JAN TIMMAN

100 Endgame Studies You Must Know

Chess Artistry to Enjoy and Learn From

NEW IN CHESS

Contents

Preface

My fascination for endgame studies, even in my younger years, was mainly caused by the fact that they forced you to think backwards. It had always been so self-evident to think forwards, to ruminate about how a position would develop. This was a new experience that gave me an intellectual stimulus.

In compositions, generally, the final position is critical. This position has to be spectacular in a certain way; a hidden, beautiful theme which requires some work to fathom. Once the end position has been discovered, the moves leading up to that position need to be determined. You have to wonder all the time: what was White's/Black's last move? And in this way, you achieve retrograde thinking.

In his book *Common Sense in Chess*, Emanuel Lasker states: 'By some ardent enthusiasts, chess has been elevated into a science or an art. It is neither; but its principal characteristic seems to be – what human nature mostly delights in – a fight'.

With the endgame study, the situation is more or less the opposite: the competitive element is shifted to the background; scientific and artistic elements are central. In each study, White's moves are forced, whether he is supposed to win or draw. Mistakes are not allowed in the course of the play, which, as a rule, is pleasing to the eye.

It is a well-known fact that various top chess players occupy themselves with endgame studies. This is regarded as a good method for finding practical solutions in the endgame and – possibly – for discovering secrets.

The idea for this book originated during a brainstorming session with Allard Hoogland, Dirk Jan ten Geuzendam and Remmelt Otten. The title is derived from Jesus de la Villa's successful book *100 Endgames You Must Know*. Therefore, I'd like to thank Jesus de la Villa for giving me permission to use a variation of his title for this book.

The book is structured in such a way that the simplest studies are presented first. I have strived as much as possible for an order of increasing degree of difficulty. Thus, I created five chapters, each chapter of a higher level than the last, and within the chapters the degree of difficulty also increases. This way, the reader can take in the material at his own tempo.

In the first chapter, I start by discussing four quite elementary pawn endings. Next are famous studies like the Réti manoeuvre and the Saavedra. After the Saavedra, I give other examples of promotion combinations that are mainly of practical use.

The second chapter also starts with a few pawn endings, and then follows the Lasker manoeuvre, which every chess player has to know. In this second chapter, too, I mainly discuss classical studies that are not too difficult. In the third chapter, things become a little more complicated, while the fourth chapter deals with special themes. I have reserved the really complicated studies for the fifth chapter. However, I have still avoided studies that are hard to explain.

In general, I have strived to find a balance between the practical and the artistic value of the endgame studies presented. Both aspects make the endgame study attractive for those who want to further deepen their knowledge of our game and want to experience its beauty.

All kinds of themes are dealt with in this book, such as the bishop and the wrong rook's pawn, promotion, mutual zugzwang, the systematic manoeuvre, minor promotion, domination, the Novotny, the Prokes manoeuvre, and Karstedt's fortress. In most cases, I have not put the themes in any stringent order: the reader is presented with differing study images all the time. In my short introductory pieces to the studies, I have sketched a concise image of the history of the endgame study.

Computers, ever increasing in strength, have greatly influenced the endgame study. They are not only an important aid during composition, but today it is also possible to examine earlier studies with a critical eye; a significant number of them have been found to be incorrect. In some cases it was possible to make corrections without damaging the ideas of the study. The Ukrainian endgame study composer Sergey Didukh is a past master in this area. On his website, which is brimming with interesting facts, he has published various older studies that have been skilfully restored. I have included four of his study versions in this book. I have also dedicated myself intensively to the correction of studies. Not only that, but I also saw possibilities to add ideas to existing studies. This conscientious work is quite satisfying; I believe it is a form of cultural preservation. I have given my own study version in 21 cases in this book.

Jan Timman, July 2024

Chapter 1
Elementary endings

- Study 1 - Richard Réti
- Study 2 - Herman Mattison
- Study 3 - Johann Behting
- Study 4 - Harold van der Heijden
- Study 5 - Josef Vancura
- Study 6 - Henri Rinck
- Study 7 - Alexander and Kirill Sarychev
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- Study 11 - Josef Vancura
- Study 12 - Herman Mattison
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- Study 14 - Mark Liburkin
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- Study 18 - Hermann Mattison
- Study 19 - Vincente Carvajal
- Study 20 - Alexey Troitzky

Study 1 - Richard Réti

Richard Réti
Deutsch Österreichische Tageszeitung 1921
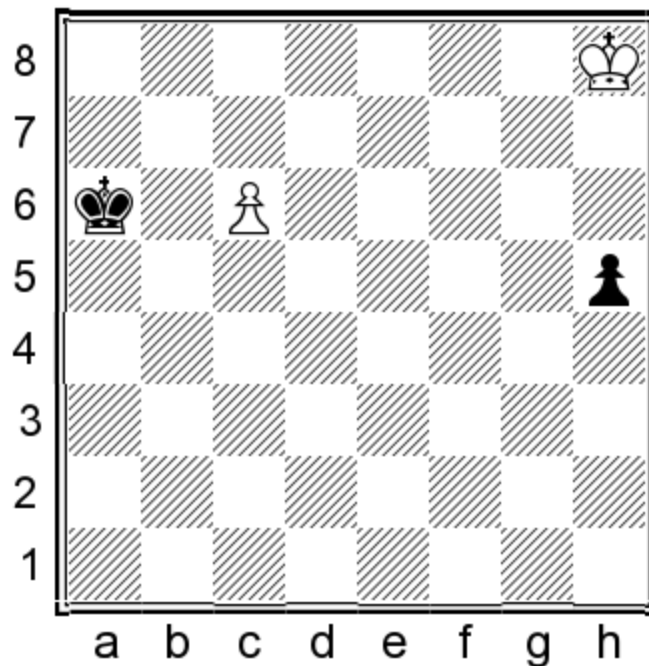
White to play and draw

Richard Réti (1889-1929) was not only a prominent player, he was also known for his magnificent endgame studies. He died at the young age of forty due to scarlet fever. Had he lived longer, how many more beautiful games and studies would he have given us? Réti's most famous study is the one presented here.

The white king is far removed from the battle scene, and Black's h-pawn seems to have free passage. Because of this, the starting position has the characteristics of an optical illusion, because there still turns out to be a way for White to save himself.

First of all, he brings the king nearer.

1.♔g7 h4

The situation still seems hopeless for White.

2.♔f6 ♔b6

Black brings his king closer, since after 2...h3 White would react with 3.♔e6 or 3.♔e7. The white king will support the pawn and both sides' pawns will promote simultaneously.

3.♔e5!
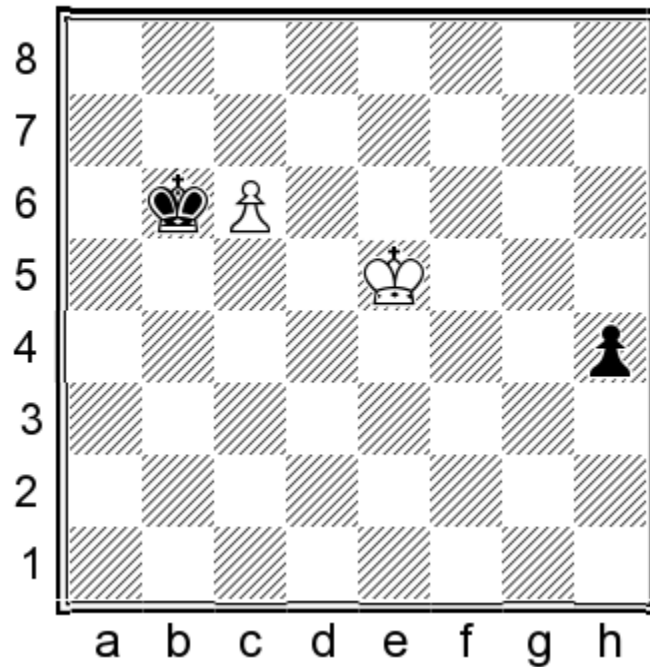
The fourth diagonal king move and also the climax of the study. Slowly White's intention is becoming clear. White's king can move in two directions: if Black takes the c-pawn, it goes to f4.

3...h3 4.♔d6

And now it supports the c-pawn.

4...h2 5.c7 ♔b7 6.♔d7 ½-½
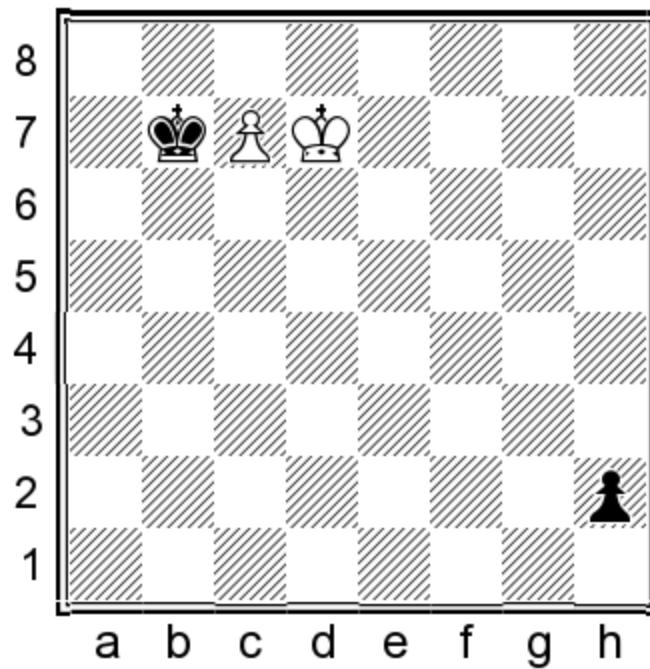
The king's march from the corner to the centre, creating the possibility to diverge either to the queenside or to the kingside, is called the 'Réti manoeuvre'. In practice, this manoeuvre will not occur in its entirety, but parts of it will. In pawn endings, diagonal king moves can bring unexpected salvation.

Study 2 - Herman Mattison

Herman Mattison
Deutsches Wochenschach 1918
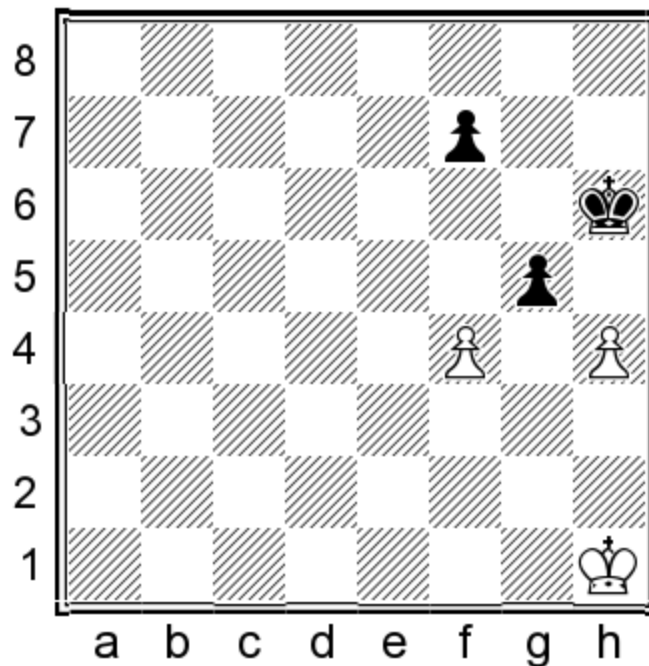
White to play and draw

Herman Mattison (1894-1932) was a very strong Latvian player. One year before his untimely death, he beat Alekhine and Rubinstein in the Prague Olympiad. He was also a gifted endgame study composer. In general, his studies are characterized by natural starting positions. The study given here is one of the four pawn endings he has composed. It is above all an instructive study.

I remember I was given the starting position as an exercise when I was eleven, and found the solution immediately, as I knew how the distant opposition worked.

Although White is a pawn up after the capture on g5, he will lose both his pawns due to the bad placement of his king.

1.hxg5+

The only move. After 1.fxg5+ ♔h5 2.g6 fxg6 Black would win easily.

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1...♔h5

What can White do now?

2.g6!

Actually, this is not a pawn sacrifice, since the g-pawn would be lost in any case. The aim of the text move is to lure the black pawn forward.

2...fxg6
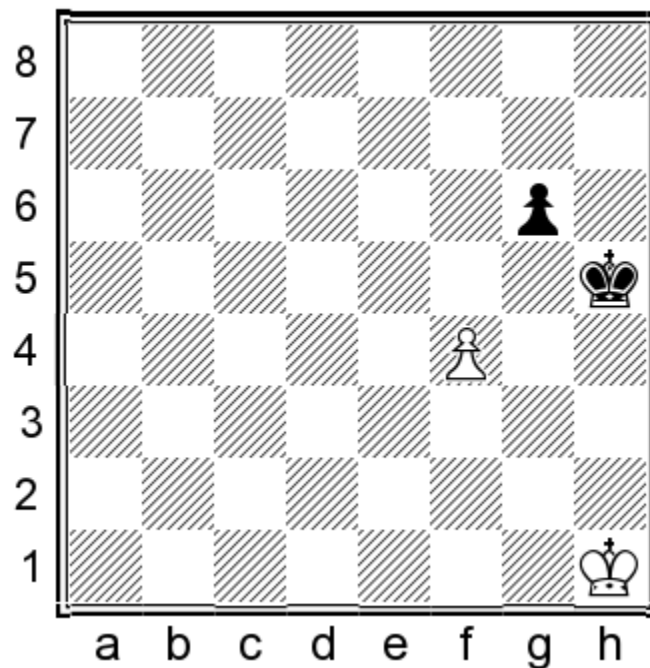
3.f5!

Again with the same purpose: the black pawn is lured further forward.

3.♔g1 was insufficient in view of 3...♔g4 4.f5 ♔xf5! and Black wins.

3...gxf5 4.♔g1!

Only now that the black pawn is on the fifth rank, White can make the distant opposition work.

4...♔g5

Black follows in White's footsteps in the hope of gaining the opposition.

5.♔f1

White persists; the black king has to move forward.

5...♚g4

Or 5...♚f4 6.♔f2 and White has the opposition.

6.♔g2 ♚f4 7.♔f2
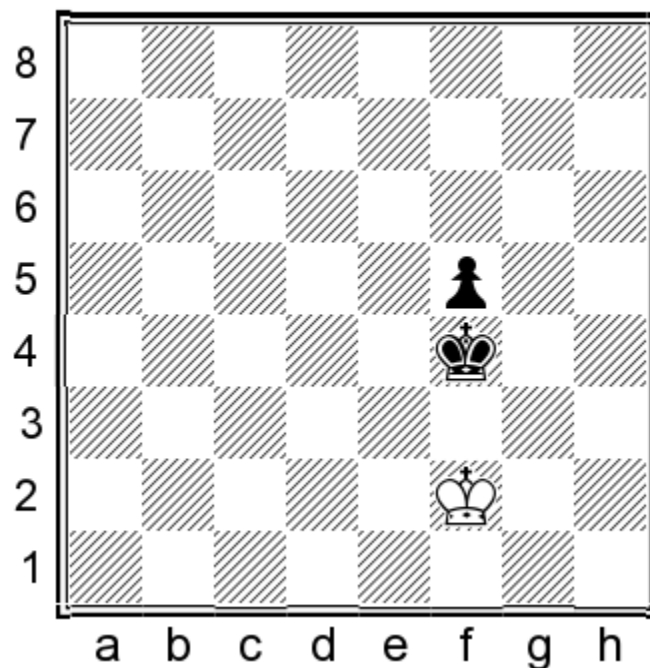
And Black can't make progress; it's a draw.

Study 3 - Johann Behting

Johann Behting
Rigasche Rundschau 1905
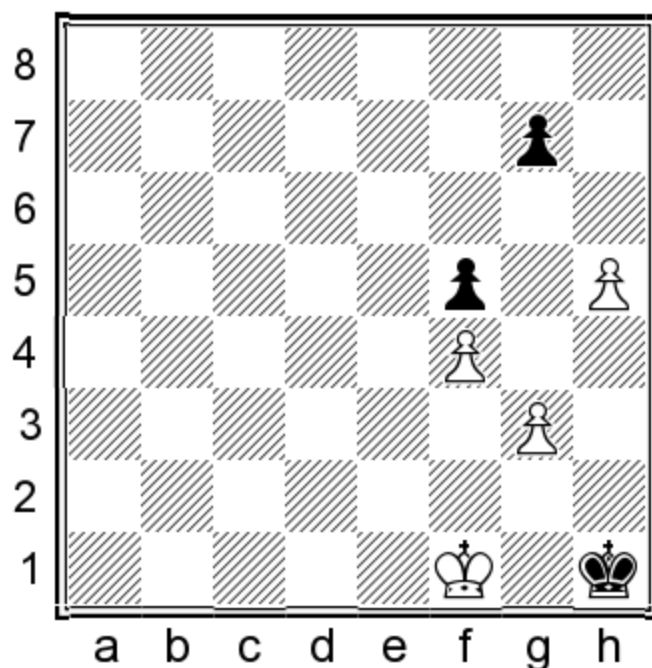
White to play and win

Sometimes in a pawn ending, everything revolves around finding the right king move. This is also the case in the study by Johann Behting (1856-1947) presented here. Like Mattison, Behting was of Latvian descent. Johann had a brother, Karl, who was eleven years younger and also composed endgame studies. Like Mattison, the Behting brothers belonged to a Baltic-German intellectual scene in the early twentieth century. Curiously, the brothers didn't compose any studies together. Each of them had their own ideas, and many of them were worthwhile, like this study.

White is a pawn up, but the question is how he can convert this advantage into a win.

1.♔e1!

Very subtle. Other king moves were insufficient.

After 1.♔e2 ♔g2 2.g4 fxg4 3.f5 g3 4.f6 gxf6 5.h6 f5 6.h7 f4 7.h8♕,

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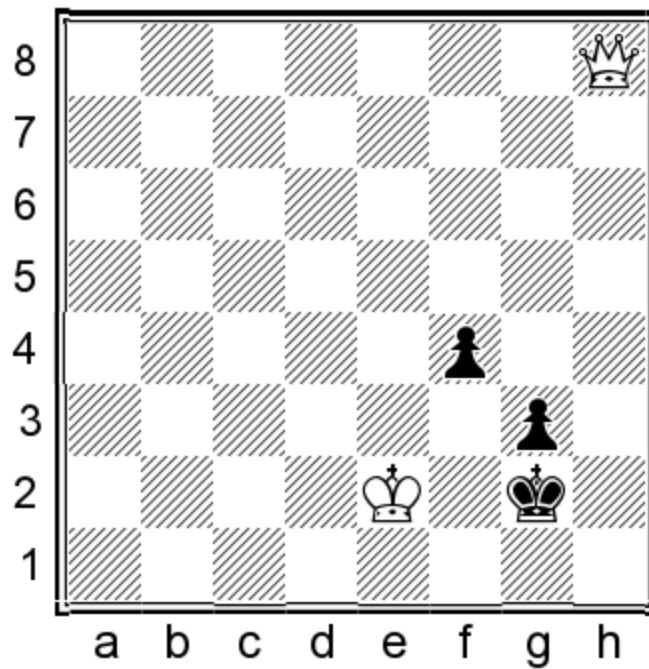
Black has 7...f3+ with check and is saved; for example, 8.♔d2 f2 9.♕a8+ ♔g1 and White cannot make progress. On the first move White has to envisage the finesse Black has six moves later. In endgame study jargon, 1.♔e1! is called 'foresight'.

It is also important that White can't win after 1.♔f2 ♔h2 2.♔f3 ♔h3 because now it is his turn. This is called 'reciprocal zugzwang' in endgame study terminology.

1...♔g2

The alternative was 1...♔h2, but then it is Black's turn after 2.♔f2 ♔h3 3.♔f3 – now the reciprocal zugzwang works to White's advantage.
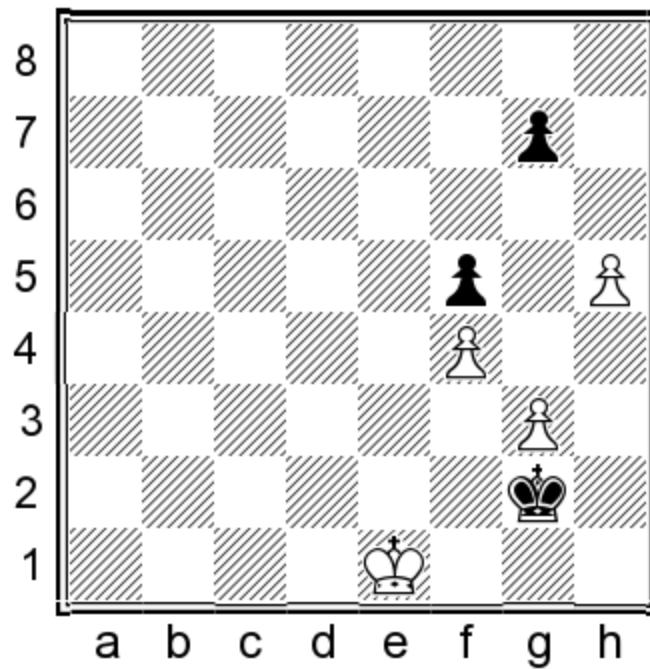
2.g4!

The breakthrough. The rest plays itself.

2...fxg4 3.f5 g3 4.f6 gxf6 5.h6

Black's problem is that his king is in the way of the g-pawn; it cannot move to the h-file since then White promotes with check.

5...f5 6.h7 f4 7.h8♕ f3
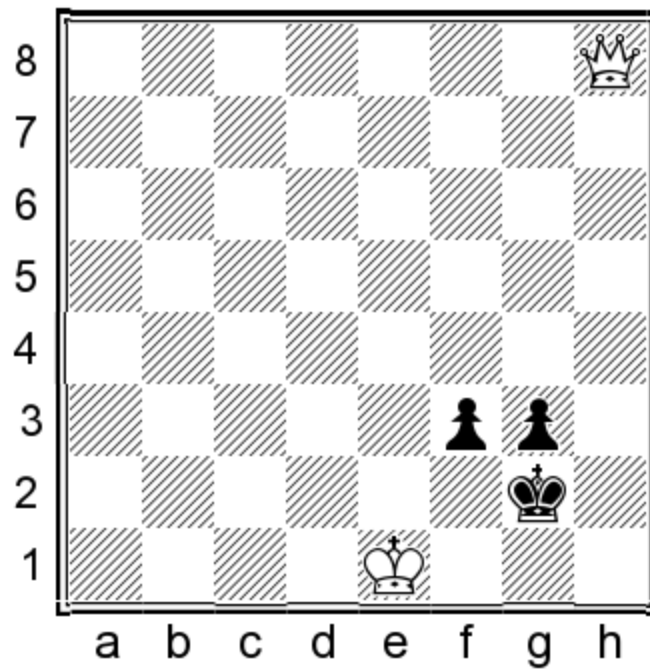
8.♕a8

The quickest road to mate, but 8.♕f8 and 8.♕f6 also suffice to win.

Study 4 - Harold van der Heijden

Harold van der Heijden
Algemeen Dagblad 2003
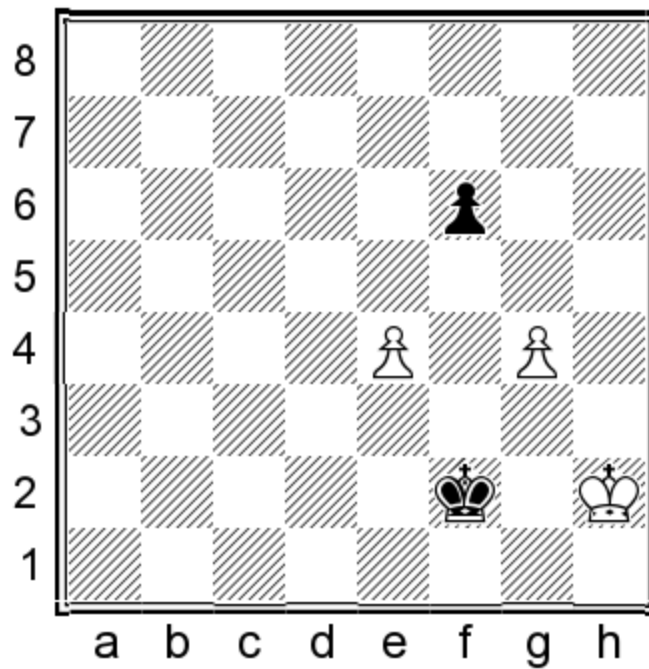
White to play and win

A leap in time of almost a century brings us to Harold van der Heijden (born 1960). He is the man behind the famous endgame study database, an undertaking of gigantic proportions that has been a blessing for every fan of the genre. Van der Heijden is also an excellent endgame study composer who has netted various first prizes. The present study is a refinement of Behting's idea. It's curious that Van der Heijden published it in a national newspaper and did not send it in for a tournament; it would probably have earned him first prize.

It seems as if Black draws without trouble, since the breakthrough with the e-pawn doesn't yield White anything.

1.♔h1!!

An unbelievable starting move. Black's king is already much more active, and now White places his king in the corner too, on what

seems like the worst square. However, this is again a case of foresight, as in the previous study.

The alternative 1.♔h3 doesn't bring White any benefit after 1...♚f3 2.e5 fxe5 3.g5 e4 and both sides promote at the same time.

1...♚f1

This king move leads to the most beautiful variation.

Also after 1...♚f3, White has to play accurately. This variation continues as follows: 2.e5! fxe5 3.g5 e4 and now White keeps the enemy e-pawn under control with 4.♔g1! e3 5.♔f1, after which his g-pawn decides.
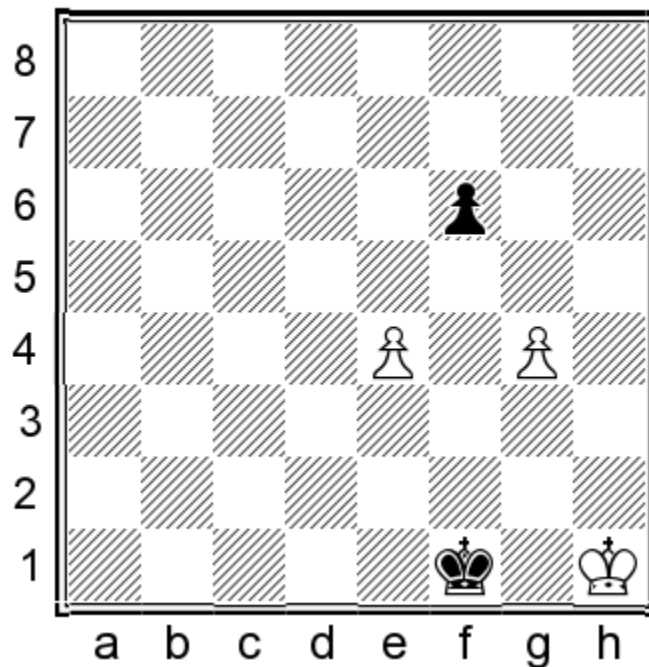
2.e5!

The right moment for the breakthrough.

2...fxe5 3.g5 e4 4.g6 e3

The race continues.

5.g7 e2 6.g8♕ e1♕

Both sides have promoted simultaneously; now follows the denouement.

7.♕g2#

White's king turns out to be excellently placed in the corner.

Study 5 - Josef Vancura

Josef Vancura
Ceske Slovo 1922
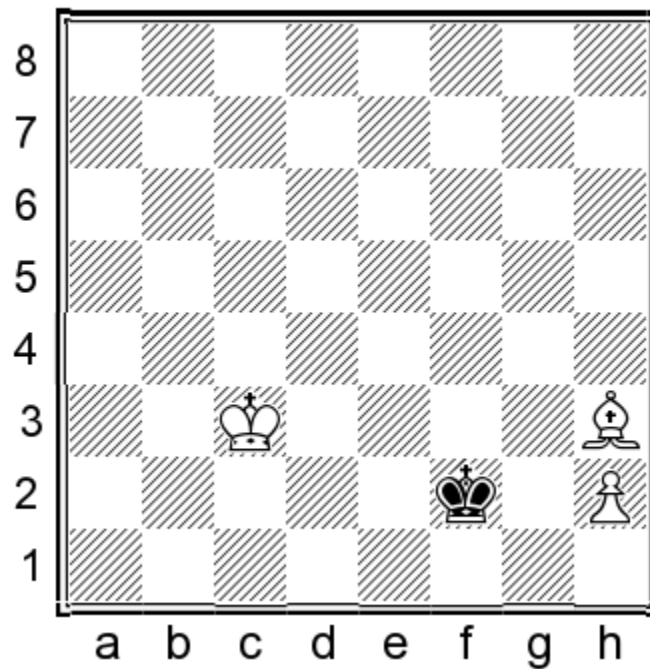
White to play and win

Josef Vancura (1898-1921) was a Czech endgame theoretician. He is mainly known for the 'Vancura defence' in the rook + pawn against rook endgame. During his short life, he was highly productive, and much of his theoretical work on endgames has been published posthumously. This is also the case with the present study.

The motif is purely theoretical; with a rook's pawn and a bishop of the wrong colour, you can't win against a bare king if the latter

reaches the safe corner square in front of the pawn. Without the white bishop, the h-pawn would have free passage. The bishop has to find the right square here.

1.♗d7!

Only this bishop move suffices, as will become clear four moves later. After 1.♗e6 ♔e3 2.h4 ♔e4 3.h5 ♔e5 4.h6 ♔f6 5.♗g8 ♔g6 6.h7 ♔g7, Black is safe.

1...♔e3

The black king walks up the board, holding off the white king at the same time. The alternative 1...♔f3 would make it easy for White, who continues 2.♔d4 ♔f4 3.h4 and now the black king is completely cut off.

2.h4

The pawn starts moving.

2...♔e4

Black could have prevented the further march of the pawn with 2...♔f4, but the drawback of that move is that White's king gets too much space again. White wins with 3.♔d4, effectively holding off the black king like before.

3.h5 ♔e5

Black still hopes to reach the corner square.

4.h6 ♔f6

The black king is close to salvation, but White has another finesse in store:

5.♗e8!
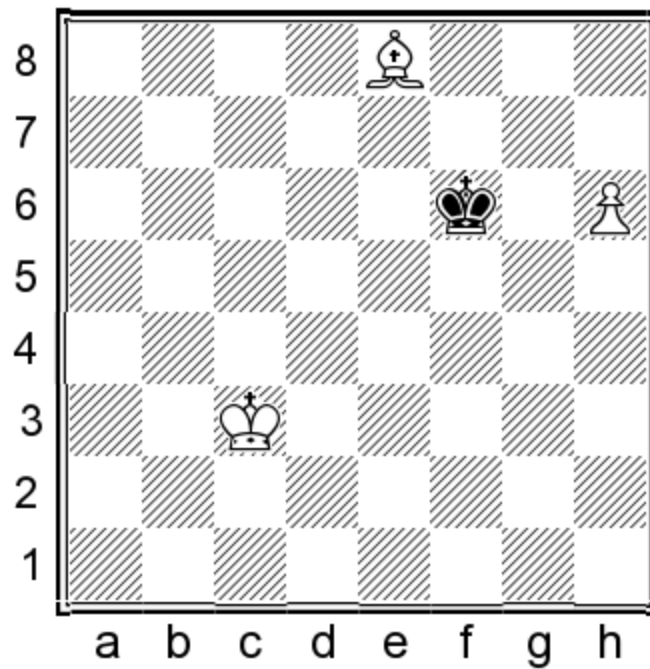
Finally, the intention behind the starting move becomes clear. The black king is cut off and the h-pawn promotes.

Study 6 - Henri Rinck

Henri Rinck
Bohemia 1906
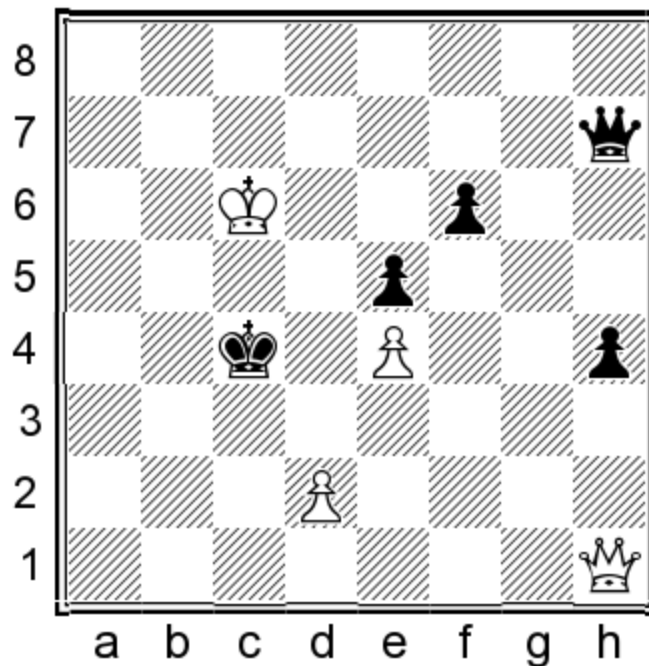
White to play and win

Henri Rinck (1870-1952) was a Frenchman who moved to Barcelona when he was thirty. He was a chemist who developed a new method to refine vegetable oil; he started an olive oil factory in the Catalan capital. Rinck had a passion for endgame studies, and he was very productive. Just before his death, his monumental book 1414 Fins de Partie was published. At Rinck's request, he was buried with the first copy under his right arm.

The study presented here is a textbook example of domination. Black is a pawn to the good, but the problem is that he has no queen checks.

1.♕b1!

A quiet move, cutting off the black king's passage to the b-file. After 1.♕f3 ♚b4 2.♕c3+ ♚a4 3.♕c4+ ♚a3 the black king would escape. Now, mate in two is threatened.

1...♔d4

The only defence.

2.♕b3!

Another quiet move.

2...♕xe4+ 3.♔d6!
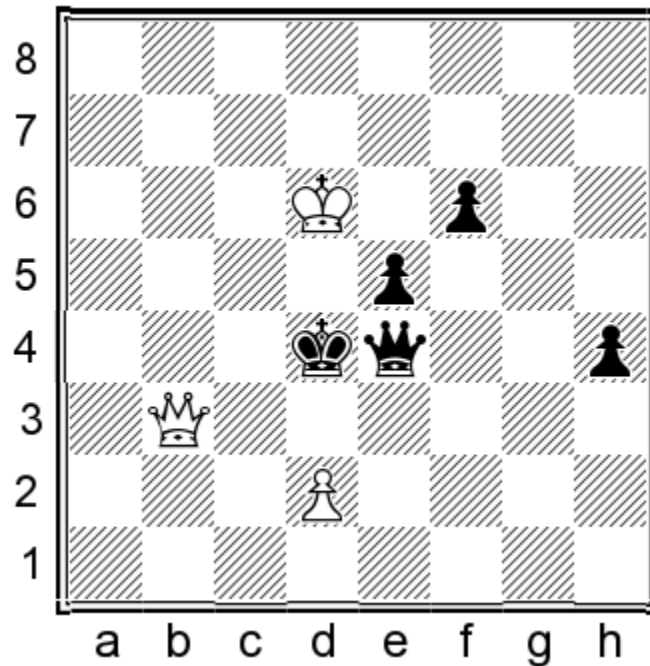
Threatening mate in one.

3...♕a8

The only move that doesn't lose right away. After 3...♕g2 (or 3...♕h1) 4.♕c3+ ♔e4 5.♕c6+, White wins the black queen.

4.♕e3+

Now White hunts down the black king.

4...♔c4 5.♕c3+ ♔b5 6.♕b3+ ♔a6 7.♕a4+ ♔b7 8.♕b5+ ♔a7

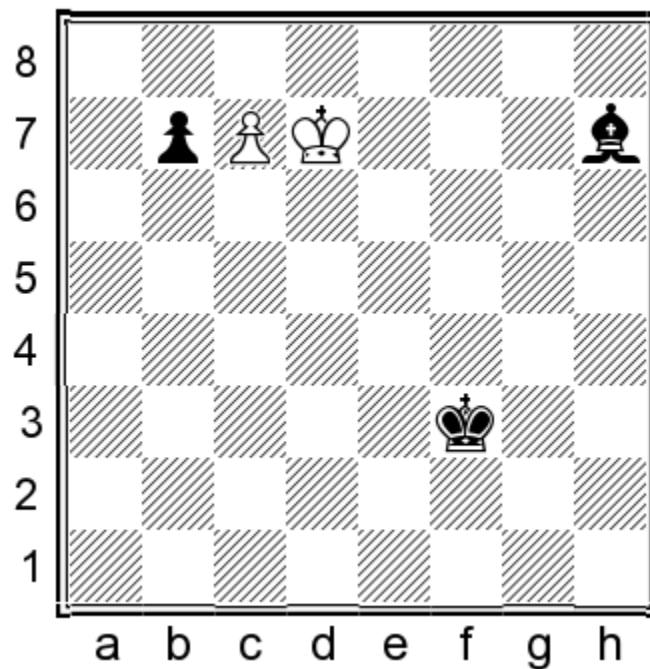Black's pieces have been driven into the corner. White now delivers the coup de grâce:

9.♔c7
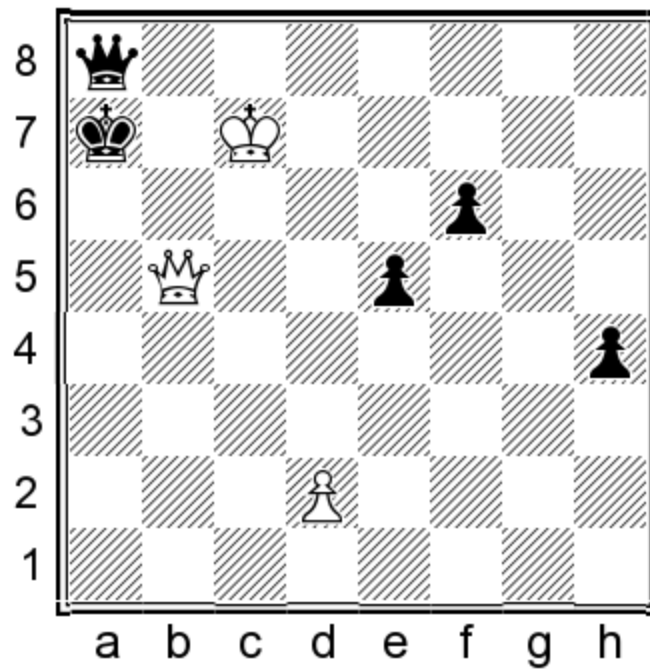
With unavoidable mate.

Study 7 - Alexander and Kirill Sarychev

White to play and draw

Alexander and Kirill Sarychev were twin brothers from Azerbaijan. Born in 1909, they started composing studies at a young age. There are twenty co-productions by them in the database. Their collaboration lasted until 1930; while Kirill started pursuing a career in society, Alexander tirelessly went on composing. The best study of the Sarychev brothers is this one from 1928, when they were 19. There are only five pieces on the board, and White seems to be lost. However, there is a hidden salvation in the position.

1.♔c8!!

This king move has become deservedly famous. White blocks his own c-pawn to force the black b-pawn forward. Insufficient was 1.c8♕ on account of 1...♗f5+ 2.♔c7 ♗xc8 and the b-pawn is protected.

1...b5
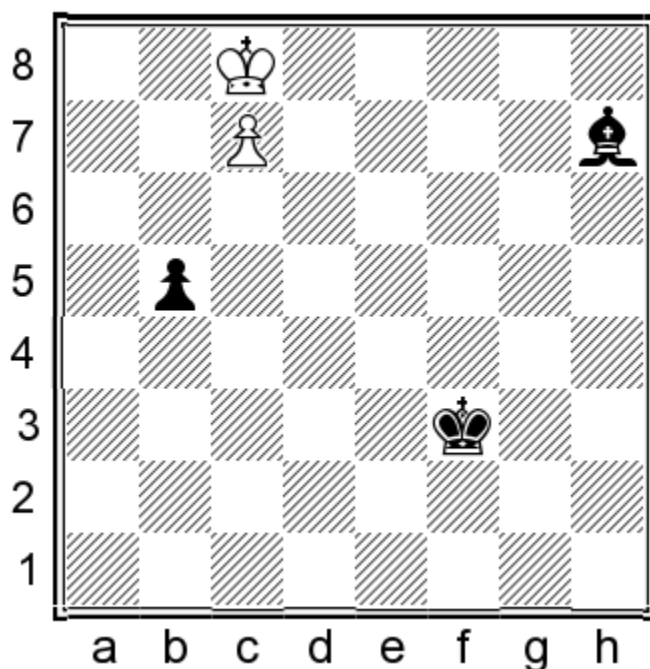
2.♔d7!

After having forced the b-pawn forward, the white king returns.

2...b4 3.♔d6

This is a kind of Réti manoeuvre, but White has to watch his step. The alternative 3.♔e6 was insufficient in view of 3...♔e4! and White's king is cut off from the queenside, while he cannot promote his pawn due to the 4...♗f5 check.

3...♗f5

Black has to lose time to prevent the promotion, handing White the decisive tempo.
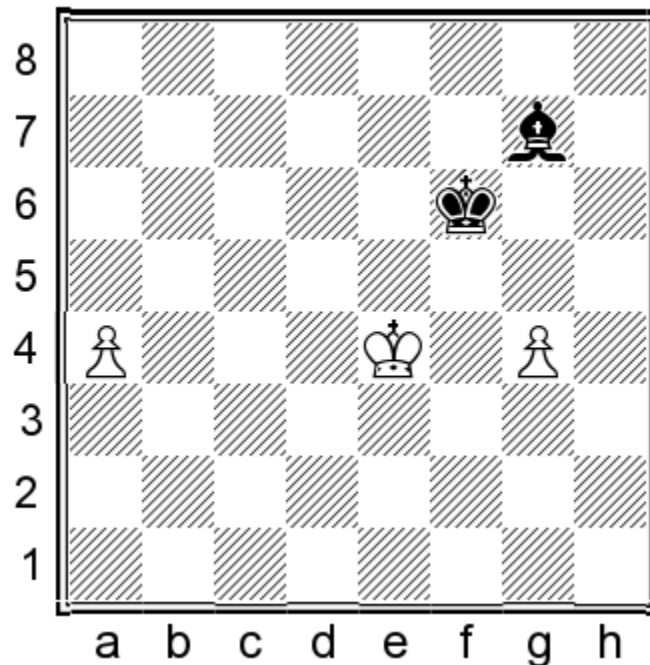
4.♔e5 ♔g4
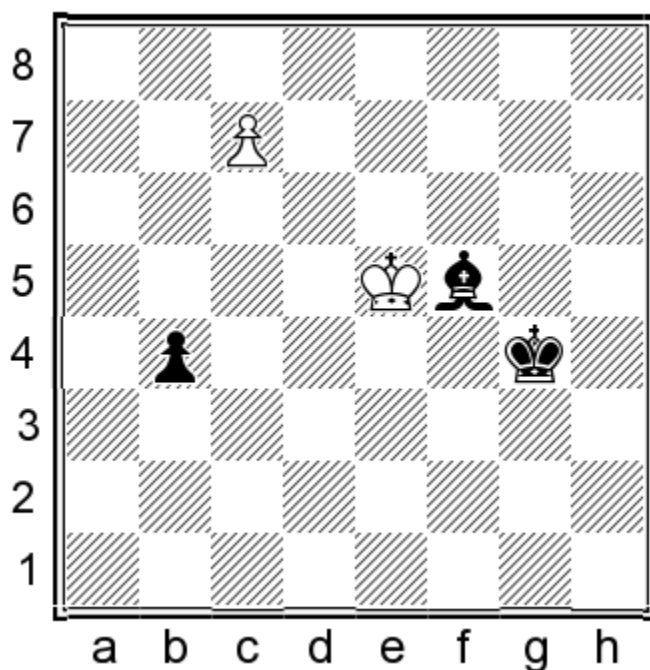
5.♔d4

And the white king is in time. The resemblance with Réti's study is striking; White saves himself with an ingenious king's march. It's a draw.

Study 8 - Henry Otten

White to play and win

Promotion is an important theme in endgame studies. The simplest but highly characteristic adaptation of the theme is this study by Henry Otten, who was born in Germany in 1855 and emigrated to the United States at a fairly young age. Otten's date of death is unclear; one source gives 1910 while another gives 1930. This is his best known study by far.

White's first move is obvious:

1.a5

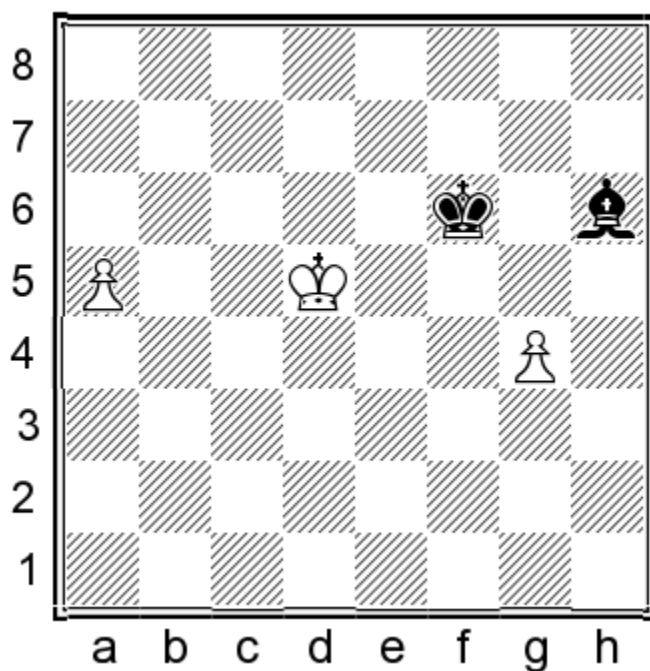The a-pawn threatens to walk to the promotion square undisturbed.

1...♗f8

The only attempt to stop the pawn - the bishop tries to reach the c5-square.

2.♔d5

With this king move, White deprives the black bishop of the square c5.

2...♗h6

A second attempt to reach the g1-a7 diagonal. However, now it becomes clear that the black king is unfortunately placed:

3.g5+!

A thematic pawn sacifice that puts Black on the wrong foot, as it were.

3...♗xg5

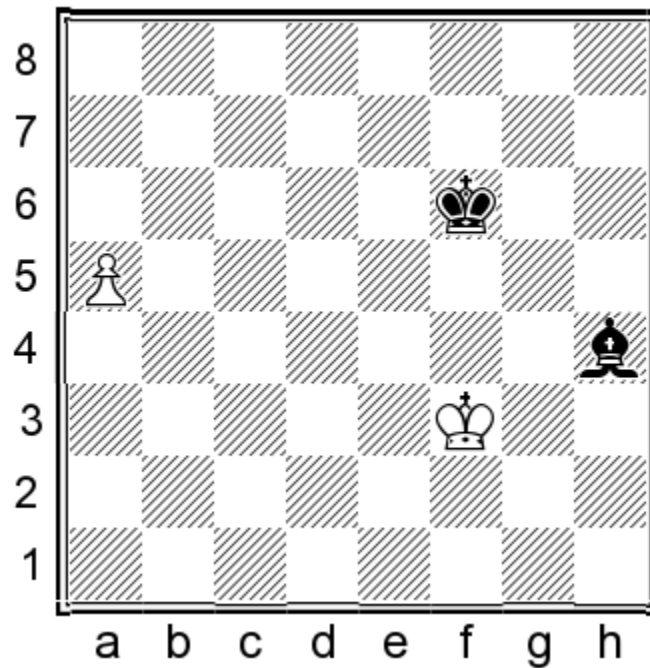Obviously, Black would lose without a fight after 3...♔xg5 4.a6.

4.♔e4

The point of the pawn sacrifice. The action range of the black bishop has been seriously limited.

4...♗h4

The final attempt to reach the g1-a7 diagonal.

5.♔f3

And so, the black bishop is outplayed by the white king. In all its simplicity, this is a convincing study that has served as a basis for further ideas by various composers.

Study 9 - Alexey Troitzky

Alexey Troitzky
Deutsche Schachzeitung 1913
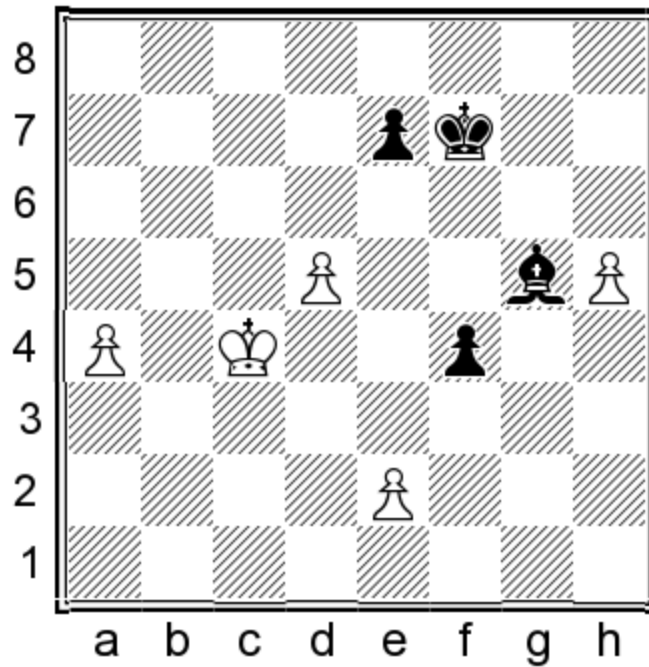
White to play and win

Alexey Troitzky (1866-1942) is generally regarded as the founder of the modern endgame study. He composed more than 1700 studies. For a long time, he was living as a forest ranger in Smolensk, where he worked on the theoretical endgame of two knights versus pawn. His findings have never been refuted. In his later years, he lived in Leningrad; he passed away during the siege. Troitzky's studies contain all the themes you can imagine. The present study is based on Otten's. The version is mine; I have added the first move for both sides.

1.a5 ♗h4

The same theme as in Otten's study; the bishop is on its way to the g1-a7 diagonal.
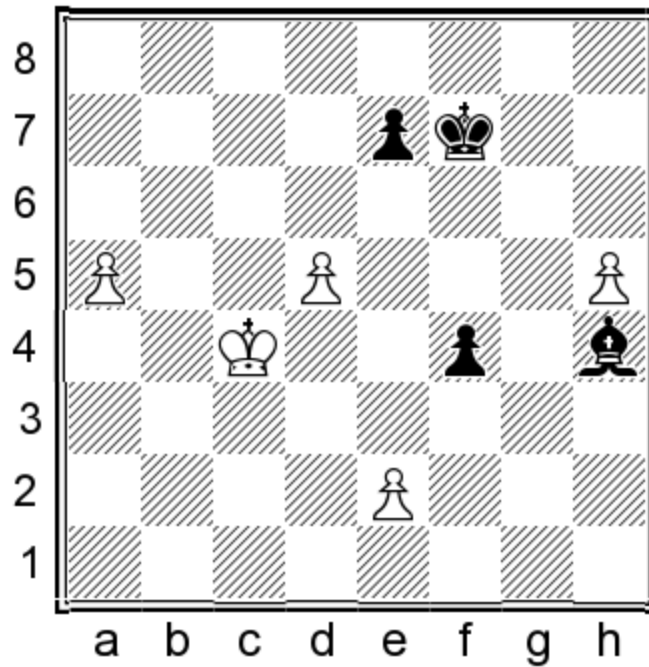
2.♔d3!

White retreats his king to prepare two consecutive pawn sacrifices.

2...♗f2 3.e4!

The first pawn sacrifice.

3...fxe3

Black has to accept the sacrifice, as otherwise White creates a passed pawn in the centre and Black's king will be helpless against them.

4.d6!

The second pawn sacrifice.

If White blocks the e-pawn immediately with 4.♔e2, Black can stop the a-pawn's promotion with 4...♗g3.

4...exd6

Forced, since after 4...e2 5.♔xe2 ♗c5 6.d7 White wins instantly.

5.♔e2

Only now that the h2-b8 diagonal has been closed does White take the time to block the e-pawn. However, Black's resources have not been exhausted yet.

5...d5 6.a6 d4

Black has created counterplay; he threatens to re-open the g1-a7 diagonal with two consecutive pawn sacrifices.

7.♔d3!
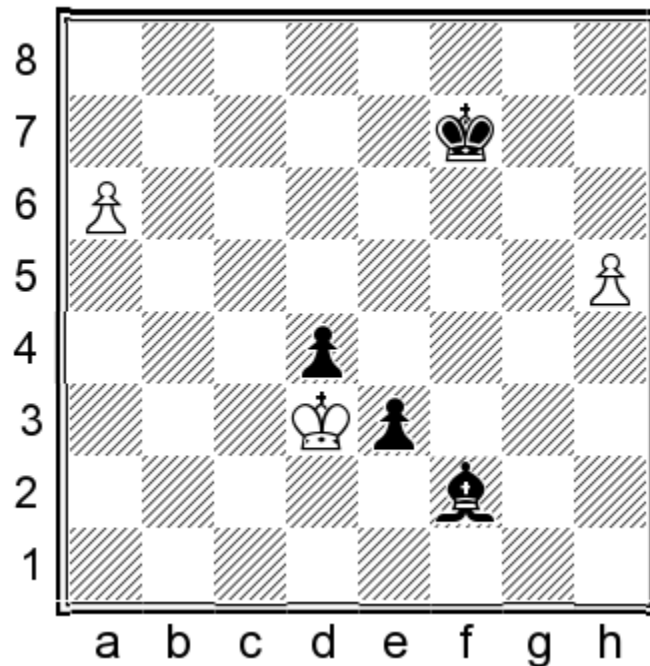
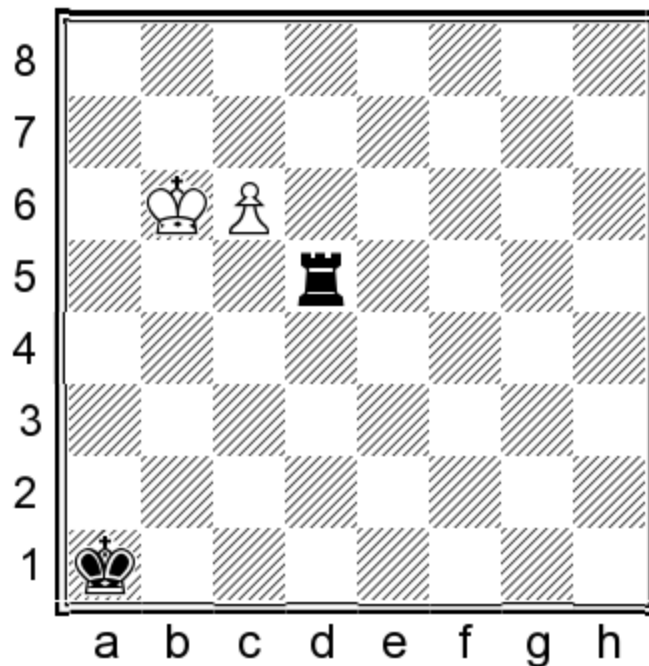Thus, White takes advantage of the fact that at this moment two black pawns are blocking the critical diagonal.

7...e2 8.♔xe2 ♗g1 9.♔d3

And the diagonal remains closed off; the a-pawn has free passage.

Study 10 - Fernando Saavedra and Georges Barbier

Fernando Saavedra and Georges Barbier
Glasgow Weekly Citizen 1895

White to play and win

The story behind this study is fascinating; it is an illustration of a fairly weak amateur chess player becoming world-famous. It started with a game between two British amateurs in 1875 which was agreed drawn in a position that was winning for White. Two decades later, Georges Barbier in his column in The Glasgow Weekly Citizen published the final position as an exercise: White to play and win. In his next column, he moved the black king from the h-file to a1, and now it was Black to play and draw. The Spanish priest Fernando Saavedra, who lived in Scotland, saw the column and discovered that White could win after all: thus, the 'Saavedra' motif was born. The study version is by Emanuel Lasker, who added White's first move.

1.c7

Of course, if the black king were somewhere on the kingside, White would win easily now. As it is, however, Black has a gorgeous resource.

1...♖d6+ 2.♔b5

The white king has to stay away from the seventh rank as then the black rook would pin the c-pawn.
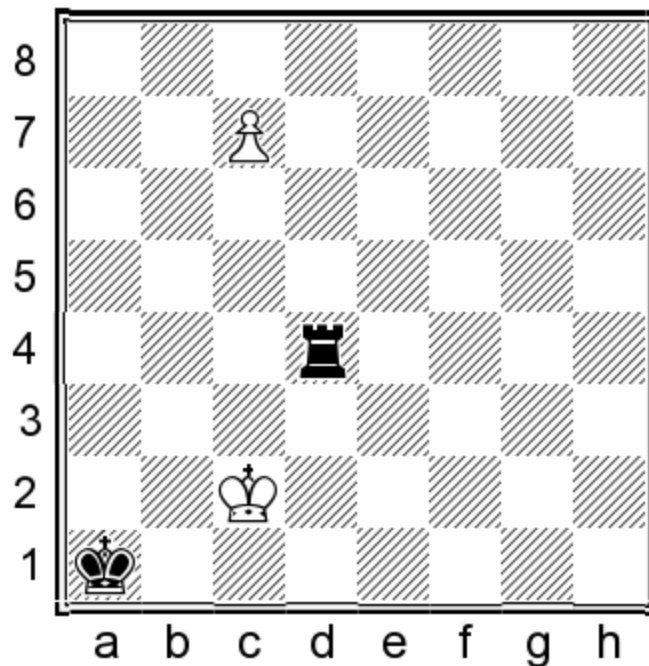
2...♖d5+
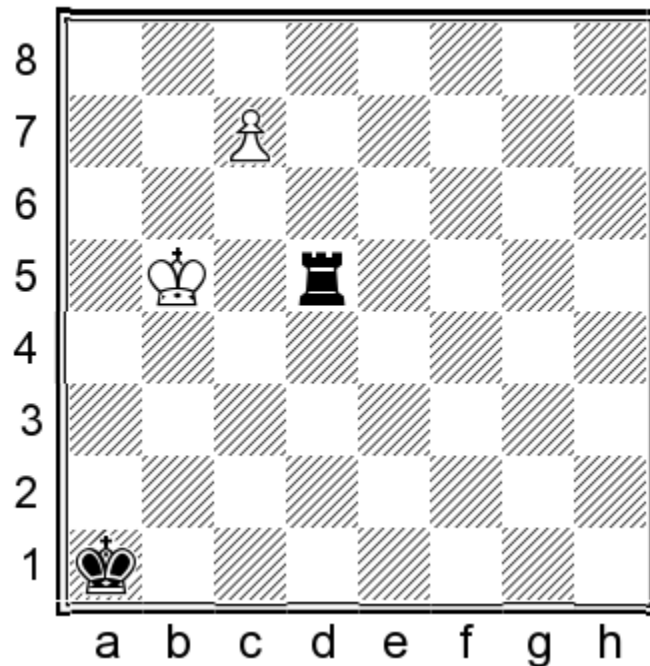
3.♔b4

The white king walks down to c2 along the b-file. If it moves to the c-file too quickly, the black rook can move to d1 and reach c1 with check.

3...♖d4+ 4.♔b3 ♖d3+ 5.♔c2

It seems as if Black has run out of resources now. However, there is yet another finesse in the position thanks to the position of the black king:

5...♖d4!

35

Barbier's discovery; Black plays for stalemate.

6.c8♖!!

And this is Saavedra's discovery, which guarantees an unexpected win. White prevents the stalemate and threatens to give mate. Obviously, Black would have his way after 6.c8♕ ♖c4+.
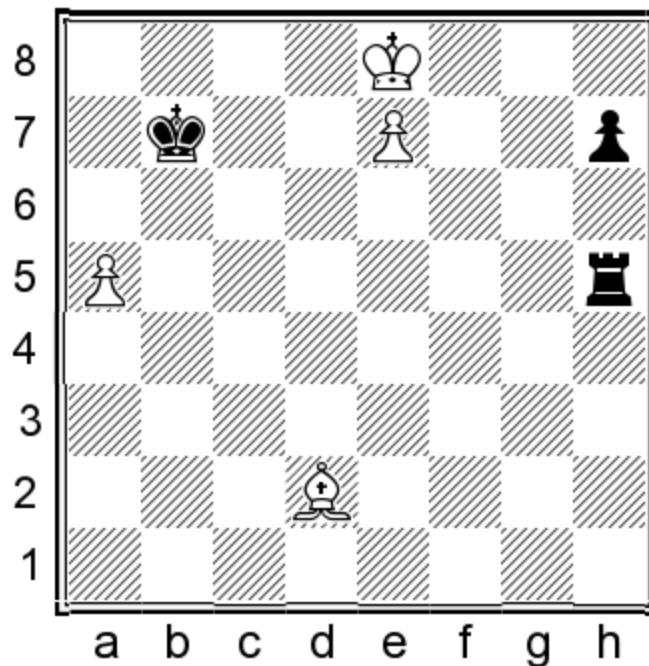
6...♖a4

The only way to prevent mate.

7.♔b3

And now mate is threatened from the other side. White wins thanks to the attack on the black rook.

This is the most famous endgame study in history.

Study 11 - Josef Vancura

Josef Vancura
Deutsche Schachzeitung 1916

White to play and win

The Saavedra is of course a highly exceptional position; in most cases, a rook has no trouble keeping a pawn on the seventh rank under control. But definitely not always! In this second study by Vancura, we see how White manages to dominate a defending rook with a bishop and thus enable promotion.

1.a6+!

White sacrifices a pawn to close off the a-file for the black rook and to create space on the queenside for his king. The immediate 1.♗f4 was insufficient in view of 1...♖xa5 with a draw.

1...♔xa6 2.♗f4

Depriving the black rook of the e5-square.

2...♖h1

The best chance; the rook has the greatest range from the first rank.

3.♗g3!
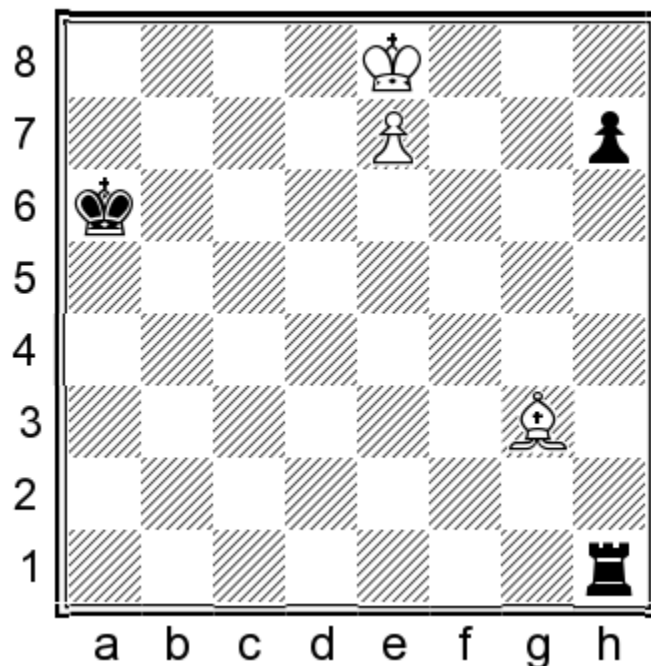
And now the rook is deprived of the e1-square. It's a curious situation; even though White does not threaten to promote immediately, Black has no way of giving his rook for the pawn.

3...♖f1

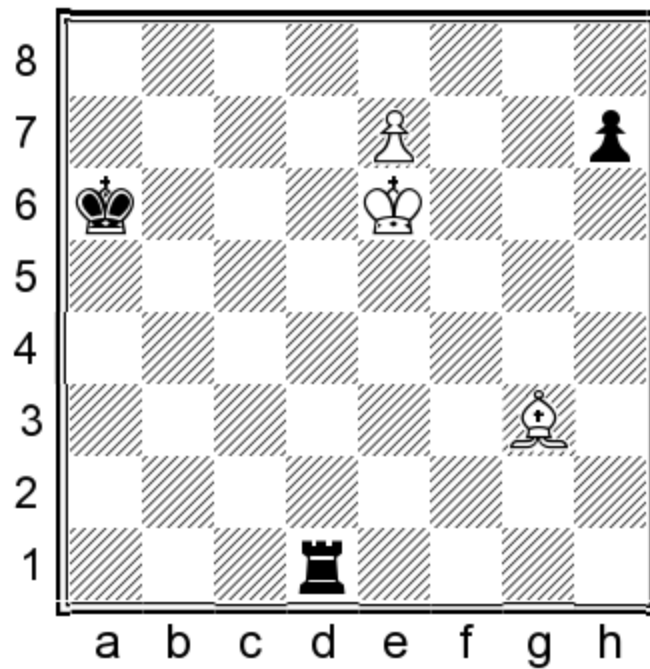Again, the best chance. Black threatens to play his rook to f3 or f6.

4.♔d8

Definitely not 4.♔d7? in view of 4...♖f7 and the e-pawn is pinned.

4...♖d1+ 5.♔c7

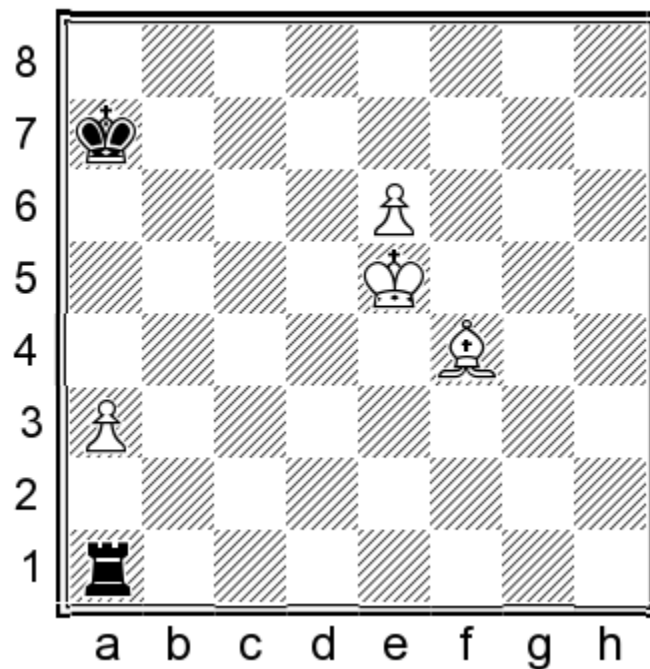White needs space on the queenside.

5...♖c1+ 6.♔d7 ♖d1+ 7.♔e6

And wins. Black's meaningful checks are exhausted.

Study 12 - Herman Mattison

Herman Mattison
Rigasche Rundschau 1914

White to play and win

In the previous study, the black rook was dominated by the bishop, enabling a far-advanced passed pawn to promote. In our second study by Mattison, we see a different motif. Actually, something incredible is happening here.

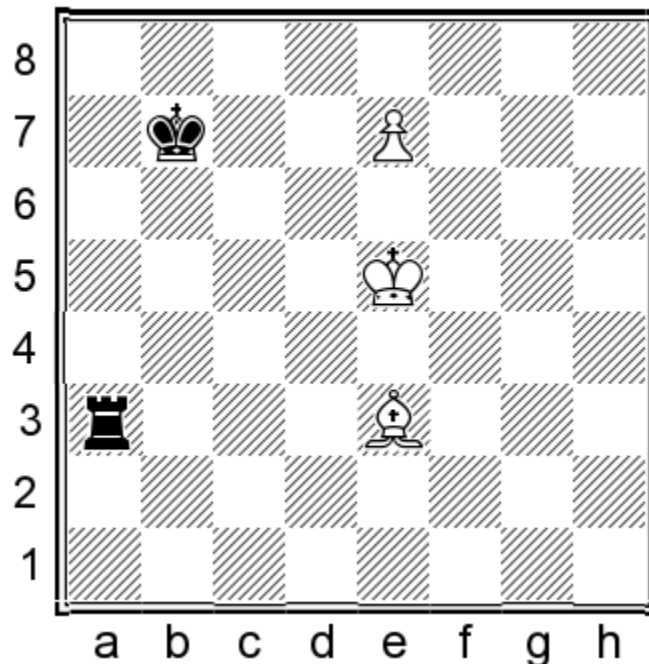Superficially, Black does not seem to have any problems as White cannot push his pawn right away. So the first move is forced:

1.♗e3+ ♚b7

The best square for the king.

2.e7

Now is the time to push the pawn. However, Black has an obvious resource:

2...♜xa3

There seems to be no problem for Black; he attacks the bishop and is ready to move his rook to the back rank. However, there follows an earth-shattering surprise:

3.♗a7!!

A fantastic move. White cuts off the rook's route to the back rank. The idea of this bishop sacrifice has been reused various times by different endgame composers.
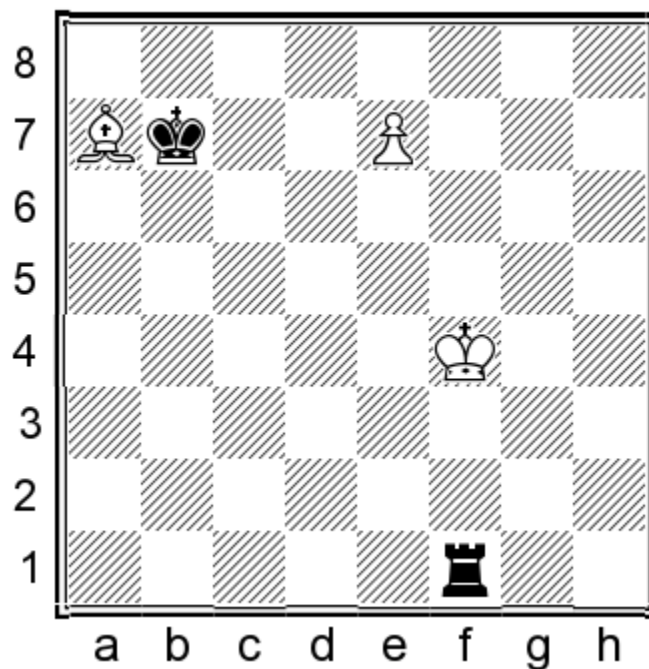
3...♖a1

Black could not take the bishop; after 3...♔xa7 4.♔d4 ♖a4+ 5.♔d5 ♖a5+ 6.♔d6 ♖a6+ 7.♔d7 there are no checks left. Therefore, the text move is his only chance; the rook has to have as much room as possible.

4.♔f4!

An accurate king move, preparing...

4...♖f1+

5.♗f2!

... the second bishop sacrifice. The black rook is forced onto the second rank.

5...♖xf2+ 6.♔e3 ♖f1 7.♔e2

And again it ends with Saavedra's king move.

Study 13 - Sergey Kaminer

Sergey Kaminer
Shakhmaty 1925
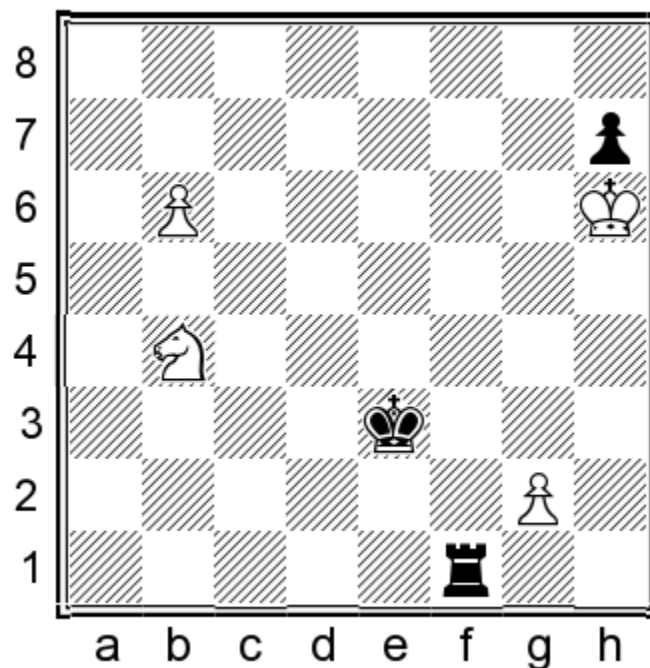
White to play and win

The struggle of knight and pawn on the seventh rank versus rook has other characteristics. This is shown in this study by Sergey Kaminer (1908-1938), who was a good friend of Botvinnik in the latter's younger years. In 1937, Kaminer gave his book with notes to Botvinnik; he feared falling prey to the Great Purge. And indeed, Kaminer was murdered one year later, but his 99 studies were

preserved for prosperity. Kaminer composed the present study when he was sixteen.

The first move is obvious.

1.b7 ♖f8 2.♘c6

It seems incredible that White can win from this position, since for the time being, the black rook has enough room on the back rank.

2...♔f4
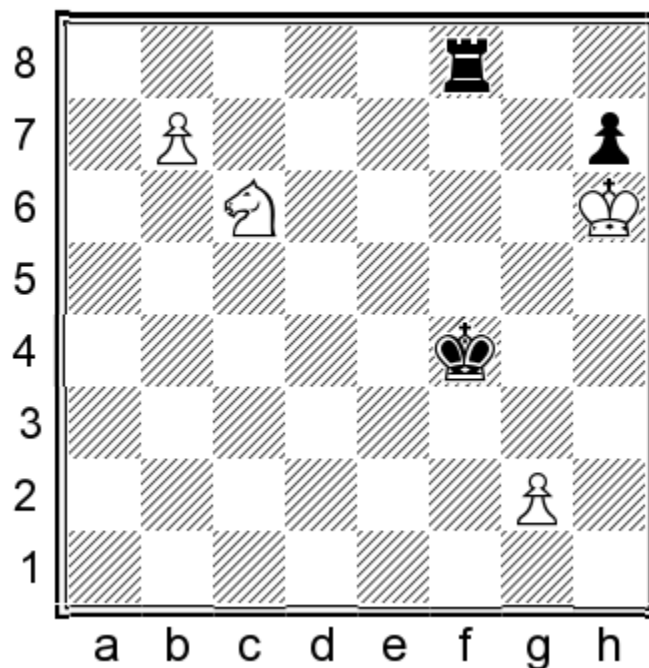
3.g4!

A fantastic move. White lures the black king to g4 to make the concluding combination possible. The immediate 3.♔g7 was insufficient for the win, since White doesn't get any further after 3...♖e8 4.♔f7 ♖h8 5.♔e7 ♖g8! 6.♘d8 ♖g7+ 7.♘f7 ♖g8.

3...♔xg4

If Black doesn't take the pawn, White wins easily.

On 3...♖e8, 4.g5 is simplest.

4.♔g7

Forces the rook to e8.

4...♖e8 5.♔f7 ♖h8
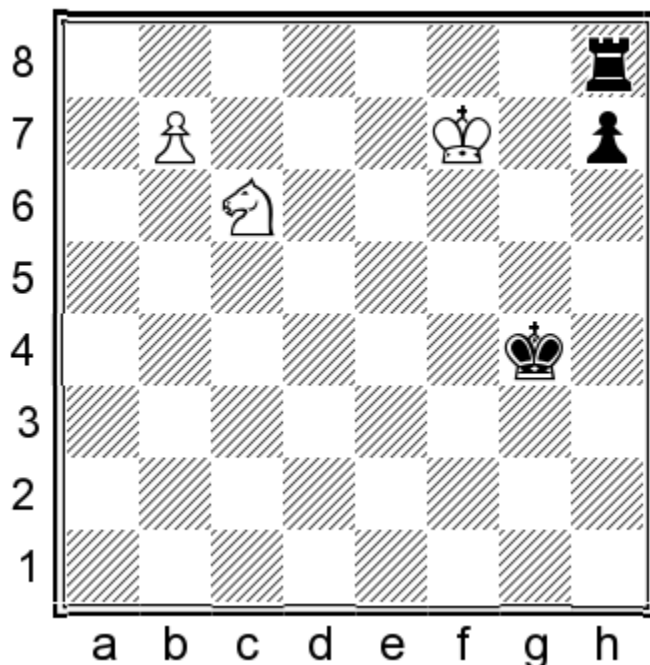
6.♔e7!

Preparing 7.♘d8. Just like in Study No. 11, the scope of Black's rook is limited by the presence of his own h-pawn.

