## WERNER KEYM

## CHESS PROBLEMS OUE BOX



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Chess
is an international language.
(Edward Lasker)

Chess thinking is good. Chess lateral thinking is better.


Photo: Gabi Novak-Oster
In 2002 this chess problem (= no. 271) and this photo were published in the German daily newspaper Rhein-Zeitung Koblenz.
That was a great success: most of the 'solvers' were wrong!

## Werner Keym

Chess Problen
Ount off fie Bon

Nightrider Unlimited

The content of this book differs in some ways from the German edition Eigenartige Schachprobleme (Curious Chess Problems) which was published in 2010 and meanwhile is out of print.

The complete text of Eigenartige Schachprobleme (errata included) is freely available for download from the publisher's site, see http://www.nightrider-unlimited.de/angebot/keym_1st_ed.pdf.

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## Preface

This is a very personal book about exotic regions of the fascinating world of chess composition. They are not about fairy pieces and conditions, but rather about castlings, en-passant captures, pawn promotions, tasks, unconventional first moves, retro puzzles, text problems (with mathematical aspects), retractors, proof games, records, special stipulations and more. Such problems are entertaining, exciting, stimulating, witty, funny - and often even computer-defying. Ideally, they are 'beautiful', that is perfect in idea and form (such as no. 9 and 345).
'Chess problems demand from the composer the same virtues that characterize all worthwhile art: originality, invention, conciseness, harmony, complexity and splendid insincerity'. (Excerpt from Poems and problems by Vladimir Nabokov).

It was not easy for me to make a final selection from thousands of problems. In so doing, the beneficial Problem Database provided valuable support (see p. 171). On the one hand, I found suitable examples in the $P D B$. On the other hand, I could point out relevant problems in the $P D B$ and thus give additional information whilst saving space. Of course, the early classics including Sam Loyd, Niels Høeg, Thomas R. Dawson, Luigi Ceriani and Karl Fabel are represented as well as today's Andrey Frolkin and Michel Caillaud.

From my earlier book Eigenartige Schachprobleme (see p. iv for the online version), I have taken on 375 chess problems and added 125 new ones. In about half of the 500 problems, retrograde analysis plays a minor or major role. There are two reasons for this approach. For one thing, I prefer to solve and compose retros. On the other hand, my proposal led to a change in rules on the mutual dependency of castlings and en-passant captures, thus ending a decades-long controversy. Such problems (as no. 360 ) are a very interesting specialty of chess composition and an enrichment compared to the chess game in which only one of these possibilities can be realized.

In order to enable enjoyable reading and solving, both the diagram and the solution are on the same page. Comments that are not mine are in quotation marks. References to predecessors, cooks etc. are welcome. - I would like to thank all those who supported me and made Chess Problems Out of the Box possible, especially Ralf Binnewirtz, Godehard Murkisch, Alfred Pfeiffer and Günther Weeth.

Werner Keym
'Inspiration of a quasi-musical, quasi-poetical or to be quite exact poetico-mathematical type, attends the process of thinking up a chess composition'. (Vladimir Nabokov)

## Chess composition


of chess

## Castling gala

No. 1
W. E. Candy

Author and Source
uncertain 1911


Mate in 2

No. 5
a) William A.

Shinkman
American Chess Journal 1877
b) Werner Keym

Deutsche Schachzeitung 1971


Mate in 3
a) diagram
b) $R f 1 \rightarrow a l$

No. 6
Werner Speckmann
Diagramme und Figuren 1971


Mate in 2
b) all 1 file to left

I selected some out of countless castling problems, you will find other ones (with retro content) in other chapters. Very easy is the symmetrical no. 1: 1.0-0! zugzwang. A symmetrical pendant (1.0-0-0) with five pieces is P1146398.

Here are three further examples with two white rooks only. No. 2: Hanspeter Suwe, Nürnberger Zeitung 1969, wKel Ral Re4 bKc3, \#3; 1.0-0-0!. - No. 3: Hilmar Ebert, feenschach Sonderdruck 1979, wKel Rhl Rh3 bKg5, \#4; 1.0-0!. - No. 4: Werner Keym, Allgemeine Zeitung Mainz 1987, wKel Ral Rd6 bKc5, \#4; 1.0-0-0!.

No. 5 contains two problems, which are here shown as a twin. No. 5a is rich in substance: $1 . \mathrm{Rh} 1$ ! (active sacrifice of the rook) Kxh1/Kg3/Kf3 2.Kf2/Kf1/Rg1 Kh2/Kf3/Ke3 3.Rh4/Rh3/Rg3\#. No. 5a is a mirrored position of the original version wKh4 Re6 Rh3 sKg2. In no. 5b the solution is $1 . \operatorname{Rc} 3!\mathrm{Kg} 1 / \mathrm{Kh} 12 . \operatorname{Rc} 2 \sim 3.0-0-0 \#$ (castling in the $3^{\text {rd }}$ move) or $1 \ldots$ Kh2 2.Kf1 Kh1 3.Rh3\#. Tries are 1.Ra3? Kg1!, 1.Rg4+? Kh3!, 1.Ke2? Kg 3 !. In a) the rook moves to its starting square h1, in b) it is put on the starting square for castling a1. Both versions are attractive.

No. 6: a) 1.Kf2+! Kh2 2.Rh1\#, b) 1.Rb2! Kh1 2.0-0-0\#. Nice!

No. 7
Sam Loyd
New York Albion 1857


Mate in 3

No. 8
Bengt Gï̈bel
Polis-Tidningen 1945


Mate in 2

No. 9
Ado Kraemer
Die Welt 1972 lst Prize


Mate in 3

In no. 7 there is a passive sacrifice of the rook: 1.Rf4! $\mathrm{K} \times \mathrm{h} 12 . \mathrm{Kf} 2 \mathrm{Kh} 2$ 3.Rh4\# or with castling in the $2^{\text {nd }}$ move: $1 \ldots \mathrm{~K} \times$ g3 2.0-0 Kh3 3.R1f3\#. Immortal!

In no. 8 White even sacrifices its strongest officer, but not $1 . \mathrm{Qf} 3$ ? $\mathrm{B} \times \mathrm{f} 3$ ! and castling is not permitted, yet just so with 1.Qe4! $\mathrm{B} \times \mathrm{e} 4$ and now $2.0-0-0$ works alright; after $1 \ldots$. Bf3? simply follows $2 . \mathrm{Kd} 2 \#$. The rook is allowed to jump over a guarded square, but not the king - how 'unjust'!

In no. 9 you may admire perfect economy and use of space: 1.0-0-0! Ke7 2.Rhf1 b6/Ke6 3.Qe4/Qe8\#, 1...Kg7 2.Rdf1 b6/Kg6 3.Qg2/Qg8\#, 1...Ke6/Kg6 2.Qf8 ~ 3.Rhe1/Rdg1\#, 1...Kf6 2.Qf8+ Ke5/Kg5 3.Rhe1/Rdg1\#. Letzfform à la Kraemer! This problem with the key $1.0-0-0$ was published as the $1000^{\text {th }}$ problem in the daily newspaper Die Welt.

No. 10
Jan Knöppel
Springaren 1950


Mate in 3

The symmetrical no. 10 has the asymmetrical solution 1.0-0! $\mathrm{K} \times \mathrm{e} 7$ 2.Sb7 Ke8 3.Rbe1\#. Ke1 und Rb 1 are not allowed to castle.

No. 11
Viktor N. Pilipenko
Deutsche Schachzeitung 1969


Mate in 2

No. 15
Werner Keym
Stuttgarter Zeitung 2002
For Karin


Mate in 3

No. 16
Werner Keym
Allgemeine Zeitung Mainz 1972


Mate in 3

No. $\mathbf{1 1}$ is one of the very rare miniatures showing two real black castlings. Therefore you must accept the coarse key: 1.Ke6! [thr. 2.R $\times$ a8/Q $\times$ h8\#] 0-0-0/0-0 2.Qb7/ Qg7\#. You will find similar problems with Partial Retrograde Analysis on page 106.

Miniatures with real white-black castlings are rare, too. Here three early examples: No. 12: Boris Pustowoj, Molodojsibirjak 1962, wKel Qg7 Rhl Bh2 bKe8 Ra8 Sal, \#2; 1.0-0!. - No. 13: Boris Pustowoj, Omskaja Prawda 1969, wKel Qd6 Rhl a6 bKe8 Ra8 Bd7, \#3; 1.0-0!. This author composed about 250 castling miniatures. No. 14: Werner Keym, Die Schwalbe 1969, wKel Qc7 Ral bKe8 Rh8 a6 h7, \#3; $1.0-0-0!$. - An aristocratic miniature is no. 15: $1.0-0-0$ ! $0-02 . \operatorname{Rg} 1+\operatorname{Rg} 7$ 3.Se7\#. All men move except the queen. Pin model mate - dedicated to my wife Karin.
No. 16 shows both real white castlings. After 1.Se2! [thr. 2.Rh4 ~ 3.Qf2\#] three dualfree variations follow: 1...Bc8 2.Ra4 [thr. 3.Qf2\#] Kg2 3.Qc6\#, 1...Kg4 2.Qg6+ Kf3 3.Rh3\#, 1. . .Ke4 2.Qe6+ Kd3/Kf3 3.0-0-0/0-0\#. Strongest try is 1.Sd3? Ke4! 2.Rh4+ Kf5!. 'The thematic play consists of both long and short castling as an echo and is rich in tries - for a pawnless miniature certainly a rarity.' - A predecessor in two moves is no. 17: Emanuel Lasker, Schweizerische Schachzeitung 1900, wKel Qc8 Ral Rhl Se2 bKe4, \#2; 1.Qe6+!.

Gino von Moellwitz once compared the chess problem with a tree: 'the root is the riddle, the trunk the idea, the flower the art'.

No. 18
Wolfgang Pauly
Deutsches Wochenschach 1910


Mate in 4

No. 19
Erich Zepler
Die Schwalbe 1929


Mate in 4

No. 20
Nenad Petrovic
problem $19591^{\text {st }}$ Prize


Mate in 8

In no. 18-21 Black is allowed to castle. He seems to defend himself successfully by moving his king or his rook from and to the starting square. So the initial position is reached, it is true, but the right to castle is lost. No. 18 shows this idea in a miniature: 1.Qe5? 0-0!; 1.Qb5+! Kf8 2.Qf5+ Ke8 3.Qe5! Bg3/Bc3 4.Qxh8/Qb8\#. Pauly!

In no. 19 the white king even provokes a check of the black rook. 1.Qd6? 0-00!; 1.Kd4! [thr. 2.Qe5+ Kd8/Kf8 3.Rh8/Qh8\#] Ra4+ 2.Ke5 Ra8 3.Qd6! ~/Kd8 4.Qe7/Rh8\#; 2...Rc4 3.Qb8+; 2...d6+ 3.Qxd6; 1...Kf8 2.Qf4+,Qd6+; 1...f1Q 2.Qe5+. Zepler!

In no. 20 the two rooks move and return to their original squares. 1.Qc3? 0-0! and 1.Bd3? Rh1+ 2.Bb1 0-0-0!. Therefore 1.Qb7! Rd8 2.Qb3 Ra8 3.Bd3 [thr. 4.Qf7+ Kd8 5.Qf6+ Kc8 6.Bxa6+ Kb8 7.Qxh8\#] Rh1+ 4.Bb1 Rh8 5.Qc3 Rh7 6.Qf6 [thr. 7.Sxh7 8.Qf8\#] Rf7 7.Qxf7+ Kd8 8.Qf8,Qg8\#. Three times the 'same' position, yet this results in forfeit of one castling right. Petrovic!


## No. 21 <br> Zdravko Maslar \& Nenad Petrovic

Politika 1961
Mate in 6
The same idea as in no. 20, but in six moves only! 1.Qg7? 0-0-0!. 1.Sf6+!? e7×f6 2.Qxc7 $0-0$ !. 1.Se5! (zugzwang) Rf8 2.Sd7 (zugzwang) Rh8 3.Sf6+Kf8 (3...e7×f64.Q×c7!) 4.Sd7+Ke8 $5 . \mathrm{Qg} 7 \mathrm{R} \sim 6 . \mathrm{Q} \times \mathrm{R} \#$. With no good reason at all this superb problem has for a long time stood in the shadow of no. 20.

No. 22
Thomas R. Dawson
Chess Amateur 1923


Mate in 3

No. 23
Andreas Thoma
König \& Turm 2003


Mate in 4

No. 24
Peter Hoffmann
Die Schwalbe 2014


Mate in 4

In no. 22 two squares (e1 and h1) are simultaneously vacated for the white queen by the key move $1.0-0$ !. Therefore after $1 . .$. b3/c5 follows 2.Qe1/Qh1 ~ 3.Qa5/Qa8\#. Such a manoeuvre can work out just only by castling.

No. 23 was the sample to show the double rendering of the clearance of two squares by two castlings. 1.Ba4! d5 2.0-0 d5 $\times \mathrm{c} 4 /$ a5 3 . $\mathrm{Qh} 1 / \mathrm{Qe} 1 \sim 4 . \mathrm{Q} \times \mathrm{c} 6 / \mathrm{Q} \times \mathrm{a} 5 \#, 1 .$. a 5 $2.0-0-0 \mathrm{~d} 5 / \mathrm{Sf7} 3 . \mathrm{Qe} 1 / \mathrm{Sa} 1 \sim 4 . \mathrm{Q} \times \mathrm{a} 5 / \mathrm{Sb} 3$ \#. A great construction.

No. 24: 1.B $\times$ e5? d6!. 1.Sd5! [thr. 2.Sf6+ $\mathrm{K} \times \mathrm{f4} 3 . \mathrm{Be} 3 \#]$ e6 $\times \mathrm{d} 52.0-0 \mathrm{~g} 3 \times \mathrm{h} 2+$ 3.Kh1 ~ 4.Rae1\#. 1...e6 $\times$ f5 2.0-0-0 a1Q,R+ 3.B $\times$ a1 f5 $\times \mathrm{g} 4 / \mathrm{c} 34 . \mathrm{Bg} 6 / \mathrm{Rhe} 1 \#$, $2 . . . f 5 \times \mathrm{g} 4$ 3.Rhe $1+$ Kf5 $4 . \mathrm{R} \times$ e5\#. Here the vacated squares a1 and e1 are occupied by B and Rh as well as the squares e1 and h1 by Ra and K . So the free square el is used differently according to either long or short castling. In this respect no. 24 surpasses no. 23 .


No. 25
Thomas R. Dawson
Chess Amateur 1923
Mate in 4
No. 25 shows double vacation in an entirely different manner: 1.0-0! Kc4 2.Be1 Kd5 3.Bh1 Kc4 and now 4.Qa2\#! King and rook vacate their squares for the bishops, then the bishops vacate their squares for the queen. TRD was the one to do the impossible.

