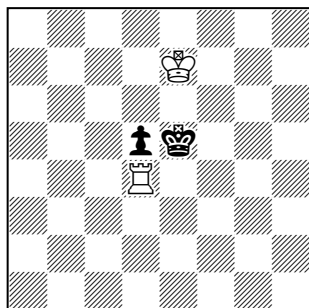


The Chess Endgame Studies of Richard Réti : Rooks and pawns

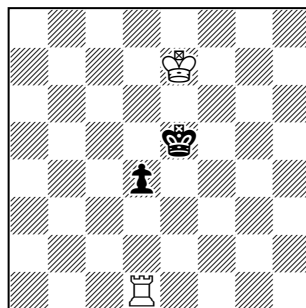
John Beasley, 14 January 2012, latest revision 5 August, minor correction 15 September

4.1 (M 18)



White to play and win

4.1a



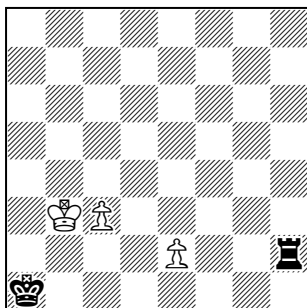
1 Rd1, after 1...d4

4.1 (*Münchener Neueste Nachrichten*, 1928, correcting a setting in *Hastings and St Leonards Post*, 1923) is another of Réti's most famous studies. Try 1 Rd1, getting as far away from the Black king as possible: no, 1...d4 (see **4.1a**), with 2 Kf7 Ke4 3 Ke6 d3 and the Black king will crowd the rook and force the draw, or 2 Kd7 Kd5 2 Kc7 Kc5 and White is no further forward, or 2 Rd2 Ke4 3 Kd6 d3, or 2 Rh1 and again 2...d3.

The solution is **1 Rd2/Rd3** (we'll look at this dual in a moment) **d4 2 Rd1**, reaching **4.1a** with Black to play. If now **2...Kd5** then **3 Kd7**, and whichever file Black moves to White will come down the other (say 3...Ke4 4 Kc6 d3/Ke3 5 Kc5 Ke3/d3 6 Kc4 d2 7 Kc3); if instead 2...Ke4 then 3 Kd6 etc similarly.

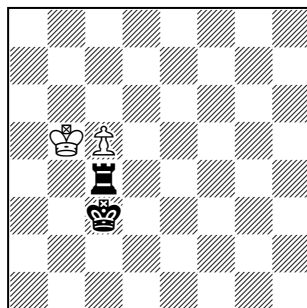
But what about the dual Rd2/Rd3 at move 1? According to Mandler in *Studie*, Réti deliberately chose this setting, even though conventionally sound settings were available, because of its simplicity and charm. He was not worried about the inaccuracy at move 1, because in his opinion White's first and second moves should be treated as a unit, and no other realisation was as cogent as this little four-man position.

4.2 (M 19 corrected)



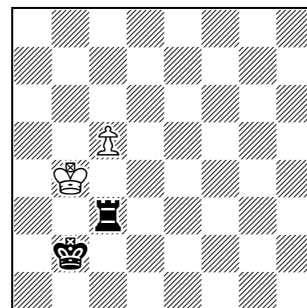
White to play and hold the draw

4.2a



1 e4 Re2 2 c4, after 5...Rc4

4.2b



1 e3, after 4...Rc3

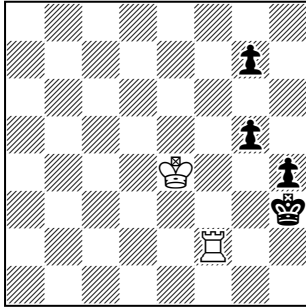
White's e-pawn is under attack in **4.2** (*Shakhmatny Listok*, 1929, correction by Maizelis) and the natural move is 1 e4, but this fails: 1...Re2 with 2 c4 Rxe4 3 Kb4 Kb2 4 Kb5 Kc3 5 c5 Rc4 (see **4.2a**) 6 c6 Kd4 7 Kb6 Kd5 8 c7 Kd6 and the pawn has been hunted down, or 2 Kc4 Rxe4+ 3 Kd5 Re8 (rooks normally belong behind passed pawns, but here 3...Re1 only draws, 4 c4 Rc1 5 c5 Kb2 6 c6 Kb3 7 Kd6 Kb4 8 c7 Kb5 9 Kd7 etc, and the rook must go in front of the pawn where it can gain time by checking) 4 c4 Rd8+ 5 Kc5 (holds out longest) Rc8+ 6 Kb4 Ka2/Kb1 (but not 6...Kb2, when 7 c5 gives a position equivalent to **4.1a** with the rook's side to move) 7 c5 Kb2 (now we have the same position with the pawn's side to move) and wins as in the analysis of **4.1**.

