 hxg5+! ♔g6 4 ♔e5! ♔xg5
4...h4 5 ♔f4! ♔h5 6 g6 +−.
5 f4+! ♔g6
5...♔g4 6 f5 +−; 5...♔h6 6 ♔f5 +−.
6 ♔e6! ♔g7
6...h4 7 f5+! ♔h7 8 f6 h3 9 f7 h2 10
f8♕ +−.
7 f5!
7 ♔e7 doesn't make any progress:
7...♔g6 8 ♔e6! ♔g7.
    7...♔f8 (D)
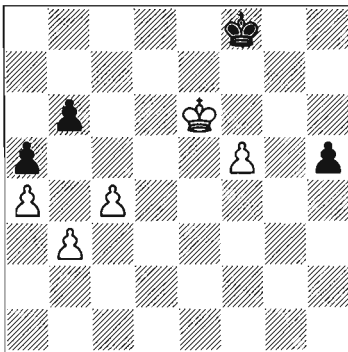
8 b4!!
By this beautiful breakthrough Ador-
jan now brings his queenside majority
into play.

8...axb4 9 c5 bxc5
9...b3 10 c6! +−.
**10 a5! b3 11 a6! b2 12 a7! b1♕ 13
a8♕+! ♔g7 14 f6+!**
In queen endings like this one it is not
the number of pawns that counts but how
far advanced they are. Thus White is win-
ning even though he is a pawn down,
since his f-pawn can't be stopped. How-
ever, very accurate play is necessary.
14...♔h6 15 ♕h8+ ♔g5 16 ♕g8+
16 f7? allows Black a perpetual check:
16...♕b3+ 17 ♔e7 ♕b7+ 18 ♔f8 ♕b8+
19 ♔g7! ♕e5+ 20 ♔h7 ♕e4+! 21 ♔g8
♕a8+! 22 f8♕ ♕d5+ =.
16 ♕g7+ ♔h4 (16...♔f4 17 ♕c7+ +−)
and then:
a) 17 f7? is premature due to the bad
position of the queen: 17...♕b6+ 18 ♔d5
♕b7+ and Black has a perpetual check,
e.g. 19 ♔xc5 ♕c7+ 20 ♔d5 ♕d7+ 21
♔e5 ♕b5+ (21...♕e7+? 22 ♔f5! ♕d7+
23 ♔g6! +−) 22 ♔f6 ♕c6+ =.
b) 17 ♕g2! ♕b8 18 ♕e4+ ♔h3 19 f7
+−.
    16...♔f4
16...♔h4 17 f7 ♕e4+ 18 ♔f6 ♕f4+ 19
♔g7 ♕g5+ 20 ♔h7! ♕f5+ 21 ♔h8 +−.
    17 f7 ♕f5+ (D)
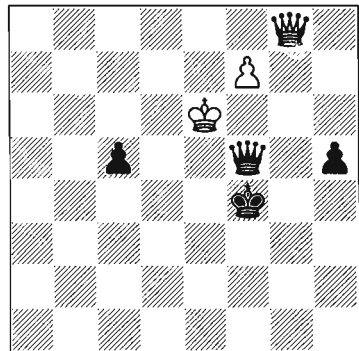
18 ♔d6?!
At this stage White could win quite
easily: 18 ♔e7!? ♕e5+ (18...♕e4+ 19

♔f6 ♕e5+ 20 ♔g6 ♕g5+ 21 ♔h7 ♕f5+ 22 ♔h8 +−) 19 ♔f8 h4 (19...c4 20 ♕g6 ♕h8+ 21 ♔e7 ♕e5+ 22 ♕e6 ♕c7+ 23 ♔f6 ♕c5 24 ♔g7 +−) 20 ♕g6 h3 (or 20...♕h8+ 21 ♔e7! ♕e5+ 22 ♔d7 +−) 21 ♔g8 ♕d5 22 ♔h7 ♕d7 23 ♕f6+ ♔e4 24 ♔h8 h2 25 ♕h4+ ♔d3 26 f8♕ +−. After the text-move Adorjan also won but it took much longer.

In the previous two examples we have noticed that first one has to activate the king and then push the pawns forward. Usually this is true but no rule is without exception. It is worth to noting that some-times there are important pawn moves that have to come first:
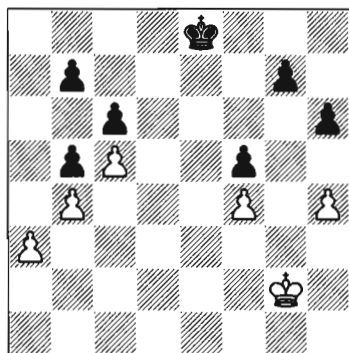
10.03 =/+
J.Timman − B.Larsen
Buenos Aires 1980

1 h5!
This makes the black g-pawn back-ward, and thus takes away possible spare tempi. Black can't profit from an outside passed pawn after ...g6 because his king isn't able to get into the white position.

1 ♔f3? would be wrong as then Black could realize his extra pawn: 1...g6! 2 ♔g3 ♔f7 3 ♔f3 (3 h5 g5! −+) 3...♔f6 4 ♔e3 g5! 5 hxg5+ hxg5! 6 fxg5+ ♔xg5! −+ and Black wins by analogy to 10.01.

1...♔f7 2 ♔f2 ♔f6 3 ♔f3! ½-½
Black can't make any progress: **3...g5** (3...♔e6 4 ♔e3 ♔d5 5 ♔d3! = and he doesn't have a spare move with a pawn) **4 hxg6! ♔xg6 5 ♔g3! ♔f6** (5...♔h5 6 ♔h3! =) **6 ♔h4!** and White is fast enough to prevent a march of the black king to the centre: **6...♔g6** = (not 6...♔e6? 7 ♔h5! ♔d5 8 ♔xh6! ♔d4 9 ♔g6! ♔e4 10 ♔g5! +−).

Though the number of pawns is equal, the familiar procedure is also possible in the next example:
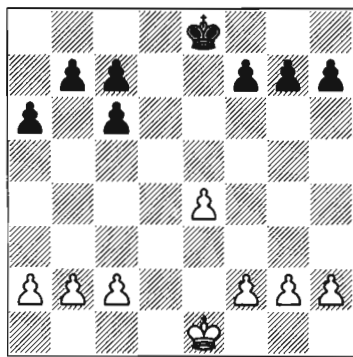
10.04 +/−
M.Euwe
Deutsche Schachzeitung, 1940

Such a pawn-structure can, for exam-ple, arise in the Exchange Spanish. Thus it is important to deal with it. Again the first step is to bring the king closer to the pawns and then one should advance on the kingside since the mobilization of the majority is the right way to exploit the quasi-extra pawn. Since both sides still have seven pawns there is only a little space for penetration, which demands a certain amount of precision.

1 ♔e2 ♔e7 2 ♔e3 ♔e6 3 f4 c5 4 c4 c6 5 a4 b5 6 b3!

White now has a kind of formation on the queenside against which Black can't create a passed pawn.

6 cxb5? cxb5! = would of course give up the whole advantage and the position would be drawn.

6...f6 *(D)*
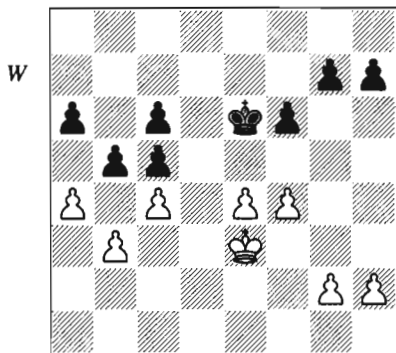
7 g4

7 a5? gives away the decisive spare tempo:

a) Not 7...b4? 8 g4:

a1) 8...h6 9 f5+ ♔e5 10 h3 ♔d6 11 ♔f4 ♔d7 12 e5 ♔e7 13 exf6+ (13 e6 followed by ♔g3-h4-h5-g6 also wins) 13...gxf6 14 h4 ♔f7 15 g5! ♔g7 16 gxf6+ ♔xf6 17 ♔e4 +−.

a2) 8...g5 9 e5!? (this pawn sacrifice gives White an even more distant majority; 9 ♔f3 h6 10 ♔e3 ♔d6 11 e5+ fxe5 12 f5! ♔e7 13 ♔e4 ♔f6 14 h3! +−) 9...gxf4+ 10 ♔xf4! fxe5+ 11 ♔e4! (11 ♔g5? h6+! 12 ♔xh6! e4! 13 g5! ± leads to a queen ending that shouldn't be won) 11...h6 12 h4 ♔f6 13 g5+! hxg5 14 hxg5+! ♔xg5 15 ♔xe5! +−. The outside majority has served its purpose and White wins easily.

b) 7...♔d6? 8 f5! ♔e5 9 g4 h6 (9...g5 10 fxg6! hxg6 11 h4! +−) and then:

b1) 10 h4? b4! 11 h5! ♔d6! 12 ♔f4 ♔d7 13 e5 ♔e7 (13...fxe5+? 14 ♔xe5 ♔e7 15 ♔f4 ♔f6 16 g5+! hxg5+ 17 ♔g4! +−) 14 exf6+ gxf6! =.

b2) 10 h3! b4 11 h4! ♔d6 12 ♔f4! +−.

c) 7...g6! 8 g4 ♔d6 9 h4 (9 g5 fxg5 10 fxg5! ♔e5 11 h3 ♔d6 12 ♔f4 ♔e6 =) 9...h6! 10 ♔f3 ♔e7 11 h5 (11 e5?! fxe5! 12 fxe5 g5 13 h5 ♔e6 14 ♔e4! b4! 15 ♔f3 ♔xe5 16 ♔e3! =) 11...g5! 12 e5 gxf4 13 exf6+ ♔f7 14 ♔xf4 ♔xf6! 15 ♔e4 ♔e6! 16 ♔f4 ♔f6! 17 g5+ hxg5+! 18 ♔g4! b4! 19 h6 ♔g6! 20 h7! ♔xh7! 21 ♔xg5 ♔g7! = (Speelman in *Endgame Preparation*).

7 f5+ ♔e5 8 g4 +−.

7...g6

Or 7...♔d6 8 f5 ♔e5 and then:

a) 9 h3? bxa4 10 bxa4! a5! 11 h4! h6!:

a1) 12 ♔f3?! ♔d4! 13 h5! (13 ♔f4? ♔xc4! 14 e5 fxe5+! 15 ♔e4 ♔b3! 16 g5 hxg5! 17 hxg5 c4! 18 f6 gxf6! 19 g6 c3 20 g7 c2 21 g8♕+ ♔b2! −+) 13...♔xc4 (13...♔d3 14 e5! fxe5! 15 ♔f2! ♔e4 16 ♔g3! ♔d3! =) 14 e5! fxe5! 15 g5! ♔d3 16 gxh6 gxh6 17 f6! e4+! 18 ♔f2 ♔d2! =.

a2) 12 h5 ♔d6! =.

b) 9 a5! +−.

8 f5+ gxf5 *(D)*
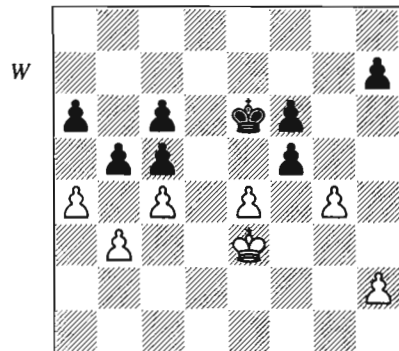
9 exf5+

9 gxf5+ ♔e5 10 a5 h6 11 h3 h5 12 h4 b4 13 ♔f3! ♔d4 14 ♔f4! ♔c3 15 e5! +−.

9...♔e5 10 h3 bxa4 11 bxa4! a5 12 h4 h6 13 ♔f3! h5

13...♔d4 14 g5 +−.
14 gxh5 +−

B) Majority vs Central Passed Pawn

In Chapter 8 we got to know the strength of an outside passed pawn. It's similar with an outside majority, as the following examples will show:
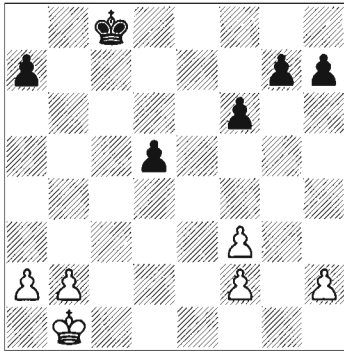
10.05 +/
K.Müller – V.Lagudin
Pula 1989

White places his king on the dream square d4, whereupon it becomes clear that the queenside majority far outweighs the weakened kingside pawn-structure.
1 ♔c2 a5?!
1...♔c7:
a) 2 b4? ♔c6 3 ♔c3 (3 a4? d4! 4 ♔d3 ♔d5! 5 f4 f5 6 a5 a6! 7 b5 axb5! 8 a6 ♔c6! 9 ♔xd4 ♔b6! −+) 3...d4+! 4 ♔xd4 ♔b5! 5 ♔c3 ♔a4! =.
b) 2 ♔c3 ♔c6 3 ♔d4 and now:
b1) 3...h5 4 f4 g6 5 b3 a6 6 a3 g5 (6...h4 7 h3 g5 8 fxg5 fxg5 9 f3! ♔d6 10 b4! ♔c6 11 a4 ♔d6 12 b5 a5 13 b6 ♔c6 14 b7 ♔xb7 15 ♔xd5 +−) 7 f5! g4 8 b4! ♔b5 9 ♔xd5! ♔a4 10 ♔e6! ♔xa3 11 ♔xf6! +−.

b2) 3...g5!? 4 b4 ♔b5 5 ♔xd5! ♔xb4 6 ♔e6! ♔a3 7 ♔xf6! ♔xa2 8 ♔xg5! leads to a winning queen ending, e.g. 8...♔b3 9 f4! ♔c4 10 f5 ♔d5 11 ♔f6 a5 12 ♔e7 a4 13 f6! a3 14 f7! a2 15 f8♕! a1♕ 16 ♕f7+ +−.
2 ♔c3 ♔c7 3 ♔d4 ♔c6 4 f4 g6 5 b3 ♔d6 6 a3 f5 7 b4 axb4 8 axb4! ♔c6 9 h4 ♔b5 10 ♔xd5! ♔xb4
Now the advantage of an outside passed pawn becomes obvious: the white king is far closer to the kingside pawns.
11 ♔e5 ♔c4 12 ♔f6 ♔d5 13 ♔g7 ♔e6 14 ♔xh7 ♔f7 15 f3 ♔f6 16 ♔g8 1-0
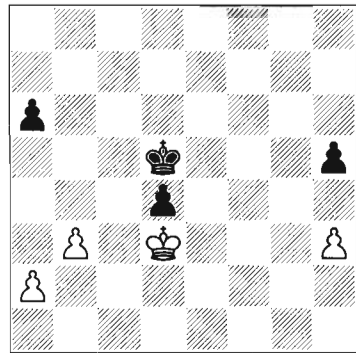
10.06 =/
L.Winants – L.Riemersma
Dordrecht 1988

It is a little bit surprising that White isn't able to win here:
1 b4!?
1 h4 a5 2 a3 ♔c5 3 ♔e4 a4! 4 bxa4 ♔c4! 5 a5! d3 6 ♔e3! ♔c3! 7 a6! d2! a7! d1♕! 9 a8♕! =.
1...h4
1...♔c6 2 a4 (2 ♔xd4 ♔b5! 3 ♔c3 ♔a4! =) 2...♔d5! 3 h4 ♔e5! 4 b5 axb5! 5 axb5 ♔d5! =.
1...♔e5? 2 h4! ♔d5 3 a3! ♔e5 4 a4! ♔d5 5 a5! ♔c6 (5...♔e5 6 b5! +−) 6

♔xd4 ♚d6 (6...♚b5 7 ♚c3! ♚c6 8 ♚c4!
♚d6 9 b5 axb5+ 10 ♚xb5! ♚c7 11 ♚c5
+−) 7 ♚e4 ♚e6 (7...♚c6 8 ♚f5 +−) 8 b5
+−.

**2 a3 ♚e5 3 a4 ♚d5! 4 a5!? ♚c6 5
♚xd4 ♚d6?**

For 5...♚b5! 6 ♚c3! ♚c6! = see the
game.

6 ♚c3?

6 ♚e4 ♚c6 7 ♚f4 +− would have
won, as White is one tempo ahead.

**6...♚c6 7 ♚c4 ♚d6! 8 b5 axb5+! 9
♚xb5 ♚c7! 10 ♚c5 ♚b7! =**

Of course White would have won eas-
ily if the h-pawns had been g-pawns.

C) Spread Majorities

Usually a short majority is better than a
longer one (especially a two versus one
majority because after its mobilization
there is either a protected passed pawn or
no opposing pawn left).
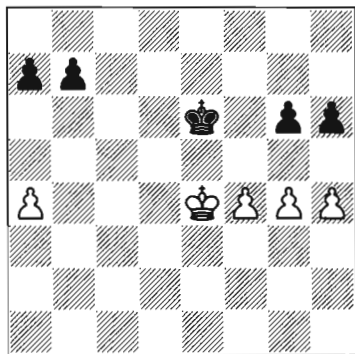
10.07   **=/=**
Levenfish, 1950

With his example Levenfish wanted to
demonstrate the strength of an outside
passed pawn, which is to be created by
...b6, ...a6 and ...b5. However, the active
white king just manages to neutralize this

advantage. White though, as we see in
the main line by Maizelis, has to act very
precisely:

1...h5!?

1...b6 2 f5+ (2 h5 = Averbakh) 2...gxf5+
3 gxf5+! ♚f6 (3...♚d6 4 h5 a6 5 ♚d4 b5
6 axb5! axb5! 7 f6 ♚e6 8 ♚c5 ♚xf6 9
♚xb5! ♚g5 10 ♚c4! = reaches the sav-
ing haven f1 just in time) 4 ♚d5 a6
(4...h5? 5 ♚c6! ♚xf5 6 ♚b7! +−) 5 ♚c6
b5! 6 axb5! axb5! 7 ♚xb5! =.

2 f5+ gxf5+!

Not 2...♚f7? 3 fxg6+ ♚xg6 4 g5! ♚f7
5 ♚e5 ♚e7 6 ♚f5 ♚f7 7 a5 +−, since
here the protected passed pawn is stron-
ger than the outside majority.

3 gxf5+! ♚f6 4 a5!

4 ♚f4? b6! 5 ♚e4 a6! 6 ♚d5 ♚xf5 7
♚c6 b5! 8 axb5 axb5! 9 ♚xb5 ♚g4! −+.

4 ♚d5? ♚xf5! 5 a5 (5 ♚d6 ♚g4 6
♚c7 ♚xh4 7 ♚xb7 a5! −+) and then:

a) 5...b5? 6 a6! ♚g4 (for 6...b4 7 ♚c4!
♚e4 8 ♚xb4 ♚d5 9 ♚b5 ♚d6 10 ♚c4
♚c6 11 ♚d4! ♚b6 12 ♚d5! ♚xa6 13
♚c6! =, see the main line) 7 ♚c5! ♚xh4
8 ♚xb5! ♚g5 9 ♚c6! =; see 3.07.

b) 5...♚g4! 6 ♚d6 b5! 7 ♚c5 a6! −+.

4...b5 (D)
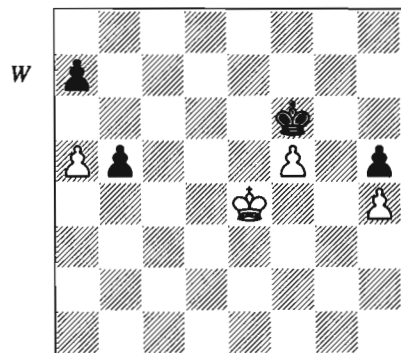
5 a6!!

Essential precision, motivated by
Bähr's Rule and the counterplay against
the black a-pawn.

Not 5 axb6? axb6! −+; nor 5 ♔d5? a6! (5...♔xf5? 6 a6! =) 6 ♔e4 b4! 7 ♔d3 ♔xf5 8 ♔c4 ♔g4 9 ♔xb4 ♔xh4! 10 ♔c5 ♔g5 11 ♔b6 h4! −+.

5...b4 6 ♔d4 ♔xf5 7 ♔c4! ♔e5

7...♔g4 8 ♔xb4! ♔xh4 9 ♔c5 ♔g5 10 ♔c6! =.

8 ♔xb4 ♔d4 9 ♔b5! ♔d5 10 ♔b4! ♔c6 11 ♔c4! ♔b6 12 ♔d5! ♔xa6 13 ♔c6!

The position would be won according to Bähr's Rule if Black could leave his a-pawn at a7. However, in order to get away from the edge of the board he has to move the a-pawn.

13...♔a5 14 ♔c5! a6

14...♔a4 15 ♔c4! ♔a3 16 ♔b5 =.

15 ♔c4! ♔a4 16 ♔c5!

16 ♔c3? ♔b5! 17 ♔b3 ♔c5 −+.

16...♔b3 17 ♔b6! ♔c4 18 ♔xa6 =

After one couldn't force a win in the previous example, now the 2-1 majority is successful despite the bad king position:
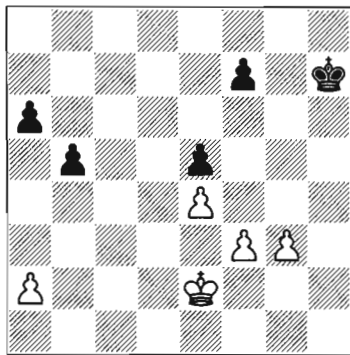
10.08   **/+**
A.Liebstein – Ju.Bolbochan
Mar del Plata Z 1951

The winning plan falls into two phases.
1...a5 2 ♔d3 ♔g7 3 ♔c2 ♔f8 4 ♔c3 ♔e7 5 ♔c2 ♔d6 6 ♔d3 ♔c5

The first phase of the plan is completed while White couldn't do anything without weakening himself. Now though, the black king threatens to get to d4, which has to be prevented by White because further passive play isn't possible any more.

7 f4

7 ♔c3 b4+ 8 ♔b3 ♔b5! 9 f4 a4+ 10 ♔c2 ♔c4 11 fxe5 ♔d4! −+.

7...f6 8 ♔c3

8 fxe5 fxe5! −+. Now White's outside passed pawn becomes a prey of the black king because the white king can't support it.

8...♔d6

After White has opened up an entry route, the black king now gets back to the kingside:

9 ♔d2 ♔e7 10 ♔d3 ♔f7 11 ♔d2 ♔g6 12 ♔e3 ♔h5 13 ♔f3 b4 14 g4+ ♔g6 15 fxe5 fxe5 16 ♔e3 ♔g5 17 ♔d3 ♔xg4 18 ♔c4 ♔f3 19 ♔b5 ♔xe4 20 ♔xa5 ♔d3 21 ♔xb4 e4! 22 ♔b5 e3 23 a4 e2 0-1

For a detailed explanation of the very important practical question of which majority is the 'better' one, we now deal with two further examples.
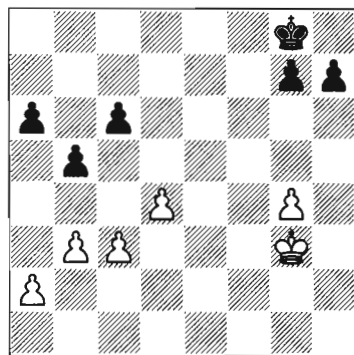
10.09   **/=**
Y.Hellwing – J.Nunn
London Lloyds Bank 1990

In the first case Black has the majority on the short wing and thus is better off. Against precise defence this advantage is not sufficient to win because the white king is more active and his pawns on the queenside can't be so easily attacked.

1...⩴f7 2 ⩴f4 ⩴e6 3 ⩴e4 h6 4 a4 g6 5 c4 h5 6 gxh5 gxh5 7 ⩴f4 ⩴f6 8 a5 b4 9 ⩴e4! ⩴g5

9...h4!? 10 ⩴f4! h3 11 ⩴g3! ⩴f5 12 ⩴xh3! ⩴e4 13 d5! cxd5! 14 c5! ⩴e5 15 ⩴g4 d4 16 ⩴g3 ⩴d5 17 ⩴f4:

a) 17...⩴c6 18 ⩴f3! = (18 ⩴e4? ⩴xc5! 19 ⩴f3 d3 20 ⩴e3 d2! 21 ⩴e2 ⩴d5! 22 ⩴d1 ⩴e4 23 ⩴xd2 ⩴d4! −+).

b) 17...⩴xc5 18 ⩴e4! ⩴b5 19 ⩴xd4 ⩴xa5 20 ⩴c5 stalemate.

10 ⩴e5?!

10 d5 cxd5+! 11 ⩴xd5! h4 12 ⩴e4! ⩴g4! 13 ⩴e3! ⩴g3 14 c5! =.

10...h4! 11 d5! cxd5 12 cxd5! ⩴g6! 13 ⩴e6! h3! 14 d6! h2! 15 d7! h1♕! 16 d8♕!

The queen ending which has arisen should be a draw, even though White still has to play accurately.

16...♕h3+ 17 ⩴e7 ♕e3+ 18 ⩴d7 ♕xb3 19 ♕b6+ ⩴g5 20 ♕xa6 ♕d5+ 21 ⩴c7

21 ♕d6 ♕xa5 =.

21...b3 22 ♕b6 ♕e5+ 23 ⩴b7 b2 24 a6 ♕e4+ *(D)*
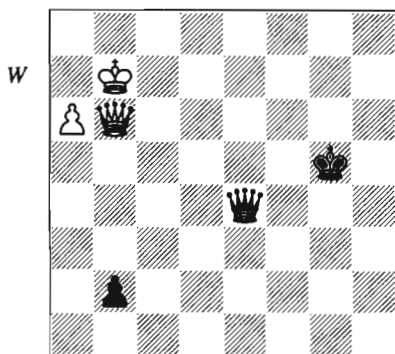
25 ⩴c7?

The beautiful stalemate idea 25 ⩴a7!! was mentioned by John Nunn in his book *John Nunn's Best Games*: 25...b1♕ (or 25...♕h7+ 26 ⩴a8! b1♕ 27 ♕xb1! ♕xb1 28 a7! =) 26 ♕f6+ ⩴g4 27 ♕h4+ ⩴f3 28 ♕f2+ =.

25...♕c2+ 26 ⩴d7

26 ⩴b7 b1♕ 27 ♕xb1 ♕xb1+! also wins for Black.

26...b1♕ 27 ♕e3+ ⩴g4 28 ♕d4+ ♕e4 29 ♕g7+ ⩴f3 0-1

Concerning the second position we could use an analysis by Dr Hübner that was published in *CBM 41* with the title 'Abfall' (rubbish):
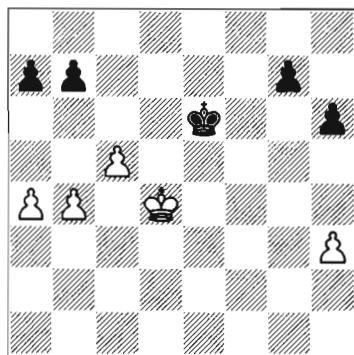
10.10   =/

M.Bier – A.Schwarz
Leipzig 1879

The white king is more active than its black colleague and his majority is far advanced. But due to Black's 2-1 majority this shouldn't be enough:

1 a5?!

1 b5!? is the more natural move and would have caused problems for Black as well. 1...a5! (1...a6? 2 c6! bxc6 3 bxa6! +−; 1...⩴d7? 2 ⩴e5 ⩴e7 3 a5 ⩴d7 4 ⩴f5 +−; 1...g5? 2 a5! +− see the game) and then:

a) 2 ♔e4 g6 (2...g5?! 3 b6 ♔d7! 4 ♔f5! ♔c6! 5 ♔g6! ♔xc5! 6 ♔xh6! ♔xb6! 7 ♔xg5! ♔c5 8 h4! b5! 9 h5! b4! 10 h6 b3! 11 h7 b2! 12 h8♕ b1♕! 13 ♕e5+ ♔c6 14 ♕xa5 =) 3 h4 (3 c6 bxc6! 4 bxc6! ♔d6! 5 c7! ♔xc7 6 ♔e5! ♔c6 7 ♔f6! ♔c5 8 ♔xg6! ♔b4! 9 ♔xh6 ♔xa4! 10 ♔g7 =) 3...g5 4 hxg5 hxg5! 5 c6 bxc6! 6 bxc6! ♔d6 7 ♔f5 ♔xc6 8 ♔xg5! =.

b) 2 bxa6 bxa6! 3 a5 g5 4 ♔e4! h5! 5 c6 ♔d6 6 ♔f5 g4! 7 hxg4 hxg4! 8 ♔xg4 ♔xc6 9 ♔f4 =.

1...g5?

1...a6 2 b5 (2 ♔e4? g5 3 b5 axb5! 4 c6 ♔d6! 5 cxb7 ♔c7! 6 a6 h5 −+; 2 c6 bxc6! 3 ♔c5! ♔d7! 4 ♔b6! g5 5 ♔xa6! ♔c7!? 6 b5! cxb5! 7 ♔xb5! h5 8 ♔c4 h4!? 9 ♔d3 g4! 10 ♔e2 g3 = − see 6.01H) 2...axb5 (2...♔d7 3 c6+ bxc6 4 bxa6! ♔c7 5 ♔c5 g5 6 a7! ♔b7! 7 a8♕+ ♔xa8! 8 ♔xc6! h5 9 ♔d5 =) 3 c6! ♔d6! 4 cxb7! ♔c7! 5 ♔c5 (5 a6? would be wrong because after 5...g5! −+ the black passed pawns go through) 5...g5 6 ♔xb5 ♔xb7! (6...h5? 7 ♔a6! ♔b8 8 ♔b6 g4 9 a6 gxh3 10 a7#) 7 ♔c5 =.

2 b5! ♔d7

After 2...h5 *(D)* follows a worthwhile 'breakthrough of the majority':

W
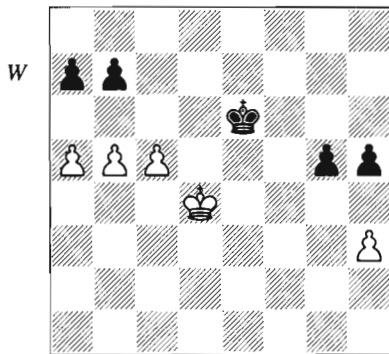
3 c6 bxc6 (3...b6 4 axb6! axb6 5 ♔e4! +−; 3...♔d6 4 cxb7! ♔c7 5 a6! +−) 4 b6! axb6 5 a6! +−.

3 ♔e5 h5

3...a6 4 bxa6! bxa6 5 ♔f5 +−.

4 ♔f5! g4 5 hxg4! hxg4 6 ♔xg4! ♔c7

Also after 6...a6 7 b6! ♔c6 8 ♔f5 ♔xc5 (8...♔d7 9 ♔e5 ♔c8 10 ♔e6 ♔d8 11 ♔d6 ♔c8 12 ♔e7 ♔b8 13 ♔d7 ♔a8 14 c6 +−; 8...♔b5 9 ♔e6 ♔xa5 10 ♔d6 ♔b5 11 c6 +−) 9 ♔e6 ♔c6 10 ♔e7! ♔b5 11 ♔d6 ♔xa5 12 ♔c7! +− Black would be lost.

7 ♔f5 ♔d7 8 ♔f6 a6 9 bxa6 bxa6 10 ♔e5! ♔c6 11 ♔d4! +− 1-0

What happens if the majority can't be mobilized so easily?
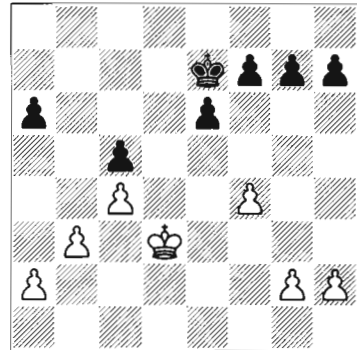
10.11   **/=**
T.Sammalvuo – P.Cramling
Reykjavik 1995

White has great trouble creating a passed pawn on the queenside and thus has to proceed very accurately:

1...a5 2 ♔e3?!

2 a3!? f6 3 ♔c3! e5 4 fxe5! (4 f5? e4 5 ♔d2 ♔d6! 6 ♔e3 ♔e5! 7 g4 h6!? 8 h3 h5! 9 a4 h4! −+) 4...fxe5! 5 ♔d3! (5 b4? cxb4+! 6 axb4 a4! −+) 5...♔e6 6 ♔e4 h5 7 g3! g6 8 h3 ♔d6 9 g4 hxg4 10 hxg4! ♔e6! 11 g5 =.

2...h5!? 3 ♔f3 ♔d6 4 ♔e3 f6 5 g3 g6 6 ♔e4 ♔e7!?

Or:

a) 6...e5 7 fxe5+! fxe5! 8 h3 ♔e6! 9 g4 hxg4 10 hxg4! and now:

a1) 10...♔f6? 11 ♔d5! ♔g5 12 ♔xe5! ♔xg4 13 ♔d5 ♔f4 14 ♔xc5! g5 15 ♔b5!:

a11) 15...a4 16 b4! ± (16 bxa4? g4! 17 a5 g3! 18 a6! g2! 19 a7! g1♕! 20 a8♕ ♕b1+! 21 ♔c5 ♕g1+! =).

a12) 15...g4 16 c5! a4!? 17 b4! (17 ♔xa4?? ♔e5! −+; 17 c6? axb3! 18 axb3! g3! 19 c7 g2! 20 c8♕ g1♕! 21 ♕c4+ ♔f3! =) 17...g3 18 c6! g2 19 c7! g1♕ 20 c8♕! ±.

a2) 10...♔d6! =.

b) 6...h4 and then:

b1) 7 g4?! f5+ 8 gxf5! (8 ♔f3? ♔e7!! wins for Black, since White is short of moves; in order to delay further the exchange on f5, either the a-pawn or the h-pawn would have to move, in both cases with fatal consequences) and here *(D)*:
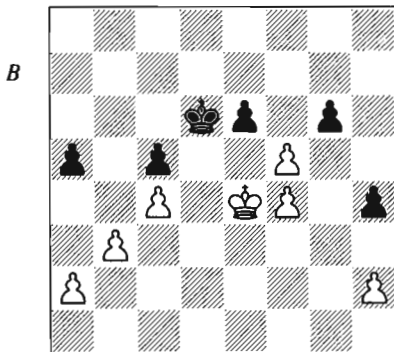
b11) 8...exf5+ 9 ♔d3! ♔e6 10 a3! ♔f6 11 ♔c3! (11 b4? cxb4 12 axb4 axb4! 13 c5 ♔e6! 14 ♔c4 g5! 15 fxg5 f4! 16 g6 f3! 17 g7 ♔f7! 18 ♔d3 f2 19 ♔e2 b3 −+) 11...g5 12 fxg5+! ♔xg5 13 b4! cxb4+ 14 axb4! axb4+ 15 ♔xb4! f4 16 ♔c3 with a draw.

b12) 8...gxf5+ 9 ♔f3 e5 10 ♔e3! ♔e6 11 ♔f3! exf4 12 ♔xf4! ♔f6! 13 a3! (13 h3? ♔e6! 14 ♔g5 ♔e5! 15 ♔xh4 f4 −+) 13...♔e6 14 ♔g5! ♔e5 15 ♔xh4! ♔f4 and now:

b121) 16 h3:
b1211) 16...♔e4 17 ♔g3! ♔e3 18 ♔g2! f4 19 ♔f1! ♔f3! 20 h4! ♔g4! 21 ♔f2 ♔xh4! 22 b4! axb4 23 axb4! cxb4! 24 c5! b3 25 c6! b2 26 c7! b1♕ 27 c8♕! =.

b1212) 16...♔f3 17 b4! (17 ♔g5? ♔e4! 18 h4 f4! −+) 17...axb4 18 axb4! cxb4! 19 c5! ∓.

b1213) 16...♔e3 17 b4! axb4 18 axb4! cxb4 19 c5! b3 20 c6! b2 21 c7! b1♕ 22 c8♕! ∓.

b122) 16 ♔h3 ♔f3 17 b4! cxb4 18 axb4! axb4 19 c5! b3 20 c6! b2 21 c7! b1♕ 22 c8♕ ♕f1+ (22...♕d3 23 ♕c4!! ♔e2+ 24 ♔xd3+! ♔xd3! 25 ♔g3 ♔e3 26 ♔g2! =) 23 ♔h4 ♕f2+ 24 ♔g5! ♕g1+ 25 ♔f6! ♕d4+ ∓.

b2) 7 gxh4! f5+ 8 ♔e3 e5 9 a4 ♔e6 10 ♔f3! =.

c) 6...f5+ 7 ♔e3 h4 8 gxh4! e5 9 a4 ♔e6 10 ♔f3! =. After ...e4+ there is no way into the white fortress and 10...exf4? even loses due to White's spare tempo h3: 11 ♔xf4! ♔f6 12 h3! ♔e6 13 ♔g5! ♔e5 14 ♔xg6! +−.

Now we return to the main line after 6...♔e7 *(D)*:
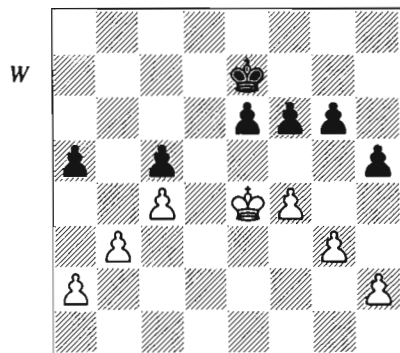
7 h3?
7 a4? ♔d6 8 h4 e5! 9 f5 gxf5+! 10 ♔xf5 ♔e7 11 g4 e4 12 ♔xe4 hxg4! 13 ♔f4 f5! −+.

7 ♔e3!? a4 (7...h4 8 gxh4! ♔d6 9 ♔e4! f5+ 10 ♔e3 e5 11 a4 =) 8 bxa4 ♔d6 9 h3 ♔c6 10 ♔e4 ♔b6! 11 g4! hxg4! 12 hxg4! ♔a5! 13 g5 fxg5! 14 fxg5! ♔xa4! 15 ♔e5 ♔b4! 16 ♔xe6 ♔xc4! 17 ♔f6 =.

7...♔d6 8 a3

8 a4 f5+ 9 ♔e3 h4! −+; 8 h4 e5! 9 fxe5+ (9 f5 gxf5+! 10 ♔xf5 ♔e7 11 g4 e4 12 ♔xe4 hxg4! 13 ♔f4 f5! −+) 9...fxe5! 10 ♔e3 ♔e7 11 ♔e4 ♔e6! 12 a3 ♔d6! 13 ♔e3 ♔e7 14 ♔f3 ♔f6 15 ♔e4 ♔e6! 16 a4 ♔d6! 17 ♔e3 ♔e7 18 ♔f3 ♔f6 19 ♔e4 ♔e6! 20 ♔e3 ♔f5! 21 ♔f3 e4+ 22 ♔e3 ♔e5! −+.

8...h4!?

The first pawn lever destroys White's kingside pawn-structure.

9 gxh4 (D)

9 g4 f5+! 10 ♔f3 e5 11 gxf5 gxf5! 12 ♔e3 ♔e6 13 ♔f3 e4+ 14 ♔e3 a4! −+.

9...f5+

9...a4?? 10 bxa4! ♔c6 (10...f5+ 11 ♔f3 ♔c6 12 h5 gxh5 13 ♔g3! +−) 11 f5 exf5+ 12 ♔f4! ♔b6 13 h5! gxh5 14 ♔xf5! ♔a5 15 ♔xf6! ♔xa4 16 ♔e6 ♔xa3 17 ♔d5! ♔b4 18 h4! +−.

10 ♔d3 e5! 11 ♔e3 ♔e6!

11...exf4+?? 12 ♔xf4! ♔e6 13 ♔g5! ♔e5 14 ♔xg6! +−.

12 ♔f3

12 fxe5 ♔xe5! 13 ♔f3 f4! 14 ♔f2 ♔e4! −+; 12 a4 exf4+ 13 ♔xf4 ♔f6! 14

h5 gxh5! 15 h4 ♔e6! 16 ♔g5 ♔e5! 17 ♔xh5 ♔f6 −+.

12...e4+ 13 ♔e3 a4!

This pawn lever on the other wing opens up the way for the black king. Not, however, 13...♔f6? 14 a4! ♔g7 15 h5!? ♔h6 (15...gxh5 16 h4 =) 16 hxg6! ♔xg6 17 ♔f2 ♔h5 18 ♔g3 = because 18...e3?? 19 ♔f3 ♔h4 20 ♔xe3 ♔xh3 21 b4 +− takes it on the chin.

0-1

D) Even Distribution of Pawns

Now we shall discuss positions where the pawns on both wings are distributed in an even but not completely symmetrical way:

10.12 /=

A.Miles − J.Klinger
Biel 1986

Though White has the advantage of the more outside candidate on the a-file, Black is able to draw with precise play:

1...♔e6

1...b5 2 b3 ♔e6 3 a4 c4! 4 axb5 cxb3! draws.

2 ♔d3 ♔d5 3 b3 g5 4 ♔c3 f5 5 ♔d3 b5 6 g4 fxg4

6...f4 7 a4 ♔c6 (7...bxa4 =) 8 ♔e4 (8 axb5+ ♔xb5! 9 ♔c3 ♔b6 10 ♔c4 ♔c6! =) and now:

a) After 8...♔b6? White is too fast: 9 axb5! ♔xb5 10 ♔f5! ♔b4 11 ♔xg5! ♔xb3 12 ♔f5 c4 13 g5! c3 14 g6! c2 15 g7! c1♕ 16 g8♕+! ♔b4 17 ♕b8+ ♔a3 18 ♕xf4 +−.

b) 8...bxa4 enables Black to launch a timely counter-attack: 9 bxa4! ♔b6 10 ♔d5 ♔a5! =.

c) 8...c4 9 axb5+! ♔xb5! 10 bxc4+! ♔xc4! 11 ♔f5 ♔d3 12 ♔xg5 ♔e3! =.

7 fxg4! *(D)*
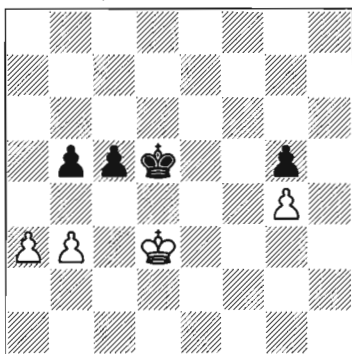
7...♔e5?

This allows the creation of a winning outside passed pawn. Black should play 7...♔c6 8 ♔e4 ♔d6:

a) 9 ♔f5? ♔d5! 10 ♔xg5 c4 11 bxc4+ bxc4! 12 ♔f4 ♔d4 13 ♔f3 ♔d3! 14 ♔f2 (14 g5 c3! −+; Black immediately wins the white queen by ...♕f1+ and ...♕g1+) 14...c3! −+.

b) 9 a4 c4! 10 axb5! cxb3! 11 ♔d3! and draws.

8 a4! c4+

8...bxa4 9 bxa4! ♔d5 10 ♔c3 c4 11 a5 wins for White.

9 ♔c3! 1-0

And finally a very difficult example from grandmaster practice:
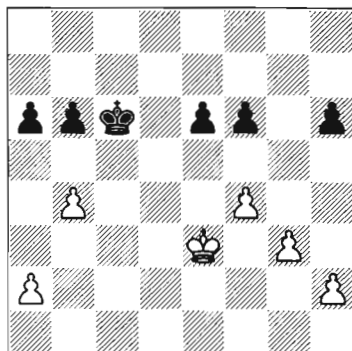
10.13　　　　　　　=/
R.Vaganian – Z.Vranesić
Toronto 1990

The problems arise from the great number of possibilities; often it is not clear whether the black king should be activated or not:

1 ♔e4

Or:

a) 1 g4:

a1) 1...♔d6 2 ♔d4 ♔e7 3 a4 ♔d7 4 h4 ♔e7 5 g5 (5 h5 ♔f7 6 a5 bxa5 7 bxa5! ♔e7 8 ♔c5 e5 9 ♔d5 exf4! 10 ♔e4 ♔f7 11 ♔xf4 ♔e6 12 ♔e4 ♔e7! =) 5...♔f7! (5...hxg5? 6 fxg5! +−) 6 ♔e4 ♔g7 (6...h5? weakens the h-pawn too much: 7 ♔d4 ♔g6 8 gxf6 ♔xf6 9 ♔e4! +−) 7 gxf6+ ♔xf6! 8 h5 ♔f7 9 ♔e5 ♔e7! 10 a5 b5! = and White cannot penetrate.

a2) 1...f5? 2 g5 hxg5 3 fxg5! ♔d6 4 ♔f4! ♔e7 5 h4! ♔f7 6 h5! ♔g7 7 ♔e5 a5 8 bxa5 bxa5 9 g6 a4 10 a3! +− leaves Black in a fatal zugzwang.

a3) 1...♔d5 2 h4:

a31) 2...a5? 3 bxa5! bxa5 4 h5 e5 (4...♔d6 5 g5 ♔e7 6 g6 +−) 5 ♔f3 exf4 (5...♔d4 6 g5! fxg5 7 fxg5! ♔d3 8 gxh6 e4+ 9 ♔f2! +−) 6 ♔xf4! ♔e6 7 a4! ♔e7 8 ♔e3 ♔d7 9 ♔d3 ♔d6 10 ♔d4! ♔e6 11 ♔e4! ♔e7 12 ♔d5! ♔d7 13 ♔c5! ♔e6 14 ♔b5 ♔e5 15 ♔xa5! ♔f4 16 ♔b4 ♔xg4 17 a5 +−.

a32) 2...f5? 3 g5! hxg5 4 h5 gxf4+ 5 ♔xf4! e5+ 6 ♔xf5! e4 7 ♔f4! wins for White.

a33) 2...♔d6 =.

a34) 2...e5!? 3 ♔f3 (3 fxe5 ♔xe5! 4 a4 f5 5 g5 hxg5 6 hxg5! f4+ 7 ♔f3! ♔f5 8 g6 ♔xg6! 9 ♔xf4 ♔f6 =; 3 h5 a5 4 bxa5 bxa5! 5 ♔f3 ♔e6! =) 3...♔d4! (3...exf4? 4 ♔xf4! ♔e6 5 a4 ♔e7 6 ♔f5 ♔f7 7 h5 +−) 4 g5 fxg5 (4...♔d3? 5 fxe5 fxe5 6 gxh6! e4+ 7 ♔f2! ♔d2 8 h7 e3+ 9 ♔f3 e2 10 h8♕! e1♕ and now 11 ♕d4+! +− forces the exchange of queens; 4...e4+? 5 ♔e2 fxg5 6 fxg5 hxg5 7 hxg5! ♔e5 8 ♔e3 +−) 5 fxg5 hxg5! 6 hxg5 ♔d3! with a draw.

b) 1 f5 (P.Kühn) is also playable, but presents Black with fewer problems. There are even three different drawing methods:

b1) 1...e5 2 ♔e4 ♔d6 3 g4 ♔e7 4 h4 ♔f7 5 g5 = (5 ♔d5? h5! −+).

b2) 1...♔d5 2 fxe6 ♔xe6! 3 ♔f4 f5! 4 g4!? fxg4! 5 ♔xg4 ♔f6! 6 ♔h5 ♔g7! 7 a4 ♔h7! 8 h3 ♔g7 9 h4 ♔h7 10 ♔g4:

b21) 10...a5? 11 bxa5! (11 b5? ♔g6! 12 h5+ ♔g7! 13 ♔f5 ♔f7! =) 11...bxa5 12 h5! ♔g7 13 ♔f5! ♔f7 14 ♔e5! ♔e7 15 ♔d5! +−.

b22) 10...♔g6! 11 h5+:

b221) 11...♔f6? 12 ♔f4!:

b2211) 12...♔e6 13 ♔e4! ♔f6 (13...b5 14 a5! ♔d6 15 ♔f5 +−) 14 ♔d5! ♔g5 15 ♔c6! ♔xh5 16 ♔xb6 ♔g4 17 b5 axb5 18 ♔xb5! +−.

b2212) 12...a5 13 b5! ♔e6 14 ♔e4! +− and the white king penetrates decisively.

b222) 11...♔g7! 12 ♔g3 ♔g8 13 ♔f4 ♔f8! 14 ♔e4 ♔e8! =.

b3) 1...exf5 2 ♔f4 ♔b5! 3 ♔xf5 ♔xb4! 4 ♔xf6 ♔a3 5 g4 b5 6 h4 b4 7 g5 hxg5! 8 hxg5 ♔xa2! 9 g6 b3 10 g7 b2 11 g8♕+ ♔a1! =.

1...h5

1...♔d6 =.

2 h3 ♔d6 3 g4 hxg4!

3...♔e7? 4 g5! (4 gxh5? ♔f7 =) 4...♔f7 5 gxf6 ♔xf6 6 h4 a5 7 b5 +−.

4 hxg4! *(D)*
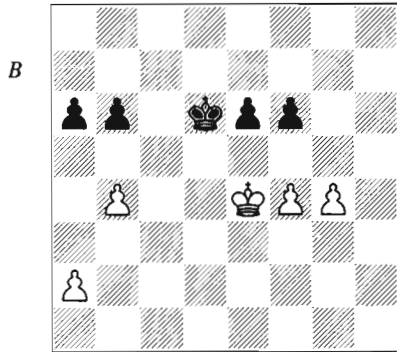
4...a5?!

This makes the b6-pawn easier to attack. More accurate was 4...♔e7!? 5 a4 ♔d7 6 ♔d4 ♔e7 7 a5 bxa5 8 bxa5! ♔d6 9 g5 fxg5 10 fxg5! e5+ 11 ♔e4 ♔e6! 12 g6! ♔f6! 13 g7 ♔xg7 14 ♔xe5 =.

5 a3!?

5 bxa5 bxa5! 6 a4 ♔e7 7 ♔d4 ♔f7 8 ♔c5 e5 =.

5...axb4 6 axb4! ♔e7

Black must not give more squares away: 6...b5? 7 ♔d4! ♔c6 8 g5! fxg5 9 fxg5! ♔d6 10 g6 +−.

7 ♔e3

7 g5 ♔f7 8 gxf6 ♔xf6! 9 b5 ♔f7 =.

7...♔f7 8 ♔d3 ♔g7 9 ♔c4 ♔g6 10 ♔b5 f5?

After 10...e5! 11 fxe5! fxe5 12 ♔c4! ♔g5! 13 ♔d5! ♔f4! 14 g5 e4! 15 g6 e3! 16 g7 e2! 17 g8♕ e1♕! 18 ♕b8+ ♔g4 19 ♕xb6 = the position is a theoretical draw, but in practice there would still be some winning chances.

11 gxf5+! ♔xf5 12 ♔xb6! ♔xf4 13 ♔c5 e5 14 b5! e4 15 b6! 1-0

The b-pawn will promote with check.

Chapter 10 Exercises
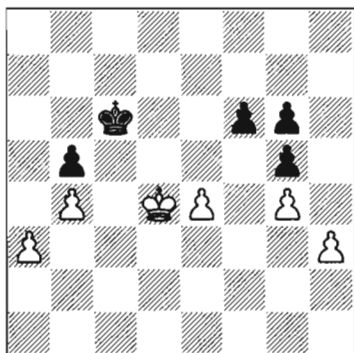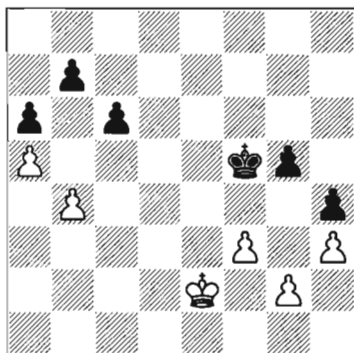
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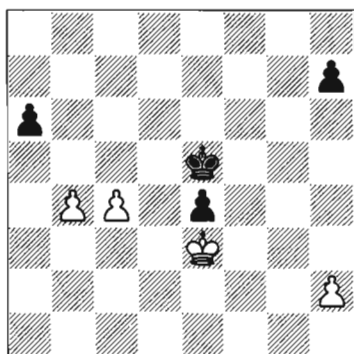
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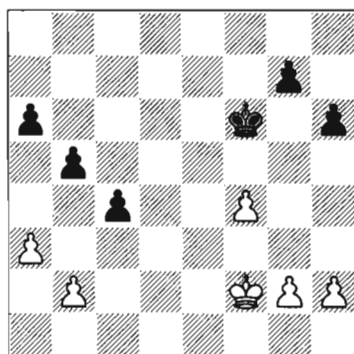
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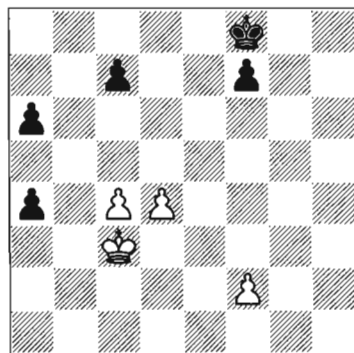
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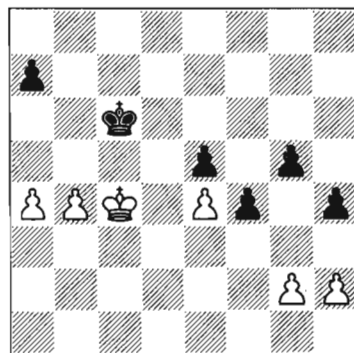
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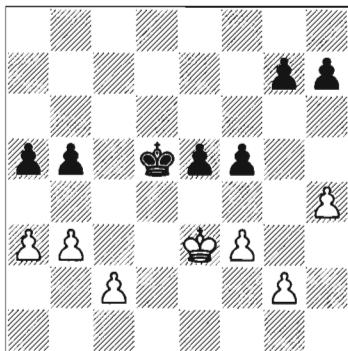
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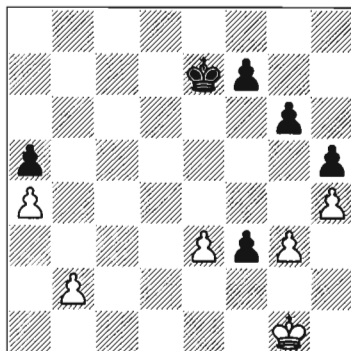
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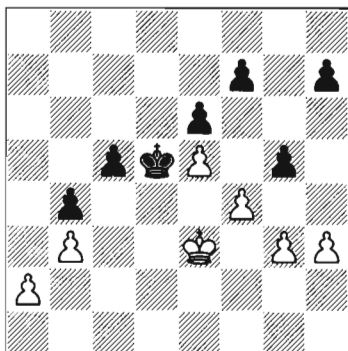
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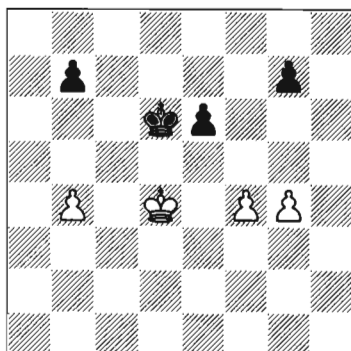
A10.10 *****/

Solutions to Chapter 10 Exercises

A10.01 G.Juares Flores – K.El Harazy, *Dubai OL 1986*

The extra pawn can't be realized:

1 ♔c3!?

1 e5?! f5! 2 e6! ♔d6! 3 e7! ♔xe7 4 ♔e5! f4! 5 ♔e4 ♔e6 6 ♔d4! f3 7 ♔e3! ♔d5 8 ♔xf3! ♔c4 (8...♔d4 9 ♔g3 =) 9 ♔e4 ♔b3! 10 ♔e5! =.

1...♔d6! 2 ♔b3

2 ♔b2 ♔e5! 3 a4 ♔xe4! = (3...bxa4? 4 b5! +–); 2 ♔d4 ♔c6! =.

2...♔e5! 3 a4! ♔xe4!

3...bxa4+? 4 ♔xa4! ♔xe4 5 b5! +–.

4 a5

After 4 axb5 ♔d5 5 ♔c3 f5 there is not enough left for a win.

4...♔d5! 5 ♔c3 f5?

This destroys the fortress that was there for the taking: 5...♔c6 6 ♔d4 ♔d6! 7 ♔e4 ♔c6! =.

6 gxf5! gxf5 7 ♔d3 ♔c6 8 ♔e3 ♔d5 9 ♔f3 ♔d6 10 ♔g3 ♔d5

10...f4+ 11 ♔g4 ♔d5 12 ♔f3 ♔d6 13 h4 +–.

11 h4! gxh4+ 12 ♔xh4 ♔c6

12...f4 13 ♔g4 ♔e4 14 a6! +–.

13 ♔g5 1-0

A10.02 Damele, 1966

The advantage of the outside majority is just sufficient for a win:

1 h3!

1 b5? axb5! 2 cxb5! ♔d5! 3 b6 ♔c6! 4 ♔xe4 ♔xb6! =.

1 h4? h5! 2 b5 (2 c5 ♔d5! 3 ♔f4 ♔d4! 4 c6 e3! 5 ♔f3 ♔d3! 6 c7 e2! 7 c8♕ e1♕! 8 ♕xa6+ ♔c3 =) 2...axb5! 3 cxb5! ♔d5! 4 b6 ♔c6! 5 ♔xe4 ♔xb6! =.

1 c5? ♔d5 2 ♔f4 h5 3 h4 ♔d4! =.

1...h6

1...♔f5 2 b5 axb5 3 cxb5! ♔e5 4 b6! ♔d6 5 ♔xe4! ♔c6 6 ♔f5 ♔xb6 7 ♔g5!

+–; 1...h5 2 h4! ♔f5 3 b5! axb5 4 cxb5! ♔e5 5 b6! ♔d6 6 ♔xe4! +–.

2 b5! axb5

2...a5 3 c5 ♔d5 4 c6 ♔d6 5 ♔xe4! +–.

3 cxb5! ♔d5 4 b6! ♔c6 5 ♔xe4! ♔xb6 6 ♔f5! ♔c6 7 ♔g6! ♔d6 8 ♔xh6! ♔e6 9 ♔g6! +–

A10.03 G.Markotić – K.Arkell, *Cappelle la Grande 1993*

Surprisingly White can't achieve more than a draw because the archer Keith Arkell has prepared a devilish trap. The game continued 1 ♔b4? c5+!! (Arkell's missile! All other moves even lose, e.g. 1...a3? 2 ♔xa3! ♔e7 3 ♔b4 ♔e6 4 ♔a5 ♔f5 5 f3 ♔f4 6 c5 f5 7 d5 ♔e5 8 d6! cxd6 9 c6! +–) 2 dxc5 ♔e7 3 ♔xa4 ♔d7 4 ♔a5 ♔c6 5 ♔xa6 f5 0-1. Instead, White can draw as follows:

1 ♔b2 ♔e7 2 ♔a3 ♔d7

2...♔e6? 3 ♔xa4! ♔f5 4 f3! ♔f4 5 c5! ♔f5 6 ♔a5! +–.

3 ♔xa4 ♔c6 4 ♔a5 ♔b7! 5 d5 ♔a7! 6 c5

6 f4 f5! 7 ♔b4 ♔b6 8 c5+! ♔a7! =.

6...♔b7! 7 f4 f5! 8 ♔a4 ♔a7 9 ♔b4 ♔b8

9...♔b7? 10 ♔a5! ♔a7 11 c6! +–.

10 c6 ♔a8! 11 ♔c5 ♔b8! 12 ♔d4 ♔c8! 13 ♔c5 =

A10.04 Instructive example

The majority can't be mobilized so easily because the f-candidate is a backward pawn, but one can break the black blockade by a typical pawn sacrifice:

1 ♔f2 ♔f4

1...♔e5 2 g3 ♔d4 3 f4 hxg3+ (3...gxf4 4 gxh4! ♔e4 5 h5 ♔f5 6 ♔f3 +– and the outside passed pawn is decisive) 4 ♔xg3! gxf4+ 5 ♔xf4 +–.

2 g3+ hxg3+ 3 ♔g2! ♔e5 4 ♔xg3! ♔f5 5 f4!

This time White doesn't win back the sacrificed pawn at once but instead gets

the more outside passed pawn. This pawn deflects the black king so far from the queenside that White wins:
5...gxf4+ 6 ♔f3 ♔e5 7 h4! ♔f5 8 h5! ♔g5 9 h6! ♔xh6 10 ♔xf4! ♔g6 11 ♔e5! ♔f7 12 ♔d6! ♔e8 13 ♔c7! ♔e7 14 ♔xb7 +−

A10.05 P.Lukacs – M.Trifunović, *Vrnjačka Banja 1988*
White immediately has to get his king to the queenside to stop the black king improving his position and blocking the way of the white king:
1 ♔e3!!
1 g4? ♔e6 (1...a5? 2 ♔e3 b4 3 axb4 axb4 4 ♔d4 c3 5 bxc3! bxc3 6 ♔xc3 h5 7 h3! hxg4 8 hxg4! ♔e6 9 ♔d4 ♔d6 10 f5 g6 11 fxg6! +− (A1.09)) 2 ♔e3 ♔d5! =.
1...♔f5
1...♔e6 2 ♔d4 ♔d6 3 g4 g6 4 f5 gxf5 5 gxf5! h5 6 f6 h4 7 f7 ♔e7 8 ♔c5! ♔xf7 9 ♔b6! +−.
2 ♔d4! ♔xf4 3 ♔c5! ♔e4
The counter-attack 3...♔e3 comes too late: 4 ♔b6! ♔d2 5 ♔xa6! ♔c2 6 ♔xb5! ♔xb2 7 ♔xc4! ♔xa3 8 ♔d5 +−.
4 ♔b6! ♔d5 5 ♔xa6! ♔c6 6 ♔a5 ♔c5 7 h3 h5 8 h4! ♔c6 9 ♔b4! ♔b6 10 a4
This dissolves the queenside under circumstances that are very favourable for White.
10...bxa4 11 ♔xc4 ♔a5 12 ♔c5 a3 13 bxa3! ♔a4 1-0

A10.06 H.Steiner – O.Bernstein, *Groningen 1946*
White has a great advantage since the black king has no way to penetrate if he doesn't play ...a5. Against the best defence a difficult queen ending will arise, in which White will have excellent winning chances, but we have not been able to prove a win.
1 ♔d3! ±

1 h3? g4! 2 hxg4 f3! 3 ♔d3 fxg2! −+.
1...g4 2 ♔e2! ♔b6 3 h3 gxh3!?
3...g3?! 4 ♔f3! ♔c6 5 ♔g4! ♔b6 6 ♔xh4! +−; 3...f3+?! 4 ♔f2 fxg2 5 hxg4 h3 6 g5 +−.
4 gxh3! a5 5 b5!
5 bxa5+? ♔xa5 6 ♔f3! ♔xa4 7 ♔g4! ♔b4 8 ♔xh4! ♔c4 9 ♔g4! ♔d4 10 ♔f3! ♔c5! =.
5...♔c7 6 ♔f3 ♔d6 7 ♔g4! ♔c5 8 ♔f3
8 ♔xh4! ± leads to the game, in which Steiner still tries to provoke mistakes from Black so that he doesn't have to play the queen ending.
8...♔b6 9 ♔e2 ♔b7 10 ♔f2 ♔c7
10...♔b6?! 11 ♔f3 ♔c5 12 ♔g4 ♔d4 13 b6 +−.
11 ♔g2 ♔b7 12 ♔g1 ♔c7 13 ♔h1 ♔b7 14 ♔h2 ♔c7 15 ♔g2 ♔b7 16 ♔f3 ♔b6 17 ♔g4! ♔c5 *(D)*
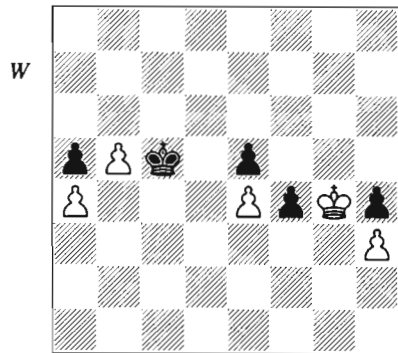
18 ♔xh4! ♔d4 19 b6 f3 20 ♔g3! ♔e3 21 b7! f2 22 b8♕! f1♕ 23 ♕xe5! ♕e1+ 24 ♔g4! ♕d1+ 25 ♔g5 ♕xa4 26 ♕g3+
26 h4? ♕a2 ∓.
26...♔e2
26...♔d4 27 ♕f2+ ♔d3 28 e5 ±.
27 e5 ♕e8 28 ♕g4+ ♔f2?!
After 28...♔d3 29 e6 ± it is not easy to prove a win.
29 ♕f5+ ♔g2 30 e6 a4 31 ♕f7 ♕b5+ 32 ♔h6 ♕c4 *(D)*

After 32...a3 33 e7! ♕a6+ 34 ♔g7 a2 35 ♕d5+! +– White can get his queen on the long diagonal with check, whereupon e8♕ wins.

W
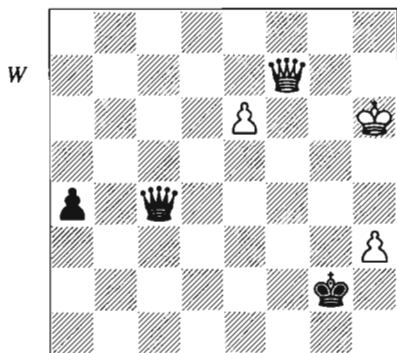
33 ♕g6+?

33 ♕g7+! would have won: 33...♔xh3 (33...♔h2 34 ♕e5+ ♔g2 35 e7 ♕c6+ 36 ♔g7 ♕e8 37 ♕d5+ ♔xh3 38 ♕f7 +–) 34 e7 ♕h4+ 35 ♔g6 ♕e4+ 36 ♔f7! ♕c4+ 37 ♔f8! ♕c5 38 ♔g8 ♕c8+ 39 ♔h7! ♕d7 40 ♕f7 ♕d3+ 41 ♔g8 ♕g3+ 42 ♕g7 ♕b8+ 43 ♔h7 ♕b1+ 44 ♕g6 ♕b7 45 ♕h6+ ♔g3 46 ♕g7+ +–.

33...♔h2 34 ♕f5

34 e7?! ♕h4+! ∓.