No. 26
Thomas Beumann
Open Chess Diary
04-08-2004


Mate in 3

No. 27
Klaus Wenda
Schach 1966 It Prize


Mate in 6

No. 28
Alois Johandl
FIDE Tourney 1959
$1^{\text {st }}$ Prize


Mate in 4

In the miniature no. 26 wSb 1 and bKc 1 prove to be an obstacle for executing $0-0-0$. Here the job is done by zugzwang: 1.Rb4! Kc2 2.Sbc3 Kd3 3.0-0-0\#.

The same aim is reached by a complex logical procedure in no. 27 (FIDE-Album). $1 . \mathrm{Ra} \times \mathrm{d} 1$ ? b3! and 1.Bd7+? Kd8 2.Bg4+ Ke8 3.Sh5 f5!, therefore 1.Sh5! B $\times \mathrm{h} 5$ 2.Bd7+ Kd8 3.Bg4+ Ke8 4.0-0-0! c6 5.Rd8+ B $\times$ d8 6.Bd7\#.

No. 28 (FIDE-Album) has got the bishop's complete retreat from a8 to h1 for a key, a queen sacrifice and castling by both sides. 1.Bh1! Sa7 (1...0-0? Qa8 Sa7 3.Qg2\#) 2.Qc6 d7 $\times$ c6 3.0-0-0 0-0 4.Rg1\#.

No. 29
Wolfgang Pauly
Deutsches Wochenschach 1911


Mate in 3
b) mirrored (al $\leftrightarrow h 1)$

Again castling by both sides in no. 29:
a) $1.0-0-0!\mathrm{Sa} 2+2 . \mathrm{R} \times \mathrm{a} 20-03 . \mathrm{Rg} 1 \# ; 1 \ldots \mathrm{Sd} 3+$ 2.R $\times \mathrm{d} 3 \mathrm{c} 4 \times \mathrm{d} 3 / 0-03 . \mathrm{Rc} 8 / \mathrm{Rg} 3 \# ; 1 \ldots$. $\mathrm{Sd} 52 . \mathrm{R} \times \mathrm{d} 5$ $0-03 . \mathrm{Rg} 5 \# ; 1 . . . \mathrm{Sc} 62 . \mathrm{b} 5 \times \mathrm{c} 60-03 . \mathrm{Rg} 1 \#$.
b) (mirrored): not $1 . \operatorname{Re} 1$ ? $\mathrm{S} \times \mathrm{f} 2+$ !, but $1 . \mathrm{R} \times \mathrm{h} 6$ ! $\mathrm{S} \times \mathrm{f} 2+/ \mathrm{Se} 3+2 . \mathrm{Kc} 2 / \mathrm{Kc} 1 \sim 3 . \mathrm{Rh} 8 \# ; 1 . . \mathrm{S} \times \mathrm{h6}$ 2.Re2 $\sim 3 . \operatorname{Re} 8 \#$. Subtle modification by mirroring. Cp. no. 38 and 217.

No. 30
Gerald F. Anderson
Westminster Gazette 1917


Mate in 4

No. 31
Vladimir Savchenko
Shakmatny Moscow 1970
${ }^{\text {st }}$ Prize


Mate in 8

No. 32
Hilmar Ebert
Deutsche Schachblätter $19874^{\text {th }} \mathrm{HM}$


Mate in 9

Castling is the only non-capturing move by an officer that cannot be retracted in one move. At least three moves are necessary to reach the initial position. With perfect elegance this is shown in the most famous switchback of castling (no. 30): 1.0-0! Kh4 2.Kf2 g3+ 3.Ke1 g4 4.Rh1\#.
In no. 31 (FIDE-Album) we admire a very brave white king. Not 1.Rd1? Sd2!, but 1.0-0-0! a3xb2+ (1...Sd2? 2.Re1+ Se4 3.Sd7\#) 2.Kc2 ( $2 . \mathrm{K} \times \mathrm{b} 2$ ? Qb8! 3.B $\times \mathrm{b} 8 \mathrm{~g} 6 \times \mathrm{h} 5$ ) b1Q+ (2...Se3+? 3.Kd3 b1Q+4.R $\times \mathrm{b} 1 \mathrm{Bf} 1+5 . \mathrm{R} \times \mathrm{f} 1$ and $6 . \mathrm{Bd} 4 / \mathrm{Sd} 7 \#$ ) 3.Kc3!! and 7 possible checks, but none is successful (3...Qc2+/ Qd3+/Qa1+,Qc1+/Qb4+4.B $\times \mathrm{Q} / \mathrm{K}, \mathrm{R} \times \mathrm{Q} / \mathrm{R} \times \mathrm{Q} / \mathrm{Kd} 3) 3 \ldots \mathrm{Qb} 2+4 . \mathrm{Kd} 3!!$ now 8 possible checks $4 \ldots \mathrm{Qe} 2+!5 . \mathrm{K} \times \mathrm{e} 2 \mathrm{f} 3+6$. Ke 1 (this seems to be the position after 1.Rd1? Sd2!) $6 \ldots$. . Sd2 7.Sd7+ Ke4 8.Bc2\# since the square f3 is now blocked (which makes the difference). A monument in the problem chess history. The provoking key reminds us of famous problems composed by Sam Loyd (P1031114), Ado Kraemer (P1032516) and Lev Loshinsky (P1026036).
There are numerous skittles problems. No. 32 (FIDE-Album) is one of the best showing castling as a key move in a white homebase position. 1.Rh2/Rf1/Qb1? f2+/d2+/f2+!; 1.0-0! e2! 2.Qd2 f2+! 3.R $\times \mathrm{f} 2 \mathrm{f} 3!4 . \mathrm{Rh} 2!\mathrm{f} 45 . \mathrm{Rh} 5!\mathrm{f} 2+6 . \mathrm{K} \times \mathrm{f} 2$ f3 7.Rg5! e1Q+8.Q×e1+ Kf4 9.Q×e5\#; 4...f2+5.K×f2 f4! 6.Rh5! f3 7.Rg5! etc.; 4...e1Q 5.Q×e1 Kf4 6.Qd2+! Ke4! (6...Kg4 7.Qh6 f2+ 8.K×f2 f4 9.Qg6\#) 7.Rh5! f2+8.K $\times \mathrm{f} 2 \mathrm{f} 49 . \mathrm{Qe} 1 \#$. Hilmar Ebert also composed a pendant with wQf1 and wRa1 (no. 33), Schach-Report 1987, \#9; 1.0-0-0!.
Even longer, but much easier to solve are no. 34 Jan Mortensen, Thema Danicum 1983, wKel Rhl sKg6, \#11; 1.0-0! and no. 35 wKel Ral bKc5/6, \#13; 1.0-0-0!. These are the length records for castling problems with three pieces (duals included).

No. 36

Hermann Albertz
Karl Henke
Die Schwalbe 1948
$1^{\text {st }}$ Prize


Helpmate in 2*

No. 37
Frederick Hawes
Frank Ravenscroft
The Problemist 1958


Selfmate in 4

No. 38
Klaus Wenda
problem 1976 l $^{\text {st }}$ Prize


Black retracts 1 move, then helpmate in 1
b) mirrored (al $\leftrightarrow h 1)$

In No. 36 (FIDE-Album) the two castlings take a major role in the play. In the solution it is white castling 1.Rh7! 0-0 2.Re7 2.Qc8\#, in the set play (with White to play) black castling $1 . . . \mathrm{Q} \times$ h4 2.0-0 $\mathrm{Qh} 7 \#$. A little jewel.

No. 37 (FIDE-Album): 1.Qh8! Bh7 2.0-0-0+ Sf1 3.Bd6 a3 4.b2×a3 b2\#. Selfmate problems with castling are rare (except in Valladao problems).

No. 38: a) Backward $\mathrm{Re} 8 \times \mathrm{Qh} 8$, forward $\mathrm{Kc} 8 \mathrm{Q} \times \mathrm{e} 8 \#$; White must have castled. b) Backward $\mathrm{Ke} 8-\mathrm{e} 7$, forward $0-0-0 \mathrm{a} 8 \mathrm{Q} \#$; White must have castled as well, but his queen was captured before; backward $\mathrm{Rd} 8 \times \mathrm{Qa} 8$ ? is illegal because of 8 wPs . Cp . no. 217.


No. 39
a) Frederick Baird Morning Post 1910
b) Julio Sunyer Chess Amateur 1923

White and Black retract 1 move each, then helpmate in 1. b) $w K \rightarrow h 5$
Hilmar Ebert presented this classic as a twin 1983 for the first time: a) backward $\mathrm{Kg} 7 \times \mathrm{Rh} 6$ Rd6 $\times$ Qh6, forward Rd6-d8 Qh6-e6\# (original position: Kf5/Kh2), b) backward Kg6×Rh5 Rh $8 \times$ Qh5, forward 0-0 Qh5-h7\#. The super classic!!

No. 40
Alexey Selezniev
Tidskrift för Schack 1921


Win

No. 41
Werner Keym
Allgemeine Zeitung Mainz 1963 (v)


Win

No. 42
Noam Elkies
Shahmat 1987 lst Prize


Win

No. 40: This peppy study presents a typical double effect of castling. After 0-0-0 the white king attacks the rook and the white rook guards the pawn or attacks the king. Not 1.0-0-0? Ra2 2.d7/Kb1 Ra1+/Ra8! =, but 1.d7! Kc7 2.d8Q+/R K $\times$ d8 $\mathbf{3 . 0 - 0}-\mathbf{0}+!\mathbf{K} \sim \mathbf{4 . K} \times \mathbf{b} \mathbf{2}$ 1:0. Later on this was called the Selezniev motif. Many later studies show this motive with bRb2 or bRh2 or wRb7 or wRh7. According to the endgame tablebases the position of no. 40 is a draw, as they do not take into account the castling rule (cp. no. 43).

In no. 41 the Selezniev motif is supplemented by sacrifices of knight and rook. 1.Sd4! $\mathbf{K} \times \mathbf{d 4}$ (2...Rh2? 3.Ra4 and mate in 48 moves) 2.0-0-0+ Kc3 3.Rd3+! K $\times$ d3 4.K $\times$ b2 Kd4 5.Ka3 Kc5 6.Ka4 Kb6 7.Kb4 opposition and win. The version of 1963 ( $w$ Kel Ral Scl b3 bKe4 Rb2 d3) had the coarse key move $1 . \mathrm{S} \times \mathrm{d} 3$.

No. 42 (FIDE-Album) is a marvellous study: self blocks of bR, forks of S, Selezniev motive on g 2 and h 2 , mate by castling. 1.g7! (1.Sg5? g2 2.Sf3+ Kg3 3.g7 Rb8 4.Sg1 Rg8 5.Ra7 Kg4 and wPg7 will be conquered.) 1...g2 2.g8Q (2.g8R/0-$0-0$ ? Rb8 =) 2...Rc2! (2...g1Q+? 3.Q $\times \mathrm{g} 1+\mathrm{K} \times \mathrm{g} 14.0-0-0$ ! 1:0) 3.Sf6 (3.Ra2 $\mathrm{R} \times \mathrm{a} 24 . \mathrm{Q} \times \mathrm{a} 2 \mathrm{Kh} 1=\mathbf{g} 1 \mathrm{Q}+\mathbf{4 . Q} \times \mathbf{g} \mathbf{1}+\mathbf{K} \times \mathbf{g} 15 . S g 4!$ with an unexpected reciprocal zugzwang: all moves of $\mathrm{bR}, \mathrm{bK}$ and bPc 4 result in the loss of the R or in mate. 5...Rb2 6.0-0-0+; 5...Rc3 6.Kd2+; 5...Rc4 6.Kd2+/Ke2+ Kg2 7.Se3+; 5...Rg2 6.0-0-0\#; 5. . Kg2 6.Se3+; 5. . .Kh1 6.Se3 Rh2 7.0-0-0\#, 5. . c4 6.Se3 Rf2/Rh2 7.0-$0-0+\mathrm{Kh} 2 / \mathrm{Kf} 28 . \mathrm{Sg} 4+$.

No. 43
Ernest Pogosjanz
EG 1979


Win
Incorrect

No. 44
Josef Moravec
Duvtip 1921


Win

No. 45
Réti- Tartakower
Free Game, Vienna 1911


Position after
7. . $Q \times e 5$ ?

No. 43: The author's solution is short: 1.Se3! $\mathbf{R} \times \mathbf{h} 2$ (1... Re6 2.Kf2+ Kxh2 3.Sg4+ Kh3 4.Kf3 Kh4 5.Kf4 Kh5 6.Kf5) 2.0-0-0\#! But now the endgame tablebases become involved with a surprising double aspect. On the one hand they judge the position after $1 . \mathrm{Se} 3 \mathrm{R} \times \mathrm{h} 2$ (with subsequent mate by $2.0-0-0 \#$ ) as a draw since they do not account for the castling rule. On the other hand they present a win by 1.h4! with mate in 33 moves. Tim Krabbé gave this comment: 'So this is a study with two solutions. A human solution that is beyond the grasp of the tablebase, and a tablebase solution that is beyond the grasp of humans.' Stephen Rothwell points out that the 'cook' $1 . \mathrm{h} 4$ is eliminated by putting the knight on d1 or g2. After 1.Se3! Re6 the dual $2 . \mathrm{Kf} 2+$ or $2 . \mathrm{h} 4$ however remains.

No. 44: 1.Lb8! (1.Rh3? $0-0-0=$ ) d2 (1...Rxb8/Ra6+ 2.Rh3/Bd6 1:0) 2.Bd6! 0-0-0 3.Rc3\#. Cunningly designed.
'Réti's Mate' - under this name the following combination (no. 45) entered into the history of chess: 1.e4 c6 $2 . d 4$ d5 (Caro-Kann) 3.Sc3 d5 $\times$ e4 4.S $\times$ e4 Sf6 5.Qd3 $\mathbf{e 5}$ ? Mistakes may stimulate the game of chess, yet they will kill the chess problem! $\mathbf{6 . d 4} \times \mathbf{e 5}$ Qa5+ 7.Bd2 Qxe5!? (pins and threatens the wS) 8.0-0-0! (thereby the wK gets away from the pinning and seems to give up the $S$ ) $\mathbf{S} \times \mathbf{e} 4$ ?? Now not 9.Re1? Be7 10.R $\times$ e4 Qc7, but a mate in 3 moves: 9.Qd8+!! (sacrifice of the Q) $\mathbf{K} \times \mathbf{d 8}$ 10.Bg5+ Kc7 (Ke8? 11.Rd8\#) 11.Bd8\#! 'An ordinary move in a problem will never be fascinating, a problem move in the game will do so anyway.'

## Four real castlings in directmate problems and endgame studies

In a chess game two castlings at most can be executed, four, however, in a chess composition.