So do we ignore the e-pawn, and play say 1 c4? No, 1...Rxe2, and if 2 c5 then 2...Re4 preventing either king or pawn from advancing further (if the pawn advances to c6, it strays too far from its king, and ...Re6 followed by ...Rc6 picks it up); alternatively, 2 Kb4 Kb2 3 c5 Rc2 4 Kb5 Kc3 5 c6 Kd4 again hunting down the pawn.

This leaves **1 e3**. Can this be possible? Remarkably, it can. **1...Re2 2 c4 Rxe3+ 3 Kb4 Kb2 4 c5 Rc3** (see **4.2b**) **5 Kb5** and the rook is blocking its king's path to d4. To win, Black must play, in some order, ...Re2, ...RxP, ...Rc~, ...Kb2, ...Kc3, and ...Kd4. After 1 e4, his move to the c-file is ...Rc4, and he can do this; after 1 e3, his move to the file is ...Rc3, and he cannot. It is one of the more ingenious ways of forcing a "pawn-one".

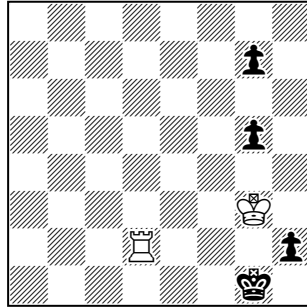
Réti had everything except the Black rook one file to the right, but in 1956 Chéron and Maizelis found a refutation starting 1...Ka2. Maizelis suggested the simple correction above. Chéron preferred to move the Black rook to a2, introducing some additional play, but this turned out to allow a second refutation.

4.3 (M 20)



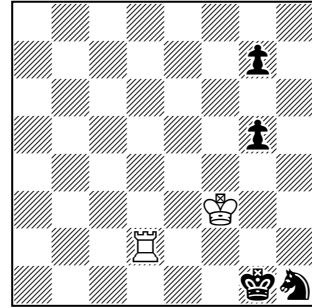
White to play and win

4.3a



After 6 Kg3

4.3b

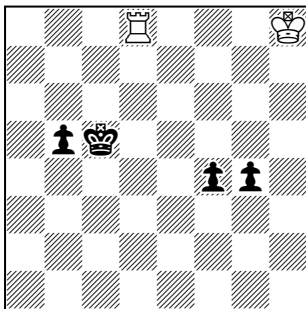


After 7 Kf3

4.3 (*Tijdschrift v. d. NSB*, 1922, correction) is a puzzle. Try 1 Ke3: no, 1...Kg3 2 Rf5 g4 3 Ke2 h3 4 Kf1 Kh2 5 Rg5 g3 6 Rg6 g2+ 7 Kf2 Kh1 with a draw. Try 1 Rf5, when 1...g4 2 Kf4 g3 3 Kf3 Kh2 4 Rg5 wins: yes, but 1...Kg4 2 Rf1 Kg3 3 Rg1+ Kf2 4 Rd1 h3 5 Kf5 Kg3 (but not 5...h2, when 6 Kg4 wins) 6 Rd3+ Kh4 7 Rd4+ Kg3 holds out. The only move to win is **1 Rd2** (the reason for choosing the d-file will appear), and the main line defence is **1...Kg3**. Nothing else is better; if 1...g6 then 2 Kf3 g4+ 3 Kf2 Kh2 4 Kf1+ Kh1 5 Rd4 etc, and Mandler also gives 1...g4 2 Ke3 with 2...g5 3 Rd4 Kg3 4 Ke2 h3 5 Kf1 or 2...Kg3 3 Ke2 Kg2 4 Rd4.