34...♕e2 35 ♔g6 a3 36 ♔f7 a2 37 ♕f6 ♕a6 38 ♕a1 ♕b7+ 39 e7 ♕d5+ 40 ♔f8 ♕f5+ 41 ♔g7 ♕g5+ 42 ♔f7 ½-½

A10.07 M.Adams – C.Lutz, *Wijk aan Zee 1995*

This example was analysed in detail by Christopher Lutz in *Informator 62* and we have partly used this analysis. Black has the more active king and a space advantage on both wings, and this should be sufficient for a win. He has to proceed very accurately though.

1...a4?

This threatens the familiar breakthrough ...b4 but gives away the win since now White could, after the exchange on

a4, gain space on the kingside by playing g4 in order to save time for the race.

1...b4? 2 axb4 axb4! 3 c4+ is only a draw.

1...h5 2 ♔d3 a4 3 bxa4 (3 b4 e4+ 4 fxe4+ fxe4+! 5 ♔e3 ♔e5 6 c3 ♔d5 7 ♔f4 g6 8 g3 ♔c4! 9 ♔xe4 ♔xc3! –+; 3 c4+ bxc4+! 4 bxc4+ ♔c5 5 ♔c3 e4 –+) 3...bxa4! 4 ♔c3 e4 5 fxe4+ fxe4! 6 ♔d2 (6 ♔b4?! e3 7 ♔c3 ♔e4! –+) 6...♔d4 –+ and in the following play Black exchanges the e-pawn for the c-pawn and then captures the a-pawn, winning (since his own pawn is still at a4 he can free himself from the edge of the board by ...a4-a3).

2 h5?

Gaining space on the kingside is basically the right idea but White first had to parry Black's threat to break through.

The right course is 2 bxa4! (not 2 b4? ♔c4 3 ♔d2 e4 –+) 2...bxa4 3 g4! (3 ♔d3? h5! 4 g3 g6 5 c3 ♔c5 6 c4 e4+ 7 fxe4 fxe4+! 8 ♔xe4 ♔xc4! 9 ♔e5 ♔b3 10 ♔f6 ♔xa3 11 ♔xg6 ♔b4 12 ♔xh5 a3 –+) and now *(D)*:

B
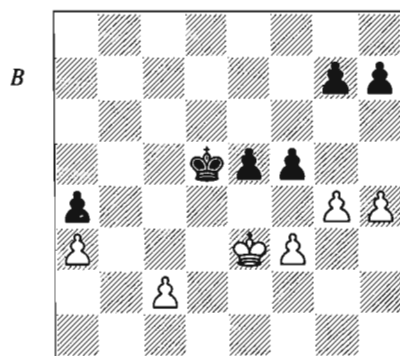
a) 3...g6:

a1) 4 gxf5? gxf5! 5 ♔d3 (5 h5 ♔c4! –+) 5...h5:

a11) 6 ♔c3 e4! 7 fxe4+ ♔xe4! (but not 7...fxe4?, when White escapes by 8 ♔d2! ♔d4 9 ♔e2 ♔c3 10 ♔e3! =) 8 ♔d2 ♔d4 –+.

a12) 6 ♔e3 ♚c4! 7 ♔d2 ♚d4 8 ♔e2 (8 c3+ ♚c4! 9 ♔c2 e4 10 fxe4 fxe4! 11 ♔d2 ♚b3 12 ♔e3 ♚xa3! −+) 8...♚c3 9 ♔d1 ♚b2! 10 c4 ♚xa3! 11 c5 ♚b3! 12 c6 (12 ♔c1 a3 13 ♔b1 e4 −+) 12...a3! 13 c7 a2! 14 c8♕ a1♕+! 15 ♔e2 ♕b2+! and Black wins.

a13) 6 c3 (*D*).
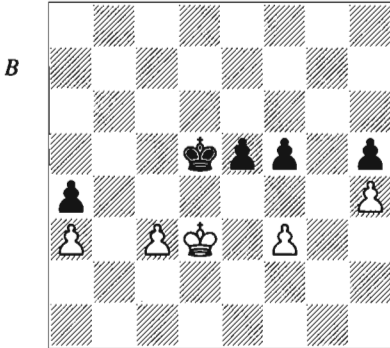
6...♚c6!! (G.Beikert; 6...♚c5? 7 c4! e4+ 8 fxe4! fxe4+! 9 ♔xe4! ♚xc4! 10 ♔e3 ♚b3 11 ♔d3 ♚xa3 12 ♔c3 = according to Bähr's Rule; 6...♚d6? 7 ♔c4! ♚c6 8 ♚b4! ♚d5 9 c4+! ♚c6 10 ♚c3 ♚c5 11 ♔d3! =) 7 ♚c4 ♚d6! 8 ♔d3 ♚d5! −+.

a2) 4 ♔d3! h5 5 g5 =.

b) 3...fxg4 4 fxg4! ♚c4 5 ♚e4! ♚c3 6 ♚xe5! ♚xc2 7 ♚e6! ♚b3 8 ♚f7! g6 (8...♚xa3 9 ♚xg7! ♚b4 10 ♚xh7 a3 11 g5! a2 12 g6! a1♕ 13 g7! = Grigoriev) 9 ♚g7! (9 h5? ♚xa3! 10 hxg6 hxg6! 11 ♚xg6 ♚b4 12 ♚f7 a3! 13 g5 a2! 14 g6 a1♕! −+) 9...♚xa3 10 ♚xh7! ♚b4 11 h5! (11 g5? a3! 12 h5 a2! 13 hxg6 a1♕! 14 g7 ♕h1+ 15 ♚g6 ♕e4+ 16 ♚h6 ♕e8 −+) 11...gxh5 (11...g5 12 h6 a3! 13 ♚g8! a2! 14 h7! a1♕! 15 h8♕! =) 12 gxh5! (12 g5? h4! −+) 12...a3 13 h6 a2 14 ♚g8! a1♕ 15 h7! = (3.07).

2...b4! 0-1

Michael Adams resigned due to 3 c4+ ♚e6 4 axb4 a3 −+.

A10.08 K.U.Schiffer – B.Finegold, *Groningen 1989*

Here it was important first to open up a way for the king by ...c4 to make sure the existing white a-pawn isn't dangerous.

1...c4!? 2 bxc4+

2 fxg5 c3 3 ♚d3 ♚xe5 4 a4 bxa3 5 ♚xc3 ♚d5 −+; 2 h4 gxh4 3 gxh4 c3 4 ♚d3 h5 5 ♚e3 c2! 6 ♚d2 ♚e4 7 ♚xc2 ♚xf4 8 ♚d3 ♚g4 −+.

2...♚xc4! 3 ♚d2 gxf4 4 gxf4 ♚d4! 5 ♚c2 ♚e4 6 ♚b3 ♚xf4! 7 ♚xb4 ♚xe5! 8 ♚c5

8 a4 ♚d6 9 ♚b5 ♚c7 −+.

8...f5! 9 a4 f4! 10 a5 f3! 11 a6 f2! 12 a7 f1♕! 13 a8♕ ♕f2+ 14 ♚b5 ♕b2+ 0-1

The exchange of queens can't be avoided: 15 ♚c4 ♕d4+ 16 ♚b3 ♕d5+ −+.

A10.09 B.Kristensen – P.Nikolić, *Esbjerg 1982*

Black can win the game because of his better pawn-structure and more active king:

1...♚d6! 2 ♚f2 ♚c5! 3 ♚xf3 ♚b4! 4 ♚e2 ♚xa4! 5 ♚d2 ♚b3 6 ♚c1 f6 7 ♚b1 g5 8 ♚c1 gxh4 9 gxh4 f5 10 ♚b1 ♚c4

Since Black can't make any direct progress on the queenside, he first has to exchange the f-pawn for the e-pawn.

11 ♚c2 a4 12 ♚d2 ♚d5 0-1

Kristensen resigned because of 13 ♚d3 ♚e5! 14 ♚d2 ♚e4 15 ♚e2 f4 16 exf4 ♚xf4! −+.

A10.10 N.Grigoriev, 1920

This study is a very hard nut, of which the solution by Grigoriev has never been published. Averbakh ascribes the following solution to Kniasev (Moscow):

1 b5!

Not 1 ♚e4? b6!:

a) 2 b5 ♚c5! 3 ♚e5 ♚xb5! 4 ♚xe6 ♚a4 5 ♚f7 b5! 6 ♚xg7 b4! 7 f5 b3! 8 f6

b2! 9 f7 b1♕! 10 f8♕ = still offers practical chances but is drawn. By the way, the reason the promotion didn't get a ! was not 10 f8♖? ♕e4 −+ but 10 g5?! =.

b) 2 ♔d4 b5! 3 ♔e4 ♔d7! 4 ♔e5 ♔e7! 5 f5 exf5! 6 ♔xf5 ♔f7! 7 g5 ♔e7! 8 ♔g6 ♔f8! and White can't make any progress because 9 ♔h7? ♔f7! 10 ♔h8 ♔g6! −+ leads to a disaster.

1...b6

1...♔d7 2 ♔e5! ♔e7 3 g5 (3 f5 exf5 4 ♔xf5! ♔f7 5 b6 +−) 3...b6 4 f5! exf5 5 ♔xf5! ♔f7 6 g6+! ♔e7 7 ♔e5! ♔d7 8 ♔d5! +−.

2 ♔c4!

2 f5? exf5! 3 gxf5! ♔e7! 4 ♔e5 ♔f7! and 2 g5? g6 3 ♔e4 ♔d7! 4 ♔e5 ♔e7! are only draws.

2...♔e7

2...e5 3 f5! e4 4 ♔d4! e3 5 ♔xe3 ♔e5 6 ♔f3! +−.

3 ♔d3! ♔f6 4 ♔e4 ♔f7 5 ♔e5! ♔e7

5...g6 6 ♔d6! ♔f6 7 ♔c6 g5 8 fxg5+! ♔xg5 9 ♔xb6 e5 10 ♔c5! e4 11 ♔d4! +− forces the king to the fatal square f4.

6 f5!

6 g5? g6 = (6...♔d7 7 f5 exf5! 8 ♔xf5 ♔e7! 9 ♔g6 ♔f8! =).

6...exf5 7 ♔xf5! ♔f7 8 ♔g5! ♔f8

8...g6 9 ♔h6! ♔f6 10 ♔h7! ♔g5 11 ♔g7! ♔xg4 12 ♔xg6! +−.

9 ♔f4! ♔e8 10 ♔e4! ♔d8 11 ♔f5! ♔e7 12 ♔g6

12 g5 ♔f7 13 g6+! +−.

12...♔f8 13 ♔h7! ♔f7 14 g5! ♔f8 15 g6! +−

11 Fight for Tempi and Manoeuvres

In contrast to Chapter 10, passed pawns now play a minor role. The main question is whether the kings are able to penetrate and how one should use spare tempi or how the pawn-structure should be changed.

A) Typical Manoeuvres with an Even Distribution of Pawns

The first example shows the procedure by which the more passive side can draw if he is able to prevent the opponent's king from getting into his position:
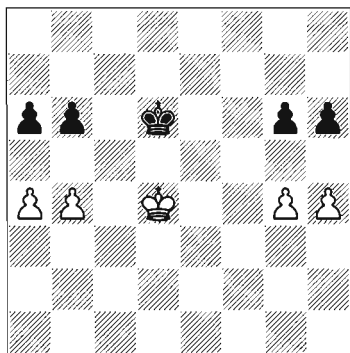
11.01 =/=

The white pawns are one rank further up the board, and so they are usually faster when a race is concerned. But keeping the opposition is all it takes for Black to draw:

1 ♔e4!?

1 ♔c4:

a) 1...♔e5 2 g5 (2 a5?! bxa5 3 bxa5! ♔f4 4 g5 hxg5! 5 hxg5! ♔xg5 6 ♔c5 =) 2...hxg5 (2...h5 3 a5 ♔d6! 4 axb6 ♔c6! 5 ♔d4 ♔xb6! 6 ♔e5 ♔b5! 7 ♔f6 ♔xb4! 8 ♔xg6 a5! 9 ♔xh5 a4! =) 3 hxg5! ♔d6 = (3...♔f5? 4 b5! a5 5 ♔d5! ♔xg5 6 ♔c6! ♔f5 7 ♔xb6! g5 8 ♔c5!! g4 9 ♔d4! g3 10 ♔e3! ♔g4 11 b6! ♔h3 12 b7! g2 13 ♔f2! +–).

b) 1...♔c6 2 b5+ axb5+! 3 axb5+! ♔d6 4 ♔d4 ♔e6 =.

1...♔e6!

1...a5? 2 bxa5! bxa5 3 ♔d4! g5 (3...h5 4 g5! +–) 4 h5! ♔e6 5 ♔e4! ♔f6 6 ♔d5! ♔f7 7 ♔c5 ♔e6 8 ♔b5 ♔e5 9 ♔xa5! ♔f4 10 ♔b4 +–; 1...h5? 2 gxh5! gxh5 3 ♔f5 ♔d5 4 ♔g5 ♔c4 5 ♔xh5! ♔xb4 6 ♔g4 +–.

2 a5 b5!

White just doesn't manage to win the opposition. 2...bxa5? 3 bxa5! ♔d6 4 ♔d4! ♔c6 5 ♔e5! ♔b5 6 ♔f6! ♔xa5 7 ♔xg6 ♔b4 8 h5 +–; 2...♔d6? 3 axb6! ♔c6 4 h5 +–.

3 g5 h5! 4 ♔d4! ♔d6! 5 ♔e4! ♔e6! =

Often a defence based on the opposition can be broken by a single spare tempo (*see following diagram*):

Due to g2-g3 Black can't defend the key squares of the a-pawn:

1 ♔c4

1 g3 also wins at once, but in this line one has to calculate the race precisely: 1...♔e6 (1...♔c6 2 ♔c4! +–) 2 ♔c5 ♔f5 3 ♔b5 ♔g4 4 ♔xa5! ♔xg3 5 ♔b4 and White wins.
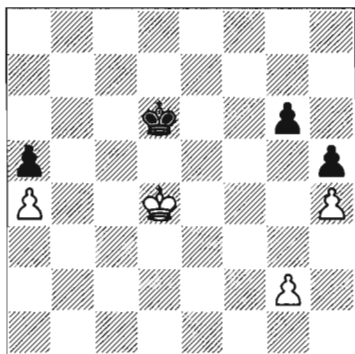
11.02   +/−

1 ♔e4?? allows the black king to penetrate on the queenside: 1...♔c5! −+.
1...♔c6 2 g3!
With the help of the spare tempo, White wins the opposition and conquers the key squares of the a-pawn.
2...♔b6 3 ♔d5! +−

Sometimes one can also gain a spare tempo by other means:
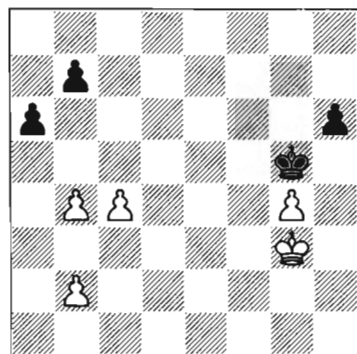
11.03   +/
G.Kamsky – V.Tukmakov
Reykjavik Open 1990

Though White's queenside majority is unable to create a passed pawn, it can provide the decisive spare tempo.

1 b3 ♔f6 2 ♔f4 ♔g6 3 c5!?
3 b5 axb5 4 c5! also wins (but not 4 cxb5? b6! 5 ♔e5 ♔g5! and Black can draw).
3 ♔e4?! ♔g5 4 ♔f3! ♔f6 5 c5 ♔g5!?
(5...♔g6 6 ♔f4 ♔f6 7 b5! axb5 8 b4! +−)
6 ♔g3! (6 b5? gives away the opportunity to gain a spare tempo: 6...axb5! 7 b4 ♔g6! 8 ♔f4 ♔f6! = and now it's White to move in a position of reciprocal zugzwang) 6...♔g6 7 ♔f4! (7 ♔h4?! ♔f6 8 ♔h5 ♔g7 9 b5? axb5! 10 b4 ♔h7! 11 g5 hxg5! 12 ♔xg5! ♔g7 =) 7...♔f6 8 b5! axb5 9 b4! +−.
3...♔f6 4 b5!
Gaining a tempo; the further-advanced of the doubled pawns is sacrificed in order to create a zugzwang with the back pawn that is fatal for Black.
4...axb5 5 b4! ♔e6 6 ♔e4! ♔f6 7 ♔d5! 1-0
There could have followed 7...♔g5 (7...♔e7 8 c6 bxc6+ 9 ♔xc6! +−) 8 ♔d6! ♔xg4 9 ♔c7! h5 10 ♔xb7! and White wins because the c-pawn queens with check.

The following two practical examples are not at all easy:
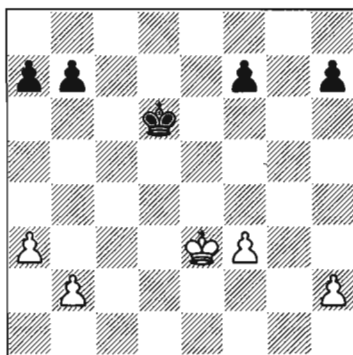
11.04   /=
L.Sandler – P.Leko
Sydney 1992

It soon becomes obvious that Black is better. His king is more active (because he is to move) and all of his pawns have the option of a possible double step while White has already played a3 and f3. So if necessary, a fight for tempi would be in Black's favour. Despite these advantages Black isn't able to win against the best defence.

1...♔e5!?

By 1...♔d5 Black achieves nothing: 2 ♔f4!? ♔c4 3 ♔e5 ♔b3 4 ♔f6 b5 5 ♔xf7 is a draw.

2 a4!?

White should immediately try to build a defensive position by a4 and b3 in order then to be able to oscillate with his king on the 3rd rank. The move a4 is necessary because otherwise Black could undermine the b3-pawn by ...b5 and ...a5-a4.

The game proceeded instead 2 f4+?! ♔d5 *(D)* and now:
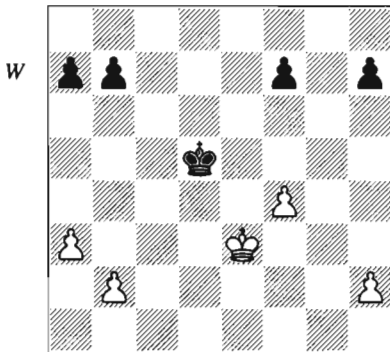
a) Sandler made a decisive error, losing as follows: 3 b3? b5 4 ♔d3 a5 5 h3 h6 6 ♔e3 a4 7 bxa4 (7 ♔d3 axb3 8 ♔c3 ♔e4 9 ♔xb3 ♔xf4 10 ♔b4 f5 11 ♔xb5 ♔g3 also wins for Black; the f-pawn queens with check) 7...bxa4! 8 ♔d3 f5! –+ 0-1.

b) 3 a4!! b6 (after 3...♔c4 White's counter-attack isn't fast enough: 4 ♔e4! ♔b3 5 ♔e5 =) 4 ♔d3 a6 5 b3 b5 (5...f5 6 b4 =) 6 axb5! axb5 7 ♔c3 ♔c5 (7...♔e4 8

♔b4! =) 8 f5! h5 (8...f6 9 ♔d3! h5 10 ♔e4 h4 11 h3! b4 12 ♔e3! ♔d5 13 ♔d3! =) 9 h4! (9 h3? f6 10 ♔d3 ♔b4! 11 ♔c2 ♔a3! 12 ♔c3 h4 —+) 9...f6 10 ♔d3! ♔d5 11 ♔c3! =.

2...a5 3 h3 h6 4 f4+ ♔d5 5 ♔d3 f5 6 b3

This safely protects the key square c4. Since the white king can easily defend d4 and e4 by oscillating between d3 and e3 there is nothing else one could do.

6...b6 7 h4 h5 8 ♔e3! ♔c5 9 ♔d3! ♔b4 10 ♔c2!

10 ♔d4? ♔xb3! 11 ♔e5 ♔xa4! 12 ♔xf5 ♔b5 ∓.

10...b5 11 axb5! ♔xb5 12 ♔d3 ♔b4 13 ♔c2! =

The next game is of fundamental significance and demands special attention:
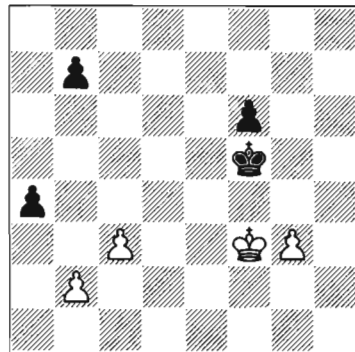
11.05 /=
R.Hegde – E.Vasiukov
Coimbatore 1987

One usual winning plan for the more active king is the exchange of all pawns on one wing in order to use the existing space or time advantage on the other wing. However, in the present example White can avoid the exchange of the b2-pawn with the help of a nice stalemate trick:

1...b5 2 g4+

2 ♔e3 ♔e5 (2...♔g4 3 ♔f2! f5 4 ♔g2! =) 3 g4 leads to the game.

2...♔e5

2...♔g5 3 ♔g3! f5 4 gxf5! ♔xf5 =. The strategy of exchanging all the kingside pawns doesn't help him either since now Black can no longer penetrate on the queenside.

3 ♔e3! ♔d5 4 ♔d3!?

4 ♔f4?! is very risky from a practical point of view: 4...♔c4 5 ♔f5! ♔b3 6 ♔xf6! ♔xb2 7 g5! a3 8 g6! a2 9 g7! a1♕ 10 g8♕! ♕f1+ 11 ♔e7 ♔xc3 =.

4...♔c5!? 5 ♔d2

Not 5 ♔c2?, when Black can successfully accomplish his plan: 5...♔c4! 6 ♔c1 (6 ♔b1 ♔b3 −+). Then:

a) 6...a3 7 ♔c2:

a1) 7...b4 8 cxb4 a2! (8...axb2? 9 ♔b1!! =) 9 b3+ ♔xb4! 10 ♔b2 a1♕+ 11 ♔xa1 ♔xb3! −+.

a2) 7...axb2 8 ♔xb2 b4! 9 cxb4 ♔xb4! −+.

b) 6...♔b3 7 ♔b1 a3! 8 bxa3 ♔xc3! 9 ♔a2 ♔c2! (9...b4? 10 axb4! ♔xb4 11 ♔b2! =; see 2.12) 10 ♔a1 ♔b3! −+.

5...♔c4 6 ♔c2! b4 7 cxb4! ♔xb4! *(D)*
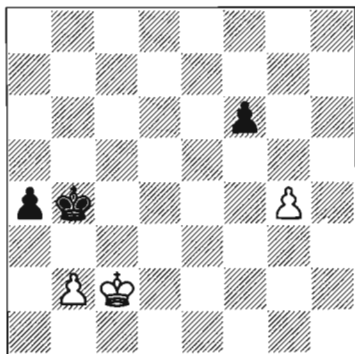
8 ♔b1

8 ♔c1 ♔c4 9 ♔b1! (9 ♔c2? ♔d4! 10 ♔d2 ♔e4! 11 ♔c3 ♔f4 12 ♔b4 ♔xg4! 13 ♔xa4 f5! −+) and now 9...♔b3 leads

to the game (at move 9), while after 9...♔d3 10 ♔a2! ♔e4 11 ♔a3! ♔f4 12 ♔xa4! ♔xg4! 13 b4 f5 = Black isn't able to win either.

8...♔b3 9 ♔a1 a3!? 10 ♔b1!!

10 bxa3? ♔xa3! −+; 10 g5? fxg5! −+.

½-½

Due to 10...axb2 11 g5 fxg5! stalemate.

It isn't obvious that the same stalemate trick is again the only way to save the game in the following example:
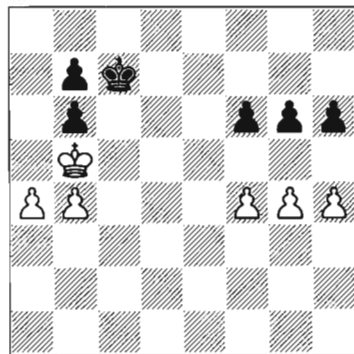
11.06 =/
Variation from **C.D.Meyer – H.Dutschak**, *Bundesliga 1996*

Though Black's queenside pawn-structure is weakened, White cannot exploit that fact nor he can use his space advantage. No matter how White proceeds on the kingside, Black always has an adequate answer.

1 h5

a) 1 f5 gxf5! 2 gxf5! h5! 3 a5 bxa5! 4 bxa5! ♔d7 =.

b) 1 g5 fxg5! (1...hxg5? lets White break through successfully: 2 fxg5! f5 3 h5! f4 4 hxg6 f3 5 g7! f2 6 g8♕! f1♗+ 7 ♕c4+ ♗xc4+ 8 ♔xc4 +−) and now:

b1) 2 hxg5?? (this attempt to break through ends in disaster) 2...h5! 3 f5 ♔d7

(3...h4? 4 fxg6! h3 5 g7 h2 6 g8♕ h1♕ 7 ♕c4+ ♔d6 8 ♕xb6 +–) 4 fxg6 ♔e7 and Black wins.

b1) 2 fxg5! h5! 3 ♔c4 ♔c6 4 ♔d4 ♔d6 =.

c) 1 a5:

c1) 1...g5?! 2 axb6+ ♔d6! 3 fxg5 fxg5! 4 hxg5 hxg5! 5 ♔c4 ♔c6! (5...♔e5? 6 ♔c5! ♔f4 7 ♔d6! ♔xg4 8 ♔c7! ♔f3 9 ♔xb7! g4 10 ♔c6 g3 11 b7! g2 12 b8♕! g1♕ 13 ♕f8+! +–) 6 b5+ ♔xb6! 7 ♔b4! ♔c7! 8 ♔c5 ♔d7! 9 ♔d5 ♔c7! 10 ♔e5 ♔b6! 11 ♔f5 ♔xb5! 12 ♔xg5 ♔c5 13 ♔f6 b5! =.

c2) 1...bxa5 2 bxa5 ♔d7 3 ♔c5 ♔c7 4 ♔d5 ♔d7 =.

d) 1 ♔c4 ♔d6 2 ♔d4 ♔e6 also leads to a draw.

1...gxh5! 2 gxh5! f5! 3 a5 bxa5! 4 bxa5! ♔b8!

This leads to the familiar (11.05) stalemate finish.

4...♔c8? loses a decisive tempo: 5 ♔c4 ♔b8 6 ♔d5 ♔a7 7 ♔e5 ♔a6 8 ♔xf5! ♔xa5 9 ♔e6 +– and White wins in the end by ♕a8+ and ♕b8+.

5 ♔b6 ♔a8! 6 a6 ♔b8! 7 axb7 stalemate.

B) "Don't Touch Me!"

This special form of a fight for tempi is characterized by two pawns of different colour standing next to each other. First horizontal (*see following diagram*):

Both kings have to keep their distance from the 'don't touch me' pawns (a6, b6). If either king moves next to them he gets into a fatal zugzwang.

1 ♔b4!

1 ♔b5? ♔a7! –+.

1...♔b8!

1...♔a7? 2 ♔b5! +–.

2 ♔c4 ♔a8! 3 ♔b4! =

3 ♔d5? ♔a7! 4 ♔e5 b5! –+.
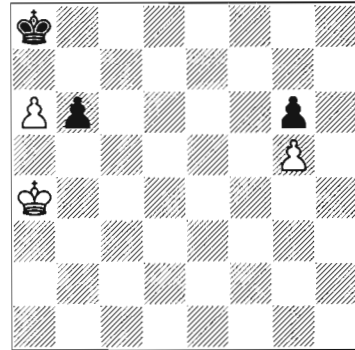
11.07   =/=

Y.Averbakh

For such positions it's worthwhile knowing the following **rule**. We distinguish between two cases:

1) No or same number of spare tempi: one shouldn't move first to a 'don't touch me' square (b5 or a7 in 11.07) but one has to keep a short distance away.

2) Different number of spare moves: one should move as soon as possible to a 'don't touch me' square.

It follows that positions of the first type are usually drawn while in the second case there is usually a decisive result. Three examples should illustrate that:
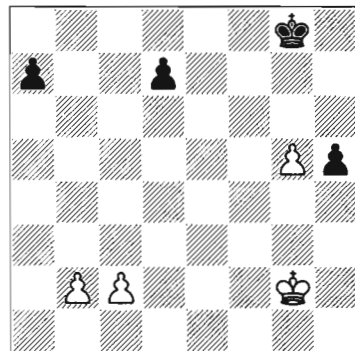
11.08   =/=

After Maizelis

Both sides have the same number of tempi with their pawns; thus we have the first case:

1 ♔g3 ♚g7 2 ♔h3

2 ♔f3?! ♚g6 3 ♔f4! a5 4 b3! d6 5 c4 is a draw.

2...♚f7 3 ♔g3!

To move closer would be fatal: 3 ♔h4? ♚g6! 4 c4 (4 c3 a6 5 b3 d6 6 b4 d5! —+) 4...a5! 5 b3 d6! —+.

3...♚g7! =

3...♚g6? 4 ♔h4! a5 5 c4 a4 6 c5! ♔f7 7 ♔xh5! ♚g7 8 g6 ♚g8 9 ♔h6 ♚h8 10 g7+ ♚g8 11 ♔g6! a3 12 bxa3! d6 13 c6 +—.

With black pawns at b7 and c7 the spare moves would have been equal as well. In that case too neither side would have been able to move next to the pawns.

The next case is different:
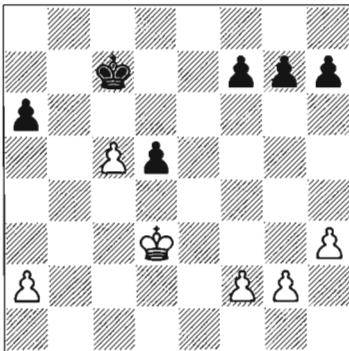
11.09 +/+

The two sides have a different number of spare tempi. Therefore the king should step on the 'don't touch me' square as soon as possible:

1 ♔d4

After 1 ♔c3? Black uses the rule and turns the tables: 1...♚c6 2 ♔d4 g5!! (first h3 has to be fixed; an immediate 2...a5?

doesn't work: 3 h4 a4 4 g4 a3 5 f4 h6 6 h5 f6 7 f5! +—) 3 f3 (3 g3 a5! 4 g4 a4! 5 a3 f6 6 f3 h6! —+) 3...a5 4 g3 a4 5 a3 h5 6 h4 gxh4 7 gxh4 f6! 8 f4 f5! 9 ♔e5 ♔xc5! 10 ♔xf5 d4! 11 ♔e4 ♔c4! —+. Black either queens with check or wins the white queen by ...♕e1+ and ...♕f1+.

1...♚c6 2 h4

2 f4 +—.

2...g6

2...h5 3 a3 a5 4 a4! g6 (4...f6 5 f3! g5 6 g3! +—) 5 f3! f6 6 f4 f5 7 g3! +—.

3 g3 f5 4 a3! a5 5 a4! f4 6 g4 h6 7 f3! g5 8 h5! +—

Because of its great popularity we have to include the following example:
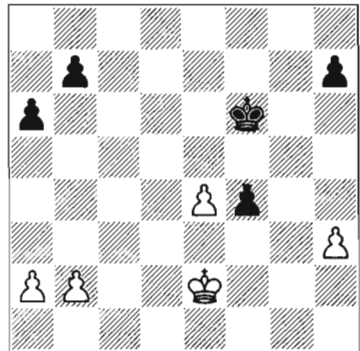
11.09A +/+
Sveda – Sika
Brno 1929

White to move would win: **1 ♔f3!** (1 h4? ♚e6! 2 ♔f2! =; 1 ♔f2?? ♚e5 2 ♔f3 a5! —+) **1...♚e5** (now White has to get rid of the disadvantage of having already played h3) **2 h4! a5 3 h5! a4 4 h6! b6 5 b4! +—**.

In the game it was Black's move: **1...♚e5 2 ♔f3 a5!** (Black plays on the wing where he has a disadvantage in terms of spare tempi) **3 b3 b5 4 a3 a4 5 bxa4 bxa4! 6 h4 h5! 0-1.**

'Don't touch me' pawns that block each other are known to us from Chapter 2. Here the rule is applied as well:
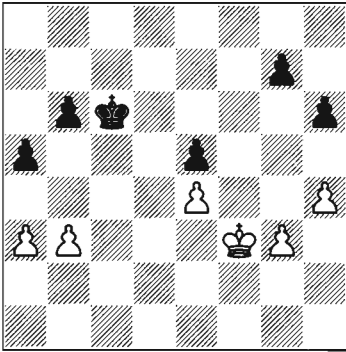
11.10   **+/**
L.Polugaevsky – K.Grigorian
USSR Ch (Leningrad) 1971

White uses his right to move to get Black into zugzwang:
1 ♔g4! ♔c5
1...g6 2 h5! gxh5+ 3 ♔xh5 +–; 1...♔b5 2 ♔f5! a4 3 bxa4+ ♔xa4 4 ♔xe5! ♔xa3 5 ♔d6 +–.
2 ♔f5!
2 h5? b5! 3 ♔f5 b4! 4 axb4+ ♔xb4! 5 ♔xe5! ♔xb3! =.
2...♔d4
Now the kings can't move any longer without giving up their respective e-pawns. By accurate play White makes sure it is Black who first runs out of moves:
3 h5! b5
3...♔c3 4 ♔xe5! ♔xb3 5 ♔d5 b5 6 e5! b4 7 axb4! a4 8 e6 a3 9 e7! a2 10 e8♕! a1♕ 11 ♕e3+!? ♔xb4 12 ♕b6+ ♔a3 13 ♕a7+ ♔b2 14 ♕xg7+ ♔a2 15 ♕xa1+ +–.
4 b4! a4
4...axb4 5 axb4! ♔c4 6 ♔xe5! ♔xb4 7 ♔d4 ♔a5 8 ♔c5! b4 9 ♔c4! is winning for White.

5 g4! ♔c4 6 ♔xe5! ♔b3 7 ♔d4! ♔xa3 8 ♔c3! ♔a2 9 ♔c2! **1-0**

C) King-March and Fight for Tempi

Now that we have familiarized ourselves with the basic techniques of manoeuvres and the fight for tempi, we are ready to discuss long king-marches into the opponent's position.
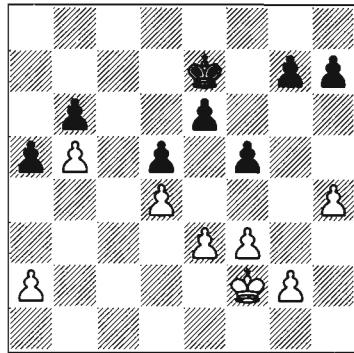
11.11   **+/**
H.Behrens – R.Storm
Germany 1982

The first example is relatively simple because with ♔f2-g3-f4-e5 White has a clear route and enough spare tempi to achieve his aim:
1 ♔g3! ♔f6 2 ♔f4! h6
2...g6!? 3 g4! (3 e4? h6 =) 3...fxg4 (3...h6 4 g5+! +–) 4 fxg4! and now:
a) 4...a4 5 e4! (5 g5+? ♔e7! 6 e4 dxe4! 7 ♔xe4 ♔d6! 8 a3 ♔d7! 9 ♔e5 ♔e7! =) 5...dxe4 6 ♔xe4!:
a1) 6...g5 7 h5!? (7 hxg5+?! ♔xg5 8 ♔e5! ♔xg4 9 ♔xe6! h5 10 d5! h4 11 d6! h3 12 d7! h2 13 d8♕! h1♕ 14 ♕d4+ ♔g3 15 ♕xa4 ±) 7...♔f7 8 ♔e5 ♔e7 9 d5 exd5 10 ♔xd5! ♔d7 11 ♔e5 ♔e7 12 ♔f5 +–.

a2) 6...a3 7 d5 +–.

a3) 6...♔f7 7 ♔e5 ♔e7 8 h5 (after 8 a3? Black can close the position: 8...h6! 9 h5 g5! =) 8...gxh5 9 gxh5! a3 10 d5 exd5 11 ♔xd5! ♔d7 12 h6! (12 ♔e5?! ♔e7 13 h6 ♔d7 14 ♔f6? ♔d6! 15 ♔g7 ♔e7 is drawn because White can't leave the corner) 12...♔c7 13 ♔e6! +– and White captures the b6-pawn.

b) 4...e5+ 5 dxe5+! ♔e6 6 e4 (6 ♔g5?? ♔xe5! 7 ♔h6 ♔e4! 8 ♔xh7 ♔xe3! 9 ♔xg6 d4! 10 h5 d3! 11 h6 d2! 12 h7 d1♕! 13 h8♕ ♕xg4+! 14 ♔f7 ∓) 6...d4 7 g5! a4 8 a3! ♔e7 9 ♔f3! ♔e6 10 ♔e2! ♔xe5 11 ♔d3! +– gets Black in a 'don't touch me' zugzwang set-up.

3 h5! ♔f7 4 ♔e5 ♔e7 5 e4 dxe4 6 fxe4! fxe4 7 ♔xe4 ♔f6 8 ♔f4 a4 9 a3 ♔f7 10 ♔e5 ♔e7 11 d5 exd5 12 ♔xd5! ♔d7 13 g3 ♔c7 14 ♔e6! ♔c8 15 ♔f7 1-0

The route isn't always indicated so clearly:
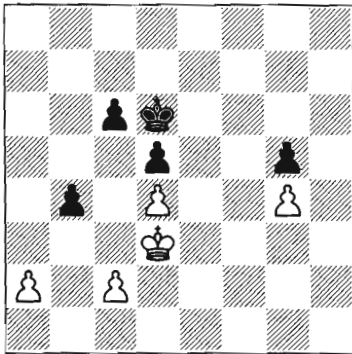
11.12 /+
Hansen – A.Nimzowitsch
Randers simul 1925

It seems as if Black is about to lose because White is threatening to create an outside passed pawn on the a-file by c3. But Aron Nimzowitsch managed to turn the tables by penetrating on the queenside with his king:

1...♔c7!!

After 1...c5? White can create an outside passed pawn: 2 dxc5+! (2 c4? ♔c6! =) 2...♔xc5 3 c3! +–.

2 c3

Other moves don't help either:

a) 2 c4 ♔b6 3 cxd5 cxd5! 4 ♔c2 ♔a5 (4...♔b5? 5 ♔b3! ♔a5! 6 a4 bxa3! 7 ♔xa3! =) 5 ♔b2 ♔a4! 6 ♔c2 ♔a3! 7 ♔b1 b3! 8 ♔a1 ♔b4 –+.

b) 2 a3 bxa3! 3 ♔c3 ♔b6 (3...c5 also wins but after 4 dxc5 ♔c6 5 ♔b3 ♔xc5 6 ♔xa3 d4 7 ♔b3 ♔d5! 8 ♔b4 one has to find the idea 8...d3!! 9 cxd3 ♔d4! –+) 4 ♔b3 ♔b5 5 c3 c5 6 dxc5 ♔xc5! 7 ♔xa3 ♔c4 8 ♔b2 d4 –+.

2...♔b6! 3 cxb4 ♔b5! 4 ♔c3 ♔a4! 0-1

Hansen resigned because of 5 ♔c2 (5 b5 cxb5! 6 ♔b2 ♔b4 –+) 5...♔xb4! 6 ♔d3 ♔a3 7 ♔c3 ♔xa2! 8 ♔b4 ♔b2! 9 ♔c5 ♔c3 –+.

The next game, which was analysed in detail by Magerramov in *Informator 44*, shows typical resources for the attack and the defence:
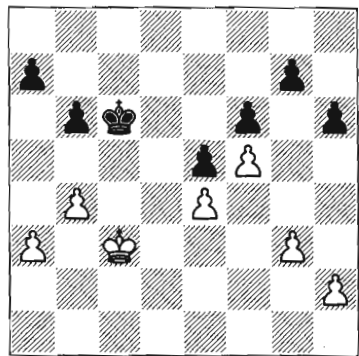
11.13 +/
E.Magerramov – S.Makarychev
Pavlodar 1987

White has to continue very accurately so that his route on the kingside isn't plugged. Furthermore the queenside isn't yet closed.

1 a4!

1 ♔c4? b5+! 2 ♔d3 ♚d6 3 ♔e3 ♚e7! 4 ♔f2 (4 ♔f3 ♚f7! 5 ♔g4 g5 6 fxg6+ ♔xg6! 7 h3 a6 =) 4...♚f7 5 ♔f3 g5! 6 fxg6+ ♚g7!! (with this very pretty move, Black manages to reach the reciprocal zugzwang with White to play: 6...♚xg6? 7 ♔g4! a6 8 h3! h5+ 9 ♔f3! f5 10 exf5+ ♔xf5 11 ♔e3 +−) 7 ♔g4 ♚xg6! 8 h3 a6 9 ♔f3! ♚g5 10 g4 ♚g6! =.

After 1 g4? (the move played in the game itself) Black can block the way to the kingside:

a) 1...a6 2 ♔c4 (after 2 a4 h5! 3 h3 h4 = White cannot close the queenside, nor does he have enough reserve tempi to penetrate there himself) 2...h5! (2...♚d6? 3 a4 ♚c6 4 b5+ axb5+ 5 axb5+! ♚d6 6 h3 ♚c7 7 ♚d5 ♚d7 8 h4 +−) 3 h3 h4 4 a4 a5 =.

b) The erroneous 1...b5? was played in the game: 2 ♚d3 ♚d6 (2...h5 is now not enough, as Black has closed the queenside himself: 3 ♚e3 hxg4 4 ♚f2 ♚d6 5 ♚g3 ♚e7 6 ♚xg4 ♚f8 7 ♚h5 ♚f7 8 h3! a6 9 h4! ♚f8 10 ♚g6! ♚g8 11 h5! +−) 3 ♚e3 ♚e7 4 ♚f3 *(D)*. Now Black can continue:
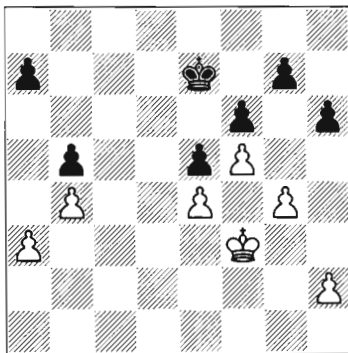
b1) 4...♚f7 5 ♚g3! g5 6 fxg6+! ♚g7 (6...♚xg6 7 ♚h4! a6 8 h3! ♚g7 9 ♚h5! ♚h7 10 h4! ♚g7 11 g5! hxg5 12 hxg5! ♚f7 13 gxf6 ♚xf6 14 ♚h6 +−) 7 ♚h3! ♚xg6 8 ♚h4! +−.

b2) The game concluded 4...♚f8 5 ♚g3 ♚f7 6 ♚h3! (6 ♚h4? g5+ 7 fxg6+ ♚xg6! 8 h3 a6! =) 6...♚g8 7 ♚h4! ♚f8 8 ♚h5! ♚f7 9 h3 ♚f8 10 ♚g6 ♚g8 11 h4 ♚f8 12 g5 hxg5 13 hxg5! fxg5 14 ♚xg5 ♚f7 15 ♚g4 ♚e7 16 ♚h4 ♚f6 17 ♚h5! a6 18 ♚h4! 1-0. Except for the mistake on the first move, Magerramov conducted an excellent king-march against the only exploitable weakness in Black's position: the g7-pawn. 18...♚e7 19 ♚g4! ♚f6 20 ♚h5! ♚f7 21 ♚g5! ♚e7 22 ♚g6! ♚f8 23 f6! +−.

c) After 1...h5!?, either the route will be closed or White will lose his reserve tempi: 2 h3 (2 gxh5 b5 3 ♚d3 ♚d6 4 ♚e3 ♚e7 5 ♚f3 ♚f7 6 ♚g4 a6 7 h3 ♚g8 8 h6 gxh6 =; the black king can oscillate between g7 and h7, and the fortress is impenetrable) 2...hxg4 3 hxg4! b5 4 ♚d3 ♚d6 5 ♚e3 ♚e7 6 ♚f3 ♚f7 7 ♚g3 (7 g5? fxg5! 8 ♚g4 ♚f6! 9 ♚h5 a6! −+) 7...g5 =.

1...b5

1...a6 2 ♚c4 b5+ (after 2...h5 White can, thanks to his two reserve tempi, penetrate on the queenside: 3 b5+! axb5+ 4 axb5+! ♚d6 5 h3! ♚c7 6 ♚d5! ♚d7 7 h4! +−) 3 axb5+! axb5+ 4 ♚d3! ♚d6 5 ♚e3 ♚e7 6 ♚f3! ♚f7 7 ♚g4! g5 8 fxg6+! ♚xg6 9 h3! h5+ 10 ♚f3! ♚h6 11 h4! ♚g6 12 g4! +−.

2 a5! ♚d6 3 ♚d3 ♚e7 4 ♚e3 ♚f7 5 ♚f3! h5 6 g4 h4

6...♚g8 7 ♚g3 ♚h7 8 ♚h4 ♚h6 9 a6! +−.

7 g5! fxg5 8 ♚g4! ♚f6 9 ♚h5! h3 10 a6! +−

A weakened pawn-structure can also be the target of a king-march:
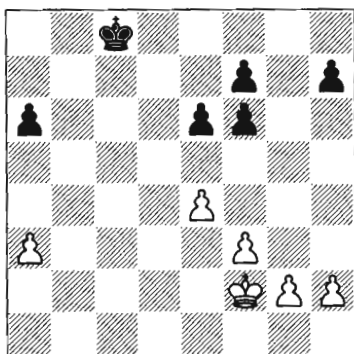
11.14 +/

N.Liogky – A.Nenashev
USSR Army Ch (Tashkent) 1987

11.14A /+

E.Cohn – A.Rubinstein
St Petersburg 1909

On the kingside the white king can get to h6, thereby tying Black down. Afterwards White exchanges pawns in a favourable way and wins due to his more active king.

1 ♔g3!

1 ♔e3? e5 2 ♔d3 ♔c7 3 ♔c4 ♔c6 4 g4 ♔d6 5 ♔b4 ♔c6 6 ♔a5 ♔b7! is a draw.

1...♔d7 2 ♔h4 ♔e7 3 ♔h5! ♔f8 4 ♔h6! ♔g8 5 f4 ♔h8 6 g4 ♔g8 7 h4 a5 8 a4 ♔h8 9 e5 fxe5 10 fxe5! ♔g8 11 g5

11 h5 ♔h8 12 ♔g5 ♔g7 13 h6+! ♔f8 14 ♔f6! ♔e8 (14...♔g8 15 ♔e7 ♔h8 16 ♔f8 +–) 15 ♔g7 (15 g5?! ♔f8 16 g6 fxg6 17 ♔xe6! ♔e8 18 ♔f6! ♔f8 19 e6! ♔e8 20 ♔g7! +–) 15...♔e7 16 ♔xh7 ♔f8 17 g5 +–.

11...♔h8 12 h5!

12 ♔h5? ♔g7! 13 ♔g4 ♔f8 =.

12...♔g8 13 g6 ♔h8

13...hxg6 14 hxg6! ♔h8!? 15 ♔g5 ♔g7 16 gxf7! ♔xf7 17 ♔h6! +–.

14 gxh7

Not 14 gxf7?? stalemate.

1-0

■ The similar classic is the following game:

1...♔f6! 2 ♔d2 ♔g5! 3 ♔e2 ♔h4! 4 ♔f1 ♔h3! 5 ♔g1 e5 6 ♔h1?! b5 7 ♔g1 f5 8 ♔h1 g5 9 ♔g1 h5 10 ♔h1 g4 11 e4 fxe4 12 fxe4 h4 13 ♔g1 g3 14 hxg3 hxg3! 0-1

Even in balanced positions the construction of a route can cause confusion:
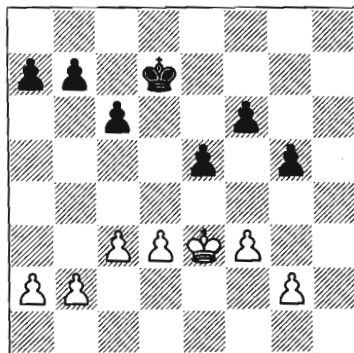
11.15 =/

S.Belkhodja – P.Lebel
Hyères 1992

With the first two moves White marks the route to f5 in order then to dedicate himself to the queenside.

1 ♔e4 ♔e6 2 g4!? b6
2...a5 3 a4 b6:
a) 4 b4 ♔d6 (4...c5? 5 b5 ♔d6 6 ♔f5! ♔e7 7 ♔g6! ♔e6 8 c4 ♔e7 9 ♔g7! ♔e6 10 ♔f8! f5 11 ♔g7 fxg4 12 fxg4! e4 13 dxe4! ♔e5 14 ♔g6 +−) 5 bxa5 bxa5! 6 ♔f5 ♔e7! 7 d4 exd4! 8 cxd4! ♔f7! 9 f4 gxf4! 10 ♔xf4 ♔g6 =.
b) 4 d4 exd4 5 ♔xd4 f5 6 b4 fxg4! 7 fxg4! ♔d6 8 bxa5 bxa5! 9 ♔c4 ♔e5 10 ♔c5! ♔f4 11 ♔xc6 ♔xg4 12 c4 =.
3 b4 a6
3...a5 4 a4 ♔d6 5 d4 exd4 6 ♔xd4! c5+ 7 bxc5+ bxc5+! 8 ♔e4 ♔e6! 9 c4 ♔d6 10 ♔f5 ♔e7! 11 f4 gxf4! 12 ♔xf4 =.
4 a4 a5 5 d4 exd4 6 ♔xd4 (D)
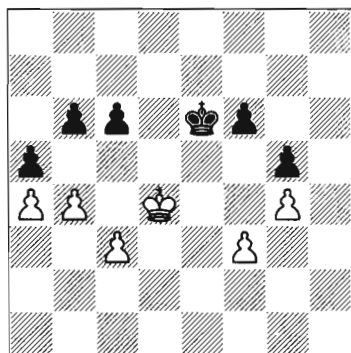
6...♔d6
6...axb4? 7 cxb4! ♔d7 8 ♔e4 ♔d6 (8...♔e6 9 a5! bxa5 10 bxa5! ♔d6 11 ♔d4 +−) 9 ♔f5 c5 (9...♔d5 10 a5! bxa5 11 bxa5! c5 12 a6! ♔c6 13 ♔e4! +−) 10 bxc5+! bxc5 11 ♔e4!? +− (11 a5?! leads to an advantageous though difficult to win queen ending: 11...♔c6 12 ♔e4! ♔b5 13 ♔d5! c4 14 a6 c3 15 a7! c2 16 a8♕ c1♕ 17 ♕b7+ ♔a5 18 ♔e6 ±).
7 ♔c4
Now the game concluded 7...♔d7? 8 bxa5! bxa5 9 ♔c5! ♔c7 10 c4! 1-0 (due to 10...♔d7 11 ♔b6! ♔d6 12 ♔xa5 ♔c5 13 ♔a6! ♔xc4 14 ♔b6 +−). Instead,

active counterplay would have achieved a draw:
7...♔e5! 8 bxa5 bxa5! 9 ♔c5 ♔f4! 10 ♔xc6 ♔xf3! 11 c4 ♔xg4! 12 c5 ♔f4 13 ♔d6 g4! 14 c6 g3! 15 c7 g2! 16 c8♕ g1♕! 17 ♕c4+ =

The progress of chess programs seems to be unstoppable but still no chip is born a master:
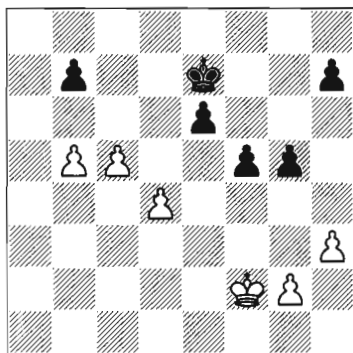
11.16   /=
V.Anand – *Pentium Genius*
London PCA rpd 1994

"What does this position have to do with king-marches?" you might ask. With the present structure on the kingside no white penetration is possible. Black only has to watch out for d5, which can be neutralized by a timely ...b6. But surprisingly there followed:
1...h5?
1...♔d7 2 ♔e3:
a) 2...♔c7?! 3 d5!? e5?! (3...exd5 4 ♔d4 b6! =) 4 b6+ ♔d7 5 g4!? f4+! 6 ♔e4 h6 7 ♔f3:
a1) 7...♔d8! 8 c6! bxc6 (8...♔c8 9 c7 ♔d7 10 ♔e4! ♔c8 11 ♔xe5 ♔d7 12 d6 f3 13 ♔f6! f2 14 c8♕+! ♔xc8 15 ♔e7 +−) and then:
a11) 9 dxc6? ♔c8 10 ♔e4 ♔b8! 11 ♔xe5!? (11 ♔f3 ♔c8 12 c7 ♔d7 13 ♔e4

♔c8! 14 ♔xe5 ♔d7! 15 ♔e4 ♔c8! 16
♔d5 ♔d7! 17 ♔c4 ♔c8! 18 ♔b5 ♔b7!
19 ♔c5 f3! 20 ♔d6! ±) 11...f3! 12 ♔d6
f2! 13 c7+ ♔b7! 14 ♔d7! f1♕ 15 c8♕+!
♔xb6 16 ♕c6+ ♔a5 17 ♕xh6 ♕f7+ 18
♔d8 ♕f4 19 ♔e7 ±.

a12) 9 d6!! ♔c8 10 ♔e4! (this fatal
formation, which we got to know in
Chapter 8, occurs very rarely in practice;
Black is lost) 10...f3 (10...c5 11 ♔d5 f3
12 ♔c6 +−) 11 ♔xf3! c5 12 ♔e4 c4 13
♔e3 +−.

a2) 7...♔c8! 8 c6 (8 d6 ♔d7 9 ♔e4
♔c6! =; the queen ending arising after 10
♔xe5 f3 11 ♔e6! f2 12 d7! f1♕ 13 d8♕!
doesn't achieve anything for White due
to 13...♕xc5! 14 ♕c7+ ♔b5 15 ♕xb7
♕xh3) 8...bxc6! 9 dxc6! ± (9 d6? c5! 10
♔e4 c4! ∓).

b) 2...h6 3 ♔d3 b6! 4 cxb6 h5! 5 d5:
b1) 5...exd5 6 ♔d4 f4 7 ♔xd5 g4! 8
hxg4 (8 ♔e4?? f3! 9 gxf3 gxh3! −+)
8...hxg4! 9 ♔e4 f3! =.
b2) 5...e5 6 ♔c4 e4! 7 ♔d4 h4 =.
c) 2...b6!? 3 cxb6 (3 c6+ ♔d6 =; 3
♔d3 bxc5 4 dxc5 e5! 5 ♔c4 e4 6 ♔d4 h5
7 g4 fxg4 8 hxg4 h4 9 ♔xe4 ♔c7 =)
3...h5 (3...♔c8? loses by one tempo: 4
d5! exd5 5 ♔d4! g4 6 ♔xd5! gxh3 7
gxh3! ♔b7 8 ♔e5! ♔xb6 9 ♔xf5! ♔xb5
10 ♔g5! +−) 4 h4 gxh4! 5 ♔f4 ♔c8! 6
♔e5 ♔b7 7 ♔xe6 f4 8 d5! h3! =.

2 h4!?
Now the path to f4 is open.
2...gxh4
2...g4 3 ♔e3 +−.
**3 ♔f3 ♔e8 4 ♔f4 ♔d7 5 ♔g5 ♔d8 6
♔xh4 ♔d7 7 ♔xh5 +− 1-0**

Chapter 11 Exercises
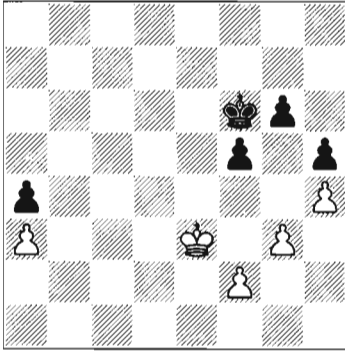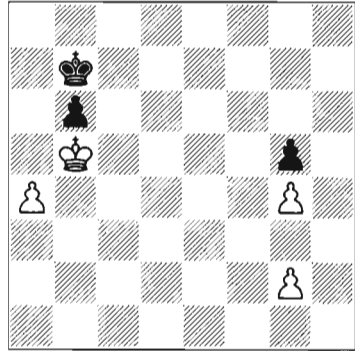
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A11.04   **/
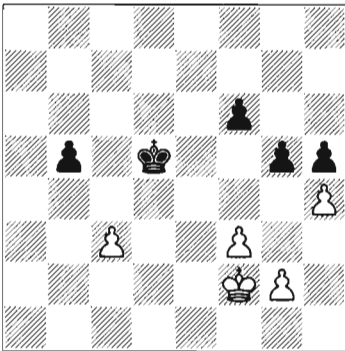
A11.02   **/

A11.05   ****/

A11.03   /***

A11.06   ****/

Secrets of Pawn Endings
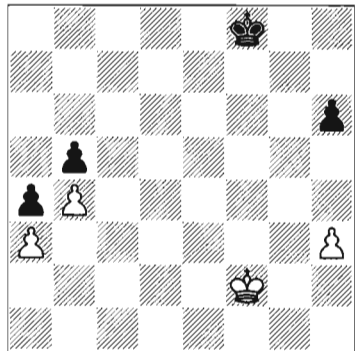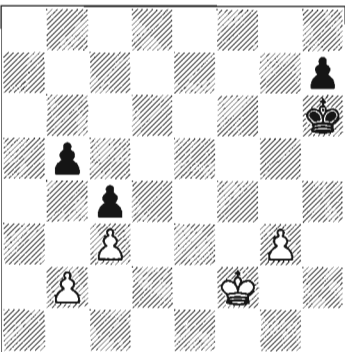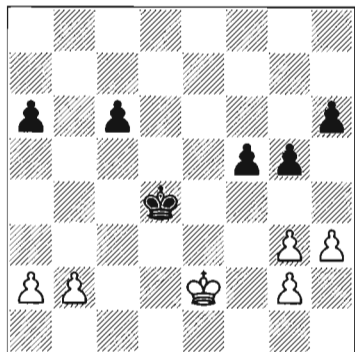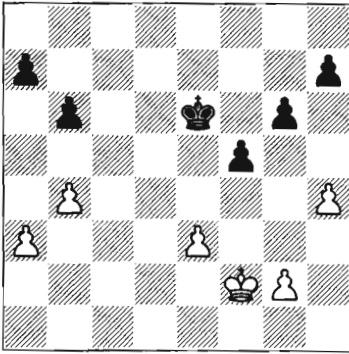
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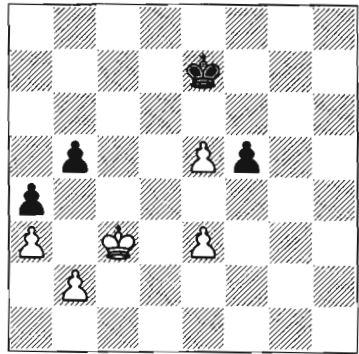
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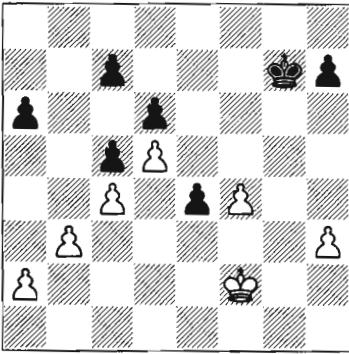
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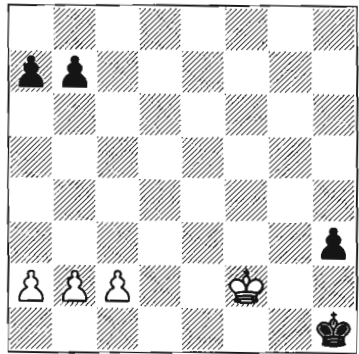
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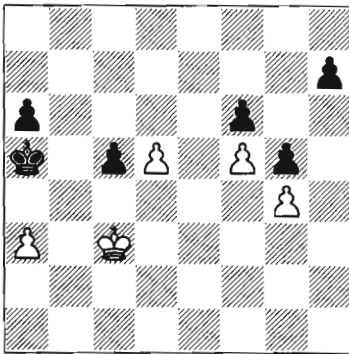
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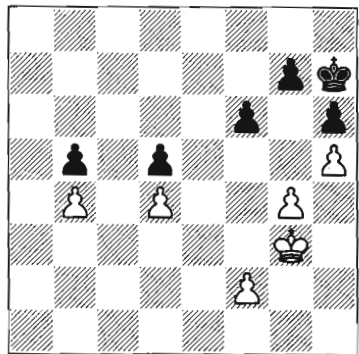
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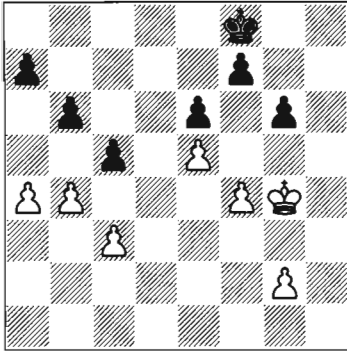
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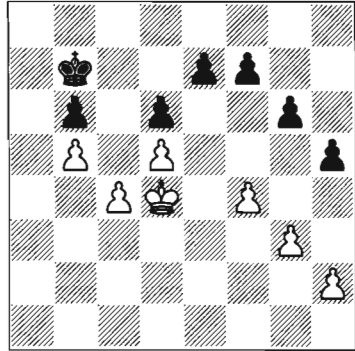
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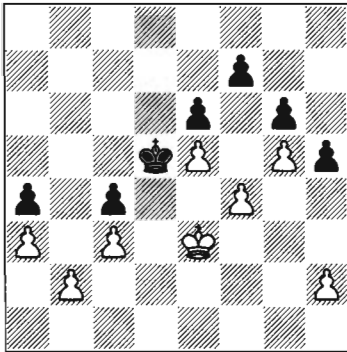
A11.14 ****/

Solutions to Chapter 11 Exercises

A11.01 Ki.Georgiev – N.Short, *Lvov 1984*

Black has to make a precise move to hold the position:

1...g5!!

Though it splits the pawns, this is the only move that is left after a process of elimination.

1...♔e5? 2 f4+! ♔d5 3 ♔d3! ♔c5 4 ♔c3! ♔d5 5 ♔b4! ♔e4 6 ♔xa4! ♔f3 7 ♔b4 ♔xg3 8 a4! +–.

2 f4

2 hxg5+ ♔xg5! 3 ♔f3:

a) 3...f4 4 gxf4+ ♔f5 5 ♔e3

a1) 5...♔f6 6 ♔e4 h4! 7 ♔e3 ♔g6 8 ♔e4 ♔f6! 9 f5 h3! 10 ♔f3! ♔xf5 11 ♔g3! ♔e4 12 ♔xh3 ♔f3 =.

a2) 5...♔g4 6 ♔e4 h4! 7 f5 h3! 8 f6! h2! 9 f3+! ♔g3 10 f7! h1♕! 11 f8♕! =.

b) 3...♔g6 4 ♔f4 ♔f6! 5 f3?! ♔g6! 6 g4 (6 ♔e5? ♔g5! 7 f4+ ♔g4! –+) 6...fxg4 7 fxg4! h4 8 g5 =.

2 ♔d4 f4 3 ♔e4! fxg3 4 fxg3! gxh4 5 gxh4! ♔e6 6 ♔f4! =.

2...gxh4! 3 gxh4! ♔e6! 4 ♔d4 ♔d6! 5 ♔c4! ♔c6! 6 ♔d4

6 ♔b4?! would only cause trouble for White: 6...♔d5! 7 ♔xa4 ♔e4! 8 ♔b4 ♔xf4! 9 a4 ♔g3 =.

½-½

A11.02 S.Deak – T.Horvath, *Hungarian Cht 1994*

Hopefully you have noticed that this exercise comes two chapters late:

1 g4!!

1 hxg5? fxg5! 2 ♔e3 ♔e5 3 ♔f2! ♔f4 4 g3+! ♔e5 5 ♔g2! (5 ♔e2? ♔d5! 6 ♔e3 ♔c4! 7 f4 gxf4+! 8 gxf4 ♔d5! 9 ♔f3 ♔e6 –+) 5...♔d5 6 ♔h3! ♔c4 7 f4! gxf4 8 gxf4! ♔d5 9 ♔h4! ♔e4! 10 ♔g5! h4! 11 f5! h3 12 f6! ∓.

1...gxh4

1...hxg4 2 h5! g3+ (2...♔e6 3 fxg4! +–) 3 ♔xg3! ♔e6 4 ♔g4! ♔f7 5 f4 gxf4 6 ♔xf4 ♔g7 7 ♔f5 +–.

2 gxh5! ♔e6 3 ♔g2! ♔f5 4 f4! +– 1-0

A11.03 J.Nogueiras – J.Hjartarson, *Biel IZ 1993*

Surprisingly the black king can successfully penetrate if he makes good use of all his spare tempi:

1...♔h5!!

1...♔g5? 2 ♔f3! ♔f5 3 g4+! ♔g5 4 ♔g3! h6:

a) 5 ♔h3? ♔f4! 6 ♔h4 ♔f3 7 ♔h5 (7 ♔h3 ♔e3 8 ♔h4 ♔d3 9 ♔h5 ♔c2! 10 ♔xh6 ♔xb2 11 g5 b4! –+) 7...♔g3! and Black wins.

b) 5 ♔f3! =.

2 ♔f3 ♔g5! 3 ♔f2

3 g4 ♔h4! 4 ♔f4 h6 5 ♔f3 ♔h3! 6 ♔f4 ♔g2! 7 g5 hxg5+! 8 ♔xg5 ♔f3 –+; 3 ♔g2 ♔g4! 4 ♔h2 ♔f3 5 ♔h3 ♔e3 6 ♔g4 ♔d2 –+.

3...♔g4! 4 ♔g2 h6!

One tempo to get in...

5 ♔f2 ♔h3! 6 ♔f3 h5 0-1

...and one for the encirclement, which Nogueiras didn't want to be shown: 7 ♔f2 ♔h2! 8 ♔f3 ♔g1! 9 ♔f4 ♔f2 10 g4 hxg4! –+.