No. 46
Knud Hannemann
Skakbladet 1921


Mate in 4

No. 47
Juan Rosetti
Chess Correspondent 1947


Mate in 4

As to directmate problems the classic no. 46 (FIDE-Album) is the first rendering of four real castlings as to be seen with the combinations b0-0-0/w0-0-0 und b0$0 / \mathrm{w} 0-0$. Black castles for the sake of defending and checking, White castles to avoid checking. After 1.Qd5! [thr. 2. $\mathrm{Q} \times \mathrm{d} 7+/ \mathrm{Q} \times \mathrm{f} 7+3 . \mathrm{Q} \times \mathrm{f} 7 / \mathrm{Q} \times \mathrm{d} 7 \#$ ] there are four variants: two are thematic ( $1 \ldots 0-0-0$ and $1 \ldots 0-0$ ), two are side lines ( $1 \ldots \mathrm{Rh} 7$ and $1 . . . f 7 \times \mathrm{g} 6)$. 1.Qd5! 0-0-0 2.0-0-0 (2.0-0? $\mathrm{R} \times \mathrm{h} 43 . \sim \mathrm{Rh} 1+$ ) b7×a6 3.Be5 ~ 4.Qa8\#, 2...f5 3.Bf3 Rd~ 4.Q×d7\#; 1...0-0 2.0-0 (2.0-0-0? Rac8 3.~R $\times \mathrm{c} 5+$ ) R×a6 3.Qh5; 1...Rh7 2.g6×h7 0-0-0 3.Q $\times$ d7+ R $\times$ d7 4.h8Q,R\# (dual); $1 . . . f 7 \times \mathrm{g} 6$ 2.Sc7+,Q×d7+,Qe5+ (dual).

No. 47 (FIDE-Album), the second classic, has got a similar structure. It is all about Black's threatening of check. 1.Qc3! [thr. 2.Q $\times \mathrm{f6} 3 . \mathrm{Qe} 7, \mathrm{Q} \times \mathrm{h} 8 \#] 0-0-0$ 2.0-0-0 [thr. 3.Qa5 4.Qc7\#] (2.0-0? Rhg8 3.Qa5 $\mathrm{R} \times \mathrm{g} 3+$ ) Kb8 3.Qa5,Qb2+ (dual); 1...0-0 2.0-0 [thr. 3.Qxf6 4.Qg7\#] (2.0-0-0? Rb8 3.Q×f6 Rb1+) Rfb8 3.Q×f6 Kf8 4. Qh8\#; 1...Rb8 2.Q $\times$ f6 Rb1+3.R $\times$ b1 0-0 4. $\mathrm{Qg} 7 \# ; 1 \ldots \mathrm{Kf} 82 . \mathrm{B} \times \mathrm{a} 8[\mathrm{thr} .3 . \mathrm{Q} \times \mathrm{f} 6$ 4. $\mathrm{Qd} 8, \mathrm{Q} \times \mathrm{h} 8 \#]$ Rg8 3.Q $\times \mathrm{f} 6, \mathrm{Qb} 2, \mathrm{Rb} 1$ (dual). With a supplementary bBa 2 all duals will disappear (Werner Keym, Die Schwalbe 2006).

No. 48
Werner Keym
Die Zeit 2006


Mate in 3

No. 49
Werner Keym
Hannoversche Allgemeine
Zeitung 2007


Mate in 5

No. 48 (FIDE-Album) is the first dual-free directmate problem with four real castlings. 1.Bb5+! Kd8 2.0-0-0+ Kc8 3.Q×h8\#; 1...Kf8 2.0-0+ Kg8 3. Qg3\#; $\quad 1 \ldots \mathrm{~B} \times \mathrm{b} 5 \quad 2 . \mathrm{R} \times \mathrm{a} 5$ [threatens $3 . \mathrm{R} \times \mathrm{a} 8, \mathrm{Q} \times \mathrm{h} 8 \#] \mathrm{Kd} 8 / 0-0-0 / \mathrm{Kf} 8 / 0-0$ $3 . \mathrm{R} \times \mathrm{a} 8 / \mathrm{Ra} 8 / \mathrm{Q} \times \mathrm{h} 8 / \mathrm{Rg} 1 \#$. The thematic try $1 . \mathrm{Bh} 5+$ ? ( $1 . . . \mathrm{Kd} 8$ ? 2.0-0-0+ Bd3 $3 . \mathrm{Q} \times \mathrm{h} 8 \#$ ) Kf8! only fails because the white king is not allowed to jump across the square f1 guarded by bBa6. [Werner Keym, Die Schwalbe 2006, wBb5 (instead of $w B e 2$ ), \#2; thus a correct two-mover (with Black on the move) is obtained (= no. 48a)]. There is no combination of two castlings as in no. 150 and 151 , but one castling in each of the four variants. However, a stronger difference between the mating moves $3 . \mathrm{R} \times \mathrm{a} 8 \#$ and 3 .Ra8\# would be desirable.

This desire led to the question of whether a chess problem can be realized whose thematic variants (with castling) are of full length and whose non thematic variants (without castling) are of short length in such way that Black's best and longest defense requires castling? After more than 400 tries of construction (motto: ' $10 \%$ inspiration, $90 \%$ transpiration') I succeeded in composing such a problem, the dualfree five-mover no. 49 (FIDE-Album): 1.Bb5+! Kd8 2.0-0-0+ Kc8 3.Q×h8+ Sg8 $4 . \mathrm{Q} \times \mathrm{g} 8+\mathrm{Kb} 75 . \mathrm{Rd} 7 \# ; 1 . . \mathrm{Kf8} 2.0-0+\mathrm{Kg} 83 . \mathrm{Qg} 3+\mathrm{Sg} 44 . \mathrm{Q} \times \mathrm{g} 4+\mathrm{Kh} 75 . \mathrm{Qg} 6 \# ;$ $1 \ldots . \mathrm{S} \times$ b5 $2 . \mathrm{R} \times$ a5 [thr. $3 . \mathrm{R} \times \mathrm{a} 8 \#$ and $3 . \mathrm{Q} \times \mathrm{h} 8+\mathrm{Sg} 84 . \mathrm{Q} \times \mathrm{g} 8 \#] 0-0-0$ 3.Ra8+ Kb7 4.Qf3+ Rd5 5.Q $\times$ d5\#; 2...0-0 3.Rg1+ Sg4 4.R $\times \mathrm{g} 4+\mathrm{Kh} 75 . \mathrm{Qg} 7 \#$. If after $2 . \mathrm{R} \times \mathrm{a} 5$ Black does neither play $2 \ldots 0-0-0$ nor $2 \ldots 0-0$, then there will be a short mate in 3 or 4 moves. Therefore all four castlings are necessary and real - this has been unique up to now. No. 48 and 49 are my best chess problems without any retrograde aspect.

No. 50
Werner Keym
Die Schwalbe 2006


Win

No. 51
Oleg Pervakov
Die Schwalbe 2008
$200^{\text {sh }}$ TT Prize


Draw

No. 52
Martin Minski
(after Oleg Pervakov)
Die Schwalbe 2017


Who wins?

No. 50 seems to be the first endgame study with four real castlings: 1.Bb5+ Kd8 2.0-0-0+ Kc8 3.Qxh8+ and mate or $\mathbf{1 . . . K f 8} \mathbf{2 . 0 - 0 +}$ Kg8 3.Qf3 (3.b4/Qh3? $\mathrm{Q} \times \mathrm{c} 5+=$ ) Se5 (3...Q $\times \mathrm{c} 5+4 . \mathrm{Kh} 1 \mathrm{Sd} 6 / \mathrm{Se} 55 . \mathrm{Rg} 1+; 3 \ldots \mathrm{Kg} 74 . \mathrm{Qg} 4+\mathrm{Kh} 65 . \mathrm{Rf} 3)$ 4.Qg3+ Sg6 5.Q $\times$ c7 1:0, e.g. $5 \ldots \mathrm{~B} \times$ b5 $6 . \mathrm{Q} \times$ b7 $\mathrm{B} \times \mathrm{f} 1 / \mathrm{Rd}, \mathrm{e} 87 . \mathrm{Q} \times \mathrm{a} 8+/ \mathrm{c} 4$. After $\mathbf{1} . . . \mathbf{B} \times \mathbf{b 5}$ follows $\mathbf{2 . R} \times \mathbf{a} 5 \mathbf{0 - 0}(2 \ldots \mathrm{Qg} 3+3 . \mathrm{Q} \times \mathrm{g} 31: 0$, e.g. $3 \ldots \mathrm{~S} \times \mathrm{a} 54 . \mathrm{R} \times \mathrm{h} 7 \mathrm{Rf} 8$ 5.Qc7) 3.Rg1+ and mate or $\mathbf{2} . . \mathbf{0 - 0} \mathbf{- 0}$ 3.Ra8+ Qb8 4.R $\times$ b8+ 1:0, e.g. $4 \ldots \mathrm{~K} \times$ b8 $5 . \mathrm{b} 3 \times \mathrm{c} 4 \mathrm{Ba} 66 . \mathrm{c} 5 \times \mathrm{b} 6 \mathrm{Ka} 8 / \mathrm{Rc} 8 / \mathrm{h} 57 . \mathrm{Qg} 7 / \mathrm{c} 5 / \mathrm{Qg} 7$. White captures the black queen on d8, c7, b8 and g3.

No. 51 (FIDE-Album): 1.B $\times$ e7! Qh7! 2.B $\times \mathbf{g 5}$ (2.Bd6? Bd4 3.Qg2 Bc3+ 4.Kf1 Qf5+ 5.Qf2 Qe4 6.Qe2 Q $\times$ e2+ 7.K $\times$ e2 $\mathrm{B} \times \mathrm{a} 18 . \mathrm{R} \times \mathrm{a} 1 \mathrm{R} \times \mathrm{h} 49 . \mathrm{B} \times \mathrm{c} 50-0-0$ ! 0:1) 2...B $\times$ g5 3.h4 $\times$ g5 0-0 (3...0-0-0 4.0-0! $\mathrm{Q} \times$ h3 5. Qg2! Qe3+ 6.Rf2! =) 4.0-00! Rab8 5.Qc2! Qg7 6.Rd6! Qa1+ 7.Kd2 Q×a5+ 8.Kd1! Qa1+ 9.Kd2 Qa5+ 10.Kd1 Rbd8 (otherwise positional draw) 11.Qg6+ with perpetual check. In an ideal draw study, however, white castling is necessary to avoid losing and black castling to avoid losing, too. A slight flaw: in no. 51 (after $3 . \mathrm{h} 4 \times \mathrm{g} 5$ ) there is a draw by $3 \ldots 0-0$ as well as by $3 \ldots$ Qh4+.

In no. 52 this challenge is mastered. 1.Qa2? 0-0-0! 2.0-0! Rd3! 3.Qg2 Qa7+ 4.Rf2 Qc5 5.a6 Qc3 6.Raf1 Rg3 0:1; 1.Q×b4 ? 0-0-0 2.0-0 $\mathrm{Q} \times \mathrm{h} 3$, Qd3 0:1. 1.Qb2! 0-0-0! 2.0-0! Rd3 (2... Q $\times$ h3 3. Qg2 Qe3+ 4.Rf2 Rh3 5.Q $\times \mathrm{c} 6+=)$ 3.Qf6 $\mathbf{Q} \times \mathbf{h} 3$ (3...Rg3+4.Kf2 Rg2+5.K×g2 Q $\times$ h3 $+6 . K f 2=$ ) 4.Q $\times \mathbf{c 6}+=; \mathbf{1 . . . 0 - 0 ! ~ 2 . 0 - 0 - 0 !}$ $\mathbf{R} \times \mathbf{a} 5$ 3.Qd4! $=$ (e.g. $3 \ldots . \mathrm{Qh} 6+4 . \mathrm{Kb} 1 \mathrm{Rfa} 85 . \mathrm{Qc} 4+\mathrm{Kh} 86 . \mathrm{Qd} 4+\mathrm{Kg} 87 . \mathrm{Qc} 4+$ with perpetual check). Conclusion: In this study all four castlings are necessary - and nobody wins!

## Four real castlings in helpmate two-movers

No. 53 is probably the first problem with two solutions, no. 54 perhaps the second? In no. $53-55$ there are the combinations $0-0 / 0-0$ and $0-0-0 / 0-0-0$, in no. $570-0 / 0-0-0$ and $0-0-0 / 0-0$. In no. 57 w . castling unpins the Rc3. In no. 58 the same piece is put on three different squares of a diagonal.

No. 53
Karl Kubbel
Magyar Sakkvilág 1929


Helpmate in 2
2 solutions
$1.0-0-00-0-02 . \mathrm{Qc} 3 \mathrm{~B} \times \mathrm{a} \# \#$
$1.0-00-02 . \mathrm{Q} \times \mathrm{g} 3 \mathrm{~g} 6 \times \mathrm{h} 7 \#$
No. 56
Hanspeter Suwe
‘ 0 -0’ 1981 TT $3^{\text {rd }}$ HM


Helpmate in 2
2 solutions
b) mirrored (al $\leftrightarrow h 1)$
a) $1.0-0-0+\mathrm{Bd} 62 . \mathrm{Rd} 7$ Ra8\#
a) $1.0-0 \mathrm{Bb} 22 . \mathrm{Rf7} 7 \mathrm{Rh} 8 \#$
b) $1 . \operatorname{Rc} 80-0-02 . \operatorname{Re} 8 \mathrm{R} \times \mathrm{d} 7 \#$
b) $1 . \mathrm{Ke} 80-02 . \mathrm{Rd} 8$ Rael $\#$

No. 54
Werner Keym
Die Schwalbe 2006


Helpmate in 2
2 solutions
1.0-0-0 0-0-0 2. Sf5 $\mathrm{Qc} 2 \#$
$1.0-00-02.5 \mathrm{Se} 8 \mathrm{Q} \times \mathrm{f} 8 \#$
No. 57
Werner Keym
Die Schwalbe 2006


Helpmate in 2
b) Ral $\rightarrow$ hl
a) 1.0-0 0-0-0 $2 . \mathrm{e} 2 \mathrm{R} \times \mathrm{g} 3 \#$
b) 1.0-0-0 0-0 $2 . \mathrm{Sa} 3 \mathrm{R} \times \mathrm{c} 5 \#$

No. 55
Iwan I. Soroka
Schach-Echo 1981


Helpmate in 2
b) $S f 7 \rightarrow d 7$
a) $1.0-000-02 . \mathrm{Bg} 7 \mathrm{~h} 7 \#$
b) $1.0-0-000-0-02 . \mathrm{Bc} 7 \mathrm{Ba6} \mathrm{\#}$