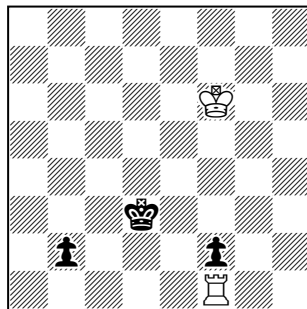
After 1...Kg3, play continues **2 Rd3+ Kg2** (or 2...Kg4 3 Ke3 Kg3 4 Ke2+ Kg2 5 Rd4 Kg3 6 Rd7 etc) **3 Kf5 h3 4 Kg4 h2 5 Rd2+ Kg1 6 Kg3** threatening mate (see 4.3a), and only **6...h1N+** offers hope. Now **7 Kf3** gives 4.3b, and we see why the rook had to go to the d-file at move 1; if it were on any other file, Black could escape by 7...g4+ 8 Kxg4 Nf2+ 9 Kf3 Nd3. As it is, however, the knight will have to go back to h1 (9...Nh3 would be met by 10 Kg3 attacking it and threatening mate), and White will win. The move that holds out longest from 4.3b is in fact 7...g6, after which White repeatedly loses a move to bring the g-pawns forward: 8 Rg2+ (simplest) Kf1 9 Rh2 Kg1 (9...g4+ 10 Kxg4 with 10...Nf2+ 11 Kf3 or 10...Kg1 11 Rd2) 10 Rd2 g4+ 11 Kxg4 Nf2+ 12 Kf3 Nh1 13 Ra2 (say) g5 14 Rd2 etc.

4.4 (M 21)



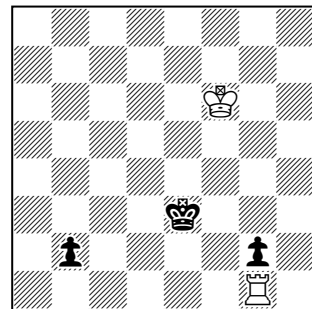
White to play and hold the draw

4.4a



1 Rf8, after 7...Kd3

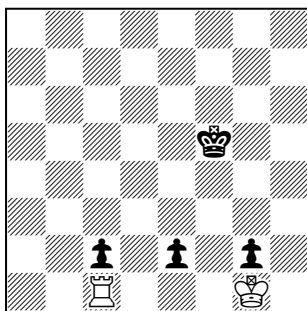
4.4b



1 Rg8, after 7 Ke3

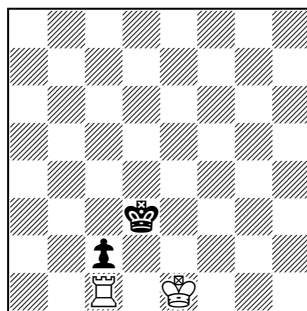
A study like 4.3 has a certain practical value, and the same will be true of 4.4 (composed in 1929, and first published in Mandler's 1931 book). Try 1 Rf8: no, 1...f3 2 Rf4 b4 3 Rxg4 b3 4 Rg1 f2 5 Rf1 b2 6 Kg7 Kd4 7 Kf6 Kd3 threatening 8...Kf2 (see 4.4a), and if White tries 8 Rb1 Black will play 8...Kc2 instead. Correct is **1 Rg8**, after which **1...g3 2 Rg4 b4 3 Rxf4 b3 4 Rf1** (White has unimportant alternatives from here onwards) **g2 5 Rg1 b2 6 Kg7 Kd4 7 Kf6 Ke3** gives 4.4b. Black again threatens to attack the rook and win it for the pawn, but White can counter by playing **8 Rb1** ready for 8...Kf2 9 Rxb2+; and if Black switches his attack to the other side, **8...Kd3**, White plays **9 Rg1** and Black still cannot advance. If the pawns are only four files apart, they and their king can overwhelm the rook; if they are five files apart, they cannot.