A11.04 S.Brynell – J.O.Lind, *Swedish Ch (Gotland) 1997*

Thanks to the spare tempo g2-g3 White is successful:

1 ♔c4!

1 ♔b4? ♔a6! 2 ♔c4 ♔a5! 3 ♔b3! b5! =; 1 g3? ♔c7! 2 ♔c4 ♔c6! =.

1...♔a6

Or 1...♔c6:

a) 2 g3 ♔b7 3 ♔d5 +– (3 ♔b5? ♔c7! =).

b) 2 ♔d4 ♔d6 3 ♔e4 ♔e6 (3...♔c5 4 ♔f5! +–) 4 g3! +–.

2 ♔d5

2 ♔b4 ♚b7 (2...♚a7 3 a5 +–) 3 ♔b5
♚c7 4 ♚a6 ♚c6 5 g3! +–.
2...♚a5 3 ♚c6! ♚a6 4 g3
4 ♚d6 ♚a5 5 ♚c7 ♚xa4 6 ♚xb6!
♚b4 7 g3 +–.
4...♚a7 5 ♚c7! ♚a6 6 ♚b8! b5 7
axb5+! ♚xb5 8 ♚c7 ♚c5 9 ♚d7! ♚d5
10 ♚e7! ♚e5 11 ♚f7! ♚d6 12 ♚f6 1-0

A11.05 After **N.Grigoriev**, 1938
Averbakh gives this study with a white
king at g2 and the solution 1 ♚f2. But
since 1 ♚g3 would also win in this case,
we have placed the king at f2. One could
have also placed it on e1 to get rid of the
unwelcome effect of having two key
moves.
1 ♚g3!
1 ♚f3? ♚f7! 2 ♚g4 ♚g6! 3 ♚f4 ♚f6
only draws.
1...♚g7 2 ♚h4! ♚f6 3 ♚h5! ♚g7 4
h4! ♚h7 5 ♚g4 ♚g6 6 h5+! ♚f6 7 ♚f4!
At first sight White hasn't achieved
anything in particular but have a look
yourself.
7...♚e6 8 ♚e4! ♚f6
8...♚d6 9 ♚d4 +–.
9 ♚d5 ♚g5 10 ♚c5 ♚xh5 11 ♚xb5!
♚g4 (D)

W
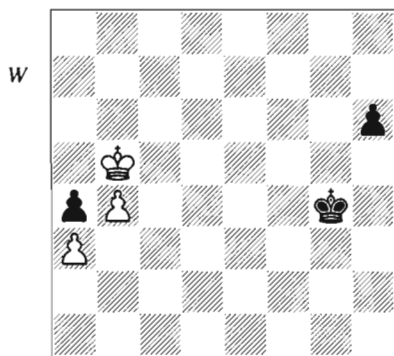
12 ♚c4!!
This is the point. The black king is di-
rected in such a way that either the b-pawn

queens with check or a skewer wins the
queen. After 12 ♚xa4? h5! =, though,
both pawns queen at the same time.
12...h5 13 ♚d3! ♚f3 14 b5! h4 15 b6!
h3 16 b7! h2 17 b8♕! h1♕ 18 ♕b7+
and White wins.

A11.06 J.Fedorowicz – M.Chandler,
London Lloyds Bank 1987
The black king is so active that the
weakened black pawns on the queenside
are by far outweighed. White should now
have used the spare tempo on the king-
side at once in order to draw:
1 g4! (Hebbinghaus)
Not:
a) 1 h4? g4:
a1) 2 h5 ♚e4 3 b3 c5 4 a3 ♚d4 5 ♚d2
a5 (5...c4? 6 b4! c3+! 7 ♚d1!! ♚d3 8
♚c1! =) 6 a4 c4 –+.
a2) 2 ♚d2 a5 3 ♚e2 a4 4 ♚d2 h5 5
♚e2 c5 6 ♚d2 ♚e4 7 ♚e2 c4:
a21) 8 ♚d2 f4 9 gxf4 ♚xf4! 10 ♚c3
(10 ♚e2 ♚g3! 11 ♚f1 ♚h2 12 ♚f2 g3+
13 ♚f3 a3 –+) 10...♚g3! –+.
a22) 8 a3 f4 9 gxf4 ♚xf4! 10 ♚f2 g3+
11 ♚e2 ♚e4! 12 ♚d2 ♚d4! 13 ♚e2 c3!
14 bxc3+ ♚xc3! –+.
b) The game actually continued 1
♚d2? ♚e4 2 ♚e2 a5 (D):

W
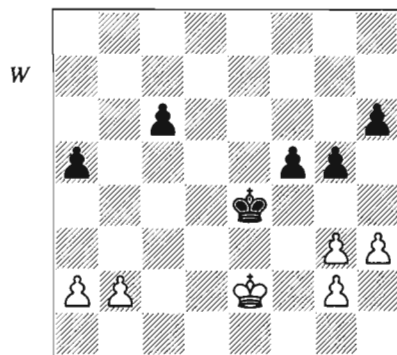
b1) 3 b3 h5! (3...c5? 4 ♚d2! ♚d4 5
g4! fxg4 6 hxg4! ♚e4 7 ♚c3! ♚f4 8 ♚c4

♔xg4! 9 ♔xc5 ♔g3 10 b4 axb4! 11 ♔xb4! =) 4 h4 g4 –+.

b2) 3 ♔d2:

b21) 3...f4?, Chandler's actual move, gave Fedorowicz a last chance to save himself:

b211) The game ended 4 gxf4? ♔xf4! 5 ♔e2 ♔g3 6 ♔f1 a4 7 ♔g1 h5 8 b3 axb3 9 axb3 c5 10 ♔f1 ♔h2 0-1 (due to 11 ♔f2 g4! 12 h4 ♔h1! 13 ♔g3 ♔g1! –+).

b212) 4 g4! a4 (4...f3 5 gxf3+! ♔xf3! 6 a4 c5! 7 ♔d3 ♔g3 8 ♔c4! ♔xh3! 9 ♔xc5! ♔xg4! 10 b4! =) 5 ♔e2! c5 6 b3 (Wilhelmi; 6 a3? c4 7 ♔d2 ♔d4! 8 ♔c2 ♔e3! 9 ♔c3 ♔f2 –+) 6...a3 7 ♔f2!! ♔d3 8 ♔f3! ♔d2 (after 8...♔c2 9 ♔e2! ♔b2 10 ♔d2 ♔xa2 11 ♔c2! = the full depth of White's defensive idea is apparent) 9 ♔f2! ♔c3 10 ♔e2 ♔c2 11 ♔e1! ♔d3 12 ♔f2! ♔d2 13 ♔f3! ♔e1 14 g3! (14 h4? ♔d1 15 hxg5 hxg5! 16 ♔f2 ♔d2! 17 ♔f3 ♔e1! –+) 14...fxg3! 15 ♔xg3! ♔f1 16 ♔f3! ♔g1 17 ♔g3! ♔h1 18 h4! ♔g1 19 h5! =.

b22) 3...♔d4 4 ♔e2 h5 5 ♔d2 c5 6 ♔e2 ♔e4 7 ♔d2 f4 –+.

1...fxg4

1...f4 2 ♔d2! c5 3 b3 a5 (3...c4 4 b4! =) 4 a3! c4 5 b4! =.

2 hxg4! ♔e4 3 g3! c5 4 b3! ♔d4 5 ♔d2! a5 6 a3! c4 7 b4! axb4 8 axb4! c3+ 9 ♔c2! ♔c4! 10 b5! =

A11.07 J.Klinger – L.Ftačnik, *Novi Sad OL 1990*

As Ftačnik's detailed analysis (*CBM* 22, Inf 50/476) shows, he made life difficult for himself:

1...♔e5?!

1...♔d5?! 2 ♔f3 ♔c4? (2...♔e5! 3 b5 h6! –+; compare the main line) 3 ♔f4 ♔b3 4 g4! (4 ♔g5? ♔xa3! 5 ♔h6 ♔xb4 6 ♔xh7 a5! 7 ♔xg6 a4! 8 h5 a3 –+) and now:

a) 4...a5 5 bxa5 bxa5! 6 gxf5 gxf5! 7 ♔xf5 ♔xa3 8 e4 ♔b4 9 e5 a4! 10 e6 a3! =.

b) 4...fxg4 5 ♔xg4 h6 (5...♔c4? 6 ♔g5! ♔d3 7 ♔h6! ♔xe3 8 ♔xh7! +–; 5...♔xa3? 6 e4! ♔xb4 7 e5! ♔c5 8 ♔g5! +–; 5...a5 6 bxa5 bxa5! 7 e4 ♔c4! 8 ♔g5 ♔d4! 9 ♔h6 ♔xe4! 10 ♔xh7 ♔f5! 11 a4 =) 6 e4! (6 ♔f4? ♔xa3! 7 b5 ♔b4 8 ♔e5 ♔xb5 9 e4 g5! 10 hxg5 hxg5! 11 ♔d6 g4 12 e5 g3 13 e6 g2 14 e7 g1♕ 15 e8♕+ ♔a5 16 ♕e5+ b5 –+) 6...♔c4! 7 ♔f4 ♔d4 8 b5 g5+ 9 hxg5! hxg5+! 10 ♔f5! g4! 11 e5! =.

c) 4...♔xa3 5 gxf5! gxf5! 6 b5 ♔b4 7 ♔xf5! ♔xb5! 8 e4! ♔c6! 9 ♔f6 ♔d7! 10 ♔f7! ♔d6! 11 ♔f6! =.

With 1...b5!? Black secures the reserve tempo ...a6, which guarantees him victory: 2 ♔e2 ♔d5 3 ♔d3 ♔e5 4 ♔d2 ♔e4 5 ♔e2 h6 6 ♔d2 g5 7 hxg5 hxg5! 8 ♔e2 g4 9 ♔d2 (9 g3 a6! –+) 9...f4! 10 exf4 ♔xf4! 11 ♔e2 ♔g3! 12 ♔f1 ♔h2! 13 ♔f2 g3+ 14 ♔f3 a6! –+.

2 b5 ♔e4! 3 ♔e2 h6! (*D*)
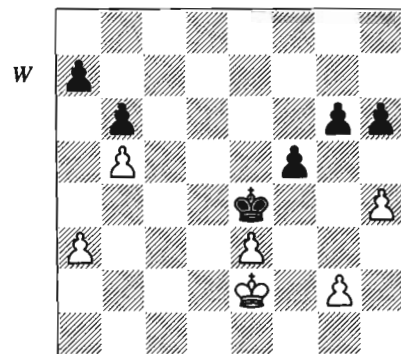
4 g3

4 ♔d2 f4 5 exf4 ♔xf4! –+.

4 ♔f2!?:

a) 4...g5? 5 hxg5! hxg5! 6 ♔e2 g4 (6...♔e5 7 ♔d3 ♔d5 8 a4 g4 9 g3 ♔e5 10 ♔d2! ♔d6 11 ♔c2! =) 7 a4 f4 8 exf4! ♔xf4! 9 ♔f2! g3+ 10 ♔e2! ♔e4 11 ♔d2! ♔d4 12 ♔e2! ♔c4 13 ♔f3! ♔b4 14 ♔xg3! ♔xa4! 15 ♔h4 = (15 ♔f4? ♔xb5! 16 g4 ♔c5! 17 ♔e5 a5! –+).

b) 4...♔d3? 5 ♔f3 g5 6 hxg5! hxg5! 7 g3! (7 a4? ♔c4 8 e4 fxe4+ 9 ♔xe4 ♔b4 10 ♔f5 ♔xa4! 11 ♔xg5 ♔xb5! 12 g4 a5! 13 ♔f5 ♔c6 14 g5 ♔d6! –+) 7...♔c4 8 e4! fxe4+ 9 ♔xe4! ♔xb5 10 ♔f5 ♔a4 11 ♔xg5 ♔xa3 12 ♔f6 =.

c) Only the elegant move 4...♔d5!! wins, as the black king is either quicker to reach the queenside, or is in time to exert pressure in the centre. 5 ♔f3 (5 ♔e2 ♔c4 –+) 5...g5! (5...♔c4? 6 ♔f4! =) 6 hxg5 hxg5! 7 g3 ♔e5! 8 ♔f2 g4! 9 ♔e2 ♔d5 10 ♔d3 ♔c5! 11 e4 fxe4+! 12 ♔xe4 ♔xb5! 13 ♔f4 ♔a4! 14 ♔xg4 ♔xa3! 15 ♔f4 ♔b4! 16 g4 ♔c5! 17 ♔e5 a5! –+.

4...♔d5! 5 ♔f3

5 h5 gxh5 6 ♔f3 ♔e5 7 a4 h4 8 gxh4 h5! 9 ♔f2 ♔e4! 10 ♔e2 f4! –+.

5...g5 6 hxg5 hxg5! *(D)*
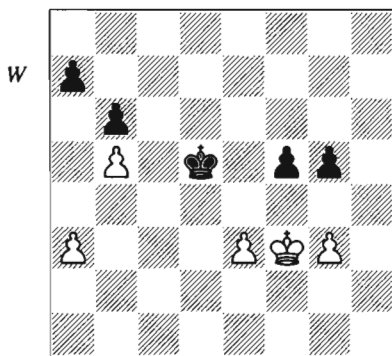
7 a4

White has used up all his reserve tempi and is outmanoeuvred.

7 g4 fxg4+ 8 ♔xg4 ♔e4! 9 ♔xg5 ♔xe3! 10 ♔f5 ♔d4 11 ♔e6 ♔c4 12 a4 ♔b4 –+.

After 7 ♔f2!? ♔c4 (7...♔e4? 8 ♔e2 g4 9 a4! =) 8 ♔f3 ♔d3! (8...♔xb5? 9 g4! fxg4+! 10 ♔xg4! ♔c6 11 ♔xg5 b5 12 e4 a5 13 e5! ♔d7 14 ♔f5! a4 15 ♔e4 b4 16 ♔d3 b3 =; see 6.01H) it is White to play in the reciprocal zugzwang and so he loses: 9 a4 ♔c4 10 e4 (10 g4 fxg4+! 11

♔xg4 ♔d3! 12 ♔f3 g4+! –+) 10...fxe4+ 11 ♔xe4 ♔b4 12 ♔f5 ♔xa4! 13 ♔xg5 ♔xb5! 14 g4 a5! 15 ♔f5 ♔c6 16 g5 (16 ♔e6 a4! 17 g5 a3! 18 g6 a2! 19 g7 a1♛! 20 g8♛ ♛a2+! –+) 16...♔d6! 17 ♔f6 a4! 18 g6 a3! 19 g7 a2! 20 g8♛ a1♛+! 21 ♔f5 ♛e5+ 22 ♔g4 ♛e6+!? –+.

7...♔e5 8 ♔e2 ♔d6 9 ♔f3 ♔d5 10 ♔e2 ♔c4 0-1

11 ♔d2 (11 ♔f3 ♔d3 12 ♔f2 g4 –+) 11...♔b4 12 ♔d3 ♔xa4 13 ♔c4 g4 14 ♔d5 ♔xb5 15 ♔e5 a5 16 ♔xf5 a4 –+.

A11.08 R.Dautov – S.Reshevsky, *Moscow GMA Open 1989*

You have certainly noticed that White wins the fight for tempi. But have you also realized that this is in vain?

1...♔f6 2 ♔e3 ♔f5! 3 h4 h5!

3...♔g4? 4 ♔xe4! ♔xh4 5 ♔f5! ♔g3 (5...h5 6 ♔e6 ♔g3 7 f5! h4 8 f6 h3 9 f7 h2 10 f8♛ h1♛ 11 ♔d7 +–) 6 ♔g5! h6+ 7 ♔xh6! ♔xf4 8 ♔g6 ♔e5 9 ♔f7 winning for White.

4 a3! a5!

4...♔f6? 5 ♔xe4! ♔g6 6 f5+ ♔f7 7 ♔f4 ♔f6 8 b4 cxb4 9 axb4! ♔f7 10 ♔g5 and White wins.

5 a4! ♔f6 ½-½

In view of 6 ♔xe4 ♔g6! 7 f5+ ♔g7 8 ♔f3 ♔f7! 9 ♔f4 ♔f6! =.

A11.09 Randviir – P.Keres, *Pärnu 1947*

In this position, which was analysed in detail by Paul Keres in *Practical Chess Endings* (No. 56), Black has to play very accurately and keep the spare tempo ...h6 until the right moment comes.

1...♔b5!

1...♔b6? 2 ♔c4! a5 3 a4! (now Black is forced to use up his spare tempo) 3...h6! 4 ♔c3 =.

2 a4+ ♔b6! 3 ♔c4 a5! 4 d6

4 ♔c3?! loses more quickly: 4...♔c7! 5 ♔d3 ♔d6 6 ♔c4 h6! 7 ♔b5 ♔xd5! 8 ♔xa5 ♔c6 –+.

4...⬦c6! 5 d7 ⬦xd7 6 ⬦xc5 ⬦e7 7 ⬦d5

7 ⬦b5 h5 −+.

7...⬦f7 8 ⬦e4 ⬦f8

This fine waiting move gets White into a deadly zugzwang.

9 ⬦e3 ⬦e7! 10 ⬦e4 ⬦d6! 11 ⬦d4 h6!

The spare tempo wins the opposition and thus the game.

12 ⬦e4 ⬦c5! 13 ⬦e3 ⬦d5 14 ⬦d3 ⬦e5! 15 ⬦e3 h5! 16 gxh5 ⬦xf5! 17 ⬦f3 ⬦e6 18 ⬦g4 ⬦f7 19 ⬦f5 ⬦g7 0-1

A11.10 A.Alekhine – Yates, *Hamburg 1910*

With the help of his extra pawn Alekhine managed to produce a 'don't touch me' formation that is fatal for Black.

1 ⬦d3

1 ⬦b4? ⬦e6! 2 ⬦xb5 ⬦xe5! 3 ⬦xa4 ⬦e4! 4 b4 ⬦xe3! =; 1 ⬦d4? ⬦e6! 2 e4 f4! 3 ⬦c3! ⬦xe5 4 ⬦d3! =; 1 e4 +−.

1...⬦d7 2 e4 f4

2...⬦e6 3 exf5+ ⬦xe5 4 ⬦c3 +−.

3 ⬦e2 ⬦e6 4 ⬦f2! 1-0

Yates resigned due to 4...⬦xe5 5 ⬦f3!.

A11.11 K.Müller, Original

Black's only defensive idea is a self-stalemate. This idea is the basis for the following fight for tempi:

1 c4!

1 ⬦g3? ⬦g1 2 ⬦xh3! ⬦f2 =; 1 c3? b5 =; 1 a4? a5 (1...b6 2 c4 a5! =) 2 c3 ⬦h2 3 b4 (3 c4 ⬦h1 4 c5 ⬦h2! 5 b3! ⬦h1! =) 3...axb4! 4 cxb4! b5! =; 1 b3? a5 2 a4 b5 3 axb5 a4! 4 b6 axb3 5 cxb3 h2! 6 ⬦e3 ⬦g1 7 b7! h1♕! 8 b8♕! =.

1...a5

1...a6 2 b4 ⬦h2 3 c5 ⬦h1 4 a4 +−; 1...b6 2 b4 a5 3 c5 +−; 1...⬦h2 2 b4 +−.

2 c5!

2 a4? b6 =; 2 b3? b6! (2...⬦h2? 3 c5! ⬦h1 4 a3! ⬦h2 5 b4! axb4 6 axb4! ⬦h1 7

b5! +−; 2...h2? 3 c5 a4 4 bxa4 b5 5 a5 +−) 3 a3 (3 ⬦g3 ⬦g1! 4 ⬦xh3! ⬦f2! 5 ⬦g4 ⬦e3 6 ⬦f5 ⬦d4 7 ⬦e6 a4 8 ⬦d6 axb3 9 axb3! ⬦c3! 10 ⬦c6 ⬦xb3! 11 ⬦b5 ⬦c3! =) 3...⬦h2! 4 b4 axb4! 5 axb4! b5! (5...⬦h1! 6 b5! h2 7 c5! +−) 6 cxb5 ⬦h1 7 b6 h2! 8 ⬦e3 ⬦g2 9 b7! h1♕! 10 b8♕! =.

2...a4

2...⬦h2 3 b3! ⬦h1 4 a3! ⬦h2 5 b4! axb4 6 axb4! ⬦h1 7 b5! b6 8 ⬦f1 h2 9 ⬦f2! +−.

3 b4!

3 b3? a3! =.

3...axb3

3...a3 4 b5! (4 ⬦f1? b5! =) 4...b6 5 ⬦f1 ⬦h2 6 cxb6 ⬦h1 7 b7 h2 8 ⬦e2 +−.

4 axb3! h2 *(D)*

4...⬦h2 5 b4! ⬦h1 (5...b5 6 cxb6 ⬦h1 7 b7 h2 8 ⬦g3 ⬦g1 9 b8♕! h1♕ 10 ♕b6+ ⬦f1 11 ♕f2#) 6 b5! +−.
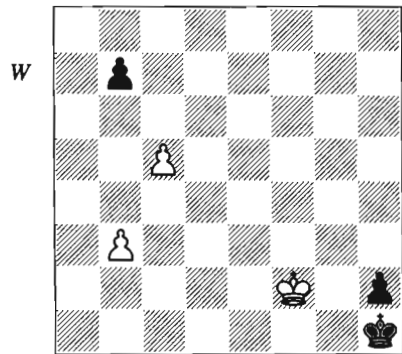
5 c6!! b5

Or 5...bxc6 6 b4! c5 7 b5! c4 8 b6! c3 9 b7! c2 10 b8♕! c1♕ 11 ♕b7+ ♕c6 12 ♕xc6#.

6 c7! b4 7 ⬦g3 ⬦g1 8 c8♕ +−

■ In 1932, Jelinek created the following exercise (*ECE 415*): w⬦c2,△f2,g2, h2; b⬦a1,△a2,f5,h7: 1 ⬦c1! +−. The game Mandler-Prohaska, Austria 1924 (*ECE 1565*) shows similar ideas with a very nice prelude: w⬦c6,△a3,b4,g2,h3;

b♔f2,♙a7,h4: 1 ♔d5!! ♔xg2 2 ♔e4!
♔xh3 3 ♔f3! ♔h2 4 ♔f2! h3 5 b5! ♔h1 6
♔f1! h2 7 b6!! a5 8 b7! a4 9 ♔e2! and
White went on to win.

A11.12 J.Bany – P.Rechmann, *Porz Citroen Cup 1990*

The white king-march to f5 is obvious
and would be decisive due to the spare
tempi. Therefore you had to act immedi-
ately:

1...g5!

1...♔g8? 2 ♔f4 ♔f8 3 ♔f5 ♔f7 4 f3
(4 f4 g6+ 5 hxg6+ ♔g7 6 ♔e6! ♔xg6 7
f5+ ♔g5 8 ♔f7 ♔xg4 9 ♔xf6! h5 10
♔e5 +–) 4...♔e7 5 ♔g6 ♔f8 6 f4 ♔g8:

a) 7 g5?! hxg5 8 fxg5! fxg5 9 ♔xg5
♔h7:

a1) 10 ♔f5? ♔h6! 11 ♔e6 ♔xh5! 12
♔xd5 g5!:

a11) 13 ♔e4 ♔g6! 14 ♔e5! g4! 15
♔f4! ♔h5! (15...♔f6? 16 ♔xg4! ♔e6 17
♔f4 ♔d5 18 ♔e3! ♔c4 19 ♔e4! ♔xb4
20 d5! +–) 16 d5! g3! 17 ♔xg3 ♔g5! =.

a12) 13 ♔c6 g4! 14 d5! g3! 15 d6!
g2! 16 d7! g1♕! 17 d8♕! ♕c1+ 18 ♔xb5
=.

a2) 10 ♔g4!! ♔h6 11 ♔h4! g6 12
hxg6! ♔xg6 13 ♔g4! +–.

b) 7 ♔f5 ♔f7 8 g5 fxg5 9 fxg5! hxg5
10 ♔xg5! ♔g8 (10...♔e7 11 ♔f5 ♔f7 12
♔e5! +–) 11 h6 gxh6+ 12 ♔xh6 ♔f7 13
♔g5! ♔e6 14 ♔g6 +–.

1...g6? 2 ♔f4 ♔g7 (2...f5 3 f3! +–) 3
hxg6! +– – see under 2...♔g7?.

2 hxg6+ ♔xg6!

2...♔g7? 3 ♔f4! ♔xg6 4 f3! f5 5 ♔e5!
fxg4 6 fxg4! ♔g5 7 ♔xd5! ♔xg4 8 ♔e5!
+–.

3 ♔f4

3 ♔h4 f5! 4 f3 (4 gxf5+?! ♔xf5 5
♔h5! ♔e4 6 ♔xh6! ♔xd4 7 f4 ♔e4 8
♔g5! d4 9 f5! d3 10 f6! d2 11 f7! d1♕ 12
f8♕! =) 4...f4! 5 ♔h3! ♔g5 6 ♔g2 ♔h4 7
♔h2! =.

3...f5! *(D)*

W
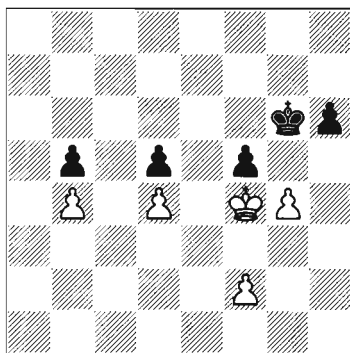
4 gxf5+!?

4 f3? ♔f6! 5 ♔g3 ♔g5! 6 ♔h3 fxg4+!
7 fxg4 h5! –+.

4 ♔e5? fxg4! 5 ♔xd5 h5! 6 ♔e5 (6
♔e6 h4! 7 d5 h3! 8 d6 h2! 9 d7 h1♕! 10
d8♕ ♕e4+ 11 ♔d7 ♕d5+ 12 ♔c8
♕xd8+ 13 ♔xd8 ♔f5 14 ♔e7 ♔f4 15
♔f6 ♔f3 16 ♔f5 ♔xf2! 17 ♔xg4 ♔e3
–+) 6...h4! 7 ♔f4 h3! 8 ♔g3 ♔f5 and
Black wins.

4 ♔g3?! fxg4 5 ♔xg4! h5+ 6 ♔h4
♔h6 7 ♔h3! ♔g5 8 ♔g3! ♔f5 9 ♔h4!
♔e4 10 ♔xh5! ♔xd4 11 f4 =.

4...♔f6! 5 ♔g4! h5+

5...♔f7 6 ♔h5 ♔f6! 7 ♔xh6 ♔xf5! 8
♔h5 ♔e4 9 ♔g5 ♔xd4! 10 f4 =.

6 ♔xh5

6 ♔f4 h4! 7 ♔g4! h3! 8 ♔xh3 ♔xf5!
=.

**6...♔xf5! 7 f3 ♔f4! 8 ♔g6! ♔e3! 9
♔g5 ♔xd4! 10 f4! ♔c3 ½-½**

A11.13 K.Müller – N.Narings, *Dutch jr Ch (Arnhem) 1988*

White's winning plan is first to get the
king to f6, then to exchange the kingside
by g4, f5 and again ♔f6 and e6 so as then
to use the more active king position.
Therefore Black has to take care that his
queenside pawn-structure doesn't become
too weak. This can only be managed by
an exchange at b4.

1...cxb4!

The game in fact continued 1...a5? 2 bxa5 bxa5 3 ♔g5 ♔e7 4 g3 ♔f8, when White could exchange the kingside pawns and win: 5 ♔f6 ♔e8 6 g4 ♔f8 (6...c4 7 f5 exf5 8 gxf5! gxf5 9 ♔xf5 ♔e7 10 ♔f4 ♔d7 11 ♔e3 ♔e6 12 ♔e4! +–) 7 f5 exf5 8 gxf5! gxf5 9 ♔xf5 ♔e7 10 c4 ♔d7 11 ♔f6! ♔e8 12 e6! ♔f8 13 ♔e5 +– 1-0.

1...c4? can be cut off by b5 and then be captured by the white king. In this line White can even allow the kingside to be closed once he has captured the c4-pawn since he has the option c3-c4-c5xb6 with a new route on the queenside. Specifically:

a) 2 ♔g5 ♔e7 3 g3 a6 4 g4 b5 5 axb5! (5 a5? ♔e8 6 ♔f6 ♔f8! 7 f5 exf5 8 gxf5! gxf5! 9 ♔xf5 ♔e7! 10 ♔f4 ♔d7 11 ♔e3 ♔e6 12 ♔e4 f6! 13 exf6! ♔xf6! 14 ♔d5 ♔f5! 15 ♔c6 ♔e4! 16 ♔b6 ♔d3! 17 ♔xa6! ♔xc3! 18 ♔xb5 ♔b3 19 a6 c3! 20 a7 c2! 21 a8♕ c1♕! 22 ♕d5+ ♔b2 = and the position is a theoretical draw because White can't force the exchange of queens) 5...axb5 6 f5! exf5 7 gxf5! gxf5 8 ♔xf5! +–.

b) 2 b5 ♔e8 3 ♔g5?! ♔e7 4 g3 ♔e8 5 ♔f6 ♔f8 6 g4 ♔e8:

b1) 7 f5? exf5 8 gxf5! gxf5! 9 ♔xf5 ♔e7 10 ♔f4 ♔e6 11 ♔e4! f6! 12 exf6! ♔xf6! 13 ♔d5 ♔f5! (13...♔e7? 14 ♔c6! +–) 14 ♔c6 (14 ♔xc4 ♔e4 =) 14...♔e4! 15 ♔b7! ♔d3! 16 ♔xa7! ♔xc3! 17 a5 ♔b4 18 axb6 c3! 19 b7 c2! 20 b8♕ c1♕! 21 ♕e5 ♕a3+ 22 ♔b7 ♕f3+ =.

b2) 7 ♔g5! ♔e7 8 ♔h4! f6 9 g5 fxe5 10 fxe5! ♔d7 11 ♔g4 +–.

2 cxb4! ♔e8 3 ♔g5 ♔e7 4 b5 ♔e8 5 ♔f6 ♔f8! 6 g4 ♔e8! 7 f5 exf5 8 gxf5! gxf5! 9 ♔xf5 ♔e7 =

A11.14 H.Neustadtl – Porges, *1901*

Since the black king has to prevent the penetration of the white king via the d4-square, Black can be forced into zugzwang

by a triangulation and compelled to move the h-pawn. This pawn will finally fall prey to White's king and the white h-pawn will make a decisive breakthrough.

1 ♔f3!

Not 1 h3?:

a) 1...h4? 2 ♔f3! ♔c6 3 ♔g4! ♔d5 4 ♔xh4! ♔e4 5 ♔g4! +– (5 ♔g3? ♔e3! 6 h4 ♔e4! 7 ♔g4! ♔e3! 8 ♔g3! =).

b) 1...♔c5! 2 ♔e4 h4 3 ♔e3 ♔c6! 4 ♔f2 ♔c5! =.

1...♔c6 2 ♔f2 ♔c5 3 ♔e2 ♔c6 4 ♔f3! ♔d5 5 ♔e3! ♔c5 6 ♔e4! h4

6...♔c6 7 ♔d4! ♔b5 8 h4! +–.

7 ♔f3! ♔d5 8 ♔e3! ♔c5 9 ♔e4! h3 *(D)*

9...♔c6 10 ♔d4! ♔b5 11 h3! +–; 9...♔b5 10 ♔d4 +–.
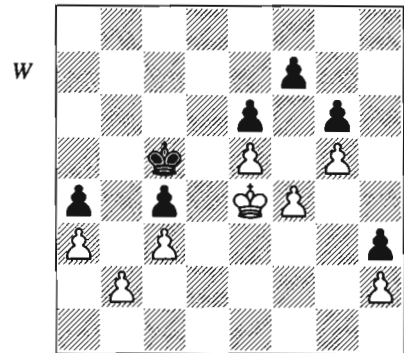
10 ♔e3 ♔c6 11 ♔f2! ♔d5 12 ♔f3! ♔c5 13 ♔g3 ♔d5 14 ♔xh3! ♔e4 15 ♔g4 ♔d3

15...♔e3 16 ♔g3 ♔e4 17 h4 ♔e3 18 h5! gxh5 19 f5! exf5 20 g6!? fxg6 21 e6 f4+ 22 ♔h2 +–; 15...♔d5 16 ♔f3 ♔c6 17 ♔e4 ♔c5 18 h3 ♔c6 19 ♔d4 ♔b5 20 h4 +–.

16 ♔f3

16 f5 exf5+ 17 ♔f3 +–.

16...♔c2 17 h4 ♔xb2 18 h5 gxh5 19 f5! exf5 20 g6 fxg6 21 e6! ♔xa3 22 e7! ♔b2 23 e8♕! a3 24 ♕b5+ +– 1-0

A real classic.

**A11.15 S.Kindermann – H.Wirthen-
sohn,** *Hamburg SKA 1991*

Since the white king cannot invade the black position right now, only a temporary pawn sacrifice and very precise play can help:

1 f5!!

1 ♔e4? f5+ =.

1...gxf5

1...g5 2 f6 ♔c7 3 ♔e4 ♔d7 4 ♔f5 +–;
1...♔c7 2 ♔e4 ♔d7 3 ♔f4 ♔e8 4 ♔g5 gxf5 5 ♔xh5 +–.

2 ♔e3!

Heading towards the h-pawn; after its loss White will win because of his outside passed pawn.

2...e5 3 dxe6! fxe6 4 ♔f4! ♔c7 5 ♔g5

5 h4 ♔d7 6 ♔g5!:

a) 6...e5 7 ♔xf5! ♔e7 8 ♔g5! d5 9 cxd5! ♔d6 10 g4!? (avoiding the queen ending after 10 ♔xh5: 10...e4 11 ♔g4! ♔xd5 12 h5 ♔c4 13 h6 ±) 10...e4 11 ♔f4! ♔xd5 12 gxh5! +–.

b) 6...♔e7 7 ♔g6!! (7 ♔xh5?? ♔f6! –+) and then:

b1) 7...♔e8 8 ♔xh5! d5 9 cxd5! (9 c5?? d4! –+) 9...exd5 10 ♔g5! d4 11 ♔f4! ♔f7 12 ♔f3! ♔g6 13 g4 +–.

b2) 7...e5 8 ♔xf5! ♔f7 9 ♔g5! ♔e6 10 ♔xh5! d5 11 c5!? bxc5 12 b6 ♔d7 13 ♔g4 c4 14 ♔f3 +–.

b3) 7...d5 8 cxd5! exd5 9 ♔xf5! ♔d6 10 g4! d4 11 ♔e4! hxg4 12 ♔xd4! +–.

5...♔d7

5...d5 6 cxd5! exd5 7 ♔xf5! (7 ♔xh5?? d4! –+) 7...♔d6 8 g4! hxg4 (8...d4 9 ♔e4! hxg4 10 ♔xd4! ♔e6 11 ♔e4! +–) 9 ♔xg4! ♔e5 10 ♔f3! +–.

5...e5 6 ♔xf5! h4 (6...♔d7 7 h4! ♔e7 8 ♔g5! ♔e6 9 ♔xh5! ♔f5 10 g4+! +–) 7 g4! (7 gxh4? ♔d7 =) 7...h3 8 g5 ♔d7 9 ♔g4! ♔e6 10 ♔xh3 ♔f5 11 ♔h4! e4 12 g6 +–.

6 ♔xh5 d5

6...e5 7 ♔g5! ♔e6 8 h4 e4 9 ♔f4! ♔f6 10 g4 fxg4 11 ♔xe4 +–.

7 cxd5! e5 *(D)*

7...exd5 8 ♔g5! d4 9 ♔f4! ♔e6 10 ♔f3 +–.
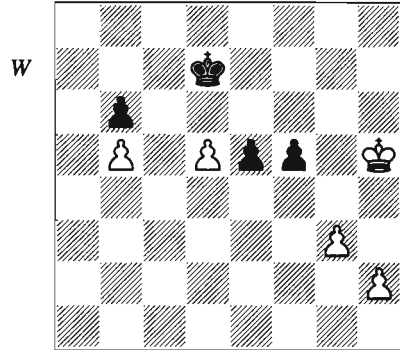
8 ♔g5! ♔d6 9 h4!?

9 ♔xf5?! ♔xd5 10 h4! e4 11 ♔f4! ♔d4 12 h5! e3 13 h6! e2 14 h7! e1♕ 15 h8♕+! ♔c4 (15...♔d5 16 ♕d8+ ♔c5 17 ♕d3 ±; 15...♔c5?! 16 ♕e5+ ♕xe5+ 17 ♔xe5! ♔xb5 18 g4! ♔c6 19 ♔e6 +–) 16 ♕e5! ±.

9...♔xd5

9...e4 10 ♔f4! ♔xd5 11 h5 ♔e6 12 g4 fxg4 13 ♔xg4 +–.

10 h5! f4!? 11 gxf4!

11 ♔g4? ♔e4! =.

11...e4 12 ♔g4 ♔c4 13 h6! e3 14 ♔f3! ♔d3 15 h7! e2 16 h8♕! e1♕ 17 ♕d8+ ♔c4 18 ♕xb6! ♕d1+ 19 ♔g3 ♕d3+ 20 ♔g4 ♕e2+ 21 ♔g5 ♕g2+ 22 ♔f6 ♕b2+ 23 ♔f7 ♕b1 24 ♕g6 1-0

After 24...♕xb5, for example, 25 ♕e4+ ♔c3 26 ♕e5+ +– could follow.

12 Corresponding Squares

The theory of corresponding squares is one of the most difficult in pawn endings and up to now we have only dealt in detail with special cases like opposition and triangulation. But what exactly are corresponding squares? In an ideal case they are a system of exactly corresponding squares on which the kings are in reciprocal zugzwang (that means, for example, if the white king moves to a square of the system the black king has to move to the corresponding square in order to draw and White, in order to win, has to move in such a way that the black king can't move to the corresponding square – because he is already on it or because he can't fly). However, not all examples that can be analysed according to the theory of corresponding squares fit this ideal picture, since reserve pawn moves and possible counter-attacks by the defending king can disrupt the pattern. We will include the resulting "system-transient corresponding squares" (Zinar) into the numbering scheme and if necessary we will assign several numbers to a single square.

Our chapter on corresponding squares is intended for the practical player even though there are a lot of studies. Our stress is therefore on the following questions:

- How does one recognize a position of corresponding squares?
- How are the corresponding squares determined?
- How does the play proceed in a system of corresponding squares?

If you would like a more detailed and rather theoretical approach to the theory of corresponding squares, we recommend an essay by the composer of studies, Zinar, in the last chapter of Averbakh's book (there he proposes a distinction between 11 special systems and explains what one has to do in each case).

A) Corresponding Squares in Previous Examples

In the previous chapters we have already analysed positions in which the knowledge of corresponding squares helped a lot to understand the position better. We shall again look at some of these examples in order to explain or train the determination of corresponding squares with the help of positions with which we are already familiar.
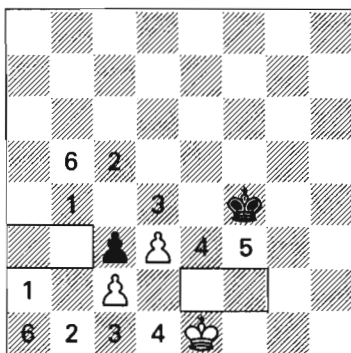
12.01/A4.05 (e1=5)   **+/=**
N.Grigoriev
Izvestia, 1921

Naturally our main focus in this chapter is on the manoeuvres of the kings. We therefore always start with the determination of the key squares since they are decisive for the determination of the corresponding squares. Key squares are e2, f2 and b3, a3 (marked by boxes). If, like here, not all key squares are next to each other, their shortest connection (the 'shortest way') is significant. The shortest way from b3 to e2 for White leads across a2-b1-c1-d1, while Black defends himself via b4-c5-d4-e3. Since both sides have only one shortest way at their disposal here the squares of the shortest way are at the same time corresponding squares which we number from 1 to 4. Then we number the rest of the squares that are directly next to the key squares. The square e1 gets a 5 (note that corresponding squares which are occupied by pieces are indicated below the diagram to avoid making the diagrams too messy!). Due to the threat either to move to one of the key squares or to 4, f3=5 is the corresponding square (this protects the key squares and is next to the 4). If the white king is at f1 then the black king has to move to e3. Nevertheless this square doesn't receive a number because after 1...♔e3? 2 ♔f1?? White even loses due to the counter-attack 2...♔d2!. Because of the edge of the board only the square a1=6 remains for king manoeuvres. It corresponds to the b5-square (in order to go to 1 or 2 if necessary).

Therefore, if Black is to move, he can only secure the draw if he keeps all corresponding squares. This is only possible by playing 1...♔f3! 2 ♔d1 ♔e3! 3 ♔c1 ♔d4! 4 ♔b1 ♔c5! 5 ♔a1 ♔b5! 6 ♔a2 ♔b4! =.

The drawing of the corresponding squares in the next example immediately makes the win visible (what a pity that

during the game you are not allowed to draw on the board...):
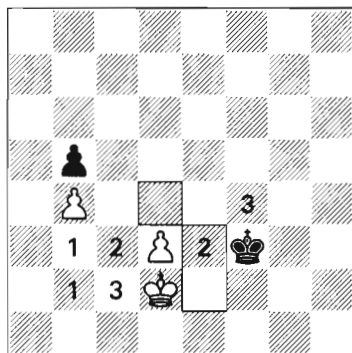
12.02/4.04 (d2=1=f3)   +/−
N.Grigoriev
K novoi armii, 1920

Here the key squares are d4, e2 and e3. The square d2=1 corresponds with f3=1, because Black can't leave the square of the d-pawn. c3=2 is adjacent to d4 and 1, which is only fulfilled by e3=2. The squares on the first rank don't get numbers because a counter-attack against the d-pawn would be possible. If we look at the other squares then White threatens to move from c2=3 to 1 or 2. These threats can only be answered by Black at f4=3. From b2 and b3 White threatens to move either to 2 or 3. Black only has one square from which he can move to 2 or 3, namely f3=1. Thus we can also assign a 1 to b2 and b3. It follows that White has more corresponding squares, and this secures the win. As we already know, the easiest route to success is 1 ♔c2 ♔f4 2 ♔b3 ♔f3 3 ♔b2 ♔f4 4 ♔c2! ♔f3 5 ♔d2! ♔f4 6 ♔e2! +−.

The next two positions show that our knowledge of the different forms of opposition is based on corresponding squares:

12.03/7.04 (b6=4, g7=2)   +/=
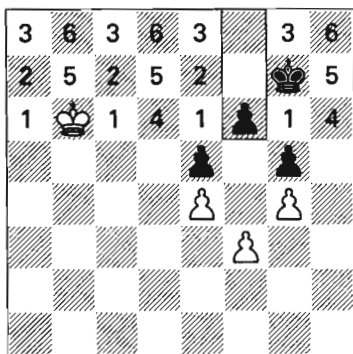
12.04/A4.04 (e5=6, f3=2)   +/=
After **Van Nyevelt**, *Superiorité*, 1792

Key squares are f6, f7 and f8. With three or more key squares that are next to each other first you always have to number the adjacent squares that are parallel. Thus e6, e7, e8 = 1, 2, 3 correspond to g6, g7, g8 = 1, 2, 3 with Black. The squares d6, d7, d8 or h6, h7, h8 with Black get the numbers 4, 5 and 6. Afterwards the numbers repeat each other until a counterattack is possible, here even to the edge of the board. f7 and f8 don't get numbers since the f6-square isn't available to Black. If White stays on the fifth rank Black only has to parry the white threat to move to 1 or 4, thus to stay at 2 or 5. Since this is always possible, the squares of the fifth rank don't get numbers. White doesn't have a surplus of corresponding squares, because of which Black draws if he takes the corresponding square to b6 by **1...♔h6!**.

The next example shows that even big systems of corresponding squares can arise (*see following diagram*):
Black mustn't leave the square of the a-pawn. Key squares are c4, d4 and e4-e7, as well as d7-a7 if Black gives up the defence of e8. For a better overview we start the numbering along the key squares on the e-file: White f4-f7=1-4=d4-d7

with Black. Then we number g4-g7= 5-8=e4-e7 (defence on the key squares). A defence along the c-file isn't possible because there is no access to the c4-square. The 2, 6 combination on the third rank is due to the key squares c4-e4. On the second rank there are no corresponding squares since Black can oscillate on 3 and 7 or 1 and 5 until White moves to the third rank. The squares 3a, 7a result from the key squares on the seventh rank. We have given them an 'a' because with a white king on f8 or h8 Black can either defend by ...♔d6 or by ...♔d8 (easier). But if the white king is on f6 or h6 (no a-numbers!) only ...♔d6 is correct. The numbers 9-11 result from the key squares c7-a7. a5 is an additional corresponding square since ♔a7 or ♔b7 leads to a stalemate. In this connection a7 and b7 are therefore inferior key squares.

1...♔d5! =
Even though the diagram looks to be unclear, Black always draws by taking the appropriate form of opposition.

After these introductory examples our first question can be largely answered: one recognizes the issue of corresponding squares by the fact that there are not many pawn moves still possible and that

there are at least two squares that correspond to each other.

If you have detected two corresponding squares it's usually worth looking for more.

B) Bishop's Pawn and Rook's Pawn vs Rook's Pawn

With the help of this important pawn formation we will examine how the possibility of further pawn moves affects a system of corresponding squares. Our starting point is a position that is familiar from Chapter 5 (5.10 = 12.08). In order to understand its system of corresponding squares it is necessary to deal with positions in which the h-pawn is far-advanced. Due to the dangers of a possible stalemate, the f-pawn shouldn't be pushed forward too early, and because of this the analysis of corresponding squares makes sense. We start with the pawn at h3:
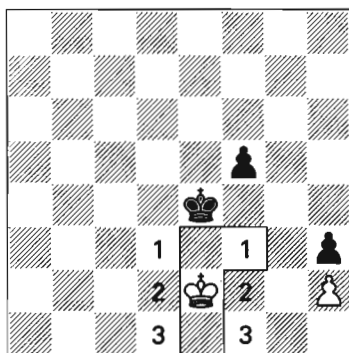
12.05 =/=
C.Rösch – V.Mast (colours changed)
Lingen 1995

This position is drawn, whoever is to move. Key squares are e3-e1 plus f3 and

corresponding squares are d3-d1=1-3= f3-f1. There are no further corresponding squares because one can defend two key squares that are next to each other (e3, f3) by simple oscillation. In that way it's not important that White to move loses the vertical opposition. It follows that the h-pawn shouldn't be pushed to h3 too early.

1 ♔f2! ♔d3

The game concluded 1...f4 2 ♔e2! ♔f5 3 ♔f3 ♔e5 4 ♔e2 ♔e4 5 ♔f2! f3 6 ♔e1 ♔e3 7 ♔f1! ½-½.

1...♔d4!? 2 ♔e2! = (2 ♔g3? ♔e3! 3 ♔xh3 f4 4 ♔g2 ♔e2! –+; 2 ♔f3? ♔d3! –+).

2 ♔f3! ♔d2 3 ♔f2!

3 ♔f4? ♔e2! 4 ♔xf5 ♔f3! –+.

3...♔d1 4 ♔f1! =

Now to a pawn at h4:
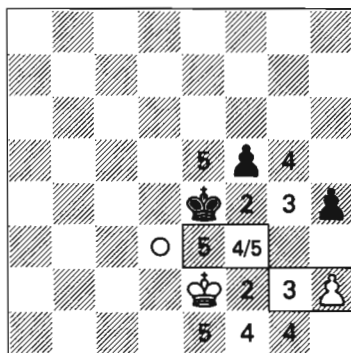
12.06 (e2=1=e4) –/=
A.Khalifman – B.Gulko
(colours changed)
Erevan 1996

Obviously the key squares are e3, f3 and g2, h2. As we know from 12.05, the d3-square plays a special role (with kings at d3 and f3, ...h3! wins). We haven't continued our numbering on the d-file as White doesn't have to take the opposition

there but can also counter-attack via f3. If the kings fight for the third rank on the queenside then White can only save himself by taking the (distant) opposition, provided he is more than one file ahead in the race to the kingside.

1 ♔f2 ♔d3! 2 ♔f3 h3!

2...♔d2? 3 ♔f4 =.

3 ♔f2

3 ♔f4 ♔e2! 4 ♔xf5 ♔f3! –+.

3...♔d2! –+ 0-1

Notice also that the position with w♔f3 v b♔g5 is a reciprocal zugzwang.

Position 12.06 actually occurred in Vaganian-Sunye, Rio de Janeiro IZ 1979 and Boey-Hamann, Skopje OL 1972.

With a pawn at h5 the situation is as follows (the position corresponds to a study by Maizelis from 1955):
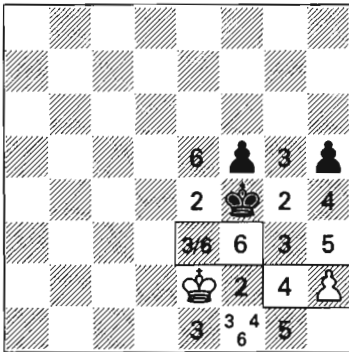
12.07 (e2=1=f4)　　　　　–/=
H.Ree – Z.Ribli
(colours and wings changed)
Amsterdam 1973

The numbering explains itself by the black option for a transition into 12.06 by ...h4. Since there only the opposition draws, one has to avoid it here. Thus White is in zugzwang and loses:

1 ♔f2 ♔e4 2 ♔e2 h4! 3 ♔f2 ♔d3! 4 ♔f3 h3! 5 ♔f2 ♔d2! 6 ♔f3 ♔e1! 7 ♔e3 ♔f1! 8 ♔f3 ♔g1! 9 ♔g3 f4+! 0-1

If Black is to move, he can't make any progress since White has the 'anti-opposition':

1...♔e4 2 ♔f2! ♔f4 3 ♔e2! ♔g4 4 ♔f2! ♔h4 5 ♔f1

5 ♔g1? ♔h3! 6 ♔h1 ♔g4! 7 ♔g2 h4 –+ (12.06).

5...♔h3 6 ♔g1! f4 7 ♔h1! ♔g4 8 ♔g2! h4 9 ♔f2! =

As a crowning finale we now discuss the situation with a pawn at h6 in more detail:
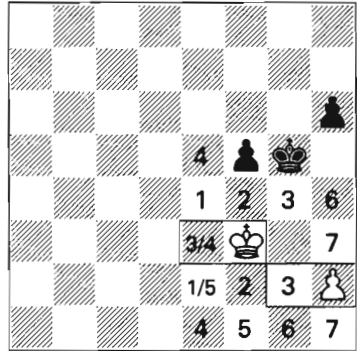
12.08/5.10 (f3=4,5,6, g5=5)　=/=
R.Vaganian – J.Sunye Neto
Rio de Janeiro IZ 1979

From 5.10 and 12.05-12.07 we know that White has to take the opposition on the second rank after the h6-pawn has moved to h4. Since this takes another two moves (an even number), White also now has to get the opposition on the second rank. It follows e4-g4=1-3=e2-g2. After ...♔h4 either the passive ♔g1 or ♔f3 (or ♔f4), with a counter-attack against the f-pawn, is possible. Also after ...♔g4 White still has a trump in the threat of a counter-attack after ♔e3. It follows that the square g5=5 corresponds with the squares f3, e2 and f1:

1 ♔e2!! =

The obvious 1 ♔g3?, as played in the game, fails to 1...h5! 2 ♔f3 h4! —+ (12.06).

With Black to move, the position is evidently a draw:

1...h5

1...♔h4?! 2 ♔f4! =.

2 ♔g3

2 ♔e3 ♔g4 3 ♔f2! = (12.07).

2...♔f6 3 ♔f4 ♔e6 4 ♔e3

4 ♔g5? ♔e5! 5 ♔xh5 f4 —+.

4...♔e5 5 ♔f3

5 ♔d3 ♔f4 6 ♔e2! =.

5...h4 6 ♔e3! = (12.06)

C) Complicated Cases

Now that we have focused on the determination of corresponding squares, we would now like to look at some studies that deal with the issue of manoeuvres.
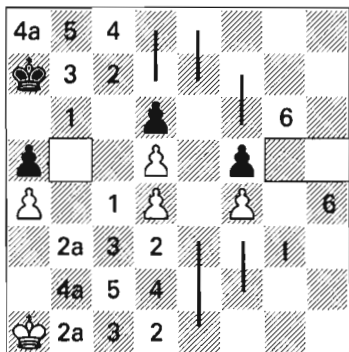
12.09 (a7=2a)   +/=
Em.Lasker & G.Reichhelm
Chicago Tribune, 1901

Key squares are b5, g5 and h5. The shortest way for White is c4-d3-(e2/e3)-(f2/f3)-g3-h4. On the black side only b6-c7-(d7/d8)-(e7/e8)-(f7/f6)-g6 isn't longer. The drawn lines indicate that the squares e1-e3 correspond to the squares

d7-d8 (and also f2/f3 correspond to e7/e8 and g3 corresponds to f6/f7). On the kingside Black has a surplus of corresponding squares because of which we there only number h4=6=g6 (once the black king is on the kingside he also has the option of counterplay against the white f-pawn, so White can't reverse his tracks once he has gone to the kingside). For a determination of a system of corresponding squares on the queenside therefore only the distance to the key squares on the kingside is of interest. In other words: squares on the d-file for White have to correspond with squares on the c-file for Black. Thus: c4=1=b6, d3=2=c7, c3=3=b7, d2=4=c8, c2=5=b8. The remaining squares on the b-file and on the first rank for White don't create any new threats and can therefore be assigned numbers that we have already used. The squares on the b-file will be assigned an additional 'a' because Black is able to defend himself accordingly on the c-file as well as on the a-file. We also add a7=2a and a8=4a for Black. a1-a3 will not be numbered since they correspond with b7 as well as with b8.

How does play now proceed in the determined system? The defender (Black) always has to be on the corresponding square. If this is, as in this case, not possible, the opponent's threat (here to occupy b1=2 or b2=4) has to be parried. Black to move manages this by either 1...♔b7 or 1...♔b8. The attacker (White) also has to occupy the corresponding square in order to win or he has to move in such a way that the defender isn't able to get to the corresponding square. Thereby the attacker should try to get closer to the key squares and at any rate he shouldn't move away from them. If White is to move, he therefore moves to a corresponding square of a7:

1 ♔b1!

1 ♔b2? ♚a8!! =; 1 ♔a2? ♚b7 2 ♔b3 ♚c7 3 ♔c3 ♚b7! 4 ♔d3 ♚c7! 5 ♔e2 ♚d7 6 ♔f3 ♚e7 7 ♔g3 ♚f7 8 ♔h4 ♚g6! =.

1...♚b7 2 ♔c1! ♚c7 3 ♔d1! ♚d8 4 ♔c2!

Black would need wings to reach the corresponding square, b8!

4...♚c8 5 ♔d2! ♚d7 6 ♔c3! ♚c7 7 ♔d3! ♚b6 8 ♔e3 +−

White penetrates on the kingside.
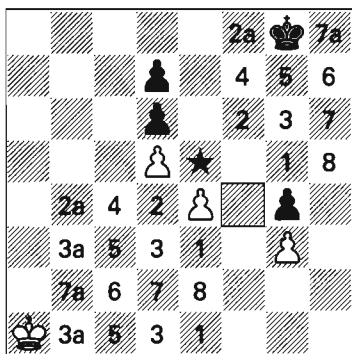
12.10 (g8=3a)   **+/=**
Locock
British Chess Magazine, 1892

In addition to the obvious key square f4 with the pair of corresponding squares e3=1=g5 we have a second pair d4=2=f6 because of White's threat to play e5. There are no further key squares on the queenside because of the possible counter-attack against e4. Connecting squares are d3=3=g6. c4, c3, c2, d2 and e2 (=4-8) correspond to f7, g7, h7, h6 and h5. The remaining corresponding squares accordingly will be numbered with already used numbers. Due to the aforementioned counter-attack there are no clear corresponding squares on the a-file and if White moves to the f-file Black only has to oscillate between g6 and h6, which

again isn't clear-cut. If Black is to play, he draws by **1...♚g7** or **1...♚h7** while if it is White's move, he wins as follows:

1 ♔b1!

1 ♔b2? ♚h8!! 2 ♔b3 ♚g8! 3 ♔c3 ♚g7! 4 ♔d4 ♚f6! =; 1 ♔a2? ♚g7 2 ♔b3 ♚g6 = (2...♚f6? 3 ♔c2! +−).

1...♚g7 2 ♔c1! ♚g6 3 ♔d1! ♚g5 4 ♔c2!

White exploits the fact that Black can't move to h7. After 4 ♔e1?! ♚g6 White has to return.

4...♚h6 5 ♔d2! ♚h5 6 ♔c3!

Black had to leave g7 unwatched. 6 ♔e2?! ♚h6 again doesn't help White.

6...♚g6 7 ♔d3! ♚f6

7...♚g5 8 ♔e3! ♚g6 9 ♔f4! ♚h5 10 ♔f5 +−.

8 ♔d4! ♚g6 9 e5! ♚f5

9...dxe5+ 10 ♔xe5! ♚f7 11 ♔f5! ♚e7 12 ♔xg4! ♚d6 13 ♔f5! +−.

10 exd6! ♚f6 11 ♔e4! ♚g5 12 ♔e5! ♚g6 13 ♔f4! +−

■ Of course d6 and d7 are also key squares because of which the pairs of corresponding squares c7-e7 and c8-e8 arise. White can also use them by 1 ♔b2? ♚h8!! 2 ♔b3 ♚g8! 3 ♔b4 ♚f8! 4 ♔b5. It just doesn't do him any good.   .
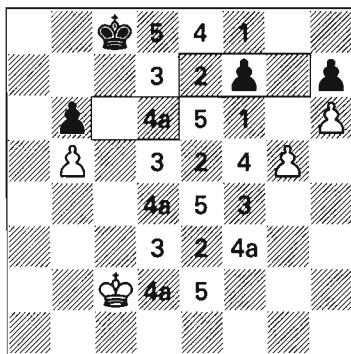
12.11   **+/=**
W.Bähr, 1934

Key squares are c6, d6 and e7-g7. That leads to the pairs of corresponding squares f6=1=f8, e5=2=e7 and d5=3=d7. Behind them f5=4=e8 is the connecting square to 1,2, and e4=5=d8 makes it possible to move to 2-4. With the other squares one has to watch out for a few peculiarities. If Black has to defend on the first two ranks then the numbering can be extended (as in the diagram). However, there is a possibility of a counterattack, so Black wins with kings at d2 and d6 or e2 and e6, whoever is to move.

1 ♔d2! ♚d8

1...♚c7 2 ♔e3! +–.

2 ♔e2! ♚e8 3 ♔f3! ♚e7 4 ♔e3! ♚e8

4...♚d6 5 ♔d4! ♚e6 6 ♔e4! and White wins.

5 ♔d4! ♚d8 6 ♔e4! ♚e8 7 ♔f5! ♚e7 8 ♔e5! ♚d7 9 ♔f6! ♚e8 10 ♔g7! +–

■ The following studies are closely related to the present one: Bähr 1936: w♔c2,△b4,g4,h5; b♚e8,△b5,f6,h6 (*ECE* 468), Ebersz 1935: w♔b1,△a3,g5,h6; b♔f8,△a4,f7,h7 (*ECE* 469), Ebersz 1935: w♔e1,△a4,g5,h6; b♚e8,△b6,f7,h7 (*ECE* 470) as well as Bähr 1934: w♔d2,△b4, c5,g5,h6; b♔d8,△b7,b5,f7,h7 (*ECE* 609). Portisch & Sarközy take these studies in order to discuss articles by Ebersz and Barath (*Magyar Sakkelet* 1931, April 1954) about the role of 'geometrical opposition' in the theory of corresponding squares (p.9ff, No. 27-31). The interested reader should try to find out in which of the positions given above opposition plays a role and in which it doesn't.
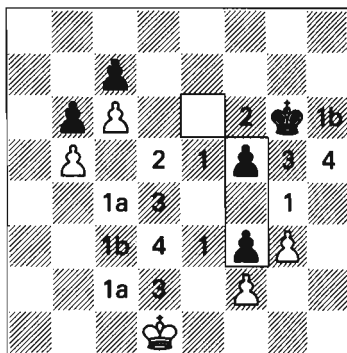
12.12 (g6=1a)   +/=

M.Zinar, 1983

Key squares are f3-f5 and e6, except that ♔e6 leads to nothing if Black is already at g4. It follows e5=e3=1=g4, but one has to be aware of the fact that the position after ♔e3 ♚g4 is even lost. Further we label d5=2=f6 (protects e6 and e5=1), d4=3=g5 and d3=4=h5. Now the adjacent squares on the c-file have to be examined. Since one must bear in mind the possibility of Black playing ...♚g4, they are labelled c4=c2=1a=g6 and c3=1b=h6. Due to the counter-attack there are no corresponding squares on the b-file and Black has several options for the squares on the first rank.

1 ♔c2! ♚h6 2 ♔c3! ♚g6 3 ♔c4! ♚g5 4 ♔d4! ♚h5 5 ♔d5!

5 ♔e3?? ♚g4! –+.

5...♚g4 6 ♔e5! ♚h3

6...♚g5 7 ♔e6! +–.

