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3: Queen and Pawn vs Queen

An understanding of at least the basics of ♖+♔ vs ♕ is very important for the practical player. Is a particular position a draw or can one side win if we enter a queen ending with this material distribution? Will it be easy to obtain the result we aim for? To which area should our king go and what should be done with our queen? In particular, without any advance knowledge it is almost impossible to work out the correct position for the defender's king. Thanks to computers, we know far more than chess-players of previous generations.

It is virtually impossible to cover all possible piece configurations, yet we shall provide quite a detailed guide. There are four fundamentally different cases depending on which file the pawn stands, so we devote one section to each. Within each of these sections, we first of all examine positions with the pawn on its starting square, and then look at examples in which the pawn stands progressively closer to promotion.

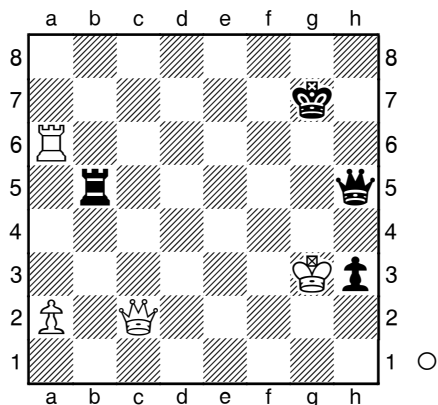
In this chapter we shall include quite a few studies from endgame study composer Árpád Ruzs, a fellow Hungarian. He expressed to us his view that there is a lot still to be discovered in ♖+♔ vs ♕. We feel this depends on one's outlook: while the tablebase of course provides complete information and some general ideas have been worked out, there are many subtle tactics yet to be explored in certain positions. He was kind enough to share some statistics on queen endings with one or two pawns and more importantly he also sent his superb studies on this subject. His input surely raised the quality of our work.

Rook's Pawn

In general, most ♖+♔ vs ♕ positions with a rook's pawn are objectively drawn provided the defender has time to coordinate his pieces well, but this ending is very difficult to hold in practice. It is easy to slip into a lost position by misplacing a piece, and in practice there are all manner of tactical pitfalls to avoid.

Rook's Pawn on its Second Rank

In most cases this should be drawn from an objective viewpoint, but actually achieving the draw may be far from easy. Árpád Ruzs found a position in which White can force a lengthy win with a pawn on the second rank:



Ruzs

Magyar Sakkvilág, 2012

White to play and win

1 ♖a7+! ♔f8 2 ♖a8+! ♔g7 3 ♕c7+ ♕f7 4 ♕c3+ ♔g6! 5 ♕c6+ ♔h7! 6 ♖xb5 ♕g6+ 7 ♔xh3 ♕e6+ 8 ♔g2!!

White's rook is unprotected, but White doesn't bother to hang on to it. Avoiding the diagonal with 8 ♔g3? doesn't win: 8...♕e3+ 9 ♔h4 (after 9 ♔h2 ♕f4+ 10 ♔g2 ♕g5+ Black forces stalemate) 9...♕f4+ 10 ♔h5 ♕e5+ 11 ♕xe5 stalemate.

8...♕e4+

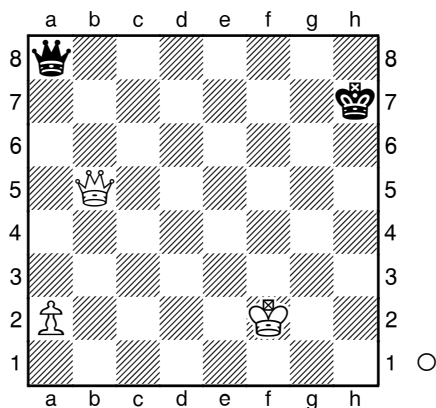
Black wins the rook.

9 ♔f2!

The only winning move, but it takes 102 moves. On 9 ♔g3?, 9...♕e3+ 10 ♔g2 ♕g5+! saves Black.

9...♕xa8 (D)

Nalimov's endgame tablebase reports that White wins in 101 moves, but that is a distance to mate (DTM). In general in this book we use distance to conversion (DTC); FinalGen describes it as a win in 89 moves.

**10 a4!**

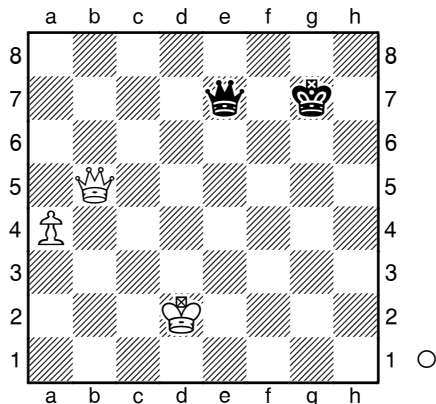
This is White's only winning move. If the white king were on g3 here, both ...♙g6 and ...♗g8+ would hold.

10...♗a7+

10...♗f8+ 11 ♔e2 ♗e7+ merely transposes, while other moves lose more quickly.

11 ♔e2! ♗e7+ 12 ♔d2! ♔g7 (D)

There are no more useful checks: 12...♗d6+ 13 ♗d3+ +-.

**13 a5!**

Another 'only' move: the pawn is getting dangerously close to promotion.

13...♔f8

13...♗d6+ 14 ♔c3 ♗c7+ 15 ♔d4 ♗d6+ 16 ♔c4 ♔f7 (16...♗c7+ 17 ♗c5 and White wins in 72 moves) 17 a6 ♔e6 18 ♗e8+ ♔f6 19 ♗c8 is a win in 75 moves.

14 a6

White has to push the pawn.

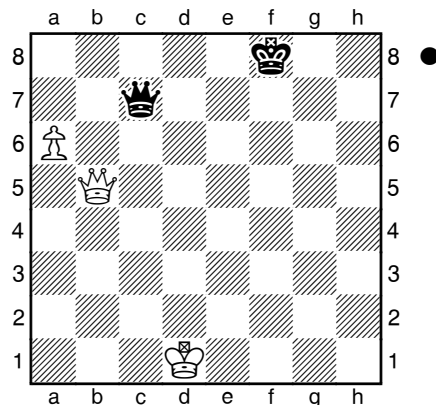
14...♗c7

Black stops the white king from reaching the c-file and threatens checks on the dark squares.

If Black were able to move again here, ...♔e7 would draw.

15 ♔d1!! (D)

An especially subtle move, preparing ♗d3. The key point is not to allow a check on a5 or f4. White can try moving the king to a different light square on the d-file and also position the queen on the same file, but after 15 ♔d3? ♔e7 16 ♗d5 Black has the subtle defence 16...♗c1!. Therefore, it is another 'only' move.