4.5 (M 22)



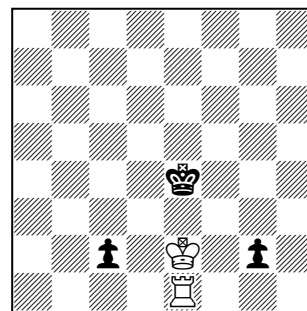
White to play and win

4.5a



1 Kxg2, after 3...Kd3

4.5b

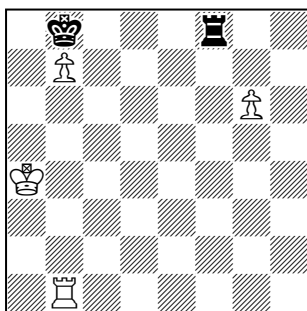


Main line, after 4 Re1

The natural move in **4.5** (*Kölnische Volkszeitung*, 1928) is 1 Kxg2, but it fails: 1...Ke4 2 Kf2 and now not 2...Kd3, when 3 Ke1 would put Black in zugzwang and win easily (we would have **4.5a** with an extra Black pawn on e2 but with Black to move), but 2...e1Q+ 3 Kxe1 (3 Rxe1 is no better, 3...Kd3 with ...Kd2 to follow) Kd3 (see **4.5a**) and White can make no progress (4 K~ Kd2, 4 Ra1 Kc3 5 Rc1 Kd3 repeating). By sacrificing one of his two pawns, Black has transferred the burden of moving to White.

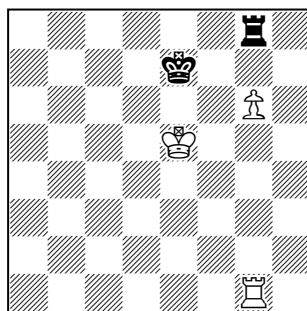
The correct move is **1 Kf2** going for the e-pawn instead, and after **1...Ke4 2 Kxe2 Kd4 3 Rg1/Ra1** (simplest) **Ke4** (after 3...Kc3 White wins easily, 4 Rg1 K~ 5 Kd2 etc) **4 Re1** we have **4.5b**. (Playing 3 Re1 instead of 3 Ra1/Rg1 doesn't forfeit the win, but it wastes time; after 3...Ke4 we have **4.5b** with White to play, which isn't what we want, but White can manoeuvre to lose a move and get back to the same position with Black to play.) From **4.5b**, **4...Kd4** can be met by **5 Kd2** since the rook prevents the Black king from doubling back to support the g-pawn, and **4...Kf4** by **5 Kf2** similarly, but what about **4...Ke5**? Obviously **5 Ke3**, and if 5...Ke6 then 6 Kd2+ Kf5 7 Rg1 and White mops up both pawns.

4.6 (M 24)