7 ♔f4! ♚g2 8 ♔e3! +–

Chapter 12 Exercises

Exercises 12.01-12.04 are known to us
from previous chapters. Only their key
squares and corresponding squares have
to be determined.
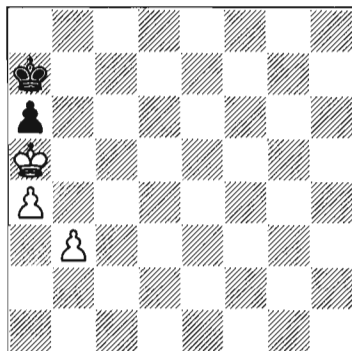
A12.03/A5.09   **/
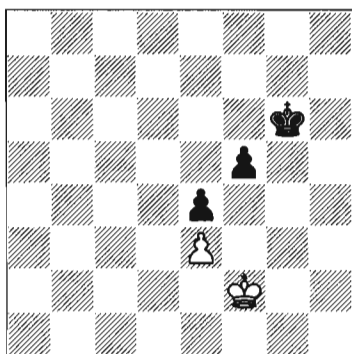
A12.01/4.09   */
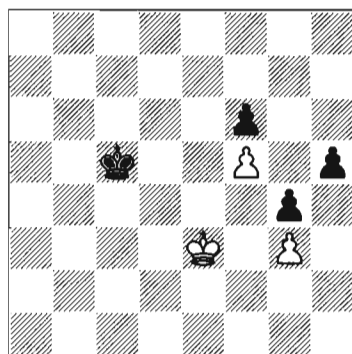
A12.04/6.06   /**
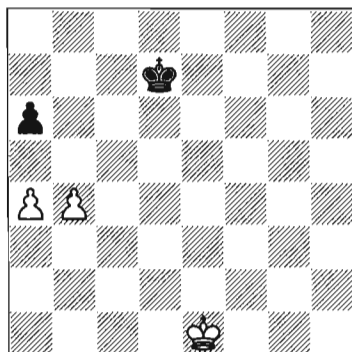
A12.02/A5.08   */
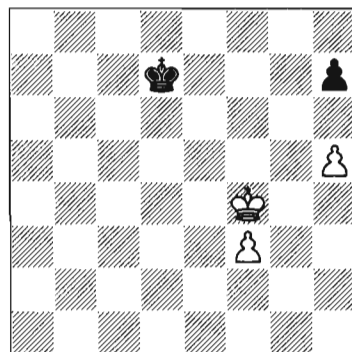
A12.05   /****
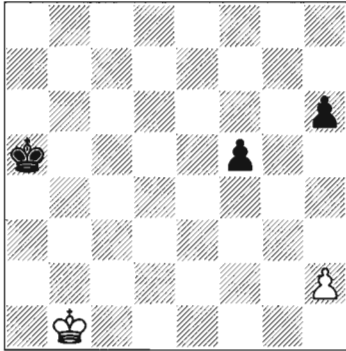
A12.06 /***
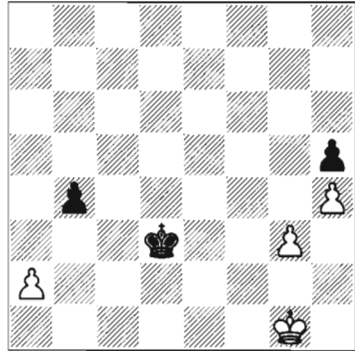
A12.09 /****
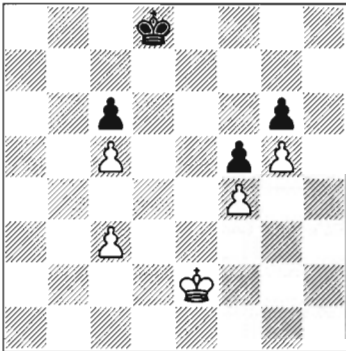
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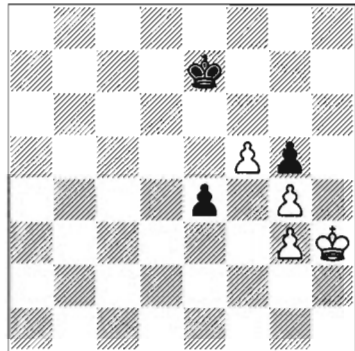
A12.10 ****/
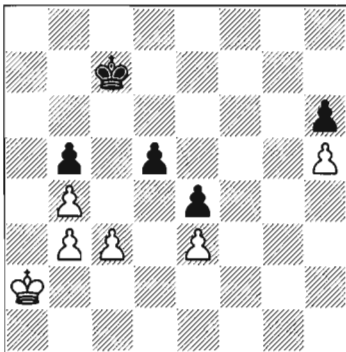
A12.08 ****/
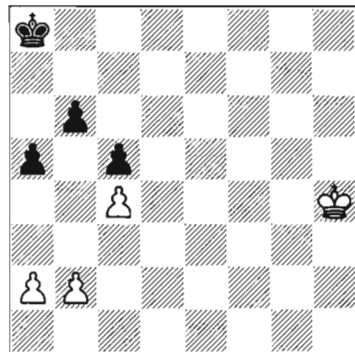
A12.11 *****/

Solutions to Chapter 12 Exercises
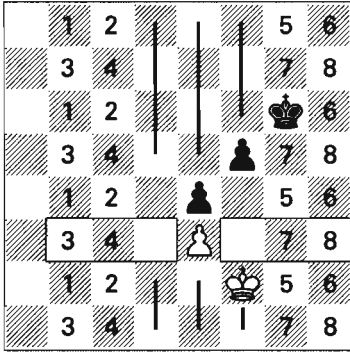
A12.01/4.09 (g6=5)　　　=/+
J.Timman – A.Yusupov
Amsterdam Donner mem 1994

Have you also drawn on the whole board? Key squares are b3-d3 and f3-h3. Shortest ways are h4-g5-f6-(e5/e6)-d5-c4-b4 = h2-g1-(f1/f2)-(e1/e2)-(d1/d2)-c2-b2. It follows that there are no corresponding squares on the d-, e- and f-files (it's sufficient if White stays on the same file, which we have indicated by the lines). If Black steps onto the a-file, a counter-attack against the unprotected f-pawn is possible. The systems of corresponding squares on both wings reach the base line because White can't become active. But a defence on the key squares is possible. A possible continuation is 1 ♔g2! ♔g7 2 ♔g3 ♔f7!? 3 ♔f2! (the seemingly active 3 ♔f4? backfires after 3...♔f6 4 ♔g3 ♔g5 5 ♔f2 ♔h4! –+) 3...♔e7 4 ♔e2 ♔e8 5 ♔e1! ♔d7 6 ♔d1 ♔c7 7 ♔c1! (distant opposition) 7...♔b8 8 ♔b2! ♔b7 9 ♔b3 ♔b6 10 ♔b2! ♔c5 11 ♔c3 ♔d5 12 ♔d2! ♔d6 13 ♔d1! ♔c5 14 ♔c1! ♔b5 15 ♔b1! ♔a5 16 ♔c1 (not 16 ♔a1? f4! and Black wins) 16...♔a4 17 ♔c2! =.
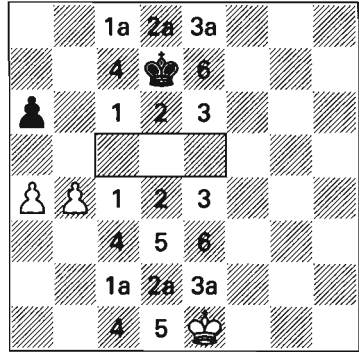
A12.02/A5.08 (d7=5, e1=6)　+/=
W.Bähr, 1936

Key squares are c5, d5 and e5. We number the adjacent squares and the other squares as usual. If the white king is on the first rank, then of course one has to watch out for a counter-attack.
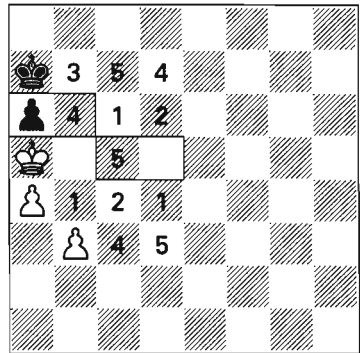
A12.03/A5.09　　　　　+/=
(a5=3 for White and 2 for Black)
After **Réti** and **Mandler** (1929) and
Grigoriev (1930)

This exercise shows how an additional possible pawn move affects the system of corresponding squares of A12.02. Here there is no key square at e5 because of the counter-attack via c5 and b4. Let's

assume that the white king is already at d4. Due to White's spare tempo Black then couldn't play ...♔d6? (b4! with a transition to A12.02 would then win). Instead he would have to protect the two key squares by ...♔c6! (anti-opposition!) in order to move to the corresponding square d6 only after b4. It follows that d4=b4=1 correspond to c6=1, c4=2=d6 and a5=3=b7 (parries the threat ...♔b4 and protects a6, b6). Amongst the other squares, c3=4=d7 (anti-opposition) or b6. (♔c4 can be answered by the stalemate idea ...♔a5. Thus for Black it follows a5=2.) Further d3=5=c7. Of course with some king positions (for example, w♔c3; b♔c5 or w♔d3; b♔d7) the counter ...a5 is possible if Black is able to defend the new key squares.
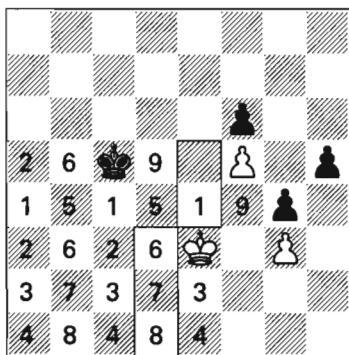
A12.04/6.06 (c5=2=e3)   −/=
Idea by **Grigoriev**, 1934

Key squares are d3-d1 and e4, e5. The squares d5 and d4 are not key squares due to the stalemate idea ♔f4, and d3 of course can't be accessed at once after ♔f4. This stalemate trap is also the reason for the original pair of corresponding squares d5=9=f4. The remaining corresponding squares can be determined as in position 12.04.
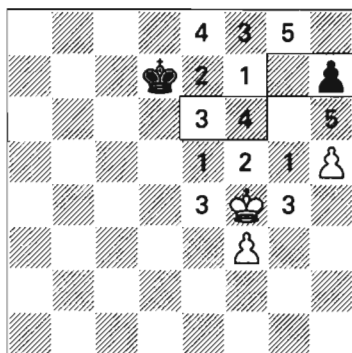
A12.05 (f4=4)   +/=
After **Z.Azmaiparashvili – L.Eolian**, *USSR Spartakiad 1979*

Key squares are e6, f6 and g7, h7. Because White can still play the pawn move f4, Black shouldn't take the opposition as in 12.06, but has to avoid it. e5=g5=1=f7, f5=2=e7, e4=g4=3=f8, f4=4=e8 and finally h6=5=g8 are the pairs of corresponding squares.
1...♔e8!
1...♔e6? 2 ♔g4! ♔f6 3 f4! ♔g7 4 ♔g5! +− (12.06).
2 ♔f5 ♔e7!
2...♔f7? brings us to a position actually from Azmaiparashvili-Eolian, which concluded as follows: 3 ♔g4? (3 f4 ♔e7 4 ♔e5! ♔f7 5 ♔d6! ♔f6 6 h6! +−) 3...♔f6? (3...♔f8 =) 4 ♔f4?! (4 f4! +−) 4...♔f7 (4...♔e6 5 ♔g4! +−) 5 ♔f5? (5 ♔e5 +−) 5...♔e7! 6 ♔e5 ♔f7! 7 ♔d6 ♔f6! 8 ♔d7 ♔f7 9 h6 ♔g6! 10 f4 ♔f7! 11 f5 ♔f6 ½-½.
3 ♔e5 ♔f7! 4 f4 ♔e7! = (12.06)

A12.06 Instructive example
Black has to take the (distant) opposition in order to capture the corresponding squares:
1...♔b5! 2 ♔c1
2 ♔b2 ♔b4! −+.
2...♔c5! 3 ♔d1 ♔d5! 4 ♔e1 ♔e5! 5

&f1 h5! 6 &e1 h4! (12.06) 7 &f1 &d4! 8
&e2 &e4! 9 &f2 &d3! 10 &f3 h3! –+
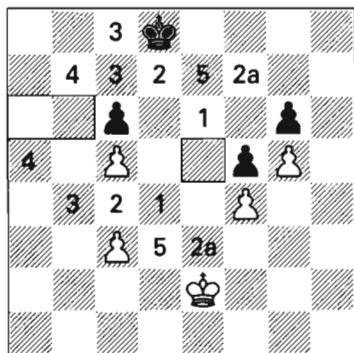
A12.07   =/=
V.Filippov – I.Zakharevich
Russian Ch (Elista) 1996

Key squares are a6, b6 and, due to the
spare move c4, also e5. Thus d4=1=e6
and along the shortest way d4-c4-b4-
a5=1-4=e6-d7-(c7/c8)-b7. There are also
d3=5=e7 and e3=2a=f7.

1...&e8!
Brilliant defence! Black recognizes
the system of corresponding squares.

2 &d2
2 &d3 &e7! 3 &c4 &d7! 4 &d4 &e6!
5 &c4 &d7! 6 &b4 &c7 7 &a5 &b7!:
  a) 8 c4 &a7! 9 &b4 &b7 (9...&a6? 10
&c3! &a5 11 &d4 &b4 12 &e5! &xc4
13 &f6 +–) 10 &c3 &c7 11 &d4 &d7 12
&e5 &e7! =.
  b) 8 &b4 &c7 = (but not 8...&a6? 9
&c4! &a5 10 &d4 &b5 11 &e5 +–).

2...&d8 3 &c2 &d7 4 &b3 &c7
4...&e6 5 &c4 (5 &a4?! runs into a
counter-attack: 5...&d5! 6 &b4! &e4! 7
&a5! &xf4 8 &b6! &xg5 9 &xc6! f4 10
&d6 f3 11 c6! f2 12 c7! f1♕ 13 c8♕!
♕d3+ 14 &e5 ♕f5+ 15 ♕xf5+! gxf5! 16
c4 f4 =) 5...&d7! =.
5 &b4 &c8! ½-½
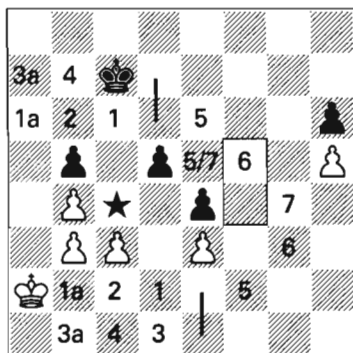
A12.08 (c7=3)   +/=
M.Euwe
Tidskrift för Schack, 1924

Here the advance c4 plays the decisive
role. Since Black has to take twice at c4,
e4 isn't protected any longer which leads
next to f5 to new key square f4 on the
kingside. On the queenside a pawn-
structure of the type 'don't touch me'
arises, leading to the pair of correspond-
ing squares c3=b5. Then the shortest
ways are d2-(e1/e2)-f2-g3 = c6-(d6/d7)-
(e5/e6)-f5 for Black. By this we first de-
termine the corresponding squares on the
queenside: d2=1=c6. Connecting square
to 1 and c3 or b5 is c2=2=b6. Further,
d1=3=c7 and c1=4=b7 both have the
same distance to the shortest way. b1 and
b2 don't bring anything new and in addi-
tion to c7 and c6 are also corresponding
squares to a7 and a6. On the kingside we
have f2=5=(e5/e6) plus g3=6=f5 and
g4=7=e5.

**1 &b1! &b7 2 &c1! &c7 3 &d1! &d6
4 &c2! &c6 5 &d2! &b6**
  5...&d6 6 c4! dxc4 7 bxc4! bxc4 8
&c3! &d5 9 b5! &c5 10 b6! is winning
for White.
  6 &e2 &c6 7 &f2! &d6 8 &g3! &e5 9
&g4! &e6 10 &f4! &f6 11 c4! dxc4 12
bxc4! bxc4 13 &xc4! c3 14 &d3! and
White wins.
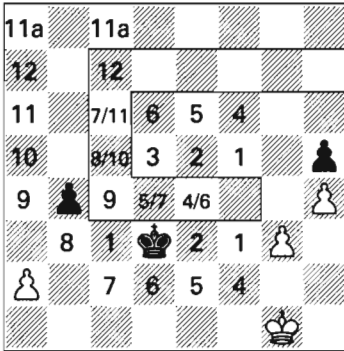
A12.09 (d3=3)　　　　　/=
R.Réti, 1929

Black shouldn't be afraid of an exchange at g4 as long as his king is close enough. If White then uses the h-pawn as a deflecting force, the black king, after capturing the pawn, gets back just in time to the safe square c8. But he has to stay in the square of the h4-pawn to prevent a breakthrough. We conclude that White can only win if he captures the b-pawn first. Thus he has to advance to the key squares c4-f4. The b-pawn covers the c3-square, so the numbering along the key squares only takes place on three files. f3-d3=1-3=f5-d5 and, moving further back, f2-d2=4-6=f6-d6 (the squares on the white baseline aren't corresponding squares because White can't approach from them). If these were all the corresponding squares, Black would lose because he couldn't get back to his system in time. However, one also has to be aware of the possible counter-attack against the a-pawn. Right now Black is short of exactly one tempo. He can queen the b-pawn in six moves, but White on the other hand queens in five moves with check on g8, while ...hxg4 costs another tempo. But this tempo could be saved if the white king were at f3. Therefore Black can also defend himself on the key squares. d4 gets the 5 and e4 the 6. Further e4 is a corresponding square to f2 and thus gets another 4 and d4 is a corresponding square to c2 and thus gets a 7 like c2. We would like to emphasize that these corresponding squares only exist because of the counter-attack. The control of f4 by the g-pawn would normally exclude a defence on the key squares. Moreover, White can penetrate the black position via b3, which explains the remaining corresponding squares.

1...♔d4!!

1...♔c3? 2 g4! ♔b2 3 g5! +−.

After 1...♔e4? 2 ♔f2! ♔d4 the black king is too far away from the h-pawn: 3 g4! hxg4 4 ♔g3! ♔e5 5 ♔xg4! ♔f6 6 ♔f4 +−.

2 ♔f2

2 ♔g2 ♔e5! 3 ♔f3 ♔f5! 4 g4+ hxg4+! 5 ♔g3 ♔g6 6 ♔xg4 ♔h6! 7 ♔f4 ♔h5! =; 2 ♔f1 ♔e5 3 ♔e1 ♔f5 =.

2...♔e4! 3 ♔e2 ♔d4! 4 ♔f3

4 ♔d2 ♔e4! 5 ♔c2 ♔d4! 6 ♔b3 ♔c5! 7 ♔a4 ♔c4! 8 ♔a5 ♔c5! 9 ♔a6 ♔c6! 10 ♔a7 ♔c7! =.

4...♔c3! 5 g4 hxg4+! 6 ♔xg4 ♔b2! 7 h5 ♔xa2! =
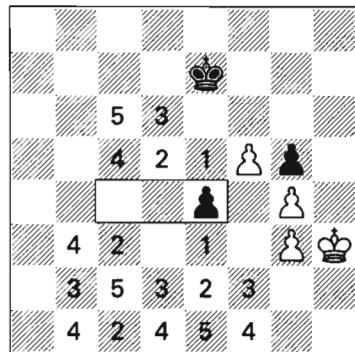
A12.10　　　　　　+/=
V.Halberstadt
L'Echequier de Paris, 1954

Both kings can only manoeuvre within the square of the opponent's passed pawn. Furthermore Black has to watch out for a sacrifice of the f-pawn that would be favourable for White. Obvious key squares are d4 and e4. The concluding pairs of corresponding squares are e3=1=e5 (d5 isn't sufficient because of f6) and c3=2=d5 with the connecting square d2=3=d6. It follows at once e2=2. Next, one would like to number the c2-square but to do that one would have to calculate many variations because with c5, c6 and e5 there are three possible corresponding squares for Black. Therefore it is better to deal with the squares on the b-file since Black isn't allowed to step on them. Let's therefore assume the white king is at c3 and the black king is at d5. After ⌂b4 Black could *a priori* think about ...⌂d6 or the counter-attack ...⌂d4, thus against b3=4 there only remains c5 because ...⌂d6 fails to ⌂b4 and ...⌂e5 or ...⌂c6 to ⌂c4. From this it also follows c2=5=c6, after which all numbers are assigned. Now we can finally assign the other squares with familiar numbers. One can conclude from the picture that now exists that if Black is to move, he draws by 1...⌂d6 or 1...⌂d7, while if it is White's move, he wins as follows:

1 ⌂g2! ⌂d7 2 ⌂f1!

2 ⌂f2? ⌂d6! 3 ⌂e2 ⌂d5! 4 ⌂d2 ⌂d6! 5 ⌂c2 ⌂c6! 6 ⌂b3 ⌂c5! 7 ⌂c3 ⌂d5! 8 ⌂b4 ⌂d4! (Black's defence is based on this counter-attack and thus also the system of corresponding squares) 9 ⌂b3 ⌂c5!? =.

2...⌂c6 3 ⌂e1! ⌂c5 4 ⌂d1! ⌂c6

4...⌂d5 5 ⌂e2! ⌂e5 6 ⌂e3! ⌂d5 7 f6! ⌂e6 8 ⌂xe4! ⌂xf6 9 ⌂d5! +–.

5 ⌂c2! ⌂c5

5...⌂d6 6 ⌂d2! ⌂d5 7 ⌂c3! (7 f6? ⌂e6! 8 ⌂e3 ⌂xf6! 9 ⌂xe4 ⌂e6! =) 7...⌂c5 8 f6! +–.

6 ⌂b3! ⌂d6 7 ⌂b4!

7 ⌂c4?! ⌂e5 doesn't help White. From that one can see that there is something special about the key square c4, because now White has to try again by 8 ⌂b3!.

7...⌂d5 8 ⌂c3! ⌂c5

8...⌂e5 9 ⌂c4! +–.

9 f6! ⌂d6 10 ⌂d4! ⌂e6 11 ⌂xe4! ⌂xf6 12 ⌂d5! +–

A12.11 N.Grigoriev, *Shakhmaty v SSSR,* 1938

You have no doubt realized that the starting position doesn't as yet have much to do with corresponding squares. Black just threatens ...a4 with equality. White can only prevent that by playing a4 himself.

1 a4! *(D)*
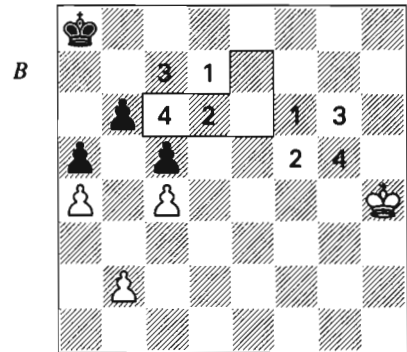
Only now does the system of corresponding squares become interesting. White's spare tempo makes the determination of the key squares more difficult. They are e6 and e7. Due to the spare tempo the adjacent corresponding squares have to be at a knight's distance (anti-opposition). Thus pairs are f6=1=d7, f5=2=d6, g6=3=c7 and g5=4=c6. Due to Black's possible counter-attack against c4 there are no corresponding squares on the h-file and the eighth rank. One also has to consider that Black at once gets an

equal position if he gets the vertical opposition on the seventh or sixth rank.

1...♚b7

1...♚b8 2 ♚g5 ♚c8 3 ♚f5! (3 ♚f4? ♚d7! =) 3...♚d7 4 ♚f6! ♚d6 5 b3! +−.

2 ♚h5!!

2 ♚g5? ♚c6! 3 ♚f5 ♚d6! 4 ♚f6 ♚d7! 5 ♚f7 (5 ♚e5 ♚e7! 6 ♚d5 ♚d7! 7 b3 ♚c7! 8 ♚e6 ♚c6! =) 5...♚d6! 6 ♚e8 ♚e5! =.

2...♚c7

2...♚c6 3 ♚g5! +−.

3 ♚g6! ♚c6 4 b3! *(D)*

4 ♚g7? ♚d6! =.
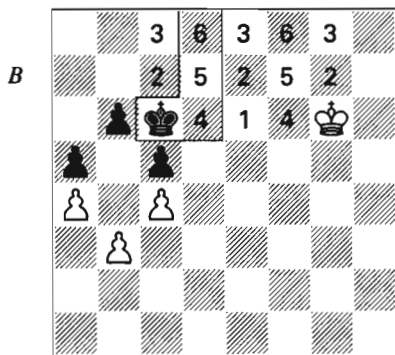
(c6=1=g6)

Now that White has used up his tempo move, the corresponding squares change

considerably. The change is not solely in Black's favour, though, as by ruling out the counterattack against c4, White gains access to squares on the 8th rank. Naturally, White chose a moment to play b3 when the two kings were on corresponding squares in the new system. Now Black cannot prevent White penetrating with his king and winning the b6-pawn.

4...♚c7 5 ♚g7! ♚c6 6 ♚f8! ♚d7 7 ♚f7! ♚d6 8 ♚e8! ♚e5

8...♚c7 9 ♚e7! ♚c6 10 ♚d8! ♚d6 11 ♚c8! ♚c6 12 ♚b8! +−.

9 ♚d7 ♚d4 10 ♚c6 ♚c3 11 ♚xb6! ♚xb3 12 ♚b5! +−

■ Related to this study there is a fascinating story which we would like to repeat in brief, following the illustration by Averbakh: "Nikolai Grigoriev died on 10th October 1938. The present study was published in the October edition of the periodical *Shakhmaty v SSSR* of the same year. Its solution only appeared after the death of the author, in 1939, and in the following version: 1 a4 ♚b7 2 ♚g5 ...". Only in 1985 (thus 47 years after Grigoriev's death!!) was the above correct solution published in *Shakhmaty v SSSR*. *ECE* still says that the position is drawn and the study therefore incorrect. For a pawn ending that looks so easy it is quite unbelievable, don't you think?

13 Thinking Methods to Find the Right Move

In the first 12 chapters we have dealt with the basic ideas and techniques in pawn endings. In this chapter a few thinking methods and fighting methods will be presented. Of course the following reflections do not only make sense in pawn endings. With enough time many pawn endings can be calculated more or less to the end. Now that adjourned games have been virtually abolished, one usually faces a pawn ending with a restricted amount of time. This time must be used in a sensible way. First one should decide how to proceed. Usually it makes sense to make a list of candidates and to include at first all moves that seem to make any sense.

A) Method of Exclusion

But there are also positions in which one can play intuitively according to the motto "if this move doesn't win, the position just isn't won" (positive method of exclusion). We have first chosen such an example (*see next diagram*). [With the following diagrams, imagine that you have only 2 minutes left to the time-control. What is your 40th move?]

Black threatens to create an outside passed pawn on the queenside by ...b6-b5 and thereby to dissolve his weakness. If White doesn't act in a dynamic way he can't win anyway. Therefore Shirov played **1 h4!** (not 1 ♔d3? ♔c5 2 h4 b5! 3 axb5! ♔xb5! 4 h5 ♔c5 5 g4 ♔d5 6 g5 ♔e5 =) and Adams resigned. The key continuation:

13.01 +/

A.Shirov – M.Adams
Las Palmas 1994

1...♔e5
1...♔c4 2 h5! b5 3 axb5! ♔xb5 4 g4! a4 5 ♔d2 ♔c4 6 g5! +–; 1...b5 2 axb5! ♔c5 3 h5 a4 4 ♔d2 ♔xb5 5 g4! +–.
2 ♔d3
2 g4? ♔d5! (2...g6? 3 h5 gxh5 4 gxh5 ♔f5 5 ♔d4 ♔g5 6 ♔c4 ♔xh5 7 ♔b5! +–) 3 ♔d3 (3 h5 ♔e5! 4 ♔f3?! b5! 5 axb5! a4! 6 b6 ♔d6! =) 3...♔e5! 4 ♔c4 ♔f4! 5 g5 ♔g4! 6 ♔b5 ♔xh4! 7 ♔xb6 ♔xg5! 8 ♔xa5 ♔f4 9 ♔b5 g5! =.
2 h5 +–.
2...♔f4
2...♔d5 3 h5 +–.
3 ♔c4 ♔g3 4 ♔b5 ♔xg2
4...♔xh4 5 ♔xb6! ♔g3 6 ♔xa5! and White wins.
5 ♔xb6 ♔g3 6 h5! ♔g4 7 ♔xa5!
♔xh5 8 ♔b4 g5 9 a5! g4 10 a6! g3 11 a7! g2 12 a8♕! g1♕ 13 ♕h8+! is winning for White.

The second example shows a negative method of exclusion:
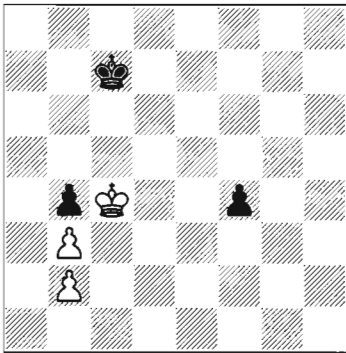
13.02   **=/**
M.Brodsky – S.Sivokho
St Petersburg 1993

Since the white king can't leave the square of the f-pawn, the only choice is between 1 ♔d4 and 1 ♔d3. After 1 ♔d4 ♔d6 2 ♔e4 ♔c5 3 ♔xf4 ♔d4 White is in zugzwang and loses. There remains only:

1 ♔d3!

1 ♔d4? ♔d6! 2 ♔e4 ♔c5! 3 ♔xf4 ♔d4! 4 ♔f5 ♔d3! 5 ♔e5 ♔c2! 6 ♔d4 ♔xb2! 7 ♔c4 ♔a3! –+.

1...♔b6

An analogous way of thinking now determines...

2 ♔d4!

...as the only remaining move.

½-½

Black is unable to make any progress: 2...♔c6 3 ♔c4! ♔d7 4 ♔d3! ♔d6 5 ♔d4! ♔e6?! 6 ♔e4! f3! 7 ♔xf3 ♔d5 8 ♔e3 (8 ♔f4?? ♔d4! –+) 8...♔e5! =.

B) The Opponent's Possibilities

Here we distinguish between two basically different cases. If we notice that the opponent has an obvious plan or a direct threat we of course have to avoid these possibilities. Looking for the opponent's options might also lead to the conclusion that he hardly has any good moves. This might open up the opportunity to get him in zugzwang. Let's start with the first case:
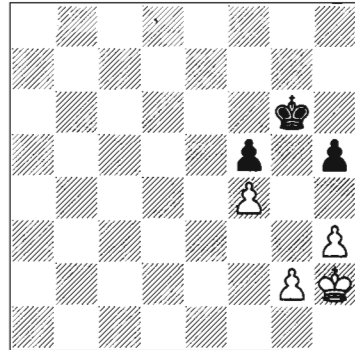
13.03   **+/=**
E.Geller – R.Kholmov
USSR Ch (Leningrad) 1963

It was actually Black's move in the game, but we shall first consider what would happen with White to play. Black threatens to close the kingside with ...h4. A later exchange with g3 would only lead to a draw. How can we render this threat innocuous?

1 g3!

Other moves fail: 1 ♔g3? ♔f6 2 ♔h4 (2 ♔f3 h4! =) 2...♔g6! 3 g3 ♔h6! =; 1 ♔g1? h4! =; 1 h4? ♔f6 2 ♔g3 ♔e6 3 ♔f3 ♔d5 4 ♔e3 ♔c4 =.

1...♔f6 2 ♔g2 ♔e7 3 ♔f2 ♔d6 4 ♔e2

The decisive tempo move! Because of the reserve tempo h3-h4, c4 and d4 are key squares. Taking into account the threat g4, the shortest routes are c5-d5-e6 and d3-e3-f3, giving rise to the correspondences c5-d3, d5-e3 and e6-f3. Further back, the squares e2 and f2 both

correspond to d6, so White has a spare square on the second rank.

4...♔d5 5 ♔e3! ♔c5

Black covers the key square d4, but he moves too far away from the kingside, so that the advance g4 wins. 5...♔e6 6 ♔d4! ♔d6 7 h4! +−.

6 ♔f3! ♔d5 7 g4! hxg4+ 8 hxg4! fxg4+

8...♔e6 9 g5! +−.

9 ♔xg4! ♔e6 10 ♔g5! ♔f7 11 ♔f5! and wins.

In the game, Kholmov resolved the situation on the kingside, so as to gain the opposition without any trouble:

1...h4! 2 ♔g1 ♔f7 3 ♔f1 ♔f6 4 ♔f2 ♔f7! *(D)*

4...♔e6? 5 g4 hxg3+ 6 ♔xg3! ♔f6 7 ♔f3 ♔g6 8 ♔e3! ♔h5 9 ♔d4! +−.

W
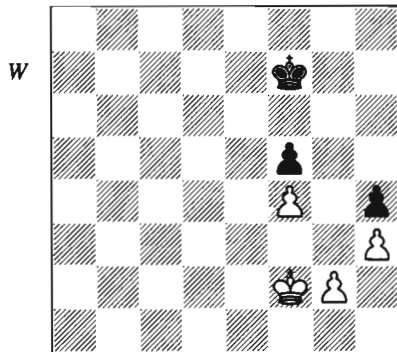
5 ♔e3 ♔e6

On the kingside it is sufficient for Black to occupy the same file (because of his control of e4). In the battle on the c- and d-files for the key squares c5, d5 and e5, it is necessary to maintain the opposition.

6 ♔e2 ♔e7! 7 ♔d1 ♔d7!

7...♔e6? 8 ♔c2! +−; 7...♔d6? 8 ♔d2! +−.

8 ♔d2 ♔d6 9 ♔e2 ♔e7 10 ♔d3 ♔d7!
½-½

In 1898, Neustadtl (*ECE* 1204) created the position w♔e4,△f5,g4,h4; b♔d6,△f6, h6 in which there is in addition to the win shown above a possible win by moving to the queenside: 1 ♔d4 ♔c6 2 ♔c4 ♔d6 3 ♔b5 +−.

Now we proceed to the second case:
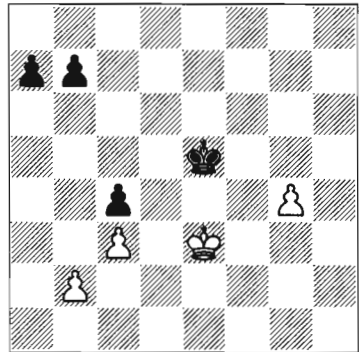
13.04　　　　　　　　　　　　　=/

R.Fischer – A.Bisguier
USA Ch (New York) 1959/60

If Black moves his king, then White's king can advance, so Black has to move his pawns forward, but this makes them more vulnerable. Fischer decided on a wait-and-see strategy:

1 ♔f3!?

1 g5?! ♔f5! 2 ♔d4 ♔xg5! 3 ♔xc4 ♔f6 =.

1...a5!

1...b5? 2 ♔e3! a6 3 g5! ♔f5 4 ♔d4! ♔xg5 5 ♔c5! +−; 1...♔f6? 2 ♔f4! ♔g6 3 ♔e5! ♔g5 4 ♔d6! ♔xg4 5 ♔c7! b5 6 ♔c6 ♔f5 7 ♔xb5! ♔e4 8 ♔xc4! +−.

2 ♔e3!?

2 g5 ♔f5 3 ♔e3 ♔xg5 4 ♔d4 ♔f4 5 ♔xc4 ♔e3 6 ♔b5 ♔d3 7 ♔xa5 ♔c2! =.

2...a4!

Bisguier defends ingeniously. By moving his a-pawn forward, he makes it very difficult for White's king to capture

the pawns. At the same time he prepares a break with ...b5-b4, so the white king is confined to the zone a5-f5-f1. Not 2...b5?, in view of 3 g5! b4 4 g6! bxc3 5 bxc3! ⬧f6 6 ⬧d4! +−.

3 g5

For a long time we thought that White could win with 3 ⬧f3!?; for example, 3...b6? 4 ⬧e3! b5 5 g5 b4 6 cxb4! c3 7 ⬧d3! cxb2 8 ⬧c2! +− or 3...b5? 4 ⬧e3 (4 g5?? b4! 5 cxb4 c3! 6 bxc3 a3! −+) 4...b4 5 cxb4! c3 6 ⬧d3! cxb2 7 ⬧c2! a3 8 g5 +−. However, Hiarcs 7.32 using the endgame tablebase ⬧+2⬧ v ⬧+⬧ discovered 3...⬧f6!! 4 ⬧f4 ⬧g6! 5 g5 ⬧g7 6 ⬧f5 ⬧f7! 7 ⬧e5 ⬧g6! 8 ⬧d5 ⬧xg5! = (see the game).

3...⬧f5! 4 ⬧d4

4 g6 ⬧xg6! 5 ⬧d4 ⬧f5 6 ⬧xc4 ⬧e4 7 ⬧b5 ⬧d3 8 ⬧xa4 ⬧c4!? 9 ⬧a3 b5! 10 ⬧a2 b4! =.

4...⬧xg5! 5 ⬧xc4 ⬧f4! 6 ⬧b4 ⬧e3! 7 ⬧xa4 ⬧d2! 8 ⬧b3 ⬧d3

8...⬧c1 =; 8...⬧d1? 9 ⬧c4! ⬧c2 10 b4 +−.

9 c4 ⬧d2! 10 ⬧a4 ⬧c2! 11 ⬧a3

11 b4 ⬧c3 12 c5 ⬧d4! 13 ⬧b3 ⬧d5! 14 ⬧c3 b6! =; 11 b3 ⬧d3 12 ⬧b4 ⬧d4 13 c5 ⬧d3! 14 ⬧a5 ⬧c3! 15 ⬧a4 ⬧d3! =.

11...⬧d3 12 ⬧b3 *(D)*
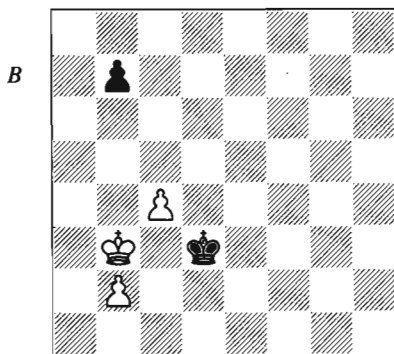
12...⬧d2!!

The game instead finished 12...b6? 13 ⬧b4! ⬧c2 14 ⬧a3! ⬧d3 15 ⬧b3 ⬧d2 16 ⬧a4 ⬧c2 17 b4 1-0.

13 c5 ⬧d3! 14 ⬧b4 ⬧c2 15 ⬧b5 ⬧d3! 16 ⬧a5 ⬧d4! 17 ⬧b6 ⬧c4! 18 b3+ ⬧b4! =

C) Fighting Methods

In this respect many pawn endings don't offer much, especially when the pawn-structure isn't fixed, but even here there is still something one can do:
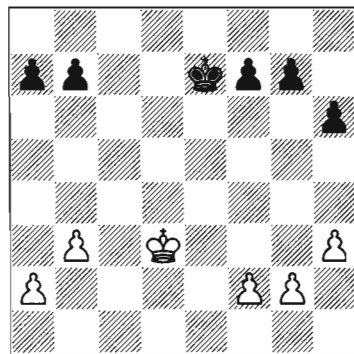
13.05   **=/=**
V.Jansa – E.Prandstetter
Czechoslovak Ch (Prague) 1986

Though in this nearly symmetrical position White is a little bit better due to his advantage in space, a path to victory can't be detected. We have already seen that first the king should advance as far as possible, so the first move is quite obvious:

1 ⬧d4

Black plays according to the same motto:

1...⬧d6

However, it's not so easy now to find a promising plan for making progress. The list of candidates is long (nearly every

pawn move can be considered) but which one bothers the opponent most? Jansa makes a good choice with the h-pawn. Perhaps he might threaten h5 himself and if Black plays ...h5, he can add some spice by f3 and g4.

2 h4!?

Black also has a great choice, but he decides to prevent the constant menace of h4-h5.

2...h5

2...g6 3 g4 b6 4 a4 h5 5 gxh5 gxh5! 6 b4. Now it's a difficult situation for Black, which he solves best by clearing up the position on the queenside immediately:

a) 6...a6? 7 ♔e4! ♔e6 8 ♔f4 f6!? (8...♔d5 9 ♔g5! +–; 8...♔f6 9 b5 a5 10 f3! +–) 9 ♔e4! b5 10 axb5! axb5 11 f3! ♔d6 12 ♔f5! ♔d5 13 ♔g6!! (13 ♔xf6? ♔c4! 14 f4 ♔xb4! 15 f5 ♔c3! 16 ♔e5 b4! 17 f6 b3! 18 f7 b2! 19 f8♕ b1♕! 20 ♕c5+ ♔d3! 21 ♕d4+ ♔e2! 22 ♕e4+ ♕xe4+! 23 ♔xe4! ♔d2! =) 13...♔c4 14 ♔xh5! ♔xb4 15 ♔g4! +–. This queen ending with the f-pawn is won for White.

b) 6...f5?! 7 a5 (7 f4 a6 =; 7 f3 a6 8 a5 bxa5 9 bxa5! ♔c6! =) and now:

b1) 7...♔e6? 8 axb6 axb6 9 ♔c4! ♔e5 (9...♔d6 10 ♔b5! ♔c7 11 ♔a6! ♔c6 12 b5+ ♔c5 13 f4! +–) 10 ♔b5! ♔f4 11 ♔xb6! ♔f3 12 b5 ♔xf2 13 ♔c5! f4 14 b6! f3 15 b7! ♔g2 16 b8♕! f2 17 ♕g8+ ♔h2 18 ♕f7 ♔g2 19 ♔d4 f1♕ 20 ♕xf1+! ♔xf1 21 ♔e3! +– (A2.05).

b2) 7...bxa5 8 bxa5! ♔c6! 9 ♔e5 ♔b5! 10 ♔xf5 ♔xa5! =. Now White has to go through with his f-pawn, but he has no real winning chances in the queen ending with a rook's pawn.

c) 6...a5 7 bxa5 (7 b5 f5 8 f3 ♔e6 =) 7...bxa5! 8 f3 f6 9 ♔e4 ♔c5! = (and not 9...♔e6? 10 ♔f4! ♔d6 11 ♔f5! ♔c5 12 ♔g6!! {again it's important to keep the f-pawn because otherwise the resulting queen ending couldn't be won} 12...♔b4 13 ♔xh5! ♔xa4 14 ♔g6! ♔b3 15 h5! a4

16 h6! a3 17 h7! a2 18 h8♕! a1♕ 19 ♕xf6 +–).

3 f3!? b6 4 g4 g6

After 4...hxg4?! 5 fxg4! White has an outside candidate on the h-file, which secures his advantage. In the following play Black has to defend himself very accurately in order to survive: 5...♔e6 6 ♔e4 a6 7 a3. Now:

a) 7...a5?:

a1) 8 a4? fixes the structure in such a way that Black can hold the balance: 8...f6!. Then:

a11) 9 h5 ♔e7! 10 ♔f5 ♔f7! 11 g5 fxg5! 12 ♔xg5! ♔e7 13 ♔f5 ♔f7!? (13...♔f8?! 14 ♔e6 ♔g8! 15 ♔d6 ♔h7! =) 14 ♔e5 ♔e7 =.

a12) 9 ♔f4!? ♔f7! (9...g6? 10 ♔e4! ♔d6 11 h5! f5+ 12 ♔f4 +–) 10 ♔f5 g6+! (10...♔e7? 11 ♔g6 ♔f8 12 h5 ♔g8 13 h6! gxh6 14 ♔xf6! ♔h7 15 ♔f7! +–) 11 ♔e4 ♔e6! 12 h5 ♔f7!:

a121) 13 hxg6+ ♔xg6! 14 ♔d5 ♔g5 15 ♔e6! ♔g6! 16 ♔e7 ♔g5 17 ♔f7 f5! 18 gxf5! ♔xf5! =.

a122) 13 h6 ♔g8 14 ♔d5! (14 ♔f4? ♔h8! 15 g5 fxg5+! 16 ♔g4 ♔g8! –+) and now (D):
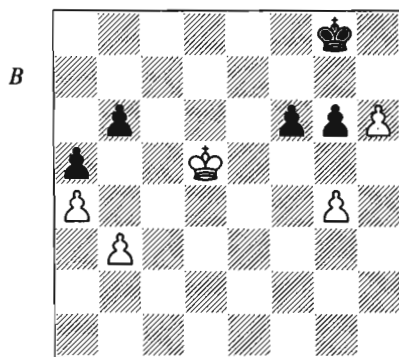
14...♔h8!? (14...♔f7 15 ♔c6 ♔g8! 16 ♔xb6 f5! 17 gxf5 gxf5! 18 ♔c5 ♔h7! 19 b4 f4! 20 bxa5 f3! =) 15 ♔d6 (15 ♔e6? ♔h7! 16 ♔xf6 ♔xh6! –+ is reciprocal

zugzwang with White to move; 15 ♔c6 ♔h7! 16 ♔xb6! f5! 17 gxf5! gxf5! 18 ♔c5 f4 19 ♔d4 ♔xh6! 20 ♔d3 ♔g5 21 b4! =) 15...♔g8! =.

a123) 13 ♔d5 ♔f8 (13...♔g7? 14 ♔e6! +–) 14 hxg6 ♔g7! 15 ♔c6 (15 ♔d6 ♔xg6 16 ♔e6 ♔g5 17 ♔f7 f5! is a draw) 15...♔xg6! 16 ♔xb6 ♔g5! 17 ♔xa5 ♔xg4! and the resulting queen ending is a theoretical draw.

a2) 8 ♔f4! *(D)*:
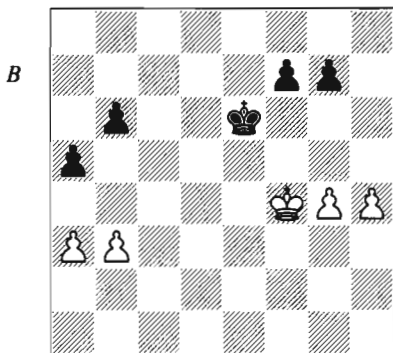
a21) 8...f6 9 ♔e4! g6 10 a4 +–.
a22) 8...b5 9 h5 f6 10 ♔e4! b4 (10...a4 11 b4! +–) 11 axb4! axb4 12 ♔d4! ♔d6 (12...f5 13 g5! +–) 13 ♔c4! ♔e5 14 ♔xb4! ♔f4 15 ♔c4 ♔xg4 16 b4 f5 17 ♔d3! (17 b5? f4! 18 b6 f3! 19 ♔d3 ♔h3! 20 ♔e3 ♔g2! =) 17...f4 18 ♔e2! +–.
a23) 8...♔d5 9 ♔f5 +–.
a24) 8...♔f6 9 h5:
a241) 9...b5 10 g5+ ♔e6 11 ♔e4 b4!? 12 axb4! (12 a4? g6 13 h6 f5+! only draws) 12...axb4:
a2411) 13 ♔d4? ♔f5! 14 h6! ♔g6! (14...gxh6? 15 gxh6! ♔g6 16 ♔e5! +–) 15 ♔e5 ♔h7! 16 ♔f5 ♔g8 =.
a2412) 13 ♔f4 f6 14 g6! +–.
a242) 9...♔e6 10 g5 f6 11 g6! ♔e7 12 ♔f5 b5 13 b4 a4 14 ♔g4 ♔f8 15 ♔f4 ♔e8 16 ♔e4 ♔f8 17 ♔d5 ♔e7 18 ♔c5 +–.
b) 7...b5 8 b4 (8 ♔f4 ♔f6! 9 h5 ♔e6! 10 g5 f6! 11 g6 ♔e7! =) 8...f6! 9 ♔f4:

b1) 9...g6?! 10 ♔e4 ♔f7! (10...♔e7? 11 ♔d5! ♔f7 12 ♔d6! ♔f8 13 ♔e6! ♔g7 14 h5! +–) 11 ♔d5 ♔e7! 12 ♔c6!? (12 h5 ♔f7 13 ♔d6 ♔g8 14 hxg6 ♔g7! 15 ♔e7 ♔xg6! 16 ♔f8 ♔h6!! =) 12...♔e6! 13 h5 ♔f7! 14 ♔b6 gxh5! 15 gxh5! f5! 16 ♔c5! ♔f6! 17 ♔d4 ♔g5! 18 ♔e5! f4!±.
b2) 9...♔f7 10 ♔f5 g6+! 11 ♔e4 ♔e6! 12 h5 ♔f7! 13 ♔d5 ♔g8 14 hxg6 ♔g7! 15 ♔c6 ♔xg6! 16 ♔b6 ♔g5! =.

5 ♔e4 *(D)*
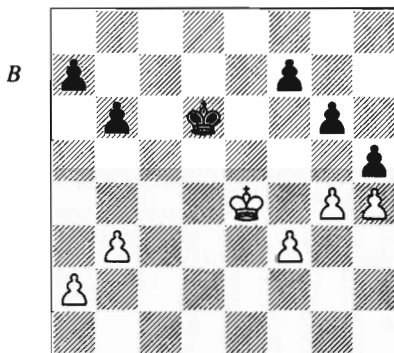
Jansa forces his opponent to play accurately:
5...♔e6!
5...hxg4? 6 fxg4! ♔e6 7 h5 ♔f6 8 ♔f4! gxh5 (8...♔g7 9 ♔e5! +–) 9 gxh5! ♔g7 10 ♔g5 +–.
6 b4 b5 7 ♔f4 ♔f6!
7...f6? 8 gxh5! gxh5 9 ♔e4! f5+ 10 ♔d4! ♔d6 11 f4! a6 12 a3! +–.
8 g5+ ♔e6! 9 ♔e4 f6 10 gxf6! ♔xf6! 11 ♔f4 g5+ 12 hxg5+! ♔g6! 13 ♔e5 ♔xg5! 14 f4+! ♔g6! 15 ♔e6 ♔g7
15...h4?! 16 f5+ ♔h7 17 f6 h3! 18 f7 h2! 19 f8♕ h1♕! 20 ♕f5+ ±.
16 ♔e7
16 ♔f5 ♔h6! 17 ♔e6 =.
16...♔g6 17 ♔e6! ♔g7 ½-½
Even though the game ended with the expected draw, Vlastimil Jansa nevertheless forced his opponent to find a couple of very accurate moves. This is what you

should also try in better positions (of course with calculated risks).

In the next game the manoeuvres were even crowned by success:
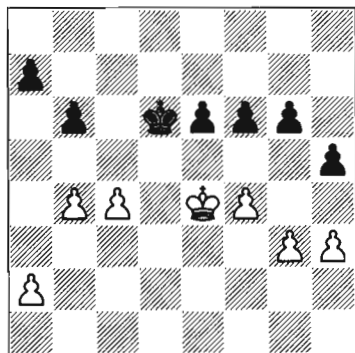
13.06 =/=
E.Lobron – N.Sehner
Bundesliga 1984/5

Though White is a little bit better, his advantage shouldn't lead to a win by normal means. Therefore one should, as in the previous example, try to make the opponent's task as difficult as possible. To start with, Lobron just improves his position:

1 ♔d4 a5 2 a3 ♔c6 3 g4
3 bxa5?! would have made Black's task easier: 3...bxa5! 4 a4 ♔d6 5 g4 hxg4 6 hxg4 g5 7 fxg5 fxg5 8 ♔e4 ♔c5 9 ♔e5! ♔xc4. Now:
a) 10 ♔f6? ♔d4! 11 ♔xg5 (11 ♔xe6 ♔e4! –+) 11...e5! –+.
b) 10 ♔xe6! ♔b4 11 ♔f5 ♔xa4 12 ♔xg5! =.
3...hxg4 4 hxg4 ♔d6 5 g5 fxg5 6 fxg5 a4!?
Black should in no case exchange the a-pawns. If now White creates a passed c-pawn in order to eat up the kingside, the a-pawn will secure sufficient counterplay. However, if Black had exchanged

the a-pawns he would, after a later c5, have had to live with an outside passed pawn or, as bad, with a protected white passed pawn.
6...e5+ 7 ♔e4 a4! (7...♔e6? 8 bxa5 bxa5 9 c5! a4 10 c6! ♔d6 11 c7! ♔xc7 12 ♔xe5! +–) and then:
a) 8 b5?! ♔e6 (8...♔c5 9 ♔xe5 ♔xc4 10 ♔f6 ♔b3! =) 9 ♔e3 =.
b) 8 ♔e3 is very similar to the game continuation.
7 ♔e4 e5!
Not 7...♔d7? 8 ♔e5! ♔e7 9 b5 ♔d7 10 ♔f6! +–.
Black has found the only move and now White can't make any progress. Thus Lobron tries to provoke mistakes with the help of the following king moves:
8 ♔f3
8 c5+ doesn't run away: 8...bxc5! 9 bxc5+! ♔xc5 10 ♔xe5! ♔c4! =.
8...♔d7 9 ♔e2 ♔e6 10 ♔d3 *(D)*
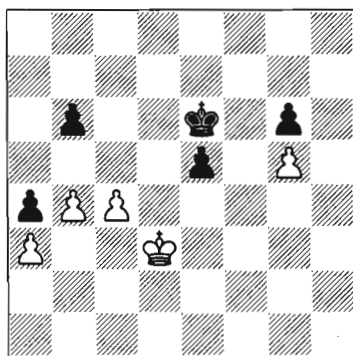
10...♔d7
Or 10...♔f5:
a) 11 c5 bxc5 12 bxc5! e4+! 13 ♔e3 (13 ♔d4 ♔f4! 14 c6 e3! 15 ♔d3 ♔f3! 16 c7 e2! 17 c8♕ e1♕! =) 13...♔e5! 14 c6 ♔d6! 15 ♔xe4 ♔xc6! 16 ♔e5 ♔c5! 17 ♔f6 ♔c4! =.
b) 11 ♔e3 ♔e6 12 ♔e4 ♔d6! =.
11 ♔c3 ♔d6 12 ♔c2 ♔d7 13 ♔d1!?

Is this really a problem with corresponding squares? At least White's manoeuvre causes a first black weakening:

13...e4?! 14 ♔d2

Now Sehner chooses the wrong one of the two plausible alternatives:

14...♔d6?

14...♔e6! 15 ♔e3 (15 ♔e2 ♔e5! 16 ♔e3 ♔f5! =) 15...♔f5! 16 c5 bxc5! 17 bxc5! ♔e5! 18 c6 ♔d6! 19 ♔xe4 ♔xc6! 20 ♔e5 ♔c5! =.

15 ♔e3! 1-0

Because of 15...♔e5 16 b5! and White wins.

D) Balance of Risks

For the last two examples we again assume that there are only two minutes left for the last move before the time-control:
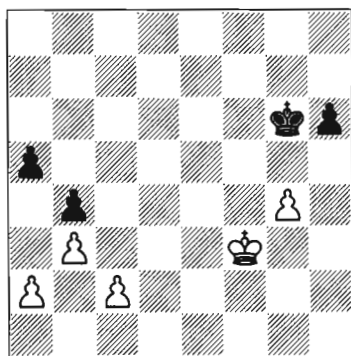
13.07 +/
Berger – Bauer
corr. 1889

In this position White can't lose if he doesn't do anything. We therefore first have to reach our time-control:

1 ♔f4!?

This would be the best practical try in time-trouble. 1 ♔e3 ♔g5 2 c4 ♔xg4 (for 2...bxc3 see the main line) 3 ♔e4 ♔g5 4

♔e5! ♔g6 5 ♔e6 +−. 1 c4 was played in the actual game.

1...♔f6

Now one can sit back and calculate if there is a way to win. Since this can only be managed by a breakthrough on the queenside, this example is very suitable for the exact calculation of variations. The way to victory isn't so straightforward as it looks at first sight.

2 c4 bxc3 3 ♔e3! ♔g5

We have now rejoined the correspondence game.

4 a4!! ♔xg4 5 b4! axb4 6 ♔d3! +−

This move had to be found in the calculation because 6 a5? b3! 7 ♔d3! b2! 8 ♔c2! ♔f4 9 a6! ♔e3! 10 a7! b1♕+ 11 ♔xb1! ♔d2! 12 a8♕ c2+! 13 ♔a2 c1♕! = is still a draw but compared to the starting position troublesome.

1-0

The next example is an anticipation of Chapter 15:
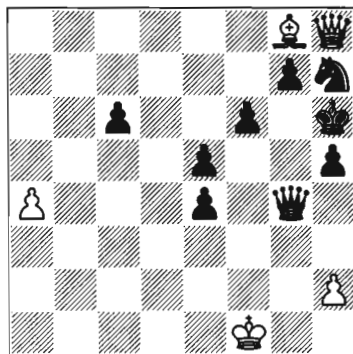
13.08 /=
K.Müller – J.Szabolcsi
Budapest 1991

Black, who had a good position the whole game long, commits himself with the last move before the time-control by **1...♕f5+?!**.

Such key, irreversible decisions should not be made under great time-pressure. Otherwise, however, White could continue in such a way that this opportunity wouldn't exist any longer.
1...♕d1+ 2 ♔g2 ♕f3+ (2...♕xa4?! 3 ♕xh7+! ♔g5 4 ♕xg7+! ♔f5! 5 ♗h7+ ♔e6! 6 ♗g8+ ♔f5! =) 3 ♔g1 ♕g4+ (not 3...e3? 4 ♕xh7+! ♔g5 5 ♕xg7+! ♔h4 {5...♔f5 6 ♕g2 +–} 6 ♕g3+ ♕xg3+ 7 hxg3+! ♔xg3 8 ♗c4 +–) and now 4 ♔f1 = (perpetual check). Even 4 ♔h1 is playable: 4...g6 5 ♕xh7+! ♔g5 6 ♗f7! =.
1...g6 2 ♕xh7+! ♔g5 3 ♗f7! =.
2 ♔e1!?
Now Black is forced to reverse his last move and to give up the protection of the knight by the queen. Otherwise White simplifies into a winning pawn ending.
2...h4?
Or:
a) 2...g6? 3 h4! ♕d7 (3...g5 4 ♗xh7! ♕xh7 5 ♕xf6+! ♕g6 6 ♕h8+! ♕h7 7 hxg5+! ♔g6 8 ♕f6#!) 4 ♗xh7 ♕xh7 5 ♕xh7+ ♔xh7 6 a5 +–.
b) 2...♕f3? 3 ♕xh7+! ♔g5 4 ♕xg7+! ♔f5!? (4...♔h4?! 5 ♕g3+! ♕xg3+ 6 hxg3+! ♔xg3 7 ♗e6 +–) 5 ♕g3! ♕h1+ 6 ♔e2!:
  b1) 6...h4 7 ♕h3+! ♔g5 8 ♗h7 +–.
  b2) 6...♕c1 7 ♗h7+! ♔e6 8 ♕b3+! ♔e7 (after 8...♔d6 9 ♕d1+ ♕xd1+ 10 ♔xd1! ♔d5 11 ♗xe4+ ♔xe4 12 a5! +– the black king is in the square of the a-pawn but the c6-pawn is in his way) 9 ♗f5 +–.
  b3) 6...c5 7 ♗f7 +–.
  b4) 6...♕b1 7 ♕c3 ♕b7 8 a5 +–.

c) 2...♕f4! 3 ♕xh7+ ♔g5 4 ♕xg7+ ♔f5! = and because of the active position of the black queen, White can't make any progress.
3 ♕xh7+
3 ♗xh7 g6 4 ♕g8! +–.
3...♕xh7 4 ♗xh7! ♔xh7 5 a5 g5 6 a6 g4 7 a7 g3 8 hxg3 h3 9 ♔f1! +–
After 9 a8♕?? h2! –+ the queen would be helpless against the pawns.
1-0

E) Rules of Thumb

As is often the case in life, the art is not to know the rules but the exceptions. For a better orientation we again summarize:

- the king should be activated
- an extra pawn wins almost all the time
- protected passed pawns are very favourable
- outside passed pawns deflect the opponent's king
- isolated pawns and doubled pawns are generally unfavourable
- no rule can replace concrete calculation

Furthermore one should be familiar with the following concepts: opposition (distant, diagonal, virtual), key squares, passed pawn (outside, protected, connected), square rule, majority, breakthrough, zugzwang, reciprocal zugzwang, corresponding squares, triangulation, encirclement, king-march, fight for tempi, fortress, liquidation of one wing,...

14 Complicated Cases

We now offer a few difficult practical examples. Therefore you should get out your board and set, if you haven't already done so. There are several ways to approach our analysis. The easiest way is just to replay it. But it is also beneficial to play the positions out (even if it has to be versus a computer) and then to compare the game and your thoughts with the analysis. Thereby it's quite possible that you soon get on other tracks than we do. The four exercises are also suitable for playing out.

This time our structuring doesn't depend on the content. Nevertheless you should start with the first three examples. Afterwards we look at the top world class and conclude with a very detailed analysis by Claus Dieter ('CD') Meyer.

A) Out of Life

We start with a rapid chess game. After a knight exchange both players only had 5 minutes left for the pawn ending (*see following diagram*):

What is White to do? Obviously he is worse. On the kingside the tempi are distributed evenly and on the queenside Black threatens to advance to the weaknesses b4 or d4; then ...c6-c5 could give the decisive spare tempo. However, White can save the game if he offers a temporary pawn sacrifice by b4 at the right time, though in order to do that, White shouldn't have a disadvantage of tempi on the kingside and he has to keep the base f3. In this sense White's first move is logical:

14.01   =/
F.Lamprecht – F.Kaye
Eimsbüttel rpd 1995

1 g4!?
1 f4 and now:

a) 1...exf4 2 gxf4! ♔d6 (2...h6?! 3 e5!? fxe5! 4 fxe5! b5! 5 ♔d3 bxa4 6 bxa4! ♔b6! 7 ♔d4 ♔c7! 8 ♔c5 g5! 9 e6! h5 10 e7 ♔d7! 11 e8♕+ ♔xe8! 12 ♔xc6! g4 13 ♔d5! =) 3 b4 c5! 4 bxa5 bxa5! 5 ♔d3 =.

b) 1...g5 2 fxg5 fxg5! 3 g4! h6 4 h3 b5 5 axb5 cxb5! 6 cxb5! ♔xb5! 7 ♔d3 =.

1...h5?!
This is not clever because the balance of tempi on the kingside gets much worse.

1...b5 2 cxb5 cxb5! 3 axb5! ♔xb5 4 h4 is a draw.

1...g5!?:
a) 2 ♔d3? ♔b4! 3 ♔c2 ♔a3! 4 ♔c3 (4 c5 bxc5! 5 ♔c3 ♔a2 −+) 4...c5 −+.

b) 2 ♔c2? ♔d4! 3 ♔d2 c5 4 h3 h6! −+.

c) 2 h3?! b5 (2...h6 3 b4+! =) 3 cxb5 cxb5! 4 axb5! ♔xb5 5 ♔c2! = (5 ♔d3?

♔b4! 6 ♔c2 ♔a3! 7 ♔c3 h6! 8 ♔c2 ♔a2!
9 ♔c3 ♔b1! —+).

d) 2 b4+ axb4+! 3 ♔b3! b5 =.

2 gxh5 gxh5! 3 b4+!? axb4+!

After 3...♔d6? 4 c5+! ♔c7 (4...bxc5 5
bxa5! +—) 5 cxb6+ ♔xb6 6 ♔c4 +— the
outside passed a-pawn wins.

4 ♔b3! h4

4...♔d4? (without the f-pawns this
counter-attack would win) 5 ♔xb4! h4 6
h3! ♔e3 7 c5! +—.

5 h3! ♔d6?

5...b5! 6 cxb5! cxb5! 7 a5! ♔d6! 8
♔xb4 ♔c6! 9 a6 ♔b6! 10 a7! ♔xa7! 11
♔xb5 ♔b7! =.

**6 ♔xb4! ♔c7 7 c5! ♔b7 8 cxb6 ♔xb6
9 a5+ ♔a6 10 ♔c5 ♔xa5 11 ♔xc6! ♔b4
12 ♔d5 ♔c3 13 ♔e6! ♔d4 14 ♔xf6!
♔e3 15 ♔xe5! ♔xf3 16 ♔f5 ♔g3 17 e5!
♔xh3 18 e6 ♔g2 19 e7 h3 20 e8♕ h2 21
♕e2+ ♔g1 22 ♔g4 h1♕ 23 ♔g3! +— 1-0**

The next example was analysed in de-
tail by Yuri Yakovich in *Informator 43*.
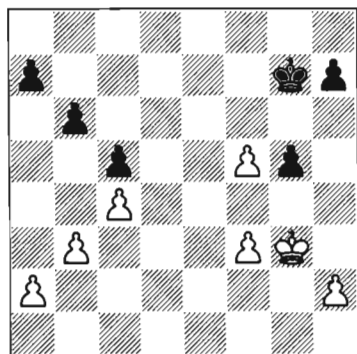
14.02   /=
Y.Yakovich – B.Kantsler
Uzhgorod 1987

The first moves are obvious:

1...h5!

1...♔f6? 2 ♔g4! h5+ 3 ♔xh5! ♔xf5 4
a3 a6 5 a4 +—.

2 f4!?

After 2 h4?? gxh4+ 3 ♔xh4 ♔f6! 4
♔xh5 ♔xf5! —+ the white king is sud-
denly cut off.

Time for a stocktaking. Plausible can-
didates are 2...g4 and 2...♔f6. Their value
can only be determined by concrete cal-
culation. If one doesn't have much time,
one has to become general. After 2...g4 3
♔h4 ♔f6 4 ♔xh5 ♔xf5 5 ♔h6 Black
can't take at f4 at once because of ♔g6.
With a pawn less, he should therefore be
lost. Let's now look at 2...♔f6. At first
sight the clear-cut 3 fxg5+ ♔xg5 4 f6
♔xf6 5 ♔f4 doesn't look good. On the
other hand, White also has to consider
the counterplay against the h-pawn after
5...♔g6. If possible one should continue
the calculations, but without further cal-
culation (time) 2...♔f6 is preferable.

2...g4? *(D)*

2...♔f6! 3 fxg5+ ♔xg5! 4 f6 ♔xf6! 5
♔f4 ♔g6! 6 h3 (6 h4 ♔f6! 7 a3 a6! 8 b4
cxb4! 9 axb4! ♔e6 =) 6...♔f6 7 a3!? (7
h4 a6! 8 a3 b5! 9 cxb5 axb5! 10 ♔e4
♔e6! 11 a4 c4 =) 7...a6! 8 a4 ♔g6! 9 a5
bxa5! 10 ♔e5 ♔g5 11 ♔d5 ♔h4 12 ♔xc5
♔xh3 13 ♔b6 a4 14 bxa4! h4 15 c5 ♔g3!
= and the resulting queen ending with the
a-pawn can't be won, especially since the
black king is already in the corner diago-
nally opposite the queening square.

W
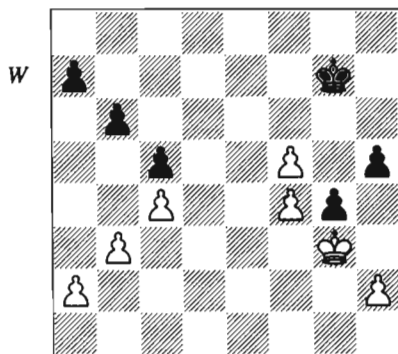
3 ♗h4! ♔f6 4 ♗xh5 ♔xf5 5 ♔h6 a6 6
a4! ♔f6 7 ♗h5 ♔f5 8 ♔h6 ♔f6 9 ♔h7
♔f7

9...♔f5 10 ♔g7 ♔xf4 11 ♔f6 +−.

10 f5

The f-pawn is sacrificed in order to
encircle Black.

10...♔f6

10...a5 11 f6 ♔xf6 12 ♔h6! ♔f5 13
♔h5 ♔f4 14 ♔g6 g3 15 hxg3+! ♔xg3 16
♔f5 +− (A7.09).

11 ♔g8 ♔xf5 12 ♔f7 a5

12...♔g5 13 ♔e6 ♔g6 14 ♔e5 ♔g5
15 ♔e4 a5 16 ♔e5 ♔h5 17 ♔f5 ♔h4 18
♔g6! +−.

13 ♔e7 ♔e5!?

Black at least achieves the transition
into a (lost) queen ending.

13...♔e4 14 ♔d6 ♔f3 15 ♔e5 ♔e3 16
♔f5 ♔f3 17 ♔g5! g3 18 hxg3! ♔xg3 19
♔f5 +−.

**14 ♔d7 ♔d4 15 ♔c6 ♔e4 16 ♔xb6!
♔f3** *(D)*

W
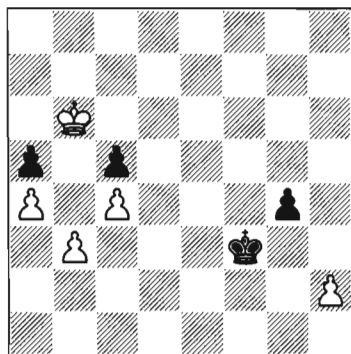
17 ♔xa5!?

In the ending ♕+♙ vs ♕ with a cut-off
king the following general rule is valid:
the bishop's pawn offers the greatest
winning chances, followed by central
pawns and knight's pawns. Positions with
a rook's pawn are usually drawn. There-
fore here it's much more favourable to go
through with the a-pawn.

17 ♔xc5?! ♔g2 18 ♔b5! (not 18 b4??
♔xh2! −+ because the g-pawn queens
with check) 18...♔xh2 19 c5! g3 20 c6!
g2 21 c7! g1♕ 22 c8♕! ±, e.g.: 22...♕g5+
(22...♕e1 23 ♔a6 ♕e5 24 ♕c4 ♔g2 25
♕c2+ ♔f3 26 ♕d3+ ♔g2 27 ♕d2+ ♔f3
28 ♕xa5 +−; 22...♕a7 23 ♕c2+ ♔h1 24
♕c3 ♔g2 25 ♕xa5 +−) 23 ♔a6 ♕d5 24
♕b7 ♕c5 25 ♕h7+ ♔g2 26 ♕g6+ ♔h2
27 ♕d3 ♔g2 (27...♕c6+ 28 ♔xa5! ♕c5+
29 ♕b5! ♕a7+ 30 ♔b4! ♕d4+ 31 ♕c4!
+−) 28 ♕b5 ♕c3 29 ♕c4 ♕e5 30 ♕c2+
♔f3 31 ♕d3+ ♔g4 32 ♕b5 ♕e1 33
♕xa5 +−.

