## C. Rook studies with White pawns on e6/e7 and g6, perhaps also with a Black pawn on 97

[This is perhaps the hardest section of the book, and a few preliminary remarks may be in order. The difficulty arises not so much because the studies are difficult in themselves, though several of them are, but because many of them form a tightly connected group; in analysing any one of the group, we find that Black can lead the play into another, and there is no simple point at which to begin. But the reader who has not previously studied this corner of the endgame field may find it helpful to start by looking at the diagram below:


White may be two pawns up, but he cannot win; his rook cannot move without dropping a pawn, his pawns cannot advance, his king cannot drive the Black rook from the g -file, and if it advances to the fifth rank Black will start checking. In several of the studies that follow, Black attempts to draw by reaching this position, and White must act so as to prevent him.]

A simple and easily understood twin
3.22 (S388)

Svobodné slovo 1960


White to move and win
(a) as set, (b) wKh3 to g3
(a) 1 Rf7 Rxe6 2 g7 Rg6 3 Rf6+ and wins; 1 e7? Rxe7 2 Rh7 Re6 3 Rh6 Ke7 4 g 7 Rxh6+.
(b) 1 e7 Rxe7 2 Rh7 Re6 3 g7/Rh6 and wins; $1 . . . \mathrm{Kd} 72 \mathrm{Kf} 2$ Rxe 73 Rh7 etc. The move 2 Kf 2 is not easy.

If the White king is on h 2 or g 2 , the winning move is $1 \mathrm{Rd} 7+$.
[This may have been simple to Mandler, but I suspect that some readers might welcome a little more detail. In (a), after 1 e 7 ? Rxe7 2 Rh7 Re6, the alternative attack 3 g 7 is met by 3 ... Rg 6 (4 Rh6 Rxh6+), after which White's king will never escape from the $h$-file and Black's will soon make its presence felt. The same if the White king starts on h2. In (b), 1 Rf7? allows 1...Rxe6 $2 \mathrm{~g} 7 \mathrm{Rg} 6+$ 3 K-- Ke6 $4 \mathrm{Ra} 7 \mathrm{Kf6}$ (or $1 \ldots \mathrm{Rg} 1+$ etc), and $1 .$. Rxe 6 also works if the king is on g2. There remain 1 Rf7 with the king on h2, when $1 .$. Rxe6 $2 \mathrm{~g} 6 \mathrm{Rh} 6+3 \mathrm{Kg}-$ Rg6+ leads into the refutation of 1 Rf 7 in (b), and 1 e 7 with the king on g2, when 1 ...Rxe 72 Rh 7 is met by 2 ...Re 5 and $3 \ldots \mathrm{Rg} 5$ (or $2 \ldots \mathrm{Re} 8$ and $3 \ldots \mathrm{Rg} 8$ ). These don't work in (a) and (b) because the White king is one rank nearer to his pawn, and can prevent the Black king from coming across to attack it.]

The other side of the coin
3.23 (S389)

Svobodné Slovo 1960


Black to move and draw (a) as set, (b) wKh3 to g3
(a) 1 ...Rxe7 2 Rh7 Re6 3 Rh6 Ke7 4 g 7 Rxh6+; 1...Ke6? 2 Rh7 Kf6 3 g 7.
(b) 1...Ke6 2 Rh7 Kf6 3 g7 Rg8

4 Rh8 Rxg7+; 1...Rxe7? 2 Rh7 Re6 3 Rh6.

A twin derived from the above
3.24 (S390)

Československýsach 1950


White to move and win (a) as set, (b) wKg 2 to h 2
(a) 1 Kf3 Rxe 72 Rh7 Re6 3 g7 Rg6

4 Rh6 Rxh6 5 g8Q and wins. The attempt to apply the solution of (b) fails: 1 Rh7 Rg8 2 Rf7 Rxg6+. Most of the ingenuity lies in the refutation of the tries

1 Kg 3 and 1 Kh 3 , which we have already seen in the previous diagram.
(b) 1 Rh7 (threat 2 g 7 followed by 3 Rh8) Rg8 2 Rf7 (threats 3 g7 and 3 Rf8) and wins.
[The computer appears to suggest that 1 Rh 7 is not refuted by 1 ...Rg8 in (a), but the only winning continuation is 2 Rg 7 , after which 2 ... $\operatorname{Re} 8$ repeats the initial position. There is in any case another refutation in $1 . . . \mathrm{Kd} 7$. This fails in (b) because it does nothing about the threat of 2 g 7 and 3 Rh 8 , but in (a) we have 2 g7 Rg8 3 Rh8 Rxg7+ and Black has time to take the e-pawn as well.]

## Intricate tempo play

> *3.25 (S391, RP17)
> Československý sach 1954


White to move and win
The Black rook has plenty of freedom on the eighth rank. Out-tempoing it will not be easy, nor will recognizing when the tempo play starts and when it finishes.

The start is relatively simple. Black's threat of ...Rxe7 leaves White no alternative to $\mathbf{1} \mathbf{R h} 7$. Now the advance of the g-pawn is threatened, and Black's best reply is $\mathbf{1}$...Rg8. This creates a new Black threat, $2 \ldots \mathrm{Kd} 7$ followed by the capture of a pawn. White cannot permit this, and so plays 2 Kc6. Now 2...Kf6 is met by 3 Rf7+ and 4 Rf8, while moves such as $2 \ldots$ Ra8 and $2 \ldots$ Re8 lose to 3 g 7 . This leaves Black nothing but 2...Rc8+,
and now the intricacy starts.
The most natural move is perhaps $3 \mathrm{Kb7}$. Black meets this by $3 \ldots \mathrm{Re} 8$, taking advantage of the fact that the White king is open to check on the seventh rank. We have now reached a difficult position. It is the same as that after White's first move with these exceptions: the White king is on b7 instead of b5, and this time it is White's move. Before, we were threatening g 7 , and Black had to reply ...Rg8 to prevent it. Can we not play the same move now, 4 g 7 ? The check $4 . . \mathrm{Rxe} 7+$ won't help Black, as we see from the continuation 5 Kc6 Re8 6 Rh8. But Black plays 4...Rg8, and we see why the White king is badly placed: 5 Rh 8 Rxg 7 and the remaining pawn is pinned, or 5 e8Q+ Rxe8 6 Rh8 Re7+ and the check gains Black a crucial tempo.

So Black's move 3...Re8 is very strong, the more so because it threatens $4 \ldots \operatorname{Re} 7+$ and if White tries 4 Kc 6 Black can repeat moves by $4 . . . \mathrm{Rc} 8+$. At first the solver may be alarmed by this, but then he realises that White can play 4 Kc 7 without fearing 4 ...Rxe $7+$, because the reply 5 Kd 8 will win. But he will deceive himself if he thinks that this solves the study, because Black will simply decline to capture on e7; he will return his rook to g 8 , and White will not advance another step.

Here our solver may have an idea. What if in this position (wKc7, Rh 7 , bKe6, Rg8) it were Black's move? Black would have been outwitted in the tempo battle, and he would lose. True, 4...Kf6 cannot be met by 5 Rf7+ Ke6 6 Rf8 because of $6 \ldots \mathrm{Rg} 7$ pinning, but White has 5 Kd 7 Kxg 66 Rh 1 winning. 4...Re8 is met by 5 g 7 , with $5 \ldots \mathrm{Rxe} 7+6 \mathrm{Kd} 8 /$ Kc6 or 5 ...Rg8 6 Rh8 Rxg7 7 Kd8 Rxe7 8 Rh6+. 4...Ra8 likewise loses to 5 g 7 .

This has taken us a major step forward. After 1 Rh7 Rg8 2 Kc6 Rc8+ we postpone putting the White king on the seventh rank, and play $3 \mathrm{Kb6}$.

We have just seen that 3 ...Rg8 is met by 4 Kc7 (which is clearly the most difficult manoeuvre in the study), while $3 \ldots \operatorname{Re} 8$ allows 4 g 7 as we saw at the start. There remains only $\mathbf{3} . . \mathrm{Rb8}+$, which lets White play 4 Kc 5 . Now 4 ...Rg8 is met by 5 Rf7 Re8 (we are now back at the starting position but with the White king on c5 instead of b5) 6 Kd4 Rxe7+ 7 Rxe7+ Kxe7 8 Ke5 etc. If Black tries 4...Rc8+ then of course White again plays 5 Kd 4 .
[The computer also gives 3 Kb 7 as winning, apparently in contradiction to what is stated above, but it is an excursion down a blind alley. The only winning reply to $3 \ldots \operatorname{Re} 8$ is 4 Kb 6 , reinstating the threat of 5 g 7 etc , after which $5 \ldots \mathrm{Rb} 8+$ 6 Kc 5 rejoins the normal main line.]

## A voluntary return to prison

*3.26 (S392, RP19, version)
Deutsche Schachzeitung 1962, version


White to move and win
For the moment, we can see neither prison nor prisoner.

Black threatens 1...Rxe6 and 1...Rg5. Let us try $1 \mathbf{R g} 7.1$...Rxe6 still appears dangerous, but it leads to $2 \mathrm{~g} 7 \mathrm{Rh} 6+$ $3 \mathrm{Kg} 4 \mathrm{Rg} 6+4 \mathrm{Kf} 5 / \mathrm{Kh} 5$ and White wins.

Relatively stronger is $\mathbf{1} . . . \mathrm{Rg} 5$ ( 2 g 7 ? Rg3+ 3 Kh4 Rg4+ 4 Kh5 Rg5 +5 Kh 6 Rg6+ 6 Kh7 Rh6+ $7 \mathrm{Kg} 8 \mathrm{Rh} 8+$ and stalemate). After 2 Rg7! the White pawn is defended, but now we see what is meant by prisons and prisoners: the

White king is confined to the h -file. Will he be able to escape?

After 2...Rg1 $3 \mathbf{K h 4}$ White threatens $4 \mathrm{Rg} 8+\mathrm{Ke} 75 \mathrm{Kh} 5$ followed by 5 ...Kf6 $6 \mathrm{Rf} 8+$ etc or $5 \ldots \mathrm{Rh} 2+6 \mathrm{Kg} 5 \mathrm{Rh} 1$ (6...Kxe6 7 Rf 8 ) 7 Ra 8 (threat 8 g 7 ) Kxe6 8 Ra7/Rf8. The simple move 3... Rg 2 will still allow this, so Black must give check: 3...Rh1+. White's plan has succeeded, his king has escaped from his shackles, he finds himself on the broad plain of the chessboard, he is free. So why should he want voluntarily to return to his prison? We shall soon see.