6...♖g8

Neither did 6...h5 help, since after 7.♘d8 ♖h7+ 8.♘f7 the rook can't return to the back rank.
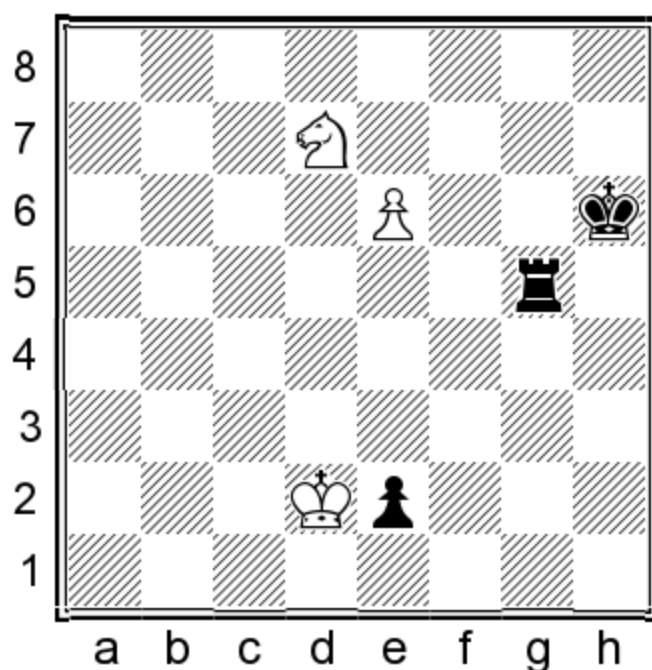
7.♘d8 ♖g7+ 8.♘f7 ♖g8
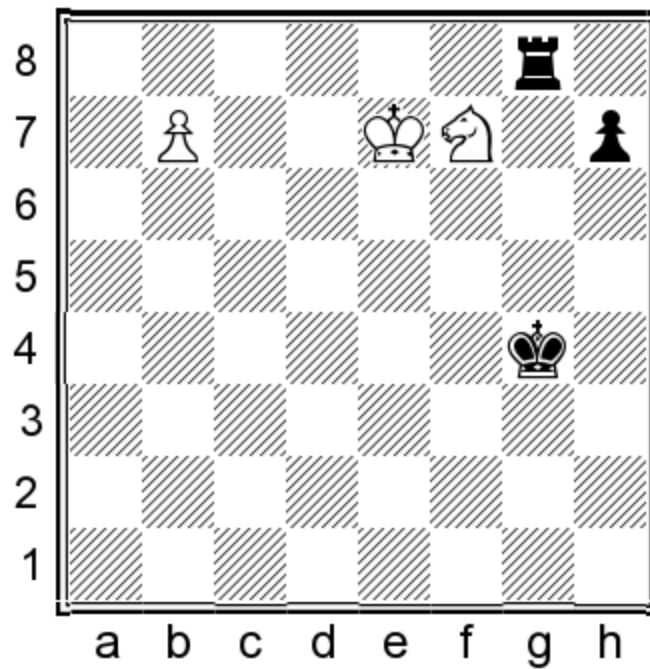
And now follows the point of the third move:

9.♘h6+ 1-0

Study 14 - Mark Liburkin

Mark Liburkin
Shakhmaty v SSSR 1939

White to play and win

The Russian endgame composer Mark Liburkin (1910-1953) is regarded as a genius by some connoisseurs. His studies are characterized by fantastical elements, twists and turns that are not easy to conceive. The present study is one of his simpler compositions. In the original version, Liburkin had also built in an attractive bishop sacrifice, but that turned out to be incorrect. This simplified version is by the Dutch endgame study composer Jan van Reek. White's first move is obvious:

1.e7

It seems as if Black can't do anything now. In the previous study, his rook was on the back rank, but here the white pawn's promotion seems unavoidable. However, Black has a clever defence:
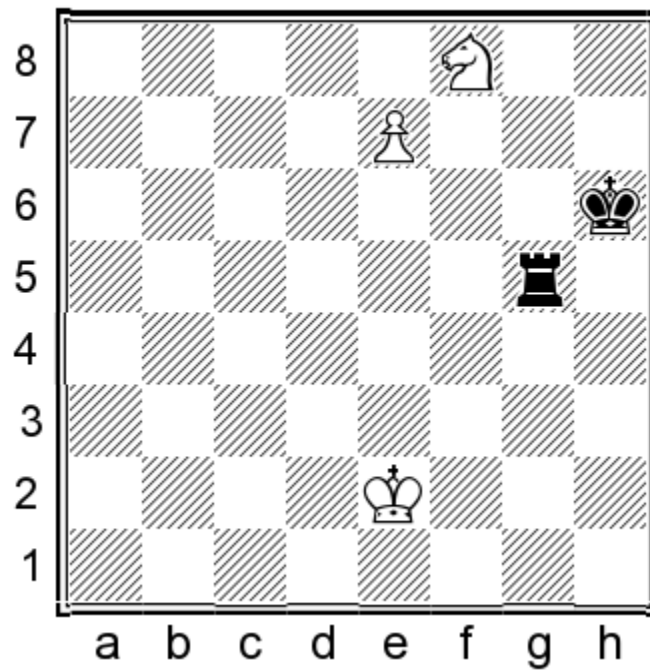
1...♖g1!
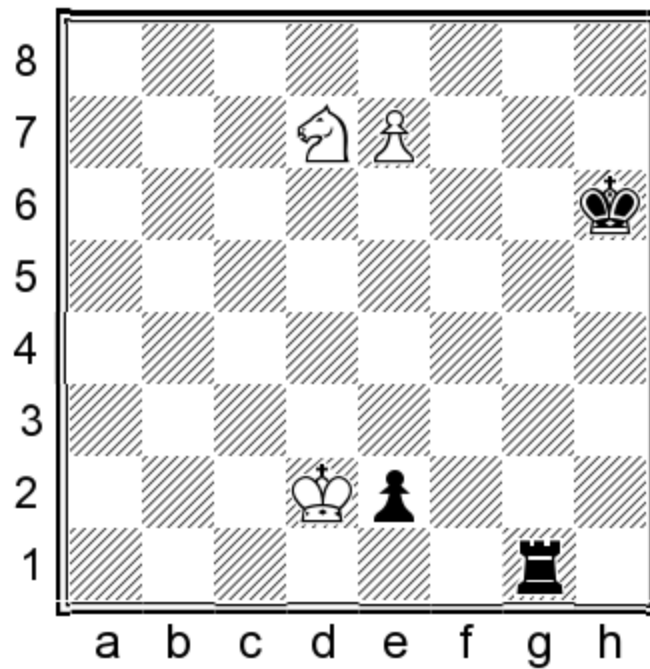
Forcing the white king to move to the e-file.

2.♔xe2 ♖g8 3.♘f8 ♖g5!

Black's plan becomes clear: he is playing for stalemate.

In essence, this defence resembles Barbier's in the Saavedra study; only here White can't promote to a rook. However, he has another beautiful finesse:

4.♘g6!!

Certainly not 4.e8♕ in view of 4...♖e5+ 5.♕xe5 with stalemate. With this elegant knight move, White cuts off the rook's path to the back rank while at the same time controlling the e5-square. In that sense, there is a similarity with Study No. 12. In that study by Mattison, the domination of the black rook was realized by a bishop sacrifice – in this one by Liburkin, by a knight sacrifice.

Study 15 - Paul Heuäcker

Paul Heuäcker
Neue Freie Presse 1930
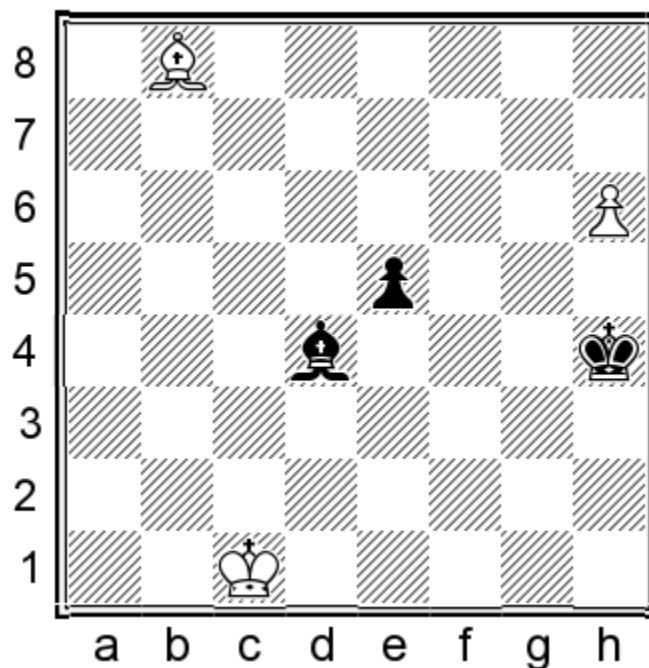
White to play and win

One of the most famous promotion combinations has been adapted into a study by the German endgame study composer Paul Heuäcker (1899-1969). However, the original idea stemmed from the Frenchman Anatole Mouterde seventeen years earlier.

In the starting position, Black only has to push the e-pawn to stop the white h-pawn, but White manages to prevent that:

1.♗a7!

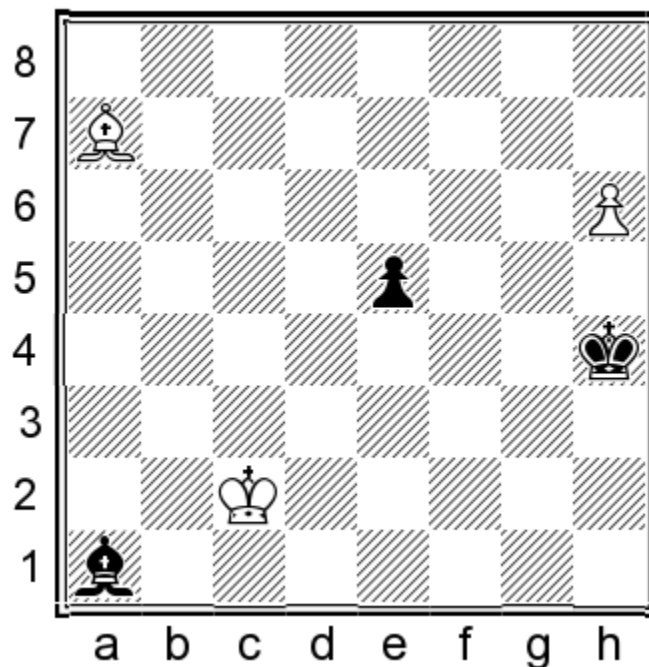Forcing Black to play his bishop to another square on the long diagonal.

1...♗a1

Relatively the best square for the bishop.

2.♔b1

Again, the black bishop is driven away. It has only one square:

2...♗c3 3.♔c2 ♗a1

White has improved the position of his king, but how to continue now?

4.♗d4!!

A wonderful move. White sacrifices his bishop to force the black bishop to move to an unfavourable square, after which he manages to close the long diagonal definitively.
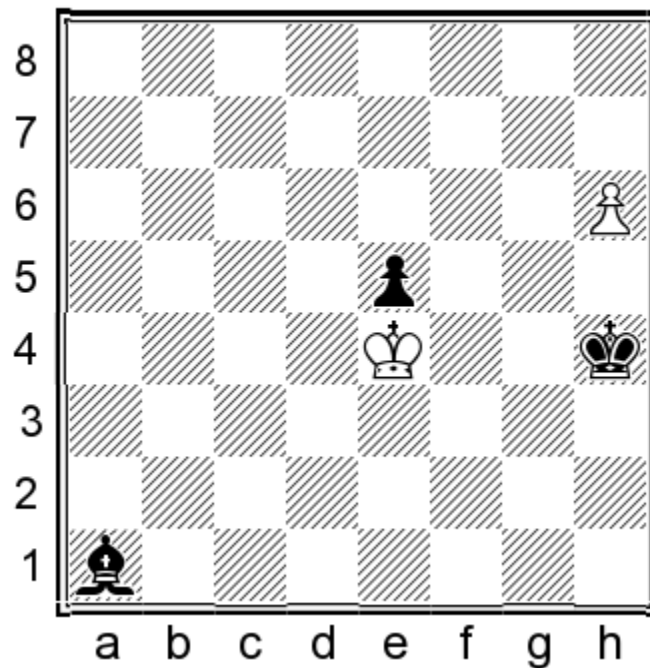
4...♝xd4

Or 4...exd4 5.♔d3 and White wins.

5.♔d3

The point of the bishop sacrifice. White again prevents the liberating push of the e-pawn.
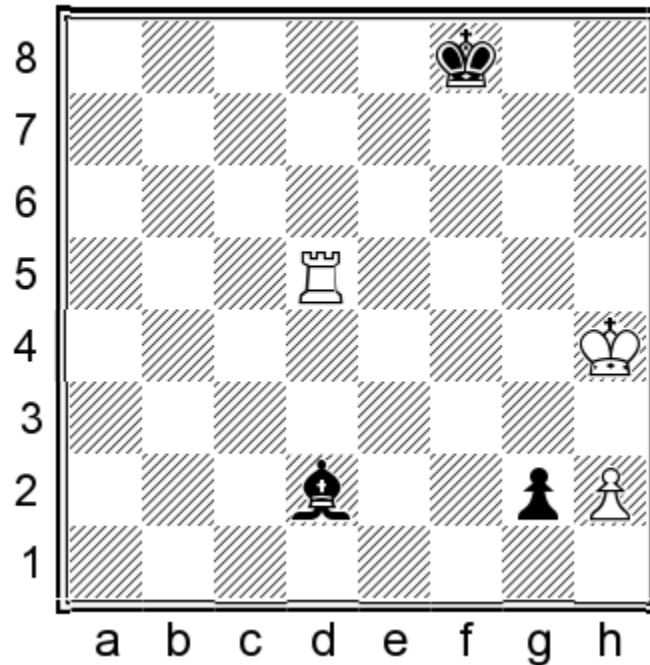
5...♝a1 6.♔e4

And the blockade is completed; White's pawn promotes and he wins.

In essence, this is the same blockade as in Study No. 9, but here everything revolved around the long diagonal. Heuäcker's study has inspired many study composers to use similar ideas, but this miniature remains unparalleled.

Study 16 - Alexey Troitzky

Alexey Troitzky
Novoye Vremya 1895

White to play and draw

This is an older study by Troitzky that was published in the French magazine La Stratégie. Here the theme is: how can White prevent the promotion of the black pawn?

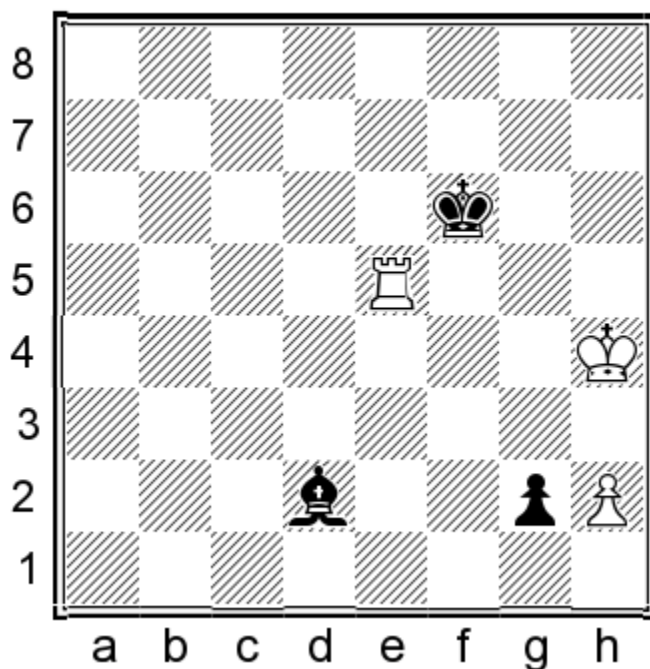White's defending task seems to be impossible at first sight. However, there are hidden finesses.

1.♖f5+

White has to give check. After 1.♖xd2 g1♕ he has no chance of holding.

1...♔e7

If the black king moves to the g-file, White's task is easier. After 1...♔g7 2.♔h3 g1♕ 3.♖g5+, stalemate is inevitable. There is also

another path to the draw: 2.♖f3 ♗e1+ 3.♔h3 g1♕ 4.♖f7+ and White has a 'kamikaze rook'.

2.♖e5+ ♔f6

It seems as if White hasn't accomplished anything with his checks, but he has a miraculous escape:

3.♖e1!

Sacrifices are almost always spectacular with so little material. Black has no choice; he has to take the rook.

3...♗xe1+ 4.♔h3

The point of the previous move. To prevent stalemate, Black will have to promote to a minor piece. Since two bishops of the same colour can never win, Black has to promote to a knight.

4...g1♘+ 5.♔g2

And now it turns out that the black pieces are in each other's way: White wins either the knight or the bishop.
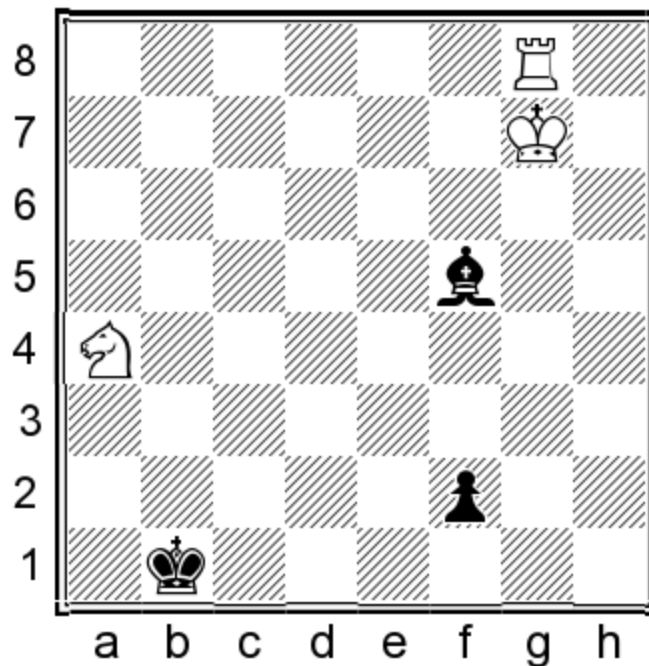
5...♘e2 6.♔f1 ½-½
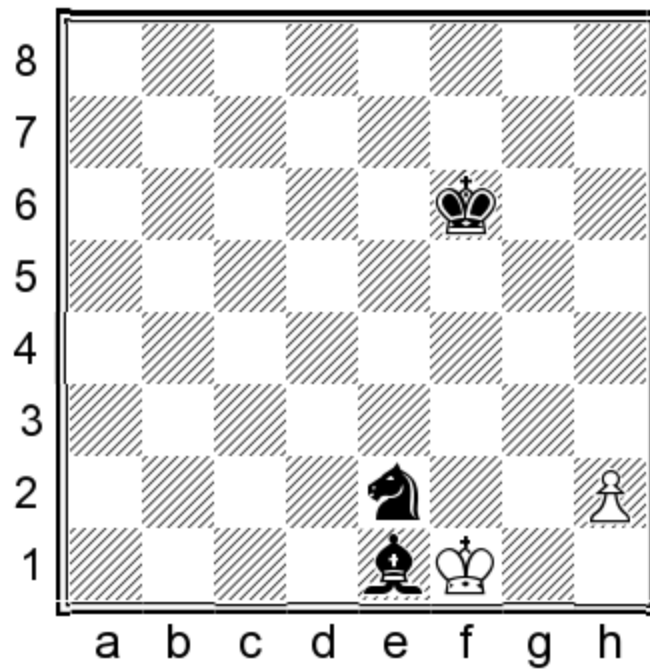
The stalemate theme from this study has been adapted many times since, but Troitzky's original version stands as the most convincing one.

Study 17 - Leonid Kubbel

Leonid Kubbel
Rigaer Tageblatt 1907

White to play and draw

Leonid Kubbel (1892-1942) has been my favourite composer for a long time. His studies are gracious, economical and often brilliant. Like Troitzky, he perished during the siege in Leningrad, but he was much younger. Kubbel was also a problem composer, and in his studies you can see themes from problem chess. But not here; this study revolves around stalemate, although that is not visible in the starting position.

First of all, White has to try to stop the f-pawn.

1.♘c3+

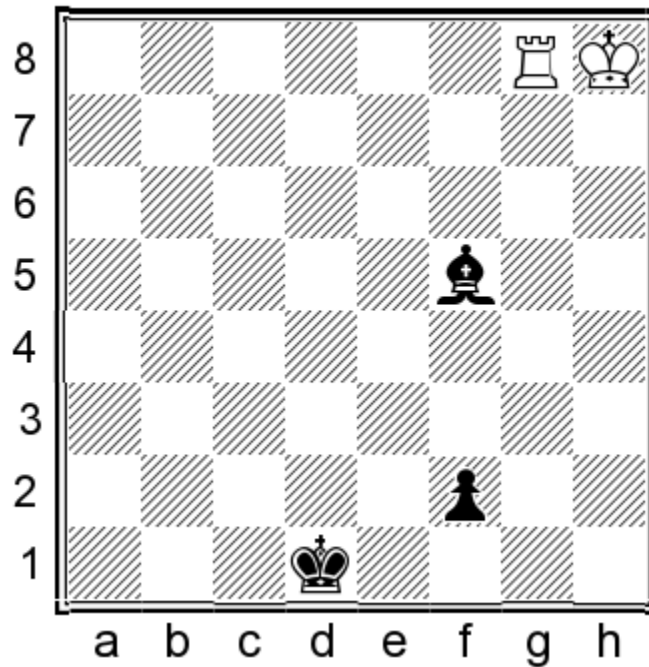A necessary starting move; White has to involve his knight in the play.

1...♔c2

The only good square for the king. Now the spectacle begins.

2.♘d1!

White sacrifices his knight to lure the enemy king to the back rank. 2.♘d5 was insufficient since White runs out of resources after 2...♔d2.

2...♔xd1 3.♔h8!

The idea of the knight sacrifice starts to become clear. White builds up a 'stalemating net' in the corner.

3...♔c1

Black is not willing to resign to his fate. After 3...f1♕ 4.♖g1, stalemate would be unavoidable.
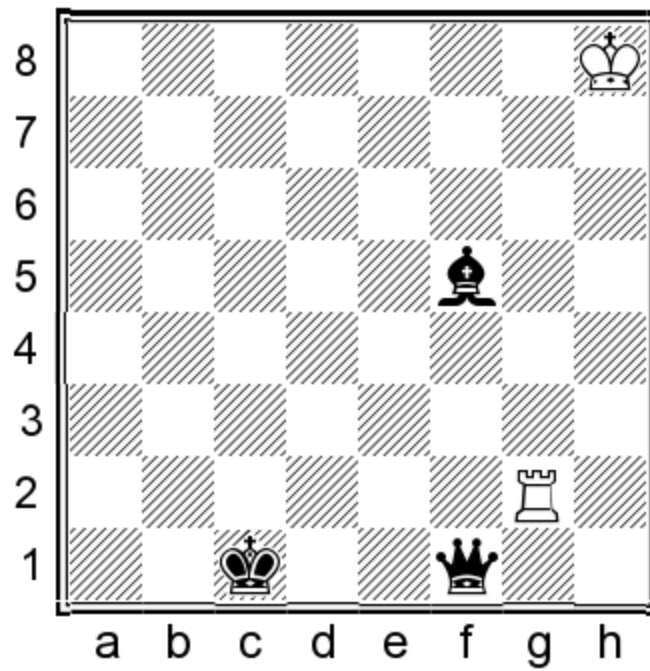
4.♖g2!

The only way to force Black to promote.

Insufficient was 4.♖g3 in view of 4...♗e4; Black also wins after 4.♖g7 ♗e6.

Of course, the immediate 4.♖g1+ wasn't good either, as Black would then take the rook and promote to a light piece.
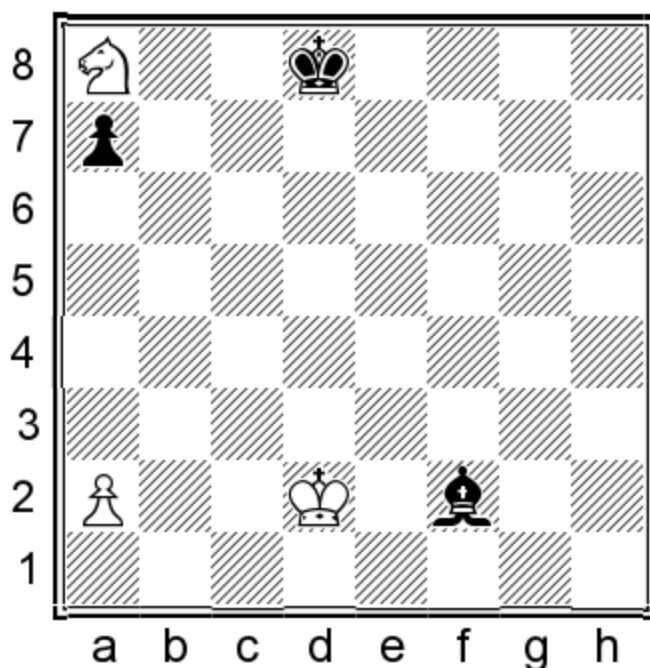
4...f1♕

There is nothing better.

5.♖g1! ♕xg1

Stalemate.

Study 18 - Hermann Mattison

Herman Mattison
Latvijas Sacha Vestnesis 1924

White to play and draw

You don't always have to despair if your knight is standing in a desolate corner threatening to be lost. This is illustrated in our third study by Mattison, in a version by the Ukrainian endgame study composer Tigran Gorgiev.

White has to proceed extremely carefully to save himself.

1.a4

Only thus! If White plays 1.♔e2 first, he will land in a lost pawn ending: 1...♗g1 2.a4 ♔c8 3.a5 ♔b7 4.♘b6 ♗xb6 5.axb6 axb6 6.♔d3 and now there follows 6...♔a6! 7.♔c4 ♔a5 and Black gets the opposition.

1...a5

The best chance. With the white king on d2, the pawn ending is a draw. After 1...♔c8 2.a5 ♔b7 3.♘b6 ♗xb6 4.axb6 axb6, 5.♔c3 is

the simplest path to the draw. But other king moves also suffice, since White then has the distant opposition.
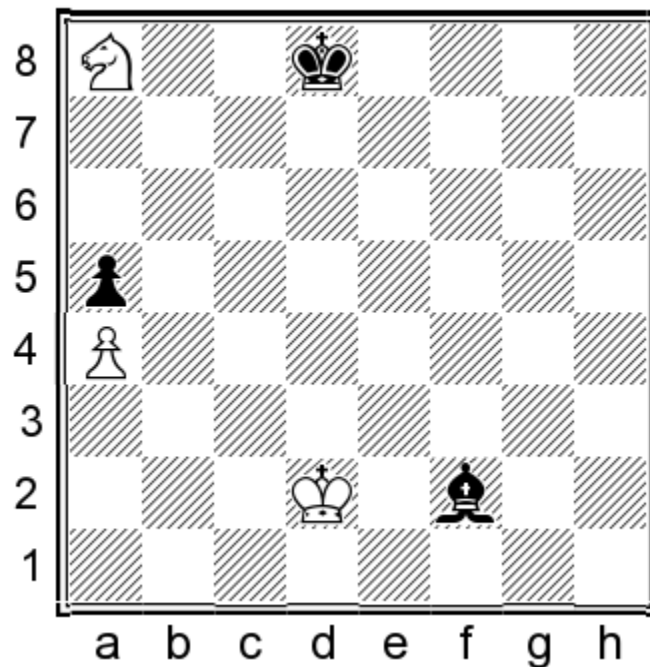
2.♔e2!

An important intermediate move. If the king walks up immediately with 2.♔d3?, Black wins with 2...♔d7 3.♔c4 ♔c6 4.♘c7 ♔xc7 5.♔b5 and now he can protect the a-pawn with 5...♗e1.

2...♗g1

Black has to move his bishop to a worse square.

3.♔d3

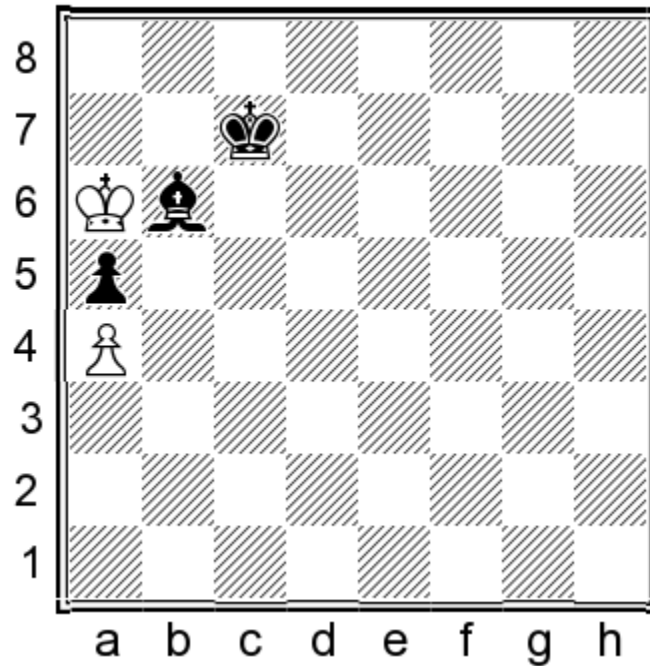Now is the time to walk up with the king.

3...♔d7 4.♔c4 ♔c6

But what now?

5.♘c7!

The saving move. By sacrificing the knight, White gets the b5-square for his king.

5...♔xc7 6.♔b5 ♗b6

58

The only defence.

7.♔a6!

An interesting moment: we have a case of reciprocal zugzwang.
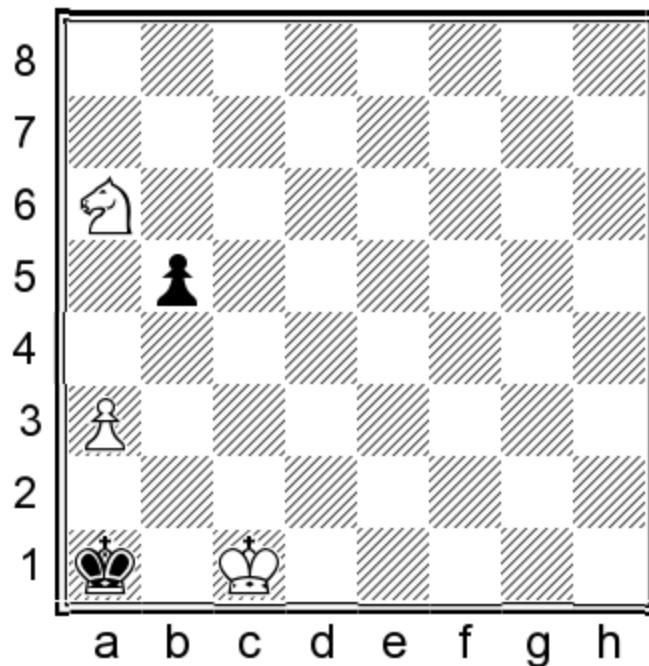
7...♚c6

Stalemate.

Study 19 - Vincente Carvajal

Vincente Carvajal
Havana Journal 1889

White to play and win

The study presented here is by the Spaniard Vincente Martinez Carvajal (1840-1915), about whom little is known. Apart from a slightly different version of this same composition, this is his only study in the database. Later, other versions have appeared. For example, I have seen a version with the knight on d5 and the white pawn on a2. This amounts to the same thing: White has to start with a pawn sacrifice.

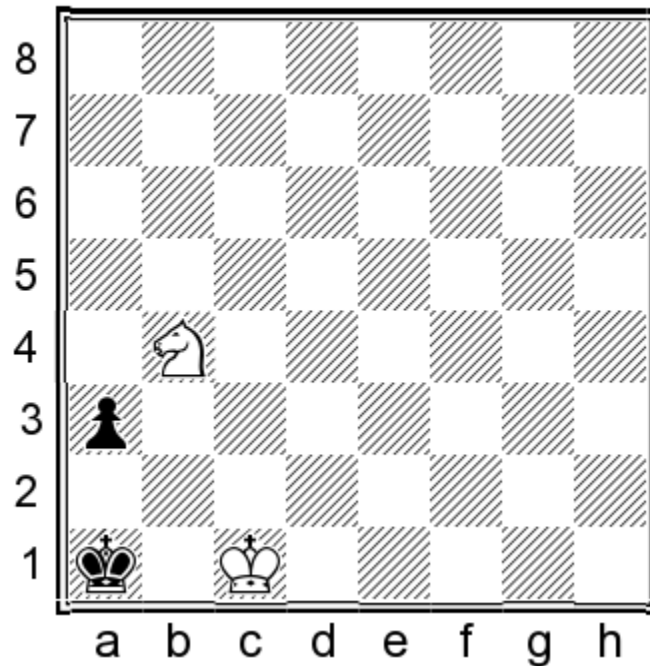I'm giving the first study here, which has mate as its theme.

1.a4!

At first sight, sacrificing White's last pawn does not look logical. The problem is, however, that after 1.♘c7 ♚a2 2.♘xb5 ♚b3 White cannot win. The black king is too active, and 3...♚a4 is the next move.

1...bxa4 2.♘b4

The first point of the pawn sacrifice; the black king is imprisoned in the corner.

2...a3

An interesting situation.

If it were Black's move, White would be able to deliver mate immediately. Therefore, White has to manoeuvre in such a way that he keeps the black king in the corner and loses a tempo in one way or another. With a sole knight, this cannot be achieved; it takes help from the white king. The teamwork of king + knight goes as follows:
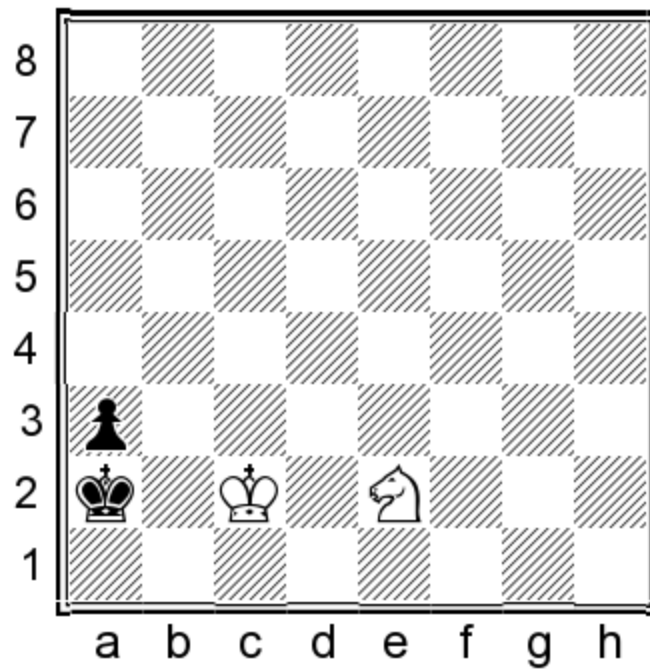
3.♘c2+ ♚a2 4.♘d4!
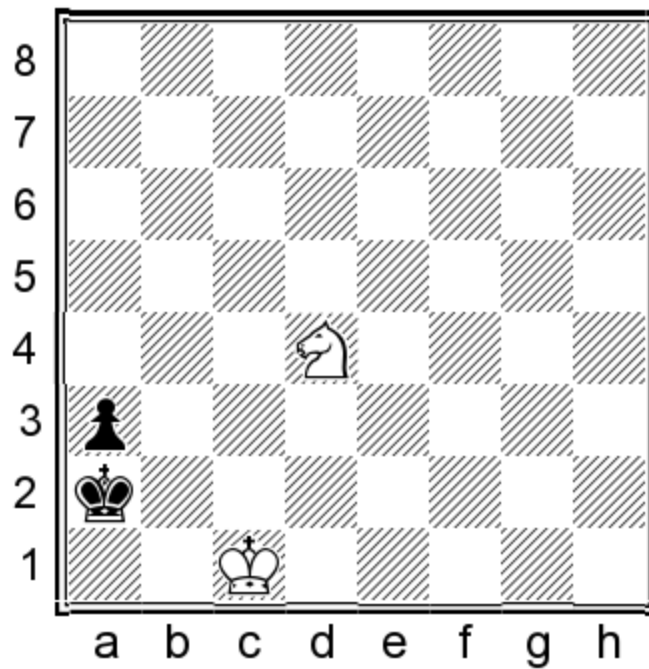
Controlling the b3-square and forcing the black king back into the corner.

4...♔a1 5.♔c2

The king move serves a special purpose: the c1-square is vacated for the knight.
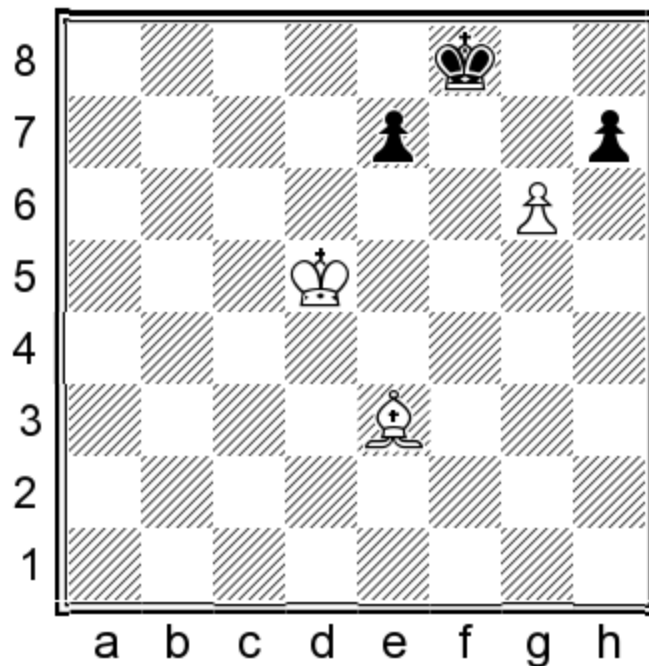
5...♔a2 6.♘e2!

On the way to c1.

6...♔a1 7.♘c1 a2 8.♘b3#

The masterpiece is completed.

Study 20 - Alexey Troitzky

Alexey Troitzky
Novoye Vremya 1895

White to play and win

This is probably Troitzky's most famous study. As with the Saavedra, with limited material a masterpiece is created that is harmonious and rich in finesses.

First of all, White will have to secure the safety of his pawn. Therefore, the first moves are clear:

1.♗h6+ ♔g8 2.g7

White has saved his pawn. Still, the win is not guaranteed. For example, the position would be a draw if Black didn't have his e-pawn. Then the white king could not take over the defence of the g-pawn on account of stalemate.

2...♔f7

The alternative 2...e6+ would be answered with 3.♔d6!. If Black now pushes his e-pawn further, White brings his king to f6 and then removes the bishop to prevent stalemate. And after 3...♔f7 4.♔e5, a
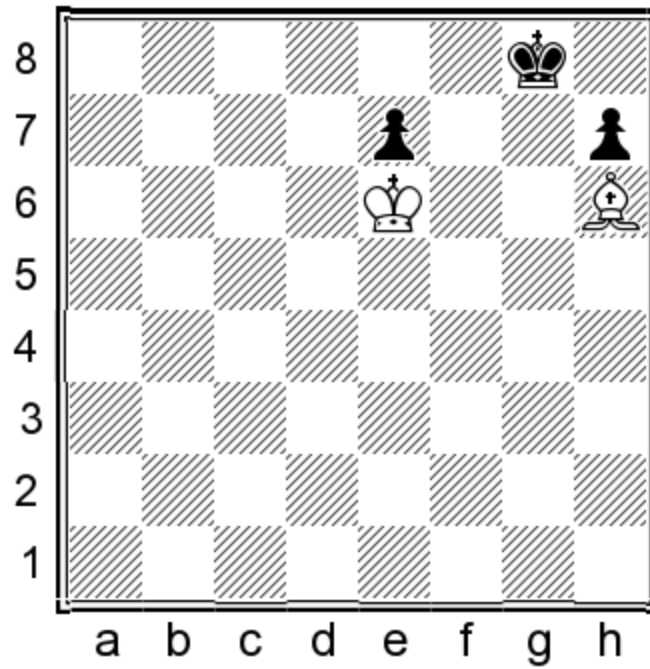
situation of reciprocal zugzwang arises. Black has to withdraw his king and hand the f6-square over to the white king. Black then loses again due to the presence of his e-pawn.
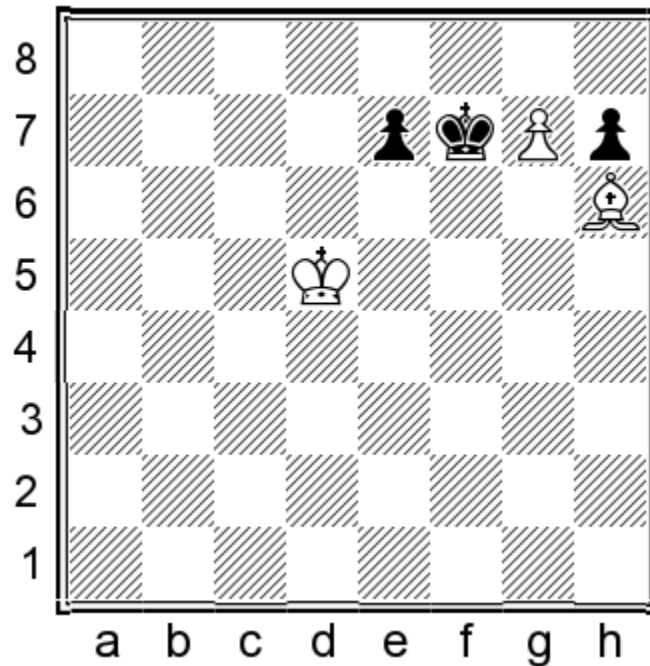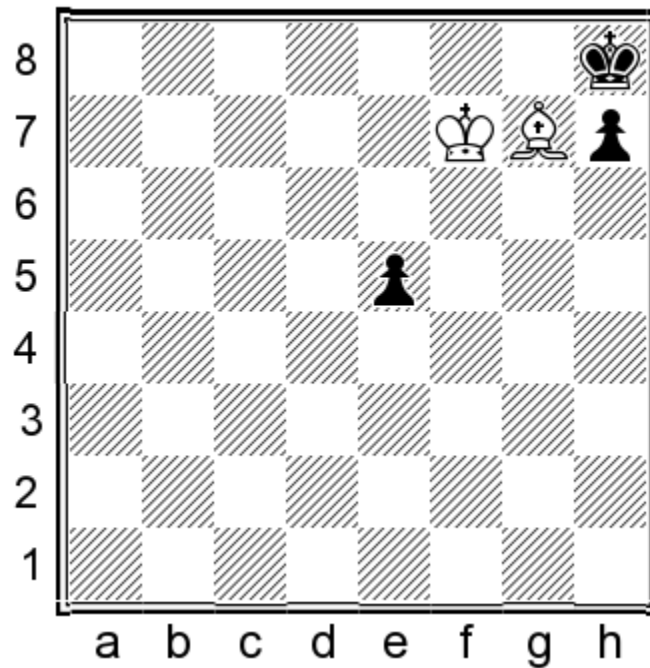

3.g8♕+!

Definitely not 3.♔e5? in view of 3...e6 and White is in zugzwang. He has to move his king, after which Black starts running with his e-pawn. With the king on f7, this guarantees the draw.

3...♔xg8 4.♔e6

An unbelievable situation. White has no pawn left, but the blocked black pawns guarantee him a mating attack.

4...♔h8 5.♔f7 e5 6.♗g7#

Various other studies have been created on the basis of this masterpiece by Troitzky, but the original is still the best.
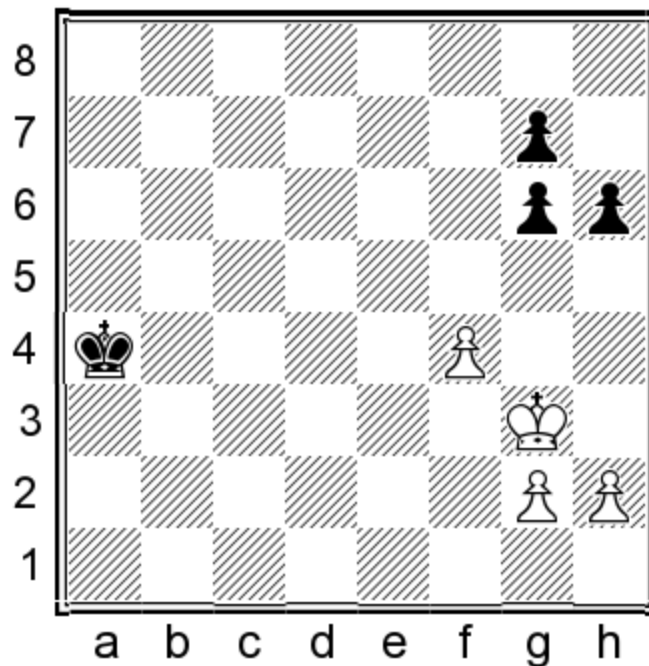
Chapter 2 Classical studies

Study 21 - Herman Mattison

Herman Mattison
Shakhmatny Listok 1929

White to play and win

Here is a second pawn endgame by Mattison. Seemingly, White's task is simple. In general, White is winning in such positions since the black king is far removed from the battle scene. But closer inspection teaches us that White's task is not at all easy, since his king has trouble penetrating the black position.

The white f-pawn is in the way; without it, the white king would penetrate along the squares f4 and e5. Therefore, the first move is clear:

1.f5!

Alternatives are insufficient for the win. After 1.♔f3 ♔b5 2.♔e4 ♔c6 3.♔e5 ♔d7, Black keeps his defence watertight.

If White prepares the march of the f-pawn with 1.♔g4, Black can also defend. After 1...♔b5 2.f5 Black sacrifices a pawn with 2...♔c6 and the position cannot be won; for example, 3.fxg6 ♔d6 4.♔f5

♔e7 5.g4 ♚d7 6.h4 ♚e7 7.h5 ♚d7 8.g5 and here we reach a crucial point: Black cannot exchange on g5. However, he continues 8...♚e7 9.gxh6 gxh6 10.♚e5 ♚f8 11.♚f6 ♚g8 12.g7 ♚h7 with a draw.

1...♚b5!

Again, Black offers the sacrifice of a pawn. After 1...g5 2.♚g4, White would win easily.
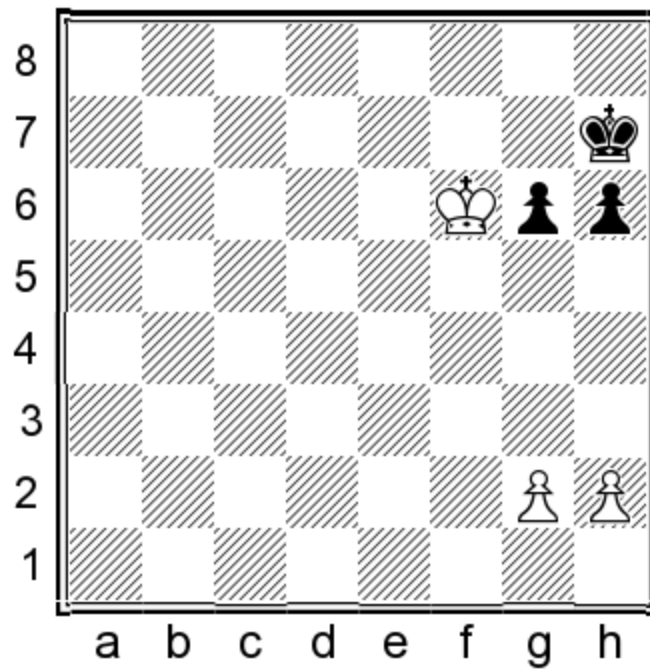
2.♚f4 ♚c6 3.♚e5 ♚d7
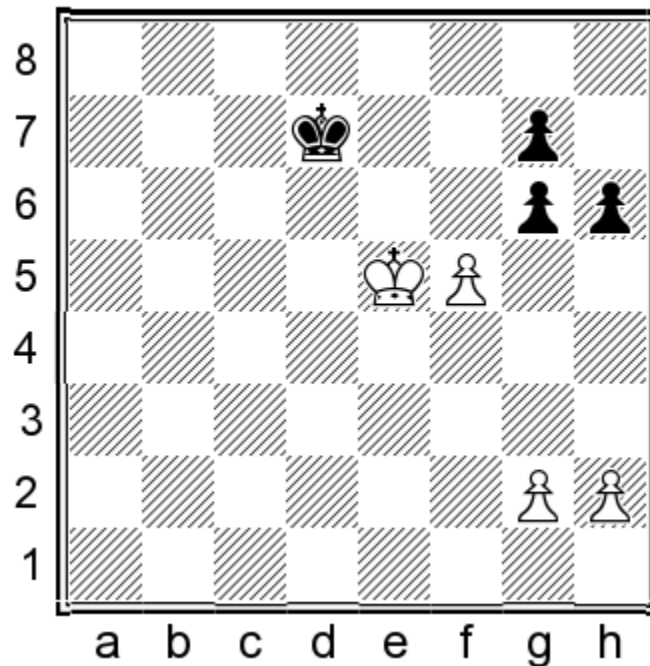
For the time being, Black has prevented the invasion of White's king. However, White has another finesse:
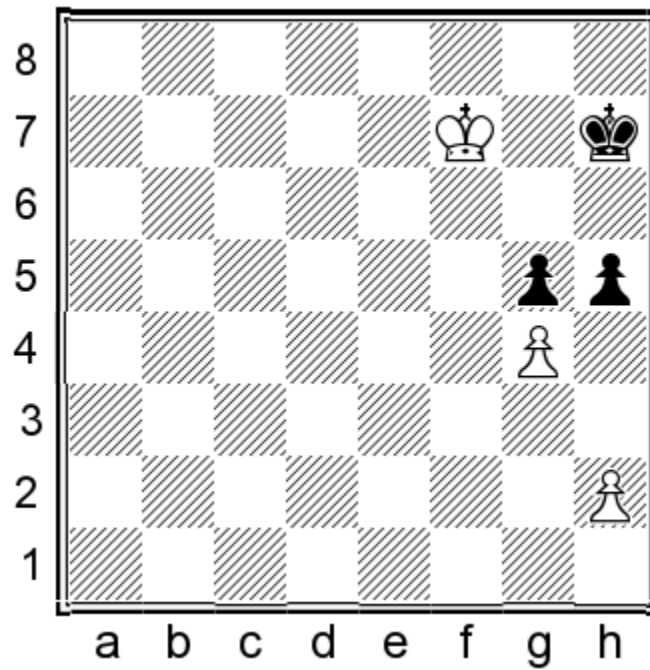
4.f6!

Conquering the f6-square for his king.

4...♚e8 5.fxg7 ♚f7 6.g8♕+ ♚xg8 7.♚f6 ♚h7

70

8.g4!

Definitely not 8.h4 in view of 8...h5 with a draw.

8...g5 9.♔f7 h5

Black appears to save himself, but now follows a thematic breaking move:

10.h4! ♔h6 11.♔f6

The final finesse.

11...gxh4 12.g5+ ♔h7 13.♔f7 1-0

Study 22 - Alexey Troitzky
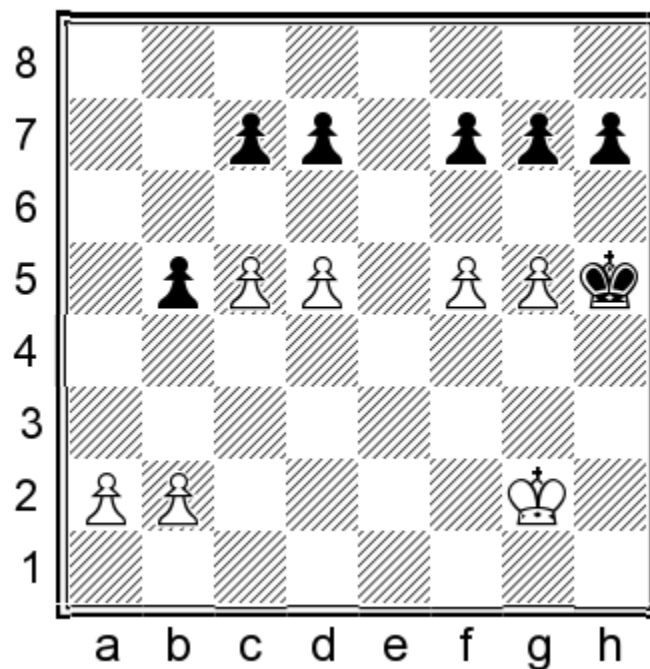
White to play and win

Pawn breaks are typical motifs in pawn endgames. Troitzky was one of the first who used this motif in a study. It has to be said that the great Russian composed relatively few pawn endgames – not more than around 25 of the more than 1700 studies ascribed to his name. In Troitzky's book with 360 selected studies we don't even find a

single one. Various experts have been working on the present study; the first pawn sacrifice, for example, was only added several decades later.

In the starting position, material is equal but White's pawns seem to be vulnerable. He will have to do something special to avoid ending up worse.

1.g6!

Certainly not 1.f6? in view of 1...g6! and Black wins. This conclusion requires further explanation. White's trump in the position is that he has a potential passed a-pawn. After 1...g6!, Black has a simple plan: capturing White's kingside pawns and then bringing the king to the queenside via e7 and d8.

1...fxg6
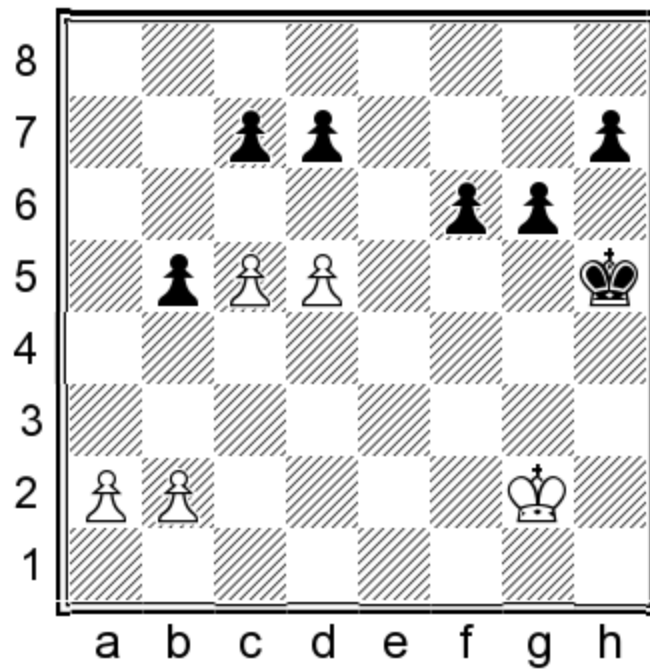
Capturing with the h-pawn is met in the same way.

2.f6!

This second pawn sacrifice is necessary to take away the f6-square from Black's king.

2...gxf6

3.a3!

A quiet but extremely important little move. White is going to create a passed pawn on the a-file. For this purpose, 3.b3? was insufficient on account of 3...b4! and Black wins.

3...♔g5 4.b3 ♔f5 5.a4 bxa4 6.bxa4 ♔e5
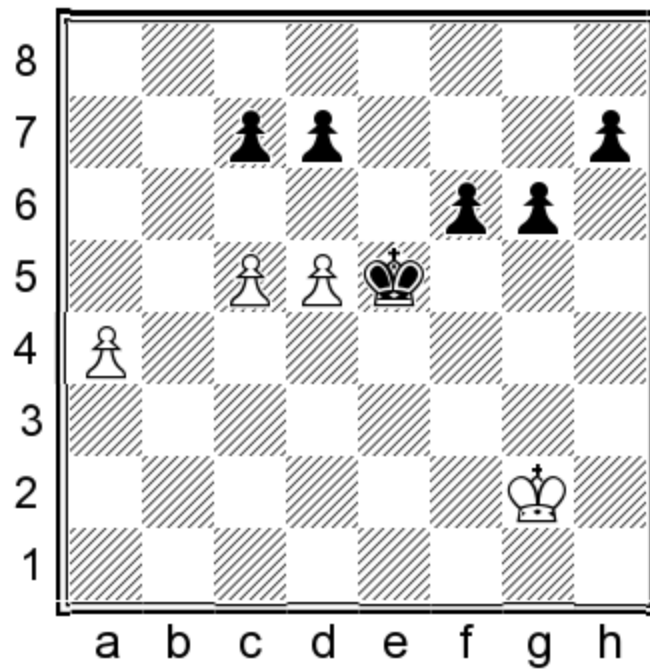
7.d6!

The third pawn sacrifice.

7...cxd6 8.c6!

And the fourth. Each time, the purpose is the same: to deprive the black king of the crucial squares.

8...dxc6 9.a5

Now the a-pawn has free passage.

9...♔d5 10.a6 ♔c5 11.a7 1-0

Study 23 - Mikhail Zinar

Mikhail Zinar
Moscow Tourney 1983

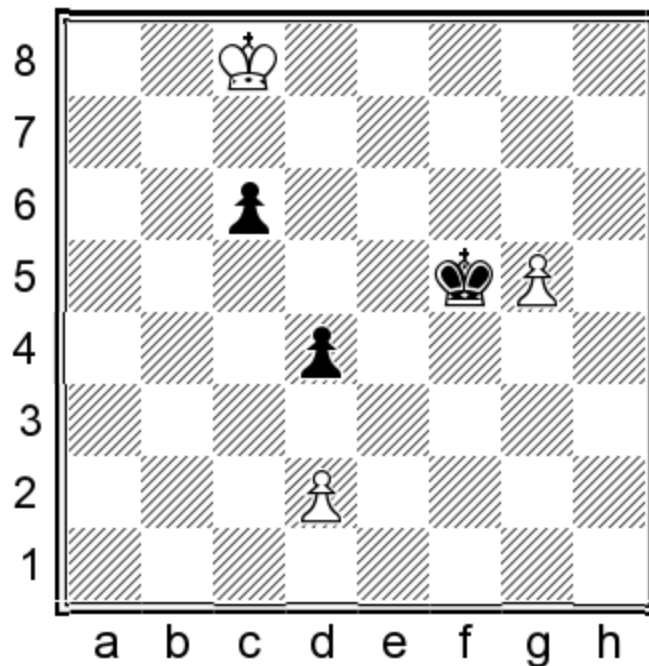# White to play and draw

Mikhail Zinar (1951-2021) was an absolute master in pawn endgame studies. He published a book about it: Harmony of the Pawn Study. For some time, Zinar was shrouded in mystery. After he hadn't published any studies for a long time and nothing was heard from him, it was assumed that he had died. However, he re-emerged and continued composing. The study presented here is his best one, in my opinion.

White has to find the right route for his king every time.

1.♔b7!

Definitely not 1.♔d7? c5 2.d3 c4! and Black promotes with check.

1...c5 2.d3

Forced. Now it becomes clear what this study is all about: Black can break through with his c-pawn at any moment, but he is not in a hurry to do so. Every time, the result will be that he promotes first,

and then the question is which positions are drawn with a white pawn on c7.

This is also why White should not play 1.♔c7?, which blocks his c-pawn after the capture on c4.
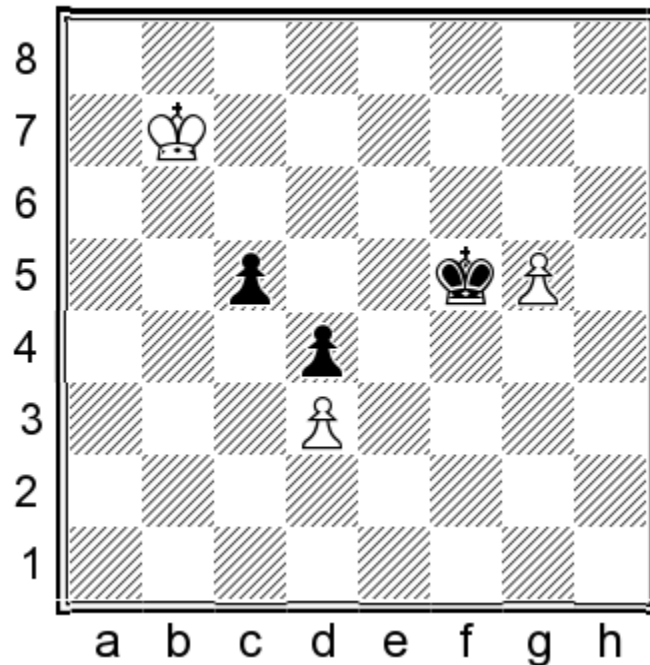
2...♔g6!

A subtle retreat. After 2...c4 3.dxc4 d3 4.g6! ♔xg6 5.c5 d2 6.c6 d1♕ 7.c7, the draw is inevitable.

Please take note of White's fourth move: giving the g-pawn is necessary to enable the eventual stalemate with the black queen on b6 and the white king on a8.

3.♔a7!

Vintage Zinar. White has to keep the king on the seventh rank to be able to reach the b8-square, as will become clear later. After 3.♔b6? c4 4.dxc4 d3 5.c5 d2 6.c6 d1♕ 7.c7 ♕d7 8.♔b7 ♕f5! White will be mated because he still has his g-pawn.
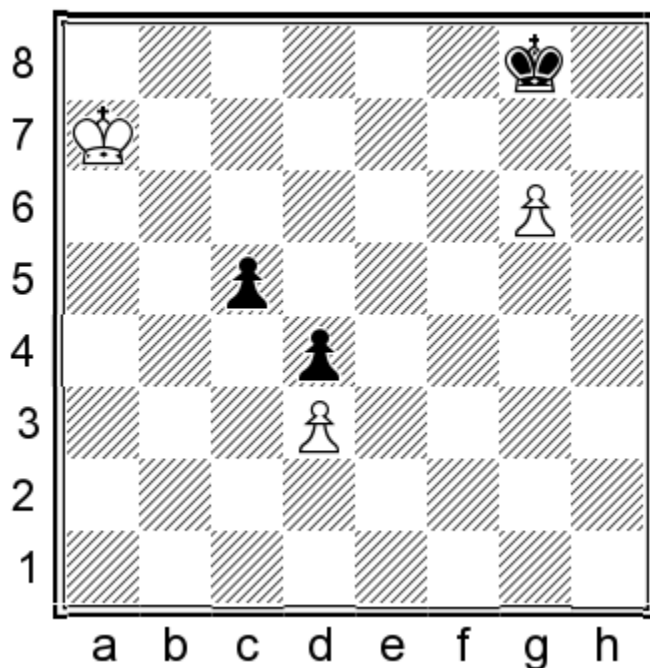
3...♔f7

Now, 3...♔xg5 would be met with 4.♔b6; for instance, 4...c4 5.dxc4 d3 6.c5 d2 7.c6 d1♕ 8.c7 ♕d7 9.♔b7 with a draw.

The immediate breakthrough 3...c4 also leads to a draw after 4.dxc4 d3 5.c5 d2 6.c6 d1♕ 7.c7 ♕d7 8.♔b8. The g-pawn cannot move.

4.g6+!

Again, White has to get rid of his g-pawn.

4...♔g8

5.g7! ♔xg7 6.♔b6!

The same principle as before. Without the g-pawn, White's king is able to enter the sixth rank. 6.♔a6 was also sufficient.
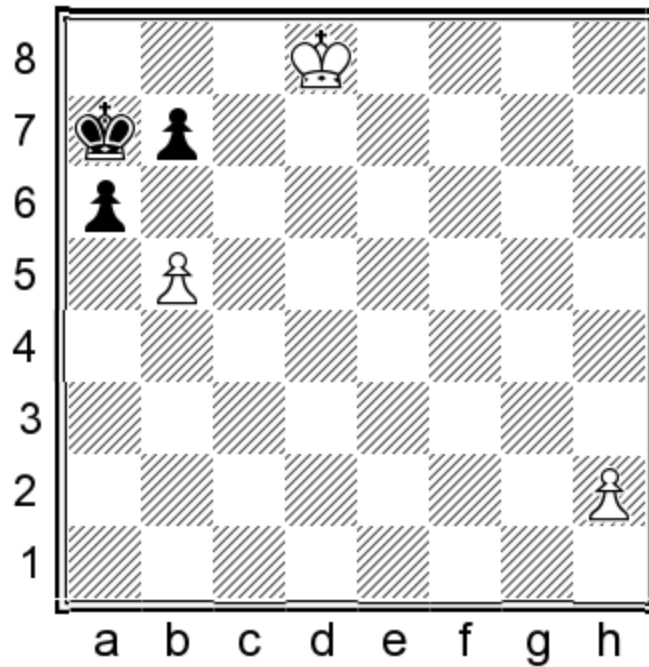
6...c4 7.dxc4 d3 8.c5 d2 9.c6 d1♕ 10.c7

The c-pawn guarantees the draw.

10...♕d7 11.♔b7 ♔f6 12.♔b8 ½-½

Study 24 - David Joseph

White to play and win

There are endgame study composers who are known for one single study only. One of them is the Englishman David Joseph (1896-1984). Apart from the masterpiece I present here, he has no other important studies to his name. And this is also a version that appeared two years later in Ceskoslovenska Republika; Joseph's original version was not very good. The curious thing about this study is that it is actually not a pawn endgame.

After the pawn race, a queen ending ensues in which White evades stalemate in a subtle way. The first move is forced:
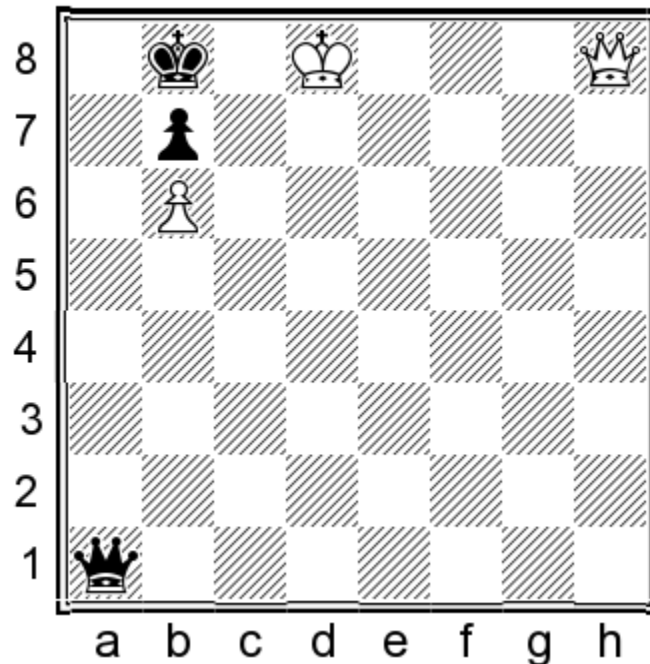
1.b6+!

This can hardly be called a pawn sacrifice. If White starts pushing the h-pawn, Black takes on b5, and the consequences of 1.bxa6? b5 are even worse.

1...♔b8!

The only move to keep up the fight; Black is going to play for stalemate.

2.h4 a5 3.h5 a4 4.h6 a3 5.h7 a2 6.h8♕ a1♕

Now we see the point of Black's first move: White can't take the black queen due to stalemate.

7.♕g8!

It is clear that the white queen has to continue operating on the eighth rank to maintain the mate threat, but he has to find the right square for his queen. After 7.♕f8 ♕a3! (with the idea of checking on d6) and 7.♕e8 ♕g7!, the draw is unavoidable.

7...♕a2

Black's only chance. His queen keeps sacrificing itself to prevent mate.

8.♕e8!

White has to avoid the f8-square, as we have seen.
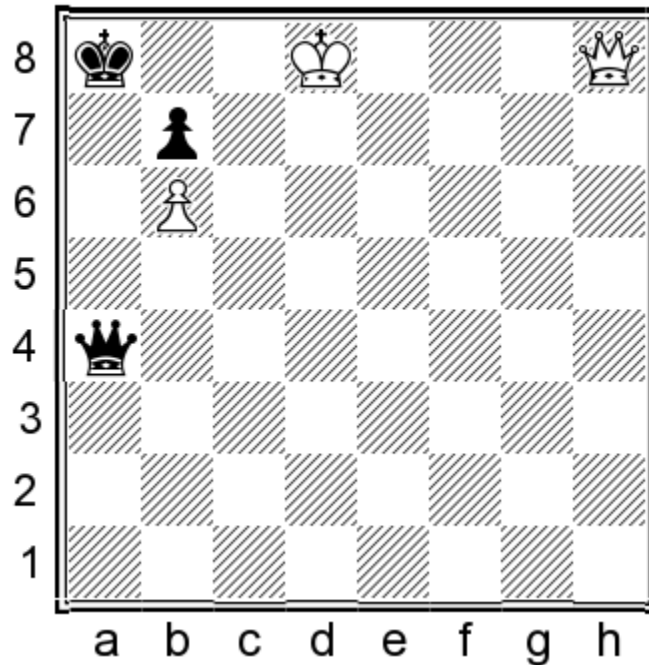
8...♕a4

Black is still able to keep up the vis-à-vis of the queens, but not for long.

9.♕e5+

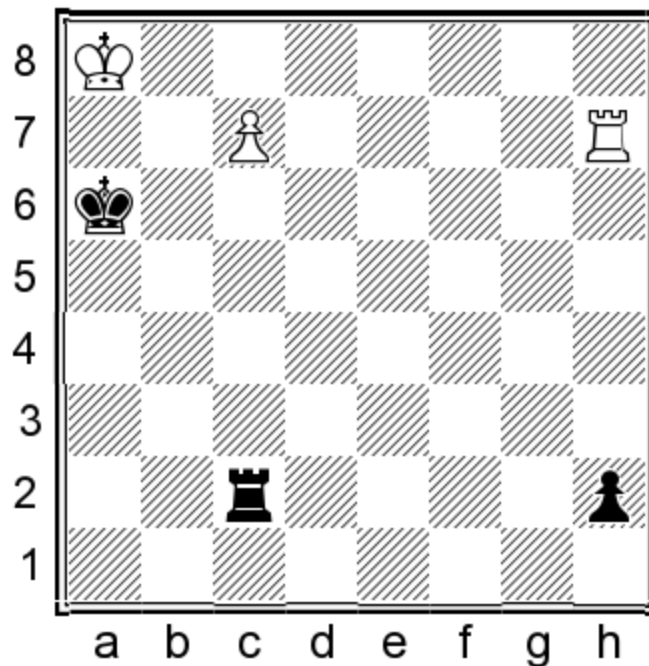The introduction to a decisive manoeuvre.

9...♚a8 10.♕h8!

The white queen has returned, and with decisive force this time. The stalemate has been prevented, and Black will be mated.

Study 25 - Emanuel Lasker

Emanuel Lasker
Deutsches Wochenschach 1890

White to play and win

Emanuel Lasker (1868-1941) hardly requires an introduction. He was the World Champion for 27 years – a record that will probably never be broken. Lasker has also composed several dozens of endgame studies. In most cases, these contain small combinations or instructions as to how certain technical endgames have to be handled. The study I present here is different. Lasker composed it four years before he became World Champion. White manages to win with the help of a forcing manoeuvre. Curiously, Lasker didn't include this study in his standard work Lehrbuch des Schachspiels. He probably thought it was too complicated for beginners. Still, the study has great practical use. Another curiosity is that there are no less than seven versions of the study: the black pawn can also be on f2, while both kings can be shifted as well.
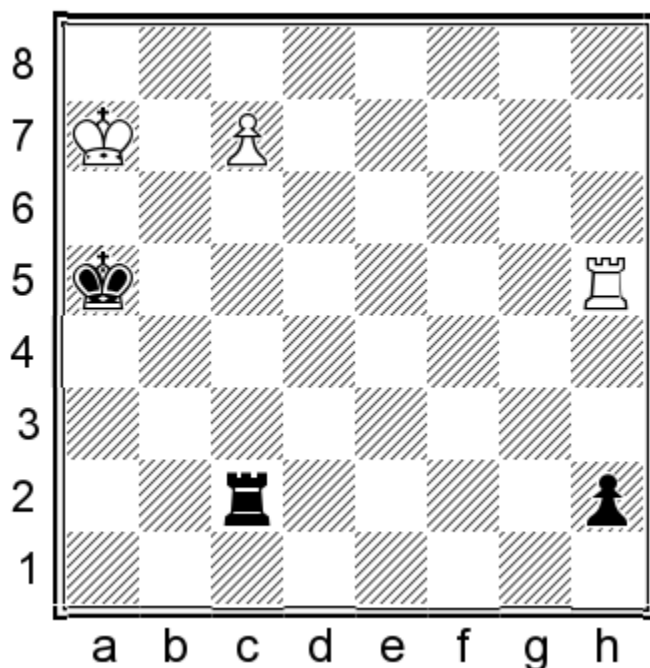
1.♖h6+

White has to give check, since he won't get any further with 1.♔b8 ♖b2+.

1...♔a5 2.♔b7

White can also play his king to b8, which amounts to the same.

2...♖b2+ 3.♔a7 ♖c2 4.♖h5+

With this second check, White forces the enemy king to move further down the board.

4...♔a4 5.♔b6

Again, White has an alternative: 5.♔b7 is also good.

5...♖b2+ 6.♔a6

Preparing a third rook check.

6...♖c2 7.♖h4+ ♔a3 8.♔b6 ♖b2+ 9.♔a5
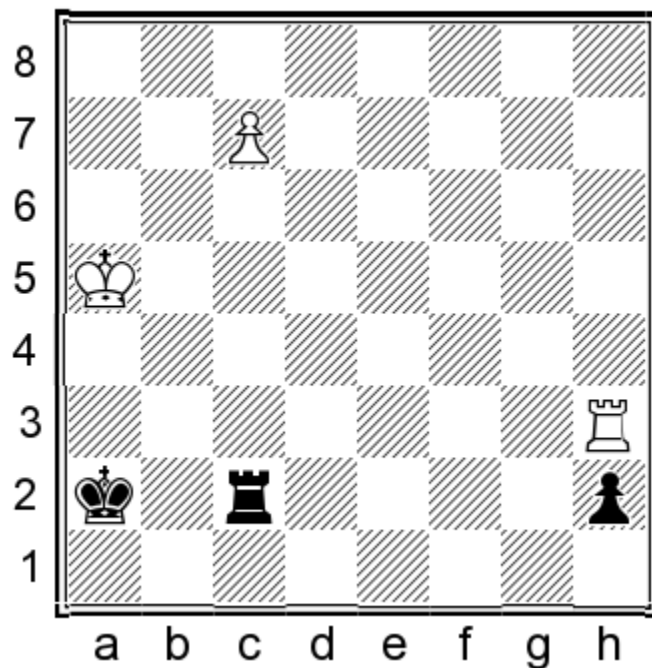
The white king keeps moving backwards – the point will become clear soon.

9...♖c2 10.♖h3+

The fourth rook check.

10...♔a2

11.♖xh2

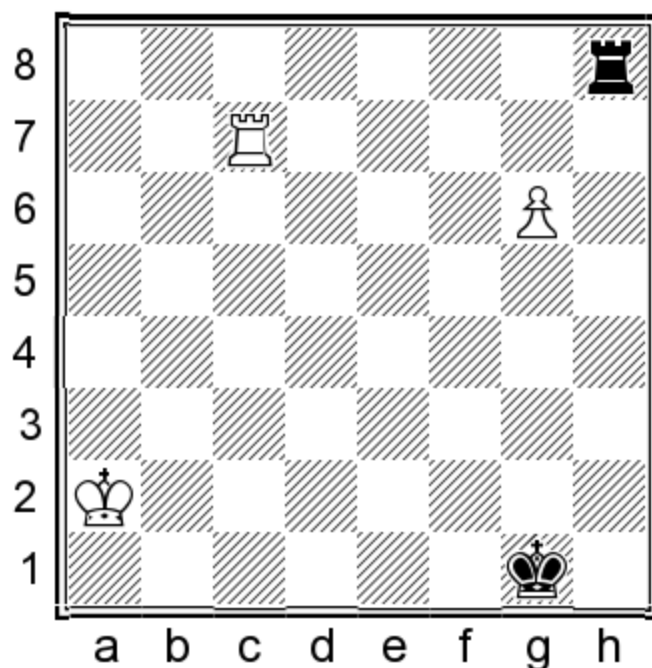And this is the ultimate point; Black's rook is pinned.

11...♖xh2 12.c8♕ 1-0

This collaboration of the white pieces is known as the 'Lasker manoeuvre'.

Study 26 - David Gurgenidze

David Gurgenidze
Shakhmaty v SSSR 1981

White to play and win

The Georgian David Gurgenidze (1953-) is one of the best endgame study composers of the post-war generation. He has accumulated many first prizes in study tournaments. Gurgenidze has composed more than 1000 studies, and in 1990 he was awarded the grandmaster title in this genre. He has also published various books about the endgame study. Gurgenidze has incorporated a great variety of themes in his studies, and he has a preference for rook endings. The study given here is one of his best.
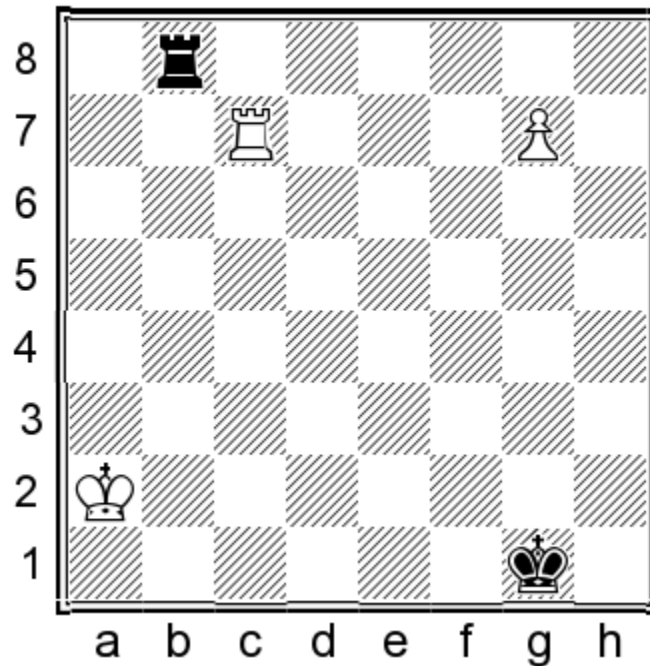
With a minimum amount of pieces, he manages to adorn the study with original and elegant motifs.

1.g7

White has to push the g-pawn right away. After 1.♔b3 ♖h6 (or 1...♖h5) 2.g7 ♖g6 3.♔c4 ♖g5 4.♔d4 ♔g2 5.♔e4 ♔g3, the black king arrives in time; White cannot win.

1...♜b8

The best square for the rook. The white king remains cut off from the b-file.

2.♖b7!

With this elegant rook move, White conquers the b-file.

2...♜c8

Black persists by moving the rook to the c-file.

3.♔b3 ♚g2
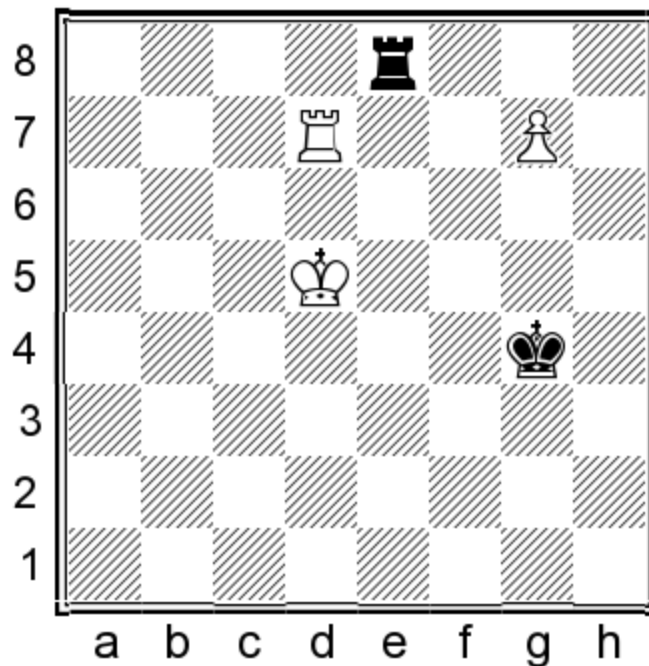
Both kings are approaching the battle scene.

4.♖c7!

The same pattern as two moves earlier: White conquers the c-file for his king.

4...♜d8 5.♔c4 ♚g3 6.♖d7!

For the third time, a file is made accessible for the white king.

6...♜e8 7.♔d5 ♚g4

8.♖e7!

This method of the rook and the white king following each other in their movements is called a 'systematic manoeuvre'. The Lasker manoeuvre also showed some features of this method, but there all the pieces were involved, in a less-straight line.

8...♖g8 9.♔e6
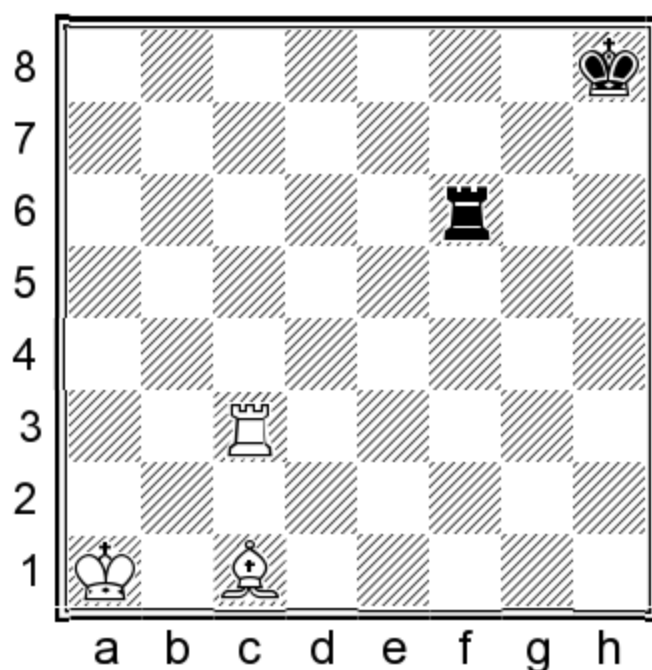
White has reached the all-important e-file.