**17...♔g2 18 ♔b5 ♔xh2 19 a5! g3 20
a6! g2 21 a7! g1♕ 22 a8♕! ♕e3 23 ♕d5
♕xb3+ 24 ♔xc5 ♕a3+ 25 ♔b6 ♕b4+
26 ♔c6 ♕a4+ 27 ♔d6 ♕a6+ 28 ♔e5
♕h6** *(D)*

W
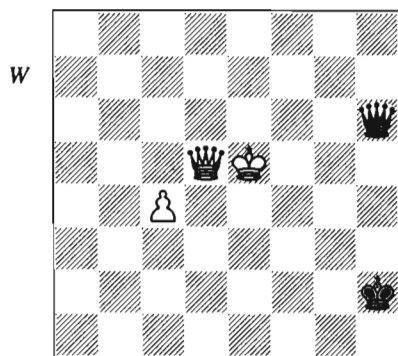
29 ♕d6

Not 29 c5? immediately, allowing a
well-known circling perpetual check:
29...♕g5+! 30 ♔d6 ♕d8+! 31 ♔c6 ♕a8+!
32 ♔d6 ♕d8+! 33 ♔e6 ♕g8+! 34 ♔e5
♕g5+! 35 ♔e4 ♕g2+! 36 ♔d4 ♕d2+! 37
♔c4 ♕a2+! =.

29...♕g5+?!

29...♕e3+!? +−.

30 ♔e6+ ♔g1 31 ♕d4+ +− 1-0

Kantsler resigned because it is impos-
sible for Black to avoid the exchange of
queens.

In the third example the defender again faces a very difficult task.
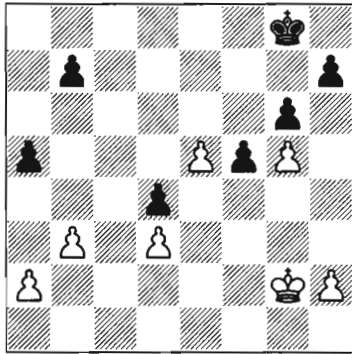
14.03   /=
S.Grabov – E.Gausel
Års 1995

Though White loses the e5-pawn, his hopes are still alive because of the closed structure.

1...♔f7 2 ♔f3 ♔e6 3 ♔f4

3 a3 ♔xe5 4 ♔g3 f4+?! 5 ♔g4! b5 6 b4 a4 7 h3 f3! 8 ♔xf3! ♔f5! 9 h4! ♔e5! =.

3...♔d5 4 e6 ♔xe6

Capturing the e-pawn was very easy. But how should Black continue now? Right now the plan to penetrate with the king via e5 doesn't work because the g5-pawn can't be captured, e.g. 5 a3 ♔d6 6 ♔g3 ♔e5 7 ♔f3 f4 8 ♔g4 f3 9 ♔xf3 ♔f5 10 h4 =. Therefore Einar Gausel has the plan of first moving the king to g7 and then playing ...h6. Without the h-pawns, the g-pawn can't be kept. So White has to play very precisely to reach a very difficult, but probably tenable, queen ending.

5 a3 ♔d6 6 ♔g3 ♔e6 7 ♔f4 b6 8 ♔f3?

8 h4 ♔d5 9 ♔f3! ♔e5 10 ♔g3! f4+!? (10...♔d6 11 ♔f3 ♔e7 12 ♔f4 ♔e6 13 ♔f3! ♔f7 14 ♔f4! ♔g7 15 ♔e5! h6 16 ♔xd4! hxg5 17 hxg5! ♔f7 18 ♔d5 ♔e7

19 a4 ♔d7 20 d4 ♔c7 21 ♔e5! ♔c6 22 ♔e6! ♔c7! =) 11 ♔f3! ♔f5 12 a4! ♔e5 13 ♔g4! ♔d5 14 ♔xf4! ♔c5 15 ♔e5 ♔b4! 16 ♔xd4! ♔xb3! 17 ♔e5! ♔xa4! 18 d4! ♔b5 19 d5 a4! 20 d6 a3! 21 d7 a2! 22 d8♕ a1♕+! 23 ♔e6 is just slightly better for Black.

8...♔f7!

8...♔e5? 9 ♔g3 f4+ 10 ♔g4! f3 11 ♔xf3! ♔f5! 12 h4 b5 13 ♔g3 =.

9 ♔f4 ♔g7! 10 ♔e5 h6! 11 gxh6+ ♔xh6! 12 ♔xd4 g5! 13 ♔e5 f4 14 ♔e4 ♔g6 *(D)*
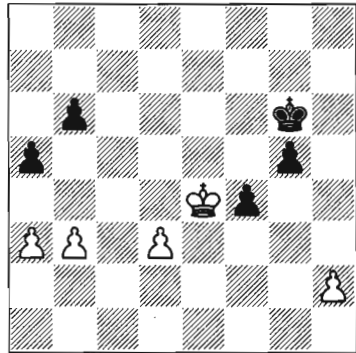
15 b4

15 d4 ♔f6 16 d5 ♔e7 17 b4 axb4 18 axb4 ♔f6 19 h3 (19 b5 ♔g6 20 d6 ♔f7! 21 ♔d5 ♔e8! 22 ♔c6 ♔d8! –+) 19...♔g6? 20 ♔d4! ♔f5 21 ♔c5! f3 22 d6! f2 23 d7! f1♕ 24 d8♕! ♕c4+ is a little better for Black) 20 ♔d3 ♔g7 (the start of a triangulation) 21 ♔d4 ♔f7 22 ♔d3 ♔g6! 23 ♔e4 ♔f6! 24 ♔d4 ♔f5! 25 b5 (forced, but now after a second triangulation the d-pawn is lost) 25...♔g6 26 ♔d3 ♔g7 27 ♔d4 ♔f7 28 ♔d3 ♔g6! –+.

15...a4 16 d4 ♔f6 17 d5 ♔g6!? 18 h3 ♔f6 19 b5 ♔g6 20 ♔d3 ♔f7 21 ♔d4 ♔e7

After 21...♔g7!? White cannot hold the correspondence (d4-f5, e4-f6, d3-g6): 22 ♔d3 ♔g6! 23 ♔e4 ♔f6! 24 ♔d4 ♔f5! –+.

22 ⟂d3!? ⟂d6 *(D)*

W
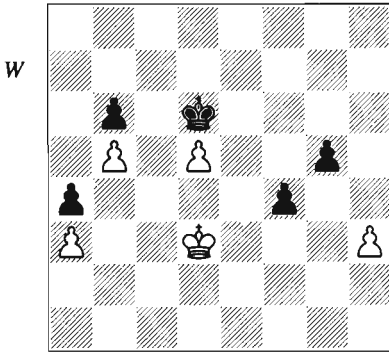
23 ⟂d4?!

Or 23 ⟂e4!? (Hecht in *CBM 50*) and now:

1) Not, of course, 23...f3?? 24 ⟂xf3! ⟂xd5 25 ⟂g4! +− and White is too quick.

2) 23...⟂c5? 24 ⟂e5! and now:

2a) 24...⟂xb5?! 25 d6! f3! = (but not 25...⟂c6? 26 ⟂e6! f3 27 d7! f2 28 d8♕! f1♕ 29 ♕d7+! ⟂c5 30 ♕d5#!).

2b) 24...f3 25 d6! f2 26 d7! f1♕ 27 d8♕! and Black cannot capitalize on his initiative; for example, 27...♕f4+ 28 ⟂e6 ♕e3+ 29 ⟂f6 ♕f3+ 30 ⟂g6 ♕xh3 31 ♕xg5+ ⟂c4 32 ♕f4+ ⟂xb5 33 ♕b4+ with a draw.

3) 23...⟂e7 −+.

23...f3 24 ⟂e3 ⟂xd5 25 ⟂xf3 ⟂c4! 26 ⟂e4 ⟂b3 0-1

Because of 27 ⟂d3 ⟂xa3 28 ⟂c3 ⟂a2! 29 ⟂c2 a3! −+.

B) At the Highest Level

There was a lively discussion in the chess press concerning the following position (for example, H.J.Hecht in *CBM 51*, p.49ff; R.Knaak in *CBM 52*, p.57; J.Timman in *NIC* 2/96, p.43 and 3/96, p.6,35; as well as A.Shirov in *NIC* 2/96, p.36):
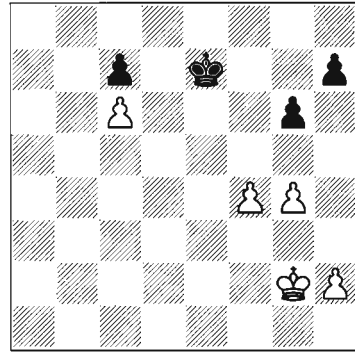
14.04   =/
A.Shirov – J.Timman
Wijk aan Zee 1996

White has three different winning plans:

1) A breakthrough by g5 followed by h4 and f5 or to build a protected passed pawn (this plan was chosen by Shirov in the game);

2) To centralize the king via f3-e4-e5 and then to get Black into zugzwang in order either to win the c-pawn or to go through with the f-pawn (which was suggested by Timman); and finally

3) To penetrate with the king via g3-h4-g5 on the kingside.

However, none of the three plans leads to a win.

Nevertheless, with the win in sight and the power of persuasion Alexei Shirov played...

1 g5!?

The desired effect followed soon: Black resigned!

1-0??

Timman's way of thinking was probably as follows. "If Black captures the c-pawn White gets the opportunity for a breakthrough on the kingside by which a seemingly decisive protected passed pawn on f6 results." The first publications after the game agreed with the verdict of

the two players until Sven Joachim finally proved the draw in a letter to *Schachwoche*.

The third plan isn't dangerous for Black at all: 1 ♔g3 ♚d6! 2 ♔h4 ♚xc6! 3 ♔g5 ♚d5 4 ♔f6 = (4 ♔h6 ♚e4 5 ♔xh7 ♚xf4 6 ♔xg6 ♚xg4 7 h4 =).

The second plan demands more detailed analysis. 1 ♔f3 (Timman) 1...♚d6 2 ♔e4 ♚xc6 3 ♔e5 ♚d7! 4 ♔f6 *(D)* and now:
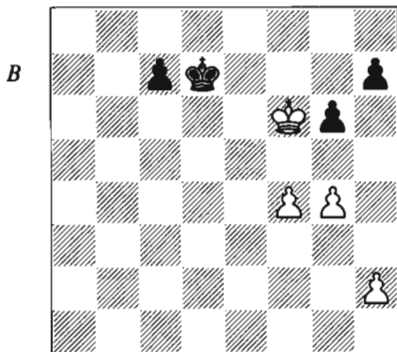
a) 4...c5?! 5 ♔e5 ♚c6! 6 h3 c4 7 ♚d4 ♚b5! 8 h4:

a1) 8...♚b6?!:

a11) 9 f5 gxf5! 10 g5 ♚b5! 11 h5! f4! 12 g6 hxg6 13 hxg6 f3! =.

a12) 9 h5 gxh5 10 gxh5 ♚b5 11 h6 c3 12 ♚xc3 ♚c5 13 ♚d3 ♚d5 14 ♚e3 ♚e6 15 ♚e4 ♚f6 = (12.05).

a13) 9 g5 ♚b5! (9...♚c6? 10 f5! gxf5 11 h5! f4 12 ♚xc4! f3 13 ♚d3! ♚d5 14 g6 hxg6 15 h6! +—) 10 h5 (10 ♚c3 ♚c5! 11 f5 gxf5! 12 h5 f4! =) 10...gxh5 11 f5! h4 12 f6 h3 13 f7 h2! 14 f8♕ h1♕! 15 ♕c5+ ♚a6 16 ♕xc4+ ♚b6 17 ♕c5+ ♚a6 =.

a14) 9 ♚xc4 ♚c6! = (7.16).

a2) 8...♚b4 9 f5! gxf5 10 gxf5! c3 11 f6 c2 12 f7! c1♕ 13 f8♕+! ♚b5 14 ♕f5+ ♚b4 15 ♕xh7 =.

b) 4...c6 5 h3 (5 ♚g7 c5! 6 f5 gxf5 7 gxf5! c4! 8 f6 c3! 9 f7 c2! 10 f8♕ c1♕!

11 ♕f5+ ♚c7 12 ♚xh7 =) 5...c5 6 ♚e5 ♚c6! 7 h4 c4 8 ♚d4 ♚b5 9 f5 gxf5! 10 gxf5! (10 g5? f4! 11 h5 f3! 12 g6 hxg6 13 hxg6 f2! 14 g7 f1♕! 15 g8♕ ♕d3+ and wins) 10...c3 (10...♚c6 = (Krasenkow; see 12.07)) 11 ♚xc3 ♚c5 =.

1...♚d6! 2 h4

2 f5 gxf5! (after 2...♚xc6? 3 f6! +— the h-pawn that is still at h2 provides the necessary spare tempi for a win) 3 h4 ♚e5 4 ♚f3 f4! 5 h5 ♚f5! 6 g6! hxg6! 7 h6 ♚f6! 8 ♚xf4 g5+! 9 ♚g4 ♚g6! 10 h7! ♚xh7! 11 ♚xg5 ♚g7! =.

2...♚xc6! 3 f5!? ♚d6

3...gxf5? 4 h5! +—.

4 f6 ♚e6 5 ♚f3 ♚d7 6 ♚e4

6 h5?! gxh5! 7 ♚g3! ♚e6 (7...c5 8 ♚h4! c4 9 ♚xh5! c3 10 ♚h6 ♚e6 11 ♚g7! =) 8 ♚h4! ♚f7 9 ♚xh5! c5! 10 ♚h6 c4! 11 ♚xh7! =.

6 ♚g4 ♚e6 7 h5!?:

a) 7...gxh5+? 8 ♚xh5! c5 9 ♚h6! c4 10 ♚g7 (10 ♚xh7 c3 11 ♚g6! c2 12 f7! c1♕ 13 f8♕! +—) 10...c3 11 f7! c2 12 f8♕! c1♕ 13 ♕f6+ ♚d5 14 ♚xh7 +— (Hecht).

b) 7...♚f7!! (Joachim) 8 hxg6+ ♚xg6! = (8...hxg6? 9 ♚f4 ♚e8 10 ♚e5 ♚d7 11 ♚d5 ♚e8 12 ♚c6 ♚d8 13 f7 +—; without the h-pawns the position is won since White captures the key squares of the g6-pawn).

6...♚e6

6...♚d6? 7 h5! gxh5 8 ♚f5! h4 9 g6! hxg6+ 10 ♚xg6! +—.

7 ♚d4 ♚d7

7...c6? 8 ♚e4! ♚d6 9 h5! +—.

8 ♚d5 ♚e8!

8...♚d8? 9 ♚c6! +— is reciprocal zugzwang with Black to move.

9 ♚e6

9 ♚c6 ♚d8! =.

9...♚f8! =

Now White can't make any progress because **10 ♚d7??** fails to **10...c5!** and Black wins.
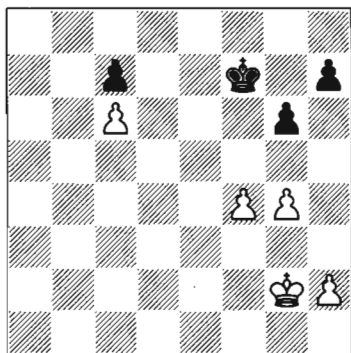
14.04A **+/**
Variant of **Shirov – Timman**,
Wijk aan Zee 1996

If in the starting position one moves the black king to f7, the plan chosen by Shirov in the game wins, as the analysis above has already shown. The plan to penetrate with the king on the kingside also wins but the march of the king through the centre doesn't, because here Black surprisingly has enough resources to draw.

1 g5!?
1 ♔f3? ♔e6 2 ♔e4 (2 g5 ♔d5 3 f5 gxf5! 4 ♔f4 ♔xc6! 5 ♔xf5 ♔d6 =) 2...♔d6! 3 h4 (3 f5 gxf5+! 4 gxf5 ♔xc6! 5 ♔e5 ♔d7! 6 ♔f6 c5! 7 ♔g7 c4! 8 f6 c3! 9 f7 c2! 10 f8♕ c1♕! 11 ♕f5+ ♔c7 12 ♔xh7 =) 3...♔xc6! 4 ♔e5 ♔d7! 5 ♔f6 c5 6 f5 gxf5 7 gxf5 c4 8 ♔g7! c3 9 f6! c2 10 f7! c1♕ 11 f8♕! =.
1 ♔g3:
a) 1...♔f6 2 g5+ (2 ♔h4 h6 3 f5 gxf5 4 gxf5! ♔xf5 5 ♔h5! +–) 2...♔e6 3 h4! ♔d6 4 h5 gxh5 5 f5 ♔e5 6 f6 ♔e6 7 ♔h4! +–.
b) 1...♔e6 2 ♔h4! ♔d6 3 ♔g5! ♔xc6 4 ♔h6! ♔d5 (4...♔d6 5 ♔xh7 c5 6 ♔xg6! c4 7 f5! c3 8 f6! c2 9 f7! c1♕ 10 f8♕+! +–; 4...♔d7 5 f5 +–) 5 ♔xh7 ♔e4 (5...c5 6 f5 gxf5 7 g5! +–) 6 ♔xg6 ♔xf4 (6...c5 7 f5 c4 8 f6 c3 9 f7 c2 10 f8♕ c1♕

11 ♕f5+ ♔d4 12 h4 +–) 7 h4 c5 8 h5! c4 9 h6! c3 10 h7! c2 11 h8♕! c1♕ 12 ♕h6+! +–.
1...♔e6 2 h4! ♔d6
2...♔d5 3 f5! gxf5 4 h5! ♔e6 (4...♔e5 5 h6! +–) 5 ♔f3 +–.
2...♔f5 3 ♔f3 ♔e6 4 ♔g4 ♔d6 5 f5 gxf5+ (5...♔xc6 6 h5 gxh5+ 7 ♔xh5 ♔d7 8 g6 hxg6+ 9 fxg6 ♔e7 10 ♔h6! +–) 6 ♔xf5 ♔xc6 7 h5 ♔d7 8 g6 hxg6+ 9 ♔xg6! +–.
3 f5! gxf5
3...♔xc6 4 fxg6 hxg6 5 h5! gxh5 6 g6! +–.
4 h5! ♔e6 5 ♔f3 +–

Now let's look at an even higher-level game:
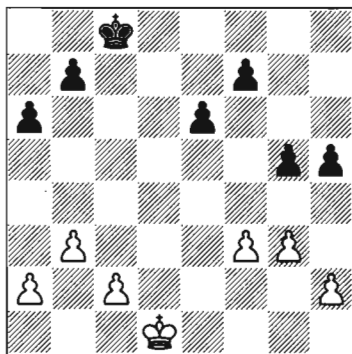
14.05 **/=**
A.Karpov – A.Shirov
Buenos Aires 1994

For a weaker player it would soon become very difficult to hold the position against either one of these two players. Nevertheless we want to try to understand some of the thoughts with the help of the analysis by Shirov in *Informator 62*. The position is in a way sharpened by the different majorities. In general the shorter majority is favourable, but here this is by far outweighed by Black's right

to move and his space advantage on the kingside.

1...♔d7

1...g4!? 2 ♔e2:

a) 2...gxf3+? 3 ♔xf3! ♔d7 (3...e5 4 g4 h4 5 ♔e4 f6 6 g5 +−) 4 h4 e5 (4...f5 5 ♔f4! ♔d6 6 c4! +−) 5 g4! hxg4+ 6 ♔xg4! ♔e6 7 c4 +−.

b) 2...♔d7 3 ♔e3 e5 4 f4 ♔e6! = (Shirov; 4...f6? 5 fxe5 fxe5 6 ♔e4 ♔e6 7 c4 a5 8 a3 b6 9 b4 a4 10 c5! b5 11 c6 +−) 5 fxe5 ♔xe5! (5...b5? 6 ♔e4 b4 7 ♔d4 a5 8 ♔e4! +−) 6 c4 arrives at a very interesting position. Black, who has the more active king, must ensure that his a-pawn stays on the board, so that he doesn't get into trouble with his backward f-pawn.

b1) 6...f5? loses, because Black gives up the reserve tempo ...f6, and the active idea of exchanging pawns on the kingside fails by a hair's breadth. 7 b4! f4+ (7...h4 8 gxh4 +−) 8 gxf4+! ♔f5 9 b5 axb5 (9...h4 10 b6 ♔e6 11 ♔f2 +−) 10 cxb5! h4 11 a4 h3 12 ♔f2! ♔xf4 13 a5 +−.

b2) 6...a5 7 a3 *(D)*:
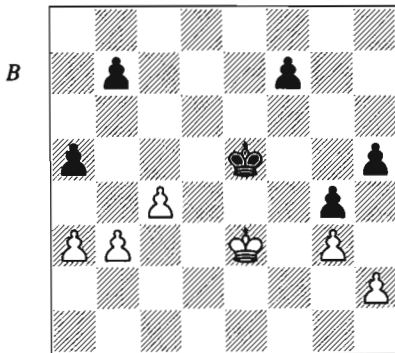
b21) 7...f5? 8 b4!:

b211) 8...axb4 9 axb4! b6:

b2111) 10 b5? ♔d6! (10...♔e6? 11 ♔f4! ♔d6 12 ♔xf5! ♔c5 13 ♔g5 ♔xc4 14 ♔xh5! ♔xb5 15 ♔xg4! ♔c4 16 ♔f3 b5 17 h4 b4 18 ♔e3! ♔c3 19 h5! b3 20 h6! b2 21 h7! b1♕ 22 h8♕+! ♔c4 23 ♕d4+ ♔b5 24 ♕d3+ +−) 11 ♔d4 ♔e6! 12 ♔d3 = (12 c5? bxc5+! 13 ♔xc5 f4! 14 gxf4 h4! 15 f5+ ♔d7! −+).

b2112) 10 c5! b5 11 h4 gxh3 12 ♔f2 +−.

b212) 8...a4 9 c5! ♔d5 (9...h4 10 gxh4 f4+ 11 ♔f2 +−) 10 ♔f4! ♔e6 11 ♔g5! +−.

b22) 7...b6:

b221) 8 ♔d3:

b2211) 8...a4 9 bxa4 f6:

b22111) 10 c5? bxc5! 11 a5 (11 ♔c4 ♔d6! 12 ♔b5 f5! 13 a5 ♔c7! 14 ♔xc5 f4! −+) 11...♔d5 12 a6 ♔c6! 13 ♔e4 (13 ♔c4 f5! −+) 13...♔b6! 14 ♔d5 f5! 15 ♔e5 c4! 16 ♔d4 h4 −+.

b22112) 10 ♔e3 ♔d6 11 ♔e4 ♔c5!:

b221121) 12 ♔d3 f5 13 a5! bxa5! 14 a4! ♔c6 = (14...♔b4? 15 ♔d4! ♔xa4! 16 c5 ♔b5! 17 ♔d5! f4! 18 gxf4 h4! =).

b221122) 12 ♔f5 ♔xc4! 13 ♔xf6 ♔b3! 14 ♔g5 ♔xa4 15 ♔xh5! =.

b2212) 8...f6 9 b4 a4! (9...axb4? 10 axb4! f5 11 ♔e3 +−) 10 ♔e3 f5! 11 b5! ♔e6 (11...♔d6 12 ♔d4 ♔e6! 13 c5? bxc5+! 14 ♔xc5 f4 15 gxf4 h4! −+) 12 ♔f4?! (12 ♔d3 =) 12...♔d6!:

b22121) 13 ♔xf5? ♔c5! 14 ♔e5 (14 ♔g5 ♔xc4! 15 ♔xh5 ♔b3! 16 ♔g4 ♔xa3! −+) 14...♔xc4! 15 ♔d6 ♔xb5! 16 ♔d5 ♔a6 17 ♔d6 ♔b7! −+.

b22122) 13 ♔e3! ♔e5 14 ♔d3! =.

b222) 8 b4 a4 9 ♔d3 f6! 10 ♔e3 f5! 11 b5! =.

2 ♔d2

2 h3?! ♔d6 3 ♔d2 ♔c5 4 c3 b5:

a) 5 a3? enables Black to breach the queenside by ...a5-a4: 5...a5 6 ♔d3 f6 7 ♔e4 (7 g4 h4 −+) 7...a4! 8 bxa4 bxa4! 9 ♔d3 h4 10 gxh4 (10 g4 ♔d5 11 c4+ ♔c5 12 ♔c3 f5 13 ♔d3 fxg4! 14 fxg4 e5! −+) 10...gxh4! 11 c4 e5 12 ♔c3 f5! 13 ♔d3 e4+ −+.

b) 5 ♔d3 f6 =.

2...♔d6 3 c4 ♔c5 4 ♔c3 g4 *(D)*

4...a5?! 5 h3!? f6 6 a3 b6 7 b4+ axb4+ 8 axb4+! ♔c6 9 ♔d4 ♔d6 10 g4 hxg4! (10...h4? 11 ♔e4 ♔c6 12 f4 gxf4 13 ♔xf4! e5+ 14 ♔f5 ♔d6 15 g5 fxg5 16 ♔xg5! +–) 11 hxg4 ♔c6 12 ♔e4 ♔d6 13 f4 gxf4! 14 ♔xf4! ♔e7 =.
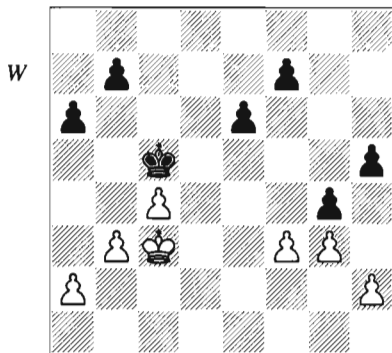
5 f4
5 b4+ ♔d6 6 f4:
a) 6...e5?! 7 c5+!? (for 7 fxe5+ ♔xe5! 8 ♔d3 b6! 9 ♔e3 a5 10 a3 a4 = see note 'b222' to Black's 1st move {after 8...a4}) 7...♔d5 8 fxe5! ♔xe5 9 ♔c4!? f5! 10 a4!:
a1) 10...h4?! 11 b5 (11 gxh4 ♔e4! 12 ♔c3 f4! 13 ♔d2! ♔f3! 14 h5 g3 15 hxg3 fxg3! 16 h6 g2! =) 11...axb5+ 12 axb5! hxg3 13 hxg3! f4! 14 gxf4+! ♔e4!! and Black draws.
a2) 10...f4 11 gxf4+! ♔e4! = (and not 11...♔xf4? 12 b5! axb5+ 13 axb5! ♔e5 14 b6! +–).
b) 6...f6 7 ♔d4 ♔c6 8 a4 b6 =.
5...a5!? 6 a3! f6 7 b4+ axb4+ 8 axb4+! ♔d6 9 ♔d3 ♔c6 10 ♔d4 ♔b6
10...b6 = (Karpov).
11 b5 ♔a5 12 ♔c5! e5! 13 fxe5! fxe5! 14 ♔d5! ♔b4
14...♔b6 15 ♔xe5! ♔c5! =.
15 b6! e4! 16 ♔xe4
16 c5?! ♔b5 17 ♔d6! e3 18 c6! ♔xb6 19 c7! e2! 20 c8♕! e1♕! 21 ♕c5+ ♔a6 22 ♕xh5 =.
16...♔xc4

16...♔c5 17 ♔e5 (17 ♔f5 ♔xb6! 18 ♔g5 ♔c5! 19 ♔xh5! ♔xc4! 20 ♔xg4! =) 17...♔xc4 = (17...♔xb6? 18 ♔d6! ♔a5 19 c5! ♔b5 20 ♔d5! ♔b4 21 c6! +– Shirov).
17 ♔f5 ♔c5 18 ♔g5 ♔xb6! 19 ♔xh5! ♔a5 20 ♔xg4! b5! ½-½
21 h4! (21 ♔f3? is wrong because after 21...b4! 22 ♔e2 ♔a4! 23 ♔d2 ♔a3! 24 ♔c1 ♔a2! –+ the b-pawn is unstoppable) 21...b4! 22 h5! b3! 23 h6! b2! 24 h7! b1♕! 25 h8♕! ♕e4+ 26 ♔g5! ♕e3+ 27 ♔h4 ♕e4+ =.

The next position, from a rapid chess game, is also difficult to assess:
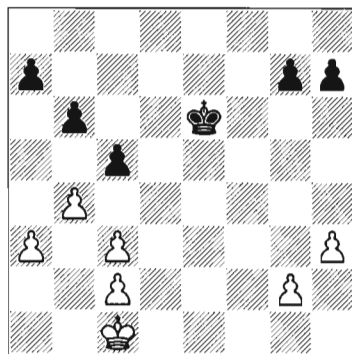
14.06 =/
V.Kramnik – G.Kasparov
New York Intel PCA rpd (3) 1995

Since White's extra pawn is doubled, Black has good chances to draw with his active king:
1 ♔d2 c4?!
1...♔d5 2 ♔d3 c4+ 3 ♔e3 b5 4 ♔f4 ♔e6 5 ♔e4 h6 6 ♔d4 ♔d6! 7 g3 g6 (7...g5 8 h4 gxh4! 9 gxh4! h5! 10 ♔e4! ♔e6! =) 8 h4 h5! 9 ♔e4 ♔e6! 10 ♔f4 ♔f6! 11 g4 hxg4 (11...a6 12 g5+ ♔f7! 13 ♔e5 ♔e7! =) 12 ♔xg4! ♔e6 13 ♔g5 ♔f7! 14 h5 gxh5! =.
2 b5!? ♔d5 3 ♔e3 ♔e5!

3...g5? 4 ♔f3! ♔e5 (4...h5 5 h4 ♔e5 6 hxg5 ♔f5 7 ♔g3 ♔xg5 8 ♔h3! h4 9 g3 hxg3 10 ♔xg3! +−) 5 ♔g4! ♔f6 (5...♔e4 6 ♔xg5! ♔e3 7 ♔f5 ♔d2 8 ♔e4 ♔xc3 9 ♔d5! ♔xc2 10 ♔xc4! +−) 6 ♔h5! ♔f5 7 g3 ♔e4 8 ♔xg5! ♔e3 9 ♔f6 ♔d2 (9...♔f3 10 h4 +−) 10 ♔e5! ♔xc3 11 ♔d5! ♔xc2 12 ♔xc4! +−.

4 h4 h5 5 g3 g6 6 ♔f3 ♔f5! *(D)*

6...g5? 7 hxg5! ♔f5 8 g6 ♔xg6 9 g4 +−.

W
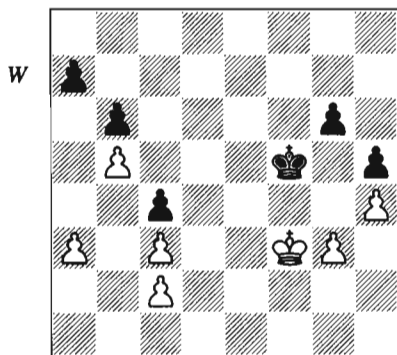
7 a4?!

7 g4+!?:

a) 7...hxg4+? 8 ♔g3! ♔e5 (8...♔f6 9 ♔xg4 ♔f7 10 h5 +−) 9 ♔xg4! ♔e6 10 ♔g5! ♔f7:

a1) 11 ♔h6 ♔f6:

a11) 12 a4? ♔f5! (12...♔f7? 13 ♔h7! ♔f6 14 ♔g8! ♔f5 15 ♔f7! +−) 13 ♔g7 g5! 14 hxg5 ♔xg5! 15 ♔f7! ♔f4! 16 ♔e6 ♔e3! 17 ♔d5 ♔d2! =.

a12) 12 ♔h7! g5 (12...♔f7 13 a4! ♔f6 14 ♔g8! g5 15 h5! +−) 13 hxg5+! ♔xg5 14 ♔g7! ♔f4 15 ♔f6! ♔e3 16 ♔e5! ♔d2 17 ♔d4! ♔xc2 18 ♔xc4! ♔d2 19 ♔b4 ♔d3 20 c4! ♔d4 21 a4! ♔e5 22 c5! +−.

a2) 11 h5 gxh5 12 ♔xh5! ♔f6 13 ♔g4 ♔e5 14 ♔f3 ♔f5 15 ♔e3 ♔e5 16 a4! +−.

b) For 7...♔e5! 8 a4!? = (8 gxh5 gxh5! =) see the game.

7...♔e5?!

Much simpler is 7...g5!? 8 hxg5! ♔xg5! = (Vaïsser in *CBM Express 47*).

8 g4!? ♔e6?

It's hard to believe but the world champion could still escape: 8...hxg4+! 9 ♔xg4! ♔f6! (9...♔e6? 10 ♔f4! ♔f6 11 ♔e4! ♔e6 12 ♔d4! ♔f5 13 ♔xc4! ♔g4 14 ♔d3 ♔xh4 15 c4 +−) 10 ♔f4 ♔g7! and now:

a) 11 ♔e5 ♔h6! 12 ♔e6 (12 ♔d5 ♔h5! 13 ♔xc4 ♔xh4! 14 ♔d3 g5! 15 ♔e2 ♔h3! 16 c4 g4! 17 c5! bxc5! 18 a5! g3! 19 b6! =) 12...♔h5! 13 ♔f7 ♔xh4 14 ♔xg6! ♔g4 =.

b) 11 ♔g5 ♔f7! 12 h5 gxh5! 13 ♔xh5! ♔f6 14 ♔g4 ♔e5! 15 ♔g5 ♔e4! 16 ♔f6! ♔e3 17 ♔e5! ♔d2 18 ♔d4! *(D)*.

B
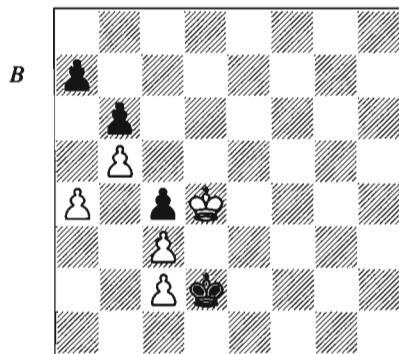
18...♔d1 (!!) (but not 18...♔xc2? 19 ♔xc4! ♔d2 20 ♔d4 ♔c2 21 c4 ♔b3 22 a5! bxa5 23 c5! a4 24 b6 +−) 19 ♔xc4 ♔xc2! 20 ♔b4 ♔d3! 21 ♔b3 (21 c4 ♔d4! is also a draw) 21...♔e4! 22 c4 ♔e5! =.

9 gxh5! gxh5 10 ♔f4?!

Taking the opposition by 10 ♔e4!? would have won at once: 10...♔f6 11 ♔f4 ♔g6 12 ♔e5 +−.

10...♔f6 11 ♔e4! ♔e6 12 a5?

12 ♔d4! ♔f5 13 ♔xc4! ♔g4 14 ♔d3! ♔xh4 15 c4 ♔g5 (15...♔g3 16 c5 h4 17 a5 h3 18 axb6 axb6 19 cxb6! +−; 15...♔g4

16 c5 bxc5 17 a5 h4 18 b6 axb6 19 a6 +–)
16 c5 h4 17 ♔e2 +–.

**12...bxa5! 13 ♔d4! ♔f5 14 ♔xc4!
♔g4**

14...♔e4 15 ♔b3 ♔d5 16 ♔a4 ♔c4 17
♔xa5! ♔xc3 18 ♔a6 ♔c4 =.

15 ♔b3

15 ♔d4!? ♔xh4! 16 c4! ♔g5! 17 c5!
h4! 18 b6 axb6! 19 cxb6 h3! 20 b7 h2! 21
b8♕ h1♕! 22 ♕e5+ ♔g6 23 ♕xa5
♕d1+ =.

**15...♔xh4! 16 c4 ♔g5! 17 c5 h4! 18
c6 h3! 19 c7 h2! 20 c8♕ h1♕! 21 ♕d8+
♔f5 22 ♕d3+ ♔e5 23 ♕e3+**

23 ♕c3+!? ♔d6 24 ♔a4 ±.

23...♔d6 24 ♕d4+ ♔e6

24...♕d5+ 25 ♕xd5+ ♔xd5! 26 ♔a4
♔c4 27 ♔xa5 ♔c3 28 ♔a6 ♔c4 =.

**25 ♕c4+ ♔d6 26 ♕f4+ ♔e6 27 ♕e3+
♔d6 28 c4?! ♕b1+ 29 ♔c3 ♕a1+ 30
♔d2 ♕b2+ 31 ♔e1 ♕b4+ 32 ♔d1 ♕xc4
33 ♕h6+ ♔c5 34 ♕e3+ ♔xb5 ½-½**

There could have followed, e.g., 35
♕e2 ♕xe2+ 36 ♔xe2! ♔c4 37 ♔d2 ♔b3
38 ♔c1! =.

The following game up until Black's
error on move 4 was characterized by
great time-trouble:
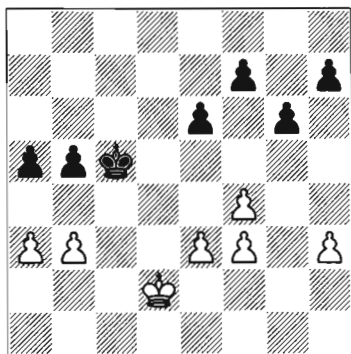
14.07   ∓/
A.Karpov – G.Kasparov
Las Palmas 1996

1 ♔d3 f6 2 h4?! ♔d5 3 b4?

3 e4+! ♔d6 4 ♔e3 e5 5 f5! (5 fxe5+?
fxe5! –+) 5...gxf5 6 exf5! ♔d5 7 ♔d3 a4
8 bxa4 bxa4! 9 h5 h6 10 ♔c3! e4 11
fxe4+! ♔xe4! 12 ♔b4! ♔xf5 13 ♔xa4!
∓.

3...axb4! 4 axb4 h6? *(D)*
Giving away the decisive reserve
tempo – this was actually move 40 in the
game.

4...e5!:

a) 5 h5 (this idea, to build a fortress, is
'obviously' doomed to fail, but see for
yourself how close it is) 5...gxh5! 6 e4+
♔e6! 7 f5+ ♔f7! 8 ♔e3 h4 9 ♔f2 ♔g7!
10 ♔g2 ♔h6! 11 ♔h3 ♔g5 –+.

b) 5 fxe5:

b1) 5...♔xe5? 6 f4+! ♔f5 7 ♔d4! h6
(7...h5 8 ♔d5! g5 9 fxg5! fxg5! 10 e4+!
=) 8 ♔d5 (8 ♔c5? g5! 9 hxg5 hxg5 10
fxg5 fxg5! 11 ♔d5 g4! 12 e4+ ♔g6!! –+)
8...h5 9 ♔d6!! (9 ♔d4? g5! 10 fxg5 fxg5!
11 e4+ ♔g6! –+) 9...♔g4 10 ♔c5 g5 11
fxg5! fxg5! 12 e4! =.

b2) 5...fxe5! 6 ♔c3 h5 7 ♔d3 e4+! 8
fxe4+ ♔e5! 9 ♔e2 ♔xe4 10 ♔f2 g5 11
hxg5 ♔f5! –+.

c) 5 e4+ ♔d6:

c1) 6 ♔e3 ♔e6 –+.

c2) 6 f5:

c21) After 6...♔e7? Black cannot
make progress on the kingside, as the fol-
lowing variation illustrates: 7 fxg6 hxg6
8 ♔e3 ♔e6 9 ♔f2 (9 f4? exf4+! 10 ♔xf4
g5+! 11 hxg5 fxg5+! 12 ♔xg5 ♔e5! –+)
9...♔f7 10 ♔g3 ♔g7. Now:

c211) 11 ♔h3 f5 12 exf5 gxf5! 13 h5
♔h7! 14 ♔g3! ♔g7! 15 ♔h3! =.

c212) 11 ♔g4?! ♔h6 12 ♔g3! (12
f4? exf4! 13 ♔xf4 ♔h5! 14 ♔g3 g5! 15
hxg5 fxg5! 16 e5 ♔h6! 17 ♔f3 ♔g7 18
♔e4 ♔g6! 19 ♔d5 ♔f7! –+) 12...♔h5 13
♔h3! f5 14 exf5 gxf5! 15 ♔g3! =.

c213) 11 f4 exf4+ 12 ♔xf4! ♔f7 13
e5!? f5 14 ♔g5 ♔e6 15 ♔f4! (15 ♔xg6??
f4! –+) 15...♔e7 = (and not 15...♔d5? 16

h5! gxh5 17 ♔xf5! h4 18 e6! ♔d6 19
♔f6! +—).
   c22) 6...gxf5! 7 exf5 ♔d5! 8 h5 h6! 9
♔c3 e4! 10 f4 e3! 11 ♔d3 e2! —+.
   c3) 6 fxe5+ fxe5 (6...♔xe5 7 ♔e3 g5!
—+) 7 ♔e3 ♔e6:
   c31) 8 f4 exf4+ 9 ♔xf4 h6 10 e5 g5+!
—+ (10...♔d5?? 11 h5! g5+ 12 ♔f5! g4
13 e6! ♔d6 14 ♔f6! g3 15 e7! g2 16
e8♕! g1♕ 17 ♕xb5 +—; 10...♔f7? 11
♔f3 ♔e6 12 ♔e4! g5 13 h5! =).
   c32) 8 ♔f2 ♔f6 9 ♔g3 h6! 10 ♔h3
h5! 11 ♔g3 g5! —+.

W
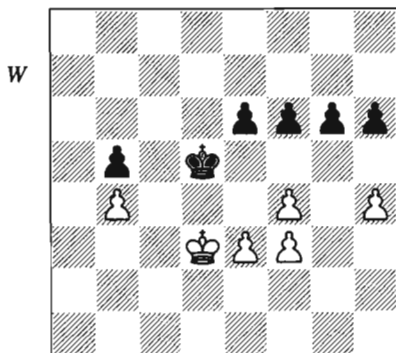
5 e4+!
From now on, Karpov steers his ship
safely to the haven of a draw.
   5...♔d6 6 ♔e3 e5
   6...g5? 7 e5+ ♔d7 8 hxg5 (8 exf6??
gxh4! —+) 8...fxg5 9 fxg5! hxg5 10 f4
+—.
   7 fxe5+! fxe5
   7...♔xe5 8 f4+! ♔e6 9 ♔f3 g5 10
hxg5 hxg5 11 ♔g4 gxf4! 12 ♔xf4! =.
   8 ♔f2 ♔e6
After long thought, Karpov played...
   9 ♔g2
...when the game ended in a draw
(½-½).
   Frederic Friedel described this in
CBM 57 thus: "In the press room, Fritz
confirmed what all the grandmasters had
already said: 9 ♔g2 is the only move for

Karpov to make a draw." From the prac-
tical point of view one should play 9
♔g2, but surprisingly it is not the only
move; there is also 9 ♔e2?! *(D)*:

B
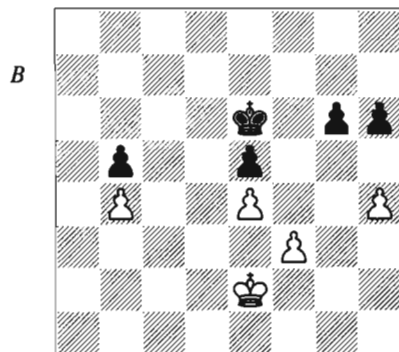
   a) 9...h5? goes too far: 10 ♔e3! g5
(10...♔f7 11 f4! g5!? 12 hxg5! ♔g6 13
f5+ ♔xg5 14 ♔f3 +—) 11 hxg5! h4 12 f4!
h3 13 f5+! +—.
   b) 9...♔f6 10 ♔e3! g5 11 h5! g4!? 12
f4! (12 fxg4? ♔g5! 13 ♔f3 ♔h4! —+)
12...exf4+ (12...♔e6 13 f5+! ♔f6 14 ♔f2
♔g5 15 ♔g3 ♔xh5 16 ♔g2 ♔g5 = be-
cause Black cannot support his pawns
with his king owing to the protected
passed f-pawn; 12...g3 13 f5! ♔g5 14
♔f3 ♔xh5 =) 13 ♔xf4! g3! 14 e5+!! (14
♔xg3? ♔g5! 15 ♔f3 ♔xh5! 16 ♔f4 ♔g6!
17 ♔e5 ♔f7! 18 ♔d6 ♔e8! —+) 14...♔e6!
15 ♔xg3! ♔xe5 16 ♔f3! (16 ♔g4?? ♔e4!
—+ is reciprocal zugzwang with White to
move) 16...♔f5 (16...♔d4 17 ♔f4! =) 17
♔e3! ♔e5 18 ♔f3 =.
   9...♔f6 10 ♔g3! g5 11 h5! =

C) C.D. Analyses

(10/96, p.267ff) using the Nunn convention.
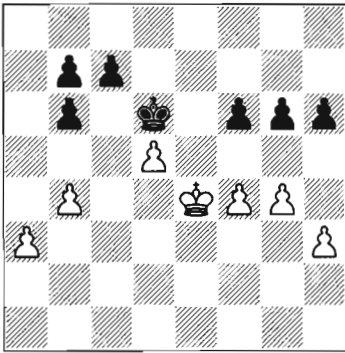
14.08 =/
C.D.Meyer – H.Dutschak
Bundesliga 1995/6

1 a4!?
After 1 h4?!, Black would solve his problems by 1...b5!?.
1...♔d7?!
Instead of staying passive, Black should immediately try to find a path to equality. Probably he could even force it in several ways:
a) 1...g5!? (this looks convincing) 2 fxg5. Now:
a1) 2...fxg5?! 3 b5!? *(D)* and now Black can play:
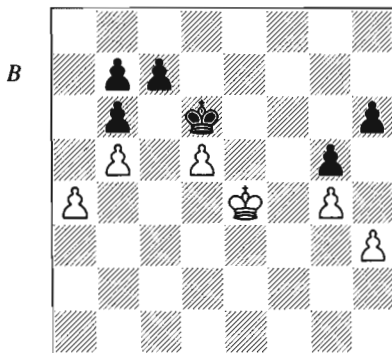
a11) 3...♔c5? 4 ♔e5! ♔b4 (4...♔c4 5 ♔e6! ♔c5 6 ♔d7! +−) 5 ♔e6! ♔xa4 6 ♔d7! +−.
a12) 3...♔e7? 4 ♔e5! ♔d7 (4...♔f7 5 ♔f5! ♔e7 6 ♔g6! +−) 5 ♔f5 ♔d6 (5...c5 6 dxc6+ bxc6 7 bxc6+! ♔xc6 8 ♔g6 +−) 6 ♔g6! ♔xd5 7 ♔xh6! c5 8 bxc6! bxc6 9 ♔xg5!:
a121) 9...b5 10 a5 b4 (10...c5 11 ♔f4 +−; 10...♔c5 11 a6 ♔b6 12 ♔f4 +−) 11 a6! ±.
a122) 9...♔e4 10 ♔h5 ±.
a13) 3...c5 =.
a2) 2...hxg5!?:
a21) 3 ♔f5? ♔xd5! 4 ♔xf6 c5! ∓.
a22) 3 a5? bxa5! 4 bxa5 ♔c5! 5 ♔f5 ♔xd5! 6 ♔xf6 c5! 7 h4 gxh4! ∓.
a23) 3 b5 ♔e7! = (3...♔c5? 4 ♔f5! ±).
a24) 3 ♔d4 ♔e7 =.
b) 1...c5!? may strangely enough also work: 2 dxc6 ♔xc6! *(D)*. Then:
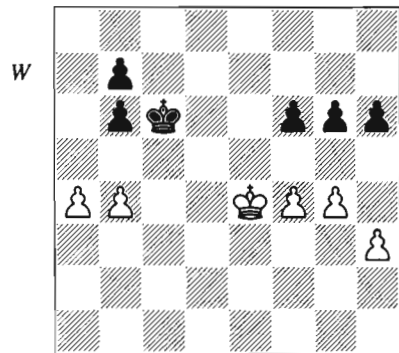
b1) 3 g5 hxg5 4 fxg5 (4 f5? ♔d6 5 fxg6 ♔e6! −+) 4...f5+! 5 ♔e5 ♔d7 6 h4 ♔e7 =.
b2) 3 h4 ♔d6:
b21) 4 h5 gxh5 (4...f5+ 5 ♔e3 fxg4 6 hxg6! ♔e6 =) 5 gxh5! ♔e6! =.
b22) 4 ♔d4 ♔c6 5 ♔c4 (5 g5 fxg5 6 fxg5 hxg5! 7 hxg5 ♔d6 =; 5 h5 gxh5! 6 gxh5 ♔d6 7 ♔c4 ♔c6 =) and now:
b221) 5...f5? 6 gxf5! gxf5 7 a5 bxa5 (7...h5 8 b5+! ♔c7 9 axb6+ ♔xb6 10

♔b4! ♚c7 11 ♔c5! +−) 8 bxa5! ♚d6 (8...h5 9 ♔b4! +−) 9 ♔b5! ♚c7 10 ♔c5! +−.

b222) 5...♚d6! 6 ♔b5 ♚c7! =; see 11.06.

c) 1...b5!? is an interesting blocking sacrifice that in the following play also has to be watched out for. White loses his active options on the queenside.

c1) 2 axb5:

c11) 2...g5? 3 fxg5 fxg5 (3...hxg5 4 ♔f5 ♚xd5 5 ♔xf6 +−) 4 b6!? c6 5 dxc6! ♚xc6 6 ♔f5! ♚xb6 7 ♔g6! ♚b5 8 ♔xh6! ♚xb4 9 ♔xg5! b5 10 h4 ♚c4 11 ♔f4! b4 12 ♔e3! (12 g5? b3! 13 g6! b2 14 g7! b1♕ 15 g8♕+! ♚c5! =) 12...♚c3 13 h5! b3 14 h6! b2 15 h7! b1♕ 16 h8♕+! ♚c4 17 ♕d4+! ♚b5 18 ♕d3+ ♕xd3+ 19 ♔xd3! +−.

c12) 2...b6 3 h4 ♚d7 4 h5 gxh5! 5 gxh5! ♚e8 6 d6!? cxd6! 7 ♔d5 ♚d7! 8 f5 ♚e7! 9 ♔c6 d5! 10 ♔xd5! ♚d7! =.

c2) 2 a5 g5!? 3 fxg5 hxg5! 4 ♔d4! c6! 5 dxc6! ♚xc6! =.

2 h4 (D)

B
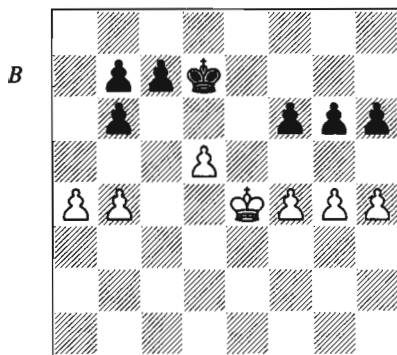
2...♚e7?
Alternatives include:
a) 2...g5? 3 fxg5 fxg5 4 hxg5 hxg5 5 ♔f5 +−.
b) 2...c5? 3 dxc6+!:
b1) 3...bxc6 4 a5 ♚c7 5 ♔d3 c5 (or 5...♚b7 6 g5 fxg5 7 h5 gxh5 8 f5 h4 9 ♔e2 +−) 6 a6! cxb4 7 a7 ♚b7 8 g5 fxg5 9 h5 gxh5 10 f5 +−.

b2) 3...♚xc6 4 h5! f5+ (4...g5 5 fxg5 fxg5 6 ♔f5 +−) 5 ♔e5! and White is winning.

c) 2...♚d6? allows a powerful pawn breakthrough: 3 h5! (3 ♔d4? c6!? 4 dxc6! ♚xc6! =, as usual) 3...f5+ (3...g5 4 fxg5! fxg5 5 b5 +−; 3...gxh5 4 gxh5! f5+ 5 ♔d4! +−) 4 ♔d4! fxg4 5 hxg6! ♚e7 6 b5 ♚f6 7 a5 bxa5 8 b6! (D).

B
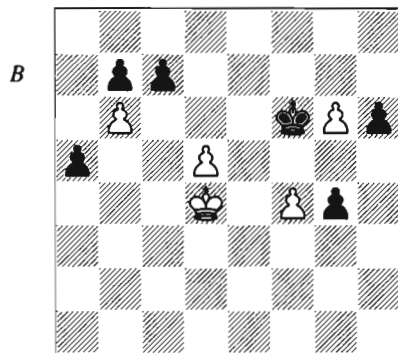
8...cxb6 9 d6! +−. This idea will show up again and again.

d) 2...b5!! is here an emergency brake: 3 a5 ♚d6 4 ♔d4 (4 h5 gxh5 5 gxh5! ♚e7! =) 4...c6! 5 dxc6 ♚xc6! =.

3 ♔d4?
Certainly not 3 h5?? f5+! 4 ♔e3 (4 gxf5 gxh5! −+) 4...♚f6 5 hxg6 ♚xg6! −+.

It is now the right time for 3 g5!: 3...hxg5 (3...f5+ 4 ♔e5! h5 5 b5! ♚f7 6 d6! c5 7 bxc6! bxc6 8 d7! ♚e7 9 d8♕+ ♚xd8 10 ♔f6! c5 11 ♔xg6! c4 12 ♔h6 c3 13 g6! c2 14 g7! c1♕ 15 g8♕+! ±) 4 hxg5! ♚f7 (4...fxg5 5 fxg5! ♚d6 6 ♔d4! +−; play has transposed to the game) 5 ♔d4! ♚e7 6 gxf6+! ♚xf6 7 ♔e4! ♚f7 8 ♔e5! ♚e7 9 a5! (9 b5? ♚f7! 10 d6 c5 11 bxc6 bxc6! 12 f5 gxf5! 13 ♔xf5! c5 =) 9...b5 10 ♔d4 ♚d6 11 ♔e4! ♚d7 12 ♔d3 ♚e7 13 ♔e3 ♚f6 14 ♔e4! ♚f7 15 ♔d4!

♔f6 16 ♔c5! ♔f5 17 ♔xb5! ♔xf4 18 ♔c4! g5 19 b5 g4 20 ♔d3 *(D)*.
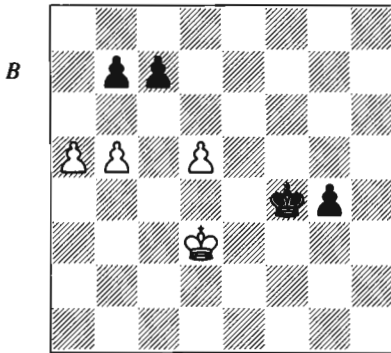
20...♔f3 21 a6 bxa6 22 d6 cxd6 23 bxa6! g3 24 a7! g2 25 a8♕+! and White wins.

3...♔d6
Or:
a) 3...g5? 4 hxg5 hxg5 5 fxg5! fxg5 6 ♔e5! ♔d7 7 b5 ♔e7 8 ♔f5! ♔d6 9 ♔xg5! ♔xd5 10 ♔f6 +−.
b) 3...h5?:
b1) 4 f5! hxg4! 5 fxg6! b5!! (5...g3? 6 ♔e3! f5 7 b5 f4+ 8 ♔f3 ♔f6 9 h5 ♔g7 10 a5 bxa5 11 b6 cxb6 12 d6 +−) 6 axb5 b6! 7 h5 (7 ♔e4 f5+ =) 7...f5 8 h6 ♔f6 9 h7 ♔g7! 10 ♔e3 g3 11 ♔f3 f4! =.
b2) 4 g5! f5 (4...fxg5 5 fxg5! ♔d6 6 ♔e4! ♔d7 7 ♔e5! ♔e7 +−; compare the game continuation) 5 ♔e5! ♔f7 6 d6!:
b21) 6...c6 7 a5 b5 (7...c5 8 bxc5! bxc5 9 ♔d5 ♔e8 10 ♔c4! ♔d7 11 ♔b5 +−) 8 ♔d4! ♔e6 9 ♔c5! ♔d7 10 ♔b6! ♔c8 11 d7+ +−.
b22) 6...c5 7 bxc5! bxc5 8 ♔d5! b6 9 ♔c6 +−.
c) 3...b5!? may be the only sensible alternative to the text-move.
4 g5
After 4 ♔e4 again one has to think about the pawn sacrifice 4...b5!?; for example:
a) 5 axb5 b6!:

a1) 6 h5 f5+ (or also 6...gxh5 =) 7 gxf5 gxh5! 8 f6! ♔d7! 9 ♔f5! ♔e8! 10 ♔g6! ♔f8! 11 ♔xh5! ♔f7! 12 ♔xh6! ♔xf6! (reciprocal zugzwang with White to move) 13 ♔h7! ♔f7! 14 ♔h8 ♔f8! =.
a2) 6 ♔d4 ♔d7 =.
b) 5 a5 f5+!? 6 gxf5! gxf5+! 7 ♔xf5! (7 ♔d4? h5! −+) 7...♔xd5! 8 ♔g6 c5! 9 f5 cxb4! 10 f6 b3! 11 f7 b2! 12 f8♕ b1♕+! 13 ♔xh6 =.
4 h5 gxh5! 5 gxh5! ♔d7 seems to be equal as well.
4...hxg5! *(D)*
4...fxg5? 5 fxg5! hxg5 6 hxg5! +−.
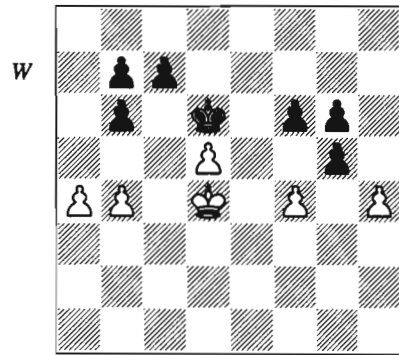
5 hxg5
Explosive tactical possibilities are offered by 5 fxg5, e.g.:
a) 5...♔e7? 6 gxf6+! ♔xf6 7 ♔e4! ♔f7 8 ♔e5! ♔e7 9 a5!:
a1) 9...bxa5 10 bxa5! ♔f7 (10...♔d7 11 ♔f6! +−) 11 d6! +−.
a2) 9...b5 10 ♔d4 ♔f6 (10...♔d6 11 ♔e4! ♔d7 12 ♔d3 ♔e7 13 ♔e3 ♔d7 14 ♔e4! +−) 11 ♔c5! ♔e5 12 d6! cxd6+ 13 ♔xb5 d5 14 ♔a4! ♔d6 (14...d4 15 ♔b3 ♔d5 16 b5! ♔c5 17 a6! +−) 15 b5! ♔c5 16 a6! bxa6 (16...♔b6 17 ♔b4! +−) 17 bxa6! ♔b6 18 ♔b4! ♔xa6 19 ♔c5! ♔b7 20 ♔xd5! ♔c7 21 ♔e6! ♔d8 22 ♔f7! +−, and White wins by one tempo.
b) 5...f5? is again punished by a breakthrough: 6 b5! f4 (6...♔e7 7 h5!?

gxh5 8 a5 bxa5 9 b6! cxb6 10 g6! +−) 7 h5! f3 (7...gxh5 8 g6 ♔e7 9 a5 +−) 8 ♔e3 gxh5 9 a5 bxa5 10 g6 ♔e7 11 b6 +−.

c) 5...b5!! *(D)*.
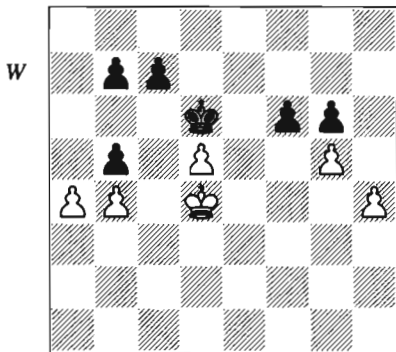
This blocking sacrifice now serves as the last resource.

c1) 6 a5? f5! (6...fxg5? 7 hxg5! +−) 7 h5 gxh5! 8 g6 ♔e7! 9 ♔e5 h4 wins for Black.

c2) 6 gxf6? bxa4! 7 b5 b6! 8 ♔c4 ♔d7! 9 ♔b4 ♔e8! 10 ♔xa4 ♔f7! 11 ♔b4 ♔xf6! −+.

c3) 6 axb5! fxg5! 7 hxg5! b6! is a draw.

5...fxg5?

Both players have lost the thread.

a) 5...♔e7? 6 gxf6+! ♔xf6 7 ♔e4!:

a1) 7...b5 8 a5! (8 axb5? b6! =) 8...♔f7 9 ♔d4! ♔f6 10 ♔c5! +− leads to line 'a212'.

a2) 7...♔f7 8 ♔e5! ♔e7 9 a5!:

a21) 9...b5 10 ♔d4:

a211) 10...♔d6 11 ♔e4! ♔d7 12 ♔d3 ♔e7 13 ♔e3 ♔f6 14 ♔e4! ♔e7 15 ♔e5! ♔f7 (15...♔d7 16 ♔f6! c5 17 dxc6+! bxc6 18 ♔xg6 c5 19 ♔f5 cxb4 20 ♔e4! +−) 16 d6 (16 ♔d4 ♔f6 17 ♔c5! is another way to win, but is more complicated) 16...c6 17 ♔d4 ♔e6 18 ♔c5! +−.

a212) 10...♔f6 11 ♔c5! ♔f5 12 ♔xb5! ♔xf4 13 ♔c4 g5 14 b5 g4 15 ♔d3 ♔f3 16 d6 cxd6 17 a6! g3 18 axb7 g2 19 b8♕

g1♕ 20 ♕f8+ ♔g2 21 ♕g7+ ♔f1 22 ♕xg1+ +−.

a22) 9...bxa5 10 bxa5! ♔d7 (10...♔f7 11 d6! c6 12 ♔d4! ♔e6 13 ♔c5! ♔d7 14 ♔b6! ♔c8 15 d7+! +−) 11 ♔f6! b5 12 ♔e5! b4 13 ♔d4! +−.

b) 5...f5 is OK: 6 ♔c4 (6 b5 ♔d7! 7 ♔e5 ♔e7! =) 6...♔d7 (6...b5+ 7 axb5! b6! 8 ♔d4 ♔d7! 9 ♔e5 ♔e7! =) 7 a5 bxa5 8 bxa5! ♔e7 =.

c) 5...b5!? is 'last but not least' again the move that draws at once: 6 axb5 (6 f5!? =) 6...fxg5! 7 fxg5! b6! 8 ♔e4! ♔d7! =, more or less as before.

6 fxg5! ♔d7

6...c6 7 dxc6! bxc6 8 a5 ♔c7 (8...b5 9 a6 +−) 9 ♔e5 +−.

7 ♔e5! ♔e7 *(D)*

½-½
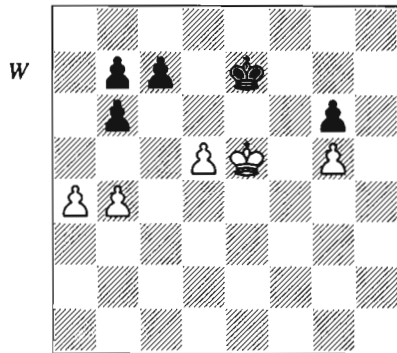
Draw? Really? This premature draw is the appropriate end of a fluctuating struggle. The (cautious) reader though will know where the rub was, won't he?

8 a5!

This was suggested by GM Rozentalis in the following analysis. The point is that White marks c5 as a weakness and thus in addition to the pair of corresponding squares e5/e7 adds another one with d4/d6.

But not 8 b5? ♔f7! 9 d6:

a) 9...c5:

a1) 10 ♔d5 ♔e8! 11 ♔e4 (11 a5? bxa5! 12 ♔xc5 ♔d7 −+) 11...♔d8 12 ♔e5! ♔d7 13 ♔d5! =.

a2) 10 bxc6 bxc6! 11 d7! ♔e7! 12 d8♕+ ♔xd8! 13 ♔f6! c5 14 ♔xg6! c4 15 ♔f7 c3 16 g6! c2 17 g7! c1♕ 18 g8♕+! ♔c7 =.

b) 9...c6 10 d7 ♔e7! 11 d8♕+ ♔xd8! 12 ♔f6 c5 13 ♔xg6! c4 14 ♔f7 c3 15 g6! c2 16 g7! c1♕ 17 g8♕+! ♔c7 =.

8...b5

8...bxa5 9 bxa5! ♔f7 (9...♔d7 10 ♔f6! b5 11 axb6 cxb6 12 ♔xg6! b5 13 ♔f5! +−) 10 d6! c6 11 ♔d4! ♔e6 12 ♔c5!, etc., as usual.

After the main move though the black king can only oscillate between e7 and d7, whereupon he is brought into a deadly zugzwang by a mean triangulation.

9 ♔e4 ♔d7 10 ♔d3 *(D)*

Or 10 ♔e3, 11 ♔d3 and 12 ♔e4!.

B
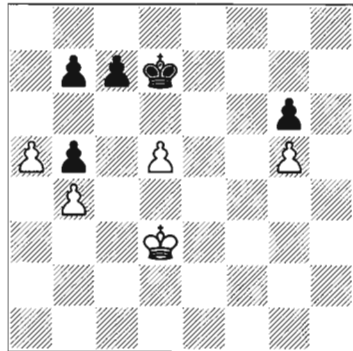
10...♔e7 11 ♔e3 ♔d7 12 ♔e4! ♔e7

12...♔d6 13 ♔d4! +−.

13 ♔e5! ♔d7

13...♔f7 14 ♔d4 +−.

14 ♔f6! c5 15 dxc6+ bxc6 16 ♔xg6 c5

After, e.g., **17 ♔f5 cxb4 18 ♔e4!**, the final curtain comes down.