**15...♔e7**

After 15...♗d6+ 16 ♔e2! ♗d4 (16...♔e7 loses to 17 ♗d3! ♗h2+ 18 ♔d1! ♗g1+ 19 ♔d2!) 17 ♗c6 ♔g7! 18 ♔f3 (after 18 ♗c7+?! ♔h8! 19 a7? ♗e4+ the white king cannot escape the checks) 18...♔f7 19 ♗e4 ♗c3+ 20 ♔f4 ♗c1+ 21 ♔g3! ♗g5+ 22 ♗g4 ♗c5 23 ♗d7+! ♔g6 24 ♗d3+ ♔h6 25 ♔f3 the white queen is placed ideally on d3 (where it protects the pawn and helps the king cross to the queen-side). A long technical win follows: 86 or 75 moves, depending on how it is counted.

16 ♗d3!

This cut-off is the only winning move. On 16 ♗d5?, 16...♗c3! saves the game.

16...♔e6

After 16...♗c8 the fastest win is 17 a7 ♗a8 18 ♔e2. On 16...♗c5, 17 a7! ♗xa7 (17...♗g1+ loses to 18 ♔d2 ♗h1 19 ♗a3+) 18 ♗h7+ wins.

17 ♗e3+ ♔f5

17...♔d6 18 a7.

18 a7 ♗c6 19 ♔e2 ♔g4 20 ♔f1!

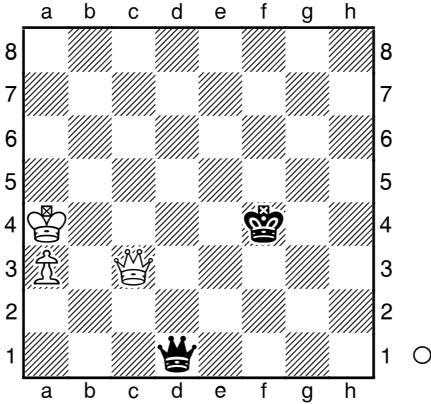
White starts a delightful triangulation.

20...♗b7 21 ♔f2 ♗f7+ 22 ♔g1

White will win by transferring the queen to a5 with checks.

Rook's Pawn on its Third Rank

We now continue our coverage with over-the-board games.



Honfi – Tóth
Budapest Ch 1966

Both sides have multiple ideas to choose from. The position is a draw as the pawn is so far from promotion; although Black is unable to draw by getting his king in front of the pawn, it can easily reach the safe zone in the h1-corner.

90 ♖b4

Ever since the famous Minev-Botvinnik game in 1954, we know that the player with the extra pawn should look to put his king on the same or neighbouring file or rank as the opponent's king. This creates chances for a cross-check or to set up a battery.

90... ♜b1+ 91 ♔c5 ♜f5+ 92 ♔b6 ♜e6+ 93 ♔b5 ♜e8+

93... ♜d5+!? is more practical. After 94 ♜c5 ♜b7+ 95 ♔a5 ♜a8+ Black can prevent White from advancing the pawn by giving checks. The defender can often do so when the pawn is only one square away from its starting square.

94 ♜c6!

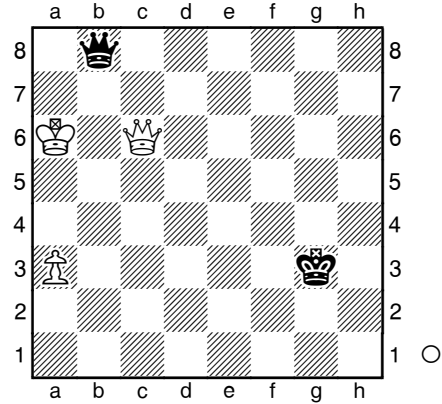
A clever idea, enabling the pawn to advance.

94... ♜b8+

After 94... ♜h5+ 95 ♔b6 or 94... ♜e5+ 95 ♔a6 ♜e2+ 96 ♜b5 ♜e6+ 97 ♔a5 Black has no check.

95 ♔a6 ♔g3 (D)

An attempt to reach the (also drawing) a1-corner fails only because White can force an exchange of queens after 95... ♔e5? or 95... ♔e3?.



Black chooses the best area for his king, the opposite corner.

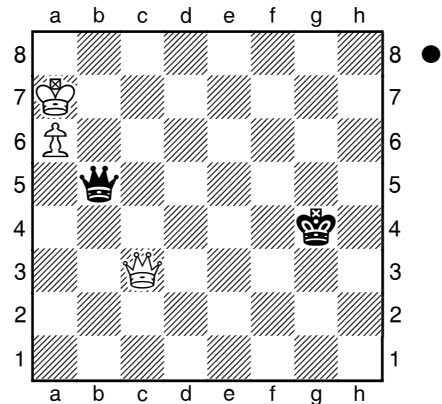
96 a4 ♔h2 97 a5

In the next few moves, White gets onto the same line as the black king.

97... ♔h3 98 ♜h1+ ♔g3 99 ♜b7 ♜d6+ 100 ♜b6 ♜d3+ 101 ♔a7 ♜d7+ 102 ♜b7 ♜d4+ 103 ♔a8 ♔g4

103... ♔h2 is more practical.

104 ♔b8 ♜e5+ 105 ♜c7 ♜b5+ 106 ♔a7 ♜d5 107 ♜c3 ♜b5 108 a6 (D)



After this pawn advance, Black faces another 50 moves of suffering. The position is drawn, but it is very hard to hold.

108... ♔h4 109 ♜h8+ ♔g4 110 ♜b8 ♜d7+ 111 ♜b7 ♜d4+ 112 ♜b6 ♜d7+ 113 ♔b8 ♜e8+ 114 ♔b7 ♜d7+ 115 ♜c7 ♜b5+ 116 ♔a7 ♔h3 117 ♜b7 ♜c5+ 118 ♔b8 ♜d6+ 119 ♔c8 ♜f8+ 120 ♔d7 ♜f7+ 121 ♔d6 ♜f6+ 122 ♔d5 ♜f5+ 123 ♔d4 ♜f4+ 124 ♔d3 ♜f1+ 125 ♔d2 ♜f2+ 126 ♔d1 ♜f1+ 127 ♔c2 ♜e2+ 128 ♔b3 ♜d1+ 129 ♔a2 ♜a4+ 130 ♔b2 ♜d4+ 131 ♔c2 ♜c4+

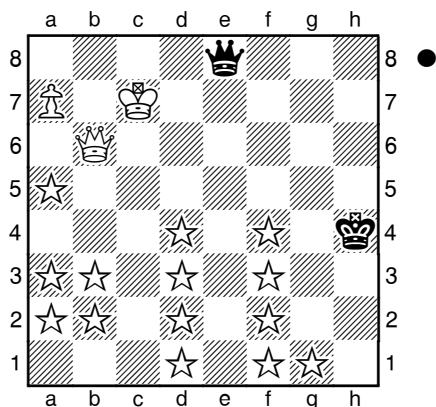
132 ♖b1 ♜f1+ 133 ♔a2 ♜f2+ 134 ♔a3 ♜c5+ 135 ♜b4

After wandering with the king for 23 moves, White moves his queen again.

