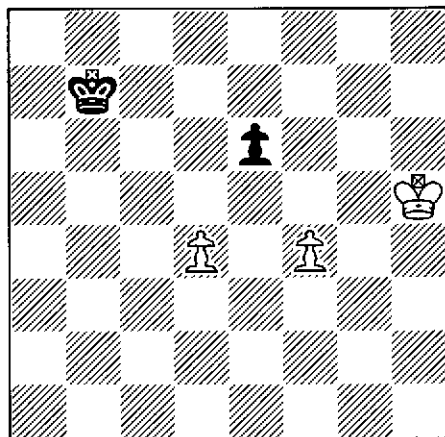# Depth and Beauty

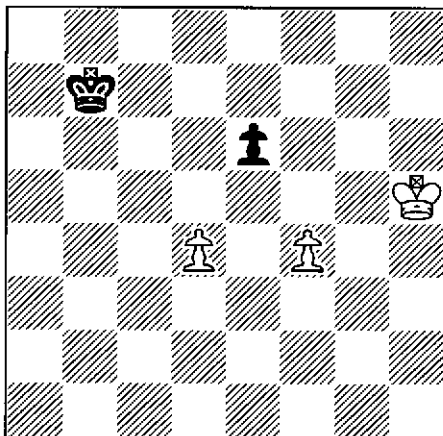## The chess endgame studies of

Artur Mandler

translated and edited by John Beasley

ARVES Book of the Year 2003

Depth and Beauty

The chess endgame studies of

Artur Mandler

White can win only by playing 1 Kh6 Kb6 2 Kh7 Kb7 3 Kh8!!

translated and edited by John Beasley

Dedication

Mandler's own book opens with a composition dedicated to František Macek, but this has unfortunately been found to be unsound. In its place, perhaps I can offer the little trifle below. It encapsulates a manoeuvre which occurred to me while I was analysing one of Mandler's studies for this book, and it gave a lot of trouble to my solvers when I published it in *diagrammes*.

JDB after AM, offered as a small tribute to his memory
diagrammes 2001
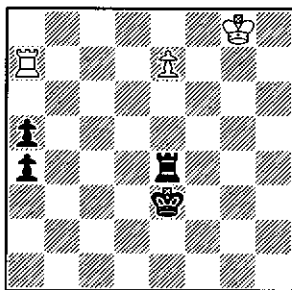
White to move and win

The White king will have to hide on e8 sooner or later, but if we try the natural 1 Kf7/Kf8 Rf4+ 2 Ke8 Black can play 2...Kd3 and reach his pawns in time: 3 Kd7 Rd4+ 4 Ke6 Re4+ 5 Kd6 Rxe7 6 Kxe7/Rxe7 Kc3 and draws, or 3 Kd8 Re4 4 Rxa5 Kc3 5 Rxa4!? Rxa4! 6 e8Q Ra8+, or 3 Rxa5 Kc2! 4 Kd7 Rd4+ 5 Ke6 Re4+ 6 Re5 Rxe5 7 Kxe5 a3. Correct is the roundabout **1 Kf7 Rf4+ 2 Ke6! Re4+ 3 Kd7 Rd4+ 4 Ke8**, after which the Black rook is on d4 instead of f4 and **4...Kd3** can be met by **5 Rd7** pinning (5...a3 6 Rxd4+ Kxd4 7 Kd7 a2 8 e8Q a1Q 9 Qh8+). Moves other than 4...Kd3 give White no trouble (he threatens Rxa5 followed by Kf7 etc, and if 4...Rd5 to prevent this then Kf7 at once). As the reader will see when he or she reaches Chapter 3, all the individual lines in this had already been discovered by Mandler; my only contribution was to add the little walk by the White king to tie everything together.

Contents

Translator's introduction

The English grandmaster Murray Chandler has described the chess endgame study as "a marvellous and calming escape from a busy world", and rarely has this been as true as in the work of the Bohemian composer Artur Mandler (1891-1971). He was a product of the rich chess culture of Central Europe, where a host of fine players and analysts regularly met and stimulated each other, and where the standard expected of the ordinary club player and newspaper reader appears to have been remarkably high. At a time when English chess columns were dominated by the relatively undemanding "White to play and mate in two", the readers of *Prager Presse* were being treated to the subtleties of our title-page study, a completely natural king-and-pawn position where the only way to win is for the White king to leave the central battlefield severely alone and march straight up the board into the corner.

Such an environment was bound to produce endgame study composers. The initial impetus was provided by Oldřich Duras, that splendid chess all-rounder of the period before World War I, who was not only one of the strongest players in the world but also contributed to opening theory and composed endgame studies which are still quoted in the textbooks. But if Duras showed the way, others soon followed: František Dedrle, Josef Hašek, Josef Moravec, Richard Réti, and a host of lesser figures.

And Mandler. Comparisons are odious, but it seems to me that Mandler and Réti are like peaks which rise even above a high plateau; they show a mastery of the natural endgame study which perhaps has been equalled only by the famous Russian composer Nikolai Grigoriev. John Roycroft, writing in the endgame study magazine *EG* after Mandler's death, summed up his work two short sentences: "Here is no depth for depth's sake. Instead, subtlety, beauty and economy combine inextricably and inevitably, so it seems, into one glorious achievement." (*EG* 31, April 1973, page 421.) Depth there certainly is, often in abundance, but it is the natural depth of the game and not the artificial complexity of the problem: the depth inherent in a position such as **1.10**, where the reasons for the White king's unexpected manoeuvre lie many moves into the future. And as for subtlety, beauty, and economy, his studies will speak for themselves.

But they can speak only if they are given a platform. A collection of Réti's studies was produced by Mandler after his untimely death (original German edition 1931, Spanish translation 1983), and Grigoriev's work has also been collected by his friends and admirers (original Russian edition 1952, second Russian edition 1954, Italian translation 1965). But a complete record of Mandler's studies is available only in Czech in his 1970 book *Studie*, and this is now difficult to obtain even in its country of origin.

In essence, therefore, the present volume is a translation into English of *Studie*, but I have supplemented the text with occasional passages from Mandler's 1965 book *64 studií z oboru věžových a pěšcových koncovek* ("64 rook and pawn studies") and I have added a small but important group of studies which appeared in his 1970 problem collection. I have checked everything by computer, and this has inevitably disclosed some faults; the unsound studies for which I have been unable to find a

satisfactory correction have been placed in an appendix. I suspect that most are unrescueable, at least without resorting to constructional crudities which Mandler would not have permitted, but some may yield to the treatment of a future repairman more skilful than I. This possibility apart, I think we now have a complete collection of Mandler's studies, or at least of such as he wanted to be preserved, conveniently presented for an English-speaking readership.

My editorial procedure needs little comment. Numbers "S" and "RP" above the diagrams identify the studies in *Studie* and *64 studií z oboru věžových a pěšcových koncovek* respectively. Exclamation and question marks accompanying moves are always Mandler's. Where Mandler highlights a main line, I have followed him; where he does not, I have highlighted the main line of the solution in the conventional manner, but at one point I think this may have distorted his intentions and I have added a note. Anything in square brackets [...] is my own. Issue 31 of *EG* contains a list of Mandler's favourite studies, confided to Harold Lommer in one of the last letters he wrote; I have marked these studies with asterisks, but if readers are looking for a convenient pointer to the most rewarding items I would add **3.29** and **5.13**. The actual translation was relatively straightforward (Mandler's writing is beautifully clear, a boon to any translator), but the captions with which he introduces each study were sometimes a challenge; I hope I have surmounted it successfully. Obvious misprints (there are only a few) have been silently corrected. The need to cover gaps left by unsound studies has forced me to compose occasional pieces of bridging text, and this also has been done silently as long as the added material seemed to be routine. There are however two places where more creative rewriting seemed appropriate. Mandler presents the exposition of two studies in the form of short narratives, and sadly both studies have been faulted by the computer. It would have been a pity to lose the stories altogether (they are not great literature, but they are pleasantly different from the normal run of chess analysis), so I have moved their characters to two other studies and have let them play out their little comedies there instead. The analytic details have inevitably been changed, but I have tried to preserve dialogue and characterization.

There are four appendices. Appendix A contains translations of the introductions written by Bedřich Thelen to *64 studií z oboru věžových a pěšcových koncovek* and by Břetislav Soukup-Bardon to *Studie*. Both these writers knew Mandler personally, and it is appropriate that their appreciations be included. Appendix B exposes a Mandler rook-against-knight analysis to the pitiless glare of the definitive computer results now available, and shows the remarkably high quality of his work. Appendix C contains details of prizes and other honours. I am well aware that I may be acting controversially in relegating such matters to an appendix, but many of Mandler's finest works appeared in newspaper columns where prizes were not on offer, and the reader who is short of time will be much better advised to look for the asterisks denoting Mandler's declared favourites than to seek out the magic words "First Prize". Finally, Appendix D contains the studies that the computer has faulted, and perhaps a future composer will be able to rescue some of them.

Testing and soundness

Everything in this book has been checked by computer, using the programs Hiarcs 7.32 and Fritz 6 on a Pentium III at 450 MHz with 128Mb of RAM. As set up on my machine, these programs automatically consult the Nalimov five-man endgame tablebases as required, and also a "depth to capture" database for $K+R$ v $K+N$ created by John Tamplin. For specific positions, I also made use of Ken Thompson's database for $K+R+B$ v $K+B+N$, and Marc Bourzutschky tested some positions fror me using his databases for $K+R+X$ v $K+R+Y$ and $K+R+2P$ v $K+R$. So far as I know, no error in any of these databases has been reported in the literature, and I think they can be taken as definitive.

Can it therefore be assumed that everything in the book is guaranteed to be correct? Sadly, no. Even if we assume that the computer calculations have not been vitiated by machine or program error, an assumption which is not necessarily justified (there is a known error in Fritz 6, though the circumstances in which it arises are believed to be fully understood and I don't think it has affected any of the analyses I have relied on here), there remain two significant sources of error: operator error (telling the machine to analyse the wrong position, or misreading the result) and the "horizon" effect. A computer may be very fast, but it is still finite, and within a given time it can only perform a certain amount of calculation. Typically, it examines every line to a certain depth and selected lines more deeply, and if it finds a forced winning or drawing line it reports accordingly; otherwise, it makes a judgement based on the deepest positions it has reached, and if there is a winning move "just over the horizon" it will inevitable return the wrong answer. At a late stage in the preparation of the book, I received news of Marc Bourzutschky's databases for $K+R+X$ v $K+R+Y$ and $K+R+2P$ v $K+R$. Marc immediately sent me a file of published studies which he had found to be unsound, and these turned out to include two by Mandler which I had passed as correct. They were demolished by apparently characterless moves whose effectiveness only became apparent some way into the future: so far, in fact, that when I took my computer right up to the position before the crucial move and told it to start looking, it took over an hour to report that the study was indeed faulty.

On this evidence, it must be expected that future analysts with more powerful computers will spot a few errors which I have missed, but I hope that any such error has resulted in the retention of an unsound study and not in the unjustified rejection of a sound one.

The mere discovery of an error is of course very far from the end of the matter. An otherwise good study has an inaccuracy somewhere along the way; do we keep it or don't we? The defender has a resource not analysed by the composer, and although there is an answer it appears to be more difficult and complicated than the play in the alleged solution; should the study be discarded as less than properly convincing? An unsound study is one of a set; are the remainder worth keeping on their own? An unsound study can be corrected, but at a cost in additional material, inelegance, or artificiality; would the composer have accepted the correction? All these require the crystallization of imprecise factors into a yes-or-no decision, and one editor will inevitably differ from another. On the whole, I have tended to come down on the side of harshness, since it does a composer's reputation no good to accompany undoubted masterpieces with works in which the observer is forced to overlook imperfections

or obscurities; but all the omitted studies have been detailed in Appendix D, and it will be a simple matter for future editors who may think otherwise to reinstate them.

Mandler's standards of accuracy were in fact very high. A crude count suggests that around a quarter of his studies have proved faulty, but few pre-computer study composers had a better record and very few worked in fields as deep and difficult as his. A disproportionate number of the flawed studies in fact gained prizes or found their way into anthologies, testimony both to their ambitious nature and to the fact that errors overlooked by Mandler tended to escape the notice of others as well. Some of the mistakes were in positions where one side had an extra piece and the other had one or more advanced pawns, an area where there are no simple rules and even modern computers have to perform a lot of calculation to get the right answer. A few resulted from reliance on "theoretical knowledge" which has since been proved misleading (in accordance with the received wisdom of his day, he assumed draws in positions with Q v Q+P, N v 2B, and B+N v R+B where the computer has now proved that the stronger side can force a win). It should also be realised that Mandler's analyses can have received very little independent checking, since even editors who had the ability to check them are unlikely to have had the time. Most of an editor's time is spent in the sheer practicalities of getting material typeset and corrected, and in dealing with correspondence from solvers and the more error-prone of his community of composers; the name "Mandler" at the top of a page of analysis will normally have caused its acceptance without further ado.

Look at it the other way round. An impartial examination by the powerful and pitiless computers of the present day has indicated that around three-quarters of Mandler's studies were correct, and I doubt if even the perfect knowledge that may become available at some time in the future will reduce this figure below 70 per cent. Given that most of his studies were deep and that some were right on the boundary of pre-computer theoretical knowledge, does this not bear witness to a very high standard of performance?

A suggestion to the reader

When Timothy Whitworth and I wrote *Endgame Magic*, we inserted intermediate diagrams into the text of each study so that even the less expert player could read for pleasure without the need to get out board and men. In respect of the present book, it soon became clear that this would be impracticable; the deeper studies would require so many intermediate diagrams that their presence would be as much of a distraction as a help. But a valuable aid to reading is now to hand in the shape of a typical computer chess program, which not only presents the user with a board and men but (a) gives an automatic analysis of alternative lines of play and (b) enables the reader to try out a line not given by the composer and then to put the men back to the point of departure with one click of a mouse. So if you find you need to get out board and men when reading through some of these studies - and if you are of anything less than master strength, I think you certainly *will* need to get them out - you may find the "intelligent board and men" provided by a modern computer to be by far the best tool for use.

Acknowledgements

Mandler's text starts with a glowing acknowledgement to Gen.-Maj. František Macek, "to whom I give most grateful thanks for his all-round help in the preparation of this book, a task which has involved many hours of devoted labour, and all the more so because he was similarly willing to assist in the first volume [Mandler's problem collection]. Without his endeavours, my problems would not have been published in collected form." The name of František Macek has appeared frequently in Czech study literature in recent years, and always with respect and affection. Although not a composer himself, he was a great supporter of the art, one of those whose self-sacrificing hard work makes possible the achievements of others. His name will be perpetuated by his collection of some 55,000 studies, the fruit of half a lifetime of dedicated endeavour. This is now in the custody of Harold van der Heijden, who has been collating and merging it with his own computer-based collection: a splendid resource for present and future generations.

My own acknowledgements come into three categories. In respect of the text itself, I am grateful to Emil Vlasák, Vladimír Kos, and the library of the British Chess Problem Society for material, to Emil Vlasák and Jan Lerch for examining some of my alleged demolitions and for pointing out an error in one of them, to Jiří Jelínek and František Macek for their attempts to put me into contact with Mandler's son, to Marc Bourzutschky for sending me his file of demolished studies and for testing some further positions at my request, to Chris Feather for a translation from German, to Guy Howarth for help in accessing the K+R v K+N "depth to capture" database compiled by John Tamplin, and to Ken Whyld for tracking down the Amelung study mentioned in Chapter 2. Financially, I am grateful to a friend who shares my belief that this has been a job worth doing and will be giving practical effect to this opinion by meeting half the printer's bill, and to ARVES, which by adopting the book as an "ARVES book of the year" has widened its circulation and underwritten part of its cost. And by no means least, I would like to thank all my Czech, English, and English-speaking foreign friends whose kind words about my previous translations of Czech works on chess have encouraged me to continue doing them. Truly it was a good day when my daughter greeted me with the news that there was this young man who played the oboe and spoke no English, and they were going to get married...

1. Pawn studies

[The pawn study was one of Mandler's favourite fields, and his achievements compare with the best. It is generally accepted that the leading composer of pawn studies to date has been Grigoriev, and in terms of numbers this is certainly true. Grigoriev's collected works include over a hundred pawn studies, Mandler's *Studie* fewer than thirty; Grigoriev took half the prizes in the 1936 pawn ending tourney of *La Stratégie*, Mandler did not. But numbers are only half the story, and Mandler's best pawn studies are in no way inferior to the best of Grigoriev's. Several of his favourites are to be found in this chapter, and they range from full-blooded masterpieces to the most delicate of lightweight classics.]

Pawn against pawn

*1.1 (S309)
*Národní Osvobození* 1938
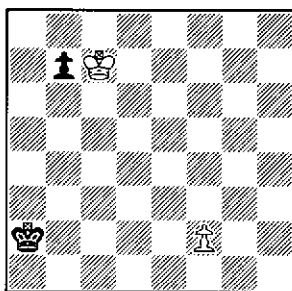
White to move and win

Four-man positions are very popular among the chess public, because they tempt the solver to have a go, and this is particularly true of pawn endings. The solver is surprised when he discovers the solution not to be quite as easy as the simplicity of the position had led him to believe. Here, the solver, if he is solving honestly and not just trying to guess the composer's intention, will start by trying 1 Kxb7. But this does not work; Black's reply 1...Kb3 brings his king within the square of White's pawn, and White's king is too far away to defend it. Neither is 1 Kb6 correct, on account of 1...Kb3 2 Kc5 Kc3 3 f4 b5 etc. Correct is **1 Kd6 Ka3** (not 1...Kb3, the king must not

block his own pawn) **2 Kc5 Ka4 3 f4 b5 4 f5 b4 5 Kc4** (a difficult move to find, because the White king loses two tempi while Black only loses one) **b3 6 Kc3 Ka3 7 f6 b2 8 f7 b1Q 9 f8Q+** and wins. If 1...b5 then 2 Kc5 Kb3 3 Kxb5 (3 f4? Kc3 and draws) Kc3 4 Kc5 Kd3 5 Kd5 and wins.

[This study illustrates how an idea can pass through several hands, gaining something each time. Duras (*Národní listy* 1905) showed how White can sometimes win a pawn race by decoying the Black king so that White's promotion gives check: White Kb4, Pb2 (2), Black Kh6, Pg7 (2), play 1 Kc5 and either 1...g5 2 b4 g4 3 Kd4 Kg5 4 b5 g3 5 Ke3 Kg4 6 b6 Kh3 7 b7 g2 8 Kf2 Kh2 9 b8Q+ or 1...Kg6 2 b4 Kf7 3 b5 Ke7 4 Kc6 Kd8 5 Kb7 g5 6 Ka7 g4 7 b6 g3 8 b7 g2 9 b8Q+. Grigoriev (*Izvestia* 1928) sharpened this by letting Black promote first: White Kd3, Pf2 (2), Black Ka4, Pb6 (2), play 1 Kd4 and either 1...b5 2 f4 b4 3 f5 b3 4 Kc3 Ka3 5 f6 etc or 1...Kb5 2 Kd5 Ka6 3 f4 Kb7 4 f5 Kc7 5 Ke6 Kd8 6 Kf7. Mandler sharpened the play still further by starting with a refusal to capture. There is now only one main line and there are minor alternatives at moves 4 and 5 (White can play 5 Kd4 instead of Kc4, or 4 Kd4 and 5 f5), but the opening move and the climax are both so striking that the study has become one of the all-time classics.]

A study particularly useful to beginners

*1.2 (S310, RP47)
Šachové umění 1949
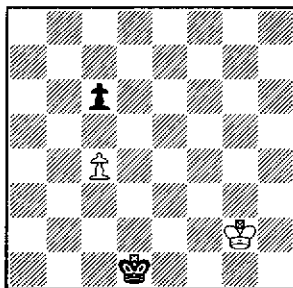
White to move and draw

It is easy to see that White cannot prevent Black from capturing the White pawn. If Black can achieve this while the pawns are still in their present positions, he will always win, because the capture will put his king on c4, and this is one of the three critical squares b4, c4, d4, two ranks in front of the pawn, whose occupation guarantees the win. To avoid this, White must advance his pawn to c5 in the course of the play, unless Black prevents him by advancing his own pawn first.

If White advances his pawn to c5, he must meet its capture by playing Kc3, thus stopping Black from occupying one of the critical squares. If however Black plays his pawn to c5, the critical squares become b3, c3, d3, and White must reply to the capture by playing Kc2.

If White plays 1 c5? Black replies 1...Ke2, and this ensures the win; White must play to g1 or g3, and he will be left too far away from c3. But 1...Kd2 and 1...Kc2 will not be good enough for Black, because White can reply 2 Kf2 or Kf1 (but not 2 Kf3 on account of 2...Kd3) and he will reach c3 in time.

So the first move will be a king move to f1, f2, or f3. Let us start by trying

1 Kf3. After 1...Kd2 (1...c5 is wholly bad and even loses, while 1...Kc2 allows the draw) 2 Kf2 (2 c5 Kd3 and 2 Ke4 Kc3 3 c5 Kc4 both lose, though Black must not meet 2 c5 by 2...Kc3 on account of 3 Ke2) Kd3 (or 2...Kc3 or 2...c5) 3 c5 Kd4/Kc4 and the White king has only two moves to cover the three files which separate him from c3. However, had he played 1 Kf2 or 1 Kf1, he could have met 1...Kd2 by 2 c5 Kd3 3 Ke1, arriving at c3 just in time.

We are now reduced to Kf1 and Kf2. But after 1 Kf1? c5 2 Kf2 Kd2 White again finds himself three files away from the critical square with only two moves to get there. The correct move is **1 Kf2**. Now White can meet **1...c5** by 2 Ke3. But after **2...Kc2** he must not play 3 Ke4 Kc3 4 Kd5, because 4...Kb4 would win; instead, he must play **3 Ke2 Kc3 4 Kd1 Kxc4 5 Kc2** with a draw. And **1...Kd2** is met, as we have already seen, by **2 c5 Kd3 3 Ke1 Kd4 4 Kd2 Kxc5 5 Kc3**.

We have gone into this simple study in some detail, because although it will give no trouble to experienced players it is very useful to beginners.

Close and distant opposition

1.3 (S311, RP48)
Tijdschrift 1921
(with R. Réti)
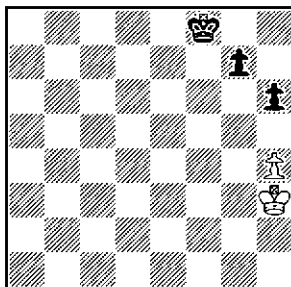
White to move and draw

We analyse this study and the next from

the inside out, looking first at what is going to happen later in the solution, then seeing what the early moves have to be in order to create favourable conditions for it.

1) Black's move ...h5 comes into consideration only when the White king cannot reply by moving to g5.

2) The White pawn can make the first pawn move if the White king is already on e5 or f5, or if its advance will leave White with the opposition. So as long as the pawns are in their present positions, Black cannot put the kings into opposition (either close or distant) because White will then draw by h5.

3) If Black plays ...g6 while his king is on the seventh rank, White must take up the distant opposition; if the Black king is on the sixth rank, White must take up the close opposition (the vertical opposition is always implied); if the Black king has reached the fifth rank, ...g6 is always a winning move.

4) As long as the Black king has not reached the fifth rank, the opposition is harmful. If Black has it, White draws by h5; if White has it, Black wins by ...g6. If the Black king has reached f6, the pawns still being where they are, White must prevent its advance to the fifth rank. Which move is correct, Ke4 or Kg4? Only Ke4. If White plays Kg4, giving the king configuration g4/f6, Black wins by 1...Ke5 2 Kh5 Kf4 3 Kg6 Kg4 4 Kxg7 h5. But if the White king is on e4, White can meet ...g6 or ...Ke6 by Kf4. The squares e4/f6, and likewise f4/e6, mutually correspond, and the side which has to move while the kings are in this position is in zugzwang: White to move loses, Black to move can only draw.

5) After 1 Kg3 (Kg4) Kf7, the White king cannot move to the f-file. 2 Kf3 and 2 Kf5 would allow Black to win by 2...g6, and 2 Kf4 by 2...Ke6. So, from the diagram position, the Black king can play to f6 without White's being able to play to e4 in reply. However, there is another

square which corresponds to **f6**, and this is **h5**. If Black has to move in the position h5/f6, gaining the fifth rank does not help him: 1...Ke5 2 Kg6 Kf4 3 Kxg7 h5 4 Kf6! Kg4 5 Ke5 and draws. White to move in this position loses. So f6 and h5 are also corresponding squares.

6) **f7** and **g4** form a further pair of corresponding squares. If the kings are on these squares and White is to move, 1 h5 is met by 1...Ke6 2 Kf4 Kf6 (see point 2 above), 1 Kf5 and 1 Kf3 by 1...g6 (point 3), 1 Kf4 by 1...Ke6 (point 4), and 1...Kg3 by 1...Kf6, since the White king has access neither to e4 nor to h5 (points 4 and 5). If Black is to move, 1...g6 does not come into consideration (2 Kf3), and neither does 1...Ke6 (2 Kf4). 1...Kg6 fails against 2 Kf4 Kh5 3 Kg3 g6 4 Kh3, and 1...Kf6 against 2 Kh5 (point 5).

7) This has led us to the opening move. 1 Kg4 is met by 1...Kf7, but White must bring his king close enough to meet ...Kf6 by Kh5, and this leaves him no choice but 1 Kg3. Now White will meet 1...Kf7 by 2 Kg4.

8) After 1 Kg3 Ke7 2 Kf3 Kf6 3 Ke4 Kf7 the White king is out of range of g4. However, there is another square which corresponds to **f7**, and that is **e3**. From here, White preserves the options of playing Kc4 or Kf4 if the Black king returns to the sixth rank, and of taking the distant opposition if Black plays ...g6. On 4...Ke7, White keeps the distant non-opposition.

9) The solution therefore unfolds **1 Kg3 Ke7** (for 1...Kf7 see below) **2 Kf3 Kf6** (2...Ke6 3 Kf4 Kf6 4 h5, 2...g6 3 Ke3) **3 Ke4 Kf7** (3...Ke6 4 Kf4, 3...Kg6 4 Kf4) **4 Ke3** and either **4...Ke7 5 Kf3** or **4...g6 5 Kf3**. If **1...Kf7** then **2 Kg4 Kf6 3 Kh5** etc.

[The computer has only a trifling comment to make on this impressive piece of logical analysis: with the kings on e3/e7, White needn't persist with the distant non-opposition, he can play h5 straight away.]

Beneficial and harmful opposition

1.4 (S312, RP61)
La Stratégie 1936
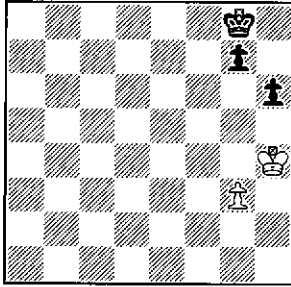
White to move and draw

We give the analysis of this study in the same fashion, dealing in turn with various configurations which arise in the course of the solution.

1) If we have wKf5, Pg4, bKf7, Pg7/h6 with Black to move, 1...g6+ 2 Kf4 is only drawn (2...Kf6 3 g5+, 2...Ke6 3 Ke4 g5 4 Kd4). 1...g5 2 Ke4 Kg6 3 Kf3 is clearly no better. White to move also draws: 1 g5 g6+ 2 Kf4 h5 3 Kf3 Ke6 4 Ke4 Kd6 5 Kd4 Kc6 6 Ke4! This position is therefore always drawn.

2) If we move the position down a rank, giving wKf4, Pg3, bKf6, Pg6/h5, the result with Black to move is unchanged. However, White to move now loses. After 1 g4 g5+ 2 Kf3 h4 3 Kf2 Ke5 4 Ke3 Kd5 White cannot prevent the loss of his pawn, and any other starting move allows the Black king to reach g5. This position is therefore disadvantageous for the side which is to move. The opposition is beneficial.

3) In the position wKf5, Pg3, bKf7, Pg7/h6, with the White pawn on its original square, White to move draws by 1 g4 (see point 1). Black to move plays 1...g6+, and after 2 Ke5 h5 3 Kf4 Kf6 White loses (point 2). The same position arises after 2 Ke4 Kf6 3 Kf4 (3 g4 Kg5 4 Kf3 h5) h5 and after 2 Kf4 Ke6!

(2...Kf6? 3 g4 g5+ 4 Ke4 and either 4...Ke6 5 Kd4 or 4...Kg6 5 Kf3) 3 Ke4 Kf6 4 Kf4 h5. Admittedly, after 1...g6+ 2 Kf4 Ke6 White can try 3 g4 in the hope of 3...Kf6? 4 g5+, but Black has a better move in 3...Kd5. White's try 2 Kg4 is met by 2...Kf6 3 Kh4 (3 Kf4 h5) Kf5 4 g4+ Kf4. So Black to move wins, and in the position f5/f7, the pawns being on their original squares, the opposition is harmful.

4) If the White king is on h5 and the Black on f7, the pawns not having moved, White to move loses, because the only move that does not leave g6 open to the Black king is 1 g4 and the reply 1...Kf6 leaves him with no adequate defence. However, with Black to move White can draw: 1...Kf6 2 g4 Kf7 3 g5. There is hence a fundamental difference between the positions f5/f7 and h5/f7. In the first case the opposition is harmful to its possessor, in the second case beneficial.

5) In the opening position, White cannot play 1 Kh5, because 1...Kf7 would leave him a lost position (point 4), and likewise not 1 g4 on account of 1...Kf7 2 Kh5 Kf6. There remains only **1 Kg4**, and if **1...Kf7** then **2 Kh5** (not 2 Kf5, point 3). If Black plays **1...Kf8**, keeping open the possibility of meeting Kh5 by ...Kf7, White secures the draw by **2 Kf5 Kf7 3 g4** (point 1); but not 2 Kf4 (2...Kf7 3 Kf5 g6+ and Black wins, point 3) nor 2 Kh4 (2...Ke7 or 2...g6).

6) The reply 1...g6 is not dangerous, for example 2 Kf4 Kf7 3 g4 Kf6 4 g5+.

The solution in brief unfolds **1 Kg4 Kf7 2 Kh5, 1...Kf8 2 Kf5 Kf7 3 g4**.

A simple stalemate

1.5 (S313, RP62)
*La Stratégie* 1936
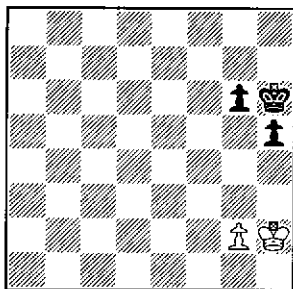
White to move and draw

Black threatens to play 1...Kg5. Let us start by trying 1 g3. After 1...Kg5 2 Kh3 Black avoids 2...Kf5 in favour of 2...Kf6, and now he can meet 3 Kh4 with 3...Kf5 4 Kh3 Kg5 5 Kh2 Kg4 6 Kg2 h4 winning. If instead 3 g4 then 3...Kg5. If 3 Kg2 Black again succeeds in gaining the square g4: 3...Kf5 4 Kf3/Kh3 Kg5 etc.

Neither is 1 Kh3 good. Black replies 1...Kg5 and 2 g3 loses as we have just seen, while 2 Kg3 leads to a Black win as follows: 2...h4+ 3 Kh3 (3 Kf3 Kf5) Kh5 4 g3 hxg3 etc.

Correct is **1 Kg3 Kg5 2 Kh3** (2 Kf3? h4), and now White need not fear 2...h4 because 3 g3 hxg3 4 Kxg3 leads to a draw. Black can still play **2...Kf5** and meet **3 Kh4** by **3...Kf4** in the hope of 4 Kh3? Kg5 gaining square g4 as above. However, White saves himself by **4 g4**, because the capture **4...hxg4** gives stalemate.

Moving the pawn also moves the critical squares

1.6 (RP54)
Národní Osvobození 1938
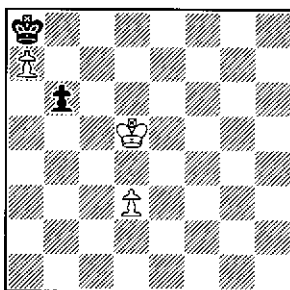
White to move and win

[This study is not given a diagram in *Studie*, though it is referred to in the exposition of the study which follows. In an ending with K + P v K, the "critical" squares are the three squares directly in front of the pawn and two ranks ahead of it, which the king must attain if he is to win. We have already met them in study **1.2**.]

This study is not difficult. The try 1 Kc6 fails against 1...Kxa7. White has nothing better than 2 d4 (after 2 Kc7 Black will promote first), and this harms him by moving the critical squares from the fifth rank to the sixth. There follows 2...b5 3 Kxb5 Kb7, and Black draws.

To gain a decisive tempo, White interpolates 1 Kd6, and only after 1...Kxa7 does he play 2 Kc6. Now the ending after 2...b5 3 Kxb5 Kb7 4 d4 is won. Black therefore tries 2...Ka6, but 3 d4 wins.

Black can try to shift the tempo back by playing 1...Kb7, because 2 a8Q+ Kxa8 3 Kc6 leads to the drawn position already seen. However, White has a better alternative in 3 Kc7 b5 4 d4 b4 5 d5 b3 6 d6 b2 7 d7 b1Q 8 d8Q+ Ka7 9 Qd4+ Ka6 10 Qa4 mate. In this line,

White can hold back a8Q+ until his other pawn has reached d4 or d5.

So the solution is **1 Kd6 Kxa7 2 Kc6** etc, or 1...Kb7 2 a8Q+ Kxa8 3 Kc7 etc.

[Mandler does indeed write "gain" a tempo at the start of the second paragraph, both in *Studie* and in *64 studií z oboru věžových a pěšcových koncovek*. On the face of it, we have a manoeuvre to lose a move and not to gain one, but the effect is to leave White with a tempo in hand later on, and the impression which remains at the end is that he has gained something rather than losing it.]

White must lose two tempi in order to win

1.7 (S314)
Práce 1969
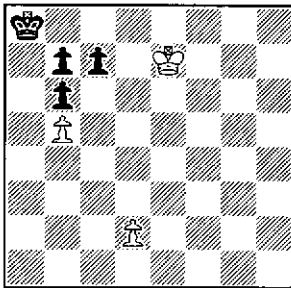
White to move and win

This study was developed from the previous one. 1 Kd7 is bad on account of 1...Kb8! (but not 1...c6? which loses to both 2 Kc7 and 2 bxc6) 2 d3 c6 3 bxc6 bxc6 4 Kxc6 Ka7, giving a position which we have already seen to be drawn. 1 d4 also leads nowhere, this time on account of 1...c6 2 Kd6/Kd7 Kb8 with a draw (but not 1...Kb8 at once, when 2 d5 wins).

Nor does White win by 1 d3 (a loss of a tempo, but at the wrong moment). Black refutes this by 1...c6 or 1...Kb8.

Correct is **1 Kd8!** (first loss of a tempo) **Kb8 2 Kd7 c6 3 bxc6 bxc6**

4 Kxc6 Ka7 5 d3 (second loss of a tempo) and we have reached the position in the previous study after 1 Kd6 Kxa7 2 Kc6.

If Black plays 1...c6, there follows 2 Kc7 (2 bxc6? bxc6 and Black wins) and either 2...cxb5 3 d4 b4 4 d5 b3 5 d6 b2 6 d7 b1Q 7 d8Q+ and wins, or 2...Ka7 3 bxc6 bxc6 4 Kxc6 b5 5 Kxb5 etc. If 2...c5, White replies 3 Kxb6 c4 4 Kc5 Ka7 5 Kxc4 and wins.

The Black king rushes down the board in alarm, only to go back up again

1.8 (S315)
Šachové umění 1949
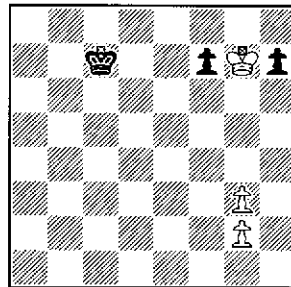
White to move and win

White must obviously eliminate one of the Black pawns, but which? That on f7 appears the more dangerous, but 1 Kxf7 is not good enough: for example, 1...Kd6 2 Kf6 Kd5 3 Kf5 Kd4 and the Black king will keep watch on the White pawns from below, or 2 Kg7 Ke5 3 Kh6 Ke4.

If Black adopts the same tactics in the true solution, he makes the win more difficult but does not prevent it. **1 Kxh7 Kd6 2 Kh6** (2 Kg7 Ke5) **Kd5** (this gives White more trouble than 2...Ke5 3 Kg5, when 3...Ke4 4 Kf6 leaves Black with no good move and other choices lead back into the main line) **3 Kg5** (3 Kh5 Ke4/Kd4 and 4...Ke3 will draw) **Ke5** (again 3...Ke4 is met by 4 Kf6, while

3...Kd4 4 Kf6 Ke4 5 g4 Ke3 6 Ke5 transposes into the main line) **4 g4 Ke4** (if Black plays 4...f6+, the answer is not 5 Kg6 Kf4 6 Kh5 Kg3 with a draw but 5 Kh5 Kf4 6 g5 fxg5 7 g4) **5 Kf6 Ke3** (5...Kf4 6 g5 Kg4 7 g3) **6 Ke5 Kf2** (or 6...Ke2 7 g5 Ke3 8 Kf5 etc) **7 g5 Kg3 8 Kf5** (of course not 8 Kf6 on account of 8...Kf4) **Kh4 9 Kf4 Kh5 10 g3 Kg6 11 Kg4 Kh7 12 Kf5 Kg7 13 g4 Kh7 14 Kf6** and White wins.

There is more than one way to catch a queen

1.9 (S316)
Československý šach 1954
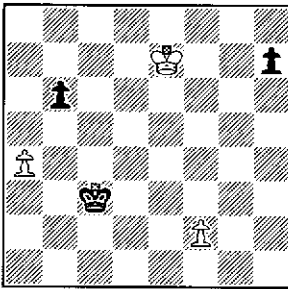
White to move and win

After 1 f4? both the passed pawns will promote, with an obvious draw. If White is to win, he must stop the h-pawn, and hence the king must move at once to the sixth rank. 1 Kd6 does not come into consideration on account of 1...Kd4, after which the h-pawn is already beyond recall: 2 Ke6 Ke4 3 Kf6 Kf4. White would like to play 1 Ke6 and keep his options open, ready to intervene on either wing as necessary, but this also fails to win: 1...h5 2 Kf5 Kb4 3 f4 Kxa4 4 Ke4 Kb5 and Black draws.

So whether he likes it or not, White must block his own passed pawn with his first move and play **1 Kf6**. If Black now tries 1...h5, there follows 2 Kg5 Kd4 3 Kxh5 and he has lost his pawn without

compensation. He therefore plays **1...Kd4 2 f4 h5** (2...Ke4 3 f5 h5 4 Kg5 transposes) **3 Kg5 Ke4** (Black has no alternative but to put his king on the diagonal a8-h1, but it will soon prove fateful to him) **4 f5 h4 5 f6 h3 6 f7 h2 7 f8Q h1Q 8 Qa8+** etc.

There remains **1...Kb4**, and now we have a reworking of the theme of study **1.1**: 2 f4 (not 2 Ke5 on account of 2...h5 3 f4 h4 4 Ke4 Kc5, when 5 f5 Kd6 will lose and White must play 5 Kf3 even to draw) **Kxa4 3 f5 b5 4 Ke5** (4 Kg5 leads nowhere - it is remarkable that the march of the White king to c3 has a greater effect than the advance of the pawn on f5) **b4 5 Kd4 b3 6 Kc3 Ka3 7 f6 b2 8 f7 b1Q 9 f8Q+** and either **9...Ka2 10 Qa8 mate** or **9...Ka4 10 Qa8+ Kb5 11 Qb7+**.

Just what is going on here?

*1.10 (S317, RP58)
Československý šach 1951
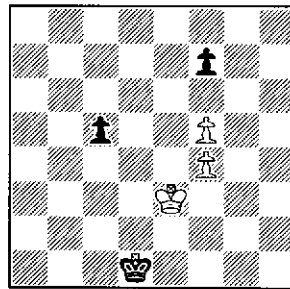
White to move and draw

The chief difficulty for the solver here lies in finding out precisely what is going on. The principal enemy is clearly the Black pawn on c5. The White king can capture this in three moves. It appears to make no difference whether he approaches it via d3 or e4, but the more probable route seems to be via d3. However, Black replies 1...f6, and after 2 Kc4 Kd2 3 Kxc5 Ke3 both 4 Kd5 Kxf4 5 Ke6 Kg5

and 4 Kc4 Kxf4 5 Kd3 Kxf5 leave him with a win.

The route via e4 brings no advantage, on the contrary it allows Black to get after the White pawns without the preliminary move ...f6: 1 Ke4? Kd2 2 Kd5 Ke3 3 Kxc5 Kxf4 and wins.

The next try will lie in the move 1 f6. This of course means giving up the capture of the pawn on c5. After 1 f6 Kc2 2 Ke4 c4 3 Kd5 c3 4 Kd6 Kd2 5 Ke7 c2 6 Kxf7 c1Q 7 Ke7 Qc5+ 8 Kc8 Qc3+ 9 Kf8 Kd3 10 f7 Ke4 11 Kg8 White certainly draws; the Black king is too far away. But we have been too hasty in playing 4...Kd2 for Black. After the better move 4...Kd3 Black wins, for example 5 Ke7 c2 6 Kxf7 c1Q 7 Ke7 (7 Kg7 Qb2) Qe3+ 8 Kf8 Ke4 9 f7 Kf5 10 Kg7 Qe7 11 Kg8 Qe6 12 Kg7 Qf6+ 13 Kg8 Kg6 14 f5+ Qxf5 15 f8Q Qe6+ etc.

By playing the faulty move 1 f6, White forfeits the possibility of taking the pawn on c5, yet in spite of this he nearly draws. It would be sufficient if the Black king could not play to the third rank at move 4. Slowly, we realize what is truly going on. It has nothing to do with the capture of the pawn on c5, but rather in the setting up of an ending with two pawns against the queen such that the Black king has been unable to reach the third rank before the promotion to queen. We deliberately let the pawn on c5 be.

The requirement of keeping the Black king from the third rank is met by the following solution: **1 Kd3 f6 2 Kc4** (2 Ke4? c4!) **Ke2 3 Kd5! c4 4 Ke6 c3 5 Kxf6 c2 6 Ke7! c1Q 7 f6** and draws. White must not play 6 Kg7? on account of 6...c1Q 7 f6 Qc3 8 Kg6 Ke3 and Black wins.
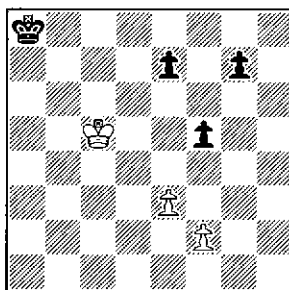
Can the same result not be reached after 1 Ke4? Black now does not play 1...Ke2 (because 2 f6 Kf2 3 Kd5 Ke3 4 Kxc5 Kxf4 5 Kd4 Kf5 6 Ke3 Kxf6 7 Kf4 draws) nor 1...f6, but 1...Kd2

2 Ke5 (2 f6 c4, 2 Kd5 Ke3) Kc3 (2...c4? 3 Kf6 c3 4 Kxf7 c2 5 f6 and draws) 3 f6 c4 4 Kd6 c3 5 Ke7 c2 6 Kxf7 c1Q and wins.

Luring a Black pawn to an apparently more favourable square

1.11 (S318, RP53)
Šachové umění 1949

White to move and win

The main line of this study has a very sharp point. After **1 Kd5 Kb7** the move 2 Ke6 fails against 2...f4! 3 exf4 Kc6, because the apparently strong 4 f5 does not lead to a win. Who would have said that this move would force victory if the Black pawn now on g7 stood instead on g6, ready to capture the White pawn after its advance? Yet this is the only way to win. So White improves by inserting **2 Ke5**, which temporarily prevents the advance of the Black f-pawn (2...f4 3 Kxf4 Kc6 4 Kg5 Kd5 5 Kg6 Ke4 6 Kxg7 Kf3 7 Kf7 e5 8 Ke6), and only after **2...g6** does he play **3 Ke6**. If Black now tries the same defence as before, **3...f4 4 exf4 Kc6**, there follows **5 f5 gxf5 6 f4 Kc5 7 Kxe7 Kd5 8 Kf6 Ke4 9 Kg5** and White wins. If 3...Kc6 then 4 f4 etc.

The difficulty of this study is increased by a large number of tries, of which we give only the main ones. The move 1 Kc6? has only one refutation: 1...Ka7! and either 2 Kd7 f4! or 2 f4 Ka6! Nothing else works. 1...g5 fails against 2 Kd7

(2...e5 3 Kc6 f4 4 exf4 exf4 5 Kf5 or 2...f4 3 exf4 gxf4 4 Kxe7), 1...f4 against 2 exf4 (2...Ka7 3 f5 Ka6 4 f4 or 2...Kb8 3 Kd7 Kb7 4 f5), and 1...Kb8 against 2 Kd7 (2...e5 3 Ke6 f4 4 e4 Kc7 5 Kxe5 f3 6 Kf4 Kd6 7 Kxf3 Kc5 8 Ke3 g5 9 Kd3 Kf4 10 Kd4 g4 11 e5 Kf3 12 e6 etc, or 2...f4 3 exf4 Kb7 4 f5).

After the correct move 1 Kd5 Kb7, it would appear that 2 f4? fails against 2...Kc7 3 Ke6 Kd8 4 Kxf5 Kc8 5 Kg6 Kf8 6 f5 Kg8 7 e4 Kf8 8 e5 e6! 9 f6 Kg8 and either 10 Kg5 Kf7 or 10 Kh5 gxf6, but White can win by playing 5 Ke6! with the continuation 5...K-- 6 f5 Ke8 7 e4 Kf8 (7...Kd8 8 Kf7 etc) 8 Kd7 Kf7 9 e5 Kf8 10 e6 or 5...g6 6 e4 Kf8 7 Kd7 Kf7 8 e5 etc. The true refutation of 2 f4 proceeds 2...Kc7/Kb6 3 Ke6 Kc6/Kc5 4 Kxf5 Kd6! 5 e4 e5 with a draw.

After 1 Kd5 Kb7 2 Kc5 g6, the move 3 f4 fails against 3...Kc7 4 Ke6 Kd8 5 Kf7 Kd7 6 Kxg6 e6 7 Kf7 Kd6 8 Ke8 e5! 9 Kf7 exf4 10 exf4 Kd7.

[In the line 1 Kc6 Ka7 2 Kd7, the computer gives 2...Kb6 as an alternative drawing move for Black, but this is merely a transposition of moves; after 3 Ke6, Black finds he has to play 3...f4 after all.]

White puts off the capture of an advancing Black pawn

1.12 (S319)
Národní Osvobození 1939
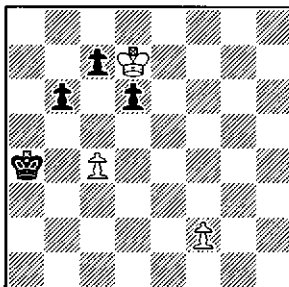
White to move and win

The solver must calculate the main line right through to the end before he can decide on the correct way to start. A knowledge of our opening study **1.1** will help him.

1 Kxc7 fails against 1...Kb4 and 2...Kxc4, 1 f4 against 1...b5 2 cxb5 d5 3 Kxc7 Kxb5 etc. Hence **1 Kc6**. Now 1...d5 2 cxd5 b5 is hopeless on account of 3 Kxc7. Black plays **1...b5 2 cxd5 d5**, and after 3 Kxd5 Kxb5 4 f4 c5 he will promote as quickly as White. But White plays **3 Kc5** and postpones the capture, for he wants to get his king to the fourth rank without loss of time. **3...d4** (3...Ka5 leads to a quick win after 4 f4 d4 5 b6 cxb6+ 6 Kxd4 Kb5 7 Kd5 Ka4 8 f5, or 5...Ka6 6 bxc7) **4 b6 cxb6+ 5 Kxd4** (we know the finish from study **1.1**) **b5 6 f4 b4 7 f5 b3 8 Kc3 Ka3 9 f6 b2 10 f7 b1Q 11 f8Q+** and White wins. If Black tries to rescue himself by 5...Kb5, White wins by 6 Kd5 Ka6 (6...Ka4 7 f4 b5 8 f5 b4 9 Kc4 etc) 7 f4 Kb7 8 f5 Kc7 9 Ke6 Kd8 10 Kf7/Kf6 etc.

Impromptu

**1.13** (S320, RP60)
Práce 1955
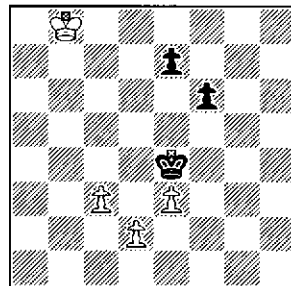
White to move and win

1 c4 f5 2 Ka7! e5 3 c5 f4 4 c6 f3 5 c7 f2 5 c8Q f1Q 7 Qb7+ and wins.

[Before the advent of the computer, endings with Q+Pd4 v Q were assumed to be drawn, so Mandler did not worry

about 2 c5 Kd5 3 d4 e5 4 Kb7 f4 5 exf4 exf4 6 c6 f3 7 c7 f2 8 c8Q f1Q, but computer analysis has shown that this also wins: 9 Qd7+ and mate on move 58 at the latest. Computers of the future may also have something to say about 2 Kb7 e5 3 c5 f4 4 c6 f3 5 c7 f2 6 c8Q, when White gets Q+2P v Q+P. But wins like these are impossible to demonstrate without artificial aid, whereas the elegant crispness of the author's 2 Ka7 retains its charm. Studies such as **1.13** deserve to remain in the literature, even if we have to change the stipulation to something like "White to play and establish a simply won position within 9 moves".]

Just when the solver thinks he has finished, he has to start all over again

1.14 (S321, RP55)
Národní Osvobození 1936
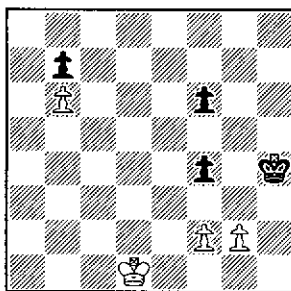
White to move and win

The average solver will perhaps start by playing 1 Ke2? Kg4? Both moves are bad. White's 1 Ke2 lets slip the win, but Black's 1...Kg4 hands it back again. But now 2 f3+? forfeits the win once more: 2...Kg3 3 Kf1 Kh2 4 Kf2 f5 with a drawn position. Correct is 2 Kd3, with for example 2...Kf5 3 Kd4 and either 3...f3 4 gxf3 Kf4 5 Kd5 Kxf3 6 Ke6 Kxf2 7 Kxf6 etc or 3...Ke6 4 Ke4 Kd6 5 Kxf4 Kc6 6 Kf5 Kxb6 7 Kxf6 Kc5 8 Ke5 b5 9 f4 b4 10 f5 b3 11 f6 b2 12 f7 b1Q 13 f8Q+ Kc4 14 Qc8+.