Chapter 14 Exercises
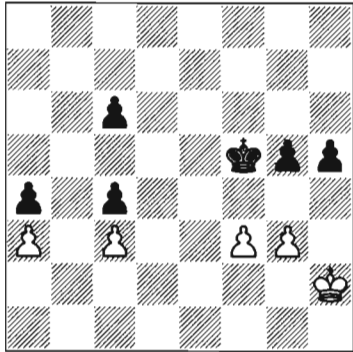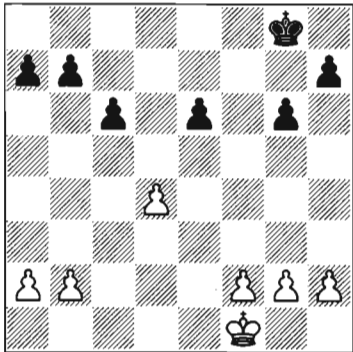
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A14.03   ***/
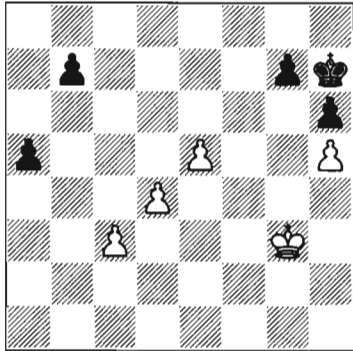
A14.02   ****/
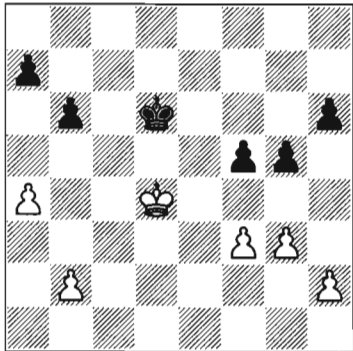
A14.04   /***

Solutions to Chapter 14 Exercises

A14.01 Teichmann – Blackburne, *Berlin 1897*

For a better understanding of this important position, which has already been analysed many times (Averbakh, for example, devotes three pages to it (Av 580, p.287ff)), we want to make some preliminary considerations. Black has an extra pawn at c6, and this offers him an important spare tempo. He therefore has to create a position in which this tempo is useful. The pawn formation on the kingside offers the idea ...h4 (or rarely ...g4). Because of the outside passed pawn, White then can't take at h4. If White remains passive, Black takes at g3 and after White takes back he plays ...♔f5, which secures the advance to f4. Only then is the spare tempo used to enable a winning encirclement. After the plan is clear, one has to consider the counter f4 when looking for the right moment for the advance ...h4. The analysis shows that ...h4 wins with the following king positions: b♔e5 vs w♔h3, h2, g1 or f2; b♔e6, f6 or g6 vs w♔h2, g1 or f2; b♔f5 vs w♔g2.

It follows that Black wins in the quickest way if he carries out a triangulation at f6, e6 and e5 because White can only oscillate between h3 and g2.

1...♔f6

1...h4? 2 ♔g2! =; White meets any king move by 3 f4!.

2 ♔h3

2 ♔g1?! h4 –+.

2 ♔g2:

a) 2...♔e5 followed by ...h4.

b) 2...♔e6 3 ♔f2 (3 ♔g1 h4 4 f4 gxf4! –+) 3...h4 4 f4 ♔f5 5 fxg5 h3! and Black wins.

c) 2...♔g6:

c1) 3 ♔h3:

c11) 3...♔f6 4 g4!? h4! 5 f4!? gxf4! 6 ♔xh4 ♔e5! (6...♔g6? 7 g5! ♔f5 8 g6! =) 7 g5 (7 ♔h3 ♔e4! 8 ♔g2 ♔d3! –+) 7...♔e4! 8 g6 f3! 9 g7 (9 ♔g3 ♔e3! –+) 9...f2! 10 g8♕ f1♕! –+.

c12) 3...♔f5 4 ♔h2 and Black must start from the beginning.

c2) The actual game finished 3 ♔h2 h4 4 ♔h3 hxg3 5 ♔xg3 ♔f5! 6 ♔f2 ♔f4! 7 ♔e2 ♔g3! 8 ♔e3 c5! 9 ♔e2 ♔g2! 0-1.

2...♔e6 (D)
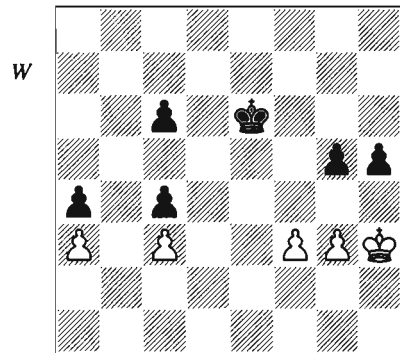
3 ♔g2

3 ♔h2 h4 4 ♔g2 (4 f4 gxf4! 5 gxh4 ♔f5! 6 ♔h3 ♔e4! leads to the main variation) 4...hxg3 5 ♔h3 ♔e5 6 ♔xg3 ♔f5! 7 ♔g2 ♔f4! (7...g4? 8 ♔g3 =) 8 ♔f2 c5! 9 ♔e2 ♔g3! 10 ♔e3 ♔h3 (the decisive move: White doesn't have the square d3 available) 11 ♔f2 ♔h2! 12 ♔e2 ♔g2! 13 ♔e3 ♔f1! –+.

3 g4 h4! 4 f4 gxf4! 5 ♔xh4 ♔e5! –+ (as above).

3...♔e5! 4 ♔h3

4 ♔f2 h4 5 f4+ ♔f5! 6 fxg5 (6 ♔f3 g4+! 7 ♔f2 hxg3+! 8 ♔xg3 c5! –+) 6...h3! 7 g4+ ♔xg5! 8 ♔g3 h2! 9 ♔xh2 ♔xg4! 10 ♔g2 c5 –+.

4...h4

The advance 4...g4+ only wins with the present king position. If the black king were on f5, White could defend himself with ♔g2.

a) 5 ♔g2 gxf3+! 6 ♔xf3 ♔f5! 7 ♔e3 (7 ♔f2 ♔e4! 8 ♔e2 c5! −+) 7...♔g4! 8 ♔f2 ♔h3! 9 ♔f3 c5! −+.

b) 5 fxg4 hxg4+! 6 ♔xg4 ♔e4! 7 ♔h5 ♔d3! 8 g4 ♔xc3! 9 g5 ♔b2! −+.

5 f4+

5 gxh4 gxh4! 6 ♔g4 c5 (6...h3 −+) 7 f4+ ♔e4! 8 f5 h3 −+.

5...gxf4! 6 gxh4 ♔e4! 7 ♔g2

7 h5 f3 8 h6 ♔e3 −+.

7...♔d3! 8 h5

8 ♔f3 also loses: 8...♔xc3! 9 h5 ♔b3 −+.

8...♔e2! −+

The resulting queen ending is hopeless for White.

A14.02 Vasilev – Briuzgin, *USSR 1971*

The white king is not in the square of the passed a-pawn, so he has to do everything possible to queen his connected passed pawns. Dr Michael Berndt analysed this position in *Jugendschach* 3/89 in a series about pawn endings, which caused co-author Müller to have a closer look at this position himself (see *Jugendschach* 5/89, p.27ff).

1 d5

1 e6 ♔g8! 2 ♔f4! ♔f8 *(D)*:
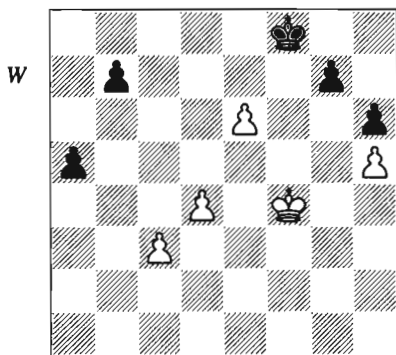
a) 3 ♔e4? enters the square of the a-pawn, but it is still not enough. The following lines are dramatic:

a1) 3...♔e7? 4 c4!! (4 d5? a4! 5 ♔d3 b5! −+) 4...♔xe6 (4...a4 5 ♔d3! =) and now:

a11) 5 ♔d3:

a111) 5...b6 6 ♔c3 ♔f5 7 ♔b3 (7 d5 =; 7 c5? bxc5! 8 dxc5 ♔e6 9 ♔c4 a4! 10 ♔b4 ♔d5! 11 ♔b5 a3! ∓) 7...g5 8 hxg6! ♔xg6! 9 c5 bxc5! 10 dxc5 ♔f6 11 ♔a4! ♔e6 12 ♔xa5! ♔d7! 13 ♔b6! ♔c8! 14 ♔c6! h5! =.

a112) 5...g5 6 hxg6! ♔f6! 7 d5 ♔xg6! 8 c5! (8 ♔d4? a4 9 ♔c5 a3 10 d6 ♔f7 11 ♔b6 ♔e6! −+) 8...♔f7 9 ♔c4! ♔e7 (9...h5 10 ♔b5! a4 11 c6! bxc6+ 12 dxc6! =) 10 ♔b5! a4 11 ♔b6 a3 12 d6+ ♔d7 13 ♔xb7! a2 14 c6+! ♔xd6! 15 c7! a1♕ 16 c8♕! =.

a12) 5 d5+? ♔d6! 6 c5+!? ♔xc5! 7 ♔e5 a4! 8 d6 a3! 9 d7 a2! 10 d8♕ a1♕+! 11 ♔e6 ♕a2+ (11...♕f6+? 12 ♕xf6! gxf6! = is only a draw: either the black king is outside the winning zone of the h-pawn (3.07) or White stalemates himself) 12 ♔e7 ♕e2+ 13 ♔f8 b5 ∓.

a13) 5 c5!? a4 6 d5+! ♔f6 7 ♔d4 a3! 8 ♔c3! ♔e5 9 d6! ♔e6 10 ♔b3 b6 11 cxb6 ♔xd6 12 ♔xa3 ♔c6! 13 ♔a4 ♔xb6! 14 ♔b4! and the result is a draw (see 4.08).

a2) 3...a4! 4 ♔d3 *(D)*:
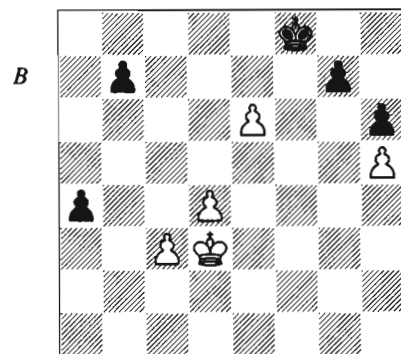
a21) 4...a3?? 5 ♔c2! ♔e7 6 d5! ♔f6 7 ♔b3! +−.

a22) 4...♔e7? 5 c4!! (5 d5? b5! −+) 5...♔xe6 6 ♘c3! g5 7 hxg6! ♔f6! 8 d5 ♔xg6! 9 ♘b4! ♔f6 (in the following play, White must ensure that the h-pawn does not promote with check) 10 ♘xa4! (10 c5? a3 −+) and then:

a221) 10...♔e7 11 ♘b5 ♔d7 12 ♘b6: a2211) 12...h5? 13 ♘xb7! h4 (after 13...♔d6 14 ♘b6! h4 15 c5+! +− White either reaches a winning queen ending or promotes with check) 14 c5! h3 15 c6+! ♔e7 16 ♘c7! (16 c7? h2! 17 c8♕ h1♕! 18 ♕e6+ ♔d8! {Black must keep his king in front of the pawn} 19 ♕d6+ ♔e8 20 ♘c7 ♕h7+! 21 ♔c8 ♕h3+ =) 16...h2 17 d6+! ♔f7 18 d7! h1♕ 19 d8♕! ♕h2+ 20 ♕d6 ♕a2 21 ♔d7 ♕a4 22 ♕e6+ ♔f8 23 ♕g6 ♕b5 24 ♕e4 +−.

a2212) 12...♔c8! 13 c5 h5! 14 d6! h4! 15 d7+! =.

a222) 10...h5 11 ♘b5 h4 12 ♘b6! h3 13 d6! ♔e6 14 ♘c7! =.

a223) 10...♔e5 11 ♘b5 h5 12 ♘b6! ♔d6 13 ♘xb7! h4 14 ♘b6! =.

a23) 4...b5! 5 d5 ♔e7! 6 ♔c2 (6 c4?! a3! 7 ♔c3 bxc4! −+) 6...♔f6! 7 ♔b2 g5! (7...g6?? 8 e7 ♔xe7 9 hxg6! +−) 8 hxg6 ♔xg6! 9 ♔a3 h5! (9...♔f6? 10 ♔b4! =) 10 d6 (10 ♔b4 a3! 11 ♔xa3 h4! 12 ♔b4 h3! −+) 10...♔f6! 11 e7 ♔f7! 12 ♔b4 and now comes the decisive point: 12...a3!! −+ (after 12...h4?? 13 ♔xb5 a3 14 ♔c6! a2 15 ♔d7! a1♕ 16 e8♕+! +− White would be winning because of the far-advanced d-pawn).

b) 3 ♔e5 ♔e7 (3...a4 4 ♔d6 ♔e8! 5 d5 a3! 6 ♔c7! a2 7 d6! =) 4 d5! a4! 5 d6+! =.

1 ♔f4 =.

1...♔g8!? 2 ♔f4! a4! 3 d6 ♔f7 3...♔f8?! 4 ♔f5! ♔f7! (4...a3? 5 ♔e6! +−) 5 e6+ ♔e8 =.

4 ♔f5! a3 5 e6+! ♔e8 6 ♔g6 a2 7 d7+! ♔e7 8 d8♕+! ♔xd8! 9 ♔f7! a1♕ 10 e7+! ♔c7 11 e8♕! ♕xc3 12 ♔g8 ♕d4 13 ♔h7 ♕f6 14 ♕g6 ½-½

Because of 14...♕xg6+ 15 ♔xg6 b5 16 ♔xg7! b4 17 ♔xh6! b3 18 ♔g7! b2 19 h6! b1♕ 20 h7! (3.07).

A14.03 N.Zilberman − D.Polajzer, *Bled 1989*

White has the better pawn-structure and the more active king, and this is enough to secure a winning advantage. The analysis follows the game; Black could have improved his play in some places but he could never save the game.

1 ♔e2 ♔f7 2 ♔e3 ♔e7 2...♔f6 3 ♔e4 g5 4 g4 a5 5 a4 b6 6 b3 b5 7 f3 ♔f7 8 ♔e5 ♔e7 9 f4 gxf4 10 ♔xf4 ♔d6 11 ♔e4 bxa4 12 bxa4! c5 13 g5 cxd4 14 ♔xd4! e5+ 15 ♔e4 ♔e6 16 h4 ♔d6 17 ♔f5 ♔d5 18 h5! e4 19 g6 +−.

3 h4 ♔d6 4 ♔f4 h6 4...♔d5 5 ♔g5! ♔xd4 6 ♔h6 ♔e5 7 ♔xh7 ♔f6 (7...♔f5 8 f3 e5 9 ♔g7 +−) 8 ♔h6 c5 9 g4 b5 10 g5+ ♔f7 11 ♔h7 winning, since after h5 the g-pawn can't be stopped.

5 ♔e4 Black now doesn't have enough spare tempi to prevent the white king from penetrating via e5-f6 or d6.

5...a5 (D)

W
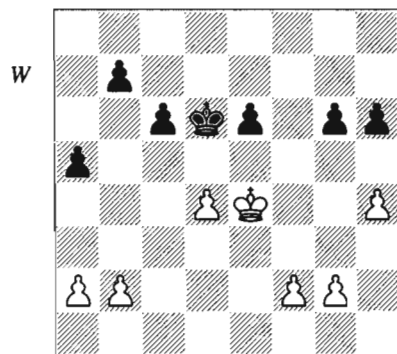
6 g4 6 a4 b6 7 g4 b5 8 b3 bxa4 9 bxa4! c5 10 dxc5+ ♔xc5 11 ♔e5:

a) 11...♔b4 12 f4! ♔xa4 13 h5!! (13 f5? exf5! 14 h5 f4! 15 hxg6! =) 13...gxh5 14 f5! exf5 15 gxf5! h4 16 ♔f4 +–.

b) 11...g5 12 h5! ♔b4 13 f4 gxf4 14 ♔xf4 ♔xa4 15 g5 hxg5+ 16 ♔xg5 +–.

6...a4 7 b3 a3 8 b4 b6 9 f3 c5

9...b5 10 h5! +–.

10 dxc5+! bxc5 11 b5!

11 bxc5+? ♔xc5! 12 ♔e5 ♔c4! (not 12...g5? 13 h5 ♔c4 14 f4 gxf4 15 ♔xf4 +–) 13 f4 ♔c3! 14 ♔xe6 ♔b2! 15 f5 gxf5! 16 gxf5! ♔xa2! 17 f6 ♔b3! 18 f7 a2! 19 f8♕ a1♕! =.

11...e5

11...♔c7 12 f4! (12 ♔d3? ♔b6! 13 ♔c4 e5 14 h5 g5! 15 ♔b3 ♔xb5! 16 ♔xa3! ♔c4! 17 ♔b2! ♔d3 18 a4! ♔c4 19 ♔a3! =) 12...♔b6 13 h5! gxh5 14 g5 hxg5 15 fxg5! h4 16 g6! h3 17 ♔f3! +–.

11...h5 12 gxh5 gxh5 13 f4 ♔c7 14 ♔d3! ♔b7 15 ♔c3! ♔c7 16 ♔b3! +–.

12 ♔d3! ♔c7 13 ♔c3 ♔b7 14 ♔b3 1-0

A14.04 A.Chuprov – V.Varlamov, *St Petersburg 1994*

The white king is ready to penetrate the position, but Black has several ways to prevent that. Which one have you chosen?

1...h5

Or:

a) 1...a5!? 2 g4 (2 h4? f4! –+; 2 f4 g4 =) 2...f4 3 h3:

a1) 3...♔e6?! 4 ♔e4 (4 ♔c4 ♔d6! 5 ♔b5 ♔c7! =) 4...♔d6! 5 ♔f5 ♔d5 6 ♔g6! ♔d4! 7 ♔xh6! ♔e3! 8 ♔xg5! ♔xf3! 9 ♔h4! ♔e4 10 g5! f3! (10...♔f5? 11 g6 +–) 11 g6! f2! 12 g7! f1♕! 13 g8♕! ♕f2+ 14 ♔h5 ♕xb2 ± (Hecht in *CBM 41*).

a2) 3...♔c6:

a21) 4 ♔e4? ♔c5! 5 ♔f5 ♔d4! –+.

a22) 4 b3?! b5 5 axb5+! ♔xb5! 6 ♔c3! ♔c5 7 ♔c2! (7 ♔d3? ♔b4! 8 ♔c2 a4! 9 bxa4 ♔xa4! –+) 7...♔b4 8 ♔b2! =.

a23) 4 ♔c4 =.

b) 1...a6 *(D)*:
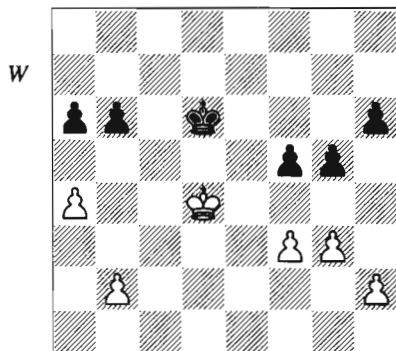
b1) 2 b4 g4 3 f4 (3 fxg4 fxg4! 4 ♔e4 a5 5 bxa5 bxa5! 6 ♔f5 ♔c5! 7 ♔xg4! ♔b4! =) 3...b5 4 a5! h5! 5 ♔c3 ♔d5 6 ♔d3! =.

b2) 2 g4:

b21) 2...fxg4?! 3 fxg4! a5:

b211) 4 ♔c4 ♔c6! 5 h3 ♔d6! 6 ♔b5 ♔c7! =. Then 7 ♔a6? leads to a disaster: 7...♔c6! 8 ♔a7 ♔c5! 9 ♔b7 (9 b3 b5! –+) 9...♔b4! 10 ♔xb6 ♔xa4! 11 ♔a6 ♔b4 –+.

b212) 4 ♔e4 ♔c5! 5 ♔f5! ♔b4! 6 ♔g6! ♔xa4! 7 ♔xh6! ♔b3! 8 ♔xg5! a4 9 h4 ♔xb2! 10 h5! a3 11 h6! a2 12 h7! a1♕ 13 h8♕+ ♔b1 14 ♕h7+ ♔c1 15 ♕c7+ ♔d2 16 ♕xb6 =. Since Black doesn't have a perpetual check at once he should keep the king in the south-west corner so as not to be in the way of his own queen.

b22) 2...♔e6 3 b4 fxg4 4 fxg4! ♔d6! 5 ♔e4 ♔e6 6 h3 a5 =.

c) 1...g4?! 2 fxg4 (2 f4 a6 3 ♔c4 ♔c6 =) 2...fxg4! 3 ♔e4 (3 b4 a5 4 bxa5 bxa5! 5 ♔c4! ♔c6! 6 ♔d4! =) 3...♔c5 4 ♔f4 ♔b4 5 ♔xg4 ♔xa4 6 ♔h5 ♔b3 7 g4 a5 8 ♔xh6 ♔xb2 9 g5 a4! 10 g6 a3! 11 g7 a2! 12 g8♕ a1♕! 13 ♕g7+ ♔b1 14 ♕g6+ ♔a2 = can't be won with the rook's pawn.

2 h3

2 h4 f4 3 hxg5! fxg3! 4 ♔e3! h4 5 f4 h3
6 ♔f3! h2 7 ♔g2! ♔e6 8 g6 ♔f6 9 f5! =.

2...a6 *(D)*

2...a5 3 g4 hxg4 4 hxg4 f4 5 ♔e4 ♔c5!
6 ♔f5 ♔d4! 7 ♔xg5 ♔e3! =.

2...h4:

a) 3 gxh4 gxh4! 4 b4 ♔e6 5 a5 (5 b5
♔d6! 6 f4 ♔e6! =) 5...♔d6 =.

b) 3 g4:

b1) 3...f4? 4 b4 a6 5 ♔c4! ♔e5 (White
wins after 5...♔c6?! 6 b5+! axb5+ 7
axb5+! ♔d6 8 ♔d4! ♔e6 9 ♔e4!) 6 a5!
♔d6 7 axb6! ♔c6:

b11) 8 ♔b3? ♔b7!? = (8...♔xb6?! 9
♔a4 ♔c6 10 ♔a5 ♔b7! 11 b5 axb5! 12
♔xb5! ♔c7 13 ♔c5 ♔b7! =).

b12) 8 ♔d4 ♔xb6 9 ♔e5 ♔b5 10 ♔f5
♔xb4 11 ♔xg5! a5 12 ♔xh4! a4 13 g5!
a3 14 g6! a2 15 g7! a1♕ 16 g8♕! ♕e1+
17 ♔h5! ♕g3 18 ♕g4 ±.

b2) 3...♔e6! 4 b4 a6! 5 a5 bxa5 6
bxa5! fxg4! 7 fxg4! ♔d6! =.

3 g4 hxg4 4 hxg4 ♔e6
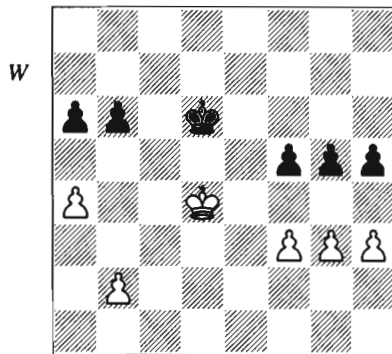
4...fxg4? 5 fxg4! a5 6 b3! (6 ♔e4?
♔c5! 7 ♔f5 b5! 8 ♔xg5 bxa4! 9 ♔f4
♔b4 10 g5 ♔b3! 11 g6 ♔xb2! 12 g7 a3!
13 g8♕ a2! =) 6...♔c6 7 ♔e5 ♔c5 (7...b5
8 ♔f5 bxa4 9 bxa4! ♔c5 10 ♔xg5! ♔b4
11 ♔f4 ♔xa4 12 g5 +−) 8 ♔f5 ♔b4 9
♔xg5! ♔xb3 10 ♔f5 ♔xa4 11 g5 +−.

5 b3 f4 6 b4

6 ♔e4 a5! =.

6...♔d6! 7 ♔c4 ♔e5

7...♔c6? 8 b5+! axb5+ 9 axb5+! ♔d6
10 ♔d4! ♔e6 11 ♔e4! +−.

8 a5 *(D)*
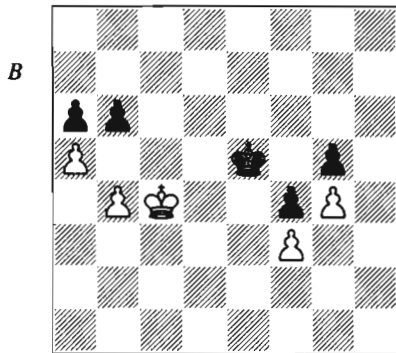
8...♔d6

8...bxa5 9 bxa5! ♔d6! (9...♔e6? 10
♔c5! ♔e5 11 ♔b6! +−) 10 ♔d4 ♔c6! 11
♔e5:

a) 11...♔b5? 12 ♔f5 ♔xa5 13 ♔xg5!
♔b4 14 ♔xf4! a5 15 ♔e3!? (Hecht; 15
g5?! +−) 15...♔c3 16 g5 +−.

b) 11...♔c5!! 12 ♔e4 ♔c4! 13 ♔f5
♔d4 14 ♔xg5 ♔e3! =.

9 axb6 ♔c6! 10 b7 ♔xb7! 11 b5

11 ♔d5 ♔b6! 12 ♔e5 ♔b5! 13 ♔f5
♔xb4! 14 ♔xg5! a5! 15 ♔xf4 a4! 16 g5!
a3! 17 g6! a2! 18 g7! a1♕! 19 g8♕! (here
Black can only draw against the bishop's
pawn if he has an immediate perpetual
check) 19...♕c1+ (19...♕d4+?! 20 ♔f5!
♕c5+! 21 ♔e4 ♕c2+! =; 19...♕f6+? 20
♔g4 ♕d4+ 21 ♔h5 ♕f6 22 ♕d5 +−) 20
♔e4 ♕c2+ =.

**11...a5 12 ♔c5 ♔c7 13 b6+ ♔b7! 14
♔b5! a4! 15 ♔xa4! ♔xb6 16 ♔b4 ♔c6
17 ♔c4 ♔d6 18 ♔d4 ♔e6?**

Varlamov, who for a long time has de-
fended himself so accurately, now loses
his nerve. He had to prepare a counter-
attack by 18...♔c6!: 19 ♔e5 ♔c5! 20 ♔f5
♔d4! 21 ♔xg5 ♔e3! =.

19 ♔e4! +− 1-0

15 Simplifications

Before the pawn ending the gods have placed simplification. Fortunately we have accumulated enough knowledge in the previous chapters to be ready to master this important aspect of the game. Well, apart from the few other endings. Of course we have also struggled with the evaluations, as it has been extremely difficult to keep to the 'Nunn Convention' in this chapter (particularly we distinguish between $±$ and $±$ but not between $\mp$, $=$ and $±$ or $±$ and $+-$). It should also be said that the examples are ordered by typical considerations while the exercises, with the exception of the concluding study, are arranged by the distribution of material.

A) Correctly Assessing Various Endgames

How should one make the right choice when you must decide how and whether to simplify with a limited amount of time? Well, pawn endings differ from most piece endings in such a way that you can arrive at a definite result by concrete calculation if there is enough time available. The following example is typical for this *(see following diagram)*:

Alexei Shirov had calculated that he wins after...

1 ♖xh7!

The assessment of the rook ending after 1 ♖xb5? is 'of course' only a draw: 1...♖h2+ 2 ♔e3 (2 ♔e1 ♖a2 3 ♖b3 f4 4 d5 ♔f5 5 d6 ♔e6 6 ♖d3 ♔d7 =) 2...♖h3+ 3 ♔f4 ♖xa3 4 ♖b6+ ♔f7 5 ♔xf5 ♖a5+ 6 ♔e4 ♔e7 and Black has reached the Philidor position. White can't make any

15.01   **+/**
A.Shirov – V.Ivanchuk
USSR jr Cht (Kramatorsk) 1989

progress because after 7 d5 ♖a1 8 ♔e5 his king has no shelter against the checks from behind: 8...♖e1+ 9 ♔d4 ♖d1+ 10 ♔c5 ♖c1+ =.

1...♔xh7 2 ♔f3 ♔g7

2...♔g6 3 ♔f4! ♔f6 4 d5! ♔g6 5 ♔e5! +-.

3 ♔f4! ♔g6 4 ♔e5! 1-0

Ivanchuk resigned as after 4...♔g5 5 d5! f4 6 d6! +- the d-pawn goes through with check.

Now two simplifications that lead to a draw *(see following diagram)*:

Like the rook ending in the previous example, the knight ending should also be drawn, but it's easier to calculate the simplification 1 ♘xf5+ until the end, though one needs the knowledge from Chapter 3 in order to reach a safe haven:

1 ♘xf5+!?

1 ♔c3?! ♘h4!? $\mp$ still demands precise play from White (1...♘xd4 2 ♔xd4!
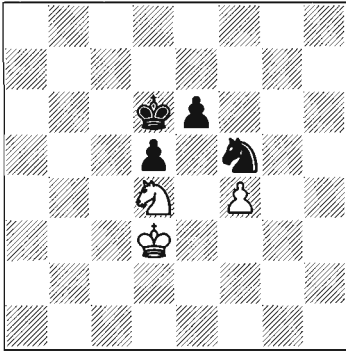
15.02 =/

V.Topalov – A.Antunes
Candas 1992

♔c6 3 ♔e5! ♔d7 4 f5! exf5 5 ♔xd5! =;
1...♔e7 2 ♘xf5+ exf5! 3 ♔b4! ♔d6 4
♔b5! =).

**1...exf5! 2 ♔d4! ♔c6 3 ♔e5! ♔c5 4
♔xf5! d4 5 ♔g6!**

Because 5 ♔e4 loses the queen and 5
♔e6 is the wrong side.

**5...d3 6 f5! d2 7 f6! d1♕ 8 f7! ♕d8 9
♔g7! ♕g5+ 10 ♔h8 ♕f6+ 11 ♔g8!
♕g6+ 12 ♔h8! ♕xf7 ½-½**

Stalemate.

15.03 =/

A.Munteanu – D.Moldovan
Bucharest 1992

Since one is never sure whether the
black passed pawn at e3 isn't too strong
in a queen ending, a simplification is a
very safe way to a draw:

1 ♕xe5+!?

1 ♕c4+?!:

a) 1...♕d4:

a1) 2 ♕xd4+? ♔xd4! 3 ♔c2 ♔c4! 4
g3 ♔d4! 5 g4 hxg4! 6 h5 ♔e4 7 h6 e2 8
h7 (8 ♔d2 ♔f3! 9 h7 ♔f2! 10 h8♕ e1♕+!
−+) 8...e1♕ 9 h8♕ ♕e2+ −+.

a2) 2 ♕c6+ ♔e5 (2...♔d3?? 3 ♕c2#!)
3 ♕b5+ ♕d5 4 ♕xd5+!? ♔xd5! 5 ♔d1!:

a21) 5...♔e4 6 ♔e2! ♔d4 (6...♔f4 7
♔d3 =) 7 g4! =.

a22) 5...♔d4 6 ♔e2! ♔e4 7 g3! =.

b) 1...♔f5 2 ♕e2 ♕c5+ (2...♔f4?? 3
♕f3#!) and White still has to play accu-
rately, e.g. 3 ♔d1 ♕d5+ 4 ♔e1 ♔f4 5
♔f1 ♕e4 6 g3+!? ♔xg3 7 ♕xe3+! ♕f3+
8 ♕xf3+! ♔xf3! =.

1...♔xe5! 2 ♔d1!

Not 2 ♔c2? ♔d4! (2...♔e4? 3 ♔c3! =)
3 g4!? hxg4! 4 h5 ♔e4 5 h6 e2 and Black
wins.

2...♔f5

2...♔e4 3 ♔e2! ♔d4 4 g4! =.

3 ♔e2 ♔e4 *(D)*

3...♔f4 4 ♔d3 =.

4 g3!

Not, of course, 4 ♔e1? ♔d3! 5 ♔d1
e2+! 6 ♔e1 ♔e3! −+.

4...♔d4 5 g4! hxg4! 6 h5! g3 7 h6! g2 8 h7! = ½-½
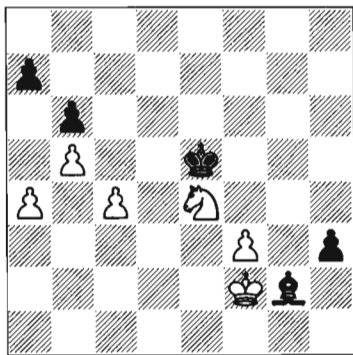
15.04 /=
A.Shirov – V.Akopian
Oakham jr 1992

In the battle for the tournament victory it seemed as if Alexei Shirov had already missed his winning chances until Akopian surprisingly simplified into a pawn ending:

1...♗xf3?
Instead he had a study-like way to hold the position:
a) Not 1...♔e6?, which is too passive. 2 c5 bxc5 (2...♔d5 3 c6! ♔e6 4 ♘g3 ♔d6 5 ♘f5+ ♔e6 6 ♘h4 +−) 3 a5! (3 ♘xc5+? ♔d5 =) 3...♔d7 4 ♘xc5+! ♔c7 (4...♔d6 5 b6 axb6 6 a6! +−; 4...♔c8 5 ♘d3 ♗h1 6 ♘e1 h2 7 ♘g2! +−) 5 ♘e6+ ♔d7 (5...♔d6 6 a6 ♗h1 7 b6! h2 8 b7! +−) 6 ♘d4 and now:
a1) 6...a6 7 b6! ♔d6 8 ♘f5+ ♔d7 9 ♘h4 ♔c6 10 ♔g1 +−.
a2) 6...♗h1 7 ♘f5 h2 (7...♗g2 8 ♘h4 +−; 7...♔c7 8 ♘h4 h2 9 ♘g2! +−) 8 ♘g3! ♗xf3 9 ♔xf3! ♔d6 10 ♘e4+! +−.
a3) 6...♔d6 7 ♘f5+!:
a31) 7...♔c5 8 b6! ♔c6 (8...axb6 9 a6! ♔c6 10 ♘d6! ♔c7 11 a7! +−) 9 ♘d6! a6 10 ♘f5 +−.

a32) 7...♔d7 8 ♘h4! ♔d6 9 ♔g1! (9 ♘xg2?? fails to 9...h2! −+) 9...♔c5 10 b6:
a321) 10...♗xf3 11 ♘xf3! axb6 12 a6! ♔c6 13 ♘d4+! ♔c7 14 ♘b5+! ♔b8 15 ♔h2 +− (15 a7+? =).
a322) 10...axb6 11 a6! ♔c6 12 ♘xg2 hxg2 13 f4 +− and White first queens the a-pawn with check and then the f-pawn.
b) 1...♔f4! 2 ♘d2! ♗h1! (2...♔e5? 3 c5! bxc5 4 a5! ♔d6 5 ♘e4+! ♔c7 6 ♘xc5! ♗h1 7 ♘e4! +−) 3 ♔g1 (3 a5?! bxa5 4 c5! h2 5 ♘f1! ♗xf3 6 ♘xh2! ♗d5 =) 3...♗g2! (3...♗xf3? 4 ♘xf3! ♔xf3 5 c5! +−) 4 c5 ♔g3 (4...bxc5 5 a5! c4! 6 b6! axb6 7 axb6! c3! 8 b7 cxd2! 9 b8♕+ ♔xf3! = Akopian) 5 ♘e4+! ♔f4! 6 c6 ♗xf3! 7 ♘d6 (7 c7 ♗g4! 8 ♘d6 ♔g3! 9 ♘e4+ =) 7...♗g4! (7...♔g3? 8 ♘f5+! ♔f4 9 c7! ♗b7 10 ♘d6! +−) 8 ♔h2 ♔e5! 9 ♘c4+ ♔e6 = Shirov (Inf 54).
2 ♔xf3! h2 3 ♔g2!
3 ♘f2? ♔d4 =.
3...♔xe4 (D)
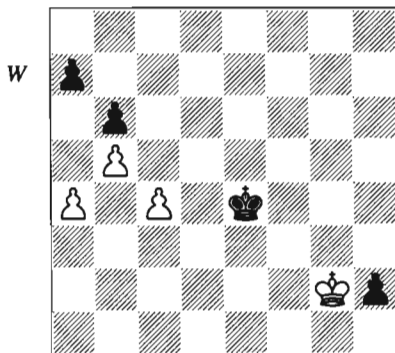
Now Alexei Shirov had prepared a surprise for his opponent:
4 c5!! ♔d5
4...bxc5 5 a5! ♔d5 (5...c4 6 b6! axb6 7 a6! c3 8 a7! c2 9 a8♕+! ♔d3 10 ♕a3+ ♔d2 11 ♕b4+ ♔d1 12 ♕d4+! ♔e2 13 ♕c3! ♔d1 14 ♕d3+! ♔c1 15 ♔xh2! b5 16 ♔g2 b4 17 ♕b3! ♔d2 18 ♕b2 ♔d1

19 ♔f2 +− Shirov) 6 a6! c4 7 b6! c3 8 bxa7! h1♕+ 9 ♔xh1! c2 10 a8♕+! and White wins.

5 c6! ♔d6 6 ♔xh2 ♔c7

6...a6 7 ♔g3 axb5 8 axb5! ♔e6 9 c7 +−.

7 ♔g3 ♔d6 8 ♔f4 ♔e6 9 ♔e4 ♔d6 1-0

The last assessment problem was again proposed by the trainer in Hamburg, Claus Dieter Meyer:
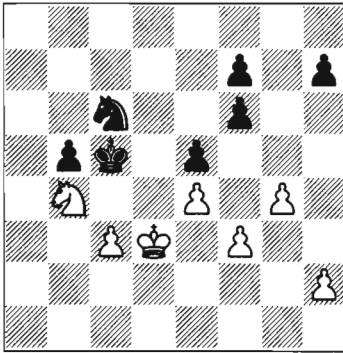
15.05   +/
A.Keller − C.Schubert
Bundesliga 1985/6

Surprisingly, only the pawn ending after 1 ♘xc6 is a win.

The knight ending after 1 ♘d5?, as played in the game, contains so many traps that one might even lose. 1...b4! (1...f5? 2 gxf5! h6 3 h4 +−) 2 ♘xf6 (the game ended 2 cxb4+ ♘xb4+! 3 ♘xb4 ♔xb4! ½-½) and now:

a) 2...bxc3? 3 ♔xc3 ♘d4 4 ♘xh7 ♘xf3 5 h3! ♔d6 6 ♔d3! ♔e7 7 ♔e3! (7 g5? f6!! {Meyer} 8 gxf6+ ♔f7 9 ♔e3 ♘h4 10 ♔f2 ♘g6! 11 ♔g3 ♘f4 12 ♔g4 ♔g6! 13 h4 ♔xh7 14 ♔f5 ♔g8 15 ♔xe5 ♘g6+ =) 7...♘h4 (after 7...♘g1?! the knight has no more squares, so a simplification into a pawn ending is the easiest

way to win: 8 ♘g5 f6 9 ♔f2! fxg5 10 ♔xg1! +−) 8 g5! +−.

b) 2...b3!:

b1) 3 ♘xh7?. After this further pawn-grab, Black's passed b-pawn becomes too dangerous. 3...♘a5! and now:

b11) 4 ♔d2 ♘c4+ 5 ♔c1 ♔b5 6 ♘f6 ♔a4! −+.

b12) 4 ♘f6 ♘c4! 5 ♘d5 ♔b5! (not 5...♘a3? 6 c4! b2 7 ♘c3! b1♕+ 8 ♘xb1! ♘xb1 9 h4 +−) 6 h4 ♔a4! 7 h5 b2 8 ♔c2 ♔a3! 9 ♘b4 ♘d2! −+.

b13) 4 c4!? ♘xc4 (4...♔b4? 5 ♘f6! b2 6 ♘d5+ ♔b3 7 ♘c3! ♘xc4 8 h4 ♘a3 9 h5! ♘b5 10 ♘b1! ♔a2! 11 ♘d2! ♘d4! 12 h6! ♘xf3 13 h7! ♘xd2! 14 ♔xd2 b1♕ 15 h8♕! ∓; 4...b2 5 ♔c2 ♘xc4! 6 ♘f6 −+ − see 4...♘xc4) 5 ♘f6 b2! 6 ♔c2 ♔b4! 7 ♘d5+ ♔a3! 8 ♘c3 ♘e3+! 9 ♔d3 ♘d1 (9...♔b3 10 h4 ♘g2 11 h5 ♘e1+ 12 ♔d2 ♘xf3+! 13 ♔d3 ♘g5! 14 ♘b1 ♔a2! 15 ♘c3+ ♔a1! 16 h6 b1♕+ 17 ♘xb1 ♔xb1! −+) 10 ♘b1+ ♔a2! 11 ♘d2 ♘f2+! (not 11...b1♕+?? 12 ♘xb1! ♔xb1 13 h4! +−) 12 ♔c2 ♘h3! 13 ♔d3 ♘f4+ 14 ♔e3 ♘e6 15 h4 ♘c5 16 h5 ♘b3! is winning for Black.

b2) 3 ♘d5!? ♘a5 4 ♘e3 ♔b5 5 ♔d2! ♘c4+!? 6 ♘xc4! ♔xc4! 7 g5! b2! 8 ♔c2 b1♕+ 9 ♔xb1! ♔xc3! (D).
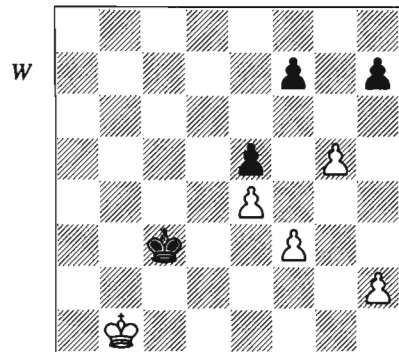
Now White is only able to hold the pawn ending by 10 ♔a2!! =.

White can instead win as follows:

1 ♘xc6! ♔xc6 2 ♔c2! ♔b6 3 ♔b2! ♔c6 4 ♔a3! ♔c5 5 ♔b3! ♔c6 6 ♔b4! ♔b6 7 c4 bxc4 8 ♔xc4! ♔c6 9 h3! *(D)*
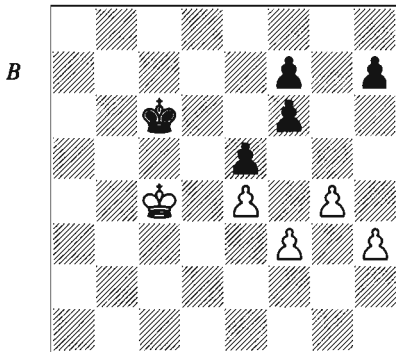
9...♔d6

9...h6 10 h4! ♔d6 11 ♔b5!:

a) 11...♔d7 12 ♔c5 ♔c7 13 ♔d5 ♔d7 14 g5 fxg5 15 hxg5! hxg5 16 ♔xe5! g4 (16...♔e7 17 ♔f5! f6 18 e5! fxe5 19 ♔xe5! +−) 17 fxg4! ♔e7 18 g5 ♔e8 19 ♔f6! ♔f8 20 e5! ♔e8 21 ♔g7! ♔e7 22 ♔g8 ♔e8 23 e6 +−.

b) 11...♔e7 12 ♔c6 ♔e6 13 ♔c7 ♔e7 14 h5! ♔e8 15 ♔d6! ♔d8 16 g5! fxg5 17 ♔xe5! ♔e7 18 ♔f5! ♔f8 19 ♔f6! ♔g8 20 e5! ♔f8 21 e6! fxe6 22 ♔xe6! +−. The white king has conquered a key square of the h6-pawn.

10 ♔b5! ♔d7 11 ♔b6!

(M.Voigt).

11 ♔c5? ♔c7! 12 ♔d5 ♔d7! 13 h4 ♔e7! 14 ♔c6 (14 g5?! fxg5! 15 hxg5! f6! 16 gxf6+! ♔xf6! 17 f4 =; 14 h5 h6 =) 14...♔e6! 15 ♔c7 ♔e7! 16 h5:

a) 16...♔e8?! 17 ♔d6 ♔d8 18 g5 fxg5 19 ♔xe5 (19 h6 ♔e8 20 ♔xe5 ♔e7! 21 ♔f5 f6! 22 e5 fxe5! 23 ♔xe5 g4 24 fxg4 = (6.01C)) 19...♔e7! 20 ♔f5 f6! 21 e5 fxe5! 22 ♔xg5 ♔f7 23 ♔f5 ♔f8 24 ♔f6 ♔g8! 25 ♔xe5 ♔f7! = (A12.05).

b) 16...h6 17 ♔c6:

b1) 17...♔e8? 18 ♔d6! +−.

b2) 17...♔d8?! 18 g5 fxg5! 19 ♔d6 f5!! 20 exf5 (20 ♔xe5 fxe4 21 ♔xe4 ♔e8 =) 20...e4! 21 fxe4 g4! 22 f6 ♔e8! 23 e5 g3! 24 e6 g2! 25 f7+! ♔f8! =.

b3) 17...♔e6 18 ♔c5 ♔d7 19 ♔d5 ♔e7! =.

11...♔d6 12 h4! *(D)*
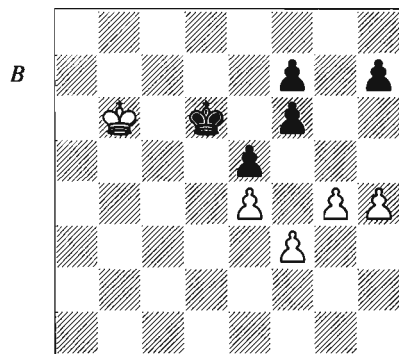
12...h6

12...f5 13 exf5 e4 14 fxe4! ♔e5 15 ♔c6 ♔xe4 16 ♔d6 h5 17 gxh5! ♔xf5 18 ♔e7! +−.

12...♔d7 and now:

a) 13 ♔c5 ♔c7 (13...♔e7 14 ♔d5! ♔d7 15 g5! +−) 14 ♔d5 ♔d7 15 g5! ♔e7 16 gxf6+! ♔xf6 17 ♔d6! +−.

b) 13 ♔b7 ♔d8 (13...♔d6 14 ♔c8 ♔c5 15 ♔d7 ♔d4 16 ♔e7! ♔e3 17 ♔xf6! ♔xf3 18 ♔f5!! +−) 14 ♔c6 ♔e8 15 ♔d6! h6 16 g5 fxg5 17 hxg5! hxg5 18 ♔xe5! +−.

13 h5! ♔d7

13...f5 14 g5! fxe4 15 fxe4! ♔e7 16 gxh6! ♔f8 17 ♔c5 +−.

14 ♔b7!

After 14 ♔c5? ♔e7! 15 ♔d5 the black king can hide in the corner: 15...♔f8! 16 ♔d6 ♔g8 17 ♔e7 ♔g7! =.

14...f5!?

14...♔d8 15 ♔c6! ♔e8 16 ♔d6! ♔d8 17 g5! +−.

15 gxf5!

15 exf5? f6! =; 15 g5? fxe4! 16 fxe4 ♔e7 17 gxh6! ♔f8! 18 ♔c6 f5! 19 exf5

e4! 20 f6 ♔g8! 21 ♘d7 e3! 22 h7+ ♔xh7! 23 f7! e2! 24 f8♕ e1♕! =.

15...f6

15...♔e7 16 ♘c7 ♔f6 17 ♘d6 ♔g5 18 ♔e7 +–.

16 ♔b6! ♔d6 17 ♔b5! ♔d7 18 ♔c4 ♔c6 19 ♘d3 ♔c5

19...♔d6 20 ♔e3 ♔e7 21 f4 ♔f7 (or 21...exf4+ 22 ♔xf4 ♔d6 23 e5+ fxe5+ 24 ♔e4! +–) 22 fxe5 fxe5 23 ♘d3 ♔f6 24 ♘c4 ♔g5 25 ♘d5 ♔xh5 26 f6 +–.

20 ♔e3 ♔c4 21 f4 exf4+ 22 ♔xf4 ♔d4 23 ♘f3! ♔d3 24 e5! fxe5 25 f6 e4+ 26 ♔f2! ♔d2 27 f7! e3+ 28 ♔f3! e2 29 f8♕! e1♕! 30 ♕b4+! +–

30 ♕xh6+? ♔d3! 31 ♕d6+ ♔c4! =.

B) Good Technique

The giving back of material in order to simplify into a won pawn ending is standard. Often it's the way to win that costs the least time and energy.
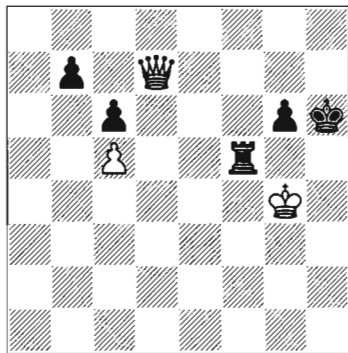
15.06 +/
C.Hansen – J.Piket
Wijk aan Zee 1994

Curt Hansen could now have captured the b-pawn with his queen but why complicate, if a queen sacrifice is a clear win?

1 ♕xf5!?

1 ♕d2+ ♔h7 2 ♕h2+ ♖h5 (2...♔g7 3 ♕b2+ ♔g8 4 ♕xb7 +–) 3 ♕b8 +–; after 3...♖xc5?! 4 ♕c7+! ♔h6 5 ♕f4+! ♔g7 6 ♕d4+! the rook is lost.

1 ♕xb7? (bad technique!) gives away half a point because by 1...♖xc5 2 ♕e7 ♖f5 3 ♕d8 ♔h7 4 ♕d7+ ♔h6 5 ♕xc6 ♔g7 (but not 5...♔h5? 6 ♕f6! ♔h7 7 ♕f7+! ♔h6 8 ♕g8! ♖g5+ 9 ♔f4 ♖f5+ 10 ♔e4 +–) Black can build a fortress: 6 ♕d7+ ♔g8 7 ♕e7 ♔h8 8 ♕h4+ ♔g7 = (8...♔g8?! 9 ♕h6 ♖f7! 10 ♔g5 ♖h7 =).

1...gxf5+ 2 ♔xf5! ♔h5 3 ♔e5 ♔g5 4 ♔d6! ♔f5 5 ♔c7! ♔e6 6 ♔xb7! 1-0

Even though it worked so well in the previous example, one has to be cautious with simplifications into a pawn ending:
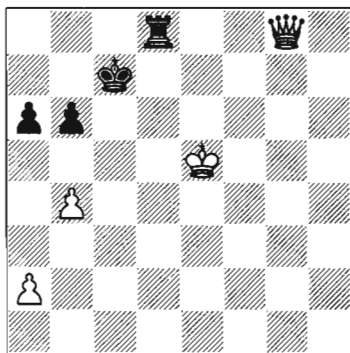
15.07 +/
D.Pirrot – C.Gabriel
Bad Wörishofen 1996

Pirrot wanted to make things easy in this totally won position.

1 ♕xd8+??

However, he was now confronted with an unpleasant surprise. He could have won by 1 ♕c4+ ♔b7 2 a4 ♖c8 3 ♕xc8+ ♔xc8 4 ♔d6! +– (but not 4 b5? ♔d7!! 5 ♔d5 a5! = or 4 ♔e6? b5! 5 a5 ♔c7! 6 ♔e7 ♔c6! =).

1...♔xd8! 2 ♔d6 b5! 3 ♔c6 a5! ½-½

Of course the plan to give back material could be longer-term. The plan to simplify into a pawn ending is demonstrated in the next example:
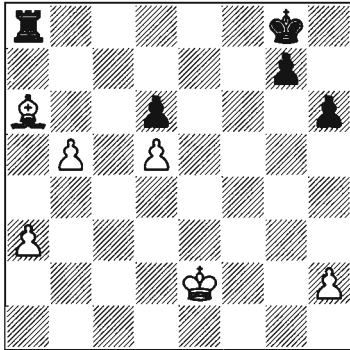
15.08   **/+**
Variation from **P.Florath – S.Löffler**
Bundesliga 1995/6

The white passed pawns on the queenside threaten to go through by a4-a5 and b6, so Black has to be careful. But his king arrives just in time to exploit the bishop's fixed position with a beautiful exchange sacrifice:

1...♔f7 2 ♔d3

2 ♔f3 ♔e7 3 ♔g4 g6 4 a4 ♔d7 5 a5 ♖xa6 −+.

2...♔e7 3 a4 ♔d7 4 a5 ♔c7

4...♖f8?? 5 b6! +−.

5 ♔d4 ♔b8

After 5...♖xa6?? Black couldn't prevent the white king from penetrating: 6 bxa6! ♔b8 7 ♔c4! g5 8 ♔d4 (8 ♔b5? g4 9 ♔c6 h5! only draws) 8...♔a7 9 ♔e4! ♔xa6 10 ♔f5! ♔b5 (10...♔xa5 11 ♔e6! g4 12 ♔xd6! h5 13 ♔c6 +−) 11 ♔g6 ♔xa5 12 ♔xh6! g4 13 ♔g5 ♔b5 14 ♔xg4! ♔c5 15 h4 ♔xd5 16 ♔f5! and White wins.

6 ♔e4 ♖xa6!? 7 bxa6 g6!

The white king has no way to get in. Black just collects the two a-pawns, and will then deal with the d-pawn. A white attempt on the kingside fails:

8 h4 ♔a7 9 h5 g5 10 ♔f5 ♔xa6 11 ♔e6 g4! −+

C) Combination

With tactical clashes it is important to assess the resulting positions quickly and correctly. If in one line a pawn ending results, you can apply your knowledge.
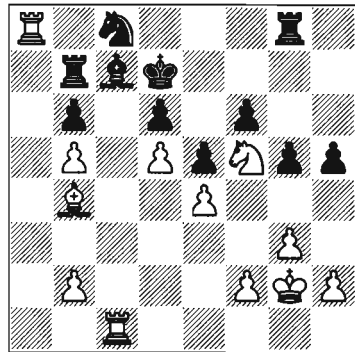
15.09   **+/**
K.Aseev – A.Sidorov
Kstovo 1996

Due to his more active pieces, White is a lot better but it's not so easy to see how to make further progress. Fortunately the simplifying combination wins.

1 ♗xd6!? ♗xd6 2 ♖cxc8 ♖xc8 3 ♖xc8! ♔xc8 4 ♘xd6+! ♔b8 5 ♘xb7! ♔xb7

Now White can penetrate with his king on the kingside, though he must be careful with the pawns to prevent Black from closing the position.

6 h4

6 f4 also wins, e.g. 6...♔c7 7 f5 ♔d6 8 g4 h4 9 ♔f3 ♔c5 10 ♔e3 ♔d6 (10...♔xb5 11 ♔d3 ♔c5 12 ♔c3 b5 13 ♔b3 +−) 11 ♔d3 ♔c5 12 ♔c3 ♔d6 13 ♔c4 ♔c7 14

d6+ ♚xd6 15 h3 ♚c7 16 ♚d5! ♚d7 17
b3 +−.

6 g4? h4! =; compare 6.09.

6...gxh4

6...g4 7 f3 f5 8 exf5 +−.

7 ♚h3

7 gxh4 ♚c7 8 f4 ♚d6 9 f5 +−.

7...hxg3 1-0

Because after 8 ♚xg3 ♚c7 9 ♚h4 +−
the white king penetrates successfully.

Chapter 15 Exercises
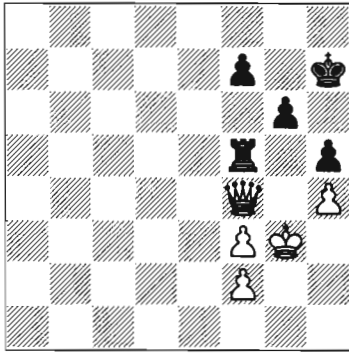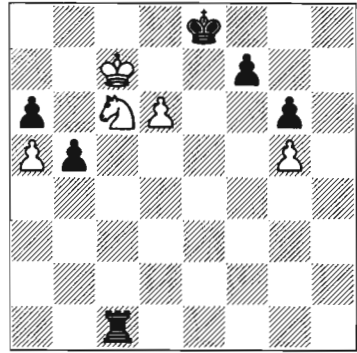
A15.01   **/

A15.04   /***
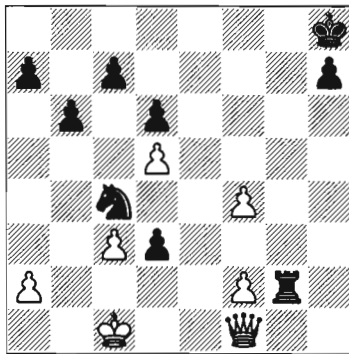
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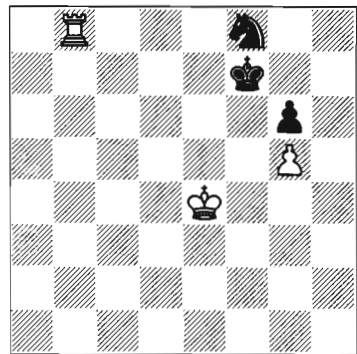
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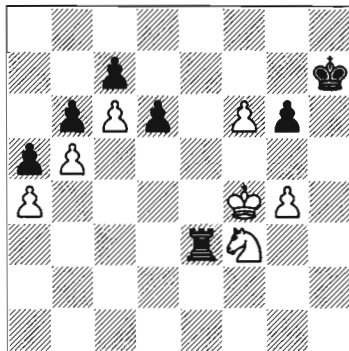
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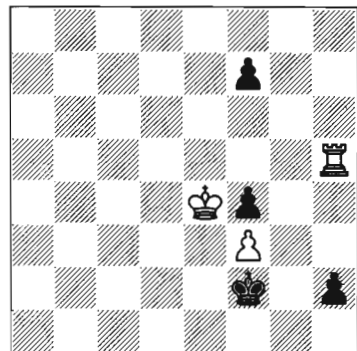
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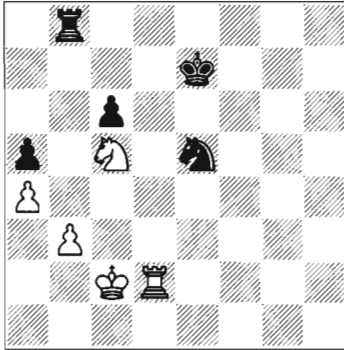
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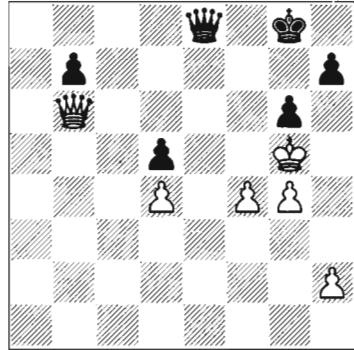
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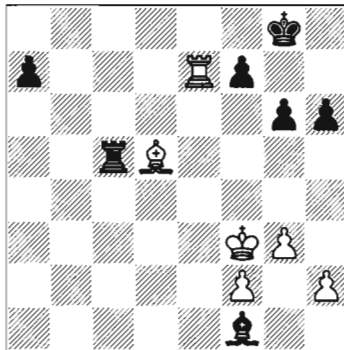
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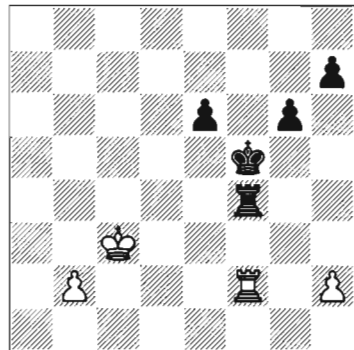
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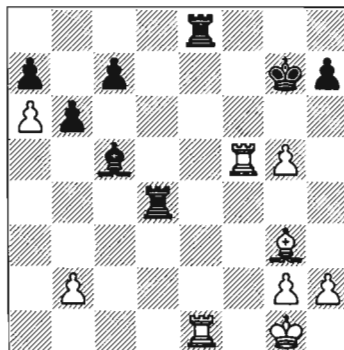
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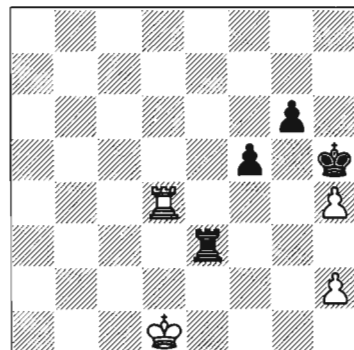
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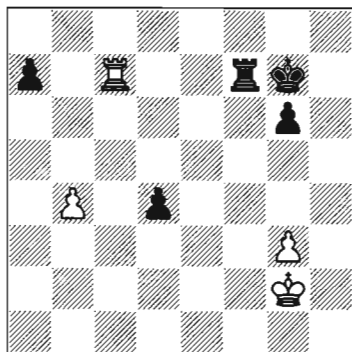
A15.13   ****/
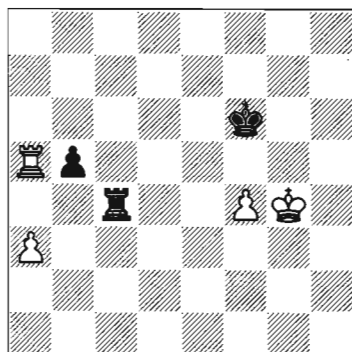
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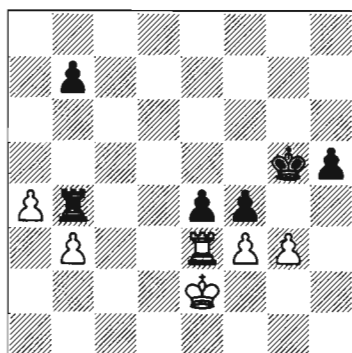
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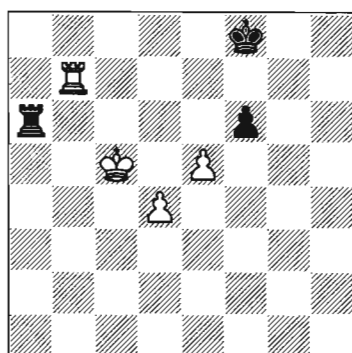
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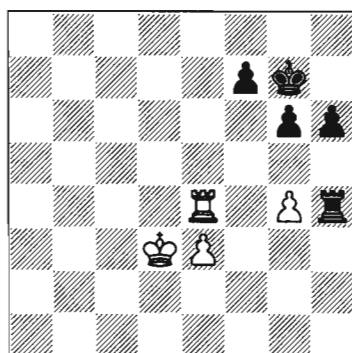
A15.15   /*****
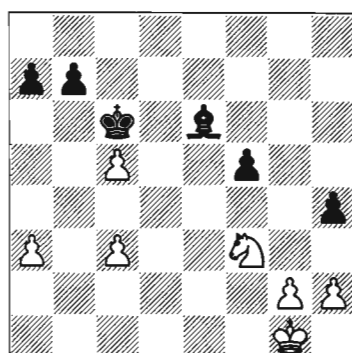
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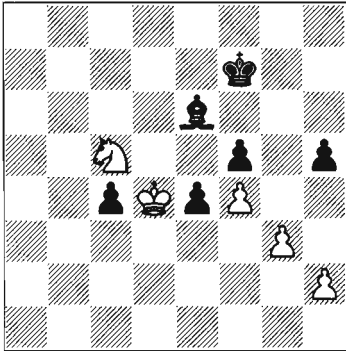
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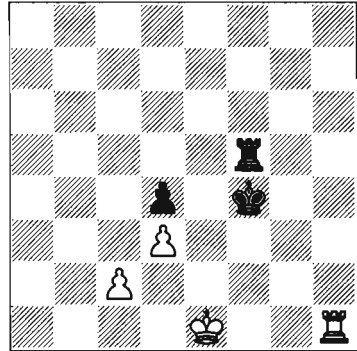
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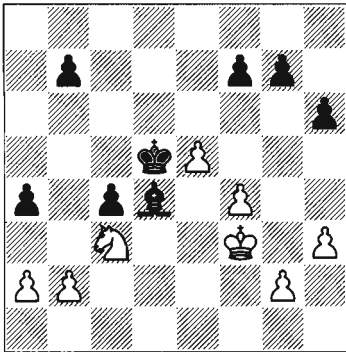
A15.20   /***

Solutions to Chapter 15 Exercises

A15.01 Ki.Georgiev – K.Ninov, *Stara Zagora Z 1990*
1 ♕xf5!?
White could also bring his king to the centre first, but the immediate simplification is the quickest way to win.
1...gxf5 2 ♔f4! ♔g6 3 ♔e5!
3 ♔e3? ♔g7! 4 ♔d4 ♔f6! 5 ♔d5 f4! 6 ♔d6 (6 ♔e4 ♔e6! 7 ♔xf4 ♔f6! 8 ♔e4! ♔e6! 9 f4 f6! 10 f5+ ♔d6! 11 ♔d4 ♔c6! =) 6...♔f5! 7 ♔e7 ♔g6! =.
3...f4 4 ♔e4!
One had to see this move before playing 1 ♕xf5.
1-0
In view of 4...♔f6 (4...♔g7 5 ♔f5! f6 6 ♔xf4 ♔g6 7 ♔e4! +–) 5 ♔xf4! ♔g6 6 ♔e5 f6+ 7 ♔e6 ♔g7 8 f4 ♔g6 9 f5+ ♔g7 10 ♔e7 +–.

A15.02 N.Liogky – A.David, *Cannes 1991*
Have you seen the extremely beautiful transformation combination?
1...♖g3!! 2 ♕h1
2 ♕d1 d2+! 3 ♔c2 ♖d3! –+ (3...♖e3? 4 ♕g4! ♖e1 5 ♕c8+! =); 2 fxg3 d2+! 3 ♔b1 ♘e3! 4 ♕e2 d1♕+! –+; 2 f5 ♖e3!? (2...♖f3?! –+) 3 ♔d1 ♖e2 –+ (Liogky, *Inf 52/(715)*).
2...d2+! 3 ♔c2 ♖d3! 4 ♔xd3
After 4 ♕d1 ♖xd5 –+ (Liogky) White is completely tied down.
4...d1♕+ 5 ♕xd1 ♘b2+! 6 ♔c2 ♘xd1! 7 ♔xd1
Black now wins easily thanks to his outside passed pawn and queenside majority. With this knowledge it was a little bit easier to see the combination.
7...b5 8 ♔e2 ♔g7 9 ♔f3 ♔f6 10 ♔g4 ♔g6 11 a3 ♔f6 12 f5 a6 13 ♔f4 h5 14 ♔e4 ♔g5 15 f3 ♔f6

15...h4 16 f6 ♔xf6 17 ♔f4 h3 18 ♔g3 ♔e5 19 ♔xh3 ♔xd5 –+.
16 ♔f4 a5! 17 ♔e4 ♔g5 0-1

A15.03 M.Ulybin – S.Temirbaev, *Cheliabinsk 1993*
So far we have only seen successful simplifications, so it is time for a counter-example:
1...♖xf3+?
1...♖a3!? 2 ♘g5+ ♔g8! 3 ♘e6 ♖xa4+ 4 ♔g5 ♖e4 5 ♘xc7 ♔f7! –+.
Temirbaev underestimates the weakness of the c7-pawn and probably overvalues his protected passed pawn d6 (but it's also possible that he missed 4 f7! during his calculations). However, the protected passed pawn alone doesn't secure the win; as we shall see, it doesn't even insure against loss.
2 ♔xf3! g5?
This was probably the idea behind 1...♖xf3+ but it only makes things worse.
2...♔g8 3 g5 ♔f7 4 ♔e4 ♔f8 (4...♔e6 5 ♔d4 d5! =) 5 ♔d5 ♔f7! =.
3 ♔e4 ♔g6 4 f7! ♔xf7 5 ♔f5! ♔e7
5...d5 6 ♔e5! (6 ♔xg5? ♔e6! =) 6...d4 7 ♔xd4! ♔e6 8 ♔e4! ♔f6 9 ♔d5! ♔f7 10 ♔e5! ♔g6 11 ♔e6! +–.
6 ♔xg5! ♔e6 7 ♔h6 ♔f7 8 g5 ♔g8 9 ♔g6! 1-0
Temirbaev resigned in view of 9...d5 10 ♔f5! ♔f7 11 ♔e5! ♔g6 12 ♔xd5! ♔f5 13 g6 +–.