135...♜a7

Usually, the queen doesn't do well in front of the pawn, but here it can return to play easily.

136 ♜c4 ♔g3 137 ♔a4 ♔h3 138 ♜e6+ ♔g3 139 ♜d6+ ♔h4 140 ♔b5 ♔h3 141 ♔a5 ♜e3 142 ♜d7+ ♔h4 143 a7 ♜c5+ 144 ♔a6 ♜a3+ 145 ♔b7 ♜b4+ 146 ♔c8 ♜c5+ 147 ♜c7 ♜f5+ 148 ♔b7 ♜b5+ 149 ♜b6 ♜d7+ 150 ♔b8 ♜e8+ 151 ♔c7 (D)



White would be winning (with Black to play) only if his king were on one of the marked squares (note that $w♔g2$ is a draw because of $1...♜g6+$!). The diagram position would be a win for White if the black king were on the e-file. But (with the white king on c7, b7 or a6 and Black to play) if the black king is on one of the distant squares of the a-file, it is a draw.

151...♜e7+?

A careless move, as Black will run out of checks. After $151...♜f7+$!, unlike in the game, Black will have a check on the diagonal, and after $152 ♔c8 ♜f5+$! Black can hold on.

152 ♔c8! ♜e4 153 ♜c5!

Other moves would win much more slowly. From now on, White played very well, never letting the win slip.

153...♜e6+ 154 ♔c7 ♜f7+ 155 ♔b6 ♜b3+ 156 ♔a5!

White approaches the rank of Black's king. Now $156...♜a2+$ would be the last check, as it is met by $157 ♔b5$. From this point, the win is easy, as White can promote after some checks.

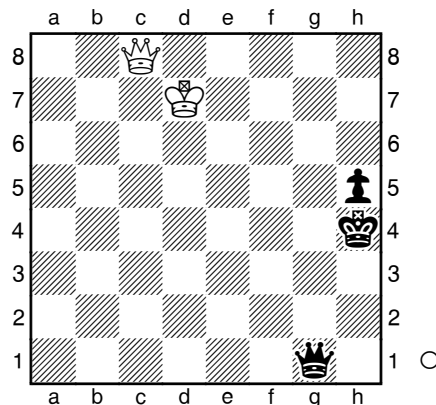
156...♜f3 157 ♜c4+ ♔h5 158 ♔b6 ♜f6+ 159 ♜c6 ♜d8+ 160 ♔b7 ♜e7+ 161 ♔a6 ♜a3+ 162 ♔b6 1-0

Black runs out of checks and White gains another queen, easily securing the win.

In conclusion, if the rook's pawn is on the third rank, Black's king may stand almost anywhere and the position can be held, unless the stronger side manages to exchange queens under favourable conditions. Our impression is that with the pawn on the third rank, it is worth trying to hold by continuously checking.

Rook's Pawn on its Fourth Rank

Let's continue with the pawn a rank closer to promotion.



Gligorić – Timman
Bugojno 1980

61 ♜c3

The white king is in a particularly good position to reach the opposite corner (a8), but we may note that the white king could be placed virtually anywhere, and it would still be a draw.

61...♜g3 62 ♜c1 ♜g4+ 63 ♔c7

Gligorić could not choose a wrong direction, as $63 ♔e8 ♜e4+$ $64 ♔f7$ is a draw as well.

63...♜g7+ 64 ♔b6 ♜f6+ 65 ♔a7 ♜e5!

Wisely centralizing the queen and defending his pawn.

66 ♜g1 ♔h3 67 ♜h1+

Preventing the further advance of the pawn with a check. $67 ♔a8 h4$ $68 ♔a7$ is OK too.

67...♔g4 68 ♜d1+ ♔f4 69 ♜f1+ ♔g5! (D)

Bronstein tries a few more things before submitting to the inevitable draw.

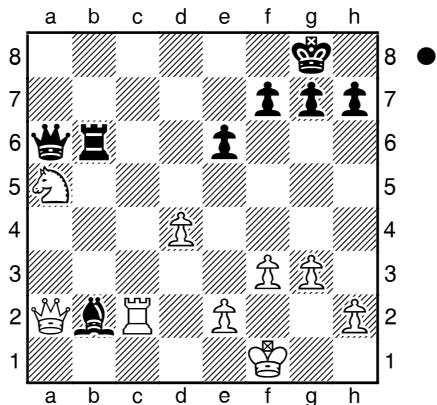
68 ♖b2+ ♔g6 69 ♖c2+ ♔f6 70 ♖c6+ ♔g7
71 ♖b5 f5 72 ♖d7+

72 ♖xf5 ♖e2+ 73 ♔g1 ♖xf3 is a draw too.

72... ♔f6 73 ♖d6+ ♔g7 74 ♖d7+ ♔f6 75
♖d6+ ♔g7 1/2-1/2

Queen and Five Pawns vs Queen and Four Pawns

When one side has five pawns and none of them are doubled, they clearly cannot all be on the same wing. But in the next example White has only one pawn-island, so the position resembles 'pawns on one side' and therefore we discuss this important pawn distribution in this chapter.



Reshevsky – Fine
Nottingham 1936

34...g6?

34...h6! is a better way to give the king some luft as it avoids simplification to a pawn ending. Pushing the h-pawn two squares with 34...h5?! is slightly more weakening.

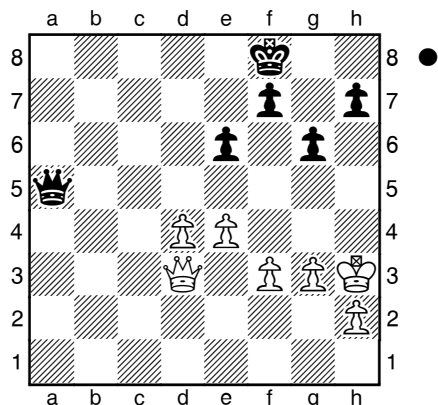
35 ♖xb2 ♖xb2 36 ♖xb2 ♖xa5 37 ♖b8+
♔g7 38 ♔f2?

This queen ending can be held. Alekhine pointed out that the pawn ending after 38 ♖e5+! ♖xe5 39 dxe5 (intending h4) is winning. If Black waits, then White places his king on g4 and prepares to play h5. If Black plays ...h5 himself, the white king will invade.