We can strengthen the defence by playing 2...f3 instead of 2...Kf5. Now 3 gxf3 fails against 3...Kxf3 4 Kd4 Kxf2, and if 5 Ke4 then 5...Ke2 6 Kf5 Ke3 7 Kxf6 Kd4 and White even loses. However, White can still win by 3 g3 Kh3 4 Kc3 and either 4...Kg2 5 g4 or 4...Kg4 5 Ke4 f5+ 6 Ke3 etc.

After 1 Ke2, let us try 1...Kg5 instead of 1...Kg4. Wherein lies the difference? After 2 Kd3 f3 3 g3 (clearly 3 gxf3 is still not good) Black can play 3...f5. This is a position of reciprocal zugzwang: Black to move loses, White to move cannot win. 4 Ke3 is met by 4...Kg4, 4 Kd4 by 4...f4 5 gxf4+ Kxf4 6 Kd5 Kf5! 7 Kd6 Ke4 8 Kc7 Kd3 9 Kxb7 Ke2 10 Kc6 Kxf2 11 b7 Kg2 12 b8Q f2.

The move 4 Kd4 fails to win because it is now Black's move and after 4...f4 5 gxf4 Kxf4 he gains the opposition. If however it were White's move in the position after 4 Kd4, he would win. So in the position White Kd3, Pb6/f2/g3, Black Kg5, Pb7/f3/f5, White must delay playing Kd4 until Black has played ...Kh5, or has advanced ...f4 and allowed White to exchange pawns. In reply to ...Kg4, White must play Ke3. It is now clear that the White king must play to d3 in order to set up this position, and so White must not play this move prematurely.

The correct solution is therefore **1 Kd2 Kg5** (1...Kg4 2 Kd3) **2 Kc3 f3 3 g3 f5 4 Kd3!** with continuation 4...Kg4 5 Ke3 or 4...f4 5 gxf4+ Kxf4 6 Kd4 or **4...Kh5 5 Kd4**.

In the variation 4...f4 5 gxf4+ Kxf4 6 Kd4 Kf5, 7 Kd5? would fail against 7...Kf4 8 Kd6 Ke4 9 Kc7 Kd3 10 Kxb7 Ke2 11 Kc6 Kxf2 12 b7 Kg2 13 b8Q f2. Correct is 7 Ke3 Ke5 8 Kxf3 Kd6 9 Kg4 etc, but not 9 Ke4 on account of 9...Kc6 10 f4 Kxb6 11 f5 Kc6 12 Ke5 Kd7 13 Kf6 b5 etc.

1 Kc2 would be wrong on account of 1...f3 2 gxf3 (2 g3+ Kh3) Kg5 3 Kd3 Kf4 4 Ke2 f5.

Let us return to the main line (4...Kh5 5 Kd4). After **5...Kg5** 6 Ke5? Kg4 White has no winning continuation, as shown for example by 7 Kd6 Kh3 8 Kc7 Kg2 9 Kxb7 Kxf2 10 Kc6 Kg2. The position after 6...Kg4 is another reciprocal zugzwang, and if it were Black's move he would lose. White therefore plays **6 Kd5! Kg4** and only now **7 Ke5**, ready to meet 7...Kh3 by 8 Kf4 Kg2 9 Ke3. On **7...Kg5** there now follows **8 Kd6 Kg4 9 Kc7 Kh3 10 Kxb7** and it seems that our work is finished.

But this is far from being the case. In order to free a square for the advance of his passed pawn, The White king has a choice of seven moves. It is remarkable that after **10...Kg2** only one of these seven moves is correct, namely **11 Ka6!** Why not 11 Kc7? Because after 11...Kxf2 12 b7 Kxg3 13 b8Q the Black king is not in check, and the Black pawn will be able to advance to the second rank. In the resulting ending, the pawn on f5 does not help White because it controls the squares g4 and e4 which are needed by the White queen.

And why not 11 Kc6? Because after 11...Kxf2 12 b7 the diagonal a8-h1 will be blocked by the White king, and the promotion of the Black pawn cannot be prevented. But on a6 the king is out of the way of the new queen, and White wins by **11...Kxf2 12 b7 Kg2** (for 12...Ke2 and 12...Kxg3 see below) **13 b8Q f2 14 Qb7+ Kg1** (14...Kxg3 15 Qh1) **15 Qb6 Kg2 16 Qc6+ Kg1 17 Qc5 Kg2 18 Qd5+ Kg1 19 Qxf5** etc. 12...Ke2 13 b8Q f2 14 Qb5+ Ke1 15 Qxf5 etc; 12...Kxg3 13 b8Q+ Kg2 14 Qb7 Kg3 15 Kb5 etc, or 13...Kf2 (instead of 13...Kg2) 14 Qh2+ (14 Kb5 also wins, but I do not consider this a defect because this variation is merely supporting analysis) Ke1 (14...Ke3 15 Qh5) 15 Qh1+ Ke2 16 Qh5.

After the correct move 11 Ka6, White also wins against the defence 11...Kxf2 12 b7 Kxg3 13 b8Q Kg2 14 Qb7 Kf2:

15 Kb5 (this time the White queen cannot reach h5, but the king arrives on the scene just in time) Ke2 16 Qc7+ Kf1 17 Kc4.

The solution in brief: 1 Kd2 Kg5 2 Kc3 f3 3 g3 f5 4 Kd3 Kh5 5 Kd4 Kg5 6 Kd5 Kg4 7 Kc5 Kg5 8 Kd6 Kg4 9 Kc7 Kh3 10 Kxb7 Kg2 11 Ka6 Kxf2 12 b7 Kg2 13 b8Q f2 14 Qb7+ Kg1 15 Qb6 Kg2 16 Qc6+ Kg1 17 Qc5 Kg2 18 Qd5+ Kg1 19 Qxf5 and wins.

Corresponding squares

*1.15 (S322)
Tidskrift för Schack 1967
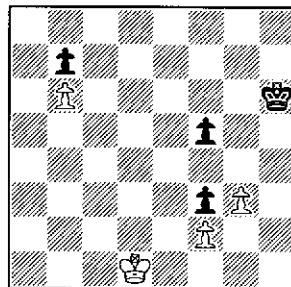
White to move and win

We have already spoken about corresponding squares in the analysis of study **1.3**. Here we have another example. In the preceding study, from which the present study arose, we also saw some corresponding squares, but they were present in smaller numbers.

In the present diagram, the simplest pair of such squares are **g2** and **e3**. If we set the kings on these squares (we always name the square of the Black king first), we soon see that we have a position of reciprocal zugzwang; whoever is to move will lose an important pawn.

If we move the Black king to g4, giving the pair of squares **g4** and **e3**, White to play must move his king, and after 1 Kd4 Kh3 2 Kd3 Kh2 3 Kd2 Kg1 he does not merely fail to win, he

actually loses.

Another pair of corresponding squares is given by **h5** and **d2**. Black to move has no way out; ...Kg4 is met by Kc3, ...Kg5 by Kd3, and ...Kg6 again by Ke3. In the diagram position, White therefore plays 1 Kc2, ready to meet 1...Kg5 by 2 Kd3 and 1...Kh5 by 2 Kd2. 1...Kg6 demands continuing concentration since neither 2 Kd3 nor 2 Kd2 comes into consideration (2 Kd3 Kg5, 2 Kd2 Kh5), but it is not difficult to find the correct continuation 2 Kc3. We have here a further pair of corresponding squares, **g6** and **c3**. After 2...Kf6 there follows 3 Kd4.

So the solution unfolds **1 Kc2 Kg6 2 Kc3 Kg5 3 Kd3 Kh5 4 Kd4** and as after White's fifth move in the preceding study. This time the solution is one move shorter.

[Mandler thought that 2...Kf6 could be met by either 3 Kd4 or 3 Kc4, but the computer disagrees; after 3 Kc4, Black can go for the b-pawn and hold the draw (3...Ke6 4 Kd4 Kd6 5 Ke3 Kc5 6 Kf4 Kxb6 7 Kxf5 Kc5 8 g4 b5 and 12 g8Q b1Q+). This defence fails after 3 Kd4 because the White king is one tempo nearer to the Black f-pawn. So the play is actually a little more precise than Mandler thought, and we might as well spell it out: 2...Kf6 3 Kd4 Kg5 (3...Ke6 4 Ke3 etc) 4 Kd5 rejoining the main line.

This minor analytical point apart, I find it interesting that this later and simpler version should be the one that Mandler included in his list of favourites, even though the earlier version has a slightly longer solution and offers a wider choice at White's first move. Length and complexity may be virtues, but clarity is a greater one.]

A preliminary examination ...

1.16 (S323, RP56)
64 studií z oboru věžových a pěšcových koncovek 1965
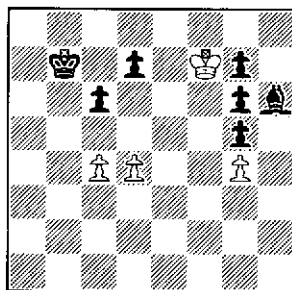
White to move and win

This diagram was not conceived as an independent study, its purpose being solely to simplify the understanding of the next study, so the presence of an immobile Black bishop need not distress us.

White must play so that the move d5 will gain the opposition, and by this we mean the close horizontal opposition. He can gain the distant horizontal opposition straight away, but this is not good enough; after 1 d5 cxd5 2 cxd5 Kb6, both 3 Ke7 Kc5 4 d6 Kc6 and 3 d6 Kc5 4 Ke7 Kc6 leave White with an eventual loss.

In order to gain the close horizontal opposition by the move d5, White must first obtain the close horizontal "non-opposition". He cannot therefore play 1 Ke8 on account of 1...Kc7! nor 1 Ke7? on account of 1...Kc8! For example, 1 Ke7 Kc8 2 d5 cxd5 3 exd5 Kc7 and again Black wins, or 2 Kd6 Kd8 3 c5 Ke8 4 Kc7 Ke7 etc.

Correct is **1 Kf8**. Black now loses because he must move. On 1...Kc8 there follows 2 Ke7 Kc7 3 d5 cxd5 4 cxd5 and either 4...d6 5 Ke6 or 4...Kc8 5 d6, and if Black tries 3...c5 White replies 4 Ke8 with either 4...Kd6 5 Kd8 or 4...d6

5 Ke7. Further winning lines are 1...Kc7 2 Ke8 Kc8 3 Ke7 (or 3 d5) and 1...Kb6 2 Ke7. White also gets a decisive advantage after 1...Kb8 2 d5 cxd5 3 cxd5, for example 3...Kb7 4 Ke8 and either 4...Kc7 5 Kc7 or 4...Kc8 5 d6, and it might seem to us that this is the result of the opposition, but this is an optical illusion. What is important after 1...Kb8 is that the Black king is on the eighth rank, and so cannot reply to 2 d5 cxd5 3 cxd5 by playing to b6. In contrast, it is immaterial whether the White king stands on f8 or f7.

... and a six-fold echo

*1.17 (S324, RP57)
Práce 1949
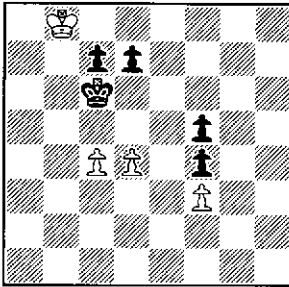
White to move and win

The theme of the preceding study is here multiplied, and the route to the win made easier. After 1 Ka7 Kd6 2 Kb7 c6 3 Kb8 (3 Kc8? Ke7 4 Kc7 Ke6) Ke6 (3...Ke7 4 Kc8) 4 Kc7 Ke7 5 d5 cxd5 6 cxd5 we have reached a position of opposition which we know from the preceding study. After **6...d6** White wins by **7 Kc6**, and after **6...Ke8 7 d6** we have the same position in echo.

A further pair of echoes arises in the variation 1 Ka7 d6 2 Ka6 Kd7 3 Kb7 Kd8 4 Ka7 Ke7 (4...Kd7 5 Kb8, 4...Ke8 5 c5) 5 Ka8 (White can play his fourth and fifth moves the other way round, 4 Ka8 Ke7 5 Ka7) Ke6 (5...Ke8 6 c5,

5...Kd8 6 Kb7, 5...Kd7 6 Kb8, 5...Kf6 6 Kb7 c5 7 d5 Ke5 8 Kc6 Kd4 9 Kxd6 and either 9...Kxc4 10 Kc6 or 9...Ke3 10 Kxc5 etc) 6 Kb7 Kd7 7 c5 dxc5 8 dxc5 and either **8...c6 9 Kb6** or **8...Kd8 9 c6**. If 5...Kd7 (instead of 5...Ke6) there would follow 6 Kb8 Kc6 (6...Kd8 7 c5 Kd7 8 Kb7 c6 9 Kb6 etc) 7 Kc8 Kb6 8 Kd7 (8 d5? c6 9 Kd7 cxd5 10 cxd5 Kc5 11 Ke6 Kd4 12 Kxd6 Ke3 13 Kc5 Kxf3 14 d6 Kg3 15 d7 f3 16 d8Q f2 and draws) Kb7 9 c5 dxc5 10 dxc5 and either **10...c6 11 Kd6** or **10...Kb8 11 c6**. The echoed climactic positions are in bold type.

After 1 Ka7 d6, 2 Kb8 fails on account of 2...Kb6 3 Kc8 Kc6 4 d5+ Kb6 5 Kd7 Kb7 6 Ke6 Kb6 7 Kxf5 Kc5 8 Kxf4 Kxc4 9 Ke4 Kc5 10 f4 c6. It might seem that 2 Ka8 would be more effective, but this also can be defeated: 2...Kb6 3 Kb8 (in the vertical direction, neither the opposition nor the non-opposition works) c6 4 Kc8 Ka5 5 Kc7 Kb4 6 Kxc6 Kxc4 7 d5 Kd4 8 Kxd6 Ke3 9 Ke5 Kxf3 10 d6 Kg3 11 d7 f3 12 d8Q f2.

An interesting try after 1 Ka7 d6 2 Ka6 Kd7 is 3 Kb5. The Black king cannot retreat to the e-file (3...Ke7/Ke8) on account of 4 Kc6 Kd8 5 Kb7 Kd7 6 c5 etc. 3...Kc8 is met by 4 Kc6 Kb8 5 Kd7 etc. This only leaves 3...Kd8, and what happens after 4 Ka5? 4...Kd7 allows White to win by 5 Ka6 (5...Kd8 6 Kb7, 5...Kc6 6 Ka7 Kd7 7 Kb8, 5...Ke7 6 Ka7, 5...Kc8/Ke8 6 Ka7). The correct reply to 4 Ka5 is 4...Kc8 5 Ka6 Kd7 (or 5...Kb8) etc.

Let us return to the position after 1 Ka7 Kd6 2 Kb7. If 2...c5, White wins by 3 d5: 3...Ke7 4 Kc7, or 3...Ke5 4 Kc7 Kd4 5 Kxd7 and either 5...Kxc4 6 Kc6 Kd4 7 d6 Ke3 8 d7 Kxf3 9 d8Q or 5...Ke3 6 Kc6 Kxf3 7 d6 Ke2 8 d7 f3 9 d8Q f2 10 Qe8+.

If Black replies to 1 Ka7 by 1...d5, there follows 2 c5 Kb5 3 Kb7 Kc4 4 Kxc7 Kxd4 5 Kd6 Ke3 6 c6 and White wins.

1 Kc8? fails against 1...d6 and either 2 Kd8 Kb7 3 d5 (3 Ke7 Ka6!) Kb6 4 Kd7

Kb7 5 Ke6 Kb6 6 Kxf5 Kc5 7 Kxf4 Kxc4 8 Ke4 Kc5 9 f4 c6 or 2 Kb8 Kb6.

[Mandler indicates an inversion dual in the second main line (4 Ka8 followed by 5 Ka7 or the other way round) and the computer gives a few more alternatives for White at various points, but none seems important. For example, it gives 4 Kb8 as another winning move at this point, but in fact this merely wastes time; after 4...Kd7 5 Ka8 Ke7 White has to play 6 Ka7 and rejoin the main line, and he has taken three moves when he need have taken only two.]

By sacrificing two pawns, White gains a decisive positional advantage

1.18 (S325, version)
Tidskrift för Schack 1962, version
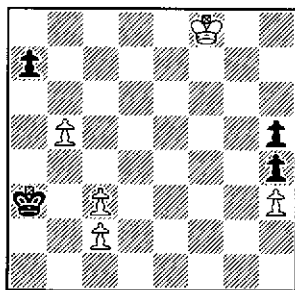
White to move and win

1 Ke7 Ka4 2 b6 axb6 3 Kd6 Ka3. It does not appear that White's pawn sacrifice has achieved a great deal. He has lost a pawn, the pawn on c3 is no longer a passed pawn, and the Black king threatens the c-pawns. But after **4 Kc6 Kb2 5 c4 Kc3 6 Kb5** Black finds himself forced to move, **6...Kd4,** and a second sacrifice now carries White to success: **7 c5!** (7 Kb4? Ke4 8 c5 bxc5+ 9 Kxc5 Kf4 10 Kd4 Kg3 11 Ke3 Kxh3 12 Kf3 Kh2 and draws) **bxc5 8 c4 Ke4 9 Kxc5 Kf4 10 Kd4 Kg3 11 c5 (Ke3)** etc.

[I have added the pawn on h5 to remove an apparent bust by 2 Kd6 Kxb5

3 Kd5, when White can trade his advanced c-pawn for Black's a-pawn and then play out a routine win with two pawns against one: 3...Kb6 (advancing the a-pawn helps White) 4 c4 Kc7 5 c5 Kd7 6 c6+ Kc7 7 Kc5 Kd8 (7...Kc8 8 Kd6 Kd8 9 c7+ Kc8 10 Kc6 is easier for White) 8 Kd6 Kc8 9 c3! (9 c4 forfeits the win) Kd8 10 c7+ Kc8 11 Kc6 a5 12 Kb5 Kxc7 13 Kxa5 Kc6 14 Kb4 Kb6 15-18 Kf4 Kxc3 19-20 Kxh4 Ke5 21 Kg5 and wins. Adding a second Black pawn on the h-file appears to slow White down sufficiently to enable the Black king to get back to f8.]

The White king goes the long way round

1.19 (S326, RP63)
Šachové umění 1949
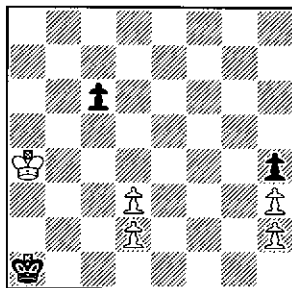
White to move and win

The White king can reach the pawn on c6 by two routes, via b4-c5 or via a5-b6. After 1 Kb4 Kb2 2 Kc5 Kc2 3 d4 Kd3 he has no winning continuation. But if it were now Black's move, there would be a way to win.

So White must deliberately lose a tempo. How can he do this? His king will go via a5. True, the journey to c6 takes just as long via a5 as via b4, but in the try which we have just looked at the White king is not c6, it is on c5, and the journey to c5 via a5 is one move longer.
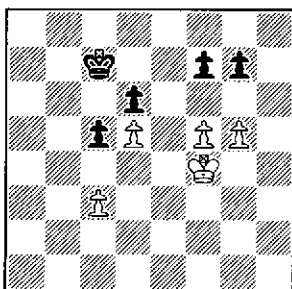
Hence: **1 Ka5 Kb2 2 Kb6 Kc2 3 d4**

Kd3 4 Kc5 Ke4 5 d5 cxd5 6 d4 and White wins, for example 6...Kf3 7 Kxd5 Kg2 8 Ke4 Kxh2 9 d5 Kxh3 10 d6 Kg2 11 d7 h3 12 d8Q etc.

The h-pawns prevent a dual by 5 Kc4.

White keeps or passes the move as required

1.20 (S327, RP64)
Lidová kultura 1949

White to move and draw

The try 1 f6 fails against 1...g6! (not 1...gxf6 on account of 2 gxf6 and a counterattack by the White king via g5 and h6) 2 Ke3 Kb6, with a Black win after either 3 Kd3 Kb5 or 3 Kd2 c4 4 Ke3 Ka5 5 Kd4 Kb5 6 Ke3 Ka4 7 Ke4 Ka3 8 Ke3 Kb2 9 Kd4 Kb3.

How can White arrange that the move rests with either himself or Black as needed? Simply by playing 1 Kg4. This threatens 2 Kh5 followed by 3 f6, and so forces the reply 1...g6. This is what White wanted. Now the Black pawns cannot move without allowing White to counterattack, and White has to hand a means of controlling the tempo. If he wants to remain on move, he plays fxg6, and if he wants to give the move to Black he plays f6. But this happy situation will not persist indefinitely. The White king cannot wander too far from the K-side, otherwise the pawn on g6 will be able to capture on f5 in safety.

In the position that arises after **1 Kg4**

g6 **2 Kf4** (or Kf3) **Kb6 3 Ke4** (Ke3), Black cannot play 3...Kb5 on account of 4 fxg6 fxg6 5 Kd3 Ka5 6 Kc2. After **3...Ka5** there follows **4 Kd3 Kb5 5 f6** (now White gives the move to Black) **Ka5** (5...Ka4 6 Kc4) **6 Kc2 c4 7 Kb2 Kb6 8 Ka3 Kb5** (White's position has worsened) **9 Kb2 Kc5 10 Ka3 Kxd5 11 Kb4** (White will gain the pawn on c4 in return for the lost pawn on d5, but his K-side pawns are weak) **Kc6** (or 11...Ke6 12 Kxc4 Kf5 13 Kd5 Kxg5 14 Kxd6) **12 Kxc4 d5+ 13 Kd4 Kd6 14 c4** and White will draw.

[The computer gives 14 Ke3 Ke5 15 Kd3 as an alternative draw at the end, but it is markedly less clear and at so late a stage it can hardly be thought a defect.]

Gently does it!

1.21 (S328)
Die Schwalbe 1960
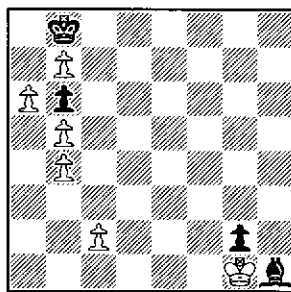
White to move and win

In my problem collection, there is a chapter entitled "Festina lente!" featuring problems in which a White pawn standing on the second rank is content with a single-step move whereas the solver might expect it to move two squares so as to get to grips with a distant Black king as quickly as possible. This seems to be a theme more suited to "mate in *n* moves" problems than to studies. I have only incorporated it into one study, and that is the present one.

Let us start by trying 1 c4. After 1...Ka7/Kc7 2 c5 Kb8 (2...bxc5 3 bxc5 Kb8 4 c6 and White wins) White cannot take the pawn on b6 because the capture will give stalemate. Hence 3 c6 Ka7 4 b8Q+ (4 c7 again gives stalemate) Kxb8, and now we have a position of reciprocal zugzwang in which White would win were it Black's move.

Correct is therefore **1 c3 K-- 2 c4 Kb8 3 c5 K--** (3...bxc5 4 bxc5 K-- 5 b8Q+ Kxb8 6 b6 etc) **4 b8Q+ Kxb8 5 c6** and now Black finds to his detriment that it is he who has to move.

I have put this among the pawn studies even though there is a Black bishop on the board, since this bishop plays a purely passive role.

[Few readers will have Mandler's problem collection - it was published a few months before *Studie* and is now just as hard to obtain - and since this is hardly a typical Mandler study, perhaps a brief background comment is in order. In 1960, Mandler wrote an article on the theme "Festina lente!" for the German problem magazine *Die Schwalbe*. It contained some twenty examples, all but the present one being problems with stipulation "White to play and mate in *n*", and even the present composition is much more like a problem than a study in construction. But Mandler put it in *Studie*, and I have thought it appropriate to follow suit. He points out that both stalemates in the play after 1 c4 are pure (each square surrounding the king is either blocked by a Black man or guarded by a single White man, no square is multiply guarded and none is both guarded and blocked) and that composers of the "Bohemian" school to which he belonged attach just as much importance to pure stalemates as they do to similarly refined mates.

It might be added that the computer has greatly assisted the finding of "festina lente" studies, and if Mandler were writing today I doubt if he would still

describe as a theme more suited to problems. A definitive computer analysis of endings with given material automatically produces a list of positions of reciprocal zugzwang, and whenever a position with a pawn on the third rank is reciprocal zugzwang there is a chance that the only good move with the pawn on the second rank will be "pawn one". Some composers have viewed the advent of computers with very mixed feelings; Mandler, I think, would have revelled in the possibilities they have opened up.]

An echo both of a stalemate and of its accompanying play

1.22 (S329, RP52)
Národní Osvobzení 1936
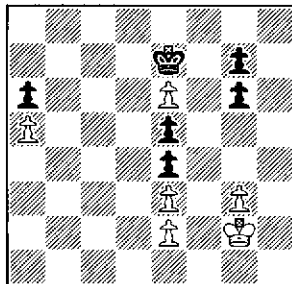
White to move and draw

The pawn on a5 cannot be protected. Its salvation will be a K-side counterattack.

But White must not be too hasty. After 1 Kh3? Kxe6 he is suddenly lost for a move. On 2 Kg4 there will follow 2...Kf6 3 Kh4 Kf5 4 Kh3 g5 5 Kg2 g4 and the counterattack is at an end. 2 Kh4 will be met by 2...Kf5, and 2 g4 by 2...g5.

Correct is **1 Kh2! Kxe6 2 Kh3** and now it is Black who has to find a move. **2...Kf5** fails against **3 Kh4 g5+ 4 Kh5 g4 5 Kh4 g6 stalemate**. If instead 5...g5+ then 6 Kh5 Kf6 7 Kh6 (7 Kxg4? Kg6) and White even wins, if 5...Kf6 then 6 Kh5 (6 Kxg4? g6!) and again ...g5 allows White to win. If Black plays

4...Kf6, there follows 5 g4 and 5...g6+ 6 Kh6 Kf7 7 Kh7 will be another White win, but not 7 Kxg5 Kg7 8 Kh4 Kf6 9 Kg3 g5 and Black wins.

If instead of 3...g5+ Black plays **3...Kf6**, White must avoid 4 g4? on account of 4...Ke6 5 Kg5 Kf7 6 Kh4 Kf6 7 Kg3 g5 with a Black win, but he can save himself by contriving a stalemate one rank higher than in the previous variation: **4 Kg4 g5 5 Kh5 Kf5 6 g4+ Kf6 stalemate**. If instead 5...g4 White must avoid 6 Kxg4 on account of 6...g6 7 Kh4 Kf5 8 Kh3 g5 9 Kg2 g4 etc, but he has 6 Kh4! g5+ 7 Kh5.

The same stalemate occurs after 1 Kh2 Kxe6 2 Kh3 Kf6 3 Kg4 g5 4 Kh5 Kf5 5 g4+ Kf6.

In addition to the echo of the stalemate itself, we have an echo in the course of the associated play.

Sometimes the solver must master some of the tasks which confronted the composer

*1.23 (S330, RP51)
Národní Osvobození 1936
Correction *Šachové umění* 1947
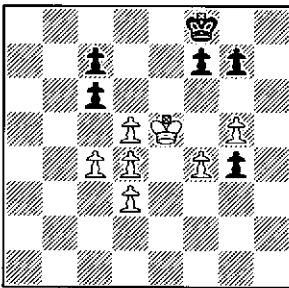
White to move and draw

This study bears the traces of its origin. The difficulties with which a composer struggles while attempting to realize his theme are often reflected in the resulting position, sometimes in its appearance, sometimes in its content, often unattractively, rarely congenially; and sometimes the solver must himself overcome some of the difficulties which confronted the composer.

The theme of the present study is again the echo both of a stalemate position and of the way it is brought about. But the road to this echo is hedged around with obstacles.

Black's hopes of victory lie in his passed pawn. This pawn must be stopped if White is to draw, and so only 1 Ke4 suggests itself as a key. But 1 Ke4 loses.

The solver must realise from the start that his only means of salvation will be stalemate, and hence that he must create the possibility of immobilizing the White pawns. Hence he plays **1 d6**. After **1...cxd6+ 2 Ke4 Ke7** there follows **3 f5** (to prevent the threatening ...f5) **f6 4 Kf4 fxg5+ 5 Kxg4 Kf6 6 c5**, and after **6...d5 7 Kh5 Kxf5** White is stalemated. If instead 6...dxc5, White replies 7 dxc5 g6 8 fxg6 Kxg6 9 d4 Kf6 10 d5 cxd5 11 c6 with a draw.

The same stalemate, one rank lower, arises after **2...g6 3 Ke3 Ke7 4 Kf2 f5** (4...Ke6 5 Kg3 Kf5 6 c5 dxc5 7 dxc5 Ke6 8 Kxg4 Kd5 9 Kf3 Kd4 10 Ke2 Kxc5 11 Ke3 Kd5 12 d4 and draws) **5 gxf6 e.p.+ Kxf6 6 Kg3 Kf5 7 c5 d5** (7...dxc5 8 dxc5 g5 9 fxg5 Kxg5 10 d4 Kf5 11 d5 cxd5 12 c6) **8 Kh4 Kxf4**. White's 6th and 7th moves can be interchanged.

In the first variation, after 1 d6 cxd6 2 Ke4 Ke7 3 f5 f6, the move 4 g6 must not lead to a draw. This was one of the chief obstacles in the course of the construction, and it is a difficult task for the solver to recognize that this is only a try and to find its refutation. It actually fails against 4...d5+ 5 Kf4 c5! and either 6 Kxg4 cxd4 7 Kf3 Kd6 8 cxd4 Kxd5 9 Kf4 Kc6! 10 Kf3 Kb5 or 6 dxc5 dxc4 7 dxc4 (at first sight, this position does not look like a Black win) Kd7 8 Kxg4 Kc6 followed by 9...Kxc5.

In the second variation (2...g6 3 Ke3 Ke7 4 Kf2 f5) White must capture the

pawn on f5, otherwise Black, having guarded his passed pawn, will penetrate with his king via a5 and b4.
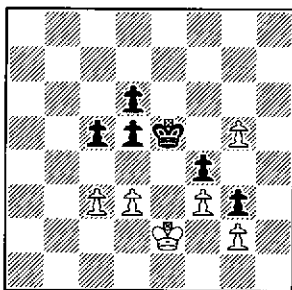
2...f5+ 3 gxf6 g6 4 Ke3 (c5) leads into now familiar territory.

1 Ke4? is met by 1...cxd5+ 2 Ke3 Ke7 3 f5 f6 4 g6 c5! with a Black win.

Haven't we seen this before?

1.24 (S331)
Original to *Studie* 1970

White to move and win

This position occurs after the moves 1 d6 cxd6 2 Ke4 Ke7 3 f5 f6 4 g6 in the preceding study. I have inverted the colours, turned the board through 180 degrees, and changed the stipulation to "White to move and win". But why should I do this? Turning the board round and inverting the colours appears to change nothing. Yet there is a difference between merely refuting a try and analysing the same position as if it were a self-standing study. For a position to be entitled to exist as a study in its own right, not only must it be difficult to solve, it must also be correct, its main line must be free from cooks and duals. However, only in the main line do we need to examine and refute alternative lines of attack; in the case of sidelines, usually (there are exceptions) we take no notice.

It would of course be a different matter if a fragment of an existing study were to be sent to a tourney as a new and independent creation, or if it were to have been taken from somebody else's work. But such considerations are not relevant here.

1 c4? does not succeed. But not because of 1...dxc4. This is met by 2 dxc4 and either 2...d5 3 cxd5 Kxd5 4 Kd3 Ke5 5 Kc4 and White wins, or 2...Kf5 3 Kd3 Kxg5 4 Kc4 etc. Black defeats 1 c4 by playing 1...d4: 2 Kd2 Kf5 3 Kc2 Kxg5 and now it is White who is fighting to hold the draw.

Correct is **1 d4+**. But what of the defence 1...cxd4? The tempting 2 cxd4+ leads only to a draw: 2...Kf5 3 Kd3 Kxg5 4 Kc3 Kg6 and Black will draw by gaining the distant horizontal opposition. Correct is 2 Kd3 dxc3 3 Kxc3 Kf5 4 Kd4 and White wins. Black still has two pawns on the d-file, but the White king has plenty of time to deal with them. Even more improbable is White's win in the main line, when Black is left with two pawns on the c-file: **1...Kf5 2 c4**. If now 2...Kxg5, the reply 3 dxc5 would be a mistake on account of 3...dxc5 4 cxd5 Kf5 5 Kd3 Ke5 (if 6 Kc4 then 6...Kd6 and Black wins). A winning line after 2...Kxg5 is 3 cxd5 Kf6 4 Kd3 cxd4 (4...Ke7 5 Kc4) 5 Kxd4 Kf5 6 Kc3 Kf6 7 Kb4 Ke5 8 Kc4 Kf6 9 Kb5 Kf5 10 Kb6 Kf6 11 Kc7 Ke5 12 Kc6.

The most hopeful continuation for Black appears to be **2...dxc4 3 dxc5 dxc5**. In fact White's win is now straightforward, even though at first sight it seemed most unlikely: **4 Kd2 Kxg5 5 Kc3 Kf5 6 Kxc4 Ke6 7 Kxc5 Ke5 8 Kc4** and so on.

An ending with almost a full complement of pawns

1.25 (S332)
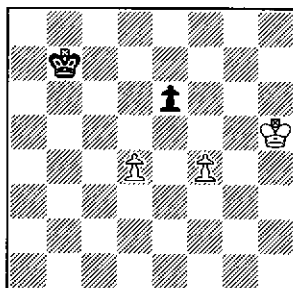*Lidová kultura* 1946
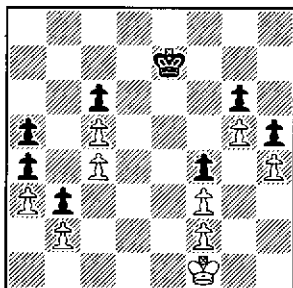
White to move and win

Here there are five pairs of corresponding squares: **f5/d4**, **e5/d3**, **e6/c3**, **f5/d2**, and **e6/e2**. The Black square is listed first in each case.

Solution: **1 Ke1 Ke6** (1...Kd7 2 Kd2) **2 Ke2 Kf5 3 Kd2 Ke6 4 Kc3 Ke5 5 Kd3 Kf5 6 Kd4** and so on.

A novelty with theoretical value

*1.26 (S333, RP49)
Prager Presse 1929

White to move and win

This position makes a contribution to endgame theory. The simpler a position, the greater the probability that it is already known to theoreticians. Study composers, as distinct from analysts, do not usually set out to extend the boundaries of theoretical knowledge, but rather to find interesting positions and beautiful manoeuvres. But it sometimes happens, usually unintentionally, that such a composition also turns out to enrich endgame theory.

In a position with the pawns arranged as shown here, White will normally win only if he can manoeuvre his king to one of the squares e8, e7, amd e6. Fr. Dedrle seems to have been the first to have established the significance of these squares. But in the present position, it does not appear possible for his king to get there. In fact the breakthtrough manoeuvre is possible only because the pawns are on the fourth and sixth ranks; if they were any lower down on the board, Black could defend all the weak points.

The White king cannot advance to the sixth rank without allowing Black to take the opposition. Conversely, Black cannot allow White to gain the opposition on the sixth or eighth rank, because this will allow him to reach one of the critical squares; for example, 1 Kh6 Kc6? 2 Kg6 Kd6 3 Kf6 Kd7 4 Kf7 Kd6 5 Ke8 and wins, or 2...Kc7 3 Kg7 and either 3...Kd8 4 Kf6 Kd7 5 Kf7 or 3...Kc6 4 Kf8 etc.

The Black king is well placed on b7. White wins only by luring him to the eighth rank: **1 Kh6 Kb6 2 Kh7 Kb7 3 Kh8 Kb8 4 d5 exd5 5 f5** etc. Bad would be 1 Kg6? Kc6 2 Kg7 Kc7 3 Kg8 Kc8 4 d5 on account of 4...Kd7 with a draw.

White saws away at the Black position

*1.27 (S334, RP50)
La Stratégie 1936
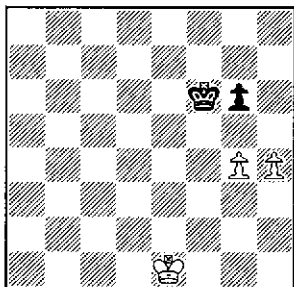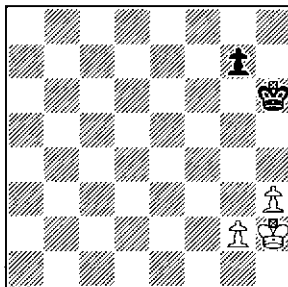

White to move and win

Taking the opposition on the f-file by 1 Kf2 does not help White. The Black king stays on the file, and Black need not fear the White king's advance to f4: 1...Kf7 2 Kf3 Kf6 3 Kf4 g5+ and Black draws. And if the White king leaves the file, Black can take the opposition, thus (1 Kf2 Kf7) 2 Ke3 Ke7 3 Ke4 Ke6 and either 4 Kd4 Kd6 or 4 Kf4 Kf6.

The solution is **1 Kd2! Ke6 2 Ke2 Kf6 3 Kd3 Ke5 4 Ke3 Kf6 5 Kd4 Ke6 6 Ke4 Kf6 7 Kd5 Ke7 8 Ke5 Kf7 9 Kd6** and White wins. On 2...Kd6 there follows 3 Kf3.

The White king's path resembles the teeth of a saw.

Freeing a crucial square for the king

1.28 (S335)
La Stratégie 1936

White to move and win

1 g3? g5!; 1 g4? g5!; **1 h4! Kg6 2 Kg3 Kh5 3 Kh3 g6 4 g3 g5 5 g4+** and **6 h5**. Why not 1 Kg3? Because it would allow the Black king to come to g5? Not at all, after 1 Kg3 Kg5 2 h4+ White will win in the same way as in the solution. Nor do we play 1 h4 in order to keep the Black pawn from g5, because 1 Kg3 g5 also leads to a White win: 2 Kg4 Kg6 3 h4 etc.

The true purpose of 1 h4 is to free the square h3 for the White king. The try 1 Kg3 is defeated by 1...Kh5 2 h4 g5.

After 1 h4 Kg6 2 Kg3 Kh5 3 Kh3 g6 White wins because he has at his disposal the waiting move g3. 4 g4+ would lead to a similar drawn position to that which originates after 1 g3 g5, but one rank higher.

2. Rook against knight

[This endgame is classic territory, having first been investigated in the ninth century. The analysis was finally completed by computer in 1970, but it took a while for the news to filter through the chess community and there is no evidence that Mandler was aware of it. And even in the presence of the definitive analysis now available, I think Mandler's studies remain of interest. The computer merely divides positions into two classes, won and not won; the studies probe the boundaries, and throw light on why a certain position ends up on one side of the fence while an almost identical position finds itself on the other.]

A surprisingly quick victory

2.1 (S336)
Revue FIDE 1955
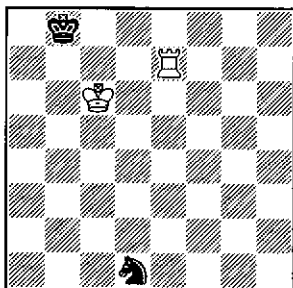
How quickly can White win?

This is neither a problem nor a study, it is something between the two. The stipulation can be specified more precisely: Within three moves, White must achieve a position where either mate or capture of the knight will follow next move. Strictly speaking, such compositions belong to fairy chess, but the present one will serve as an introduction to the less easy positions in the ending R v N.

In this ending, the knight is in greatest danger when it ventures too close to the enemy king, or when it finds itself too far away from its own king. In our example here, it is far from its own king, without protection. A mere two moves, **1 Kb6 Kc8 2 Re2**, now leave Black with no

good move. But as a problem "win in *n* moves" this is strictly speaking a three-mover, because if Black plays 2...Nc3 the knight is not lost at once; it is captured only after 3 Rc2.

[The term "fairy chess" was coined by Henry Tate of Melbourne "for all that immense range of work which stands outside, in some point or other, the orthodox channels of Caissic ingenuity" (T. R. Dawson, *The Chess Amateur*, December 1918, p 85). In calling "win within *n* moves" a "fairy chess" stipulation, Mandler was taking rather a strict view, because the stipulation was orthodox enough in the early days of chess and may yet become so again. It certainly seems appropriate to compositions such as **1.13**, where "reach a simply won position within 9 moves" retains the author's intended solution while eliminating a long-winded alternative demonstrable only with the aid of a computer.]

**A beautiful and theoretically very
important study, though only the first
move is mine**

2.2 (S337)
Československý šach 1933
(after F. Amelung)
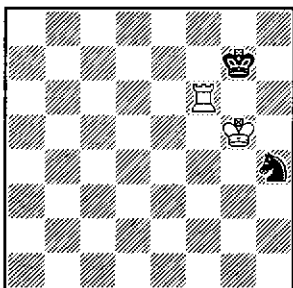
White to move and win

In 1900, F. Amelung published the
following study: White Kf4, Rd6 (2),
Black Kg7, Nh4 (2), White to move and
win. I don't know where it appeared.
I have given the study a different first
move, but everything else remains the
same. In the diagram, the solver must
look several moves ahead in order to find
the right move. The solution unfolds
1 Rd6 Nf3+ 2 Kg4 (2 Kf4? Nh4 3 Kg4
Ng6 and draws) **Ne5+ 3 Kf5 Nf7** (for
3...Nc4 see below) **4 Rd7** (see **2.2a**) **Kg8
5 Kf6** and wins. **2.2a** is a fundamental
position in this ending, and we shall
frequently encounter it.
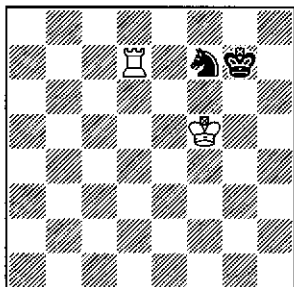
2.2a - Black to move, White wins.

Black can hold out longer if he keeps
his knight further away from the White
king. If we play **3...Nc4** instead of
3...Nf7, White must avoid 4 Re6 on
account of 4...Kf7 (another important
position) 5 Rc6 Ne3+ 6 Kf4 Nd5+
7 Ke5 Ne7, for after 8 Rc7 Kf8 there is
no win. After 8 Rc7 the men are placed
as in **2.2a**, but the position has been
shifted one file to the left. So we see that
"Amelung's position" - for thus we
would like to call **2.2a** - cannot be shifted
either to the left or downwards without
forfeiting the win.

Instead of 4 Re6, White must answer
3...Nc4 by **4 Rd4 Ne3+ 5 Kf4 Nc2
6 Rc4 Na3 7 Rc5 Kf6 8 Ke4 Ke6 9 Kd3**,
and now he does win.

[This is a study where Mandler does
not highlight a main line, and it is clear
that he regarded the draw after 3...Nc4
4 Re6 as just as important as the two
winning lines. In discussing **2.2a**,
Mandler writes "Kf8" and not Kg8,
but Kf8 loses very easily whereas Kg8
parallels the move which draws when the
position is shifted one file to the left, and
I am sure the latter is what was intended.

We may also notice that Mandler gives
2 Kf4 an unequivocal question mark,
even though White can meet 2...Nh4 by
3 Kg5 and have another bite at the
cherry. In the analysis of a study to win,
a move which allows the defender to
regain a previous position is regarded as
faulty, even if a player in a practical game
would have an opportunity to try again.
It is as if the "three repetitions" rule did
not exist, and *any* repetition of a previous
position allowed the weaker side to claim
a draw.

As for the origin of the Amelung
position, Ken Whyld tells me that
Deutsche Schachzeitung ran a series by
Amelung on R v N in 1900. The position
here was quoted on page 138, with a
comment that he had analysed it in
"Balt. Schachbl" (presumably *Baltische
Schachblätter*), number 6, page 223.]

One apparently insignificant square makes all the difference

*2.3 (S338)
Oesterreichische Schachrundschau
1924
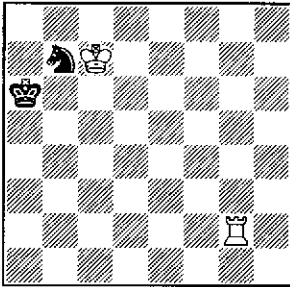
White to move and win

In this position, if the rook were on h2 instead of g2 there would be no win. **1 Rg6+** (the moves 1 Ra2+ Na5 would lead to a fundamental and well-known draw, in which the Black pieces support each other and prevent the approach of the White king) **Ka7 2 Kc6 Nd8+**. If 2...Ka6 then White waits with 3 Rh6 or 3 Rf6, and we have a win known to Amelung: 3 Rh6 Na5+ 4 Kc5+ Ka7 5 Kb5 Nb7, and we have reached the winning position of al-Adli from the year 1257(!). **3 Kd6!!** Here we see why there would be no win with the rook on the h-file: it would now stand on h6, and Black could capture it by ...Nf7+. **3...Nb7+ 4 Kd5!** This and the preceding move are better explained by variations than by words. **4...Na5 5 Kc5 Nb7+ 6 Kb5 Kb8 7 Kc6 Nd8+ 8 Kd7 Nb7 9 Rg5 Ka7 10 Kc8** and White wins.

[Mandler now gives a detailed analysis covering over 20 lines, which we reproduce with definitive computer commentary in Appendix B. And the "al-Adli" position is even older than Mandler thought. H. J. R. Murray dates al-Adli's chess activity to the middle of the ninth century, and cites a report that

the position had actually occurred in a game played by Rabrab, who was active in 819 (*A history of chess*, Oxford, 1913, pp 197 and 307).]

An unlikely opening move

2.4 (S339)
28. říjen 1926
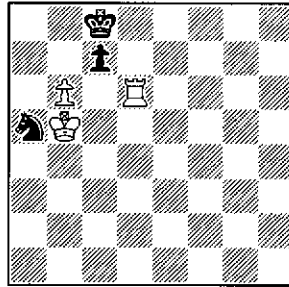
White to move and win

The first move is **1 Rd2**. Clearly some solvers would exclude this move from consideration, since the continuation 1...cxb6 2 Kxb6 Nc4+ loses the rook. But a knowledge of the preceding study, where in essence we have the same position reflected about the long diagonal, simplifies the solution for us. After **1...cxb6** (1...Nb3 would be met by 2 Rd3 Nc1 3 Re3 etc) there follows **2 Rc2+ Kb7** (2...Kb8 3 Kxb6 Nb7 4 Kc6 Na5+ 5 Kc5 etc as in the preceding study) **3 Rc3**. During the solution of the preceding study, we saw that the rook could not start on the h-file, but we might have added that it could have started on the f-file instead of the g-file, and the f- and g-files correspond here to the second and third ranks. The move 3 Rc3 forces the Black king to retreat. **3...Kb8 4 Kxb6 Nb7 5 Kc6 Na5+ 6 Kc5** etc as in the preceding study.

White cannot start 1 Rd3 on account of 1...cxb6 2 Rc3+ Kb7, after which he has no waiting move.
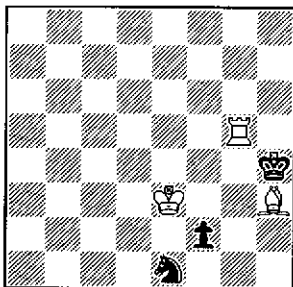
[This study appears in Harold van der

Heijden's "Endgame study database 2000" with a note claiming an alternative win by 1 Rd1 cxb6 2 Rc1+ Kb7 3 Rc3 leading back into the main line, but this is quite false: 2...Kb8! holds the draw.]

Another variation on the same theme
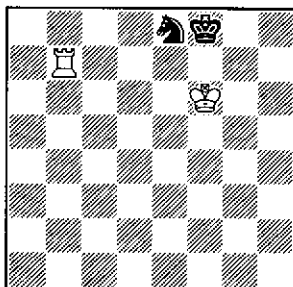
2.5 (S340)
Československý šach 1933

White to move and win

1 Rb5 Kxh3 2 Kxf2 Ng2 3 Rb3+ etc. The position is now as after White's first move in the *Oesterreichische Schachrundschau* 1924 study, rotated through 180 degrees.

Everything seems obvious ...

2.6 (S341)
A universally known theoretical position


White to move, Black draws

Those familiar with the ending R v N will see at a glance that this position is drawn. If White plays **1 Ke6**, there follows **1...Ng7+ 2 Kf6 Ne8+ 3 Kg6 Kg8 4 Rf7 Nd6 5 Rd7 Ne8** and so on.

Everything is obvious, and the question of space plays no role here. At least this would be the judgement of the majority of solvers.

... but even in the ending R v N, space plays a major role

2.7 (S342)
Československý šach 1933
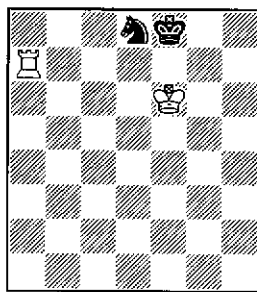
Here we have modified the preceding diagram by removing the a-file. This slight narrowing of the available space is sufficient to convert a clearly drawn position into a win. So even in the ending R v N, the question of space plays a significant role.

The present study does not use the normal board, and so belongs strictly to the realm of fairy chess. However, it is very useful for the understanding of the ending R v N. We cannot solve it without some fundamental theoretical analysis, and in particular it is necessary to be familiar with the *Oesterreichische Schachrundschau* 1924 study.

After **1 Kg6 Nd6** (1...Kg8 2 Rd7 Kf8 3 Rf7+ leads to the same position) **2 Rd7 Ne8** (if 2...Nb5 then 3 Kf6 Ke8 4 Ke6 and either 4...Nc3 5 Rc7 or 4...Kf8

5 Rd8+ Kg7 6 Rd3, while if 2...Nc4 then 3 Rd4 Nb6 4 Rd6 Nc4 5 Re6) **3 Rf7+ Kg8** the rook must quit the seventh rank, otherwise the Black king will be able to return to the f-file. Which square on the f-file should the rook choose? We know from the preceding studies that only f2 and f3 come into consideration. Here we play **4 Rf3**. As regards 4 Rf2, we content ourselves with the observation that after 4...Nd6 White cannot play 5 Kf6 without losing the rook, while 5 Rf4 Ne8 6 Rf3 merely lengthens the solution. The continuation after 4 Rf3 Ng7 5 Kf6 Nh5+ 6 Kf5 Ng7+ 7 Ke5 Kh7 we already know from the *Oesterreichische Schachrundschau* study.

Thus far, everything also works on the ordinary 8 x 8 board. However, after **4...Nc7** White has no win on the normal board. On a board from which the a-file has been removed, we have **5 Kf6 Kf8 6 Rf2/Rf1 Ke8 7 Rd2 Nb5 8 Ke6 Nc7+ 9 Kd6 Kd8 10 Rd3** and White wins, for example **10...Ne8+ 11 Ke6+ Kc8 12 Ke7 Nc7 13 Kd6** and we have the same winning position on the queen's side as we had after 4 Rf3 Ng7 5 Kf6 on the king's.