## No. 58

Werner Keym
Die Schwalbe 2006


Helpmate in 2
b) d) $B h 3 \rightarrow a 2 / c 4 / f 7$
a) 1.Rf8 0-0-0 2.Sb1 Rhe1\#
b) $1 . \mathrm{Sb} 30-02 . \mathrm{Rd} 8 \mathrm{Rae} 1 \#$
c) $1 . \mathrm{Bb} 5 \mathrm{a} 4 \times \mathrm{b} 52.0-0-0 \mathrm{Ra} 8 \#$
d) $1.0-0 \mathrm{~g} \times \mathrm{f} 7+2 . \mathrm{Kh} 8 \mathrm{R} \times \mathrm{h} 5 \#$

No. 59
Werner Keym
Die Schwalbe 2006 (c)


Helpmate in 2
1.0-0 0-0 2.Se8 $\mathrm{Q} \times \mathrm{f} 8 \#$ or $1.0-0-000-0-02 . \mathrm{d} 3 \times \mathrm{c} 2 \mathrm{Qc5} \mathrm{\#}$

No. 60
Werner Keym
Die Schwalbe 2006


Helpmate in 2
1.Qc5 0-0-0 2.0-0 Rdg1\# or
$1.0-0-00-02 . c 4 \times b 3 \mathrm{Q} \times 66 \#$

No. 61
Werner Keym
(after A. Hazebrouck)
Die Schwalbe 2006


Helpmate in 2 Duplex
1.b0-0-0 Qa2 2.Kb8 Qa8\# or
1.b0-0 S $\times$ g6 2.Rf7 Rh8\# or
1.wQa2 R $\times$ a2 2.0-0-0 Ra1\#
or 1.w0-0 $\mathrm{S} \times \mathrm{h} 4$ 2.Kh2 $\mathrm{S} \times \mathrm{f} 3 \#$

In no. 59 and 60 for the first time a realization of four real castlings in a helpmate two-mover is achieved without the condition of two solutions (no. 53-54) or a twin version (no. 55-58) - by means of Partial Retrograde Analysis (see p. 106). In no. 59 the bPs captured 10 pieces, among them the promoted officer(s) X. Genesis of the position: either a) $\mathrm{wPh} \times \mathrm{Qg} \rightarrow \mathrm{g} 8 \mathrm{X}, \mathrm{wPa} 2 \rightarrow \mathrm{a} 8 \mathrm{X}$ ( $\mathrm{b} 0-0-0$ not permitted) or b ) $\mathrm{wPa} \times \mathrm{Qb}, \mathrm{wPh} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$ (b0-0 not permitted). Solution: a) 1.0-0!, b) 1.0-0-0!.

In no. 60 the bPP captured 6 times; besides bOfficer $\times \mathrm{Pd}$ and $\mathrm{wPe} / \mathrm{g} \times$ Sf. Genesis: either $\mathrm{wPa} 2 \rightarrow \mathrm{a} 8 \mathrm{X}$ (then 1.Qc5!) or $\mathrm{wPh} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$ (then $1.0-0-0$ !).

As to no. 61 you should give the matter considerable thought. Let us begin with the initial array of the game and try to reach the position of the diagram. Whichever way you will go, only one of the four castlings will be permitted (Partial Retrograde Analysis): a four-part problem for indefatigable retro fans. The related problem by A. Hazebrouck is P0001291.

No. 64 is an extraordinary helpmate two-mover presenting 1 or 2 or 3 or 4 solutions and castlings.

Four real castlings in helpmate three-movers (cp. P0525390 and P0004532) turn out to be easier for the composer than in two-movers.

## Curious castling tasks

No. 62
Ralf Krätschmer
Die Schwalbe 2010 (v)


Mate in how many moves?
a) $0-0-0 \& 0-0$
permitted
b) only 0-0-0 permitted
c) only $0-0$ permitted
d) $0-0-0 \& 0-0$ not per-
mitted

No. 63
Werner Keym
König \& Turm 2007 (v)
$3^{\text {rd }}$ Prize


Mate in how many moves,
if a) $w 0-0$ is executed, if b) w0-0-0 is executed, if c) $b 0-0-0$ is executed, if d) $b 0-0$ is executed?

No. 64
Werner Keym
Die Schwalbe 2006


Helpmate in 2
How many solutions?
b) $\mathrm{Pe} 4 \rightarrow \mathrm{ft}$
c) $\mathrm{Pe} 4 \rightarrow g 4$
d) $\mathrm{Pe} 4 \rightarrow h 4$

No. 62: The number of the castling rights decreases, the length of the solutions increases. a) \#2 1.Qe5+! Kd3/Kf3 2.0-0-0/0-0\#; b) \#3 1...Kf3 (Kd3? 0-0-0\#) 2.Qe2+ K×f4 3.Rf1\# (3.0-0\#?); c) \#4 1...Kd3 (Kf3? 2.0-0\#) 2.Ra3 Kc2 3.Qe2+ Kb1 4.0-0\#; d) \#5 1...Kd3 2.Qe2+ Kxd4 3.Qe5+ Kd3 4.Rd1+ Kc2 5.Q×c3\#. A pendant with black castlings is P1256196 by Ralf Krätschmer, too.

No. 63: With w0-0 the solution works in 3 moves, with w $0-0-0$ in 4 , with b0-0-0 in 5 , with b0-0 in 6 . a) $1 . \mathrm{Bb} 5+!\mathrm{Kf8} 2.0-0+\mathrm{Kg} 83 . \mathrm{Q} \times \mathrm{g} 3 \#$; b) $1 . . . \mathrm{Kd} 82.0-0-0+$ Kc8 3.Q $\times$ h8+ Kb7 4.Rd7\#; c) $1 . . . \mathrm{S} \times \mathrm{b} 52 . \mathrm{R} \times \mathrm{a} 5$ [thr. $\mathrm{R} \times \mathrm{a} 8 \# / \mathrm{Q} \times \mathrm{h} 8+\#] 0-0-0$ 3.Ra8+ Kb7 4.Qf3+ Rd5 5.Qxd5\#; d) $2 \ldots 0-03 . Q \times$ g3+ Kh8 4.Qe5+ Rf6 5.R $\times$ a8+ Kg 7 6.Rg1\#. 'An incredible curiosity.' [The original stipulation 'Mate in 6 moves' proved to be unsuitable.]

No. 64: The more steps the pawn takes to the right, the more solutions and castlings arise. a) 1.0-0-0 $\mathrm{B} \times \mathrm{b} 52 . \mathrm{Sc} 1 \mathrm{R} \times \mathrm{c} 1 \#$ ( $=1$ solution with 1 castling); b) 1.Sa5 0-0-0 2.Rf8 Rhe1\# plus a) ( $=2 \mathrm{~s}$. with 2 c .); c) 1.Bd7 0-0 2.Td8 Rae1\# plus a) plus b) ( $=3$ s. with 3 c .); d) $1.0-0 \mathrm{~B} \times \mathrm{b} 3+2 . \mathrm{Kh} 8 \mathrm{R} \times \mathrm{h} 4 \#$ plus a) plus b) plus c$)(=4 \mathrm{~s}$. with 4 c .). Magic.

## From the Allumwandlung to the Babson Task

Composers and solvers of chess problems are always fascinated by pawn promotion, especially by the four promotions to queen, rook, bishop and knight in the same problem, the so-called Allumwandlung (AUW). This is a small collection out of hundreds of AUW problems.


Mate in 2
b) $-d$ ) $Q \rightarrow h 7 / a 7 / c 3$

No. 68
Wouter J. Mees
Probleemblad 1959


Mate in 2
b) $\mathrm{Ba} 8 \rightarrow g 8$

No. 69
Hilmar Staudte
Deutsche Schachzeitung 1964


Mate in 2
4 solutions

One underpromotion is possible with three pieces only (no. 65): Charles Tomlinson, Amusements in Chess 1845, wKc6 c7 bKa7, \#2. Not 1.c8Q? stalemate, but 1.c8R! Ka6 2.Ra8\#. - A hundred years later two underpromotions are shown with four pieces (no. 66): Allan Th. Werle, Tidskrift för Schack 1945, wKf2 e7 bKh1 $d 2$, \#4. Not 1.e8Q? d1S+2.Kg3 Se3 3.Q $\times$ e3 stalemate, but 1.e8R! d1S+2.Kg3 Se3 3.R×e3 Kg1 4.Re1\#

In no. 67 the queen is transferred three times. Thereby four different promotions ( S , B, R, Q) become possible: a) 1.f8S+! Kf6 2.Qg7\#, b) 1.f8B! Kf6 2.Qf5\#, c) 1.f8R! Kd6 2.Rf6\#, d) 1.f8Q! Kd7 2.Qcc8\#. Four different mate squares. Unsurpassed.

In no. 68 the promotions are equally distributed to version a) 1.d8B! Kd7 2.f8S\# and to version b) $1 . \mathrm{d} 8 \mathrm{R}$ ! $\mathrm{K} \times \mathrm{e} 72 . \mathrm{f} 8 \mathrm{Q} \#$.

The multiple solution problem no. 69 starts with promotions: I 1.d8R! Ke7 2.Qf6\#; II 1.d8B! Kd7 2.Qd5\#; III 1.f8Q! K $\times$ d7 2.Qd5\#; IV 1.f8S+! Ke7 2.Qf6\#.

No. 70
Niels Høeg
Nordiske Schackbund 1905
$6^{\text {th }} H M$


Mate in 3

No. 71
Zdravko Maslar
Bilten 1962
$1^{\text {st }}$ Prize


Mate in 3

No. 72
Horst Bäcker
Schach-Echo 1976
$3^{\text {rd }}$ Prize


Mate in 4

For the first time no. 70 shows the (alternative) AUW of a white pawn on the same promotion square in the same move with a non capturing key - dual-free with 12 pieces only: 1.f7! [thr. 2.f8Q ~ 3.Qe7\#] Kd6 2.f8Q+ Kc6 3.Qc5\#; 1...e5×f4 2.f8R Kd6 3.Rf6\#; 1...e5×d4 2.f8B Kf6 3.Ra6\#; 1...Kf6 2.f8S e5×d4 3.Rf7\#. The classical AUW! According to his own words Niels Høeg needed twelve years to find this pattern of construction. Later on it was often used in the same or modified form.
The AUW was achieved even in the form of a miniature (no. 71): 1.Qh5! Kc7 2.Qc5 Kb8/Kd8 3.d8Q/c7\#; 1...Ke7 2.Qc5+K×e6/Kd8 3.d8S/c7\#; 1...K×c6 2.d8B Kd6 3.Qd5\#; $1 \ldots$. K $\times$ e6 2.d8R Ke7 3.Qe8\#. Laid down by the hand of a magician!

As far as I know the powerful problem no. $\mathbf{7 2}$ was the first to render a completely dual-free AUW with a black pawn: 1.Qxc5!
1...f2 $\times \mathrm{g} 1 \mathrm{Q} 2 . \mathrm{f} 6 \mathrm{Qf} 23 . \mathrm{Rf} 5 \mathrm{Qf} 3 / \mathrm{Qf4} / \mathrm{Q} \times \mathrm{f} 54 . \mathrm{R} \times \mathrm{f} 3 / \mathrm{R} \times \mathrm{f} 4 / \mathrm{R} \times \mathrm{f} 5 \#$;
$1 \ldots \mathrm{f} 2 \times \mathrm{g} 1 \mathrm{R} 2 . \mathrm{S} \times \mathrm{g} 3+\mathrm{h} 4 \times \mathrm{g} 33 . \mathrm{Qe} 7 \mathrm{e} 2+4 . \mathrm{Q} \times \mathrm{e} 2 \#$;
1 ...f $2 \times$ g1B $2 . \mathrm{Q} \times \mathrm{a} 5 \mathrm{~B} \sim 3 . \mathrm{Q} \times \mathrm{b} 4 \mathrm{~B} \sim 4 . \mathrm{Q} \times \mathrm{e} 1 / \mathrm{Qe} 1 \#$;
1 ...f $2 \times \mathrm{g} 1 \mathrm{~S} 2 . \mathrm{Q} \times \mathrm{e} 3 \mathrm{~S} \times \mathrm{e} 2 / \mathrm{S} \times \mathrm{h} 33 . \mathrm{Kd} 2 / \mathrm{S} \times \mathrm{g} 3+\sim / \mathrm{h} 4 \times \mathrm{g} 34$. $\mathrm{Qe} 1 \#$.
Besides there are three thematic tries which Black parries by the appropriate promotion: 1.Qc7/Qe6/Qh8? f2xg1Q/B/S!.
'Problem chess unites essentials of the riddle, the art and the science'.
(Werner Speckmann)

No. 73
Matjaz Zigman
Delo-Tovaris 1970
${ }^{\text {st }}$ Prize


Mate in 3

No. 74
Friedrich Köhnlein
Münchner Neueste
Nachrichten 1903


Mate in 4

No. 75
Matti Myllyniemi
Suomen Tehtäväniekat 1966
O. Kaila 50 JT ${ }^{\text {st }}$ Prize

a) Mate in 2
b) Selfmate in 2
c) Helpmate in 2
d) Helpstalemate in 2

In a very economical style no. 73 (FIDE-Album) shows white and black promotions:
1.Sd2! [2.g8Q]
1...a1B 2.g8R Ka2 3.Ra8\#;
1...a1S 2.g8Q Sb3 3.Qxb3\#.

And there are two thematic tries: $1 . \mathrm{g} 8 \mathrm{Q}$ ? a1B!; 1.g8R? a1S!.
As early as in 1903 the successive AUW of four white pawns was presented in its Letztform (no. 74): 1.f8Q!
1...Kb4 2.h8B! (2.h8Q? Ka4!) Kxc5 3.b8R Kd6 4.e8S\# 1...Kd2/Kd4 2.Qf2+ Kc3 3.Qe1+ Kd4 4.Bg1\#.

Even in only three moves a successive AUW (with 3 white pawns and 1 black pawn) was achieved without any duals (P1291184).

No. 75 (FIDE-Album): a) 1.e8S e5 2.S $\times$ c7\#; b) 1.e8B e5 2.Bc2 e4\#; c) $1 . \mathrm{e} 5 \mathrm{e} 8 \mathrm{Q}$ $2 . e 4+\mathrm{Q} \times \mathrm{e} 4 \# ;$ d) 1.e5 e8R $2 . \mathrm{e} 4+\mathrm{R} \times \mathrm{e} 4$ stalemate. The change of the stipulation results in an alternative AUW. Highly original.

No. 76
Knud Hannemann
Skakbladet 1922


Mate in 2
b) $-d$ ) turn $90^{\circ}$ (wKh6), $180^{\circ}, 270^{\circ}$ (wKa3)

No. 77
Niels Høeg
Skakbladet 1907
${ }^{\text {st }}$ Prize


White forces the end of the game in 2 moves

## No. 78 <br> Knud Hannemann

Dagens Nyheder 1933


Mate in exactly
1, 2, 3 and 4 moves

No. 76 (FIDE-Album): An astonishing AUW is created by turning the board (clockwise): a) 1.d8Q+! Ke6 2.Qe7\#, b) 1.b8R! Kf4 2.Rf8\#, c) 1.d8B! Kd4 2.Bf6\#, d) 1.f8S! Kd5 2.Bb7\#. The Danish wizard!