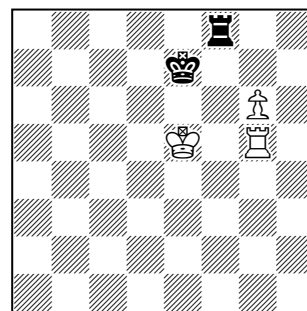
White to play and win

4.6a



1 Ka5, after 7...Ke7

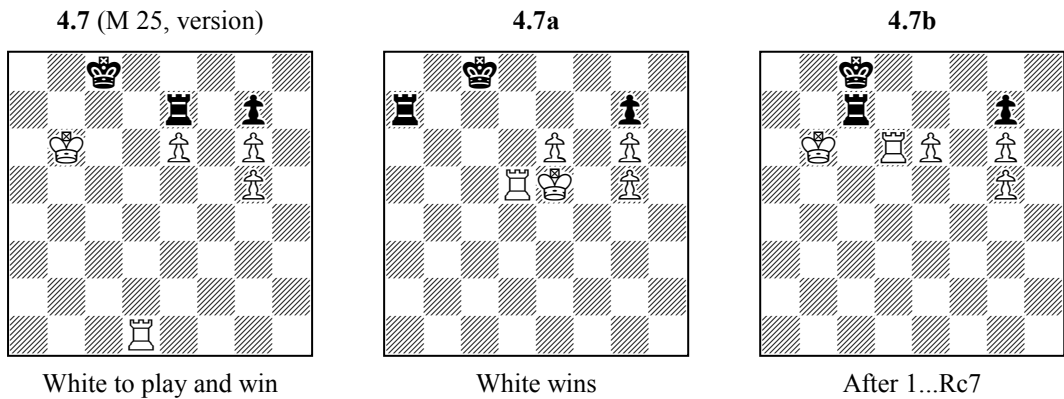
4.6b



Main line, after 6...Ke7

In **4.6** (5th Honourable Mention, Tourney in honour of A. A. Troitzky, *Zadachy i etyudy*, 1929), an immediate king advance to support the b-pawn fails: 1 Ka5 Rf6 2 Rg1 (2 Rb6 Rxb6 3 Kxg6 stalemate) Rf8 3 Ka6 (3 Kb6 Rf1 with a perpetual hounding of the rook) Rg8 4 Kb5 (4 Kb6 Rxc6+ 5 Rxc6 stalemate, 4 g7 Rxc7 5 Rxc7 stalemate) Kxb7 5 Kc5 Kc7 6 Kd5 Kd7 7 Ke5 Ke7 (see **4.6a**) 8 Kf5 Rf8+ 9 Kg5 Rf2/Rf3 with ...Kf8 to follow. Nor does 1 Rb6 work: 1...Rf1 (threat 2 Ra1+ K~ 3 Rb1+ K~ 4 Rxb6 Kxb6 stalemate) 2 Ka3 Rc1 3 Kb2 Rc5 4 Kb3 Rc1 and the White king will stay shut in.

To win, White must get his king across to support his g-pawn, and the way to start is **1 Rb5** threatening 2 Kb4. 1...K~ 2 b8Q+ is routine and if 1...Rg8 then 2 Rb6 with 3 Kb5 to follow, leaving **1...Rf1** (for 2 Kb4 Rg1 3 Rb6 Rb1+ 4 K~ Rxb6 5 Kxb6 stalemate) and **1...Rf6** attacking the pawn from the side. But in each case **2 Rg5** forces **2...Rf8**, and White's king can advance: **3 Kb5/Kb4 Kxb7 4 Kc5** (now White must keep to the fifth rank) **Kc7 5 Kd5 Kd7 6 Ke5 Ke7**. This gives **4.6b**, which differs from **4.6a** in that Black's rook is not yet on g8 and White's rook is on the fifth rank. This allows White to play **7 Rf5**, after which the Black rook must quit the file (7...Rxf5 8 Kxf5 is a routine win) and Black's king will be cut off from the pawn: 7...Rg8 8 Rf7+ Ke8 9 Kf6 Kd8 10 g7 Ke8 11 Ke6 Kd8 12 Rf8+, or 7...Ra8 8 Rf7+ Ke8 9 Kf6 Ra6+ 10 Kg7 etc.

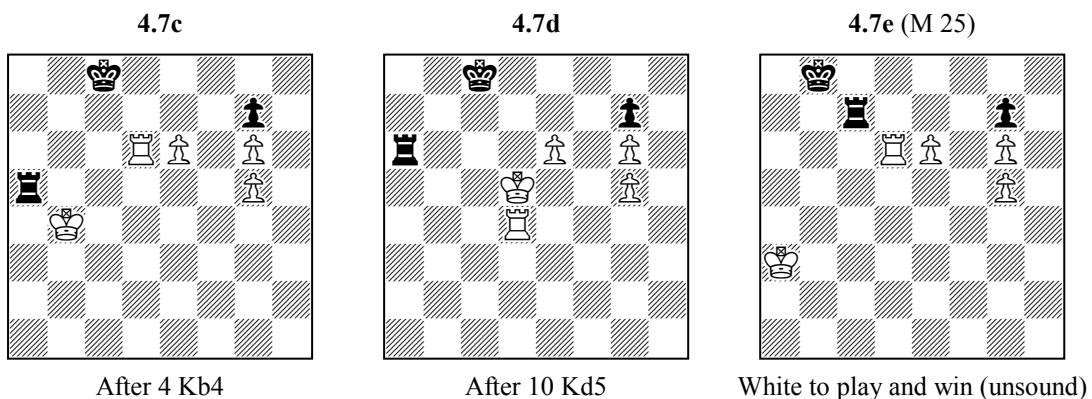


I give 4.7 (*Národní listy*, 5 May 1929, version) in the form quoted by Mandler in *FIDE Revue* 1957.