[Readers who are going through this book with the aid of a computer will find it very instructive to play through these moves on the standard 8 x 8 board and see just where Black needs access to the a-file in order to draw. The computer adds one further line, which echoes the line 2...Nc4 3 Rd4 Nb6 4 Rd6 Nc4 5 Re6 and which Mandler may have thought too obvious to mention: 2...Ne4 3 Rd5 Nc3 4 Re5, and the non-existent 4...Na4 is needed in order to draw.]

The Amelung position on rank and file

2.8 (S343)
Wiener Schachzeitung 1925
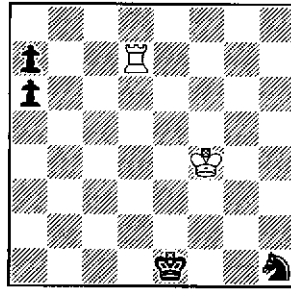
White to move and win

This study does not strictly belong to the present chapter in terms of material, but thematically it is very much in place.

1 Re7+ Kf2 (1...Kf1 2 Ke3 leads to a shorter solution) **2 Rh7 Kg2 3 Rg7+** (White dare not lose a tempo in case the Black pawn finally arrives too soon, hence the need for so many apparently superfluous moves by the rook) **Kf2 4 Rg5** (getting into place for the Amelung position) **a5 5 Rh5 Kg2 6 Ke3**. Now we see why the rook had to come to the fifth rank. Were it elsewhere, Black could now save himself by 6...Ng3; but as it is, 7 Rg5 would give the Amelung position (see **2.2a**) and White would win. **6...a4 7 Rg5+** (not 7 Rd5 at once, because of 7...a3 and White would arrive too late) **Kf1 8 Rd5** (preparing the Amelung position for the second time, this time with the knight pinned on the rank, and now Black has no time for ...a3 because White threatens 9 Kf3) **Kg2** (8...a3 9 Kf3 Ke1 10 Re5+ Kd1/Kd2 11 Rc5 etc, 8...Ke1 9 Rc5 Kd1 10 Kf3) **9 Rd2+ Kg3** (9...Kh3 10 Kf4) **10 Rd1 Kg2 11 Kf4 Nf2 12 Rd2** and wins.

Knowing the preceding studies simplifies the solution of this twin

2.9 (S345)
Československý šach 1933
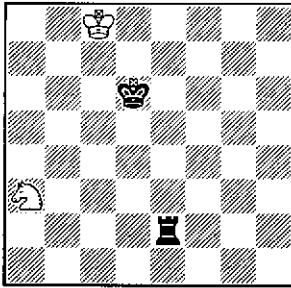
White to move and draw
(a) as set, (b) bRe2 to e1

(a) With the rook on e2, the first move is **1 Nb5+**. In order to win, Black would have to play 1...Kc6, and this is not possible on account of 2 Nd4+. 1...Kc5 is not good enough: 2 Nc7 Kb6 3 Nd5+ Kc6 4 Nb4+ Kc5 5 Nd3+. However, 1 Nc4+? would fail on account of 1...Kc5 2 Na5 Rc2 3 Nb7+ Kc6, giving a position already known from the *Oesterreichische Schachrundschau* study.

(b) Now **1 Nc4+** is the move that draws, for example 1...Kc5 2 Na5 Kb6 3 Nb7 (3 Nc4+? Kb5 4 Nd6+ Kc6 and Black wins) Rc1+ 4 Kb8 Kc6 5 Na5+ and Black cannot play 5...Kc5 on account of 6 Nb3+. Again, this position is already known to us, and without this knowledge the solution of the present study would be difficult. 1 Nb5+? fails against 1...Kc6 2 Nd4+ Kc5 3 Nb3+ Kb6 4 Nd4 Rc1+ 5 Kb8 Rd1.

Another twin in which the rook is shifted one square

2.10 (S346)
Československý šach 1933
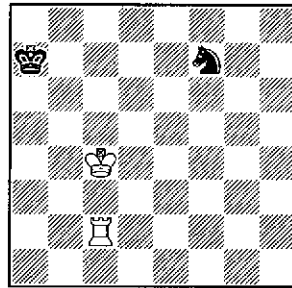
White to move and win
(a) as set, (b) wRc2 to c3

(a) Here there are a host of tries. 1 Kd5? Kb7! (1...Kb6/Nd8? 2 Rc8!) 2 Ke6 Ng5+ 3 Kf6 Nf3 and Black draws, or 2 Rf2 Nd8 3 Kd6 Kb6! 4 Rb2+ Ka6 5 Kc7 Ne6+ and White is getting nowhere. This is a typical line of play by Black. Black also meets 1 Rd2 by 1...Kb6, 1 Re2 by 1...Nd8 with either 2 Re8 (2 Kc5 Kb7 3 Kd6 Kb6) Nb7/Nc6 or 2 Rd2 Nc6, and 1 Rf2 by 1...Nd8 2 Rf8 Ne6 etc. Correct is **1 Rg2 Kb6 2 Rg6+ Ka5 3 Kd5** and wins.

(b) 1 Rg3? Nd6+ 2 Kd5 (the position of the White rook on g3 prevents 2 Kc5) Nb5 3 Kc5 Ka6 and White cannot check on the a-file. The move of the rook to the third rank has proved doubly unfortunate. The way to the win is now **1 Kd5 Kb7 2 Ke6 Ng5+ 3 Kd7! Kb6 4 Re3** etc.

In these two studies, it has been the rook whose displacement by one square has created the twin settings. That a similar displacement of the knight should lead to a complete change in the solution wuold hardly be remarkable.

[Mandler actually seeks to refute 1 Rg3 in (b) by playing 1...Nd6+ 2 Kd5 Nc8 3 Kc6 Ne7+ 4 Kd7 Nd5 'etc', but

the computer continues 5 Rb3 and captures the knight on move 22 at the latest. But 2...Nb5 does hold the draw, so the twin can stand with slightly different analysis. Would Mandler have accepted it in this modified form? We cannot be certain, but I think he probably would.]

Sometimes the knight finds itself far from its king, yet the stronger side cannot win

2.11 (S347)
Československý šach 1934
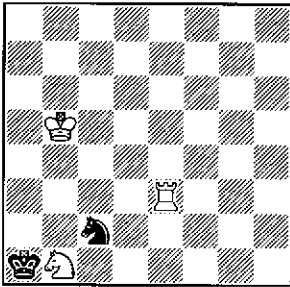
White to move and win

Where should the threatened rook go? It must stay on the e-file, lest the knight escape. For example, if White were to play 1 Rh3? there would follow 1...Kxb1 2 Kc4 Kb2 and White would be unable to win, because the rook would be unable to reach the Amelung position by playing to e2. 1 Re2 and 1 Rb3 allow 1...Nd4+. A superficial consideration might lead the solver to consider 1 Re4 as the answer. This does indeed work after 1...Kxb1 2 Kc4 Kb2 3 Re2, but Black has a better defence in 2...Kc1. Now 3 Kb3 does not help, because the Black king escapes to the d-file and White has no rook check at his disposal.

Correct is **1 Re5 Kxb1 2 Kc4 Kc1 3 Kb3 Nd4+ 4 Kc3** with an easy win. The object of 1 Re5 is to prevent 4...Nb5+.

But is this really the only way to win?

Would not 1 Re7 or Re8 be good enough? No, not 1 Re8, because the rook is lost after 4...Nb5+ 5 Kc4, and neither 5 Kb4 (5...Nd4!) nor 5 Kd3 (5...Na3) is good.

Not so transparent is the refutation of 1 Re7. It sometimes happens that the stronger side cannot win even though the knight has been driven far from its king. This is a case in point: 1 Re7? Kxb1 2 Kc4 Kc1 3 Kb3 Nd4+ 4 Kc3 Nb5+ 5 Kc4 Nd6+ 6 Kb3 (6 Kd3 Nb5) Nf5 7 Rc5 Nh4! and in spite of the apparently unfavourable position of the knight Black can hold the draw.
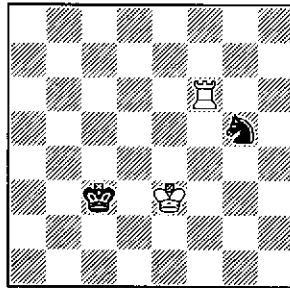
[The computer gives 7...Ng3 as an alternative draw in the last line, but it hardly detracts from the point Mandler is making.]

The merry capering of the hobby-horse

2.12 (S348)
by Richard Réti
Tidskrift för Schack 1929

White to move and win

What is a Réti study doing in a collection of my compositions? The ending R v N has been largely ignored in the textbooks, and we cannot solve the studies in this chapter without a knowledge of certain fundamental positions. We have already seen several of them, and this beautiful Réti study is another. It prepares the ground for the following studies, within which it is wholly or partly contained.

Studies and endgame theory are not antitheses, studies are the building material of theory.

The Black king occupies a favourable square. If it were on b3, White would have an easy win: 1 Kf4 Nh3+ 2 Kg4 Ng1 3 Rf2 and 4 Rg2. The square c2 would also be bad, allowing White two possible ways of winning: 1 Rg6 Nf7 2 Kd4 Nd8 3 Kd5 Nb7 4 Ra6 or 1 Rf5 Ne6 2 Re5. White must proceed more carefully if the king is on c4. Now the way to win is 1 Kf4 Nh3+ 2 Ke4 (if the Black king were on c3, he would have a draw here by 2...Ke2) Ng5+ (2...Kc5 3 Ke3 and 4 Rg6) 3 Kc5 Nh3 (3...Kd3/Kc5 4 Rf5) 4 Rf3 Ng5 (4...Ng1 5 Re3) 5 Rf4+ and 6 Rf5.

So if we can expel the king from c3, we shall have our win. We will proceed thus: **1 Kf4 Nh3+ 2 Kf3** (threat 3 Rg6) **Ng5+ 3 Ke3!** This has brought us back to the starting position with Black to move. The knight can move neither to h3 (4 Rg6) nor to h7 (4 Rf5), so it is the king which must give way: **3...Kc4 4 Kf4 Nh3+ 5 Ke4 Ng5+ 6 Ke5 Nh3 7 Rf3 Ng5 8 Rf4+** followed by **9 Rf5** and White wins.

The hobby-horse capers merrily between g5 and h3, and White must proceed carefully and with forethought in order to catch him. Twice he plays so as to transfer the burden of moving to Black.

[In his text to this study, Mandler uses the affectionate diminutive *koníček* ("little horse") for the knight, instead of the normal word *jezdec* that he employs elsewhere. My rendering "hobby-horse" may be a translator's artefact, because I am not sufficiently familiar with early 20th-century Central European folk dance traditions to know whether he genuinely had something of this sort in mind, but the vision of an English Morris dance, with the hobby capering merrily on the outskirts, was irresistible.
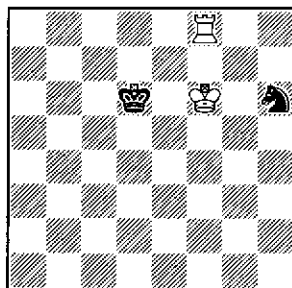
An analytic note from the computer:

right at the end, 8 Rf5 is playable and indeed slightly simpler (8...Nh3 9 Ke4, with Ke3 and Rh5 to follow). The rest is impeccable. The same note applies to the next study.]

An even longer caper by the knight

2.13 (S349)
*Československý šach* 1933
(after R. Réti)

White to move and win

Here we lengthen the knight's pendulum. This is no more than an extension by five moves of the preceding study, since after Black's fifth move we have the position of the Réti study reflected through 180 degrees.

1 Rd8+ Kc5 2 Rd3 Ng4+ 3 Kf5 **Nh6+** 4 Ke6 **Ng4** 5 Rf3 Kc6 6 Kf5 **Nh6+** 7 Kf6 **Ng4+** 8 Ke6 Kc5 9 Kf5 **Nh6+** 10 Ke5 **Ng4+** 11 Ke4 **Nh6** 12 Rf6 **Ng4** 13 Rf5+ Kc4 14 Rf4 **Nh6** 15 Ke5+ and White wins.

An unexpected encounter with the Réti study

**2.14** (S350)
Československý šach 1933
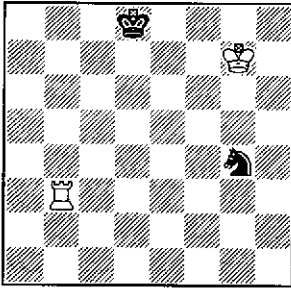
White to move and win

Our experience in the examples up to now has been that the king should attack the opposing knight diagonally in order to limit its powers of movement, even though this allows the knight to give check. The present study forms an exception. Here the king attacks the importunate knight laterally: **1 Kf7 Ne5+ 2 Ke6 Ng6 3 Kf6 Nf4 4 Kf5 Nh5 5 Rb7** etc.

But in this study we also have another unexpected encounter with the position of the Réti study: (1 Kf7) **Kd7 2 Rd3+ Kc6 3 Ke6 Kc5 4 Rf3 Kc6**. We already know the rest.

Two more occurrences of familiar manoeuvres

2.15 (S351)
Československý šach 1934
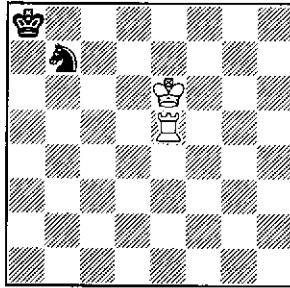
White to move and win
(a) as set, (b) wK to f7, wR to f6

(a) There is a dual at the end of the *Oest. Schachrundschau* study **2.3**. Instead of 9 Rg5, White can proceed otherwise, though the play is very complicated. Here this dual is removed, though of course at the cost of also removing the main line of the study. The solution is quite short, and goes **1 Kd7 Ka7 2 Kc8! Nd6+ 3 Kc7**. 1 Kd5? Ka7!

(b) **1 Ke6** (1 Ke7? Ka7) **Kb8 2 Kd7 Ka7 3 Kc6 Nd8+ 4 Kd6 Nb7+ 5 Kd5 Na5 6 Kc5 Nb7+ 7 Kb5** etc; 1...Na5 2 Rf5 (2 Kd5? Kb7!) Nc4 3 Rf4 Nb6 4 Kd6/Rb4 etc; 1...Nc5+ 2 Kd5 Nd7 3 Rf7 etc; 1...Ka7 2 Kd5. Here we have a manoeuvre from study **2.3** combined with the Amelung position.

A position which prompted a systematic investigation

2.16 (S352)
Československý šach 1946
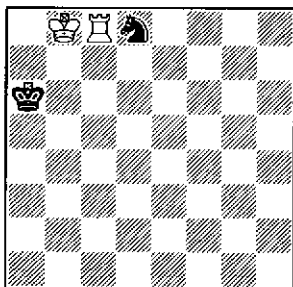
Shift the position bodily so that
Black to move can draw

How can we place this configuration on the board so that Black to move can draw? This can be answered only by a laborious consideration of all 30 possible settings. I will therefore reveal at once the answer which came out of my researches. The unique way to set this configuration on the board so that Black to move can draw is **White Kd7, Re7; Black Kc5, Nf7**. Black can now hold out by **1...Nh6 2 Rh7 Ng4 3 Rh5+ Kb6 4 Kd6 Ne3**.

The solver does not have to take my word for it. Why should precisely this position be drawn, and not a position one or more squares away from it? How should Black continue, if White plays **5 Rc5**?

This question gave rise to further research. The position that arises is so important for the ending R v N that we must get to grips with it. Without it, nothing is simple.

[The computer indicates an alternative draw by 4...Nf2 (5 Kd5 Ng4 6 Kd4 Kc7 and Black will eventually regroup), but 4...Ne3 is the simpler and more natural move and I don't think the existence of this alternative takes away from what follows.]
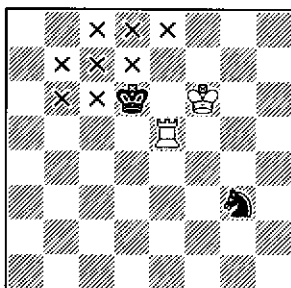
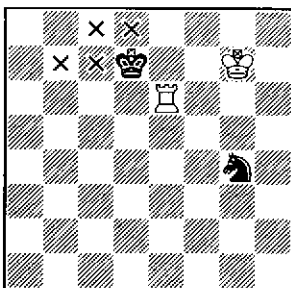### Three instructive diagrams

2.17 (S353)
Československý šach 1946-47
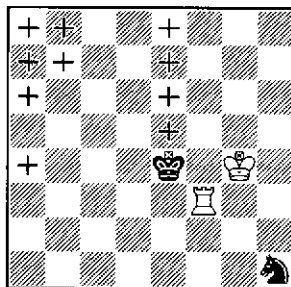
A - White to move wins

B - Black to move draws

C - White to move, Black draws

The three diagrams A-C show positions which can be reached from the preceding diagram, and which arise very frequently in the analysis of endings with R v N.

White to move wins in **A**, or if the

position is shifted so that the Black king is on any square marked +.

B shows the same configuration with Black to move. Black draws in the position shown, or if it is shifted so that the Black king is on any square marked ×.

In **C**, the White king is one square further away from the Black. If White is to move, Black draws in the position shown, or if it is shifted so that the Black king is on any square marked ×.

I would have to present extensive analysis to prove the correctness of these diagrams, and it would demand far too much space.

We can now complete the analysis of diagram **2.16**. We stopped with White Kd6, Rc5, Black Kb6, Ne3, Black to play move 5. We see from diagram **2.17B** that White cannot win. The reason is that after **5...Nd1 6 Rc1 Ne3 7 Rc3 Nf5+ 8 Ke6 Nd4+ 9 Kd5 Nb5** we have a position similar to the Amelung position but one rank lower, and this enables Black to hold the draw.

[The definitive computer results now available differ from Mandler's only in showing a very difficult win in diagram **A** with the Black king on a6: with best play, White can capture the knight on move 22. I have adjusted Mandler's diagram accordingly. The alteration appears not to affect the exposition of subsequent studies.]

Four more related diagrams...

2.18 (S354)
Československý šach 1933
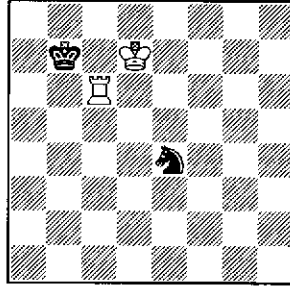
White to move throughout
(a) as set, White wins
(b) wK to e7, Black draws
(c) as (a) down a rank, Black draws
(d) as (b) down a rank, White wins

This is a collection of chess compositions; it is concerned with theoretical analyses only in so far as these are useful for understanding solutions. We shall therefore engage in only a few positions deserving of special attention - and these four positions are cases in point. Most of the remaining positions in diagrams **2.17A-C** are more easily mastered.

Usually, twin compositions feature different solutions leading to the same result. These four diagrams show something quite different. If we shift position (a) down a rank, we obtain position (b), but White wins in one case and Black holds the draw in the other. The reverse happens if we shift position (b) down a rank. And positions (a) and (b) also form a pair of twins, as do (c) and (d), and once more everything is reversed; White wins in one part, Black draws in the other.

In this first diagram, **1 Rc4 Nf6+ 2 Ke7 Nd5+ 3 Kd6 Nb6 4 Rb4** brings us to the now familiar Amelung position. If instead **1...Ng5 2 Rf4 Kb6**, the move **3 Ke7?** would be a decisive mistake.

Correct is **3 Kd6** with continuation **3...Nh3 4 Rf3 Ng5 5 Re3**.

Somewhat more complicated is **1...Ng3**. There are several ways to win, but also some tempting moves which analysis shows to be faulty. Thus for example after **2 Ke6 Kb6 3 Ke5 Kb5** White must not play 4 Kd5 on account of 4...Ne2, as we can see from **2.17A**. Correct is **4 Rc2 Kb4 5 Rg2 Nfl 6 Kd4** etc. On **1...Nf2** we play **2 Rd4 Kb6** and after **3 Ke6 Kc5 4 Ke5** we reach one of the winning positions shown in **2.17B**. However, if Black plays **3...Kb5**, we must not automatically play 4 Ke5, which would let Black draw (4...Kc5, see **2.17A**). Correct is **4 Kf5**. After **1...Nd2** the moves **2 Rb4+ Ka6 3 Kc6 Ka5 4 Kc5** lead to a win shown in **2.17B**, but wrong would be 2 Rd4 Nf3 3 Rd5 Kb6 4 Ke6 Kc6 as shown in **2.17A**. The repeated references to these auxiliary diagrams show their indispensable nature for resolving endings with R v N.
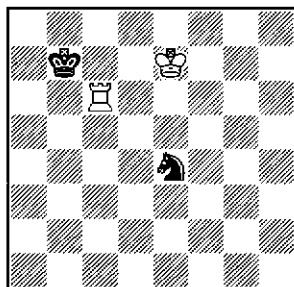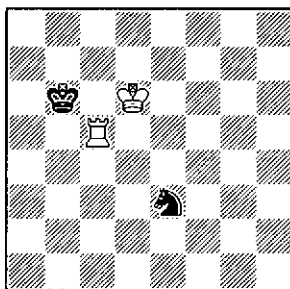

(b) White to move, Black draws

The same position will arise in the analysis of (b). Here, after **1 Rc4 Nd2** the move 2 Rb4+ forfeits any chance of winning, and the continuation **2 Rd4 Nf3 3 Rd5 Kc6 4 Ke6** leads only to **2.17B**; Black draws by **4...Ne1**.

In (c) and (d), we have the same positions down a rank. Now everything is changed. In (c), after **1 Rc3**, Black can draw by **1...Nf5+**. Conversely, Black was able to draw in (b) only by playing ...Ne1

and in (d) the equivalent move is no longer available, so White wins by **1 Rc3 Nd1 2 Rd3 Nf2 3 Rd4**.

(c) White to move, Black draws
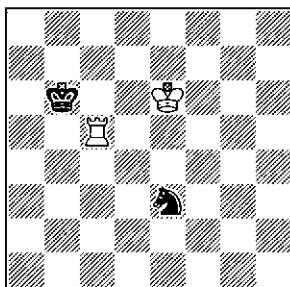
(d) White to move and win

[The computer has only one comment: in (a), in the line 1...Nd2 2 Rd4 Nf3, White has a difficult win by 3 Rd1, and it is 3 Rd5 rather than 2 Rd4 which is the decisive mistake.]

...and a twin study originating from them

2.19 (S355)
Československý šach 1933

White to move and win
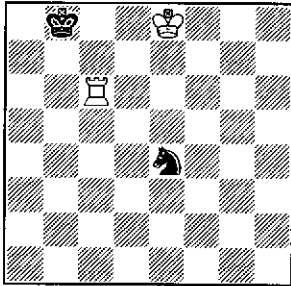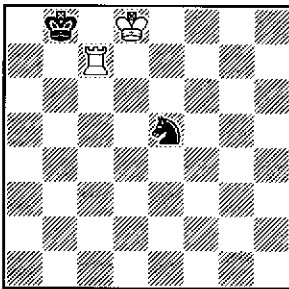(a) as set, (b) everything one rank down

The solution flows automatically from the preceding four diagrams. In (a), **1 Kd7 Kb7** gives the winning position shown in part (a) of **2.18**, whereas 1 Ke7 Kb7 brings us to the drawn position of **2.18** (b).

In (b), everything is the other way round, and now White must play **1 Ke6**.

An unusually complicated affair

2.20 (S356)
Československý šach 1946

White to move and win

Let us imagine that we reach this position in a game. I might almost say that it cannot be completely analysed without the aid of our three auxiliary diagrams **2.17A-C**. We keep coming back to a shifted version of the original position. This dependence is even closer than might appear from playing through the solution, for in analysing individual positions of this kind, the solver who conscientiously examines every possibility will continuously find new positions of the same kind, even though not as many as arise from **2.20**.

First, some tries. 1 Rc5! (this is correct) Nf3 2 Rb5+? Ka7 3 Kc7 Ka6 4 Rd5 Ne1 and draws; 2 Rd5? Kb7 3 Kd7 Kb6 4 Kd6 Ne1; 2 Rc3! Nd4 3 Rc4! Nf3 4 Rb4+? Ka7 5 Kc7 Ka6 6 Kd6 Ka5 7 Kc5 Nd2 and we have **2.17A**.

Now the solution. **1 Rc5 Nf3** (1...Nd3 see line 8 below) **2 Rc3 Nd4** (2...Ne5 see line 6, 2...Nd2 line 7) **3 Rc4 Nf3** (3...Ne2 see line 4, 3...Nf5+ line 5) **4 Ke7 Kb7** (4...Ne5 see line 1) **5 Kd6 Kb6 6 Kd5 Kb5 7 Rc2 Ne1 8 Rc3 Kb4 9 Kd4** and wins (**2.17B**).

1) 4...Ne5 5 Rc5 Nf3 (5...Nd3 see line 2) 6 Rd5 Kc7 7 Kf6 Kc6 and White wins (**2.17C**), but not 7 Ke6? Kc6 and Black draws (**2.17A**); if 7...Kb6 then 8 Kf5 and 8 Rd3 both win.

2) 5...Nd3 6 Rd5 Nf4 (6...Nf2 see line 3) 7 Rd4 (7 Rd6? Kc7 and draws, **2.17A**) Ne2 8 Rc4 Kb7 9 Ke6 Kb6 10 Ke5 (10 Kd5? Kb5 draws, **2.17A**) Kb5 and White wins (**2.17C**).

3) 6...Nf2 7 Rd4 Kc7 8 Ke6 Kb6 9 Kf5 (9 Ke5? Kc5 draws, **2.17A**) Kc5 and White wins (**2.17C**).

4) 3...Ne2 4 Kd7 Kb7 5 Kd6 Kb6 6 Ke5 (6 Kd5? Kb5 draw, **2.17A**) Kb5 and White wins (**2.17C**).

5) 3...Nf5 4 Kd7 Ne3 5 Rc5 Kb7 6 Ke6 (of course not 6 Kd6) Kb6 and White wins (**2.17C**).

6) 2...Ne5 3 Ke7 Kb7 4 Kd6 Nf7+ 5 Ke6 Ng5+ 6 Kd7 Nc4 7 Rc4 and wins (**2.17A**, after playing Rc4).

7) 2...Nd2 [see note at end].

8) 1...Nd3 2 Rb5+ Ka7 3 Kc7 Ka6 4 Kc6 and wins **(2.17B)**.

[The computer sometimes shortens the solution by deviating from Mandler's systematic treatment, but this is hardly important. There is however an error in Mandler's variation 7. He gives 3 Kd7 Kb7 4 Ke6 Ne4 5 Rc4 Ng5+ 6 Kd7 intending 6...Nf3 7 Kd6 Nd2 8 Rb4+ Ka6 9 Kd5 Ka5 with a win by diagram **2.17C**, but the computer prefers 6...Kb6 and in fact 3 Kd7 forfeits the win; White must play Rc7 first, and Kd7 the move after. The win after 3 Rc7 takes only 13 more moves and I am sure Mandler was aware of it (the few wins he missed were much deeper), but the play is complicated and it is not clear how he would have chosen to present it had he realised that it was needed.]

A conventional twin

2.21 (S357)
Československý šach 1946
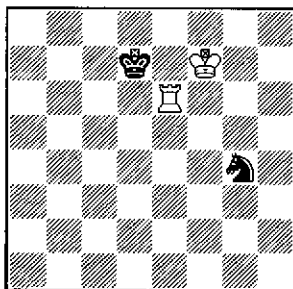
Black to move and draw
(a) as set, (b) everything one rank higher

These positions have the same stipulation, Black to move and draw, but the routes to the draw differ.

(a) **1...Nf2 2 Re2 Nh3** and either **3 Kf6 Nf4 4 Rd2+ Kc6 5 Ke5 Ng6+ 6 Kf5 Nf8** and draws or **3 Rd2+ Kc6 4 Kf6 Nf4 5 Ke5 Ng6+**; 1...Nh2? 2 Kf6!; 1...Kc7 2 Re4 Nf2 3 Rd4 Kc6 4 Ke6 Kc5

5 Ke5 **(2.17B)**.

(b) **1...Kc8 2 Re5 Nf3 3 Rd5 Kc7 4 Ke7 Kc6 5 Ke6 (2.17B) Ne1** and draws; 1...Nf3? 2 Re3 Nh4 (2...Ng5 3 Kg7 Kd7 4 Kf6 Nh7+ 5 Kg6 Nf8+ 6 Kf7 etc) 3 Kf7 Nf5 4 Rd3+ Kc7 5 Ke6 Ng7+ 6 Kf6 Nh5+ 7 Ke7 Nf4 8 Rc3+ Kb6 9 Kd6 and either 9...Kb5 10 Re3 or 9...Nc2 10 Rc4 Kb5 11 Kd5.

[Valid alternatives: in (a), 2...Ng4, 6...Ne7+; in (b), 3...Kb7/Ne1/Ng1, 4...Kb6/Ne1/Ng1.]

A study in systematic movement

2.22 (S358)
Československý šach 1946
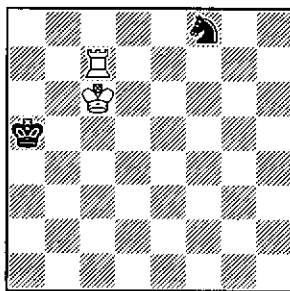
Black to move, White wins

Here again, we shall largely be dependent on our auxiliary diagrams. **1...Ne6 2 Rd7 Kb4 3 Rd6 Ng7** (3...Ng5 see line 3) **4 Kd5 Nf5 5 Re6 Kc3 6 Re5 Nh6** (6...Nh4 see line 1). So far, everything has proceeded in a pleasantly systematic manner, but now 7 Ke4 would be a mistake (7...Nf7 8 Rd5 Kc4 and draws). Correct is **7 Rg5**.

1) 6...Nh4 7 Rh5 Ng2 (7...Ng6 see line 2) 8 Rh3+ Kb4 9 Kd4 Ne1 10 Rc3.

2) 7...Ng6 8 Ke4 Ne7 9 Rh7, or 8...Nf8 9 Rh6 and either 9...Kc4 10 Rd6 Kc5 11 Ke5 or 9...Nd7 10 Kd5 Kb4 11 Rd6.

3) 3...Ng5 4 Rg6 Nf3 (4...Nf7 5 Kd5) 5 Rg4+ Ka5 6 Kc5 Nd2 (6...Ne1 7 Rg3) 7 Rb4.

3. Rook studies

[It is noticeable that whereas most study composers are tempted by the easy rewards offered by the minor pieces, Mandler concentrates on the rook. Although it is much the most frequent protagonist in over-the-board endings, the rook is generally regarded as unpromising material for studies; rook studies may be deep and difficult, but they are unlikely to be entertaining. A reading of this chapter may correct this impression. Play with rooks can at least as subtle as play with other pieces, and more than one ending depends on reciprocal zugzwang: a climax perhaps more surprising here than in any other ending, because it might seem that the rook's freedom of movement puts any such ideas out of court. Mandler divides his rook studies into four groups: (a) rook against pawns, (b) studies with wPg6 and bPg7, (c) studies with wPe6/g6 or e7/g6 and perhaps also bPg7, and (d) other studies.]

A. Rook against pawns

My simplest rook study

3.1 (S359, RP10)
Revue FIDE 1959
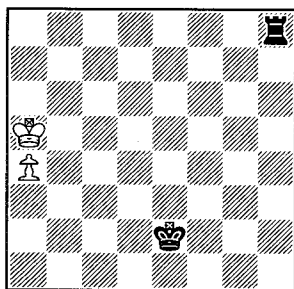
White to move and draw

The natural opening move is 1 Kb6, covering the advance of the pawn right up to the seventh rank, but this is insufficient to draw. Play continues 1...Kd3 2 a5 Kc4 3 a6 Rh6+ 4 Kb7 Kb5 5 a7 Rh7+ 6 Kb8 Kb6 and Black wins. We now realize that while the move 1 Kb6 has permitted the rapid advance of the pawn, it has done nothing to prevent the approach of the Black king, which is attacking the pawn as early as the fourth move.

The White king must obstruct his adversary. So we try 1 Kb4 Kd3 2 a5 Kd4 3 a6 Rb8+ 4 Ka5 Kc5 5 a7 Rh8, but again Black will win.

Correct is to start by choosing the middle way, **1 Kb5**, and only after **1...Rh5+** to play **2 Kb4**. Now **2...Kd3 3 a5 Kd4 4 a6** leaves the rook without a check from above, and after **4...Rh7 5 Kb5 Kd5 6 Kb6** the draw is assured. If instead 4...Rh8 5 Kb5 Rb8+, White must of course play not 6 Ka5 on account of 6...Kc5 etc, but 6 Kc6.

If Black plays **1...Rb8+**, the White king must go once more to the c-file: **2 Kc6 Ra8 3 Kb5 Kd3 4 a5 Kd4 5 a6/Kb6** draw. The a-file is again the wrong choice: 2 Ka6 Kd3 3 a5 Kc4 4 Ka7 Rb1 5 a6 Kc5/Kd5 and the Black king has arrived in time.

If Black plays 1...Kd3 2 a5 Rh5+, White again comes down to the fourth rank, 3 Kb4, and we have transposed into the play after 1...Rh5+.

If we shift the Black king to g3, as in diagram **3.1a** on the next page, we have quite a different situation:

3.1a
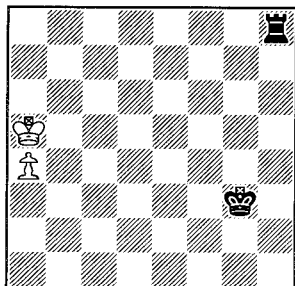
Now the drawing move is **1 Kb6**. This time White must meet **1...Rb8+** by 2 Ka7, not 2 Kc6, because the latter is answered by 2...Ra8 driving the White king back to b5. There follows 3 Kb5 Kf4 4 a5 Ke5 5 Kb6 Kd6 and again Black has arrived too soon: 6 a6 Rb8+ etc. But after **2 Ka7** White draws: **2...Rb1 3 a5 Kf4 4 a6 Ke5 5 Ka8 Kd6 6 a7**. The Black king has not been able to reach b6 in time.
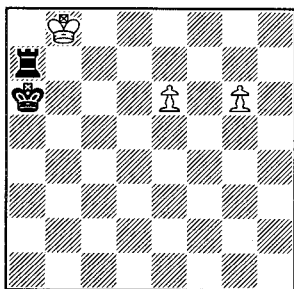
The king marches from one wing to the other

3.2 (S360, RP4)
Československý šach 1960

White to move and draw

1 Kc8. If Black now plays 1...Re7, White replies 2 g7 Rxg7 3 Kd8 with an easy draw. Black therefore tries **1...Kb6**. Now 2 g7 fails against 2...Kc6 3 Kd8 Kd6 4 Ke8 Rxg7 etc. Correct is **2 Kd8 Kc6**

3 Ke8 (3 e7? Ra8 mate) **Kd6 4 e7** (a decisive sacrifice, crystal clear) **Rxe7+ 5 Kf8 Ke6 6 g7 Rf7+ 7 Kg8 Rf1** (7...Kf6 8 Kh8 Rxg7 stalemate) **8 Kh7 Rh1+** (8...Kf6 9 g8N+) **9 Kg8** (9 Kg6? Rg1+ 10 Kh7 Kf7) **Kf6 10 Kf8 Ra1 11 g8N+** and draws.

A careless first step would give the enemy king a shelter

3.3 (S361)
Československý šach 1950
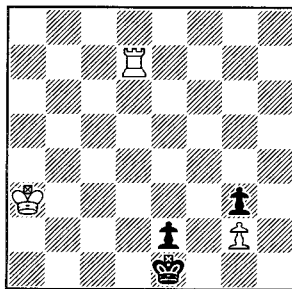
White to move and draw

The move 1 Kb3 would be a decisive mistake: 1...Kf2 2 Rf7+ Kxg2 3 Re7 Kf2 4 Rf7+ Ke3 5 Re7+ Kd2 6 Rd7+ Kc1 7 Rc7+ Kb1 8 Re7 g2 and Black wins. By his first move, White has allowed the Black king to find shelter from the rook's checks on b1.

Correct is **1 Kb2** followed as before by **1...Kf2 2 Rf7+ Kxg2 3 Re7**, and if now **3...Kf2** then **4 Rf7+ Ke3 5 Re7+ Kd3 6 Rd7+ Kc4 7 Rc7+ Kd4 8 Rd7+ Kc5 9 Rc7+ Kd5 10 Rc1** (10 Rd7+? Kc6/Ke6 and wins) **Kd4 11 Kc2** and draws. Alternatively, **3...Kf3 4 Kc2/Kc3** (now 4 Rf7+? fails to 4...Kg4 and either 5 Re7 g2 6 Kc2 Kf4 or 5 Rg7+ Kf5) **g2 5 Kd3! Kf4** (5...g1Q 6 Rf7+ and 7 Rg7+) **6 Rf7+ Ke5 7 Rg7 Kf6 8 Kxe2 Kxg7 9 Kf2** draw. The finish is dramatic.

A sudden transition from urgency to tempo play

3.4 (S362, RP2)
Prager Prese 1932
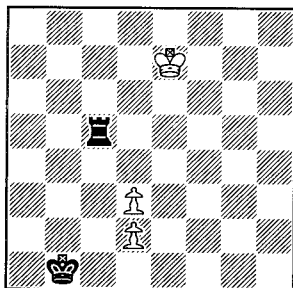
White to move and draw

In this five-man study we encounter a position of reciprocal zugzwang, together with the theme of transition from urgent manoeuvring to tempo play.

Black threatens ...Rd5. White must prevent this, which limits his choice of first move to Kd6 or Ke6. 1 Kd6 has the advantage of attacking the Black rook, but this advantage means little; even after 1 Ke6 the Black king will not be able to make two moves in succession, because the White pawn will attack the rook. The disadvantage of 1 Kd6 is seen after 1...Rc8, when 2 d4 is met by 2...Rd8+ forcing the White king to come down to the fifth rank. After the correct move **1 Ke6** this continuation is no longer effective, because White can meet 1...Rc8 2 d4 Rd8 by 3 d5 and the pawn is one rank further forward. And if 1...Kc2 White plays 2 d4 and thereby gains an important tempo, leading for example to 2...Rc6+ 3 Ke7 Kd3/Rc8 4 d5 and so on.

Black therefore plays **1...Rc6+**, and White again has to decide whether to put his king on to the d or the e file. The moves 2 Kd7/Ke7 are ruled out by 2...Rc2. And once again the occupation of the d-file (2 Kd5) is faulty, though this time not on account of 2...Rc8, which is

refuted as in the main line, but because of 2...Rc2 3 d4 Rxd2 4 Kc5 (again the White king is held down to the fifth rank) Kc2 5 d5 Kd3 6 d6 Ke4 7 Kc6 Ke5 with a Black win.

So White plays **2 Ke5** (2...Kc2 3 d4 Rc8 4 d5 etc), and he meets **2...Rc8** by **3 d4**. But his position still seems hopeless. Black can again prevent the White king from advancing beyond the fifth rank, by **3...Re8+** and 4...Rd8(+), and we already know that the resulting position is bad for White. What can we do now?

At this point we must appeal to a study by Réti, on which the present study was based.

A four-man study featuring reciprocal zugzwang

3.5 (S363, RP3)
by Richard Réti
Tijdschrift 1922,
Münchener Neueste Nachrichten 1928
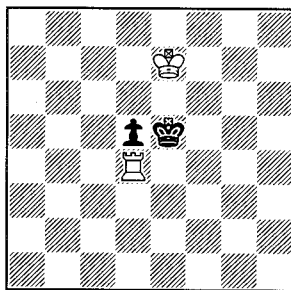
White to move and win

This study is unsound according to normal criteria. However, Réti deliberately chose the present setting, even though conventionally sound alternatives 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 realization was as cogent as

this little four-man position.

Why does 1 Rd1 not work? Because Black replies 1...d4, and we have a position of reciprocal zugzwang.

In order not to have to move in this position, White starts by playing **1 Rd3 or 1 Rd2**, and only after **1...d4** does he play **2 Rd1!** On 2...Kd5 there follows 3 Kd7, with 3...Ke5 4 Kc6 Ke4 5 Kc5, or 3...Kc5 4 Ke6, or 3...Ke4/Kc4 4 Kd6, and White wins in each case.

Conversely, after 1 Rd1? Black draws by 1...d4, with 2 Kd7 Kd5 3 Kc7 Kc5, or 2 Kf7 Ke4 3 Ke6 d3, or 2 Rd2 Ke4 3 Kd6 Ke3 4 R-- d3, or 2 Rh1 d3.

It is a magical setting of reciprocal zugzwang and tempo play using only four men.

Now let us return to study **3.4**. After **1 Ke6 Rc6+ 2 Ke5 Rc8 3 d4 Re8+** we follow the example of Réti and play **4 Kd5! Rd8+ 5 Kc4! Kc2 6 d5**. If instead Black tries 4...Kc2, we naturally reply 5 Kc6 Kd3 6 d5 Kd4 (6...Rc8+ 7 Kd7 Rh8 8 d6, but not 7 Kb7 on account of 7...Rd8) 7 d6 Ke5 8 d7.

The pawn on d2 normally vanishes in the course of the play, but it is needed if Black tries to tempo by playing 5...Kc1 (6 d5 Kc2 7 d3/d4). But even the presence of this pawn doesn't help White if he chooses the wrong line: 1 Kd6? Rc8 2 d4 Rd8+ 3 Kc5 Kc2 4 d5 Kd3 5 d6 Ke4 6 d4 Kf5 7 Kc6 Ke6 8 d5+ Kf7 9 d7 Ke7 10 d6+ Ke6.

An ingenious rook manoeuvre

3.6 (S364)
Revue FIDE 1961
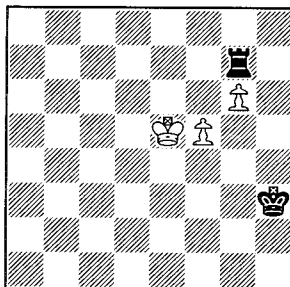
White to move and win
(a) diagram, (b) bK on h4

There are two obvious lines of attack here, 1 f6 and 1 Kf6, and an alert solver is bound to ask himself why a move which works in one part does not also work in the other. He cannot therefore miss the ingenious manoeuvring by the Black rook which is an integral part of the study.

In the diagram position, 1 f6? fails as follows: 1...Rxg6 2 f7 Rg5+ 3 Ke4 Rg4 4 Ke3 Rg3+ 5 Ke2 Rg2+ 6 Kf1 Rg4 7 f8Q Rf4+ 8 Qxf4 stalemate. Correct is therefore **1 Kf6**, and if 1...Rg8 then either 2 Kg5 or 2 Kf7.

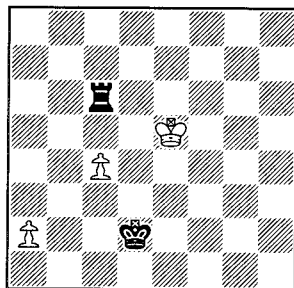With the Black king on h4, **1 f6** is correct: **1...Rxg6 2 f7 Rg5+ 3 Ke4 Rg4+ 4 Ke3 Rg3+ 5 Ke2!** (5 Kf2 Rg5 6 f8Q Rf5+) **Rg2+ 6 Kf1** and White wins. Conversely, 1 Kf6? Rg8 2 Kf7 (2 g7 Kg4) Ra8 3 g7 Kg5 4 f6 Kf5.

[Mandler doesn't mention 2 Kf7 in part (a), giving only 2 Kg5 (which is of course sufficient), and I have slightly altered his text so as to bring out the differentiation after it.]

Two similar barriers

3.7 (S365)
Revue FIDE 1958, version

White to move and draw
(a) diagram, (b) wPa2 on a3

White gradually strengthens the attack, and Black the defence

3.8 (S367, RP21)
Československý šach 1950

White to move and win

In these two studies, the White king joins forces with his pawns to create a barrier to delay the Black king. In part (b), the barrier is one rank higher than in (a).

Which move is correct, 1 Kd4 or 1 Kd5? One works in one case, the other in the second. By finding where the difference lies, the solver arrives at the correct solutions.
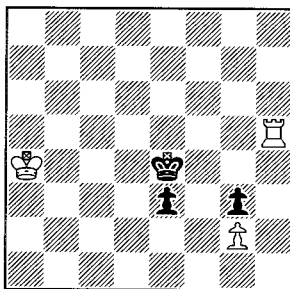
In the diagram position, **1 Kd4 Rd6+ 2 Kc5** and White draws, for example 2...Rd8 3 Kb6 etc, or **1...Kc2 2 c5** and the White king can keep the Black at bay thanks to the fact that the pawn on a2 covers b3. 1 Kd5? would be faulty, because after 1...Rc8 2 c5 Kc3 3 a3 Kb3 the Black king has managed to cross the third rank in good time: 4 c6 Ka4 5 Kd6 Kb5 6 a4+ Kb6 7 a5+ Ka7 8 Kd7 Kb8 and Black wins.

With the pawn on a3, this procedure is not possible: 1 Kd4? Kc2 2 c5 Kb3 3 Kd5 Rc8 4 Kd6 Ka4 5 c6 Kb5 and Black wins as above. But perhaps we can try to construct the same barrier, but one rank higher? We can indeed: **1 Kd5 Rc8 2 c5 Kc3 3 c6** and the task is accomplished.

White may be a rook up, but he has to proceed very circumspectly in order to to clinch the win.

Let us start by trying some rook moves. After 1 Rh8 e2 2 Kb3 Ke3 we see that Black has not only held the draw, he is even going to win: 3 Re8+ Kf2 4 Rf8+ Kxg2 5 Re8 Kf2 6 Rf8+ Ke3 7 Re8+ Kd2 8 Rd8+ Kc1 9 Rc8+ Kb1 10 Re8 g2 etc. We know most of this from study **3.3**.

All right, try 1 Rh1. But after 1...Kd3 2 Kb3 e2 3 Ra1 Kd2 White is again lost.

We have been playing 2 Kb3 automatically, as if no other move came into consideration. But this move is not good.

So let's try again: 1 Rh1 Kd3 2 Kb5(?!) e2 3 Kc5 Kd2 4 Kd4 e1Q 5 Rxe1 Kxe1 6 Ke3 and White wins. It seems as if we are on the right path. But we still need to look at the variation 1 Rh1 e2 2 Kb5 Ke3, and here 3 Kc4 is not good enough, for example 3...Kf2 4 Kd3 Kxg2 5 Re1 Kf3 6 Rxe2 g2 and Black draws.

Where did White go wrong? He should have played 2 Kb4, instead of Kb5, so as to have Kc3 available at move 3: 1 Rh1 e2 2 Kb4 Ke3 3 Kc3 Kf2 4 Kd2

Kxg2 5 Rh8 and White wins.

If White can sharpen the attack, Black can sharpen the defence. After 1 Rh1 e2 2 Kb4 he interpolates 2...Kd3, and only after 3 Kc5 does he play 3...Ke3. Now the White king has been prevented from reaching c3 in time. And at first sight it appears that 4 Ra1/Rb1 do not help, because there follows 4...e1Q 5 Rxe1+ Kf2 and Black will draw after any rook move. But White need not move the rook; he can play 6 Kd4 Kxe1 7 Ke3, with an easy win.

However, Black has another trick up his sleeve. He can revert to his original first move, 1...Kd3, and then answer 2 Kb4 with 2...Ke2! Now 3 Kc3 is met by 3...Kf2 4 Kd3 Kxg2 5 Rh8 (5 Ra1 Kf2!) Kf2 6 Rf8+ Ke1 with a draw.

But this need not alarm us. We simply interchange White's first and second moves, and play 1 Kb4 e2 2 Rh1 Kd3 3 Kc5 etc. We must just be careful, if Black plays 1...Kd3, to play not 2 Rh1 (on account of 2...Ke2) but 2 Kc5, ready to meet 2...Ke2 by 3 Kd4.

So the solution unfolds **1 Kb4 e2 2 Rh1 Kd3** (2...Ke3 3 Kc3 Kf2 4 Kd2 Kxg2 5 Rh8 etc) **3 Kc5 Kd2** (3...Ke3 4 Ra1/Rb1 and either 4...Kf2 5 Kd4 etc or 4...e1Q 5 Rxe1 Kf2 6 Kd4) **4 Kd4**.

At the start, the White king had a choice between three apparently equivalent moves. We have established that only 1 Kb4 wins. Nor perhaps is it without interest that even the two remaining moves are not truly equivalent; 1 Kb5 does at least hold the draw, whereas 1 Kb3 loses.

[Readers who are following this study with the aid of a computer may find themselves a little confused when they get to paragraph 5, 1 Rh1 Kd3 2 Kb5 etc. The computer gives 2...Ke2 as a draw in this line as well, so 1...Kd3 is in fact a good move, and it is not immediately obvious why Mandler should abandon it and transfer his attention to 1...e2. All becomes clear three paragraphs later.

The computer's speed, and its infallibility within its calculation horizon, are invaluable, but it is also interesting to see how a human analyst sorts out the true trails from the false and gradually arrives at the same conclusion.]

Something quite simple for a change

3.9 (S368)
FIDE Revue 1956
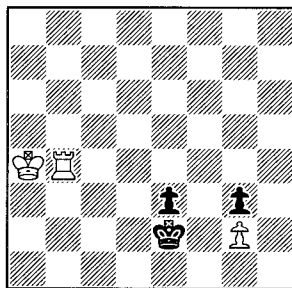
White to move and draw

The diagram recalls study **3.3**. Would it not be possible to draw by the same means? In that study, the Black e-pawn was already on the second rank, so it would appear to be a simple matter to achieve the same end here where the pawn is only on the third rank. But the truth is that whereas Black is only one tempo behind his position in study **3.3**, White is two tempi behind, albeit less obviously: his king is on the fourth rank and so requires two moves rather than one to attain the second rank and deny the Black king a shelter, while the rook must use a move to get to the seventh or eighth rank and so place itself at a sufficient distance to keep checking.

In fact the way to draw is much simpler. White must start by choosing between 1 Kb3 and 1 Kb5. 1 Kb5 is easily refuted by 1...Kf2. Correct is **1 Kb3**, meeting 1...Kf2 by 2 Rf4+ Kxg2 3 Kc2 Kh3 4 Kd3 g2 5 Rf8 etc.

But what do we do after **1...Kd3**? Now

it seems that the rook must be on the seventh or eighth rank or the king on the second, in order to allow White to draw as in the previous study. But in fact the play is quite different. Correct is **2 Rd4+**. Black must take the rook, and the capture leaves him without a win: **2...Kxd4 3 Kc2 Kc4 4 Kd1 Kd3 5 Ke1 e2 stalemate**.