In no. 77 the stipulation and the solution are even more amazing: $1 . \mathrm{Qe} 1!\mathrm{e} 2 \times \mathrm{f} 1 \mathrm{Q}$ $2 . \mathrm{K} \times \mathrm{g} 3 \mathrm{Q} \times \mathrm{e} 1 \#$ selfmate, $1 \ldots \mathrm{e} 2 \mathrm{xf} 1 \mathrm{R} 2 . \mathrm{Qxg} 3 \#$ mate, $1 \ldots \mathrm{e} 2 \times \mathrm{f} 1 \mathrm{~B} 2 . \mathrm{K} \times \mathrm{g} 3$ stalemate, 1...e2xf1S 2.Qf2+Kxf2/g3×f2 selfstalemate; $1 \ldots \mathrm{~g} 22 . \mathrm{B} \times \mathrm{e} 2 \#$. This time the actor is a black pawn.

The solution of this curious n-mover no. 78 (FIDE-Album) is: a) 1.e8Q\#, b) $1 . \mathrm{e} 8 \mathrm{R}+$ ! Kd7 2.Re7\#, c) 1.e8B! d5 2.Kc6 ~ 3.Bd7\#, d) 1.e8S! Kd7 (1...d5 2. Kc6 ~ 3.Sc7/Sg7\#) 2.Sc7,Sg7 d5 3.e5 d4 4.e6\#. The weaker the promoted officer, the longer the play. - A counterexample is no. 243.

No. 80
Sigurd Clausen
Nya Dagligt Allehanda 1927
(c) Alexander Hildebrand Tidskrift för Schack 1985


Win

No. 81
Knud Hannemann
(after V. Neidze)
Stella polaris 1968
Special HM


Draw

For a long time the presentation of AUW in an endgame study had been considered to be impossible. The famous composer Henri Rinck is reported to have said that this Himalaya would stay unconquered, even if a million dollar was offered as a prize. So Harold Lommer's famous study was a sensation in 1933 (no. 79): 1.g6 $\times \mathbf{h 7}+$ ! $\mathbf{Q} \times \mathbf{h 7}$ 2.e7 $\times \mathbf{f 8 Q}$ \#; 1...Kg7 2.e7 $\times \mathbf{f 8 B}+$ ! 1:0 ( $2 . \mathrm{e} 7 \times \mathrm{f8Q}+$ ? $\mathrm{K} \times \mathrm{h} 73 . \mathrm{g} 4 \times \mathrm{h} 5 \mathrm{Re} 1+4 . \mathrm{K} \times \mathrm{e} 1$ stalemate); 1...Kh8 2.e7 $\times \mathbf{f 8 R}+$ ! 1:0 ( $2 . \mathrm{e} 7 \times \mathrm{f} 8 \mathrm{Q}+$ ? Kxh7 stalemate); $\mathbf{1 . . . K \times h 7}$ 2.e7 $\times$ f8S+! Kg8! 3.g4 $\times$ h5 R $\times$ h5 4.Kc1 Rb5! 5.Sd7 Kf7 6.Bd6 Ke8 7.Sf6+ Kf7 8.Sd5 1:0.

A second sensational event took place 50 years later, when no. 80 was rediscovered. The original version (with wPg7, bKg8, bPf7) was not sound (1.g6×f7+Q $\times f 7$ !), but becomes correct without these two single moves (1.f6+!) and surpasses later no. 60 as to the key move, content and economy. A. Hildebrand's small correction only concerns the first two single moves. 1.g7+! K $\times \mathbf{g} 7 \mathbf{2 . f 6}+\mathbf{K} \times \mathbf{f 6} \mathbf{3 . f 8 Q}+1: 0$ (3.f8R+? Ke7 $4 . \mathrm{B} \times \mathrm{h} 5 \mathrm{R} \times \mathrm{a} 6+5 . \mathrm{Kb} 1 \mathrm{~K} \times \mathrm{f} 8$ ); 2... Kh8 3.f8R+! (3.f8Q+? Kh7 4.B $\times \mathrm{h} 5 \mathrm{R} \times \mathrm{a} 6+$ 5.Kb1 Ra1+ 6.K $\times$ a1 stalemate) Kg7 3.B $\times$ h5 1:0; 2. . . Kh6 3.f8B+! (3.f8Q+? Kh7 etc. stalemate) Kg5 4.B $\times$ h5 K $\times$ h5 5.B $\times$ b4! $\mathbf{R} \times \mathbf{a 6 + 6 . K b 1 ~ R ~} \times$ e6 7.f7 Rg6 8.Kc1 1:0; 2...Kh7 3.f8S+! Kg8 (3...Kh6 4.B $\times$ h5 R $\times$ a6+ 5.Kb1 Ra5/K $\times$ h5 6.Bd1/e7 1:0) 4.B $\times$ h5 R $\times$ a6+ 5.Kb1 Ra5 6.Sd7 R $\times$ h5 7.f7+ Kh7 8.Sf6+ 1:0. Fantastic!

No. 81: 1.Rd1+ Sf1+ 2.R $\times \mathbf{f} 1+\mathbf{g 2} \times \mathbf{f 1 B}$ ! (2...g2 $\times \mathbf{f 1 Q} 3 . R h 2+\operatorname{Kg} 14 . R h 1+=$; 2...g2 $\times \mathbf{f 1 R} 3 . \operatorname{Rh} 2+\mathrm{Kg} 14 . \mathrm{Rg} 2+=; \mathbf{2} . . . \mathbf{g} \mathbf{2} \times \mathbf{f} 1 \mathrm{~S}+3 . \mathrm{K} \times \mathrm{f} 4$ 1:0) 3.Rh2+! (3.Rb2? Kg1! zugzwang 0:1) 3...Kg1 4.Rb2 (zugzwang) Sd3/Sd5/Rc4/Rd4/Re4 5.Rg2+ Kh1 5.Rh2+ Kg1 6.Rg2+ Bxg2 stalemate. Simply clever!


Helpmate in 2
b) $\mathrm{Pb} 2 \rightarrow \mathrm{~g} 2$

No. 83
Harald Haverkorn
Dirk Borst
Die Schwalbe $19883^{\text {rd }}$ HM


Helpmate in 2.5
4 solutions

No. 84
Helmer Ternblad
Feenschach 1954 l $^{\text {st }}$ Prize


Helpmate in $3 *$

There are heaps of helpmate problems with AUW. Here are four beautiful miniatures. - No. 82: The solution of a) is 1.b1B! d8Q 2.Bbg6 Qd2\# and b) 1.g1R! d8S 2.Rg6 Sf7\#.

A special AUW helpmate is realized by an extraordinary stipulation (P0508180). Besides there is a helpstalemate problem showing AUW with only four pieces (P0501791).

No. 83 is the only AUW with five pieces and four solutions. I 1...c8S! 2.Ka8 Kc7 3.Rb6 S $\times$ b6\#, II 1...c8B+! 2.Ka8 Kc7 3.Rb7+ B $\times$ b7\#, III 1...c8R! 2.Ra8 Rc6 3.Kb8 Rb6\#, IV 1...c7×b8Q+! 2.Ka6 Kc7 3.Sc6 Qb6\#.

No. 84: The set play is $1 \ldots \mathrm{f} 7$ 2.a1B f8R 3.Bb2 Ra8\#, the solution is $1 . \mathrm{a} 1 \mathrm{~S}$ f7 2.Sc2 f8Q+ 3.Ka4 Qb4\#.


No. 85
Rolf Trautner
(after J. Bebesi)
Die Schwalbe 1960
Helpmate in 7
No. 85 shows a successive AUW ( 1 wP and 3 bPs): 1.c1S! Kg8 2.Sb3 a2×b3 3.g1B b4 4.Bc5 b4×c5 5.a2 c6 6.a1R c7 7.Ra7 c8Q\#.

No. 86
György Páros
FIDE Review 1958
Special Prize


Helpmate in 3
b) $-d$ ) $S \rightarrow d 3 / f 3 / h 5$

No. 87
Aurél M. Kárpáti
Die Schwalbe 1954
$3^{\text {rd }}$ Prize


Helpmate in 3
b) $-d) s K \rightarrow e 5 / e 7 / h 8$

No. 88
Christer Jonsson
Springaren 1993
$4^{\text {th }}$ Prize


Helpmate in 4 4 solutions

No. 86 (FIDE-Album): 1.h1B! Bd3 2.Bc6 Bg6 3.Bd7 Sc7\#, b) 1.h1Q Bg2 2.Qh5 Be4 3.Qf7 Sc5\#, c) 1.h1S Bb5 2.Sg3 Bc6 3.Sf5 Sg5\#, d) 1.h1R Bb5 2.Rhd1 Be8 3.R1d5 Sg7\#. Most elegant.

No. 87 (FIDE-Album): a) 1.b1S b7 2.Sc3 b8S 3.S $\times$ b5 Sc6\#, b) 1.b1R b7 2.Rd1 b8R 3.R $\times$ d5 Re8\#, c) 1.b1Q b7 2.Q $\times$ b5 b8Q 3.Qe8 Qd6\#, d) 1.b1B b7 2.B $\times$ e4 b8B 3.Bh7 Be5\#. Perhaps the first helpmate to show four echo promotions, the so-called Babson task (cp. p. 18), by means of a quadruplet.

No. 88 (FIDE-Album): I 1.K $\times$ e4 e6 2.e1Q e7 3.Qa1 e8Q+4.Qe5 Q×e5\#, II 1.K $\times$ e4 e6 2.e1B e7 3.Bf2 e8B 4.Bd4 Bc6\#, III 1.K×e4 e6 2.e1S e7 3.Sc2 e8S 4.Sd4 Sf6\#, IV 1.Kc6 e6 2.e1R e7 3.Rc1 e8R 4.Rc5 Re6\# Probably the first Babson in a helpmate without a change of the diagram position? A flaw, however, is the same key $1 . \mathrm{K} \times \mathrm{e} 4$ in three cases. - Why is this task (often achieved in directmate and selfmate problems) so difficult for the helpmate genre? Who composes such a problem with four different keys?

No. 89
Knud Hannemann
Tijdschrift N.I.S.B. 1931


Selfmate in 4

No. 90
Andreas Thoma
Die Schwalbe 2009
$1^{\text {st }}$ Prize


Selfmate in 25

To no. 90
Final position


Selfmate problems are suitable for AUW. No. 89 is a classic successive AUW (Q-R-B-S): $1 . \mathrm{h} 8 \mathrm{Q}+!$ Kg6 2.g8R+K Kf7 3.e8B+ Ke6 4.d8S+ R $\times \mathrm{d} 8 \#$.

No. 90 (FIDE-Album) is the first selfmate miniature with successive AUW. 1.c8Q+! Sd8 2.g8B Kf8 3.Bc4! Ke8 4.b4 Kf8 5.b5 Ke8 6.b6 Kf8 7.b7 Ke8 8.b8R Kf8 9.Qc5+ Ke8 10.f7+ Kd7 11.f8S+ Ke8 12.Sg6 Kd7 13.Se5+ Ke8 14.Qc7 Kf8 15.Kf5 Ke8 16.Kf6 Kf8 17.Qc8 Ke8 18.Rb7 Kf8 19.Rh7 Ke8 20.Kg7 Ke7 21.Qc7+ Ke8 22.Bb5+ Sc6 23.Kh8 Kf8 24.Qe7+ $\mathrm{S} \times \mathrm{e} 725 . \mathrm{Sg} 6+\mathrm{S} \times \mathrm{g} 6 \#$ (final position). Hard work for composer and solver.


No. 91
Alexander Hildebrand
Stella Polaris 1968 Special Prize
Selfmate in 2
4 solutions
No. 91-94 are alternative AUW. No. 91 is a lucky finding: I 1.d8Q b3 2.Qh4 b2\#. II 1.d8R b3 2.Rd4 b2\#, III 1.d8B b3 2.Ba5 b2\#, IV 1.d8S b3 2.Sc6 b2\#.


Selfmate in 2

No. 93
William A. Shinkman
The Theory of Pawn
Promotion 1912


Selfmate in 3

No. 94
Henry W. Bettmann
Funkschach 1926
$1^{\text {st }}$ Prize


Selfmate in 3

In no. 92 the white pawn on h 7 plays a major role: $1 . \mathrm{Bf} 5+$ ! $\mathrm{K} \times \mathrm{f} 5 / \mathrm{Kf7} / \mathrm{Kg} 7 / \mathrm{K} \times \mathrm{h} 5$ $2 . \mathrm{h} 7 \times \mathrm{g} 8 \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{S} \mathrm{B} \times \mathrm{g} 3 \#$.

In no. 93 the black pawn on f 2 is the actor: 1.Bd6!
1...f1Q 2.Qc4+ Q×c4 3.Bb4+ Q×b4\#.
1...f1R 2.Qh8+ Rf6 3.Bc5 Bb2\#.
1...f1B 2.Qg3+ Bd3 3.Bc5 Bb2\#.
1...f1S 2.Qh3+ Se3,Sg3 3.Bc5 Bb2\#.

Furthermore 1...c5 2.Bg3 [3.Qb4+] c4 3.B $\times$ f2 Bb2\#.
It was Joseph Babson who initiated a long series of construction of problems with an AUW of Black and an AUW of White in the form of an echo, if possible by one black pawn and one white pawn. No. 94 (FIDE-Album) shows the first rendering of this task, the perfect echo AUW, which later on was called the Babson task: 1.a8B! f $2 \times \mathrm{g} 1 \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{S} 2 . \mathrm{f} 8 \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{S} \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{S} \sim 3 . \mathrm{X} \times \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{S} \mathrm{R} \times \mathrm{a} 6 \#$, $2 \ldots \mathrm{Q} \times \mathrm{f} 1 / \mathrm{Q} \times \mathrm{c} 5+3 . \mathrm{b} 5+\mathrm{B} \times \mathrm{b} 5 \#$; flaws are the duals $1 \ldots \mathrm{f} 2 \times \mathrm{g} 1 \mathrm{Q} 2 . \mathrm{f} 8 \mathrm{Q} \mathrm{Q} f 2 / \mathrm{Qg} 7$ $3 . \mathrm{Q} \times \mathrm{f} 2, \mathrm{R} \times \mathrm{f} 2 / \mathrm{Q} \times \mathrm{g} 7, \mathrm{~h} 6 \times \mathrm{g} 7$. Who composes such a problem with dual-free full length variants?
'The rigidity of the material with which we have to compose is a more formidable opponent than Lasker or Capablanca.