9...♔g5 10.♔f7

And the diagonal king manoeuvre has been completed; White wins.

# Study 27 - Rinaldo Bianchetti

Rinaldo Bianchetti
L'Italia Scacchistica 1924

White to play and win

Rinaldo Bianchetti (1883-1963) was an Italian endgame study composer. Over fifty studies by him can be found in the database. In general, he composed technical studies with reduced material. He also published a book on pawn endings called Teoria del Finali di soli Pedoni. Bianchetti was friends with Rinck, who, in fact, composed similar studies. The study given here is by far the best-known – and the best – by the Italian. In the original version, the white rook was on d4, but I give Alexander Herbstman's version; the picture with the rook on c3 is just a little more attractive, I feel. White's first move is clear:

1.♗b2
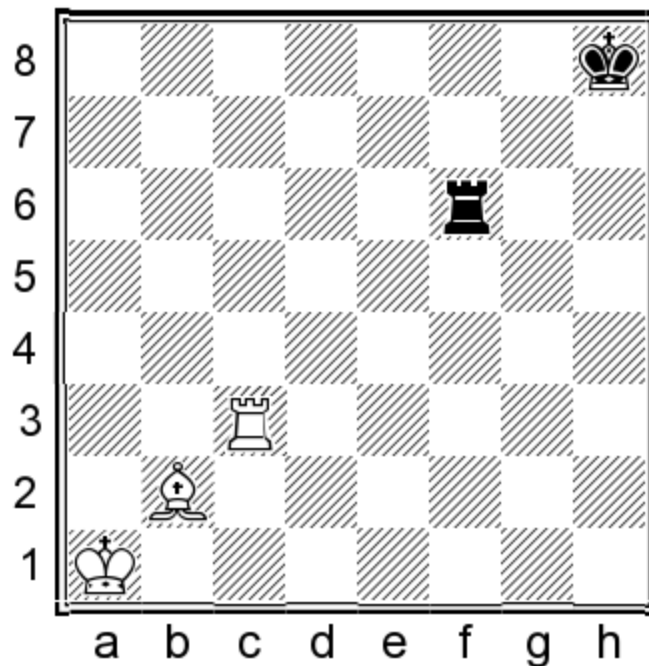
Now, all five pieces are on the long diagonal. With this bishop move, White sets up an ambush. The question is: how can Black save his rook?

1...♖h6

King moves didn't help; on 1...♚h7, 2.♖c7+ is winning.

Analogously, 1...♚g8 fails to 2.♖g3+.

Assuming that Black's rook has to stay close to his king so as not to be lost right away, Black has three other moves: on 1...♖g6 White has mate in two with 2.♖c8+ ♚h7 3.♖h8#.
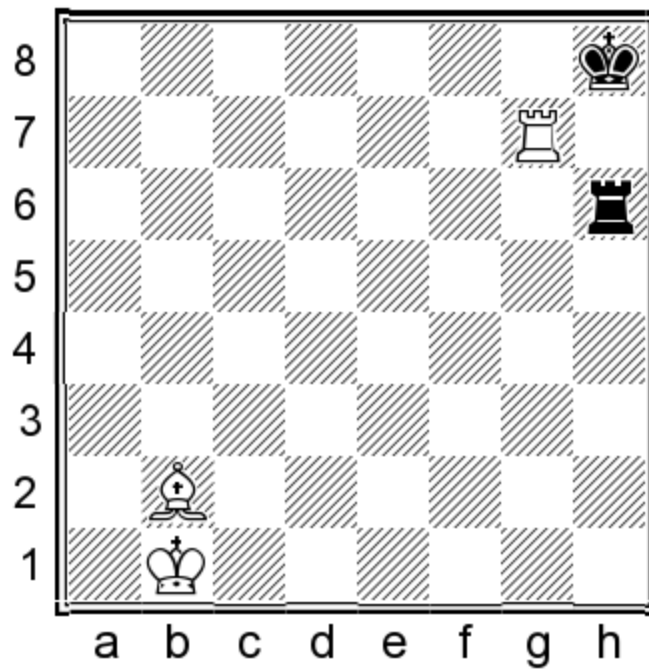
Similarly, 1...♖f7 fails to 2.♖h3+ ♚g8 3.♖h8#.

We see that the variations are symmetrical every time, with the long diagonal as an axis. This means that the last rook move, 1...♖f8, leads to a loss consistent with the main line: 2.♖c7+ ♚g8 3.♖g7+ ♚h8 4.♔a2! and Black is in zugzwang.

2.♖g3+

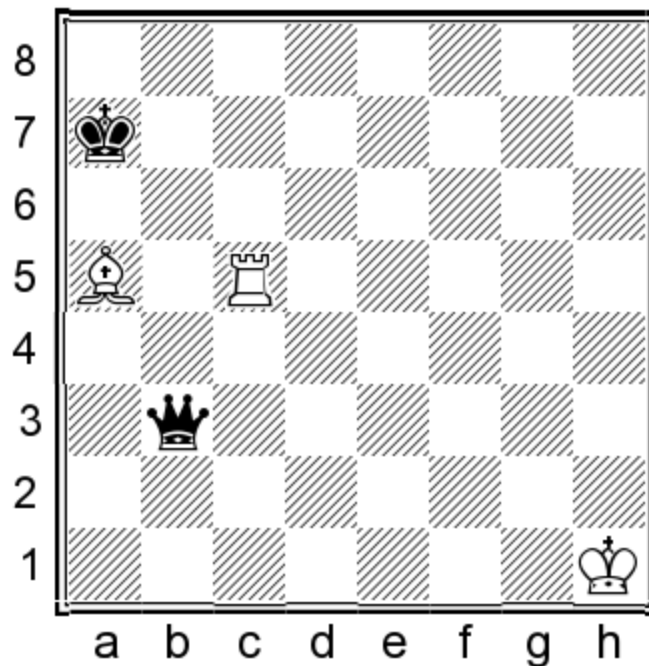On its way to g7.

2...♚h7 3.♖g7+ ♚h8 4.♔b1!

Again, the symmetry, and again the lethal zugzwang. Incidentally, here we can speak of a 'reciprocal zugzwang'. If it were White's move, it would be a draw, as any move allows a check by Black's 'kamikaze rook'.

4...♖h1+ 5.♖g1+ ♔h7 6.♖xh1+ 1-0

Study 28 - Vitaly Halberstadt

Vitaly Halberstadt
Réti Memorial Tourney, Sachove Umenie 1950

White to play and draw

Vitaly Halberstadt (1903-1967) was born in Odesa, grew up in St Petersburg, did his final exams in Berlin, and then settled in Paris. Halberstadt is especially known for the book L'Opposition et les Cases Conjuguées Sont Reconciliées, which he published together with Marcel Duchamp in 1932. Halberstadt was greatly interested in philosophy, literature and painting. He lived close to the Bibliothèque Nationale, which he frequently visited. More than two hundred studies by Halberstadt can be found in the database. The study given here is one of his best-known.

It seems improbable that White can prevent the loss of a piece, but there is a narrow path to the draw.
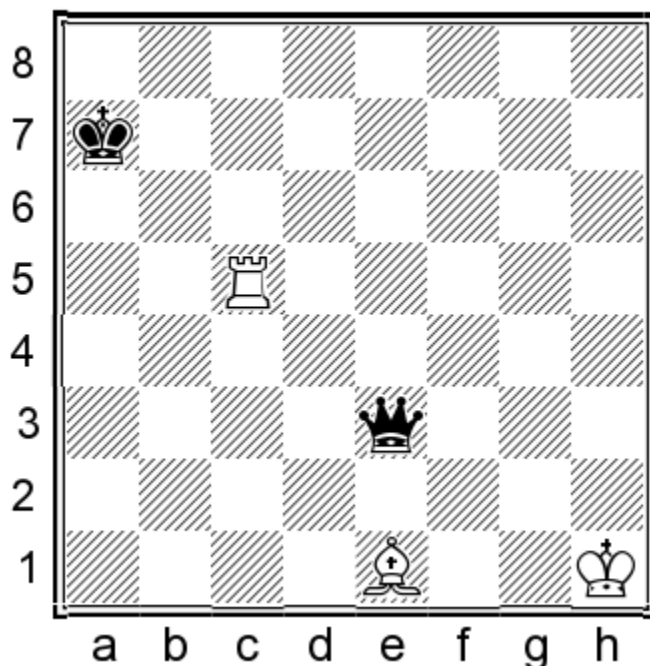
1.♗e1!

Actually, this is an indirect defence of the rook. However, this certainly doesn't solve all of White's problems.

1...♛e3!

The strongest queen move. If Black attacks the bishop with 1...♛b1, White can save himself in two ways. He can either play 2.♖a5+ ♚b7 3.♖e5; or 2.♖c7+ followed by 3.♖e7, when Black has no effective queen checks.

Nor does 1...♛f3+ yield Black anything after 2.♚g1.

With the text move, Black puts a knife to White's throat. How can he save both of his pieces?

2.♗g3!!

The climax of the study. White leaves both of his pieces en prise; all of this is based on two stalemate patterns. 2.♗f2 was insufficient in view of 2...♛xf2 3.♖a5+ ♚b7 4.♖b5+ ♚c6 and the rook checks will be exhausted. The black queen controls the intersections on the g1-a7 diagonal.

2...♚b6

The first stalemate pattern arises after 2...♛xg3 or 2...♛xc5 3.♗f2. After Black's king move, however, White has a problem. In these circumstances, he cannot play his bishop to f2 since the queen can

take the rook on c5 when it gives check there. Which square does White have for the rook?
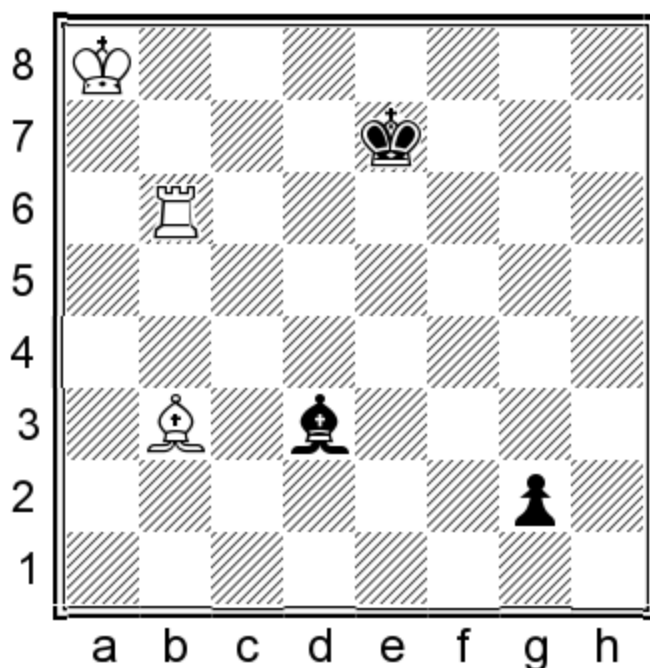
3.♖c2!
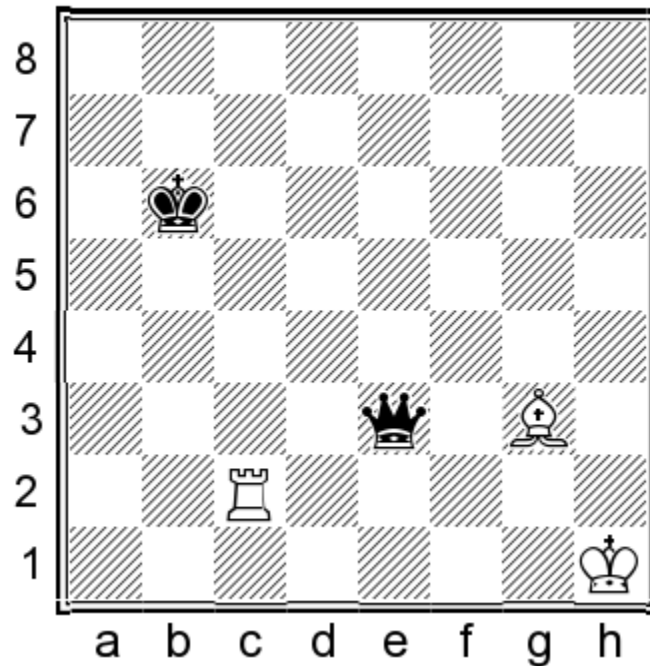
The only square.

3...♕xg3 4.♖b2+

Draw. White keeps giving checks on the second rank; now the principle of the 'kamikaze rook' does work.

Study 29 - Stanislav Bilokon

**Stanislav Bilokon**
Krasnoe Znamja 1979

White to play and draw

Stanislav Bilokon (1939-1984) was one of the best Ukrainian endgame study composers in history. In many early publications he was called Belokon, which means 'white horse' in Russian. Since the start of the war in Ukraine, Russian names are avoided as much as possible, and so now the Ukrainian spelling Bilokon is commonly used. Bilokon has a number of spectacular studies to his name. The miniature given here is my version of one of his first-prize studies. The original also had a black a-pawn that didn't have any function. It's all about the black g-pawn – how can White stop it?

1.♖b7+

The obvious-looking alternative 1.♖e6+ was insufficient, though it takes a long variation to prove this. After 1...♔d8 2.♖e1 ♗f1 3.♗c4 g1♕ 4.♖xf1 ♕b6 5.♖f8+ ♔e7 6.♖f7+ ♔e8 7.♖b7 ♕a5+ 8.♖a7 ♕d8+ 9.♔b7 ♕d7+ 10.♔b6 ♕d4+, Black wins the bishop.

1...♔f6 2.♖f7+ ♔g6 3.♖f8
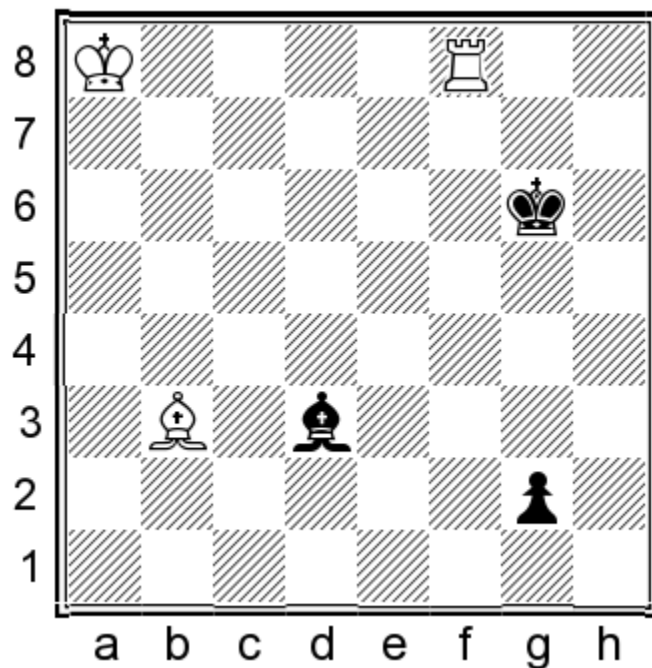
It seems as if White easily achieves his goal, but Black has a finesse up his sleeve:
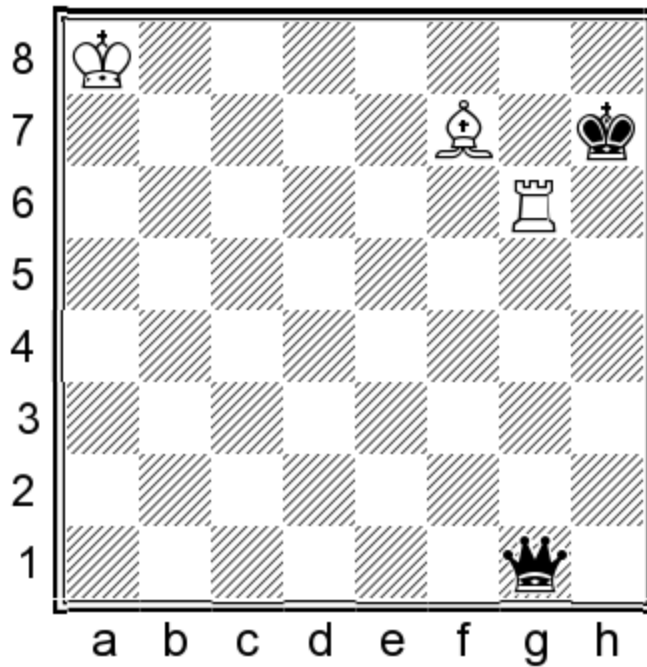
3...♔h7 4.♖g8 ♗g6

By retreating the bishop, Black closes off the g-file for the white rook.

5.♗f7!

The only move.

5...g1♕ 6.♖xg6

Materially, White isn't so badly off, but the coordination between his pieces is problematical. Black now has two queen moves:
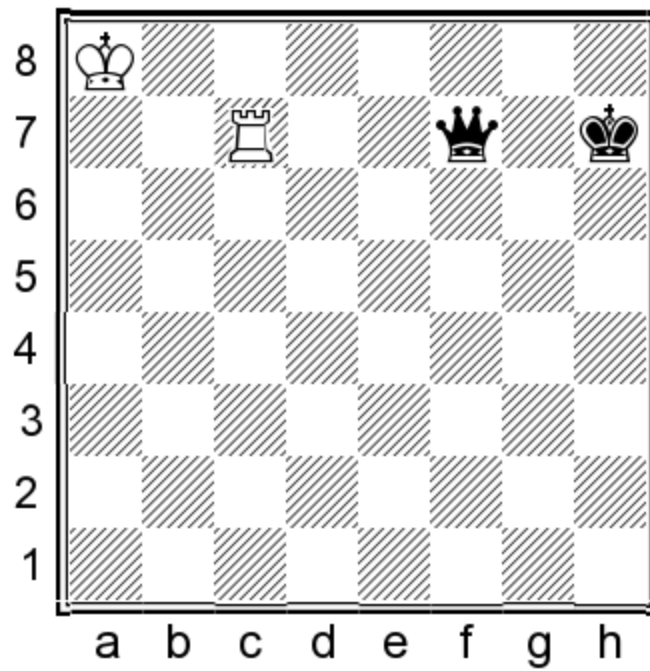
6...♛f2

An important alternative was 6...♛c5 when White saves himself with 7.♖g8! ♛c7 8.♖b8 and the bishop is indirectly protected.

7.♖c6!

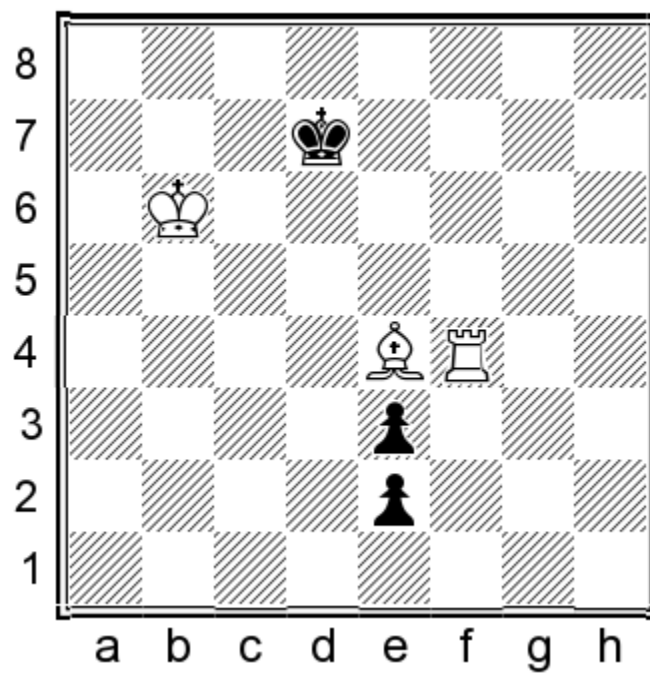A variation on Halberstadt's study (No. 28). White is going to force stalemate:

7...♛xf7 8.♖c7 ½-½

Study 30 - Richard Réti

Richard Réti
Kölnische Volkszeitung 1928

White to play and win

It doesn't often happen that a study by a great endgame study composer contains a flaw and another celebrity of the same calibre sets to work to correct it. The concept of the study given here stems from Réti, and the correction is by Rinck, who published it in the same year in Bohemia. It seemed as if it was only a minor detail: in the original study, White's rook was on e5 instead of f4. The difference will soon become apparent.

Obviously, White has to do something about the threatened promotion of Black's foremost e-pawn.

1.♗f5+

The other bishop check was insufficient for the win; after 1.♗c6+ ♔d6 2.♖d4+ ♔e5 3.♖e4+ ♔d6! 4.♖xe3 e1♕, stalemate is inevitable.
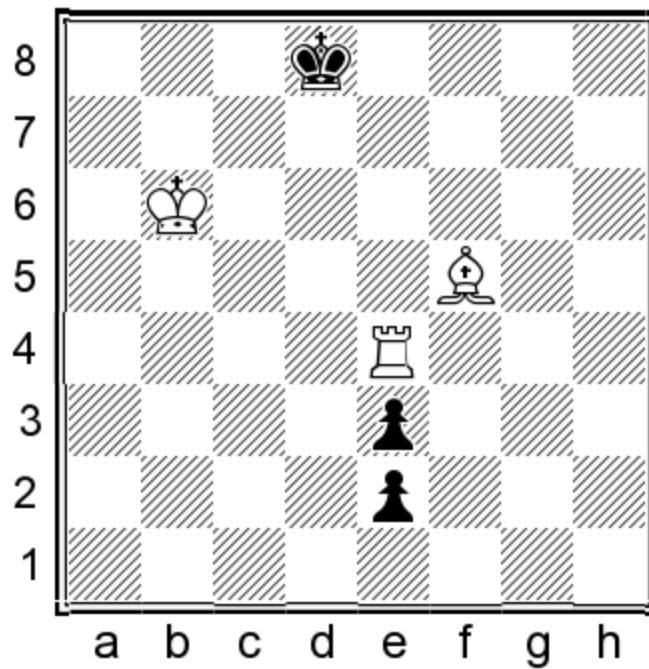
1...♔d8 2.♖d4+

White has to drive the black king to the e-file.

2...♔e7 3.♖e4+

The matter seems to be settled, but now Black again starts playing for stalemate:

3...♔d8!

A second stalemate pattern arises. Again, White cannot take on e3.

4.♗d7!!
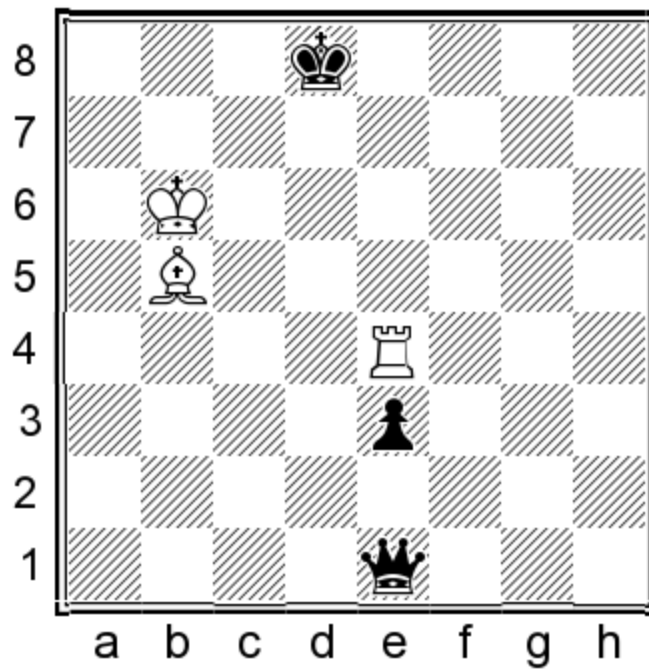
Here we see the difference with Réti's original version. With the rook on e5, White could also play his bishop to d3 instead of the magnificent text move, with the same result. Since the white rook is on e4 in this version, the bishop's path to d3 is blocked.

4...e1♕

If Black captures the bishop, the stalemate is gone and White can take on e3.

5.♗b5

An unbelievable situation; Black's queen has no good check, and mate can't be prevented.
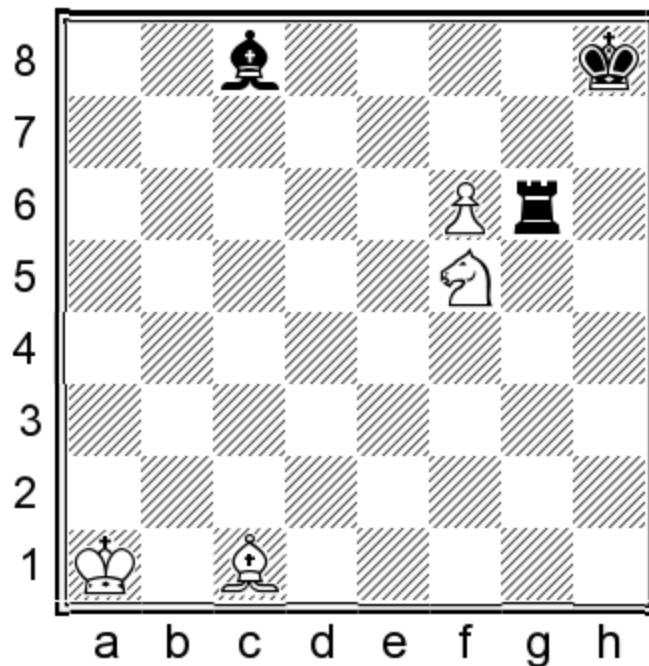
5...♕c3 6.♖e8

Mate.

Study 31 - Vladimir Korolkov

Vladimir Korolkov
Lelo 1951

White to play and win

Vladimir Korolkov (1907-1987) was one of Russia's greatest endgame study composers. He was awarded the grandmaster title in 1976. Like Botvinnik, he was an electrical engineer, but he must have spent a great deal of his time on endgame studies; he composed more than four hundred of them. Korolkov had a preference for excessive themes, but he was also a master in other genres.

The study given here is considered one of his best. However, it has a problem: almost the entire study had a precedent. Two years earlier, the Dutch endgame study composer Jan Selman had won first prize with a study that was virtually identical. Still, Korolkov's version has been published much more often. This is especially due to the fact that his version is better. Korolkov didn't know Selman's study, by the way; news didn't travel so fast in those days.

1.f7 ♖a6+

Black has to give check; after 1...♖f6 2.♗b2 he would lose immediately.

1...♖g8 was also insufficient in view of 2.fxg8♕+ ♚xg8 3.♘e7+ and White wins the bishop.

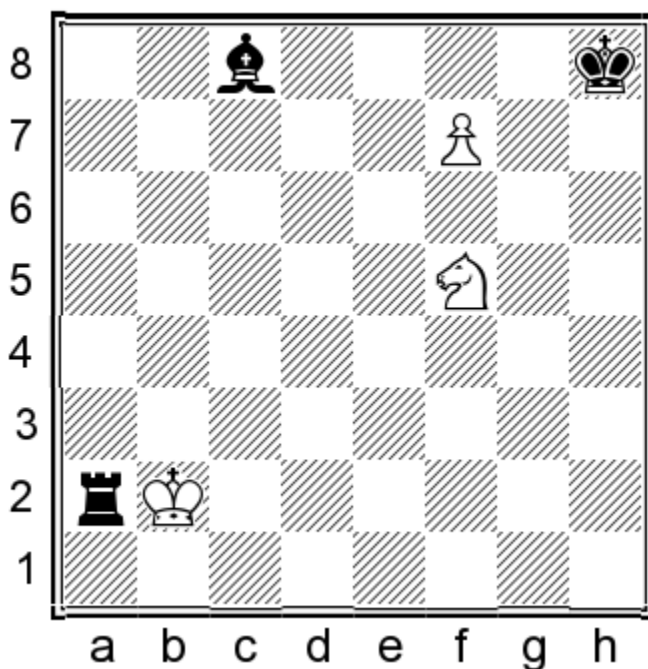**2.♗a3!**

The white king had no good square on the b-file, since 2.♔b2 fails to 2...♖f6. That's why he sacrifices his bishop, forcing the black rook to the third rank.

2...♖xa3+ 3.♔b2

The start of a lengthy king's march.

3...♖a2+

The only check that makes things difficult for White. After 3...♖b3+ 4.♔a2!, Black runs out of resources; his rook blocks the a2-g8 diagonal.

4.♔c1!

The white king has to move backwards. After 4.♔c3 ♖c2+ 5.♔b4 ♖b2+ 6.♔c5 ♖c2+ 7.♔d6 ♖d2+, Black's rook is able to stop the f-pawn.
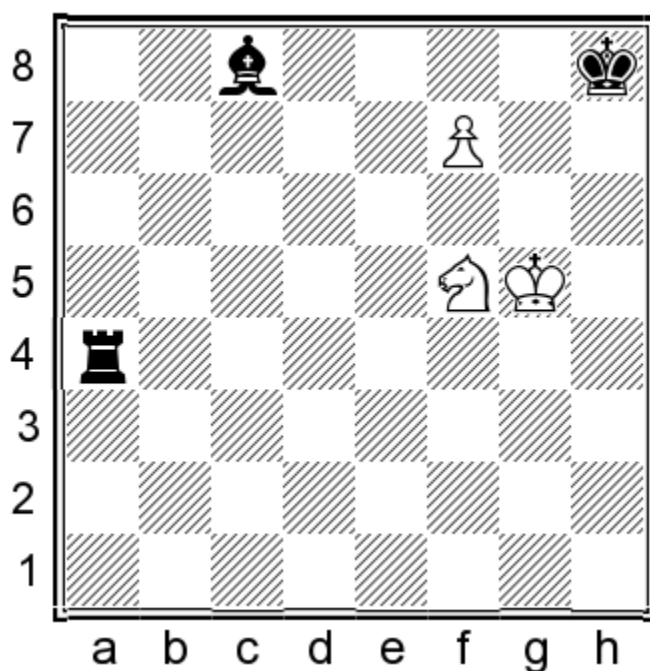
4...♖a1+ 5.♔d2 ♖a2+ 6.♔e3

Only now can the white king enter the third rank.

6...♖a3+ 7.♔f4

White has to be careful in choosing the right way forwards for his king. After 7.♔d4 ♖d3+! Black would save himself.

7...♖a4+ 8.♔g5

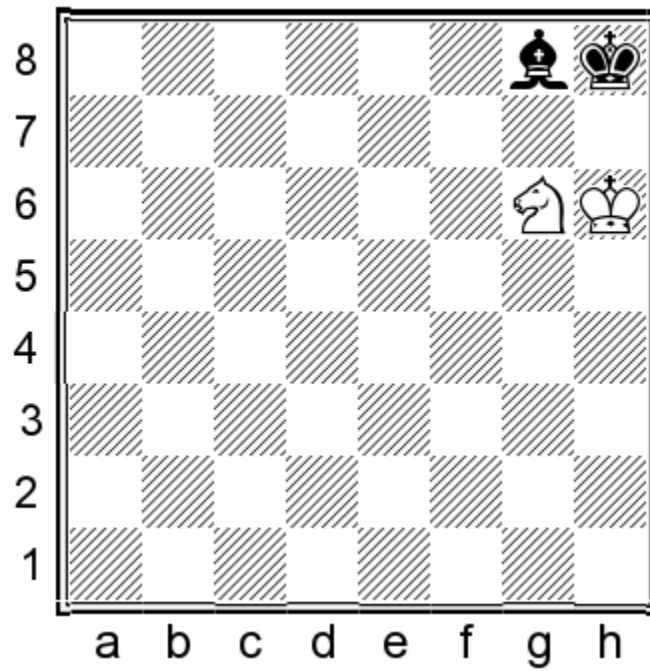It seems as if Black's checks are exhausted, but he still has a resource:

8...♖g4+!

Again, White can't take the rook.

9.♔h6 ♖g8

Finally, Black's rook has reached the back rank. Now he seems to be saved, but White has a final combination:
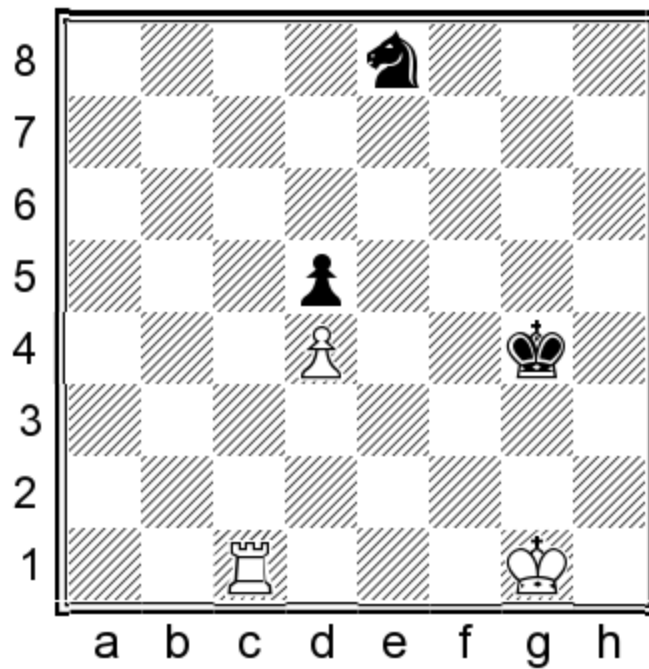
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10.♘e7 ♗e6 11.fxg8♕+ ♗xg8 12.♘g6#

Again this mate with the knight.

Study 32 - Abram Gurvich

Abram Gurvich
Shakhmaty v SSSR 1958

White to play and win

Abram Gurvich (1897-1962) was born in Baku, but later settled in Moscow as a literary and theatre critic. He composed about eighty studies – generally of a high level. In the present study, he shows that you can build up a mating construction even in endgames with only six pieces. In fact, we have a purely technical endgame on the board. In general, we can say that in endgames with this material, the defending side can hold the draw in certain circumstances. Black has to succeed in holding off the enemy king by positioning his king and knight correctly. I have adapted Gurvich's original version in such a way that all the pieces have been moved one square to the left. This yields more instructive tactical elements.
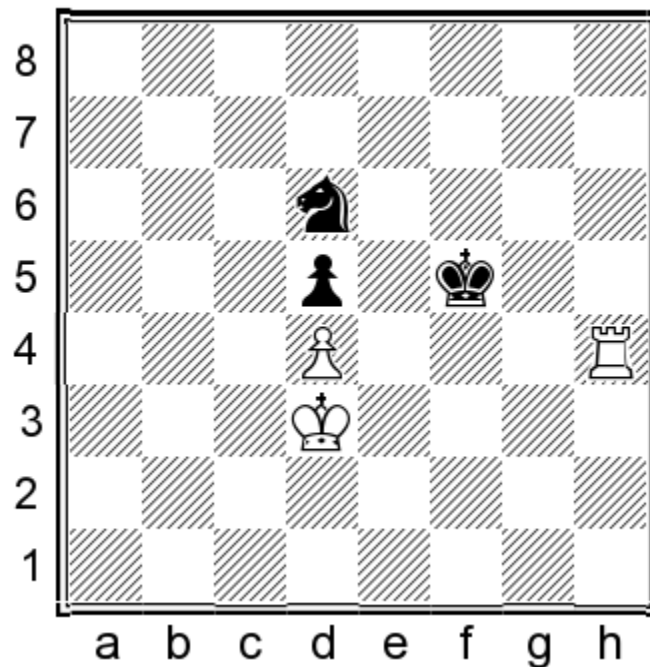
1.♔f2

Of course, White has to move his king to the centre.

1...♔f4

The only chance; Black too has to direct his king towards the centre.

2.♖c6!

An important alternative was 2.♖h1, to give check on h4. This seems to guarantee an easy win, but Black can hold with extremely accurate play. He has to start with 2...♘d6! and after 3.♔e2 ♔e4! 4.♖h4+ ♔f5 5.♔d3
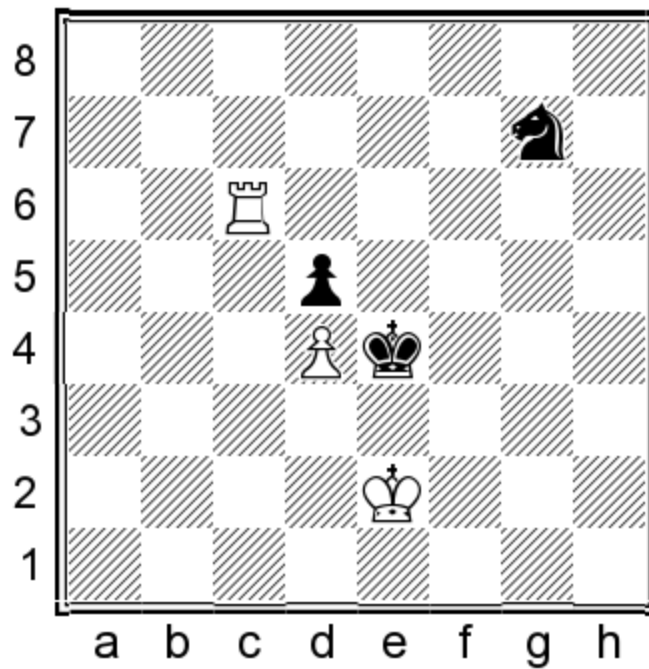

there is, again, a critical moment. The only move is 5...♘f7!. The knight is on its way to e6. Play may continue 6.♖h5+ ♔e6 7.♔c3 ♘d8 (or 7...♔d6) 8.♔b4 ♔d6 9.♖h6+ ♘e6 and White doesn't get any further. With the text move, he deprives the black knight of good squares.

2...♘g7

The black king had no useful moves.

3.♔e2 ♔e4

4.♖g6!

Putting the knife to Black's throat.

4...♘f5

The alternative 4...♘h5 is also hopeless after 5.♖g4+ ♚f5 6.♚f3; Black's knight can't reach the e6-square in time.
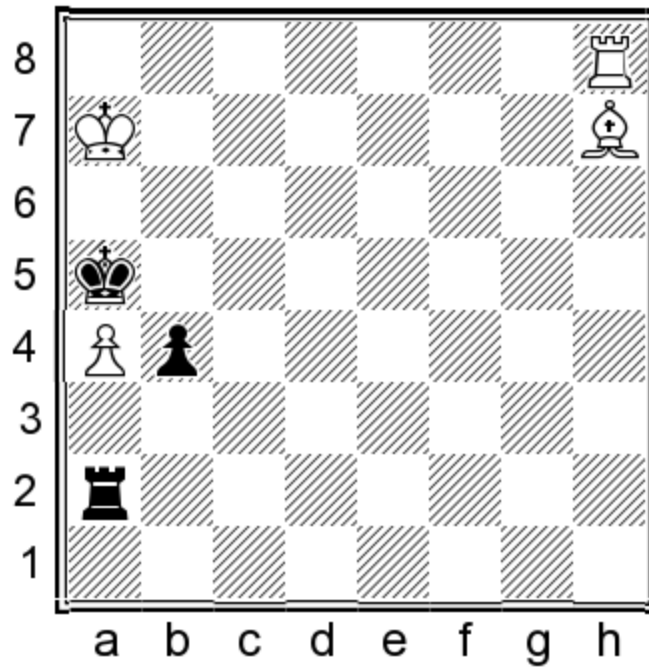
5.♖g4

Mate.

It's strange that Gurvich only got a 5th honorable mention for this compact, beautiful piece of work.

Study 33 - Abram Gurvich

Abram Gurvich
Shakhmatnaya Moskva 1959

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White to play and win

Gurvich was a past master in creating studies in which a mating net is woven with reduced material. In this study, White seems to have no winning chances. His a-pawn is weak, contrary to Black's b-pawn, and his pieces are not active. However, there is one motif he can capitalize on: the black king is unsafe at the moment.

1.♗g8!

The only move to exploit the unsafe positioning of Black's king. It is of the utmost importance for White to prevent the march of the black b-pawn. After 1.♖a8? b3, White's winning chances would be gone.

1...♖b2!

Obviously, Black couldn't take the a-pawn in view of mate on h5. An alternative was 1...♖g2 to play for stalemate. After 2.♗b3 ♖g7+

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3.♔b8 ♖b7+ 4.♔c8, however, the stalemate is gone. The text move seems to solve all the problems, but now follows a surprise:
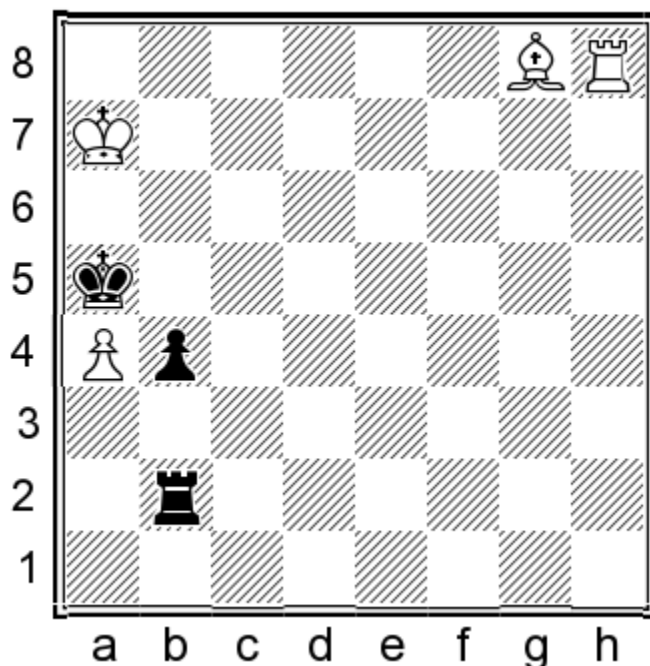
2.♗b3!!

An incredible move. White sacrifices his bishop to block the black b-pawn. The alternative 2.♗c4 seemed strong as well, since after 2...♔xa4? 3.♔b6! b3 4.♔c5 Black gets mated. However, Black escapes by pushing his pawn right away: 2...b3!.

2...♖xb3

Again, Black could play for stalemate. On 2...♖h2, however, White has an intricate path to the win: 3.♖f8! ♖f2 4.♖a8. Stalemate has been prevented, White has the check on f7 covered, and Black gets mated.

3.♖a8!
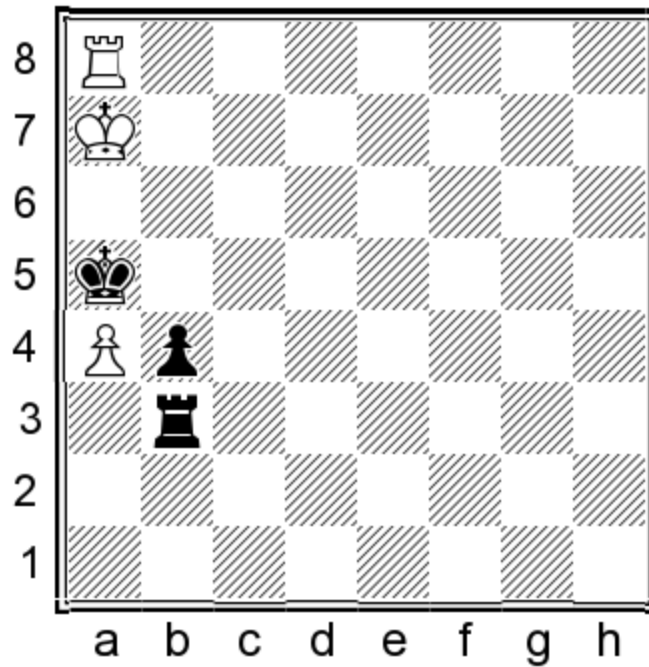
A highly unusual rook ending. Black's king is caught in a mating net.
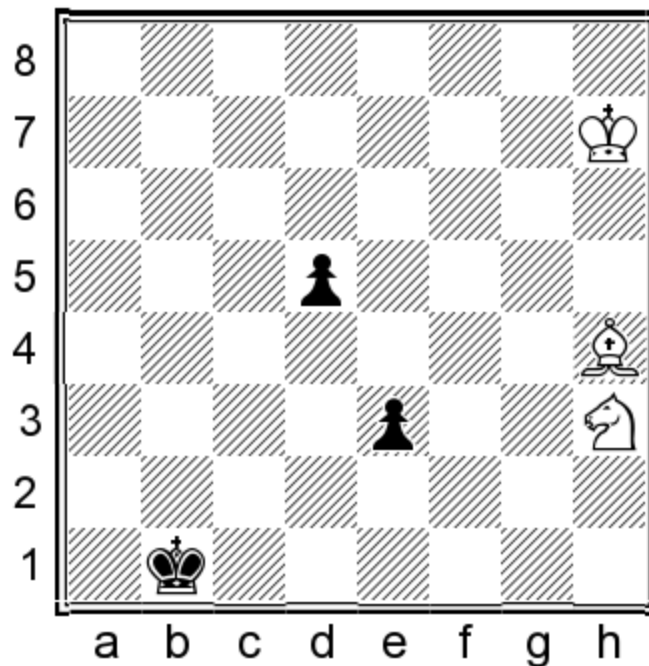
3...♔xa4 4.♔b6#

Wisely, Gurvich didn't send in this study to a tournament; he probably wasn't excited by the prospect of getting another honorable mention for a masterpiece.

Study 34 - André Chéron

André Chéron
Journal de Genève 1964

White to play and win

André Chéron (1895-1980) was mainly known as an endgame theoretician. He wrote a four-volume standard work on the various theoretical endgames. His systematic approach was especially striking – his diligent analytical work being displayed in a thick forest of variations. In his younger years, Chéron was one of the best players in France; later he settled in Switzerland. He composed a number of problems and studies, sometimes with fanciful starting positions. Mostly, his studies were straightforward, like the one given here.

1.♘f4

White doesn't have time yet to bring his king closer. After 1.♔g6 d4 2.♘f4 ♔c2, White can't block the passed pawns.

1...d4 2.♗f6!

An important move. White forces the enemy e-pawn to move forward, so as to establish a better blockade. Also, we will see later that the black e-pawn will create a self-block (meaning that the pawn deprives the black king of an escape square).

2...e2

The best chance. After 2...♔c2 3.♗xd4 e2 4.♗f2 ♔d2 5.♘g2 White manages to block the e-pawn.
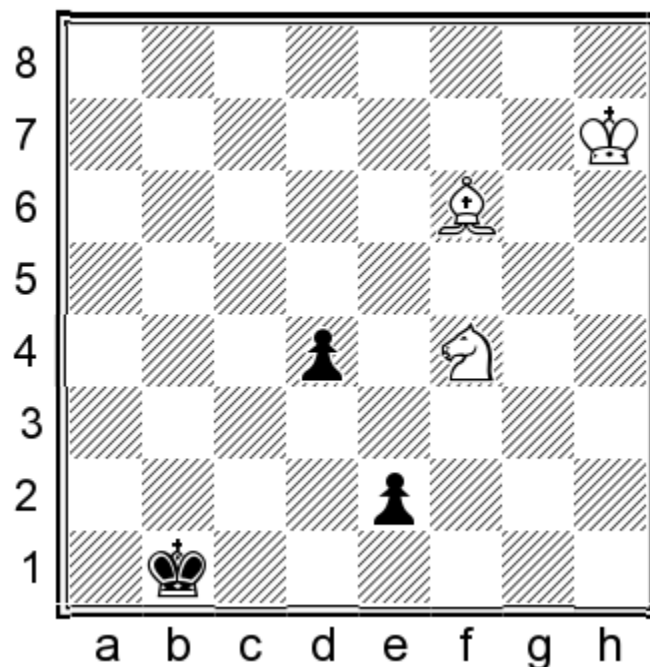
3.♘d3!

White can't take the pawn; he has to block it. After 3.♘xe2 d3 4.♘c3+ ♔c2, it's a draw.

3...♔c2 4.♘e1+ ♔d2 5.♗h4

For the time being, White has managed to keep the pawns under control. However, they are not yet blocked!

5...d3 6.♔g6

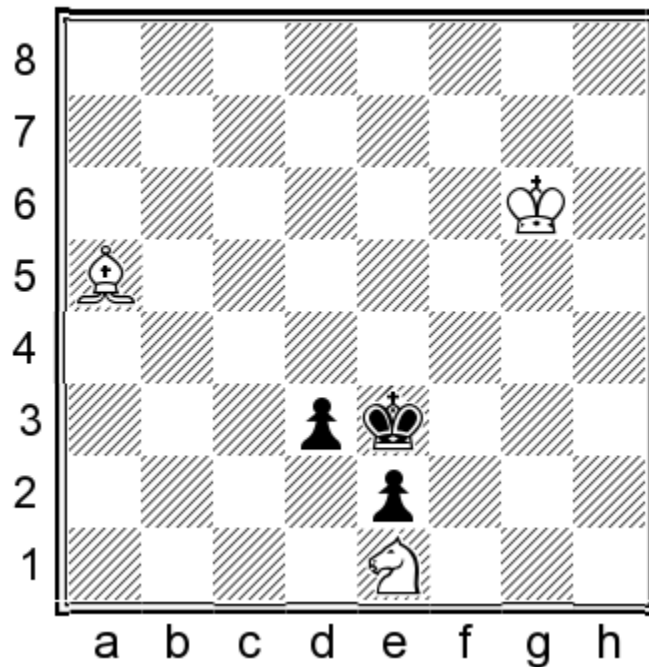Only now does White have time to bring his king closer.

6...♔c3 7.♗d8

The bishop has to approach from the other side to stop the d-pawn.

7...♔d2

After 7...d2 8.♗a5+, the d-pawn is lost.

8.♗a5+ ♔e3

But now what?

9.♔f5

Again, the king comes closer.

9...d2

To avoid a blockade of his pawns, Black is forced to erect a second self-block.
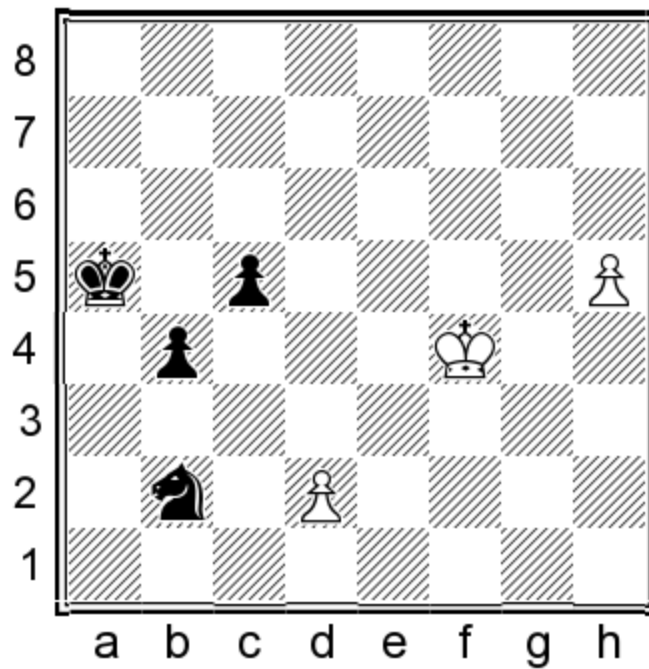
10.♗b6#

A pretty mate.

Study 35 - Vasily and Mikhail Platov

Vasily and Mikhail Platov
Deutsche Schachzeitung 1906

White to play and win

The Platov brothers are known – besides Troitzky and Kubbel – as the founding fathers of the modern endgame study. Mikhail (1884-1942) and Vasily (1881-1952) completed grammar school in Riga and then moved to Moscow. Mikhail became an engineer, Vasily an epidemiologist. In the years 1903 to 1905, they composed studies separately; after that they cooperated almost exclusively for a while, composing over 180 studies.

In the study presented here, White's task is clear: he has to promote his pawn.

1.h6 ♞d3+

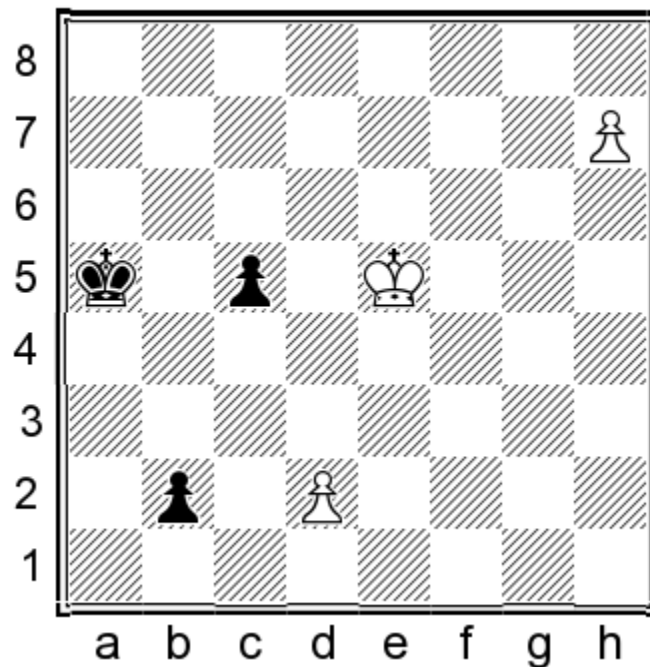The only way to make it difficult for White.

2.♔f5

The only good square for the king. White has to keep controlling the e5-square. The alternative 2.♔e4 is insufficient for the win in view of 2...♘f2+ and White's king has no good squares.

2...♘e5!

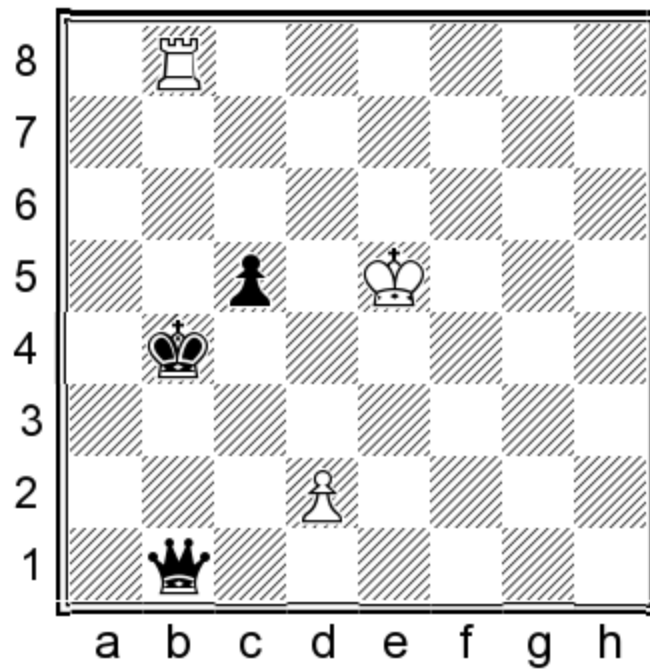A knight sacrifice with a deep point.

3.♔xe5 b3 4.h7 b2

5.h8♖!

Black's second move was based on the fact that White can't promote to a queen here. After 5.h8♕? b1♕ 6.♕a8+ ♔b5 7.♕b7+ there follows 7...♔c4 when taking the queen stalemates Black. For this reason, White has to promote to a rook.
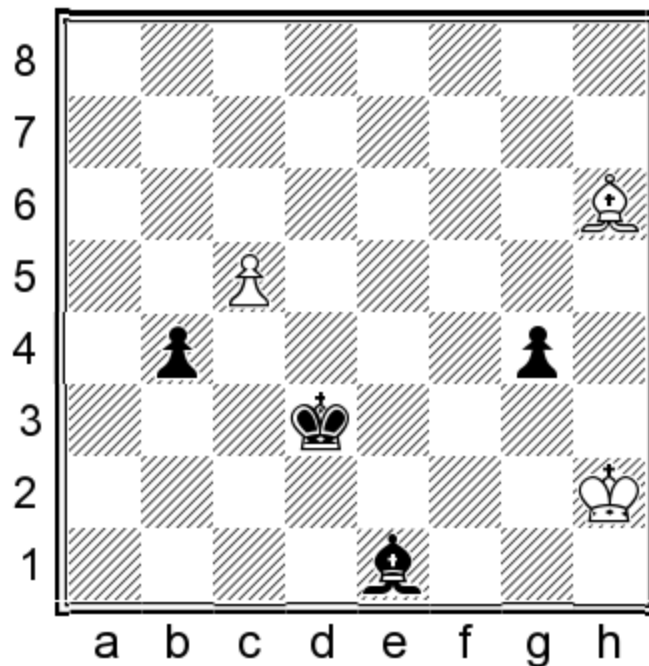
5...b1♕ 6.♖a8+ ♔b4 7.♖b8+ 1-0

Seventy years after Calvi and eleven years after Saavedra, the Platov brothers succeeded in creating a feasible scheme for a study with a rook promotion. It has been adapted in many different variations in later studies.

Study 36 - Vasily and Mikhail Platov

Vasily and Mikhail Platov
Deutsche Schachzeitung 1906

White to play and win

The Platov brothers also created a scheme for a study with a bishop promotion – again, seventy years after Calvi. They published the study given here together with the previous one, as a pair.

Black sacrifices a piece to enable the stalemate construction in this study as well. White's first move is obvious:
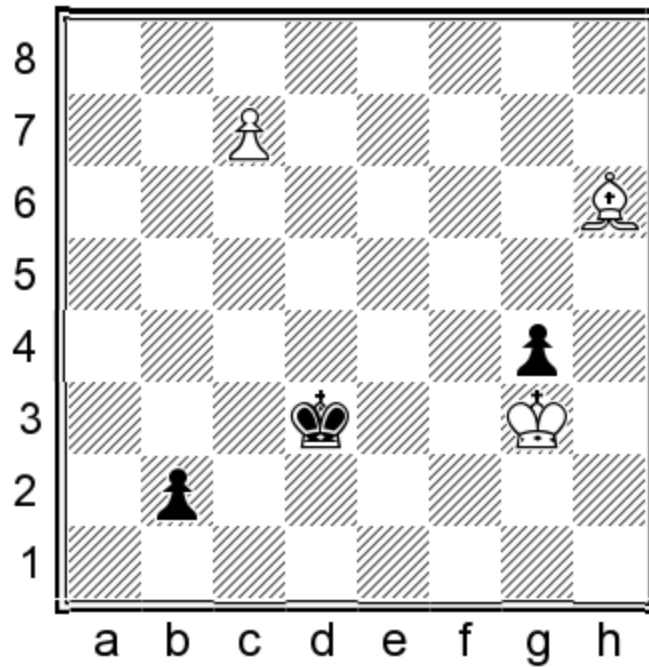
1.c6

It is now surprisingly difficult to keep the struggle going. Black's b-pawn is in the way of his bishop stopping White's c-pawn, and after the mutual promotion White has a devastating check on f5. However, Black has a resource:

1...b3 2.c7 ♗g3+!

The counterpart of 2...♘e5 in the previous study. Black sacrifices his bishop to play for stalemate.

3.♔xg3 b2

4.c8♗!

The only way to win, but it isn't immediately clear why 4.c8♕ b1♕ 5.♕f5+ doesn't win. Black naturally plays 5...♔e2, and now White can't take the black queen due to stalemate. However, he can continue 6.♕xg4+, and now Black has to find the right square for the king on every move. After 6...♔e1 7.♕e6+ ♔d1 8.♕d5+ ♔c2 9.♕e4+ ♔b2 10.♗g7+ ♔c1 White doesn't get any further.

4...♔e4
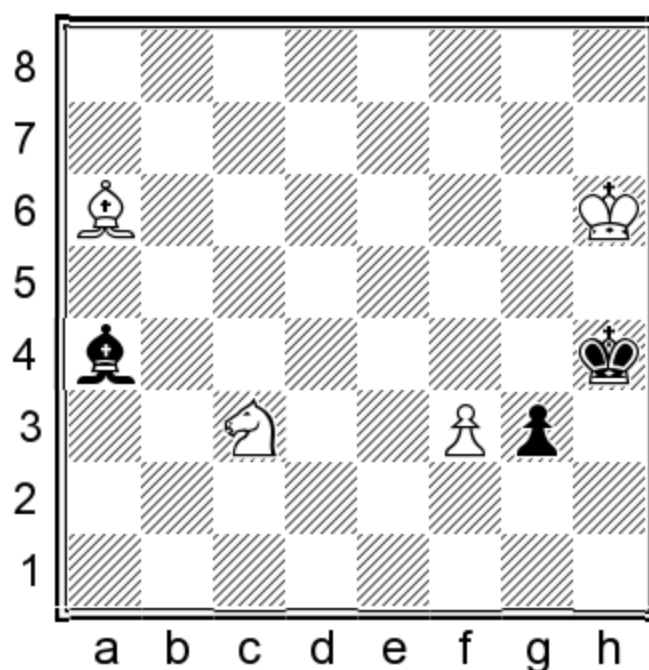
A final attempt.

5.♔xg4 b1♕ 6.♗f5+ 1-0

This bishop promotion scheme has been re-used later by various endgame study composers.

Study 37 - Ernest Pogosyants

Ernest Pogosyants
Shakhmatnaya Moskva 1961

White to play and win

Ernest Pogosyants (1935-1990) was the most productive endgame study composer ever. He has more than two thousand studies in the database. This had to do with the fact that for many years he had a daily column in a Russian newspaper in which he published a new chess puzzle every day for years. As a consequence, many of his studies are mere trifles. However, he also composed excellent studies which capture the imagination; it is no coincidence that he was a friend of Mikhail Tal. The study given here is one of his best; this is my version of it. I have added two moves to enrich it.
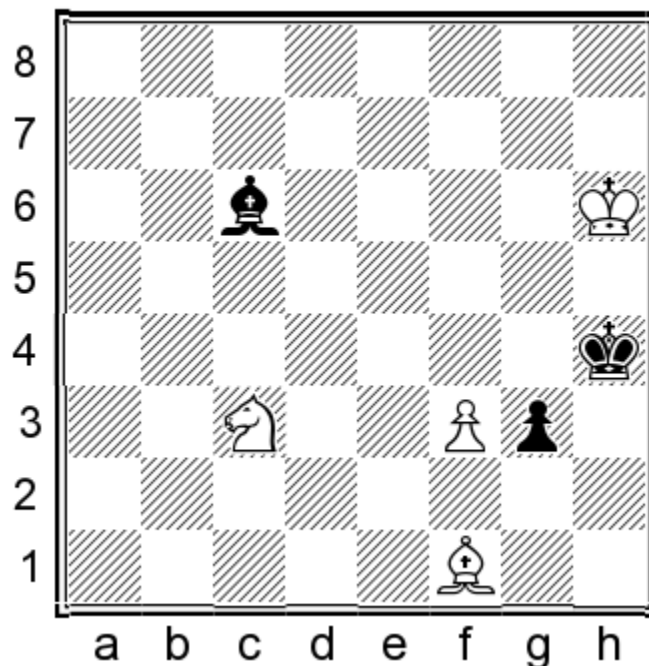The first move is clear: White will have to stop the g-pawn.

1.♗f1

And now Black has to move his bishop:

1...♗c6

The alternative was 1...♗d7. Now White has to watch out. He has to continue 2.♗g2, cutting off the black king from the playing field. (But not 2.♘d1 in view of 2...g2! 3.♗xg2 ♔g3 and a draw is inevitable.)

2.♘e4!

Centralizing the knight is necessary. If White thoughtlessly protects the f-pawn with 2.♗g2, Black has the surprising 2...♗xf3! 3.♗xf3 ♔h3 and now White can't keep Black's g-pawn under control. After 4.♘e2 g2 5.♘f4+ ♔g3, it's a draw.
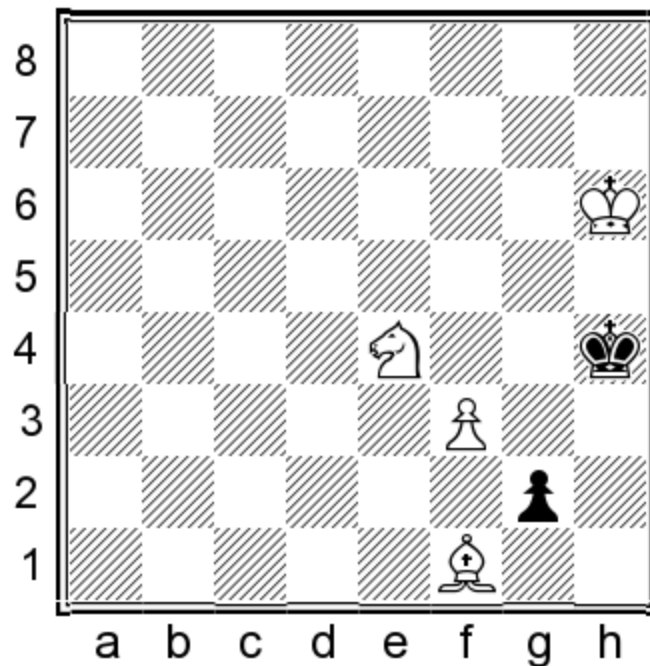
2...♗b5

Forcing the white bishop to move to g2.

3.♗g2 ♗f1!

The point of the previous move becomes clear. Black sacrifices his bishop to play for stalemate.

4.♗xf1 g2

Now what? White has a highly elegant answer to this question.

5.♘g3!

An unbelievable move; while his bishop is under attack, White also puts his knight en prise. The idea behind the knight move is not only to prevent stalemate but also to introduce an unexpected mating motif into the position.

5...g1♕

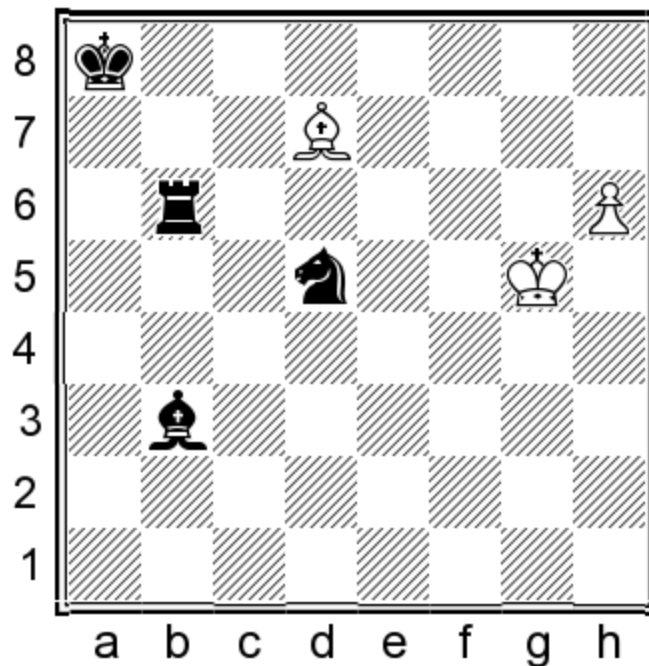5...♔xg3 was also hopeless, since after 6.♗xg2, the f-pawn is defended.

6.♘f5

Mate.

Study 38 - Jean De Villeneuve Esclapon

Jean De Villeneuve Esclapon
Schweizerische Schachzeitung 1923

White to play and draw

Like David Joseph, the French count Jean De Villeneuve Esclapon (1860-1943) owes his fame mainly to one study. The count had a great predilection for composing, and there are 143 studies by him in the database. No, his other studies do not contain many interesting ideas, but this one first-prize study is fantastic. There are no less than seven versions of it. In the original study, there is also a white knight on the board that has no function, and it is captured in the course of the solution. I have selected here the version by the Dutch endgame study composer Jan van Reek. White is a lot of material down, but his h-pawn is an important trump card.

1.h7 ♖b8 2.♗e6!

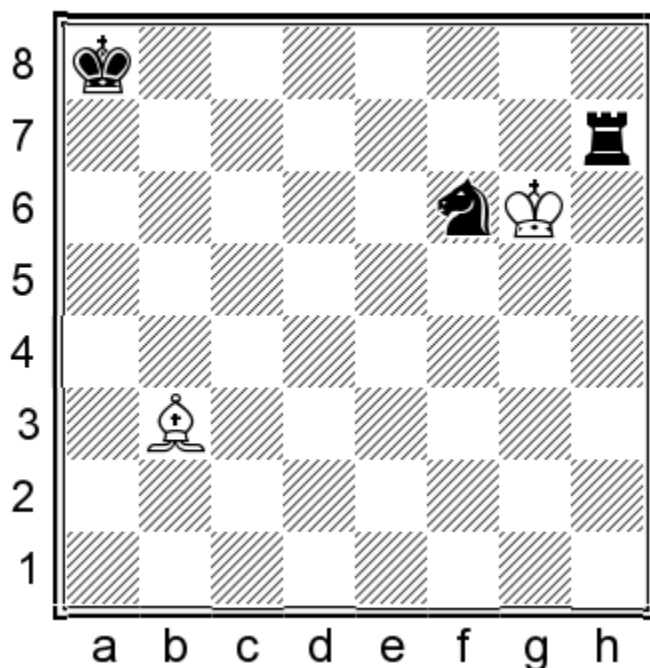With this bishop move, White pins the enemy knight, disturbing the coordination in Black's camp.

2...♖h8

The best try. After 2...♞f6 3.♔xf6 ♗xe6 4.♔g7 it would be an immediate draw.

3.♔h6 ♞f6

Now we see some skirmishes of unique elegance and beauty.

4.♗xb3 ♖xh7+ 5.♔g6

Now Black has to attack the bishop to avoid an immediate draw:

5...♖h3

The alternative 5...♖b7 is also met with 6.♗e6. If the knight moves, White has a pin along the long diagonal.

6.♗e6

Attacking the rook.

6...♖f3

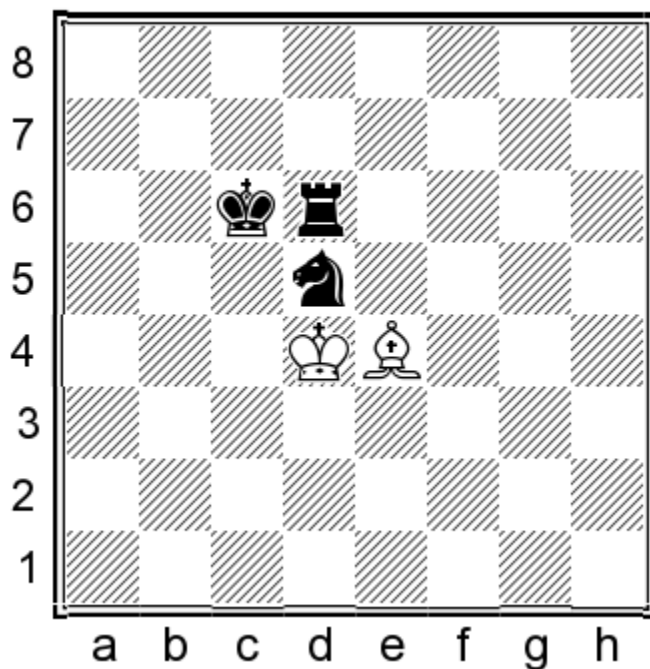Thus, Black protects the knight, but White's resources are not exhausted yet.

7.♗f5!

Attacking the knight again.

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7...♘d5 8.♗e4 ♖f6+ 9.♔g5 ♖d6

Black has managed to save the knight, but White has a saving manoeuvre:
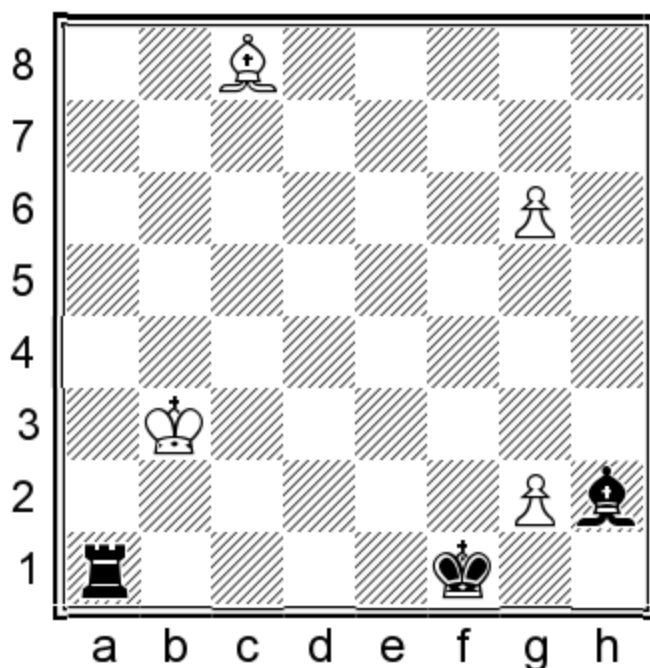
10.♔f5 ♔b7 11.♔e5 ♔c6 12.♔d4!

The saving king move. By keeping the black king from c5, White establishes an 'eternal pin'. Black is a full rook up, but he cannot win. There is a variation on this eternal pin: with a black rook instead of the knight on d5 and the white king on c4 it is a draw as well. White always has bishop moves on the long diagonal.

Study 39 - Vasily Dolgov

White to play and win

Vasily Dolgov (1924-) is the oldest living endgame study composer today. He is no longer active; his last known study dates from 2001. Before that, he composed almost four hundred studies. Dolgov is an absolute master in studies on the theme of the systematic manoeuvre. The study given here is his best achievement.
The starting move is obvious:

1.g7

Now it's all about whether Black can prevent promotion.

1...♖b1+ 2.♔a4

Not 2.♔c2 in view of 2...♖b2+! 3.♔c1 ♗f4+ 4.♔xb2 ♗e5+ with a draw.

2...♖a1+

Black has to keep giving checks.

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3.♔b5 ♖b1+ 4.♔a6

White has to keep avoiding the c-file as otherwise Black has a saving rook check on c1.

4...♖a1+ 5.♔b7 ♖b1+ 6.♔a7

The white king has moved a long way up; for the moment, Black's rook checks are exhausted.
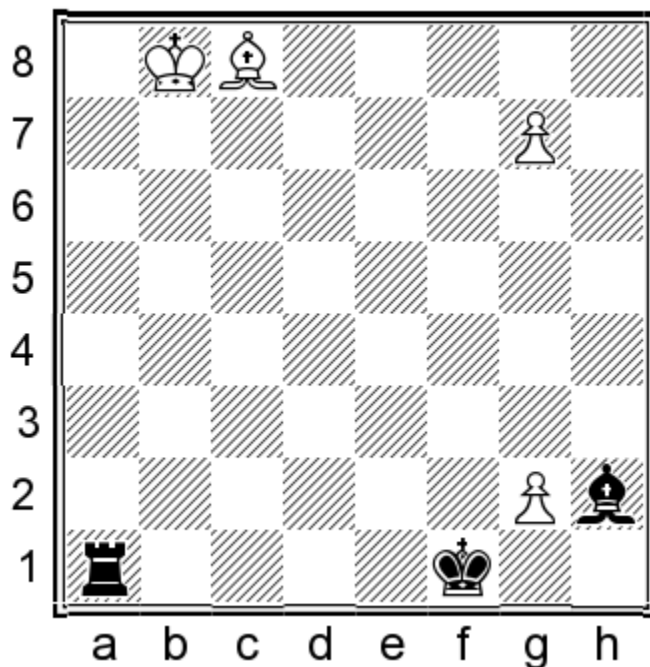
6...♗g1+

The only way, since after 6...♖a1+ 7.♗a6+ White wins right away.

7.♔a8

The king needs the corner square in the systematic manoeuvre.

7...♖a1+ 8.♔b8 ♗h2+

Again, Black has to give check with the bishop. After 8...♖b1+ 9.♗b7 ♗h2+ 10.♔c8 ♖c1+ 11.♔d8 ♖d1+ 12.♔e7 ♖e1+ 13.♔f7 White wins without effort.

9.g3!

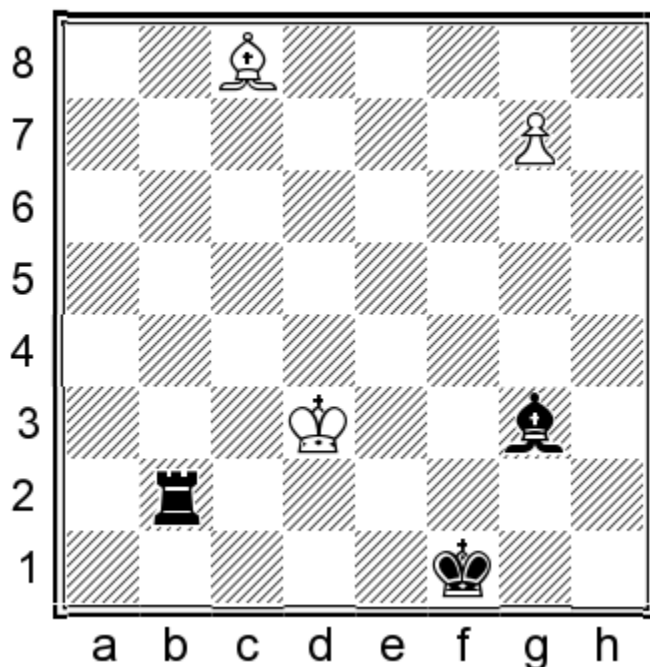The climax of the study. The black bishop is lured to g3.

9...♗xg3+ 10.♔b7 ♖b1+ 11.♔a6 ♖a1+ 12.♔b5

Now the white king moves backwards. Only later we will see why.

12...♖b1+ 13.♔a4 ♖a1+ 14.♔b3 ♖b1+ 15.♔c2

Now, this is possible.

15...♖b2+ 16.♔d3

Only here does the point of White's play become clear: the g3-square is inaccessible for Black's rook.
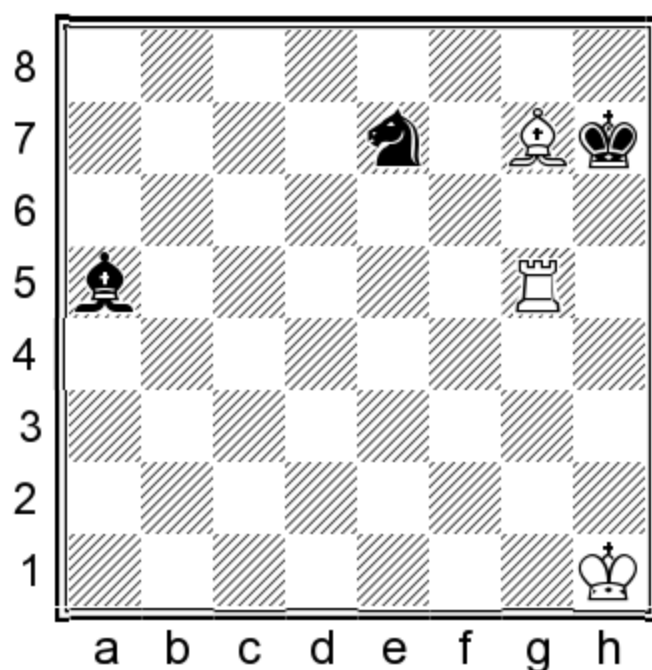
16...♖b3+ 17.♔e4 ♖b4+ 18.♔f5 ♖b5+ 19.♔g4 1-0

This move is given in the solution, but 19.♔g6 also suffices, and even leads to mate one move quicker. Then, 19...♗f4 runs into 20.♗a6 and White wins.