Where can the king find refuge? The approaches to the seventh rank are blocked, and he will be able to escape the Black rook's checks only by coming down to the second rank. But he has the whole board at his disposal. Let is start by trying 4 Kg 3 . Surely this cannot be a mistake? But when we look more closely, we see that the White king has chosen the least favourable square on the whole board. Only by playing here does he allow the Black rook temporarily to relinquish control of the g-file. Black accordingly forces the draw: 4...Rel $5 \mathrm{Rg} 8+$ (the White rook cannot leave the g-file on account of ... $\mathrm{Rgl}+$, and 5 e 7 is hopeless) $\mathrm{Ke} 76 \mathrm{~g} 7 \mathrm{Rg} 1+7 \mathrm{Kf4}$ Kxe6.

White therefore plays $4 \mathbf{K g} 4(4 \mathrm{Kg} 5$ would be an unnecessary waste of time), and now he can meet 4 ...Rel by $5 \mathrm{Rg} 8+$ Ke7 6 Kg 5 .

But the situation which results from 4...Rg1+ is even more difficult. True, the choice seems easy enough at first sight. Three squares are available on the f-file. But we can reject the continuation $5 \mathrm{Kf} 4 / \mathrm{Kf} 3 \mathrm{Rfl}+6 \mathrm{Kg} 3$ because we have already seen that $g 3$ is a bad square, and 6 Ke 3 is no better on account of ...Re1+ or ...Rg1. This leaves the try $5 \mathrm{Kf} 3 \mathrm{Rfl}+$ 6 Kg 2 ( 6 Ke 2 Rg 1 is a draw). But alas, there follows 6...Rf6 7 e7 Rf5 and again the position is drawn.

So we see that free movement over the wide open spaces of the chessboard brings
no benefit to the White king, and he returns to his prison by 5 Kh 3 . This gives the same position as we had after Black's second move, but now it is Black himself who is to move and he has little choice. The rook must not quit the g -file without giving check (for example, 5...Re1 6 Ra 7 and wins). The apparently threatening 5...Rh1+ is met by 6 Kg 2 Rh 57 Kf 3 Rg 5 8 Kf4 Rg1 $9 \mathrm{Rg} 8+\mathrm{Ke} 710 \mathrm{Kf5} \mathrm{etc}$, and 5 ... Rg 5 is easily refuted ( 6 Kh 4 Rg 1 $7 \mathrm{Rg} 8+$ ).

Now it seems that the study is solved. But Black has a move which promises to deliver him from his precarious situation, namely $5 . . . \mathrm{Kd8}$, because $6 \mathrm{Rd} 7+\mathrm{Ke} 8$ 7 g 7 will again allow him to save himself by perpetual check ( $6 \ldots \mathrm{Rg} 3+7 \mathrm{Kh} 4$ $\mathrm{Rg} 4+\mathrm{etc}$ ).

The correct continuation is $\mathbf{6} \mathbf{K h 4}$. As after his third move, White threatens Rg8+ followed by Kh5 etc. Hence 6...Rh1+, but now White can play 7 Kg 3 ; with the Black king on d8, White need not fear 7...Rel (8 Rd7+ Ke8 9 Kf4 Rxe6 10 g7). Black has however other options, 7...Ke8 and 7...Rg1+. 7...Ke8 can be met by 8 Kg 2 giving the same position as after $5 \ldots \mathrm{Rh} 1+6 \mathrm{Kg} 2$, and the move which puts the greatest difficulties in White's way is 7...Rg1+. Play continues 8 Kf2 Rg5 9 Rd7+ (now that the White king is away from the h-file, we can advance the g-pawn) Ke8 10 g 7 Rg2+. From now on, White will be seeking refuge from the desperado rook. Black can continue his pursuit of the White king as long as he can check from below or from the right. Therefore White lures the rook to the top left corner of the board, forcing it to check from above or from the left, after which the checking will soon cease. $11 \mathrm{Ke} 3 \mathrm{Re} 2+$ (checking from the right is no better) $12 \mathrm{Kd4} \mathbf{~ R d 2 +}$ 13 Kc5 Rc2+ $14 \mathrm{~Kb} 6 \mathrm{Rb} 2+15 \mathrm{Ka} 7$ ( 15 Kc 7 wastes time) $\mathrm{Ra} 2+\mathbf{1 6} \mathbf{K b 8}$ Ra8+ 17 Kc7 Rc8+ 18 Kd6 Rc6+ 19 Ke5 Rxe6+ 20 Kf5 and White wins.
[Mandler had the White rook on d6,
when White's first move is more surprising because it leaves the e-pawn undefended, but there is a bust by 1 Kg 4 . Mandler thought this was refuted by 1...Kf8, but White has a win by $2 \mathrm{Kf4}$ Rel (2...Ra5 3 Rd7 etc) 3 Rd8+ Kg 7 (3...Ke74g7) 4 Kf 5 (threat $5 \mathrm{Rd} 7+$ etc) $\mathrm{Rfl}+5 \mathrm{Ke} 5 \mathrm{Rel}+6 \mathrm{Kd} 6 \mathrm{Rdl}+7 \mathrm{Ke} 7$ with Ke 8 etc; " 1 Kg 4 is a mate in 29 ", says Marc Bourzutschky's oracle. The present rescue was the best I could find. 64 studií z oboru věžových a pěšcových koncovek has a simpler setting where the prison is in place from the outset ( wKh 1 , Rg7, bRg4, play 1 Kh2 Rg5 2 Kh 3 etc ).]

An apparently good move fails, an apparently bad one succeeds
3.27 (S394, RP37)

Československy̆ šach 1950


White to move and win
The move that springs to the eye is 1 e 7 . Then the solver notices the reply 1...Rd6+, when 2 Kxd 6 gives stalemate. This is a pure stalemate, and so has probably been put there by the composer as a deliberate trap.

So the solver looks elsewhere, and he soon spots the possibility of sacrificing the rook on b8 and advancing his pawn. But this is a delusion. White would win after $1 \mathrm{Rb} 8+\mathrm{Kxb} 82$ e7 Rcl +3 Kd 7 Rd1+ only if the Black king was on the sixth rank or lower or the rook on the third rank or higher.

The move 1 e 7 was in fact correct. After 1...Rd6+ White need not capture; he can play 2 Kc5 Re6 3 Kd5 Rxe7 $4 \mathrm{Kd6}$, and now all goes smoothly.
[In respect of the position which would be won "only if the Black king was on the sixth rank or lower or the rook on the third rank or higher", the White king must take the g-pawn and then escape the checks; if the Black king is on say b6 he can hide on b8, if if the rook is on the third rank he can come down the board.]

## The significance of a small displacement

3.28 (S395)

Revue FIDE 1956


Black to move and draw (a) as set, (b) wKh4 on h3
(a) $1 \ldots \mathrm{Kd} 7$, and after 2 Rxg 7 the White rook and pawn block his king's path to the seventh rank: $2 \ldots \mathrm{Rg} 23 \mathrm{Kh} 5$ $\mathrm{Rh} 2+4 \mathrm{Kg} 5 \mathrm{Rg} 2+5 \mathrm{Kf6} \mathrm{Rf} 2+$ etc.
(b) Now this fails, because the White king prevents Black's move $2 \ldots \mathrm{Rg} 2$. Instead, 1...Kd6! 2 Rxg7 Rxe7 3 Rh7 Re6 4 g7 Rg6 with an easy draw; the White king is too far away to play 5...Kh5 and 6...Kh6. But 1...Kd6 would fail in (a), because the White king would be near enough to support his pawn; after 2 Rxg7 Rxe7 White can win either by exchanging rooks or otherwise.
[In (a), l...Kd6 can also be refuted by 2 e8Q Rxe8 3 Rxg7.]

## Fourth time lucky

3.29 (S397, RP11) Československýsach 1950


White to move and win
[The characters that follow were actually used by Mandler to discuss a study I have had to relegate to Appendix $D$, but it seemed a pity to lose them and I have moved them to the present setting. I have left the names as in the original, "Vesely" ("Merry") is quite a common name in Czech and I am sure that a comparable group of English schoolboys would have given little Hochman the nickname "Lofty", but "Kálert" is in neither my dictionary nor the Brno telephone directory and if some particular meaning was intended it escapes me. Pronounce the accented vowels long - Veselee, Kaalert - and stress the first syllable whether long or short.]
"Today we are going to examine your analytic abilities, gentlemen," said Professor Caissus. "What can you say about this simple position? Who is going to start? You, Hochman."
"White cannot keep his pawn advantage," said the student thus singled out. "Black will march his king across to d7 and push the rook away, and the e-pawn will be left helpless."
"Yes, but White doesn't have to wait for his rook to be pushed," objected another of the Professor's pupils. "He
plays 1 Rf threatening to promote, so Black must capture the pawn at once, 1...Rxe7, and 2 Rf7 pins the Black rook. Black cannot capture because the recapturing pawn will promote."
"But this isn't going to win," said a third student. "Black will play 2...Rb7 bringing his rook to safety, and now what is White going to do?"
"Perhaps it is in fact a draw," said the Professor. "What do you think, Kálert?"

The latter replied: "I think I have found a way to win. White continues 3 Ka 5 , and after 3...Ka8 4 Ka 6 Black is in trouble. His rook is doubly attacked, it cannot capture White's rook, and if it moves off the rank White will play 5 Rxg 7 . The resulting ending is surely won."
"Yes, but Black doesn't have to play 3...Ka8," said Hochman. "He can play 3...Kb8 instead, and now $4 \mathrm{Ka6}$ will be answered by 4 ... Ka8 and the capture will give stalemate. So White must release the pressure, and he isn't going to get anywhere."

They thought for a while, trying all White's possible moves, and it did indeed appear that there was no way through.
"White does win!" With this warlike cry, a student named Veselý entered the fray. "I start by playing 1 Kb 5 . Black must reply $1 . . \mathrm{Kb} 7$, and now we bring the rook round to f 7 as before. After 2 Rf8 Rxe7 3 Rf7 Black will have to play his rook to c7 instead of b7, and there will be no stalemate."
"But after 3...Rc7 it is White's move," objected Kálert, "so his king has to retreat, and Black will play ...Kc6 and get out of trouble." Kálert and Veselý were the Professor's most talented pupils, and were always vying for supremacy. "Try $4 \mathrm{~Kb} 4 \mathrm{Kc} 65 \mathrm{Kc} 4 \mathrm{Kd} 6+$ : yes, 6 Rxc 7 Kxc7 $7 \mathrm{Kd5} \mathrm{Kd7} \mathrm{and} \mathrm{Black} \mathrm{will} \mathrm{safely}$ draw, or 6 Kd4 Rxf7 and 7...Ke7."

Hochman put up his hand. He was the youngest of the group, but very promising. "Can we not get to this
position with Black to move? Suppose we start by playing 1 Ka 5 instead of $\mathrm{Kb5}$. Black must still play $1 . . \mathrm{Kb} 7$, and after 2 Rf8 Rxe7 3 Rf7 Rc7 White can play 4 Kb 5 . Now even 4 ... Kc8 will lose: 5 Kb 6 Rc1 6 Rxg 7 Rg1 7 Kc6 Kd8 8 Kd6, and the Black king can get no closer since on e8 it will be mated."