Because these lifeless opponents do not have any moments of human weakness'.
(Henri Weenink)


For a very long time the correct rendering of the Babson task in a directmate problem had been considered to be impossible - until 1983, when Leonid Yarosh composed his famous masterpiece no. 95 (FIDE-Album): 1.a7! [thr. 2.a7×b8Q,R,B,S ... 4.\#] $1 \ldots \mathbf{a 2} \times \mathbf{b 1 Q} 2 . \mathbf{a 7} \times \mathbf{b 8 Q}$ ! [thr. $3 . \mathrm{R} \times \mathrm{f} 4+, \mathrm{Q} \times \mathrm{f} 4+, \mathrm{Qd} 6+, \mathrm{Q} \times \mathrm{b} 3$ ] $\mathrm{Qe} 43 . \mathrm{R} \times \mathrm{f} 4, \mathrm{Q} \times \mathrm{f} 4$ $\mathrm{Q} \times \mathrm{f} 44 . \mathrm{Q} \times \mathrm{f} 4 / \mathrm{R} \times \mathrm{f} 4 \# ; 2 \ldots \mathrm{Qe} 1 / \mathrm{Q} \times \mathrm{f} 53 . \mathrm{R} \times \mathrm{f} 4+, \mathrm{Q} \times \mathrm{f} 4+\mathrm{etc} . ; 2 \ldots \mathrm{Q} \times \mathrm{b} 23 . \mathrm{Q} \times \mathrm{b} 3$ [thr. $4 . \mathrm{R} \times \mathrm{f} 4, \mathrm{Q} \times \mathrm{b} 2 \#$ ] $\mathrm{Qc} 34 . \mathrm{Qa} \times \mathrm{c} 3, \mathrm{Qb} \times \mathrm{c} 3 \# . \quad 1 \ldots \mathbf{a} 2 \times \mathbf{b 1 R}$ 2.a7 $\times \mathbf{b} 8 \mathrm{R}$ ! [thr. $3 . \mathrm{R} \times \mathrm{f} 4 \#](2 . \mathrm{a} 7 \times \mathrm{b} 8 \mathrm{Q}$ ? $\mathrm{R} \times \mathrm{b} 23 . \mathrm{Q} \times \mathrm{b} 3$ stalemate) $\mathrm{R} \times \mathrm{b} 23 . \mathrm{R} \times \mathrm{b} 3 \mathrm{~K} \times \mathrm{c} 44 . \mathrm{Qa} 4 \#$; $2 \ldots \mathrm{Re} 13 . \mathrm{R} \times \mathrm{f} 4+\mathrm{R} \times \mathrm{b} 3$ etc. $1 \ldots \mathbf{a} \times \mathbf{b 1 B} \mathbf{2 . a 7} \times \mathbf{b 8 B}$ ! [thr. $3 . \mathrm{R} \times \mathrm{f} 4+, \mathrm{Sd} 6, \mathrm{~B} \times \mathrm{f} 4$ ] (2.a7×b8Q? Be4 3.Q $\times \mathrm{f} 4$ stalemate) Be4 3.B $\times \mathrm{f} 4 \sim 4 . B e 3, B e 5 \# . \quad 1 \ldots \mathbf{a} \times \mathbf{b 1 S}$ 2.a7 $\times$ b8S! [thr. $3 . \mathrm{R} \times \mathrm{f} 4 \#$; 3.B $\times \mathrm{e} 7$ ] $\mathrm{S} \times \mathrm{d} 23 . \mathrm{Qc} 1 \mathrm{Se} 4 / \mathrm{S} \sim 4 . S c 6 / \mathrm{R} \times \mathrm{f} 4 \#$. Interesting sidelines: $1 . . . \mathrm{Qe} 52 . \mathrm{B} \times \mathrm{e} 7 \mathrm{Qd} 63 . \mathrm{S} \times \mathrm{d} 6$; 2.Qc7 3.B $\times \mathrm{f} 6+$. $1 . . \mathrm{Q} \times \mathrm{d} 8+2 . \mathrm{Kg} 7$ ! $\mathrm{a} 2 \times \mathrm{b} 1 \mathrm{Q} 3 . \mathrm{R} \times \mathrm{f} 4+; 2 \ldots \mathrm{Qf}, \mathrm{g}, \mathrm{h} 8+3 . \mathrm{K} \times \mathrm{Q} \mathrm{a} 2 \times \mathrm{b} 1 \mathrm{Q} 4 . \mathrm{d} 8 \mathrm{Q}, \mathrm{R} \#$. $1 \ldots \mathrm{Qd} 62 . \mathrm{Re} 1 \mathrm{Qc} 6$ $3 . \mathrm{R} \times \mathrm{f} 4+$. $1 \ldots \mathrm{Q} \times \mathrm{a} 82 . \mathrm{R} \times \mathrm{f} 4+\mathrm{Qe} 43 . \mathrm{a} 8 \mathrm{Q}$. A strong try: 1.Re1!? $\mathrm{Q} \times \mathrm{d} 8+!2 . \mathrm{Kg} 7$ Qf,g,h8+3.K $\times \mathrm{Q}$ stalemate.

Up to now about 20 direct Babson problems have come to be achieved. You will find them in $P D B$ ( $\mathrm{K}=$ 'Babson task'). No. 96 is the first with four dual-free main lines: 1.d6xe7! e1Q 2.e7 $\times$ f8Q! (2.e7 $\times \mathrm{f} 8 \mathrm{R}$ ? Qxe4+ 3.d4 Qf5) Q $\times \mathrm{e} 4+3 . \mathrm{d} 4$ Qf5 $4 . \mathrm{B} \times \mathrm{f} 5 \# .1 \ldots$ e1R 2.e7 $\times \mathbf{f 8 R}$ ! (2.e7×f8Q? R $\times \mathrm{e} 4+3 . \mathrm{d} 4$ stalemate; $2 . \mathrm{e} 7 \times \mathrm{f} 8 \mathrm{~S}+$ ? Kg 8 3.Ka5 R $\times$ e4) $\mathrm{R} \times \mathrm{e} 4+3 . \mathrm{d} 4 \mathrm{Kg} 74 . \mathrm{R} 4 \mathrm{f} 7 \#$. $1 . .$. e1B 2.e7 $\times \mathbf{f 8 B}$ ! ( $2 . \mathrm{e} 7 \times \mathrm{f8Q} / \mathrm{R}$ ? stalemate; 2.e7×f8S+? Kg8 3.Qa6,Ka3,Ka5 stalemate) Kg8 3.Qa6 Kh7 4.Qg6\#. 1. . .e1S $\mathbf{2 . e 7} \times \mathbf{f 8 S}+$ ! (2.e7×f8Q/R? $\mathrm{S} \times \mathrm{d} 3+!) \mathrm{Kg} 83 . \mathrm{Ka} 5 \mathrm{~S} \sim 4 . \mathrm{Qc} 4 \#$. The full length variants with other promotions contain duals, e.g. $1 . \ldots \mathrm{e} 2 \times \mathrm{f} 1 \mathrm{Q} 2 . \mathrm{e} 7 \times \mathrm{f} 8 \mathrm{Q}, \mathrm{R}, \mathrm{S}$. There are two settings with a better key move (P1328423 and P1328425). - Who composes such a problem with dual-free full length variants? And who fulfils my dream of a Babson endgame study?

## From the Valladao Task to the Keym Task

Since the beginning of problem chess history the three special moves promotion, castling and en-passant capture have always fascinated composers and solvers, especially the combination of these moves, even if there is no thematic interdependence of such moves. When they are all found in a problem, the special term for such a task is Valladao task referring to Joaquim Valladao Monteiro, who organized a relevant theme tourney in 1966.


Mate in 5

No. 98
Felix A. Sonnenfeld
O Globo 1966
Valladao TT $1^{\text {st }}$ Prize


Mate in 2

No. 99
José Figueiredo
O Globo 1966
Valladao $T T 1^{s t} H M$


Mate in 2

No. 97 is probably the first problem to present the Valladao task (in a successive form): 1.0-0-0+! Kc7 2.Bf4+ e5 3.f5×e6 e.p.+ Re5 $4 . \mathrm{e} 7 \sim 5 . \mathrm{e} 8 \mathrm{~S} \#$.

The winner no. 98 shows three double pawns' steps and two en-passant captures. 1.a8Q,R? b5!. 1.b4! [thr. 2.e6\#] $\mathrm{S} \times \mathrm{e} 2 / \mathrm{Se} 42 . \mathrm{K} \times \mathrm{e} 2 / 0-0 \# ; 1 . . \mathrm{d} 5 / \mathrm{a} 4 \times \mathrm{b} 3$ e.p. $2 . e 5 \times \mathrm{d} 6$ e.p./a8Q,R\#. Flaw: the (unavoidable) dual of the promotion.

No. 99 has several tries and fine refutations. 1.Kd1?/Rh2? Sg6!; 1.Rf1? Sc8!. 1.00! [thr. 2.Re1\#] Sc4/Sd5/Sd7 2.c8S\#; 1...f5 2.g5×f6 e.p.\#; 1...Sg6 2.R1×f7\#. This two-mover is a perfect Valladao (as no. 97, 100-102): 1) there is no dual of the promotion, 2 ) there is only the double step of the pawn with the subsequent enpassant capture by the adversary pawn and not the simple step of the pawn with a normal capture by the adversary pawn. In the theme tourney in 1966 both flaws were tolerated.

No. 100

Werner Keym
(after I. Godal)
Die Schwalbe 2005
Special HM


Mate in 2

No. 101
Frank Fiedler
Werner Keym
Problemkiste 2005 (v)


Mate in 2

No. 102
Werner Keym
feenschach 2010


Mate in 2

No. 100: 1.0-0! [thr. 2.g6\#] b1S/f5 2.Rc2/g5×f6 e.p.\#. The try 1.g6+? Se3 2.0-0\#? only fails because the white king is not allowed to jump across the square f1 guarded by bSe3. This is quite rare in Valladao problems. In the related problem ( P 1288319 ) there is the typical flaw: the captures $\mathrm{P} \times \mathrm{P}$ and $\mathrm{P} \times \mathrm{P}$ e.p. side by side.

No. 101: 1.Ba7+! Kd3/Kd5/c5 2.0-0-0/f7 $\times \mathrm{e} 8 \mathrm{~S} / \mathrm{b} 5 \times \mathrm{c} 6$ e.p.\# A Valladao with a particular feature: the three special moves are the mating moves.

No. 102: It is easier to find the solution than the reasons for the solution. 1.h5 $\times \mathrm{g} 6$ e.p.! [thr. 2.h8Q\#] 0-0-0 2.a8Q\#. The last moves were g7-g5 g6×Bh7 (e.g. Bd4-e3 g5-g6 e $3 \times$ Bf2) since the light-squared bishop is the only missing black piece. There is no other black move which allows a previous white one: $\mathrm{Pb} 7-\mathrm{b} 6$ ? would exclude the bB from $\mathrm{c} 8 ; \mathrm{Pc} 6 \times \mathrm{Xd} 5$ ? would prevent the promotion of the wPc on c 8 . The 4 black captures were $\mathrm{Pb} 7 \times \mathrm{Xa} 6, \mathrm{~Pa} 7 \times \mathrm{Xb} 6, \mathrm{Pc} 6 \times \mathrm{Xd} 5, \mathrm{Pe} 3 \times \mathrm{Xf} 2$. Here the retroanalytical aspect is no end in itself, but an aid to present a successive Valladao in a two-mover.

No. 103
Nikolai Mironenko
Die Schwalbe 1975


Mate in 3

No. 104
Werner Keym
Die Schwalbe 2005


Mate in 3

No. 105
Nils G. G. van Dijk
Ivar Godal
Schach-Echo 1972


Mate in 3

No. 103: 1.0-0! zugzwang f6/f5 $2 . \mathrm{g} 5 \times \mathrm{f} 6 / \mathrm{g} 5 \times \mathrm{f} 6$ e.p. $\mathrm{Kg} 33 . \mathrm{g} 8 \mathrm{Q}, \mathrm{R} \# ; 1 . . \mathrm{Kg} 3$ 2.Qh5 ~ 3.Rf3\#. This is the first Valladao miniature, but it is not perfect, since it has the two typical flaws: a dual of the promotion and the captures $\mathrm{P} \times \mathrm{P}$ and $\mathrm{P} \times \mathrm{P}$ e.p. side by side (cp. the miniatures P1038497 and P1146356).

In no. 104 the three special moves succeed one another (successive Valladao): 1.Rh5! [thr. 2.Rh8\#] g5+ $2 . \mathrm{f} 5 \times \mathrm{g} 6$ e.p. $0-0-03 . \mathrm{a} 8 \mathrm{Q} \# .1 . \mathrm{R} 5 \times \mathrm{g} 7$ ? Kf8!. This is the most economical rendering of the (perfect) Valladao task in a directmate problem. The study needs 8 pieces (no. 107), the selfmate genre 7 (no. 113).

No. 105 shows a perfect Valladao in a double setting: 1.e4! [thr. 2.e8Q+ R $\times \mathrm{e} 8$ $3 . Q \times e 8 \#]$ d4×e3 e.p. 2.0-0-0 [thr. 3.Qd7\#] Rd8 3.e7×d8S\#, 2...Bd4 3.Qf5\#; $1 . . \mathrm{f} 4 \times \mathrm{e} 3$ e.p. 2.0-0 [thr. 3.Bf7\#] Rf8 3.e7×f8S\#, 2...Bf4 3.Qf5\#. Great!

No. 106
Nils A. Bakke
'0-0' 1982
Reiners Memorial
$5^{\text {th }}$ Place


Win

No. 107
Jarl H. Ulrichsen
EG 2011


Win

No. 108
Werner Keym
Stuttgarter Zeitung 2017


White retracts 3 moves, Black 2; then mate in 1. Proca Retractor

No. 106 is the first correct endgame study to show the (perfect) Valladao task. 1.g4! (1.h8Q? Qf4!) h4 $\times$ g3 e.p. 2.h8S+! (2.h8Q? Qf2+!) Kf5 3.0-0+ (3.Rf1+? Kg4! $4 . \mathrm{R} \times \mathrm{f} 8 \mathrm{~g} 25 . \mathrm{Kf} 2 \mathrm{Kh} 36 . \mathrm{Kg} 1 \mathrm{~g} 4!$ 0:1) $\mathbf{K g} 4$ 4.R $\times$ f8 1:0. As far as I know all earlier Valladao studies include a cook or a major dual.

No. 107: 1.0-0-0! h5 (1... h6? 2.a4! 1:0) 2.g5 $\times$ h6 e.p. (2.a4? h4 0:1) g7 $\times$ h6 3.a4 h5 4.a5 h4 5.a6 h3 6.a7 h2 7.a8Q g1Q/h1Q 8.Qa7+/R $\times$ h1 1:0. Letzfform!