The White king staggers out of one check into another

3.10 (S370)
Rudé právo 1958
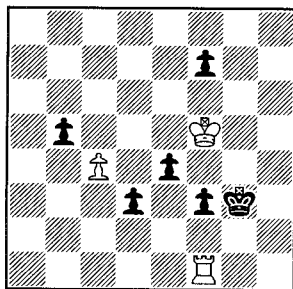
White to move and win

1 Kxe4 (1 cxb5? e3!) **f5+ 2 Kxd3**. The move 2 Ke3? would give Black an important tempo by 2...f4+, and would forfeit the win: 3 Kxd3 Kg2 4 Rxf3 (other rook moves are met by 4...bxc4+, and 4 cxb5 by 4...Kxf1) Kxf3 5 cxb5 Kg2 6 b6 f3 7 b7 f2. **2...bxc4+**. Now 2...Kg2 does not draw, because Black lacks the tempo f5-f4 in comparison with the preceding line: 3 Rxf3 Kxf3 (3...bxc4+ 4 Ke2 with a simple win) 4 cxb5 f4 5 b6 Kg2 6 b7 f3 7 b8Q etc. **3 Ke3**. One move ago, we could not allow the move ...f4+; now, we want to provoke it, because it will block a crucial square against Black's king. 3 Kd2 at once is defeated by 3...c3+ 4 Ke1 c2 5 Rg1+ Kf4 6 Kf2 Ke4. **3...f4+ 4 Kd2 c3+**. Every White move so far has exposed him to check. **5 Ke1 c2 6 Rg1+ K-- 7 Kf2** and wins.

B. Rook studies with wPg6 and bPg7

In the next two sections, we examine rook studies with two particular pawn configurations: (a) a White pawn on g6 facing a Black on g7, and (b) a White pawn on e6 or e7 and a second one on g6, sometimes also with a Black pawn on g7. It is a matter of systematic examination, of studies as the fruit of analysis. There are composers who disdain this way of working, and attach value only to "goal-inspired" or "artistic" studies. These are compositions where the solver does not need to subject the position to a fundamental analysis, but rather to seek out ideas and manoeuvres which are not natural to it and which the composer has in a sense forced into it. Some regard composition in this style as in some way a higher artistic activity, and they look down on analysts and the "analysis-inspired" studies they produce.

The majority of composers are capable of working in either mode, though most find themselves more at home in one than in the other. So let us be glad that both kinds of composition give artistic satisfaction, and let us look on both without prejudice.

Analysis-inspired and goal-inspired studies cannot always be differentiated at first sight, but studies of the first kind usually employ less material, they are more difficult to solve, and often they make a contribution to endgame theory. The theme of a goal-inspired study is usually presented more incisively, and an idea which cannot be realised in a simple form can sometimes be mastered by using additional material.

Richard Réti expresses himself on the question thus (*Sämtliche Studien*, 1931, p. 10): "There are two ways to compose studies. A) We can take a simple and interesting position, discover what lies behind it, and present this in a refined form: artistic, economical, and clear. B) We can start from a predetermined

climax, say a mate, stalemate, or reciprocal zugzwang, and compose a lead-in to it. The second way of working does not greatly appeal to me, though I have sometimes indulged in it."

[If Mandler were writing today, he would be even more distressed at the small number of analysis-inspired studies that are published. Yet I have not personally found that composers and commentators look down on them, quite the reverse in fact, and I suspect that the reason for their paucity is quite different: it is that this mode of composition is so difficult that few have the knowledge, ability, and perseverance required to succeed in it. My own studies have been almost entirely goal-inspired, and while none is a masterpiece they have at least given a certain amount of pleasure to my friends. But if I were asked to produce the sort of thing that Mandler achieves so splendidly in the next twenty pages, I would not even know how to start.

At a technical level, there was a translation difficulty here. Mandler's actual terms translate as "analytic" and "combinational", but "combinational study" is not a term we use in English and it could be argued that studies are necessarily combinational whatever the reasons that have prompted their creation. My terms "analysis-inspired" and "goal-inspired" are undesirably clumsy, but they do encapsulate the distinction that Mandler is making.

It should also be noted that Mandler quotes Réti in Czech, and that it is Mandler's quotation which I have translated here. However, Chris Feather has kindly given me a direct translation of Réti's original German, and I am glad to say that the two are not significantly at variance.]

Start with the move that will be needed anyway

3.11 (S371)
Československý šach 1950
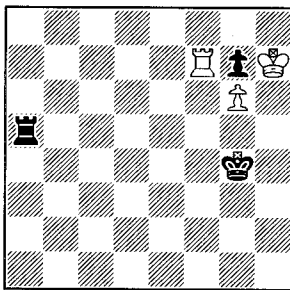
Black to move and draw

Black cannot save his own pawn, so he must go after White's. To do this, he must play 1...Kg5/Kh5 followed by 2...Ra6, or perhaps the other way round. It is not obvious at first sight which of the king moves is better, but ...Ra6 will be needed in any case. In such a case, we shall not normally go far wrong if we start by playing the move which will definitely be needed, and put off the choice between the other moves until later.

In fact we have here 1...Kg5? 2 Rxg7! Ra6 3 Rb7 and wins, or 1...Kh5? 2 Kxg7 Ra6 3 Rf5+ (2...Rg5 3 Rf6). But after **1...Ra6** we have **2 Kxg7 Kg5** drawing, or **2 Rxg7 Kh5**. If 2 Rb7 then again 2...Kg5 (2...Kh5? 3 Rb5+, 2...Kf5? 3 Rxg7).

A very similar case

3.12 (S372)
Revue FIDE 1956
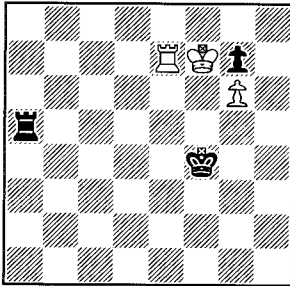
Black to move and draw

The solution to this study is similar, but the motivation for the moves is different.

1...Kf5? 2 Rb7!; 1...Kg5? 2 Kxg7!

1...Ra6! 2 Kxg7 Kf5, 2 Rb7 Kg5 3 Rb5+ Kh6.

A mating attack

3.13 (S373, RP22)
Československý šach 1950

White to move and win

1 Rd5 Rg1+ (there is no other way of meeting the threats ...Rd8+ and ...Rd7) **2 Kf5 Rf1+ 3 Ke5 Re1+**. It appears that White cannot now play **4 Kd6** on account of **4...Rg1**. However, White continues **5 Kc7** and threatens mate. There follows 5...Rc1+ 6 Kd7 Re1 7 Rd6

and White will win the Black pawn, for example 7...Kb8 8 Kd8 (threat 9 Rd7) Rg1 9 Ke8 etc.

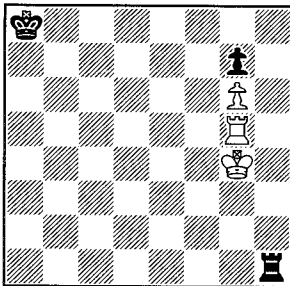White protects his pawn by a mating attack, and this pawn then secures him the victory.

White's first move deliberately loses a tempo

*3.14 (S374, RP23)
Československý šach 1950
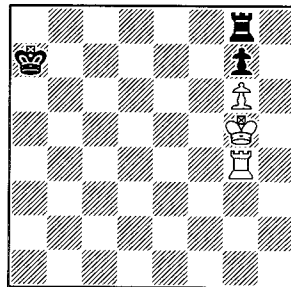
White to move and win

The natural first move is 1 Rf4. Correct is however 1 Re4. Why?

Let us try 1 Rf4. Play continues 1...Kb6 2 Rf7 Kc6 3 Kf5 Kd6, and White has to move. If he tries 4 Ra7, Black replies 4...Rf8+ (5 Ke4 Ke6, or 5 Kg5 Rf1/Rg8). White wins only if he can reach the position after 3...Kd6 with Black to move: in other words, he must lose a tempo. This is done by playing **1 Re4 Kb6 2 Re7 Kc6 3 Kf5 Kd6 4 Rf7**. Now the "unwelcome obligation to move" rests on Black, and he loses: for example, 4...Kd5 5 Rd7+ Kc7 6 Ke6 etc.

But cannot Black lose a move in reply? No, because he cannot afford to let the White king attain the e-file.

If instead 1 Rd4? then 1...Kb6 2 Rd7 Kc6 and the rook must make a decision. If it moves to f7, Black can play 3...Kc5 followed by 4 Kf4 Kd5 or 4 Kf5 Kd6 (of course 3...Kd5 also works), and if it goes to e7 or a7 Black replies 3...Kd6.

A win that is harder than it seems

3.15 (S378, version)
Práce 1952, version
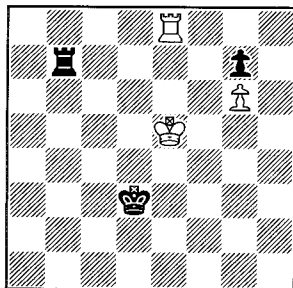
White to move and win

If White tries 1 Ke6 threatening 2 Re7, Black can reply 1...Ke4. 2 Re7 can now be met by 2...Rb6+ 3 Kf7+ Kf5 with a draw. Better is **1 Rf8**, with the continuation 1...Ke3 2 Rf7 Rb5+ 3 Ke6 and wins. But the win is not as simple as it appears. Black can continue 3...Ke4, and White must not capture at once since 4 Rxg7 Rb6+ 5 Kf7 Kf5 is only a draw. Instead, he must play 4 Ra7/Rc7, and now the threat of Kf7 and Kxg7 leaves Black helpless.

But Black can strengthen the defence. He interpolates **1...Re7+**, and now neither 2 Kd6 works (2...Ra7 3 Ke6 Ke4) nor 2 Kf5 (2...Kd4 3 Rf7 Re5+). White must play **2 Kd5**, and if **2...Ke3** then **3 Rf7**. But the win is still far from easy. Black plays **3...Re8**, and the pawn will remain taboo for some time. Its immediate capture is refuted by 5...Kf4. Correct is **4 Kd6**, and the threat of exchange forces the Black rook to leave the e-file. Relatively best is **4...Rc8**. We know that White cannot continue 5 Ke6 at once on account of 5...Rc6+ 6 Kf5 Rc5+ 7 Kg4 Rc4+ 8 Kg3 Ke4 etc, hence **5 Kd7**, and only after **5...Ra8** does he play **6 Ke6**. Now that the rook is on the a-file, the check on the rank leads nowhere (the previous line 6...Ra6+

7 Kf5 Ra5+ 8 Kg4 Ra4+ 9 Kg3 Ke4 now loses to 10 Rf4+), and after **6...Ke4 7 Rb7 Rf8** White can at last take the pawn: **8 Rxg7 Kf4 9 Rf7+** and the rooks will be exchanged.

[This was originally set with the White rook on h8 and the Black on c7, with the additional point that an immediate 1 Rf8 would fail (1...Rc6 2 Kf5 Ke3 3 Rf7 Rc5+ 4 Kg4 Rc4+ 5 Kg3 Ke4 6 Rxg7 Kf5) and White had to play 1 Re8 first. This threatened 2 Ke6, intending 3 Re7 and if 2...Ke4 then 3 Kd6+ and 4 Kxc7, so Black apparently had to play 1...Ra7/Rb7 and we had the diagram position. But the computer has shown that 1...Rc5+ gives Black a draw: 2 Kd6 Kd4 3 Re7 Rf5 4 Kd7 (4 Rxg7 Rf6+) Rg5 5 Re6 (5 Rxg7 Ke5) Kd5 6 Ke7 Rf5 and Black will hold out, or 2 Ke6 Ke4 3 Kf7+ (3 Re7 Rc6+ 4 Kd7+ Kd5 5 Rxg7 Re6) Kf5 4 Kxg7 Rc6, or 2 Kf4 Rc4+ 3 Kf5 (3 Kf3/Kg3 Rc6) Rc5+ 4 Re5 Rc7 and 5 Re8 will be met by a further check on c5. There are several lines where White wins the pawn, but none where he wins the game.

So this important introductory move must be left off, and it is a very moot point whether Mandler would have wanted the study to be presented in its present truncated form. My feeling is that he might well have preferred to suppress it, but the win from this position is referred to in the next study, and it is easier to present it as a separate preliminary item than to blend the necessary analysis into the later text.]

Something which we have already met appears as a try

3.16 (S382, RP35)
Československý šach 1954
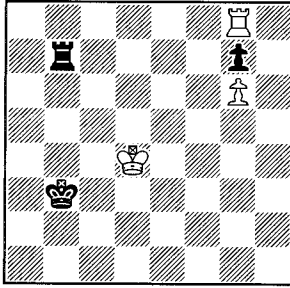
Black to move and draw

After 1...Kc2 2 Ke5, the solver will probably start by playing 2...Kd3. But in this position we know that 3 Rf8 wins for White (see the preceding study).

Surprisingly, 2...Kd3 would succeed if the White king had already reached on e6. In that case, 3 Rf8 could be answered by 3...Ke4.

The solution therefore unfolds **1...Kc2 2 Ke5 Re7+** (an improbable continuation) **3 Kd5** (3 Kf5 Kd3 4 Rf8 Kd4) **Ra7** (not 3...Rb7 4 Rd8 Kd3 5 Kc6+) **4 Ke6 Kd3**.

This is one of those studies which are easier to solve than to explain satisfactorily.

[In his text to this study in *64 studií z oboru věžových a pěšcových koncovek*, Mandler addresses the question as to whether a "try", a study which is hidden within another and is encountered only if the solver of the latter goes down a false trail, can be regarded as of equivalent value to a study presented in the normal way. This question has attracted much attention in the problem field, where composers in the so-called "modern" style expect solvers to go to considerable trouble to seek out moves which do not in fact solve the problem. As regards studies, Mandler says Yes, a study which appears only as a "try" within another study can be regarded as a fully-valued component of the latter provided that there is no risk that the solver will overlook it, though he will have nothing to do with the so-called "try" which the solver sees only after the composer's commentary has explicitly drawn his attention to it. But this is a composer's viewpoint, and the general enthusiast looks at things a little differently. In a "try", White plays plausibly but wrongly, and Black defeats him by playing well. In the actual solution, White plays correctly, and Black fails; but unless White plays *better* in the actual solution than Black has done in refuting the try, the solver or reader is left with a feeling of anticlimax. In theory, it is entirely possible for a study "White to play and win" to contain one or more high-quality internal studies "Black to play and draw" which come into effect if White makes the appropriate wrong move. In practice, the feat is extremely difficult to bring off, and truly satisfying examples are rare.]

The White king must choose the middle way

3.17 (S383, RP34)
Československý šach 1954
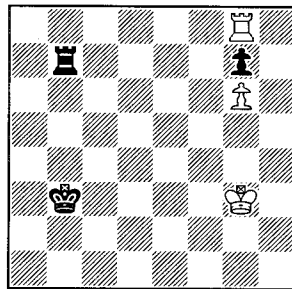
White to move and win
(a) as set, (b) with wK on e3

It is obvious that the White king must

approach the pawns. Which square should he choose?

In (a), the natural move would seem to be 1 Kf4. But there follows 1...Kc4 2 Rf8 Kd5 3 Rf7 Rb1 4 Rxg7 Ke6, and we see that we have made a wrong choice. White needs to play 5 Rf7 to keep the Black king from the pawn, and this fails on account of 5...Rf1+.

Nor is 1 Kh4 correct. Black refutes this by playing 1...Kc4 2 Rf8 Kd5 3 Rf7 Kc6.

Correct is **1 Kg4 Kc4 2 Rf8 Kd5 3 Rf7**, when **3...Rb1 4 Rxg7 Ke6 5 Rf7** and **3...Kc6 4 Rxb7** both win.

In (b), where the White king is on e3, he must again take the middle way. We have just seen that 1 Kf4 fails, and we know from the preceding study that 1 Kd4 Kc2 is drawn. This leaves only **1 Ke4**, and play continues **1...Kc4 2 Rc8+ Kb5 3 Ke5/Kd5** or 1...Kc3 2 Rf8 Re7+ 3 Kd5 etc.

[Mandler later added a third part to this, leaving the White king on e3 and moving the Black to c2 (*Revue FIDE* 1956), with the intention that White can now play to the discredited square f4 because the Black king is too far away from the pawns for the previous refutation to work. But while it is true that the alternative king moves 1 Ke4 and 1 Kd4 do not work, White has an alternative and not uninstructive win by 1 Rc8+, pushing the Black king still further form the scene of action. Moving to the b-file is clearly bad, hence 1...Kd1, and now comes 2 Kf4 Ke2 3 Rf8 Rb4+/Rb6 4 Kg5 Rb5+ 5 Rf5 Rb8 6 Rf7 Rg8 7 Kf4 and so on.]

The logical approach

3.18 (S384, RP13)
Československý šach 1956
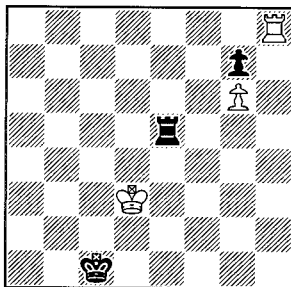
White to move and win

Sometimes, a chess problem can be solved by logic. We shall see an example later (study **3.29**) where successive trials gradually lead the solver to the right path. Here also we shall see "Probespiel", "Plan", and "Vorplan". These German terms are in common use because the Germans take a particular delight in such scientific dissection, particularly in the field of problems. But the logic often serves more to explain the solution once it has been found than to take the solver down the logical yet difficult path towards it. This is certainly true of the present study. Hardly anyone will find the solution by actually applying the logic, but I shall try to explain logically how a solver could arrive at it.

It is clear that White must capture the Black pawn. In itself, this is very easy; after 1 Rc8+ and 2 Rc7 the pawn is duly lost. But this is not enough to win the game. After 1 Rc8+ Kd1 2 Rc7 Ke1 3 Rxg7 Black will continue 3...Kf2 4 Rf7+ Kg3 5 g7 Rg5 6 Ke4 Kg4 7 Rf1 Kh3 with a draw.

From this trial play ("Probespiel") it should be possible to obtain a clue which will direct us towards the true procedure. This may not be easy, because the solver will discern several possible clues, and he

will have to decide which of them point to fundamental obstacles and which to difficulties that can be removed by better play.

In the trial which we have just seen, Black had the advantage that his king could proceed without interruption to the g-file whereas the White king was prevented by the Black rook from crossing the e-file. This is the stumbling block. To overcome it, we must lure the Black rook away from the e-file. This will be our "Vorplan" (foreplan). Our ultimate objective is of course to capture the Black pawn under more favourable conditions.

If we play 1 Rc8+ Kd1 2 Rf8 Ke1 3 Rf4, we achieve the aim of diverting the Black rook, which must leave the e-file because of the threat 4 Re4+. But alas Black has 3...Rg5, and there can no longer be any talk of a White win.

So before we proceed to our "Vorplan" (to expel the Black rook from the e-file) we must first force it to move to a rank from which it cannot retreat to the g-file. Only the seventh rank fulfils this requirement. We have therefore two foreplans, firstly to lure the Black rook to the seventh rank, and then to lure it away from the e-file.

The first move is therefore **1 Rg8**, forcing the reply **1...Re7**. This procedure may seem pointless, for instead of capturing the Black pawn by 1 Rc8+ and 2 Rc7 we force Black to defend it. But we know why we have lured the Black rook to an apparently favourable square. In a few moves its defensive possibilities will be limited. **2 Rc8+ Kd1 3 Rf8 Ke1 4 Rf4**. All according to plan. The Black rook must now quit the e-file, and relatively best is **4...Rc7**. If Black plays 4...Ra7/Rb7, White will have the choice of 5 Rf7 and 5 Ke4, but with the rook on the c-file 5 Ke4 is met by 5...Rc6 6 Kf5 Ke2 7 Kg5 Ke3 8 Rf7 Rc5+ 9 Kg4 Rc4+ 10 Kg3 Ke4 (this move is unplayable with the rook on the a- or b-file)

11 Rf4+ Kd5 12 Rxc4 Kxc4 or 7 Re4+ Kf3 8 Re7 Rc5+ 9 Ke6 Rc6+ 10 Kf7 Kf4 11 Kxg7 (11 Ra7 Kg5) Kf5. White therefore plays **5 Rf7 Rc6 6 Rxg7 Kf2 7 Ke4**. We have achieved the aim of our second Vorplan, and the White king has come up in time to protect his pawn. **7...Kg3 8 Kf5** and White wins.

But does the study not contain a dual, in that 4 Rf3 is just as good as Rf4? No, because Black has 4...Rd7+ 5 Ke4 Rd6 6 Kf5 Rf6+. With the White rook on f4, the move 6...Rf6+ doesn't help.

If Black tries the b-file at move 2, 1 Rg8 Re7 2 Rc8+ Kb1/Kb2, White guards his pawn by 3 Rc6 and wins relatively easily.

[Mandler's text in *Studie* is somewhat different from that in *64 studií z oboru věžových a pěšcových koncovek*, and I have incorporated elements from both.]

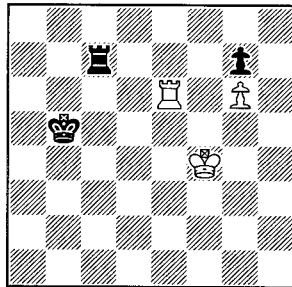### Surprising tempo play

3.19 (S385, RP29)
Československý šach 1955
Correction *Deutsche Schachzeitung*
1962

White to move and win

This position will feature tempo play. Why do I call this surprising? Because the pieces are freely placed and both sides have a wide choice of move.

The incorrect move 1 Ke5 leads to 1...Kc5 2 Re8 Rc6 3 Kf5 Rf6+ 4 Kg5 Rf1 5 Re7/Rg8 Kd6 6 Rxg7 Rg1 with a

draw.

Correct is **1 Kf5! Kc5 2 Ke5** and now it is Black who has to move. It seems that a move such as **2...Ra7** will be harmless, but in fact it allows White an important tempo-gaining check; after **3 Re8 Ra6** he can insert **4 Rc8+**. Now the Black king will be one file further away from the pawns, and after **4...Kb5 5 Kf5 Rf6+ 6 Kg5** the move 6...Rf1 will lead to a lost ending. True, Black can try 6...Rc6, hoping for 7 Rf8 Kb6 8 Rf7 Rc5+ and the White rook will block its king's advance to the seventh rank, but this lets White play 7 Rb8+ and push the Black king yet one file further away from the pawns. Black must play 7...Ka6 (else 8 Rb7), and both 8 Rf8 and 8 Rg8 win easily.

[Mandler overlooked 7 Rb8+, and I have altered his text to accommodate it. He played 7 Rf8, which does in fact win (it's the subsequent 8 Rf7 which which would be bad), but it is markedly less straightforward.]

An unusual twin

*3.20 (S386, RP28, version)
Práce 1952, version
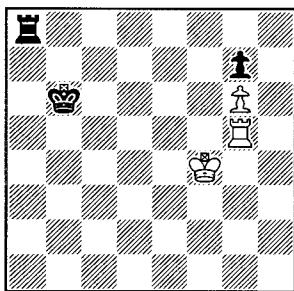
White to move and win
(a) as set, (b) with bK on b7

The White rook has two natural ways of attaining the seventh rank: by e5 and e7, or by f5 and f7. It hardly seems likely that the position of the Black king will make a difference, but so it proves; one route is necessary if the king is on b6, the other if it is on b7.

With the king on b6, White plays **1 Re5**, and after 1...Rc8 2 Re6+ he will soon have access to the pawns. Black can improve on this by interpolating **1...Rf8+** pushing the White king one square further away, but it is not enough: **2 Kg5 Rc8 3 Re6+ Kb7 4 Kf5** and the White king will still get through.

The disadvantage of b6 lies in permitting the check Re6+. If instead White plays 1 Rf5, Black draws by 1...Rc8, meeting 2 Rf7 by 2...Rc4+.

If the king is on b7, the correct move is **1 Rf5**. If Black plays **1...Rc8** as before, the reply **2 Rf7+** now gives check, and after the necessary reply 2...Rf7 the rook will be pinned and White has gained a crucial tempo. If instead White tries 1 Re5, the line 1...Rc8 2 Re7+ Rc7 leaves him a tempo behind.

[Mandler actually set this with the Black king on a6, Black to play and draw, with 1...Kb6 and 1...Kb7 refuted by 2 Re5 and 2 Rf5 respectively and intention 1...Rc8 (start with the move that will be needed anyway) and either 2 Re5 Kb7 or 2 Rf5 Kb6, but in the latter case Black can interpolate 2...Rc6 3 Kg5 or 2...Rc4+ 3 Kg5 before moving his king to b6 and this spoils the pattern. In any case, **3.20** is one of the most remarkable twin studies ever created by Mandler or any other composer, and it would have deserved a diagram to itself even had the attempted combination been sound. The contrast between the simple and apparently irrelevant change in the position and the complete difference in the solutions is very marked. There are some alternatives in the refutation play with the king on b6 (Black can meet 1 Rf5 by 1...Ra4+ as well as by 1...Rc8, and after 1...Rc8 2 Rf7 he has 2...Rc7 as well as 2...Rc4+), but there is no inaccuracy in the play in the actual main lines.]

The White rook proceeds one step at a time

3.21 (S387, RP30)
Československý šach 1954
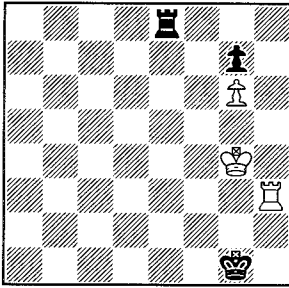
White to move and win

In this position, it is immaterial whether the Black king is on the first or second rank. What does matter is that we shift him from the g-file to the h-file. We therefore play **1 Rg3+**. Black cannot go to the f-file on account of 2 Rf3+ and 3 Rf7, hence **1...Kh2**. Now **2 Rf3** threatens 3 Rf7, and Black defends by **2...Ra8**, taking advantage of the fact that the blocking of f7 by the White rook will prevent his king from gaining access to the seventh rank. **3 Re3 Ra7 4 Kf5 Kg2**. Now we see how important it was to start by forcing the Black king to the h-file; if we had left it on the g-file, it could play ...Kf2 here, and Black would draw. **5 Ke6 Kf2 6 Rd3** and wins, there being no defence against Rd7.

1 Rf3 fails against 1...Ra8 2 Rf7 Ra4+ 3 Kf5 Ra5+ 4 Ke4 Ra4+ 5 Kd5 Ra5+ 6 Kd4 Rg5! (simplest) 7 Rxg7 Kg2 8 Ke4 Kg3.

[Mandler composed both studies and problems, and at this point he turns aside to ask briefly whether a study composer adheres to certain aesthetic principles in the way that a member of a school of problem composition does. However, some of his remarks assume a knowledge of problems and their development which most of my readers will not have, and perhaps it is best if I ignore these and just summarize what he says about the composition of endgame studies.

Up to the time of writing (1970), he says, there have been no clearly defined schools of study composition, apart from the division into "analysis-inspired" and "goal-inspired" studies. However, almost everyone acknowledges a "law of economy", even if he attaches his own meaning to the term. In the case of "analysis-inspired" studies, the material is normally determined in advance, and so "economy of material" is automatic. In contrast, "economy of moves", the problemist's principle that a theme which can be realised in n moves should not be allowed to sprawl over $n+1$, is not regarded as a constraint, and a long solution is not necessarily regarded as transgressing the laws of economy. But a solution must not be prolonged merely in order to make a study more difficult; any extension must have a thematic reason, for example by making the selection of the correct first move dependent on a proper understanding of what happens right at the end. And where the reason for a particular opening move is to set the scene correctly for the finale, the further into the future this finale occurs, or in other words the longer the solution, the better.

Additionally, as and when they are possible, the composer will seek pure and economical climactic positions, and he will take pleasure in the artistic principle of echo in mate, stalemate, and play.]

C. Rook studies with White pawns on e6/e7 and g6, perhaps also with a Black pawn on g7

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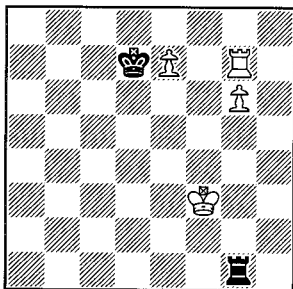
White may be two pawns up, but he cannot win; his rook cannot move without dropping a pawn, his pawns cannot advance, his king cannot drive the Black rook from the g-file, and if it advances to the fifth rank Black will start checking. In several of the studies that follow, Black attempts to draw by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

A simple and easily understood twin

3.22 (S388)
Svobodné slovo 1960
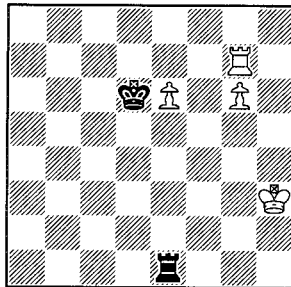
White to move and win
(a) as set, (b) wKh3 to g3

(a) **1 Rf7 Rxe6 2 g7 Rg6 3 Rf6+** and wins; 1 e7? Rxe7 2 Rh7 Re6 3 Rh6 Ke7 4 g7 Rxh6+.

(b) **1 e7 Rxe7 2 Rh7 Re6 3 g7/Rh6** and wins; 1...Kd7 2 Kf2 Rxe7 3 Rh7 etc. The move 2 Kf2 is not easy.

If the White king is on h2 or g2, the winning move is 1 Rd7+.

[This may have been simple to Mandler, but I suspect that some readers might welcome a little more detail. In (a), after 1 e7? Rxe7 2 Rh7 Re6, the alternative attack 3 g7 is met by 3...Rg6 (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 g7 Rg6+ 3 K-- Ke6 4 Ra7 Kf6 (or 1...Rg1+ etc), and 1...Rxe6 also works if the king is on g2. There remain 1 Rf7 with the king on h2, when 1...Rxe6 2 g6 Rh6+ 3 Kg- Rg6+ leads into the refutation of 1 Rf7 in (b), and 1 e7 with the king on g2, when 1...Rxe7 2 Rh7 is met by 2...Re5 and 3...Rg5 (or 2...Re8 and 3...Rg8). 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
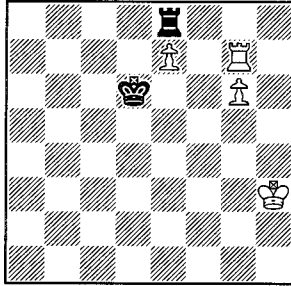
Black to move and draw
(a) as set, (b) wKh3 to g3

(a) **1...Rxe7 2 Rh7 Re6 3 Rh6 Ke7 4 g7 Rxh6+**; 1...Ke6? 2 Rh7 Kf6 3 g7.

(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)
Československý šach 1950
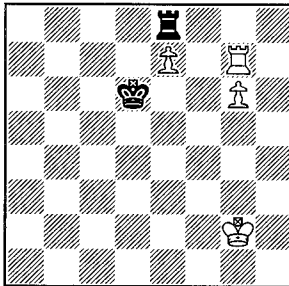
White to move and win
(a) as set, (b) wKg2 to h2

(a) **1 Kf3 Rxe7 2 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 Kg3 and 1 Kh3, which we have already seen in the previous diagram.

(b) **1 Rh7** (threat 2 g7 followed by 3 Rh8) **Rg8 2 Rf7** (threats 3 g7 and 3 Rf8) and wins.

[The computer appears to suggest that 1 Rh7 is not refuted by 1...Rg8 in (a), but the only winning continuation is 2 Rg7, after which 2...Re8 repeats the initial position. There is in any case another refutation in 1...Kd7. This fails in (b) because it does nothing about the threat of 2 g7 and 3 Rh8, 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 šach 1954
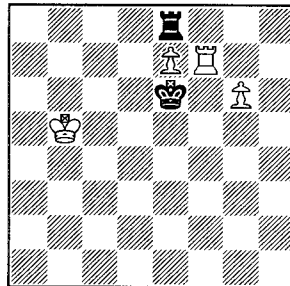
White to move and win

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 **1 Rh7**. Now the advance of the g-pawn is threatened, and Black's best reply is **1...Rg8**. This creates a new Black threat, 2...Kd7 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...Ra8 and 2...Re8 lose to 3 g7. This leaves Black nothing but **2...Rc8+**,

and now the intricacy starts.

The most natural move is perhaps 3 Kb7. Black meets this by 3...Re8, 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 g7, and Black had to reply ...Rg8 to prevent it. Can we not play the same move now, 4 g7? The check 4...Rxe7+ 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 Rh8 Rxg7 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...Re7+ and if White tries 4 Kc6 Black can repeat moves by 4...Rc8+. At first the solver may be alarmed by this, but then he realises that White can play 4 Kc7 without fearing 4...Rxe7+, because the reply 5 Kd8 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 g8, and White will not advance another step.

Here our solver may have an idea. What if in this position (wKc7, Rh7, 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...Rg7 pinning, but White has 5 Kd7 Kxg6 6 Rh1 winning. 4...Re8 is met by 5 g7, with 5...Rxe7+ 6 Kd8/ Kc6 or 5...Rg8 6 Rh8 Rxg7 7 Kd8 Rxe7 8 Rh6+. 4...Ra8 likewise loses to 5 g7.

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 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...Re8 allows 4 g7 as we saw at the start. There remains only **3...Rb8+**, which lets White play **4 Kc5**. 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 Kd4.

[The computer also gives 3 Kb7 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...Re8 is 4 Kb6, reinstating the threat of 5 g7 etc, after which 5...Rb8+ 6 Kc5 rejoins the normal main line.]

A voluntary return to prison

*3.26 (S392, RP19, version)
Deutsche Schachzeitung 1962, version
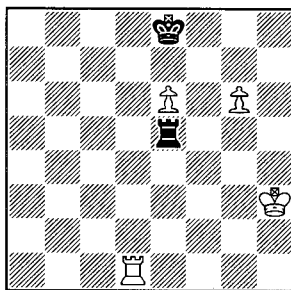
White to move and win

For the moment, we can see neither prison nor prisoner.

Black threatens 1...Rxe6 and 1...Rg5. Let us try **1 Rg7**. 1...Rxe6 still appears dangerous, but it leads to 2 g7 Rh6+ 3 Kg4 Rg6+ 4 Kf5/Kh5 and White wins.

Relatively stronger is **1...Rg5** (2 g7? Rg3+ 3 Kh4 Rg4+ 4 Kh5 Rg5+ 5 Kh6 Rg6+ 6 Kh7 Rh6+ 7 Kg8 Rh8+ 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 Kh4** White threatens 4 Rg8+ Ke7 5 Kh5 followed by 5...Kf6 6 Rf8+ etc or 5...Rh2+ 6 Kg5 Rh1 (6...Kxe6 7 Rf8) 7 Ra8 (threat 8 g7) Kxe6 8 Ra7/Rf8. The simple move 3...Rg2 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 Kg3. 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...Re1 5 Rg8+ (the White rook cannot leave the g-file on account of ...Rg1+, and 5 e7 is hopeless) Ke7 6 g7 Rg1+ 7 Kf4 Kxe6.

White therefore plays **4 Kg4** (4 Kg5 would be an unnecessary waste of time), and now he can meet 4...Re1 by 5 Rg8+ Ke7 6 Kg5.

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 Kf4/Kf3 Rf1+ 6 Kg3 because we have already seen that g3 is a bad square, and 6 Ke3 is no better on account of ...Re1+ or ...Rg1. This leaves the try 5 Kf3 Rf1+ 6 Kg2 (6 Ke2 Rg1 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 Kh3**. 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 Ra7 and wins). The apparently threatening 5...Rh1+ is met by 6 Kg2 Rh5 7 Kf3 Rg5 8 Kf4 Rg1 9 Rg8+ Ke7 10 Kf5 etc, and 5...Rg5 is easily refuted (6 Kh4 Rg1 7 Rg8+).

Now it seems that the study is solved. But Black has a move which promises to deliver him from his precarious situation, namely **5...Kd8**, because 6 Rd7+ Ke8 7 g7 will again allow him to save himself by perpetual check (6...Rg3+ 7 Kh4 Rg4+ etc).

The correct continuation is **6 Kh4**. As after his third move, White threatens Rg8+ followed by Kh5 etc. Hence **6...Rh1+**, but now White can play **7 Kg3**; with the Black king on d8, White need not fear 7...Re1 (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 Kg2 giving the same position as after 5...Rh1+ 6 Kg2, 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 g7 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 Ke3 Re2+** (checking from the right is no better) **12 Kd4 Rd2+ 13 Kc5 Rc2+ 14 Kb6 Rb2+ 15 Ka7** (15 Kc7 wastes time) **Ra2+ 16 Kb8 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 Kg4. Mandler thought this was refuted by 1...Kf8, but White has a win by 2 Kf4 Re1 (2...Ra5 3 Rd7 etc) 3 Rd8+ Kg7 (3...Ke7 4 g7) 4 Kf5 (threat 5 Rd7+ etc) Rf1+ 5 Ke5 Re1+ 6 Kd6 Rd1+ 7 Ke7 with Ke8 etc; "1 Kg4 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 (wKh1, Rg7, bRg4, play 1 Kh2 Rg5 2 Kh3 etc).]

An apparently good move fails, an apparently bad one succeeds

3.27 (S394, RP37)
Československý šach 1950
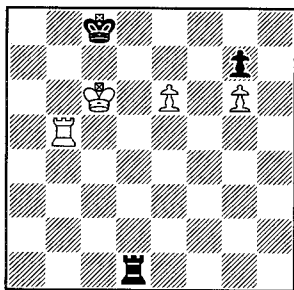
White to move and win

The move that springs to the eye is 1 e7. Then the solver notices the reply 1...Rd6+, when 2 Kxd6 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 Rb8+ Kxb8 2 e7 Rc1+ 3 Kd7 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 e7 was in fact correct. After 1...Rd6+ White need not capture; he can play 2 Kc5 Re6 3 Kd5 Rxe7 4 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
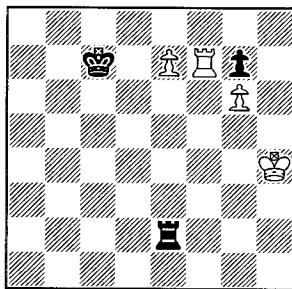
Black to move and draw
(a) as set, (b) wKh4 on h3

(a) 1...Kd7, and after 2 Rxg7 the White rook and pawn block his king's path to the seventh rank: 2...Rg2 3 Kh5 Rh2+ 4 Kg5 Rg2+ 5 Kf6 Rf2+ etc.

(b) Now this fails, because the White king prevents Black's move 2...Rg2. 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), 1...Kd6 can also be refuted by 2 e8Q Rxe8 3 Rxg7.]

Fourth time lucky

3.29 (S397, RP11)
Československý šach 1950
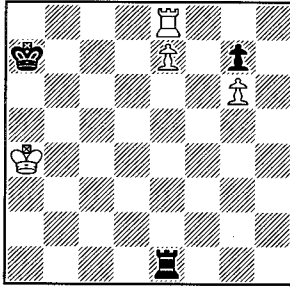
White to move and win

[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. "Veselý" ("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 Rf8 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 Ka5, and after 3...Ka8 4 Ka6 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 Rxg7. 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 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 Kb5. Black must reply 1...Kb7, and now we bring the rook round to f7 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 Kb4 Kc6 5 Kc4 Kd6+: yes, 6 Rxc7 Kxc7 7 Kd5 Kd7 and Black will 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 Ka5 instead of Kb5. Black must still play 1...Kb7, and after 2 Rf8 Rxe7 3 Rf7 Rc7 White can play 4 Kb5. Now even 4...Kc8 will lose: 5 Kb6 Rc1 6 Rxg7 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 Veselý had an objection. "Suppose Black plays 1...Re4 instead of 1...Kb7? White can only play 2 Kb5, and now 2...Kb7 3 Rf8 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 Kb4 and not 1 Ka5! Now Black does have no move better than 1...Kb7, and after 2 Rf8 Rxe7 3 Rf7 Rc7 4 Kb5 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?"

Kálert set up the starting position once more. "Not 1 Rf8 Rxe7 2 Rf7 Rb7 3 Ka5, because 3...Kb8 4 Ka6 Ka8 5 Rxb7 will be stalemate."

Veselý took up the thread. "Not 1 Kb5 hoping for 1...Kb7 2 Rf8 Rxe7 3 Rf7 Rc7 avoiding the stalemate, because White has no good move."

Little Hochman chipped in. "Not 1 Ka5 hoping for 1...Kb7 2 Rf8 Rxe7 3 Rf7 Rc7 4 Kb5 and it will be Black to move, because Black can play 1...Re4 and White will have to play to b5 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)
Československý šach 1950
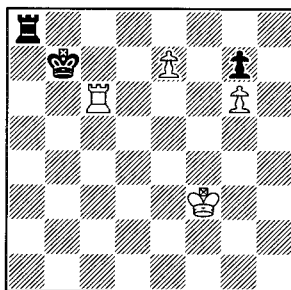
White to move and win

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 Rc1, 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 Rc1 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
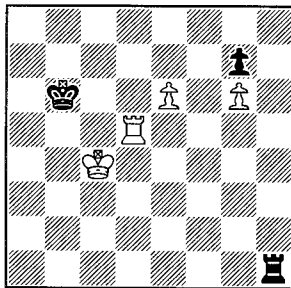position, we see that if the White rook
were on c5 and the king on e6, White
would have the winning move 6 Rf5. We
therefore change the first move to **1 Rc5**,
and the solution unfolds **1...Re8 2 Ke4
Rxe7+ 3 Kd5 Re1 4 Kd6 Rd1+ 5 Ke6
Rf1 6 Rf5** and so on. If Black plays
3...Kb6, White wins by 4 Kd6 Ra7
5 Re5/Rf5.

A surprising sacrifice of a passed pawn

3.31 (S399a, RP39)
Československý šach 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 Rc5**. 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 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...Re1**

**4 Rc6+ Kb7 5 Re6 Rd1+ 6 Ke5 Kc8
7 Re7 Kd8 8 Rxg7 Rf1 9 Ke6 Re1+
10 Kf7 Rf1+ 11 Kg8 Rg1 12 Kf8/Kh8**
and wins.

If Black plays 2...Rc1+, White must
reply not by 3 Kd4 Rd1+ 4 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 šach 1952
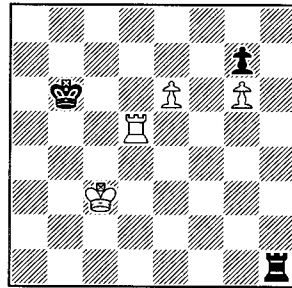
White to move and win

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 e7 Re1 2 Rd7. We cannot
go into all these, and we proceed straight

to the correct move **1 Kd2**. This threatens 2 e7 among other things, and Black's relatively best reply is **1...Rh8** (1...Kc7 makes things easier for White, for example 2 Rd7+ Kc6 3 Rd8 with the threat of 4 e7). The solution continues **2 Rd7 Kc6 3 Rxg7** (for 3 Ke3 and 3 Kd3 see the next study) **Kd6 4 e7 Ke6**. But now what should White play? 5 Rh7 is met by 5...Rg8 and 5 Ke3 also fails, this time to Re8 6 Rh7 Kf6! (not 6...Rxe7 on account of 7 Kf4). Less likely, but in fact the only correct move, is **5 Kd3!**, for example **5...Re8 6 Rh7 Rg8** (now White can meet 6...Kf6 by 7 g7, 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 Kc3 also works, since 5...Rc8+ is not a useful move and 5...Re8 6 Rh7 Rg8 7 Rf7 Re8 can be met by 8 Kd4 just as well as by 8 Ke4. So Mandler is not quite right to call 5 Kd3 the only correct move, but the dual is hardly of importance.]

Choosing the correct defensive manoeuvre

3.33 (S400, RP41/42)
Československý šach 1950
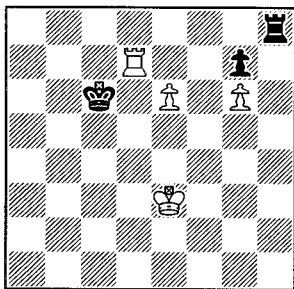
Black to move and draw
(a) as set, (b) wKe3 on d3

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 counter-attack on White's e-pawn, or by playing 1...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 e7 is met by 3...Kd7, a nondescript king move leads to 3...Kd6 4 e7 Kd7 and the same, and if White tries 3 Ra7 Black has time for **3...Rxg6** since 4 e7 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 Kf2, Black replies 2...Rh5 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 Ra7; the continuation 3...Rxg6 4 e7 Re6 no longer leaves White in check, and he wins by 5...Ra6+. If Black tries to stop the pawn by 4...Rg8 instead, White wins by 5 Ke4 Kd6 5 Kf5.

The drawing move is now **1...Re8**. The sequel is simple enough, but there is one point to note: after **2 Rxg7** Black must not play 2...Rxe6, which was the apparent point of the previous move, on account of 3 Rg8 winning (3...Kd7 4 g7 Rg6 5 Ra8, 3...Kb7 4 Kd4). Correct is **2...Kd6 3 e7 Rxe7 4 Rh7 Re1** etc.

In (a), 1...Re8 fails because White has 2 Rxg7 followed by 3 Kf4.

The Black king twice cuts the line of its rook

3.34 (S401, RP14)
Československý šach 1950
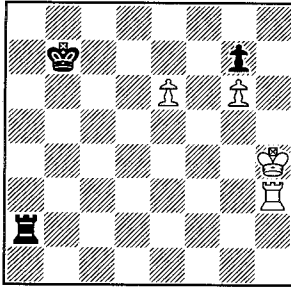
White to move and win

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 Kg5 Rxe6 4 Rf3) **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...Rc4+ 4 Kg3 Kc6 5 Re3 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...Kd6 then of course 5 Rxg7 wins easily.

If after 3...Rc4+ 4 Kg3 Black tries 4...Rc1, the correct reply is 5 e7 Re1 6 e8Q Rxe8 7 Rf7+ and 8 Rxg7. 5 Rf7+ would lead to 5...Kc6 6 Rxg7 (6 e7 Kd7) Rg1+ 7 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 Kg3; 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 Kg5? Rc5+ 5 Kf4 Rc4+ 6 Ke5, Black will play 6...Kc6, and the reply 7 Re3 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 Kg3 only draws: 3...Re4 4 Rd3 Kc6 (4...Rxe6 loses) 5 Rd7 Re1 6 Rxg7 Rg1+ 7 Kf4 Kd6 etc. But 3 Kg5 Re4 4 Rd3 wins.

If Black plays the same check at move 1, 1 Re3 Ra4+, the correct reply is again 2 Kg5. A possible continuation is 2...Ra5+ 3 Kf4 Ra4+ 4 Ke5 Kc7 (4...Kc6 5 Rc3+, 4...Kc8 5 Rf3) 5 Rd3 Ra5+ 6 Kf4 Ra4+ 7 Kf3! and wins, but not 7 Ke3 on account of 7...Ra1 8 Rd7+ Kc6 9 Rxg7 Rg1 10 Ra7 Rxg6 11 e7 Re6+. The incorrect move 2 Kg3? leads to 2...Ra8 3 Rc3 Rc8 4 Rf3 Kc6 5 Rf7 Kd6 with a draw.

If Black checks on the h-file, 1 Re3 Rh2+, White replies Kg4! and not 2 Kg3 on account of 2...Rh8 drawing. 2 Kg5 instead would lose too, because after 2...Rg2+ 3 Kf4 Rf2+ the king would have to go to g4 after all; 4 Ke5? would be met by 4...Kc7 drawing.

1 Rc3? Re2 is drawn. 2 Kg5 is met by 2...Re5+ and 3...Rxe6, 2 Rd3 by 2...Kc6 3 Rd7 Rh2+ and White cannot prevent the Black rook from gaining the g-file (4 Kg3 Rh1 5 Kg2 Rh5).

[Not mentioned by Mandler is 2...Ra1 in the main line, when White must adopt the same tactic as in the next study: 3 Kg4 Re1 (3...Rf1 4 Rc2 Rf6 5 Re2 and soon wins, or 4...Rf8 5 e7 Re8 6 Rf2 and

7 Rf7) 4 Kf5 Re2 (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 Rc1! (not 5 Rd3 on account of 5...Kc6 6 Rd7 Rf2+ 7 Ke4 Rg2, gaining the g-file and drawing) and Black is in zugzwang. King moves are bad, 5...Kb6 because of 6 Rc8 Kb7 7 Rg8 Kc6 8 Rxg7 Kd6 9 Rd7+ and 5...Kb8 because 6 Rd3 can no longer be met by 6...Kc6, which leaves only 6...Re3, and now the rook is too close to the White king: 6 Rd1 Kc6 7 Rd7 Rf3+ 8 Kg4 and wins.]

arrival. Correct is **2 Kf4 Rd4+ 3 Kf3** (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 Kg4** 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 Kf4/Ke4 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 rank

*3.35 (S402, RP15)
Československý šach 1950
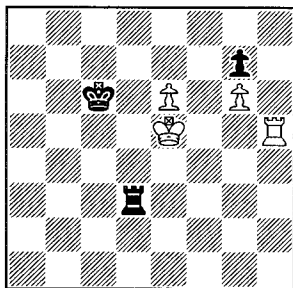
White to move and win

The solver will start by trying 1 Rh7. But the continuation after 1...Rd5+ is not easy to see and so he will perhaps look for something else. Most tempting is 1 Rh8. White threatens 2 Rc8+ K-- 3 Rg8, and 1...Kc7 is easily refuted (2 Rg8) as is 1...Rd5+ (2 Ke4, for now 2...Rd1 can be met by 3 Rc8+ and 2...Rg5 by 3 e7). But 1...Re3+ leaves White no way forward.

The first move is indeed **1 Rh7**, and the most promising defence, as we have seen, is **1...Rd5+**. White cannot reply 2 Ke4, because as a good host he cannot allow the Black rook to occupy the g-file without making preparations for its

Luring the Black rook to another file

*3.36 (S403, RP16)
Československý šach 1950
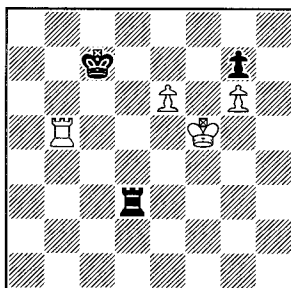
White to move and win

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...Kb6 2 Re5 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 Ra7+, when 2...Kd6 will lose the rook and 2...Kc6 will allow the White king to find shelter on the seventh rank (3 Rxg7 Rf1+ 4 Ke5 Re1+ 5 Kf6

etc). The win after 2...Kd8 3 Rxg7 is already familiar from study **3.26**.

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 Ke4? we see Black's plan: 2...Rf1 3 Ra7+ Kd6 4 Rxg7 Rg1 and even the advantage of two pawns avails White nothing. We notice that Black could not play 2...Rg3, taking the g-file at once, on account of 3 Ra7+ Kd6 4 e7 Rg1 5 e8Q Re1+ 6 Kf5 Rxe8 7 Rxg7 winning. This promotion of the e-pawn is typical. 5 e8N+ 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 d1 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+ 3 Kd5 Rd3+** (now we have the Black rook where we want him) **4 Ke4 Rd1 5 Ra7+ Kc6** (5...Kd6 is not possible and so Black loses a tempo) **6 Rxg7** and wins.