38... ♖a1 39 ♖e5+ ♔g8 40 ♔g2

White stops ...♖h1, but Black should be able to hold.

40... ♖e1 41 ♖b8+ ♔g7 42 ♖b2 ♔g8 43
♖c2 ♖b4 44 ♖d3 ♔f8 45 ♔h3 ♖a5 46 e4 (D)



White has improved his queen and has to do something with this pawn sooner or later.

46... ♖h5+ 47 ♔g2 ♖a5 48 d5

White creates a passed pawn.

48... ♔e7 49 ♖d4

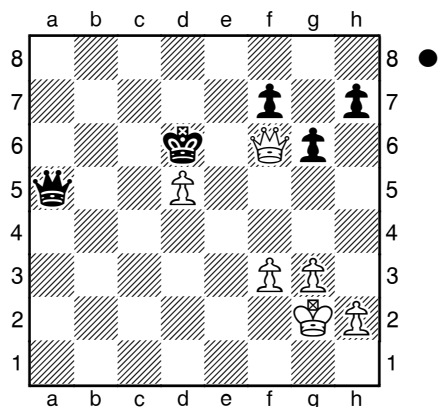
Black holds after 49 d6+ ♔d7 50 ♖d4 e5.

49...exd5 50 exd5 ♔d6?!

With some subtle moves, Black could reach an easy draw: 50... ♖a2+! 51 ♔h3 ♔d7! 52 ♖g4+ ♔d8! =.

51 ♖f6+ (D)

The queen goes after the f7-pawn, but while doing so, it leaves the white king all alone.

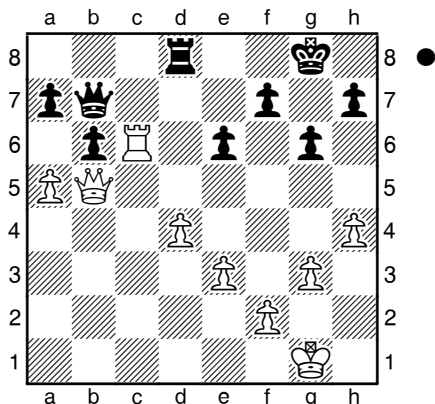


51... ♔xd5?

Allowing White to take the f7-pawn with check is a disastrous mistake. 51... ♔c5!! keeps an eye on the d5-pawn, and after 52 ♖e7+ (or: 52 ♖xf7 ♖d2+; 52 ♖c6+ ♔d4) 52... ♔b5! (52... ♔d4? 53 d6 +-) 53 ♖xf7 ♖d2+ 54 ♔h3 ♖h6+ Black gives perpetual check.

52 ♖xf7+ ♔d4

We covered the end of this game in the section 'Queen and Three Pawns vs Queen and One Pawn' (p. 155).



McShane – Idani

World Team Ch, Astana 2019

30...♖c8!

This is clearly the right solution. Black holds fairly easily despite the pawn deficit. Otherwise:

a) 30...♖b8? 31 a6! ♕e7 32 ♕e5 ♖d8 33 ♖c7 ♖d7 34 ♖xd7 ♕xd7 35 ♕b8+ ♔g7 36 ♕b7 ♕b5 37 ♕xa7 ♕b1+ 38 ♔h2 ♕f1 39 ♕b7 ♕xf2+ 40 ♕g2 +- and White wins easily.

b) 30...h5 31 a6! (31 axb6 axb6 32 ♖xb6 ♕f3 ±) 31...♗d7 32 ♔g2 and Black faces a long torture.

31 ♖xc8+ ♕xc8 32 axb6

32 a6 h5 is easy for Black, as the white queen is pinned down to defending the a6-pawn.

32...axb6 33 ♕xb6

White has won a pawn. The equivalent rook ending would be a big struggle. For instance, Tal was not able to hold it against Petrosian in the 1962 Curaçao Candidates tournament.

33...♕a8

33...h5 would lead to a similar game.

34 ♕b5

After 34 h5 gxh5 35 ♕c5 ♕a1+ 36 ♔g2 ♕a8+ 37 ♔h2 ♕a2 38 ♕g5+ ♔f8 39 ♕f6 ♕c2 40 ♔h3 ♕e4 we do not see how White can improve his position.

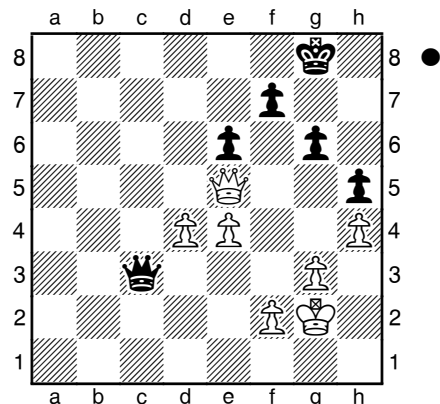
34...h5 35 ♕e5

White could consider placing his queen behind his central pawns, but Black seems to hold after 35 ♕d3 ♕f3 or 35 ♕e2 ♕d5 as well.

35...♕a1+ 36 ♔g2 ♕c3

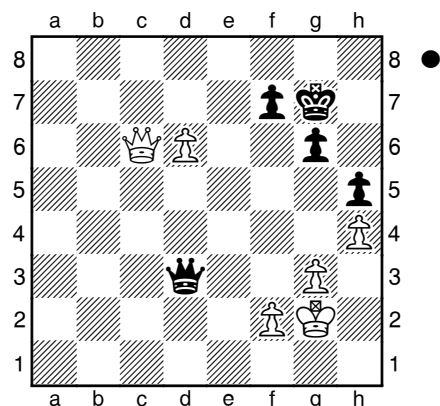
The black queen stands well behind White's central pawns.

37 ♕b8+ ♔g7 38 ♕e5+ ♔g8 39 e4 (D)



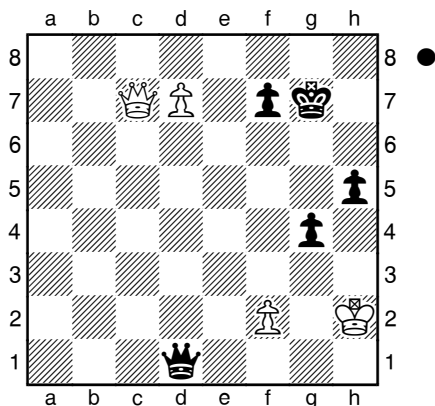
39...♕b2

Black can consider 39...♕d3!?, preventing the ♕f4-e3 manoeuvre. The reader may be quite rightly surprised that there is no need to worry about White getting a passed d-pawn. Even if it reaches d6 without obstacles, White is unable to increase the advantage thereafter: 40 d5 exd5 41 exd5 (41 ♕xd5?! allows an easy draw as the white pawn is on h4, so White's king has no chance to invade) 41...♔h7 42 d6 ♔g8 43 ♕e8+ (after 43 ♕f6 ♕d5+ 44 ♔h2 ♕d2 White's progress is halted) 43...♔g7 44 ♕c6 (D).