Study 40 - Tigran Gorgiev

Tigran Gorgiev
Shakmaty 1929

White to play and win

Tigran Gorgiev (1910-1976) was an Armenian by origin; at the beginning of the Second World War, he flew to Kazakhstan. After the war, he settled in Ukraine, where he earned a great reputation as a microbiologist. Gorgiev has a large number of magnificent endgame studies to his name. The one given here is his best known; there are four versions of it.

Originally, Gorgiev had the white king on f1 and the rook on g1. In that case, however, White also has other ways to win; not all positions with this material balance are drawn. This can be remedied by adding a black pawn somewhere, as has been done in two versions. However, that would be a shame. Without pawns, this is a so-called 'aristocratic study', and that's how it should stay.

That is why I have opted for my own version, which deviates slightly from the existing one.

1.♗f6

White cannot take the black bishop, since then his own bishop will be hanging. Other bishop moves do not suffice. After 1.♗b2 ♗d8 Black is safe.
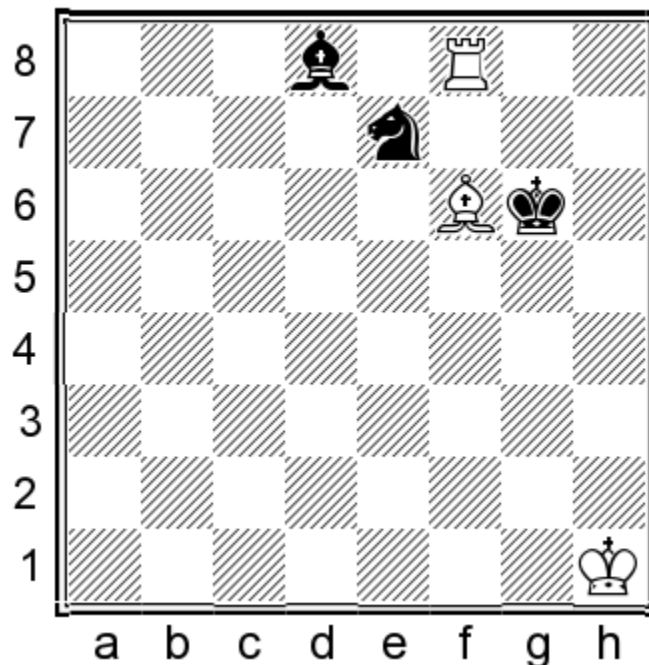
1...♗d8

The only way to save both pieces.

2.♖g7+

If White retreats the rook with 2.♖g2, 2...♘c6 saves Black.
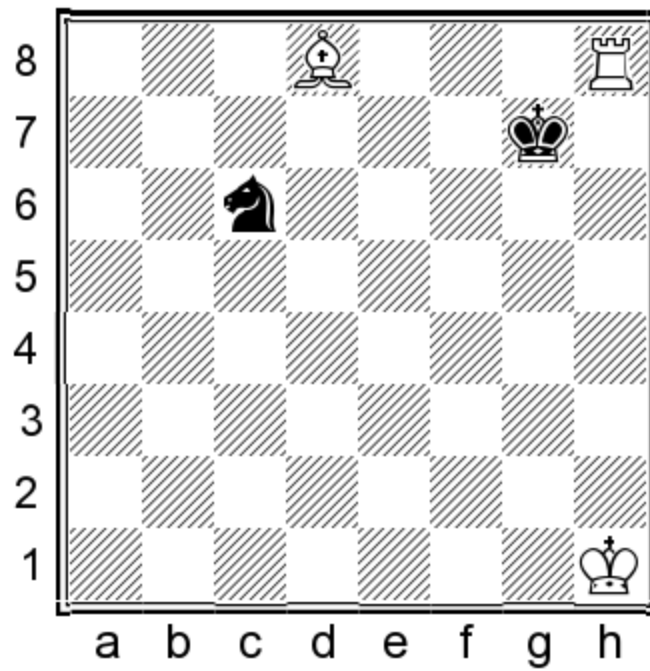
2...♔h6 3.♖f7 ♔g6

Black can't unpin the knight with 3...♘c6 in view of 4.♗xd8 ♘xd8 5.♖d7 ♘e6 6.♖d6 and White wins.

4.♖f8

It seems as if the race is run, but Black has another resource up his sleeve:

4...♘c6 5.♗xd8 ♔g7 6.♖e8 ♔f7 7.♖h8 ♔g7

Now what?

8.♗f6+!

An elegant final point.
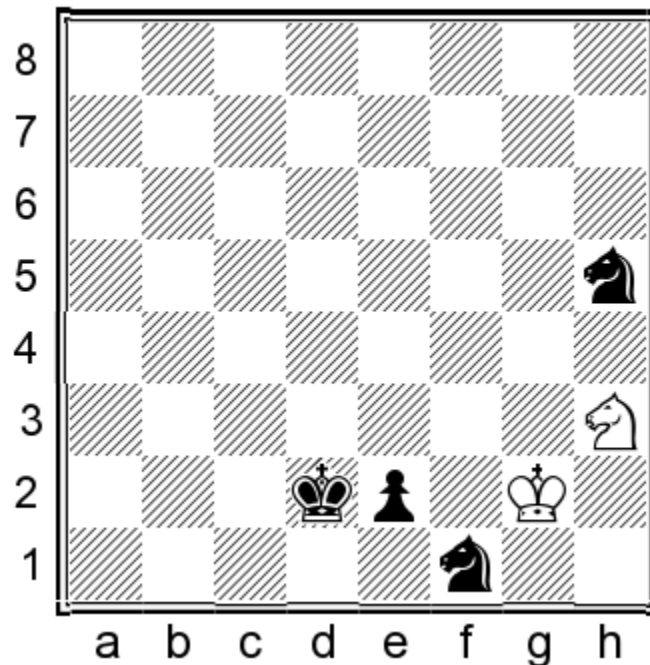
8...♚xf6 9.♖h6+ 1-0

Chapter 3
More complicated studies

Study 41 - Alexander Herbstman and Leonid Kubbel

Alexander Herbstman and Leonid Kubbel
Leningrad Central Chess Club Tourney 1937

White to play and draw

Alexander Herbstman (1900-1982) was a philology professor. Alongside his work, he had enough time to compose endgame studies – more than 300 in total. In 1925, he met Kubbel in Leningrad, and the two became friends. Together they composed a famous study, based on Troitzky's discovery that three knights can win against one. They sent in their study to a tournament where Troitzky was the judge. The great man of endgame studies awarded them first prize. This study contains no less than five stalemate motifs.

1.♘g1

The only way to prevent the promotion of the e-pawn. Now Black has a choice between two knight checks.

1...♞e3+

The best attempt. After 1...♞f4+ 2.♔h1 e1♞ 3.♞f3+! White forces either stalemate or the trade of one pair of knights.

2.♔h3!

The only king move; after 2.♔h2 e1♞ White would be lost.

2...♞f4+

The second stalemate motif arises after 2...e1♞ 3.♞f3+.

3.♔h2! ♞g4+

If Black opts for 3...e1♞, White draws with 4.♞f3+ ♞xf3+ 5.♔g3. Here there is no stalemate, but White simply wins one of the black knights.
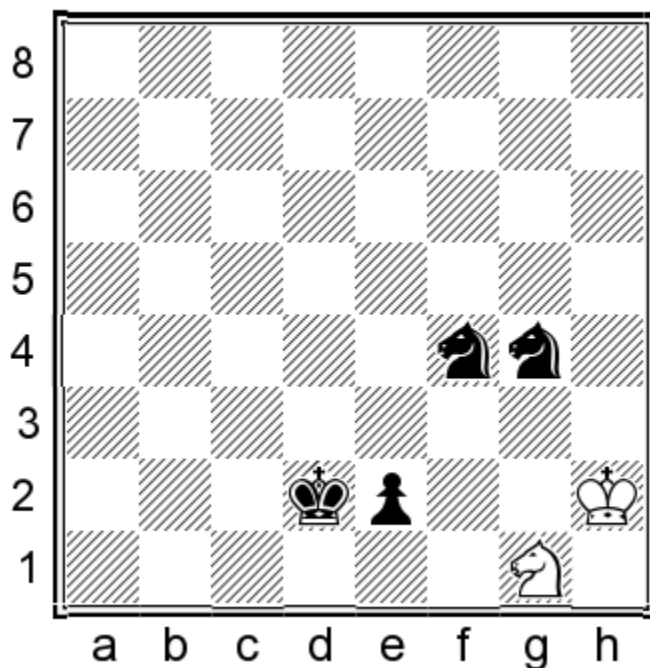
4.♔h1!

White has to find the right square for his king every time.

4...♞f2+

The third stalemate motif comes on the board when Black promotes to a queen, and after 4...e1♞ 5.♞f3+ we see the fourth stalemate.

5.♔h2 e1♞ 6.♘f3+ ♞xf3+

Three knights in a row!

7.♔g3

And so White forces the fifth, most spectacular stalemate. There is only one way for Black to defend all three knights:

7...♚e3

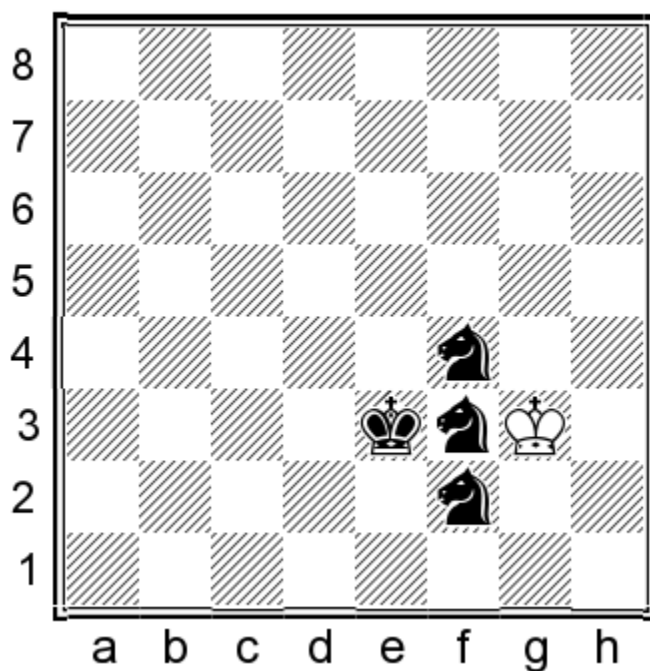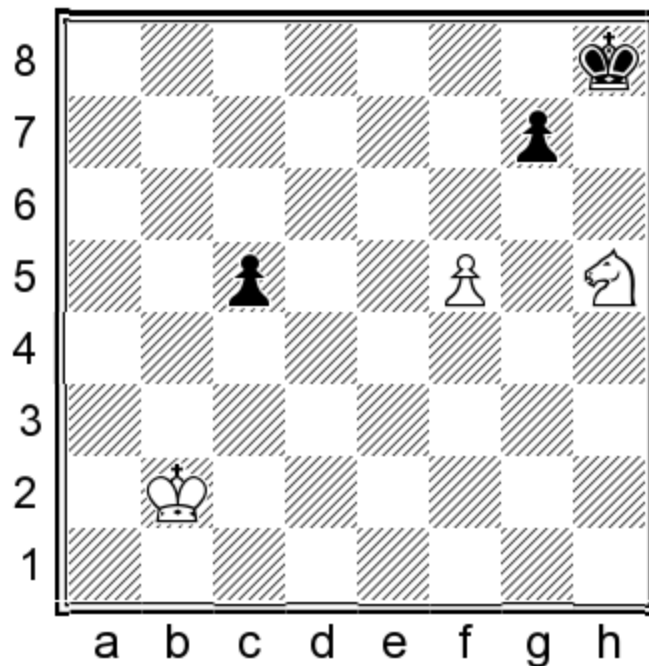A fantastic stalemate position: the three knights control all the squares on the g- and h-files.

Study 42 - Paul Farago

Paul Farago
Magyar Sakkvilag 1940

134

White to play and win

Paul Farago (1886-1970) was born in Hungary, but moved to Romania when he was 24. He composed more than 300 studies. Farago was also active as a chess publicist. Both in Revista Romana de Sah and in Magyar Sakkvilag, he had a monthly column about endgame studies. In 1956, he published the book Idei Noi in Sahul Artistic ('New Ideas in Romantic Chess'). In general, Farago's studies are complicated and hard to fathom, but this is not the case with the following miniature.

Obviously, it is highly important for White to maintain his f-pawn.

1.♔c3

A logical starting move; White brings his king closer. Still, it is interesting to check why 1.♔b3 doesn't win. If we follow the main line of the study, it turns out that after 1...♔g8 2.♘f6+ ♔f7! 3.♘g4 ♔e7 4.♔c3 ♔d6 5.♔c4 ♔c6 White cannot make any progress.

1...♔g8

The alternative 1...♔h7 loses to 2.♘f4 ♔h6 3.♘e6 and Black's king remains cut off.
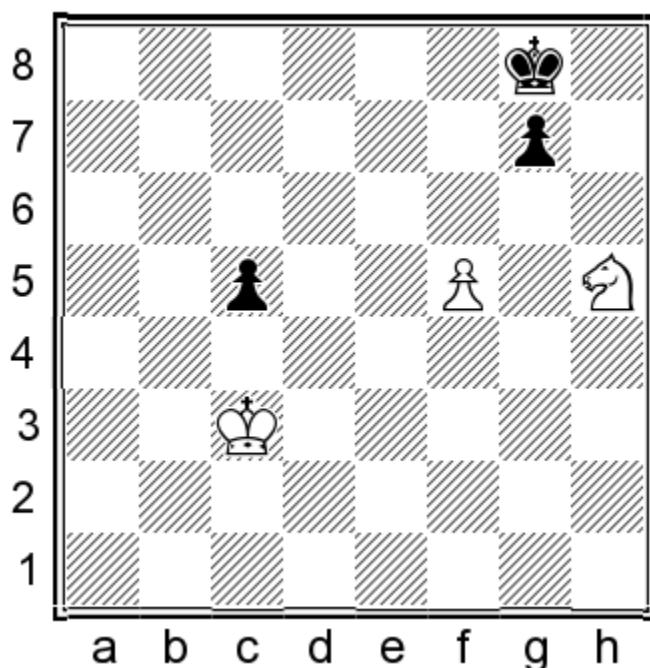
2.♘f6+!!

A fantastic move. White sacrifices his knight to reach a winning pawn ending. Insufficient for the win is 2.♘f4 in view of 2...♔f7 3.♘d5 g6 4.f6 g5 5.♔c4 g4 and White cannot maintain his f-pawn.

2...gxf6

On 2...♔f7, White continues 3.♘g4!. The knight is much better on g4 than on d5. Also, importantly, White is going to centralize his king; 3...♔e7 is met by 4.♔d3! ♔d6 5.♔e4 and Black is forced back. Here we see the difference with the variation I gave after White's first move.

3.♔c4 ♔g7 4.♔xc5

The white king collects a pawn along the way.

4...♔h6 5.♔d6 ♔h5
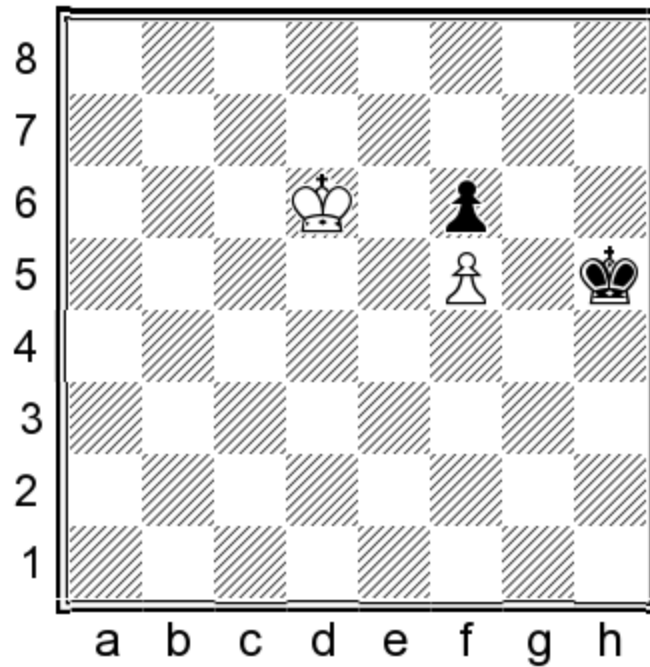
6.♔e7!

The final finesse. White is going to force zugzwang.

6...♚g5 7.♔e6 1-0

Study 43 - Richard Réti

Richard Réti
Hastings and St.Leonards Post 1922

White to play and win

During the annual Hoogeveen tournament – I think it was in 2015 – the position after White's first move of this study was depicted on a coffee mug. This was a pleasant surprise; the artist must have had a fin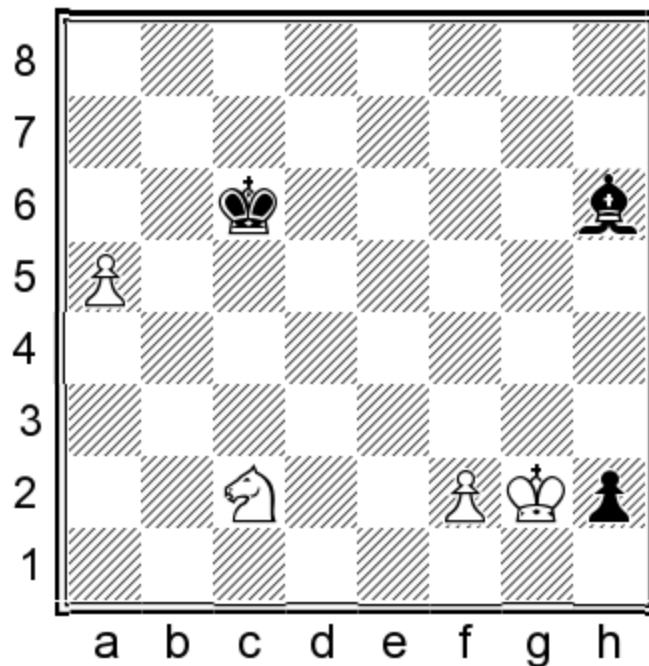e eye for that other artistic calling, the endgame study. I asked a colleague grandmaster if he recognized the position, but the penny didn't drop.

This study illustrates the theme of domination in a most convincing way. The first move is obvious:

1.♘d4+

Centralization. It is important for White to control the b5-square.

1...♔c5

The alternative 1...♔b7 would not pose any problems for White. He wins simply with 2.♔xh2, e.g.
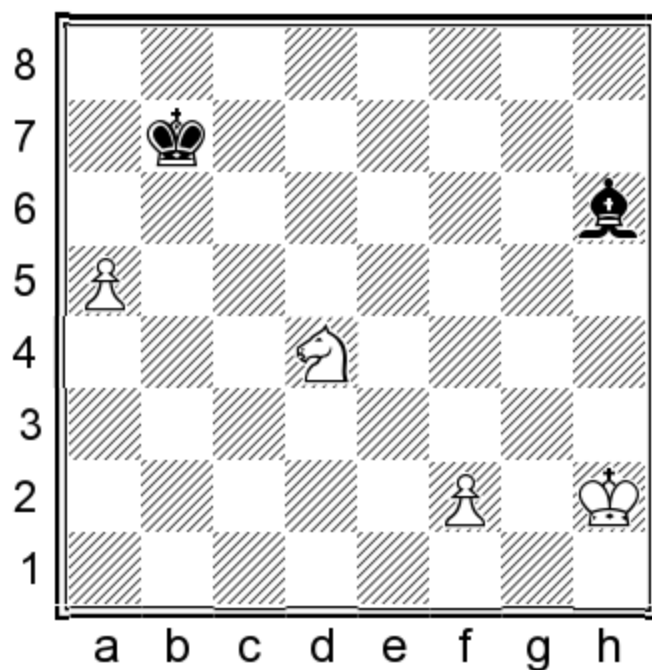
2...♔a6 3.♘b3 ♗f4+ 4.♔h3 (4.♔g2 ♗b8 5.♔f3 ♔b5 6.♘d4+ ♔a6
7.♔e4 ♗c7 8.♘b3 is also winning) 4...♗b8 5.♔g4 ♔b5 6.f4 ♔b4
7.f5 and White's passed pawns decide the issue. After the text
move, White has to come up with something special, since knight
moves do not suffice.
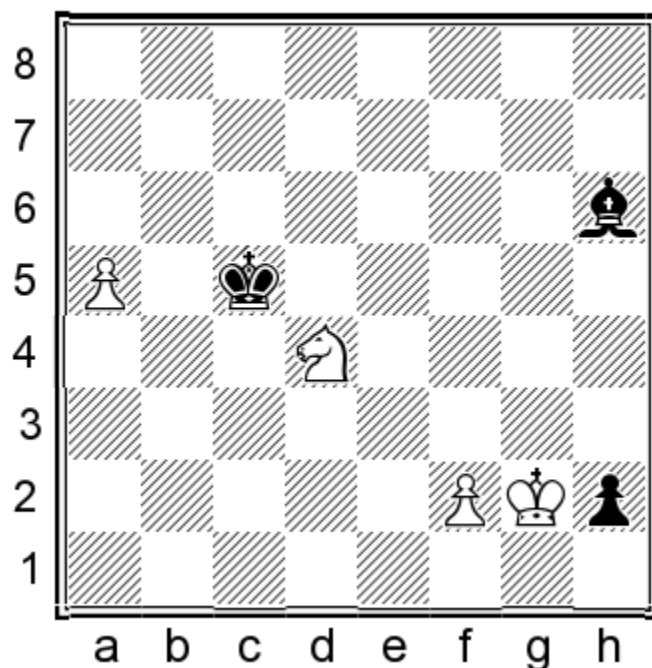
2.♔h1!!

A famous king move that puts Black in a fatal zugzwang. The black bishop has six squares, but after every move there is a lethal knight check on either b3 or e6. White's centralized knight dominates the board. Please note that this is no mutual zugzwang. If it were White's move, he could move his king back to g2.

2...♗f8 3.♘e6+ ♚b5 4.♘xf8 1-0

Study 44 - Jindrich Fritz

Jindrich Fritz
Prace 1953
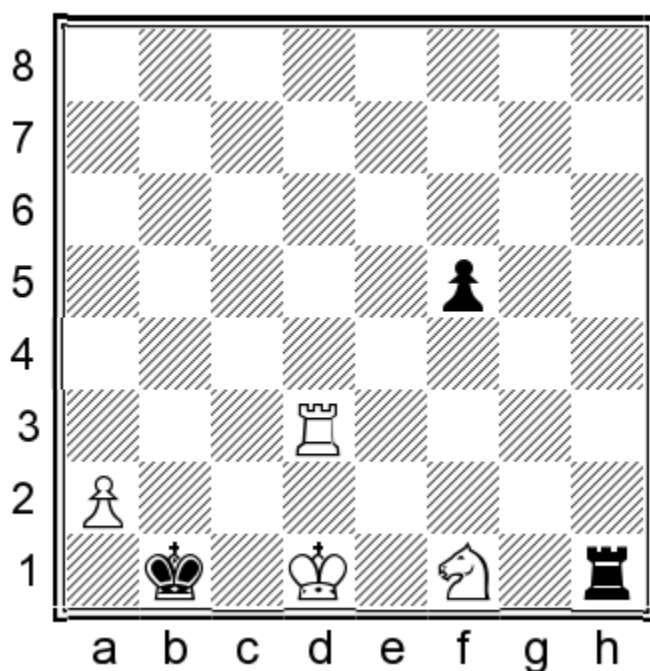
White to play and win

Jindrich Fritz (1912-1984) was, next to Ladislav Prokes, the most prominent Czech engame study composer. He was very productive: there are more than 550 studies by him in the database, 21 of which

earned first prizes in tournaments. In general, Fritz composed studies with few pawns on the board, but this is not the case with his most famous study, which I present here. Four versions of this miniature exist; I have selected the one by Ghenrikh Kasparian.
It is clear that both White's knight and his a-pawn are under attack, and therefore a draw seems inevitable. And it would indeed be a draw without the black f-pawn. However, as it is, White has a deep finesse:

1.a3!

An innocent-looking little move, but nevertheless the only way to win. In the original version by Fritz, there was a bishop on f1. There, White could defend the bishop with 1.♖f3, with a theoretically winning endgame.

1...♖xf1+ 2.♔e2
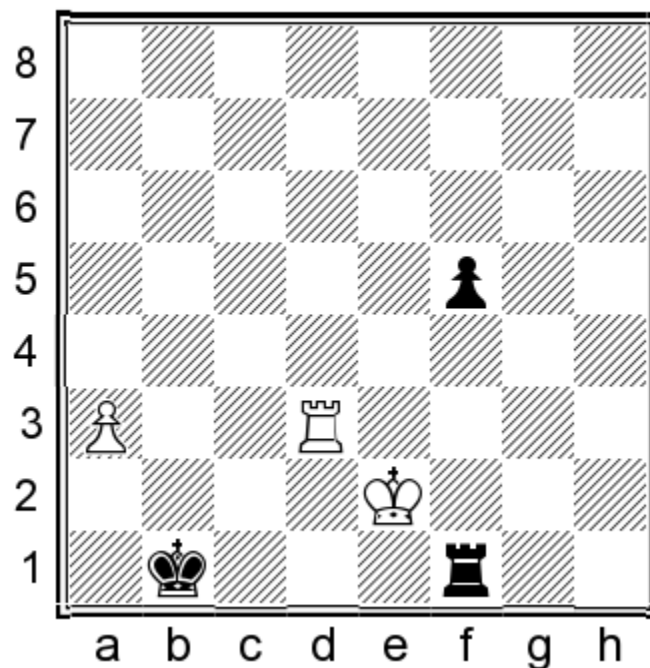
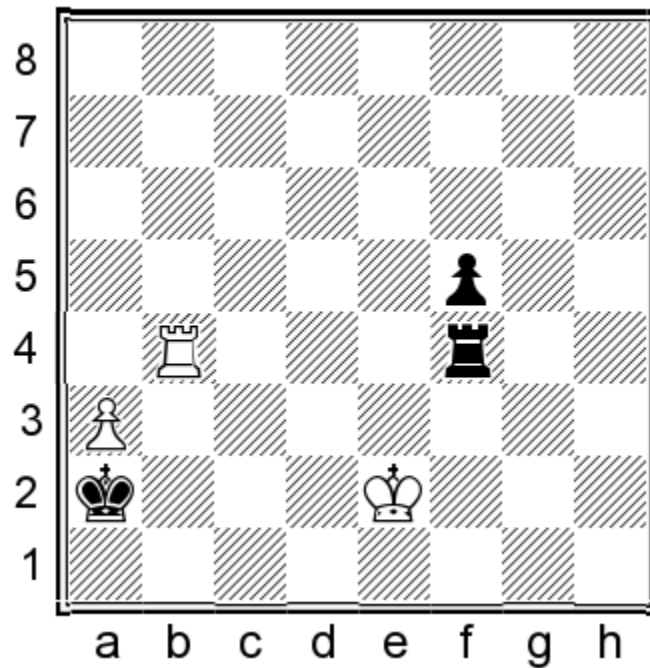An unbelievable situation – the black rook is caught.

2...♖f4

The alternative 2...♖h1 fails to 3.♖d1+ and White wins.

3.♖b3+ ♔a2 4.♖b4

The point of the first move. Black's rook has no squares since his f-pawn is in the way.

4...♖e4+
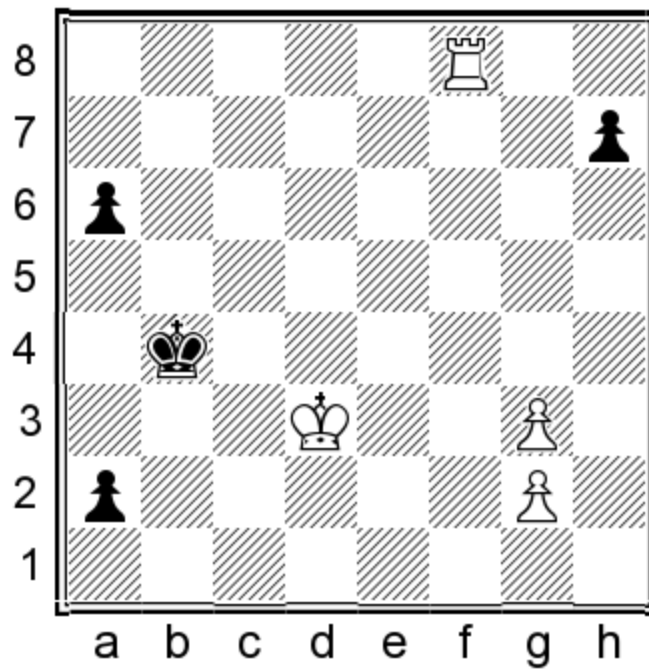
Or 4...♖xb4 5.axb4 and White wins.

5.♖xe4 fxe4 6.a4 1-0

Now the a-pawn has free passage.

Study 45 - Pal Benko

Pal Benko
Magyar Sakkelet 1980

White to play and win

Pal Benko (1928-2020) was a strong grandmaster who took part in two Candidates tournaments. When he was 40, as his competitive ambitions were diminishing, he started getting involved in the world of chess compositions. It seems as if he took pleasure in everything, even helpmate constructions – which are abhorrent to me personally. Benko excelled in the area of the endgame study. He composed accessible studies, attractive for practical players. In the study presented here, he combines an old idea by Polerio with an elegant mate motif.

1.♖f1 ♚b3 2.g4!

An important little move. Obviously, White is unable to stop the foremost a-pawn, and therefore he prepares a rook sacrifice on a1. Next, he will put his king on c2, after which Black only has pawn moves left. The text move limits Black's choice of those.

2...♔b2 3.♖f2+

White could already play 3.♖a1 here, a rook sacrifice that was found already in 1590 by Polerio. However, it doesn't win after 3...♔xa1 4.♔c2 h6! when the tempo play works out exactly in Black's favour. This becomes clear after 5.♔c1 a5 6.♔c2 a4 7.♔c1 h5! 8.g5 h4 9.g6 h3 10.gxh3 a3 and stalemate is unavoidable.

3...♔b3

The alternative 3...♔b1 would be met with 4.♔c3! a1♕+ 5.♔b3 and Black gets mated; his a-pawn is in the way.
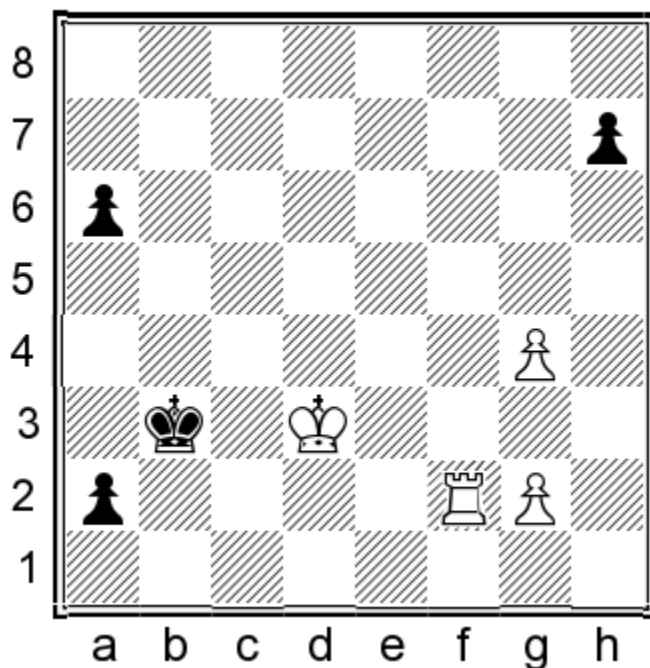
4.♖f6!!

The climax of this study. Since Black cannot promote here either, he has to push his a-pawn, and then the tempo play does work out well for White after Polerio's rook sacrifice. Such a move, anticipating developments that don't come to light until much later, are called 'foresight' in study jargon.

4...a5 5.♖f1 ♔b2 6.♖a1!

Only now does White make the sacrifice.

6...h6

There is no hurry to take the rook, but White has enough tempo moves.

7.♔d2 ♚xa1 8.♔c1 h5
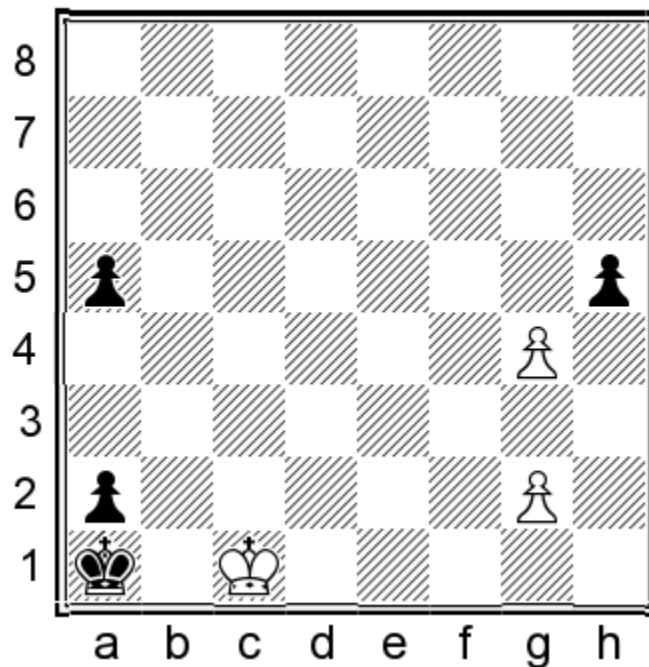
9.g5!

Naturally, White ignores the h-pawn; otherwise it would end in stalemate after all.

9...h4 10.g6 h3 11.gxh3

Now White does take, of course.

11...a4 12.g7 a3 13.♔d2

Thus removing the stalemate.

13...♚b2 14.g8♕ a1♕ 15.♕g7+

The white queen now zigzags her way to the checkmate square.

15...♚a2 16.♕f7+ ♚b2 17.♕b7+ ♚a2 18.♕d5+ ♚b2 19.♕b5+ ♚a2 20.♕c4+ ♚b2 21.♕c2

Mate.

Study 46 - Alois Wotawa

Alois Wotawa
Deutsche Schachzeitung 1954
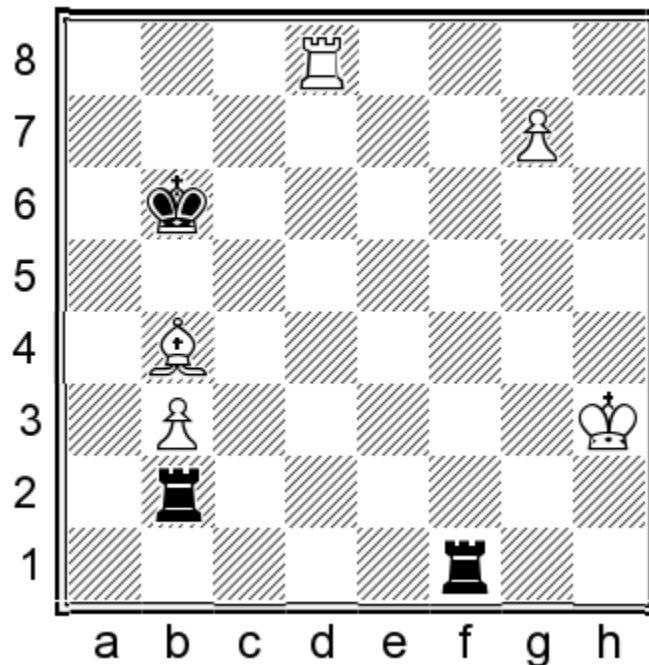
White to play and win

Alois Wotawa (1896-1970) was an Austrian judge who prosecuted Nazi leaders in Nuremberg. He was also a very good and especially interesting endgame study composer. His studies always contain all kinds of unexpected twists and tactical resources. Wotawa was very productive in the area of endgame studies; the databases contain 480 studies by him. He compiled a number of them in his book Auf Spurensuche mit Schachfiguren ('Searching for Clues with Chess Pieces'). The study presented here has an ingenious idea. This is my version; I have added the first two moves to work slowly towards the climax of the study.

1.♖d2

It is of paramount importance to control the second rank. After 1.g8♕ ♖h1+ 2.♔g4 ♖g1+, a draw would be inevitable. Black first captures on g8 and then on b3.

1...♖h1+

The only chance. After 1...♖xb3+ 2.♔h2 or 2.♔g2 White would promote undisturbed.
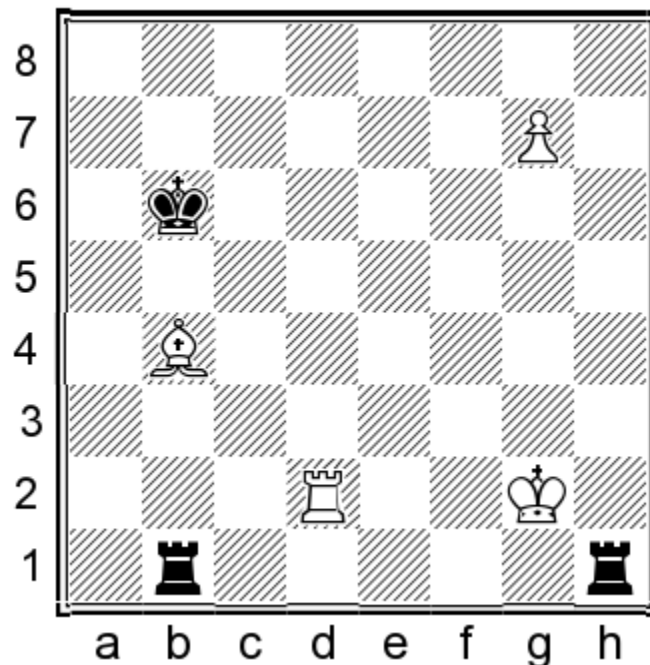
2.♔g2 ♖bb1

Now it begins.

3.♔g3!

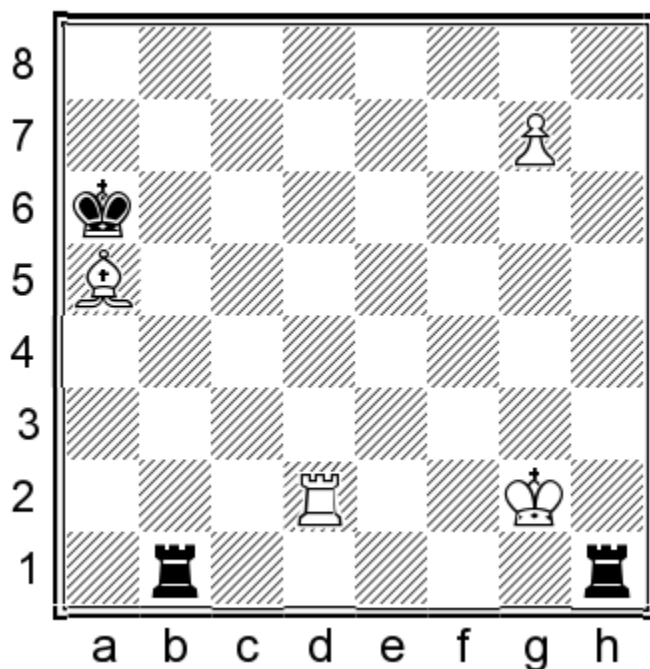Forcing Black to take the b-pawn.

3...♖xb3+ 4.♔g2! ♖bb1

The same position as two moves earlier, but now without the b-pawn. Now White is going to sacrifice his bishop.

5.♗a5+! ♔a6

The point of the bishop sacrifice comes to light after 5...♔xa5 6.♖a2+. The black king has to go to the b-file, and then follows a rook check on b2, with the same consequences as in the main line.

6.♗b6!

This second sacrifice looks like Mattison's move 3.♗a7!! (see Study No. 12), but is just a little different. Because the bishop now controls the g1-square, Black has no choice.

6...♔xb6

And now we have the same position without the white bishop and b-pawn. The b-file has become available for the white rook.

7.♖b2+ ♖xb2+ 8.♔xh1

The rest is simple; White is going to walk up the board with his king.

8...♖b1+ 9.♔g2 ♖b2+ 10.♔f3 ♖b3+ 11.♔f4 ♖b4+ 12.♔f5 ♖b5+ 13.♔f6 1-0

Study 47 - David Gurgenidze

David Gurgenidze
Schach 1981
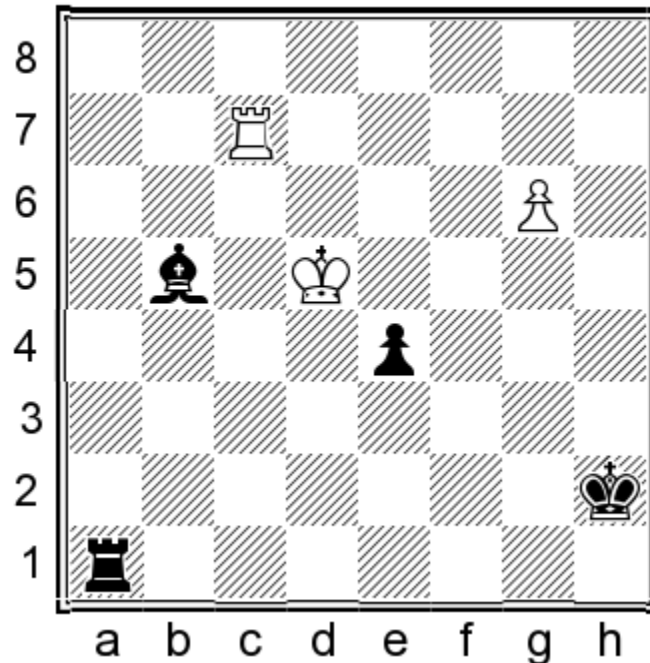
White to play and win

We have already seen a beautiful rook ending by Gurgenidze. In this miniature, he adds another element: the principle of foresight we saw in Study No. 45. Formally, this study is not a rook ending since Black still has a bishop in the starting position. However, it will soon be sacrificed.

Obviously, White has to start with a rook check to block the g-file.

1.♖h7+ ♔g3 2.g7

It seems as if Black has no defence now, since 2...♖a8 is met by 3.♖h8. However, there is a hidden resource in the position:

2...♗c6+!
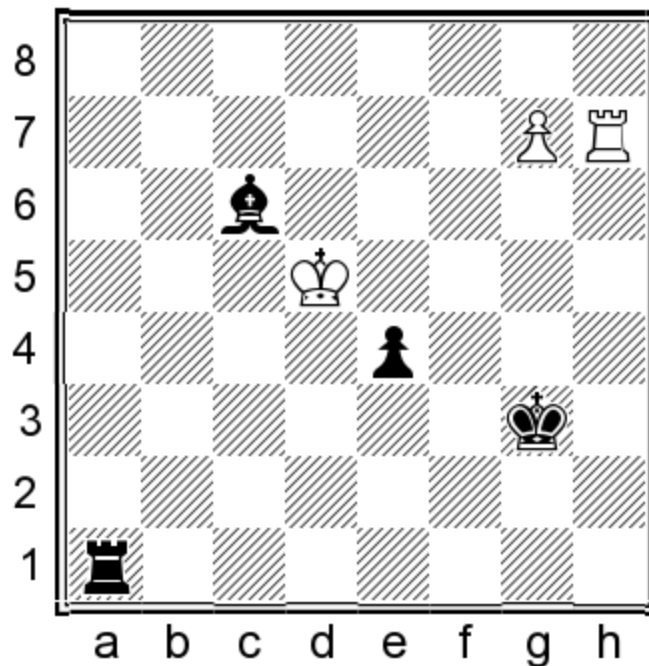
The purpose of this bishop sacrifice is to increase the scope of the black rook.

3.♔d6!!

A fantastic move. The logical-looking 3.♔xc6 would be insufficient for the win in view of 3...♖a6+ 4.♔d5 ♖g6 5.♔xe4 ♖g5! and White is in zugzwang. Therefore, White refuses the sacrifice, though he is forced to accept it one move later. This refusal is an example of 'foresight'; already here, White has to take into account the mutual zugzwang that arises later.

3...♗d5! 4.♔xd5 ♖a5+
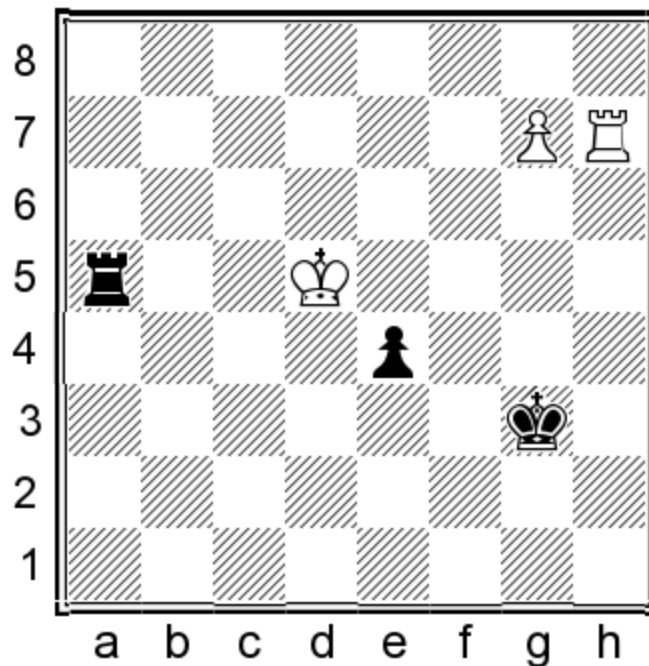
5.♔d4!

The same principle as before, on the third move. White waits with capturing the e-pawn so as to eventually put Black in zugzwang.

5...♖g5 6.♔xe4

Only now does White take the e-pawn, putting Black in zugzwang.

6...♔g4

What else?

7.♖h1!

With this well-considered retreat, White wins the rook. The black king is badly placed on g4.

7...♖xg7 8.♖g1+ 1-0
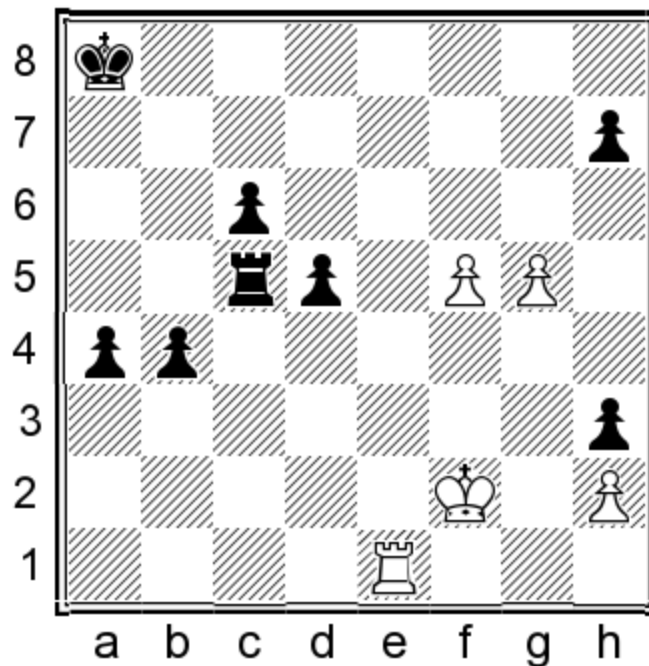
Study 48 - Eric Zepler

Eric Zepler
Morgenzeitung 1928

White to play and draw

This is probably the most famous draw study. Eric Zepler (1898-1980) was an eminent physicist of Jewish-German descent, who fled the Nazi regime to England in 1935. He mainly composed problems and only a limited number of studies. Of the study presented here, there is also a version with the black king on b8, published in Shakhmaty Listok; however there the entire idea doesn't work. Black has an impressive majority on the queenside. White has to try to achieve something with his f- and g-pawns.

1.g6!
This push has a point which is entirely different to what you would think at first sight.

1...hxg6
The alternative is 1...d4. Now, White has the surprising rook sacrifice 2.♖e5!, with the point that after 2...♖xe5 3.g7 ♖xf5+ 4.♔g1

♖g5+ 5.♔h1 Black has trouble evading stalemate; for example, 5...♔b7 6.g8♕ ♖c5 7.♔g1 b3 8.♕g7+ ♔b6 9.♕xd4 and White holds.
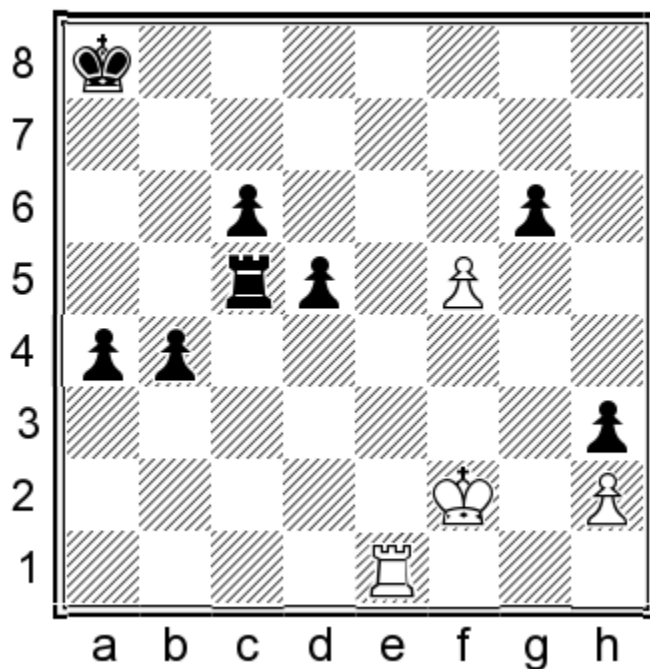
2.f6!

The first point of the first move. The logical-looking 2.fxg6 is insufficient after 2...d4 3.♖g1 ♖f5+ 4.♔e2 ♖f8 when Black's mighty passed pawns decide the issue.

2...d4
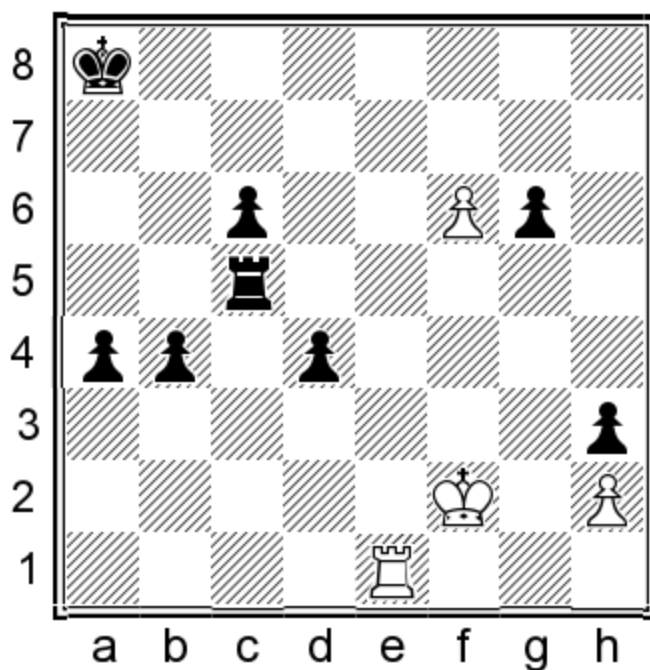
Now what?

3.♖h1!!

A fantastic move. White is going to wrap himself up.

3...♖f5+

Black has to resign himself to his fate. After 3...♖h5 4.f7 ♖h8? 5.♖e1 White would even win.

4.♔g1

The second stalemate construction comes to the surface.

4...a3 5.f7 a2 6.f8♕+

Just in time.

6...♖xf8 ½-½

Study 49 - Zinovy Birnov

Zinovy Birnov
Trud 1947
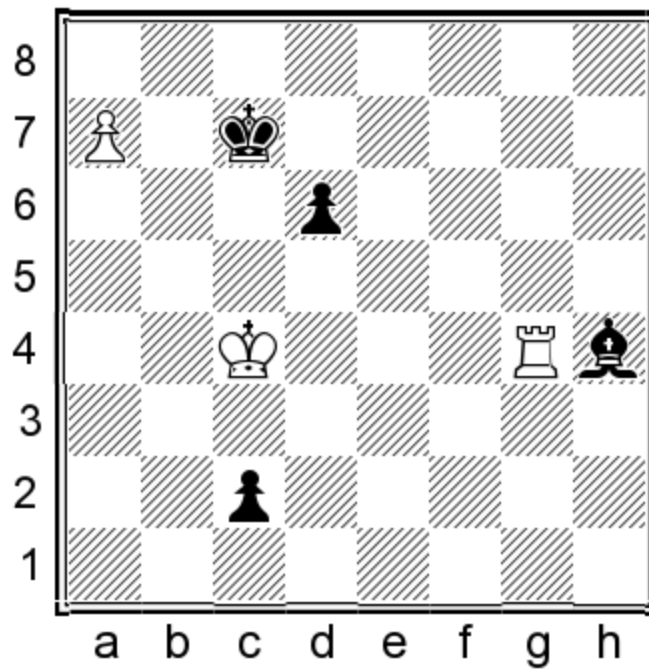
White to play and win

Zinovy Birnov (1911-1967) was born in Arkhangelsk and grew up in Volgograd, where he found employment as a construction worker. There are 149 studies by him in the database, generally of a high level. Experts consider the miniature presented here as his best study.

White can't promote, since Black then in turn promotes with check.

1.♖g7+

Not 1.♖g1 in view of 1...♔b7, after which a draw is inevitable.

After 1.a8♘+? ♔c6 White would even lose.

1...♔b6

The only square for the king.
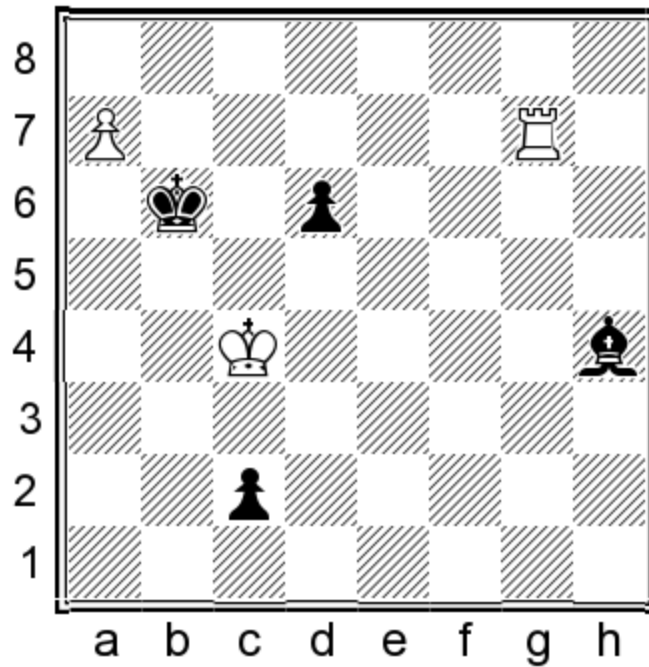
2.a8♘+!

Now, yes!

2...♔a6

The only square for the king to prevent checkmate.

3.♘c7+ ♔a5

Again, the only square. If the king goes to the seventh rank, White continues 4.♘e6+, preventing ...♗g5, and then collects the c-pawn with 5.♖g1.

4.♖g1

Only now does White retreat his rook. It seems as if the battle is over, but Black has another resource:

4...♗g5!

The only chance.

5.♖xg5+ d5+

The point of the previous move. By the pawn sacrifice, White's rook is lured to the d-file, where it is unable to stop the black c-pawn.

6.♖xd5+ ♚a4
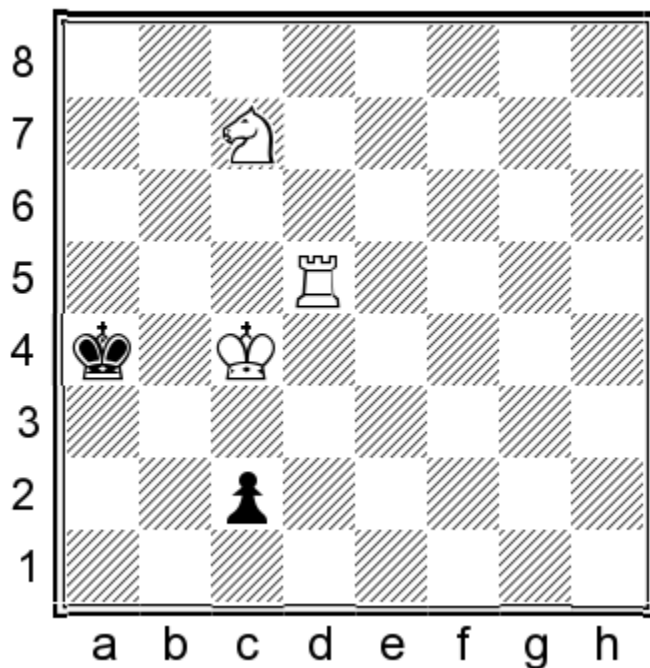
Now what?

7.♘b5!

The solution; White weaves a mating construction into the position.

7...c1♕+ 8.♘c3+

The white knight has made a long journey; mate comes in sight.

8...♚a3 9.♖a5+ ♚b2 10.♖a2

Mate.

Study 50 - Mark Liburkin

Mark Liburkin

64 1935
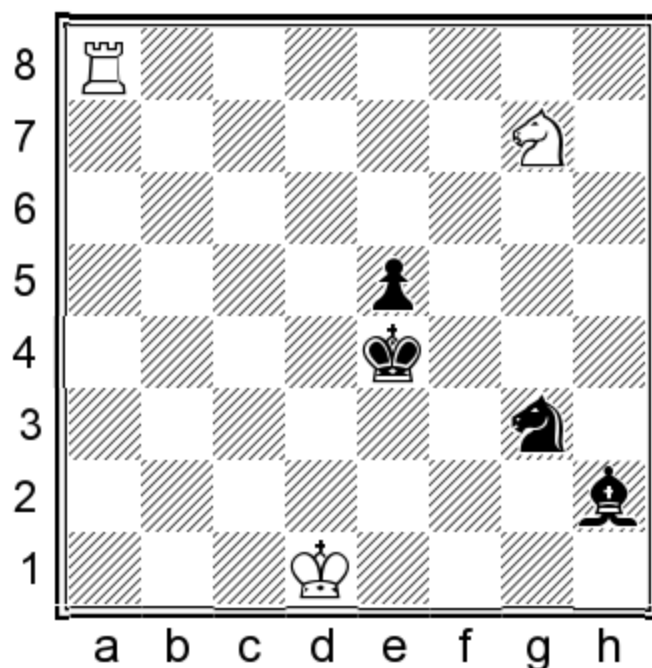
White to play and win

Mark Liburkin (1910-1953) was a brilliant endgame study composer who has approximately 200 studies to his name. He was a past master in studies on the theme of the systematic manoeuvre, and he also had a predilection for miniatures, like the study presented here. Materially speaking, Black has no problems, but White can cause trouble for Black's pieces.

1.♖a2 ♗g1!

The only way to pose White problems. After 1...♘f1 2.♔e1 Black would lose a piece without compensation.

2.♖g2 ♔f3!

The point of the previous move. Black's counterplay consists in activating the king.

3.♖xg1 ♔f2 4.♖e1 e4!
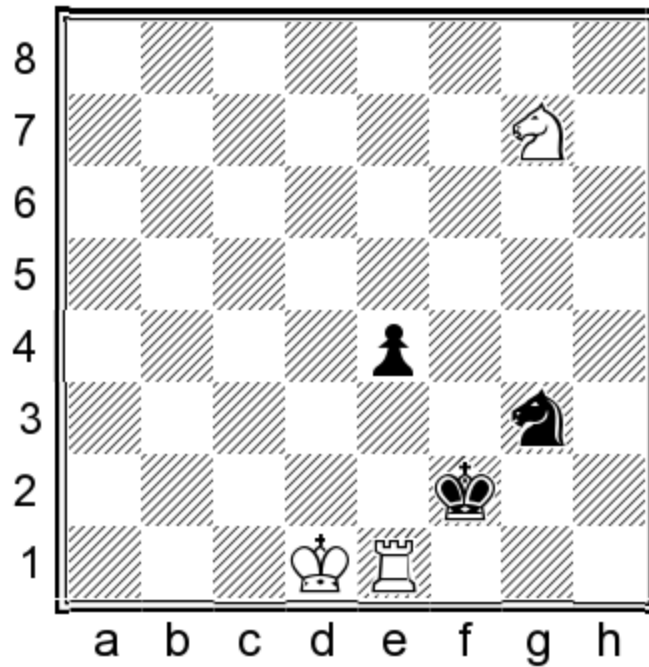
Black's plan is clear; he is going to push the white rook to the wall.

5.♘e6

White's knight rushes to the aid.

5...e3 6.♘c5!

A surprise; White makes no effort to stop the black e-pawn. The alternative 6.♘d4? was insufficient due to 6...e2+! 7.♘xe2 ♘f1! and White is stuck; the black knight has checks on e3 and then c4 (or back on f1).

6...e2+ 7.♔d2 ♘f1+
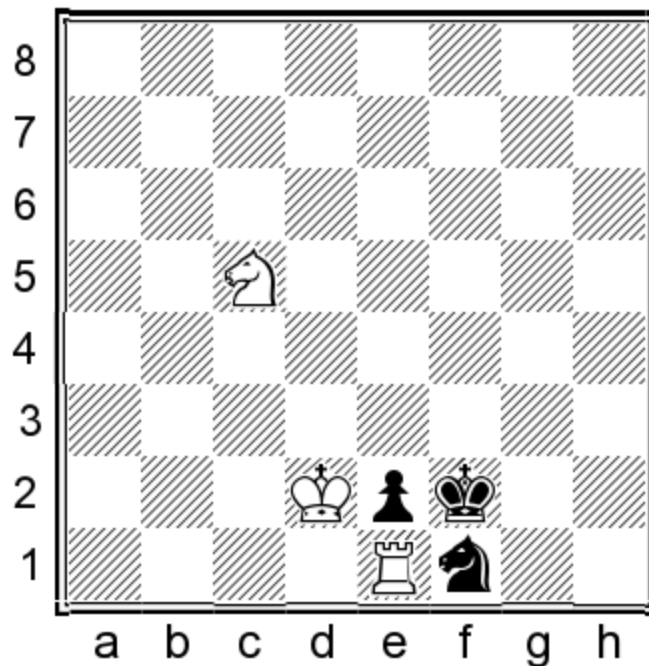
8.♔c1!

The right square for the king. After 8.♔c2? ♘e3+ 9.♔d2 ♘c4+ it would be a draw.

8...♔xe1

Black could prolong the struggle with 8...♔e3. Here, too, White has to play accurately. Play develops as follows: 9.♔c2 ♘h2 10.♘d3 ♘f3 and now 11.♖b1! is the only winning move. (Not 11.♖a1? in view of 11...♘d4+ 12.♔c3 ♘b5+ and White doesn't get any further.)

9.♘d3#

Just like in the previous study, the king gets mated on the edge, but in the middle of the rank this time.

Study 51 - Oleg Pervakov

Oleg Pervakov
Moscow Tourney 1992
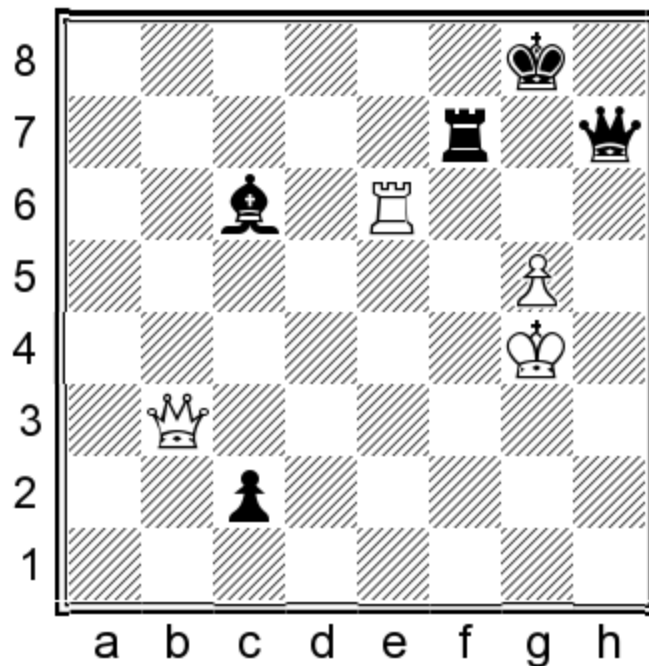
White to play and draw

Oleg Pervakov (1960-) is regarded by many as the best endgame study composer of all time. His whole life is dominated by the endgame study; he is constantly thinking of new ideas. Consequently, Pervakov is an all-round composer – a master in all genres. Through the years, he has composed more than 400 studies with more than 70 first prizes among them; no other endgame study composer comes close to this total. In the study presented here, he manages an astonishing stalemate construction. Everything is put together extraordinarily artfully.

The starting move is obvious.

1.g6

It seems as if this solves all the problems. However, Black has a vicious finesse up his sleeve:

1...♖f4+!

Black sacrifices his rook to create space for his queen. If 1...c1♕, White can take on h7, but the simplest path to the draw is 2.♕b8+ ♔g7 3.♕e5+ with perpetual check.

2.♔xf4 ♕h2+

The point of the previous move. On 2...c1♕+ White has the discovered check 3.♖e3+.

3.♔f5!

The only square for the king. After 3.♔g4 ♕g1+ 4.♔f4 ♕f1+ 5.♔e5 ♕b5+! 6.♕xb5 ♗xb5 White would be unable to stop the promotion of the c-pawn.

3...♗d7
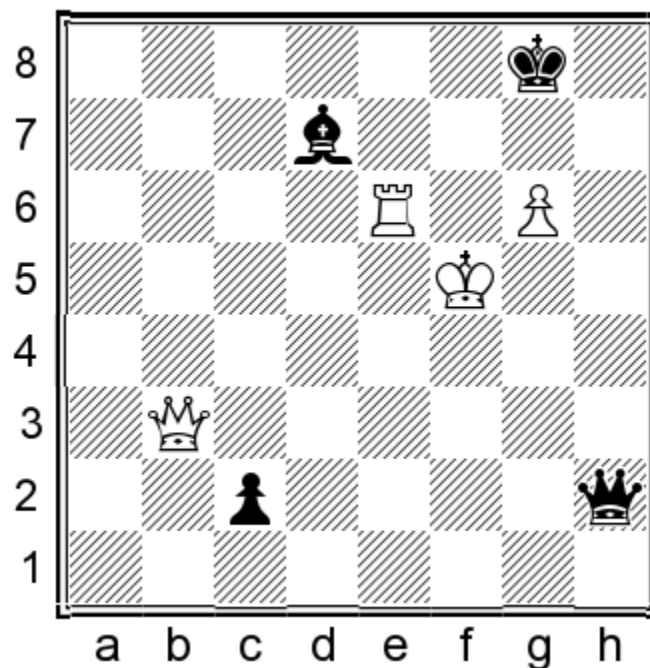
Thus, Black pins the piece that wanted to give the discovered check. The alternative 3...♕h5+ wouldn't have brought Black anything after 4.♔f6.

Now the situation is critical for White. How can he prevent promotion?

4.♔g5!

The introduction to a marvellous stalemate combination.

4...c1♕+ 5.♖e3+ ♔h8 6.g7+!

The point of White's play is starting to become clear.

6...♔xg7
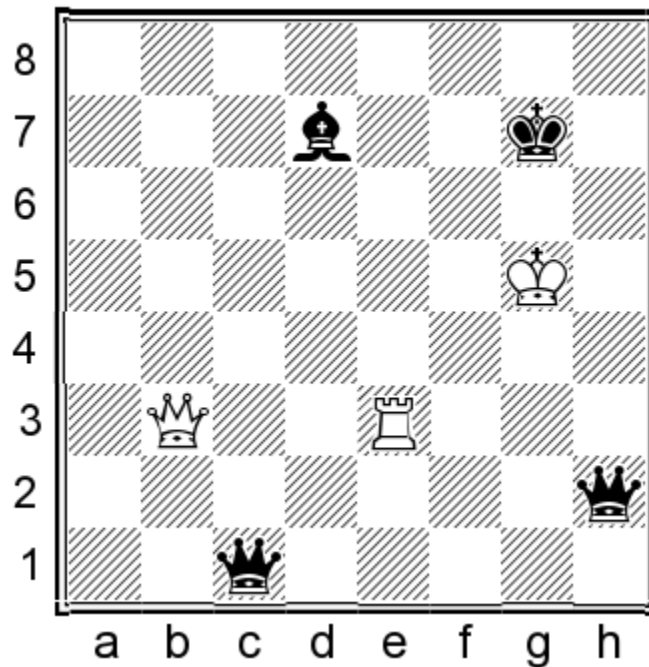
7.♕f7+!

The final point.

7...♔xf7 ½-½

In such a position, we speak of an 'ideal stalemate'. This means that every escape square for the king is controlled only once by the opposite side.

Study 52 - Leonid Kubbel

Leonid Kubbel
Shakhmatny Listok 1922
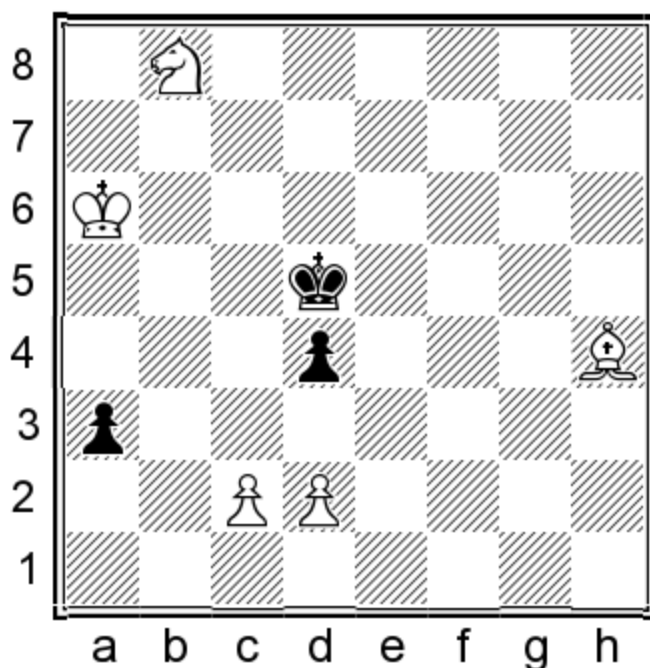
White to play and win

Here is a famous study by Kubbel. It seems improbable that White can stop the far-advanced a-pawn. However, he has a highly surprising path to the win, based on a mate motif.

The entire study is a magnificent illustration of the magic of chess. White starts with a knight sacrifice:

1.♘c6!

Preventing the further march of the a-pawn. Black has to take the knight.

1...♔xc6 2.♗f6

Putting the bishop in position.

2...♔d5

Definitely not 2...♔c5 in view of 3.♗e7+.
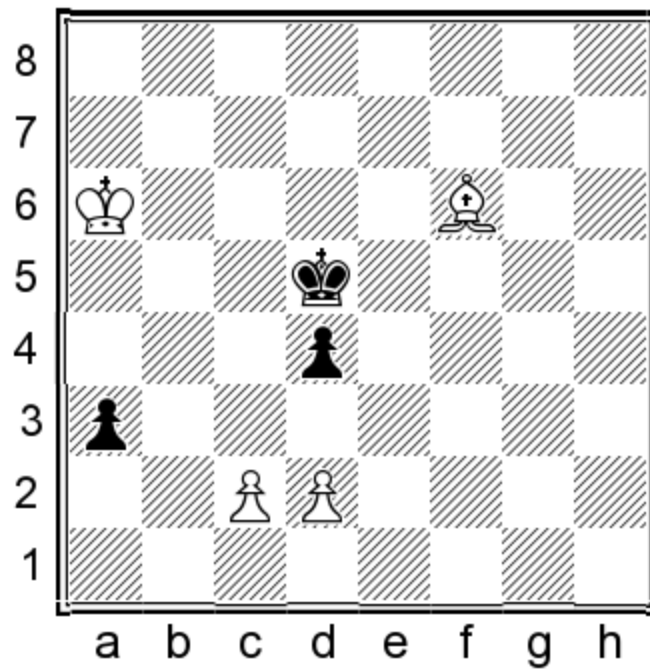
But after the text move, it looks impossible for White to stop the a-pawn. What can he do?

3.d3!!

This little move is the astonishing answer to the question. White is going to weave a mating net around the black king.

3...a2 4.c4+

Now White wins easily if Black's takes en passant. Therefore:

4...♔c5 5.♔b7!
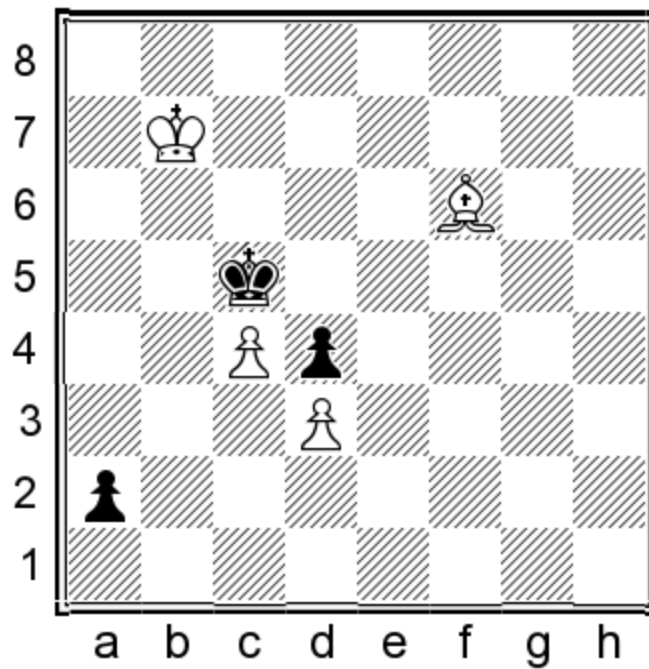
The point of the third move. If the black king moves out of the mating net to b4, White captures on d4.

5...a1♕ 6.♗e7

Mate.

Study 53 - Boris Sakharov and Anatoly Kuznetsov

Boris Sakharov and Anatoly Kuznetsov
Second Soviet Team Championship 1957
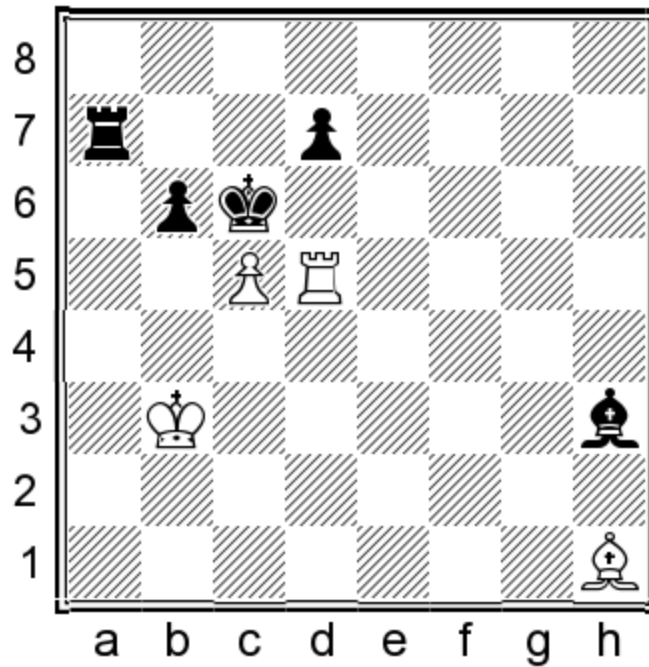
White to play and win

Anatoly Kuznetsov (1932-2000) and Boris Sakharov (1914-1973) were both excellent endgame study composers who often cooperated in the 1950s. In the study presented here, they demonstrate how a mate can be constructed in an open field with limited material.

In the starting position, White is a pawn down, but he has various discovered checks. For example, he can win the black bishop, but that is insufficient to win since he will then be obliged to trade off his last pawn.

1.♖d6+!

A remarkable first move. White sacrifices his last pawn.

1...♔b5

One of the points to White's first move comes to the surface after 1...♔xc5. Now White continues 2.♖d5+ ♔c6 3.♖a5+, winning the

black rook. Notably, the position after Black's second move is identical to the starting position, only without the white pawn. When White consciously steers for an earlier position in which he misses an own piece or pawn, this is a theme that I called the 'disappearing trick' in my book The Art of the Endgame. This was the central theme in the World Team Championship of Chess Composition in 2004.

2.cxb6

Black's situation appears hopeless. If he moves his rook, the white pawn marches on undisturbed.

2...♗e6+

This bishop check seems senseless since White can just take the bishop.

3.♖xe6

White could not move his king, since Black would then have a saving rook check.
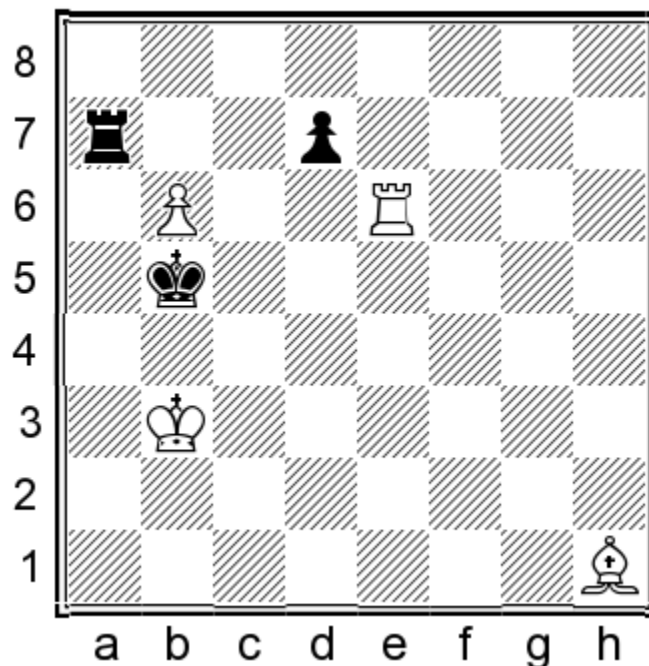
Now it seems to be all over, but Black still has a surprising resource:

3...♖b7!

Black is prepared to give his rook, only in such a way that White doesn't obtain a decisive passed pawn.

4.♖e5+! d5!

Another cunning defence. In fact, this pawn move is a Novotny, a theme I will discuss further on in this book.

5.♗xd5 ♖xb6 6.♗b7

Mate.