If Black tries 1...Kd6, White plays 2 Ra6+ Kd5 3 Ra7 Rf3+ 4 Kg4 Rf1 5 e7 Rg1+ 6 Kf3 Re1 7 Rd7+ and wins, but not 3 e7 on account of 3...Re3 4 Ra7 Re5+ 5 Kf4 Re4+ 6 Kf3 Re6 (6...Re1? 7 Rd7+!) with a draw.

[This exposition illustrates one of the differences between human and computer analysis. After 2 Ke4 Rf1 3 Ra7+ Kd6 4 Rxg7, a computer with a complete table of results for R+P v R is likely to give preference to 4...Kxe6, because it can see at once that the resulting position is drawn. But many similar positions with R+P v R are won, and Mandler cannot be blamed for playing 4...Rg1 and transposing into one of the standard drawing positions of this

section. There is a minor dual at the end, where 6 e7 is as good as 6 Rxg7 (the White king threatens to hide in the top right corner, and if 6...Re1 7 Kf5 Kd6 then 8 e8Q Rxe8 9 Rxg7 with a rather simpler R+P v R win), and the same is of course true in the line 1...Rd1 2 Ra7+ 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)
Československý šach 1950
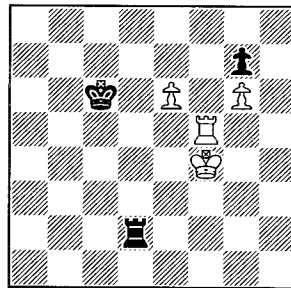
White to move and win

This study reminds us of study **3.34**. After **1 Rf7 Rd4+** White must again keep the Black rook from the g-file, 2 Kf3, but the matter is less urgent than in the previous study because after 2...Rd3+ White can play 3 Ke4 and allow Black to play 3...Rg3. The continuation is as before: 4 Rxg7 Kd6 5 Kf5 Rf3+ 6 Kg4 etc. The continuation if Black plays 2...Rd1 is likewise as before: 3 Rxg7 Rg1 4 Ra7 Rxg6 5 e7.

But after **1...Rg2** we have something new. All of a sudden, White spurns the capture on g7 (2 Rxg7? Kd6 with a draw), and plays **2 Ra7!** with the continuation **2...Rxg6 3 e7 Re6 4 Ra6+** etc. If instead Black plays 2...Kd6, there follows a now familiar sacrifice of the

e-pawn: 3 e7 Re2 4 e8Q Rxe8 5 Rxg7 and wins.

If Black plays 1...Rf2+, White must reply 2 Kg3. Other moves allow 2...Rg2, for example 2 Ke4? Rg2 3 Ra7 Kd6 and 4 e7 is met by 4...Re2+, or 2 Ke3? Rg2 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)
Československý šach 1950
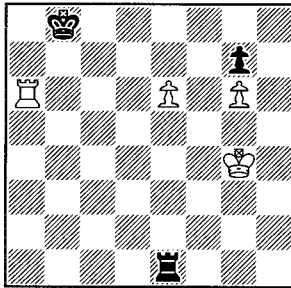
White to move and win

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 **1 Rd6**, threatening 2 Rd7 with an easy win. The reply 1...Kc7 does not help (2 Rd7+ Kc6 3 Rxg7 Rg1+ 4 Kf5, and 4...Kd6 will be met by 5 Rd7+). 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...Rg1+ 2 Kf5 Rf1+

3 Ke5 Re1+ 4 Kd5 Black will stop checking in order to play 4...Kc8. This is the right moment for this move, because White cannot reply 5 Rd7 on account of 5...Rd1+ and an exchange of rooks. If instead White tries 5 Ra6, we have 5...Kd8 and 6 Ra7 Rd1+ is again a draw.

So the White king will have to come down to the second rank anyway. Can we play 2 Kf3 straight away? No, because 2...Kc7 3 Rd7+ Kc6 4 Rxg7 Kd6 will be drawn, and playing 4 Ra7 instead of capturing the pawn will not help. True, Black cannot reply 4...Rxg6 on account of 5 e7 Re6 6 Ra6+, but 4...Kd6 is good enough to draw (5 e7 Re1 6 e8Q Rxe8 7 Rxg7 Ke6).

The position after 2 Kf3 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...Rf1+ 5 Ke2 (threat 6 e7) Rf5 6 Rd7 (again threatening e7) Kc8 (6...Re5+ doesn't help) 7 Rxg7 Kd8 8 Rd7+ Ke8 9 g7 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 Ke5 (instead of 3 Ke4) Re1+ 4 Kf4 Rf1+ 5 Ke3?

No, because the White king is now on e3 instead of f3, and we have the line 5...Kc7 6 Rd7+ Kc6 7 Rxg7 Rg1 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 Rg1+ 2 Kf5 Rf1+ 3 Ke4 Rg1 White has an easy win by 4 Rd7. After 1 Rc6 Kb7 2 Rd6 Rg1+ 3 Kf5 Rf1+ 4 Ke4 Rg1 we have only 5 Rd7+
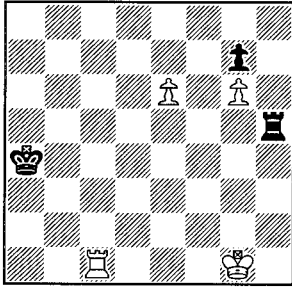
(even though this move now gives check, its effect is weaker) Kc5 6 Rxg7 Kd6, and we already know this position to be drawn. The move 1 Rc6 allows the Black king to reach c6 too soon.

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

The White king marches bravely into hostile fire

3.39 (S407)
Československý 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 Kf2 Rxg6 3 Re1 Black will not be able to prevent White from winning.

But after **1...Kb5 2 Kf2 Kb6** it is not easy to see a win for White. It appears that **3 e7** 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 Kg3 (refuted by 4...Re5) but **4 Ke3**, 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 Re7 Kd8 11 Rxg7 Ke8 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 Kg3 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 Ke3/Kg3.

We may note a tempting false trail. If after 1...Kb5 2 Kf2 Kb6, White plays 3 Re1? instead of 3 e7, 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 Ke3, play might continue 5...Rf1 (to get below the White pawn) 6 Rc2 Rf8 (if 6...Rf6 hoping to force the White rook back to c6 then 7 Rc4+ and 8 Re4) 7 Ke4 Re8 8 Ke5 Kb5 9 Rc7 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...Kb5 2 Kf2 Kb6 3 Re1, the reply 3...Rf5+ does indeed fail: 4 Kg3 Rf8 5 Rd1 Kc6 6 Rd7 Rf1 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 Kg3, Mandler thought that 4...Re5 5 Rf1 demanded another refusal to capture in the shape of 5...Kc6, but while this is indeed effective (6 Rf7 Kd7 7 Rxg7 Rg5+ 8 Kf4 Rg1 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
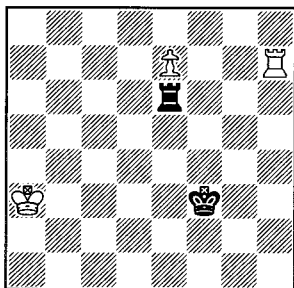
White to move and win

Play starts **1 Kb4**, and after 1...Ke4 2 Kc5 Ke5 the solution is quite easy. White plays 3 Rf7 Ke4 4 Rf1 Kd3 5 Rd1+ Ke2 6 Rd7 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...Ke4 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 Rg7, and after 3...Ke5 he can indeed play 4 Rf7.

But Black has another way of holding back the White king, namely **1...Re5**. After **2 Kc4** (2 Kc3 merely wastes time) **Ke4** White is at a loss what to do. After 3 Kf7 Ke3 we have a position where Black to move would lose at once (4...Ke4 5 Rf1), but unfortunately it is White's move. 3 Rg7 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 **3 Kf7 Ke3** after all and then to try and transfer the move to Black. This can

be done by **4 Rg7 Ke4 5 Rh7 Ke3 6 Rf7**, and **6...Ke4 7 Rf1** will follow. But if Black plays 5...Re6, the naive anticipatory move 6 Rf7 would be a decisive mistake; there would follow 6...Rc6+ 7 Kb5 Re6 8 Rf1 (8 Kc5 Ke5) Kd3 9 Rd1+ Ke2 10 Rd7 Ke3 11 Kc5 Ke4 with a draw. White must play 6 Kc5 Ke5 7 Rf7 Ke4 8 Rf1 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 Kg2 Kc2 3 Kf3 Kd3 4 Kf4 Kd4 and we have the same position as after 1 Kb4 Re5 2 Kc4 Ke4 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. KNSB*. 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
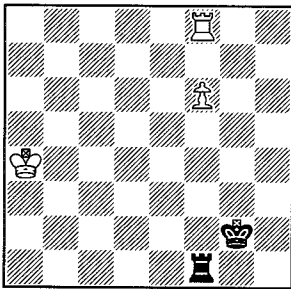
White to move and win

The experienced solver will see at a glance that 1 Rg8+? Kh3 2 Rg6 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 Kb5 Kf1 3 Kc6 Rf2 gives Black an easy draw. Black has other drawing continuations as well, for example 2...Kf2 or 2...Kf3, 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 f7 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 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 **1 Kb5**. Now 1...Rf5+ will be met by 2 Kc6 and Black has lost time, so Black must play **1...Kg3**. If he plays 1...Kf3 or 1...Kh3 instead, White wins immediately by 2 f7, but after 1...Kg3 he can meet 2 f7 by 2...Rf5+ and 3...Kf2, for example 3 Kc6 Kf2 4 Kd7 Rf3 5 Ke6 Re3+ etc.

After 1...Kg3, the White king has to choose between the three squares c6, c5, and c4. 2 Kc4 is clearly bad on account of 2...Rf5. The more likely of the two remaining moves seems to be 2 Kc6, but this move also is bad. Black plays 2...Kg4 getting nearer to the pawn, and if 3 Kd6/Kd7 then 3...Kf5 4 Rg8 (4 Ke7 Re1+ 5 Kf7 Ra1) Rd1+ 5 Ke7 Re1+ 6 Kf7 Ra1 7 Re8 Ra6 with a draw. So the pawn must advance, 3 f7, and Black replies 3...Rf6+. If White now plays 4 Kd7, the reply 4...Kf5 gives a position of reciprocal zugzwang. Black to play would lose, because ...Ke5 would be met by Re8+ and ...Kg5 by Rg8+, 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 Kd7 doesn't work, perhaps we should try to transfer the tempo. If instead of 4 Kd7 we play 4 Kc7, Black cannot play 4...Kf5 (when 5 Kd7 will win) nor can he play 4...Kf4 on account of 5 Kd8 Rf5 6 Kd7 Rd5+ (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...Rf6+ 9 Ke7 or 8...Kf3 9 Ke6, 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 Kc7 he plays 4...Kf3 5 Kd7 Rf4, 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 Kc5** with the continuation **2...Kg4 3 f7 Rf5+ Kd6**. After **4...Kf4** White wins by 5 Kd7 Rd5+ 6 Kc6 Rf5 7 Kd6 and either 7...Rf6+ 8 Ke7 or 7...Kf3 8 Ke6.

One surprise at the beginning, another at the end

3.42 (S410, version)
Práce 1952, version
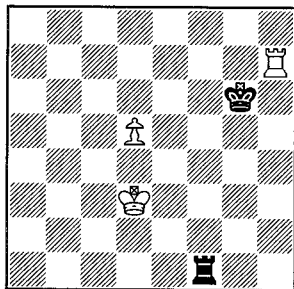
White to move and win

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 Re7** (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...Rf6 3 d7 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 Kc3 we have **2...Ra4 3 d6 Ra6 4 d7 Rd6 5 Re6+** and White wins. If White had played the incorrect move 2 Ke3, the capturing move 5...Rxe6 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 Kc3 (by playing his rook to the fourth rank, White has barred it to his king) Kf7 4 Kb4 (else 4...Ra5 etc) Re7.

[I have moved the Black rook to f1 from f6 to cut out an alternative if less tidy win starting 1 Rc7. In the try line 2 Re4 Ra7 3 Kc3, Mandler actually plays 3...Ra5 at once, relying on 4 d6 Kf6 and overlooking 4 Re6+ K-- 5 Kc4. Fortunately an alternative is available. 3...Kf6 also draws, but it allows 4 Re6+ and I think 3...Kf7 is cleaner.]
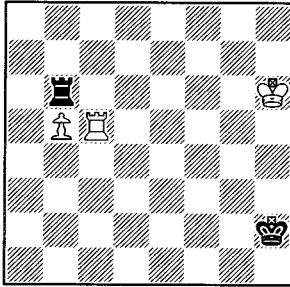
White to move and win

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 Kc4 (2 Rc3+ also works), or 1...Rb8 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 Kh5 with 1...Kh3, and 1 Kg5 with 1...Kg3. 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 Kh5, 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 Rh5 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 R v N it is quite the reverse.

After **1 Kh5** Kg3 2 Kg5 it is easy for White, for example 2...Kf3 3 Kf5 Rh6 4 Rc3+ Ke2 5 Rb3 Kd2 6 b6 Kc2 7 b7 etc or 2...Rb8 3 Kf5 Kf3 4 Ke5 Ke3 5 Kd5 Kd3 6 Kc6 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 Kg6 Kh4 4 Rc5 Kg4 5 Kf6 Kf4 6 Ke6 Ke4 7 Kd6 Kd4 8 Rh5 Kc4 9 Kc6 with a win.

After the relatively better **2...Rd6**, White must play **3 Rf5**. 3 Re5 would be a mistake on account of 3...Kg3 with 4 Kg5 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 **3...Kg3 4 Kg5 Re6** (Black has no other square on the sixth rank, if we ignore ...Rb6 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 Kg3 4 Kg5 Kf3 5 Kf5 Rh6 6 Rd3+ 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 Rd5 Kg3 4 Kg5 Re6 5 Kf5 is the simpler. The only drawing move after 1 Kg5? Kg3 2 Rf5 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...Re6 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 Kg3 4 Kg5, 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...Kg3 4 Kg5 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...Kg3 4 Kg5 Kf3 5 Kf5 Rh6 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
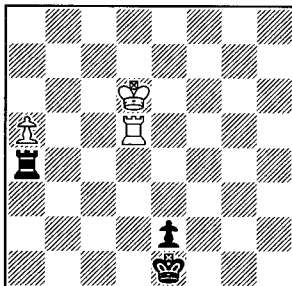
White to move and draw

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 Kc7 Qa5+ 8 Kb7 Qb5+ 9 Kc7 Qa6 10 Kb8 Qb6+ 11 Ka8 Qc6+ 12 Kb8 Kd6.

Everything hangs on the first move

3.45 (S417)
Thèmes-64 1958
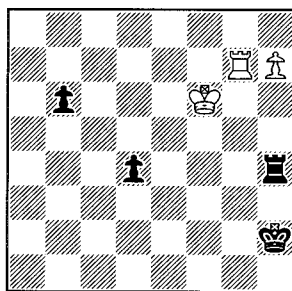
White to move and win

The White pawn cannot promote without the help of its king. The king has a choice between using the square g6 and journeying via f7 or g7, the latter after the rook has moved away. 1 Kg6 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 Kg8 and Black cannot play 2...d2 on account of 3 Rd7.

However, 1 Kf7 is not the answer. Black replies 1...Rxh7 2 Rxh7+ Kg3 (to prevent 3 Rh4) 3 Ke6 and now care is needed 3...Kf3! (3...Kf4? 4 Kd5 d3 5 Kc4 d2 6 Rd7) 4 Rd7 and 4...Ke4 draws, but not 4...Ke3? 5 Kd5!

Might 1 Rd7 be better? After 1...Kg3 2 Kg7 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 Kg8 Kf3 5 Rxd4 Rxd4 6 h8Q 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 Kg6 then Black plays 1...Kg3, and if White cuts him off by 2 Rf7 the Black b-pawn springs into action: 2...b5 3 Kg7 b4 4 h8Q Rxh8 5 Kxh8 b3.

This last attempt gives us a new idea. We play **1 Rf7** at once, with continuation 1...d3 (or 1...Kg3/Kg2) 2 Kg7 Rg4+ 3 Kf8 Rh4 4 Kg8 Rg4+ 5 Rg7. Now 1...Kg5 2 Kg7 b5 is defeated by 3 h8Q 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 Kf7 and 1 Rd7.

Now the defence works, now it doesn't

*3.46 (S420, RP8)
Československý šach 1954
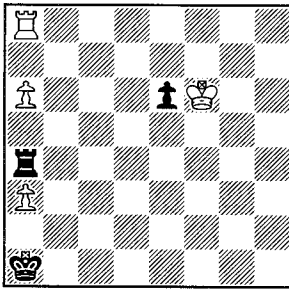
White to move and win

1 Kxe6 is refuted by 1...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...Ra4. 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 Kb6 (4 Kb5 e4) Rb3+ 5 Ka7 (5 Ka5 Ra3+ 6 Kb4 Kb2) 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 Kxe6 Rh3 3 Rf7 Ra3 White can play 4 a7.

So **1 Ra7** 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 Kd5 Rd3+ is easily evaded, 4 Kc5 Rc3+ 5 Kb5 Rb3+ 6 Ka4 Rb6 7 Ka5 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 Kd5 Rd3+ 4 Kc4 and meeting 4...Rd6 by 5 Kb5 Rd5+ 6 Kc6 Ra5 7 Kb6 Ra3 8 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 Kd7 Rd2+ 4 Kc8 help White, because after 4...Rd6 5 Kb7 Rh6 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 **5 Rf1+ Kb2 6 Rf2+** etc.

In the diagram position, 1 Kxe6 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)
Československý šach 1938
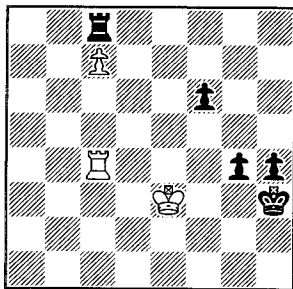
White to move and draw

Let us start by playing through the solution: **1 Ke4 g3 2 Ke3 f5 3 Kf3 g2 4 Kf2 f4 5 Kg1 Kg3 6 Rc2 f3 7 Rxg2+ fxg2 stalemate.**

It is clear from the first three moves that White is trying to avoid being out-tempoed. 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 f3 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 Rc2 g2 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 Ke4 g3 2 Kf3? f5, he

would have to abandon his favourable set-up, for example 3 Rc2 f4 4 Rc1 g2 or 3 Rc1 g2.

Why cannot White play 1 Kf4, intending 1...g3 2 Ke3 as in the solution? It is met by 1...f5. White has no continuation better than 2 Ke3, upon which Black sacrifices his f-pawn (2...f4+ 3 Kxf4) and so opens the f-file, allowing his rook to intervene with check at a suitable moment: for example, 3...g3 4 Kf3 g2 5 Kf2 Rf8+ 6 Ke2 g1Q and wins.

White must therefore play 1 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 Ke4 g3 2 Ke3 Black plays 2...Kg2, there follows 3 Rc2+ and either 3...Kg1 4 Kf3 f5 5 Rc1+ Kh2 6 Rc2+ Kh3 7 Rc4 or 3...Kh1 4 Kf3 Rxc7 5 Rxc7 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...f3. Play continues 7 Rc3+ Ke2 8 Kxg2 f3+ 9 Kh2! f2 10 Rc2+ Ke3 11 Rc1, and now 11...Rxc7 12 Rxc7 f1Q sets up another stalemate and allows 13 Re7+ with a perpetual check on the seventh rank; alternatively, 11...Kd2 12 Ra1 Rxc7 13 Kg2, 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)
Československý šach 1954
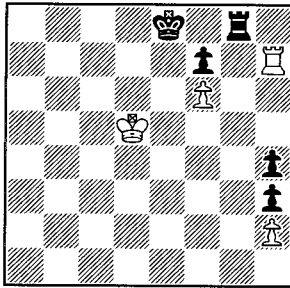
White to move and win

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 Rg7, he allows 1...Rh8 (1...Rf8 loses) followed by the escape of the Black king to f8, and the Black rook is no longer tied to the eighth rank because the check Rg8+ 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 f7 for the Black king, and 2...Ke8 3 Ra7 Rg2 will give Black a draw. 2 Rg7 is met by 2...Rf8 3 Kc6 Re8/Kc8. Correct is **1 Kc6! Kd8 2 Kd6** and now it is Black who has to move. After **2...Rf8** (2...Re8 3 Rxf7 Re2 4 Rf8+ Re8 5 Rxe8+) the move **3 Rg7** 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
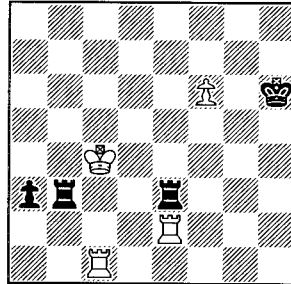
White to move and win

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...Rg3 5 Rfg1**) **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
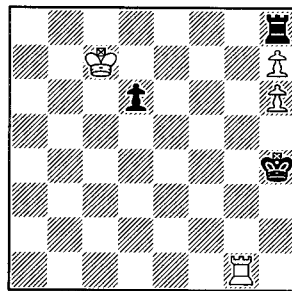
White to move and win

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: **1 Kd7 Rxh7+ 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...Kh5 then 3 Kf6 Rxh6+ 4 Kf5, while if Black plays 1...Kh5 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 rook-trapping 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 Rh1+ Kg5 5 Kg7. Black's reply 5...Rxh7+ will force a draw. White does better to play **4 Rg6+**, and if 4...Kh5 then 5 Kg7 Rd8 6 Rd6 (or Rg1/Rh6+) with a win. But if Black plays **4...Kxh7**, White must again be careful. After **5 Rg1 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 Re5+ Kf3 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 Kc3**.

If White plays 4 Rd1 here instead of the correct 4 Rg6+, Black replies 4...d4, and after 5 Rxd4 Rxh7+ 6 Kf6 Kh5 the Black rook is safe.

[The computer adds a couple of alternatives to 8 Rd8, 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
Československý šach 1954, correction
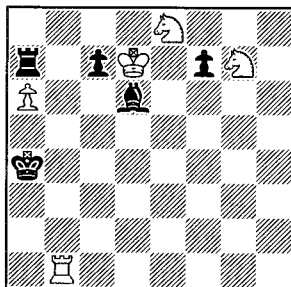
White to move and win

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 "analysis-inspired" composition.]

...and enriched with a reciprocal zugzwang

*3.52 (S430, RP46)
Svobodné slovo 1955
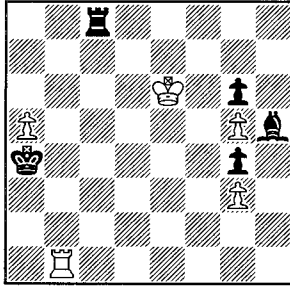
White to move and win

Why does the White rook not go to the bottom rank?

3.53 (S432)
Československý šach 1954
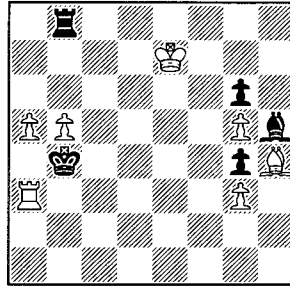
White to move and win

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) **Rc6+ 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 Kd5? for the reason we have just seen, but also not 2 Ke5 on account of 2...Ka5. If 1...Ka5 then 2 Kd7, with 2...Ra8 3 Kc6 or 2...Rf8 3 Kc6 (3 a7? Ka6! 4 Rb8 and only now 4...Rf7+).

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...Rb7+**. 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 Rb2+ Kxa6 5 Kc6) **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.

4. Rook against knight and pawn on a2/a3

[The whole of this section of *Studie* has now been overtaken by the computer, but I think it should remain; there is considerable interest in seeing how such analyses were done before computers were available, and it provides an excellent set of puzzles for use as competition pieces or training exercises.]

In this essay, I present some studies with rook against knight and pawn which form pairs of twins or short sequences. The chapter is divided into two sections according as the the pawn is on the second or the third rank. In the essay referred to above, I gave first the studies, then the auxiliary diagrams, and finally the solutions. Here I have departed from this, giving first the auxiliary diagrams and then the studies.

A. Pawn on a2

In this ending, Black's defence will consist in forcing stalemate (we always assume White to have the rook). If, with the Black king on a1 and the White on c1, the Black knight can play to c2 without allowing a capture giving mate by discovery, the draw is assured.

4.1 (S433)
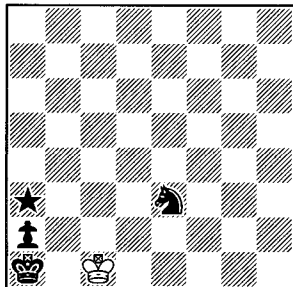
White cannot win (either side
to move, wR on any square);
same result with bN on a3

In position **4.1**, the White rook can be on any square, and either side may be to move. The star indicates that the same result occurs if the Black knight is on a3.

It is easy to see that this position is drawn. If the White rook plays to the first rank, the Black knight interposes on b1 or d1, and it then returns to a3 or e3 next move. If the White rook is anywhere else, the Black knight plays to c2 and so prevents the White king from moving to this square. White can complicate matters by putting his rook on the b-file and trying to bring his king to c3 via d2, but even in this case the result is the same.

4.2 (S434)
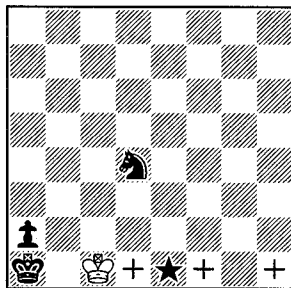
Black to move, White wins only if
wR is on a square marked "+";
same result with bN on e1

The square d4 plays an even more important role than a3 and e3. In diagram **4.2**, the White rook must be on d1, f1, or h1 is White is to win. If the

rook is not on the first rank, Black will have an immediate draw by 1...Nc2, and even on the first rank the squares e1 and g1 are not good enough: 1...Nf3 2 Rf1 (2 Rd1 Ne1, 2 Rh1 Ng1) Nd2 3 Rd1 Nb1 and 4...Na3 will give diagram **4.1**. The same happens with the knight on e1.

4.3 (S435)

White to move wins only if
wR is on a square marked "+"

The solver will soon convince himself that White can win in position **4.3** only if his rook is on one of the two marked squares. The rook must guard both e2 and d4, the former to prevent 1 Kc3 from being met by 1...Ne2+, and the latter to prevent the knight from returning to d4 after 1...Nb5+ 2 Kb3. The square e5 is not good enough, because after 1 Kc3 Nb5+ the capture of the knight will give stalemate.
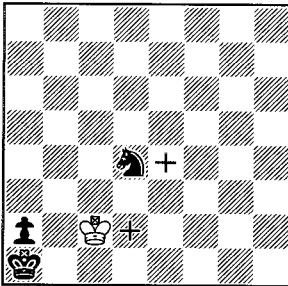
4.4 (S436)
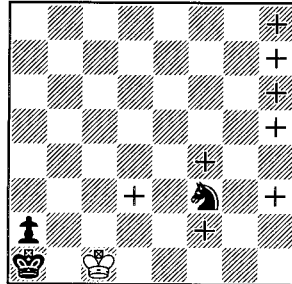
Black to move, White wins only if
wR is on a square marked "+"

In diagram **4.4**, Black is able to play 1...Nd4 and 1...Ne1, and we know from diagram **4.2** that White must be able to reply by playing to d1, f1, or h1. But the rook cannot already stand on one of these squares (we have seen in the analysis of **4.2** that Rd1 is met by ...Ne1, Rf1 by ...Nd2, and Rh1 by ...Ng1), nor can it stand on d5-d8 (Black draws by ...Nd4) nor on f5-f8 (Black plays 1...Nd2 threatening 2...Nb3+ and 3...Nd4+, and after 2 Kc2 Nf3 the rook cannot reach d2 or e4 as required by diagram **4.3**.

The squares f4, d3, and f2 have a particular significance, in that if the rook is on one of them we have a position of reciprocal zugzwang: Black to move loses, but White to move cannot force a win.

4.5 (S437)
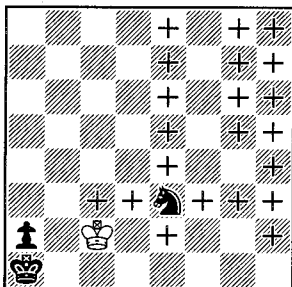
White to move wins only if
wR is on a square marked "+"

Diagram **4.5** demonstrates that the White rook is badly placed on the d or f file. White wins only if his rook is on one of the squares marked "+". With the rook on d4, neither 1 Kb3 nor 1 Kc3 suffices to win, because there follows 1...Kb1 2 Rd3 and either 2...a1Q or 2...a1N+.

[For once, I found myself in need of a little further explanation. 1 Kc1 concedes the draw at once (see **4.1**), so White must play 1 Kb3 or 1 Kc3. Black naturally replies 1...Kb1, and White must be able to respond either by capturing the knight or by a first-rank check.]

unless the Black knight is on one of the squares marked with a cross. We have already met the case d4 in diagram **4.3**, where square b2 is not marked with a plus sign, and in fact the draw is immediate (1 Kc3 Nb5+, 1 Kc1 Nb3+). If Black merely threatens to check on d4, for example if the knight is on f3, White wins by 1 Kc3 Nd4 2 Rd2, but of course this option is not available if the knight is on b5 or e2.

Black will also draw if the knight is on c4, d3, or d1. However, a4 is not good enough, because Black will need three moves to give check and in the meantime the White rook can transfer itself to the h-file and threaten mate, for example 1 Rb8 Nb2 2 Rh8 Nd1 3 Re8 Ne3+ 4 Kb3 etc.

[Mandler's diagram omits b3. He treats this square the same as f3, pointing out that 1 Kc3 Nd4 2 Rd2 wins (which it does) but overlooking the drawing move 1...Nc1. Now 2 Rd2 can be met by 2...Kb1 without allowing a bottom rank mate, and White must return to b2 (or play Rxa2) if he is not actually to lose.]

This is perhaps enough for us to solve the studies in diagrams **4.7-4.10**. The solutions will be found on page 93.

4.6 (S438)
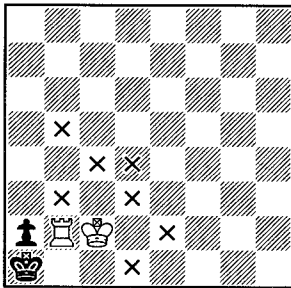
White to move wins unless
bN is on a square marked " × "
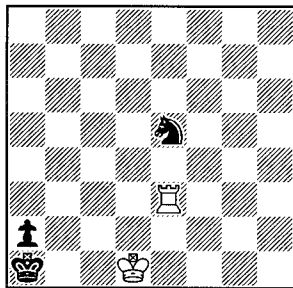
In Diagram **4.6**, White to move wins

4.7 (S439-40)

White to move and win
(a) as set, (b) wR on e4

4.8 (S441-2)
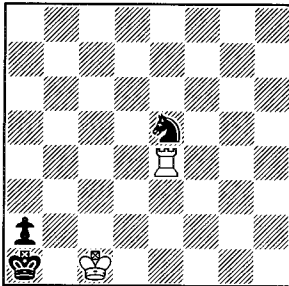
White to move and win
(a) as set, (b) wR on g7

4.9 (S443-5)
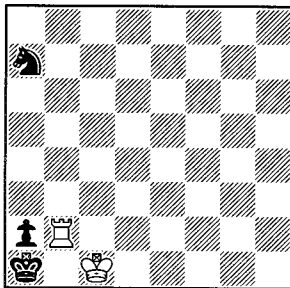
White to move and win
(a) as set, (b-c) bN on e7/f2

4.10 (S446-9)
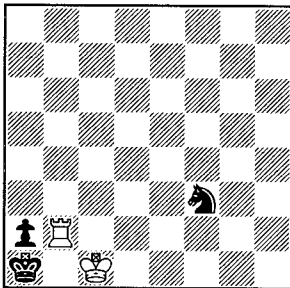
White to move and win
(a) as set, (b-d) wR on b3/b4/b5

B. Pawn on a3

Endings in which the Black pawn is on a3
are rather more difficult, because they
sometimes come down to R v N with no
pawn and the solver must know the
theory of this ending at least in its
essentials. We also need to look at the
R v P endings which may arise after a
sacrifice of the knight, and the first two
of our preliminary diagrams will address
these.

4.11 (S450)
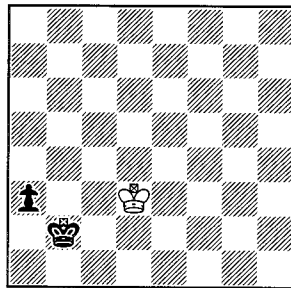
R v P: White to move cannot win,
wherever the rook may be

This position is always drawn. If for
example 1 Rg2+ then 1...Kb3, and after
2 Rg8 then 2...Kb2! 3 Rb8+ Kc1 with a
draw.

4.12 (S451)
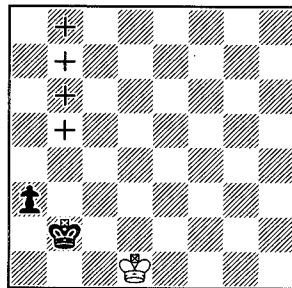
R v P: Black to move, White wins
only if wR is on a square marked "+"

If the rook is on b4, Black plays 1...Kc3 2 Ra4 Kb2 (not 2...Kb3?) and White has no winning continuation. If the rook is on b5 or any higher square, White wins easily (1...Kc3 2 Kc1 a2 3 Ra5 Kb3 4 Ra6 etc).

4.13 (S452)
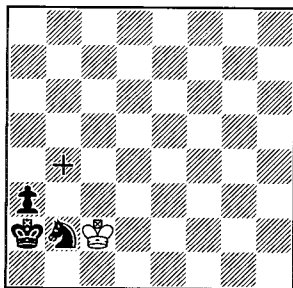
Black to move, White wins only if
wR is on the square marked "+"

This is one of the most important positions. White wins only if his rook is on b4. On 1...Ka1 there now follows 2 Kb3 Nd3 3 Rd4 Nc1+ (3...Nc5+ 4 Kxa3) 4 Kc2 Ne2 5 Rd2 and wins.

If the rook is on d4, Black draws by 1...Nd1, because the White king cannot take the knight on account of 2...Kb2 (see **4.12**) and 2 Re4 is met by 2...Nf2.

4.14 (S453)
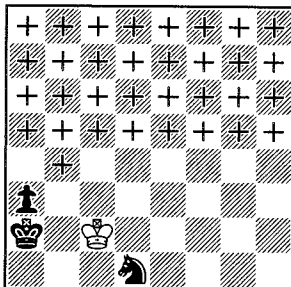
White to move wins only if
wR is on a square marked "+"

This diagram illustrates one of the consequences of diagram **4.12**. Unless the White rook is already on the b-file, Black will answer White's 1 Kxd1 by 1...Kb2, and White must be able to reply by a check on b5 or above. A check on b4 is not sufficient.

4.15 (S454)
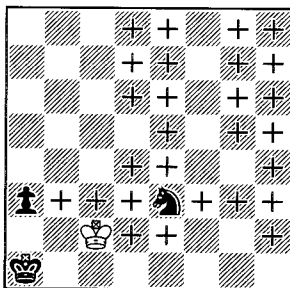
White to move wins only if
wR is on a square marked "+"

If we compare this position with that of diagram **4.5**, where the pawn is on a2, we see that it is more favourable for White, who can win not only when the rook is one of the squares previously marked but also on b3 and on most of the d-file (apart from d5 and the impossible d1). For example, rook on d4: 1 Kb3 Kb1 2 Rd3 a2 3 Rxe3 etc. But the rook is badly placed on the f-file (apart from on f3, whence it can capture the kinght), because 1 Kb3 Kb1 2 Rf3 can be met by 2...Nd1.

4.16 (S455)
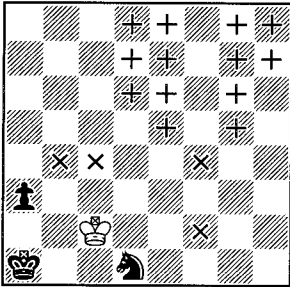
Black to move, White wins only if
wR is on a square marked "+"
White to move wins unless
wR is on a square marked " × "

Two moves come into particular
consideration for Black: 1...Ne3+ and
1...Ka2. The first leads to the preceding
diagram, the second to diagram **4.14**.
White can hope to win only if the rook
stands on a square which is marked "+"
in both these diagrams. But if we
compare the three diagrams, we see that
the present diagram has no "+" on h5
and h6. This is because Black has another
move, 1...Nf2, which holds the draw if
the rook is on one of these two squares.
After 1...Nf2 2 Rh2 Ng4 3 Rh4 Nf2
4 Rf4 Nd1 White has no good
continuation. The king cannot take the
knight (see **4.12**), while rook moves to
d4, e4, h4, f1, or f3 allow 5...Ka2 (see
4.14) and other moves are met by
5...Ne3+ (see **4.15**).

After 1...Nf2, if the rook is on h6, the
try 2 Rf6 is met by 2...Ng4 (3 Rf4 Ne3+,
or 3 Rg6 Ne5 4 Rg5/Re6 Nf3).

If the rook is on h5 and White tries
2 Rf5, Black draws by 2...Nd3, because
the king cannot capture (see **4.11**), the
rook cannot attack the knight (3 Rd5
Nb4+, 3 Rf3 Ne1+), and any other rook
move is met by 3...Ka2.

If the rook is on h7 or h8, White
meets 1...Nf2 by 2 Rf7 (Rf8).

[The computer pedantically adds a

cross on b2, but this square is of no
practical importance (a rook here would
be attacked by two Black men, so why
didn't Black use one of them to capture it
last move?) and Mandler obviously
thought it irrelevant. The same is true of
some later diagrams.]

4.17 (S456)
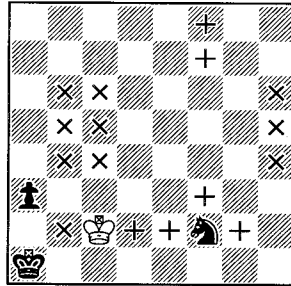
Black to move, White wins only if
wR is on a square marked "+"
White to move wins unless
wR is on a square marked " × "

The signs on the f-file require little
explanation. We have just seen that
White wins against a knight on f2 by
playing his rook to f7 or f8, and on f3 the
rook threatens immediate mate. The
reader can likewise easily convince
himself that White wins if the rook is on
d2, e2, or g2. We saw in the analysis of
the last diagram that h2 was a bad square
(in the line 1...Nf2 2 Rh2 Ng4 etc).

[The computer adds a trivial "+" on
f1, again doubtless omitted by Mandler
on the grounds that it is of no practical
importance.]

4.18 (S457)

Black to move, White wins only if
wR is on a square marked "+"
White to move wins unless
wR is on a square marked " × "

Black threatens 1...Ka2, and we know
from diagram **4.13** that White must be
able to meet this by playing to b4. The
square f4 is insufficient on account of
1...Nd1 (see **4.16**). If the rook is on b5,
Black escapes by playing 1...Nd3 (see
4.24 later), and if it is on b6 or b7 Black
has 1...Nc4 (see **4.21**, likewise later).

[Mandler presumably regarded the
crosses as self-explanatory. There are
none on the f-file because White to move
would play 1 Kb3 with a quick mate.]

4.19 (S458)

Black to move can always draw
White to move wins unless
wR is on a square marked " × "

There are no "+" signs on this diagram

because Black to move can draw
irrespective of the position of the rook.

The crosses on b7, d6, and d2 deserve
particular attention. If the rook is on b7,
Black meets 1 Kb3 by 1...Nd3 (2 Rd7
Nc5+) and 1 Kc2 by 1...Nc4 (see **4.21**
below). If it is on d6 or d2, the line 1 Kb3
Kb1 2 Kxa3 is defeated by 2...Nc4+.

4.20 (S459)
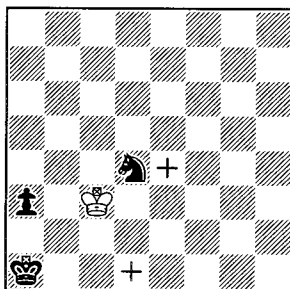
Black to move, White wins only if
wR is on a square marked "+"

The plus sign on d1 is only for
completeness. After 1..Ka2, White of
course takes with the rook and not the
king. Otherwise we have a position
reminding us of diagram **4.3** after 1 Kc3,
and the logic is the same: the rook must
cover both e2 and d4, so as to prevent an
immediate 1...Ne2 and also a return to
d4 after 1...Nb5+ 2 Kb3. However, there
is a difference. In diagram **4.3**, both e4
and d2 were suitable squares for the rook.
With the pawn on a3, only e4 works. If
the rook is on d2, Black can play 1....Ne6
without allowing immediate mate, and
he will be able to meet 2 Kb3 with
2...Nc5+.

[This is the first serious error in
Mandler's analysis, and I have had to
alter his text. He puts a plus sign on d2 as
well, overlooking 1...Ne6.]

4.21 (S460)
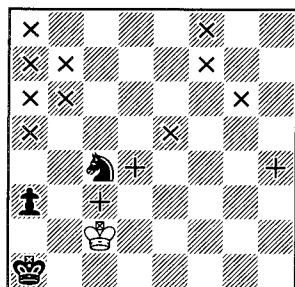
Black to move, White wins only if
wR is on a square marked "+"
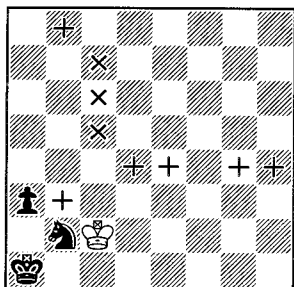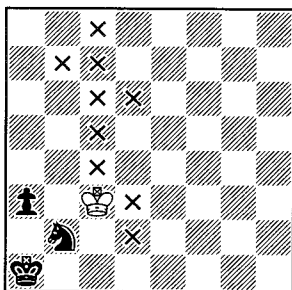White to move wins unless
wR is on a square marked " × "

We have referred to this diagram in the analysis of positions **4.18** and **4.19**. The square f4 is not marked with a plus sign on account of 1...Ne3+ (see **4.15**) and e4 on account of 1...Nd6 2 Rd4 Nf5 3 Rf4 Ne3+.

Now to the crosses. If the rook is on b8, White wins by 1 Kb3. This fails with the rook on b7 (1...Na5+). The draw with the rook on b6 follows from diagram **4.15**, since if the rook attacks the knight by 1 Rb4 or 1 Rc6 Black will reply 1...Ne3+.

With wRg8, White plays 1 Kc3 Na5 2 Kb4 Kb2 3 Rg2+ Kb1 4 Kxa3 and wins with R v N, but with wRf8 the corresponding line is only drawn (play continues 4...Nc4+ 5 Kb3 Ne3 and the mating square is covered). We also have 1 Kb3 Nd2+ 2 Kc3 Ne4+/Kb1, and 1 Rf4 Ne3+ (see **4.15**).

With wRf7, 1 Kc3 is no longer defeated by 1...Na5 (2 Rd7 wins), but 1...Ne3 2 Rf3 Nd1+ 3 Kc2 leads to diagram **4.16**. With wRg6, 1 Kc3 is met by 1...Ne5.

[This position is more difficult than Mandler thought. He omits the crosses on f8 and g6, and less seriously those on the a-file and e5 and the plus on c3, and though I have tried to alter his text to highlight the essentials I do not claim to have provided a full treatment.]

4.22 (S461)
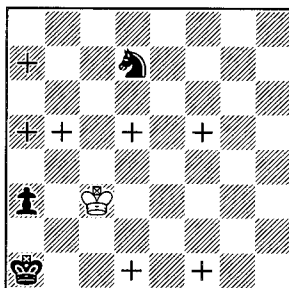
Black to move, White wins only if
wR is on a square marked "+"

If the rook is on the d-file and not on a marked square, Black will draw by playing 1...Nc5, since if White then attacks the knight Black will play 2...Kb1 and the rook will be unable to take it.

[Mandler omits the plus signs on a5, b5, and f5, where White wins even though the knight is not under immediate attack, and also that on f1. With the rook on g5 or h5, Black draws by playing 1...Kb1 and if 2 Kb3 then 2...Kc1, but if it is on f5 White can continue 3 Kxa3 and then round up the knight. With the the rook on a5, b5, or f1, 1...Kb1 is either illegal or useless, and if Black plays 1...Ka2 White can continue 2 Rf5 with a difficult win.]

4.23 (S462)
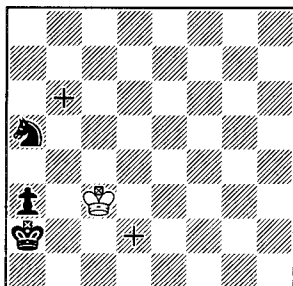
Black to move, White wins only if
wR is on a square marked "+"

This position is won for White only if the
rook is on d2 or b6. If it is on say g2
instead of d2, Black draws by 1...Kb1
2 Rg5 Nc6 3 Kb3 Nd4+. This check is
not available if the rook is on the d-file.

The square b6 is likewise good for
White. Black must play 1...Ka1, and
there follows 2 Rd6 Kb1 3 Rd5 Nc6/Nb7
4 Kb3 etc.

However, if the rook is on b6 with
White to play, he must abandon his
favourable position and there is no win.

4.24 (S463)
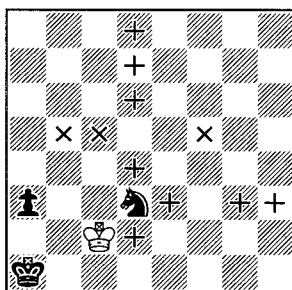
Black to move, White wins only if
wR is on a square marked "+"
White to move wins unless
wR is on a square marked "×"

With Black to move, 1...Nc5 does not
help, because in contrast to diagram **4.22**

the White king is on c2.

With White to move and the rook on
b5, 1 Rb3 is met by 1...Ne1+. If it is on
c5, 1 Rc3 fails against 1...Nb4+.

4.25 (S464)
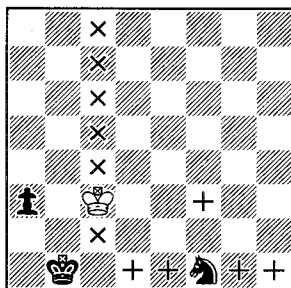
Black to move, White wins only if
wR is on a square marked "+"
White to move wins unless
wR is on a square marked "×"

If the rook is giving check from e1, the
solution is easy: 1...Ka2 2 Re2+ Kb1
3 Kb3. The play is similar if the rook is
on g1, but the solver must be aware that
he cannot win without allowing Black to
promote to a second knight: 1...Ka2
2 Rg2+ Kb1 3 Kb3 a2 4 Rg1 a1N+
5 Kc3 etc.

If the rook is on f3, White wins by
1...Nd2 2 Re3 Nf1 3 Re1+ and as above,
or 1...Nh2 2 Rg3 Nf1 3 Rg1 etc.

If the rook is giving check from d1,
the procedure is 1...Ka2 2 Rd3 Kb1 3 Rf3
etc. The win with the rook on h1 is
analogous: 1...Ka2 2 Rh3 Kb1 3 Rf3.

This preparation will simplify the analysis
of the following diagrams. The solutions
are on pages 93-4.

4.26 (S465-7)
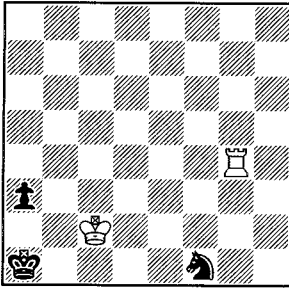
White to move and win
(a) as set, (b-c) wR on g5/h5

4.27 (S471-2)

White to move and win
(a) as set, (b) wR on f4

4.28 (S497-8)

White to move and win
(a) as set, (b) wR on d7

4.29 (S477-8, version)
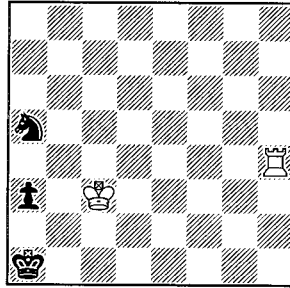
Black to move and draw
(a) as set, (b) wR on h6

4.30 (S479-82)
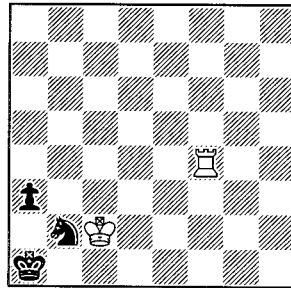
Black to move and draw
(a) as set, (b-d) wR on b5/b7/g5

4.31 (S483-5)
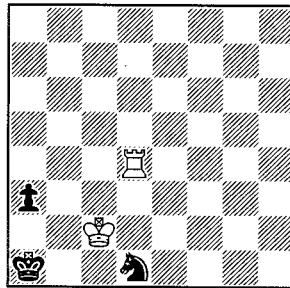
Black to move and draw
(a) as set, (b-c) wR on f6/h6

4.32 (S486-8)
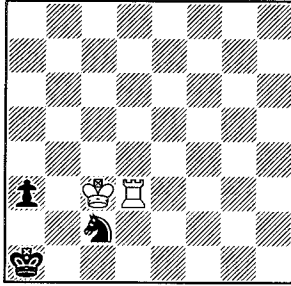
Black to move and draw
(a) as set, (b-c) wR on g2/f5
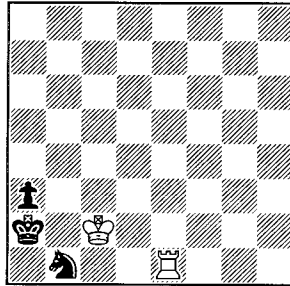
4.33 (S489-90)

Black to move and draw
(a) as set, (b) wR on c8
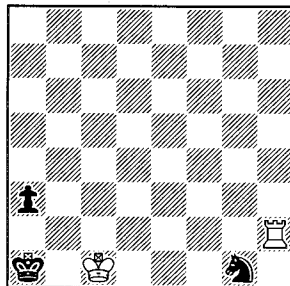
4.34 (S491-2)

Black to move and draw
(a) as set, (b) wR on h2

4.35 (S493-4)

Black to move and draw
(a) as set, (b) wR on d1

4.36 (S495-6)

Black to move and draw
(a) as set, (b) wR on d2
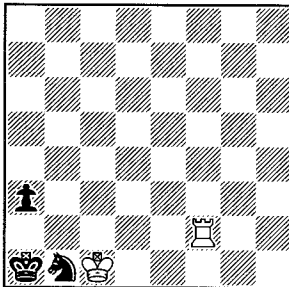
4.37 (S499-500)
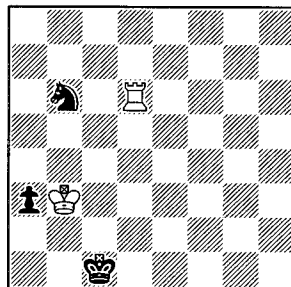
Black to move and draw
(a) as set, (b) wR on e6

4.7. Only two moves come into consideration: 1 Kc2 and 1 Kc1. Correct in (a) is **1 Kc2 Nf3 2 Re4** (Black is going to play 2...Nd4+, so White must play to one of the squares marked "+" in **4.3**) **Nd4+ 3 Kc3 Nb5+ 4 Kb3** and wins. If instead Black plays 1...Nd3, there are several ways to win, for example 2 Re4 Nb4+ 3 Kb3 Nd3 4 Rd4.