This excellent piece of analysis was applauded both by the Professor and by his fellow students.

It did indeed seem that they had found the solution, but then Vesely had an objection. "Suppose Black plays 1 ...Re4 instead of $1 \ldots \mathrm{~Kb} 7$ ? White can only play 2 Kb 5 , and now $2 \ldots \mathrm{~Kb} 73 \mathrm{Rf} 8$ Rxe7 4 Rf7 Rc7 leaves us with White to play as before."

It was left to Kálert to say the last word. "The first move must be 1 Kb 4 and not 1 Ka5! Now Black does have no move better than $1 \ldots \mathrm{~Kb} 7$, and after 2 Rf8 Rxe7 3 Rf7 Rc7 4 Kb 5 we have Black to move as required."
"Well done," said the Professor. "And now please will Kálert and Veselý briefly run through the entire solution for us?"

Kalert set up the starting position once more. "Not 1 Rf8 Rxe7 2 Rf7 Rb7 3 Ka 5 , because $3 \ldots \mathrm{~Kb} 84 \mathrm{Ka6} \mathrm{Ka} 8$ 5 Rxb7 will be stalemate."

Vesely took up the thread. "Not 1 Kb5 hoping for $1 \ldots \mathrm{~Kb} 72$ Rf8 Rxe7 3 Rf7 Rc7 avoiding the stalemate, because White has no good move."

Little Hochman chipped in. "Not 1 Ka5 hoping for $1 . . . \mathrm{Kb} 72$ Rf8 Rxe7 3 Rf 7 Rc 74 Kb 5 and it will be Black to move, because Black can play $1 .$. Re 4 and White will have to play to b 5 after all."

Kálert rounded it off. "Correct is 1 Kb4, when Black does have nothing better than 1...Kb7 and 2 Rf8 Rxe7 3 Rf7 Rc7 4 Kb5 duly leads to a win."
[This is one of my personal favourites, and I am surprised it was not on the list that Mandler sent to Lommer. Perhaps
he thought it too simple. But it is a beautiful example of the "logical" style of composition, with four successively better lines of play set in a perfectly natural and open position, and it is far superior to the examples that are normally quoted in textbooks.]

## Purity of aim

3.30 (S398, RP38)

Ceskoslovensky sach 1950


White to move and win
The White rook is under attack, and must move. It has however several possibilities. At first sight the squares on the c-file appear equivalent. To find the right move, the solver must follow these apparently identical lines of play right through to the end. If there is only one reason why the solver must select the correct line and reject the others, problemists of the New German or "logical" school talk about "purity of aim", and this is one of the principal requirements imposed by this compositional school.

Moves along the sixth rank lead nowhere. Let us therefore start by playing 1 Rcl, keeping ourselves ready to substitute another move if it seems likely to be more effective.

The solver soon sees that the pawn on e7 cannot be saved. He therefore does not attempt to do so, and concentrates on trying to bring up the White king:

1 Rcl Re8 2 Ke4 Rxe7+ 3 Kd5 Re2
4 Kd6 Rd2+ 5 Ke6/Ke7. No good; Black can play 5 ...Rf2, and there is no good continuation for White.

But if we look more closely at this position, we see that if the White rook were on c5 and the king on e6, White would have the winning move 6 Rf5. We therefore change the first move to 1 Rc5, and the solution unfolds 1 ...Re8 2 Ke4 Rxe7+ 3 Kd5 Re1 4 Kd6 Rd1+ 5 Ke6 Rf1 6 Rf5 and so on. If Black plays 3...Kb6, White wins by $4 \mathrm{Kd6} \mathrm{Ra} 7$ 5 Re5/Rf5.

## A surprising sacrifice of a passed pawn

3.31 (S399a, RP39)

Československýs sach 1952


White to move and win
The difficulty of this position lies in the first two moves. We do not spend time on the various false trails, and go straight to the solution: 1 e7 Re1 2 Re5. It is not easy to graps the purpose of these moves, but perhaps we should think in terms of a gain of tempo. If Black accepts the pawn sacrifice, 2...Rxe7 $3 \mathrm{Kd5}$, the Black rook is badly placed and must return to the first rank. But this is not enough in itself. The primary aim of the White manoeuvre is to get rid of the pawn, which, like the White rook, stands in the way of its own king.

The rest of the solution: 3...Rel

## 4 Rc6+ Kb7 5 Re6 Rd1+ 6 Ke5 Kc8

7 Re7 Kd8 8 Rxg7 Rf1 9 Ke6 Re1+ $10 \mathrm{Kf} 7 \mathrm{Rf} 1+11 \mathrm{Kg} 8 \mathrm{Rg} 1 \mathbf{1 2} \mathrm{Kf} 8 / \mathrm{Kh} 8$ and wins.

If Black plays $2 \ldots \mathrm{Rc} 1+$, White must reply not by $3 \mathrm{Kd4}$ Rd1+ $4 \mathrm{Ke5}$, which would lead to a Black win, but by 3 Kd5! Rxc5+4 Kd6 Rc8 5 Kd7 etc.
"False" twins
3.32 (S399b, RP40)

Československý sach 1952


White to move and win
Formally, this and the previous study are twins: they differ only in the position of the White king. However, the similarity is only superficial, since the solution to one does not come into consideration when the solver is attacking the other. The winning procedures are quite different. But it does not follow that twins of this nature are any less praiseworthy than other twins. It is perfectly possible to take pleasure in the fact that two positions so similar in outward appearance are so wholly different when it comes to the play. If I describe them as "false" twins, it is only to contrast them with "true" twins such as 3.33 , where the solutions do have this internal consistency.

There are several plausible ways of starting, such as 1 Rd6+, 1 Rd7, 1 Re5, 1 Kd4, and 1 e 7 Re1 2 Rd7. We cannot go into all these, and we proceed straight
to the correct move $\mathbf{1} \mathbf{K d 2}$. This threatens 2 e7 among other things, and Black's relatively best reply is $\mathbf{1 . . . R h 8}$ ( $1 . . \mathrm{Kc} 7$ makes things easier for White, for example 2 Rd7+ Kc6 3 Rd8 with the threat of 4 e 7 ). The solution continues 2 Rd7 Kc6 3 Rxg7 (for 3 Ke 3 and 3 Kd 3 see the next study) Kd6 4 e7 Ke6. But now what should White play? 5 Rh 7 is met by $5 \ldots$ Rg8 and 5 Ke 3 also fails, this time to Re8 6 Rh7 Kf6! (not $6 .$. Rxe7 on account of 7 Kf 4 ). Less likely, but in fact the only correct move, is 5 Kd 3 !, for example 5...Re8 6 Rh7 Rg8 (now White can meet 6 ... Kf6 by 7 g 7 , a move not possible with the king on e3 because of 7...Rxe7+) 7 Rf7 Re8 8 Ke4 Rxe7 9 Rxe7+ etc.
[The computer pedantically points out that 5 Kc 3 also works, since 5 ...Rc8+ is not a useful move and 5...Re8 6 Rh 7 Rg 8 7 Rf7 Re8 can be met by 8 Kd 4 just as well as by 8 Ke 4 . So Mandler is not quite right to call 5 Kd 3 the only correct move, but the dual is hardly of importance.]

## Choosing the correct defensive manoeuvre

3.33 (S400, RP41/42) Československy šach 1950


Black to move and draw
(a) as set, (b) wKe3 on d3

These positions arise if White delays playing ...Rxg7 in the preceding study. It may seem that White need not hurry to
play this move, since Black cannot defend his pawn in the long run. So why should he not postpone it, and bring his king closer before making the capture?

Indeed Black cannot keep his pawn, but he can hope to draw even after it has gone: by playing 1 ... Re8 with a counterattack on White's e-pawn, or by playing l...Rh1 and harassing White from below. One works with the White king on e3, the other is needed when it is on d3.

In (a), with the king on e3, the way to draw is 1 ...Rh1 2 Rxg7 Rg1 tying the White rook to the defence of the g-pawn. An immediate 3 e 7 is met by $3 \ldots \mathrm{Kd} 7$, a nondescript king move leads to 3 ...Kd6 4 e 7 Kd 7 and the same, and if White tries 3 Ra7 Black has time for $\mathbf{3 . . . R x g} 6$ since 4 e 7 allows 4...Re6+ and 5...Kd6.

The rook must go right down to h1; if Black contents himself with $1 .$. Rh2, White wins by 2 Rd8 with the threat of e7. If in reply to $1 .$. Rh1 White plays 2 Kf 2 , Black replies $2 \ldots \mathrm{Rh} 5$ and gains the g -file another way.

In (b), with the king on d3, the manoeuvre 1...Rh1 2 Rxg7 Rg1 can be countered by 3 Ra ; the continuation 3...Rxg6 4 e7 Re6 no longer leaves White in check, and he wins by $5 . . \mathrm{Ra} 6+$. If Black tries to stop the pawn by $4 \ldots \mathrm{Rg} 8$ instead, White wins by $5 \mathrm{Ke} 4 \mathrm{Kd} 65 \mathrm{Kf5}$.

The drawing move is now $\mathbf{1}$...Re8. The sequel is simple enough, but there is one point to note: after 2 Rxg7 Black must not play $2 \ldots$ Rxe6, which was the apparent point of the previous move, on account of 3 Rg 8 winning (3...Kd74 47 Rg6 5 Ra 8 , $3 \ldots \mathrm{~Kb} 74 \mathrm{Kd4}$ ). Correct is 2...Kd6 3 e7 Rxe7 4 Rh7 Re1 etc.

In (a), 1...Re8 fails because White has 2 Rxg 7 followed by 3 Kf 4 .

## The Black king twice cuts the line of its rook

3.34 (S401, RP14)

Československýs s̆ach 1950


White to move and win

This study has several variations. We start by looking at the main line: 1 Re3 Ra8 (for checks see later) 2 Rc3 Rc8 (2...Ra6 is met by 3 Kg 5 Rxe6 4 Rf 3 ) 3 Rf3! (not 3 Rd3 on account of 3 ... Kc6 4 Rd7 Rc7) and either 3...Rc4+ 4 Kg3 Kc6 5 Re3 or 3...Kc6 4 Rf7.

The play in this line has a strategic motivation. White lures the Black rook to the eighth rank and then to the c-file, where its line is twice cut by the Black king. After $3 \ldots \mathrm{Rc} 4+4 \mathrm{Kg} 3 \mathrm{Kc} 65 \mathrm{Re} 3$ White threatens to promote his passed pawn, and Black has no defence because his king is blocking his rook's return to the eighth rank. The reverse happens after 3...Kc6 4 Rf7. Now Black would draw if his rook could reach the bottom rank. It would check the White king away from the $g$-file, and as soon as the king reached the d-file it would occupy the g-file itself with a draw. But Black's own king prevents this. If $4 \ldots \mathrm{Kd} 6$ then of course 5 Rxg 7 wins easily.