A15.04 I.Glek – J.Hector, *Copenhagen 1995*
The far-advanced d-pawn is troublesome for Black. He therefore only has two different basic plans. Either he simplifies immediately into a pawn ending or he breaks through at an appropriate time, whereupon the resulting outside passed pawns tear apart the knight. Have you also assessed the pawn ending as won?

1...♖xc6+?
Surprisingly, this only draws. 1...♖d1!
would have won:
a) 2 ♘e5 and now:
a1) 2...f6? 3 gxf6 b4 4 d7+ (4 f7+ ♔f8
5 d7! b3 6 ♘c4! ♔xf7 7 ♘d6+! ♖xd6! 8
♔xd6! =) 4...♖xd7+! 5 ♘xd7! b3 6 ♔d6!
♔f7! 7 ♘e5+! ♔xf6! 8 ♘c4 g5 9 ♔c5 g4
10 ♔d4! g3 11 ♔e3! =.
a2) 2...b4! 3 d7+ ♖xd7+ 4 ♘xd7 b3!
5 ♘f6+:
a21) 5...♔e7? 6 ♘e4 (6 ♘d5+ ♔e6 7
♔c6 b2 8 ♘c3! f5 9 gxf6! g5 =) 6...b2 7
♘c3 f5 8 gxf6+! ♔xf6 9 ♔b6 g5 10
♔xa6 =.
a22) 5...♔f8! 6 ♘e4 b2 7 ♘c3 f5! 8
gxf6 g5! –+ (Glek, Inf 63).
b) 2 ♘b8 b4 3 d7+ (3 ♘xa6 b3 –+)
3...♔f8 4 d8♕+ ♖xd8 5 ♔xd8 b3 –+.
c) 2 ♘b4 and then:
c1) 2...f5? 3 gxf6! g5 4 ♘xa6! ♖c1+
5 ♔b6 ♔d7 6 ♘b8+ ♔xd6! 7 a6! ♖a1 8
a7 =.
c2) 2...♖d2? 3 ♔c6!! (3 ♘xa6? ♖c2+!
–+; see 2...♖d4) 3...♖d1 (3...♔d8? 4
♘xa6! ♔c8 5 ♘c5! +–) 4 ♘xa6! ♖a1! 5
d7+ ♔e7! 6 ♘c5! ♖xa5! 7 d8♕+ ♔xd8 8
♘b7+! =.
c3) 2...♖d4! 3 ♘xa6 ♖c4+! 4 ♔b6
♔d7! 5 ♘c5+ ♔xd6! 6 ♘b7+ ♔d7! 7 a6
♖c6+! 8 ♔xb5 ♔c7! 9 a7 ♖b6+! 10 ♔a5
♔xb7! 11 a8♕+ ♔xa8! 12 ♔xb6 ♔b8!
–+.
**2 ♔xc6! ♔d8! 3 ♔d5! ♔c8 4 ♔d4!
♔d7 5 ♔c5! b4 6 ♔xb4! ♔xd6 7 ♔c4!
♔e6**
7...♔c6 8 ♔d4! ♔b5 9 ♔e5! ♔xa5 10
♔f6! ♔b4 11 ♔xf7! a5 12 ♔xg6! is also
a draw.
8 ♔c5 f5
8...♔f5?! 9 ♔b6 f6! (9...♔xg5? 10
♔xa6! f5 11 ♔b5! f4 12 ♔c4! +– Glek)
10 gxf6 ♔xf6 =.
**9 gxf6! g5 10 ♔d4 ♔xf6 11 ♔e4 ♔e6
12 ♔f3! ♔d5 13 ♔g4! ♔c5 14 ♔xg5!
♔b5 15 ♔f4! ½-½**

A15.05 J.P.Koopmann – K.Müller,
Hamburg 1985
An easy exercise for a change:
1 ♖xf8+!?
Not, of course, 1 ♔e5?? ♘d7+! –+.
1 ♔d5 ♘h7 2 ♖b7+! ♔g8 3 ♖xh7! +–.
1...♔xf8 2 ♔d5!
2 ♔d4? ♔e8! =.
2...♔f7 3 ♔d6! (2.01) **1-0**

A15.06 I.Rogers – A.Shirov, *Groningen
1990*
White will have to sacrifice his rook
for the h-pawn if he wants to make any
progress. Thus knowledge about pawn
endings is also necessary. Black first has
to play ...f6 before he can simplify by
...♔g2:
1...♔g2?
1...♔g3!! 2 ♖h8 f6 3 ♖h7 ♔g2 (3...f5+
4 ♔xf5 ♔xf3! 5 ♖xh2 ♔g3! =) 4 ♔xf4
h1♕ 5 ♖xh1 ♔xh1! 6 ♔g3 ♔g1! 7 f4
♔f1! 8 ♔g4 ♔f2 9 ♔f5 ♔g3 =.
**2 ♔xf4! h1♕ 3 ♖xh1! ♔xh1 4 ♔g3!!
1-0**
The g3-square seems to have a magi-
cal attraction for the kings. Shirov re-
signed in view of 4...♔g1 5 f4! ♔f1 6 f5!
(6 ♔f3? f5! =) 6...♔e2 7 ♔f4! ♔d3 8
♔e5! ♔e3 9 f6! ♔f3 10 ♔d6! +–.

A15.07 J.Gomez Esteban – V.Miguel,
Spanish Cht 1993
To see the win of a piece is one thing.
Have you also noticed that the knight
can't escape and has to be given back at
b4?
1 ♖e2!
1 ♔c3? ♖h8 2 ♘b7 ♖a8 3 ♖e2 ♔f6! ±
is much better for White but against best
defence it shouldn't win.
**1...♔d6 2 ♖xe5! ♔xe5 3 ♘d7+! ♔d6
4 ♘xb8! ♔c7 5 ♘a6+!**
5 ♘xc6? ♔xc6! = (4.08).
5...♔b6 6 ♘b4!
6 ♔d3? ♔xa6! 7 ♔d4 ♔b6 =.

6...axb4 7 ♔d3! 1-0

In view of 7...♔c5 8 ♔e4! ♔d6 9 ♔d4! c5+ 10 ♔c4! ♔c6 11 a5! ♔d6 12 ♔b5! +–.

A15.08 M.Kaminski – I.Glek, *Biel 1995*

In endings that are as bad as this one, the defender often has to avoid pawn endings. While the outside passed a-pawn doesn't count for so much in a rook ending, it is decisive in a pawn ending. In this position White therefore has to act very accurately to avoid losing:

1 ♗xf7+?

This offers Black the game on a silver platter. Instead 1 ♔e4! (not 1 ♗a2? ♖a5! ∓ or 1 ♖d7? ♗b5! 2 ♖d8+ ♔g7 3 ♔e3 ♖c7 ∓) 1...♗c4 (1...♗g2+ 2 f3! ♗xf3+ 3 ♔xf3! ♖xd5! 4 ♖xa7! =) 2 ♗xc4! ♖xc4+! 3 ♔d3 ♖a4 4 h4 ∓ would have simplified into an uncomfortable but theoretically drawn rook ending.

1...♔f8! 2 ♖e1

2 ♖xa7 ♖f5+! –+.

2...♖f5+! 3 ♔e3

3 ♔g4 ♗g2! 4 ♗xg6 (4 ♗b3 ♗f3+! 5 ♔h3 ♖h5#) 4...♖g5+! –+.

3...♖e5+! 4 ♔d2 ♖xe1! 5 ♔xe1 ♔xf7! 6 ♔xf1 ♔e6 7 ♔e2 ♔d5 8 ♔d3 g5 9 f3 h5 10 ♔e3 a5 11 ♔d3 h4 12 ♔c3

12 f4 gxf4! –+.

12...h3 13 ♔d3 a4 14 ♔c3 a3 15 ♔b3 ♔d4! 16 ♔xa3 ♔e3! 17 f4 gxf4! 18 gxf4 ♔xf4! 0-1

White doesn't arrive in time to block Black at the edge of the board.

A15.09 W.Steinitz – J.Zukertort, *New Orleans Wch (12) 1886*

Steinitz won the game with an elegant combination:

1 ♖xc5!

1 ♖xe8?? ♖d1#!; 1 ♔f1? ♖xe1+! 2 ♔xe1 ± is no real alternative; 1 ♗e5+?? ♔g6! 2 ♖f6+ ♔xg5! 3 ♖f2 ♖dd8 would even win for Black.

1...♖xe1+ 2 ♗xe1! bxc5 3 ♗c3! ♔g6 4 ♗xd4! cxd4 5 h4!

The white kingside pawns can't be captured while White is always able to break up the queenside with the b-pawn. Not 5 ♔f2? ♔xg5! 6 ♔f3 ♔f5! 7 g4+! ♔g5 (7...♔e5 8 h4 c5 9 b3! =) 8 ♔g3 c5 9 h4+ ♔f6 10 b3! =.

5...♔f5 6 ♔f2 ♔e4 6

6...♔g4 7 g3! c5 8 b3 +–.

7 ♔e2 c5 8 b3 ♔e5 9 ♔d3 ♔f4 10 b4 1-0

Zukertort resigned owing to 10...cxb4 11 ♔xd4! ♔g4 12 g3.

A15.10 J.Howell – S.Zakić, *Vienna 1989*

The active white king is placed so unfortunately that he himself falls victim in a beautiful way:

1...♕e7+! 2 ♕f6

2 ♔h6?! ♕h4#.

2...h6+!!

2...♕xf6+? 3 ♔xf6! b5 (3...♔f8 4 ♔e5 +–) 4 ♔e7! b4 5 f5! +–.

3 ♔xg6 ♕h7+! 4 ♔h5 ♕f7+! 5 ♕xf7+ ♔xf7! 6 ♔xh6 ♔g8! 0-1

Howell resigned because the b-pawn can't be stopped, e.g. 7 ♔g6 (7 f5 b5! 8 f6 b4! 9 g5 b3! 10 g6 b2! –+ Zakić, Inf 48) 7...b5! 8 ♔f6 ♔f8! 9 ♔g6 b4! 10 ♔h7 b3! –+.

A15.11 K.Müller – A.Khasin, *Pula 1989*

The transition into a pawn ending is sufficient for a draw, while the rook ending is very risky.

1 ♖xf4+!?

1 ♖e2?! e5 ∓.

1...♔xf4!

But now accuracy is necessary because after 2 b4? the white king doesn't arrive in time.

2 ♔c4

The game saw instead 2 b4? ♔e5!:

a) Play concluded 3 b5 ♔d6 (3...♔d5? 4 b6 ♔c6 5 ♔d4! ♔xb6 6 ♔e5! =) 4 ♔d4

g5! 5 b6 h5! 6 b7 ♔c7! 7 ♔e5 h4! 8 ♔e4 ♔xb7 9 ♔f3 e5 −+ 0-1.

b) 3 ♔c4 ♔d6! 4 ♔b5 ♔c7! 5 ♔a6 ♔b8! 6 ♔b6 g5! 7 ♔c6 g4 8 ♔d6 h5! 9 ♔e5 h4! 10 ♔f4 g3! 11 hxg3 h3! 12 ♔f3 e5! −+.

2 ♔d4 e5+ 3 ♔d3! =.

2...e5

2...♔e5?! 3 ♔c5! ♔f5 4 b4 e5! 5 b5 e4! 6 ♔d4 e3 7 ♔xe3 ♔e5 8 b6 ♔d6! 9 ♔f4 h6 =.

3 ♔d3!

3 b4? e4 4 b5 e3 5 b6 e2 6 b7 e1♕ 7 b8♕+ ♕e5 ∓; 3 ♔c3? ♔e3! 4 b4 e4! ∓.

3...♔f3 4 ♔d2! ♔e4

4...e4 5 ♔e1! ♔e3 6 b4 ♔d4 7 ♔d2 ♔c4 8 ♔e3 ♔xb4 9 ♔xe4 =.

5 b4 ♔d4 6 b5 ♔c5 7 ♔d3 ♔xb5 8 ♔e4! =

A15.12 G.Timoshchenko – T.Vakhidov, *Tashkent 1987*

Strangely enough 1...♖e4? isn't the right way; Black should stay in the rook ending. It seems that not all rook endings are drawn!

1...♖h3!?

The game actually finished 1...♖e4? 2 ♖xe4! (White has to exchange; otherwise the situation is even more unfavourable than after 1...♖h3) 2...fxe4! 3 ♔e2 ♔g4 (3...♔xh4 4 ♔e3! ♔h3 5 ♔xe4! ♔xh2 6 ♔f4 =) 4 ♔e3! ♔f5 5 ♔e2 ♔f4 6 ♔f2! e3+ 7 ♔e2 ♔e4 8 ♔e1! ♔f5 9 ♔e2 ♔f4 10 ♔e1! ♔f3 11 ♔f1! e2+ 12 ♔e1! ½-½ (in view of 12...♔e3 13 h5 gxh5! 14 h3! =).

2 ♖d2

2 ♖d8 ♖xh2 3 ♖h8+ ♔g4 4 ♖h6 ♖xh4 5 ♖xg6+ ♔f3! −+.

2...♔xh4 3 ♔e1

3 ♖f2 ♖a3 −+; 3 ♖g2 g5 4 ♖f2 f4 5 ♔e1 ♖a3 6 ♔f1 ♔h3 −+.

3...♖f3 4 ♔e2 ♔g4 5 ♖a2

5 ♖d1 ♖a3:

a) 6 ♔f2 ♔h3 7 ♔g1 g5 8 ♖d5 ♖a1+ 9 ♔f2 ♖a2+ 10 ♔f1 g4 11 ♖xf5 ♔xh2!

−+ (11...♖xh2? 12 ♔g1! ♖a2 13 ♖f1! is only a draw).

b) 6 ♖g1+ ♔h5! 7 ♔f2 ♖a2+ 8 ♔g3 g5 −+.

5...f4 6 ♖b2 g5 7 ♖a2 ♖b3 8 ♔f2 ♔h3 9 ♖a5

9 ♖a8 ♔xh2 10 ♖h8+ ♔h3 11 ♖g8 ♖h5! 12 ♔f3 ♔h3! 13 ♖g7 ♔h4! 14 ♖a7 ♖h6 15 ♖a1 g4+ 16 ♔xf4 ♖f6+! −+.

9...♖b2+ 10 ♔f3 ♖g2 −+

A15.13 O.Renet – H.Olafsson, *Reykjavik (France-Iceland) 1993*

White shouldn't exchange rooks because an unpleasant surprise awaits him in the pawn ending:

1 ♖xf7+?

1 ♖c2? d3 2 ♖d2 ♖d7! 3 ♔f3 ♔f6 4 ♔e4 ♔g5 −+.

1 ♖c6!? ♖b7 (1...♖d7 2 ♔f2 d3 3 ♔e1! ∓) 2 ♔f3 ♖xb4 3 ♖c7+! ♔f6 4 ♖xa7! ♖b6!? (4...♖b3+ 5 ♔f4 =) 5 ♖a5 ∓.

1 ♖c5 ∓.

1...♔xf7! 2 ♔f3 ♔f6 3 ♔e4 g5!!

3...♔g5? 4 ♔xd4! ♔g4 5 ♔e5! =.

4 b5

4 g4 d3! 5 ♔xd3 ♔e5! 6 ♔e3 a6! wins for Black.

4...d3! 5 ♔xd3 ♔e5!

5...♔f5? 6 ♔e3! ♔g4 7 ♔f2! ♔h3 8 ♔f3! ♔h2! =.

6 ♔c4 g4 7 ♔c5 ♔e4! 8 ♔c6 ♔d4 0-1

Renet resigned because of 9 ♔d6 ♔c4 10 ♔c6 ♔b4 11 b6 axb6! 12 ♔xb6 ♔c4 −+.

A15.14 G.Bersutzki – F.Lamprecht, *Biel 1994*

White would lose in a pawn ending; thus the rook has to stay:

1 gxf4+!

The game went 1 ♖xe4? ♖xe4+! 2 fxe4 fxg3! 3 ♔f3 ♔h4! 4 ♔g2 (4 e5 ♔h3! 5 e6 g2! −+) 4...♔g4! 5 e5 h4 6 e6 h3+! 7 ♔g1 ♔f3! 8 e7 h2+! 9 ♔h1 ♔f2 and White resigned because after 10 e8♕

g2+! 11 ♔xh2 g1♕+! 12 ♔h3 ♕g3#! it's all over.

1 ♖c3? fxg3! 2 fxe4 ♔f4 3 ♖f3+ ♔g4! 4 ♖e3 h4 5 e5 g2 6 ♔f2 h3! 7 ♔g1 ♖f4 8 ♔h2 ♖f1 −+.

1...♔xf4 2 ♖c3

2 ♖xe4+? ♖xe4+! 3 fxe4 ♔xe4! −+; 2 ♔f2? ♖d4! 3 ♔e2 (3 ♖xe4+ ♖xe4! 4 fxe4 ♔xe4! −+; 3 ♖e2 ♖d2 4 ♖xd2 e3+! 5 ♔e2 exd2! 6 ♔xd2 ♔xf3! −+) 3...h4! 4 ♖c3 ♖d3! 5 ♖c7 ♖e3+! 6 ♔d2 ♖xf3! 7 ♖xb7 h3 8 a5 h2 9 ♖h7 ♖xb3 −+.

2...h4 3 fxe4 ♖xe4+ 4 ♔f2 ♔g4 5 ♖c7 is a draw.

A15.15 B.Gulko − N.Short, *Riga Tal mem 1995*

I play ...h5 and Boris resigns − in such or a similar way Nigel Short might have thought of the further procedure. How could he anticipate that this pawn ending is a kind of study concerning corresponding squares? Instead he could have exploited White's pawn weaknesses in a rook ending.

1...h5?

1...♖h2!? 2 ♖d4 ♖g2 3 ♖f4 g5 4 ♖c4 ♔g6 5 ♖c6+ f6 6 ♖c4 h5 7 gxh5+ ♔xh5! 8 e4 (8 ♖c8 f5 −+) 8...♖f2 (8...♖g3+?! 9 ♔e2 ♖g4 10 ♔d3!? f5? 11 exf5! =; 8...g4? 9 ♖c5+ ♔g6 10 ♔e3 =) 9 ♔e3 (9 ♖c8 g4 10 ♖f8 g3 11 ♔e3 ♔g4 −+) 9...♖f4 10 ♖c1 ♔g4 11 ♖g1+ ♔h3 (11...♔h4 12 ♖h1+ ♔g3 13 ♖g1+ ♔h2 14 ♖a1 f5 −+) 12 e5 ♔h2! 13 e6 ♔xg1! 14 e7 ♖f5! 15 e8♕ ♖e5+! −+.

1...♔f6 2 ♖f4+ ♔g7 (2...♔g5? 3 ♖xf7! ♔xg4 4 e4 = Timman in *NIC* 4/95) 3 ♔e2?! h5 −+.

2 gxh5! ♖xe4

2...♖xh5!? ∓.

3 ♔xe4! gxh5 4 ♔f5! f6 5 ♔f4!

5 e4? ♔f7! 6 e5 h4! 7 ♔g4 fxe5! 8 ♔xh4 ♔e6! 9 ♔g3 ♔d5! 10 ♔f3 ♔d4! 11 ♔e2 ♔e4! wins for Black (Hecht in *CBM 47*).

5...♔f7 6 ♔g3! ♔g6 7 ♔f4! ♔g7 8 ♔f3!

8 ♔f5? ♔f7 9 ♔f4 ♔e6! 10 ♔g3 ♔f5! 11 ♔h4 ♔g6! −+ (Hecht).

8...♔f8 *(D)*
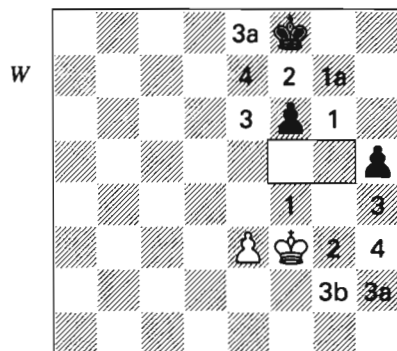
(f3=1a; f8=3b)

Here the corresponding squares are g6=f4=1, f7=g3=2 and e6=h4=3. Going further back we have e7=h3=4, e8=h2=3a, f8=g2=3b and g7=f3=1a. But one always has to consider a counter-attack towards the h-pawn and the advance e4 because of which, for example, the position with kings at f4 and g6 is not reciprocal zugzwang (compare Constantini *ECE* 1007).

9 ♔g2!!

Not 9 ♔g3? ♔f7! 10 ♔f3 ♔e6! 11 ♔f4 ♔d5! 12 ♔f5 h4 13 ♔g4 ♔e4! −+ (Hecht).

9...♔g8 10 ♔f2 ♔f8 11 ♔g2! ♔e7 12 ♔h3! ♔f7 13 ♔g3! ♔g6 14 ♔f4! ♔h6 15 ♔f5! ♔h7 16 e4 ♔h6

16...♔g7 17 e5! =.

17 ♔xf6! h4 = ½-½

A15.16 J.Speelman − M.Chandler, *Hastings 1988/9*

The most important drawn position in rook endings stems from Philidor. Knowledge of it and Bähr's Rule make the solution obvious:

1...♖a4!?

Though 1...♖c3?! 2 ♖a6+ ♔f7 3 ♔g5 ± should hold the position, it's in no way comfortable, e.g. 3...♖g3+ (3...♖f3 ±) 4 ♔f5 ♖c3 5 ♖a7+ ♔f8 6 ♔g5 ♖c6 7 f5 ♔g8 8 ♔f4 (8 ♖b7 ♖a6 9 ♖xb5 ♖xa3 10 ♔g6 ♖g3+! 11 ♔f6 ♖f3 =; 8 ♖a5 ♖c3! 9 ♔g6 ♖g3+! 10 ♔f6 ♖f3 11 ♖a8+ ♔h7 12 ♔e6 ♔g7 ±) 8...♔f8 (8...♖c4+ 9 ♔e5 ♖a4? {don't forget: Bähr's Rule can only be applied if the attacking king can't get to the key squares of his passed pawn!} 10 ♖xa4! bxa4 11 ♔e6 ♔f8 12 ♔f6! +−) 9 ♔e5 ♖c5+ 10 ♔e6 ♖c6+ 11 ♔d5 ♖f6 ±.

1...b4? 2 ♖a6+ ♔e7 3 ♖a4 +−.

2 ♖xa4

2 ♖xb5 ♖xa3 3 ♖b6+ ♔f7 4 ♔g5 ♖a1 5 ♖b7+ ♔f8 6 f5 ♖a6 = takes the Philidor position in order to give checks from behind after 7 f6 ♖a1.

2...bxa4! 3 ♔f3 ♔f5 4 ♔e3 ♔f6 5 ♔d4 ♔f5! 6 ♔c5 ♔xf4! 7 ♔b5 ♔e5 8 ♔xa4 ♔d6 ½-½

A15.17 F.Gheorghiu – C.Lutz, *Biel 1990*

The fork 1 ♖b6!? is well worth calculating. But have you also seen ...fxe5, d5 after the exchange of rooks? If you knew the endgame CD-ROM by heart you could of course have also won by 1 exf6?!, though after 1...♖xf6 you have to play 2 ♖b6! anyway: 2...♖f1 (2...♖f5+ 3 d5 ♔e7 4 ♖b7+! ♔d8 5 ♔c6! +−) 3 ♖e6! ♖c1+ 4 ♔d6 ♖a1 5 d5 ♖a6+ 6 ♔d7 ♖a7+ 7 ♔d8 ♖a8+ 8 ♔c7 ♔f7 9 ♖e1 +−.

1...♖xb6

1...♖a5+ 2 ♔b4! +−.

2 ♔xb6! fxe5

2...f5 3 d5 +−.

3 d5! +− 1-0

A15.18 C.Wilhelmi – R.Vogel, *2nd Bundesliga 1996*

1 ♘xh4 normally shouldn't be considered: the king is badly placed, the knight is at the edge of the board, the queenside

is weak and the bishop is better for play on both wings. Therefore, White has very good reason first of all to calculate the pawn ending.

1 ♘d4+!

Since it is won, fortunately the complications after 1 ♘xh4? = don't have to be examined in more detail; there White is even in danger of losing.

1...♔d5 2 ♘xe6! ♔xe6 3 ♔f2! ♔d5 4 g3? *(D)*

4 ♔f3!? (Wilhelmi) 4...♔xc5 (4...♔e5 5 ♔e3 ♔e6 6 ♔d4 +−) and now:

a) 5 ♔f4 ♔c4 6 g3! (6 ♔xf5? ♔xc3 7 g4 hxg3! 8 hxg3! b5 9 g4 a5! =) 6...hxg3 (6...h3 7 ♔xf5! +−) 7 ♔xg3!:

a1) 7...♔d5 8 ♔f4 (8 h4? ♔e4! 9 h5 ♔e3! 10 h6 f4+! 11 ♔g4 f3! 12 h7 f2! 13 h8♕ f1♕! =) 8...♔e6 9 c4 b6 10 h4 ♔f6 11 h5 +−.

a2) 7...♔xc3 8 h4 ♔d4 9 ♔f4! +−.

b) 5 g3 hxg3 (5...h3 6 ♔f4 ♔c4 7 ♔xf5! ♔xc3 8 g4 +−) 6 ♔xg3 (6 h4 +−) 6...♔c4 (6...♔d5 7 ♔f4 +−) 7 ♔f4 +−.

4 ♔e3 ♔xc5 5 ♔f4! b5 6 g3! hxg3 7 ♔xg3! +−.
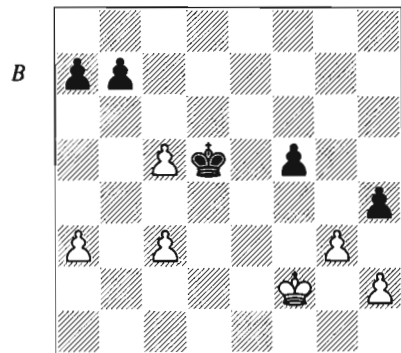
4...hxg3+! 5 ♔xg3 ♔e4! 6 ♔f2

6 h4 ♔e3! 7 ♔g2 (7 h5 f4+ =) 7...♔e2 (7...f4? 8 ♔f1 +−; 7...♔f4 8 ♔h3! ♔e3 9 h5 f4! 10 h6 f3! 11 h7 f2! 12 h8♕ f1♕+! =) 8 ♔g3 ♔e3! =.

6...♔f4 7 a4 a5

One can easily prove that White can't start any attempts to win because the black king is too strong.

8 ♔e2

8 h3 ♔e4! 9 c4 (9 h4?! ♔f4! 10 h5! ♔g5! 11 ♔f3 ♔xh5! 12 ♔f4! ♔g6! 13 ♔e5! ♔g5! 14 ♔d6! f4! 15 ♔c7! f3! 16 ♔xb7! f2! 17 c6! f1♕! 18 c7! =) 9...♔f4! 10 ♔g2 ♔e3 11 h4 ♔e2 =.

8...♔e4! 9 ♔f2 ♔f4! 10 ♔e2 = ½-½

A15.19 V.Dragiev – E.Ermenkov, *Bulgarian Ch 1995*

All black pawns are fixed on light squares, so the knight can draw despite the minus pawn. However, due to the aggressive pawn-structure on the kingside one has to proceed carefully:

1 h4!?

The game actually concluded 1 ♘xe6? ♔xe6! 2 ♔xc4 (2 h3 h4 3 gxh4 ♔f7 4 ♔xc4 ♔g6! –+; 2 h4 e3 3 ♔xe3 ♔d5 –+) 2...h4!! 3 ♔d4 h3 4 ♔c4 (4 g4 fxg4! 5 ♔xe4 g3 6 ♔f3 gxh2! –+) 4...♔d7 5 ♔c3 ♔c7 0-1.

1...♔e7

1...♗c8?! 2 ♔xc4 = only causes problems for Black.

2 ♘xe6! ♔xe6! 3 ♔xc4! ♔d6 4 ♔d4! ♔d7 5 ♔e3 ♔e6 6 ♔d4! ♔d6 7 ♔c4! ♔c6 8 ♔d4! ♔b5 9 g4!? fxg4 10 ♔xe4! ♔c6 11 ♔d4

11 f5 ♔d6 12 ♔d4! =.

11...♔d6 12 ♔e4 ♔c5 13 ♔e3 ♔d5 14 ♔d3! =

A15.20 A.Moise – F.Lamprecht, *Dresden 1997*

Of course Black would like to play 1...♗xc3 because the alternatives don't seem to be very promising. But how can one then prevent the white king from decisively getting to e4? The solution is to get a pawn to g4 in order to take away the access to the f3-square. Without this finesse the pawn ending would be hopeless:

1...♗xc3!?

1...♔c6? 2 ♔e4 +–.

1...♔c5?!:

a) 2 ♔e4 f5+!? (2...a3? 3 ♘a4+! ♔b5 4 ♔xd4! ♔xa4 5 bxa3! +–) 3 ♔xf5 (3 exf6?! ♗xf6! 4 ♘xa4+! ♔b4! ∓) 3...a3! 4 ♘e4+! ♔d5! (4...♔c6? 5 bxa3! c3 6 ♘xc3 ♗xc3 7 ♔g6! +–) 5 ♘c3+! = (5 bxa3? g6+! 6 ♔xg6 ♔xe4! 7 e6 ♗c5! 8 f5 ♔e5! –+).

b) 2 ♘xa4+ ♔b4!:

b1) 3 ♔e4 ♗xe5! 4 ♔xe5 ♔xa4! 5 ♔d4 ♔b4!? 6 g4 c3!? (6...♔b5? 7 a3! g6 8 g5 h5 9 h4 b6 10 ♔d5! +–) 7 bxc3+ ♔a3! 8 ♔c5 =.

b2) 3 ♘c3!? ♗xc3! 4 bxc3+! ♔xc3! 5 f5! ♔b2! 6 e6 fxe6! 7 fxe6! c3! 8 e7 c2! 9 e8♕ c1♕! 10 ♕b5+ ♔xa2 11 ♕xb7 ±.

2 bxc3! a3

2...g5!? 3 a3? (3 g3! =) 3...gxf4! 4 ♔xf4 b5 5 g4 b4! 6 cxb4 c3! 7 ♔e3 ♔c4! –+.

3 ♔e3

3 h4 g5 4 g3 =.

3...g5 (D)
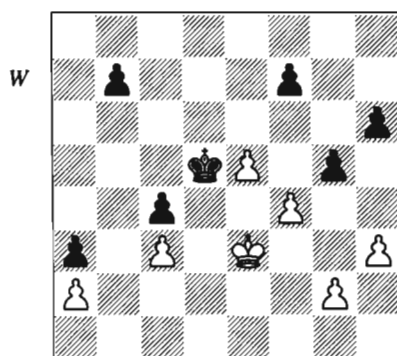
4 g3!

4 ♔f3? gxf4! 5 ♔xf4 b5 6 g4 b4! 7 cxb4 ♔d4! 8 ♔f3 ♔d3! 9 b5 c3! 10 b6 c2! 11 b7 c1♕! 12 b8♕ ♕e3+ 13 ♔g2 ♕e2+ 14 ♔g3 ♕xa2! ∓.

4...h5 5 ♔f3

5 fxg5? ♔xe5!:

a) 6 ♔f3 ♔f5 7 h4 b6! 8 ♔f2 (8 ♔e3 ♔g4! 9 ♔f2 b5! —+) 8...♔e4! 9 ♔e2 b5! 10 g4 hxg4! 11 h5 ♔f5! 12 h6 ♔g6! —+.

b) 6 g4 hxg4 7 hxg4 b5 8 ♔f3 ♔d5 9 ♔e3 ♔c5! 10 ♔e4 b4! 11 cxb4+ ♔xb4 12 ♔d4 ♔b5! 13 ♔e3 ♔a5 14 ♔e4 ♔a4 15 ♔e3 ♔b5! 16 ♔d4 ♔b4! 17 g6 fxg6! 18 g5 ♔b5! 19 ♔e3 ♔a5 —+.

5...g4+ 6 hxg4! hxg4+! *(D)*
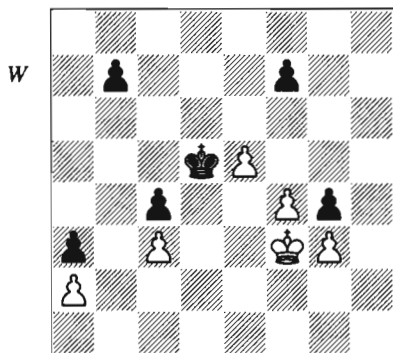
7 ♔e3

7 ♔xg4? ♔e4! 8 ♔g5 b5! 9 ♔f6 b4! 10 ♔xf7 b3! (10...bxc3? 11 e6! c2 12 e7! c1♕ 13 e8♕+! ∓ Pötzsch) 11 e6 bxa2! 12 e7 a1♕ 13 e8♕+ ♔d3 14 ♕d8+ ♔c2 —+.

7...b5 8 ♔e2 ♔c5 9 ♔d2

9 f5? ♔d5! 10 e6 fxe6! 11 f6 ♔d6! 12 ♔e3 e5! —+.

9...♔c6! =

9...b4? 10 cxb4+! ♔xb4 11 f5! ♔c5 12 ♔c3! ♔d5 13 e6! fxe6 14 f6! ♔d6 15 ♔b4!! e5 16 ♔xa3! e4 17 ♔b2 e3 18 ♔c2 ♔e6 19 a4 +—.

½-½

A15.21 E.Pogosiants, 1966

The last exercise presents a move that, it has to be admitted, is very unusual for a book on pawn endings. Since staying in the rook ending isn't sufficient for a win and Black can save himself with the help of a stalemate trick after 1 ♖f1+?, the only move to win is...

1 0-0+!!

In studies one is allowed to castle no matter how improbable it might seem that neither the king nor the rook have moved before if it can't be proved by the position that castling is forbidden.

1 ♖f1+? ♔e3! 2 ♖h1 (2 ♖xf5 is stalemate) 2...♔f4 =; 1 ♖h4+? ♔e5! 2 ♖e4+ ♔d5! =.

1...♔e5 2 ♖xf5+! ♔xf5 3 ♔f1!

3 ♔f2? ♔f4 4 ♔e2 (4 ♔g2?? ♔e3! —+) 4...♔e5! =.

3...♔f4 4 ♔f2!

From here on the following is identical with a study by Riichima (1942, *ECE* 848).

4...♔g4 5 ♔e2 ♔f4 6 ♔d1 ♔e5 7 ♔c1! ♔d5 8 ♔b2 ♔c5 9 ♔a3! +—

16 Exercises

Our last chapter should be understood as a sort of test. We have therefore divided it in three sections:

Section A is dedicated to the fundamental ideas. If you have studied the book carefully, these exercises should all be solvable.

Section B features more difficult exercises.

Section C differs from the first two sections in that it's not so much concrete moves that count but rather the assessment of the position and the correct plan. These exercises are therefore very suitable to be played out or for analysis training. The solutions include a reference to the chapter (or chapters) which contain ideas relevant to that position.
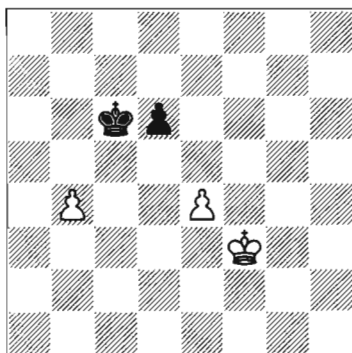
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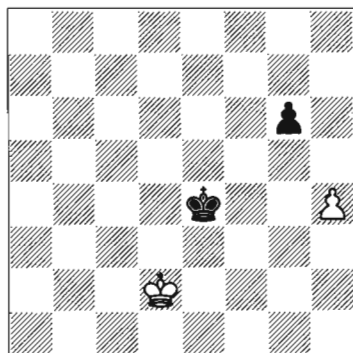
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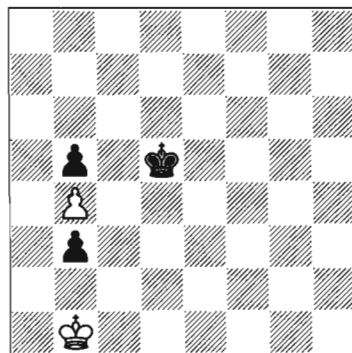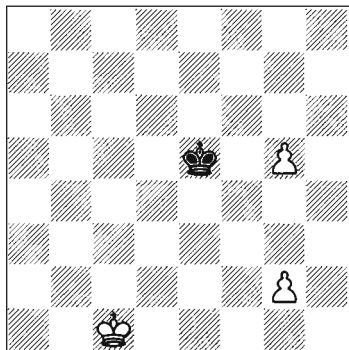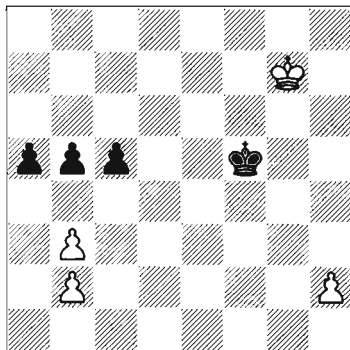
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A16.04   */

A16.07   **/
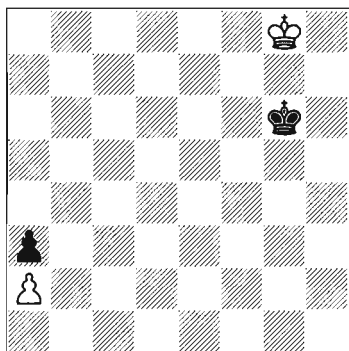
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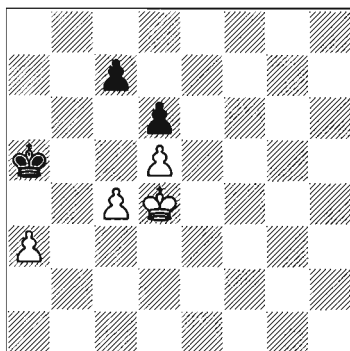
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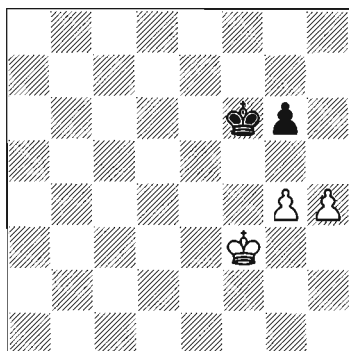
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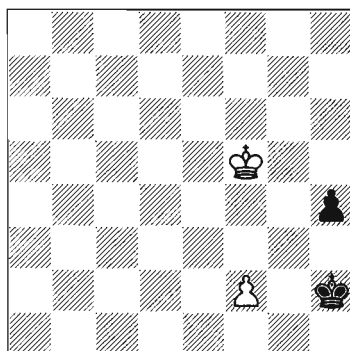
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B) Difficult Exercises
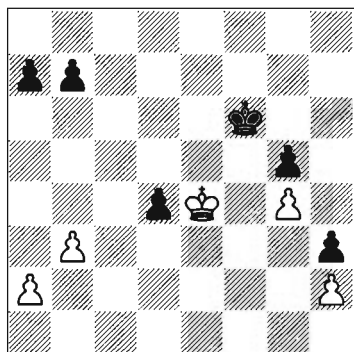
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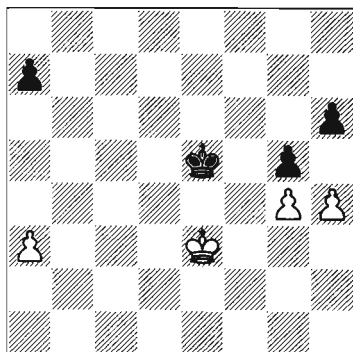
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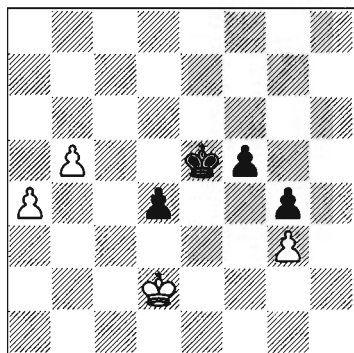
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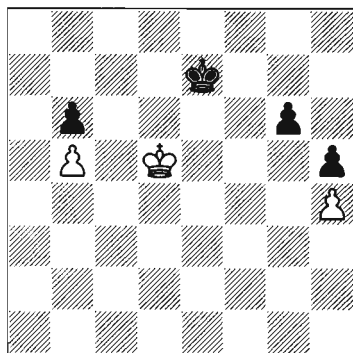
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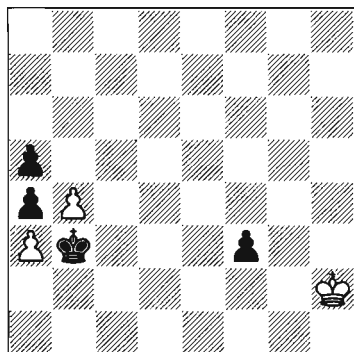
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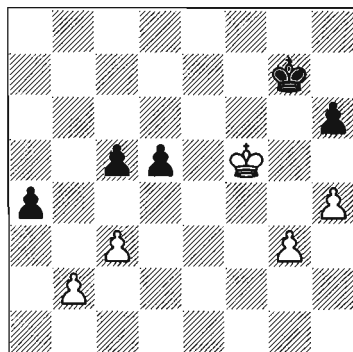
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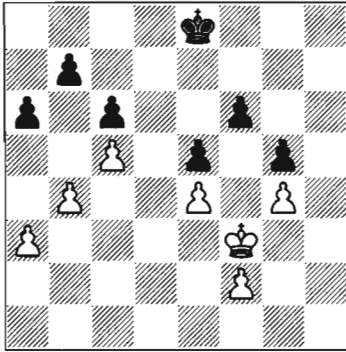
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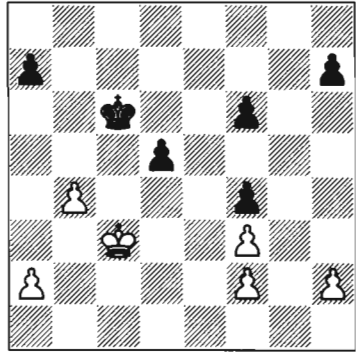
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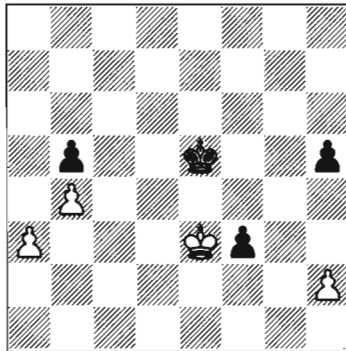
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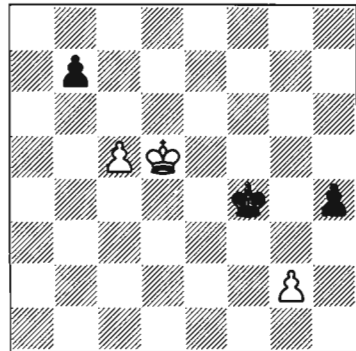
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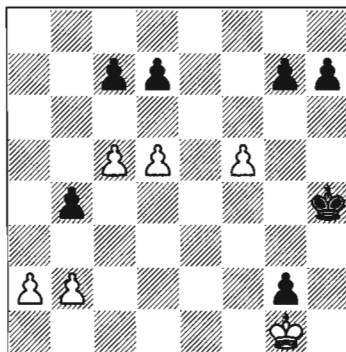
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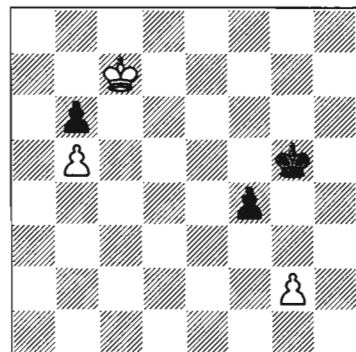
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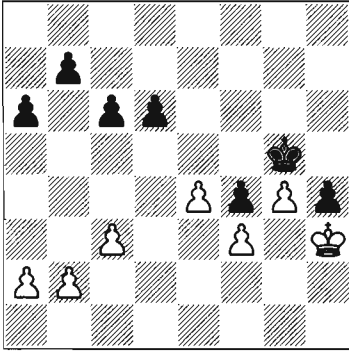
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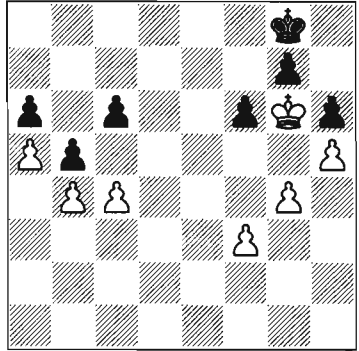
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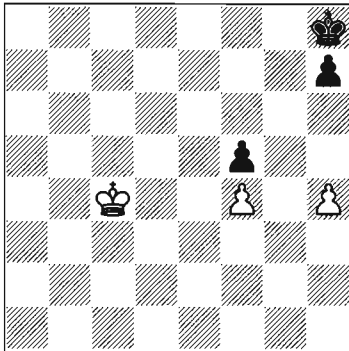
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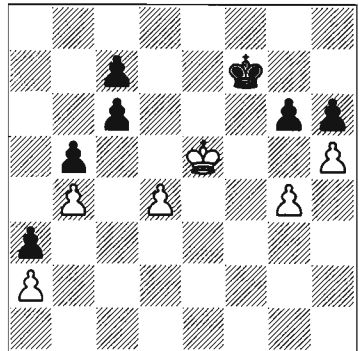
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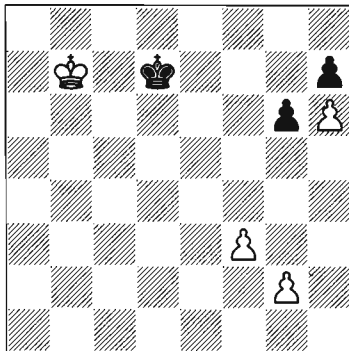
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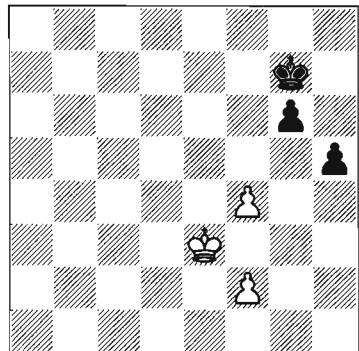
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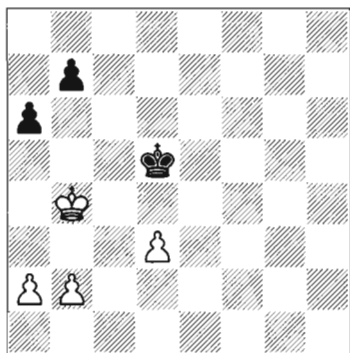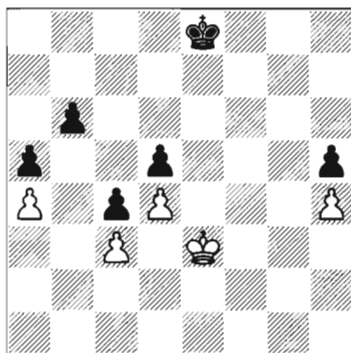
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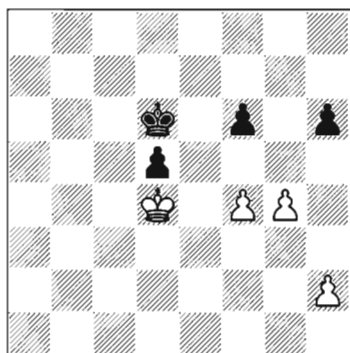
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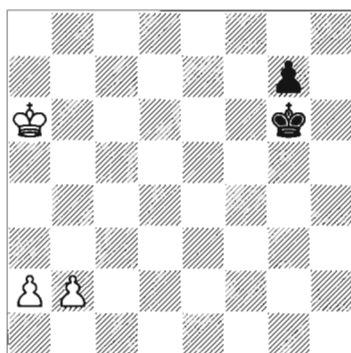
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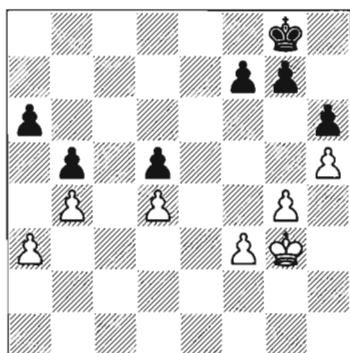
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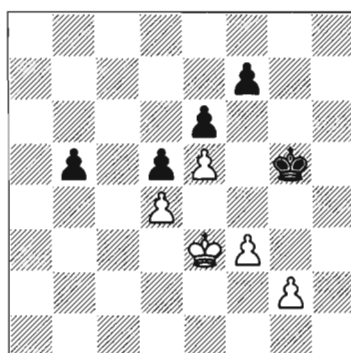
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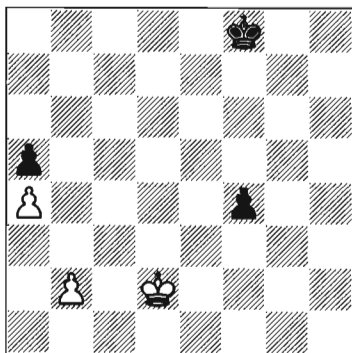
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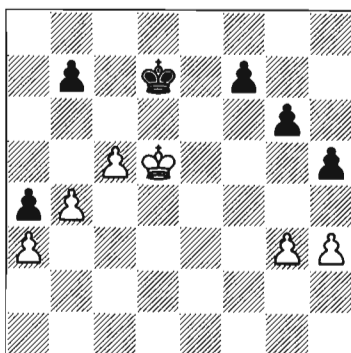
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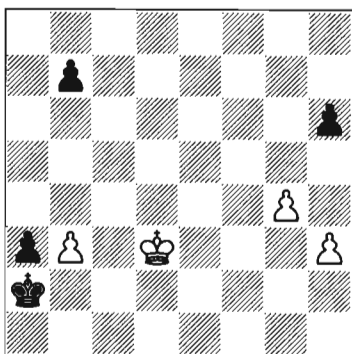
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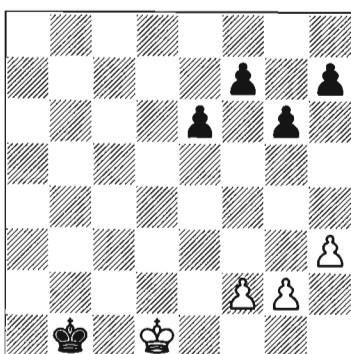
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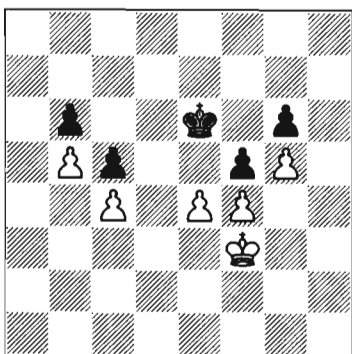
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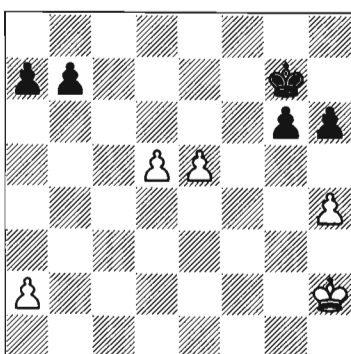
C16.12   /****

Solutions to Chapter 16 Exercises

Easy Exercises

A16.01 P.Peelen – L.van Wely, *Wijk aan Zee 1990*
(See Chapter 2.)
This position shows that also in simple endings one has to proceed with the necessary accuracy:
1...♔f3!
Bodycheck. 1...♔f4? 2 h5! =.
2 ♔e1 ♔g4! 0-1
In view of 3 ♔f2 ♔xh4! 4 ♔f3 g5! 5 ♔f2 ♔h3! 6 ♔f3 g4+! –+ (A1.04, 2.13).

A16.02 V.Salov – J.Timman, *Saint John Ct (1) 1988*
(See Chapter 2.)
This doesn't seem too good for Black, but two precise moves save him:
1...♔b5!
1...d5? 2 e5! d4 3 ♔e4! d3 4 ♔xd3 ♔d5 5 e6 ♔xe6 6 ♔c4! ♔d6 7 ♔b5! ♔c7 8 ♔a6! +– (A1.04).
2 ♔e3
After 2 ♔f4, 2...♔c4?! is possible (as well as 2...♔xb4 =). 3 ♔e3 (therefore this position doesn't deal with a zugzwang problem) 3...d5! 4 e5 d4+! 5 ♔d2 (5 ♔e4?? d3! –+) 5...♔d5! =.
2...♔c4!!
Again a bodycheck. 2...♔xb4? 3 ♔d4! +–.
½-½

A16.03 F.Yates – S.Tartakower, *Bad Homburg 1927*
(See Chapters 2 and 6.)
Of course you know this classic, but it's too beautiful to leave it out.
1 ♔b2! ♔c4 2 ♔a3! b2
2...♔c3?! stalemate.
3 ♔a2!! ♔c3 4 ♔b1! ♔xb4 5 ♔xb2! =

■ Compare Ju.Horvath-S.Horvath, Hungary 1988: w♔e3,△h5; b♔f6,△e6,h4: 1 ♔f4! h3 2 ♔g3 ♔g5 3 ♔h2! ♔h6 4 ♔g3! draw.

A16.04 N.Grigoriev, 1935
(See Chapter 1.)
For a change an easy Grigoriev:
1 g4! ♔e6
1...♔f4 2 g6! ♔g5 3 g7! ♔h6 4 g8♖ +–.
2 ♔d2! ♔f7 3 ♔e3! ♔g7 4 ♔e4 ♔f4? ♔g6! =.
4...♔g6 5 ♔f4! ♔g7 6 ♔f5! ♔f7 7 g6+! ♔g7 8 ♔g5! +– (A1.09)

A16.05 Sackmann, *Deutsche Schachblätter,* 1923
(See Chapter 5.)
It seems as if the black king has trapped his white colleague, but one has to be aware of the fact that there is still a sidestep necessary.
1 ♔h8!
1 ♔f8? ♔f6! 2 ♔g8 ♔e5! –+. Now the black king only walks in a diagonal way.
1...♔f6 2 ♔h7! ♔e5 3 ♔g6! ♔d4 4 ♔f5! ♔c3 5 ♔e4! ♔b2 6 ♔d3! ♔xa2 7 ♔c2! =

A16.06 G.Breyer – R.Réti, *Debrecen 1913*
(See Chapter 4.)
Black only draws if he defends the key squares on the fifth rank:
1...♔f7!
Distant opposition. 1...♔e5? 2 ♔e3! +–; 1...♔e7? 2 ♔e3! +–.
2 ♔e4 ♔e6! 3 ♔d4 ♔d6!
3...♔f6? 4 ♔d5! ♔e7 5 ♔e5! ♔f7 6 ♔d6! ♔f6 7 g5+ ♔f5 8 ♔e7! +–.
4 ♔e4 ♔e6! 5 ♔f3 ♔f7
5...♔f6:
a) 6 ♔f2 ♔f7! = (6...♔e6? 7 ♔e2! ♔d6 8 ♔f3! +–).

b) 6 ♔f4 g5+! =.
6 ♔e3 ♔e7! 7 ♔d3 ♔d7! 8 ♔c4 ♔e6!
9 ♔c5 ♔e5! = (5.15) ½-½
■ In 1936, Mandler (*ECE* 903) moved
the white king to e1, whereupon White to
move wins by 1 ♔d2!.

A16.07 Em.Lasker – S.Tarrasch, *St Pe-
tersburg 1914*
(See Chapter 3.)
It seems as if White is helpless against
a breakthrough on the queenside but Las-
ker has an amazing resource:
1 h4! ♔g4 2 ♔g6!! *(D)*
2 ♔f6? c4! 3 bxc4 bxc4! 4 ♔e5 c3! 5
bxc3 a4! –+ (A1.03).

B
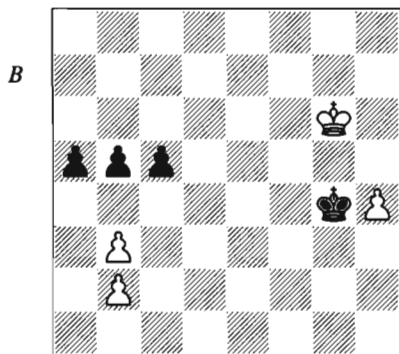
**2...♔xh4 3 ♔f5! ♔g3 4 ♔e4 ♔f2! 5
♔d5 ♔e3 6 ♔xc5 ♔d3 7 ♔xb5 ♔c2! 8
♔xa5 ♔xb3! ½-½**
A real classic!

A16.08 Karaklajić – Czerniak, *Bel-
grade 1954*
(See Chapter 7.)
Since he can't get through on the
queenside, White has to act in a dynamic
way by preparing an attack against the
c7-pawn:
1 c5!
1 ♔c3? was played in the game:
a) 1...♔b6? 2 a4 (2 ♔b4? c5+ only
leads to a draw) 2...♔a5 3 ♔b3! ♔b6 4

♔b4! c5+ 5 dxc6! ♔xc6 6 a5! and White
wins.
b) 1...♔a4! 2 ♔b2 ♔a5! 3 ♔b3 ♔b6!:
b1) 4 a4 c5 (4...♔a5? 5 ♔a3! ♔b6 6
♔b4! c5+ 7 dxc6! ♔xc6 8 a5! +–) 5 dxc6
♔xc6! 6 ♔b4 ♔b6! (6...d5? 7 cxd5+!
♔xd5 8 ♔b5! +–) 7 a5+ ♔c6! (reciprocal
zugzwang with White to move) 8 ♔a4
♔c5! 9 ♔a3 d5! 10 a6 ♔b6! 11 cxd5
♔xa6! =.
b2) The game concluded 4 ♔b4 c5+ 5
dxc6 ♔xc6! 6 a4 ♔b6! 7 ♔b3 d5 8 cxd5
♔c5! 9 a5 ♔xd5! ½-½.
1...♔a4 2 c6
2 ♔c4 ♔a5 3 c6 ♔a4 4 ♔d3 ♔xa3 5
♔e4! +–; 2 cxd6? cxd6! 3 ♔c4 ♔a5! 4
♔b3 ♔b5! 5 a4+ ♔c5! =.
**2...♔xa3 3 ♔e4! ♔b4 4 ♔f5! ♔c4 5
♔e6! ♔c5 6 ♔d7 +–**

A16.09 S.Isenegger, *Schweizerische
Schachzeitung,* 1951
(See Chapter 3.)
The surprising withdrawal constitutes
the attraction of this study:
1 ♔e6!!
1 ♔g6? ♔g2 2 f4 h3! 3 f5 h2! 4 f6
h1♕! 5 ♔g7 (5 f7 ♕h8! –+; if the queen
gets in front of the pawn the win is al-
ways safe) 5...♕a1! –+.
1 f4? ♔g3! 2 ♔g5 h3! 3 f5 h2! 4 f6
h1♕! 5 f7 ♕h8 –+.
**1...h3 2 f4! ♔g3 3 f5! h2 4 f6! h1♕ 5
f7! ♕h8 6 ♔e7! ♕e5+ 7 ♔d7 ♕f6 8
♔e8! ♕e6+ 9 ♔f8! ♔g4 10 ♔g7! ♕d7
11 ♔h8! ♔g5 12 f8♕! ♔g6 13 ♕g8+!
♔h6 14 ♕e6+ ♕xe6!** stalemate.

A16.10 R.Salgado – R.Djurhuus, *corr.
1992*
(See Chapter 10.)
At first sight everything seems to be
OK for White but...
1...d3!
The pawn gives all it has in order to
open up the way for the king.

2 ♔xd3 ♔e5! 3 ♔e3 b6!
Not 3...a5?:
a) 4 a4? b6! 5 ♔f3 ♔d4! 6 ♔g3 ♔e3! (6...♔c3? 7 ♔xh3! ♔xb3! 8 ♔g2 = with the idea h4) 7 ♔xh3 ♔f2! −+.
b) 4 a3 b5 5 b4! (5 ♔f3? ♔d4! 6 ♔g3 ♔c3! 7 ♔xh3 ♔xb3! 8 ♔g2 ♔c4 −+) 5...a4 6 ♔f3! ♔d4 7 ♔g3! ♔c4 8 ♔xh3! ♔b3! 9 ♔g2! ♔xa3! 10 h4! gxh4 11 g5! ♔xb4 12 g6! a3 13 g7! a2 14 g8♕! a1♕ 15 ♕f8+! =.
4 ♔f3 *(D)*
4 ♔d3 ♔f4 −+.
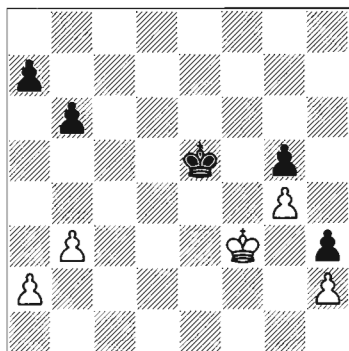
4...♔d4! 5 ♔g3 ♔e3! 6 ♔xh3 ♔f2! 0-1
Because of 7 a3 (7 b4 b5! −+; 7 a4 a5! −+) 7...a6! 8 b4 (8 a4 a5! 9 b4 axb4! 10 a5 b3! −+) 8...b5! 9 a4 bxa4! 10 b5 a3! 11 bxa6 (11 b6 a2! 12 b7 a1♕ 13 b8♕ ♕f1#) 11...a2! 12 a7 a1♕! 13 a8♕ ♕f1+ (13...♕xa8?? stalemate) 14 ♕g2+ ♕xg2#!.

A16.11 Stoltz − Nimzowitsch, *Berlin 1928*
(See Chapter 9.)
Black shouldn't allow White's pawns to roll; instead he has to throw his own pawns into the equation:
1...f4!
1...♔d5? 2 a5 ♔c5 3 a6 ♔b6! 4 ♔d3! f4! 5 ♔xd4! f3! =; 1...♔d6? 2 ♔d3! f4! 3 ♔xd4! f3! =.

2 gxf4+ ♔d6!!
The black king stops the queenside pawns while the common square of d- and g-pawn reaches the first rank.
3 a5 g3! 4 a6 ♔c7! 5 ♔e2 d3+ 6 ♔xd3 g2! 0-1
By the way, if White is to move, he wins by 1 ♔d3! f4 2 gxf4+! ♔d5 3 a5! g3 4 a6! g2 5 a7! g1♕ 6 a8♕+! ♔c5 7 ♕c6+ ♔b4 8 ♕c4+ ♔a5 9 ♕xd4! ♕b1+ 10 ♔e2 ♕xb5+ 11 ♔e3 +−.

A16.12 E.Pogosiants, 1976
(See Chapters 3 and 6.)
With the knowledge of Chapter 3 you will have certainly managed this exercise:
1 b5!
1 bxa5? f2 2 ♔g2! ♔xa3 3 a6 f1♕+ 4 ♔xf1! ♔b2! 5 a7 a3! 6 a8♕ a2! = (3.07).
1...♔c3
1...♔c4 2 b6! ♔d3 3 b7! f2 4 b8♕! f1♕ 5 ♕b5+! +−.
2 ♔g1!
2 ♔g3? ♔d4! =; 2 b6? ♔d2! =.
2...♔c4 3 b6! ♔b5 4 b7! ♔a6 5 b8♖! +−
5 b8♕? f2+ =.

Difficult Exercises

B16.01 Lanchava − Fish, *USSR 1988*
(See Chapters 5 and 11.)
Bähr's Rule and a fight for tempi dictate the further proceedings:
1 a4!!
1 hxg5? hxg5! 2 a4 a5! −+; 1 h5? a6 2 a4 a5 −+.
1...gxh4
1...a5 2 h5! =; 1...a6 2 hxg5 hxg5! 3 a5 = (3 ♔f3?! ♔d4 4 a5! ♔d3 5 ♔f2 =).
2 ♔f3?
2 a5! ♔f6 (2...♔d5 3 ♔f3 =; 2...a6 3 ♔f3! ♔f6 4 ♔g2! =) 3 a6! (3 ♔f4? a6! −+; 3 ♔f3? ♔g6!! −+) 3...♔g5 4 ♔f3! h3

5 ♔g3! h2 6 ♔xh2 ♔xg4 7 ♔g2! = according to Bähr's Rule (Andrianov Inf 45).

2...♔f6

2...a5!? —+.

3 a5 *(D)*
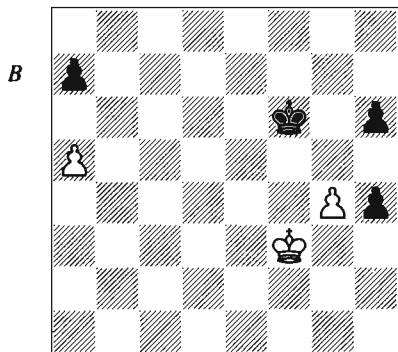
3...♔g6!!