Study 54 - Gia Nadareishvili

Gia Nadareishvili
Prague Problem Tourney Ceskoslovensky Sach 1953

White to play and draw

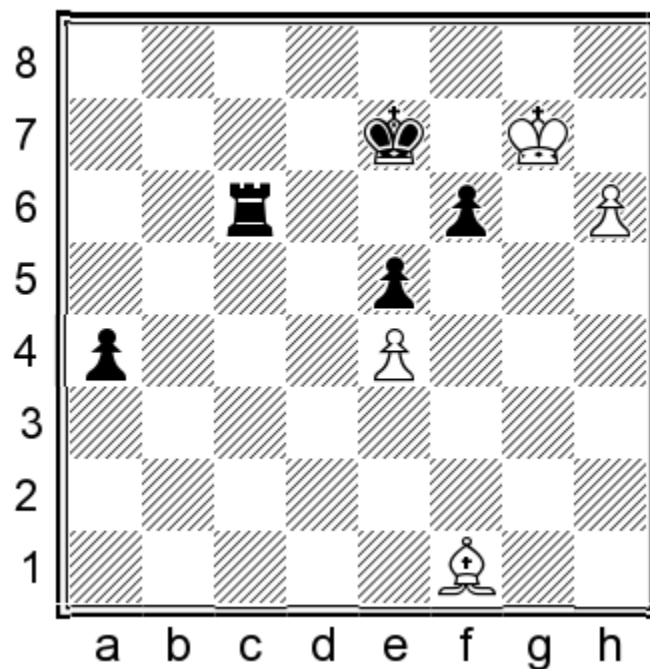Gia Nadareishvili (1921-1991) was the greatest Georgian endgame study composer of the pre-war generation. He was also the head of the neurology department of the Tbilisi Central Hospital. As an endgame study composer, he was productive: there are 359 studies by him in the database, 21 of which took first prize. Nadareishvili was a friend of Botvinnik's. In 1988, I met Botvinnik in Moscow. On that occasion, he gave me a book on Georgian composers signed by Nadareishvili. The study presented here showcases some delicate play between the rook and the bishop. It is baffling that this study was only awarded third prize.

1.h7 ♖c8 2.♗b5!

Strangely, White has to lose a tempo. First, it has to be established that 2.h8♕ is insufficient in view of 2...♖xh8 3.♔xh8 a3 4.♗c4 f5 5.exf5 ♔f6! and Black wins. The white bishop is powerless against the passed pawns.

2.♗c4 is not good either as White is in zugzwang after 2...a3. He has to move his bishop, and then the black rook invades on the back rank; for example, 3.♗b3 ♖c1 4.h8♕ ♖g1+ and Black wins.

2...a3 3.♗c4

Now, yes. A situation of mutual zugzwang has arisen.

3...♖a8 4.♗a2

The only square for the bishop. Black threatened to push his a-pawn.

4...♖b8
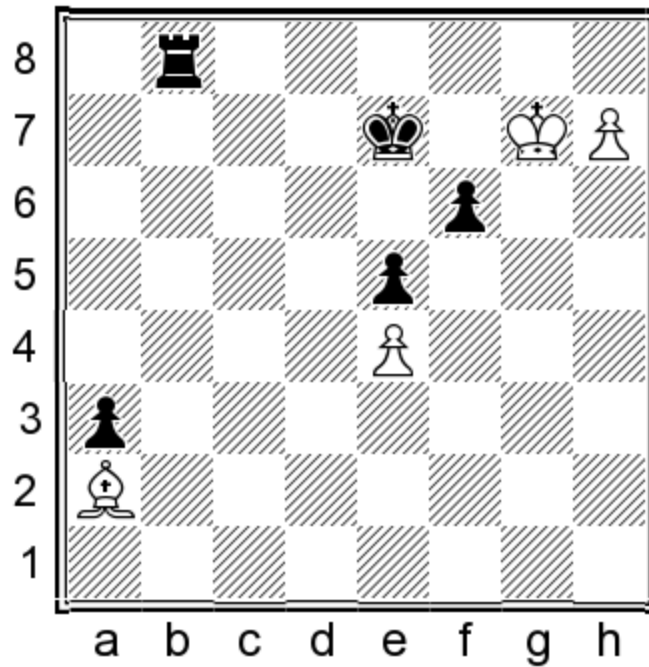
5.♗f7!

White has to find the corresponding square for the bishop every time. The b3-square is not available, and therefore the bishop takes refuge on the only safe square.

5...♖c8 6.♗c4 ♖d8 7.♗d5

We can now map out the corresponding squares of the bishop and rook: a2/a8, c4/c8, d5/d8 and f7/b8.

7...♖h8

Polerio's rook sacrifice; a final attempt.

8.♔xh8 ♔f8 9.♗g8!

Again, the only square for the bishop. White encapsulates himself.

9...f5 10.exf5 e4 11.f6 e3 12.f7 e2

Stalemate.

Study 55 - Pal Benko

Pal Benko
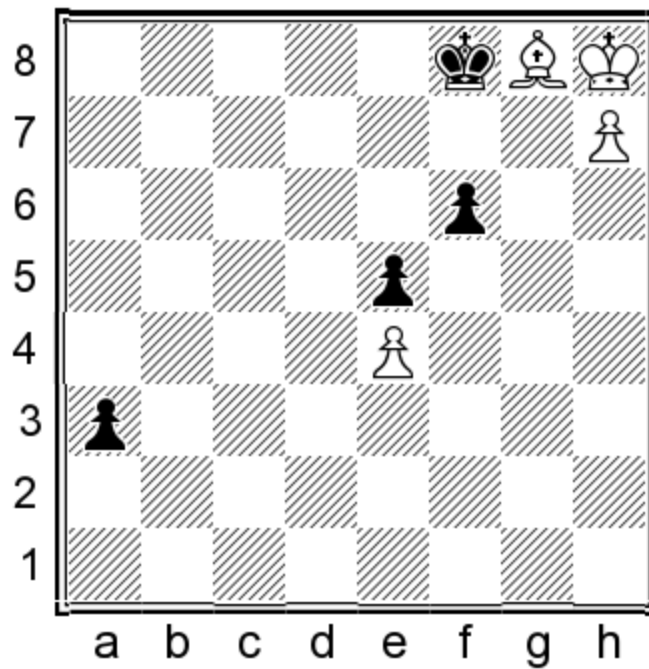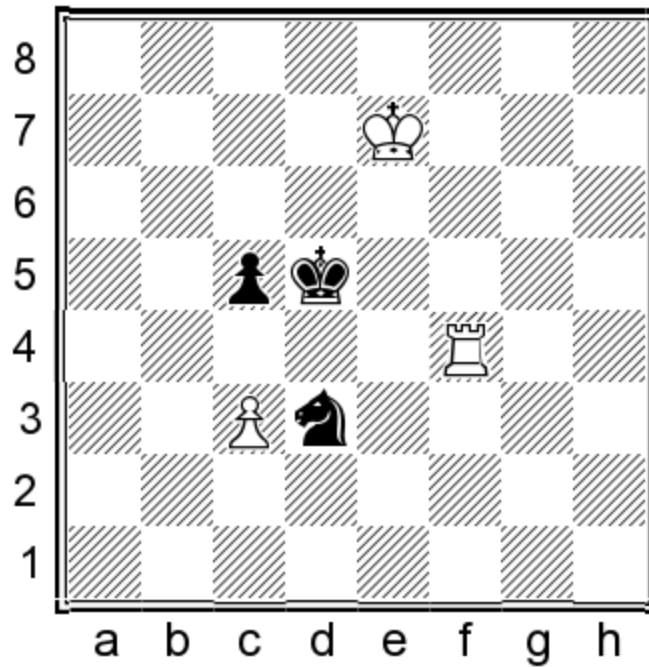Hungarian Chess Federation Tourney, Magyar Sakkelet 1986

White to play and win

Benko was a past master in combining old and new ideas. The starting point of this study was without doubt an old spectacular idea by Réti. I will come back to this later; first there is a delicate duel between the rook and the knight.

1.c4+!

White has to give this check. After 1.♖g4 ♘b2! 2.♔d7 c4 he cannot win; for instance, 3.♖g5+ ♔e4 4.♔c6 ♘d1 5.♖g4+ ♔d3 6.♖d4+ ♔xc3 and it's a draw.

1...♔e5 2.♖g4!

It is important to find the right square for the king. The alternative 2.♖h4 looks more logical, but the downside to this move is that Black can direct his knight to a better square with gain of tempo. After 2...♘e1! 3.♔d7 ♘f3 4.♖g4 ♔f5 or 4...♘d2, White can't keep his c-pawn.

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2...♘b2

In these circumstances, 2...♘e1 is useless in view of 3.♔d7 with a decisive intervention by White's king.

3.♖h4!

Now, yes! After 3.♔d7 ♔f5 4.♖h4 ♔g5 5.♖e4 ♔f5, again, White can't defend his pawn.

3...♘xc4 4.♖xc4 ♔d5
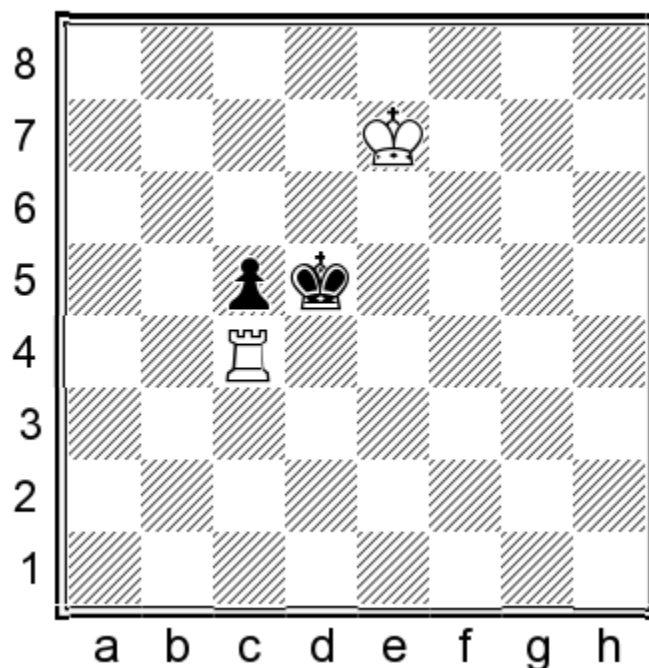
This position is known from a famous mini-study by Réti from 1921 – only there White's king was on d7. White then has to lose a tempo by moving his rook back to d2 or d3. Only when Black pushes his c-pawn to c4 does White place the rook on d1. With his king on e7, White should not lose the tempo:

5.♖c1! c4 6.♔d7

This is Réti's reciprocal zugzwang.

6...♔c5 7.♔c7

And again, we have a mutual zugzwang situation. Black has to choose whether to play his king to b4 or d4. Depending on the square Black chooses, White approaches with his king along the other side.
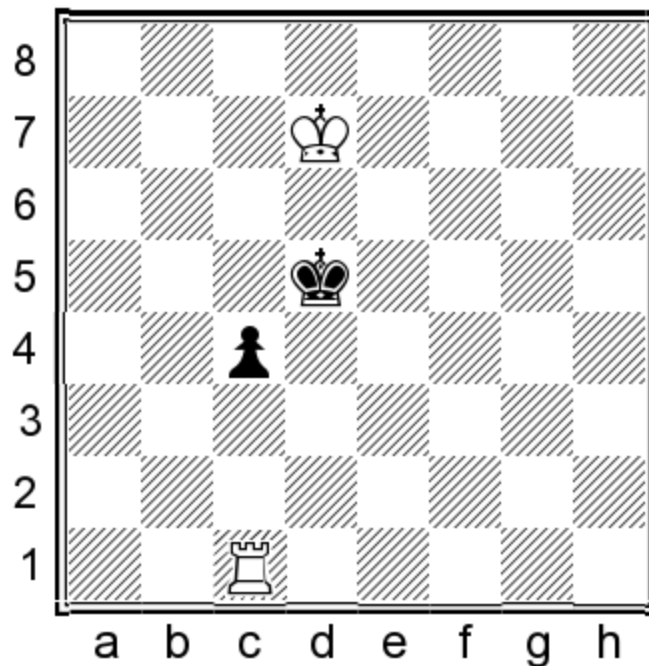
7...♔d4

Or 7...♔b4 8.♔d6.

8.♔b6 c3 9.♔b5 ♔d3 10.♔b4 c2 11.♔b3 1-0

Study 56 - Vasily and Mikhail Platov

Vasily and Mikhail Platov
Rigaer Tageblatt 1909
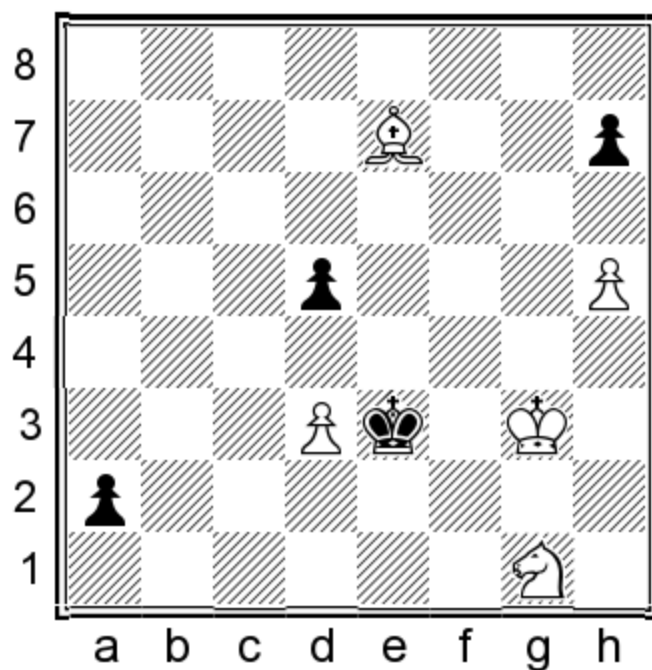
White to play and win

This is the most famous study by the Platov brothers. In essence, this study looks like the one by Kubbel (No. 52). Black has a far-advanced a-pawn that cannot be stopped by normal means.

In this study, too, White is going to weave a mating net.

1.♗f6

Thus, White forces the black d-pawn to move forward. Further on, we will see that this deprives the black king of an escape square.

1...d4
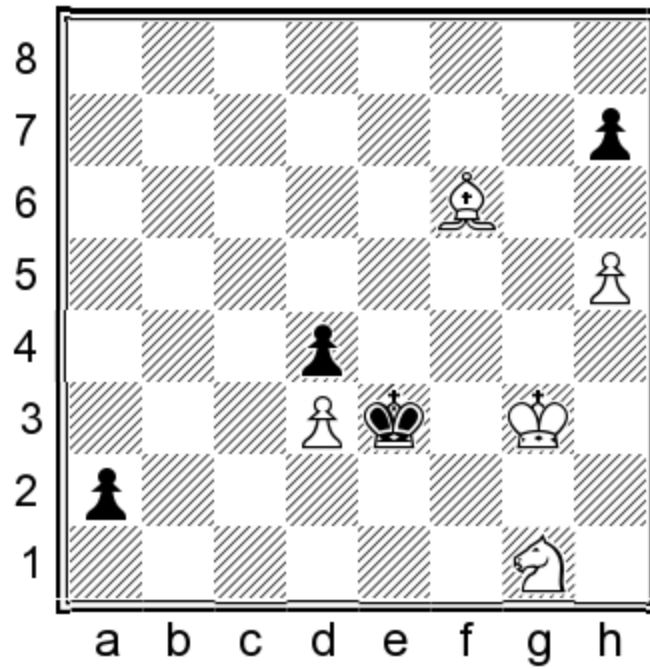
2.♘e2 a1♛

The climax of the study is approaching. If White takes twice on d4, the remaining pawn ending is a draw. However, he has a stronger move:

3.♘c1!!
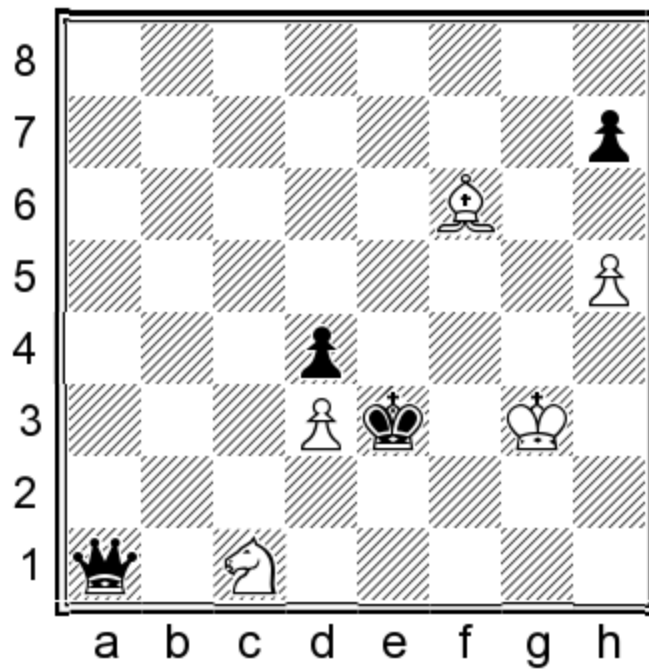
This knight move looks innocuous, but it is deadly. Black's king and queen are completely dominated by White's minor pieces; mate is threatened.

3...♕a5

Black could also protect the g5-square with 3...h6, but then White would close the mating net with 4.♗e5.

4.♗xd4+ ♚xd4 5.♘b3+ ♚xd3 6.♘a5 1-0

Study 57 - Yuri Dorogov

Yuri Dorogov
Tidskrift för Schack 1970
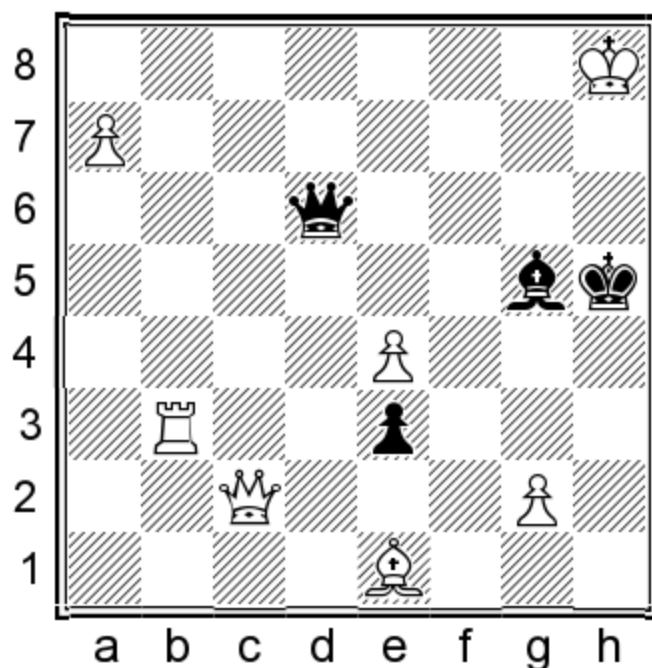
White to play and win

Yuri Dorogov was a Russian endgame study composer about whom not much is known. It is certain that he passed away in 1991, but it remains unclear whether he was born in 1937 or 1940. There are 77 studies by him in the database – generally of an excellent level. The study given here is by far the best one.

White is a rook to the good, and moreover he has a passed pawn which is about to promote. However, his king is in danger, which means that for the moment he has no time to promote.

1.g4+

This is a pawn sacrifice that Black can't accept.

1...♚h6
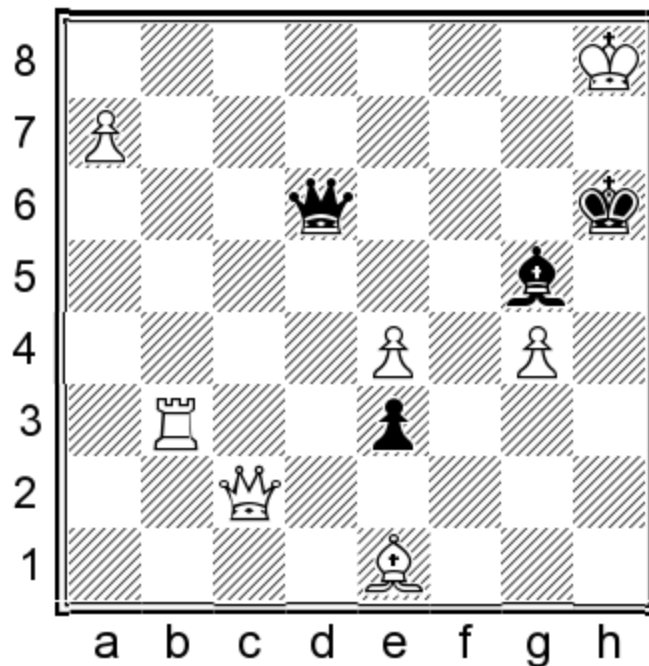
2.♕h2+!

The beautiful point of the first move. White sacrifices his queen to drive the black queen from its dangerous position.

2...♕xh2 3.♖b6+ ♗f6+

Black has to sacrifice his bishop; the king has no squares.

4.♖xf6+ ♔g5+ 5.♗h4+

The sacrifices follow each other in succession. With the bishop sacrifice, White prevents any further queen checks, but it has another point. White creates the first so-called self-block. This means that during the course of the study, Black is forced to block flight squares for his own king, eventually allowing White to give mate.

5...♕xh4+ 6.♔g7

After four successive checks from both sides, the situation has stabilized.

6...e2 7.a8♕ e1♕
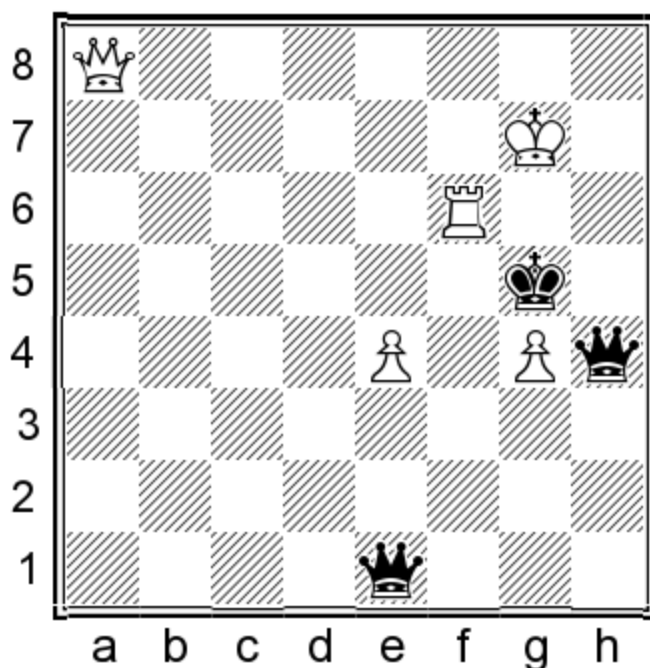
Both sides have promoted to a new queen. It looks as if there is no immediate danger for Black, but appearances are deceptive.

8.♕b8!

A magnificent quiet move. White takes control of the f4-square. It looked logical to harass the black king with the direct 8.♕d5+, but after 8...♔xg4 9.♕f5+ ♔g3 10.♖g6+ ♔h2 White has no more than a draw.

8...♕xe4

There was no escape for the black king. After 8...♔xg4 9.♖f4+ White would have obtained a winning queen ending. After the text move, Black controls the critical squares f4 and g6; however, the promoted queen is overloaded.

9.♕f4+!!

With this fantastic queen sacrifice, White creates the second self-block.

9...♕xf4 10.♖g6

Mate.

Study 58 - Vladimir Bron

Vladimir Bron

Galitzky Memorial Tourney Bulletin Central Chess Club 1964
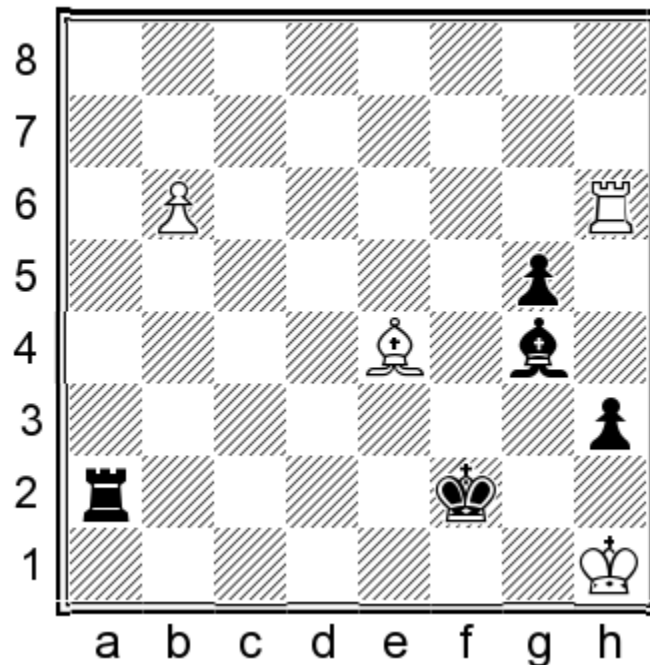
White to play and win

Vladimir Bron (1909-1985) was born in Mykolayiv in Ukraine, and moved to Kharkiv as an adult. After the Second World War, Bron settled in Sverdlovsk, where he worked as a chemical engineer; he specialized in research on fireproof materials. Bron composed approximately 400 studies, 29 of which were crowned with first prizes. In 1976, he was awarded the title of grandmaster in composition. He also composed an even larger number of chess problems. Bron was a friend of Korolkov's, and their studies also have features in common. The study presented here is a textbook example of a systematic manoeuvre. This is my version, since the original had a few flaws.

The first move is obvious.

1.b7

Now Black cannot move his king to g3 since White then promotes with check.

1...♖b2 2.♖h8

Now the systematic manoeuvre starts.
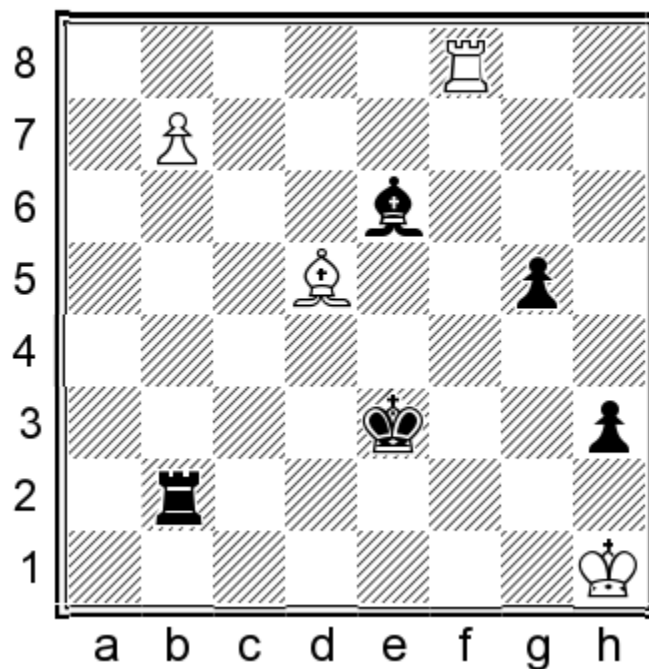
2...♗f5

Prevents the promotion of the b-pawn.

3.♖f8

White has to pin the bishop so as to drive the black king from its dominant position. After 3.♗d5 ♖b1+ 4.♔h2 g4 White can't win.

3...♔e3 4.♗d5

Step by step. After 4.♗c6 ♗d7, the win would be spoiled.

4...♗e6

5.♖e8

The pattern is repeated. By the pinning rook moves, White drives the black king ever further away from the kingside, allowing him to find a safe square on the long diagonal for his bishop.

5...♚d4 6.♗c6 ♗d7 7.♖d8 ♚c5
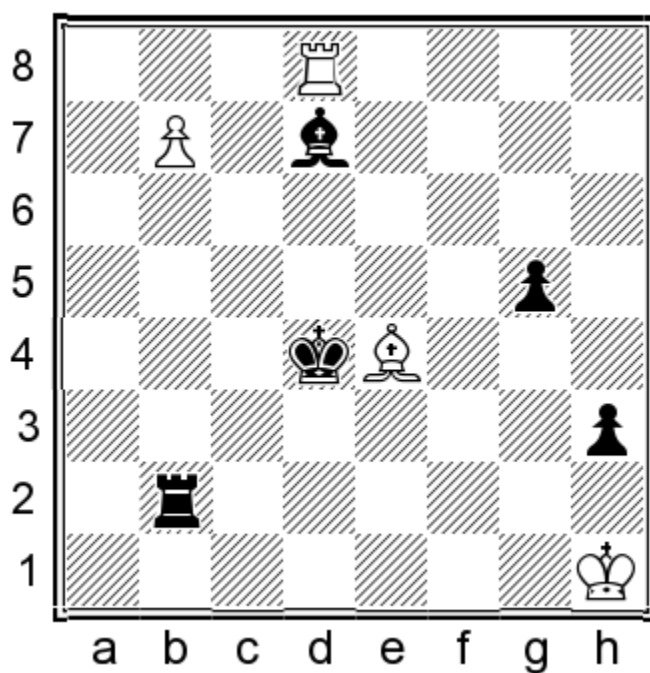
The end of the systematic manoeuvre, but now White still has to find the right square for his bishop.

8.♗e4

Not 8.♗f3 in view of 8...g4 and Black saves himself.

8...♚d4

9.♗f3

Now, yes!

9...♚e3 10.♗d5 ♗e6 11.♗c6

Finally, the bishop has found a foothold on the long diagonal. What remains are two more checks for Black:

11...♖b1+ 12.♚h2 ♖b2+ 13.♚g3 1-0

Study 59 - Nikolay Kralin

Nikolay Kralin
WCCC Tourney 1998
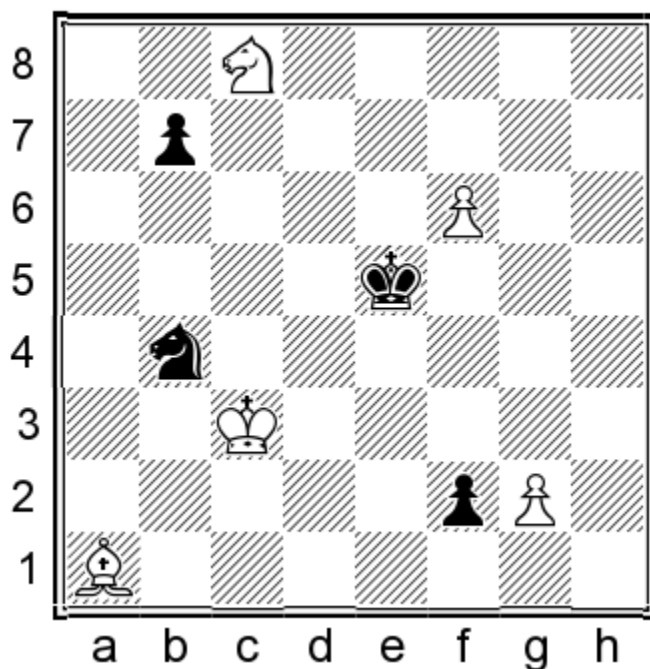
White to play and win

Nikolay Kralin (1944-) is a highly productive endgame study composer. There are more than 400 studies by him in the database. In 2005, Kralin was awarded the grandmaster title. In his studies, you can see a wide range of themes. The study presented here, which won first prize in the 1988 World Championship, is about domination.

First, White has to find a way to stop the f-pawn.

1.♔d2+ ♔e6 2.♔e2

This looks like the end of the story, but Black still has a resource.

2...♘c2
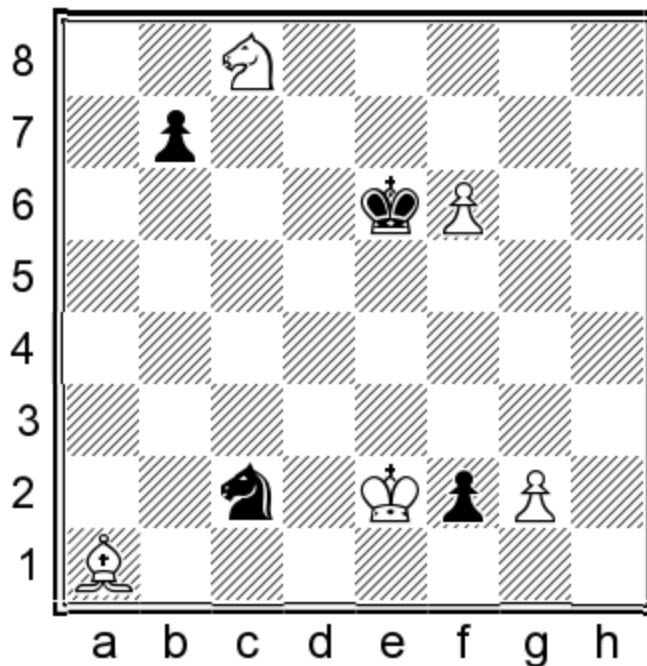
Attacking the bishop. Which square is available?

3.f7!

White sacrifices his f-pawn to gain possession of the h8-square for the bishop.

Insufficient is 3.♗c3, in view of 3...♘e3 4.♔xf2 ♘d1+ and Black wins the bishop.

3...♔xf7 4.♗h8!

White brings his bishop to the corner square to lure the black king to g8.

4...♔g8 5.♗b2!

Carefully choosing the squares for his bishop.

5...♘e3 6.♔xf2 ♘d1+ 7.♔e2 ♘xb2 8.♘b6!
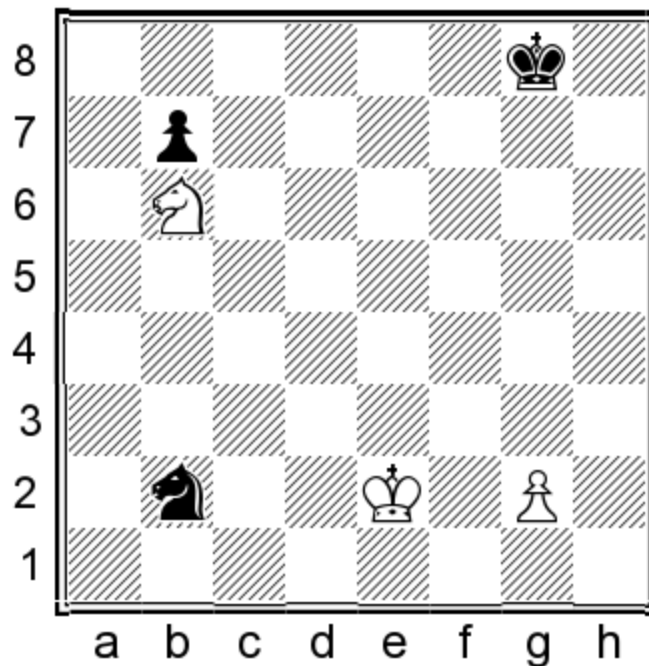
An astounding situation. With a minimum of material, Black's knight is effectively imprisoned. The black king is too far away from the battle scene to be able to bring salvation.

8...♔f7 9.♔d2

The white king leisurely strolls to the queenside to conquer the black knight.

9...♔f6 10.♔c2 ♔e5 11.♔xb2 ♔f4 12.♘d5+

Accurate to the end. After 12.♘c4 b5! it would end in a draw after all.

12...♔g3 13.♘e3 ♔f2 14.g4 1-0

Study 60 - Frédéric Lazard

Frédéric Lazard
l'Opinio 1934

White to play and draw

Frédéric Lazard (1883-1948) was a French endgame study composer. He is mainly known from a mini-game he won against Gibaud in Paris, 1922. 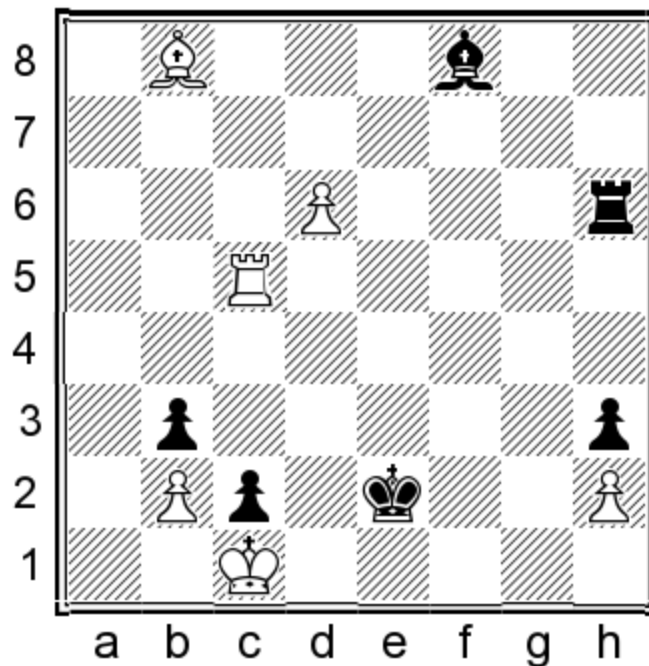There are 150 studies by him in the database. Lazard also composed chess problems. In 1929, he published the book Mes Problèmes et Études d'Échecs ('My Chess Problems and Studies'), with a foreword by Alekhine. In general, Lazard's studies show out-of the-ordinary themes. In the study presented here, White saves himself with a rook promotion. This is my version of the study; I have added the rook sacrifices on both sides at the start.

1.♖e5+ ♔d3 2.d7

Threatening to promote with check, but Black has an effective remedy:

2...♖d6!

Thus, Black not only stops the d-pawn, but also vacates the h6-square for the bishop.

3.♖e3+!

A rook sacrifice to keep the c1-h6 diagonal closed for the time being.

3...♔xe3 4.♗xd6 ♗h6

This is where Lazard's original study begins. Black threatens to give a lethal discovered check.
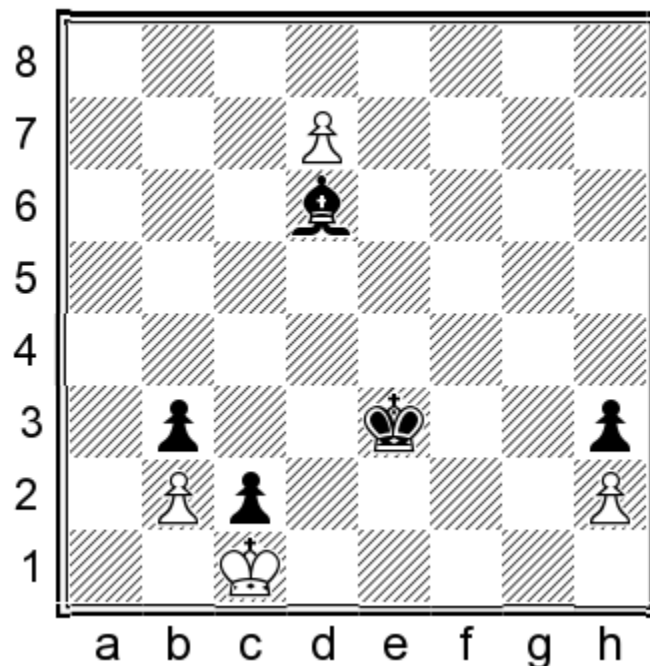
5.♗f8!

Preventing the discovered check.

5...♗f4

The best chance. After 5...♗g5 6.d8♕ ♗xd8 7.♗e7 ♗c7 8.♗d6 it would be an immediate draw; stalemate cannot be prevented.

6.♗d6 ♗xd6

7.d8♖!

In Study No. 35 we saw that White promoted to a rook to avoid stalemate. Here, White resorts to an underpromotion precisely to achieve stalemate. Incidentally, White's rook promotion in this study receives the name 'Phoenix' due to the fact that White has sacrificed a rook earlier on. With the promotion, the sacrificed rook rises from its ashes, as it were.

7...♗f4 8.♖d2!
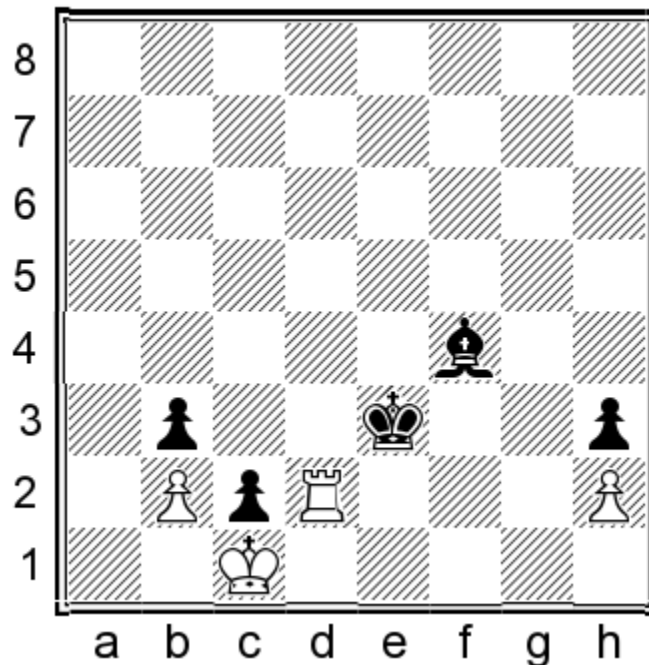
The point of the rook promotion. If Black moves his king, it is stalemate. Please note that we have a reciprocal zugzwang here; if it were White's move, he would lose.

8...♗g5

Forcing White to move the rook.

9.♖d5

The only square for the rook. White has to attack the bishop.

9...♔f4 10.♖d2

And quickly back again.

10...♗h6 11.♖d6 ♔g5

As we see, this is a systematic manoeuvre.
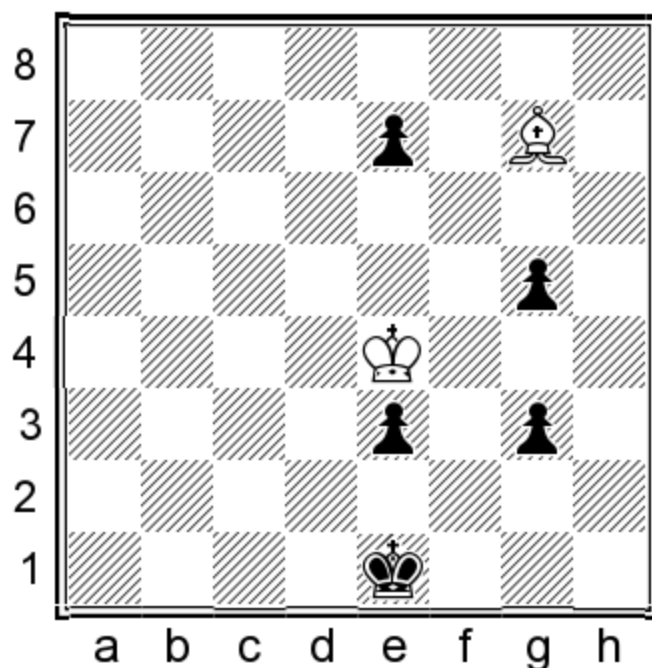
12.♖d2

Draw.

Chapter 4 Special themes

Study 61 - Unto Venäläinen

Unto Venäläinen
Ojanen-50 Jubilee Tourney, Suomen Shakki 1968

White to play and draw

Unto Eevert Venäläinen (1944-) is a Finnish FIDE Master who played for Finland in two Olympiads. Curiously, the meaning of his surname is 'a Russian'. There is only one study by him in the database, and his name doesn't appear in the register of endgame study composers. However, this one study is very special. The mysterious second move is particularly impressive.

First, White has to contain the g-pawn.

1.♔f3

Not 1.♗d4 in view of 1...e2 and Black's foremost e-pawn decides.

1...♔d2

The best attempt. After 1...e2 2.♗c3+ ♔f1 3.♔xg3 e5 4.♔g4 White holds the draw without any trouble.
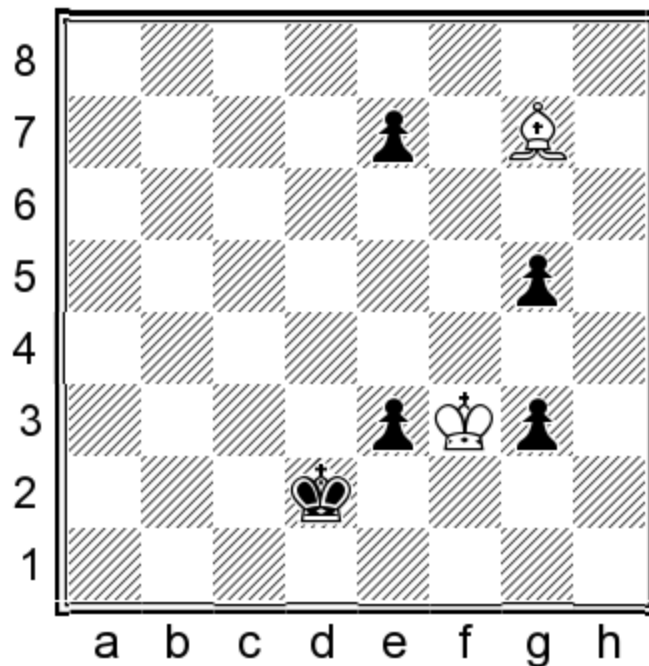
2.♗f8!!

Absolutely astonishing. The bishop makes itself almost invisible to take aim at Black's hindmost e-pawn. Other bishop moves were insufficient; for instance, 2.♗e5 g2 3.♔xg2 e2 and Black wins.

2...g4+

The alternative 2...e2 comes down to the same after 3.♗xe7 g4+ 4.♔g2!.

3.♔g2!

The only square for the king; there is a hidden stalemate pattern in the position.

3...e2 4.♗xe7

The hindmost e-pawn has been eliminated. Black should not promote now.

4...♔c3
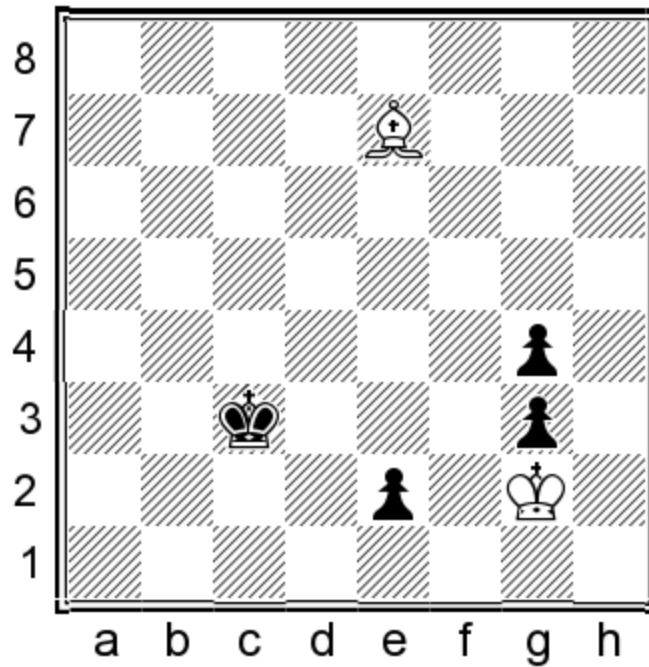
5.♗d8!

Forces the black king to move to b4. Not 5.♗d6 in view of 5...e1♖!
6.♔xg3 ♖e6! followed by 7...♖g6 with a technical win.

5...♔b4 6.♗c7!

Preparing the stalemate.

6...e1♕

In these circumstances, 6...e1♖ was insufficient for the win. After
7.♔xg3 ♖g1+ both 8.♔h4 and 8.♔f4 save the draw.
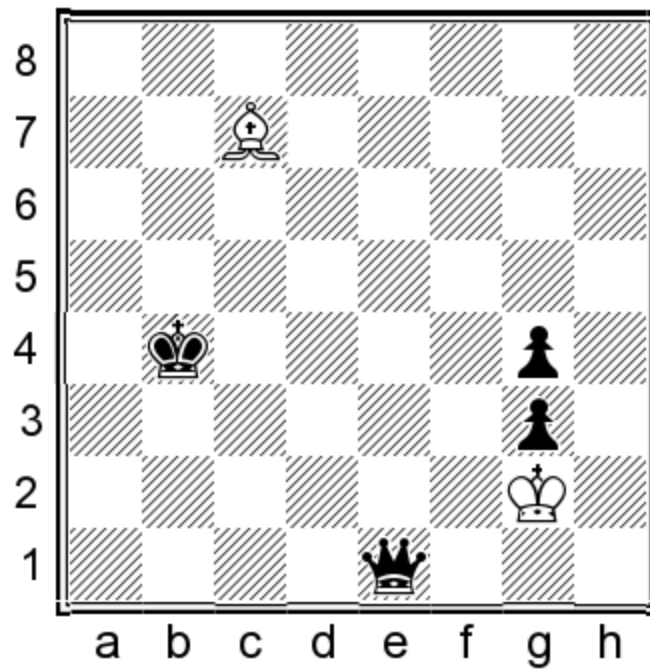
7.♗a5+!

Forcing stalemate after:

7...♔xa5 ½-½

Study 62 - Ernest Pogosyants

Ernest Pogosyants
Shakhmatnaya Moskva 1964
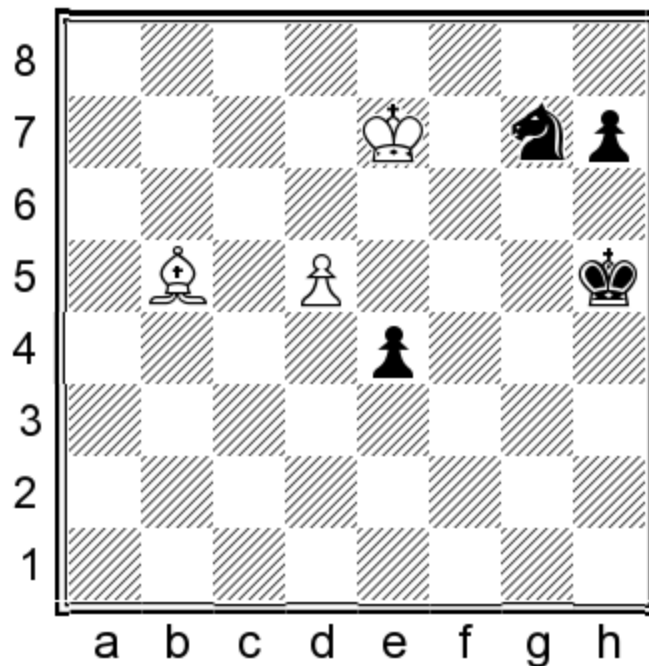
White to play and win

This study by the indefatigable Pogosyants demonstrates once more how rich in content a miniature study can be. Both sides have a far-advanced passed pawn, but the white one is much more dangerous. However, it turns out that Black has stalemate resources.

1.♔f6!

White cannot push his d-pawn yet in view of 1.d6 ♞f5+.

1...♔h6 2.d6

It seems like the race is run.

2...♞e8+!

A cunning knight sacrifice.

3.♗xe8 e3 4.d7

The point of Black's knight sacrifice becomes clear after 4.♗b5 e2 5.♗xe2 with stalemate.

There seems to be no problem for Black; after mutual queen promotion, White does not have a check.

4...e2
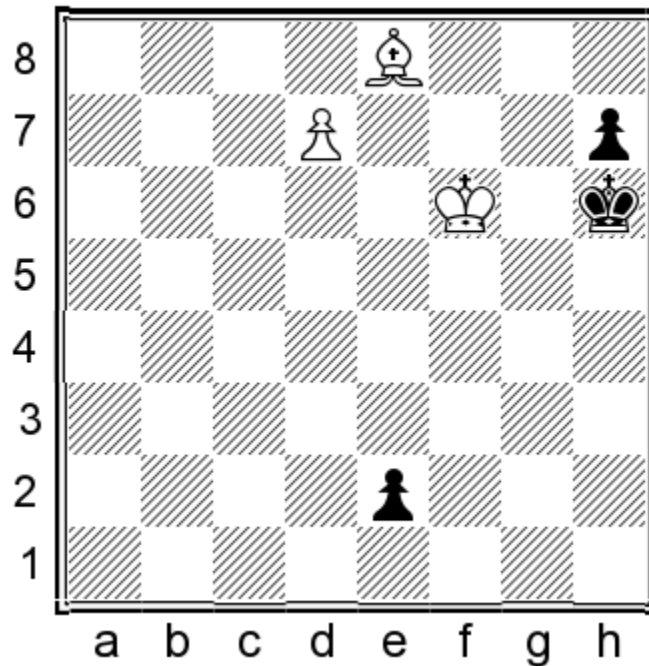
5.d8♘!

By promoting to a knight, White does have a check.

5...e1♘!

And Black does the same! After 5...e1♕ 6.♘f7+ ♚h5 7.♘e5+! White would win immediately; mate or loss of the black queen is inevitable. Thanks to the knight promotion, Black controls the f3-square.
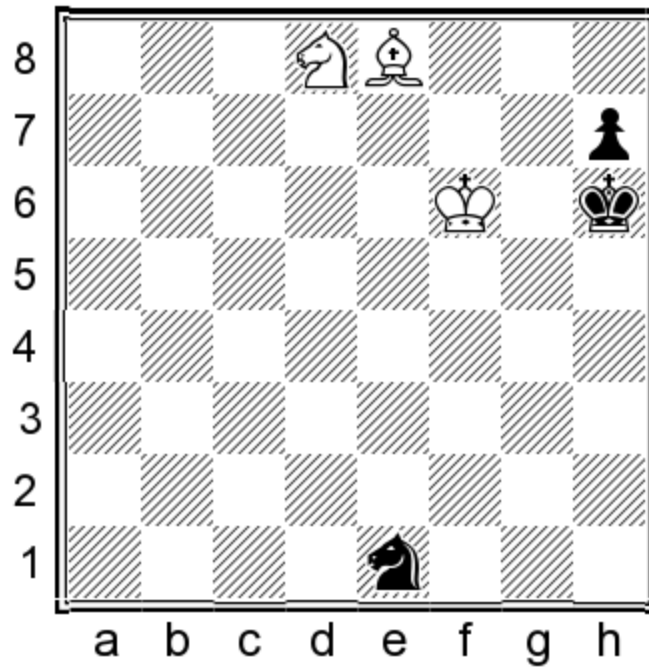
6.♘c6!

Now White chooses a different square for the knight.

6...♘g2 7.♘e7

The point of the previous move; there are two mate threats.

7...♘e3 8.♘g8

Mate.

Study 63 - Yuri Zemliansky

Yuri Zemliansky
Eighth Soviet Union Team Championship 1972
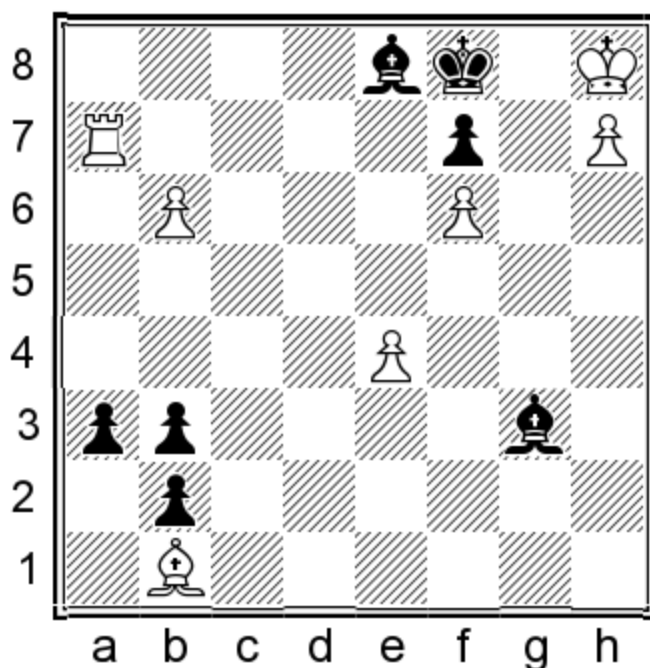
White to play and win

Yuri Zemliansky (1938-2017) was an endgame study composer from Krasnoyarsk. There are 60 studies by him in the database, seven of which gained first prizes. Almost all of his studies are of high quality. Zemliansky had imaginative ideas, and there is always a lot going on in his studies. In the study presented here, he demonstrates a rare theme: mutual promotion to a bishop.

1.♖a5

Forced. White has to control the e5-square since Black threatened 1...♗e5 with mate.

1...♗h4 2.e5 a2

The mate has been averted, but now Black threatens to promote.

3.♖xa2!

Before pushing his pawn, White has to sacrifice his rook. After
3.b7? axb1♕ 4.b8♕ ♕xh7+! 5.♔xh7 b1♕+ 6.♔h8 ♗xf6+ 7.exf6
♕h1+ White even loses; he gets mated.

3.♗xa2 was also insufficient for the win. After 3...bxa2 4.♖xa2 ♗g3!
5.♖xb2 ♗xe5 6.♖f2 ♗c6 neither side can make any progress.

3...bxa2 4.b7
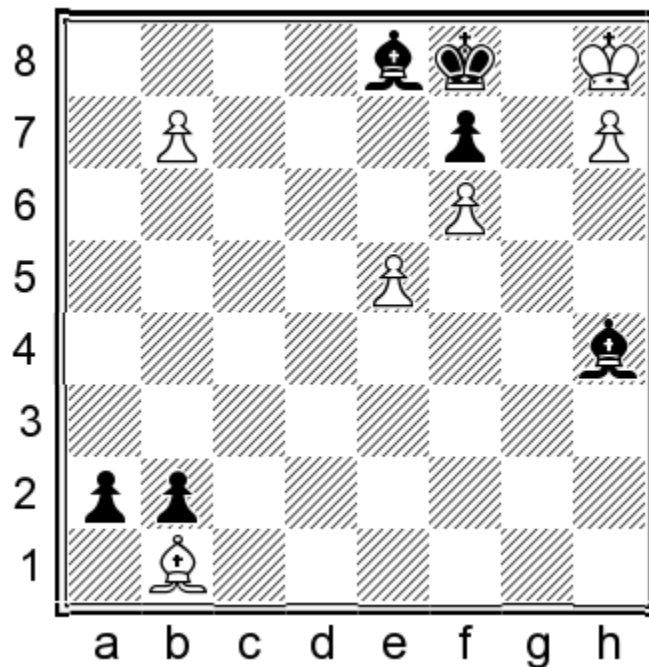
4...a1♗!

The point of the rook sacrifice becomes clear after 4...axb1♕ 5.b8♕
and the white queen controls the b1-square.

White also wins easily after 4...a1♕ 5.b8♕ ♕a3 6.♕b6; he will
bring his queen to the g-file. After the bishop promotion, the
situation is different: how can White prevent stalemate?

5.b8♗!
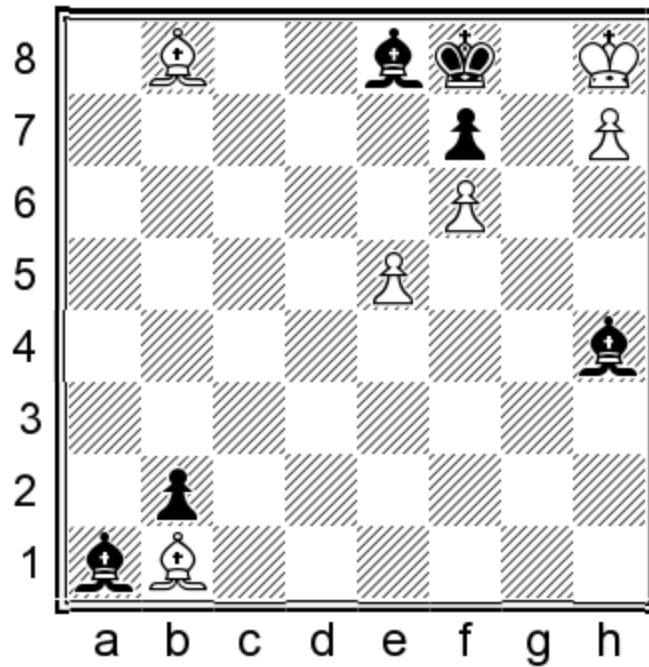
In the previous study we saw a mutual promotion to a knight; here we see a mutual promotion to a bishop, which is much rarer. An impressive illustration of the fact that promotions to a bishop (or rook) can serve both to accomplish stalemate and to avoid it.

5...♗a4 6.♗d6+

And White wins as the h-pawn will queen.

Study 64 - Thomas Dawson

Thomas Dawson
British Chess Federation Tourney 1931
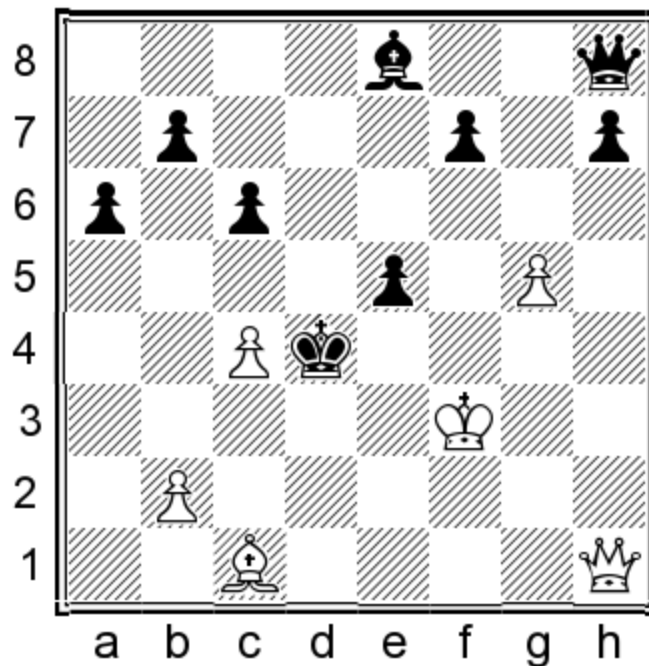
White to play and win

Thomas Dawson (1889-1951) was known as the 'Father of Fairy Chess'. He introduced the Grasshopper and the Knightrider and composed thousands of so-called exoproblems. I don't feel qualified to tell you anything more about this; it is not my expertise. Dawson was also active in the area of the endgame study, with more than 200 studies in the database. His studies are often capricious. However, the study given here is crystal clear. It is my version, I have added the initial moves.

First White has to put his king in position.

1.♔e2 e4

The best chance. Black vacates the e5-square for his king. After other moves, White gets a mating attack; for instance, 1...♔xc4 2.♕e4+ ♔c5 3.♕d3 e4 4.♗e3+ ♔b4 5.♕a3+ ♔c4 6.♕c5+ ♔b3 7.♗d4 and Black has to give the queen to prevent mate.

If the king flees with 1...♔c5, White cuts off its escape route with 2.♕d1!.

2.g6!

An important pawn sacrifice.

2...fxg6

Black has to take the bait as otherwise White gets a passed pawn that quickly decides the issue.

3.♗e3+ ♔e5

Again, Black could not take the c-pawn since after 3...♔xc4 4.♕xe4+ ♔b5 5.♕d3+ ♔b4 6.♕a3+ ♔c4 7.♕c5+ ♔b3 8.♔d3 he will soon get mated.
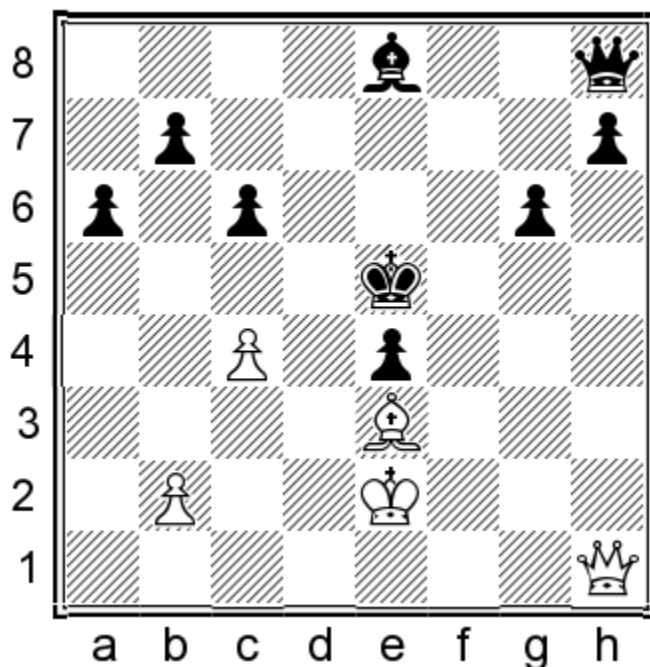
4.♗d4+!

The theme of the disappearing piece.

4...♔xd4
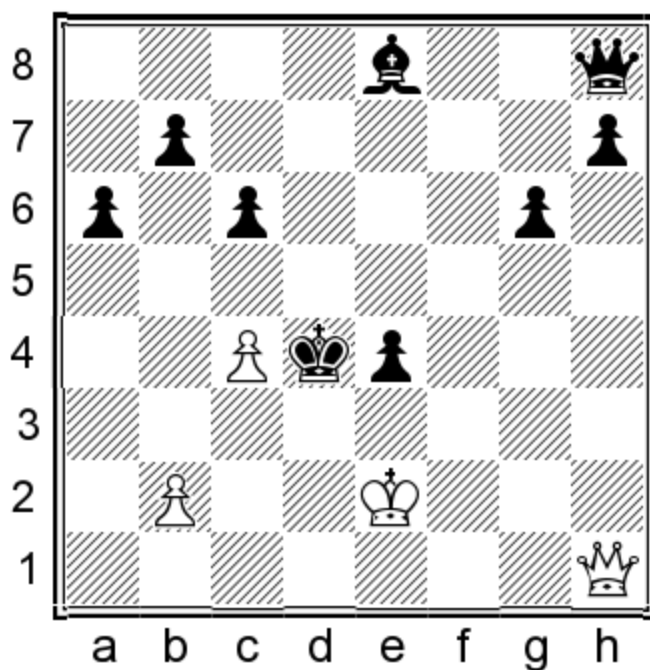
The same position as two moves before, but now without the white bishop on c1. This clears the passage for the white queen.

5.♕a1!

Dawson's invention. The black king and queen are caught on three diagonals.

5...♕g8

Black could not prevent the loss of his queen. White has either 6.b3+ or 6.b4+, depending on Black's move: 5...♔xc4 6.b3+, or 5...♕f8 6.b3+, and finally 5...♔c5 6.b4+.

6.b4+ ♔xc4 7.♕a2+ 1-0
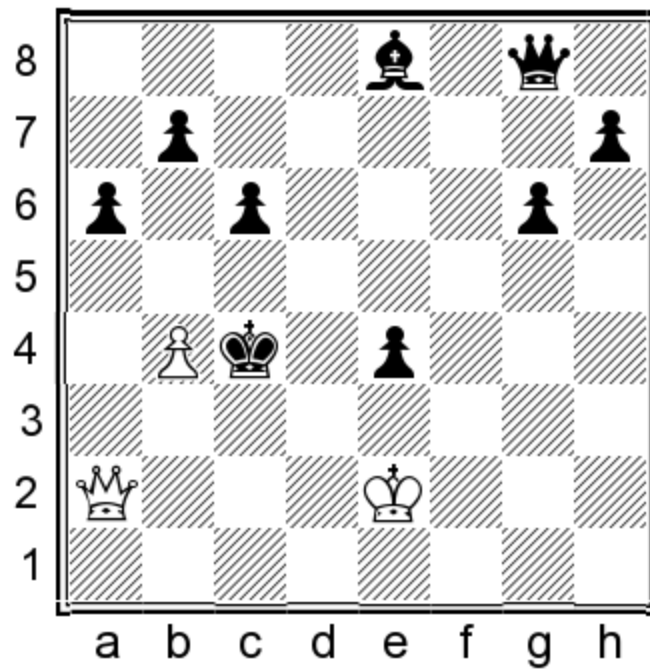
Only now do we see the point of White's second move; with the pawn sacrifice, the a2-g8 diagonal was partly opened.

Study 65 - Jan Timman

Jan Timman
The Art of the Endgame 2011
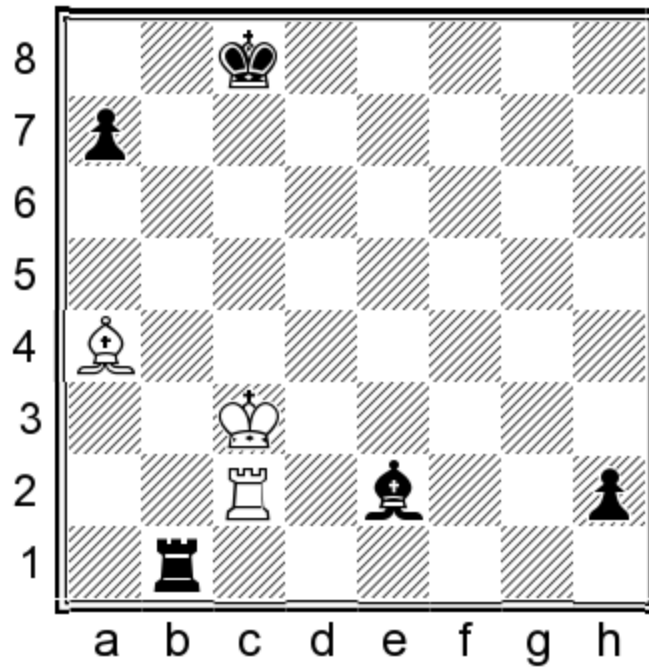
White to play and draw

I once asked a grandmaster colleague, 'Can you think of a position in which White has a rook, bishop and pawn against a bare king, and he also has the move, and still it's a draw?' My colleague couldn't think of an answer. The study presented here provides the answer. The first move is forced.

1.♗c6

Now Black has various bishop moves at his disposal.

1...♗d1

Prevents the capture on h2. After 1...♗a6 2.♖xh2 ♖c1+ 3.♖c2 White has no problems.

1...♗b5 brings Black no benefits either after 2.♗e4 h1♕ 3.♗xh1 ♖xh1 4.♔b4+ and White wins back the bishop.

After the text move, however, White has a big problem.

2.♗d7+!!

The only way out. White's bishop was doomed anyway, and therefore he sacrifices it to force the black king to move to d7. 2.♖xh2 was insufficient in view of 2...♖c1+ 3.♔d2 ♖c2+ and Black wins.

2...♔xd7 3.♖xh2
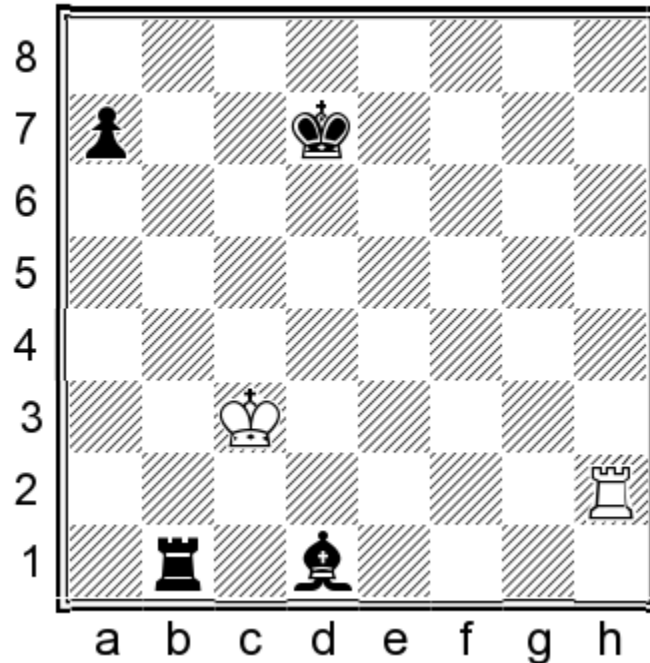
A fascinating situation. Black has a winning material advantage and it is his move; still, White can hold the draw in a miraculous way.

3...a5

The alternative was 3...♔c6 when White continues 4.♖h1! a5 5.♔d2 a4 6.♖xd1 and after the rook trade White's king is within the square of the a-pawn.

4.♖a2!

Now, 4.♖h1 was insufficient in view of 4...a4 5.♔d2 a3 and the a-pawn decides. The text move introduces an attractive finish.

4...a4
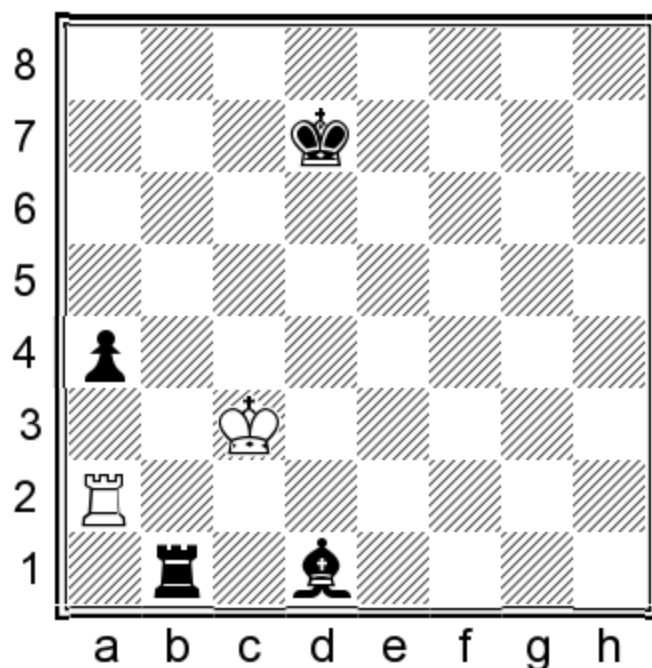
5.♖a1!

After the bishop, White also sacrifices his rook.

5...♖xa1 6.♔b2

Completing this pièce de résistance. The final position was discovered in 1896 by both the Estonian chess historian and endgame study composer Friedrich Amelung (1842-1909) and by Alexey Troitzky, independently.

½-½

Study 66 - Alexander Seletsky

Alexander Seletsky
Shakhmaty v SSSR 1933
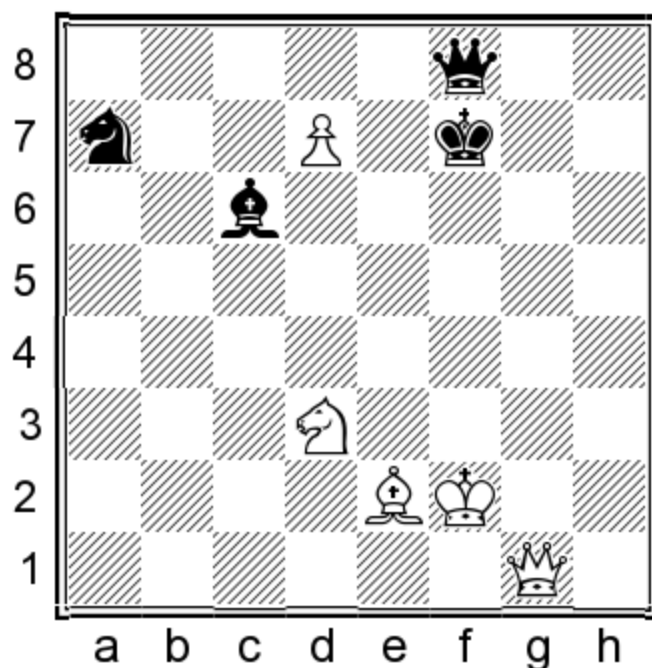
White to play and win

Alexander Seletsky has only a modest output in the area of the endgame study. We find only 12 studies by him in the database. Two of those are of exceptional quality. Probably, Seletsky composed many more studies, but his life is shrouded in mystery. For example, his birth date is not known. He probably died in 1938, but this is not certain either. His best study created a furore in broad chess circles.

At a casual glance, this endgame does not look so dangerous for Black. He has a discovered check in reserve, and so he will be able to eliminate the white d-pawn.

1.♕g5!

White commences the attack. By putting his queen in position, he limits the mobility of the black king. At the same time, he threatens to promote his d-pawn, limiting Black's defensive options. The

alternative 1.♔e1 wins a piece by force, but after 1...♗xd7 2.♕xa7, Black, according to the Tablebase, has two moves to save himself: 2...♕e7 and 2...♕d6.

1...♔e6+

Black has to flee with his king. After 1...♗xd7 2.♘f4 White would obtain a mating attack.
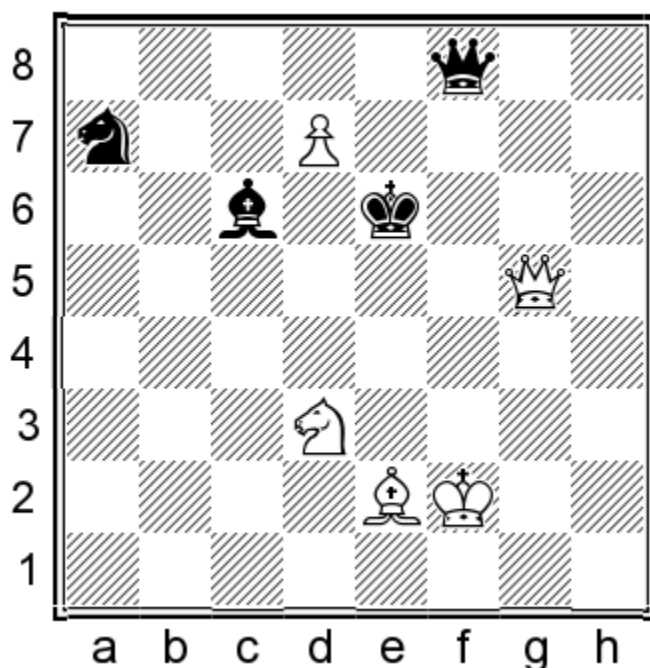
2.♔g1!

It is important to find the right king move. On g1, the king is sheltered from later queen checks by Black. Incidentally, after the alternative 2.♔e1 Black also has to defend very carefully. There can follow: 2...♔xd7 3.♘c5+ ♔c8 4.♕e5 and now Black has to watch his step, as White threatens to give a devastating check on g4. The only way out is 4...♗d7!. After 5.♘a6 ♔d8 6.♕c7+ ♔e7, White can capture the knight, but this is insufficient for the win. And after 7.♕c5+ ♔f7 8.♗c4+ ♔g7 9.♕g5+ ♔h8 the black king is safe on the kingside.