If after 3...Rc4+ 4 Kg 3 Black tries 4...Rc1, the correct reply is 5 e 7 Rel 6 e8Q Rxe8 7 Rf7+ and 8 Rxg7. 5 Rf7+ would lead to $5 . . . \mathrm{Kc} 66 \mathrm{Rxg} 7$ ( 6 e 7 Kd 7 ) $\mathrm{Rg} 1+7 \mathrm{Kf4}$ (7 Kf2 Rg5) Kd6 and draws; the White king will get no further.

All this has been the main line. In the course of the solution, Black has the opportunity of giving check on his first, second, or third move. We have already looked at the check on the third move, 3...Rc4+, and we have seen that White replies 4 Kg 3 ; the king can escape from the checks only by going to the third rank. Why cannot it go towards the Black rook? Because as soon as it sets foot on the e-file, say after 4 Kg 5 ? Rc5+ $5 \mathrm{Kf4}$ Rc4+ 6 Ke5, Black will play $6 \ldots \mathrm{Kc} 6$, and the reply 7 Re 3 will no longer be effective. This time it is White whose king is getting in the way of its rook.

A wholly different situation occurs if Black gives check on the second move (1 Re3 Ra8 2 Rc3 Ra4+). Now 3 Kg 3 only draws: 3...Re4 4 Rd3 Kc6 (4...Rxe6 loses) $5 \mathrm{Rd} 7 \mathrm{Re} 16 \mathrm{Rxg} 7 \mathrm{Rg} 1+7 \mathrm{Kf} 4$ Kd6 etc. But 3 Kg 5 Re 44 Rd3 wins.

If Black plays the same check at move 1, $1 \mathrm{Re} 3 \mathrm{Ra} 4+$, the correct reply is again 2 Kg 5 . A possible continuation is 2...Ra5+ 3 Kf4 Ra4+ $4 \mathrm{Ke5} \mathrm{Kc7}$ (4...Kc6 5 Rc3+, 4...Kc8 5 Rf3) 5 Rd3 Ra5+ $6 \mathrm{Kf4} \mathrm{Ra} 4+7 \mathrm{Kf} 3!$ and wins, but not 7 Ke 3 on account of $7 \ldots \mathrm{Ra} 18 \mathrm{Rd} 7+$ Kc6 9 Rxg7 Rg1 10 Ra7 Rxg6 11 e7 Re6+. The incorrect move 2 Kg 3 ? leads to $2 \ldots \mathrm{Ra} 83 \mathrm{Rc} 3 \mathrm{Rc} 84 \mathrm{Rf} 3 \mathrm{Kc} 65 \mathrm{Rf} 7$ Kd6 with a draw.

If Black checks on the h-file, 1 Re3 $\mathrm{Rh} 2+$, White replies Kg 4 ! and not 2 Kg 3 on account of 2 ...Rh8 drawing. 2 Kg 5 instead would lose time, because after 2 ...Rg2+ $3 \mathrm{Kf} 4 \mathrm{Rf} 2+$ the king would have to go to g 4 after all; 4 Ke 5 ? would be met by 4 ... Kc7 drawing.

1 Rc 3 ? Re 2 is drawn. 2 Kg 5 is met by 2...Re5+ and 3...Rxe6, 2 Rd3 by 2 ...Kc6 $3 \mathrm{Rd} 7 \mathrm{Rh} 2+$ and White cannot prevent the Black rook from gaining the g -file (4 Kg3 Rh1 5 Kg 2 Rh 5 ).
[Not mentioned by Mandler is 2...Ral in the main line, when White must adopt the same tactic as in the next study: 3 Kg4 Rel (3...Rf1 4 Rc2 Rf6 5 Re2 and soon wins, or 4 ...Rf8 5 e7 Re8 6 Rf2 and

7 Rf 7 ) $4 \mathrm{Kf5} \mathrm{Re} 2$ (a rook move off the file allows the White king to penetrate via d6, and we shall see in a moment that king moves are bad) 5 Rcl ! (not 5 Rd 3 on account of 5...Kc6 6 Rd7 Rf2+ 7 Ke4 Rg 2 , gaining the g -file and drawing) and Black is in zugzwang. King moves are bad, 5 ... Kb6 because of 6 Rc 8 Kb 77 Rg 8 Kc6 8 Rxg7 Kd6 9 Rd7+ and 5...Kb8 because 6 Rd 3 can no longer be met by $6 \ldots \mathrm{Kc} 6$, which leaves only $6 \ldots \mathrm{Re} 3$, and now the rook is too close to the White king: 6 Rdl Kc6 7 Rd7 Rf3+ 8 Kg 4 and wins.]

## Luring the Black rook to another rank

*3.35 (S402, RP15)
Československýs šach 1950


White to move and win
The solver will start by trying 1 Rh7. But the continuation after $1 \ldots$ Rd5+ is not easy to see and so he will perhaps look for something else. Most tempting is 1 Rh 8 . White threatens 2 Rc8+ K-- 3 Rg8, and $1 . . \mathrm{Kc} 7$ is easily refuted ( 2 Rg 8 ) as is 1 ...Rd5+ ( 2 Ke 4 , for now $2 \ldots \mathrm{Rd} 1$ can be met by $3 \mathrm{Rc} 8+$ and $2 \ldots \mathrm{Rg} 5$ by 3 e 7 ). But $1 . . \operatorname{Re} 3+$ leaves White no way forward.

The first move is indeed $\mathbf{1} \mathbf{R h} 7$, and the most promising defence, as we have seen, is $1 . . . R d 5+$. White cannot reply 2 Ke 4 , because as a good host he cannot allow the Black rook to occupy the g-file without making preparations for its
arrival. Correct is $2 \mathbf{K f 4} \mathbf{R d 4}+\mathbf{3} \mathbf{~ K f} 3$ (the guest must still be politely put off) 3...Rd3+ 4 Ke4 (now we are ready for him) Rg3 5 Rxg7 Kd6 6 Kf5 Rf3+ and we see the point of White's manoeuvre: 7 Kg 4 and wins easily. The rook must be lured back to the third rank so that White can attack it at an opportune moment and gain a tempo.

If Black plays 3...Rd1, there follows 4 Rxg7 Rg1 5 Ra7 Rxg6 6 e7 Rg8 $7 \mathrm{Kf} 4 / \mathrm{Ke} 4$ etc. The White king is well placed on f3, as it would be on d3, whereas on e3 or g3 it would stand badly.

## Luring the Black rook to another file

> *3.36 (S403, RP16)
> Československy' šach 1950


White to move and win
White's plan of campaign will be to put his rook on the seventh rank and capture the Black pawn. The first move will therefore be 1 Ra5. Black's king cannot keep the rook away from a7, because after $1 . . . \mathrm{Kb} 62 \operatorname{Re} 5$ White will win easily.

Black must therefore either give up his pawn or seek to take advantage of the fact that its capture will leave the White rook blocking its king's access to the seventh rank. However, an immediate 1 ...Rd1? fails against $2 \mathrm{Ra} 7+$, when $2 \ldots \mathrm{Kd6}$ will lose the rook and $2 \ldots$ Kc6 will allow the White king to find shelter on the seventh rank (3 Rxg7 Rfl + $4 \mathrm{Ke} 5 \mathrm{Re} 1+5 \mathrm{Kf6}$
etc). The win after $2 \ldots \mathrm{Kd} 83 \mathrm{Rxg} 7$ is already familiar from study $\mathbf{3 . 2 6}$.

Black therefore opens his defence by playing 1...Rf3+. This gets the rook away from its inconvenient position on the d-file, and if White now plays 2 Ke 4 ? we see Black's plan: 2...Rfl 3 Ra7+ Kd6 4 Rxg 7 Rg 1 and even the advantage of two pawns avails White nothing. We notice that Black could not play $2 \ldots \mathrm{Rg} 3$, taking the $g$-file at once, on account of 3 Ra7+Kd64e7Rgl 5 e8Q Rel+6 Kf5 Rxe8 7 Rxg7 winning. This promotion of the e-pawn is typical. $5 \mathrm{e} 8 \mathrm{~N}+$ is of course also good enough.

So the rook will continue checking until the White king leaves the fifth rank, after which it will retreat to the first rank.

Can White force a win in spite of this? The answer is not difficult to find once we reflect that Black could not play to dl straight away because the rook was badly placed on the d-file. So we simply have to lure the rook back to the d-file, and White will win easily.

The main line is thus 1 Ra5 Rf3+ 2 Ke5 Re3+ $\mathbf{3}$ Kd5 Rd3+ (now we have the Black rook where we want him) 4 Ke4 Rd1 $5 \mathrm{Ra} 7+\mathrm{Kc} 6$ (5...Kd6 is not possible and so Black loses a tempo) 6 Rxg7 and wins.

If Black tries $1 \ldots$ Kd6, White plays 2 Ra6+ Kd5 3 Ra7 Rf3+4 Kg4 Rfl 5 e7 Rgl $+6 \mathrm{Kf} 3 \mathrm{Rel} 7 \mathrm{Rd} 7+$ and wins, but not 3 e7 on account of $3 \ldots \operatorname{Re} 34 \mathrm{Ra} 7$ Re5+ $5 \mathrm{Kf4} 4 \mathrm{Re} 4+6 \mathrm{Kf} 3$ Re6 (6...Rel? $7 \mathrm{Rd} 7+$ !) with a draw.
[This exposition illustrates one of the differences between human and computer analysis. After 2 Ke 4 Rfl 3 Ra7+ Kd6 4 Rxg7, a computer with a complete table of results for $\mathrm{R}+\mathrm{P} \vee \mathrm{R}$ is likely to give preference to $4 \ldots$ Kxe6, because it can see at once that the resulting position is drawn. But many similar positions with $\mathbf{R}+\mathbf{P} \vee \mathrm{R}$ are won, and Mandler cannot be blamed for playing $4 \ldots \mathrm{Rg} 1$ and transposing into one of the standard drawing positions of this
section. There is a minor dual at the end, where 6 e 7 is as good as 6 Rxg 7 (the White king threatens to hide in the top right corner, and if 6 ...Re1 $7 \mathrm{Kf5} \mathrm{Kd} 6$ then 8 e8Q Rxe8 9 Rxg7 with a rather simpler $R+P \vee R$ win), and the same is of course true in the line $1 \ldots \mathrm{Rd} 12 \mathrm{Ra} 7+$ Kc6. But the point of the study lies in the luring of the rook to the unfortunate d-file, and the dual does not arise until long after this has been done.]

## White spurns the capture of the Black pawn

3.37 (S404)

Československýsach 1950


White to move and win
This study reminds us of study $\mathbf{3 . 3 4}$. After 1 Rf7 Rd4+ White must again keep the Black rook from the g-file, 2 Kf , but the matter is less urgent than in the previous study because after $2 \ldots$ Rd3+ White can play 3 Ke 4 and allow Black to play 3...Rg3. The continuation is as before: 4 Rxg7 Kd6 5 Kf5 Rf3+ 6 Kg 4 etc. The continuation if Black plays 2...Rdl is likewise as before: 3 Rxg 7 Rg 1 4 Ra7 Rxg6 5 e7.