It is now reciprocal zugzwang with White to move. 3...♔g5? 4 a6! =.

4 a6

4 ♔g2 ♔g5! 5 ♔h3 a6! —+; 4 ♔f4 a6! —+.

4...♔g5! 5 ♔f2 ♔xg4 6 ♔g2 h3+! 7 ♔h2 ♔h4! 8 ♔g1 ♔g3 —+

And by his precise play Black won after a few more moves.

B16.02 Krutiansky – Zagorovsky, *USSR 1952*

(See Chapters 9 and 10.)

Since the immediate breakthrough 1...g5 only leads to a draw, Black has to proceed in a more subtle way:

1...♔f7!!

1...♔d7?! 2 ♔e5 ♔e7! 3 ♔d5 ♔f7! —+.

1...g5? 2 hxg5! h4 (2...♔f7 3 ♔e5 ♔g6 4 ♔f4! = is reciprocal zugzwang with Black to move) 3 ♔e4! h3 4 ♔f3! ♔f7 5 ♔g3! ♔g6 6 ♔xh3! ♔xg5 7 ♔g3 =. White gets to b3 in time after Black has captured on b5 (see 1.10).

1...♔f6? 2 ♔c6! g5 3 hxg5+! ♔xg5 4 ♔xb6! =.

2 ♔c6

2 ♔e5 ♔g7! 3 ♔e4 ♔f6 4 ♔f4 g5+ 5 hxg5+ ♔g6! —+.

2...g5! 3 ♔xb6 gxh4! 4 ♔c5

4 ♔a7 h3! 5 b6 h2! 6 b7 h1♕ 7 b8♕ ♕a1+ 8 ♔b7 ♕b1+ 9 ♔c7 ♕xb8+ —+.

4...♔e7 0-1

Black is within the square.

B16.03 V.Genba – E.Wagenmakers, *Groningen 1994*

(See Chapters 8 and 9.)

White has to play accurately to win despite Black's option of a queenside breakthrough:

1 g4!

1 ♔e5?? d4! 2 cxd4 c4! 3 ♔e4 (3 d5 c3 4 bxc3 a3 5 d6 ♔f7 —+) and now:

a) 3...c3? 4 ♔d3! cxb2! 5 ♔c2! h5!! (5...a3? 6 g4 +—) 6 ♔xb2! ♔f7 7 ♔a3 ♔e6! =.

b) 3...h5! 4 d5 c3! 5 bxc3 a3! 6 d6 ♔f7 —+.

1...d4 2 cxd4! c4!? 3 ♔e4!

3 d5? c3 4 bxc3 a3 5 d6 ♔f8!! (5...♔f7? 6 g5! =) 6 ♔e6 ♔e8! —+.

3...♔f6 4 d5 c3 *(D)*
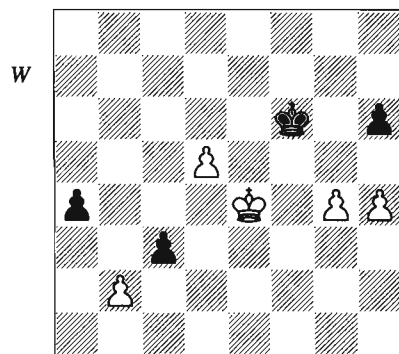
5 ♔d3! cxb2 6 ♔c2! a3

6...♔e5 7 g5! hxg5 8 h5! and wins (8.01C,D).

7 ♔b1 ♔f7
7...♔e5 8 g5! hxg5 9 h5! ♔xd5 10 h6! ♔c4 11 ♔c2! +–.
8 g5 hxg5 9 hxg5! +– (8.01C)
9 h5?? g4 –+.
1-0

B16.04 E.Eliskases – L.Schmitt, *German Ch (Bad Oeynhausen) 1938*
(See Chapters 6 and 11.)
The position is almost completely closed but White threatens to penetrate on the queenside with the help of the spare tempo f2-f3. Black immediately has to close that route; otherwise he will lose. In this example we could use the detailed analyses and annotations of *BCE*.
1...♔d7
1...a5 2 ♔e3 axb4 = is a change of move-order.
2 ♔e3 a5!!
Not 2...♔c7? 3 ♔d3 *(D)*:
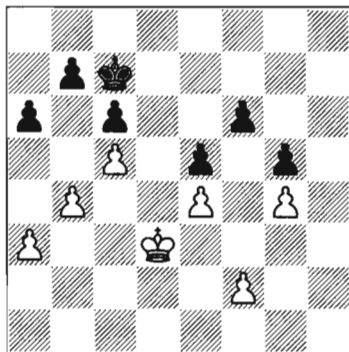
a) 3...a5 4 ♔c4:
a1) 4...a4 5 b5! ♔d7 6 ♔b4 +– (after 6 bxc6+? bxc6! = there is no way through on the queenside against a king that oscillates between a7 and b7; 6 b6?! though also wins: 6...♔c8 7 ♔b4 ♔b8 8 ♔xa4 ♔c8 9 ♔b4 ♔b8 10 a4 ♔c8 11 a5 ♔b8 12 a6 bxa6 13 ♔a5 ♔b7 14 f3! ♔b8 15 ♔xa6! ♔a8 16 b7+! ♔b8 17 ♔b6! f5 18 exf5 e4 19 f6 +–).

a2) 4...♔b8 5 ♔b3 ♔a7 6 ♔a4 ♔a6 7 f3! axb4 8 ♔xb4! ♔a7 9 ♔a5! ♔a8 10 ♔b6! ♔b8 11 a4! +–.
b) 3...♔b8 4 ♔c4:
b1) 4...♔a8 5 ♔b3 ♔a7 6 ♔a4! b5+ 7 cxb6+! ♔xb6 8 f3! (8 ♔b3? c5! =) and now:
b11) 8...c5 9 bxc5+! ♔xc5 10 ♔a5! ♔d4 11 ♔xa6 ♔e3 12 a4 ♔xf3 13 a5 ♔xg4 14 ♔b5 ♔f3 (14...♔h3 15 a6! g4 16 a7! g3 17 a8♕! g2 18 ♕h8+ ♔g3 19 ♕xf6 g1♕ 20 ♕g5+ +–) 15 a6! g4 16 a7! g3 17 a8♕! g2 18 ♕a7 +–.
b12) 8...♔b7 9 ♔b3! ♔c7 10 ♔c4 ♔b6 11 a4! ♔c7 (11...♔b7 12 ♔c5! ♔c7 13 a5! +–) 12 ♔c5! ♔b7 13 ♔d6! ♔b6 14 ♔e6 a5 15 bxa5+! ♔xa5 16 ♔d6 ♔b6 17 a5+ +–.
b2) 4...♔a7 5 ♔b3 ♔b8 6 ♔a4! ♔a8 7 ♔a5! ♔a7 8 a4! ♔b8:
b21) 9 b5?! cxb5 10 axb5! ♔c7 11 f3! (11 c6? axb5! 12 cxb7 ♔b8!! 13 ♔b4!? ♔c7 = (7.03; also compare 16.05); 11 bxa6?? bxa6! 12 ♔xa6 ♔c6! –+) 11...♔d7 12 bxa6 bxa6 13 ♔b6! +–.
b22) 9 ♔b6 ♔c8 10 b5 (10 ♔a7?? ♔c7! =) 10...axb5 11 axb5! cxb5 12 ♔xb5 ♔c7 13 f3! ♔b8 14 ♔b6! ♔c8 15 c6! +–.
3 ♔d3
3 bxa5 ♔c7 =.
3...axb4! *(D)*
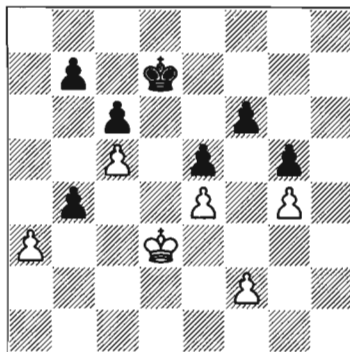
4 a4!?

4 axb4 ♔c7 5 ♔c3 b5 6 cxb6+ ♔xb6 7 ♔c4 ♔b7! 8 ♔c5 ♔c7! 9 b5 cxb5! 10 ♔xb5 ♔b7 = (7.03).

4...b6 5 cxb6! c5 6 ♔c4 ♔c6 7 a5! ♔b7! 8 ♔b3 =

Because 8 ♔b5?? fails to 8...b3! –+.

½-½

B16.05 A.Kundin – K.Zalkind, *Israel 1995*

(See Chapter 10.)

If Black plays very accurately he can hold this position due to the activity of his king because his h-pawn is already quite far advanced and Bähr's Rule often predicts a draw when White creates a passed pawn on the queenside by ♔b3 and a4. I.Tsesarsky analysed this example in detail in *CBM 54*.

1...f2!

1...♔d5? 2 ♔xf3! ♔c4 3 ♔e4! h4 4 ♔e5!! ♔b3 (4...♔d3 5 ♔d5 +–) 5 ♔d4 ♔xa3 6 ♔c5! ♔a4 7 h3! +–.

2 ♔xf2 ♔f4! 3 ♔e2 *(D)*
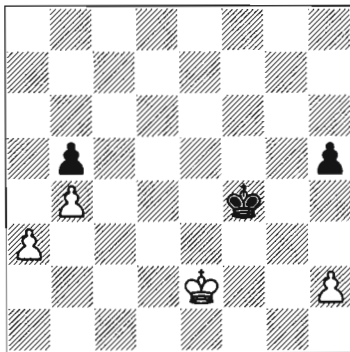
3...h4!

3...♔e4? 4 h4! ♔d4 (4...♔f4 5 ♔d3 ♔e5 6 ♔e3! ♔f5 7 ♔d4! ♔g4 8 a4 +–) 5 ♔d2! ♔c4 6 ♔c2! (now White finally profits from the opposition) 6...♔d5 (6...♔d4 7 ♔b3! ♔d5 8 a4! +–) 7 ♔d3! (7 ♔b3?! ♔c6 8 a4? bxa4+! 9 ♔xa4 ♔b6! =) 7...♔e5 8 ♔e3! +–.

4 ♔d3 h3!

Not 4...♔e5? 5 ♔c3 h3 (5...♔d5 6 ♔b3 ♔c6 7 h3 +–) 6 ♔b3! ♔e4 7 a4! bxa4+ 8 ♔a3!! (8 ♔xa4? ♔f3! =), when the a-pawn is fatal for Black because it stops the stalemate defence: 8...♔f3 9 b5! ♔g2 10 b6! ♔xh2 11 b7! ♔g2 12 b8♕! h2 13 ♕g8+ ♔f2 14 ♕d5 ♔g1 15 ♕g5+ ♔f2 16 ♕h4+ ♔g2 17 ♕g4+! ♔f2 18 ♕h3! ♔g1 19 ♕g3+! ♔h1 20 ♔b4! a3 21 ♕f2! a2 22 ♕f1#!.

5 ♔c3!? *(D)*

5 a4 bxa4! 6 b5 ♔e5 7 ♔c4 ♔d6 8 ♔b4 ♔c7 =.
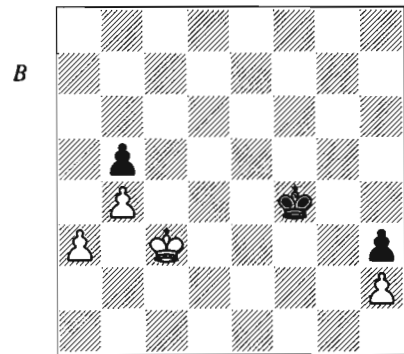
5...♔f3?

5...♔e4!! 6 ♔c2!? (after 6 ♔b3 ♔f3! 7 a4 bxa4+! 8 ♔a3 ♔g2! 9 b5 ♔xh2! = Black queens in time) and now:

a) 6...♔d4? 7 ♔b3! ♔e4 8 a4! bxa4+ 9 ♔a3!! ♔f3 (9...♔d5 10 ♔xa4! ♔c6 11 ♔a5! ♔b7 12 ♔b5! +–; White directly queens the b-pawn, because of which Bähr's Rule can't be applied here) 10 b5! +– – see the note to Black's 4th move.

b) 6...♔f3? 7 a4! +–.

c) 6...♔d5!! 7 ♔b2 (7 ♔b3 ♔c6! 8 a4 bxa4+! 9 ♔xa4 ♔b6! =) 7...♔c4 (7...♔d6 =) 8 ♔c2 ♔d5! 9 ♔d3 ♔e5! 10 ♔e3 ♔d5! 11 ♔f3 ♔c4! 12 ♔g3 (12 ♔e4?? ♔b3! 13 ♔d4 ♔xa3! 14 ♔c5 ♔a4! –+) 12...♔b3! 13 ♔xh3 ♔xa3! =.

6 a4! ♔g2 7 a5 1-0

B16.06 A.Troitsky, *Deutsche Schach-zeitung*, 1913
(See Chapters 1 and 9.)
White has a dangerous candidate on the a-file, but in order to exploit this advantage some accuracy is necessary.

1 f6!
This blocks the h4-d8 diagonal, which is the black king's simplest route to the square of the a-pawn.

1 ♔xg2? ♔g5! 2 a4 bxa3! 3 bxa3! ♔f6! 4 a4! ♔e7! 5 ♔g3 ♔d8 6 ♔f4 ♔c8 7 ♔g5 ♔b7 8 f6! gxf6+ 9 ♔xf6! h5 10 ♔g5! ♔a6 11 ♔xh5 ♔a5! 12 ♔g5 ♔xa4 13 ♔f6 ♔b5 14 ♔e7 ♔xc5! 15 ♔xd7! =.

1 a4?? ♔g3 2 a5 h5! 3 a6 h4! 4 a7 h3! 5 a8♛ h2#!.

1...gxf6 2 ♔xg2!
Before the a-pawn can run, the mating idea ...♔g3 and ...h5 first has to be prevented.

2...♔g4 3 a4 bxa3 4 bxa3! ♔f5 5 a4! ♔e5 6 d6!

6 c6? d6! —+.

6...cxd6 7 c6!
Now the way to the square is completely blocked.

7...dxc6 8 a5! +− (1.01, A1.03)

B16.07 S.Sievers − K.Müller, *Hamburg U-17 Ch 1986*
(See Chapter 10.)
With his last move, 1 b4? (instead of 1 ♔d4 +−), White offered Black the chance to become the under-17 champion of Hamburg. However, he failed to profit from White's mistake: after 1...♔b5? 2 ♔b3! 1-0 the game was over (see 10.11) and Stefan Sievers became the under-17 champion.

Black should have played:

1...d4+! 2 ♔xd4
2 ♔c4 d3! 3 ♔c3 d2 4 ♔xd2 ♔b5! =.
2 ♔b3 ♔d5 3 a3 h6 4 h3! h5 5 h4! a6 6 a4! f5! 7 b5 axb5! 8 axb5! ♔c5! 9 b6! ♔xb6! 10 ♔c4 ♔c6 11 ♔xd4 (as an

explanation for the missing exclamation mark: 11 ♔d3?! ♔d5 12 ♔d2 ♔c4 13 ♔c2! d3+ 14 ♔d2 ♔d4 15 ♔d1! =) 11...♔d6! =.

2...♔b5! *(D)*
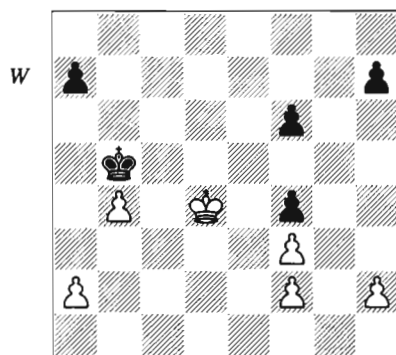
3 ♔e4!?
3 ♔c3 ♔a4! 4 ♔c4 ♔a3 5 ♔b5 ♔xa2 6 ♔a6 ♔b3 7 b5 ♔b4 8 ♔xa7 ♔xb5! 9 ♔b7! ♔c4 10 ♔c6! ♔d3 11 ♔d5! h5 12 h4! ♔e2 13 ♔e4! ♔xf2 (13...♔f1 14 ♔xf4 ♔xf2 15 ♔f5! ♔xf3 16 ♔xf6! ♔f4 17 ♔e6! ♔g4 18 ♔e5! =) 14 ♔xf4! =.

3...♔xb4! 4 ♔xf4! ♔a3 5 ♔f5! a5 6 ♔xf6 ♔xa2 7 f4 a4 8 f5 a3 9 ♔e6 ♔b3 10 f6! a2! 11 f7! a1♛! 12 f8♛!
Though the resulting queen ending is very critical for Black he should be able to draw by precise play, e.g.: **12...♛e1+ 13 ♔d7 ♛d2+ 14 ♔c6 ♛c2+ 15 ♛c5 ♛g6+!** ±.

B16.08 N.Grigoriev, *64*, 1938
(See Chapter 10.)
White shouldn't let the black king immediately get behind the c-pawn. Instead, he has to get to the other side of his pawn in order to lure the black king onto the b-file:

1 ♔c4!!
After 1 ♔d6? ♔e4 (1...♔g3? 2 ♔c7 =) 2 ♔e6 (2 ♔c7 ♔d5 3 ♔b6 ♔c4! 4 ♔xb7 ♔xc5! 5 ♔c7 ♔d4! −+) 2...♔d4 3 ♔d6

♔c4! Black is too fast: 4 c6 bxc6! 5 ♔xc6 ♔d4 6 ♔d6 ♔e3! 7 ♔e5 ♔f2! 8 ♔f4 ♔xg2! –+.

1...♔e4
1...♔g3 2 ♔b5! ♔xg2 3 ♔b6! h3 4 ♔xb7! h2 5 c6! h1♕ 6 c7! also leads to a draw (3.08).
2 ♔b5
2 ♔b4 =.
2...♔d3 3 ♔b4 ♔d4 4 ♔b5! ♔c3 5 ♔a5! ♔c4 6 ♔b6! ♔b4 *(D)*
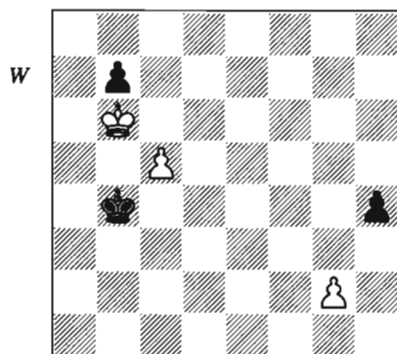
6...♔d5 7 ♔b5! =.
7 c6! bxc6 8 ♔xc6! ♔c4 9 ♔d6 ♔d4 10 ♔e6 ♔e4 11 ♔f6 ♔f4 12 ♔g6! =

B16.09 F.Dedrle, *28 Rijen,* 1926
(See Chapter 12.)
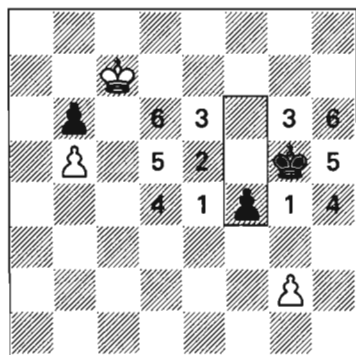
(g5=2)

If White immediately tries to capture the b-pawn, then Black draws with his f-pawn against the queen. Therefore White first has to conquer the corresponding squares in order to exchange the f- and g-pawns. Surprisingly, it is not enough for Black to get the (distant) opposition according to the corresponding squares, because White can use the squares c6, c7 and d7 to win:
1 ♔c6!!
1 ♔xb6? ♔g4 2 ♔c5 ♔g3! = (3.08); 1 ♔d7? ♔f5! (1...♔h5? 2 ♔c7 ♔g5 3 ♔c6! +–) 2 ♔d6 ♔e4! 3 ♔e6 ♔d3 4 ♔f5 (4 ♔d5 ♔c3! 5 ♔c6 ♔d4 6 ♔xb6 ♔e3! =) 4...♔c4! 5 ♔xf4 ♔xb5! 6 g4 ♔c6! 7 g5 ♔d7 =; 1 ♔d6?! ♔h6 2 ♔d7 ♔h5 (or 2...♔g5 3 ♔c6! +–) 3 ♔c7 ♔g5 4 ♔c6! +–.
1...♔g4
1...♔g6 2 ♔xb6! +–.
2 ♔d6! ♔h4 3 ♔e6! ♔g5 4 ♔e5! ♔g4 5 ♔f6! ♔h4 6 ♔f5! ♔g3 7 ♔g5! +–
■ During a training session in 1985, Herman van Riemsdijk wanted to present a study by Weenink (w♔f3,△g2,b4; b♔g5,△b5,f4: 1 ♔e4! ♔g4 2 ♔d5 ♔h5 3 ♔c6 ♔g5 4 ♔c5! ♔g4 5 ♔d6! +–) but by mistake placed the b-pawns at b5 and b6. The resulting study has the solution 1 ♔e4! ♔g4 2 ♔d5 ♔h5 3 ♔d6 ♔h6 4 ♔c7 ♔h5 5 ♔d7 ♔g5 6 ♔c6! +– (see *The Final Countdown*, p.48f).

B16.10 A.Ilyin-Zhenevsky – A.Alekhine,
USSR Ch (Moscow) 1920
(See Chapter 11.)
The black king has to defend the h4-pawn and it seems inevitable that he will fall into zugzwang. However, Alekhine found the only way to keep the balance:
1...a5!
1...b5? 2 b4! c5 3 e5! cxb4 (3...dxe5 4 bxc5! +–) 4 exd6! bxc3 5 d7! +–; 1...b6? 2 a4 a5 3 c4 +–.
2 c4

2 b3 b5 3 a4 bxa4! 4 bxa4! d5! 5 exd5! cxd5! 6 ♔g2 =.

2...b5 3 cxb5 cxb5! ½-½

White is unable to make any progress: 4 ♔g2 (4 b3 b4! =) 4...♔f6 5 ♔h2 ♔g6! 6 ♔g2 ♔f6 7 b3 b4! (7...♔g5? 8 ♔h2! +–; 7...♔g6? 8 ♔h3! ♔g5 9 a3! +–) 8 ♔h3 ♔g5! =.

B16.11 Hooper, *New Statesman*, 1961

(See Chapters 5 and 12.)
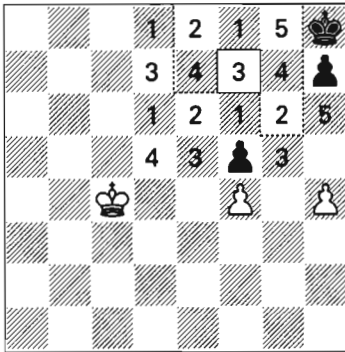
It's easy to see that the black f-pawn falls. But the black h-pawn is still at h7, and if you have studied Chapters 5 and 12, you are probably already on the scent. In fact the simple capturing of the f-pawn only leads to a draw since after ♔xf5 Black still has the answer ...♔e7 (see 12.07). However, this is a reciprocal zugzwang and thus White is successful if he considers the corresponding squares drawn in the diagram (the drawn line only serves for orientation purposes; it separates the systems of the attacker and the defender; of course White can, for example, get to e7 himself, whereupon ...♔g7 is the only answer because the key square f7 has to be defended).

1 ♔c5!

1 ♔d5? ♔g7! 2 ♔e6 ♔g6! 3 h5+ ♔g7! 4 ♔xf5 ♔f7! = (12.06); 1 ♔d4? ♔g8! 2 ♔e5 ♔f7! 3 ♔xf5 ♔e7! = (12.07).

1...♔g8 2 ♔c6!

2 ♔d4? ♔f8! 3 ♔e5 ♔f7! =.

2...♔g7 3 ♔d5! ♔f8 4 ♔d6!

4 ♔e6? ♔e8! 5 ♔f6 ♔f8! 6 ♔xf5 ♔e7! = (12.07).

4...♔g7 5 ♔e7! ♔g8

Or 5...♔g6 6 ♔e6! ♔g7 7 ♔xf5! +– (12.07).

6 ♔e6! ♔f8 7 ♔f6!

7 ♔xf5? ♔e7! is a draw (see 5.10 or 12.07).

7...♔g8 8 ♔xf5! ♔f7 9 ♔e5 ♔e7 10 h5 ♔f7 11 ♔d6! +– (5.10, 12.06)

B16.12 J.Nunn, A.J.Mestel, J.Speelman, 1978

See Chapter 7.

This instructive example, taken from *Tactical Chess Endings* by Nunn, again shows the problem of realizing an extra pawn with a 3-2 formation. White has to act very accurately to be successful:

1 ♔b8!!

Or:

a) 1 f4? ♔e6! 2 g4 (2 ♔c6 ♔f5 3 g3 g5 =) and now:

a1) 2...♔d7?! 3 ♔b8 ♔d8!:

a11) 4 f5 g5! (D) (4...gxf5? 5 g5! ♔e7 6 g6! hxg6 7 h7! +–).
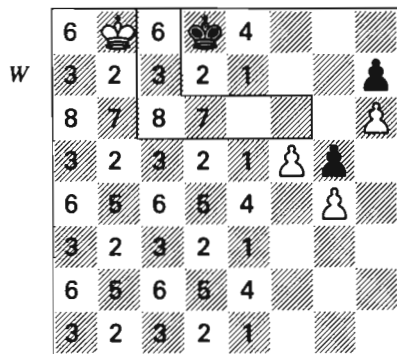
(d8=5=b8)

Black can keep the corresponding squares: 5 ♔b7 (5 ♔a8 ♔c8! =) 5...♔d7!

6 ♔b6 ♔d6! 7 ♔b5 ♔d7! 8 ♔b4 ♔d8!
(8...♔d6? 9 ♔c4! ♔c6 10 ♔d4! ♔d6 11
♔e4! ♔d7 12 ♔d5! ♔e7 13 ♔c6 ♔f6 14
♔d6 ♔f7 15 ♔d7! ♔f8 16 ♔e6! ♔e8 17
♔f6! +−) 9 ♔c5 ♔c7! 10 ♔d5 ♔d7! 11
♔e5 ♔e7! 12 f6+ ♔e8 13 ♔e6 ♔f8! 14
♔f5 ♔f7! 15 ♔xg5 ♔e6! and Black de-
fends.

a12) 4 g5 ♔e7 5 f5 ♔f7! (5...gxf5? 6
g6! +−) 6 f6! = (A6.03).

a2) 2...♔f7!? 3 ♔c7 ♔e7! 4 ♔c6 ♔e6!
5 ♔c5 ♔e7 6 ♔d5 ♔f7 7 ♔e5 ♔e7! 8 f5
gxf5 9 gxf5 ♔f7! and Black can draw
(12.05).

b) 1 g3? g5! 2 g4 ♔d6! 3 ♔c8 ♔c6 is
a draw.

c) 1 ♔b6?! ♔d6 2 ♔b7! +−.

1...g5
Or:
a) 1...♔d6 2 ♔c8! ♔e7:
a1) 3 g4 g5 4 ♔c7! ♔e6 5 ♔c6! (5
♔d8? ♔d6! =) 5...♔e5 6 ♔d7! ♔f4 7
♔e6! ♔xf3 8 ♔f5! +−.
a2) 3 ♔c7 ♔e6 4 ♔d8 ♔f7 5 ♔d7
♔f6 6 ♔e8 ♔g5 7 ♔f7 ♔xh6 8 ♔f6 ♔h5
9 ♔g7 h6 10 g3 ♔g5 11 f4+! ♔g4 12
♔xg6! ♔xg3 13 f5! +−.

b) 1...♔d8 2 f4! ♔d7 3 g3! (3 g4?
♔d8! =) and now:
b1) 3...♔d8 4 g4 +−.
b2) 3...g5 4 fxg5! ♔e7 5 g6! wins for
White.
b3) 3...♔d6 4 g4! ♔d5 5 f5 gxf5 6 g5!
f4 7 g6! f3 8 g7 +− (8 gxh7?! f2 9 h8♕!
f1♕ 10 ♕g7! +−).
b4) 3...♔e7 4 ♔c8! g5 5 ♔c7! gxf4 6
gxf4! ♔f6 7 ♔d8 ♔f5 8 ♔e7! ♔xf4 9
♔f6! +−.

2 ♔b7! g4
2...♔e6 3 ♔c6! ♔f5 4 ♔d6 g4 5 ♔e7!
+−.

3 fxg4! ♔e7 4 ♔c7! ♔e6 5 ♔c6!
5 ♔d8? ♔f6! 6 ♔d7 ♔g5! 7 ♔e6
♔g6! =.
**5...♔e7 6 ♔d5 ♔f6 7 ♔d6 ♔f7 8 ♔e5
♔g6 9 ♔f4 ♔xh6 10 ♔f5**

10 g5+ ♔h5 11 g3! ♔g6 12 ♔g4! ♔f7
13 ♔h5! ♔g7 14 g4! and White wins
(4.17).
**10...♔g7 11 ♔g5 ♔f7 12 ♔h6! ♔f6
13 g3! +−**

B16.13 B.Spassky – E.Almada, *Thessa-
loniki OL 1988*
See Chapter 11.
Black stands with his back to the wall
but it is hard to see what is really fatal for
him, isn't it?
1 ♔f5!! (D)
A surprising retreat.
1 cxb5? cxb5! 2 f4 ♔f8! 3 g5 hxg5 4
fxg5! fxg5! 5 ♔xg5 ♔e7 6 ♔f5 ♔f7! 7
♔e5 ♔e7! =.
Not 1 c5? ♔f8! 2 f4 ♔g8! 3 g5 fxg5 4
fxg5 hxg5! 5 ♔xg5:
a) 5...♔h7? 6 ♔f5 ♔h6 7 ♔e6 ♔xh5
8 ♔d6 g5 9 ♔xc6! g4 10 ♔b7 g3 11 c6!
g2 12 c7! g1♕ 13 c8♕! ♕d4 14 ♔xa6
(14 ♕c5+? ♕xc5! 15 bxc5! =) 14...♕xb4
15 ♕f5+ ♔h4 (15...♔h6 16 ♕xb5 +−) 16
♕f6+ (16 ♕xb5? =) 16...♔g4 17 ♔b6,
and since the b-pawn shields the white
king, the a-pawn can't be stopped, for ex-
ample 17...♕e4 18 a6 b4 19 a7 ♕e3+ 20
♔b7 ♕e4+ 21 ♕c6 and the ending is
winning for White.
b) 5...♔f7 6 ♔f5 ♔e7! 7 ♔e5 ♔d7!
=.

B
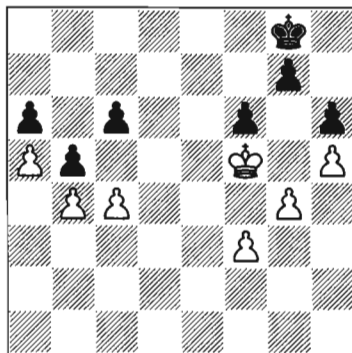
1...♔f7
1...bxc4 2 ♔e4! ♔f7 3 ♔d4! ♔e6 4 ♔xc4! ♔d6 5 ♔d4 ♔d7 6 ♔c5 ♔c7 7 f4 +–; 1...g6+ 2 ♔e4 (2 hxg6 bxc4 3 ♔e4! f5+ 4 ♔d4! fxg4 5 fxg4! ♔g7 6 ♔xc4! +–) 2...bxc4 3 ♔d4 gxh5 4 gxh5! ♔f7 5 ♔xc4! ♔e6 6 ♔c5! ♔d7 7 ♔b6 and White wins.
2 ♔e4! ♔e6 3 ♔d4! ♔d6 4 f4!
Now it becomes clear why White did not exchange on b5: ...♔c6 is impossible.
4...♔e6
4...bxc4 5 ♔xc4! f5 6 gxf5 ♔d7 7 ♔c5 ♔c7 8 f6 gxf6 9 f5! +–.
5 cxb5 cxb5 6 ♔c5! +– 1-0

B16.14 E.Schmittdiel – L.Psakhis, *Dortmund 1989*
See Chapter 10.
At first sight the active king should outweigh Black's extra pawn, but only a second look proves that this assumption is in fact true:
1 hxg6+!
1 d5? gxh5 2 gxh5 c5! 3 bxc5 b4! 4 d6 cxd6+ 5 ♔xd6 b3 6 c6 bxa2! 7 c7 a1♕! 8 c8♕ ♕d4+ –+.
1 ♔e4? gxh5 2 gxh5 ♔e6! 3 ♔f4 ♔d5 4 ♔f5 ♔xd4 5 ♔g6 c5 6 ♔xh6 ♔d5 7 ♔g6 (7 ♔g5 ♔e6 –+) 7...cxb4! 8 h6 b3! 9 h7 b2! 10 h8♕ b1♕+ –+.
1 ♔f4? gxh5 2 gxh5 ♔f6! 3 ♔g4 c5 4 dxc5 ♔e5! –+.
1...♔xg6! 2 ♔e4?
2 ♔e6! ♔g5! 3 ♔d7! ♔xg4! 4 ♔xc6! h5 (4...♔f5 5 ♔xc7! ♔e4 6 ♔c6 ♔xd4! ♔xb5! h5 =) 5 ♔xc7 h4 6 d5! h3 7 d6! h2 8 d7! h1♕ 9 d8♕ ♕h2+ is just slightly better for Black.
2...♔g5 3 ♔f3 ♔f6 4 ♔f4 ♔e6! 5 ♔e4 ♔d6! 6 ♔e3
6 ♔f5 ♔d5! 7 ♔g6 ♔xd4! 8 ♔xh6 c5! 9 g5 c4! 10 g6 c3! 11 g7 c2! 12 g8♕ c1♕+! –+.
6...♔d5 7 ♔d3 c5 8 dxc5 c6! 9 ♔c3 ♔e4 10 ♔b3 ♔d3

Not 10...♔f4? 11 ♔xa3! ♔xg4! 12 ♔b3! ♔f5 13 a4! bxa4+ (13...h5 14 a5! h4! =) 14 ♔xa4! h5 15 b5:
a) 15...♔e6?! 16 ♔a5! h4! (16...♔d7? 17 ♔b6! h4 18 ♔b7! +–) 17 b6! ♔d7! 18 ♔a6! h3! 19 b7 h2! 20 b8♕ h1♕! 21 ♕b7+ ♔d8! (21...♔e6? 22 ♕b3+ ♔d7 23 ♔b7 +–) 22 ♕b3 ♕a1+ 23 ♔b6 ♕g7! 24 ♕d3+ (24 ♕e6 ♕b7+ 25 ♔xb7! stalemate) 24...♔c8! =.
b) 15...h4!? 16 b6 h3! =.
11 ♔xa3 ♔c4! –+
11...♔c3? 12 g5 hxg5! stalemate.
0-1

B16.15 F.Holzke, *Schach 1/97*, 1997
See Chapter 7.
Play is dominated by the many positions of reciprocal zugzwang, but to recognize that with a white king at e4 and a black king at f6 wasn't easy, was it?
1 ♔d4!!
1 f3? ♔f6 2 ♔f2 ♔e6! 3 ♔g2 ♔d5! 4 ♔g3 ♔d4! 5 ♔h4 ♔e3! 6 ♔g5 h4! 7 ♔g4 h3! 8 ♔xh3 ♔xf3! –+.
1 ♔f3? ♔f7! 2 ♔g2 ♔e6! 3 ♔g3 ♔f6! –+ (3...♔f5? 4 f3! h4+ 5 ♔h3! =).
1...♔f6
1...h4 2 ♔e4 ♔f6 3 ♔e3! =; 1...♔f7 2 ♔e5 ♔e7 3 ♔d5 =.
2 ♔e4! ♔e6 3 f5+! gxf5+ 4 ♔f3! ♔e5
4...h4 5 ♔g2! ♔f6 6 f4 ♔g6 7 ♔h2 =.
5 ♔g3! ♔e4 6 ♔h4! ♔f3 7 ♔xh5! ♔xf2 8 ♔g5! ♔e3 9 ♔xf5! =

Judge the Position

C16.01 A.Shirov – J.Polgar, *Dortmund 1996*
See Chapter 7.
Black's counter-attack comes just in time. No wonder, since Judit Polgar had just simplified into this ending by an exchange on d3.
1...♔d4! 2 ♔a5 ♔xd3! 3 ♔b6 ♔c2! 4 a4

4 ♔xb7 a5! (4...♔xb2? 5 a4! +−) 5 ♔b6 a4! =.

4...♔b3

4...a5 5 ♔xb7 ♔b3! = was also possible.

5 a5 ♔a4!

5...♔b4? 6 b3! +−.

½-½

Because of 6 b3+ ♔b4! 7 ♔xb7 ♔xa5! =.

■ Hecht gives in *CBM 54* the following study by Duras (*ECE* 138), which presents the zugzwang idea in a very instructive way: w♔a7,△e2,f5; b♔c2,△e7, f6: 1 ♔b6! ♔c3 2 ♔c5! ♔d2 3 ♔c6!! ♔e3 4 ♔d5! ♔f4 5 ♔e6! ♔e4 6 e3! +−.

C16.02 A.Nimzowitsch – Chigorin, *Karlsbad 1907*

See Chapter 8.

Black's position is critical because he has to remain passive. However, there is an answer to each white attempt to breakthrough:

1...♔c6!

The game actually finished 1...♔e6? 2 ♔c5! f5 3 h3! fxg4 4 hxg4! d4 5 ♔xd4 ♔d6 6 f5 +− 1-0.

2 h3 *(D)*

2 h4 ♔d6! 3 h5!? ♔e6! 4 ♔c5 f5! 5 g5 hxg5! 6 h6 ♔f7! 7 fxg5! f4! is a draw (Schlechter).
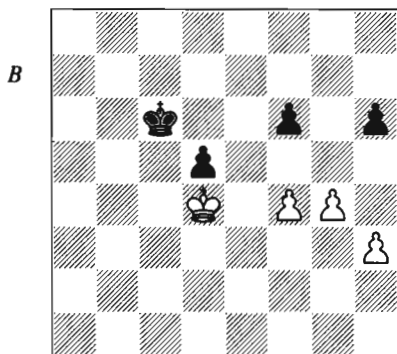
2...♔d6! 3 h4 ♔c6!

3...♔e6? 4 ♔c5! f5 5 g5! h5 6 g6 +−.

4 g5

4 h5!? ♔d6! 5 g5 fxg5! 6 fxg5! ♔e6 7 g6 = (see 6.01H).

4...fxg5

4...hxg5?! 5 h5!? g4! 6 ♔e3 ♔c5! 7 h6 d4+! 8 ♔e2 g3! 9 h7 d3+! 10 ♔xd3 g2! 11 h8♕ g1♕!:

a) 12 ♕f8+!? ♔c6 (12...♔b5? 13 ♕xf6! +−) 13 ♕xf6+ ♔d7! =.

b) 12 ♕xf6 ♕b1+ 13 ♔e3 ♕b3+! 14 ♔e4 ♕d5+! 15 ♔e3 ♕b3+ 16 ♔f2 ♕h3 =.

5 fxg5 hxg5! 6 h5 g4! 7 ♔e3 ♔c5! 8 ♔f4 d4! 9 ♔xg4 d3 10 ♔f3! ♔c4 11 h6 ♔b3!

(Euwe).

12 ♔e3 ♔c2! =

C16.03 I.Rogers – N.Sitnikova, *London Lloyds Bank 1990*

See Chapter 11.

Here Black only has the choice between two evils: ...f6 enables her to defend the d-pawn but decisively weakens the light squares, and after ...g5 she is short of one tempo:

1...f6

1...g5!? 2 hxg6! fxg6 3 ♔f4!:

a) 3...♔f7?! 4 ♔e5! h5 (4...♔e7 5 ♔xd5 h5 6 gxh5 gxh5 7 ♔e5 h4 8 ♔f4! +−) 5 gxh5! gxh5 6 ♔f5! is winning for White.

b) 3...♔g7!? 4 ♔e5! h5 5 gxh5! gxh5 6 ♔f5! ♔h6 7 f4! h4 8 ♔g4! ♔g6 9 ♔xh4! ♔f5 10 ♔g3! ♔e4 11 ♔g4! ♔xd4 12 f5! ♔e5 13 ♔g5! +−.

2 ♔f4 ♔f8 3 ♔f5 ♔f7 4 f4! ♔e7 5 ♔g6!

5 g5? ♔f7!! =.

5...♔f8 6 g5! fxg5 7 fxg5! hxg5 8 ♔xg5! 1-0

In view of 8...♔g8 9 ♔g6 ♔f8 10 ♔f5 ♔g8 11 ♔e6 ♔h7 12 ♔xd5 +− (11.11, A11.16).

C16.04 B.Gelfand – Y.Seirawan, *Amsterdam 1996*

See Chapters 6 and 10.

It is hard to believe, but this position is drawn.

1 ♔d2

1 ♔f4? b5! 2 ♔e3 bxa4 3 ♔d2 ♔f7 4 ♔c2 ♔f6 5 ♔b2 ♔f5 –+.

1...♔d7 2 ♔d1 ♔e6 3 ♔e2 ♔e7

3...♔f5 4 ♔f3! b5 5 axb5! ♔e6! 6 ♔e3 ♔d6 7 ♔d2 ♔c7 8 ♔c2 ♔b6 9 ♔b2 ♔xb5 10 ♔a3 =.

4 ♔e3 ♔e6 5 ♔e2! ♔d7 6 ♔d1 ♔c6 7 ♔c2 b5 8 axb5+! ♔xb5 9 ♔b2! ♔c6 10 ♔a3! ♔d6 11 ♔a4! ♔e6 12 ♔xa5! ♔f5 13 ♔b5 *(D)*
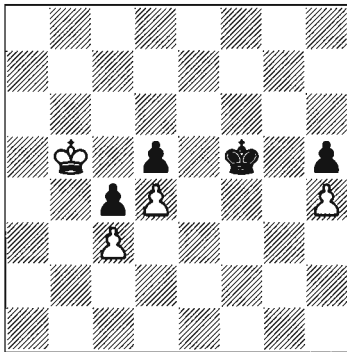
13...♔g4?!

Seirawan risks everything and goes too far. 13...♔e4 14 ♔c5 ♔d3 15 ♔xd5! ♔xc3! =.

14 ♔c5 ♔xh4 15 ♔xd5! ♔g4 16 ♔c5!?

Not, of course, 16 ♔xc4? h4! 17 d5 ♔f5! 18 ♔c5 h3! 19 d6 ♔e6! 20 ♔c6 h2! 21 d7 h1♕+! 22 ♔c7 ♕h7! –+.

16...h4 17 d5! ♔f5 18 d6! ♔e6! 19 ♔c6! h3! 20 d7 h2! 21 d8♕ h1♕+! 22 ♔c5 ♕g1+ 23 ♔xc4 ♕f1+ 24 ♔c5 ♕f5+

Now Black has to keep busy because the position with, e.g., the white queen on d4 or the pawn on c4 would be won for White.

25 ♔b6 ♕f2+ 26 ♔b5 ♕b2+ 27 ♔c4 ♕a2+ 28 ♔c5 ♕a3+

28...♕a7+? 29 ♕b6+ ♕xb6+ 30 ♔xb6! +–.

29 ♔d4 ♕a4+ =

29...♕d6+!? 30 ♕xd6+! ♔xd6! = (1.06) would now have secured the draw. Seirawan, who defended well in the queen ending despite his time-trouble, later lost on time.

C16.05 R.Emerson – J.Nunn, *London 1969*

See Chapters 3 and 8.

You have certainly seen that **1...♔f5!?** is the only sensible move (if he moves to the seventh or sixth rank later queens can be exchanged by ♕a7+ or ♕b6+ and after 1...♔h5 the queen is lost at once). But have you also noticed that White can nevertheless not win?

2 ♔b5!! *(D)*

Emerson – see Nunn, *Tactical Chess Endings*.

The game continued 2 b4? g5! = and was later drawn.
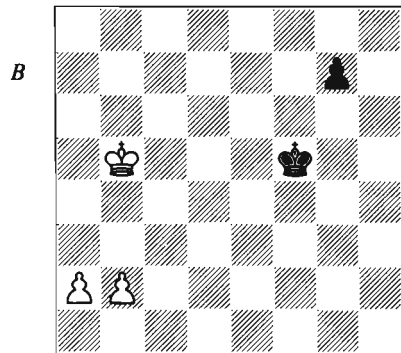
2...g5 3 ♔c4! ♔e4

3...g4 4 ♔d3! ♔f4 (4...g3 5 ♔e2! +–) 5 a4! +– (but not 5 ♔e2? ♔g3! 6 b4 ♔h3! =).

4 a4! g4 5 a5! g3 6 a6! g2 7 a7! g1♕ 8 a8♕+! ♔f4 9 ♕f8+!?

According to the endgame CD-ROM, 9 ♕b8+?! also wins but it is much more complicated: 9...♔f5 10 ♕c8+ ♔f6 11 ♕d8+ ♔f7 12 ♕d5+ ♔e8 13 ♕e5+ ♔f7 14 b4 +−.

9...♔e4 10 ♕e7+ ♔f3 11 ♕b7+ ♔f4 12 ♕f7+ ♔e5 13 ♕d5+ ♔f4 14 ♕d4+ +−

C16.06 Xie Jun − V.Hort, *Prague (Women-Veterans) 1995*
See Chapter 10.
After **1 g3!** the b-pawn becomes weak so Black has to liquidate the pawns as soon as possible:
1...♔g6!
1...f6? 2 f4+! ♔g6 3 exf6! ♔xf6 4 g4 +−.
2 ♔d3
2 g4? ♔g5! −+; 2 f4? ♔h5! 3 ♔f3 b4! 4 g4+ ♔h4! −+.
2...f6! *(D)*
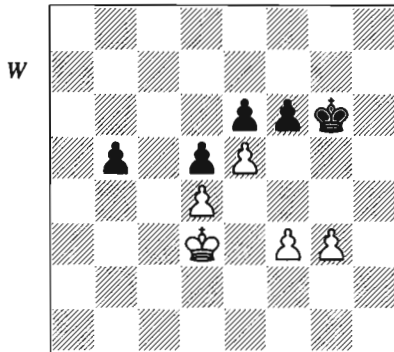
3 exf6
3 g4? fxe5! 4 dxe5 ♔g5! 5 ♔d4 b4! 6 ♔d3 ♔f4! 7 ♔d4 b3! 8 ♔c3 d4+ 9 ♔xb3 d3 10 g5 ♔e3! −+.
3 f4 fxe5 (3...f5 4 ♔c3! ♔h5 5 ♔b4! ♔g4 6 ♔xb5! ♔xg3! 7 ♔c5 ♔xf4! 8 ♔d6! =; 3...b4? 4 exf6! ♔xf6 5 g4! +−) 4 dxe5! ♔f5 5 ♔d4 b4 6 ♔d3! ♔g4 7 ♔d4! = because 7...♔xg3? fails to the break-through 8 f5! b3 9 ♔d3 d4 10 fxe6! b2

(10...♔f3 11 e7! b2 12 ♔c2! d3+ 13 ♔xb2! d2 14 e8♕! d1♕ 15 ♕h5+! +−) 11 ♔c2! d3+ 12 ♔xb2! ♔f2 13 e7! d2 14 e8♕ d1♕ 15 ♕f7+ ♔e3?! 16 ♕b3+ +−.
3...♔xf6! 4 ♔c3 e5!
4...♔f5? 5 ♔b4 e5 6 g4+! ♔f4 7 dxe5! ♔xe5 8 ♔xb5! ♔f4 9 ♔c5! +−.
5 dxe5+ ♔xe5! 6 ♔d3 b4 7 f4+ ♔f5 8 ♔d4! ♔g4 9 ♔d3! ♔f5 ½-½
A drawn position has resulted that we already know from the Chapter 8.

C16.07 N.Grigoriev, 1930
See Chapter 8.
The manoeuvre b4-b5 is obvious, but the win in the queen ending is rather hidden:
1 b4! ♔e7
1...axb4 2 a5! f3 3 a6! f2 4 ♔e2! +−.
2 b5! ♔d6 3 ♔e2 ♔e6 4 ♔f3 ♔e5 5 ♔g4! ♔e4 6 b6! f3 7 ♔g3!
The decisive intermediate move.
7...♔e3 8 b7! f2 9 b8♕! f1♕ 10 ♕e5+! ♔d2 11 ♕xa5+! ♔d1 12 ♕d5+! ♔c1 13 ♕c6+ ♔d1
13...♔b1 14 ♕b5+! +−; 13...♔d2 14 ♕g2+! +−.
14 ♕f3+ +−

C16.08 Walkewitz, *Schach,* 1976
See Chapter 6.
Due to its many stalemate options this study was a good opportunity to test your ability to calculate:
1 ♔c2! b6
1...b5 2 h4 b4 3 h5! ♔a1 4 g5! a2 5 ♔c1! hxg5 6 h6 g4 7 h7 g3 8 h8♕#.
2 h4! b5 3 h5!
3 g5? hxg5! 4 hxg5! b4 5 g6 ♔a1 6 g7 a2! 7 ♔d3 ♔b2! 8 g8♕ a1♕! 9 ♕h8+ ♔xb3! 10 ♕xa1 stalemate; 3 b4? h5! 4 gxh5 ♔a1 5 h6 a2! 6 h7 stalemate.
3...b4 4 g5! hxg5 5 h6! g4 6 h7! g3 7 h8♗!
7 h8♕? g2 8 ♕g8 g1♕! 9 ♕xg1! stalemate.

7...g2 8 ♗d4! g1♕ 9 ♗xg1! ♔a1 10 ♗c5 ♔a2 11 ♗xb4 ♔a1 12 ♗xa3 +−

C16.09 Original

See Chapters 6 and 11.

Because of the closed character of the position, the extra pawn has to be realized accurately.

1 ♔g3

After 1 e5?? = there is nothing one could do, and 1 exf5+? gxf5! 2 ♔g3 ♔f7! 3 ♔h3 ♔g7! 4 ♔h4 fails to 4...♔g6! =. This leads to the solution:

1...♔f7 2 ♔h4 fxe4 *(D)*

2...♔e6 3 exf5+! ♔xf5 4 ♔g3! ♔e4 5 ♔g4! ♔d4 6 f5! +−.
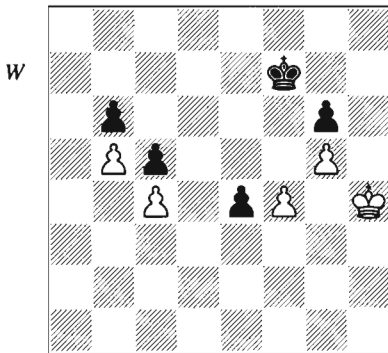
3 ♔g3! ♔e6

3...♔e7 4 ♔f2 ♔e6 5 ♔e2! ♔f5 6 ♔e3! +−.

4 ♔f2! ♔f5 5 ♔e3! ♔g4

5...♔e6 6 ♔xe4! ♔d6 7 f5 +−.

6 ♔xe4! +−

C16.10 P.Blatny − J.Howell, *Lazne Bohdanec 1995*

See Chapter 10.

Actually White has every advantage (active king, more dangerous majority) on his side. But surprisingly the black position is quite resilient:

1 g4!?

Or:

a) 1 b5:

a1) 1...f6 2 b6 g5? (2...h4! =) 3 g4! h4 4 c6+ bxc6+ 5 ♔c5! f5 6 gxf5 g4 7 b7! +− (Blatny in *CBM 45*).

a2) 1...h4!? (for this idea also compare 1...h5 in 9.11) 2 g4 (2 gxh4 f6! 3 c6+ bxc6+ 4 bxc6+! ♔c7! 5 ♔e6 f5! 6 h5 gxh5! 7 ♔xf5 ♔xc6! 8 ♔g5 ♔d5 9 ♔xh5 ♔c4! = and Black is fast enough) 2...f6!:

a21) 3 b6?! f5! 4 g5! (4 gxf5? gxf5! 5 c6+ bxc6+! 6 ♔e5 c5 7 ♔xf5 ♔c6 −+) 4...♔c8 =.

a22) 3 c6+ bxc6+ 4 bxc6+! ♔c7 5 ♔e6 f5! 6 gxf5! gxf5! 7 ♔xf5! ♔xc6! =.

b) 1 h4 f6! 2 b5 g5! (2...♔e7? 3 c6! b6 4 c7! ♔d7 5 c8♕+ ♔xc8 6 ♔e6 +−) 3 ♔e4 (3 c6+ bxc6+! 4 bxc6+! ♔c7! 5 ♔e6 gxh4 6 gxh4! ♔xc6! =) 3...gxh4! (3...♔e6? 4 g4 +−; compare 9.09) 4 gxh4 ♔e6! *(D)*:
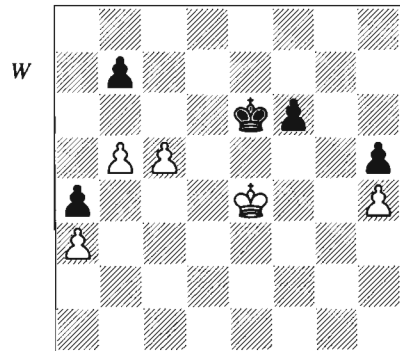
b1) 5 b6 f5+! (5...♔d7? 6 ♔f5! ♔c6 7 ♔g6!! ♔xc5 8 ♔xh5! +−) 6 ♔f4 ♔d5! 7 ♔xf5 ♔xc5! 8 ♔g5 ♔xb6! 9 ♔xh5! ♔c7 =.

b2) 5 c6 bxc6! 6 bxc6! ♔d6! 7 ♔f5 ♔xc6!:

b21) After 8 ♔xf6 Black can either draw by 8...♔d6 = according to Bähr's Rule or start adequate counterplay by 8...♔c5 =.

b22) 8 ♔g6!? ♔d5 9 ♔xh5 f5 10 ♔g5 ♔e4 (surprisingly even 10...♔e5 11 h5 ♔e6!! = draws) 11 h5! f4! =.

c) 1 ♔e5 ♔e7! =.
1...hxg4!
1...h4? 2 g5 +−.
2 hxg4! f6!
2...f5? 3 gxf5! gxf5 4 ♔e5! +−;
2...♔e7? 3 g5! f5 4 gxf6+! ♔xf6 5 ♔d6!
♔f7 6 b5 +−.
3 b5 ♔e7!
3...b6? 4 c6+! +− − see under 4...b6.
4 c6 *(D)*
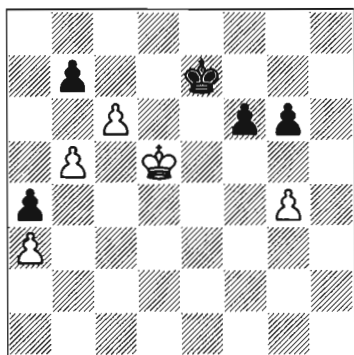
4...♔d8!!
4...bxc6+? 5 ♔xc6! ♔d8 6 ♔b7 +− (6
b6? ♔c8! =).
4...b6? 5 ♔c4 ♔d6 6 ♔b4 ♔e6 (6...f5
7 gxf5 gxf5 8 ♔c4 +−) 7 ♔xa4! f5 8
gxf5+! gxf5 9 ♔b3 +−.
5 cxb7 ½-½
Due to 5...♔c7! 6 ♔e6 f5! 7 gxf5
gxf5! 8 ♔xf5 ♔xb7 =.

C16.11 I.Rogers − V.Smyslov, *Groningen 1989*
See Chapter 7.
Can the extra pawn be realized despite
the bad king position? We think so!
1 g4
1 f4 h6 2 ♔d2 f6 3 g4 g5! 4 fxg5 hxg5!
−+.
1 ♔d2:
a) 1...f6:
a1) 2 ♔d3 ♔c1 3 f4 ♔d1 4 g4 ♔e1 5
♔e3 (5 g5 fxg5! 6 fxg5 ♔f2 −+; 5 f5 exf5

6 gxf5 ♔f2 −+) 5...♔f1 6 ♔f3 g5 7 f5
exf5 8 gxf5 h5 −+.
a2) 2 f4 *(D)*:
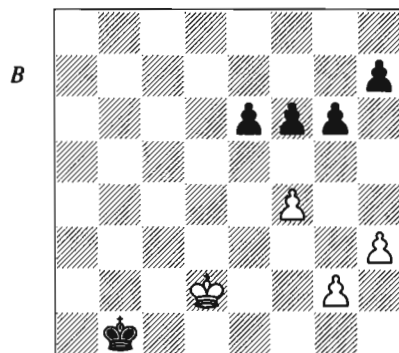
a21) 2...g5? 3 fxg5! fxg5! 4 ♔d3 ♔c1
5 ♔e4 ♔d2 6 ♔e5 ♔e3 7 ♔xe6 ♔f4 8
♔f6 =.
a22) 2...♔b2 3 ♔d3:
a221) 3...♔b3? 4 g4 ♔b4 5 ♔d4!
♔b5 6 h4! (6 g5? fxg5! 7 fxg5 ♔c6! 8
♔e5 ♔d7! 9 ♔f6 ♔d6! 10 h4 e5! −+)
6...♔c6 7 g5! fxg5 (7...f5 8 ♔e5! ♔d7 9
♔f6! =; 7...e5+ 8 fxe5! f5 9 ♔c4! =;
7...♔d7 8 gxf6! ♔e8 9 ♔e5 ♔f7 10 h5!
gxh5! 11 f5! =) 8 hxg5! ♔d6 9 ♔e4! =.
a222) 3...♔c1! 4 g4 ♔d1 (4...h6?! 5
h4 g5! −+) 5 h4 (5 g5 fxg5! 6 fxg5 ♔e1! 7
♔e3 ♔f1 8 ♔f3 e5 9 h4 ♔g1! 10 ♔g3 e4
−+) 5...♔e1! 6 ♔e3 ♔f1! 7 ♔f3 ♔g1!!
(7...h5? 8 g5! f5 9 ♔e3! ♔g2 10 ♔d4!
♔g3 11 ♔e5! ♔xh4 12 ♔f6! ♔g4 13
♔xg6! h4! 14 ♔f6! h3 15 g6! h2 16 g7!
h1♕ 17 g8♕+! ♔xf4! 18 ♕b8+! =) 8
♔g3 h5 9 f5 exf5! 10 gxh5 gxh5! 11 ♔f4
♔g2 −+.
a23) 2...h6 3 h4 (3 g4 g5 −+) 3...h5! 4
♔e3 ♔c2 5 ♔d4 ♔d2! 6 ♔c5 ♔e3!
(6...f5? 7 ♔d6! ♔e3 8 ♔e5! ♔f2 9 ♔f6!
=) 7 ♔d6 ♔xf4! 8 ♔xe6 f5 9 ♔f6 ♔g4!
10 ♔xg6 f4! −+.
b) 1...g5 2 g3 (2 ♔d3 ♔c1 3 ♔d4
♔d2 4 ♔e5 ♔e2 −+) 2...f6 3 f4 gxf4! 4
gxf4 ♔b2 −+.

1...g5 2 ♔d2 ♔b2
2...f6 −+; 2...h6 −+.
3 ♔d3 ♔c1 4 ♔e4 ♔d2 5 f4 *(D)*
5 ♔e5 ♔e2 6 ♔f6 ♔xf2 −+.
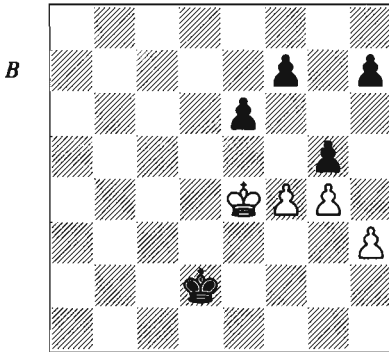
5...gxf4!
In the game 5...h6? was played, when the f-pawn gives White sufficient counter-play for a draw: 6 f5! exf5+ (6...♔e2 7 f6 =) 7 gxf5! (7 ♔xf5? ♔e3 −+) 7...f6 (7...♔e2 8 f6 ♔f2 9 ♔e5 =) 8 ♔d5! h5 9 ♔e6! g4 (9...h4 10 ♔xf6! g4! 11 hxg4 h3 12 ♔g7 h2 13 f6 h1♕ 14 f7 ♕a1+ 15 ♔g8! ♕a2 16 g5 =) 10 hxg4! hxg4 (or 10...h4 11 g5 =) 11 ♔xf6! g3 12 ♔e7! g2 13 f6! g1♕ ½-½ (3.08, 3.09).
6 ♔xf4 ♔d3 7 ♔e5
7 g5 ♔d4! −+.
7...♔e3 8 g5 ♔f3 9 ♔f6 ♔f4
9...♔g3 10 ♔xf7 e5! 11 g6 hxg6! 12 ♔xg6 e4! −+.
10 ♔xf7 e5! 11 h4
11 g6 hxg6! 12 ♔xg6 e4! −+.
11...e4! −+
11...♔g4? 12 g6! hxg6! 13 ♔xg6! =.

C16.12 H.Pillsbury – S.Tarrasch, *Nuremberg 1896*
See Chapter 8.
The outside candidates will certainly soon achieve their goal. Therefore the decisive question is whether White can support his central pawns in time. It proves

to be wise to break through on the king-side by h5:
1...b5!? 2 ♔g3
2 d6? ♔f7! 3 h5 g5! 4 d7 ♔e7! 5 e6 a5 6 ♔g3 b4 7 ♔g4 a4! 8 ♔f5 b3! 9 axb3 axb3! 10 ♔g6 b2! 11 d8♕+ ♔xd8! 12 ♔f7 b1♕ 13 e7+ ♔c7! 14 e8♕ ♕f5+! −+.
2 h5!? (Fine) and now:
a) 2...g5?! 3 ♔g3 a5 4 ♔g4 ♔f7! (not 4...b4? 5 d6! ♔f7 6 ♔f5! +−) 5 ♔f5! g4! =.
b) 2...gxh5 3 ♔g3 b4 4 d6 ♔f7 5 d7 ♔e7 6 e6! a5 7 ♔h4! a4! 8 ♔xh5! b3 9 axb3! axb3 10 ♔g6! b2 11 d8♕+! ♔xd8! 12 ♔f7! =.
2...b4
2...a5!? (Tarrasch) and now:
a) 3 ♔f4 ♔f7! 4 h5?! (4 e6+ ♔f6! 5 ♔e4 =) 4...gxh5 5 ♔f5! h4! 6 d6 h3! 7 e6+! ♔e8! 8 ♔f6! h2! 9 d7+! ♔d8! 10 ♔f7 h1♕! 11 e7+! ♔xd7! 12 e8♕+! *(D).*
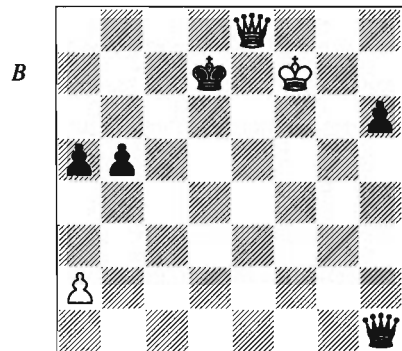
The resulting queen ending was assessed by Tarrasch (who then didn't have an endgame CD-ROM, of course) as being near to a win. In practice it certainly would offer good chances but objectively the assessment by Réti, =, should be correct:
a1) 12...♔c7 13 ♕xb5 (13 ♕e7+ =) 13...♕f3+ 14 ♔g7 = (14 ♔g6? ♕c6+! −+).

a2) 12...♔d6 13 ♕d8+ (13 ♕xb5? ♕d5+! —+) 13...♔c5 (13...♔e5 14 ♕h8+ =) 14 ♕xa5 ♕f3+ 15 ♔g7 ♕f4 16 a4 ♕xa4 17 ♕c7+ ♔d5 18 ♔xh6 =.

b) 3 h5 = (Botvinnik).

3 ♔f4 *(D)*

3 h5 =.
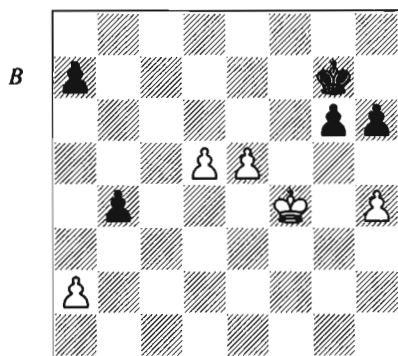
3...♔f7!

3...a5? 4 d6! ♔f7 5 h5! gxh5 6 ♔f5! +−.

The game concluded 3...g5+? 4 hxg5! hxg5+ 5 ♔xg5 a5 6 d6 ♔f7 7 ♔f5! a4 8 e6+! ♔e8 9 ♔f6! b3 10 axb3 axb3 11 d7+ ♔d8 12 ♔f7 1-0.

4 e6+!?

For 4 h5?! gxh5! 5 ♔f5! h4! ∓, see under 2...a5!?.

4...♔f6! 5 ♔e4 a5

5...g5 6 hxg5+! hxg5! 7 ♔d4! g4 8 ♔c5! ♔e7 9 ♔c6 g3 10 d6+! ♔xe6! 11 d7! =.

6 ♔d4! a4!?

6...g5?! 7 hxg5+ hxg5! 8 ♔c5 a4! 9 ♔d6 b3! 10 e7!? b2! 11 e8♕ b1♕! 12 ♕xa4 ±.

7 ♔c5!

7 ♔c4? b3! 8 axb3 a3! 9 ♔c3 g5 and Black wins.

7...b3

7...g5?! 8 hxg5+ hxg5! 9 ♔d6 b3! 10 e7 ±; 7...♔e7? 8 ♔xb4! g5 9 hxg5! hxg5 10 ♔c5 g4 11 ♔d4! +−.

8 axb3 axb3 9 ♔d6! b2 10 e7! b1♕ 11 e8♕! ♕b4+ 12 ♔c7! ♕a5+! =

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Databases and Computer Programs
ChessBase
Endgame CD-ROM
Fritz 4 and Fritz 5
MegaBase 97
Hiarcs 7.32 using the Nalimov tablebases

Index

Most of the instructive examples have been known for a long time. They are either elementary or they can't be clearly ascribed to an author. Next to the players and composers you will first find our number, then in brackets the number in the encyclopaedia or, if necessary, in Averbakh's work.

Composers

Instructive examples