2...♔xd7 3.♘c5+

The second piece is employed for the attack.
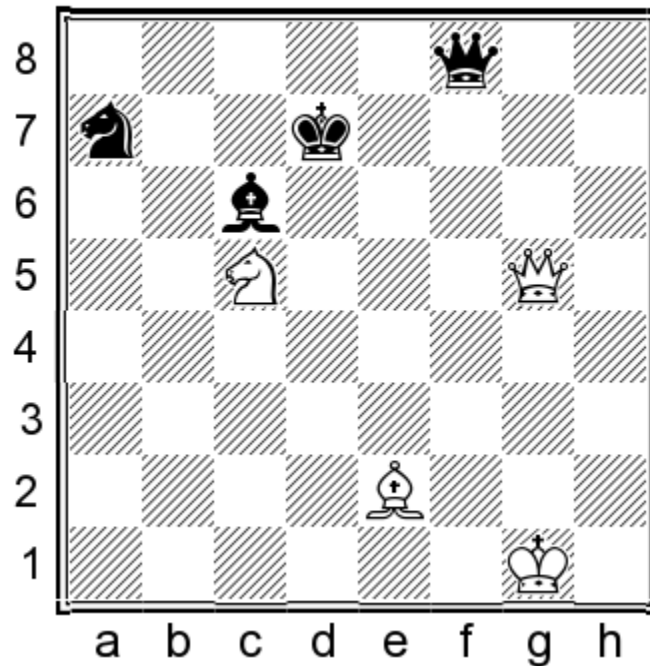
3...♔c8

The alternative 3...♔d6 is elegantly refuted. After 4.♕g3+ ♔d5
White has the pretty bishop sacrifice 5.♗c4+! when the follow-up is
forced: 5...♔xc4 6.♕d3+ ♔b4 7.♕b3+ ♔a5 8.♕a3+ ♔b5 9.♕a4+
♔b6 10.♕a6+ and now finally Black has to take the knight. After
10...♔xc5 11.♕a3+ White wins the queen.

4.♗a6+

The bishop is also involved in the attack; the black king is driven
further and further into the corner.

4...♔b8 5.♕g3+

Forcing the black king to move into the corner.

5...♔a8
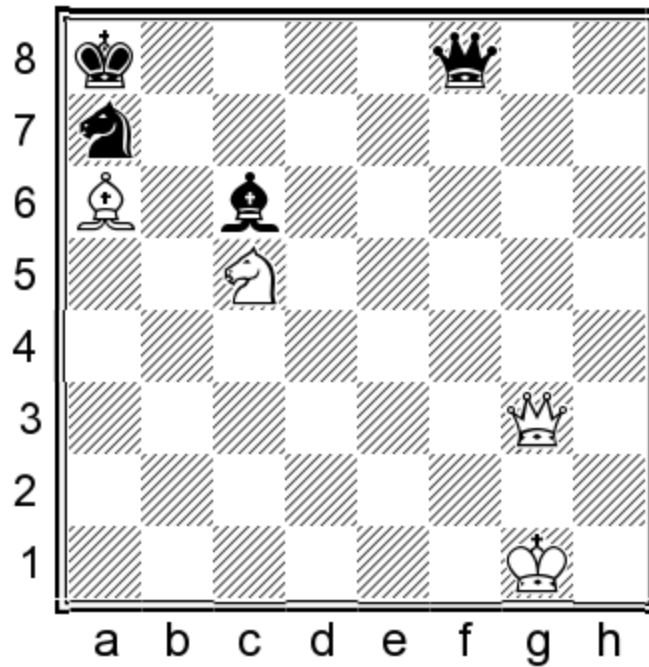
At first sight, it still looks as if Black is not in any danger. However, the mate is close:

6.♗b7+! ♗xb7 7.♘d7

The point of the bishop sacrifice. The knight is put in position for a smothered mate combination. Only now does it become clear why White had to put his king on g1 on the second move, and not on e1: in that case, Black would have a check on b4 now.

7...♕d8
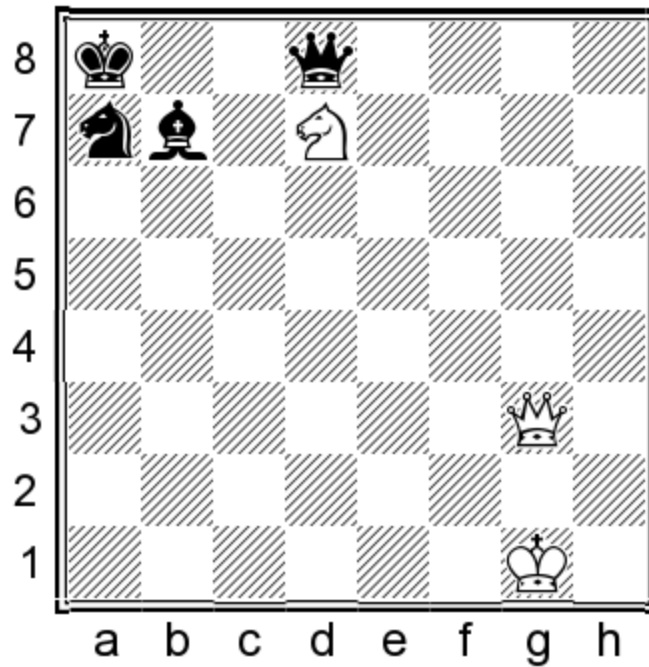
8.♕b8+!

The traditional queen sacrifice that always precedes the smothered mate.

8...♕xb8 9.♘b6#

This mating pattern contains two so-called self-blocks, meaning that during the course of the study Black is forced to block an escape square for his king with one of his pieces or pawns. The knight doesn't count in this case, since it hasn't moved.

Richard Réti

Herman Mattison

Henri Rinck

Alexey Troitzky

Study 67 - Yochanan Afek

Yochanan Afek
Tidskrift för Schack 1972
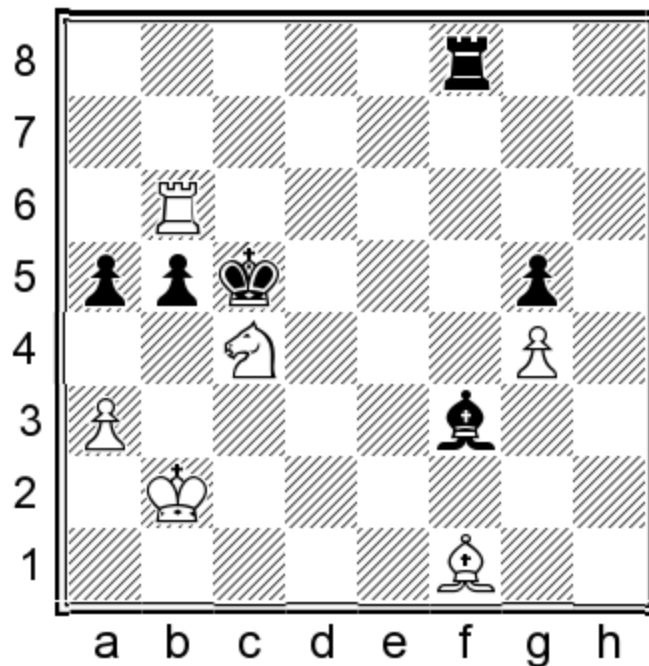
White to play and win

Yochanan Afek (1952-) is an Israeli endgame study composer who has been living in the Netherlands for a long time. Through the years, he has composed more than 400 studies with diverging themes. I have known Afek for almost a quarter of a century, and during those years I have learned a lot from him about endgame studies. Afek was awarded the grandmaster title as a composer in 2015. He had composed his best study already 43 years before that! It is a textbook example on the theme of domination.

1.♖xb5+

This rook sacrifice is forced. If 1.♘e5 ♔xb6 2.♘d7+ ♔c6 3.♘xf8 ♗xg4, Black has no trouble holding the draw.

1...♔xb5 2.♘e5+

An unpleasant discovered check for Black. To prevent a family check, he has to move his king to an endangered square.

2...♔a4 3.♘d7
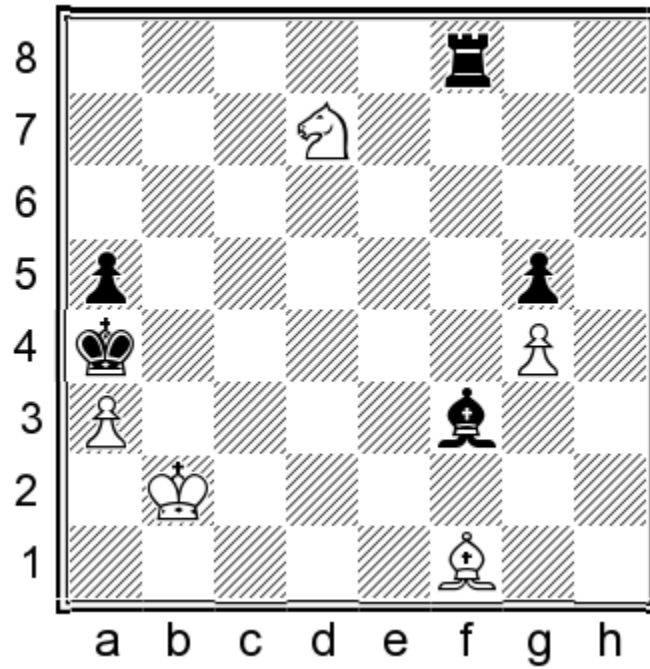
White seems to be easily winning here. However, Black has a hidden resource:

3...♗e2!

Black is going to play for stalemate.

4.♗xe2 ♖b8+
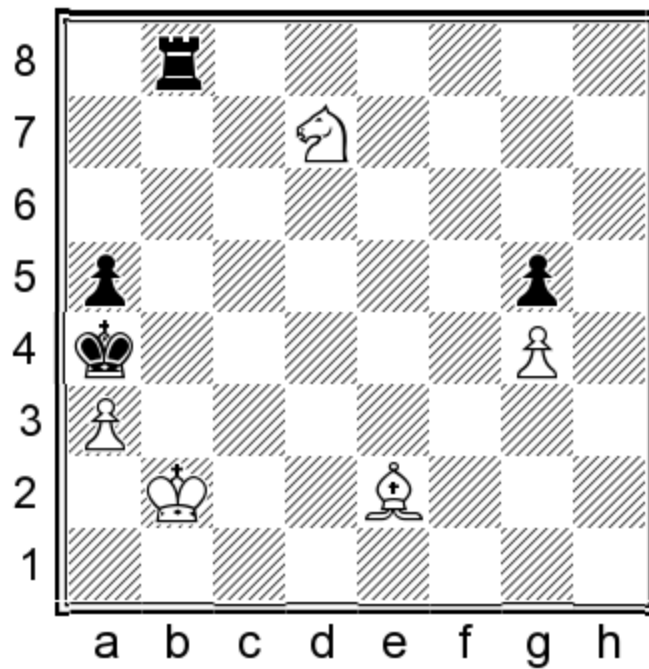
White may not capture the rook, but he comes up with a surprise in turn:

5.♗b5+!!

An astonishing move. White sacrifices his bishop to avoid stalemate. On 5.♔a2 Black has the saving move 5...♖b2+!.

5...♖xb5+ 6.♔a2
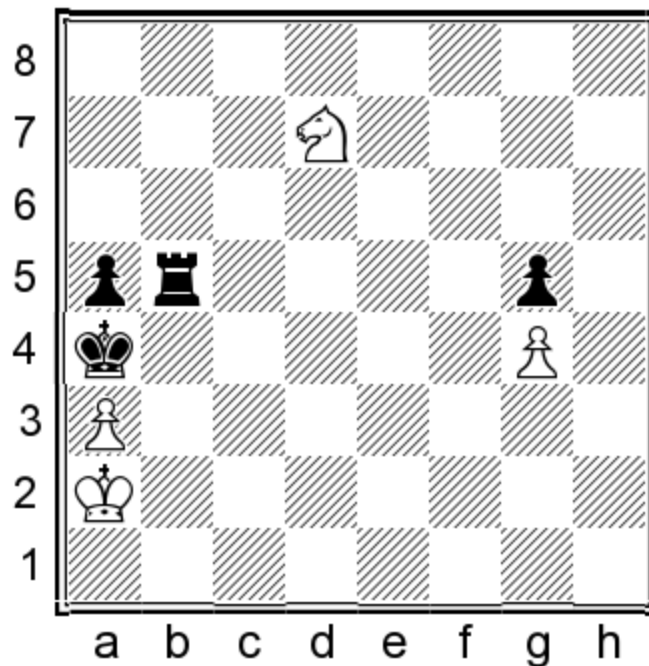
A fascinating position. The black rook is completely dominated by the white knight. Please note that this is a mutual zugzwang, and the difference is between winning and losing.

6...♖d5

Or 6...♖b7 7.♘c5+ and White wins.

7.♘b6+ ♚b5 8.♘xd5 1-0

Study 68 - Alexander Kazantsev

Alexander Kazantsev
Shakhmaty v SSSR 1953
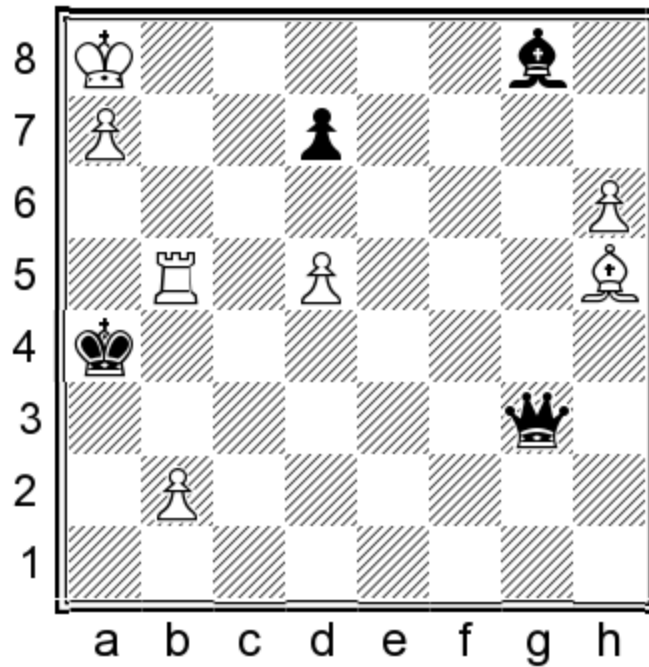
White to play and win

Alexander Kazantsev (1906-2002) was one of the most colourful persons in the history of the endgame study. He wrote science fiction books and was even a firm believer in UFO's and aliens. During the war, he worked his way up to colonel in the army. His studies stand out for the grandness of their themes. You could say they are gripping. In the study presented here, White drives the black king into a tight spot.

1.♖b7!

A strong first move. White has a clear threat: 2.♗d1+ followed by 3.b4+ and 4.♗e2+ and mate.

1...♕e5

The best defence: Black defends the e2-square and keeps the white king in the corner. The alternative 1...♕e1 fails to 2.♔b8 ♕g3+ 3.♔c8 followed by promotion of the a-pawn.
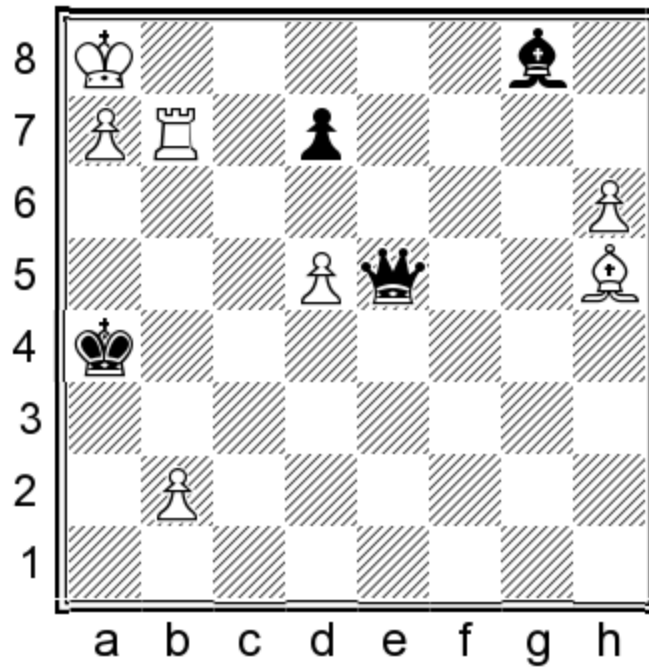
2.♗d1+!

According to plan. White drives the black king to a5.

2...♔a5 3.b4+ ♔a6 4.♗e2+! ♛xe2 5.♔b8 ♛e5+

The only queen check that poses White any problems. After
5...♛e8+ 6.♔c7 ♛e5+ 7.d6 ♛c3+ 8.♔b8 Black would get mated.

6.♔c8!

Definitely not 6.♖c7? in view of 6...♗xd5 and Black wins.

6...♛e8+ 7.♔c7 ♗xd5

Black has no choice. After 7...d6 8.a8♛+ ♛xa8 9.♖b6+ ♔a7 10.♖b5
he would lose without a fight.

8.a8♛+!

Forcing the first self-block.

8...♛xa8 9.♖b6+ ♔a7 10.b5!
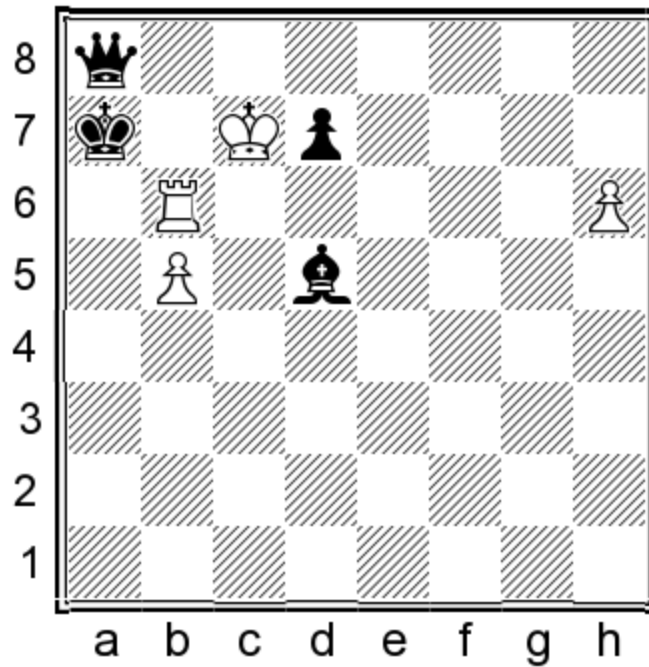
The mating net is drawn tighter.

10...♗b7

There is no other way to prevent mate on a6.

11.♖a6+!

Forcing the second self-block.

11...♗xa6 12.b6

Again, the pawn has the last word – checkmate.

Study 69 - Ghenrikh Kasparian

Ghenrikh Kasparian
Shakhmaty v SSSR 1939
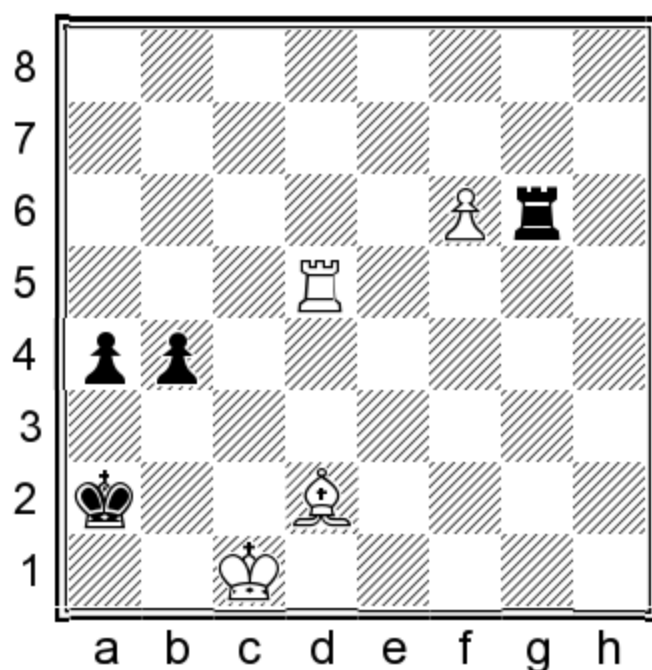
White to play and win

Ghenrikh Kasparian (1910-1995) was for a long time regarded as the greatest endgame study composer of all time. Nowadays, the multiple World Champion Oleg Pervakov is also a contender for this title. Kasparian composed more than 750 studies and wrote several books on endgame studies. He was also a very strong chess player. Kasparian won the Armenian Championship ten times and competed four times in the USSR Championship, with satisfactory results. The study given here is one of his most famous; it was immortalized on a postage stamp released in Armenia in 2010 in celebration of Kasparian's 100th birthday.

1.♗g5!

The only move to maintain the f-pawn.

1...b3

Black has to create counterplay by pushing his pawns. After 1...♖g8 2.♖d2+! ♔b3 3.f7 ♖f8 4.♖f2 White wins without effort.

2.♖d2+

Prevents the further march of the b-pawn and forces Black's king to move to the corner square.

2...♔a1 3.f7 ♖xg5

A surprise; Black allows the promotion. The alternative 3...a3 fails to 4.♖d1! ♖d6 5.f8♕ b2+ 6.♔c2+ ♖xd1 7.♕xa3#.

4.f8♕ ♖g1+ 5.♖d1 ♖g2!

The point of the third move. Suddenly Black has two mate in one threats. The alternative 5...b2+ was insufficient due to 6.♔c2+ ♖xd1 7.♕a3#.
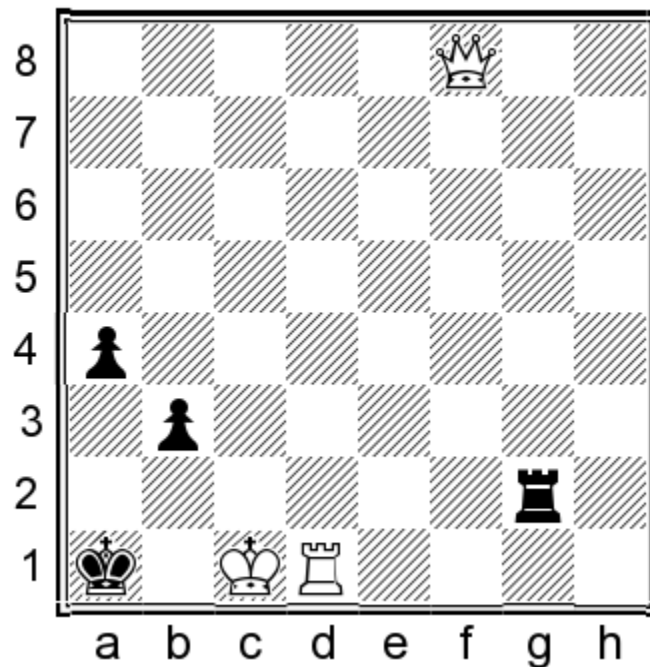
6.♕a3+

The only move to get further.

6...♖a2
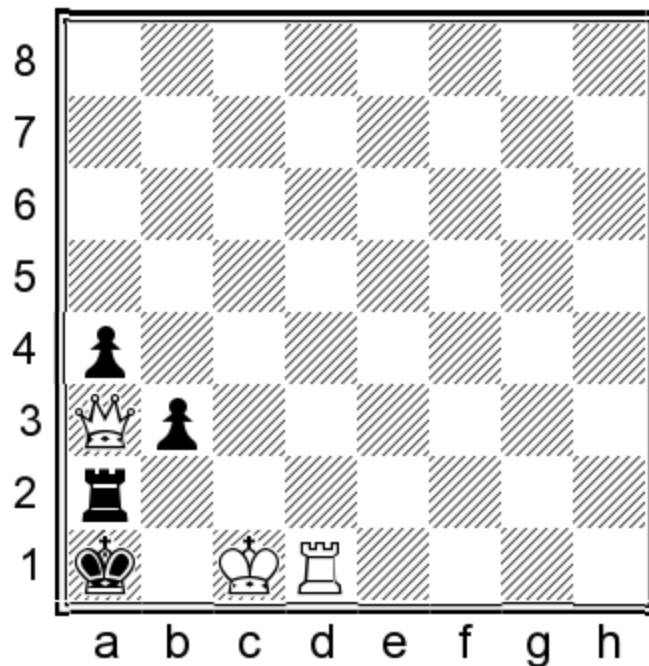
But now what?

7.♖d2!

The climax of the study. White sacrifices his queen to introduce an unexpected mating pattern. The logical 7.♕xa2+ was just insufficient to win. After 7...♔xa2 8.♖d2+ ♔a1! 9.♖b2 a3 10.♖xb3 a2 White cannot prevent stalemate. Nor does 7.♕c5 bring White anything after 7...♖h2 (only not 7...b2+ 8.♔d2+ b1♕+ 9.♔e1 and White wins.)

7...♖xa3

The alternative 7...b2+ leads to a prosaic winning line: 8.♕xb2+ ♖xb2 9.♖xb2 a3 10.♖b1+! ♔a2 11.♖b8 ♔a1 12.♔c2 a2 13.♔b3 ♔b1 14.♔a3+ and the black a-pawn will be lost.

8.♖b2! ♖a2 9.♖b1#

After we have seen several studies in which a knight gave mate to the black king in the corner, now it's the turn of the rook.

Study 70 - Laszlo Zoltan

Laszlo Zoltan
Magyar Sakkelet 1958
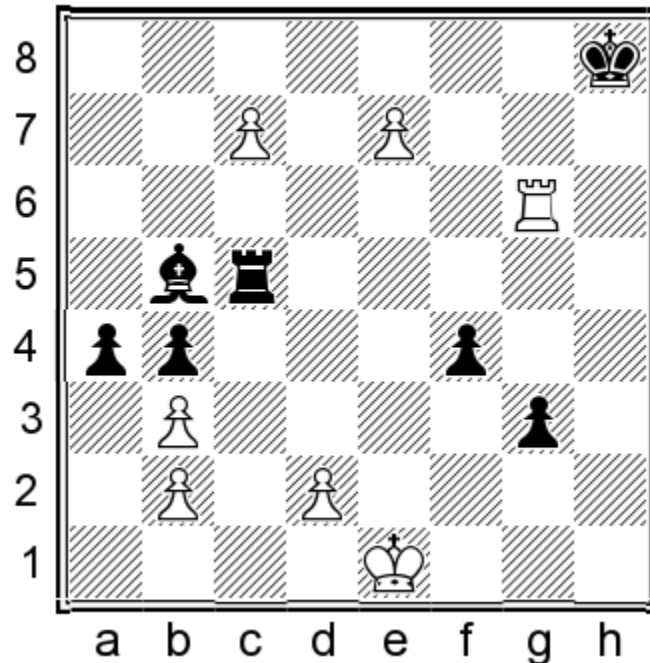
White to play and win

Laszlo Zoltan (1942-2008) was a Hungarian problem and endgame study composer. The database only contains 27 studies by him, but two of them were first prizes. Zoltan composed his best study when he was sixteen years old. We see a struggle in which White uses the Novotny theme no less than three times in a row. This is my version of the study; in the original version there was a black knight on d1 that was captured like dead wood.

1.♖c6

The first Novotny. Black cannot take the rook.

1...♖e5+ 2.♔d1 ♗e2+

On its way to g4.

3.♔c1 ♗g4
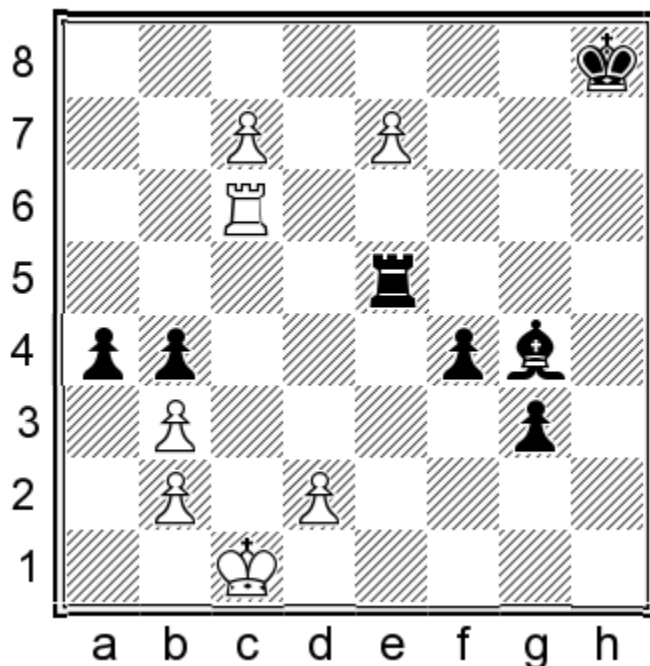
The white pawns have been stopped again – time for the second Novotny.

4.♖e6!

Again, White occupies the intersection square of the black rook and bishop.

4...♖c5+

4...♗xe6 was also insufficient since after 5.e8♕+ ♔g7 6.c8♕ ♖e1+ 7.♔c2 ♗xb3+ 8.♔d3 Black has run out of arguments.

5.♔b1 ♗f5+
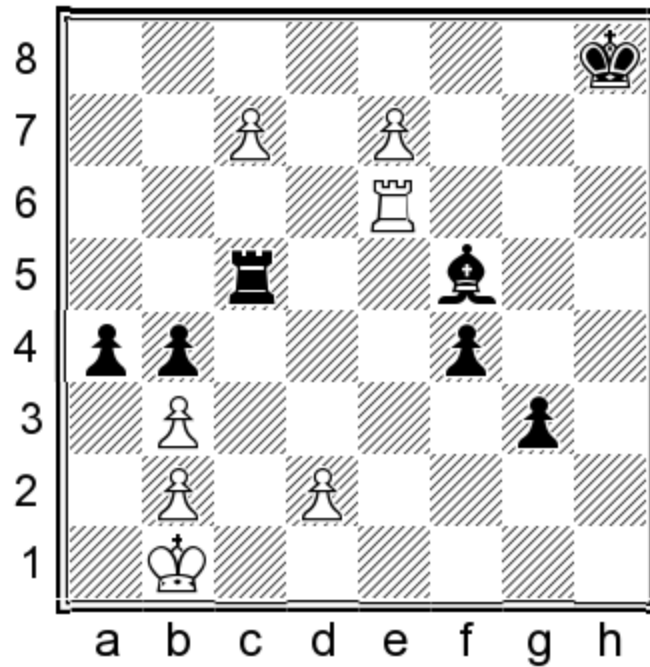
6.d3!

An important little move. Before White moves to the a-file with his king, he forces the black bishop to move to d3.

6...♗xd3+ 7.♔a2 axb3+ 8.♔xb3 ♗b5

For the third time, Black has the white pawns under control.
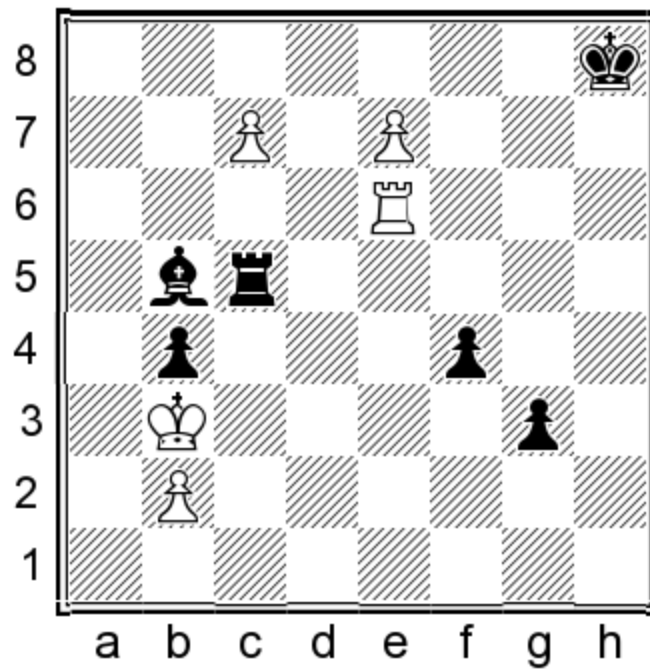
9.♖c6

And the third Novotny – the decisive one.

Study 71 - Ernest Pogosyants

Ernest Pogosyants
Shakhmaty v SSSR 1965
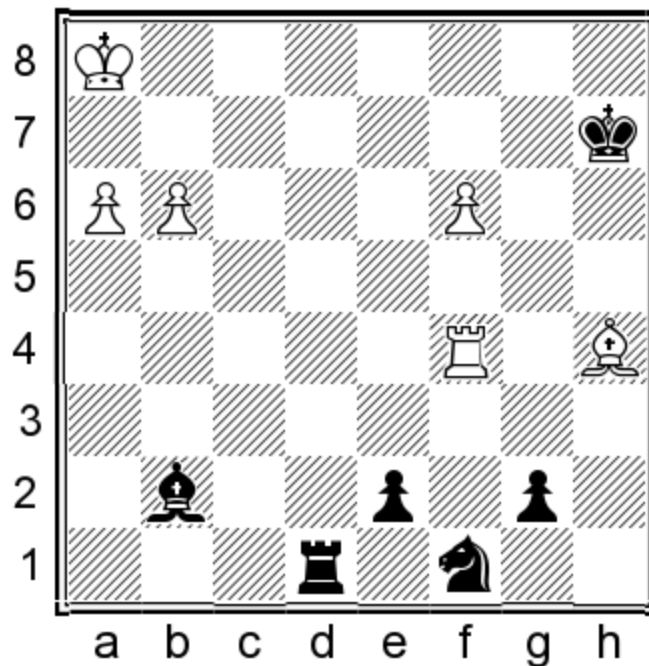
White to play and draw

We have just seen a triple Novotny, but there is also something like a mutual Novotny. This was discovered in 1965 by the man of many studies: Pogosyants. The concept is highly intricate. This is my version of the study: I have added the first two moves on both sides, and put the white rook on f4 (in the original version, the rook was on d4, but that doesn't work).

The first move is clear.

1.f7

Threatening to promote and at the same time preventing a rook check on d8.

1...♗a3 2.b7

Again threatening to promote.

2...♖b1

Black has succeeded in preventing the promotion of the white pawns, and now he threatens to promote his g-pawn.

3.♖g4
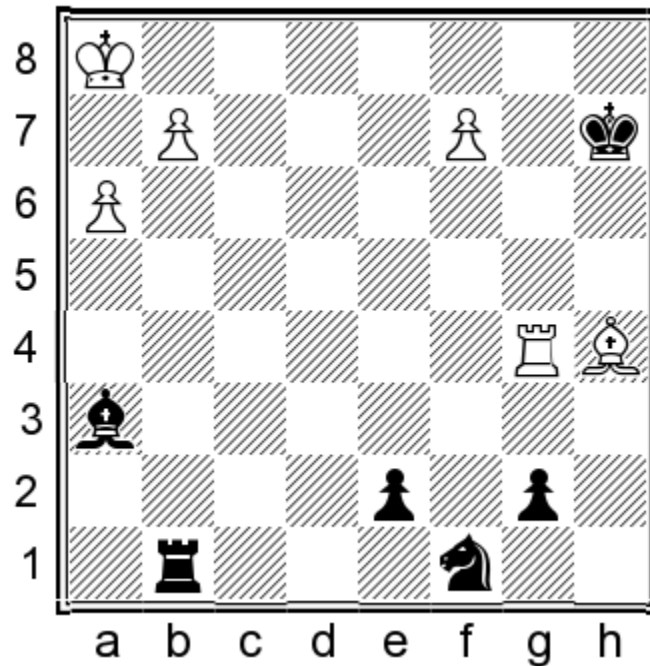
Both sides have stopped two far-advanced enemy passed pawns with their rooks and bishops. Now we get the first Novotny.

3...♘g3!

The same principle as in Zoltan's study, only now with a knight. White has a fitting reply:

4.♖b4!

A 'counter-Novotny'.

4...♖xb4

The best attempt.

5.f8♕ ♖xb7!

The point of the previous move. Now White has to be on his guard.
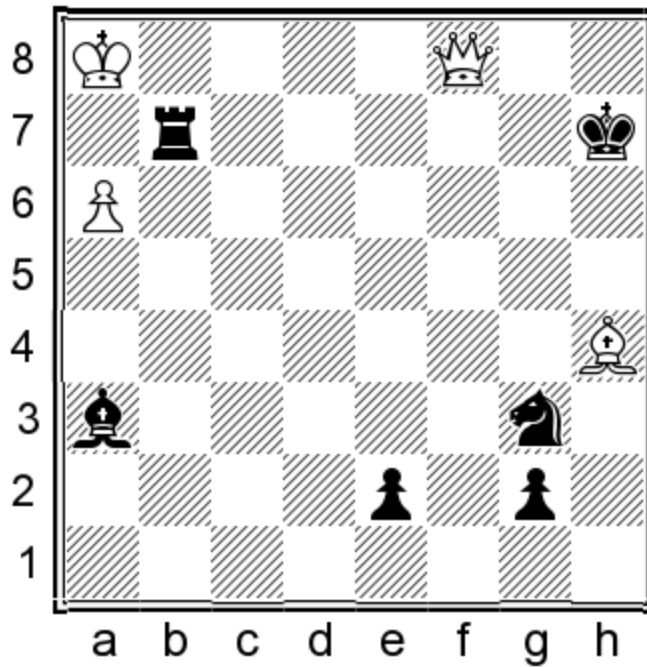
6.♕f2!

The only move, keeping the enemy passed pawns under control. After 6.♕f3 ♖g7! 7.♗xg3 e1♕! 8.♗xe1 g1♕ Black wins since White has no perpetual check.

6...♗c5

Again, the best attempt.

7.♕xc5 e1♕ 8.♕c2+ ♕e4

King moves don't help Black. After 8...♔g7 9.♕xg2 ♖b3 10.♗xg3 ♖xg3, the simplest way to draw is 11.♕xg3+ ♕xg3 12.a7, and after 8...♔h6 9.♕c6+ White doesn't have any problems either.

9.♕xe4+ ♘xe4 10.axb7 g1♕ 11.b8♕
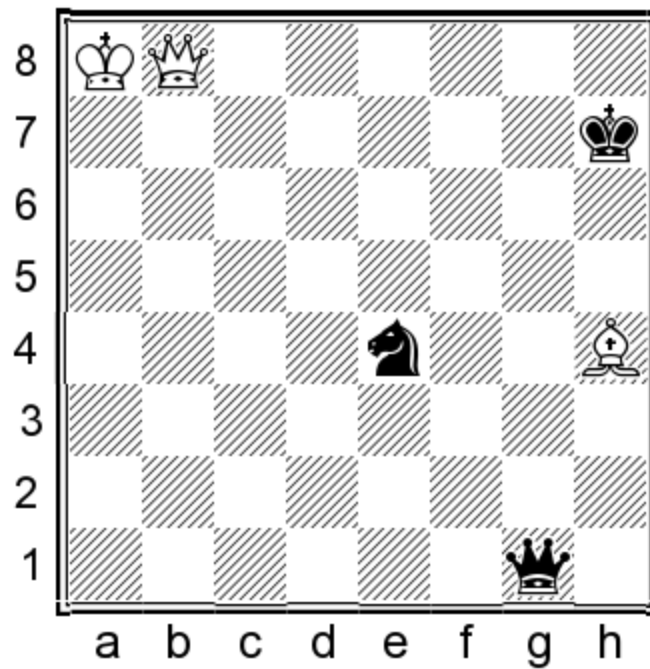
Draw.

Study 72 - Tim Krabbé and Jan Timman

Tim Krabbé and Jan Timman
The Art of the Endgame 2011
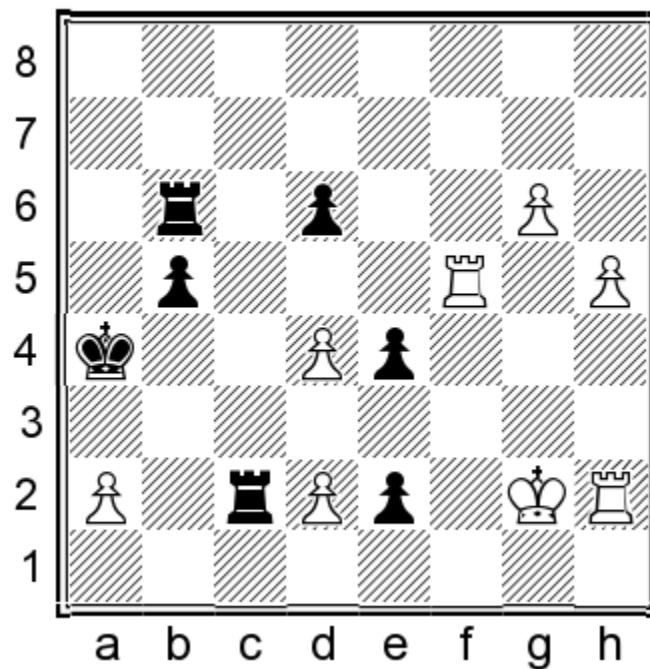
White to play and win

Tim Krabbé (1943-) is a Dutch writer with a special interest in chess endgame studies. His book Chess Curiosities contains a number of extraordinary studies. In 1992, during a holiday in France, he showed me a special theme for which he had already designed a scheme: the double Prokes manoeuvre. It kept me busy for days, but I didn't manage to convert the scheme into a good study version. I only managed this many years later, with the indispensible help of the computer.

'What is a Prokes manoeuvre?' the reader may ask. This will soon become clear in the main line.

1.♖h1

The right way to prevent promotion. After 1.♔f2 e3+! 2.dxe3 ♖bc6 3.g7 ♖b2 4.g8♕ e1♕+ 5.♔f3 ♕d1+ or 5...♕f1+, White cannot win.

1...e3 2.♔f3 ♖c1!

The prelude to the first Prokes manoeuvre.

3.♖xc1

The alternative was 3.g7. After 3...exd2 4.g8♕ ♖f1+ 5.♔g2 d1♕ 6.♖fxf1 exf1♕+ 7.♖xf1 ♕e2+ 8.♔g3 ♕e3+ the white king cannot run away from the checks. But not 8...♕xf1? 9.♕b3+ and mate.

3...exd2
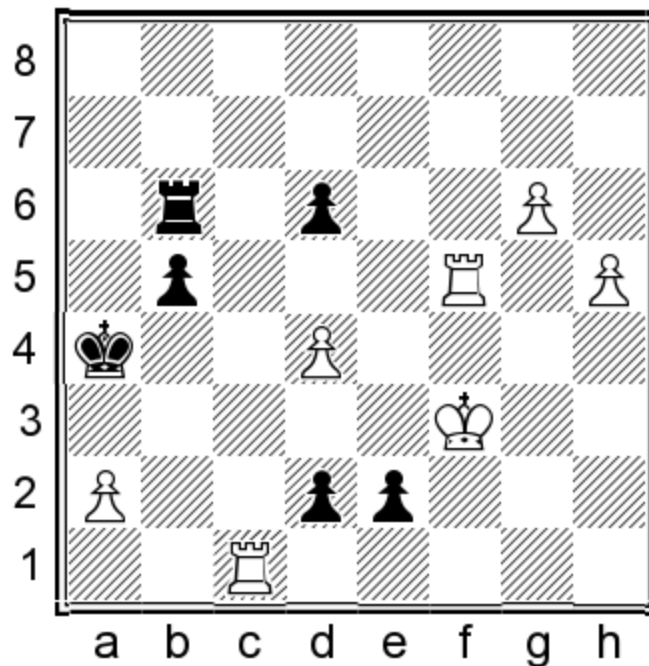
And here it comes:

4.♖c4+!

This is the Prokes manoeuvre, named after the Czech endgame study composer Ladislav Prokes (1884-1966). White sacrifices his rook to be able to control the far-advanced passed pawns. However, the study continues.

4...bxc4 5.♔xe2 c3

Again, Black has two far-advanced passed pawns that White will have to keep in check.

6.♖f1 ♖b1!

Black's second rook sacrifice, and at the same time the prelude to the second Prokes manoeuvre.

7.♖xb1 c2
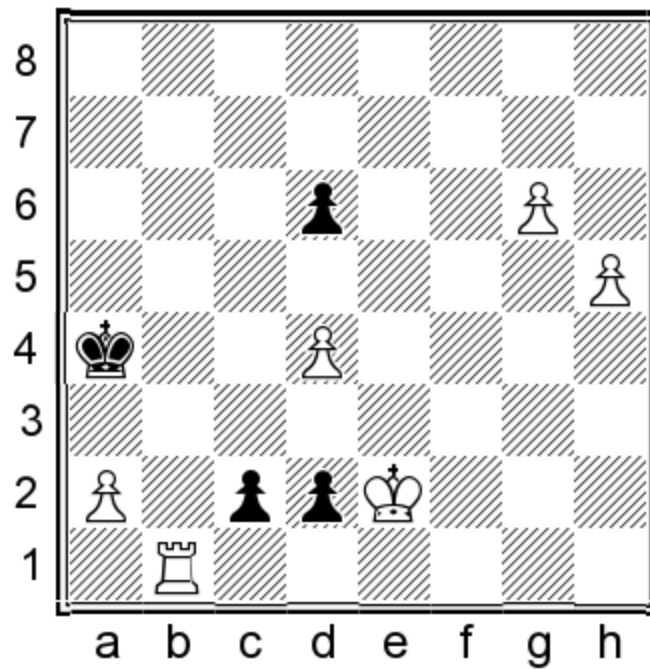
8.♖b4+!

The same principle as before.

8...♔xb4 9.♔xd2 1-0

Study 73 - Geir Sune Tallaksen Ostmoe
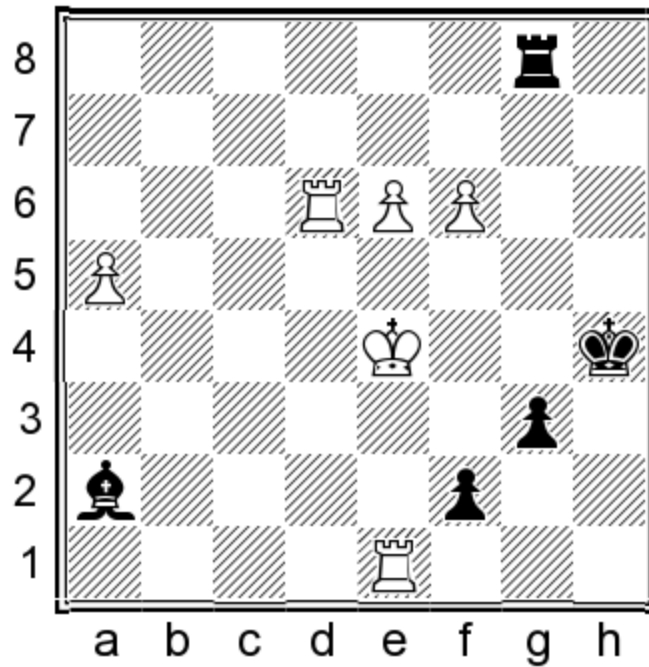
White to play and win

Besides a double Prokes manoeuvre, there is also a mutual Prokes manoeuvre. This is illustrated by the Norwegian International Master and endgame study composer Geir Sune Tallaksen Ostmoe (1985-). He attracted attention in 2022 by holding Magnus Carlsen to a draw with Black in the Norwegian club competition. Within the area of endgame studies, Ostmoe is particularly interested in specific themes, as in the study presented here.

Before marching with his f-pawn, White first has to give check.

1.♖h1+ ♔g4 2.f7 ♖a8 3.♖d8!

The well-known rook sacrifice that introduces the Prokes manoeuvre.

3...♖xd8

On the direct 3...g2, White has 4.♖g8+ and Black gets mated.

4.e7
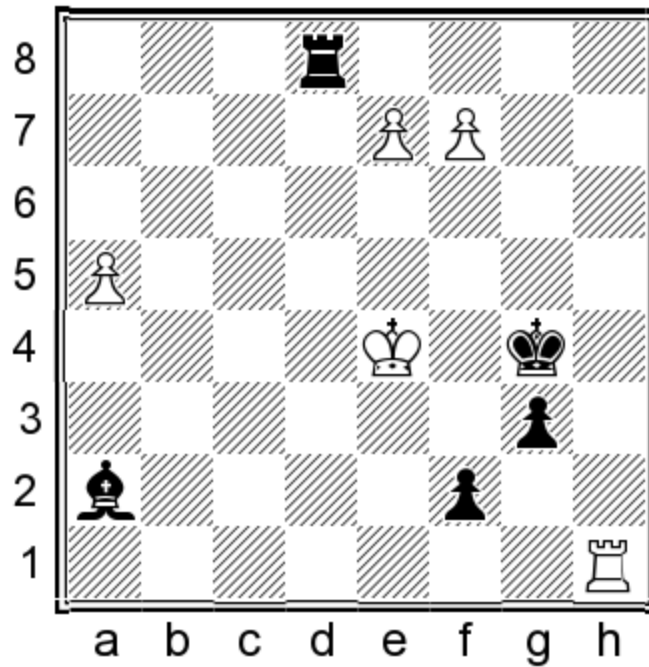
4...♖d4+!

There it is! The alternative 4...♗d5+ was equally insufficient after 5.♔e3 ♖a8 6.e8♕ ♗xh1 7.♕xa8 ♗xa8 8.f8♕ ♗g2 and now 9.♔e2! is the only move that wins.

5.♔xd4 ♗xf7

Now White has to take care of the black passed pawns.

6.♔e3 g2
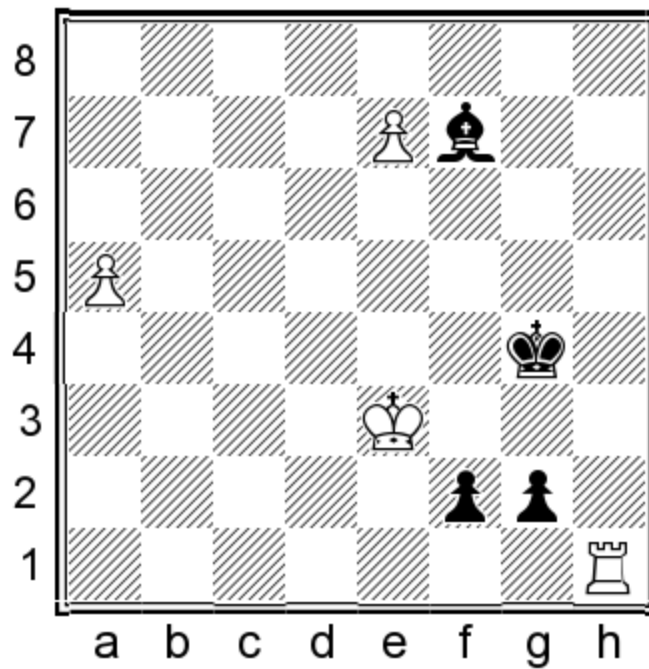
The same scheme:

7.♖h4+!

The counter-manoeuvre.

7...♔g3 8.♖g4+! ♔xg4 9.♔xf2 ♔f5 10.a6

After all the skirmishes, White's a-pawn decides the battle.

10...♔e6 11.a7

And White wins.

Study 74 - Alexey Kotov and Leopold Mitrofanov

Alexey Kotov and Leopold Mitrofanov
Leninska Smena 1976
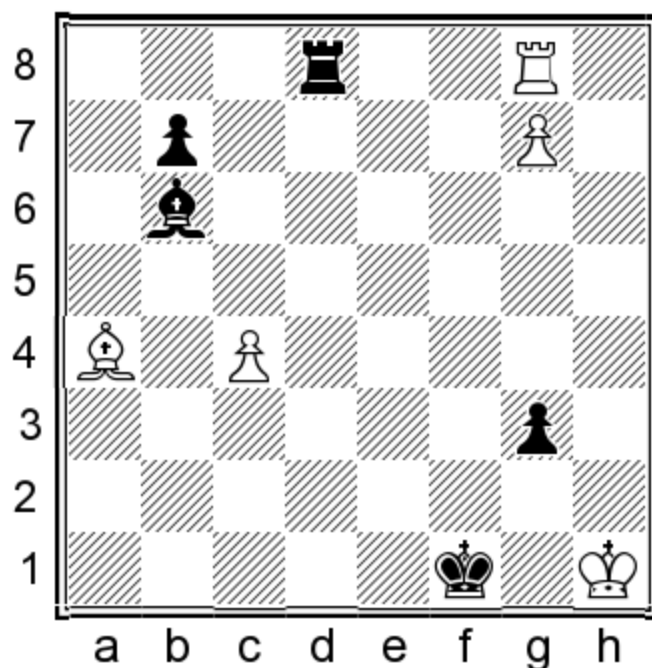
White to play and draw

As a general rule, when two endgame study composing geniuses work together, this leads to exceptional results. Alexey Kotov (1928-2007) composed more than 80 studies, mostly with original variations on the theme of the systematic manoeuvre. Leopold Mitrofanov (1932-1992) was known for his brilliant ideas. He was very productive; there are more than 400 studies by him in the database. In the following study, we see a fantastic systematic manoeuvre: a white queen and a black rook pursue each other on adjacent files.

This is my version of the study; I have added the bishop sacrifice on the second move.

1.♖f8+

Forces the black bishop to move to f2.

1...♗f2

Now Black threatens to push his g-pawn through.

2.♗c6!

White is going to play for stalemate. After 2.g8♕ ♖xf8 3.♕g7 ♖h8+ he would get mated.

2...bxc6 3.g8♕ ♖xf8
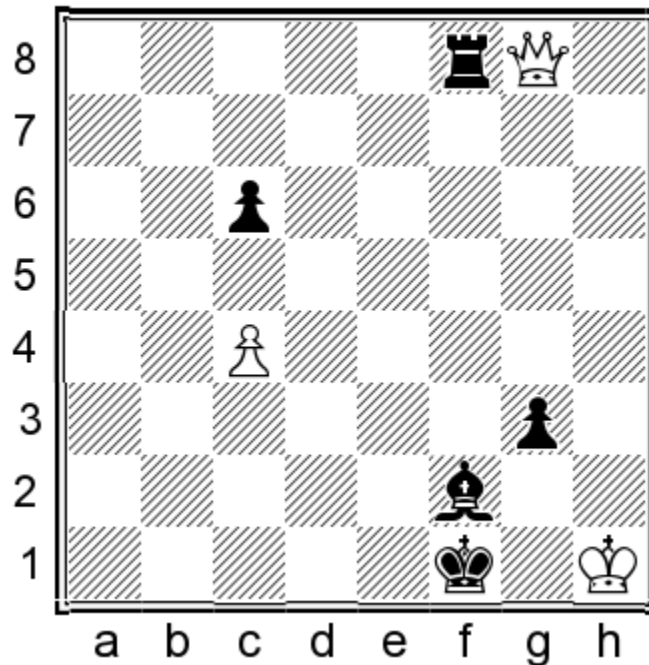
4.c5!

The point of the bishop sacrifice on the second move. The queen may not be captured.

4...♖f7!

The dance of the rook and queen begins. Black prevents the check on c4 and threatens mate in two again.

5.♕g7!

The white queen follows.

5...♖f6

Again, Black limits the scope of the white queen.
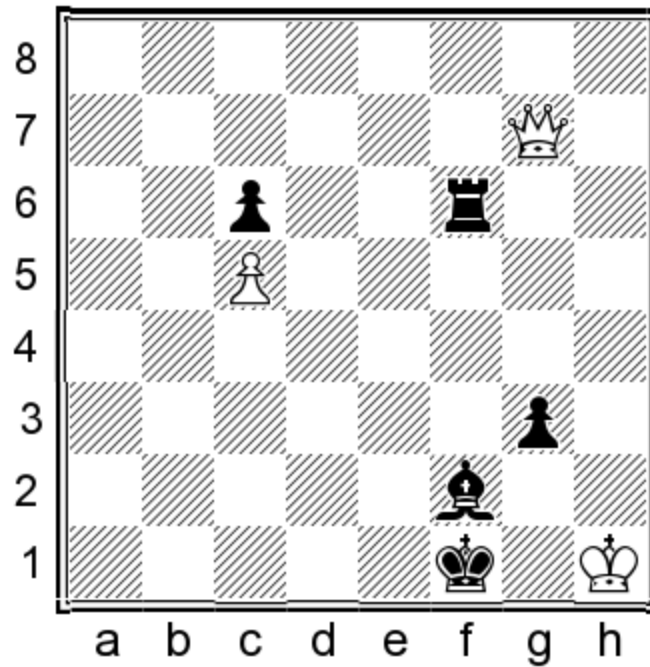
6.♕g6!

Step by step we are moving down the board.

6...♖f5 7.♕g5 ♖f4 8.♕g4

The end of the dance. Now Black has nothing better than capturing the queen, with a draw by stalemate.

Study 75 - Alexey Kotov

Alexey Kotov
64 1975
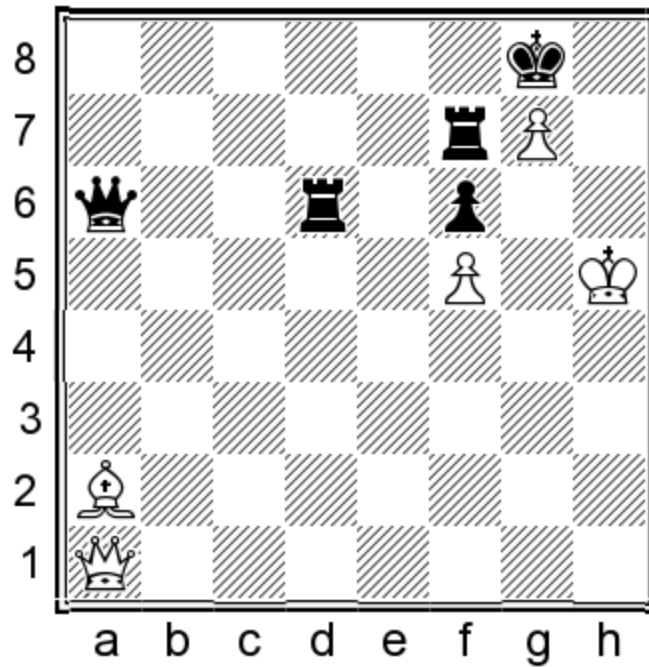
White to play and win

One year earlier, Kotov had composed a study centring around a dance of two queens. The pieces graciously move up the board on two adjacent diagonals, step by step. The play is absolutely fascinating – a magnificent demonstration of the hidden beauties of chess. I give my version of the study which contains two extra finesses.

1.♔g6

Now it seems like a done deal, but Black has a few stalemate tricks:

1...♖e6!

The best way to sacrifice the rook. After 1...♖d5 2.♗xd5 ♕a2 3.♕e5 White wins right away.

2.♗xe6
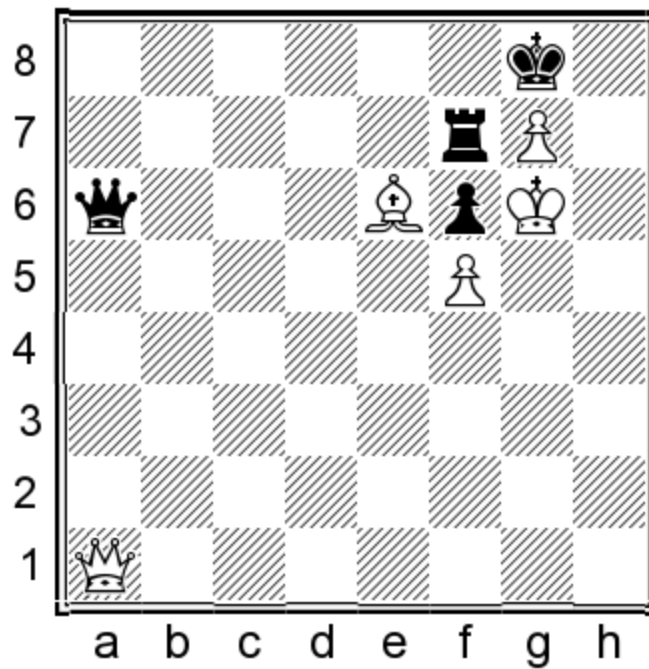
2...♕a2!

The dance begins. Black indirectly protects his rook and threatens to give check on g2.

3.♕b2!

Prevents the check.

3...♕b3!

Now threatening check on g3.

4.♕c3 ♕c4 5.♕d4

Arriving in the centre.

5...♕d5

For the second time, check on g2 is threatened.

6.♕e4!

The eighth queen sacrifice. White brings his queen over to the other long diagonal so as to dominate the enemy queen completely.

6...♕a2
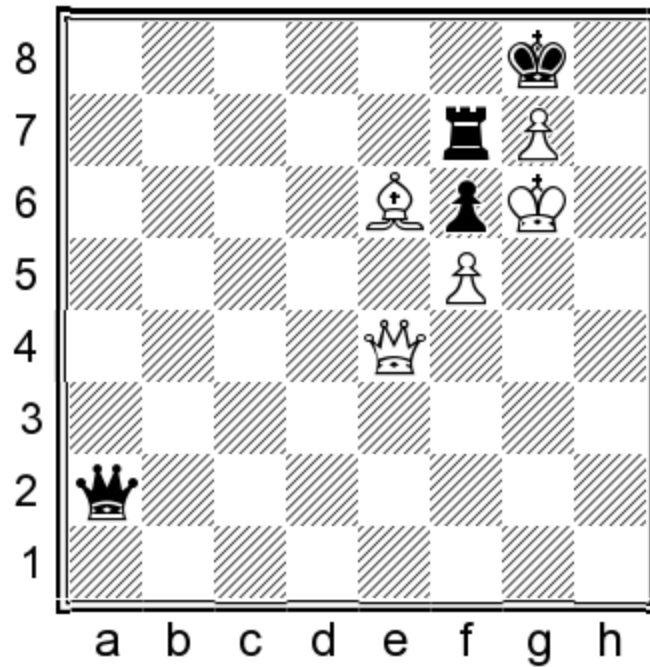
7.♕a8+

The final queen sacrifice.

7...♕xa8 8.♗xf7

Mate.

Study 76 - Leonard Katsnelson

Leonard Katsnelson
10th Soviet Team Championship 1977
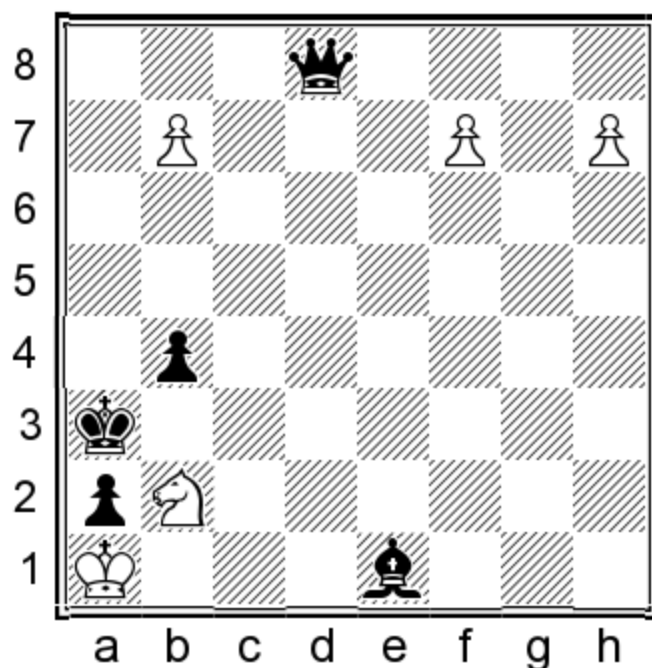
White to play and draw

There is a variation on Kotov's queen dance. This was demonstrated by Leonard Katsnelson (1936-), a shipbuilder from Leningrad with more than 200 endgame studies to his name. He also composed a significant number of studies with his one-year-younger brother Vladimir. In Kotov's footsteps, Katsnelson came up with the idea to have the queens move on two diagonals, in pursuit of each other. In this case, the defending side eventually manages to save the game.

1.b8♕!

White is going to sacrifice his three far-advanced passed pawns, but he has to do it in the right order. After 1.f8♕ ♗c3 White cannot avert mate, so he first has to divert the black queen from the d-file.

1...♕xb8 2.f8♕ ♕xf8

If 2...♗c3, White can defend with 3.♕f2.

3.h8♕

Black can't accept the third sacrifice; therefore he puts his bishop in position:

3...♗c3 4.♕f6!

Cutting off the path to f1 for Black's queen.

4...♕d6!
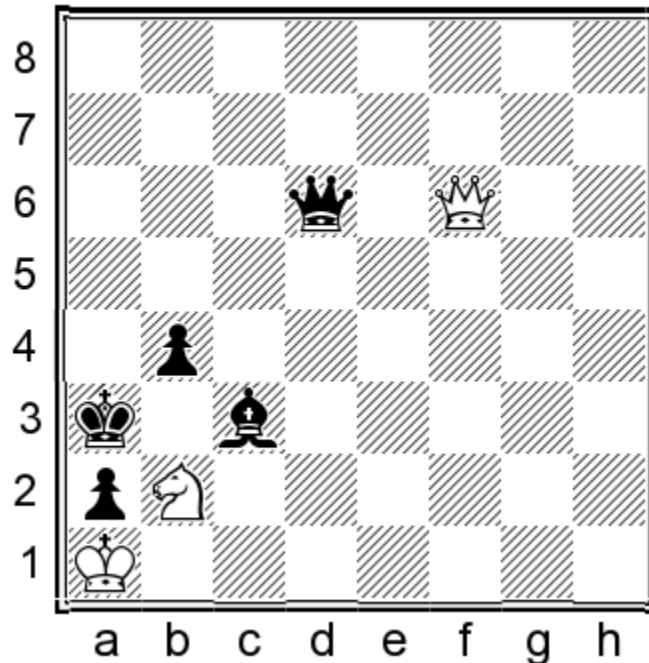
Prevents the check on a6.

5.♕d4

The queens are moving with larger steps than in the previous study. Now the black queen changes diagonals:

5...♕a6

Again aiming his eyes at the f1-square.

6.♕d3!

Thus, White disrupts the diagonal of the black queen and pins the bishop at the same time.

6...♕b5 7.♕e2

The only square for the queen.

7...♕c4 8.♕d3 ♕b5 9.♕e2
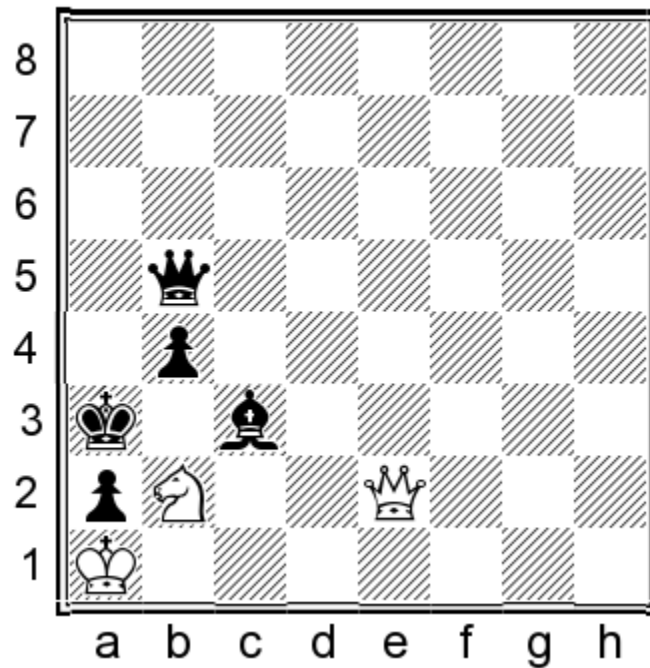
White has only two squares available on the f1-a6 diagonal, but that is just enough.

9...♕xe2

Stalemate.

Study 77 - Jan Rusinek

Jan Rusinek
New Statesman (and Nation) 1971
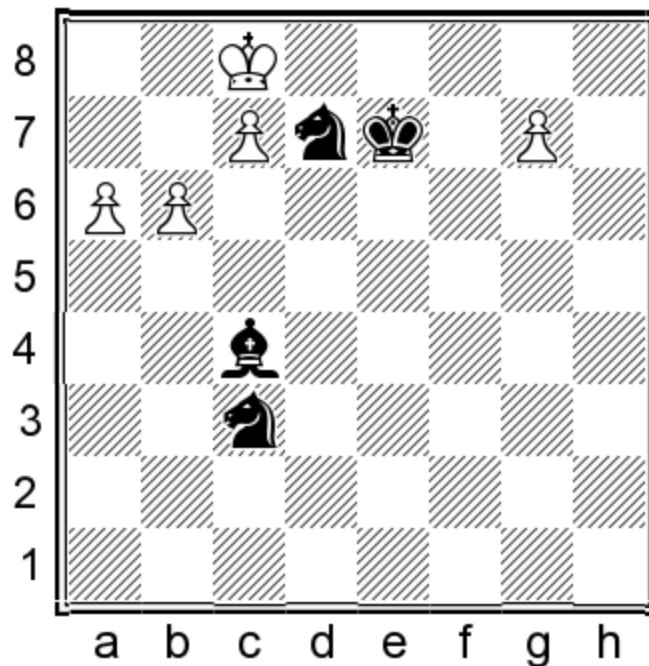
White to play and draw

Jan Rusinek (1950-) is a Polish endgame study composer. Already at a young age, he distinguished himself with several exceptionally good studies. In total, he composed around 250 studies, 27 of which were awarded first prizes. He was awarded the grandmaster title in 1992. Rusinek composed his best study when he was twenty. I give the original version here. In a later version, a queen promotion was added to make it an 'Allumwandlung' (this means that all four types of promotion have been incorporated in the main line of the study). Rusinek himself preferred the original version, and I agree with him.

1.a7

The only move. After 1.♔b7, 1...♗d5+ would drive the white king back to c8.

1...♗a6+ 2.b7 ♘e4

Threatening mate in one.

3.g8♘+!

The only move.

3...♔e8 4.♘f6+

The promoted knight has to be sacrificed immediately to prevent mate.

4...♘exf6
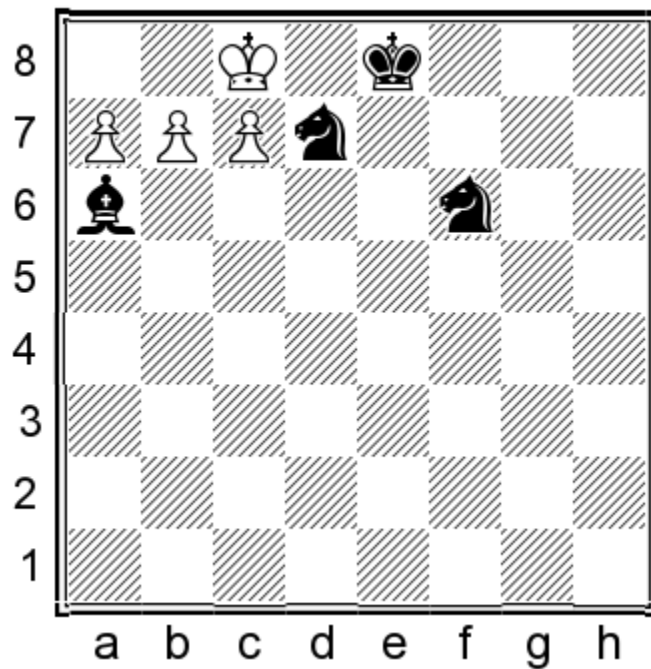
By capturing in this way, Black detains the white king on c8. The threat is mate in two.

5.a8♗!

White plays for stalemate. After 5.a8♕? ♘d5 or 5...♘g8, he gets mated.

5...♘e5

Now Black is going to introduce a different mating pattern into the position.

6.♔b8 ♘c6+ 7.♔c8 ♗f1
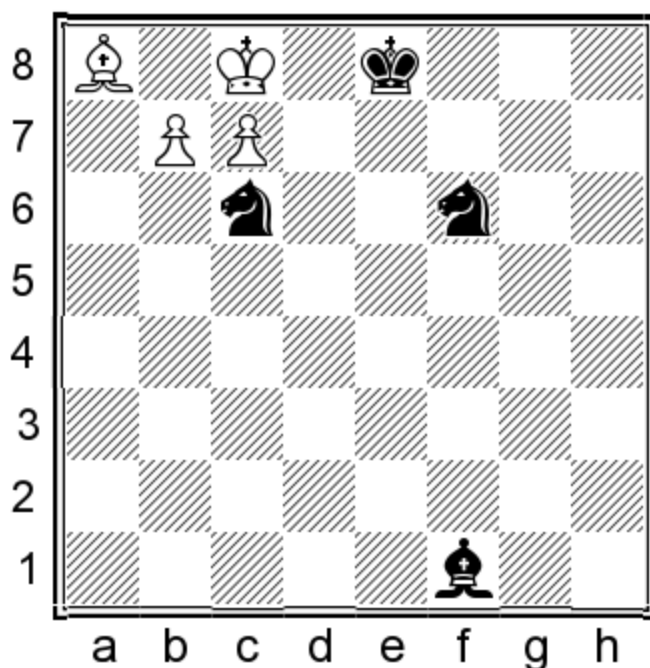
The black bishop is preparing to bombard the white king from the other side.

8.b8♖!

The third minor promotion, again intended to achieve stalemate. 8.b8♕? was insufficient in view of 8...♗a6+ 9.♕b7 ♘e4! and the black knights tie up the mating net.

White could also prevent the mate with 8.b8♘?, but after 8...♘e7+ 9.♔b7 ♗g2+ 10.♘c6 ♗xc6+ 11.♔a7 ♗d7 12.♗b7 ♗e6 13.♔b8 ♘d7+ 14.♔a7 ♘c5 he is left without a chance.

8...♗a6+ 9.♖b7 ♘e4

Stalemate.

Study 78 - Oleg Pervakov

Oleg Pervakov
Schakend Nederland 1996
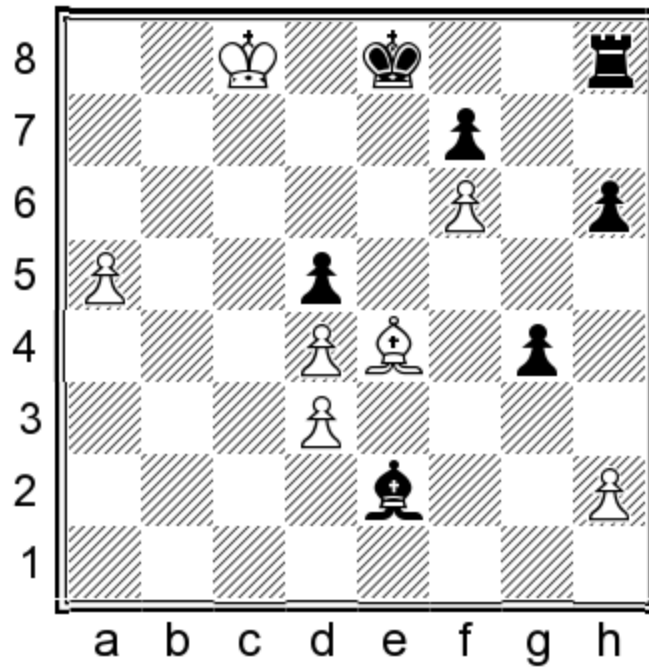
White to play and win

There are studies that are so miraculous that you can't imagine anyone capable of inventing them, but Pervakov is capable of a lot of things when it comes to endgame studies. The entire study presented here revolves around the question of whether Black will manage to castle. The manoeuvres of the white bishop hidden in the position are sublime.

The starting move sets the tone.

1.♗h7!

With this bishop sacrifice, White demonstrates that his a-pawn can only be strong if Black cannot castle. The black king is now stuck in the middle.

1...g3!

The only way to create any counterplay. After 1...♖xh7 2.a6 the white a-pawn will promote to a queen undisturbed, after which the black king gets caught in a mating net.

1...♗xd3 doesn't offer any chances to hold either after 2.♗xd3 0-0+ 3.♔b7 and Black will have to give his rook for the a-pawn.

2.hxg3 ♗h5

The point of the previous move. Black is going to play his bishop to g6.

3.a6 ♗g6
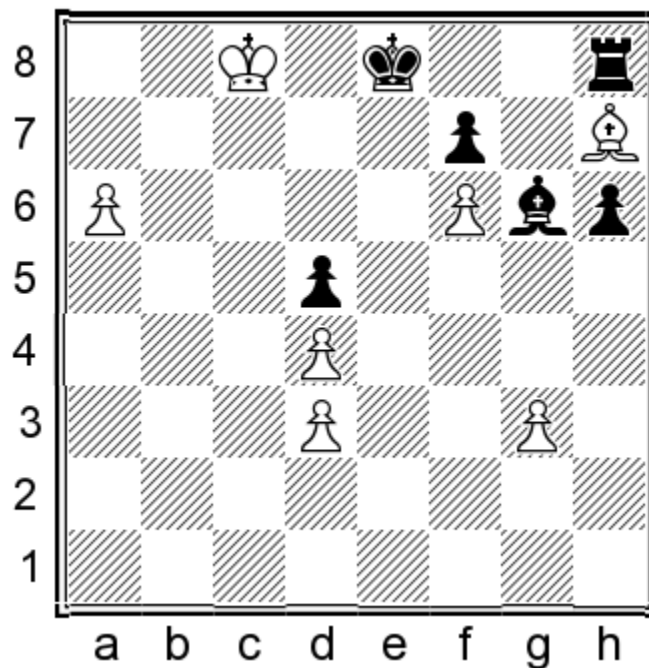
Now what?

4.♗g8!!

A wonderful move. The white bishop drives a wedge into Black's defensive lines. Insufficient was 4.a7? on account of 4...♗xh7 5.a8♕ 0-0+ and Black wins.

4...♔f8

With a clear intention: Black wants to capture the bishop with his king, after which he will have an escape square on h7. However, White pips him at the post:

5.♗h7!

In composers' jargon, such a move is called a 'switchback'. The bishop has done its job on g8 and now returns in order to keep the h7-square inaccessible to the black king.

5...♗xh7

There's nothing to be done about it.

6.a7 ♗f5+ 7.♔c7 ♔g8 8.a8♕+ ♔h7 9.♕xd5 1-0
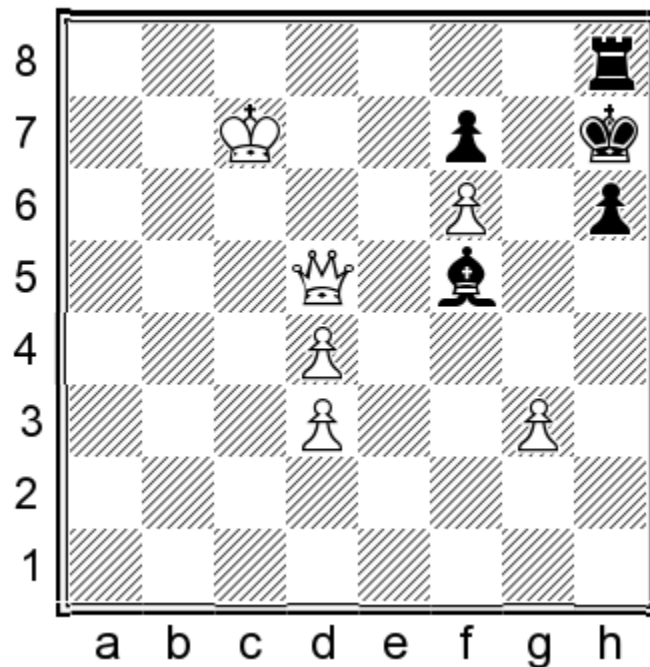
Study 79 - Dragutin Djaja

Dragutin Djaja
SFRJ champ Problem 1972
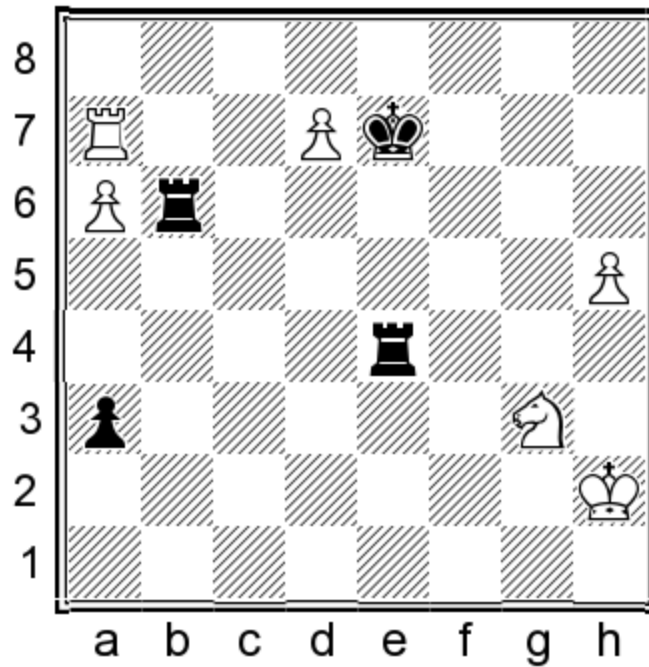
White to play and draw

Dragutin Djaja (1920-1993) was a strong Yugoslav master who composed 21 endgame studies. He was also a renowned pianist in his home country. One of Djaja's studies was circulating during the Skopje Olympiad in 1972. It has become a famous study, especially since the position after Black's fourth move looks completely losing for White. I give here a version of 1976. In the original study, Black's rook was not on e4 but on d4.