But after 1...Rg2 we have something new. All of a sudden, White spurns the capture on g 7 ( 2 Rxg 7 ? Kd6 with a draw), and plays 2 Ra7! with the continuation 2...Rxg6 3 e7 Re6 4 Ra6+ etc. If instead Black plays $2 \ldots \mathrm{Kd} 6$, there follows a now familiar sacrifice of the
e-pawn: 3 e7 Re2 4 e8Q Rxe8 5 Rxg7 and wins.

If Black plays $1 . .$. Rf $2+$, White must reply 2 Kg 3 . Other moves allow 2 ...Rg2, for example 2 Ke4? Rg2 3 Ra7 Kd6 and 4 e 7 is met by $4 . . . \operatorname{Re} 2+$, or 2 Ke 3 ? Rg 2 3 Ra7 Rxg6 and either 4 e7 Re6+ or 4 Ra6+ Kd5 5 e7 Rxa6 6 e8Q Re6+.

## The White king goes round three sides of a square

3.38 (S406, RP20)

Československy šach 1950


White to move and win
If White starts 1 Kf5?, Black replies 1...Kb7. White has no continuation better than 2 Rd6, and this blocks his king's path to the seventh rank. The only other way that is king can escape the Black checks is to come down to the second rank, and this leads only to a draw. The same happens after 1 Rc6.

But perhaps we are speaking too soon. We shall soon see that there is a very subtle distinction between the correct line and the line displayed above.

The correct first move is $\mathbf{1}$ Rd6, threatening 2 Rd 7 with an easy win. The reply $1 . . . \mathrm{Kc} 7$ does not help ( $2 \mathrm{Rd} 7+\mathrm{Kc} 6$ 3 Rxg7 Rgl+4 Kf5, and 4...Kd6 will be met by $5 \mathrm{Rd} 7+$ ). Black must therefore check, 1...Rg1+.

It may now seem that there is a gap at c6 through which the White king can slip. But after $1 \ldots \mathrm{RgI}+2 \mathrm{Kf5} \mathrm{Rfl}+$

3 Ke5 Re1+ 4 Kd5 Black will stop checking in order to play $4 \ldots \mathrm{Kc} 8$. This is the right moment for this move, because White cannot reply 5 Rd 7 on account of $5 . . \mathrm{Rdl}+$ and an exchange of rooks. If instead White tries 5 Ra6, we have $5 . . \mathrm{Kd} 8$ and $6 \mathrm{Ra} 7 \mathrm{RdI}+$ is again a draw.

So the White king will have to come down to the second rank anyway. Can we play 2 Kf 3 straight away? No, because 2...Kc7 3 Rd7+ Kc6 4 Rxg7 Kd6 will be drawn, and playing 4 Ra 7 instead of capturing the pawn will not help. True, Black cannot reply 4...Rxg6 on account of 5 e 7 Re6 6 Ra6+, but 4...Kd6 is good enough to draw ( 5 e7 Re1 6 e8Q Rxe8 7 Rxg7 Ke6).

The position after 2 Kf 3 is bad for White because the Black rook is posted where it is most effective, namely on the g-file. So let us try to lure it away from this file, and only then to put the White king on f3: 2 Kf5 Rf1+ 3 Ke4 Re1+ 4 Kf3. Now White will win; play might continue 4 ...Rfl+ 5 Ke 2 (threat 6 e 7 ) Rf5 6 Rd7 (again threatening e7) Kc8 (6...Re5+ doesn't help) 7 Rxg7 Kd8 $8 \mathrm{Rd} 7+\mathrm{Ke} 89 \mathrm{~g} 7$ and wins in a manner we have seen in previous studies.

But does the White king really have to go round the diamond path g4-f5-e4-f3? Can it not play say $3 \mathrm{Ke5}$ (instead of $3 \mathrm{Ke} 4) \mathrm{Rel}+4 \mathrm{Kf4} \mathrm{Rfl}+5 \mathrm{Ke} 3$ ?

No, because the White king is now on e3 instead of f3, and we have the line 5...Kc7 6 Rd7+ Kc6 7 Rxg7 Rgl 8 Ra7 Rxg6 9 e7 Re6+. With the White king on e3, this draws for Black; with the king on f3, Black's move ...Re6 is not check, and White wins.

After 1 Rc6? Kb7 2 Rd6 we have the same situation as after 1 Rd6! apart from the position of the Black king, but this imperceptible change means the difference between a draw and a loss. After 1 Rd6 Rgl+ $2 \mathrm{Kf5} \mathrm{Rfl}+3 \mathrm{Ke} 4$ Rgl White has an easy win by 4 Rd7. After 1 Rc6 Kb7 2 Rd6 Rg1+ 3 Kf5 $\mathrm{RfI}+4 \mathrm{Ke} 4 \mathrm{Rg} 1$ we have only $5 \mathrm{Rd} 7+$
(even though this move now gives check, its effect is weaker) Kc 66 Rxg 7 Kd 6 , and we already know this position to be drawn. The move 1 Rc6 allows the Black king to reach c6 too soon.

1 Kf5? Kb7 2 Rd6 leads to the same position.

## The White king marches bravely into hostile fire

3.39 (S407)

Československýs šach 1956


Black to move, White to win
In this study, Black deliberately passes up several opportunities of capturing a White pawn. The reason is not far to seek. For example, after 1...Rg5+ 2 Kf 2 Rxg6 3 Rel Black will not be able to prevent White from winning.

But after $\mathbf{1 . . . K b 5} 2 \mathbf{K} 2 \mathbf{K b 6}$ it is not easy to see a win for White. It appears that 3 e 7 leads nowhere, because the loss of the e-pawn will be inevitable. But after 3...Rf5+ (3...Rh8 is met by the same manoeuvre Ke3-d4-d5) White plays not 4 Kg 3 (refuted by $4 . . \mathrm{Re} 5$ ) but 4 Ke 3 , exposing himself to the apparently decisive check 4...Re5+. However, after 5 Kd4 Rxe7 6 Kd5 we have a position where all Black's efforts to preserve his pawn are doomed to failure, for example 6...Re2 7 Rc6+ Kb7 (7...Kb5 8 Rc7) 8 Re6 Rd2+ 9 Ke5 Kc8 (9...Rd7 10 Re8 Kc6 11 Ke6) 10 Re 7 Kd 811 Rxg 7 Ke 8 12 Rf7. If instead Black puts the question
to the White king at the second move, 2...Rf5+, moving to the e-file does not work because the White pawn is still on the sixth rank, but instead we have 3 Kg 3 Kb6 (3...Re5 4 Rc7) 4 Rc8 (not an easy continuation) Re5 5 Rg8.

If Black plays 1 ...Re5, White wins by 2 Rc7 Rg5+ 3 Kf2 Rxg6 4 Rc6! Rf6+ $5 \mathrm{Ke} 3 / \mathrm{Kg} 3$.

We may note a tempting false trail. If after 1...Kb5 2 Kf 2 Kb 6 , White plays 3 Rel? instead of 3 e 7 , we have 3 ...Rh8 (3...Rf5+ fails) 4 Rd1 Kc6 (not 4...Re8) 5 Rd7 Rh5 6 Rd8 Re5 7 Rg8 Kd6 and a draw.

By starting with Black to move, we have kept the variation 1 ...Re5.
[This is among the most difficult to analyse of Mandler's studies, and my computer burnt a lot of midnight electricity satisfying itself that the verdicts at the ends of some of the lines were correct. In the variation 1 ...Re5, after 4...Rf6+ 5 Ke 3 , play might continue 5 ...Rfl (to get below the White pawn) 6 Rc 2 Rf 8 (if $6 \ldots$...R6 hoping to force the White rook back to c6 then 7 Rc4+ and 8 Re4) 7 Ke4 Re8 $8 \mathrm{Ke5}$ Kb5 9 Rc 7 and Black will soon be overwhelmed. Another line here is 4...Rg5 intending 5...Re5, which might lead to 5 Rc4+ Kb5 6 Re4 Rf5 +7 Ke4 Rf8 8 Kd4 Kc6 9 Ke5 Kc7 10 e7 Re8 11 Ke6. In the line $1 . . . \mathrm{Kb} 52 \mathrm{Kf} 2 \mathrm{~Kb} 6$ 3 Rel, the reply $3 \ldots$ Rf5 + does indeed fail: 4 Kg 3 Rf 85 Rd 1 Kc 66 Rd 7 Rf 1 7 Rxg7 Kd6 8 e7 Kd7 9 Kh2 Rf5 10 Rh7 etc. Sadly, there is one flaw. In the line 1...Kb5 2 Kf2 Kb6 3 e7 Rf5+ 4 Kg 3 , Mandler thought that 4 ...Re5 5 Rfl demanded another refusal to capture in the shape of $5 \ldots \mathrm{Kc} 6$, but while this is indeed effective ( $6 \mathrm{Rf} 7 \mathrm{Kd7} 7 \mathrm{Rxg} 7$ Rg5+ $8 \mathrm{Kf4} \mathrm{Rgl}$ with a standard drawn position in this ending) the capture 5...Rxe7 also works: 6 Rf7 Rc7 and Black draws as in one of the false trails in study 3.29. A pity, but it scarcely justifies relegating the study to Appendix D.]

## D. Other rook studies

A plagiarism?
3.40 (S408, RP31)

Práce 1952


White to move and win
Play starts $1 \mathbf{K b 4}$, and after 1...Ke4 2 Kc 5 Ke 5 the solution is quite easy. White plays 3 Rf7 Ke4 4 Rf1 Kd3 $5 \mathrm{Rd} 1+\mathrm{Ke} 26 \mathrm{Rd} 7$ and wins. However, if after 3 Rf7 it were White's move he would be unable to win, because he would have to make either d6 or f6 available to the Black king.

So Black tries 1...Kf4, ready to meet 2 Kc 5 by 2...Ke4. Now White cannot play 3 Kf7? on account of 3...Ke5. He does however have a unique waiting move at his disposal, 3 Rg 7 , and after 3...Ke5 he can indeed play 4 Rf7.