1 Kc1? is not defeated by 1...Nf3? hoping for 2...Nd4 reaching **4.2**, because White has 2 Rd3 winning (see **4.4**). Instead, Black must play 1...Nc4/Ng4 2 R-- Na3/Ne3, giving **4.1**.

In (b), 1 Kc2? fails to 1...Nf3 (see **4.3**). As we have seen, this position (wKc2, wRe4, bNf3) is a position of reciprocal zugzwang: Black to move would lose, but White to move must weaken his position. Correct is **1 Kc1 Nf3 2 Kc2** and it is Black to move, or 1...Nc4 2 Kc2 Ne3+ 3 Kb3.

4.8. In (a), **1 Re2 Nf3 2 Rf2** (see **4.4**), or 1...Nd3+ 2 Kc2 Nb4+ 3 Kb3 Nd3 4 Rd2. We know from part (b) of the preceding study that 1 Kc2 does not work and from part (a) that 1 Re3 is met by 1...Nc4, while **4.5** helps to show that 1 Rd4 is not correct: Black will continue 1...Nc4 (threat 2...Na3, **4.1**) 2 Kc2 Ne3+ etc.

In (b), **1 Re7 Nd3+/Nc4 2 Kc2**; 1 Rg1? Nf3! (see **4.4**). 1 Kc2? Nf3! and the rook cannot reach e4 or d2 (see **4.3**), while on 2 Kc1 Black will play 2...Ne1 or 2...Nd4 (see **4.2**).

[I have presented the four studies of **4.7** and **4.8** as two pairs to make the diagramming easier. Mandler, who gives each study a separate diagram, presents them as a set of four, which emphasizies the link between **4.7** (b) and **4.8** (a).]

4.9. In (a), Black threatens 1...Nb5 and 2...Na3, which will draw according to diagram **4.1**. To avoid this draw, White must play Kc2 at his first or second move. But 1 Kc2 Nb5 gives

diagram **4.6**, and again White cannot win. So White must play Kc2 at move 2, and Black will be able to reply by giving check on d4. So White must put his rook on one of the squares shown in diagram **4.3**, and e4 is not within range; so the solution is **1 Rd2 Nb5 2 Kc2 Nd4+ 3 Kc3** etc.

In (b), 1 Rd2 fails against 1...Nf5 2 Kc2 Ne3+ (see **4.5**), and 1 Rh2 against 1...Nf5 2 Kc2 Nd4+ (see **4.3**). However, White now has **1 Kc2**, since the knight cannot reach any of the squares marked in diagram **4.6**.

In (c), 1 Kc2 is met by 1...Nd1/Nd3 (see **4.6**), while 1 Rd2 Nd1/Ng4 2 Kc2 Ne3+ puts us into diagram **4.5**. Correct is **1 Re2**.

4.10. These four studies can be solved very easily by considering diagram **4.4**, because in each case only one of the marked squares can be reached. In (a), therefore, **1 Rf2**; in (b), **1 Rd3**; in (c), **1 Rf4**. In (d), **1 Rh5 Nh2 2 Kc2 Nf1 3 Kb3 Nd2+** (3...Kb1 4 Rh1) **4 Kc3 Ne4+ 5 Kc2** etc; not 1 Rf5? Nd2 2 Kc2 Nf3 3 Rf4 Nd4+ and draws.

[Again, Mandler presents the seven studies of **4.9** and **4.10** as a single set. The four studies of **4.10** would be a very interesting group to set for solution *without* Mandler's preliminary analysis; I wonder how many players, even of master strength, would get them all right first time.]

4.26. In (a), **1 Kb3 Nd2+ 2 Kc3** and now **2...Nf1 3 Rg1** and wins (see **4.25**) or **2...Nf3 3 Rf4** (not 3 Rg3); if 2...Nb1+ then 3 Kc2 wins, for example 3...a2 4 Rg2 Nd2 5 Kc3 Nb1+/Ne4+ 6 Kb3. Not 1 Kc3? Ne3! 2 Re4/Rg3 Nd1+ (see **4.16**).

In (b), **1 Kc3 Kb1 2 Rg1** (see **4.25**); if 1...Ne3 then 2 Kb3. Not 1 Kb3? Nd2+!

In (c), **1 Rh3 Ka2 2 Kc3 Kb1 3 Rf3** etc (see **4.25**). Not 1 Kc3? Ng3

2 Rg5/Rh3 Ne2+ 3 Kb3 Nd4+ (see **4.20**).

[Mandler has the rook on h6 in the diagram of (c) but "2 Rg5" in the text. The solution is the same with the rook on h6, but the twinning g4-g5-h5 is neater and I have assumed that the misprint is in the diagram.]

4.27. In (a), **1 Ra7 Nc3 2 Kc2 Nb5 3 Rd7 Ka2 4 Rd2** and either **4...Na7 5 Kc3+ Kb1 6 Kb3 Kc1 7 Rd5** or 4...Nc7 5 Kc3+ Kb1 6 Kb3 etc.

In (b), **1 Kc2 Nc5 2 Rc4** (not 2 Rf5, see **4.24**).

4.28. In (a), **1 Kc2 Ka2 2 Rb4** (see **4.13** etc); 1 Kb3? Kb1! 2 Kxa3 Kc2.

In (b), **1 Kb3 Kb1 2 Kxa3**; 1 Kc2? Ka2! (see **4.13**).

[Mandler gives this towards the end of the "Black to play and draw" group, but it seems more conveniently placed here and I have taken the liberty of moving it. Part (b) seems to work just as well with the rook on d5 instead of d7.]

4.29. In (a), **1...Ka2** and draws because White can reach neither d2 nor b6 (see **4.23**). 1...Kb1? 2 Rb4+! Ka2 (2...Kc1 3 Ra4) 3 Rb6 etc.

In (b), **1...Kb1 2 Rb6+ Ka2/Kc1**. 1...Ka2? 2 Rb6.

[Mandler has the rook on g4 and g6, but this allows an alternative refutation of 1...Ka2 in (b): 2 Kb4 Nb7 3 Rg2+ Kb1 4 Kxa3 and the knight falls in 13 more moves.]

4.30. In (a), **1...Nd1** (see **4.16**).
In (b), **1...Nd3** (see **4.24**).
In (c), **1...Nc4** (see **4.21**).
In (d), **1...Ka2** (see **4.13**).

4.31. In (a), **1...Ka2** (see **4.14**).
In (b), **1...Ne3+** (see **4.15**).
In (c), **1...Nf2** (see **4.26**).

4.32. In (a), **1...Ne1 2 Re3 Ng2 3 Re2 Nf4 4 Re4 Nd3** and either **5...Rd4/Re3 Nc5** etc (see note to diagram **4.22**) or 5...Kxd3 Kb2 (see **4.11**). If 4 Rf2 then 4...Ne6 5 Rf6 Nc5; if 3 Rg3 then 3...Nf4 4 Kb3 (4 Rf3/Rg4 Ne2+) Ne2 5 Rg2 (5 Re3 Nd4+ 6 Kc3 Kb1, see **4.20**) Nd4+ 6 Kxa3 Kb1.

In (b), **1...Ne3** (1...Ne1? 2 Re2!) **2 Re2/Rg3 Nd1+ 3 Kc2 Ka2** (see **4.16**).

In (c), **1...Nd4** (see **4.20**); 1...Ne3? 2 Re5! Nd1+ 3 Kc2 (see **4.16**).

4.33. In (a), **1...Ne4 2 Re6** (2 Rc4 Nf2 3 Rf4 Nd1, see **4.16**) **Ng5** (2...Nc5? 3 Re5 Nd3 4 Re3, see **4.24**) **3 Re5/Rg6 Nf3** and draws.

In (b), **1...Ne6**. 1...Ne4? 2 Re8.

4.34. In (a), **1...Nc3 2 Kc2 Nd1** (see **4.16**); 1...Nd2? 2 Kc2 and wins, because the knight cannot use f3 to reach d4.

In (b), **1...Nd2 2 Kc2 Nf3**. Not 1...Nc3 on account of 2 Kc2 Nd1 3 Rh7/Rh8 (see **4.16**).

["The White rook can also stand on g2", writes Mandler about (b), and I think I would put it there even though it gives White a choice of four moves, 3...Rg5/g6/g7/g8, in refuting 1...Nc3.]

4.35. In (a), **1...Nd2**. 1...Nc3? 2 Re5! Na4 3 Rb5 Nb2 4 Rb4 (see **4.13**).

In (b), **1...Nc3**, because White does not have e5 at his disposal.

4.36. In (a), **1...Ne2+ 2 Kc2 Nd4+ 3 Kc3 Kb1**; 1...Nf3? 2 Rh3!

In (b), **1...Nf3! 2 Rd3 a2!** and White has no good move.

4.37. In (a), **1...Na4.**

In (b), 1...Na4 2 Kxa4 a2 3 Kb3 and wins; **1...Nd7!**

5. Studies with other material

[We have seen pawns alone, rooks and pawns, and rook against knight. This chapter contains Mandler's other studies. Some are not in his usual style, and it has to be said that one or two are not of his usual quality; mastery is the product not merely of talent but of knowledge and experience, and a man whose work is outstanding in one field may produce something quite ordinary when he tries his hand at something else. But Mandler obviously liked all these compositions himself, and I don't think I should act as a censor.

Included in this chapter are Mandler's knight-against-bishop studies based on corresponding squares. These are not in *Studie*, having already been quoted in his problem collection, but they include one of his most famous works and they also throw an interesting light on his method of composition.]

White needs six moves to return to the same position with Black to play

5.1 (S501)
L'Eclaireur de Nice 1924
(with R. Réti)
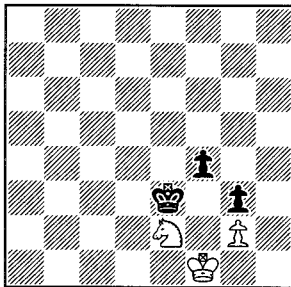
White to play and win

In 1923, O. Trinks of Ústí nad Labem published the following study in the *Oesterreichische Schachrundschau*: White Kd1, Nf1, Pf2 (3), Black Kd3, Pe4/f3 (3), White to move and win. The intention was 1 Ne3 Kc3 2 Ke1 Kd3 3 Nd1 Kc2 4 Nb2! Kc1 (4...Kc3 5 Kd1 and wins, 4...Kxb2 5 Kd2) 5 Na4 Kc2 6 Nc5 and wins, and 1 Ke1 was supposed to be defeated by 1...Kc2 2 Ne3+ Kc3! 3 Nd1+ Kd3 4 Nb2+ Kc2 with a draw. This study formed the basis of the twin studies **5.1-5.2**.

In **5.1**, Black threatens 1...f3, and so White must start **1 Ng1**. We now have the position after 1 Ke1 in the Trinks study, shifted one file to the right, and the diagram study is essentially a cook of the Trinks study. We have already seen Black's best defence, **1...Kd2! 2 Nf3+ Kd3!**, and our task is now to get back to this position with Black to move.

This is achieved by the following manoeuvre: **3 Ke1 Ke3 4 Ne5 Ke4** (4...Kd4 is met by 5 Ng4 Kd3 6 Kd1 and either 6...f3 7 Ne5+ or 6...Kd4/Ke4 7 Ke2) **5 Nc4 Kd3** (5...Kd4 6 Ke2, 5...f3 6 Nd2+) **6 Nd2 Ke3 7 Nf3 Kd3 8 Kf1**. We know the rest from the Trinks study: **8...Ke3 9 Ne1 Kd2 10 Nc2 Kd1 11 Nb4 Kd2 12 Nd5**.

The Trinks position has been shifted one file to the right to cut out the alternative winning method which appears in the following study.

[The computer gives 2 Nh3 and 4 Ng5/Nh4 as alternative winning moves, but they waste time. The source given in *Studie* is *L'Eclaireur des Nice* 1923, but "des" must be a misprint and I have followed Mandler's Réti book of 1931.]

A royal journey needing a great deal of preparation

5.2 (S502)
L'Eclaireur de Nice 1924
(with R. Réti)
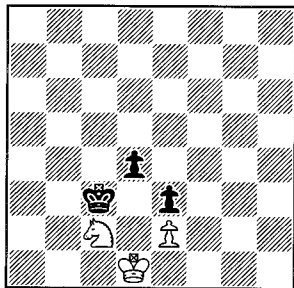
White to play and win

We cannot proceed as in the preceding study, because the move corresponding to 11 Nb4 would take the knight off the board. But another possibility is hidden in the position, that of bringing the king to e1, f1, g2, and f3. First we must see how Black defends himself if White embarks on this plan without proper preparation.

After the moves 1 Ne1 Kb2 2 Nd3+ Kb3/Kc3 3 Ke1 Kc2 4 Kf1, Black can choose between 4...Kd2 and 4...Kd1. Let us look at 4...Kd2 first: 5 Nf4 Kd1 6 Kg2. White's plan is bearing fruit! White can also play differently, 5 Ne5 Kd1 6 Nf3 etc. So we judge that Black's fourth move was a mistake. Correct was 4...Kd1 5 Nf4 Kd2 6 Kg2 d3, and after 7 exd3 e2 the White pawn is lost.

However, this move 4...Kd1 is only possible because the Black king is on c2, and this forms the foundation of the study. If the knight is on d3, Black can only draw by replying to White's Ke1 by ...Kc2. In the position Ke1/Nd3 v Kc2, Black to play loses because his king is already on c2 and must move away.

Now let us try moving the knight away from d3, and only then taking the White

king towards the east. In the position Kd1/Nf4 v Kb2 (we always omit the pawns, assuming them to be unmoved), if White plays 1 Ke1, Black can choose between the three squares c1, c2, and c3. But the choice is easy. 1...Kc2 fails against 2 Nd3, as we have just seen, and even easier is 1...Kc1, met by 2 Ne6. So the only correct move is 1...Kc3, ready to meet 2 Nd3 by 2...Kc2. The same is true if the knight is on any other square which covers d3 and allows it to reach d4 in two moves, namely c5 or e5 (or b4, but this is of no practical importance and we need not consider it).

This has led us to the important observation that if the White knight is covering d3 from c5, e5, or f4, Black must reply to White's Ke1 by playing ...Kc3. We shall try to prevent this defence by reaching the position Kd1/Nf4 (Nc5, Ne5) with the Black king already on c3 and White to play. It will not be easy. This is the true foundation of the study.

White of these three squares, f4, c5, and e5, will best suit our purpose? Let us put it another way: from which of these squares can the knight force the Black king to play to c3? Obviously we can only achieve this by putting Black in zugzwang, and to this end the knight must be guarding b3 at the instant when the Black king is on b2. So we discard f4 and e5, and concentrate on c5. This has taken us a further step backward (our analysis is essentially retrograde): White must reach the position Kd1/Nc5 v Kb2 with Black to move.

From where could the knight have come to c5? Not from d3, because it would have been checking the king on b2 with White to move. If we are to force the king to move to b2, the knight must be on a square from which it controls the one important square in the Black king's field, namely c3, and so the knight must be on e4. The position Kd1/Ne4 v Kb3, Black to move, is won for White because

Black has no reasonable move other than ...Kb2, and White's reply Nc5 gives the position of the previous paragraph.

The position Kd1/Ke4 v Kb3 is however also won if White is to move. White's move Kc1 forces Black to retreat and give him access to c2, and Black then loses quickly. We have already met this position in the previous study (in the line 4...Kd4 5 Ng4 Kd3 6 Kd1). So if the White knight can get to e4, he wins whether the Black king is on b2, b3, or c3.

We have now come a long way, and all that remains is to get the knight to e4. Even this is quite difficult, but now that we have come so far it will hardly be an insuperable obstacle.

To reach e4 from c5 is most improbable, since our whole purpose in getting to e4 is to use it as a stepping stone to c5. The square g5 is likewise not a practical choice. The knight can reach this square only from f3 or e6, and while it is doing this White will be unable to stop Black from playing ...Kc3 and ...d3.

So the practical options are d6 and f6, and the easier square to reach is f6. Let us therefore examine this first.

After 1 Ne1 Kb2 2 Nd3+ Kb3 3 Nf4 Kb2 (not 3...Kc3, which gives the position Kd1/Nf4 v Kc3 which we saw long ago as good for White) 4 Nd5 Kb3 5 Nf6 we appear to have achieved our aim. But Black has an unexpected defence against the threat of Ne4, namely 5...Kc4!! This allows the White king to reach the second rank, which we have usually regarded as being decisive, but in the present case Black can take advantage of the disadvantageous position of the knight: 6 Kc2 d3+ 7 exd3+ Kd4 and White is powerless against the threat of ...e2. 6 Ne4 is likewise met by 6...d3.

So f6 is not the answer, and only d6 is left. It is easy to see that the knight must reach this square from b5, since only from here can it keep a sufficient watch on the Black king. The last and perhaps most difficult question, namely how to arrive at b5, can be answered only after a detailed analysis of the position. There are three candidate departure squares, a3, a7, and c7. The square a3 can be reached from the initial position by a single knight's move, and it is surprising that in fact the correct route passes through c7.

Let us summarize the results of our investigation. The knight must play to c7 and from there to b5, d6, e4, and c5, and only then can the White king can start its journey to the east.

So play starts 1 Ne1 Kb2 2 Nd3+, and the variation 2...Kb3 is relatively short. White plays 3 Nf4 Kb2! 4 Nd5 Kb3 5 Nc7, and his knight has reached c7. The move 2...Kc3 demands a longer journey by the knight, namely 3 Nc1 Kb2 4 Na2 Kb1! 5 Nb4 Kb2 6 Nd5 and so on. Black has one last hope, in that after 6...Kb3 7 Nc7 Kc3 8 Nb5+ Kc4 9 Nd6+ he can attack the knight by 9...Kc5/Kd5, but White can easily refute this, for example by 10 Nf7.

The complete solution thus unfolds **1 Ne1 Kb2 2 Nd3+ Kc3** (2...Kb3 3 Nf4 Kb2! 4 Nd5) **3 Nc1 Kb2 4 Na2 Kb1 5 Nb4 Kb2 6 Nd5 Kb3 7 Nc7 Kc3** (7...Kb2 8 Nb5) **8 Nb5+ Kc4 9 Nd6+ Kb3/Kc3 10 Ne4(+) Kb2 11 Nc5 Kc3 12 Ke1 Kc2/Kc4 13 Nd3 Kc3 14 Kf1 Kd2 15 Nf4** (or 15 Ne5 Kd1 16 Nf3) **Kd1 16 Kg2** and wins.

An ancient theme in a zugzwang setting

5.3 (S503)
Rudé právo 1965 (after A. Chéron)
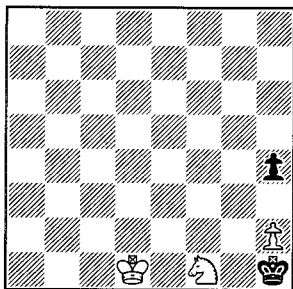
White to play and win

In 1926, A. Chéron published the following study: White Ke1, Nf1, Ph2 (3), Black Kg1, Ph4 (2). Black to play, White wins; White to play, draw.

Black to play, 1...Kg2 2 Ke2 h3 3 Ne3+ Kxh2 4 Kf2 Kh1 5 Nf1. An ancient theme, but always attractive.

White to play, 1 Ke2 Kg2 2 Ne3+ Kxh2 3 Kf2 Kh3 and draws, or 2 Ke3 Kxf1 3 Kf3 h3! 4 Kg3 Ke2 5 Kxh3 Kf3.

In the diagram, I have extended this by one move. Now we have a position where the White king cannot move to the e-file until the Black king has committed himself: 1 Ke1? Kg1! and we have the Chéron position with White to move, or 1 Ke2 Kg2 and we have the same position after Black's first move. Correct is **1 Kd2 Kg1** (1...h3 2 Ke2 and 3 Ne3, 1...Kg2 2 Ke2) **2 Ke1 Kg2 3 Ke2 Kg1** (3...h3 4 Ne3+) **4 Kf3 Kxf1 5 h3/Kg4.**

White finishes just as he started

5.4 (S504)
Zemědělské noviny 1967
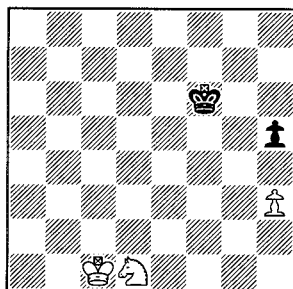
White to play and win

White's way to proceed here seems obvious. It takes one move to bring his knight to the defence of his pawn and two more to bring his king to the defence of the knight, after which he can try to out-tempo the Black king. But this cannot be made to work.

There is another way of defending the White pawn, which is by bringing the knight to g1. True, this takes three knight moves instead of one, but the route is exact and more attractive, and it brings White to his goal: **1 Nc3 Kg5 2 Ne2 Kh4 3 Ng1 Kg3 4 Kd2 Kf2** (4...Kg2 5 Ke3) **5 Ne2 h4 6 Kd3 Kg2** (6...Kf3 7 Ng1+ Kf2 8 Ke4 Kxg1 9 Kf3, but not 9 Kf4? Kf2 and draws) **7 Nf4+ Kf3** (7...Kg3 8 Ke3) **8 Ne6 Kg3 9 Ng5 Kf4 10 Ne4 Kf3 11 Kd4 Kf4 12 Kd5 Kf5 13 Nc3 Kf4 14 Ne2+ Kf3 15 Ng1+ Kf2 16 Ke4 Kxg1 17 Kf3** and White wins. We may notice that White's moves 13-15, right at the end of the solution, are an exact repetition of moves 1-3 at the start.

According to *Europe Echecs*, March 1968, page 26, K. A. L. Kubbel published the following study in 1914: White Kd3, Ne6, Ph2 (3), Black Kf3, Ph4 (2), win by 1 h3 Kg3 2 Ng5 Kf4 3 Ne4 Kf3 4 Kd4 Kf4 etc. But I do not think this is an anticipation in the true sense of the

word.

[Timothy Whitworth's *Leonid Kubbel's Chess Endgame Studies* confirms the Kubbel (*Rigaer Tageblatt* 1914), but Mandler's version offers quite enough extra to justify its creation. It may be noticed that the definitive computer analysis now available gives the main line as completely unique apart from time-wasting and blind alleys.]

A knight can never gain a tempo

5.5 (S506)
Rudé právo 1965
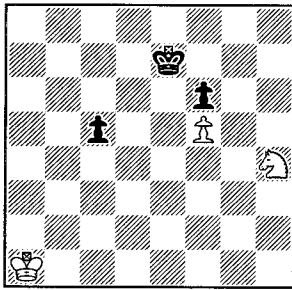
White to play and win

After **1 Kb2 Kd6** we are approaching a position in which whoever is to move is at a disadvantage: White to play only would only draw, but Black to play loses. If White plays 2 Kc3?, there follows 2...Kd5 3 Kd3 (3 Ng6 c4) c4+ 4 Kc3 Kc5 5 Ng6 Kd5 6 Ne7+ Kc5 (6...Kd6? 7 Kxc4) 7 Ng8 Kd5 8 Nh6 Kc5 9 Ng4 Kd5 with a draw. The knight, which changes the colour of its square at each move, is at a great disadvantage when it come to gaining a tempo.

After the correct continuation **2 Kb3 Kd5 3 Kc3** we have the same position with Black to move, and he loses: **3...c4** (for other moves see below) **4 Ng6 Kc5** (4...Ke4 5 Ne7) **5 Ne7** etc. If 3...Kc6, White plays 4 Kc4 and wins, for example 4...Kd6 5 Nf3 Kc6 6 Nh2 Kd6 7 Ng4; if 3...Kd6, he plays 4 Kc4 Kc6 5 Ng2

Kd6 6 Ne3 Kc6 7 Nf1 Kd6 8 Ng3 Kc6 9 Ne4 etc; if 3...Ke5, 4 Kc4 Kf4 5 Kxc5 Kg4 6 Kd6! Kxh4 7 Ke7.

The need to meet 1...Kd6 by 2 Kb3 raises the question of why White cannot start 1 Ka2. The answer is that it is met by 1...c4.

Black reduces White to a bare king in the middle of the board, but it is stalemate

5.6 (S507)
Lidová demokratie 1955 (corr 1961)
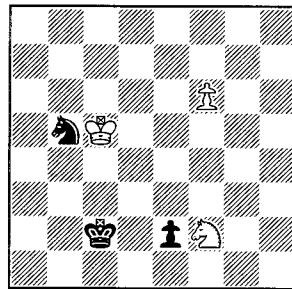
White to play and draw

1 f7 Nc7 2 Nd3 Kxd3 3 Kd6 e1Q (3...Ne6 4 Kxe6) **4 f8Q Qb4+ 5 Ke5 Qxf8 stalemate**. 1 Nd3 fails against 1...Kxd3 2 f7 Nd4 3 Kd5 e1Q 4 f8Q Qe6+ 5 Kc5 Qc6+ 6 Kb4 Qb5+/Qc4+.

Across the marsh

5.7 (S508)
Svobodné slovo 1967
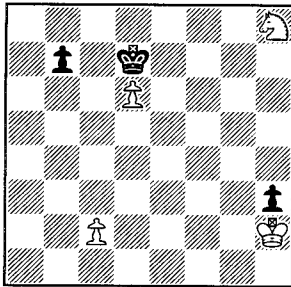
White to play and win

[The story accompanying this study was actually written by Mandler to go with the next composition in *Studie*, where the knight has a rather longer and more difficult journey, but that study has had to be relegated to Appendix D and I have moved the story here so as not to lose it altogether. As with **3.29**, I have retained the original names. "Fred" is not a Czech name (the Czech equivalent of Frederick is "Bedřich"), but the story was originally written for a Swedish magazine and I understand that the name is quite common there. The significance if any of the initials "K.N." escapes me (they would be "king's knight" in English and the knight does indeed play a leading role, but there is no reason for them to have been so written in Czech). And I know at least one wife who will be highly amused to read that the charms of the beautiful Vera appear to have been totally ignored once the chessboard came out!]

Fred received a letter asking him to present himself to the President of the Government. He could think of no reason for this, but he assumed it must be something of importance if the President himself was sending for him.

The latter said to him: "We have learned from a usually reliable source that somewhere, at a place whose location is only approximately known to us, something is hidden which is of immeasurable value to us. Nobody, apart from yourself, must know what it is. Your task is to find it and to bring it to me. Here you have a description of the region within which it might be found. And here I give you a chess diagram, which may perhaps give you a clue. On the other hand, it may be of no use to you whatever. Do you accept the commission?"

"I accept, provided you allow me to ask my friend K.N. to help me. He is an excellent chess player and solver of problems."

"I agree to your condition."

Below the diagram (see **5.7**) was written the following. "There is a path across the marsh as across the chess board. Seek first the chess path. Set out from where the dark tower once stood. Pluck the wayside fruits with care, for some are poisoned. There are false trails; be on your guard. Proceed alternately by trochee and iambus, and never retrace your steps. Take care to finish in the same manner as that in which you started."

They reached the region described, and at the inn they met a beautiful young lady with whom Fred fell instantly in love. She claimed to be spending her holiday there.

They were pleasantly surprised to find that the neighbourhood did indeed contain a marsh, but it was a wild and forbidding place and they were warned that nobody who had ventured into it had ever come out alive. Fred's friend suspected that others might be on the scent, and that perhaps this was why the President was so concerned that they should hurry and not let anyone overtake them. "We cannot confide in anyone," he said, "and we are certainly not going

to say a word to your beautiful Vera. I have been studying the diagram," he continued, "and I think it might be an endgame position, where White is to play and win. White is already a piece up and 1 Kxh3 will remove one of Black's remaining pawns, but Black will reply 1...Kxd6 and go for White's last pawn. I don't think the knight can defend it - 2 Nf7+ Kd5 3 Ng5 Kd4 4 Nf3+ Kc3 5 Ne1 Kd2 and the knight must give way, or 2 Ng6 Kd5 3 Nf4+ Kc4 3 Ne2 b5 and Black will soon exchange pawns - so the king must come across and this seems no better. 2 Kg4 Kd5 3 Kf3 Kd4 4 Ke2 Kc3 5 Kd1 b5, and again Black will exchange pawns."

"So we play 1 Nf7 defending our own pawn," said Fred, "and this explains what it says about starting where the dark tower once stood."

"Yes," said his friend, "but Black plays 1...Ke6 and the d-pawn will fall after all. White can play 2 Ne5 and after 2...Kxd6 3 Nd3 Kd5 4 Ne1 he will be a tempo or so ahead of our previous line, but Black will still advance his b-pawn and exchange off."

"But White has 2 Nd8+ winning the b-pawn," objected Fred. "The d-pawn can't run away, so shouldn't Black play 1...b5 first?"

"No," said his friend. "2 Kxh3 Ke6 3 Kg4 Kxf7 4 Kf5 and White will win. Black must play to e6 at once if he is to have any chance."

"All right, 1...Ke6, and I still play 2 Nd8+ Kxd6 3 Nxb7+. Now what?"

"The natural move is 3...Kd5, and White has nothing better than 4 Na5. There will follow 4...Kd4 5 Nb3+ Kc3 6 Na1 and we have indeed finished in the same manner as we started, but where does 'trochee and iambus' come in?"

"I think I am beginning to understand," said Fred. "A trochee is a long followed by a short, whereas an iambus is a short followed by a long. Now a knight's move from h8 to f7 can be

made as long-short, h8-f8-f7, or short-long, h8-h7-f7. But we are told to alternate trochee and iambus, and furthermore never to go back on ourselves. So we play h8-f8-f7 (trochee), f7-f8-d8 (iambus), d8-b8-b7 (trochee), and so on, and we leave out f8-f7-f8 and the later section a3-b3-a3 where we shall be going back on our tracks."

The friends duly marked out on the ground a path which corresponded to h8-f8-d8-b8-b7-a7-a5-a3-a1, and they succeeded in carrying out their commission.

Solution: **1 Nf7 Ke6 2 Nd8+ Kxd6 3 Nxb7+ Kd5 4 Na5 Kd4 5 Nb3+ Kc3 6 Na1**.

A study to which my friend added a second part

5.8 (S511)
Šachové umění 1946
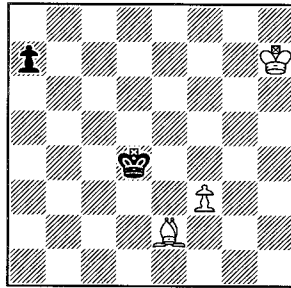
White to play and win

1 Kg6 Ke3 (1...a5 2 f4 a4 3 Bd1 a3 4 Bb3 etc) **2 Kf5!** (2 Bd1? Kf4 3 Kh5 a5 4 Kh4 a4 5 Kh3 a3 draw, 2 Kg5? Kxe2 3 f4 a5) **Kxe2 3 Ke4 a5 4 f4 Kd2 5 Kd4 Kc2 6 Kc4 Kb2 7 f5** (7 Kb5? Kb3! 8 Kxa5 Kc4) **a4 8 f6 a3 9 f7 a2 10 f8Q a1Q 11 Qf2+ Ka3 12 Qe3+ Kb2 13 Qd2+ Kb1 14 Kb3** and wins.

In *Práce*, in 1960, my dear friend the unforgettable master Josef Moravec published a twin to the position after move 1, moving the Black pawn from a7

to b7: White Kg6, Be2, Pf3 (3), Black
Ke3, Pb7 (2), White to play and win.
Now 1 Kf5 Kxe2 2 Ke4 is defeated by
2...b5 3 f4 Kd2 4 Kd4 Kc2 5 Kc5 Kc3
6 Kxb5 Kd4, and the solution is **1 Bd1
Kf4 2 Kh5 b5 3 Kh4 b4 4 Kh3 b3 5 Kg2**
and wins.

[Moravec (1882-1969) was an almost
exact contemporary of Mandler's, and
his studies were of the highest quality if
not quite as deep as Mandler's own.
Many of them are have found their way
into the textbooks, and a collection has
been produced by Emil Vlasák (SNZZ,
Brno, Czech edition 2000, English
edition 2001 with additional material).]

A striking and delicately motivated opening move

*5.9 (S513)
Československý šach 1964
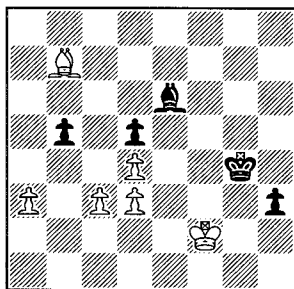
White to play and win

After 1 Bc6? Kf4! White is in zugzwang.
2 Bxb5 is met by 2...Bg4 with the threat
of 3...Bf3 and 4...h2.

Conversely, after **1 Ba8! Kf4 2 Bc6** it
is Black who is in zugzwang. 2...Kg4
allows 3 Bxb5, 2...Bf7 is met by 3 Bxb5
Bh5 4 Bd7, and 2...Bf5 by 3 Bxd5 Bxd3
4 Be6 h2 5 Kg2. White also wins after
2...h2 3 Kg2 Ke3 4 Bxb5 Kd2 5 c4, for
example by 5...Ke3 6 Kxh2 Kxd4 7 cxd5
etc.

The most hopeful defence appears to
be 1...Bf5 2 Bxd5 Bxd3 3 Be6+ Kh4 4 d5

Be4 (if 4...Bc4 then 5 Bf7). But White
just has enough time: 5 d6 h2 6 d7 h1Q
7 d8Q+ Kh5 8 Qh8+ K-- 9 Qxh1 and
wins.

A complicated stalemate combination

*5.10 (S514)
Československý šach 1961
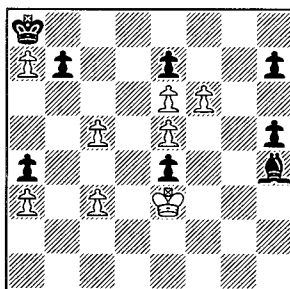
White to play and draw

An immediate advance to f7 is met by
...Bg5+ and ...Bh6. But White can leave
his f-pawn where it is; he need not fear
the capture ...exf6, since it can be met by
e7. He would like to advance his king to
the fourth rank, but 1 Kxe4 is met by
1...exf6 2 e7 f5+ and 3...Bxe7, and
1 Kd4/Kf4 by 1...exf6 2 e7 fxe5+
similarly.

Nor does 1 Ke2 help. Black deals with
the threat of f7 by simply playing 1...Bg5.

But White can try to create a
stalemate: 1 Kd4 exf6 2 c6 bxc6 3 e7
fxe5+ 4 Kc4 Bxe7 stalemate. It seems
that we have found the solution, because
2...fxe5+ 3 Kc4 bxc4 4 e7 is merely a
transposition of moves. But Black can do
better: 3...Kxa7! 4 c7 b5+ 5 Kxb5 Kb7
and wins.

Correct is **1 c6 bxc6 2 Kd4**, and
2...exf6 3 e7 4 Kc4 Bxe7 is indeed
stalemate. If Black plays 2...c5+, White
cannot reply 3 Kxe4 for fear of 3...exf6
4 e7 d5+, but he can play 3 Kd5. If the
threat of 4 f7 now panics Black into
playing 3...Bg5, White can play 4 Kxe4

and he will even win (4...exf6 5 Kf5 fxe5 6 Kxg5 etc); but Black can keep the draw by 3...Kxa7 or 3...e3.

Cut and thrust

*5.11 (S515)
Československý šach 1964
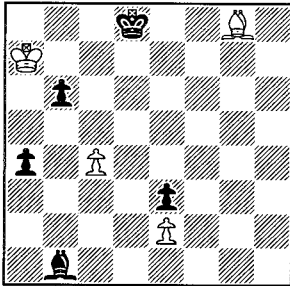
White to play and draw

The move which suggests itself first, 1 Kxb6, is a losing move. Black replies 1...Bd3, when 2 Kc5 a3 gives him an easy win and 2 c5 Bxe2 3 c6 (3 Be6 Bf3) Bg4 also leaves White helpless.

To free the diagonal g8-a2, White plays **1 c5**. If Black does not want to accept this sacrifice, he has nothing other than 1...b5 2 Kb6 b4, and simplest for White is 3 Be6 with the threat of 4 c6 etc. However, if Black accepts the sacrifice, **1...bxc5**, it appears that **2 Kb6** forces the draw, because 2...Bd3 can be met by 3 Kxc5 with 4 Kd4 to follow.

But again things are not what they seem. Black plays the unexpected **2...c4!** What can be the point of luring the White bishop to c4, when we have just seen that Black cannot play ...Bd3? But after **3 Bxc4 a3 4 Kc5 Bd3!** we see the point of Black's combination. If the White bishop were still on g8, he would have a simple draw by Kd4, but now this loses to ...Bxc4. The Black bishop has walked into double jeopardy, but neither the White bishop nor the pawn can take it. It appears that Black's combination

has gained him the victory.

But White does not throw in the towel. He must obviously move his bishop, but only **5 Ba2!** is correct; every other move will be shown to lose. Now the tables are turned.

Yet Black again injects new tension into the play: **5...Bxe2 6 Kd4 Bc4**. Black scents victory anew, because 7 **Kxe3 Bxa2** leaves him a piece ahead. But now we see why White's fifth move had to be to a2; a capture here leaves Black blocking his own pawn, and **8 Kd2!** holds the draw (but not 8 Kd3/Kd4, when Black wins by 8...Bb3! 9 Kc3 Ba4/Bd1).

[Not given by Mandler in the line 1...b5 2 Kb6 is 2...a3, but 3 c6 Bf5 4 c7+ Kd7 5 Kxb5 appears adequate; if 5...Bd3+ then 6 Kb6, and the Black bishop must go straight back to f5.]

A little combination

5.12 (S516)
Pionýrské noviny 1964
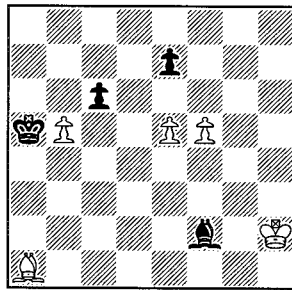
White to play and win

1 f6 exf6 2 e6 Bc5 3 bxc6 and either **3...Bd6+ 4 Be5** etc or **3...Kb6 4 Bd4**.

Knight against bishop

5.13 (S13)
Wiener Schachzeitung 1924
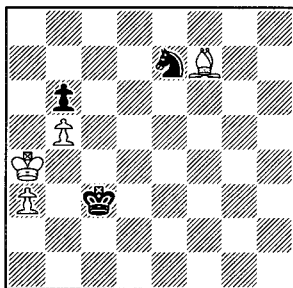
White to play and draw

[This and the next two examples come not from *Studie* but from Mandler's problem collection. They occur in an extensive article on "mate in *n*" problems with knight against bishop, the knight trying to force mate against an immobile king and the bishop trying to stop him. I have been selective as regards both examples and text, since the original contains a large amount of problemistic detail which here seems best omitted.]

In 1924, I presented the solution to **5.13** as follows: **1 Bh5 Nd5 2 Bg4 Nf6 3 Bf5**. I was aware that this solution was very far from complete. Later, I was able to present it with auxiliary diagrams and tables. The numbers in diagram **5.13a** indicate squares from which Black must at all costs be kept away; Black will win if his knight succeeds in safely reaching any of these squares.

The two mating squares are indicated by "0", and the squares giving access to them by "1". Square e4 has a "2", because if the knight can reach this square, White cannot prevent it from moving to a square marked "1". The remaining numbers are assigned similarly. So the number on a square shows how many moves Black will need to mate once he has reached this square.

5.13a (S14)

Now we can find various sets of corresponding squares, that is to say we can imagine the knight on various squares in turn and establish the squares that the bishop must occupy in order to prevent it from reaching a numbered square. This produces the following table:

Auxiliary table for diagram 5.13a

`c1:c4`	`f1:c4,f3`
`c2:c4,f3`	`f4:f5`
	`f5:f3`
`d2:d5`	`f6:f5`
`d4:d5`	
`d5:g4`	`g1:g4`
`d6:d5`	`g2:g4`
`d8:d5`	`g3:d5`
`e1:e4,e2`	`h4:e4,h5`
`e2:e6`	`h5:e6,e4`
`e3:e2`	`h6:e6,h5`
`e7:e4,f5,h5`	
`e8:e6,e4`	

What does "c1:c4" mean? It means that if the knight is on c1, the bishop must play to c4; otherwise, Black will win. Elsewhere there are two squares shown after the colon, for example "c2:c4,f3". If the knight is on c2, the bishop must play either to c4 or to f3. If the knight is on e7, the bishop has three possible moves.

Now we can fill out our incomplete solution to **5.13**. All we have to do is to

read the bishop moves from the table: for example, **1 Bh5 Nd5 2 Bg4 Ne3 3 Be2 Ng2 4 Bg4 Nf4 5 Bf5 Ne2 6 Be6 Ng3 7 Bd5 Nf5 8 Bf3** and so on.

Our table is not complete. If, for example, Black replies to 1 Bh5 by playing 1...Ng8, we cannot use it to read off White's next move. Strictly speaking, we should have included this square in our table, as "g8:c8,d7,g6,g4,h3", and we would now see that the bishop can meet Ng8 by playing to any of five squares, two of which (g6 and g4) are accessible from h5. But this omission is not fundamental. By carefully examining the diagram and table, we can read off or quickly work out a correct reply to every knight move.

We can also resolve the position of Diagram **5.13** with Black to move, when he wins by **1...Nf5 2 Bc4 Nh4!**

By constructing the auxiliary diagram and table, we have given the solution something of an automatic flavour. We can even talk of a mathematical chess study. But this has rather too learned a ring. The uninitiated might think that it demands the highest mathematical expertise, whereas in truth we require no more than the knowledge acquired in elementary school.

Automatic twins

5.14 (S17)
Šachové umění 1948
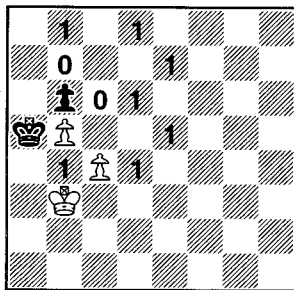
White also has a knight,
Black a dark-square bishop

But there is more. Not only is the solution of our diagrams automatic, their production may be as well.

In **5.14**, White is assumed to have the knight and Black a dark-square bishop, and the figures again indicate the number of moves the knight will take to mate from the given square. Again, we can form an auxiliary table showing the squares the bishop must occupy to keep him at bay:

Auxiliary table for diagram 5.14

```
a6:d6                f3:f6,g7
                     f4:e5
c2:c5                f5:c5
c7:e5,e7             f7:c7

d3:d6                g5:e5,d8
d5:d6                g6:d6,f6
                     g7:d4,e7
e1:e7,f8
e6:f6                h6:d6

e3:d4,d6,f2,f8,g1
e4:e7, b8-h2 except e5
g4:g7, b8-h2 except d6
h4:d4,e7,f8
```

By examining this table, we can construct a large number of related studies.

(a-b) White Ne3, Black Bd6/f8, Black to play and draw. (a) **1...Bf8**, (b) **1...Bd6**.

(c-d) White Ne1, Black Bf8/e7, the same. (c) **1...Be7**, (d) **1...Bf8**.

(e-f) White Nf3, Black Bg7/f6, the same. (e) **1...Bf6**, (f) **1...Bg7**.

(g-j) White Ng2, Black Bh8/d8/e7/d2, White to play and win. (g) **1 Ne1**, (h) **1 Ne3**, (i) **1 Nf4**, (j) **1 Nh4**. The knight's moves form a semicircle.

(k-m) White Nf6, Black Be7/e5/g7, the same. (k) **1 Ng4 Bd6/Bf6 2 Nh6**, (l) **1 Ng8 Bd6/Bf6 2 Nh6**, (m) **1 Ne4 Be5 2 Ng5**.

[Mandler has a fourth part to the last set, bBg5 completing the square, but

unfortunately 1 Nd5 and 1 Ne8 both work. We may also notice that he disdains to insert the values "1" and "2" that should pedantically appear on squares a7 and c8 in diagram **5.14**, since these squares will never be reached in the course of sensible play.]

Further possibilities

5.15 (S25)
Šachové umění 1948 (version)
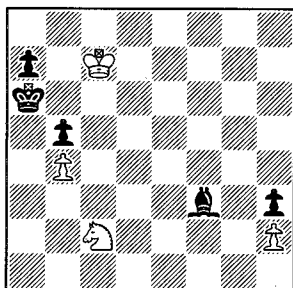
Black to move loses,
White to move cannot win

It is obvious that we can expand the production of similar twins by using different fundamental positions. We can also obtain new possibilities by adding further material, as **5.15** shows. White to play, **1 Nd4 Bd5** and the bishop will keep the knight at bay; Black to play, **1...Bb7** (else mate in 7) **2 Ne3 Bc8** (else mate in 6) **3 Nd5** and only the suicidal 3...Bd7 prevents mate in 5.

It is as if we had an automaton, which we had programmed to manufacture studies and problems of this kind and which could pour them out in hundreds.

[Mandler actually presents **5.15** as a problem/study twin, (a) bBf3, Black to play and avoid mate in 7 (1...Bb7 etc), (b) bBg2, Black to play and draw (1...Bf3), but the present "win or draw" version seems more appropriate here.]

[Before we return to *Studie*, we may note that **5.13** was used in the original 1984 edition of *The Oxford Companion to Chess* to illustrate the existence of corresponding squares in endings with bishop against knight, and was retained in the 1992 edition despite a general policy of changing examples so that purchasers of the new edition would get as much fresh material as possible. No alternative was found which offered similar depth and clarity.]

Luring the bishop to a square where it can be taken with check

5.16 (S518)
Slovenský národ 1926
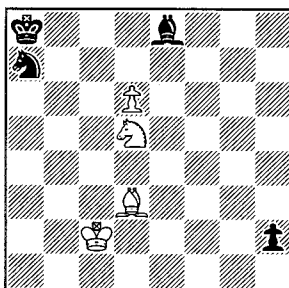
White to play and draw

1 Be4? fails against 1...Bg6. How can White prevent Black's promotion to queen? By luring the Black king to c8 and the bishop to f5, when the bishop can be captured with check and Black will have no time to promote his pawn.

Hence **1 d7 Bxd7** and now all is prepared: **2 Be4 Bf5 3 Nc7+ Kb8 4 Na6+ Kc8 5 Bxf5+**.

[Mandler adds a conjecture that this study, like **3.46**, may show the "Roman theme", but this is a question about the meaning of the terminology rather than about the content of the study and I have taken the liberty of omitting it.]

A minor-piece battle

5.17 (S519)
Oesterreichische Schachrundschau
1924 (with E. König)
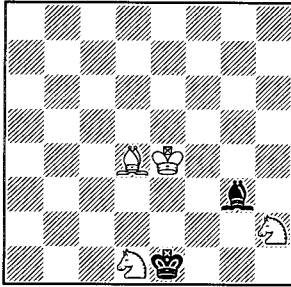
White to play and win

1 Nf1 Kxf1. Black now has one piece against two, but **2 Kf3** puts him in difficulty. The bishop is lost after 2...Bh4 (3 Ne3+ Kg1 4 Nf5+), and likewise after 2...Bb8 (3 Bf2 Bf4 4 Nc3 B-- 5 Ne4 Bf4 6 Kxf4). Black therefore plays **2...Be1**, but **3 Bb6** (3 Ba7? Ba5 4 Bf2 Bd2!) **Bd2** leads to **4 Bf2 Bf4 5 Nc3 B-- 6 Ne4 Bf4 7 Kxf4** as before.

In April 1942 I reworked this idea as follows: White Kf3, Bg1, Nd1 (3), Black Kf1, Bc3 (2), White to play wins by 1 Bb6 Be1 2 Bd4 Ba5 3 Ne3+ Ke1 4 Be5/Bf6. But I was unable to publish anything during the war, and after the war I saw the same position (I think after the first move) under the name of a Soviet composer.

[Mandler obviously expects his readers to take for granted the pretty line 2...Ke1 3 Ne3, when Black must deal with the mate threat and leave the bishop to its fate. Examination of Harold van der Heijden's "Endgame study database 2000" suggests that the Soviet composition may have been by V. A. Bron, *Shakhmaty v SSSR* 1940, White Kc3, Bh7, Na4/h4 (4), Black Kd1, Bb5, Pd2 (3), White to play wins by 1 Nb2+ Kc1 2 Nf3 d1Q 3 Nxd1 Be2 4 Be4 Bxd1

5 Ne1 (5 Ne5? Bc2) and we have the position after White's second move in Mandler's study.]

Why stop one square short of the edge?

5.18 (S520)
Oesterreichische Schachrundschau
1924 (with E. König)
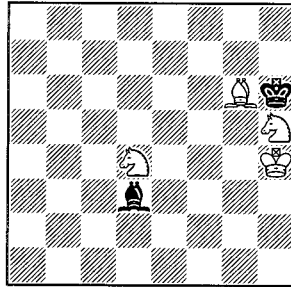
White to play and win

1 Bf7 Bg6 2 Ba2 Bxh5 3 Nf5+ Kg6 4 Bb1 etc. The White bishop must play to b1 at move 4, and so to a2 at move 2 and f7 at move 1. 4 Bc2 would fail against 4...Bd1, Bd3 against ...Be2, Be4 against ...Bf3.

[Mandler disdains mention of the trap 2...Bb1, when the thoughtless capture 3 Bxb1 gives stalemate and White must move his bishop to safety before resuming the attack.]

A little stalemate study

5.19 (S524)
Tidskrift för Schack 1967, corr 1969
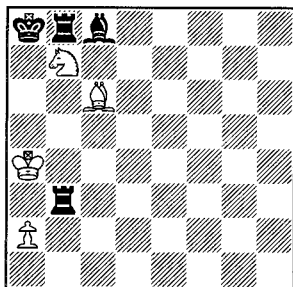
White to play and draw
(a) as set, (b) bRb3 to b5, no wPa2

(a) **1 Na5+ R3b7 2 Ka3 Ka7 3 Bxb7 Bxb7 4 Nc6+ Bxc6** stalemate; 1 Nc6+ Bb7.

(b) **1 Nd6+ R5b7 2 Ka5 Ka7 3 Bxb7 Bxb7 4 Nb5+ Ka8 5 Nc7+**.

[The definitive analysis of R+B v B+N now available confirms that the position after 3 Bxb7 in (b) is indeed a draw; there is no question of Black's being able to force a win by moving his bishop to safety and resuming the attack later on.]