1.♘f5+

The only move, since Black wins easily after 1.♘xe4 ♖b2+ followed by 2...a2.

1...♔d8 2.♖a8+

White has to give up his d-pawn to render his a-pawn dangerous.

2...♔xd7 3.a7 ♖a6
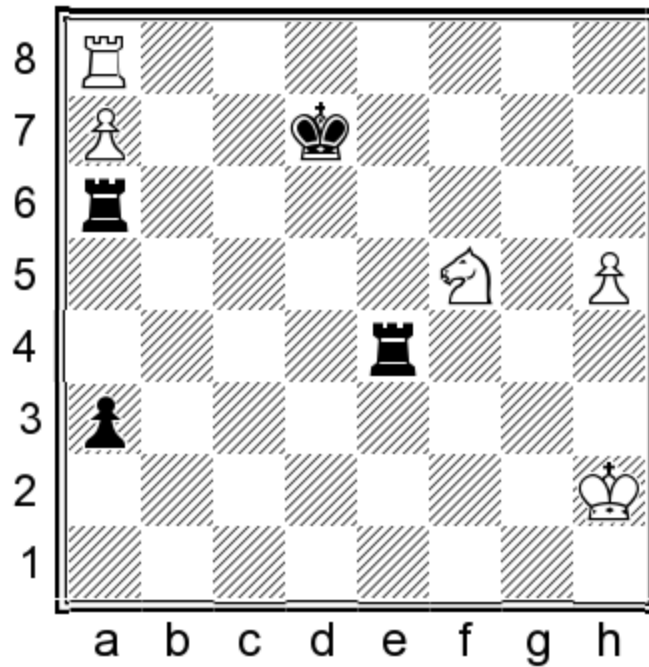
Now it is clear that White has to move his rook, but which is the right square?

4.罝g8!

Without doubt, this is the indicated rook move intuitively, but the real reason behind it is deeply hidden.

4...罝ea4

Obviously Black cannot take the a-pawn, and also after 4...罝e8 5.罝g7+ ♔c6 6.罝g6+ ♔b7 7.♘d6+ White easily holds the draw.
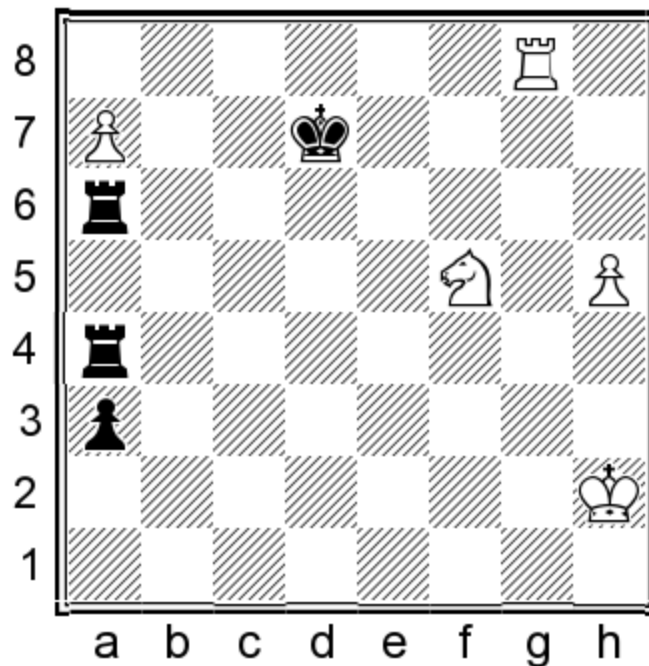
Therefore, Black plays his second rook to the a-file, after which White's resources seem to be exhausted. After 5.h6 a2 6.h7 a1♕ 7.h8♕ ♖a2+, White is quickly mated. But what else?

J.H. Donner writes in The King: 'White makes one more move and it's a draw! Keres, the two Byrnes, Lothar Schmidt, Bisguier and I sat staring at this position for more than half an hour and we couldn't find it.' That was during the Skopje Olympiad.

5.♘h6!!

This is the hidden move! By playing the knight to this square on the edge of the board, White gains control over the squares f5, f7, g4 and g7. He needs to control these squares to set a mechanism in motion: perpetual check on the g-file. Black's rooks are tied to the a-file by White's a-pawn, and so the black king doesn't have any possibilitires to escape. The Danish grandmaster Peter Heine Nielsen once said that this also worked with a bishop instead of a knight on h6. Also in that case, White controls the entire g-file.

5...♖xa7 6.♖g7+ ♚e6 7.♖g6+ ♚e5 8.♖g5+ ♚f4 9.♖g4+ ♚f3 10.♖g3+ ♚f2 11.♖g2+ ♚f1 12.♖g1+ ½-½

Study 80 - David Gurgenidze and Leopold Mitrofanov

David Gurgenidze and Leopold Mitrofanov
Molodoj Leninets (Kurgas) 1981
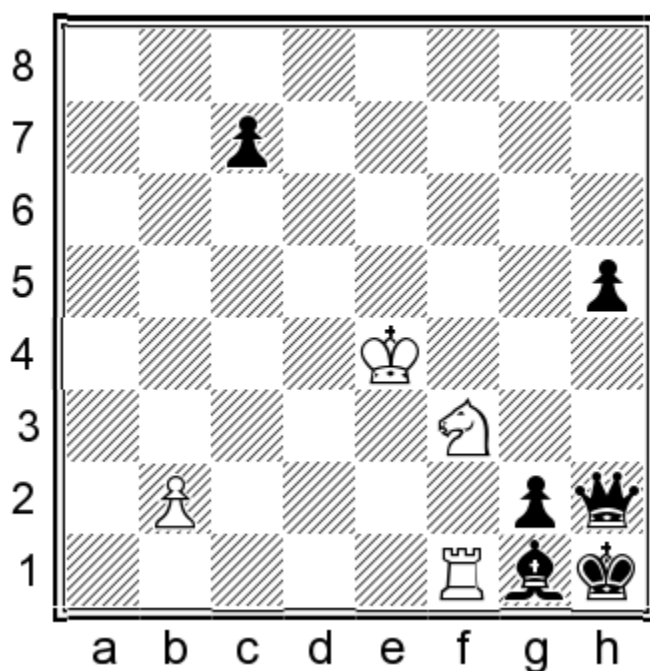
White to play and win

Nimzowitsch's mysterious rook move also exists in endgame studies. This is illustrated by Gurgenidze and Mitrofanov in a magnificent co-production. There are different versions of this study. For example, in the original version the mysterious rook move is preceded by a queen sacrifice on h2; later, this was left out – justifiably.

This is my study version, in which I have extended the white king's march with a move on the long diagonal.

1.♖b1!!

Only six moves later will it become clear why this is the only rook move that wins.

1...c5

The only chance; Black is going to play for stalemate. On the alternative 1...c6, White would react with 2.b4!. Now Black's play for stalemate comes too late. There could follow 2...h4 3.♖c1 h3 4.♖e1 c5 5.b5 c4 6.b6 c3 7.b7 c2 8.b8♕ and Black gets mated.

2.♔d5!

The start of an astonishing king's march.

2...c4 3.♔c6

On his way to the left-hand top corner.

3...h4 4.♔b7 h3
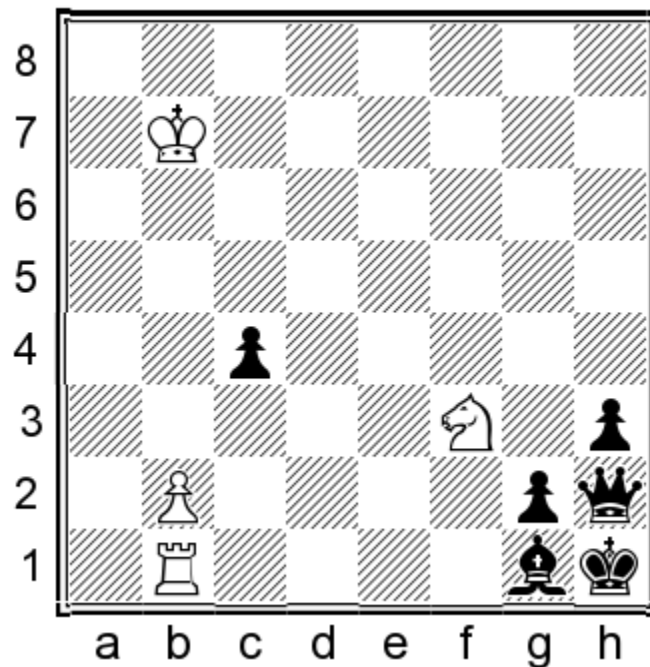
Black's plan becomes clear: he wants to sacrifice first the c-pawn and then the queen, and then push his h-pawn to h2, after which stalemate looks inevitable. However, White anticipated this plan with his first move.

5.♔a8!

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The king's manoeuvre is completed.

5...c3 6.bxc3 ♕b8+ 7.♖xb8

And now it becomes clear what this was all about; White manages to avoid stalemate by taking the queen with his rook; that way, it can reach the h8-square. It is important that the white king is on a8; otherwise Black would have had other queen checks.

7...h2 8.♖h8
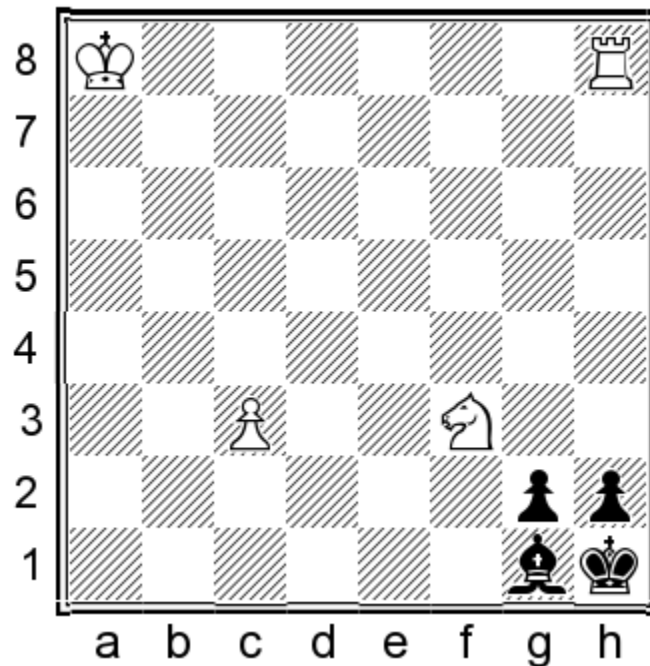
With mate on the next move.

Chapter 5
Complex studies

- Study 81 - Yochanan Afek
- Study 82 - Milan Vukcevich
- Study 83 - Yehuda Hoch
- Study 84 - Sergey Zakharov and Leonard Katsnelson
- Study 85 - Vitaly Halberstadt
- Study 86 - Gia Nadareishvili
- Study 87 - Vlacheslav Anufriev and Boris Gusev
- Study 88 - Alexander Kazantsev
- Study 89 - David Gurgenidze
- Study 90 - Gijs van Breukelen
- Study 91 - Viktor Evreinov
- Study 92 - Jan Rusinek
- Study 93 - Jan Timman
- Study 94 - Albert Belyavsky
- Study 95 - Ghenrikh Kasparian
- Study 96 - Leopold Mitrofanov
- Study 97 - Vladimir Korolkov and Leopold Mitrofanov
- Study 98 - Steffen Slumstrup Nielsen
- Study 99 - Steffen Slumstrup Nielsen
- Study 100 - Oleg Pervakov

Study 81 - Yochanan Afek

Yochanan Afek
Szachy 1974
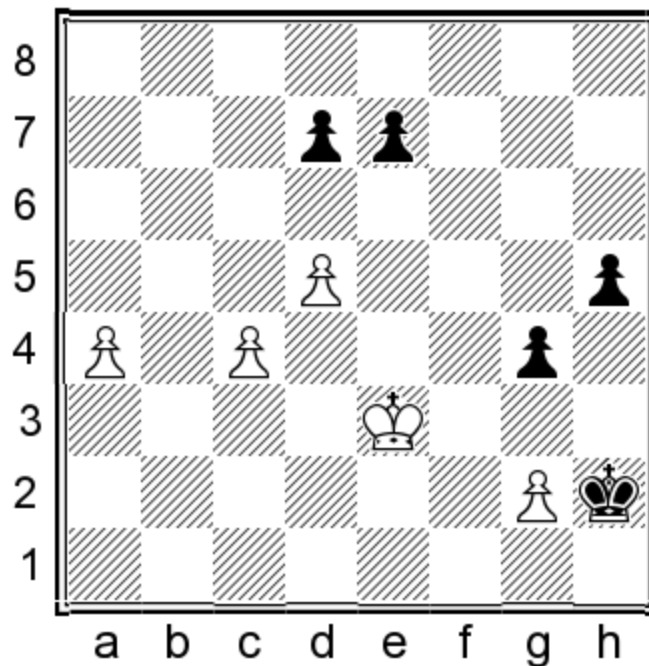
White to play and win

In Studies No. 35 and 36, we saw how the Platov brothers managed to draw up a scheme for a rook and a bishop promotion. 68 years later, Afek succeeded in combining these two minor promotions in one study. This study is especially ingenious in that it starts as a pawn endgame. This is, by the way, my version of the study, in which I lay emphasis on the initial moves. In Afek's two versions there is also a knight promotion for Black, but in my opinion the study does not need that.

1.a5

White has to start by pushing his passed pawn. The alternative is 1.d6 in order to first open the long h1-a8 diagonal. After 1...exd6 2.a5 ♔xg2 3.a6 g3 4.a7 ♔h2 5.a8♕ g2 6.♕a2 ♔h1, however, White cannot win.

1...h4

Black can't afford to lose any time. After 1...♔xg2 2.a6 White would easily win the pawn race.
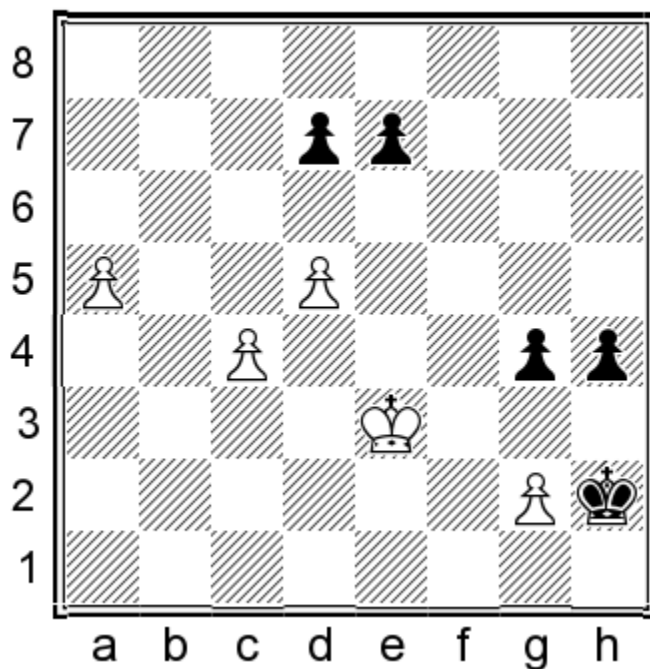
2.d6!

Now, yes! After 2.a6 h3 Black wouldn't have any problems.

2...e5!

Otherwise Black would lose without a fight.

3.a6 h3 4.g3!

An important little move, allowing White to stay ahead in the race.

4...♔xg3 5.a7
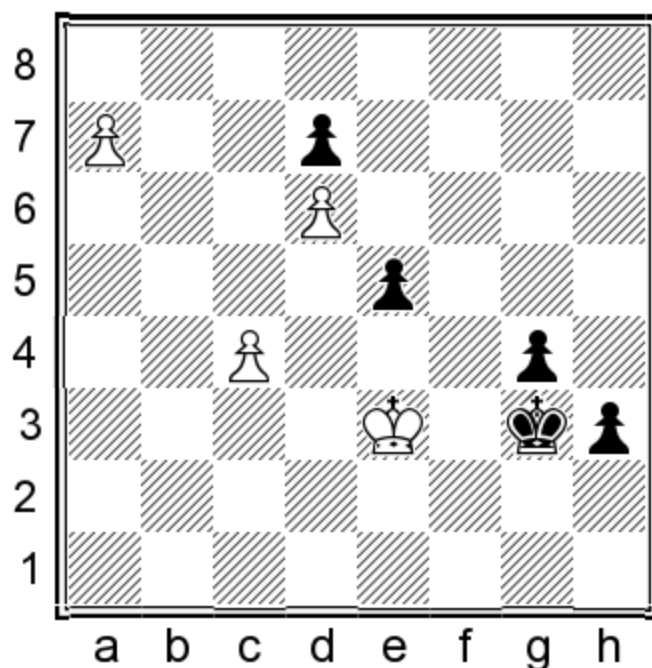
The crucial position. Black can play for stalemate in two ways:

5...e4

The other main line runs as follows: 5...h2 6.a8♗! ♔h3 7.♔f2 g3+ 8.♔f1 and White stops the passed pawns. But not 6.a8♕? in view of 6...e4! and stalemate can't be avoided.

6.a8♖!

Now, 6.a8♗? would fail to 6...♔h2 and Black wins!

6...h2 7.♖h8 1-0

Stopping the h-pawn, and the stalemate has been prevented.

Study 82 - Milan Vukcevich

Milan Vukcevich
Yugoslavia Problem Tourney 1957
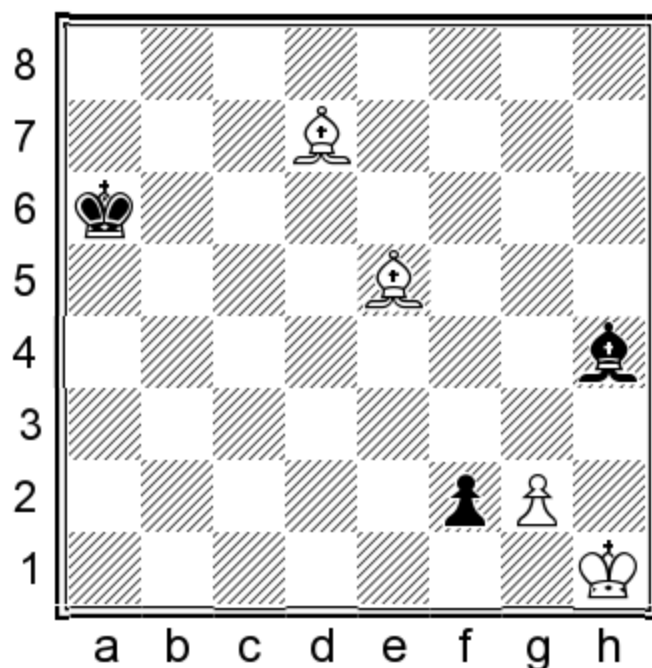
White to play and draw

Milan Radoje Vukcevich (1937-2003) was a Yugoslav problem composer by origin who also composed a small number of studies. At the age of 27, he settled in the United States where he became a Professor of Metallurgy. Vukcevich was also a strong player. I met him during the Reykjavik tournament in 1976. On that occasion, we talked a lot about endgame studies. Our mutual game in the final round ended in a draw. The study presented here is from his Yugoslav days. This is my version; I have extended the bishop manoeuvres and left out the initial moves.

How should White stop the f-pawn? He will have to give bishop checks.

1.♗c8+ ♚b5 2.♗d7+ ♚c4

The alternative 2...♔b4 would allow White to accelerate the route to the draw. After 3.♗d6+ ♔c4 4.♗e6+ ♔d4 5.♗e5+ ♔d3 6.♗f5+ ♔e3 7.♗f4+ we have almost arrived at the final play of the study already.

3.♗e6+ ♔d3 4.♗f5+ ♔e2 5.♗g4+ ♔d2

The first phase is behind us. White has no more checks with the light-squared bishop and will have to use his other bishop now.

6.♗f4+ ♔d3 7.♗f5+ ♔d4 8.♗e5+ ♔c4
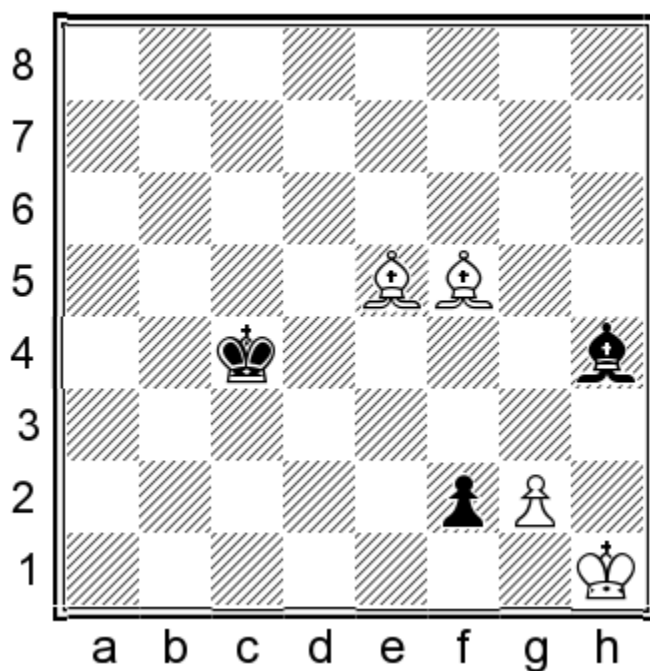
We see a new pattern. Black manoeuvres in such a way with his king that he alternatingly allows a check by each of the bishops every time.

9.♗e6+ ♔c5 10.♗d6+ ♔b5 11.♗d7+ ♔b6 12.♗c7+ ♔a6 13.♗c8+ ♔a7 14.♗b8+ ♔b6

The final phase sets in. Again, the king alternates between the light and dark squares, with the idea to ultimately exhaust White's bishop checks.

15.♗c7+ ♔b5 16.♗d7+ ♔c5 17.♗d6+ ♔c4 18.♗e6+ ♔d4 19.♗e5+ ♔d3 20.♗f5+ ♔e3 21.♗f4+ ♔e2 22.♗g4+ ♔e1
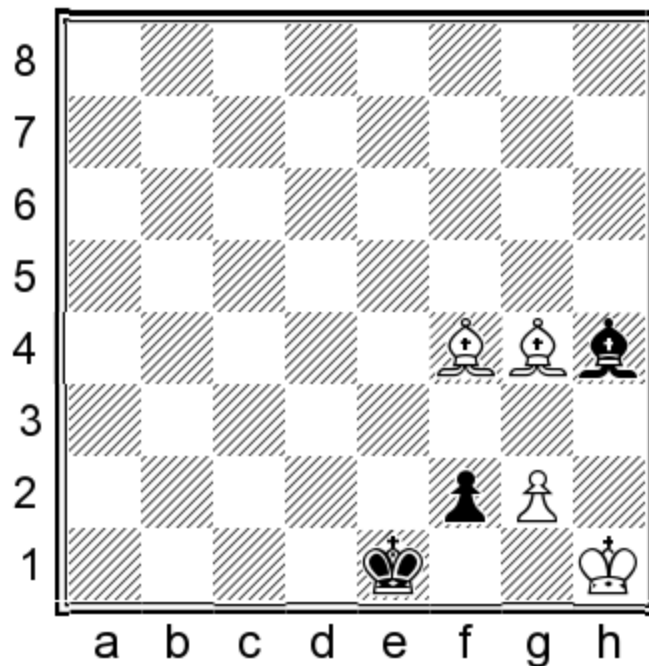
It seems as if the long manoeuvres enable Black to overtrump the white bishop pair. White has no sensible check, but suddenly he can now play for stalemate by sacrificing both bishops:

23.♗g3!

The first bishop sacrifice. Black has to take since his f-pawn is pinned.

23...♗xg3 24.♗e2!

And the second sacrifice.

24...♔xe2

Stalemate.

Study 83 - Yehuda Hoch

Yehuda Hoch
Dobrescu Jubilee Tourney 1994
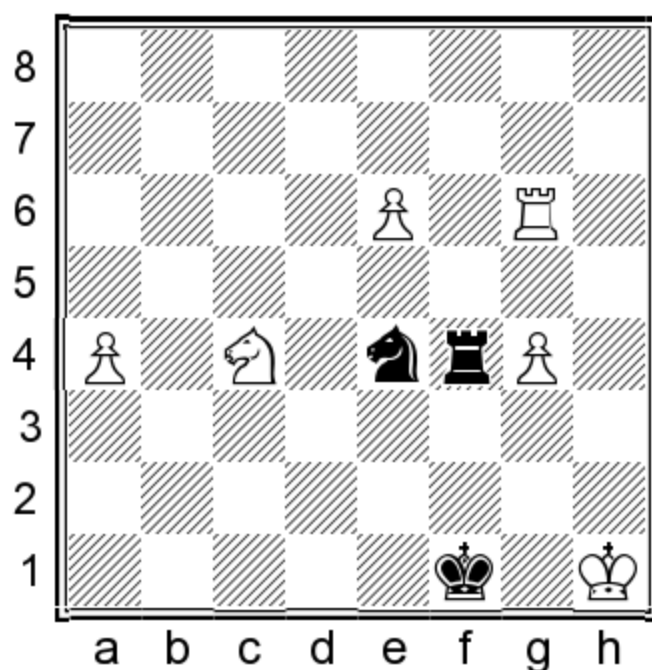
White to play and win

Yehuda Hoch (1946) is one of the best Israeli endgame study composers. The database contains 190 studies by him, several first prizes among them. Unfortunately, Hoch hasn't been active as an endgame study composer since 1995. Right before that, he composed his best study.

I give Didukh's version here, which contains some delicate initial moves.

In the starting position, White is three pawns to the good. However, the win is not simple on account of the unsafe position of White's king.

1.e7

Of course – Black cannot stop the e-pawn. However, he has another string to his bow:

1...♖f3

Threatening mate.

2.♘d2+!

A knight sacrifice to deflect the enemy knight. The alternative 2.♔h2 was insufficient for the win. After 2...♖f2+ 3.♔h3 ♖f3+ White can't move his king upwards, since after 4.♔h4? ♔g2 he will be mated.

2...♘xd2
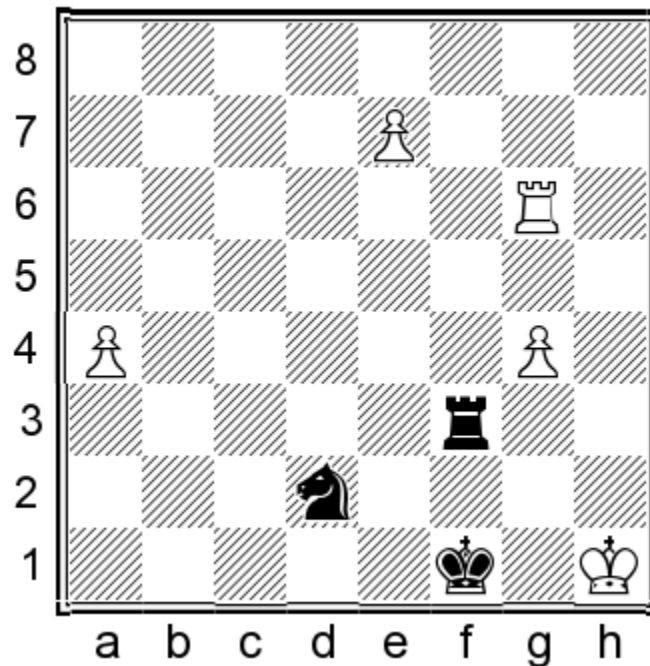
3.♖f6!

The second sacrifice, this time to deflect the rook.

3...♖xf6 4.e8♕ ♖h6+ 5.♕h5

The mate has been prevented, but the battle is not decided yet.

5...♘e4!

A nice riposte.

6.♔h2

Capturing the rook would make a draw inevitable. After 6.♕xh6 ♘f2+ 7.♔h2 ♘xg4+ the white king has to move up the board as

otherwise Black has a check on f2 again. The variation continues 8.♔h3 ♘xh6 9.a5 ♘f7! 10.a6 ♘g5+ 11.♔g4 ♘e6 and the black knight is in time to stop the a-pawn.

6...♘f6
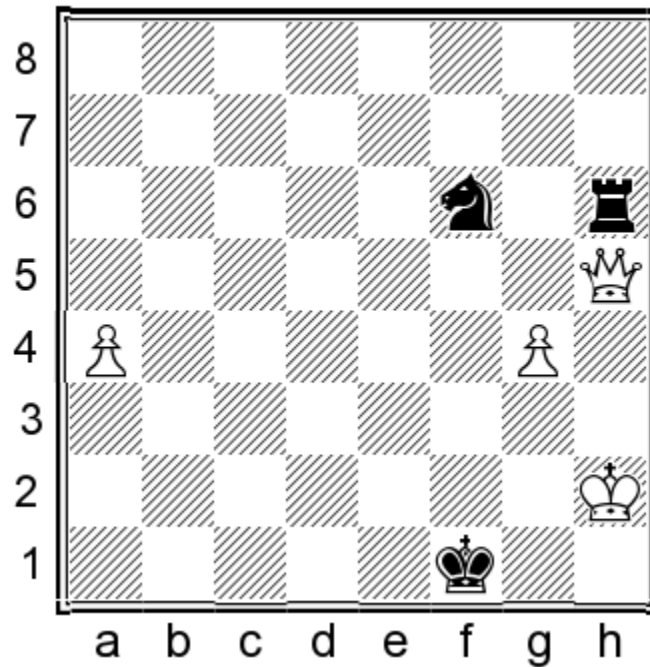
Trying to force White to take the rook after all; however, White has an intermediate move:

7.♕h3+!

The climax of the study. White forces the black king to move to f2, rendering this square inaccessible to the knight.

7...♔f2 8.♕xh6 ♘xg4+ 9.♔h1!

Now Black has to take the queen, after which the a-pawn promotes.

9...♘xh6 10.a5 1-0

Study 84 - Sergey Zakharov and Leonard Katsnelson

Sergey Zakharov and Leonard Katsnelson
Shakhmatnaya Kompozitsia 1993
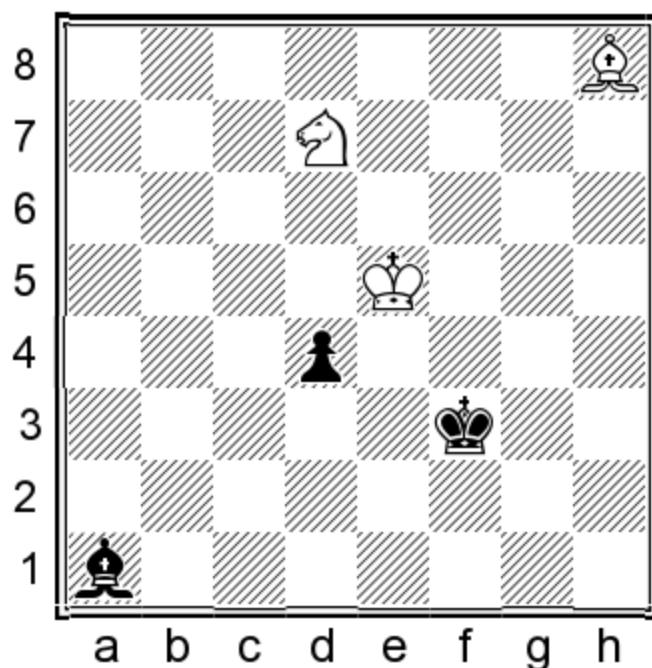
White to play and draw

Almost all positions with queen vs bishop and knight are winning for the side with the queen. This was already known in the 19th century. However, in 1903, the German endgame study composer Max Karstedt (1868-1945) discovered that a fortress position with bishop and knight was possible. Later, the Russian endgame study composer Sergey Zakharov (1952-2019) composed several studies that ended with that fortress position. The study given here, which was composed in collaboration with Leonard Katsnelson, is the most instructive illustration of the theme.

The starting position is already unique: Black's passed pawn is still only on d4 but nonetheless it can't be stopped. So, it is clear from the outset that we will have a queen vs bishop and knight ending on the board.

1.♔f5!

The only square for the white king. After 1.♔e6 d3 2.♗xa1 d2 3.♗h8
d1♕ 4.♘e5+ ♔f4 the situation is hopeless for White.

1...d3

The unstoppable passed pawn is set in motion.

2.♗xa1 d2
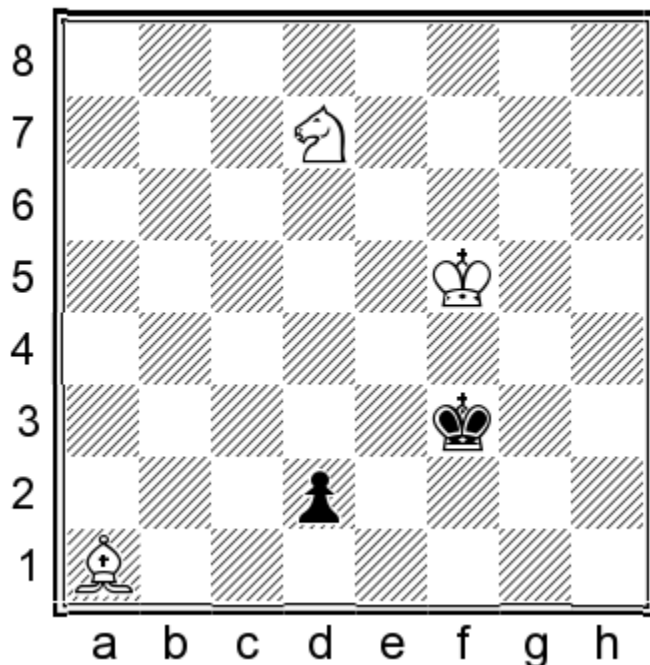
3.♗h8!

The bishop returns. As we will see, White has to preserve the g7-
square for his king. After 3.♗g7 d1♕ 4.♘e5+ ♔g3 5.♔g6 ♕c2+
6.♔f7 ♕h7 there is no fortress.

3...d1♕ 4.♘e5+ ♔g3 5.♔g6

The white king hurries to the corner.

5...♕h1
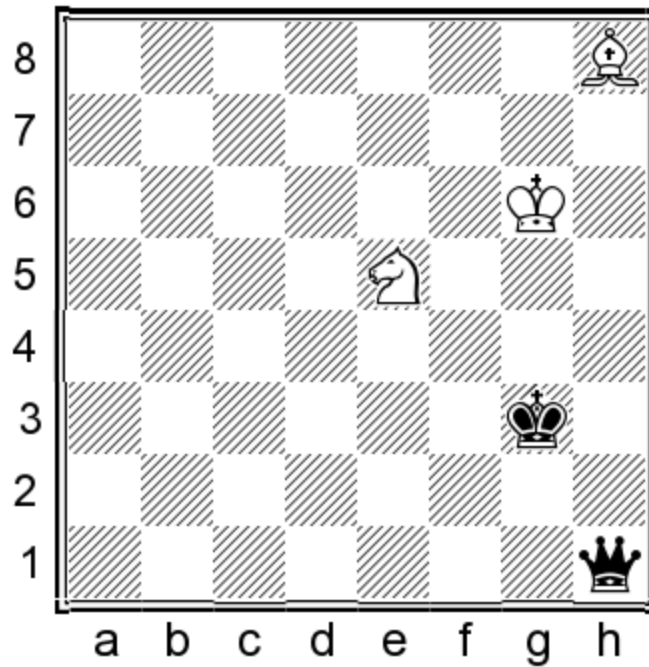
6.♔g7!

A crucial move. After 6.♗g7 ♔f4 7.♔f7 ♕h7 Black would win; it's mate in 33.

6...♕a8

The alternative 6...♔f4 is met by 7.♔g8 ♔f5 8.♗g7!. Here, we reach Karstedt's fortress. The centralized knight – securely covered by the bishop – keeps the black king at a distance. White's king cannot be put in zugzwang.

7.♔h7

The white king is in time.

7...♕e4+ 8.♔g8 ♕d5+ 9.♔h7 ♕e6 10.♗g7
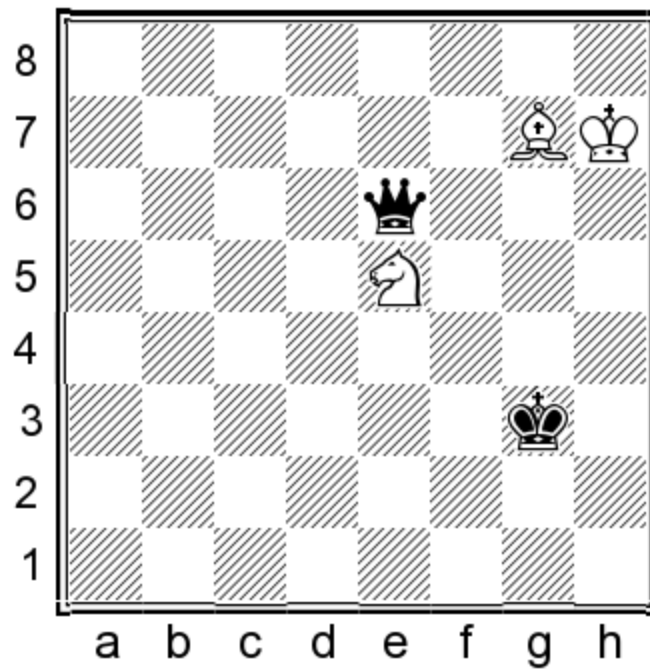
And again, White has achieved Karstedt's fortress.

Study 85 - Vitaly Halberstadt

Vitaly Halberstadt
Gross 1937
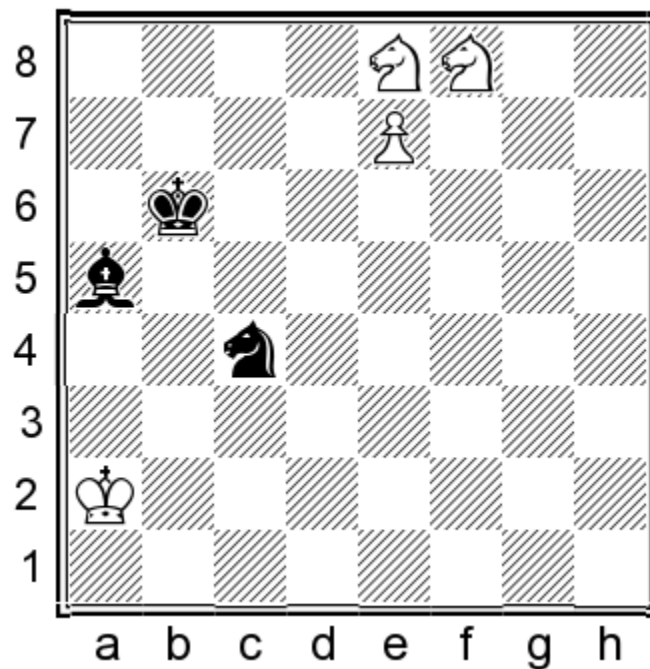
White to play and win

This is Halberstadt's second famous study; we saw the other one in Study 28. The white king's backward moves on the 4th and 5th move are especially spectacular. This is my version of the study; I have added a nice initial sequence with some sharp turns and sacrifices.

The first move is obvious.

1.♔b3

Before moving one of the knights, White deprives the black bishop of the b4-square and attacks the black knight.

1...♗b4!

Anyway! Black sacrifices his bishop to lure the white king to a worse square. The logical-looking 1...♔c5 is insufficient for various reasons. White wins most simply with 2.♘f6 ♘d6 3.♘e4+.

2.♔xb4 ♘e5

Threatening check on c6.

3.♘d7+!

White sacrifices one of his knights to force the black knight to an unfavourable square.

3...♘xd7
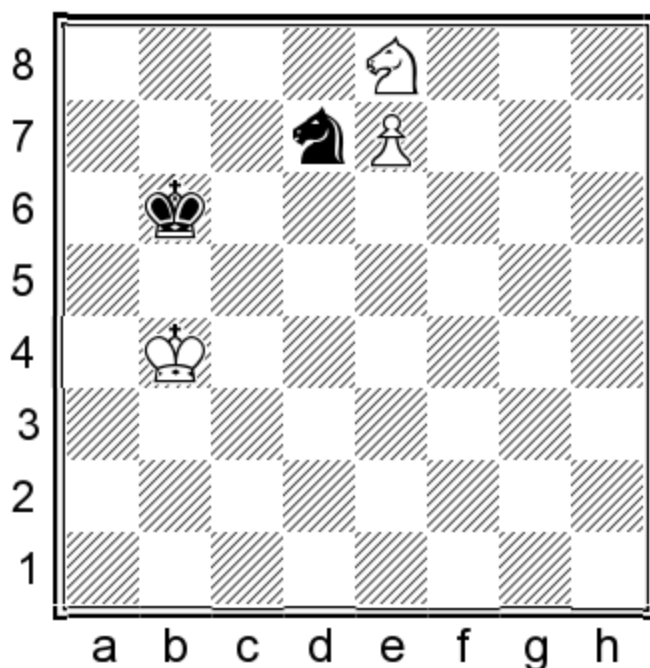
And now we reach the starting position of Halberstadt's original study. The knight ending looks simple, but it requires great accuracy from White.

4.♔a3!

The first retreat. With great care, White selects a square for his king where it is safe from checks by Black's knight.

The alternative 4.♔c3? fails to 4...♔c5 5.♘d6 ♘f6 and now White has no knight check on e4.

Nor could White move his knight. After 4.♘c7? ♘f6 he has no knight check on d5.

4...♔c6

Black brings his king closer to the white passed pawn.

5.♔a2!

Back on the starting square! After other king moves, Black still has a saving knight check up his sleeve; for example, 5.♔b2 ♘e5 6.♘f6 ♘c4+ 7.♔c3 ♘d6 with a draw.

5...♔c5

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Or 5...♔b6 6.♘c7 ♘f6 7.♘d5+! and White wins.

6.♘d6! ♘f6
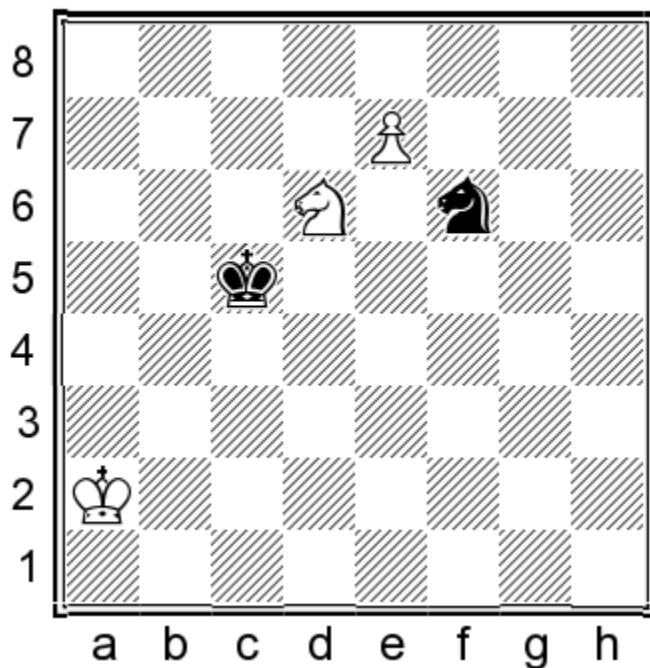
7.♘e4+!

The echo of the check from the variation given after Black's 5th move.

7...♘xe4 8.e8♕ 1-0

Study 86 - Gia Nadareishvili
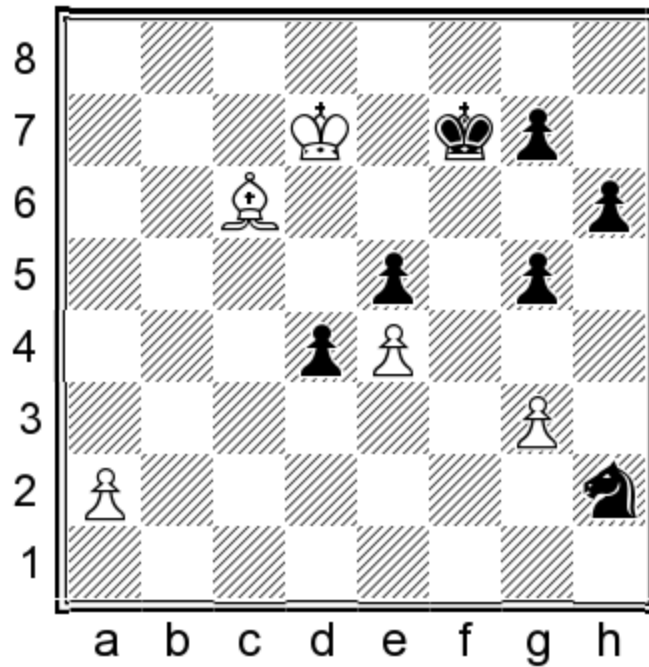
White to play and win

The most beautiful study culminating in a rook promotion is this one by Nadareishvili. From a completely natural starting position, it gradually becomes clear that Black can build up a stalemate construction. Extremely subtle play by White is required to eventually avoid the stalemate.

This study version is by Didukh.

1.a4

The rook's pawn, the great enemy of the knight, starts moving.

1...d3 2.a5 d2 3.♗a4

White has easily won the pawn race. It looks as if the battle is decided, but now Black starts working on the stalemate construction:

3...♘g4
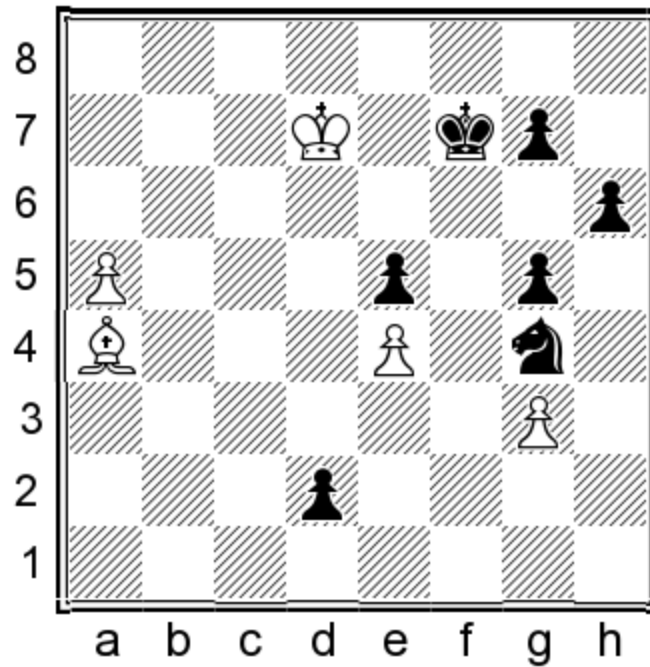
4.♗d1!

An important move. If White immediately aims for promotion with 4.a6, Black would succeed in carrying out his plan. There would follow 4...♔g6! 5.a7 ♔h5 6.a8♕ g6! followed by promotion of the d-pawn – a miraculous save.

4...♘f2 5.♗b3+ ♔g6 6.a6

The difference with the variation I gave after White's 4th move is that the bishop is now on b3 instead of a4, and this is of crucial importance.

6...♘g4 7.a7 ♔h5
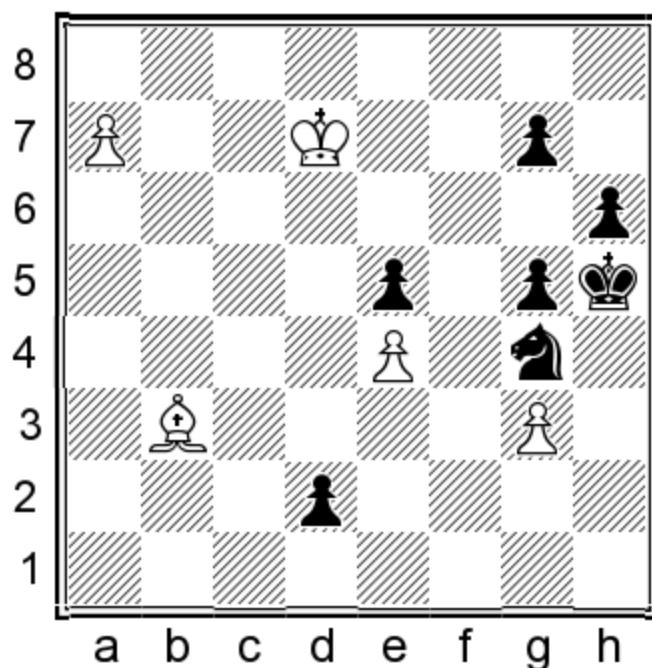
8.a8♖!

By this rook promotion, White is going to avoid the stalemate.

8...g6 9.♖a1

Now the point of White's 4th move becomes clear: the a-file was opened for the future promoted rook.

9...d1♕+ 10.♖xd1 1-0

This was Mikhail Botvinnik's favourite study.

Study 87 - Vlacheslav Anufriev and Boris Gusev

Viacheslav Anufriev and Boris Gusev
Shakhmaty v SSSR 1986
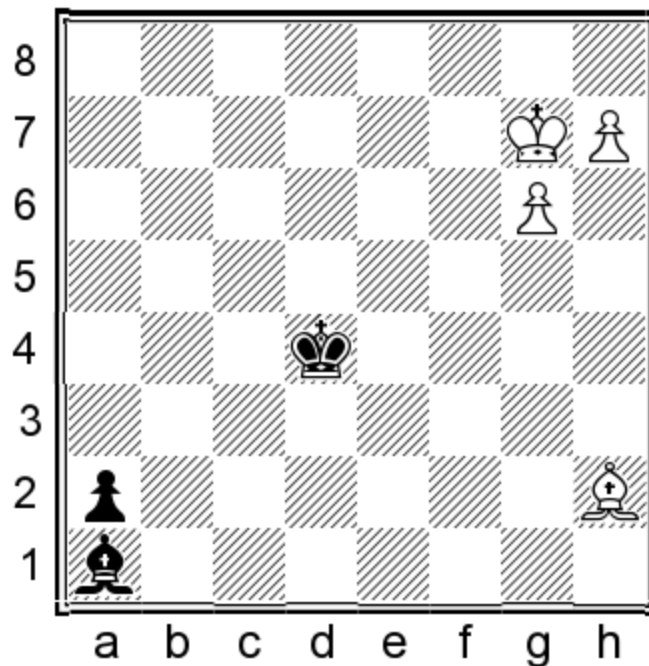
White to play and draw

Viacheslav Anufriev (1949-) and Boris Gusev (1944-2004) are not well known, but both have an excellent track record as endgame study composers. The miniature presented here is a co-production by them containing a couple of magnificent points.

Close inspection teaches us that Black has the best credentials here since his bishop is on the crucial long diagonal.

1.♔g8

White clearly should not promote, and he also waits with his bishop move until Black has played his king.

1...♔e4

On the alternative 1...♔d5 White holds the draw with 2.♗f4! ♔e6 3.♗h6 followed by 4.g7.

2.♗d6!

Now the white bishop has to take this route.

2...♔f5 3.♗f8!
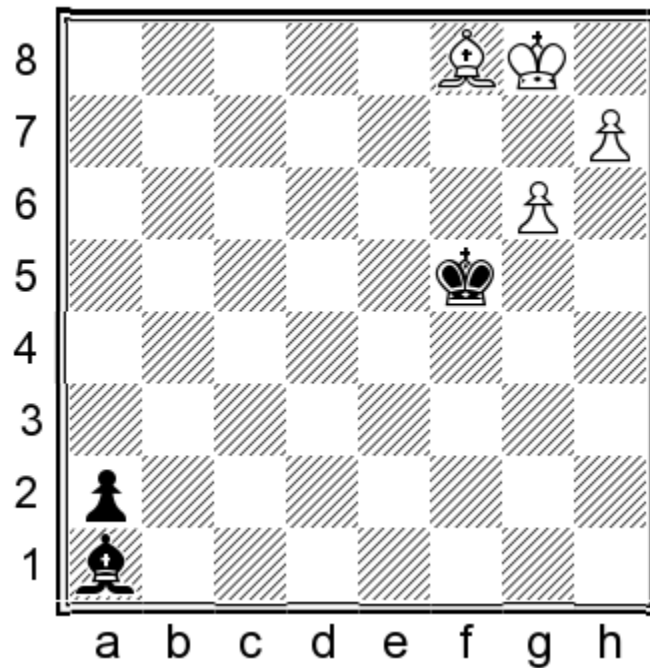
Preparing a stalemate trap.

3...♗h8!

A surprising and strong move. On 3...♔xg6 White had 4.h8♕ ♗xh8 5.♗g7! up his sleeve.

4.g7 a1♕

Now White has to take the bishop, but how?
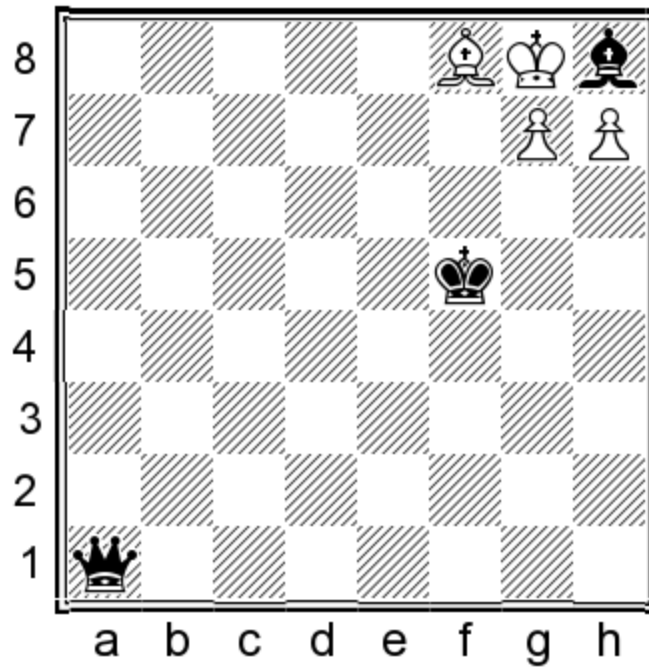
5.gxh8♘!

The only way. If White promotes to a queen, he will be mated: 5.gxh8♕ ♛a2+ 6.♔g7 ♛b2+ 7.♔g8 ♛b3+ 8.♔g7 ♛b7+ 9.♔g8 ♛d5+ 10.♔g7 ♛e5+ 11.♔g8 ♛e6+ 12.♔g7 ♛g6# and the black queen arrives at the right square by a zigzag manoeuvre.

5...♛a2+ 6.♘f7

The point – but this is not all.

6...♔g6
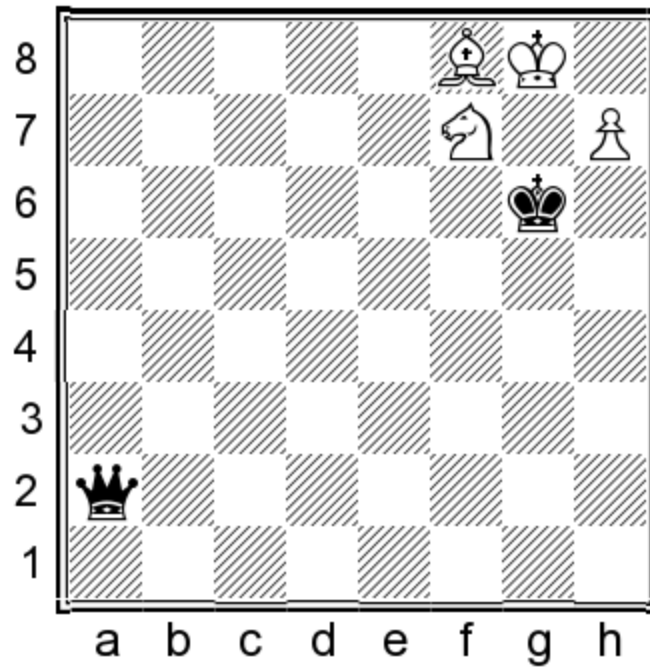
7.h8♘+!

Again, White has to promote to a knight to prevent mate.

½-½

Study 88 - Alexander Kazantsev

Alexander Kazantsev
Olympic Tourney 1964
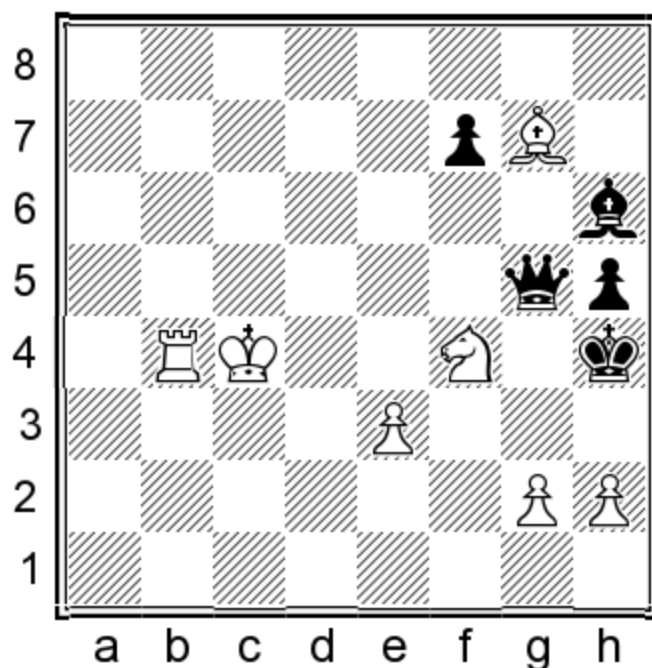
White to play and win

This is probably Kazantsev's most famous study; there are no fewer than eight versions of it. Various endgame composers have been tinkering with the study without achieving a convincing result – incidentally, this also goes for Kazantsev's original version. There are even a couple of downright bad versions around, with superfluous pieces and pawns. The version presented here, by Didukh, is the best by far – economical, with good side variations.

1.♗c3!

White has to retreat the bishop. 1.♘g6+ immediately would not bring him any benefits on account of 1...♛xg6 2.♔d5+ ♔g5 3.h4+ ♔f5 4.g4+ ♛xg4! 5.♖xg4 ♔xg4 6.♗xh6 ♔xh4, and the ending is easily holdable for Black. After the text move, Black has a hard time coordinating his pieces for the defence.

1...♛e7

The best chance. Black tries to create room for his pieces.
Insufficient was 1...♗g4 in view of 2.♔b3 and there is no way out
for the black king.

Black could also have retreated his queen with 1...♕g8. Now, there
is no immediate win for White, but he will manage to fully paralyse
Black. Play could continue 2.♔d3 ♕h7+ 3.♔d2 ♔g4 4.♘d5+ ♔f5
5.♖b5 ♔e6 6.♘f6 ♕g6 7.♖b6+ ♔f5 8.g3 ♗g5 9.♗d4 ♗h6 10.♔e2
and there is no defence to the threat of 11.e4+.
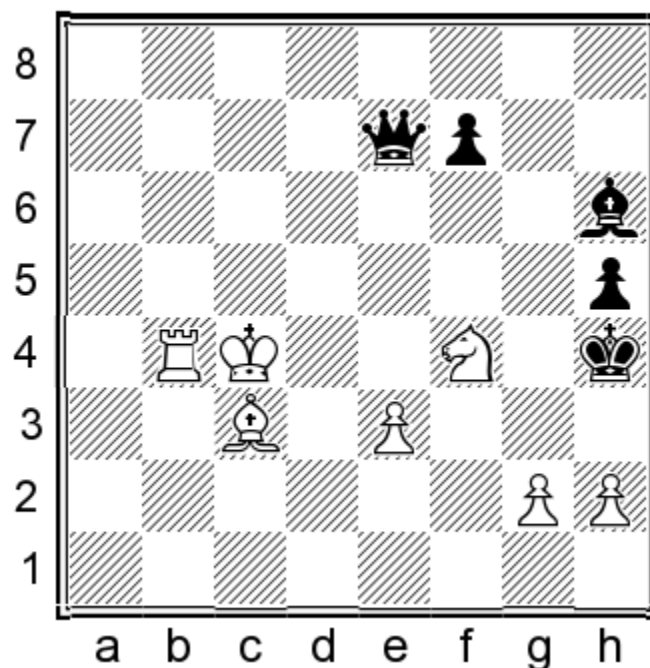
2.♘g6+!

The start of an extraordinary mating combination.

2...fxg6 3.♗f6+!

A second sacrifice, with the same purpose as the first one:

3...♕xf6 4.♔d5+

The best discovered check; White has to centralize his king to get
his mating combination to succeed.

4...♔g5 5.h4+ ♔f5

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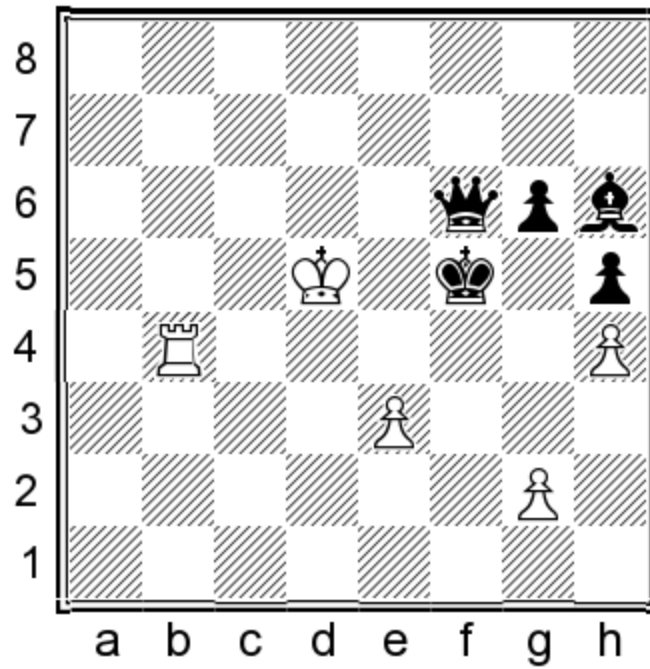
6.g4+!

With this pawn sacrifice, White forces a third self-block.

6...hxg4 7.♖f4+!

The fourth sacrifice, forcing a fourth self-block.

7...♗xf4 8.e4
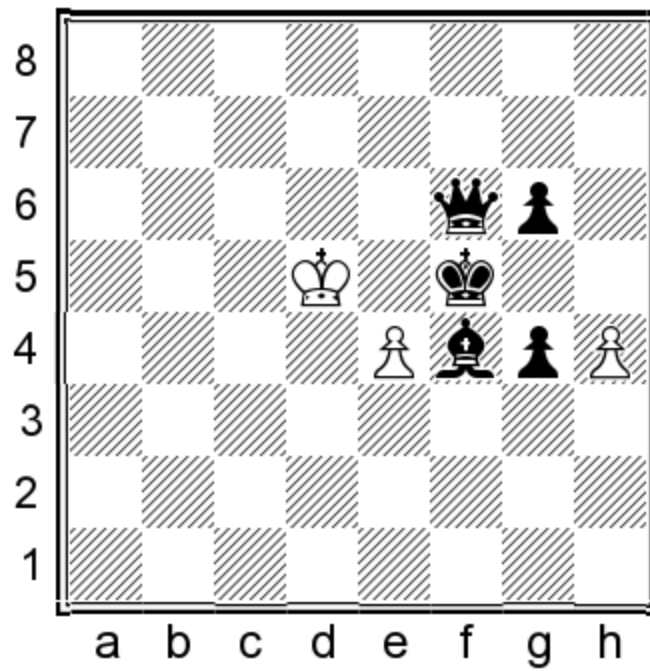
Mate. Impressive.

Study 89 - David Gurgenidze

David Gurgenidze
Azerbaijan open 1979
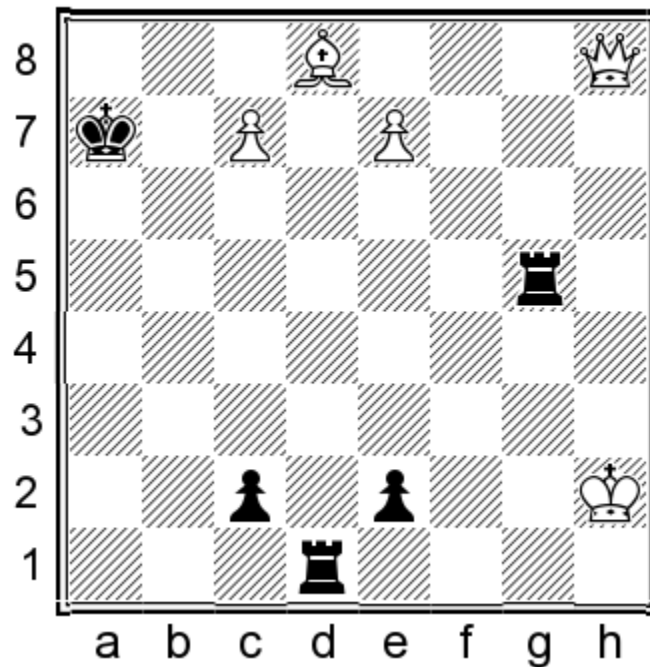
White to play and win

A mating position in which two escape squares for the king are occupied by promoted queens: Gurgenidze managed to compose a study with this finish. This is my version of the study; I have managed to add an extra variation with mutual knight promotions.

1.♕c3

Absolutely forced; White has to keep Black's passed pawns in check before promoting.

1...♖h5+

Black has to give this check. After 1...c1♕ 2.♕xc1 ♖xc1 3.e8♕ White wins without complications; for example, 3...e1♕ 4.♕xe1 ♖xe1 5.c8♕ ♖e2+ 6.♔h3 ♖e3+ 7.♔h4 and Black's checks are exhausted. There is no chance of Black getting a kamikaze rook since White's queen and bishop control too many squares.

2.♔g2 ♖g5+ 3.♔f3
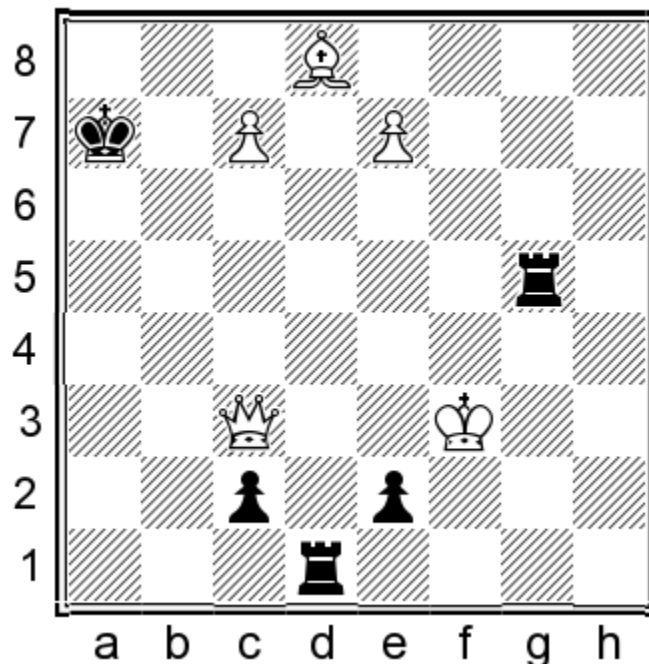
Now Black can sacrifice a rook in two ways.

3...♖g3+

The alternative is 3...♖d3+, and here is the variation I added: 4.♕xd3 e1♘+! 5.♔e4 ♖e5+ 6.♔d4! (not 6.♔xe5 in view of 6...♘xd3+ 7.♔d4 c1♕ 8.e8♕ ♘b4 and White can't win) 6...c1♕ 7.c8♘+! (the second knight appears on the board! After 7.c8♕ ♕f4+ 8.♔c3 ♕c1+, perpetual check would be inevitable) 7...♔b8 8.♕b3+ ♔xc8 9.♕h3+ ♔b8 10.♔xe5 and Black is powerless.

4.♔xg3 ♖d3+

Now Black has to give this check anyway; by the way, this was the starting move in Gurgenidze's original version! The alternative 4...c1♕ was insufficient in view of 5.♕a5+ ♔b7 6.♕b5+ ♔c8 7.♕a6+ ♔d7 8.e8♕+ ♔xe8 9.♕e6+ ♔f8 10.♗e7+ and White wins.

5.♕xd3 e1♕+ 6.♔g2 c1♕
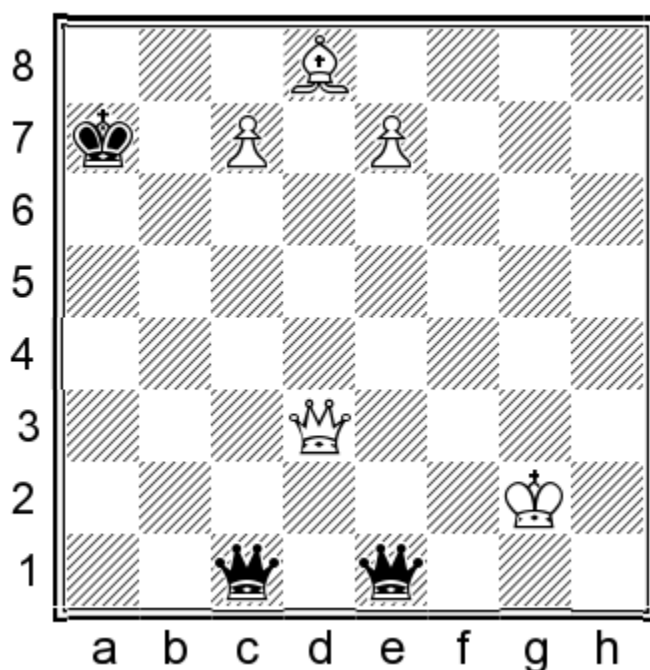
Black has succeeded in promoting both of his pawns. Now follows a long series of queen checks by which the black king is systematically driven into a corner.

7.♕d4+ ♔b7 8.♕d5+ ♔a7 9.♕a2+ ♔b7 10.♕b3+ ♔c8 11.♕b8+ ♔d7 12.♕b5+ ♔c8 13.♕a6+ ♔d7 14.♕a4+ ♔c8 15.♕a8+ ♔d7 16.c8♕+!

After nine preparatory checks, White breaks through with a promotion, thereby creating the first self-block.

16...♕xc8 17.♕d5+ ♔e8 18.♕g8+ ♔d7 19.e8♕+!

And the second promotion for the second self-block.

19...♕xe8 20.♕d5

Mate. Wonderful symmetry!

Study 90 - Gijs van Breukelen

Gijs van Breukelen
Schakend Nederland 1990
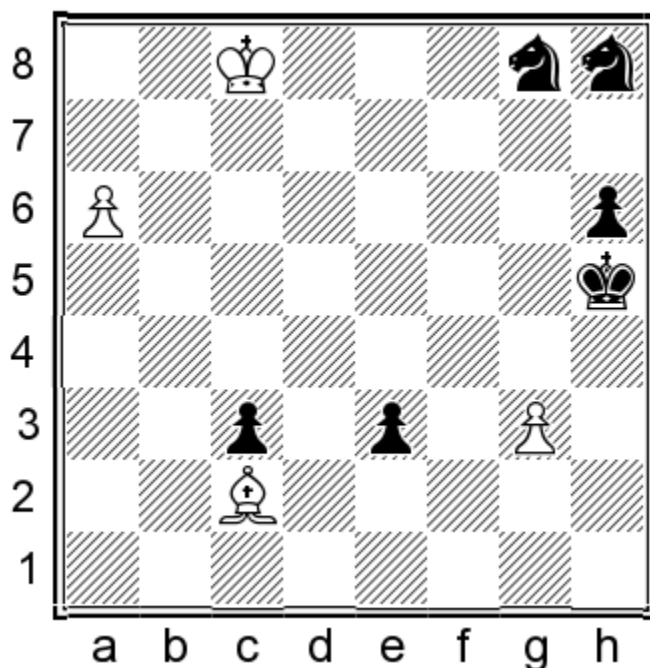
White to play and win

Gijs van Breukelen (1946-2022) was one of the most gifted endgame study composers the Netherlands has ever known. One of his studies has become famous; it was surrounded by myths. The study was long known as the 'tractor problem'. A Ukrainian farmer was supposed to have fastened a diagram with the study on the windscreen of his tractor in order to solve it while he was driving. The study is also known as 'Plaskett's puzzle'. The English grandmaster showed it to a number of participants during the second SWIFT tournament in 1987. Curiously, the study had already been immortalized in a painting by the Dutch painter Verhoef more than a decade earlier. In the painting, the pieces were depicted as insects. All this could happen because Van Breukelen was showing the study in chess circles in the Dutch city of Utrecht in 1975, without publishing it. It took fifteen years before it was published in the magazine of the Dutch federation. No fewer than six versions of the study can be found in the database. However, I have opted for a seventh version – by Didukh – in which the inactive black bishop on b4 has been removed.

White begins with a diversion.

1.a7 ♘e7+

Black couldn't push his pawn since after 1...e2 2.a8♕ e1♕ 3.♕f3+ he would get mated.

2.♔d7 ♘d5
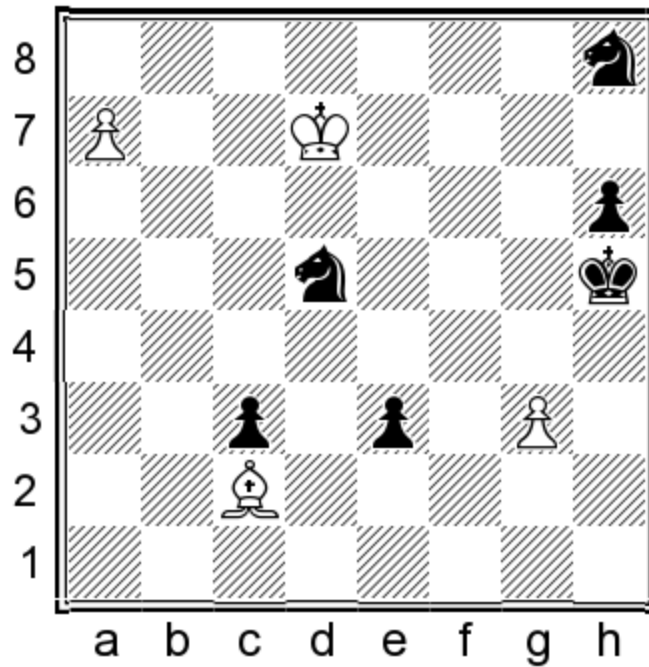
Thus, Black just barely manages to keep the a-pawn under control. Curiously, White is happy to sacrifice it:

3.a8♕!

Definitely not 3.♔c6 e2 4.a8♕ e1♕ and the white king blocks the promoted queen's range of action.

3...♞b6+ 4.♔e6

The white king is on its way to the kingside.

4...♞xa8 5.♔f5

The first phase of the study is concluded; the black king is entrapped in a mating net.

Now the question is: can the white bishop deliver the coup de grâce?

5...e2 6.♗e4 e1♞
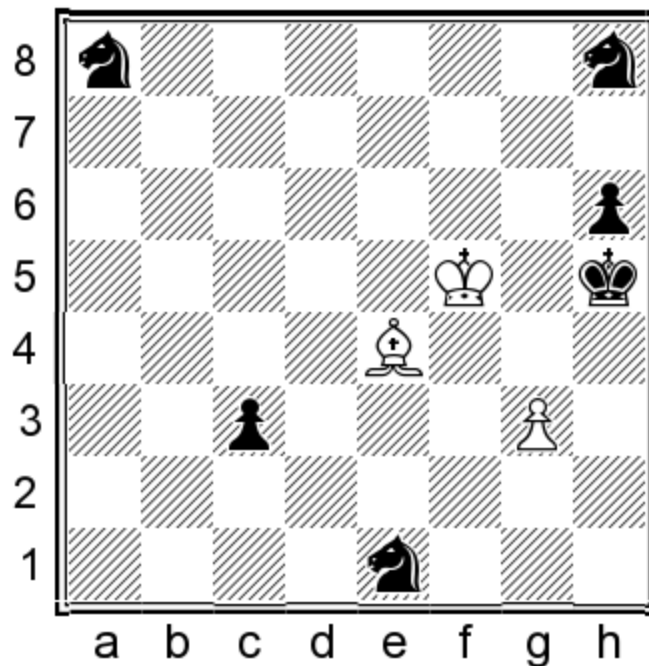
A third black knight appears on the board. For the moment, mate has been averted, but:

7.♗d5

Now the bishop is on its way to c4, and there is nothing that the black knights can do about it. Black has to go for a second knight promotion:

7...c2 8.♗c4 c1♘

The fourth knight is here.

9.♗b5

Untiring, the white bishop continues its search for a path to mate.

9...♘c7 10.♗a4

And finally the bishop has found an entry way: the four black knights are powerless against the mate threat.

Study 91 - Viktor Evreinov

Viktor Evreinov
Shakhmaty (Riga) 1959
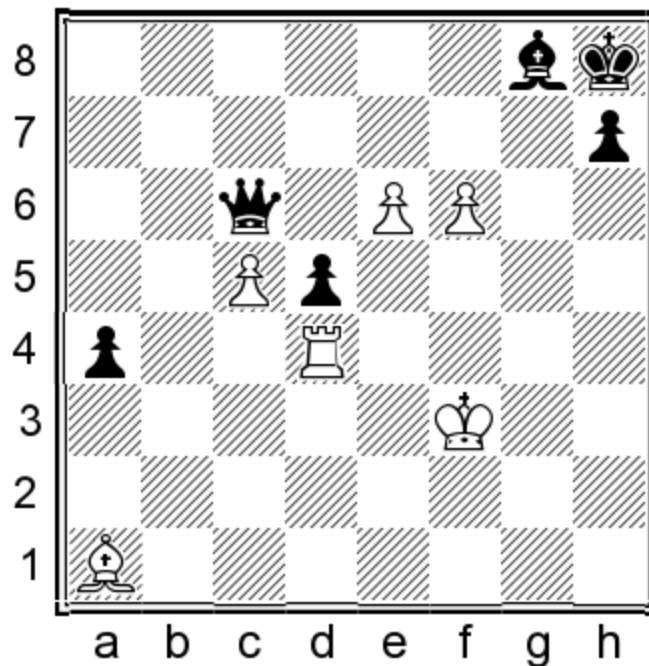
White to play and win

Viktor Evreinov (1908-1984) was a teacher by profession. When the Second World War started, he worked his way up to become a lieutenant-general and after the war he specialized in aircraft engineering. He only started composing studies when he was 37 years old. The study given here is his best one. I remember seeing it at a young age and being very impressed. It's a story of two long diagonals: White would very much like to open the a1-h8 digonal, but he has to take care that the other diagonal is kept closed for the black queen.