But Black has another way of holding back the White king, namely $\mathbf{1}$...Re5. After 2 Kc 4 ( 2 Kc 3 merely wastes time) Ke4 White is at a loss what to do. After $3 \mathrm{Kf7} \mathrm{Ke} 3$ we have a position where Black to move would lose at once (4...Ke4 5 Rfl), but unfortunately it is White's move. 3 Rg 7 allows Black to play 3...Kf5, which will ensure the draw. 3 Kc3 does not seriously come into consideration, not because of 3 ...Kd5 (when 4 Rh5 wins) but because of 3...Re6. So the only hope left to White is to play $\mathbf{3} \mathbf{K f 7} \mathbf{K e} \mathbf{3}$ after all and then to try and transfer the move to Black. This can
be done by 4 Rg 7 Ke4 5 Rh 7 Ke 36 Rf 7, and 6 ...Ke4 7 Rf1 will follow. But if Black plays 5...Re6, the naive anticipatory move 6 Rf 7 would be a decisive mistake; there would follow 6...Rc6+ 7 Kb5 Re6 8 Rfl (8 Kc5 Ke5) Kd3 $9 \mathrm{Rd} 1+\mathrm{Ke} 210 \mathrm{Rd} 7 \mathrm{Ke} 311 \mathrm{Kc} 5$ Ke4 with a draw. White must play 6 Kc 5 Ke5 7 Rf7 Ke4 8 Rfl etc.

The study had a predecessor. The Dutch composer H. Weenink published the following study in The Chess Amateur in 1925: White Kh1, Ra7, Pd6 (3), Black Kb1, Rg5 (2), win by 1 d7 Rd5 2 Kg 2 Kc2 3 Kf 3 Kd 34 Kf 4 Kd 4 and we have the same position as after 1 Kb 4 Re 5 2 Kc 4 Ke 4 in the study above. Is my study therefore a plagiarism? (In chess composition, we use this term even when the coincidence is accidental [but not in England, see below].) The fact that the studies have different introductions would not be thought significant. But Weenink's study has only a single line of play, and although this can be regarded as the main line even in the later study, the presence of a second analogous variation in 1...Kf4 may give my own study the right to an independent existence. A tourney judge might look on the matter differently.
[I cannot find the Weenink study in The Chess Amateur, and Harold van der Heijden's "Endgame study database 2000 " gives its source as Tijdschrift v.d. $K N S B$. More seriously, it must be stressed that while it may be the practice in other languages for the term "plagiarism" in chess composition merely to denote identity or significant similarity without implying anything about how the similarity arose, this is emphatically not the case in everyday English, and anyone who uses the term about someone else's work does so at his peril. The term in English implies conscious and deliberate copying, and this applies to chess composition just as to anything else. On the substance of the
present case, I imagine that Mandler would have put "after Weenink" had he consciously used Weenink's study as a starting point (see for example 2.2), and I have no doubt that he composed his own study independently and found out about Weenink's later. This happens much more often than non-composers realise; the chessmen impose their own logic, and if two composers hit on the same idea and try to set it as clearly and convincingly as possible, they are quite likely to end up with identical positions. Think of two parachutists who have been dropped on a hill at night with instructions to make their way to its summit: their initial landing points may have been completely different, but they will end up at the same goal.]

## The White king's journey is precisely determined

## *3.41 (S409, RP1) Práce 1952



White to move and win
The experienced solver will see at a glance that $1 \mathrm{Rg} 8+$ ? Kh3 2 Rg 6 is not going to work. Neither will he spend time on 1 f7?, because he knows that the premature advance of the pawn to the seventh rank will let the win slip away. Indeed, 1 f7 Rf4+ $2 \mathrm{Kb5}$ Kfl 3 Kc6 Rf2 gives Black an easy draw. Black has other drawing continuations as well, for example $2 \ldots \mathrm{Kf} 2$ or $2 \ldots \mathrm{Kf} 3$, but he must
play so that if the White king approaches the pawn he can check it away.

Both sides will try to get their kings into play, that is into the neighbourhood of the pawn. The reader unfamiliar with the delicate nature of rook endings might imagine that it is immaterial which routes they choose. If the Black king does not interfere, the White king can get to f 7 in five moves in fifteen different ways. Even after it has reached the c-file, it may still have six different possibilities. Its correct path is however precisely determined, and at the end we shall see that it cannot choose one of the quickest routes. Nor is it immaterial which route the Black king chooses.
$1 \mathrm{Kb4}$ would be a serious mistake. Black would answer 1...Rf5, and he would then put his king on the f -file and never allow the White king into play. Correct is therefore $\mathbf{1}$ Kb5. Now 1...Rf5+ will be met by $2 \mathrm{Kc6}$ and Black has lost time, so Black must play 1...Kg3. If he plays $1 \ldots \mathrm{Kf} 3$ or $1 \ldots \mathrm{Kh} 3$ instead, White wins immediately by 2 f 7 , but after 1 ... Kg 3 he can meet 2 f 7 by 2 ...Rf5+ and 3...Kf2, for example 3 Kc6 Kf2 4 Kd 7 Rf3 5 Ke6 Re3+ etc.

After $1 \ldots \mathrm{Kg} 3$, the White king has to choose between the three squares c6, c5, and c4. 2 Kc 4 is clearly bad on account of 2 ..Rf5. The more likely of the two remaining moves seems to be 2 Kc 6 , but this move also is bad. Black plays $2 \ldots \mathrm{Kg} 4$ getting nearer to the pawn, and if $3 \mathrm{Kd} 6 / \mathrm{Kd} 7$ then 3 ... Kf 54 Rg 8 (4 Ke7 Rel+ 5 Kf7 Ral) Rd1+ 5 Ke7 Rel+ 6 Kf7 Ral 7 Re8 Ra6 with a draw. So the pawn must advance, 3 f7, and Black replies 3 ...Rf6+. If White now plays 4 Kd 7 , the reply $4 \ldots$ Kf5 gives a position of reciprocal zugzwang. Black to play would lose, because ...Ke5 would be met by $\mathrm{Re} 8+$ and... Kg 5 by $\mathrm{Rg} 8+$, while ...Kf4 would allow Ke7 releasing the White rook. But it is White's move, and he must relinquish his favourable situation. Let us keep this reciprocal
zugzwang (wKd7, Rf8, Pf7, bKf5, Rf6) in mind.

If 4 Kd 7 doesn't work, perhaps we should try to transfer the tempo. If instead of 4 Kd 7 we play 4 Kc 7 , Black cannot play 4 ...Kf5 (when 5 Kd 7 will win) nor can he play 4 ...Kf4 on account of $5 \mathrm{Kd} 8 \mathrm{Rf} 56 \mathrm{Kd} 7 \mathrm{Rd} 5+$ (6...Rf6 7 Ke7) 7 Kc6! Rf5 8 Kd6. The two kings and the Black rook are now one rank lower than in the position of reciprocal zugzwang previously noted, and White will win easily ( $8 \ldots \mathrm{Rf6}+9 \mathrm{Ke} 7$ or $8 \ldots \mathrm{Kf} 3$ 9 Ke 6 , in each case releasing the White rook). It seems that we have found the answer. But we are speaking too soon, because Black has a better defence. After 4 Kc 7 he plays $4 \ldots \mathrm{Kf} 35 \mathrm{Kd} 7 \mathrm{Rf} 4$, and White's joy has turned to ashes. The promotion square is blocked by his rook, his king cannot get in front of his pawn, and he must resign himself to a draw.

So the move 2 Kc6? has let the win slip out of White's hands. Correct is 2 Kc 5 with the continuation 2 ... Kg4 3 f Rf5+ Kd6. After 4...Kf4 White wins by 5 Kd7 Rd5+ 6 Kc6 Rf5 7 Kd6 and either $7 \ldots \mathrm{Rf} 6+8 \mathrm{Ke} 7$ or $7 \ldots \mathrm{Kf3} 8$ Ke6.

One surprise at the beginning, another at the end
3.42 (S410, version)

Práce 1952, version


White to move and win
According to Réti's definition, for an
ending to deserve the title "study" it must demonstrate something worthy of attention, a surprise of some kind, some touch of refinement or sparkle, and so on. But the terms "thematic point" and "surprise" are very far from synoymous. The thematic play in a study usually involves two surprises, one when it starts and one when it reaches its climax.

After $1 \operatorname{Re} 7$ (moving the rook to the queen's side would facilitate the Black king's approach to the pawn) Rf4 (Black in his turn concentrates on keeping the enemy king away from the pawn) we have the first surprising move, the start of the key combination: 2 Kc3. 2 d6 is insufficient because after $2 \ldots$ Rf6 3 d 7 the move 3 ...Rd6+ gives check, so White must move his king and has no time for any other move. But if White wants to get his king off the d-file, why does he play Kc3, and not Ke3 with a simultaneous attack on the Black rook? Because after the correct move 2 Kc 3 we have 2...Ra4 3 d6 Ra6 4 d7 Rd6 5 Re6+ and White wins. If White had played the incorrect move 2 Ke 3 , the capturing move 5 ...Rxe 6 would now put his own king in check. This second surprise provides the climax of the thematic play.

If Black tries 1...Rf7, we have 2 Re5 Rf4 3 d6, but not 2 Re4 on account of 2...Ra7 3 Kc 3 (by playing his rook to the fourth rank, White has barred it to his king) Kf7 4 Kb 4 (else $4 .$. Ra5 etc) Re7.
[I have moved the Black rook to fl from 66 to cut out an alternative if less tidy win starting 1 Rc 7 . In the try line 2 Re4 Ra7 3 Kc 3 , Mandler actually plays 3...Ra5 at once, relying on 4 d6 Kf6 and overlooking 4 Re6+ K-- 5 Kc 4. Fortunately an alternative is available. 3...Kf6 also draws, but it allows 4 Re6 + and I think 3...Kf7 is cleaner.]

## The Black rook finds itself caught in the pincers

*3.43 (S412, RP5)
Práce 1954


White to move and win

The key to the solution is the following position of reciprocal zugzwang: White Kd5, Rc5, Pb5, Black Kd3, Rb6. White to play clearly cannot win (1 Ke5 Rh6), but Black to play must weaken his position to such an extent that his position becomes irrecoverable: 1...Ke3 2 Kc 4 (2 Rc3+ also works), or $1 \ldots \mathrm{Rb} 8$ 2 Kc6 Rc8+ (2...Kd4 2 Rh5) 3 Kb6 etc, or 1...Rh6 2 Rc1.

Let us revert to the diagram. If both sides move only their kings, White cannot gain the necessary opposition. Black will meet 1 Kh 5 with $1 . . \mathrm{Kh} 3$, and 1 Kg 5 with $1 . . \mathrm{Kg} 3$. The task of gaining a tempo will therefore fall to the White rook.

At his first move, the White king must choose between g5 and h5. We give preference to 1 Kh 5 , because it leaves more space for the White rook on the fifth rank. This insignificant difference, four squares instead of five, is decisive! But perhaps you will object that the move 1 Rh 5 also allows the Black rook one extra square; why is this difference not similarly decisive? Perhaps we can explain with the aid of a precept from practical play. Every player knows that the side which wants to capitalize on a
position with better development must avoid exchanging pieces. Just as such a player avoids reducing material, so White in our study plays so as not to reduce the space available to the pieces. To give both sides a greater choice (be it of pieces or of squares) works to the advantage of the attacker rather than the defender. However, this note does not necessarily apply to endings with unlike material; for example, in the ending $\mathrm{R} \vee \mathrm{N}$ it is quite the reverse.