If White's king could leave the shelter, he would win. But this time the shelter becomes a cage. 44...♕d4 (44...♔f8 and 44...♔f6 are good moves, but we wanted to find out whether Black could draw without moving his king, and holding only with the queen from the back) 45 d7 ♕d3 46 g4!? (46 ♕b7 ♕d6; 46 ♕c7 ♕d5+ 47

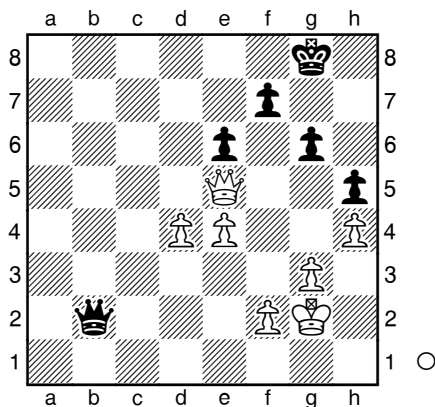
♔h2 ♖d4 48 ♔h3 ♗d5 = and Black holds) 46...hxg4 (46...♗d4! would stop even White's sly attempt) 47 h5 gxh5 48 ♖c7 ♗f3+ 49 ♔g1 (White forces Black to find 12 'only' moves in a row) 49...♗d1+ 50 ♔h2 (D) and now:



a) 50...♗d2? allows White to win in highly instructive fashion: 51 ♔g3 ♗d3+ 52 ♔f4 ♗d4+ 53 ♔f5! ♗f6+ (53...♗xf2+ 54 ♔e4 ♗f3+ 55 ♔d4 ♗d1+ 56 ♔c5 +-) 54 ♔e4 ♗f3+ 55 ♔e5 ♗f6+ 56 ♔d5 ♗f3+ 57 ♔c5 ♗a3+ 58 ♔b6 ♗b3+ 59 ♔a6 ♗e6+ 60 ♔b7 ♗d5+ 61 ♗c6 ♗a5 62 ♗c4! +-.

b) 50...♗d4!! (the key to the defence is that Black must not let the white king out through the g3-f4 route) 51 ♔g3 h4+! 52 ♔xh4 ♗xf2+ 53 ♗g3 ♗d2! (after 53...♗f6+? 54 ♔xg4 +- the battery is lethal here as well) 54 ♗e5+ f6! 55 ♗e7+ ♔g6! 56 d8♗ ♗f2+! 57 ♔xg4 f5+! 58 ♔h3 ♗f3+! 59 ♔h2 ♗f2+ 60 ♔h1 ♗f1+ with perpetual check. Finding the right defence over the board between moves 50-60 would be quite an achievement.

We now return to 39...♗b2 (D):



40 ♗d6 ♗e2 41 ♗b8+ ♔g7 42 ♗f4! ♗d3 43 ♗e3 ♗c4

After 43...♗d1 44 ♗c3 ♔g8 45 ♗c4 ♗d2? (a serious mistake, as it opens the door of White's prison; 45...♔g7 would hold like in the 39...♗d3 variation, and would not require any special effort) 46 ♔f3! ♗d1+ 47 ♔e3 ♗e1+ 48 ♗e2 ♗c3+ 49 ♗d3 ♗e1+ 50 ♔f3 ♗h1+ (not 50...f5? 51 d5) 51 ♔e2 White's chances have improved, as he is ready to create a passed pawn by playing d5 and marching with the king. Black's problems are so serious that only the extravagant 51...f5 provides chances to survive.

44 ♗d2?

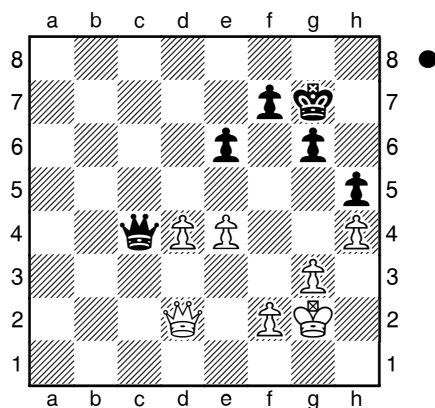
With 44 ♔f3! White's primary plan is ♔f4 and creating a passed pawn with d5 at a good moment, but he should already be delighted with the fact that he has got his king out of its 'safe prison'! Then:

a) 44...♗b4 is met by 45 ♔e2.

b) 44...♗c6 is unpleasantly answered with 45 ♔f4, whereas 45 ♗d3 is less attractive in view of 45...f5.

c) After 44...♔f6 45 ♗d2 ♗b3+ 46 ♔e2 ♗b5+ 47 ♔e3 ♗b3+ 48 ♗d3 ♗b4 49 ♗c2 ♗a3+ 50 ♔e2 ♗a6+ 51 ♗d3 ♗b7 ± Black's queen stands well, but White's chances are better than in the game.

We now return to 44 ♗d2? (D):



44...♔f8?

Black could have exploited the fact that White has left his e4-pawn undefended with 44...e5! 45 d5 ♗xe4+.

45 ♔h2?!

45 ♔f3!.

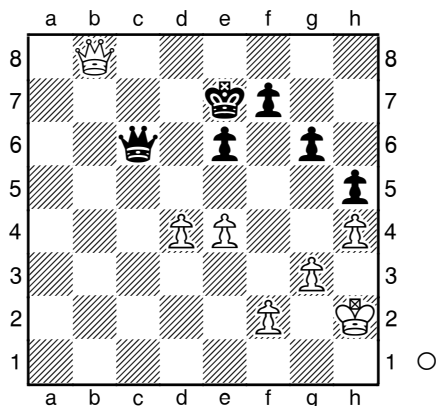
45...♔e8

Black was probably getting ready to face the d5 advance. He could still have equalized with 45...e5!.

46 ♖b2 ♜c6

After 46...♞d3! 47 ♖b8+ ♙e7 48 ♞e5 ♞e2 49 ♙g2 ♙d7 Black is safe.

47 ♖b8+ ♙e7 (D)



48 ♞e5!

Objectively Black is still OK, even though he has made some strange decisions: voluntarily retreating his active queen, and manoeuvring his king to the centre. This has left the f7-pawn somewhat vulnerable. It is worth noting how McShane adopts 'squeezing mode', creating chances for the opponent to make mistakes.

48...♙d7

After 48...♞c3!? or 48...♞c2!? 49 ♙g2 ♙d7 50 d5 exd5 51 exd5 ♞d3 Black holds.