Various echoes

*5.20 (S525)
Wiener Abendblatt 1927
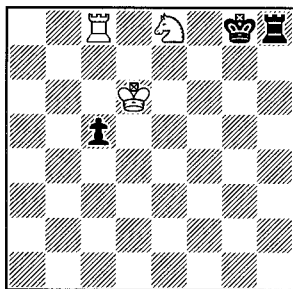
White to play and win

An immediate Ke6 is defeated by ...Kh7. White must play a waiting move, which threatens nothing itself but forces Black to weaken his position. The move **1 Ke7** frees the sixth rank for use by the White rook if the Black king plays to h7. Besides this tempo play, the study contains echoes both of mating positions and of the play leading up to them.

A) **1...Rh7+**. This move blocks h7 against the Black king and so White can play **2 Ke6 Ra7** (2...Rh6+ leads to the pure mate 3 Nf6+ Kg7 4 Rg8) **3 Nf6+ Kg7 4 Rg8+ Kh6 5 Kf5** and so on. White threatens mate by **6 Rg6** (a mate which will recur), and the pawn on c5 prevents the Black rook from giving check on the rank. The same situation will appear one rank lower in the next variation.

B) **1...c4**. This gives the White rook more scope (see variation **C**) and so permits **2 Ke6**. White threatens Rc7, and Black meets this threat by playing **2...Kf8** (for 2...Kh7 see the next variation). Now Rc7 can be met by ...Rh1. But White has **3 Nd6+!** (Nf6+ is not good enough), leading to **3...Kg7 4 Nf5+ Kh7 5 Rc7+** and either **5...Kg8 6 Rg7+ Kf8 7 Rf7+ Ke8 8 Nd6+ Kd8 9 Rd7** mate or 5...Kg6 **6 Rg7+ Kh5 7 Ke5 Ra8 8 Kf4** and Black is helpless against the threat of mate by **9 Rg5**.

C) If after 1...c4 2 Ke6 Black plays **2...Kh7** as before, White can reply **3 Rxc4**. If the rook were on c5, 3...Kg6 would draw. There follows **3...Rf8** (3...Rxe8+ 4 Kf7, 3...Kg6 4 Rg4+ etc) with similar play to the above: **4 Nf6+ Kh6 5 Rh4+ Kg7 6 Rg4+** and either **6...Kh8 7 Kf5 Rd8 8 Rh4+ Kg7 9 Rh7+ Kf8 10 Kg6** and Black is helpless against the threat of **11 Rf7** mate or **6...Kh6 7 Kf5** with the threat of mate by **8 Rg6**.

D) 1...Kh7 2 Rc6 (this is why we cleared the sixth rank) c4 3 Kf7 c3 4 Rxc3.

[Sadly, the echo line after 6...Kh8 in **C** is unnecessary, because 8 Kg6 wins

more quickly; Mandler gives 8...Rd4 as a refutation, 9 Rxd4 being stalemate, but 9 Rg5 forces a quick mate (9...Rd5 10 Nxd5, 9...Rh4 10 Kf7). So the play is less perfect than Mandler believed, but I don't think the deficiency justifies relegating the study to Appendix D.]

Some apparently irrelevant speculation shows the way to the win

*5.21 (S526, RP43)
Svobodné slovo 1957
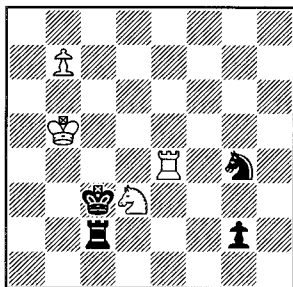
White to play and win

Each side has the same material. How can White expect to win? "Because it is his move, of course," says the solver. "He will promote first, and use the resulting initiative to gain a decisive advantage." In such balanced positions the advantage of the move very often plays a fundamental role. If it were Black's move here, he would play 1...g1Q 2 b8Q Kxd3, and White would be at a disadvantage.

Can Black perhaps play these moves the other way round, 1...Kxd3 2 b8Q g1Q?

Why should we spend time wondering what would happen if it were Black's move, and whether he could invert the order of his first two moves? Does it make any sort of sense? What would happen to a player in a tournament who wasted his time on such speculations?

Yet such reflections are not always irrelevant, and here they show us the way

to the win. If Black to move were to start by playing 1...Kxd3, the reply would be 2 Rxg4, and he would suddenly fund himself at a disadvantage. The same position arises if White is to play and we start 1 Rxg4 Kxd3, but now White has the duty of moving and in this case it does not signify an advantage. This is why we talk of the duty to move in such cases, and not of the right to move.

If the duty to move here has unpleasant connotations - as we are coming to believe - then the thought arises as to whether we might have a position of reciprocal zugzwang, even though an open position with freely mobile pieces does not immediately suggest itself as such.

If it is White to move, he is not going to get very far. After for example 1 Rxg4 Kxd3 2 Kb6 Black continues 2...Ke3 with a clear draw, and 2 Ka6 Ra2+ 3 Kb6 Ke3 leads to the same result (but not 2...Ke3, when 3 b8Q Ra2+ 4 Kb5 Rb2 5 Rb4 Rxb4+ 6 Kxb4 g1Q 7 Qb6+ wins for White).

But if it is Black to move in our zugzwang position (after 1...Kxd3 2 Rxg4), he loses. As we have just seen, 2...Ke3 fails against 3 b8Q, while 2...Rb2+ leads to 3 Kc6 Rc2+ 4 Kd5! and White's promotion cannot be prevented (4...Rb2 5 Rg3+ K-- 6 Rxg2+ etc). Nor does 2...Kc3 bear any fruit (3 Kc6 and either 3...Kd3+ 4 Kd5 or 3...Kb3+ 4 Kb6 etc).

It is difficult to see these various relationships between the pieces, and so it is not easy to recognise that 1 Rxg4 Kxd3 will give a position of reciprocal zugzwang. However, transferring the move to Black is very easy. From the diagram, we play **1 Rc4+ Kxd3 2 Rxg4**, and White will win.

But what a bad key! The first move should never give check! But here, for once, this prejudice is not in order. The whole point of the study lies in its first two moves, which we must consider

as a whole.

If 1...Kd2 then 2 Rxc2+ Kxc2 3 Ne1+ wins the Black pawn.

["Don't start with a check" is normally regarded as a precept for problems rather than for endgame studies, but it is noticeable that Mandler almost invariably adheres to it. I personally have a much greater antipathy to the capture of unmoved pieces, such as the two knights here, but Mandler does occasionally resort to this artifice when there appears to be no other way to reach the position of interest. It may also be noticed that Black's advantage after 1...g1Q 2 b8Q Kxd3 is only temporary, since White can force a draw by 3 Qd6+, but this hardly affects the force of the argument.]

The White king needs to hurry into action, but he must start by going the wrong way

5.22 (S527)
Lidové kultura 1946
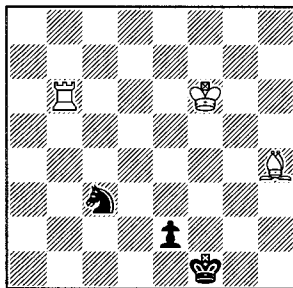
White to play and win

1 Kg6 Ne4 2 Rb1+ Kg2 3 Kf5 Nf2 4 Ke6 Kf3 5 Kd5; 1...Nd1 2 Rf6+ Kg1 3 Kg5 Ne3 4 Re6. The White king needs to come into action via d5, but he must start by going the other way.

1 Kg6 is a defensive move. If Black promotes his pawn to a queen, White must capture it outright, he cannot afford to give up the bishop in exchange.

This can be achieved only by checking on f6, and after the reply ...Ke2 by checking again on e6. So the White king must vacate square f6, and he must not get in the way of the subsequent checks. 1 Kg5 fails against 1...a1Q 2 Rf6+ Kg1/Kg2 3 Bxe1 Ne4+, 1 Kf7 against 1...Nd1 2 Rf6+ Kg1 3 K-- Ne3 4 Bf2+ (4 Re6 Ng2) Kg2 5 Be1 Kg1 6 Re6 Ng2 7 Rxe2 Kf1 8 Rf2+ Kg1.

The situation after Black's third move in the main line is complicated. The White king cannot approach (4 Kf4? e1Q 5 Rxe1 Nd3+) and a waiting move will let the win slip away, because Black's defensive plan is based not on 4...Nd1 but on 4...Kf3 followed by ...Nd3, ...Ke3, and ...Kd2. The move 4 Ke6 is directed against this defence. If Black replies 4...Nd1, there follows 5 Ke5 Kf1 6 Kd4/Ke4 e1Q 7 Bxe1 Kxe1 8 Kd3.

In the second line (1...Nd1 2 Rf6+ Kg1 3 Kg5) White needs to guard his bishop, and 3 Kh5 would allow 3...Ne3 4 Re6 Ng2 5 Rxe2 Nf4+.

A Kubbel study enriched by a second variation

5.23 (S528)
Československý šach 1952
(after K. A. L. Kubbel)
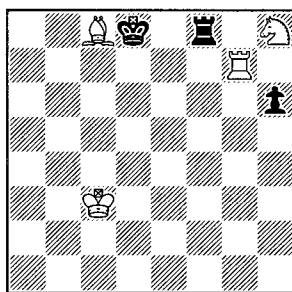
White to play and win

The following study by K. A. L. Kubbel (*Rigaer Tageblatt* 1909) was given as an illustrative example for a thematic

tourney in *Československý šach*: White Kd1, Ra7, Bc8 (3), Black Ke8, Rh8, Ph6 (3), White to play wins by 1 Bf5 Rf8 2 Bg6+ Kd8 3 Bf7, 1...Kf8 2 Bh7 etc, 1...Rg8 2 Ra8+ Kf7 3 Be6+.

In my study, which has the same play after **1 Bf5 Rxh8 2 Rd7+ Ke8 3 Ra7**, I have added the second variation **1...Rxf5 2 Nf7+ Ke8/Kc8 3 Nd6+, 2...K else 3 Nh6+**, likewise featuring an echo.

Two rooks against three minor pieces

5.24 (S531)
Národní osvobozeni 1932
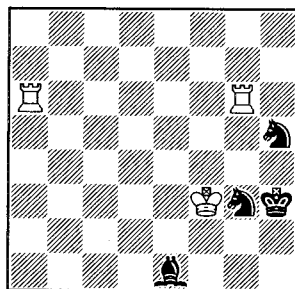
White to play and win

1 Rg8 Bd2 2 Rag6 Nf5 3 Rg1 Nh4+ 4 Kf2 Kh2 5 Rh8 Be3+ 6 Kxe3 Kxg1 7 Rxh5 Ng2+ 8 Kf3; 4...Bf4 5 Rh1+ Bh2 6 Rh8 Nf4 7 Rxh2+. 1 Ra8? Nf5 2 Rg5/Rg1 Nh4+ 3 Ke2 Ng3+ 4 Kxe1 Nf3+.

[This material proves unexpectedly tricky to handle, and this is the only survivor from four examples in *Studie*. In the subsidiary line, 6 Rg5 is quicker.]

The Black king aims for an unexpected square

5.25 (S534, RP59)
Parallèle-50 1950
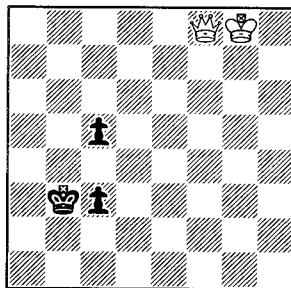
White to play and win

This study originated from **1.10** in the "pawn study" chapter.

The pawn on c5 is well placed. In the later stages of the ending, it will prevent the White queen from giving check on b4 or d4. But Black must not move it, and to avoid doing so he will have to get his king to d2. This seems an unlikely square to aim at, because we know that the way to draw with a c-pawn against a queen is for the weaker side's king to take refuge in the corner, and d2 lies in the wrong direction. But we met a similar position after Black's fifth move in study **1.10**, where 6 Ke7 held the draw whereas 6 Kg7 would have allowed Black to pin White's leading pawn and win. So it is here. If Black can reach d2, he will draw, because White can pin the leading pawn only by playing to a5, and this square is in practice unattainable.

If White could play 1 Qe5, he would win at once. The pawns would be immobilized, because ...c2 would be met by Qa1 and ...c4 would allow White to win this pawn without giving Black time to advance the other, and ...Kb2 would pin the pawn on c3 which is Black's only hope. But 1 Qf6 is not good enough, because 1...Kc2 cannot now be met by

2 Kxc5.

So how can we get the queen to e5? Only via e3. In theory, e1 would also suffice, but in practice all attempts to use it fail, for example 1 Qf1? Kb2 (1...Kc2? 2 Qe1 Kb2 3 Qe5) and either 2 Qe1 c2 or 2 Qb5+ Kc1 3 Qxc5 c2. Nor can White play 1 Qf3, because he must be prepared to meet ...Kb2 by Qe5.

So the solution unfolds **1 Qf4 Kc2** (1...Kb2 2 Qe5) **2 Qe3 Kb2** (2...c4 3 Qd4 Kb3 4 Kf7) **3 Qe5 Kc2 4 Qxc5** and either **4...Kb3 5 Qd4** or **4...Kd3 5 Qb4**.

A long queen hunt

5.26 (S535)
Československý šach 1935
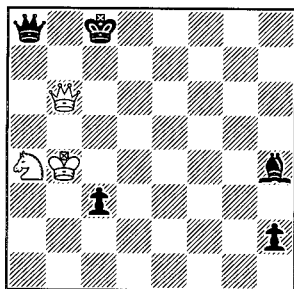
White to play and win

White must give mate or capture the queen, but the latter will suffice only if the resulting ending is won. For example, 1 Qc5+ Kd7! 2 Nb6+ is not good enough, because 2...Ke6 leaves White with no way to win.

The correct move is **1 Qe6+**, and we examine the shorter variation first.

1...Kd8 2 Qg8+ Ke7 3 Qxa8 c2. Black wants to play ...Bg5 and force the promotion of the pawn on c2. If he had played 2...Kc7, White would be able to play 4 Qh1 now, meeting 4...Bg5 by 5 Qxh2+; if 2...Kd7, White would have 4 Nc5+ and 5 Nb3.

After the relatively best line 2...Ke7 3 Qxa8 c2, White plays **4 Qb7+**. Now

the Black king can play neither to d6 (because of 5 Qh1 Bg5 6 Qxh2+) nor to d8 (5 Nc5). The squares e8, f6, and e6 allow 5 Qc6+ and 6 Kb3, and e6 also allows 5 Nc5+. On **4...Kf8** White plays **5 Qf3+ Ke7** (5...Ke8 6 Qc6+, 5...Kg7 6 Qg2+ Kh8 7 Qh1) **6 Qe2+ Kd8** (if the king returns to the f-file, there follows 7 Qf1+ and 8 Kb3) **7 Qd2+ Ke7** (7...Ke8 8 Nc5 with either 8...Be7 9 Qe1 or 8...h1Q 9 Qd7+ Kf8 10 Ne6+ and mate) **8 Qc1** and White wins because he has prevented ...Bg5.

The second and longer variation unfolds **1...Kb8** (1...Kb7 2 Nc5+ and 1...Kc7 2 Qe5+ Kd7/Kb7 3 Nc5+ shorten the play) **2 Qd6+ Kc8** (2...Kb7 3 Nc5+) **3 Qf8+** (3 Nb6+? Kb7 4 Qd5+ Kxb6 5 Qxa8 c2 6 Qb8+ Ka6 is drawn) **Kb7** (3...Bd8 4 Nb6+ Kb7 5 Qf3+ Kxb6 6 Qxa8 c2 7 Qxd8+ and wins, or 4...Kc7 5 Nxa8+) **4 Nc5+ Ka7 5 Qf7+ Kb6** (5...Kb8 6 Qe8+ Ka7 7 Qd7+ Kb8 8 Qd6+ Kc8 9 Qe6+ gives the position that will arise after move 15) **6 Nd7+ Kc7** (or 6...Ka7 7 Qa2+ Kb7 8 Qd5+ and either 8...Ka7 9 Qa5+ etc or 8...Kc7 9 Qxa8 c2 10 Qh1 Bg5 11 Qxh2+) **7 Ne5+ Kb6** (the endings after 7...Kd6 8 Nc4+ Kc6 9 Qf3+ Kc7/Kd7 10 Qxa8 c2 11 Qh1 Bg5 are won, White playing 12 Qxh2+ or 12 Ne5+ as appropriate) **8 Qe6+ Ka7** (8...Kc7 9 Qd7+ and either 9...Kb6 10 Nc4+ Ka6 11 Qb5+ with mate to follow or 9...Kb8 10 Nc6+ Qxc6 11 Qxc6 c2 12 Qh1 Bg5 13 Qxh2+, 8...Kb7 9 Qd7+ and 9...Kb8 10 Nc6+ or 9...Ka6 10 Qa4+ and as below) **9 Qa2+ Kb7** (9...Kb8 10 Nd7+ Kb7 11 Qd5+ Ka7 12 Qa5+ Kb7 13 Nc5+ etc as below) **10 Qd5+ Ka7** (10...Kb8 11 Nd7+ etc) **11 Qa5+ Kb8** (11...Kb7 12 Qb5+ and either 12...Kc7 13 Qd7+ Kb6 14 Nc4+ or 12...Ka7 13 Nc6+ Qxc6 14 Qxc6 c2 15 Kb5 with 15...Bg5 16 Qc7+ Ka8 17 Ka6 or 15...Bg3 16 Qd7+ etc) **12 Nd7+** (the knight retraces its steps) **Kb7 13 Nc5+ Kb8 14 Qb6+ Kc8 15 Qe6+** (White has

gained a decisive tempo) **15...Kc7/Kb8 16 Qe5+ Kc8 17 Qe8+ Bd8 18 Qd7+** and wins.

[An extreme tour de force; can it possibly be sound? All I can say is that my computer hasn't proved that it isn't. The "shorter variation" 1...Kd8 2 Qg8+ Ke7 3 Qxa8 c2 is certainly dualized, and in a manner not without interest: 4 Qe4+ Kf7/Kf8 (4...Kd8 5 Qxh4+, 4...Kd7 5 Nc5+, 4...Kd6 5 Qh1, 4...Kf6 5 Qc6+ and 6 Kb3) 5 Qf3+ Kg7/Kg8 (5...Bf6 6 Qf1 and the bishop is pinned, 5...Ke8/Ke6/Kg6 6 Qc6+, 5...Ke7 6 Qe2+ Kd8 7 Qf1 Bg5 8 Nc5 and either 8...c1Q 9 Qf8+ mating in a few or 8...h1Q 9 Qxh1 c1Q 10 Qh8+ Ke7 11 Qg7+ Kd6 12 Qd7+ Ke5 13 Nd3+) 6 Qg2+ and either 6...Kf- 7 Qf1+ and 8 Qc1 or 6...Kh- 7 Qh1 Bg5 8 Qxh2+. But the longer variation appears essentially clean, though there are duals in some of the lines leading off it (in particular, if Black tries giving up queen for knight on c6 and then playing ...c2, White has the simple reply Kb3). Black is purely passive, White almost certainly has additional resources, alternative solutions are to be expected; but at the time of writing, I am not aware of any.]

In the style of Stamma?

5.27 (S536)
Revue FIDE 1962
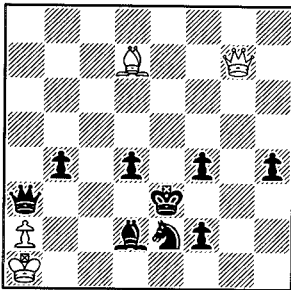
White to play and win

This and the next study have been criticized for being composed in the style of Stamma. Thus do times change. Phillip Stamma, a Syrian composer of the 18th century, lived and worked as an interpreter in London and Paris. His chess compositions were very popular, and many judges considered that his work would never be surpassed. But fashion has completely changed, and today some composers regard it as an example of what to avoid.

I do not think this and the next composition are truly composed in his style. That White proceeds by continuous checks is a superficial and not wholly reliable sign. In any case, I do not consider it easy to compose today in the style of Stamma, and I would certainly not be ashamed of doing so.

I had already worked the idea of variations **A** and **C** in the form of a seven-mover. This was rejected by an editor because of its continuous checks, and so I published it myself in *Revue FIDE*. The old "staircase" theme, where a White man gradually approaches the Black king, is here inverted; the White queen starts by moving close to the Black king, and then gradually moves away by a staircase movement until it reaches the eighth rank.

1 Qe7? Kd3 2 Bf5+ Kc4 is only a draw.

1 Qe5+ and now:

A) **1...Kd3** (1...Kf3 see **C**) **2 Qf5+** (2 Bf5+ Kc4 and draws) **Ke3** (2...Kc3 see **B**) **3 Qe6+ Kd3** (3...Kf3 4 Bc6+) **4 Qg6+ Ke3** (4...Kc4 5 Qc6+ and 6 Bf5+) **5 Qe8+**. The eighth rank is attained, and there follows **5...Kd3 6 Bf5+ Kc4 7 Qc6 mate** or **5...Kf3 6 Bc6+ Kg4 7 Qg6+ Kh3 8 Qg2 mate**.

B) **2...Kc3 3 Qc5+ Kd3 4 Bf5+ Ke3 5 Qe5+** (5 Qe7+? Kf3 6 Be4 Ke3 and draws) **Kf3 6 Be4+ Ke3 7 Bd5+ Kd3 8 Qf5+ Kc3 9 Qc8+ Kd3 10 Bc4+ Kc2** (10...Ke4 11 Qe6+ etc) **11 Bb3+ Kd3 12 Bc2+ Ke3 13 Qe6+ Kf3 14 Be4+**

Ke3. We have almost returned to the position after move 6, but with the difference that the White queen is on e6 instead of e5. We shall soon see the significance of this. **15 Bd5+ Kd3 16 Qg6+ Kc3 17 Qc6+** (at moves 8 and 9 we played Qf5+ and Qc8+) **Kd3 18 Bc4+ Kc2** (18...Ke3 19 Qe6+) **19 Bb3+ Kd3 20 Bc2+ Ke3** and the change in the position of the White queen allows her to play **21 Qe4 mate**. Move 13 can also be Qe8+. If White plays 15 Bb7+, there would follow 15...Kd3 16 Ba6+ Qxa6 17 Qxa6+ Kc2 and Black would win.

  C) **1...Kf3 2 Bc6+ Kg4 3 Qg7+ Kf5 4 Bd7+ Ke4 5 Qg6+ Ke3 6 Qe8+** and wins as in A.

The White queen and bishop return to their original squares at moves 3 and 4 of this last variation; they are like pistons impelling the windmill motion of the Black king.

[Stamma's name has been variously rendered in English; Mandler, writing in Czech, uses the phonetic form "Filip". The seven-mover is presumably S298 in Mandler's problem collection (*Revue FIDE* 1962): White Kh1, Qg7, Bd7/e1 (4), Black Ke3, Qa2, Rb7, Be2, Pg5/h5/d4/f4/b3 (9), 1 Qe5+ Kd3 2 Qf5+ Ke3 3 Qe6+ Kd3 4 Qg6+ Ke3 (4...Kc4 5 Qc6+ Kd3 6 Bf5+ Ke3 7 Qe4) 5 Qe8+ and either 5...Kd3 6 Bf5+ Kc4 7 Qc6 or 5...Kf3 6 Bc6+ Kg4 7 Qe6. Fashions in chess composition have changed and will change again, and it is quite normal for the "masterpieces" of one generation to be regarded by the next as little more than examples of what not to do; I am sure that many of the fashionable creations of the present day will receive just as short a shrift from our successors. But Mandler is right to talk about old work with respect, and to acknowledge that composition in a style now considered archaic is not necessarily the simple exercise that it might be thought.]

Three royal windmills

*5.28 (S537)
3rd Prize *ÚV ČSTV* 1961
(*Československý šach* 1962)
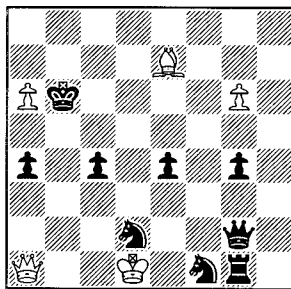
White to play and win

Let us first examine some tries and do some preliminary analysis.

  1 Qf6+? works after the faulty 1...Ka7? 2 Bc5+ Kb8 3 Qd8 (a pure mate) and after 1...Kc7? 2 Qd6+ and 3 Qd8 (another pure mate). Black does better to play **1...Kb5/Ka5 2 Qf5+ Kxa6** (2...Kb6? 3 Bd8+, 2...Kc6? 3 Qc5+ Kd7 4 Qd6+) **3 Qc8+ Ka5!** (3...Kb6? 4 Bd8+ and either 4...Kb5 5 Qb7+ Kc5 6 Be7+ Kd4 7 Qb6+ Kd3 8 Qd8+ or 4...Ka7 5 Qc7+ Ka8 6 Qc6+, 3...Kb5 4 Qb7+ and wins) **4 Qa8+** (4 Bd8+ Kb4! 5 Qb7+ Ka3!) **Kb6! 5 Qb8+ Ka6!** (5...Kc6? 6 Qc8+ and 6...Kb6 7 Bd8+ or 6...Kd5 7 Qd7+ Ke5 8 Qd6+, 5...Ka5 6 Bd8+) and he is holding out. His moves may be forced, but they are sufficient to draw.

  1 Qd4+? is refuted similarly, 1 Qb2+? by 1...Nb3.

  In the correct solution, the position after **1 Bd8+ Kb5/Kc5 2 Qe5+ Kb4 3 Be7+** (3 Qa5+? Ka3!) **Kb3 4 Qb5+ Kc3** gives us an opportunity for a few important words of explanation. Here 5 **Bb4+? Kd3!** (5...Kb2? loses to 5 Bxd2+) 6 Qd5+ Ke3 7 Bc5+ Kf4 8 Qf7+ Ke5! is only a draw, because the bishop is too close to give check. If it

were on b6, White would be able to win.

If in the same position White tries 5 Bf6+ Kd3 6 Qd5+ Ke3 7 Bd4+ (we must not let the Black king reach f2), there follows 7...Kf3 (there is no need to worry about the complicated position that arises after 7...Kd3) 8 Qf7+ Kg3! 9 Be5+ Kh4 10 Qh7+ Kg5 with another draw, because again the bishop is too close to give check. So 5 Bf6+ is not good either. Correct is **5 Qb4+!**

If Black replies to 1 Bd8+ with 1...Kc6, White must play 2 Qf6+! To play 2 Qxa4+ would be wrong. This pawn is needed to form part of the mating net, and without it there is no win; for example, 2 Qxa4+ Kd6 3 Qb4+ Kd5 4 Qb7+ Kd4 5 Qd7+ Kc3 6 Bf6+ Kb4 7 Qb7+ Ka4 8 Qc6+ Kb4 9 Be7+ Kc3/Ka5 and Black draws.

Similarly, after 1 Bd8+ Kc5 the move 2 Qa3+ is defeated by 2...Kc6, when White has no other check at his disposal but 3 Qxa4, or even more clearly by 2...Kd5, when White actually loses. Correct is 2 Qe5+!

1...Kxa6 is met by 2 Qxa4+ or alternatively by 2 Qf6+ Kb7 3 Qb6+ Ka8 4 Qc6+.

We are now in a position to go through the solution. It has four distinct geometrical motifs.

(a) Gradual retreat of the White queen to the eighth rank. **1 Bd8+ Kb5/Kc5** (for 1...Kc6 see the next paragraph) **2 Qe5+ Kb4 3 Be7+ Kb3 4 Qb5+ Kc3** (4...Ka2 5 Qxa4+ and 6 Qc2+) **5 Qb4+! Kd3** (5...Kd4 allows Qb6+ at once) **6 Qd6+ Ke3** (6...Kc3 7 Bf6+) **7 Qb6+ Kd3** (7...Kf4 8 Qf6+ and either 8...Kg3 9 Bd6+ or 8...Ke3 9 Bc5+) **8 Qd8+ Ke3** (8...Kc3 9 Bf6+ Kb3 10 Qb6+) **9 Bc5+ Kf4 10 Qf6+ Kg3 11 Bd6+** and mate to follow.

(b) Royal windmill on the b-d files. **1...Kc6 2 Qf6+ Kd5** (2...Kd7 3 Qe7+ Kc6 4 Qc7+ Kd5 5 Qd7+ and either 5...Kc5 6 Be7+ Kb6 7 Qb7+ or 5...Ke5 6 Bc7+ Kf6 7 Qf7+) **3 Qf7+ Kd4** (3...Kc5 4 Qe7+!, but not 4 Qc7+ on account of 4...Kb4) **4 Qd7+ Kc3** (4...Ke3 see next paragraph) **5 Bf6+ Kb4 6 Qb7+** (6 Qd6+? Kb5 7 Qd5+ Kxa6!) **Kc5 7 Be7+ Kd4 8 Qb6+** (8 Qd7+ is refuted by 8...Ke3 9 Bc5+ Kf4 10 Qf7+ Ke5) **Kd3 9 Qd8+** and wins as before.

(c) Royal windmill on the d-f files. **4...Ke3 5 Bb6+** (5 Bg5+? Kf2) **Kf4 6 Qf7+ Ke5** (6...Kg5 7 Bd8+, 6...Kg3 see next paragraph) **7 Bc7+ Kd4 8 Qf6+** (8 Qd7+? Kc3) **Kd3 9 Qd8+ Ke3** (9...Kc3 10 Be5+) **10 Bb6+ Kf4 11 Qf6+ Kg3 12 Bc7+** and wins.

(d) Royal windmill on the f-h files. **6...Kg3 7 Bc7+ Kh4 8 Qh7+ Kg5 9 Bd8+ Kf4** (9...Kf5 10 Qf7+ Ke5 11 Bc7+ takes us back into the previous line) **10 Qh6+ Kf3** (10...Kg3 11 Qh4+ Kf4 12 Qf6+, 10...Kf5 11 Qg5+, 10...Ke5 11 Qg7+ though not 11 Qg5+ when 11...Kd4 makes White start again) **11 Qf8+ Kg3** (11...Ke3 12 Bg5+ Kd4 13 Qd6+ Kc3 14 Bf6+) **12 Bc7+ Kh4 13 Qh6 mate**.

Appendix A : Two personal appreciations

Here follow translations of the original introductions to *64 studií z oboru věžových a pěšcových koncovek* and *Studie*.

To *64 studií z oboru věžových a pěšcových koncovek* by Bedřich Thelen (1905-72). Thelen was little known outside his own country, but was among the leading players within it; he had a first place in an international tourney (Tapolcza Fürdo 1926) to his credit, he achieved second place in a wartime championship of Bohemia and Moravia, and he was the captain of the Czechoslovak team at the 1964 Olympiad. He published a textbook, "A detailed treatise on chess", in 1929.

> I have known the author of this little book for more than 40 years. Of course, I first met him behind a chessboard. I already knew that he was a friend of the chess master Richard Réti. And that fact in itself said a great deal to me, a very great deal...
>
> Dr Artur Mandler is a master of the chess study. A renowned master! His works have something to say to chess enthusiasts, and he knows how to say it. So I advised him to select for this collection those of his studies which would be of the greatest value to practical players, namely some of his rook and pawn studies.
>
> Was this good advice? Do not practical players find all that they need in endgame textbooks, which in any case are larger and more comprehensive? The practical player seeks usefulness, not beauty! But why, in that case, do textbooks contain so many studies?
>
> Because the effect of an artistic work is stronger and longer-lasting than that of exhaustive notes in a textbook. A poem sticks in the mind longer than a piece of prose, the words of a beautiful song stay lingeringly and effortlessly in our memory. The picture of a sweet girl, coming out of a dark wood, can act on us so powerfully that years afterwards we can bring it as effortlessly and vividly to mind as if it had been yesterday. And because of the impression made by the picture of the girl, so the scenery and the setting are likewise preserved in our memory.
>
> In the same way, the beauty of an artistic study makes it a much better and more lasting carrier of practical precepts than a position from an arbitrary game. I can vouch for this from my own experience, because in so far as I have mastered the endgame, it is in large part due to studies.
>
> But do not be content just to read quickly through the solutions to the diagrams. Even if you are unable to solve a particular study within a short time, at least devote some concentrated attention to its solution when you examine it. You will gain both pleasure and benefit.
>
> I hope this little collection of Mandler's studies will find a wide and appreciative readership among our chess players.

To *Studie* by Břetislav Soukup-Bardon (1909-85). Soukup-Bardon was a leading study composer and columnist, who ran the problem column in the newspaper *Lidová demokracie* for thirty years and was at one time in the editorial team of *Československý šach*. The Chess Club of the Central Army Institute, mentioned in the penultimate

paragraph, included publishing among its activities, and had already published Mandler's problem collection.

> The chess studies of Dr Arthur Mandler are a many-sided cultural contribution. By them, Mandler - as one of the world's few composers - enriches not only the field of chess composition but also chess science and aesthetics. His studies benefit chess knowledge by casting light on basic endgame theory, and they introduce new forms of beauty and truth into chess aesthetics.
>
> To play through, solve, and examine the work of Dr Mandler is a remarkable experience, and a valuable exercise for every chess enthusiast whether he be primarily a lover of studies or an over-the-board or correspondence player. They are not just a gallery of academic examples, they are an inspiration and even more. They make possible the recognition of strategy and tactics, and also the logic lying behind endings which had not been investigated prior to these pages.
>
> Dr Mandler has shown the way forward to this and the next generations of chess study composers. He has broken the apparent bounds of this branch of chess composition and research, pointing the way to new and surprising developments.
>
> If the Central Army Institute publishes this collection of the studies of Dr Arthur Mandler, honoured Master of Sport, international master of FIDE, international judge of FIDE, and many times participant in the Czechoslovak Chess Composition Championship, it will contribute yet further to the public awareness of his chess genius. With this, as with the other works in the same series, the Institute has captured one of the most important epochs not only in Czechoslovak but in world chess composition.
>
> This is one of those chess publications whose value is truly timeless.

And yes, Soukup-Bardon did write "Arthur" Mandler with a "th". Mandler is named as "Arthur" on the front cover of his edition of Réti's studies, but he uses the Czech form "Artur" inside the book even though the text is in German. He uses "Artur" in each of the three Czech-language books containing his work. Yet here we have Soukup-Bardon using the German form "Arthur" even though he is writing in Czech, and it would seem clear that Mandler countenanced this.

Appendix B : A Mandler analysis under the microscope

This appendix examines Mandler's analysis of study **2.3** in the light of the definitive information now available from the computer. A White move annotated "!!" is the only move to win, "!" is a unique move that wins most quickly (counting moves to mate or to capture of the knight, whichever happens first), and "(!)" is a non-unique move that wins most quickly. An unannotated move is followed by a list of moves which would win more quickly, together with the number of moves each would save. Black moves, unless forced, carry similar annotations.

This is of course an unfair test. A human analyst does not spend time counting moves; he looks for the simplest and most systematic way to win, he concentrates on the most challenging defensive moves even if they lose more quickly in the end, and wherever possible he transposes into a line he has already analysed. Yet even according to this unfair test there is an average of barely 1.2 non-optimal moves per line, and most are easily justified. Consider line 20, where 12 Kd4/5 may win the knight more quickly but any normal analyst will play the simple 12 Re3 Ng2 13 Re4 leaving it helpless, or lines 6 and 15, where 11...Nh4 delays the capture of the knight but leaves it so clearly dead that no human player would consider the move for a moment.

It should also be realised that many of the moves marked "!" (shortest win) are in truth the *only* moves to win, and really deserve "!!". Consider the position after 1 Rg6+ Ka7. At this point, the computer says "Kc6 wins in 20, Rg5 wins in 22, other moves allow Black to draw", so Kc6 is marked merely as a shortest win; but if we actually try 2 Rg5, we find that after 2...Ka6 we have to play 3 Rg6+, and 3...Ka7 then repeats the position. So Rg5 is a blind alley, and we are going to have to play Kc6 sooner or later if we want to make progress. But while this particular blind alley is easy to spot, the detection of blind alleys in general is notoriously difficult, and I have contented myself with reporting the raw data as displayed by the computer.
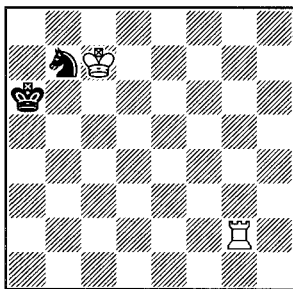
White to move and win

1 Rg6+!! Ka7! 2 Kc6! Nd8+! 3 Kd6! Nb7+! 4 Kd5! Na5! (4...Kb8 see line 1) **5 Kc5!! Nb7+!** (5...Nb3+ see 20) **6 Kb5! Kb8! 7 Kc6!! Nd8+! 8 Kd7! Nb7! 9 Rg5! Ka7! 10 Kc8!** and White wins.

1) 4...Kb8 5 Kc6!! Na5+ ["Nd8+ 1" says the computer, but we dealt with this in the main line (see the position after Black's move 7)] 6 Kb6! Nc4+! 7 Kb5! Ne5(!) (7...Ne3(!) see 12, 7...Nd2(!) see 14) 8 Re6! Nd3 (8...Nf3! see 3, 8...Ng4 see 11) 9 Kb6 [Kc4/Re4 1] Kc8! 10 Re4!! Nf2! 11 Rd4! Nh3! (11...Nh1 see 2) 12 Kc6!! Kb8! 13 Rb4+! Ka7! 14 Rb7+! Ka8! 15 Kb6! Nf4! 16 Rd7!.

2) 11...Nh1 12 Kc6! Kb8! 13 Rb4+(!) Ka7! 14 Rb7+! etc.

3) 8...Nf3! 9 Re3! Nd4+ (9...Nd2(!) see 4, 9...Ng5 see 5, 9...Nh4(!) see 6, 9...Nh2 see 8) 10 Kb6! Kc8! 11 Rc3+! Kb8! 12 Rd3!.

4) 9...Nd2! 10 Kb4(!) Nf1! 11 Rf3! Nh2!/Nd2 12 Rf4!.

5) 9...Ng5 10 Kc6! Ka7! 11 Kd7

[Kd5 2, Kc7 1] and 12 Ke7!.

6) 9...Nh4! 10 Kc6! Nf5 [Ng2 2, Ka7 1] 11 Re5 [Re4 4] Nd4+ [Nh4 4] (11...Ng3 see 7) 12 Kb6!.

7) 11...Ng3 12 Re8+ [Rb5+ 1] Ka7 13 Re7+! Kb8! 14 Rb7+! Ka8! 15 Kb6(!).

8) 9...Nh2 10 Rg3 [Kc6 2] Kc7 (10...Nf1! see 10) 11 Kc5 [Kc4 1] Kd7 (11...Nf1! see 9) 12 Kd4! Ke6(!) 13 Ke4!! Nf1(!) 14 Rg2!.

9) 11...Nf1! 12 Rf3! Nd2(!) 13 Rf4!.

10) 10...Nf1! 11 Rf3! Nd2! 12 Rf4! Nb3! 13 Kb6(!) Kc8! 14 Rc4+(!) Kb8 [Kd7/Kd8 1] 15 Rb4(!).

11) 8...Ng4 9 Kc6! Nf2(!) 10 Re8+! Ka7 11 Re7+! Kb8! 12 Rb7+!.

12) 7...Ne3(!) 8 Rg5! Kc7 [Ka7/Kb7 1] (8...Nd1/Nc2 9 Kb6!, 8...Nf1 see 13) 9 Kc5!! Kd7 [Nf1 2] 10 Kd4!! Nc2+! 11 Kc3! Ne3! 12 Kd3!. [Although the defensive manoeuvre 8...Kc7 and 9...Kd7 eventually leads to a slightly quicker loss of the knight than occurs in some other lines, it threatens to extricate the knight and so makes White play accurately and precisely, and it is natural for an analyst to give it precedence.]

13) 8...Nf1 9 Kc4(!) Ne3+/Nd2+! 10 Kd3!.

14) 7...Nd2(!) 8 Rg3 [Rg7/Kc5 1] Ne4(!) 9 Re3!! Nd6+! (9...Nf6 see 16, 9...Ng5 see 17, 9...Nd2 see 18, 9...Nf2 see 19) 10 Kc6!! Nc4! (10...Nf5 see 15) 11 Re4! Nd2! 12 Rf4(!).

15) 10...Nf5 11 Re5 [Re4 4] Nd4+ [Nh4 4] 12 Kb6! Kc8! 13 Rc5+! Kb8! 14 Rd5!.

16) 9...Nf6 10 Kc6! Ng4(!) 11 Re6(!) Nf2(!) 12 Re8+! Ka7 13 Re7+! Kb8! 14 Rb7+! Ka8! 15 Kb6(!).

17) 9...Ng5 10 Kc6! Ka7! [here, Mandler thought to clinch matters by 11 Ra3+ Kb8 12 Rb3+ Ka7 13 Rb7+ Ka8 14 Kb6, overlooking that if Black plays 13...Ka6 White must reply 14 Rb3 Ka7 15 Re3 and start again. However, there was a correct treatment of this

position in line 5, where 11 Kd7 and 12 Ke7 pick up the knight in fairly short order, and I am sure the present error was merely a slip in the writing out of the final text. The manoeuvring of the rook to b7 is appropriate in line 1, where 14...Ka6 can be met by 15 Rb3, but it doesn't work with the knight on g5.]

18) 9...Nd2 10 Kb4(!) Nf1! 11 Rf3!.

19) 9...Nf2 10 Kc6! Ng4! 11 Re6(!) Nf2(!) 12 Re8+!.

20) 5...Nb3+ 6 Kb4(!) Nd4! (6...Nd2 see 22) 7 Kc4! Nf5! (7...Nf3 8 Kd5(!), 7...Ne2 8 Rg4!) 8 Rf6! Ne3+! 9 Kc5(!) Kb7(!) 10 Rf3! Nc2 (10...Ng4! see 21) 11 Rc3(!) Ne1! 12 Re3 [Kd4/Kd5 2, Kd6 1] Ng2! 13 Re4!.

21) 10...Ng4! 11 Kd6 [Kd4 1] Nh6 [Kb6/Kb8/Kc8 3, Ka6/Ka7 1] 12 Ke6 [Rf4 1] Ng4! 13 Kf5!. [There are lines such as 11...Kc8 12 Ke6 Kc7 13 Rg3 Nf2 where the knight can run to the south and hold out for a little longer, but it is soon rounded up.]

22) 6...Nd2 7 Rd6 [Kc3 5, Re6 4, Kb5 3, Rg4 2, Kc5 1] Nf3 (7...Ne4! see 23) 8 Kc5 [Kc3 1] Kb7! (8...Ne5 9 Kd4!) 9 Rd5 [Re6 1] Kc7! 10 Rf5(!) Nh4! 11 Rf6 [Rf7+ 3] Ng2 [Kd7 6, Kd8 4] 12 Kd4!. [Mandler knew the position after 11...Kd7 12 Kd5 Ke7 13 Ke5 as a win, see **2.17B**, and he very reasonably gave precedence to 11...Ng2 trying to escape.]

23) 7...Ne4! 8 Re6! Ng5! 9 Re5(!) Nf3! 10 Rd5(!) Kb6 [Nh4 1] 11 Kc3!! Kc6 [Kc7/Nh4 2, Kb7/Nh2 1] 12 Rf5!!. [As in line 12, we have a defensive manoeuvre which eventually leads to a slightly quicker loss of the knight than occurs in some other lines, but which an analyst identifies as the key line because it forces White to act with precision and urgency. Note that the thoughtless move 12 Kc4 would present Black with one of the drawing cases of **2.17B**.]

Appendix C : Prizes and other honours

Mandler seems rarely to have entered formal composition tourneys, preferring to publish his work in newspaper columns and mainstream chess magazines where it would be seen by the general chess player. Many of his studies nevertheless received honours after publication. These were of three kinds: (a) honours in "informal" tourneys covering all the compositions published in a certain magazine; (b) honours in the Czechoslovak Championship, covering compositions published by Czechoslovak composers worldwide; (c) selection for the FIDE Albums, a series of anthologies to which composers or their representatives submit work for republication. As regards his few submissions to formal composition tourneys, the Dedrle Memorial speaks for itself, and *ČSTV* and *ÚV ČSTV* were tourneys conducted by or on behalf of the Czechoslovak Chess Federation.

Not all the honours eventually awarded to Mandler's studies were known to him during his lifetime, and I have supplemented the information given in *Studie* by that in other sources conveniently available to me. Even so, there may be a few honours of which I am unaware. For convenience, I identify each study by its number in *Studie*.

Dedicatory study to František Macek: 4th Prize, *Tidskrift för Schack* 1970-71.

S17 in Mandler's problem collection (**5.14** here): *FIDE Album* 1945-55 (parts g-j).

S311: *FIDE Album* 1914-44.

S317: 3rd Prize, *Československý šach* 1951; *FIDE Album* 1945-55.

S321: *FIDE Album* 1914-44.

S324: 1st Prize, *Práce* 1949; *FIDE Album* 1945-55.

S330: *FIDE Album* 1945-55.

S333: *FIDE Album* 1914-44.

S338: *FIDE Album* 1914-44.

S343: *FIDE Album* 1914-44.

S356: *FIDE Album* 1945-55. Mandler comments that the editors of the album dealt with the problem of presenting the maze of analysis supporting this study by giving just the bare nine moves of the main line!

S359: 9th Place, Czechoslovak Championship 1957-59; *FIDE Album* 1959-61.

S366: 15th Place, Czechoslovak Championship 1957-59; *FIDE Album* 1956-58.

S367: *FIDE Album* 1945-55.

S369: 3rd Prize, *Československý šach* 1958; 4th Place, Czechoslovak Championship 1957-59.

S370: 12th Place, Czechoslovak Championship 1957-59.

S377: 2nd Honourable Mention, *Československý šach* 1954.

S378: 2nd Prize "(?)", *Práce* 1952; 5th Place, Czechoslovak Championship 1951-52; *FIDE Album* 1945-55.

S380: 3rd Place, Czechoslovak Championship 1957-59.

S381: 9th Place, Czechoslovak Championship 1955-56.

S384: 2nd Prize, *ČSTV* 1955 (award apparently in *Československý šach* 1956, date of tourney assumed from this); 5th Place, Czechoslovak Championship 1955-56.

S385 (in its original incorrect form): 2nd Prize, *Československý šach* 1955; 6th Place, Czechoslovak Championship 1955-56; *FIDE Album* 1945-55.

S386: 16th Place, Czechoslovak Championship 1951-52; *FIDE Album* 1945-55.

S387: 1st Prize "in quarterly tourney", *Československý šach* 1954; 6th Place,

Czechoslovak Championship
1953-54.

S391: *FIDE Album* 1945-55.

S392: *FIDE Album* 1962-64.

S393: 1st Prize, *Národní listy* 1929.

S399: 2nd Prize, *ČSTV* 1951 (award
apparently in *Československý šach*
1952, date of tourney assumed from
this); *FIDE Album* 1945-55. An
alternative and perhaps preferable
reading is that it was published in
Československý šach in 1952 as a
version of a study previously
honoured in a *ČSTV* tourney.

S407: 16th Place, Czechoslovak
Championship 1956-57;
FIDE Album 1956-58.

S412: 10th-11th Place, Czechoslovak
Championship 1953-54;
FIDE Album 1945-55.

S413 (apparently in an original
incorrect form): 15th-19th Place,
Czechoslovak Championship
1953-54.

S415: 1st Place, Czechoslovak
Championship 1955-56;
FIDE Album 1945-55.

S416: 2nd Prize, Dedrle Memorial
Tourney 1959 (award in
Československý šach 1960).

S417: 3rd Honourable Mention,
Thèmes-64 1958.

S418: 1st Honourable Mention,
Thèmes-64 1958; 2nd Place,
Czechoslovak Championship
1957-59.

S420: 1st Prize, *Československý šach*
1954; 4th Place, Czechoslovak
Championship 1953-54;
FIDE Album 1945-55.

S422: 2nd Prize, *Československý šach*
1938; *FIDE Album* 1914-44.

S425: *FIDE Album* 1914-44.

S429: 2nd Place, Czechoslovak
Championship 1957-59.

S431: 1st Prize, *Československý šach*
1957; 1st Place, Czechoslovak
Championship 1957-59;
FIDE Album 1956-58.

S501-2: *FIDE Album* 1914-44.

S504: 1st ("only") Prize, *Zemědělské
noviny* 1967.

S505: 3rd Honourable Mention,
Práce 1965.

S508: *FIDE Album* 1965-67.

S509: 3rd Honourable Mention,
Tidskrift för Schack 1965.

S510: *FIDE Album* 1945-55.

S513: 23rd Place, Czechoslovak
Championship 1963-65.

S514: *FIDE Album* 1959-61.

S515: Final Honourable Mention,
Československý šach 1964; 3rd Place,
Czechoslovak Championship
1963-65; *FIDE Album* 1962-64.

S516: 12th Place, Czechoslovak
Championship 1963-65.

S517: 3rd Prize, *Slovenský národ* 1926.

S521: *FIDE Album* 1965-67.

S522: *FIDE Album* 1914-44.

S524: 2nd Prize, *Tidskrift för Schack*
1967.

S525: *FIDE Album* 1914-44.

S526: 13th Place, Czechoslovak
Championship 1957-59.

S528: 2nd Prize, *Československý šach*
1952.

S537: 3rd Prize, *ÚV ČSTV* Jubilee
Tourney 1961 (award in
Československý šach 1962).

A comparison of this list with Appendix D makes clear the extent to which errors overlooked by Mandler tended to be overlooked by others as well. The list also demonstrates that the fountain of honour plays just as erratically in chess as in other walks of life. To take just one example, S13, a classic corresponding-square study with bishop against knight which has long been the textbook example in its field, does not appear in the 1914-44 *FIDE Album*, whereas the relatively superficial S17 was chosen by the selection committee for the 1945-55 album. There are some excellent studies in the above list, without question; there are some even better ones outside it.

Appendix D : Compositions omitted

This appendix lists the compositions which have been omitted because of flaws which seem to me to vitiate the composer's intention. Less serious flaws have merely been noted in the text, or have been ignored entirely. Unless otherwise stated, everything that follows is based on my own computer-assisted examination, but I am sure many of the flaws had been discovered previously and I make no claim in respect of priority.

Any successful corrections which are brought to my attention will be reported in *British Endgame Study News*, and readers of this book who do not subscribe to *BESN* and would like to receive copies of corrections are invited to contact me (7 St James Road, Harpenden, Herts AL5 4NX, GB - England, e-mail johnbeasley@mail.com).

Dedicatory problem to František Macek (*Tidskrift för Schach* 1970): White Kc8, Ng7, Pa2 (3), Black Ka8, Pc4/d4 (3), White to play and draw. Intention 1 Ne8 d3 2 a3! (a waiting move to force Black to weaken himself) d2 3 Nc7+ Ka7 4 Nb5+ Kb6 5 Nc3 Kc6 (with bP on d2, 5...Kc5 is met by 6 Ne4+) 6 Kd8, with a note that 2 Nc7+ fails on account of 2...Ka7 3 Nb5+ Kb6 4 Nc3 Kc5 (threat 5...Kd4/Kb4) or 3 Nd5 Ka6 4 Kc7 Ka5! 5 Kd6 d2 6 Ke5. However, after 3 Nd5 Ka6 White has 4 Nc3 (or 4 a3 Kb5 5 Nc3+) Kb6 (4...Ka5 doesn't help) 5 a3 Kc5 6 Nb1! Kd4 7 a4! and if 7...c3 then 8 Nxc3 Kxc3 9 a5 and wPa7 will draw against bQ; alternatively, 7...Kc5 8 a5 Kb5 9 Na3+ and 10 Nxc4. So 2 Nc7+ works after all, and this means that 1 Ne6 is a sufficient and simpler alternative to 1 Ne8. It has long been a joke among composers that to dedicate a composition to somebody is the surest possible way of ensuring that it will eventually be proved unsound.