1.♖e4!!

An amazing move. With this rook sacrifice, White shifts the intersection of the diagonals. The logical-looking 1.f7 was insufficient for the win. After 1...♗xf7 2.exf7 ♔g7 3.♖f4+ d4+ 4.♔f2 ♔f8 5.♗xd4 ♕g6 White can't win; the c-pawn is in the way.

1...dxe4+

Black has to take the rook, since 1...d4 fails to 2.♗xd4 with an immediate win.
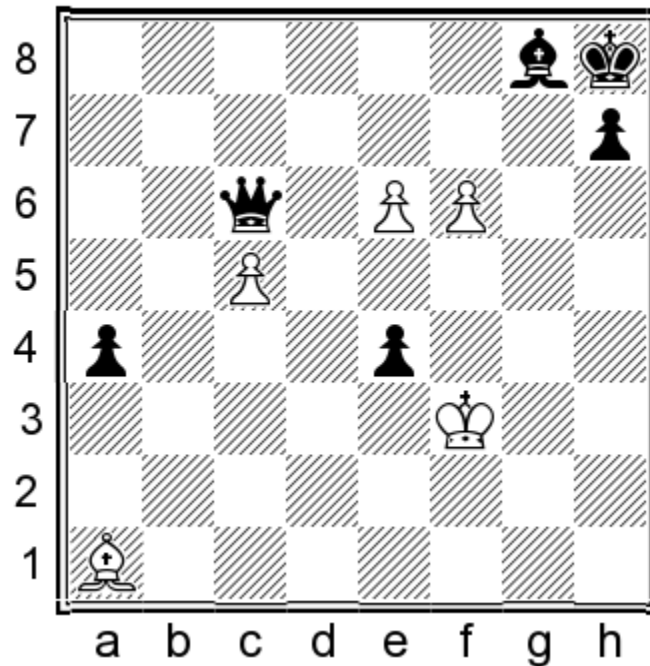
2.♔g2!

White keeps the king on the long diagonal. After other king moves, Black would have a nasty queen check.

2...e3+ 3.♔g1!

Again, the only square for the king. By pushing the e-pawn, Black has closed the g1-a7 diagonal.

3...♗f7

An emergency measure to keep the diagonal closed.

4.exf7 ♕xc5
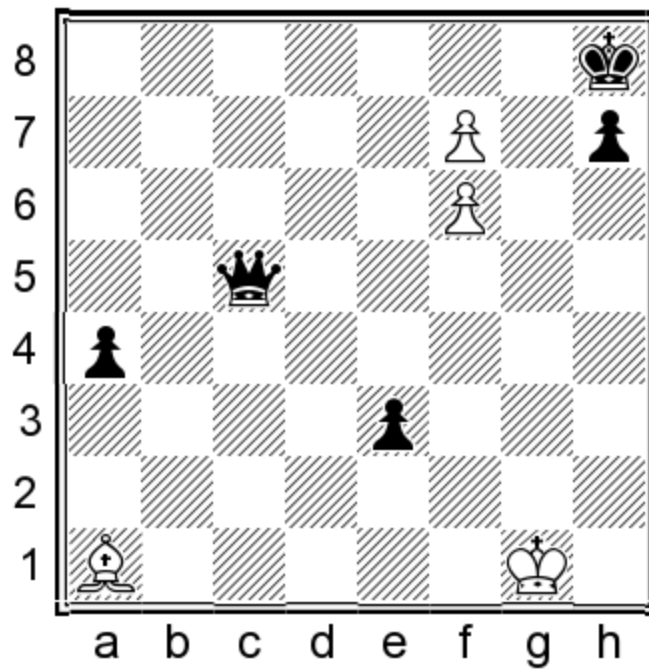
And now for the final chord:

5.f8♕+ ♕xf8 6.f7+

Finally, the white bishop has an open diagonal. Black still has a last attempt:

6...♕g7+

And for the third time, White has to find the right square for his king:

7.♔h2 ♕xa1 8.f8♕

Mate.

Study 92 - Jan Rusinek
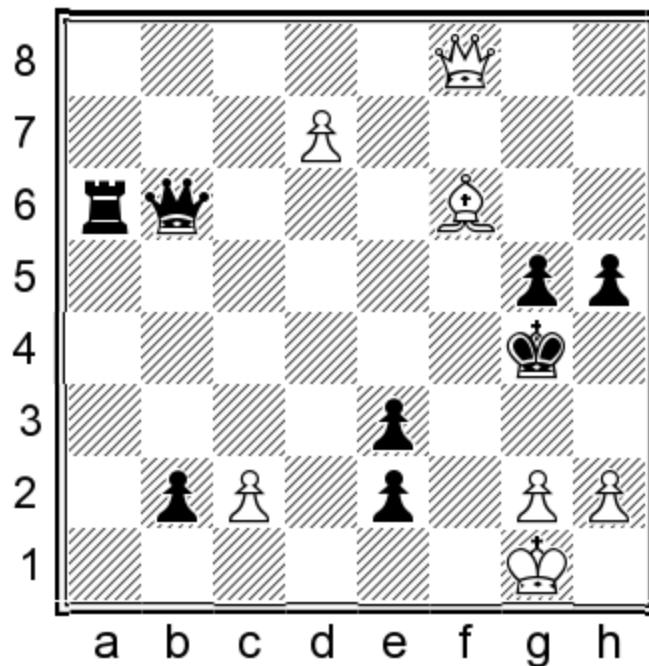
White to play and win

This is Rusinek's second famous study in this book (the other one is Study 78), also composed at a young age. It is a grand feast of queen sacrifices. In the starting position, Black has two pawns that are about to promote. Eventually, they will indeed promote, as will the pawn on e3. However, in the meantime White catches the black king in a mating net.

There are six different versions of this study. I have opted for a seventh – one by myself. I have added a black pawn on e2 to increase the total amount of queen sacrifices. This also solved another problem with the study.

The starting move is obvious.

1.h3+

Driving the black king to an unfavourable square on the edge of the board.

1...♔h4 2.♗e5!

An important move, securing the safety of his king and constricting the black king even further. Mate is threatened, starting with 3.g3+.

2...e1♕+ 3.♔h2 ♕g1+

The first queen sacrifice.

4.♔xg1 e2+ 5.♔h2 ♕g1+

And the second queen sacrifice.

6.♔xg1 ♖a1+

The alternative 6...e1♕+ is met with 7.♕f1 ♕xf1+ 8.♔h2 ♕f2 9.d8♕ b1♕ 10.♕d4+ and mate.

7.♔h2 ♖h1+

An in-between rook sacrifice. It's clear by now that Black is playing for stalemate, but it's unclear how this will manifest.

8.♔xh1 e1♕+
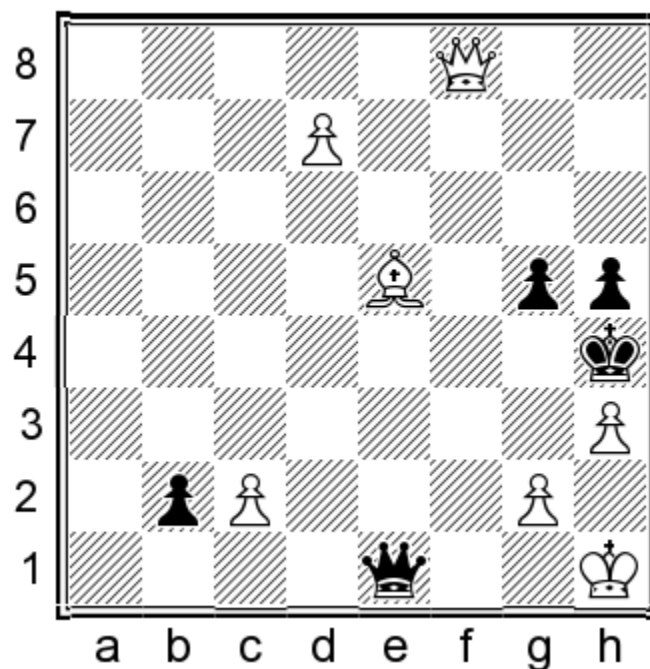
9.♕f1!

The first white queen sacrifice. The black queen is forced to move to a less favourable square.

9...♛xf1+ 10.♔h2 ♛f2

Preventing mate; White has to promote now.

11.d8♕ ♛g1+

The third black queen sacrifice.

12.♔xg1 b1♛+
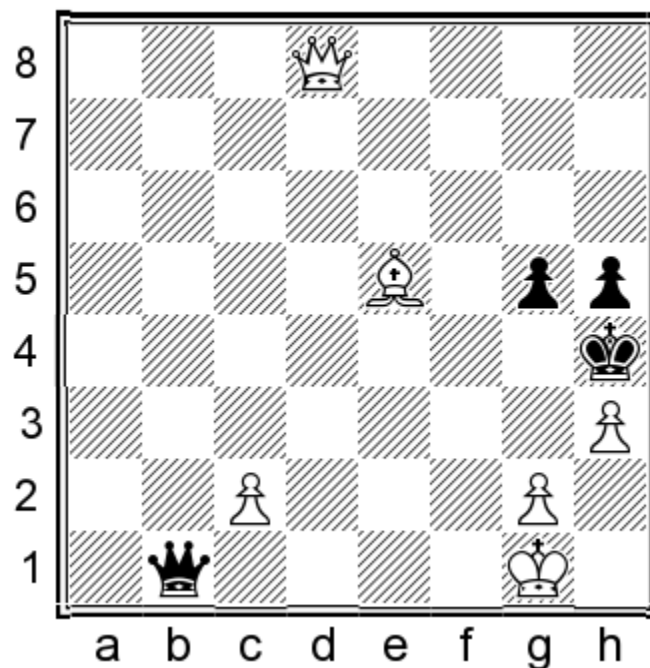
13.♕d1!

And the second counter-sacrifice! White has to prevent the stalemate that would arise after

13.♔h2 ♛g1+.

13...♛xd1+ 14.♔h2

An unbelievable situation. White has two mate threats, and Black cannot parry both.

14...♛e1

Or 14...♛e2 15.♗g3#.

15.g3+
And mate follows.

Study 93 - Jan Timman

Jan Timman
Benko 90 Jubilee Tourney 2019
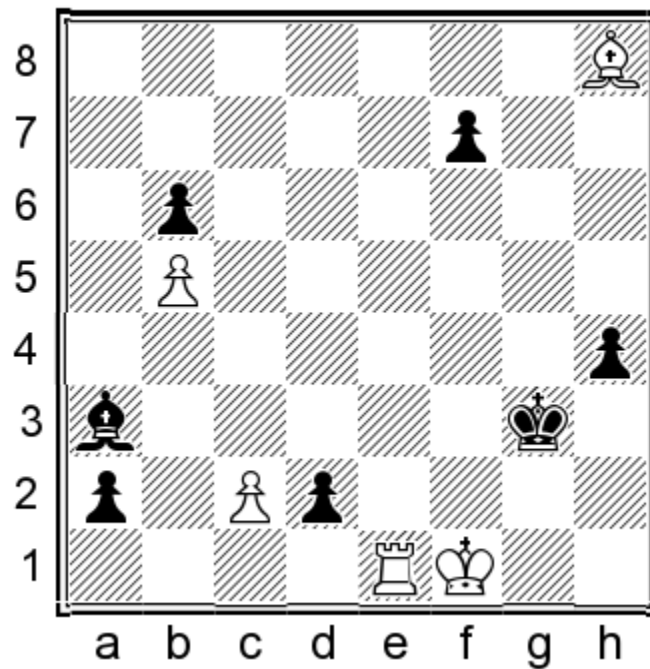
White to play and win

In 1984, Kasparian published a book with the intriguing title Tainy Etyudista ('The Secrets of the Endgame Study Composer'). In this book, the grand master explains how he composed his studies. He describes how the process goes and via which versions he achieved the end result, also mentioning the dates at which the versions were made. It must have been a meticulous job. Of course, today it is much easier to register your efforts. For example, I could easily reconstruct the way the study presented here was created by looking

at my 'New studies' file. I started working on it on 18 February, and five days later I had the final version. It was highly satisfying; it is probably my best study. One year later I decided to send it in for the tournament in honour of Benko's 90th birthday. For me, Benko had always been a source of inspiration. In the 1970s and 1980s, we exchanged ideas about studies, and he always stimulated me to continue composing. This study was published in New In Chess 2019/5.

1.♖d1

A sober starting move. The alternative 1.♖e3+, to take the rook to d3, is insufficient for the win because it allows the black bishop to cover the d-pawn from the other end of the c1-h6 diagonal. Black sacrifices a pawn to this end: 1...♔g4 2.♖d3 f6! 3.♗xf6 ♗e7! 4.♗a1 ♗g5, and Black has nothing to fear.

1...♗c1 2.♔e2

White must create space for his king.

2...h3 3.♖g1+

Not 3.c4, in view of 3...♔g2 4.c5 ♗a3! 5.c6 ♗d6, and White cannot win.

3...♔h2

If Black withdraws his king to the fourth rank, White will have no problem controlling the passed pawns.

4.♔f2
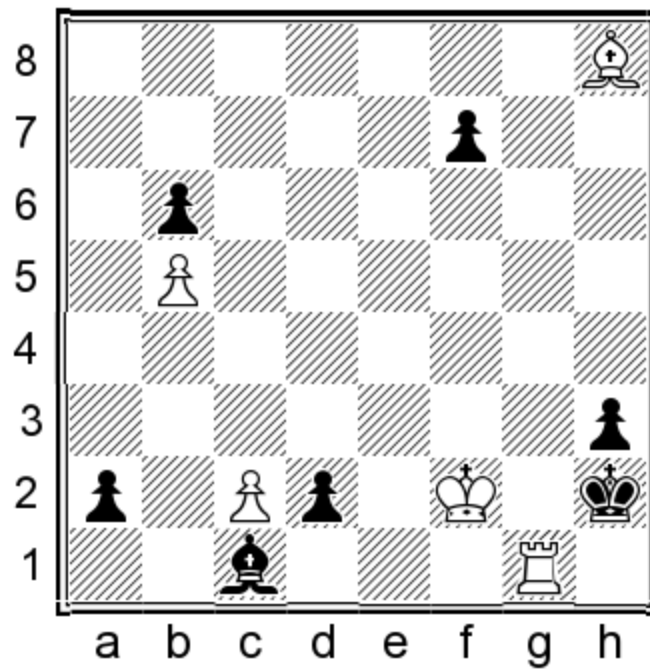
The end of the initial phase. White has introduced a mating threat. Black, for his part, is going to aim for stalemate.

4...f6

First a pawn sac.

5.♗xf6 ♗b2
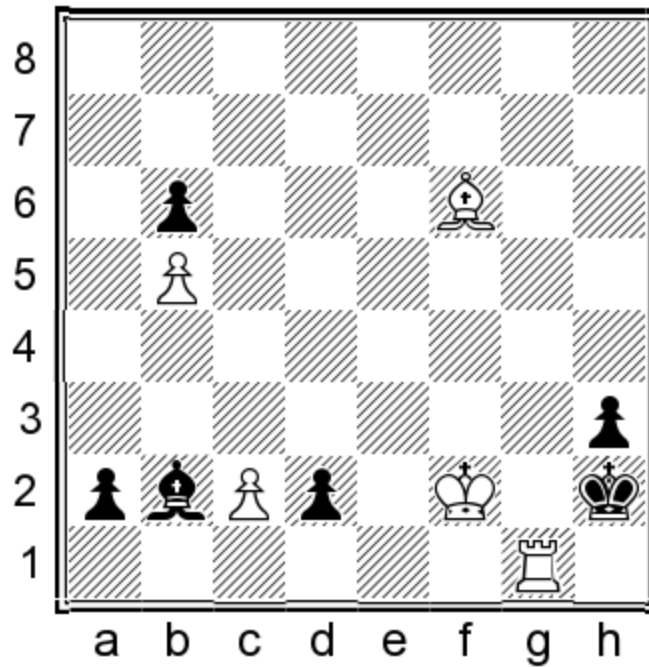
And now a bishop sac. The study is approaching its climax.

6.c3!!

White makes the same pawn sac, but with totally different intentions. To really understand the position, it is important to check what would have happened after 6.♗xb2. It is clear that Black would lose both his a-pawn and his d-pawn. This looks easy enough: 6...d1♘+! 7.♖xd1 a1♕, and if White takes the queen, it is stalemate.
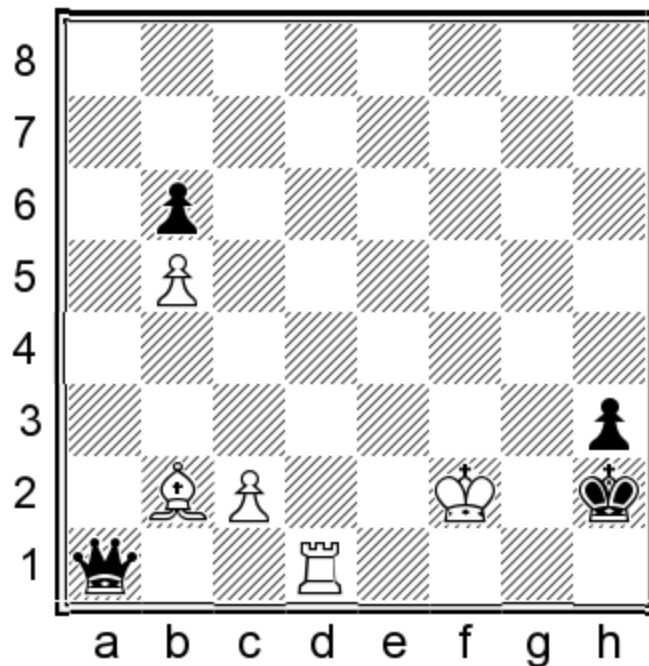
But White still has the fantastic shot 8.♖h1+!. This rook check is known from a slightly different position by the Russian study composer Makletsov. In this situation, it is not enough for the win, however, because after 8...♔xh1 9.♗xa1 h2 10.♔g3 ♔g1 11.♗d4+ ♔h1 12.♗c5 bxc5 13.♔f2 c4 14.b6 c3 the game will still end in stalemate. This is why White needs to shed his c-pawn.

6...♗xc3 7.♗xc3 d1♘+

Black can also reverse the order of queening, which leads to the second main line. It goes as follows: 7...a1♕ 8.♖xa1 (not 8.♗xa1, in view of 8...d1♘+! 9.♔f1 ♘e3+, and it's a draw because the white king must continue to cover the rook) 8...d1♘+ 9.♔f1 ♘xc3, and now the amazing rook sac 10.♖a5!!.
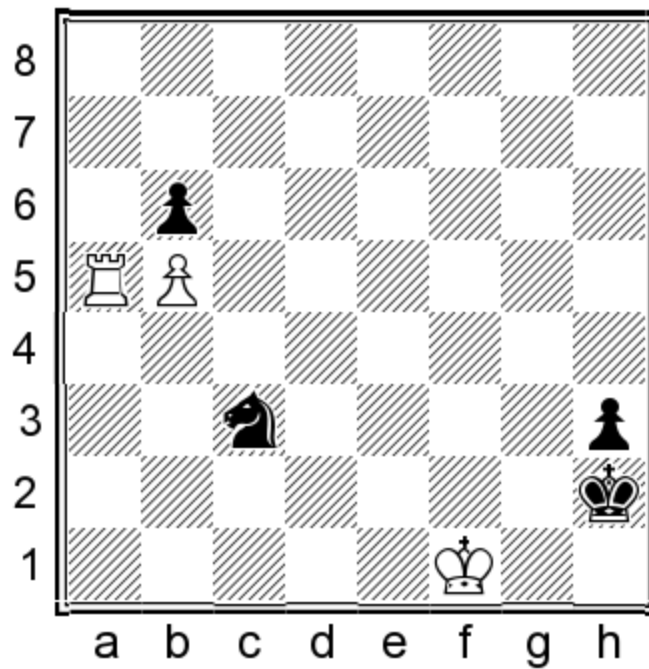
In this position, we have a situation of mutual zugzwang. With White to move, the position would be unwinnable, because the rook is tied to the defence of the b-pawn. But it's Black's move. If he takes the rook, the white b-pawn will queen, while 10...♘d5 11.♖a3 will also end up losing – White can cover the b-pawn from b3.

8.♖xd1 a1♕
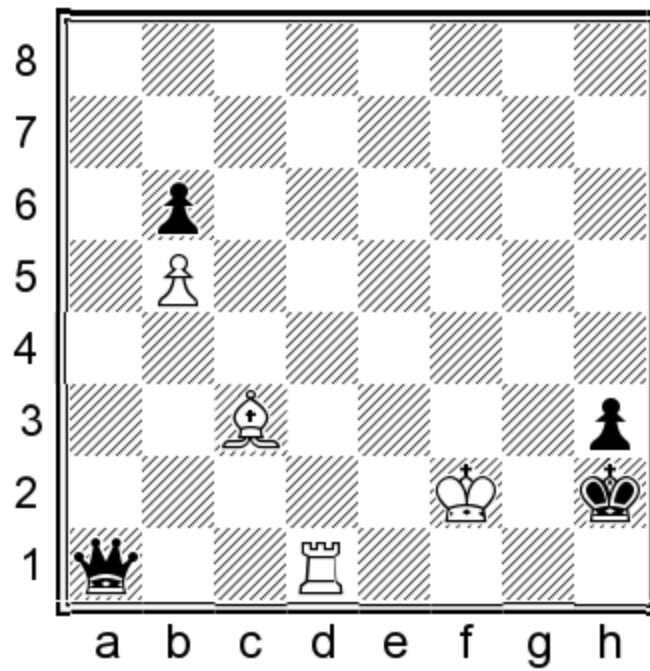
9.♖h1+!

Now Makletsov's rook sac does work.

9...♔xh1 10.♗xa1 h2 11.♔g3 ♔g1 12.♗d4+ ♔h1
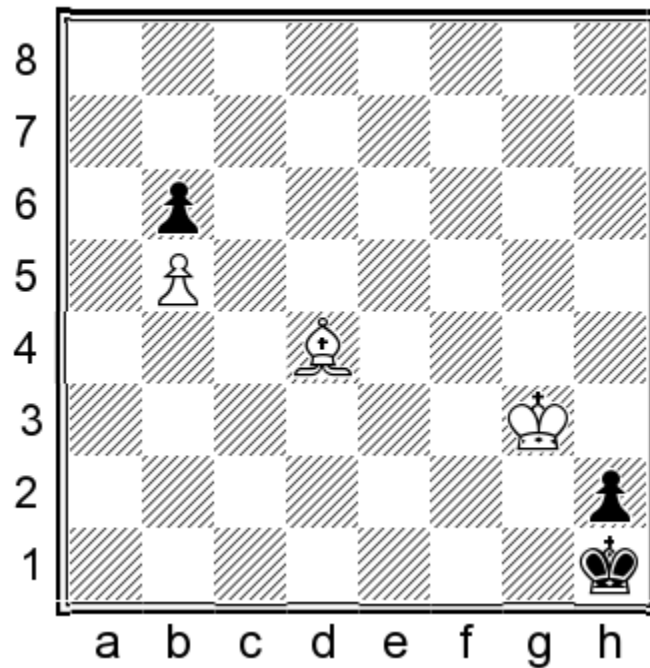
13.♗c5!

An echo of the rook sac on a5 in the second main line.

13...bxc5 14.♔f2 c4 15.b6 c3 16.b7

And wins. Because White has sacrificed his c-pawn, the stalemate has been eliminated and Black will be mated.

Vasily and Mikhail Platov

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Leonid Kubbel

Ghenrikh Kasparian

Study 94 - Albert Belyavsky

Albert Belyavsky
Korolkov Memorial Tourney 2008
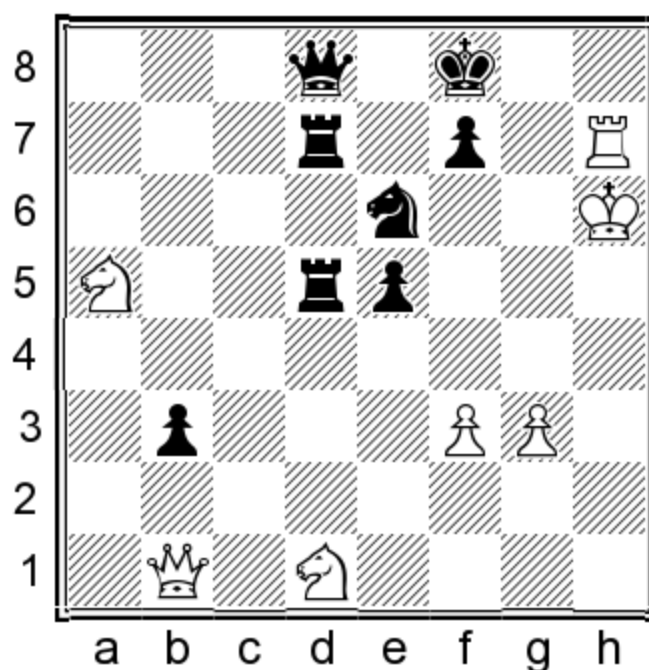
White to play and win

Albert Belyavsky (1934-2018) was a Russian painter. When he was in his mid-thirties, he started composing endgame studies. His output was not large, but his studies are very good, and they have a romantic approach. I never met Belyavsky, but I do cherish a special memory of him. In honour of his 80th birthday, a jubilee tournament was organized. In the announcement it was mentioned that the first prize would be 'a portrait of the composer'. Without a doubt, this was a sloppy translation from Russian; I remained uncertain as to what kind of picture this was. Well, I won first prize and then heard nothing for a long time – until Belyavsky passed away several years later. Via Yochanan Afek, I received a wonderful landscape painting with a dedication for me in Russian; the title was 'Morning mist'. It got a place of honour in my home.

In Belyavsky's best study, we see a magnificent combination culminating in mate. There are four versions of the study, but this is

my version, which is closest to the original. I have added a black pawn on b3 to prevent duals and show all the combinatory points to their best advantage.

White starts with a check.

1.♖h8+ ♔e7 2.♘c6+

And also this second check is obvious.

2...♔f6
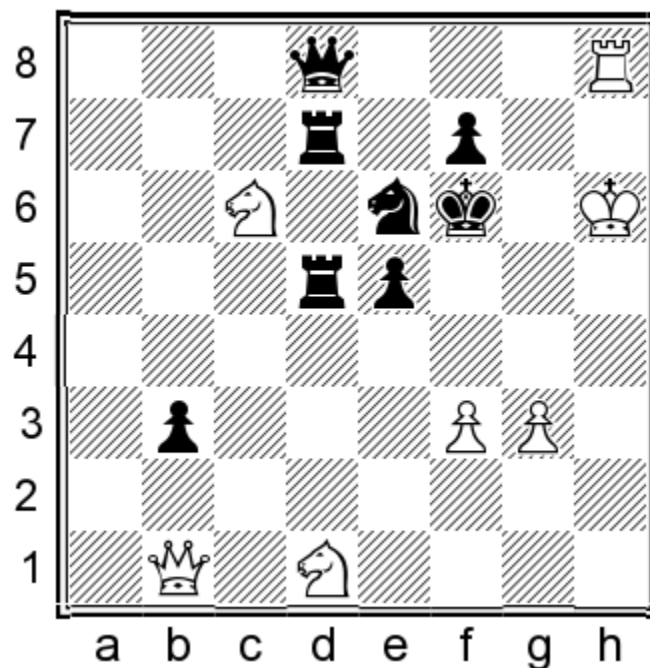
But now what?

3.♖g8!!

An absolutely stunning move. Because White is threatening mate in two, Black has to accept the rook sacrifice, and then his queen lands on an unfortunate square. By the way, taking the black queen is insufficient. After 3.♖xd8 ♘xd8 4.♘e3 ♘xc6 5.♘xd5+ ♖xd5 6.♕xb3 ♖d2 White has no realistic winning chances.

And 3.♘xd8? fails to 3...♖xd1 and Black wins.

3...♕xg8

If Black parries the mating threat in another way, White can capture the black queen; for example, 3...♖d3 4.♖xd8 ♖xd8 5.♘xd8 ♖xd8 6.♔h5 and White wins, or 3...♘g7 4.♖xd8 ♖xd8 5.♘xd8 ♖xd8 6.♔h7! ♘e6 7.f4 and here too, White's material preponderance decides the issue.

4.♕f5+!!

The wonderful point of the previous move.

4...♔xf5
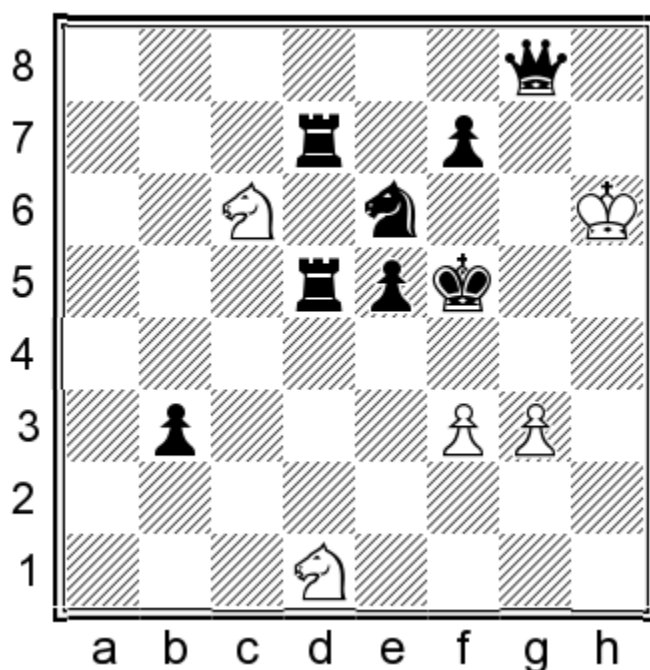
5.♘e7+!

The third and final piece sacrifice; after this, White is going to cash in.

5...♖xe7 6.♘e3+ ♔f6 7.♘xd5+

The deforestation begins.

7...♔f5 8.♘xe7+ ♔f6 9.♘xg8+ ♔f5
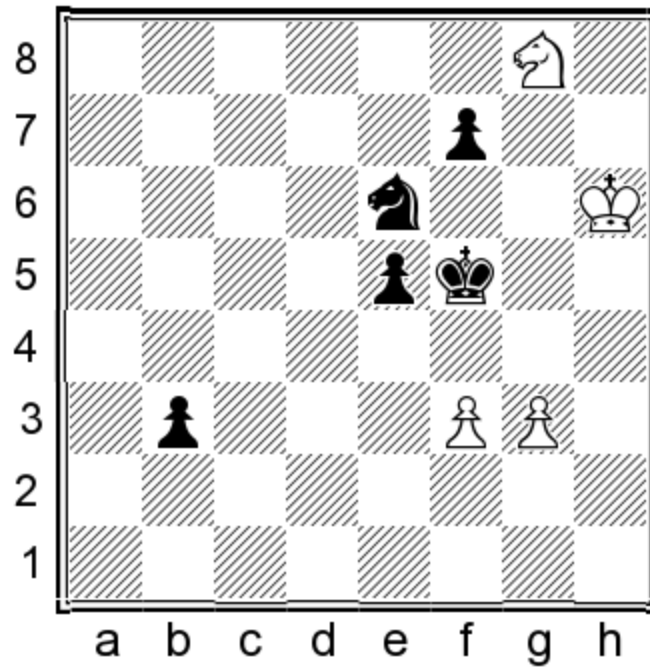
White has gained back all the material. Now for the final chord:

10.♘e7+ ♔f6 11.♘d5+ ♔f5 12.g4

Mate.

Study 95 - Ghenrikh Kasparian

Ghenrikh Kasparian
Shakhmaty v SSSR 1935
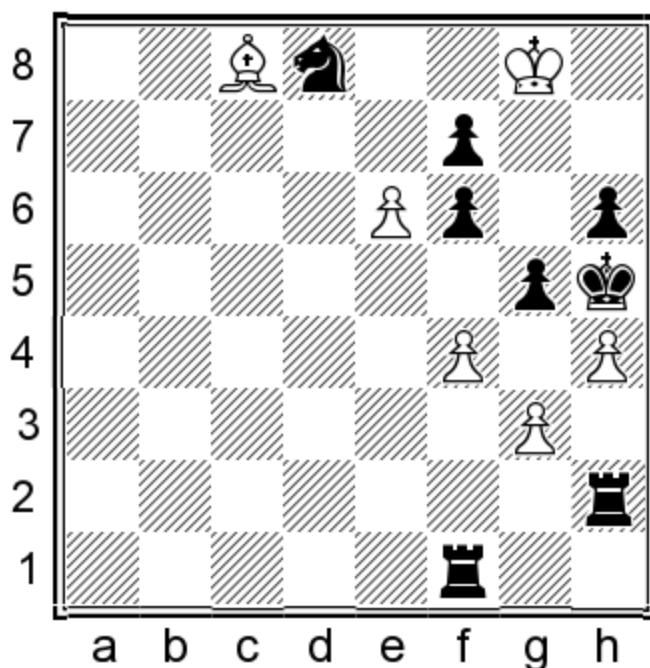
White to play and win

This is a much-lauded study by Kasparian that has been published many times. However, the form is different: in the original version we see a knight lording it over two rooks. Next, Korolkov came up with the idea that this heroic knight could be a promoted piece. However, his study version of 1950 was not watertight. Many changes were not necessary, by the way. This is my version, based on Kasparian and Korolkov.

The first move is obvious.

1.e7 ♘b7

If the black knight diverts to another square, White can simply promote to a queen; for instance, 1...♘e6 2.e8♕ ♔g4 3.♔xf7 ♔xg3 4.♕xe6 ♖xh4 5.f5 ♖hf4 6.♕xf6 and White wins easily.

2.e8♘!

There is the knight! In these circumstances, 2.e8♕ would be insufficient to win. Black can defend the pawn with 2...♞d6, after which he has nothing to fear.

2...♔g6

The only way to prevent immediate mate.
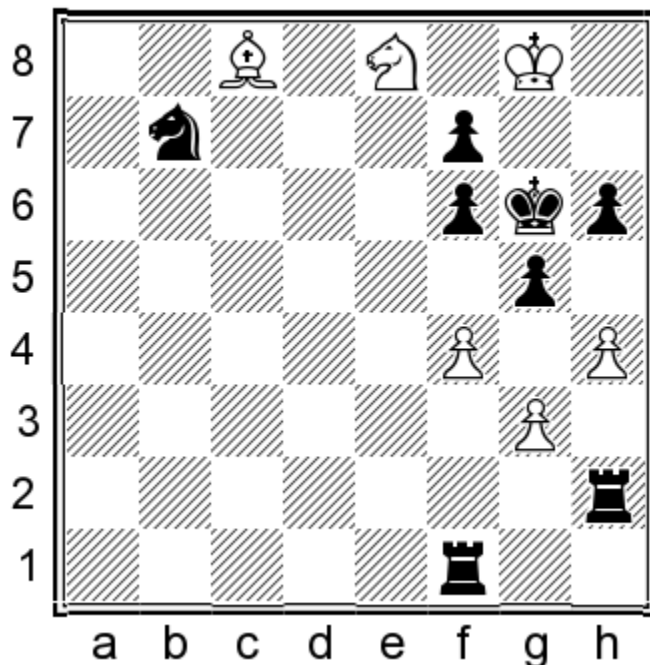
3.h5+!

Forcing Black to take the pawn with the rook, thereby blocking the h5-square for his king.

3...♜xh5

Or 3...♔xh5 4.♘g7+ ♔g6 5.♗f5 mate.

4.f5+!

The second pawn sacrifice, with the same purpose.

4...♜xf5 5.g4
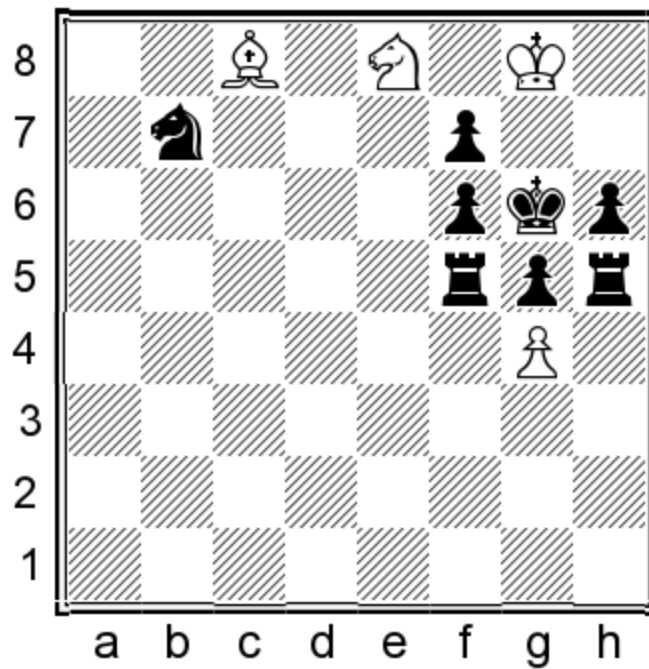
The fight for the f5- and h5-squares continues.

5...♖f4 6.♗f5+!

The climax of the study.

6...♖xf5 7.♘g7 1-0

The promoted knight has the last word. Black is two rooks up, but precisely because of that, checkmate is inevitable.

Study 96 - Leopold Mitrofanov

Leopold Mitrofanov
Rustaveli Memorial Tourney, Vecherni Tbilisi 1967
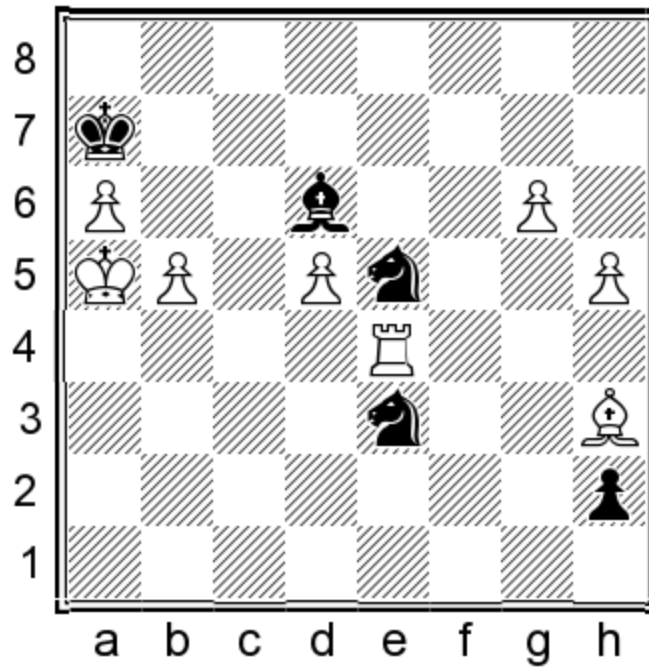
White to play and win

The study presented here shows Mitrofanov in all his glory. In the final play, we see two white pawns getting the better of the enemy's superior numbers. This is preceded by a queen sacrifice that was already known from a study by Farago from 1936. However, Mitrofanov's realization of the idea is much better. There are seven versions of this study. I have opted for my own version, which I published in New In Chess in 2013.

Obviously, White has to start by giving check.

1.b6+

Forcing the black king to move to the back rank.

1...♔a8 2.♗g2!

This bishop sacrifice is my invention. White can't win if he aims for immediate promotion. After 2.g7 h1♕ 3.g8♕+ ♗b8 the scope of the black queen is too large. The bishop sac is the introduction to a rook

sac; both sacrifices will eventually result in a limitation of room to manoeuvre of the black queen that comes on the board by promotion.

2...♘xg2
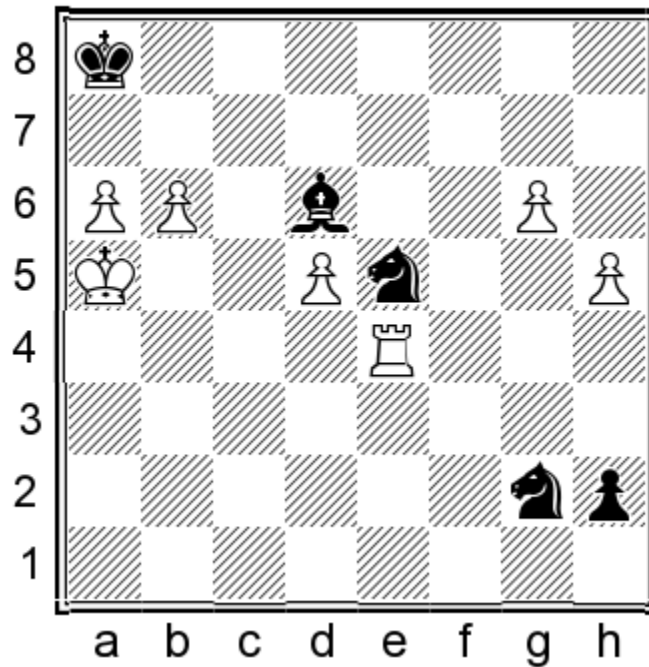
3.♖e1!

This rook sacrifice stems from Alexander Kuindzhi, who published it in the weekly magazine 64 in 1970 (at the time, Kuindzhi was a prominent Russian player).

3...♘xe1 4.g7 h1♕ 5.g8♕+ ♗b8 6.a7

The result of White's sacrifices becomes clear: the black queen has no checks on the first row as the knight on e1 is in the way. However, Black still has a resource:

6...♘c6+!

The only chance. After 6...♘d7 7.♕e6 Black would get mated soon.

7.dxc6 ♕xh5+
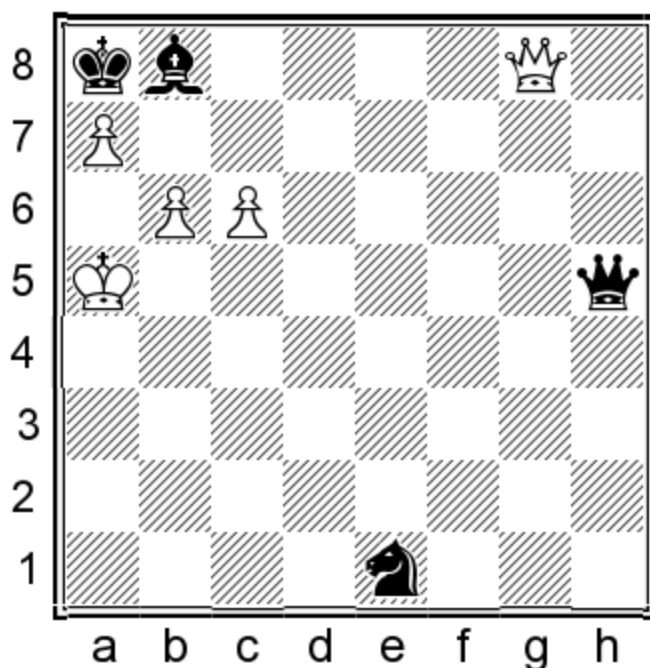
Finally, Black has managed to give a queen check.

8.♕g5!!

The magnificent climax of the study. White sacrifices his promoted queen to put Black on the wrong foot. Therefore, this specific queen sac is called a 'deflection'. In fact, the entire study revolves around the reduction of the black queen's range.

8...♕xg5+ 9.♔a6 ♗xa7 10.c7! 1-0

The black queen still has no good squares, making checkmate unavoidable.

Study 97 - Vladimir Korolkov and Leopold Mitrofanov

Vladimir Korolkov and Leopold Mitrofanov
Revista Romana de Sah 1957
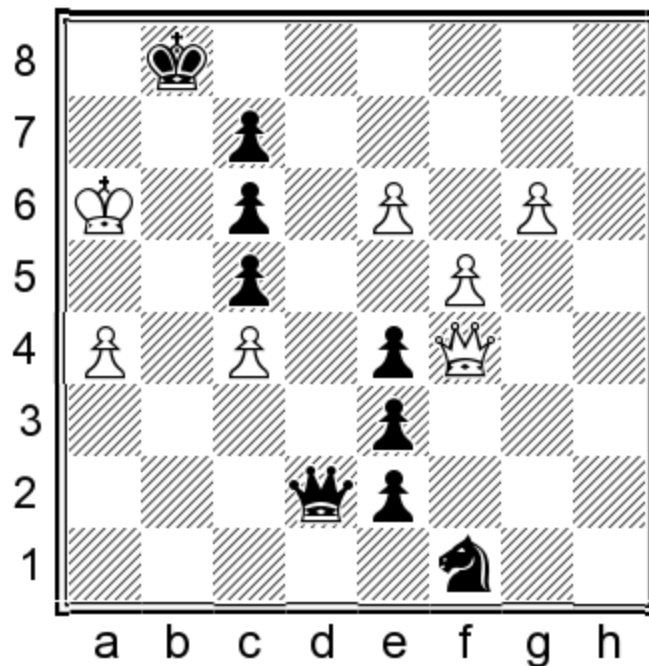
White to play and draw

Tim Krabbé once described a scene he had witnessed in the early 1970s during a Hoogovens tournament: a throng of grandmasters surrounded a chessboard on which Ljubomir Ljubojevic was showing a study. This was a co-production of two great composers: Korolkov and Mitrofanov. Indeed, this study, with its multitude of queen sacrifices, created a furore.

It starts with a quiet move.

1.♕e5

Threatening mate. Insufficient was 1.e7 in view of 1...♕d7 followed by promotion of the foremost e-pawn.

1...♕a5+

The first queen sacrifice: Black has to prevent checkmate.

2.♔xa5 ♔b7

And now Black, in his turn, threatens mate.

3.♕b2+ ♔a7
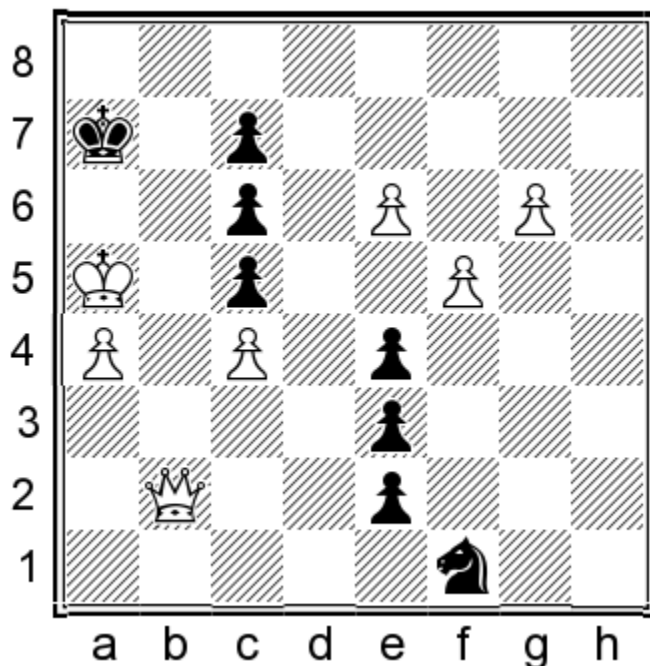
4.♕b8+!

The first white queen sacrifice.

4...♔xb8 5.♔a6

For the time being, the checkmate has been averted; however, new queens are going to appear on the board.

5...e1♕ 6.g7

White has to push this pawn. After 6.e7 ♕a5+ 7.♔xa5 ♔b7 8.e8♕ e2 9.♕a8+ ♔xa8 10.♔a6 e1♕ 11.g7 Black would stop the g-pawn with 11...♕g3.

6...♕a5+

The second queen sacrifice from the Black side.

7.♔xa5 ♔b7

And again, the white king is driven into a corner.

8.g8♕ e2

New queens announce themselves.

9.♕a8+

This time White has to sacrifice the queen on a8, since after 9.♕b8+? ♔xb8 10.♔a6 ♔c8 the black king would come within reach of the white e-pawn.

9...♔xa8 10.♔a6 e1♕

Black's second promoted queen appears on the board, ready to be sacrificed.

11.e7
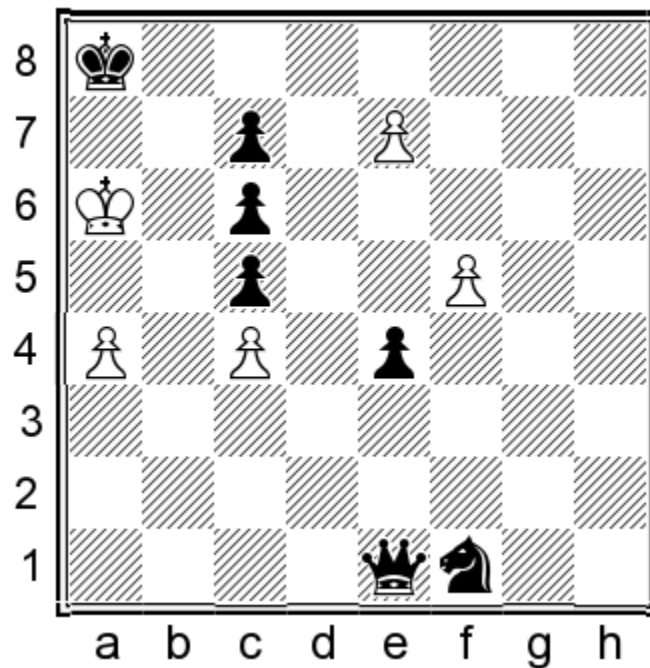
11...♕a5+

The third sacrifice on a5.

12.♔xa5 ♔b7 13.e8♕ ♘d2 14.♕a8+

And White, too, sacrifices his second promoted queen.

14...♔xa8 15.♔a6

We won't see any new queens on the board for a while; White is going to play for stalemate.

15...♘xc4 16.f6 ♘e5 17.f7

Definitely not 17.a5 on account of 17...♘d7 and White gets mated.

17...♘d7 18.f8♕+

The final sacrifice.

18...♘xf8 19.a5

And stalemate is inevitable.

Study 98 - Steffen Slumstrup Nielsen

Steffen Slumstrup Nielsen
Chess Star 2018
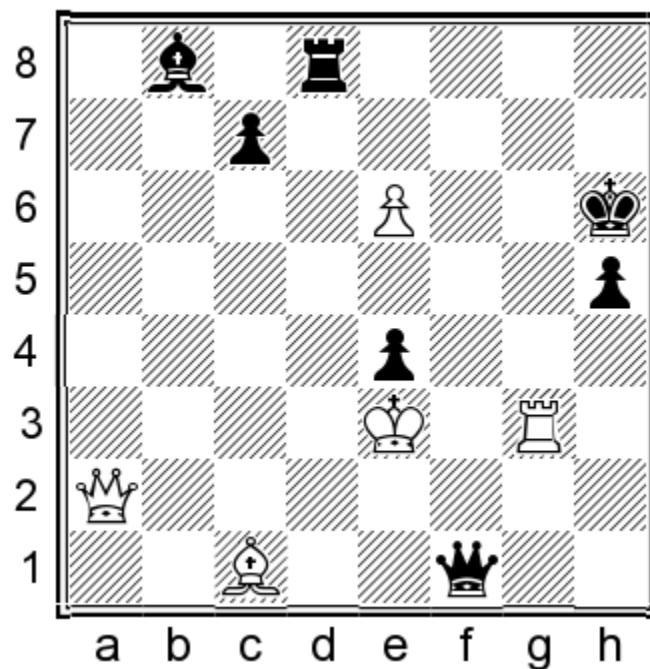
White to play and draw

Steffen Slumstrup Nielsen (1975-) became World Champion of Chess Composition in 2022, as a successor of Oleg Pervakov. Most remarkably, Nielsen only made himself known as an endgame study composer in 2011. He submitted a study for the tournament in honour of my 60th birthday and won first prize with it. In the years

after that, he developed into a more than excellent endgame study composer. His main speciality is play along diagonals. We see stunning pins and batteries in his studies, the one presented here being an excellent example.

Black has two extra pawns, and his king appears to be safer than White's. However, White has a miraculous way out of his difficulties:

1.♕a1!

The only way to cover the bishop. After 1.♕c2 ♕e1+ 2.♔f4 c6+ 3.♔f5+ ♔h7 White would run out of checks.

1...♕e1+

Preventing a discovered check by White.

2.♔f4 ♖f8+

Worsening the white king's predicament, but now follows a discovered check:

3.♔e5+ e3

A surprising move with an incredible point.

3...♔h7 is met by 4.♖g7+ ♔xg7 5.♗h6+ ♔xh6 6.♕xe1.

4.♗xe3+

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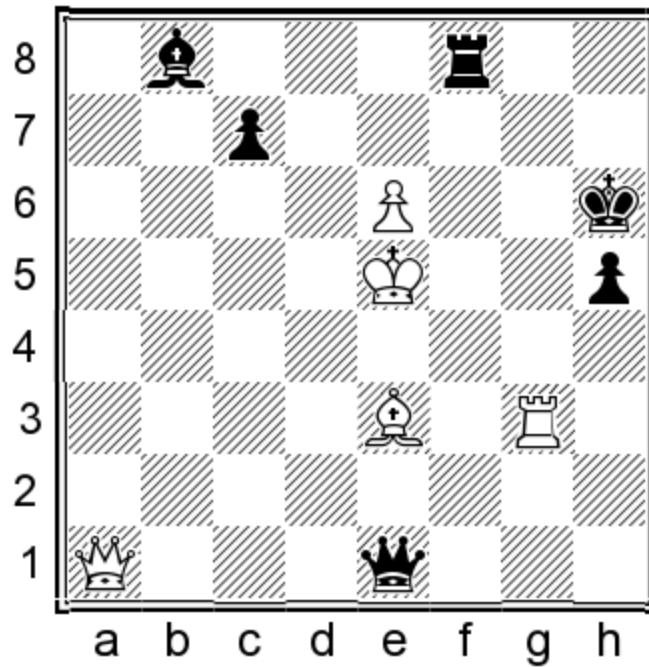
4...♖f4!!

Completely unexpectedly, Black weaves a mating net into the position. White can't capture the queen since he is mated in the middle of the board after 5.♕xe1 c6.

5.♕b2!!

The only defence. White attacks the black bishop and thereby prevents mate.

5...♕c3+!

Cutting-edge play! Black sacrifices his queen once more; incidentally, after any other move he would be losing.

6.♔xf4

White has to sacrifice his queen.

6...♕xb2 7.e7

The point of the previous move; the passed e-pawn brings salvation.

7...♕h8

Black could also prevent promotion with 7...♕b5, but then White would continue with the simple 8.♖g8.

8.♔f5+ ♔h7
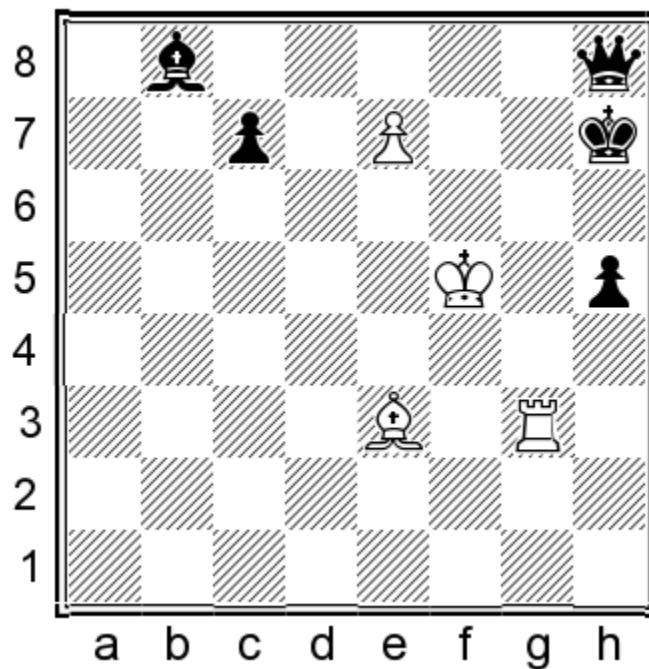
9.♖g7+!

An important finesse. After 9.♗d4 ♕c8+ 10.♔f6 ♕a6+ 11.♔f7 ♕c4+ 12.♔f8 ♕f1+ 13.♔e8 c5 Black would win easily.

9...♔xg7 10.♗d4+ ♔f7 11.♗xh8

After all these wild complications, a bishop endgame has come on the board. White has to keep playing accurately.

11...c5 12.♗f6 ♗d6 13.♔e4

Centralization.

13...♗xe7
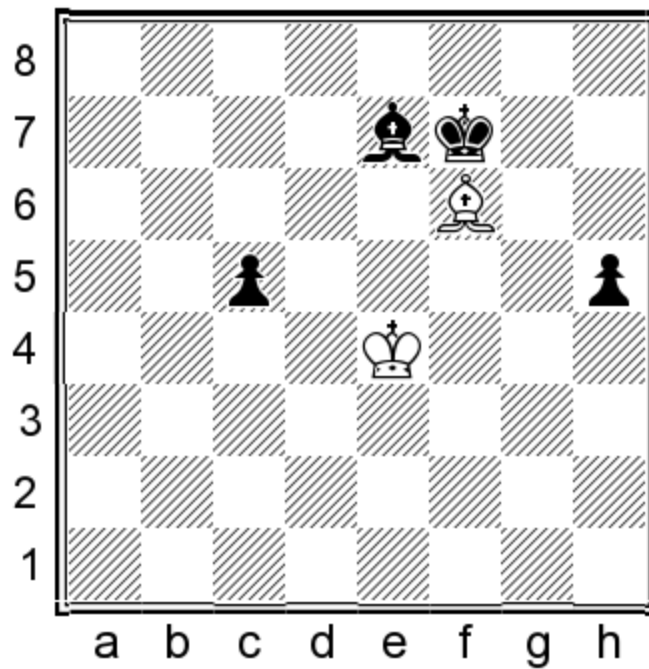
14.♗d4!

The final finesse. After other moves, the endgame would be technically winning for Black.

14...cxd4

Also after 14...c4 15.♔d5 h4 16.♔xc4 h3 17.♗g1 ♔e6 18.♔d3, the white king is just in time.

15.♔xd4 h4 16.♔e3

The white king rushes to the right bottom corner.

16...h3 17.♔f2 h2 18.♔g2 ½-½

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Ernest Pogosyants

Oleg Pervakov

Yochanan Afek

Steffen Slumstrup Nielsen

Study 99 - Steffen Slumstrup Nielsen
Steffen Slumstrup Nielsen
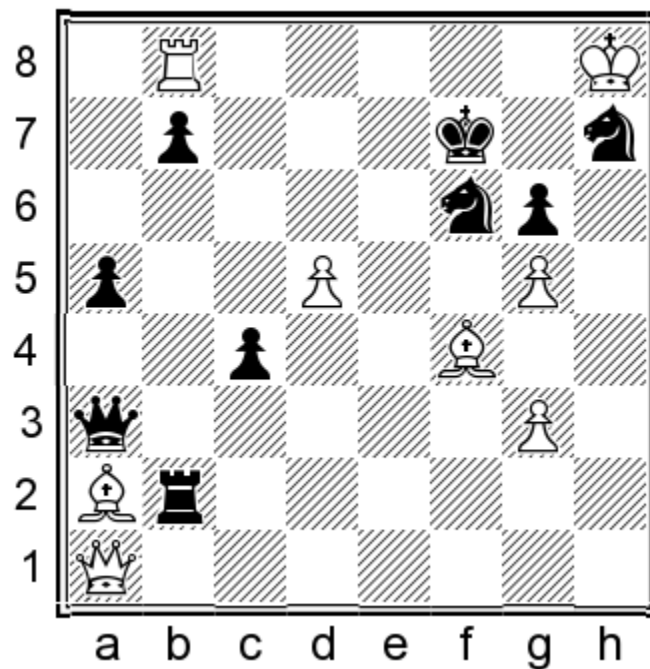
White to play and win

Here is a second example of Nielsen's brilliant ideas: a struggle of batteries and counter-batteries. In fact, it's a veritable feast of batteries.

White is the first to charge one:

1.♗xc4

The first battery consists of the d-pawn with the white light-squared bishop behind it. White threatens mate in two by pushing the d-pawn.

1...♕c3

The first counter-battery; now Black is threatening to give mate.

2.♕f1!

White applies his second battery. Now the black knight on f6 can't give a discovered check, since White then plays his bishop to e5 with a counter-check.

2...♖h2

Applying the second counter-battery. Insufficient was 2...♘f8 in view of 3.♗d2! and the black rook's path to h2 is cut off.
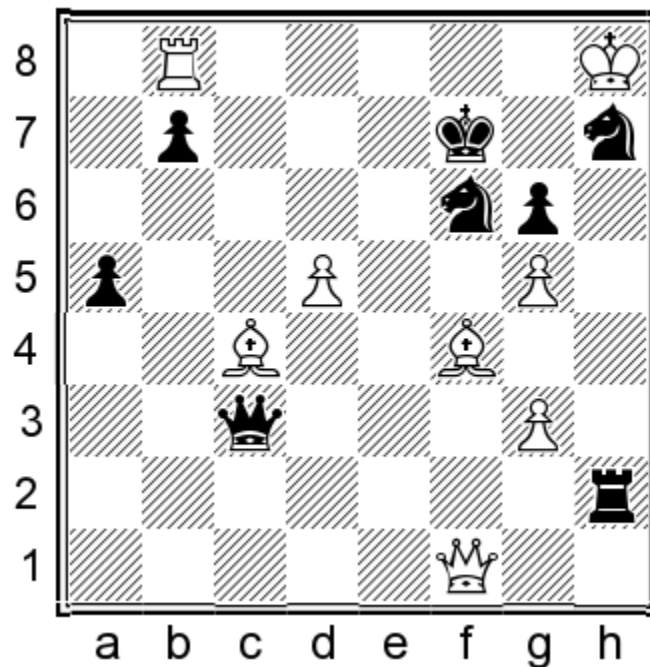
3.g4!

A tremendous quiet in-between move. Now Black has no good square for the rook.

3...♘xg4+

The first battery is fired. On 3...♖h3 White wins with 4.♕xh3 ♕xh3 5.d6+ followed by mate.

On 3...♖h4, the quiet 4.♗g3 decides.

4.♗e5+
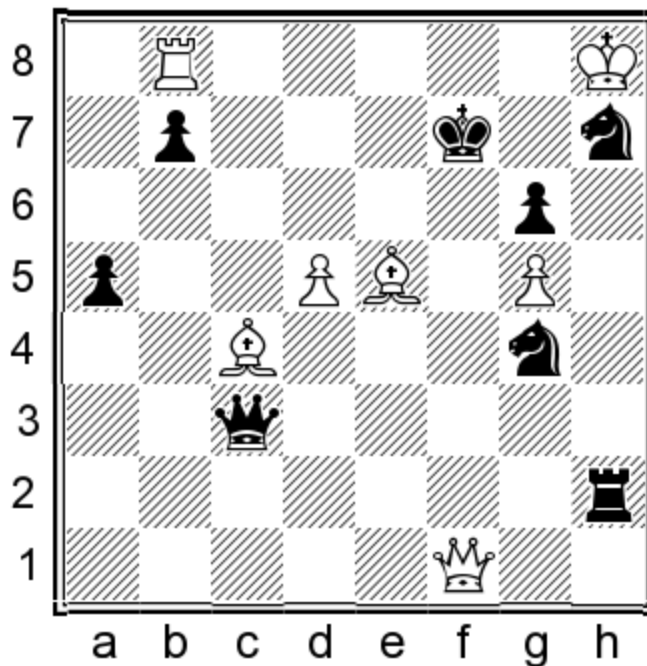
And the counter-battery is triggered.

4...♘hf6+

A new battery is fired. White has to take the rook.

5.♗xh2 ♘f2

The final phase sets in. Black tries to 'seal' the f-file with a knight sac.

6.♗e5!

And White reacts with a bishop sacrifice; he couldn't capture either of the black knights.

6...♕xe5 7.♖f8+!

And the rook is sacrificed as well. White has to create a block on the eighth rank.

7...♚xf8 8.♕xf2

The smoke has cleared, the skirmishes are over.

8...b5

A final attempt.

9.♕xf6+

Not 9.♗a2 in view of 9...♕xg5 10.♕c5+ ♔e8 and White can't win.

9...♕xf6+ 10.gxf6 bxc4 11.d6 1-0

Study 100 - Oleg Pervakov

Oleg Pervakov
Szachy 1987
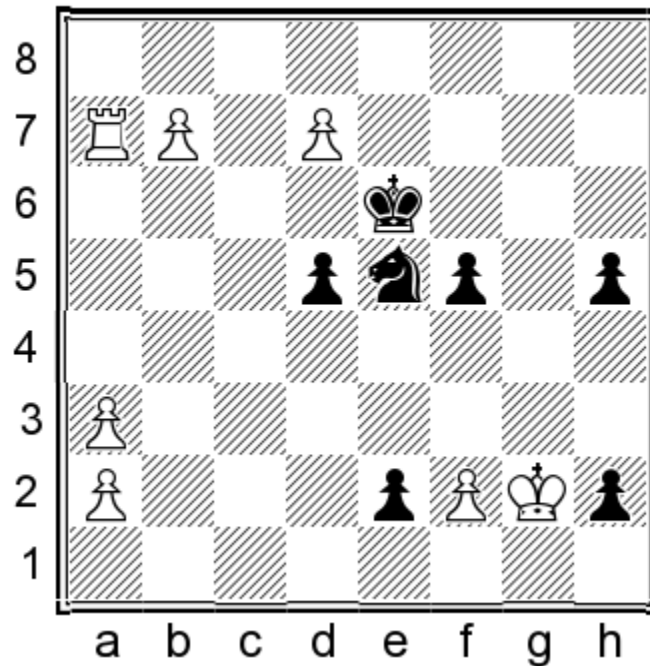
White to play and win

In his book The Ultra Modern Endgame Study, the Dutch composer Jan van Reek described this type of endgame study as follows: 'This type of study consists of linked endgame studies. The main line(s) can be divided into more than one part. Each part has a different material setting and usually a different theme.' The study presented here fulfills these conditions very well. We see Pervakov at his best.

The first part of the study contains a hunt for the black king, introduced by a knight promotion.

1.d8♘+!

White has to promote to a knight, since after 1.b8♕ h1♕+ 2.♔xh1 e1♕+ 3.♔g2 ♕e4+ Black has perpetual check.

1...♔f6 2.♖a6+ ♔g5

Not 2...♔g7 in view of 3.♘e6+ ♔h7 4.♘g5+ ♔g7 5.b8♕ and White wins; he controls the e4-square.

3.♘f7+!

With this knight sacrifice, the black king is chased further down.

3...♔h4

Black can't accept the knight sacrifice, since after 3...♘xf7 4.♖e6 White stops the black e-pawn.

4.♖a4+ d4!

Only this pawn sacrifice allows Black to continue the struggle; he is going to play for stalemate.

5.♖xd4+ ♘g4

Now Black attacks the white f-pawn with his knight, threatening 6...h1♕+ followed by 7...e1♕+. White will have to sacrifice the exchange.

6.♖xg4+ fxg4
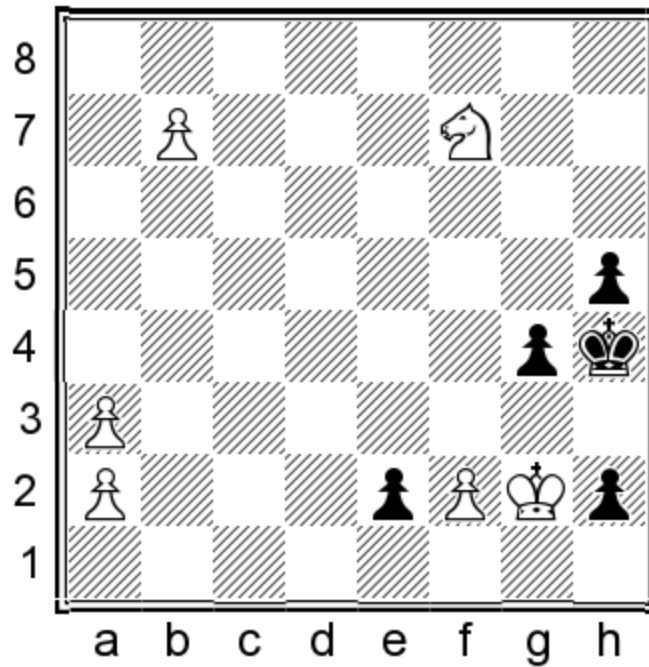
7.b8♗!

The second phase is introduced by a bishop sac. With a couple of clever tricks, White manages to liquidate to a technically winning endgame. Again, White could not promote to a queen since after 7.b8♕ h1♕+ 8.♔xh1 e1♕+ 9.♔g2 ♕e4+ 10.♔h2 Black forces stalemate with 10...♕f4+!.

7...h1♕+ 8.♔xh1 e1♕+

There is a second main line running as follows: 8...♔h3 9.♘g5+ ♔h4 10.♗g3+ ♔xg5 11.f4+ gxf3 12.a4 ♔f5 13.a5 ♔e4 14.a6 ♔e3 15.♔g1 ♔d2 16.a7 e1♕+ 17.♗xe1+ ♔xe1 18.a8♕ f2+ 19.♔h2 f1♕ and now White has the winning move 20.♕h1!. With this long queen move, White liquidates to a winning pawn endgame.

9.♔g2 ♕e4+ 10.♔h2

Threatening mate. Black still has a resource:

10...g3+

Vacating the g4-square for the king.

11.♗xg3+ ♔g4 12.f3+!

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A well-known shot; a family check is now unavoidable.

12...♔xf3 13.♘g5+ ♔e3
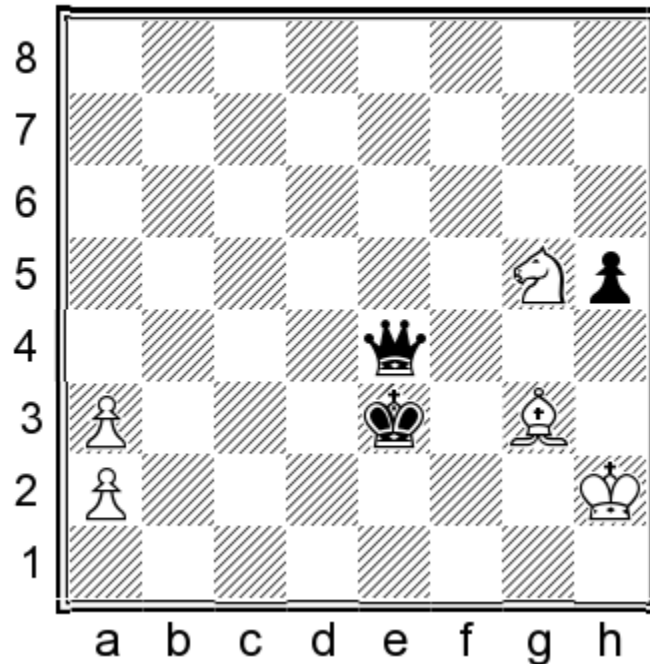
The third and final phase starts: the technical conversion.

14.♗f2+!!

A fantastic intermediate check, improving the position of White's bishop. After 14.♘xe4 ♔xe4 15.a4 ♔d5 16.a5 ♔c6 Black's king would reach the safe corner square a8.

14...♔d3 15.♘xe4 ♔xe4 16.a4 ♔d5 17.a5 ♔c6 18.a6 ♔c7 19.♗a7!

This is the difference; see also Study No. 5.

19...♔c6 20.a4! 1-0
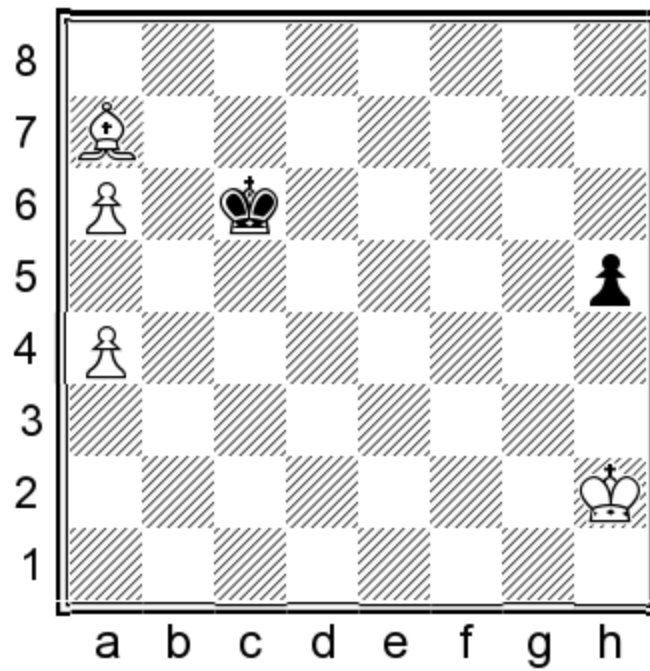
The hindmost a-pawn has the final word. Curiously, both main lines in this study consist of 20 moves.

Glossary of terms

Here, we present a glossary of all the terms used in this book. This is not a comprehensive glossary of all the terms used in endgame study composing.

Battery

When two pieces, or a piece and a pawn, are standing in line on a rank, a file or a diagonal, and the hindmost piece constitutes a threat. The threat is executed by removing the foremost piece from the rank, file or diagonal.

Blockade

When a piece is put in the way of an enemy piece, rendering the latter immobile. A blockade can also be of several pieces at once.

(Check)mate

When the king is threatened and there is no way to prevent its capture on the next move, either by moving the king, interposing a piece, or capturing the check-giving piece. Checkmate wins the game.

Deflection

When a piece or pawn is sacrificed to force the enemy piece that captures it to an unfavourable square.

Discovered check

When two pieces, or a piece and a pawn, are standing in line on a rank, a file or a diagonal, and the hindmost piece is aiming at the enemy king. The discovered check is executed by removing the foremost piece from the rank, file or diagonal.

Domination

When a piece, or a collection of pieces, is controlled by the enemy pieces in such a way that they cannot make any useful moves.

Family check

A double attack on the king and queen.

Foresight

Seeing an essential trick or point that occurs several moves later.

Kamikaze rook

When a rook keeps giving check to the enemy king all over the board and capturing it leads to **stalemate**. Often, there is a way to capture the rook in such a way that it doesn't lead to stalemate, but this opportunity may sometimes occur only after a long sequence of moves. Other terms used for this phenomenon are 'crazy rook',

'permanent rook', 'rampant rook', and 'suicide rook' – we have decided to use the above term for this book.

Lasker manoeuvre

A series of checks by a rook to the enemy king, combined with pursuing the king with the own king. The point of the manoeuvre is to capture an enemy passed pawn which is protected by an enemy rook, and if the enemy rook takes back the rook, the attacker can promote his own pawn. The enemy rook cannot take the attacker's pawn either, since, at the end of the Lasker manoeuvre, it is pinned to its own king.

Miniature study

An endgame study that involves a total of seven or fewer pieces on the board.

Novotny theme

When a piece is moved to the intersection of the range of two enemy pieces, obstructing their primary functions, one on a diagonal, the other in a straight line. In the case the piece/pawn is captured, one of the enemy pieces will block the other piece's range. Named after Antonin Novotny..

Opposition

When two kings are standing opposite each other with only one square between them, forcing the side to move to step aside with negative consequences. **Distant opposition** occurs when there are three or five squares between the kings, with the same

consequences. **Diagonal opposition** is when we have the theme with the kings positioned diagonally from each other.

Passed pawn

A pawn that can advance up the board without being blocked or captured by an enemy pawn.

Pin

When a piece is standing in line on the same rank, file or diagonal as a stronger piece of the same side, or the king. Removing that piece leads to the capture of the stronger hindmost piece, or to a check on the king.

Prokes manoeuvre

When one side has two pawns on adjacent files that are about to promote, and the opposite side can take one of the pawns with his king but then the other pawn can capture his rook. The Prokes manoeuvre consists of sacrificing the rook, typically with check, so the king can take the first pawn on the next move and cover the promotion square of the second pawn at the same time.

Promotion

When a pawn reaches the back rank (8th rank for White, 1st rank for Black), it has to be replaced by a queen, rook, bishop or knight of the same colour. Promoting to a queen is the most popular, while promoting to other pieces (often done to avoid stalemate, or to

create a double attack with a knight) is called **Minor Promotion** or **Underpromotion**.

Quiet move

A strong or surprising move which does not give check, capture anything, or create a direct threat.

Réti manoeuvre

A diagonal king manoeuvre from the corner towards the centre, providing a double function of crossing the files and the ranks at the same time. Such a manoeuvre gives the king the opportunity to either return to the same file or go to the other side of the board. In Richard Réti's famous study, the king managed to catch a seemingly unstoppable passed pawn by creating the threat of going from the kingside to the queenside to assist the promotion of an otherwise feeble passed pawn, thereby winning a decisive tempo to approach the enemy passed pawn.

Saavedra motif

When a pawn promotes to a rook instead of a queen (a '**minor promotion**') because in case of promotion to a queen, the enemy rook can be sacrificed with check, its capture leading to a certain type of **stalemate**. As a result, in this specific position, the attacker wins by a double threat of capturing the enemy rook and giving mate to the enemy king.

Sacrifice

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Intentionally allowing a piece to be captured without receiving equal material compensation, to achieve a more important goal.

Self-block

When the escape route of a king is blocked by one of its own pieces.

Stalemate

When the king is not in check, but all moves would allow the capture of the king and would thus be illegal. Another, very rare stalemate situation is when one side cannot make any legal move as their pieces and pawns are blocking each other. Stalemate leads to a draw.

Switchback

When a piece is moved to a certain square to perform a certain task, and then returns to its previous square to perform another task.

Systematic manoeuvre

A sequence of repeated, coordinated moves with two or more pieces to achieve a certain set-up.

Tempo gain

When a move limits the opponent's reasonable moves, often by creating a threat, and thus allows us to advance our goals, without the opponent being able to advance his, giving the illusionary feeling of moving twice.

Zugzwang

When one side is dominated in such a way that it cannot make a move without losing material or significantly worsening its position. **Reciprocal zugzwang** (also known as **mutual zugzwang**) is when this applies to both sides and the side to move can only make their position worse.

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Books

Here is a selection of books, most of which also mentioned in this book, that may be of interest for further study:

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Database

Harold van der Heijden's Endgame Study Database *HHdbVI*