49 ♙g2

An excellent practical decision, as it puts the ball in the opponent's court. He must decide, for instance, whether and how he needs to defend against a possible king invasion by ♙f3-f4-g5-h6-g7. After 49 ♞f6 ♞xe4 50 ♞xf7+ ♙c6 51 ♞a7 ♞d3 Black would probably hold.

49...f6?

A massive mistake: Black does serious damage to his own pawn-structure without gaining anything in exchange. Perhaps Idani found the queen on e5 psychologically hard to live with,

or maybe he overlooked White's 51st move. 49...♞c2! is Black's simplest defensive move.

50 ♞f4 f5

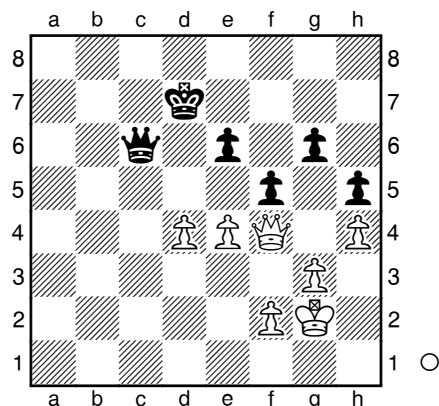
Or 50...♙e7 51 ♞f3!, and now:

a) 51...♞c2 52 e5! f5 53 ♞a8! (after 53 ♞b7+? ♙f8 Black can resist by going to h6) 53...♞d3 (53...♙f7 54 ♞d8!) 54 ♖b7+ is a win for White.

b) 51...♞d6 52 ♞c3 ♙d7 53 ♙f3 ♙d8 54 ♞c5+.

c) 51...♞b6 52 ♞e3 ♙f7 (52...♞b7? 53 d5!) 53 d5! ♞a6 and White wins with 54 ♞h6 exd5 55 ♞h7+ or 54 ♞c5 exd5 55 exd5 ♞b7 56 ♞c4.

We now return to 50...f5 (D):



51 d5! exd5

Black has no alternative; his only hope is the d-pawn.

52 exf5 d4+ 53 ♙h2 d3

After 53...gxf5 54 ♞xf5+ ♙d6 55 ♞f6+ ♙d5 56 ♞xc6+ ♙xc6 57 ♙g2 White wins.

54 ♞d4+! ♞d6 55 ♞g7+!

This check decides the race. Black will get a new queen first, but the safe position of the white king and the two-pawn advantage promise an easy victory.

55...♙c6 56 fxc6! d2 57 ♞c3+ ♙b5 58 g7 1-0

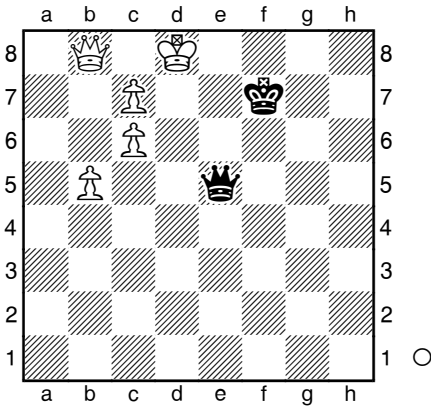
This was a nice example of how it is possible to squeeze in a queen ending.

7: The Queen

In the previous chapter, we approached positions from the pawn's point of view; now we move on to the queen. We're going to examine themes that seem on the surface much more comprehensible, but some of the material is still going to be difficult. While pawns are the soul of the position, queens are its strength.

Exchanging Queens

In a queen ending, both players should constantly evaluate which side would benefit from simplifying to a pawn endgame, as this is usually a very important consideration. In this book, we have already examined many queen exchanges in practical settings, and we shall see many more. But in this section, we mainly look at artistic studies. The first study is unique, as we hope you will agree.



Afek

Boletim da União Brasileira de Problemistas,
1980

White to play and win

Black threatens checkmate in one. His queen is so much more active than its white counterpart that it seems to compensate for the three-pawn deficit. Therefore an exchange of queens would be like a dream coming true for White. But when one looks at endgame studies, they can often feel like a dream, especially if it's one of Afek's masterpieces.

1 c8♖!!

Amazing! White counters Black's mate threat by promoting to a knight and sacrificing his queen. It is possible because the black king on f7 suddenly finds itself in a ring of tactical motifs.

Instead after 1 ♖c8? ♜f5+! 2 ♖b7 ♜xb5+ 3 ♖a7 ♜a5+ 4 ♖b7 ♜b5+ 5 ♖c8 ♜f5+ = White can't escape the checks.

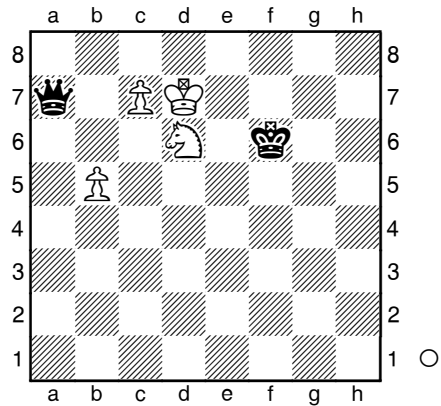
1...♜xb8 2 c7!

The queen has only one square available.

2...♜a8 3 ♖d7 ♖f6

White was threatening a huge check, so Black has to move his king. His other option resists longer but creates few chances for White to go wrong: 3...♔g7 4 ♖d6 ♜a7 5 ♖c6! (the only move that makes progress) 5...♜a8+ 6 ♖b6 ♜f8 7 c8♜ ♜xd6+ 8 ♜c6 and White wins this technical ♜+b♖ vs ♜ position in 35 moves.

4 ♖d6 ♜a7 (D)



5 ♖c6!

The only winning move; it is hard to spot its power.

5...♜a8+

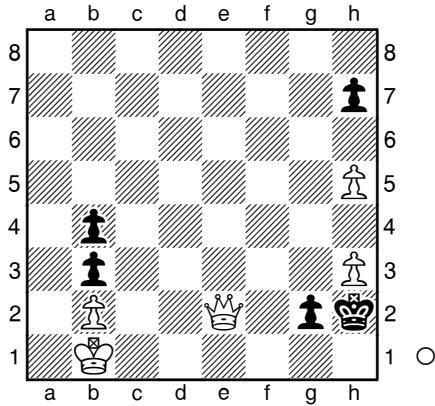
The only sensible move that stops instant promotion.

6 ♖b6 ♜f8 7 c8♜

Promoting to a rook would win as well, but take 25 moves longer.

7...♜xd6+ 8 ♜c6

The dream has come true: White swaps queens and wins.

**Zakon***Jerusalem Post, 1953*

White to play and win

1 ♔a1!!