No. 108: This is a defensive retractor of the type Proca: He who is on the move, decides whether and what he captures (cp. p. 137). It is a perfect Valladao miniature: backward $1 . e 5 \times \mathrm{f6}$ e.p.! (1.e5xf6? K/R~) forces f7-f5, 2.c7-c8B forces 0-0+, finally $3 . \mathrm{Bc} 5 \times \mathrm{Ba} 7$ ! (Black has a previous move by the B) and $1 . \mathrm{c} 8 \mathrm{Q} \#$. Not $3 . \mathrm{Bc} 5-\mathrm{a} 7 / \times \mathrm{Pa} 7$ ? since Black has no previous move. Not $3 . \mathrm{Bc} 5 \times \mathrm{Q} / \mathrm{R} / \mathrm{Sa} 7$ ? since there is no mate in 1. Got you?

No. 109

Arturo Carra
Isidoro Zezza
$2^{\text {nd }}$ FIDE-Turnier 1959 (v)
$1{ }^{\text {st }}$ Prize


Helpmate in 5

No. 110
Werner Keym
Die Schwalbe 2006
$9^{\text {th }}$ HM \& Commendation


Helpmate in 2

No. 111
Werner Keym
Die Schwalbe 2005
Special Commendation


Selfmate in 2

Probably the earliest Valladao helpmate problem is J. Keeble's 'A posteriori' problem from 1936 (no. 384). No. 109 is an excellent long helpmate: 1.0-0-0! Ka2 2.b1R Se4 3.Sc7+ c4 4.b4×c3 e.p.+ Ka3 5.Rb8 Sd6\#.

No. 110: This is a successive Valladao in a helpmate two-mover: $1 . d 4 \times \mathrm{c} 3$ e.p. + ! Rc4 2.0-0-0 a8Q\#. The last moves were not Kc5-d5 b7-b6+ (excluding Ba2 from c8), but c2-c4 Rb3-e3+. The bPs captured 11 pieces; bPa4/6 came from a7. There are 15 black pieces, so the wPb captured the bQ on the a-file. Here (as in no. 102) retrograde analysis is a necessary evil. No. 110 obtained an HM in the section helpmate and a commendation in the section retro. What does that result in?

Selfmate problems are very suitable for promotions. No. 111: This is an alternative Valladao in a selfmate two-mover. 1.b4+! c4×b3 e.p. $2 . \mathrm{Q} \times \mathrm{c} 3+\mathrm{B} \times \mathrm{c} 3 \#, 1 \ldots$ Kc6 $2 . \mathrm{b} 8 \mathrm{~S}+\mathrm{B} \times \mathrm{b} 8 \#, 1 \ldots \mathrm{Kd} 42.0-0-0+\mathrm{Sd} 3 \#$. - There is even a successive Valladao in a selfmate two-mover (P1092162).

No. 112
Rauf Aliovsadzade
Thèmes 641976


Selfmate in 5

No. 113
Andreas Thoma
Die Schwalbe 2007
${ }^{\text {st }}$ Prize


Selfmate in 11

No. 114
Nils A. Bakke
Die Schwalbe 1981
Special Prize


Selfmate in 12

No. 112 is one of the first Valladao selfmate problems: 1.g8B! b7×a6 $2 . \mathrm{Bc} 4 \mathrm{a} 5$ $3 . \mathrm{B} \times \mathrm{e} 2 \mathrm{a} 44 . \mathrm{b} 4+\mathrm{a} 4 \times \mathrm{b} 3$ e.p. 5.0-0-0 b2\#. The special moves follow each other (successive form). The underpromotion deserves attention.

No. 113 is the first (perfect) Valladao in a selfmate miniature. 1.0-0! h5! 2.Kh1 h4 3.Qg7+ Kh5 4.g4+ h4×g3 e.p. 5.Rf5+ Kh4 6.d8B+! Kh3 7.Qc3 Kg4 8.Qf3+ Kh3 9.Bb6 Kh4 10.Qf4+ Kh3 11.Bg1 g2\#. The (dualistic) variants after $1 \ldots \mathrm{~h} 6 / \mathrm{K} \sim$ need less than 11 moves according to Olaf Jenkner's computer program. Whoever does not believe that, should disembark to a lonely island with much paper and patience!

No. 114 is probably the first rendering of Valladao going along with Allumwandlung (AUW). 1.h8Q+! Kg6 2.g8R+ Kf7 3.e8B+ Ke6 4.d8S+ Kd6 5.Ra6+ Kc5 6.b4+ c4 $\times$ b3 e.p. $7 . R c 6+$ Kd5 $8 . e 4+\mathrm{K} \times$ e $49 . \mathrm{B} \times \mathrm{g} 6+\mathrm{Kd} 5$ 10.Qh5+ Bg5 11.Sf4+ S $\times \mathrm{f} 4$ 12.0-0-0+ Sd3\#. Excellent construction. - An example with Valladao, AUW and a pawn's walk (from g7 to h2) is P1245419.

No. 115
Werner Keym
(after Peter Hoffmann)
Die Schwalbe 2009


Mate in 4

No. 116
Peter Hoffmann
Die Schwalbe 2007
$198^{\text {th }}$ TT $1^{\text {st }}$ Prize


Selfmate in 8

No. 117
Kostas Prentos
Andrey Frolkin
Die Schwalbe 2006
$1^{\text {st }}$ Prize


Proof game in 26.0

Peter Hoffmann has been the only one so far to succeed in composing directmate problems with Valladao and Allumwandlung (P1291058 and P1291059). My setting (no. 115) is simpler and dual-free in the main lines. 1.0-0-0 [thr. 2.c8Q 3.Qd7\#] h2×g1S 2.c8Q Se2+ 3.Rxe2 ~4.Qd7\#. 1...h1B 2.c8R K $\times$ e6 3.Q×d4 Kf7 4.Qf6\#. $1 \ldots$ h1Q/R 2.c8Q Q/Rh7 3.c4 d4×c3 e.p. 4.Qc5\#. Side lines: $1 \ldots \mathrm{~h} 2 \times \mathrm{g} 1 \mathrm{Q} / \mathrm{R} 2 . \mathrm{c} 8 \mathrm{Q}$ $\mathrm{Q} / \mathrm{R} \times \mathrm{d} 1+3 . \mathrm{R} \times \mathrm{d} 1 ; 1 . . . \mathrm{K} \times \mathrm{c} 62 . \mathrm{c} 8 \mathrm{Q}+\mathrm{Kb5} / 63 . \mathrm{Q} \times \mathrm{d} 4 ; 1 . . . \mathrm{K} \times \mathrm{e} 62 . \mathrm{Q} \times \mathrm{h} 2 \mathrm{Kf7}$ 3.Qh7+ Ke6/Ke,f8 4.Qd7/c8Q,R\# (dual).

Peter Hoffmann again has been the only one to compose problems with Valladao, AUW and Excelsior walk (P1092157-P1092159), the so-called 'Keym task'. No. 116: 1.f8Q +! Ke6 2.d8R b6 3.R $\times$ d5! b6 $\times \mathrm{c5} 4 . \mathrm{Rd} 8+!$ ! c4 $5 . \mathrm{b} 4 \mathrm{c} 4 \times \mathrm{b} 3$ e.p. $6 . \mathrm{Ba} 3$ ! $\mathrm{b} 3 \times \mathrm{a} 2$ 7.0-0-0 a1B/S (7...a1Q/R?) $8 . \mathrm{Bb} 2 / \mathrm{Qb} 3+\mathrm{B} \times \mathrm{b} 2 / \mathrm{S} \times \mathrm{b} 3 \#$. The promotions to wQ and wR (successive) and to bB or bS (alternative) form the thematic AUW. The promotion to $\mathrm{bQ} / \mathrm{R}$ ?, which occurs in a short length variant, is not thematic, but necessary, since it avoids the dual $6 . \mathrm{Bb} 2$ ? b3 $\times \mathrm{a} 27.0-0-0 \mathrm{a} 1 \mathrm{~B} / \mathrm{S}$ ? 8.b6/Qb3+ B $\times$ b2/S $\times$ b3\# by $7 \ldots$. . alD+/R+! An absolute top achievement!

No. 117 masters this task for the first time in a proof game: $1 . \mathrm{h} 4 \mathrm{a} 52 . \mathrm{h} 5 \mathrm{a} 43 . \mathrm{h} 6 \mathrm{a} 3$ 4.h6×g7 h5 5.g4 Sh6 6.g8B Bg7 7.g5 Bd4 8.g6 f6 9.Bd5 Bc5 10.Bc6 0-0 11.g7 Kh7 12.g8R b7×c6 13.Rg5 Ba6 14.Re5 f6×e5 15.f4 Rf6 16.f5 Rd6 17.f6 Bc4 18.f7 B $\times$ a2 19.f8Q Be6 20.Qf3 a2 21.Qd5 a $2 \times$ b1S 22.Ra2 Sc3 $23 . \mathrm{d} 2 \times \mathrm{c} 3 \mathrm{c} 6 \times \mathrm{d} 524$.Kd2 d4 $25 . \mathrm{Kd} 3 \mathrm{Bf} 5+26 . \mathrm{e} 4 \mathrm{~d} 4 \times$ e3 e.p.+. The four promoted officers are gone! 'A wonderful presentation of the Keym task.'

## The (lightened) 100 Dollar Theme

There are three famous challenges in problem chess: Babson task (p. 26), Valladao task (p. 28) and 100 Dollar Theme. The tasks were mastered, but not yet the 100 Dollar Theme of the year 1963. Required is a one line, dual-free helpmate problem (without promoted officers in the position of the diagram), in which a black pawn and a white pawn start from their original square and after five moves are promoted to knights: the double knight Excelsior.

No. 118
Jenö Ban
FEENSCHACH 1965


Helpmate in 5

No. 119
Antti Pyhälä
Michel Olausson
Anton Preinfalk
Sahovska misel 2004


Helpmate in 5


Helpmate in 5

No. 118: 1.b5 b4 $2 . \mathrm{b} 5 \times \mathrm{c} 4 \mathrm{~b} 53 . \mathrm{c} 4 \times \mathrm{d} 3 \mathrm{~b} 5 \times \mathrm{c} 64 . \mathrm{d} 3 \times \mathrm{e} 2 \mathrm{c} 6 \times \mathrm{d} 75 . \mathrm{e} 1 \mathrm{~S} \mathrm{~d} 7 \times \mathrm{e} 8 \mathrm{~S} \#$. The earliest rendering of this Excelsior, but with six promoted officers. (No. 427 shows the Excelsior 'backward' - without promoted officers.)

No. 119: 1.h5 h4 2.h5 $\times \mathrm{g} 4$ h5 3.g3 h6 4.g2 h6×g7 5.g1S g8S\#. Antti Pyhälä created the (dualistic) basic position with three promoted officers in 1970. Michel Olausson removed the dual in 1989 and Anton Preinfalk saved one promoted officer in 2004.

No. 120: 1.b5 e4 2.b4 e5 $3 . \mathrm{b} 4 \times \mathrm{c} 3$ e6 $4 . \mathrm{c} 3 \times \mathrm{d} 2$ e7 $5 . \mathrm{d} 2 \times \mathrm{e} 1 \mathrm{~S}$ e8S\#. Josef Ettner created the basic position with two promoted officers in 1994. Two pieces were saved in 2005 by Ryszard Nojek and one piece shortly afterwards by myself.

I am offering 100 Euro for a rendering with one promoted officer - and 100 Euro plus 100 Dollar for a rendering without promoted officers at all!
[A rendering without promoted officers is possible, if you modify the chessboard (see no. 343) or apply the 'single box' condition (P1197947-P1197950).]

## How to solve retro problems

The following chapters contain several retro problems. I would like to show the typical ways of solving such problems to chess players and problemists not yet accustomed to playing in this genre, and I would enjoy to open the gate to the incredible variety of retro problems.

No. 121
Well-known patterns


Four times illegal


Is the position legal?

No. 123
Sam Loyd
US Chess Association 1891


Which was the last move?

For all usual problems, retros included, one characteristic feature is an absolute condition: the diagram position of a problem must be 'legal'. That means that you can play from the initial array of the game to the diagram position according to the laws of chess, even if the moves of this game seem to be improbable or bad in the eyes of a chess player. That is convincing. The contrary feature, illegality, however, often cannot recognized as easily as in the simple examples of no. 121. Above left: the bBa 8 could never go to a8. Above right: there is one pawn too many. Below left: the $w K$ could never pass by the bR. Below right: the bK could never reach h 2 ; without Pe2 or Pf2 or Pg2 or Bf1 that would be possible (= legal).

The 'Last move records' (no. 124-150) are very suitable for taking the first steps in retro land. No. $\mathbf{1 2 2}$ is more difficult. Let us begin our way of solving with typical retro questions:

1) How many white and black pieces are there?
2) Are there obvious captures due to the constellation of the pawns and if so how many?
3) Which pieces can be sacrificial pieces, which pieces cannot?
4) Are there promoted officers? If so, on which squares were they born and how many sacrificial pieces were needed for it?

These are the answers: 1) There are 10 white and 8 black pieces. 2) The bPd7 moved to a4 capturing three times. 3) The wBc 1 was captured on c 1 and the bBf8 on f8. (Hint: wPs on b2 and d2 or on e2 and g2 are revealing those circumstances; analogous bPs on b7 and d7 or on e7 and g7). The wRs could not leave their cages and could not be captured on c6, b5 or a4. 4) The Bg1 does not come from c1 (because of Pb 2 and Pd 2 ), but it is a promoted officer. It was born on b 8 . Therefore the wPf2 captured 6 black pieces on e3, d4, c5, b6, a7 and b8, namely on black squares. That is the inventory.

Now the interim balance: sacrificial pieces for the wPf2 were Q, R, R, S, S, not the light-squared B , but the promoted officer X born by the promotion of bPh ( $\mathrm{bPh} \times \mathrm{Q} / \mathrm{Sg}$ and $\mathrm{g} 3 \times \mathrm{Rh} 2$-h1 X had occurred before). In this case there are only two sacrificial pieces for the bPd7, so it cannot reach a4. Exactly one sacrificial piece is lacking either for the bPd or for the bPh.

Conclusion: the position is not legal! As in other fields it is easy to work out the inventory, but it is not so easy to draw the right conclusion.

Let us apply the above-mentioned questions to no. 123. Inventory: 1) There are 8 white and 6 black pieces. 2) The wPs captured 5 times. 3) The bBf8 died on f8. 4) The wBa8 seems to be a promoted officer, but it is not, for the wPf would need 5 captures, but there are only 4 sacrificial pieces. Interim balance: The position is either illegal or there is a well-hidden legal retro trick. And here there is such one: the last moves were $\mathrm{Kf} 3 \times \mathrm{Pg} 3+\mathrm{Pf} 4 \times \mathrm{g} 3$ e.p. $+\mathrm{Pg} 2-\mathrm{g} 4$. Conclusion: The position is legal since the last move was definitely $\mathrm{Kf} 3 \times \mathrm{Pg} 3+$.