After 1 Kh 5 Kg 32 Kg 5 it is easy for White, for example $2 \ldots$ Kf3 3 Kf5 Rh6 $4 \mathrm{Rc} 3+\mathrm{Ke} 25 \mathrm{Rb} 3 \mathrm{Kd} 26 \mathrm{~b} 6 \mathrm{Kc} 27 \mathrm{~b} 7$ etc or $2 \ldots \mathrm{Rb} 83 \mathrm{Kf5} \mathrm{Kf} 34 \mathrm{Ke} 5 \mathrm{Ke} 3$ 5 Kd 5 Kd 36 Kc 6 etc. Black therefore plays 1...Kh3. Now White plays 2 Rg5, exploiting the full width of the battlefield. The Black rook must abandon its favourable position, and on 2...Rb7/Rb8 there follows 3 Kg 6 Kh 4 4 Rc 5 Kg 45 Kf 6 Kf 46 Ke6 Ke4 7 Kd 6 Kd4 8 Rh5 Kc4 9 Kc6 with a win.

After the relatively better 2...Rd6, White must play 3 Rf5. 3 Re 5 would be a mistake on account of $3 \ldots \mathrm{Kg} 3$ with 4 Kg 5 Kf3 5 Kf5 Rh6 or 4 Rf5 Re6 5 Kg5 Rd6 6 Re5 (6 Rc5 Rb6) Kf3 7 Kf5 Rh6 8 Rd5 Ke3 9 Ke5 Rg6 10 Rc5 Rb6. After the correct move 3 Rf5 there follows $\mathbf{3}$...Kg3 4 Kg 5 Re6 (Black has no other square on the sixth rank, if we ignore ... Rb 6 to which White has of course the winning reply Rc5) 5 Rd5 Kf3 (Black already has no rook move) 6 Kf5 Rh6 7 Rd3+ Ke2 8 Rb3 Kd2 9 b6 Kc2 10 b7.

On 2...Re6 there follows 3 Rd5 Kg 3 $4 \mathrm{Kg} 5 \mathrm{Kf} 35 \mathrm{Kf} 5 \mathrm{Rh} 66 \mathrm{Rd} 3+$ and wins, but not 3 Rf5? Kg3 4 Kg5 Rd6 5 Re5 Kf3 6 Kf5 Rh6 7 Rd5 Ke3 8 Ke5 Rg6. If Black plays 2...Rf6 then 3 Rd5 and 3 Re5 both win, but 3 Rd 5 Kg 34 Kg 5 Re6 $5 \mathrm{Kf5}$ is the simpler. The only drawing move after 1 Kg 5 ? Kg 32 Rf 5 is 2...Rd6 (3 Re5 Kf3 4 Kf5 Rh6 etc).

We have seen that the correct continuation after 1 Kh5 Kh3 2 Rg5 Rd6 is 3 Rf5, and it might appear that White
is applying the principle of gradually restricting his opponent. But the reply to $2 \ldots$ Re 6 is the waiting move 3 Rd5, and 3 Rf5 would be a mistake. Here White does not continue to restrict his opponent, and allows him access to the f-file. Now we recognize the true reason governing the White rook's choice of move. White plays so that the Black rook will find itself caught between the pincers of White's rook and king, in such a way that an attack on it by the king will gain a decisive tempo. Black's attempts to defend himself merely put his rook directly into the press. In the first variation (2...Rd6), White plays 3 Rf5 Kg 34 Kg 5 , and Black will have to move to a square where the White pieces can surround it. The move 2 ...Re6 has the advantage that 3 Rf5 will allow the rook to escape the pincers ( $3 \ldots \mathrm{Kg} 34 \mathrm{Kg} 5$ Rd6), but against this the move 3 Rd5 grasps it straight away. The Black rook will be attacked by the White king with gain of tempo, and as we have seen, not even the eventual sally $3 \ldots \mathrm{Kg} 34 \mathrm{Kg} 5 \mathrm{Kf} 3$ 5 Kff Rh 6 is of avail.

Even in a simple study, the solver must see to the end before making his first first move
3.44 (S414)

Československý šach 1958


White to move and draw
1 Kc7! Kf2 2 Rf5+ Ke3 3 Re5+ Re4

4 Rxe4+ Kxe4 5 a6 e1Q 7 a7 and draws.

If White had played 1 Kc6?, Black could now gain a crucial tempo, for example 6...Ke5 $7 \mathrm{Kc} 7 \mathrm{Qa} 5+8 \mathrm{~Kb} 7$ Qb5+ 9 Kc 7 Qa6 10 Kb 8 Qb6+ 11 Ka 8 Qc6+ 12 Kb 8 Kd 6.

Everything hangs on the first move
3.45 (S417)

Thèmes-64 1958


White to move and win
The White pawn cannot promote without the help of its king. The king has a choice between using the square g6 and journeying via $f 7$ or $g 7$, the latter after the rook has moved away, 1 Kg 6 hardly seems good, because this move will give the Black king access to the g-file. But 1 Kf7 seems promising. If Black replies 1 ...d3, there will follow 2 Kg 8 and Black cannot play 2 ...d2 on account of 3 Rd 7 .

However, $1 \mathrm{Kf7}$ is not the answer. Black replies 1...Rxh7 2 Rxh7+ Kg 3 (to prevent 3 Rh 4 ) 3 Ke 6 and now care is needed 3...Kf3! (3...Kf4? 4 Kd 5 d 35 Kc 4 d2 6 Rd7) 4 Rd7 and 4...Ke4 draws, but not 4...Ke3? 5 Kd5!

Might 1 Rd7 be better? After 1...Kg3 2 Kg 7 it appears that the Black king will not reach the pawn on d4 in time. However he can succeed as follows: 2...Rg4+ 3 Kf8 Rh4 4 Kg 8 Kf 35 Rxd 4 Rxd4 6 h 8 Q Rd8+ and Black will actually win. That Black eventually wins
in this line is not of importance; what matters is that White does not.

If 1 Kg 6 then Black plays $1 \ldots \mathrm{Kg} 3$, and if White cuts him off by 2 Rf7 the Black b-pawn springs into action: $2 \ldots$... 53 Kg 7 b4 4 h8Q Rxh8 5 Kxh8 b3.

This last attempt gives us a new idea. We play 1 Rf7 at once, with continuation $1 \ldots \mathrm{~d} 3$ (or $1 . . . \mathrm{Kg} 3 / \mathrm{Kg} 2$ ) $2 \mathrm{Kg} 7 \mathrm{Rg} 4+$ 3 Kf8 Rh4 4 Kg8 Rg4+ 5 Rg7. Now $1 \ldots \mathrm{Kg} 52 \mathrm{Kg} 7 \mathrm{~b} 5$ is defeated by 3 h 8 Q Rxh8 4 Kxh8 b4 5 Rd7 b3 6 Rxd4.

Once we have found the correct first move, the study is solved. Its interest lies in this move, and in the refutations of $1 \mathrm{Kf7}$ and 1 Rd7.

## Now the defence works, now it doesn't

*3.46 (S420, RP8)
C'eskoslovenskýs sach 1954


White to move and win
1 Kxe6 is refuted by $1 \ldots$ Rh4. The rook threatens to occupy the sixth rank, where its attack on the front pawn will tie down the White rook, and if White plays 2 Rf8 to prevent this Black simply returns to the a-file by $2 \ldots \mathrm{Ra} 4$. It is also easy to see that 1 a7 is bad, because the White rook will then be tied to a8 and we shall need the gap between a6 and a8 as a shelter for the White king. The attempt to take the White king round the Black pawn also fails: 1 Ke5? Ra5+ 2 Kd6 e5 3 Kc6 Rxa3 4 Kb 6 (4 Kb5 e4) Rb3+ 5 Ka 7 (5 Ka5
$\mathrm{Ra} 3+6 \mathrm{~Kb} 4 \mathrm{~Kb} 2)$ e4 etc.
What can White do now? All that is left is the apparently nonsensical move 1 Ra7. And have we not just said that the gap between a6 and a8 must be preserved? Yes, but we shall free a7 again as soon as possible, and the move does have a purpose: it makes Kxe6 a genuine threat, because after say 1 ...Rxa3 2 Kxe 6 Rh3 3 Rf7 Ra3 White can play 4 a 7.

So $1 \mathbf{R a} 7$ is indeed the way to start, and after 1...Rxa3 2 Kxe6 Black can try to save himself by checking on the third rank. He does not want to give White time to play Ra8, while White does not want to allow the Black rook to gain the sixth rank. The simple 2 ...Re3+ 3 Kd 5 Rd3+ is easily evaded, $4 \mathrm{Kc} 5 \mathrm{Rc} 3+$ $5 \mathrm{~Kb} 5 \mathrm{Rb} 3+6 \mathrm{Ka} 4 \mathrm{Rb} 67 \mathrm{Ka} 5$ and the White rook is free to move. However, Black can strengthen his attack by playing 2...Ka2 first. He need not fear an immediate 3 Ra8 (3...Rh3 4 Rf8 Ra3 as before), and the perpetual check on the third rank seems assured. But at the right moment White can indeed allow the Black rook to occupy the sixth rank, playing $3 \mathrm{Kd} 5 \mathrm{Rd} 3+4 \mathrm{Kc} 4$ and meeting 4...Rd6 by $5 \mathrm{~Kb} 5 \mathrm{Rd} 5+6$ Kc6 Ra5 $7 \mathrm{Kb6} \mathrm{Ra} 38 \mathrm{R}$-- and so on.

On the third rank, the Black rook is too close to the White king. Instead of playing 2...Ka2, therefore, Black withdraws his rook to the second rank: 2...Ra2. Now he can pursue the White king from a safe distance, checking him until he comes down to the third rank and then occupying the sixth rank. Nor does $3 \mathrm{Kd} 7 \mathrm{Rd} 2+4 \mathrm{Kc} 8$ help White, because after 4...Rd6 5 Kb 7 Rh 6 his king is preventing his rook from leaving the a-file.

But White just has a way out. He plays 3 Ra8 (renewing the gap) and after 3...Rh2 he plays 4 Rf8, because 4 ...Ra2 will be met by $\mathbf{5 R f} \mathbf{1 + K b 2} \mathbf{6 R f} \mathbf{~}+$ etc.

In the diagram position, 1 Kxe 6 was refuted by 1 ...Rh4 (2 Rf8 Ra4). A similar position arises after the decoy of the

Black rook to a2, but now the equivalent Black manoeuvre fails.
[Mandler actually calls this study "A Roman idea", "Roman" being a problemists' term for a certain type of decoy manoeuvre, but I do not expect my readers to be familiar with problem terminology and I have substituted a title which everyone will understand.]