This fantastic move vacates the b1-square for the white queen.

1... ♕h1 2 ♖e4 ♔h2 3 ♖e5+

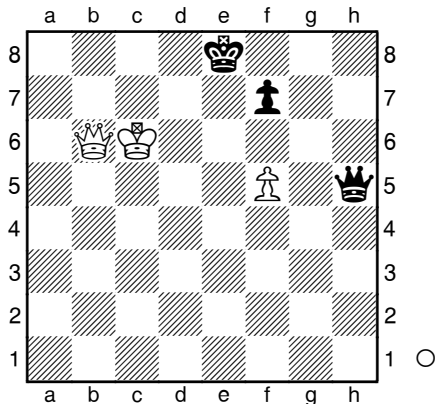
The white queen goes after the h7-pawn with precise checks.

3... ♕h1 4 ♖d5 ♔h2 5 ♖d6+ ♔h1 6 ♖c6! ♔h2

6...h6 7 ♔b1! (the king prepares an exchange of queens) 7...♔h2 8 ♖d6+ ♔h1 9 ♖xh6 g1♖+ 10 ♖c1 and White wins the pawn ending.

7 ♖c7+ ♔h1 8 ♖xh7 g1♖+ 9 ♖b1!

After quite a lot of manoeuvring, the white queen occupies the vacated square, forcing an exchange of queens.

**Pogosiants***Shakhmaty v SSSR, 1978*

White to play and win

1 f6!

White traps the black king. Checkmate and stalemate walk hand-in-hand sometimes.

The attempt to improve the queen's position first with 1 ♖b8+? has a drawback: 1...♕e7 2 ♖d6+ ♕e8 3 ♔c7! (3 f6 ♖b5+ 4 ♔xb5 =) 3...f6! 4 ♖e6+ ♔f8 5 ♖xf6+ ♖f7+ and Black holds.

1... ♖f3+

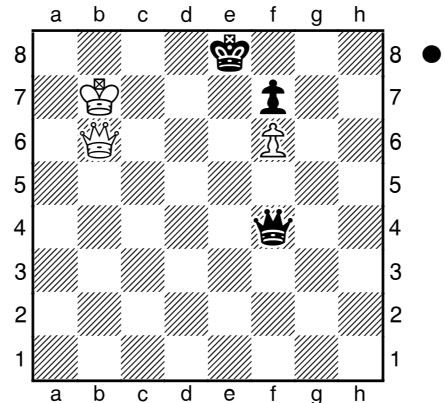
1...♖e5 is met by 2 ♔b7! (the white king vacates the key c6-square for the queen to use) 2...♖d5+ 3 ♖c6+ (exchanging queens wins) 3...♖xc6+ 4 ♔xc6 ♔d8 5 ♔d6 ♔e8 6 ♔c7 ♔f8 7 ♔d7 +.

2 ♔c7 ♖f4+

If 2...♖c3+, 3 ♖c6+ wins.

3 ♔b7 (D)

The exchange has to be made at the right time. 3 ♖d6? would not win at this point because after 3...♖xd6+ 4 ♔xd6 ♔d8 we have reached a position of mutual zugzwang with White to play.

**3... ♖d6!**

Black finds a clever defensive try.

The black king cannot escape by normal means, as after 3...♔d7 4 ♖c6+ ♔d8 5 ♖c8# it gets checkmated.

4 ♖c6+ ♖d7+ 5 ♔b6!

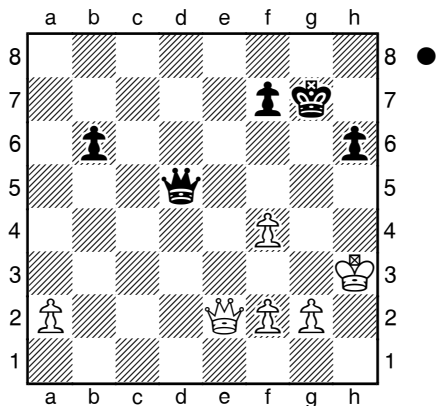
Timing is always important!

5... ♔d8 6 ♖a8+ ♖c8 7 ♖xc8+ ♔xc8 8 ♔c6 ♔d8 9 ♔d6

This is the same mutual zugzwang as we noted earlier, but this time the fatal burden to move falls upon Black.

9... ♔e8 10 ♔c7

White wins.



Karpov – Vaganian
Budapest 1973

In this queen ending, Black has better chances to draw than White has to win.

42...♔f8

Black seeks a place for the king where it is less exposed to checks.

43 ♖g3 b5 44 ♚b2 ♚d3+

44...♖g8 is also a reasonable move.

45 ♖h4

Karpov tries to frighten Vaganian a little.

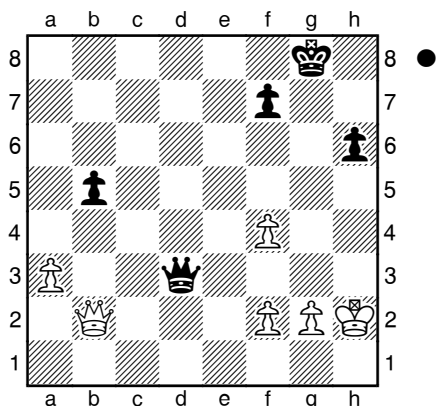
45...♚d8+ 46 ♖g3

46 ♖h5 ♚d5+ holds for Black.

46...♚d3+ 47 ♖h2

The king returns to the shelter. In the next phase, White focuses on his queen and pawns.

47...♖g8 48 a3 (D)

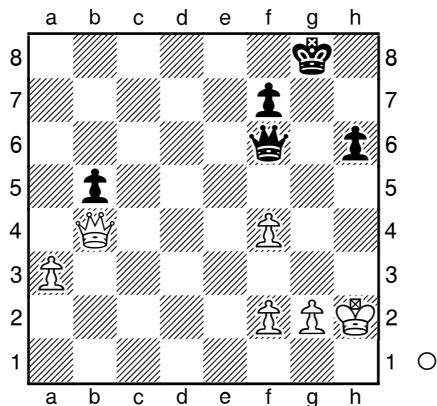


48...♚d6

Black attacks the f4-pawn. 48...♚d5? 49 ♖e2 ♖a8 50 ♖g4+ ♖f8 51 ♚h5 leaves Black in trouble, as after 51...♖xa3 52 ♖xh6+ ♖g8 53 ♚g5+ ♖f8 54 ♚xb5 White's position is easy to win.

49 ♚b4 ♚f6? (D)

This move makes sense: the queen attacks the f4-pawn and may in some cases check the white king. On the other hand, it lessens the queen's influence in the centre. Karpov will make him pay for it in a magical way. After 49...♚d5! 50 f3 ♚d3 Black chances to draw are decent; e.g., 51 ♚e7 ♖g7! 52 ♚e5+ ♖g8 and Black seems to survive despite the pawn deficit.