The first point to note is that as long as the pawns are unremoved and Black's king can reach e8, White cannot exchange rooks. For example, suppose 4.7 without the rooks. Even with the move, White cannot win; he can take the opposition by 1 Kc6, but after 1...Kd8 2 Kd6 Ke8 the normally winning move 3 e7 gives stalemate.

Now consider diagram 4.7a. Suppose first that it is Black to play. 1...Rb7 2 Kd6 (threat 3 e7) Kd8 (2...Rb6+ 3 Ke7 etc) 3 Kc6+, or 1...Rc7 2 Kd6 Kd8 3 Rf5 Rd7+ 4 Ke5 Rd1 5 Rf8+ Ke7 6 Rf7+ and 7 Rxc7, or 1...Re7 2 Kd6 Kd8 3 Rf5 and the same. White to play, 1 Kf4 Ra4+ 2 Kf5 Ra7 3 Ke5 and we have transferred the move to Black, or 1...Re7 2 Rf5 Rxe6 (if 2...Kc7 then 3 Ke5 to stop 3...Kd6) 3 Rf7 Rxc6 4 Kf5 R~ 5 Rxc7.

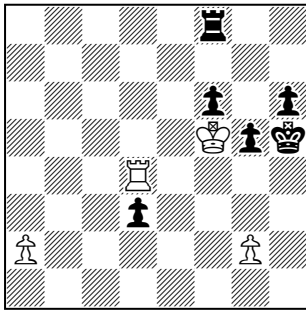
So 4.7a is a win for White with or without the move, which gives us a target. We must get White's king to e5, and cannot clear his path by opposing rooks because Black will exchange with a draw. 1 Re1 can be shown to lead nowhere, and the main line goes 1 **Rd6 Rc7** (see 4.7b) 2 **Kb5 Ra7** (2...Kb6 3 Rd8 Re7 4 Rg8 Rc7 5 Rf8) 3 **Kc5 Ra5+** 4 **Kb4** (see 4.7c) **Ra7** (for 4...Re5 see below) 5 **Kb5 Rc7** 6 **Kb6** (back to 4.7b but with Black to play) **Re7** 7 **Kc5 Ra7** (now...Ra5+ is unavailable) 8 **Rd4 Ra5+** 9 **Kc6 Ra6+** 10 **Kd5** (see 4.7d) **Ra5+** (10...Kd8 11 Ke5+ Ke8 12 Rd7 and once the g-pawn has fallen the win will not be far away) 11 **Ke4 Ra6** 12 **Ke5 Ra5+** 13 **Kf4 Ra7** 14 **Rd5 Ra4+** 15 **Kf5 Ra7** 16 **Ke5**. We have duly reached 4.7a, and the win follows as above.



On the evidence of Harold van der Heijden's "Endgame study database IV", the study originally appeared in *Národní listy* with the g5 pawn on g4. Subsequently, either Réti or Mandler appears to have decided that Black could hold the draw in 4.7c by playing 4...Re5, thus refuting the lose-a-move manoeuvre and with it the intended solution. In Mandler's 1931 book, therefore, the study appeared in the revised form 4.7e in which this supposed refutation was exploited in the play, the intended solution being 1 Ka4 Kc8 2 Kb4 Ra7 3 Kb5 etc and the natural try 1 Kb4 being defeated by 1...Kc8 2 Kb5 Ra7 3 Kc5 Ra5+ 4 Kb4 (else perpetual check on the a-file) Re5.