## An obscure position of reciprocal zugzwang

3.47 (S422, RP12) Československýs sach 1938


White to move and draw
Let us start by playing through the solution: 1 Ke4 g3 $2 \mathrm{Ke} 3 \mathrm{f5} 3 \mathrm{Kf} 3 \mathrm{~g} 2$ 4 Kf2 f4 $5 \mathrm{Kg} 1 \mathrm{Kg} 36 \mathrm{Re} 2 \mathrm{f} 37 \mathrm{Rxg} 2+$ fxg2 stalemate.

It is clear from the first three moves that White is trying to avoid being outtempoed. What position of reciprocal zugzwang is involved?

White must play so that when the Black pawns have reached f5 and g3, the White king is on f 3 with Black to move. Each of Black's three available moves now decisively weakens his position. 3...Kh2 is met by 4 Rxh4+ (new we see why the rook must stay on the fourth rank), 3...f4 4 Rc 2 g 2 will lead to the loss of Black's most important pawn, and the results of 3 ...g2 can been seen above.

But if White had to move in this position, say after $1 \mathrm{Ke} 4 \mathrm{~g} 32 \mathrm{Kf3}$ ? f5, he
would have to abandon his favourable set-up, for example 3 Rc 2 f 44 Rcl g 2 or 3 Rclg 2 .

Why cannot White play 1 Kf4, intending $1 \ldots \mathrm{~g} 32 \mathrm{Ke} 3$ as in the solution? It is met by $1 . . . \mathrm{f} 5$. White has no continuation better than 2 Ke 3 , upon which Black sacrifices his f-pawn ( $2 . . . \mathrm{f} 4+$ 3 Kxf4) and so opens the f-file, allowing his rook to intervene with check at a suitable moment: for example, 3...g3 $4 \mathrm{Kf} 3 \mathrm{~g} 25 \mathrm{Kf} 2 \mathrm{Rf} 8+6 \mathrm{Ke} 2 \mathrm{~g} 1 \mathrm{Q}$ and wins.

White must therefore play $1 \mathrm{Ke4}$, in order to meet 1...f5+ with 2 Kf4 preventing the further advance of the pawn. The continuation 2...g3 3 Kf3 now gives the required position.

If after 1 Ke 4 g 32 Ke 3 Black plays $2 \ldots \mathrm{Kg} 2$, there follows $3 \mathrm{Rc} 2+$ and either 3...Kgl $4 \mathrm{Kf} 3 \mathrm{f} 55 \mathrm{Rcl}+\mathrm{Kh} 26 \mathrm{Rc} 2+$ Kh3 7 Rc4 or 3...Kh1 4 Kf3 Rxc7 5 Rxc 7 g2 6 Rh7.
[Of course Black can avoid giving the stalemate at the end of the main line, but it doesn't help. Suppose 6...Kf3 instead of $6 \ldots \mathrm{f} 3$. Play continues 7 Rc3+ Ke2 8 Kxg2 f3+9 Kh2! f2 $10 \mathrm{Rc} 2+\mathrm{Ke} 3$ 11 Rcl , and now $11 \ldots$ Rxc7 12 Rxc7 flQ sets up another stalemate and allows $13 \operatorname{Re} 7+$ with a perpetual check on the seventh rank; alternatively, 11...Kd2 12 Ral Rxc 713 Kg 2 , and the f-pawn can be saved only at the cost of a second perpetual check.]

## Driving the rook to the side

3.48 (S424, RP33) Československýs šach 1954


White to move and win
The pawns on the $h$-file will limit the movement of the Black rook if we can push him on to this line. However, it is initially an advantage for White that his rook is on the h -file and Black's on the g-file. If White plays 1 Rg 7 , he allows 1...Rh8 (1...Rf8 loses) followed by the escape of the Black king to f 8 , and the Black rook is no longer tied to the eighth rank because the check $\mathrm{Rg} 8+$ is not feasible. But if White starts by advancing his king, the Black rook has to stay on the eighth rank.

1 Kd6? is not good. After 1 ...Kd8 White will have to move, and this is a position where the side to move is at a disadvantage. 2 Rxf7 frees $\mathbf{f 7}$ for the Black king, and $2 \ldots \mathrm{Ke} 83 \mathrm{Ra} 7 \mathrm{Rg} 2$ will give Black a draw. 2 Rg 7 is met by $2 \ldots \mathrm{Rf} 8$ 3 Kc6 Re8/Kc8. Correct is $\mathbf{1} \mathrm{Kc} 6!\mathrm{Kd8}$ 2 Kd6 and now it is Black who has to move. After 2...Rf8 (2...Re8 3 Rxf7 Re2 $4 \mathrm{Rf} 8+\mathrm{Re} 85 \mathrm{Rxe} 8+$ ) the move $3 \mathbf{R g} 7$ forces the Black rook to the h -file where its movement is limited, and after 3...Rh8 4 Rxf7 Ke8 5 Ra7 Rh5 6 Ke6 White has an easy win.

## A four-fold echo of a curious pattern

*3.49 (S425, RP9) with E. König
Wiener Schachzeitung 1924


White to move and win
1 f7 Kg7 2 f8Q + Kf8 3 Rf1+ Kg7 (if 3...Rf3 then 4 Ref2, similarly 3...Ke7 4 Rfe1) 4 Rg2+ Kh6 (or $4 . . . \mathrm{Rg} 35 \mathrm{Rfg} 1$ ) 5 Rh1+ Rh3 6 Rgh2 Rc3+ 7 Kb4 Rb3+ 8 Ka4 etc. The same configuration of pieces occurs on four different files.

White's disdain for a Black pawn may cost him dear
*3.50 (S426, RP44)
Svobodné slovo 1958


White to move and win
White must not take the pawn blindly; 1 Kxd6 Rxh7 2 Ke5 Rxh6 is only a draw. Instead, he can take advantage of the fact
that it blocks the sixth rank after the capture of the pawn on h6: $\mathbf{1 ~ K d 7 ~ R x h 7 + ~}$ 2 Ke6 Rxh6+ 3 Kf5. The Black rook is now trapped, even though the White king has exposed himself to check for the third time. 3...Rh5+ 4 Kf4 and White wins. If $2 \ldots$ Kh5 then $3 \mathrm{Kf6}$ Rxh6+ $4 \mathrm{Kf5}$, while if Black plays 1 ...Kh 5 there follows 2 Ke6/Ke7 Kxh6 3 Kf7 Rxh7+ 4 Kf6. Again we have the same pattern, this time as a three-fold echo. This rooktrapping theme will be seen again in the next few studies.

White's disdain for the Black pawn will have serious consequences in the line 1 Kd7 Kh5 2 Ke6/Ke7 Kxh6 3 Kf7 if after 3...d5 he mechanically continues $4 \mathrm{Rh} 1+\mathrm{Kg} 55 \mathrm{Kg} 7$. Black's reply 5...Rxh7+ will force a draw. White does better to play $4 \mathrm{Rg} 6+$, and if $4 \ldots \mathrm{Kh} 5$ then 5 Kg 7 Rd 86 Rd 6 (or $\mathrm{Rg} 1 / \mathrm{Rh} 6+$ ) with a win. But if Black plays $4 . . . \mathrm{Kxh} 7$, White must again be careful. After 5 Rg 1 Kh6 6 Rh1 + Kg5 7 Rxh8 Kf5 White must avoid 8 Rh5 + Ke4 9 Ke6 d4, when neither 10 Rh4+ Ke3 11 Kd5 nor $10 \mathrm{Re} 5+\mathrm{Kf} 3$ will win, and must play 8 Rd8 Ke4 (8...Ke5 9 Ke7 d4 10 Rd7) 9 Ke6 d4 10 Kd6 d3 11 Kc5 Ke3 12 Kc4 d2 13 Kc 3.

If White plays 4 Rd 1 here instead of the correct $4 \mathrm{Rg} 6+$, Black replies $4 \ldots \mathrm{~d} 4$, and after 5 Rxd4 Rxh7+ 6 Kf6 Kh5 the Black rook is safe.
[The computer adds a couple of alternatives to 8 Rd 8 , but they do not affect the main thrust of the study and I think they can be ignored.]

The trapping of a rook hidden behind a sacrifice and an exchange...
3.51 (S428)

Ajedrez (Argentina) 1958
Československýsäach 1954, correction


White to move and win
1 Ne6 fxe6 2 Nxd6 cxd6+ 3 Kxd6 Rxa6+ 4 Kc5 and so on; 3...Ka5 4 Kc6. This study is placed among the rook studies because it shows the same theme as its neighbours.
[The diagram in Studie lacks the pawn on a6, but the correction is self-evident. This is an example of what Mandler calls a "goal-inspired" study in the discussion before study 3.11. As he says there, only occasionally did he compose in this style, and it has to be said that the present example is rather wooden and unappealing; other composers do this sort of thing very much better. Mandler's talent was far better suited to "analysisinspired" composition.]

## ...and enriched with a reciprocal zugzwang

*3.52 (S430, RP46)
Svobodné slovo 1955


White to move and win
Here the rook-trapping theme is spiced by a position of reciprocal zugzwang, which is reached in two similar variations involving surprising White moves.

1 a6 (this isn't the surprising move) Re6+ 2 Ke5 (but this is - after 2 Kd5 Rxa6 White would be in zugzwang) Rxa6 3 Kd5 (now Black is in zugzwang, and White wins).

Similarly, 1 ...Ra8 is met by 2 Kd6! Obviously not 2 Kd 5 ? for the reason we have just seen, but also not $2 \mathrm{Ke5}$ on account of $2 \ldots$ Ka5. If $1 \ldots$ Ka5 then 2 Kd 7 , with $2 \ldots \mathrm{Ra} 83 \mathrm{Kc} 6$ or $2 \ldots \mathrm{Rf} 8$ 3 Kc6 (3 a7? Ka6! 4 Rb8 and only now 4...Rf7+).

Why does the White rook not go to the bottom rank?
3.53 (S432) Československýsach 1954


White to move and win
1 Ra2! The idea that it is not good to start by withdrawing an attacked man to safety is mere prejudice. The whole of the present study is based on the distinction between the two moves available to the attacked man. If White plays 1 Ra1? he reaches the position after Black's fifth move with the onus of moving on himself. We already know this position of reciprocal zugzwang from the previous study, which is a cousin to the present one. $1 . . . \mathrm{Rb} 7+$. Why this check, which allows White to gain a tempo? But if Black wants to take the pawn on b5 with his king, he must first bring his rook nearer so that it is not vulnerable to a skewer check. 2 Kd6 Kxb5 3 a6 Rb6+ (3...Ra7 $4 \mathrm{Rb} 2+$ Kxa6 5 Kc 6 ) 4 Kd5 Rxa6 5 Rb2+ Ka4. If the White rook now stood on the first rank, it would have no good move.

I have put these last three studies in the present chapter even though from the strict point of view of material they do not belong to it. But at least this brings the studies which I have created on the theme of the "trapped rook" neatly together.