50 f3?!

Karpov imperceptibly tightens the circle around the black queen, because he threatens to exchange queens on e4 or e5 in several variations. On the other hand, he also prepares a kingside pawn advance with g4 and ♖g3, an idea we already know from the wonderful Smejkal-Timman example (p. 259).

However, while Karpov's plan is very strong, the execution is not precise. It would have been better to place the queen on e3 first: 50 ♚d2 ♚h4+ 51 ♖g1 ♚e7 52 ♚e3 ♚d8 and only now 53 f3!, as Black has lost his main defensive idea with ...♚f6.

50...♚h4+

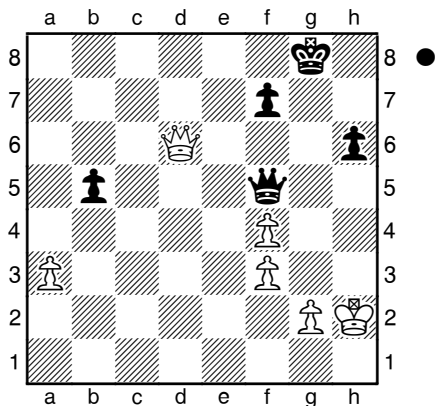
The Armenian grandmaster puts his queen on the edge of the board. This seems a risky strategy, because if the queen doesn't get back in time and remains stuck on the rim, it could be a source of further trouble. But it is too late to try to return to the centre:

a) 50...♚c6? 51 ♚e7 and here:

a1) 51...♖g7 52 ♖h3 ♚c4 (52...♖g8 53 f5) 53 ♚e5+ ♖g8 54 f5 ♖h7 55 ♚f6 +-.

a2) 51...♚c4 52 ♚f6 ♖h7 53 ♖g3 ♖a2 54 ♖h3! (White sets up a zugzwang) 54...♚d5 55 ♖h4 ♚a2 56 ♖h5 +-.

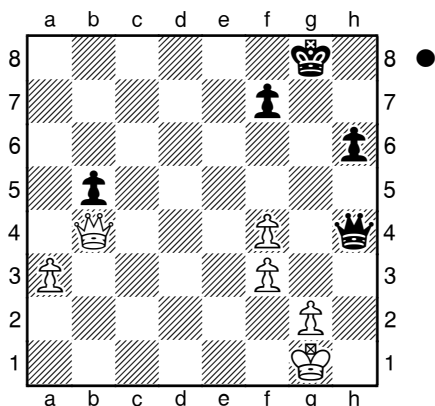
b) 50...♚f5? (it took us some time to find a way to crack this logical defence; knowing the zugzwang motif from the 50...♚c6? variation was a great help) 51 ♖d6 (*D*) and then:



b1) 51...♚h5+ 52 ♔g3 ♔h7 53 ♖f6 ♖d5 (53...♔g8 54 ♚h4 swaps the queens) 54 ♔h4! (this puts Black in zugzwang, which means he soon has to say goodbye to one of his pawns) 54...♚c4 55 ♔h5 ♖d5+ 56 f5 +–.

b2) 51...♔h7 52 ♔g3! ♚b1 (52...f6 53 ♖e7+ ♔g8 54 ♖e4 ♚h5 55 ♖e6+ wins for White) 53 ♖f6 ♚b3 54 ♔g4 threatens ♔h5, so Black has nothing better than giving up the h6- and b5-pawns for the a3-pawn, which should lose, as FinalGen confirms. After 54...♔g8 55 ♖xh6 ♚xa3 56 ♖g5+ ♔f8 57 ♚xb5 White wins.

51 ♔g1 (*D*)



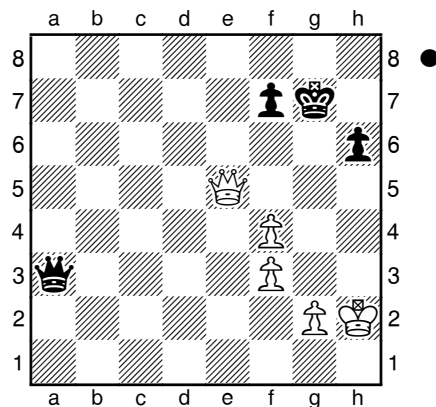
51...♚h5?

A dangerous square for the queen; he should have put it back where it was:

a) 51...♔g7? also fails: 52 ♖d4+ ♔h7 53 ♖e4+ ♔g7 54 ♖e5+ ♔g6 55 ♔f1!! (White

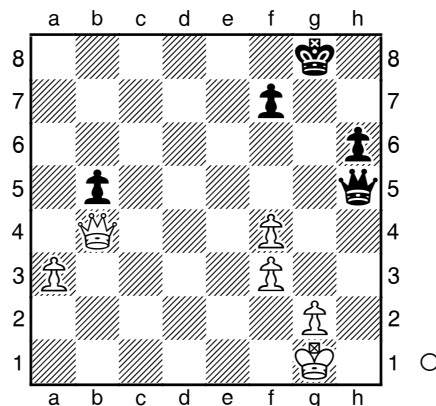
plays for zugzwang) 55...♚h1+ 56 ♔f2 ♚h4+ 57 ♔g1 h5 58 ♔f1 (after 58 ♚xb5 ♚xf4 59 ♚b4 White is almost certainly winning) 58...f6 59 ♚xb5 ♚xf4 60 ♖e8+ ♔h6 61 ♖e6 ♚c1+ 62 ♔f2 ♚xa3 63 ♚xf6+ ♔h7 64 f4 and White wins.

b) 51...♚f6! is correct, and holds. At first it looked to us like White had a forced win with 52 ♚xb5 ♚a1+ (after 52...♚xf4? 53 ♚b4 ♖e3+ 54 ♔h1 ♖e8 55 a4 ♖e5 56 a5 White is very likely to win) 53 ♔h2 ♚xa3 54 ♖e8+ ♔g7 55 ♖e5+ (*D*).



For example, 55...♔h7? 56 ♖f6 ♚b3 57 ♔g3 and the white king will invade on h5 and win the h6-pawn. However, the sophisticated zwischenzug 55...♔g6! obliges White to play 56 f5+, when 56...♔h7 57 ♖f6 ♚b3 58 ♔h3 ♚c4 (showing a reason why provoking f5 helps Black) 59 ♔g3 only superficially looks like zugzwang, since 59...♚a2! 60 ♔h4 ♚xg2 61 ♚xf7+ ♖g7 holds.

We now return to 51...♚h5? (*D*):



52 ♖e7!