S344 (*Práce* 1951): White Kd5, Rf7 (2), Black Ka8, Na5 (2), White to play and win (a) as set, (b) with wR on e7, "Shifting the rook by one square demands a different solution". Intention (a) 1 Kd6 Kb8 2 Rf5 Nc4+ 3 Kc6 etc, not 1 Kc5 Kb8 2 Kb6 Nc4+ 3 Kb5 Nd6+; (b) 1 Kc5 Kb8 2 Kb6 Nc4+ 3 Kb5 Nd6+ 4 Kc6 etc, not 1 Kd6? Kb8 2 Re5 Nc4+. However, 1 Kd6 Kb8 2 Rc7 is an alternative solution to (b), 2...Nb7+ 3 Kd7 Ka8 4 Rc8+ Ka7 5 Kc6 Na5+ 6 Kb5 Nb7 7 Rf2 etc with capture of the knight on move 19 at the latest, and 1 Rc7 also wins.

S366 (*Revue FIDE* 1958): White Kf8, Rd1 (2), Black Kf5, Pd7/b6/d5 (4), White to play and win (a) as set, (b) with bPb6 on b7, "The squares d6 and c6 in turn become unavailable to the White king". Intention (a) 1 Ke7 Ke4 (1...Ke5 2 Kxd7 d4 3 Kc6 Ke4 4 Kb5/Kxb6) 2 Kxd7 d4 3 Kc6 d3 4 Kb5 Ke3 5 Kc4 and as in study S365, but not 1 Rxd5+ Ke6 2 Rb5

("2 Rd1 doesn't help") d5 3 Rxb6+ Ke5 4 Ke7 d4 5 Rd6 Ke4 and the White rook is in the way of its king; (b) 1 Rxd5+ Ke6 2 Rb5 d5 3 Rxb7 and either 3...d4 4 Rb5 d3 5 Rb3 etc or 3...Ke5 4 Ke7 d4 5 Rd7 Ke4 6 Kd6 (now this square is available) d3 7 Kc5 Ke3 8 Kc4 and wins, but not 1 Ke7 Ke5! (1...Ke4 still loses) 2 Kxd7 d4 3 Kc7 (this time Kc6 is not possible) Kd5 4 Kb6 Kc4. Unfortunately 2 Rd1 does help in line 1 Rxd5+ of (a): "mate in 27" says the definitive analysis. So 1 Rxd5+ is an alternative solution to (a), and everything collapses.

S369 (*Československý šach* 1958): White Ke8, Rf8 (2), Black Kh2, Pc7/a6/c6/a4/c3 (6), Black to play and White to win, "A rook faced with army of pawns". A massively difficult study with four intended lines depending on Black's choice of first move: (a) 1...a3 2 Rf3 a2 3 Rf2+ Kg3 4 Rxa2 Kf4! 5 Re2! c5 (5...Kf3 6 Rc2 Ke4 7 Rxc3 Kd5 8 Kd7) 6 Kd7 Kf3 7 Re1! c4 (7...Kf2 8 Re5 c4 9 Re4, 7...c2 8 Kc6 Kf2 9 Rc1) 8 Kc6 Kf2 9 Re4; (b) 1...Kg2 2 Rf5! a3 3 Ra5 c2 (3...Kf3 4 Rxa3 Ke4 5 Rxc3 Kd5 6 Kd7 c5 7 Kxc7) 4 Rc5 a2 5 Rxc2+ Kf3 6 Rxa2 Ke4 7 Rc2 Kd5 8 Kd7; (c) 1...Kg1 2 Rf3 c2 3 Rc3 a3 4 Rxc2; (d) 1...Kg3 2 Rf1 a3 (2...c5 3 Kd7!) 3 Kd7 a2 4 Kxc6 Kg2 5 Ra1 Kf3 6 Kc5 Ke3 7 Kc4. Much of White's manoeuvring is directed towards preventing the Black king from reaching d6. Unfortunately line (b) appears to be refuted by 4...Kf3 effectively gaining a tempo, with possible continuation 5 Rxc2 (5 Rc3+ loses a tempo) Ke4 6 Kd7 (moving wR to the a-file doesn't help, 6 Ra2 Kd5 7 Rxa3 c5 and Black would draw even without bPc7) Kd3 7 Rc1 (7 Rxc6 a2 8 Rxa6 c5 is only drawn) c5 8 Kc6 (8 Rxc5 a2 9 Ra5 Kc3 10 Rxa2 c5 is drawn, and 9 Rc1 Kd2 10 Ra1 Kc3 gives the same finish) c4 11 Kc5 c3 12 Kb4 c2 13 Kb3 (or 13 Kxa3 Kc3 straight away) a5 14 Kxa3 (14 Rxc2 a5+) Kc3 15 Rh1 a4 16 Rh3+ (or 16 Rg1 Kd2) Kd2 17 Rh2+ Kd1 18 Rh1+ Kd2 and 19 Kb2 doesn't help because Black has

19...a3+. Mandler considers ...Kf3 at move 3 and again at move 5, but not at move 4.

S375, RP24 (*Československý šach* 1961): White Kg5, Rg4, Pg6 (3), Black Kb8, Rc3, Pg7 (3), White to move and win, "A natural first move, but..." (the continuation of this title being above S376). Intention 1 Rf4 Rg3+ 2 Kh5 and now 2...Rc3 3 Rf7 Rc7 4 Kg5 Kc8 5 Kf5 Rc5+ 6 Kf4 Rc7 7 Ke5 Rc5+ 8 Kd6 (not 3 Rf8+? Kb7 4 Rf7+ Rc7 5 Kg5 Kc6 6 Kf5 Rd7) and 2...Ra3 3 Rf8+ Kc7 4 Rf7+ Kd6 5 Rxg7 (not 3 Rf7? Ra5+ 4 Kg4 Ra4+ 5 Kg5 Ra5+ 6 Rf5 Ra1 7 Rf8+ Kc7 8 Rf7+ Kd6 9 Rxg7 Rg1+). However, 2...Rc3 also seems to be met by 3 Kg4 bringing the king one step nearer to the pawns ("mate in 36", says my machine). The threat is 4 Rf7 etc, and putting bR on c7 won't help; for example, 3...Rc7 4 Rf7 Kc8 5 Kf5 Kd8 (or 5...Rd7 6 Ke6) 6 Rxc7 Kxc7 7 Ke6 and the cat is among the pigeons.

S376, RP25 (*Československý šach* 1950): White Kg5, Rg4, Pg6 (3), Black Kb8, Ra3, Pg7 (3), White to play and win, "...but an imperceptible displacement of the rook forces a change in plan". The intention, as compared with S375, is that 1 Rf4 no longer works (which it doesn't) but that 1 Re4 now works instead: 1...Ra1 2 Re7 Rg1+ 3 Kf5 Rf1+ 4 Ke5, or 1...Rc3 2 Re7 Rc7 3 Rf7 Kc8 4 Kf5 Rc5+ 5 Kf4! etc. But Black also has 1...Rg3+, and if 2 Kh5 then 2...Rc3 and now he is a tempo ahead; alternatively, 2 Kf5 Kc7 3 Re7+ Kd8 4 Rxg7 Ke8 and draws.

S377 (*Československý šach* 1954): White Kg4, Rf8, Pg6 (3), Black Kf2, Rc7, Pg7 (3), Black to play and draw (a) as set, (b) with the Black rook on b7, "A massive leap by the Black king, but it seems likely to make no difference". Intention (a) 1...Ke3 2 Rf7 Rc4+ 3 Kg3 Ke4, not 1...Kg2 on account of 2 Rf7 Rc4+ 3 Kf5 Rc5+ 4 Kf4! (4 Ke4? Rg5 5 Rxg7 Kg3) Rc4+ 5 Ke5 Rc5+ 6 Kd6; (b) 1...Kg2 2 Rf7 Rb4+ 3 Kf5 Rb5+ (not 3...Kg3 as in Harold van der Heijden's "Endgame study database 2000") 4 Kf4 Rb4+ 5 Ke5 Rb5+, not 1...Ke3 (2 Rf7 Rb4+ 3 Kg3 Ke4 4 Rf4+). But White can defeat 1...Ke3 in (a) by interpolating 2 Rf3+. If 2...Kd4/Ke4 then 3 Rf7, and Black's ...Rc4 is no longer check; if 2...Kd2/Ke2 then 3 Rf7 Rc4+ 4 Kf5, and if Black tries 4...Rc5+ White has 5 Ke4.

S379, RP18 (*FIDE Revue* 1954, dedicated to V. Halberstadt): White Kd4, Re4, Pg6 (3), Black Kd2, Rc7, Pg7 (3), White to play and win, "The Black rook is pushed hither and yon". Intention 1 Kd5 (threat 2 Re8 Kd3 3 Ke6, also 2 Rf4 and 3 Rf7) Ra7 2 Ke6 Rc7 3 Kf5 Kd3 4 Re8 and as in the previous study, but again 4...Rc5+ defeats.

S380 (*Československý šach* 1957, dedicated to the memory of O. Duras): White Ke3, Re4, Pg6 (3), Black Kb3, Rb7, Pg7 (3), White to play and win, "Perhaps an even greater tangle". Intention 1 Kf4 Kc3 2 Kg5 Rc7 3 Kf5 Kd3 4 Re8 etc, but again 4...Rc5+.

S381, RP36 (*Československý šach* 1955): White Kg3, Rg8, Pg6 (3), Black Kc1, Rb7, Pg7 (3), Black to move and draw, "Clear the way!" Intention 1...Kd2 2 Kf4 Rb4+ (driving the White king where it wants to go, towards the helpless Black pawn, but clearing the way for Black's own king) 3 Kf5 Rb5+ 4 Ke6 Rb6+ 5 Kf7 Rb7+ 6 Kf8 Ke3 7 Rxg7 Rb8+ 8 Kf7 Kf4 9 Rg8 (9 Rh7 Rb7+) Rb7+ 10 Kf6 Rb6+ 11 Kg7 Kg5 12 Kh7 Kh5 and White cannot play 13 g7 for fear of being mated. However, the computer gives 2...Rc7 as an alternative draw. The key line appears to be 3 Rf8 (this would win with the rook still on b7) Rc6 4 Kf5 Ke3 5 Rf7 and again 5...Rc5+.

S393 (*Národní listy* 1929, *Revue FIDE* 1957): White Kc4, Rd6, Pe6/g6 (4), Black Kc8, Rb7, Pg7 (3), White to move and win, "My first rook study". This was developed from an unfinished Réti study. In the original 1929 version, the White king stood on c5; the later version extended the solution by two moves. Intention 1 Kd4 Rb4+ 2 Kc5 Rb7 3 Rd5 and either 3...Ra7 4 Kd4 Ra4+ 5 Ke5 Ra7 6 Kf5! Rc7 7 Rd4 Ra7/Rb7/Rc5+ 8 Kf4 Rb7/Rc7 9 Ke5 Ra7 10 Rd5 or 3...Re7 4 Kd6 Kd8 5 Rf5 Rd7+ 6 Ke5 Rd1 7 Rf8+ Ke7 8 Rf7+ Ke8 9 Rxg7 Re1+ 10 Kf5 Rf1+ 11 Kg4 Rg1+ 12 Kh3 and as in S392, but in the first line "unfortunately 10 Rf4 also works". Indeed it does, being in fact more incisive than the intended continuation, and there are other imprecisions as well. Towards the end, 8 Ke4 appears to work (Mandler gives "8 Ke4? Rb6" apparently relying on 9 e7 Re6+, whereas in fact 9 Ke5 wins easily); more seriously, 3 Rd1/../Rd4 all seem to work, cutting out the first line altogether (3...Ra7 is now met by 4 Rf1/../Rf4 at once, with a simple win) and leaving us with just the second.

S396 (*Československý šach* 1950): White Kh4, Ra6, Pe6/g6 (4), Black Kb8, Rb2, Pg7 (3), Black to play and draw (a) as set, (b) wK on h3, "A further twin using the same shift" (S395 also has wKh4-h3). Intention 1...Kc7 in (a), 1...Rb1 in (b), but the simple 1...Rb7 appears to work in both parts: 2 Kg4/Kg5 (else 2...Re7 and bK will hound wR eternally between a6 and d6) Kc7 and bK will soon post himself on e7.

S405 (*Československý šach* 1950): White Kh3, Rc6, Pe6/g6 (4), Black Kb8, Ra7, Pg7 (3), Black to play and draw, "Why do Rc3 and Rc4 demand different continuations?". Intention 1...Kb7 and either 2 Rc3 Ra4 3 Kg3

Re4 4 Rd3 Kc6 5 Rd7 Re1 6 Rxg7 Rg1+ 7 Kf4
Kd6 or 2 Rc4 Ra6 3 Rd4 Kc6 4 Rd7
Ra1/Ra3+, with a host of tries: 1...Ra4 2 Rd6
(2 e7? Re4 3 Rf6 Kc7, 2 Kg3? Kb7) Kc7
3 Rd7+ and 4 Rxg7, 1...Ra1 2 Kg4 (2 Rd6?
Kc7 3 Rd7+ Kc6 4 Rxg7 Rg1 5 Ra7 Rxg6 6 e7
Rg8, 2 e7? Re1 3 Rf6 Kc7) Kb7 3 e7 Re1
4 Rf6, 1...Rc7 2 Rd6 Kc8 3 Kg4 Ra7 4 Rd5
Re7 5 Kf5, and 1...Re7 2 Kg4 Kb7 3 Rd6 Kc7
4 Ra6 Kb7 5 Kf5 Kxa6 6 Ke5 Kb7 7 Kd6.
However, 1...Re7 draws since Black can play
6...Rb7 (7 Kd6 Rb6+ 8 Ke7 Rb1 and even
9 Kf7 Rf1+ 10 Kxg7 will not win, or 8 Kd7
Rb7+ 9 Ke8 Rb1 10 e7 Kb7 and much the
same).

S411, RP26/27 (*Turnajový bulletin* 1954):
White Kd7, Ra8, Ph6/h2 (4), Black Kh3, Rg4
(2), White to play and win (a) as set, (b) bRg4
to g5, "The Black men get in each other's way".
Intention 1 Ke7 refuted in both parts by 1...Rg6
2 Rh8 Ra6, 1 Ke8 refuted in (a) by 1...Rd4+
2 Kc6 (2 Ke6 Rh4 3 Rh8 Ra4, 2 Ke7 Rh4
3 Rh8 Kg4 4 Kf6 Kh5 5 Ra8 Rf4+ 6 Kg7 Rg4+
7 Kh7 Rg5) Rh4 3 Re3+ Kg2 4 Re6 Kf3 5 Kd6
(5 Kd5 Rh5+) Kf4 but not 1...Rh4 2 Rg3+ Kg2
3 Re6, in (b) by 1...Rh5 2 Re6 Kg4 etc but not
1...Rd5+ 2 Ke7! Rh5 3 Rh8 Kg4 4 Kf6 (4 h7?
Kh3 5 Kf6 Rh4) Rf5+ (4...Kh4 5 h7) 5 Ke6
Rh5 6 Rg8+ Kf4 7 Rg6 Rxh2 8 Kf6 Ra2 9 Rg8
Ra6+ 10 Kg7 Kg5 11 h7 Ra7+ 12 Kf8+,
solution (a) 1 Ra7! (threat 2 h7) Rh4 2 Ra6 etc,
but not 1 Ra6 Kh4 2 Ke8 Kg5 and either 3 h7
Rh4 or 3 Kf7 Rb4 (the point is that the
preliminary decoy of the Black rook to h4
prevents his king from coming up so quickly),
(b) 1 Ra6 Kg4 2 Ke8 and either 2...Kh5 3 h7 or
2...Rb5 3 h7 with 3...Kg5 4 Ra8/Rd6 or
3...Rb8+ 4 Kf7. However, in (a) there is no
need for the brilliant 1 Ra7 because the natural
shut-off move 1 Ra5 also works (1...Kh4 2 Ke8
Rb4 3 Rd5 etc, 1...Kxh2 2 Rh5+, 1...Rh4
2 Ra6 rejoining the main line).

S413, RP7 (*Turnajový bulletin* 1954,
correction): White Kh8, Rh5 (2), Black Kc3,
Rh1, Ph3 (3), White to play and draw (a) as set,
(b) wRh5 on h4, "Staying on the h-file is in
turn necessary and forbidden". Intention
(a) 1 Kh7 Kd2 (1...Kd3 2 Ra5, but not 2 Kh6
Ke4 3 Kg5 Rg1+) 2 Kh6 Ke2 (2...Ke3 3 Ra5)
3 Kg5 Kf3 4 Kb4 Rg1 5 Rf5+ Ke4 6 Rf2 and
either 6...Ke3 7 Ra2 etc or 6...Rg2 7 Rf1 h2
8 Rh1 Kf3 9 Kh3 Rg8 10 Rf1+ K-- 11 Ra1, not
1 Kg7? Kd3 (1...Rg1+ is met by 2 Kf6) 2 Ra5
Rg1+, nor (1 Kh7 Kd2) 2 Kg6 Ke3, nor 1 Ra5
Kb2 2 Re5 Rc1 3 Rh5 Rc3 4 Kg7 Kc2 5 Kg6
Kd2 and either 6 Kg5 Rc5+ or 6 Rh7/Rh8 with
a crucial loss of tempo; (b) 1 Ra4 (threat
2 Ra3+) Kb2/Kb3 (1...Rb1 2 Rh4)
2 Re4/Rf4/Rg4 Rc1 3 Rh4 Rc3 4 Kg7 (4 Kh7?
Rg3) Kc2 5 Kg6 Kd2 6 Kg5 Ke2 7 Kg4, not

1 Kh7 Kd2 2 Kh6 Ke2 3 Kg5 Kf3 and h4 is
barred to wK. However, 1 Ra5 works in (a),
because after 1...Kb2 2 Re5 Rc1 White can
interpolate 3 Rb5+! and gain a tempo:
3...Ka3/Ka2/Ka1 4 Rh5 and bK is one file
further away, or 3...Kc3/Kc2 4 Rh5 forcing bR
back to h1. RP7 gives another setting, White
Kh8, Rd5 (2), Black Kc4, Rh1, Ph3 (3),
intention 1 Rh5 with 1...Kc3 or 1...Kd4 2 Rh4+
Kc3, but 1 Rd2 also works.

S415, RP6 (*Práce* 1955): White Ka5, Rf4,
Pg5 (3), Black Kb3, Rd2, Pf5 (3), White to
play and win, "We failed to guess the thoughts
of the master". Intention 1 Kb6 (1 Kb5 Rd6
and either 2 Rxf5 Rg6 as in S412, or 2 Kc5 Rg6
3 Rxf5 Kc3, or 2 Rf3+ Kc2 and 3 Kc5 Rg6
4 Rxf5 Kc3 or 3 Kc4 Kd2 4 Rxf5 Ke3) Rd6+
2 Kb5 Re6 3 Rf3+ Kc2 4 Kc4 Kd2 5 Kd4.
However, Black can play 2...Kc3, and after
3 Kc5 Ra6 4 Rf3+ Kd2 5 Kd4 the Black rook is
on a6 instead of e6 and 5...Ra5 is good enough
to draw (confirmed by Marc Bourzutschky's
definitive analysis of R+P v R+P). The trouble
is that captures of the f-pawn merely give a
drawn position with R+P against R, and if
White does not capture it Black can advance it
sufficiently to draw after having sacrificed his
own rook.

S416 (2nd Prize, Dedrle Memorial Tourney
1959): White Ka4, Rc8, Pc6 (3), Black Ke4,
Rb2, Ph5 (3), White to move and win, "Black
finds an unusual method of guarding his pawn".
Intention 1 Rh8 h4 2 Ka5 Ke5 3 c7 Rc2 4 Kb6
Rb2+ 5 Kc6 Rc2+ 6 Kd7 Rd2+ 7 Kc8 Rh2
8 Rh5+ and wins, or 1...Rc2 2 Kb5 Rb2+
3 Ka6 Ra2+ 4 Kb7 Rb2+ 5 Kc8 Rb2 6 c7 Kf4
7 Rh6 Kg5 8 Kd7. But Marc Bourzutschky's
definitive analysis of R+P v R+P refutes the
latter: 1...Rc2 2 Kb5 Ke5! 3 Rh6 h4 4 Kb6
Rb2+ 5 Kc7 Rb4 and Black will draw. This is
typical of play in extreme rook-and-pawn
endings. In the position after 2 Kb5, the natural
move for Black is 2...Kd5 attacking White's
pawn directly, and a lot of analysis is needed to
show that he actually does better to play
2...Ke5. This threatens nothing immediately,
but it keeps an eye on the White pawn from a
distance, while staying sufficiently close to
Black's own pawn to be able to support it if
necessary. Having been told of the bust by
Marc, I gave the position after 2 Kb5 to my own
computer, and it took an hour to home on to
2...Ke5 as the right move for Black.

S418 (*Thèmes-64* 1958): White Kd6, Rd7,
Pe6 (3), Black Ke3, Re4, Pa7/a4 (4), White to
move and win, "A study within a study".
Intention 1 e7 Kd3 2 Rc7 Rd4+ 3 Ke6 Re4+
4 Kd7 Rd4+ 5 Kc8 Re4 6 Kd8 a5 7 Rc5 Kd4
8 Rc1 e3 9 e8Q Rxe8+ 10 Kxe8 Kd3 11 Kd7 a2
(11...Kd2 12 Rc5 a4 13 Rc4) 12 Kc6 Kd2

13 Ra1 Kc3 14 Rxa2 Kb4 15 Rh2 a4 16 Rh4+ Kb3 17 Kb5 a3 18 Rh3+ Kb2 19 Kb4 a2 20 Rh2+ Kb1 21 Kb3 and wins, study S419 below being used to answer 1 Rxa7, but Marc Bourzutschky's definitive analysis of R+P v R+P has refuted S419 and S418 falls with it.

[This was the study which led to my dedication piece. Not yet being aware of the flaw in S419, I was examining S418 as a live candidate, and one of the lines to which the computer drew my attention was 1...a5 shielding bPa4 from above. Now 2 Rc7 was met by 2...Kd4 drawing in all lines, but the previously despised 2 Ra7 won even though it was no longer a capture. I expected the continuation to be 2...Rd4+ 3 Ke6 Re4+ 4 Kd7/Kf7 Rf4+ 5 Ke8, and was most surprised to see that the computer preferred 4 Kd7 to 4 Kf7. But examination soon showed why, and then it was just a question of adding the little king walk to highlight the distinction.]

S419 (extract from the above): White Ke6, Re5, Pa5 (3), Black Kd3, Ra2, Pe3 (3), White to move and draw. Intention 1 Kd6 Rc2 2 Rd5+ Ke4 3 Re5+ Kf4 4 Re7! Ra2 5 Rf7+ Ke4 6 Re7+ Kd3 7 Re5 e2 8 Rd5+ etc, but Marc Bourzutschky's definitive analysis of R+P v R+P gives the result as a Black win. The key line is 6...Kd4 (ready to put pressure on wR) 7 Re5 Ra1! 8 Rd5+ Ke4 9 Re5+ Kf4 10 Ke6 (what else?) Rd1 and wK is one crucial file further away from wP. This was another line which my computer took a long time to find even after I had told it exactly where to start looking.

S421 (*Thèmes-64* 1958): White Kd6, Rd8, Pe7 (3), Black Ke2, Re4, Pa7/d7/a3 (5), White to move and draw, "White can promote straight away, but he voluntarily abandons this possibility for a while". Intention 1 Rxd7 Kd2 2 Rxa7 Rd4+ 3 Ke5 Rd3 4 Ra8 Kc2 5 Kf4 Rd4+ 6 Kf5 Rd5+ 7 Kf6 Rd6+ 8 Kf7, but 5 Ke4 is simpler (5...Kd2 6 Rd8, 5...Rd1 6 Rxa3 Re1+ 7 Re3). The study is in any case little more than a companion to S418/9, and with the loss of this final manoeuvre I decided that it was not worth retaining.

S423, RP32 (*Práce* 1951): White Kf5, Rd6, Pb2/e2 (4), Black Kb5, Rg2, Pb3/e3 (4), White to play and draw, "Do we bring the White king into action as quickly as possible, or play to keep his opponent at a distance?". Intention not 1 Rd3 Rxe2 2 Rxb3+ Kc4 3 Rc3+ Kd4 or 3 Ra3 Rf2+, when "the pawn on e3 cannot be stopped", nor 1 Ke4 Rxe2 2 Rd5+ Kc6 3 Rd3 Rxb2 4 Rxe3 Kc5 5 Kd3 Kb4 and Black just reaches his pawn in time, but 1 Ke5 Rxe2 2 Rd5+ Kc6 3 Rd6+ Kc7, driving the king one rank further away before playing Rd3. However, 1 Rd3 and 1 Ke4 both work: 1 Rd3 Rxe2 2 Rxb3+ Kc4 3 Ra3 Rf2+ 4 Ke4 e2 5 Re3 and Black's next move will allow the White king access to d3 or f3, or 1 Ke4 Rxe2 2 Rd5+ Kc6 3 Rd8 Rxb2 4 Kxe3 Kxe3 and the Black king will be harassed from above.

S427 (*Ajedrez* 1959): White Kb7, Rg6, Ph7/h6 (4), Black Kh3, Rh8, Pc6 (3), White to play and win (a) as set, (b) bPc6 to c7, "A Black pawn is left in place to obstruct checks from its rook". Intention (a) 1 Kc7 etc, not 1 Kxc6 on account of 1...Kh4 2 Kd6 Kh5 3 Rg1 Kxh6 6 Ke6 Ra8 5 Rg8 Ra6+; (b) 1 Kc6 and much the same. However, the computer refutes 1 Kc7 in (a) by 1...Rxh7+ 2 Kd6 Kh4 3 Ke6 c5 (Mandler only considers 3...Kh5), and the same refutation applies to (b).

S429 (*Ajedrez* 1958): White Kd7, Rb6, Pa6/f5 (4), Black Ka4, Ra8, Pg7/h4 (4), White to play and win, "The same move twice over". Intention 1 f6 gxf6 2 Kc6 (the White king needs to go both to b7 and to c5) Ra7 3 Kc5 Ka5 4 Rb1/Rb2 Rc7+ 5 Kd6 (the king goes back to d7, and then comes forward again at moves 7 and 8) Rc8 (5...Ra7 6 Kc6 Rxa6+ 7 Kc5) 6 Kd7 Ra8 7 Kc6 Rxa6+ 8 Kc5 etc, with 2...h3 3 Kb7 h2 (3...Rh8 4 Rb1 Ka5 5 a7 Rh7+ 6 Kc6 Rxa7 7 Ra1+ Kb4 8 Rxa7 Kc4 9 Ra4+ Kd3 10 Kd5/Rh4) 4 Rb1 Rh8 5 a7 Rh7+ 6 Kb6 Rh8 7 Rh1 and 2...Ra7 3 Kc5 h3 4 Rb1 h2 5 Kb6 Re7 6 a7 Re6+ 7 Kc5 Ra6 (7...Re5+ 8 Kd6 Ra5 9 Ra1+ K-- 10 Rxa5) 8 Ra1+ K-- 9 Rxa6. However, in the line 2...h3 3 Kb7 h2 4 Rb1 the computer plays 4...Re8 with play on the e-file, and at the very least this makes things much harder for White. Its preferred line is 5 a7 Re7+ 6 Kb6 Re6+ 7 Kc5 Re5+ 8 Kc6 Re8 9 Rh1 Kb4 10 Rxh2 Re6+ 11 Kd5 Ra6 12 Rh7 f5 13 Rb7+ Kc3 with an actual draw, in which case the study is unsound, but even if White's play can be strengthened the existence of so difficult a sideline will distract attention from the study's point.

S431, RP45 (*Československý šach* 1957): White Ke4, Rd4, Pc6/f5/c4/c3/c2 (7), Black Ke8, Ra8, Pe7/h7/a6/b6/b5 (7), White to play and win, "A study characterized by the possibility of castling by Black". Intention 1 f6 (to provoke 1....exf6, after which Black's eventual ...Rxc6 will leave his rook blocked in) exf6 (nothing better) 2 c5 bxc5 (now the rook is blocked in another direction as well) 3 Rd7 and either 3...Rc8 4 Rb7 Rxc6 5 Kd5 Rc8 6 Rxh7 with the threat of 7 Kf6 etc or 3...a5 4 Rc7 a4 5 Kd5 a3 6 Rxh7 0-0-0+ (we cannot prove that Black has lost the right to castle, so we must allow for the possibility) 7 Kxc5. But Mandler analyses only 3...b4 among the possible sidelines, and there are many natural alternatives for which he offers nothing. I am prepared to believe that in fact none of them

leads to a Black escape, but some of them appear to put more difficulties in White's way than the "main line" moves, and their refutation is far from being as crisp and clear as the main line (after two apparently obvious variations on Black's "main line" play, 3...h5 taking bP temporarily out of range of wR and 3...Rc8 4 Rb7 f5+ freeing the sixth rank for bR, my computer had found no win even after several hours, and it would seem that any win that might exist will require extensive analysis). No way could I show this study to a friend at the club and expect him to be convinced. I know at least one reviewer who will criticize me for rejecting it, but I stand by my guns; the greater the number of men on the board, and the more artificial the position, the more the main line must stand out with crystal clarity if a study is to be aesthetically satisfying.

S468-70 (this and the next two items are triplet or twin studies from the "rook against knight and pawn" chapter): White Kd2, Rc5-c6-c8 (2), Black Ka1, Nb8, Pa3 (3), White to play and win. Intention with wRc5, 1 Kc3 (1 Kc2? Ka2) Nd7 (1...Ka2 2 Rc7 Na6 3 Rc6, 1...Kb1 2 Rb5+ Kc1 3 Ra5 and 4 Rxa3) 2 Rd5 (2 Rc7? Ne5) Nf6 3 Rf5 Ne4+ 4 Kb3 Nd2+ 5 Kc2 Nc4 6 Kc3 Nd6 7 Rd5; with wRc6, 1 Rd6 Nc6/Na6 (1...Kb2 2 Rb6+ Ka1 3 Kc2, but not 3 Kc3? Nd7 4 Rd6 Nc5 5 Rd5 Kb1) 2 Kc2 (2 Kc3? Kb1); with wRc8, 1 Kc2 (1 Kc3? Nd7). However, the first part (wRc5) fails to both 1...Ka2 and 1...Kb1: 1 Kc3 Ka2 2 Rc7 Kb1 3 Rb7+ Kc1 4 Ra7 Kd1 5 Rxa3 Ke2, or 1...Kb1 2 Rb5+ Kc1 3 Ra5 Kd1 and the same. The second and third parts remain technically viable as a twin, but the differentiation of greatest interest is between wRc5 (1 Kc3 intended) and wRc8 (1 Kc2) and I don't think Mandler would have wanted the study to appear in truncated form.

S473-4: White Kc2, Rg5 (2), Black Ka2, Nh2-a6, Pa3 (3), White to play and win. Intention with bNh2, 1 Rg2 Nf3 (1...Nf1 2 Kc3+ Kb1 3 Kb3 etc) 2 Kc1+ Ka1 3 Rg3 a2 4 Rh3 etc; with bNa6, 1 Kc3 Nb8 2 Rg2+ Kb1 3 Kb3 Kc1 4 Rc2+ Kb1 5 Rd2 Kc1 6 Rd6. The second part (bNa6) allows an alternative win starting with 1 Rb5 Nc7 2 Re5, and although it is markedly less clear than the intention I don't think Mandler would have allowed the study to stand had he been aware of it.

S475-6: White Kc3, Rg2-g3 (2), Black Ka1, Na5, Pa3 (3), White to play and win. Intention with wRg2, 1 Kb4 (1 Rd2? Nc6! 2 Kb3 Na5+) Nc6+ 2 Kxa3 Kb1 3 Kb3; with wRg3, 1 Rd3 (1 Kb4? Nc6+! 2 Kxa3 Kb1 3 Kb3 Nd4+) Ka2 2 Rd2. However, in the first part (wRg2) the intended refutation of 1 Rd2 fails: 3 Kc2 and

either 3...Nc4 4 Rd4 or 3...Ka2 4 Kc3+, in each case leading to known ground.

S505 (*Práce* 1965): White Kb1, Ng2, Pf4/f2 (4), Black Kh2, Pc7/g6/c5/c3 (5), White to play and win, "Some unexpected manoeuvres". Intention 1 Nh4 Kh3 and now not the natural 2 Nxg6 but the brilliant combination 2 f5! gxf5 3 Ng6! (capturing the pawn again fails) and White has a difficult win thanks to the Black pawn's blocking of the square in front of the White (3...Kg4 4 f4, 3...f4 4 f3). However, 2 Nxg6 does win; Mandler gives 2...Kg4 3 Kc2 c4 4 Kxc3 Kf5 "draw", but White has 5 Nh4+ Kxf4 6 Kd2 with either 6...Kg4 7 Ng2 Kf3 8 Ke1 c3 9 Ne3 and White will advance as soon as the Black king gives way, or 6...c3+ 7 Ke2 c2 8 Ng2+ Ke4 (8...Kf5/Kg4 9 Ne3+, 8...Ke5/Kg5 9 f4+ and 10 Kd2) 9 f3+ K-- 10 Kd2 and the c-pawn goes.

S509 (*Tidskrift för Schack* 1965): White Kh1, Bg3/g2, Nf4/e1, Pf5/c4/e4/c2 (9), Black Kg4, Bh4/h3, Nh8/f3, Pb7/d6/f6 (8), White to play and win, "The labyrinth". This is the original location of the story in which the position represents a map showing the location of buried treasure. Intention 1 Bxh4 Bxg2+ 2 Nexg2 Nxh4 3 Nxh4 Kxf4 4 Ng6+ Kxe4 5 Nxh8 Kxf5 6 Nf7 Ke4 7 c5 Kd5 8 cxd6 Ke6 9 Nd8+ Kxd6 10 Nxb7+ Kd5 11 Na5 Kd4 12 Nb3+ Kc3 13 Na1, but there appears to be an alternative win by 1 Nxf3, when Mandler gives 1...Bxg2+ 2 Kxg2 Bxg3 "draw" but 3 Nd5 Be5 (3...Bh4 4 Nxh4 Kxh4 5 Nxf6) 4 Nxe5 fxe5 leaves White a pawn up with a protected passed pawn, and the intended solution appears to fail if Black plays 7...dxc5 instead of 7...Kd5. Mandler gives 8 c4 b5 9 Nd6+ as winning (9...Kd4 10 cxb5 Kd5 11 Kc2), but 9...Ke5 seems to hold the draw; the computer gives 10 Nxb5 f5 11 Kg2 Ke4 12 Kf2 (12 Nd6+ doesn't help) f4 13 Ke2 (13 Na3 f3 14 Nc2 Kd3 15 Ne3 Ke4 16 Nd5 Kd4 17 Nb6 Ke4 18 Nc8 Kd4 19 Nd6 Ke5 20 Nb5 takes us back to where we started) f3+ 14 Kf2/Kd2 Kf4 and White is not going to make progress. His king cannot force Black's king back on its own, but if his knight tries to help it will have to scurry back to defend the c-pawn, while if the king tries to take over the defence of the c-pawn the Black f-pawn will run. It would appear that some dishonest spy had sold the President the wrong map.

S510 (*Svobodné slovo* 1947): White Kf8, Nf5, Pe7/c6 (4), Black Kf3, Rh7, Bh5/h2 (4), White to play and draw, "A succession of small points" (and a composition which Mandler acknowledges as being outside his normal style, "but such compositions can expect a much wider welcome among the general public than analytical work"). Intention 1 Kg8 (1 Ng7 Rh8 mate) Ke4 (1...Bg6 2 e8Q, 1...Kg4 2 Ne3+ and

3 Kxh7, 1...Jf4 2 c7) 2 Ng7 (2 Kxh7 Kxf5
3 Kh6 Bg6 4 Kg7 Bd6 5 Kf8 Kf6 6 c7 Bxe7+)
Bg6 (2...Rxg7+ 3 Kxg7 Kd5 4 Kf8 Bd6 5 c7,
2...Rh6 3 Nxh5) 3 c7 (3 e8Q+? Bxe8 4 Kxh7
Bf7 5 Kh6 Bf4+ 6 Kh7 Be5 7 Kh6 Kf4 8 Nh5+
Kf5 9 Ng7+ Kg4 10 Kh7 Kg5) Bxc7 4 e8Q+
Bxe8 5 Nxe8 Re7 6 Kf8 Bd8 7 Nd6+ Kd5
8 Nf7 Rd7 9 Ke8 Re7+ 10 Kf8 with a positional
draw, but we now know that 1...Bg6 2 e8Q leads
to a 2B v N win for Black: 2...Bxe8 3 Kxh7 Ke4
and the pawn will soon go. Much of the
composition could be preserved by starting at
move 2, but the final stages depend on the Black
king's presence on e4 (we need to meet 5...Rd7
by 6 Nf6+) and in a "goal-inspired" study like
this it is really rather important that it arrives at
its final position in the course of the play.

S512 (*Revue FIDE* 1964): White Kh1, Ba4,
Pd4/c3/a2/b2 (6), Black Kd2, Be6, Pd5/g4
(4), White to play and win, "We learn by our
mistakes". This was the original home of
Kálert, Veselý, and little Hochman. Intention
1 Kh2 (1 b4 Kxc3 2 b5 Kxd4 3 b6 Bc8 4 Bc6
Kc4 5 b7 Bxb7 6 Bxb7 d4, 1 Bc6 Kc2 2 b4
Kxc3 3 b5 Kxd4 4 b6 Bc8 5 b7 Bxb7 6 Bxb7
Kc4 7 Kg2 d4 8 Kg3 d3 9 Kxg4 d2 10 Bf3 Kb4,
1 Kg2 Kc1 2 b4 Kb2 3 Bc6 Kxa2 4 b5 Kb3 5 b6
Bc8 6 Bxd5+ Kxc3 7 Be6 Bb7+) Kc1 (1...Bc8
2 Bc6 Kc2 3 Bxd5 Kxb2 4 Bf7/Bg8 Kc3 5 d5
Kd4 6 Be6) 2 b4 Kb2 3 Bc6 Kxa2 (3...Kxc3
4 b5 Kxd4 5 b6 Bc8 6 b7 Bxb7 7 Bxb7 Kc4
8 Kg3 d4 9 Kxg4) 4 b5 Kb5 5 b6 Bc8 6 Bxd5
Kxc3 7 Be6 Bb7 8 d5 etc, with much additional
exploration which is expounded in detail.
However, 1 Bc6 and 1 Kg2 lead to alternative
wins. In the line after 1 Bc6, White can play
8 Bc8 winning the g-pawn, after which the
bishop can protect the a-pawn and the Black
d-pawn will be no threat; in the line after
1 Kg2, he has 6 Kf2 bringing his king to the
defence of his own d-pawn, with 6...Kxc3 7 Ke3
Kc4 8 b7 Bxb7 9 Bxb7 g3 10 Ba6+ K-- 11 Bf1
and 6...Kc4 7 b7 Bxb7 8 Bxb7 g3+ 9 Ke3 g2
10 Bxd5+ Kxd5 11 Kf2.

S517 (*Slovenský národ* 1926): White Kb6,
Be3, Nb4, Pf4 (4), Black Kd6, Rf6, Be4, Nb2
(4), White to play and draw, "Black
combination and White countercombination".
Intention 1 Bd4 Na4+ 2 Ka5 Rxf4 3 Be5+
Kxe5 4 Nd3+ Bxd3 stalemate, but Black can
play 1...Rxf4 and invoke the computer discovery
that R+B win against B+N if the bishops run
on squares of different colour. After 2 Bxb2, any
sensible move keeping control of d3 leads to a
win if we ignore the fifty-move rule, and several
moves (2...Bg6 is quickest) win even if we allow
White to invoke it.

S521 (*Tidskrift för Schack* 1966): White Kf6,
Bd6, Na4/d4, Pa5/g5 (6), Black Ka1, Bh4/h1,
Nh8, Pb7/f7/h5/g4/f3/a2 (10), White to play

and draw, "A combination and its echo".
Intention 1 a6 (threat 2 axb7) with the echo
repetition lines 1...bxa6 2 Bf4 Kb1 3 Nc3+ Kb2
4 Nd1+ Ka3 5 Bd6+ Ka4 6 Nb2+ Ka5 7 Nc4+
and 1...f2 2 Nc2+ Kb1 3 Na3+ Kc1 4 Nf4+
Kd1 5 Nc3+ Ke1 6 Nc2+ Kf1 7 Ne3+, but
White can improve on the first of these: 6 Nc3+
Ka5 7 Bc5 forces mate.

S522 (*Prager Presse* 1929): White Kc4, Rf1,
Pa4 (3), Black Ka5, Bc2, Pc3 (3), White to
play and win, "Both sides find themselves in
zugzwang". Intention 1 Rg1 (1 Kxc3 Bxa4
2 Ra1 Kb5) Bxa4 2 Ra1 c2 3 Kc5 with 1...Bh7
2 Rg5+ Kxa4 3 Rg7, 1...Be4 2 Kxc3 Kxa4
3 Rg4, but White can invert moves 2 and 3 in
the main line, and in the sideline 1...Be4 Black
can make things harder for White by playing
2...Bc6 instead of capturing. To hold on to his
pawn and force the win, White must now resort
to lines such as 3 Kc4 Bd7 4 Re1 Bc6 5 Re7 Bf3
6 Ra7+ Kb6 7 Rf7 Bd1 8 Kb4 and 9 a5, and it
is all much less simple and straightforward than
the win in the main line. Such a question rarely
arises with an analytical study in Mandler's
normal style, but whenever the supposed "main
line" of a study leads to a quick defeat the
question is bound to arise as to whether Black is
really playing logically; is his loss after other
moves so clear and straightforward that the
"main line" move can be presented as a
reasonable choice? This reservation, coming on
top of the inversion dual after 1...Bxa4, really
seems to put the study out of court.

S523 (*Prager Presse* 1929): White Kd2, Rd1,
Pa4 (3), Black Ka6, Bg4 (2), White to move
and win, "Is this study correct?" Intention
1 Re1 Bd7 (once the pawn has reached the fifth
rank, there is a winning procedure known since
the 1860s) 2 Kd3! (2 Kc3 Bxa4 3 Ra1 Kb5) Ka5
(2...Bxa4 3 Ra1 Kb5 4 Kc3 and this time it is
Black to move) Ka5 3 Kc4 Bc6 4 Re7 Bf3
5 Kb3 and so on, and the reason for the query is
that J. Vančura published a study in 1924
showing how White could overcome a fifth-rank
blockade and force the pawn forward anyway.
This being so, 1 Ra1 etc would also win for
White, albeit far less crisply. The computer
confirms the Vančura win, and there is a more
serious flaw: Black can play 2...Kb6 (now
...Bxa4 is a genuine threat) 3 Ra1/Rb1+ Ka5,
forcing White to overcome a fifth-rank blockade
after all. So 1 Re1 does not even lead to a crisp
short cut, and in fact is no better than any other
rook move (they all win, and 1 Ra1 does so one
move sooner than the rest). According to the
1978 English edition of Averbakh, 2...Kb6 was
reported by L. Braberman in *Shakhmaty v SSSR*
in 1966, but Mandler was clearly unaware of it.

S529 (*Prager Presse* 1929): White Kd5,
Rd1/h1 (3), Black Kh6, Bh4, Ne2, Pe4/f3 (5),

White to play and win, "The point occurs at the second move". This is a further working of the theme of S522 and S523, with intention 1 Kxe4 ("Instead of capturing with check, White gives up the exchange") Ng3+ 2 Ke3! Nxh1 3 Rxh1 Kg5 (3...Kh5 4 Kf4 f2 5 Kf5 f1Q+ 6 Rxf1 etc) and only now 4 Kxf3. However, Mandler gives no analysis of 1 Rxh4+, and it appears very strong because White can meet 1...Kg5 by 2 Rhh1 and the fork will avail Black nothing: 2...Nc3+ 3 Kd4 Nxd1 4 Rxd1 Kf4 5 Rf1 e3 6 Kd3 e2 7 Ra1 Kg3 8 Ke3. So White will retain the advantage of two rooks against knight and two pawns, and he appears to have a certain win.

S530 (*Národní osvobození* 1932): White Kf2, Rc1/d1 (3), Black Kh5, Ba6, Nh4/g2 (4), White to play and win, grouped with S531-3 under the title "Two rooks against three minor pieces". Mandler has wRd1/e1 in the diagram in *Studie*, but it is clear from the solution that c1/d1 were meant. Intention 1 Rc6 Bb7 2 Rd5+ Kg4 3 Rc4+ Nf4 4 Rd7 B-- 5 Rg7+ or 3...Kh3 4 Rg5 Ba8 5 Rg3+ Kh2 6 Rc8 B-- 7 Rh8, but the bishop does not need to move in the latter line; Black can play 6...Nf4, meeting 7 Rxa8 with 7...Nh3 winning rook for knight.

S532 (*Národní osvobození* 1932): White Kf3, Rg6/c5 (3), Black Kh3, Be1, Nh5/g3 (4), White to play and win. Intention 1 Rgg5 Kh4 (1...Nf6 2 Rc8 Ngh5 3 Rc1) 2 Rg4+ Kh3 3 Rd4 Nf6 (3...Kh2 4 Rh4+ Kg1 5 Rc1 Kf1 6 Rh2) 4 Rd1 Nfe4 (4...Bb4 5 Rg5) 5 Re5 Nf2 6 Rxe1 Nd3 7 Rh1+/Rh5+, and not 1 Rh6? Kh4 2 Rd6 Ne4! 3 Kxe4 Bb4. However, the main line of the intention is dualized by 2 Rgd5, and the intended try 1 Rh6 also leads to a solution: 1...Kh4 is met by 2 Rc4+ Kg5 3 Ra6/Rb6, after which 3...Kf5 and 3...Nf5 allow immediate mate and everything else concedes material within a few moves.

S533 (*Parallèle-50* 1950): White Kf3, Rg6/d5 (3), Black Kh3, Be1, Nh5/g3 (4), White to play and win. This was intended as a twin to the above, with solution 1 Rh6 Kh4 2 Rc6 Kh3 3 Rc1, but 3...Nf4 draws for Black. 4 Kxf4 is met by 4...Ne2+ with possible continuation 5 Kf3 Nxc1 6 Rd1 Nd3 7 Rxd3 Kh2, while if say 4 Rd8 Ng2 5 Rh8+ the check 5...Nh4+ forces White back (6 Kf4 Bd2+).

S20 in the problem collection (*Sachové umění* 1948): White Kb4, Nc1, Pb6/c5 (4), Black Ka6, Ba2, Pb7 (3), White to play and win, Black to play and draw. Intention with

White to play, 1 Ne2 Bd5 2 Nd4 (1...B-- 2 Nc3), with Black to play 1...Bf7 2 Ne2 Be8. However, White can continue 3 Nd4 Bd7 (else mate in 2) 4 Kc4 followed by Kd5-d6-c7, and he will win easily.

There are also some problem/study twins in the problem collection, again from *Sachové umění* 1948, which I have omitted on the grounds that that their purpose is to show the differentiation between the two solutions and the study component is not sufficiently interesting to stand on its own. **S16** (c-d), White Kc6, Pb3, N as below (3), Black Ka5, Bd6, Pa6/b3 (4), and now (c) White Nd4, Black to play and avoid mate in 6 (1...Bc7 and either 2 Ne6 Bb6 or 2 Nf5/Nf3 Bf4); (d) White Nh4, Black to play and draw (1...Be5 and 2 Ng6 Bd4 or 2 Nf3/Nf5 Bf4). **S22**: White Kb3, Pb5, Pa4, N as below (4), Black Ka5, Pb6, B as below (3), and now (a) White Nf4, Black Bg7, Black to play and avoid mate in 3 (1...Bd4) and to draw if wP is on c4 instead of a4 (1...Be5); (b) White Ne1, Black Bg7, Black to play and avoid mate in 5 (1...Bd4) and to draw against wPc4 (1...Bf8); (c) White Nf2, Black Bb4, Black to play and avoid mate in 3 (1...Bd2) and to draw against wPc4 (1...Bf8). In each case, the "draw" line adds nothing to ground that we have already covered. Mandler also points out that **5.13** can be given the problem stipulation "White to play and avoid mate in 6" and that "perhaps this position is better as a problem than as a study". He argues as follows. "The bishop must move so as to meet ...d5 by moving to d3 or g4. For this purpose, the moves 1 Bg6 and 1 Bh5 are equivalent. (The limitation on the number of moves allows us to sacrifice the bishop on d3, 1 Bg6 Nd5 2 Bd3). But Black can meet 1 Bg6 by 1...Ng8 and now White has no defence. After the correct move 1 Bh5, White can meet 1...Ng8 by either 2 Bg6 or 2 Bg4. 1 Be8 fails only against 1...Nd5, 1...Ng8 allowing White to play 2 Bg6. This complete separation is missing from the study version. There, Black can meet 1 Bg6 by either 1...Nd5 or 1...Ng8." I personally disagree, thinking the position far more simple and satisfying as a study, but I think readers should know that the argument has been put. His readiness and ability to go to this level of detail is one of the reasons why Artur Mandler became a first-rate analyst, and why John Beasley, for example, did not.

Artur Mandler (1891-1971) was one of the giants of 20th-century chess endgame study composition; he had a mastery of the natural endgame study which has perhaps been equalled only by his friend Richard Réti and the famous Russian composer Nikolai Grigoriev. But whereas there have been several editions of the work of Réti and Grigoriev, Mandler's has been collected only in his book *Studie* (Praha, 1970), and this is now difficult to obtain even in its country of origin. The present volume makes it conveniently available to readers worldwide. It contains the studies in *Studie* with a translation into English of Mandler's perceptive and illuminating commentary, and the whole is supplemented by notes based on the results of modern computer examination.

ARVES (Alexander Rueb Vereniging voor Schaakeindspelstudie) is the world's leading association of endgame study enthusiasts. It publishes the international English-language endgame study magazine *EG*, and offers its members a further quarterly magazine *EBUR* and a "Book of the year" in which a topic is treated in greater depth than is possible in magazine articles. Enquiries to the Secretary, Hans Buijs, Bakenburgseweg 2A, 6814 MJ Arnhem, NL - Nederland.