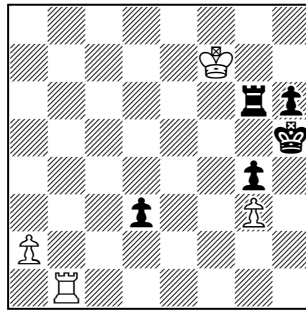
Had this been sound, it would have been a masterpiece, the apparent reciprocal zugzwangs after 1 Kb4? Kc8 2 **Kb5 Ra7** and 1 Ka4! Kc8 2 Kb4 **Ra7** 3 **Kb5** putting the final touch to an already fine composition. Sadly, the definitive results with K + R + 2P v K + R now available refute 4...Re5, the positions after 5 Rd7 Rxe6/Rxc7 6 Rxc7 being won for White (specimen best-play lines are 5...Rxe6 6 Rxc7 Kd8 7 Kc5 Ra6 8 Kd5 Ke8 9 Rg8+ Ke7 10 Ke5 Ra5+ 11 Kf4 Ra4+ 12 Kf5 Ra5+ 13 Kg4 Ra4+ 14 Kh5 Ra1 15 Rb8 Rh1+ 16 Kg4 Rg1+ 17 Kf5 Rf1+ 18 Ke4 with 18...Rf8 19 Rb7+ Ke6 20 g7 or 18...Re1+ 19 Kd3 Rd1+ 20 Kc2 Rg1/Rd5 21 g7, and 5...Rxc7 6 Rxc7 Kd8 7 Kc4 Ke8 8 Kd4 Rg1 9 Rg8+ Ke7 10 Ke5 Re1+ 11 Kf5 Re5+ 12 Kf4 Re1 {12...Rxe6 loses one move more quickly, 13 Kg5 Re1 14 Kh6 Rh1+ 15 Kg7 Rg1 16 Rh8 Ke6 17 Rh2} 13 Kg5 Rh1 14 Ra8 Rg1+ 15 Kh6 Rh1+ 16 Kg7 Rg1 17 Rh8 Kxe6 18 Rh2 Rg3 19 Re2+ Kd6 20 Kf7 Rf3+ 21 Kg8 Rg3 22 g7). So 4.7e collapses, 1 Kb4 becoming an unwanted dual rather than a tempting try, and we have to go back to 4.7. The fact that Mandler quoted 4.7 rather than 4.7e in 1957 suggests that he had worked this out before the computers did.

4.8 (M 26)



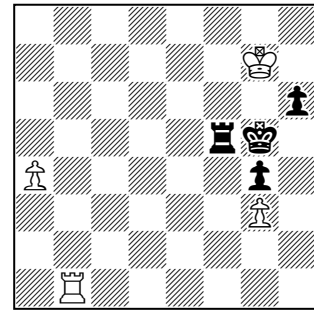
White to play and win

4.8a



After 5 Kf7

4.8b



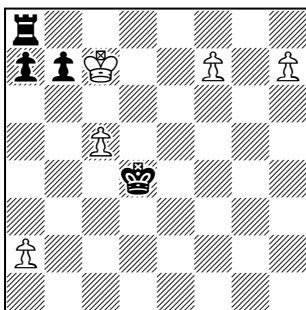
After 9...Kg5

In **4.8** (*Tijdschrift v. d. NSB* 1922, version in *Ostrauer Morgenzeitung*, 6 February 1923, dedicated to Dr A. Mandler), **1 g3** threatens mate by **2 Rh4+ gxh4 3 g4**, and the only realistic defence is **1...Rg8** (if instead **1...g4** then **2 Rxc4** and mate by **3 Rh4**). Now **2 Rb4** threatens mate by **3 Rb1** and **4 Rh1**, and the only defence is **2...g4**. White still continues with **3 Rb1**, but Black can give himself a little air by **3...Rg5+ 4 Kxf6 Rg6+ 5 Kf7**.

This has brought us to **4.8a**, and we see that Black is not wholly out of the wood; a move by his rook along the rank will allow **Rb5+** and mate next move, and **...Kg5** will allow mate at once. There remains **5...d2**, but **6 a4** maintains the pressure (and its guard on b5 will be useful in the later play). Black still has no good rook or king move, but **6...d1Q 7 Rxd1** gets the pawn off the board, and now **7...Rf6+** has become available because **8 Kxf6** will be stalemate. Hence **8 Kg7**, and if **8...Rg6+** then **9 Kh7** leaves Black helpless (he can avoid mate by **9...Kg5 10 Rd5+ Kf6**, but **11 Rd6+** then picks up the rook). But Black can play **8...Rf5** claiming the fifth rank for himself, and after **9 Rb1 Kg5** we have **4.8b**.

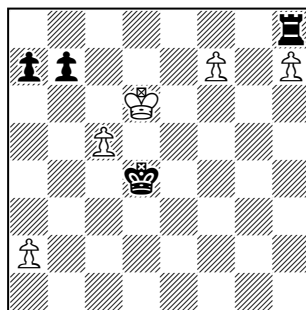
If now **10 Rb5**, which was White's objective in playing **9 Rb1**, Black can reply **10...h5**, and he will draw (**11 Rxf5+ Kxf5 12 a5 h4 13 a6 hxg3** etc). The winning move is **10 Rb6**, and if **10...h5** then **11 Rg6** gives mate. So Black moves his rook, say **10...Re5**, and now White can play **11 Rb5**. The exchange **11...Rxb5 12 axb5** loses, White being a tempo ahead of the previous line, and if he moves his rook back to f5 or defends it by **11...Kf5** White will win by exchanging it off and taking the pawn on h6.

4.9 (M 27)



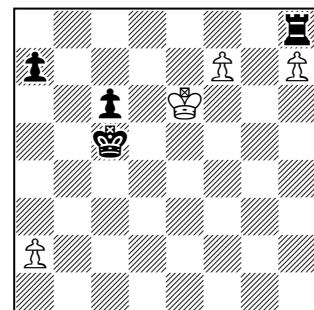
White to play and win

4.9a



1 Kd6, after 1...Rh8

4.9b



4 Ke6, after 4...Kc5

White's first thought in **4.9** (equal 1st/2nd Prize, *Shakhmatny Listok*, 1927/I) might be **1 Kxb7** with **2 c6** to follow, but it is soon seen to be inadequate. **1...Rh8** threatens **2...Rxh7** pinning the f-pawn, if **2 c6** then **2...Rxh7 3 c7 Rxf7** with **...Rxc7** to follow, and if **2 Kc6** to avoid the pin then **2...Ke5** etc.

So White must go the other way, and the natural move is **1 Kd6** guarding the c-pawn and avoiding the pin. But Black still plays **1...Rh8**, and White has a problem (see **4.9a**). Given that **2 Ke7** will be met by **2...Rxh7** again pinning the pawn, his only chance appears to be **2 Ke6** going for the rook, but Black will play **2...Kxc5** and shadow him across: **3 Kf6 Kd6 4 Kg7 Ke7 5 Kxh8 Kxf7**. White is now blocked in, and will be stalemated when his pawn moves have run out. Nor will sacrificing the c-pawn help (**2 c6 bxc6 3 Ke6 Kc5** and exactly the same), and moves by the a-pawn can simply be echoed by Black.

The way forward is **1 Kd7**, and after **1...Rh8** then **2 Kd6** giving **4.9a** with Black to play. **2...Ke4** is clearly hopeless (**3 Ke6 Kd4 4 Kf6 Kd5 5 Kg7 Ke6 6 f8Q**), but does not **2...Kc4 3 Ke6 Kxc5** lead to a draw as before?

No, White can meet **2...Kc4** by **3 c6** (now sacrificing the c-pawn does help), and after **3...bxc6** not **4 Ke6**, met by **4...Kc5** as before (see **4.9b**), but **4 Ke5**. Black must play **4...Kc5** to keep in touch, and **5 Ke6** gives **4.9b** with Black to play. Moves by the a-pawn can be echoed by White, **5...a6 6 a3 a5 7 a4**, and after **7...K~** we shall have **8 Kf6 Kd5 10 Kg7 Ke6 11 f8Q**.

It is one of Réti's most subtle studies.