As you can see retro moves are noted in the usual way of forward notation.
If you do not succeed in releasing a position, you should begin with the initial array of the game and try to reach the diagram position by playing forward.

In complicated cases I present an auxiliary diagram or state the genesis of the position, i.e. the important (not constantly unique) moves from the initial game array to the diagram position.

## Economical retro records (type A, B, C, M)

The economical records with the stipulation 'Which was the last move?' are the best known retro themes. In a most economical rendering a unique move (e.g. $\mathrm{K} \times \mathrm{B}$ ) is proved to be the last one by retroanalysis. The following criteria apply to the economy: a minimum of 1) pieces, 2) officers ( $\mathrm{Q}, \mathrm{R}, \mathrm{B}, \mathrm{S}$ ), 3) major officers ( Q , $\mathrm{R})$, 4) queens. B and S are equal in evaluation.

There are 60 different last moves (records): K, Q, R, B, S, P moves (6 different moves); K, Q, R, B, S, P captures Q, R, B, S, P (30); P moves and promotes to Q, R, B, S (4); P captures Q, R, B, S and promotes to Q, R, B, S (16); P does a double step (1); P captures en-passant (1); long and short castling (2).

Furthermore there are various types. Type A: it is not stated who is on the move; neither king is in check ( 59 different moves, not e.p. capture). Type B: it is stated who is on the move; neither king is in check ( 59 different moves, not e.p. capture, but see no. 439). Type C: a king is in check ( 60 different moves). You will find these records in my book 'Eigenartige Schachprobleme' or PDB (K='economy record' and $\mathrm{K}=$ 'type $\mathrm{A}^{\prime}$ ) or www.janko.at/Retros or www.anselan.com. - Type $\mathbf{M}$ (related to type C ) is less known: Black is mate ( 60 different moves).

No. 124
H. August, V. Onitiu,
O. Brennert, N. Høeg,
T. R. Dawson

Skakbladet 1924


Last move?

No. 125
Niels Hoeg
Skakbladet 1924


Last move?

No. 126
Theophilus Willcocks
Die Schwalbe 1978


Last move?

No. $124(\mathrm{~Kb} 4 \times \mathrm{Sa} 3)$, the most economical type A record, and no. 125 (FIDEAlbum; Ba $2 \times$ Sb1) are simple. - No. 126 is singular: Bh7 $\times$ Rg8! Rg7-g8+ Bg $8 \times$ Sh7 Sg5-h7+ Bh7-g8, e.g. Sf3 $\times$ Rg5 $\ldots$ bRe8-a8! wRd8-d7! and the cage is open.

No. 127
Istvan Gajdos
problem 1957
$1^{s t} / 2^{n d}$ Prize


Last move?

No. 128
Zdravko Maslar
problem 1957


Last move?

No. 129
Vojko Bartolovic
Rudolf Buljan
problem $19575^{\text {th }}$ Prize


Last move?

No. 127 ( $\mathrm{Ra} 8 \times \mathrm{Qb} 8$ !) and no. 128 ( $\mathrm{Rc} 8 \times \mathrm{Qb} 8$ !) have got 13 pieces, but no. 127 is the record (B is more economical than R). - No. 129 is tricky: Qf8 $\times$ Qd8! bQe8-d8+ wQh6-f8 $\ldots$ wKh6 $\rightarrow$ c7. The last move was not $\mathrm{Qf} 8 \times$ Rd8?, for the wK cannot pass by the bR nor (after bPg7-g6) leave the cage.

No. 130 (b7 $\times$ Qa8Q!) is the only record to need 15 pieces. - No. 131: backward $\mathrm{f} 7 \times \mathrm{Qe} 8 \mathrm{R}$ !, before h6-h5 e6/g6 $\times$ Sf7. - No. 132 (FIDE-ALBUM) is unique: the last move was $\mathrm{Bg} 8 \times \mathrm{Qh} 7$ !, before e.g. Qh1-h7 h7 $\times$ Rg8B! ... h2 $\rightarrow \mathrm{h} 7 \mathrm{bKh} 5 \rightarrow \mathrm{~h} 8$ $\mathrm{bRh} 6 \rightarrow \mathrm{~g} 8 \mathrm{wKg} 8-\mathrm{f} 7 \mathrm{bSd6}$-e8 wKa6 $\rightarrow \mathrm{g} 8$. The bRh is needed as a sacrificial piece, so not backward $\mathrm{Bg} 8 \times \mathrm{Rh} 7$ ?. This is my best last-mover.

No. 130
Harold H. Cross
Fairy Chess Review 1958


Last move?

No. 131
Jan Mortensen
Fairy Chess Review 1958


Last move?

No. 132
Werner Keym
Die Schwalbe 1979
$1^{s t}$ Special Mention


Last move?


Last move?

No. 134
Werner Keym
Die Schwalbe 1980


Last move?

No. 135
Werner Keym
Die Schwalbe 1990


Last move?

In 16 cases the records of type A and B are the same, among them the classic no. $\mathbf{1 3 3}(\mathrm{K} \times \mathrm{Q})$. Here the last move was $\mathrm{Kg} 8 \times \mathrm{Qh} 8$. Before $\mathrm{Kg} 7 \times \mathrm{Rh} 8$ ? or $\mathrm{Pg} 7 \times \mathrm{Sf} 8 \mathrm{~S}$ ? a black move would be missing. Pg7-g6? locks up the wK.

No. 134, too, deals with $\mathrm{K} \times \mathrm{Q}$. Here the last move was not $\mathrm{Kc} 8 \times \mathrm{Q} / \mathrm{Rb} 8$ ? $\mathrm{Q} /$ $\mathrm{Ra} 8 \times \mathrm{Sb} 8+\mathrm{Kd} 8$-c8 since a black move would be missing. Pe7-e6? locks up the wK, for he cannot pass by the bRg which is not able to go to h8. So the last move was $\mathrm{Ka} 8 \times \mathrm{Qb} 8$ !, before e.g. $\mathrm{Qd} 8 \times \mathrm{Sb} 8+\ldots$ Qh4-d8 $\ldots$ wKf6 $\rightarrow \mathrm{a} 8$. No. 92 is the only type A record with a white Rex solus.

In later publications no. 134 was presented as the new type A record for $\mathrm{K} \times \mathrm{Q}$ because in the chess game a knight is generally considered to be a little weaker than a bishop. But that depends on the position. Therefore this is not a criterion serving for the economical retro records.

In 2007 retro specialists followed my suggestion and agreed that in type C records a king must (before 2007: can) be in check.

Therefore the type C record for $\mathrm{K} \times \mathrm{Q}$ is neither no. 133 nor 134, but no. 135 (Ke8 $\times$ Qf7\#). Genesis of the position: wS $\times$ Bc8, wS $\times$ Bf8, bKe8-f8, f7-f6, bQd8 $\rightarrow \mathrm{d} 6$, $\mathrm{bKf} 8 \rightarrow \mathrm{c} 8$, bSb8 $\rightarrow \mathrm{d} 8$, bRa8-b8, bSg8-h6, bRh8 $\rightarrow \mathrm{f} 7$, wPg6 $\times$ Rf7-f8R, bSh6-g8, $\mathrm{bPh} 7-\mathrm{h} 6$, wKe1 $\rightarrow \mathrm{e} 8$, $\mathrm{bSd} 8 \rightarrow \mathrm{a} 8, \mathrm{bPa} 7 \times \mathrm{Xb} 6, \mathrm{wPa} 2 \rightarrow \mathrm{a} 7 \times \mathrm{Rb} 8$ B and then bQd6-e6 Bb8-a7 Qe6-f7+Ke8 $\times$ Qf7+. No. 135 is the only type C record which needs one piece more than the respective type A record.

No. 136
Oskar E. Vinje
Fairy Chess Review 1938


Last move?

No. 137
Werner Keym
feenschach 1977
Commendation


Last move?

No. 138
Frank Christiaans
Die Schwalbe 1995


Last move?

The type A records are playing in the champions' league of the last move records. In no. 136-138 the number of captures is important. In no. 136 the white pawns captured the 13 missing black pieces. So there is no sacrificial piece for the wK or wR or wS . Therefore the last move was only $0-0-0$ ! $\mathrm{Kc} 2-\mathrm{b} 3 / \mathrm{Kc} 2 \times \mathrm{Xb} 3$.

In no. 137 the wPb and the wPd captured $\mathrm{Q}, \mathrm{S}, \mathrm{S}$ and the promoted officer $\mathrm{X}(=\mathrm{bPa})$ on squares c7 and d8 and promoted to rooks. The last move was not $w \operatorname{Pc} 7 \times \mathrm{Xd} 8 \mathrm{R}$ ? without a previous black move, but $\mathrm{wPa} 7 \times \mathrm{Rb} 8 \mathrm{R}$ ! with the previous move bRa 8 - b 8 .

No. 138 is a challenge. The wBc 1 was captured on c 1 , the bBf 8 on f 8 . So the Ba3 is a promoted officer ( $\mathrm{wPh} \rightarrow \mathrm{d} 7-\mathrm{d} 8 \mathrm{~B}$ ), the white pawns captured 11 pieces, among them three of the four black pawns of the files a-d. For that purpose either the bPa or the bPb had to move to the d-file. For both pawns there were not enough white pieces to be captured ( $\mathrm{Q}, \mathrm{R}, \mathrm{B}, \mathrm{S}$ ). So one of the two pawns was captured on the file a or b by a white officer. The last move was not $\mathrm{wBb} 4 \times \mathrm{Pa} 3$ ? retrostalemate, but wKa $5 \times \mathrm{Pa} 4$ ! b $5 \times \mathrm{Xa} 4$, and the position can be released.

Many well-known retro composers have created last move records. For the last time one piece was saved in type $\mathrm{C}(\mathrm{P} \times \mathrm{Q}=\mathrm{R})$ in 1980 and in type $\mathrm{A}(\mathrm{Q} \times \mathrm{P})$ in 1995. Two pieces were saved in type B for $\mathrm{P} \times \mathrm{Q}=\mathrm{Q}(=$ no. 144) and $\mathrm{P} \times \mathrm{Q}=\mathrm{R}$ by myself in 2007 and one piece in type B for Q- (= no. 141) by Andrew Buchanan in 2012. Who will be the next one?

No. 139
Jan Mortensen
Feenschach 1956


Last move?
Black to play

No. 140
Rolf Uppström
Die Schwalbe 1987


Last move?
Black to play

No. 141
Andrew Buchanan
feenschach 2012
Special Prize


Last move?
Black to play

Six type B records. No. 139 (Ka $2 \times$ Sa1! Sb3-a1+) is a well-known position by Jan Mortensen which completely anticipates Raymond Smullyan's mirrored version. No. 140 (Sc2-a1!) and no. 141 (Qa7-a8) are smart.

No. $142(\mathrm{R} \times \mathrm{B})$ shows a clever release: $w \mathrm{Rg} 2 \times$ Bg1! Bh2-g1 Rg1-g2 Rg2-f2 f2-f3. - No. $143(B \times R)$ is partly similar, partly different: $w B g 7 \times$ Rh8! Rg8-h8 Bh8g7 g7×Xh6. - No. 144: a7×Qb8Q!; not a7×Sb8Q? Sc6-b8+ retrostalemate; not a7 $\times$ Rb8Q? Ka5-a6 a6-a7 a7×Xb6 X-b6 Sb6-a8 illegal.

No. 142
Vojko Bartolovic
Rudolf Buljan
problem 1957 I ${ }^{\text {st }}$ Comm.


Last move?
Black to play

No. 143
Jörg Varnholt
Die Schwalbe 1988


Last move?
Black to play

No. 144
Werner Keym
feenschach 2012
Die Schwalbe 2007
$2^{\text {nd }} H M$


Last move?
Black to play

No. 145
Niels Hoeg
Skakbladet 1916


Last move?

No. 146
Sveto Stambuk
Problem $19512^{\text {nd }}$ Prize


Last move?

No. 147
Branko Pavlovic
Sahovski Vjesnik 1950


Last move?

Three unsurpassable classical type C records. No. 145 (FIDE-Album) is the oldest record: backward d5×e6 e.p.+! e7-e5 d4-d5+. - In no. 146 the last moves were Kg2-f2+! f2-f1B+. - No. 147 shows the well-known double check of rook and bishop: backward Kg3×Pf3! g4×f3 e.p.+f2-f4. In 1957 Raymond Smullyan presented this 'trick' in his famous puzzle (cp. no. 218).

Three type M records. No. 148: backward g7-g8S\#!. - No. 149: backward not b4 $\times$ Q/R/B/Sa5\#? (illegal!), but b4×Pa5\#!. - No. 150: the white Pawns captured 15 times, so there is no sacrificial piece for the white king. Therefore the last move was not Kc6×Xb6\#?, but Kc6-b6\#!.

No. 148
Bernd Schwarzkopf
Werner Keym
Die Schwalbe 1990


Last move?

No. 149
Ladislav Packa
Andrej Frolkin
Die Schwalbe 1990


Last move?

No. 150
Werner Keym
Die Schwalbe 1990


Last move?

## Economical retro records (type D, ELM, further types)

Type D means Duplex (= type B twice): a) If Black is to play, there is a unique last white move; b) If White is to play, there is a unique last black move. This results in $60 \cdot 59: 2=1770$ combinations of different moves.

Bernd Schwarzkopf presented type D in 1981 and published about 35 combinations in 1983 in feenschach. In 2007 many records were published in the Retro Mailing List. You find about 160 type D records in www.janko.at/Retros or www.anselan.com. Each of the 59 different moves (e.p. is impossible) was achieved at least once. Unlike the old fashioned types A, B and C, type D offers many chances for composers.

No. 151 shows the combination $\mathrm{B}-/ \mathrm{B} \times \mathrm{S}$; a) backward wBf7-g8 Bg8 $\times$ Sh7 Sg5-h7 $\mathrm{h} 7 \times \mathrm{Xg} 6$, b) backward bBf7 $\times$ Se8. - The corner positions of no. 152 are different: a) wPc $7 \times$ Bb 8 S, b) bPf $2 \times$ Sg 1 R. - No. 153: a) wPh $7 \times$ Rg 8 B, b) bPa $2 \times$ Rb $1 B$; $\mathrm{bPa} 7 \rightarrow \mathrm{a} 2$, $\mathrm{wPa} 6 \times \mathrm{Xb} 7$, the cage is open. There we have got the famous duo from Argentina.

No. 151
Wolfgang Dittmann

Hans Gruber
Günter Büsing
Bernd Schwarzkopf
feenschach 1983


Last move?
a) Black to play
b) White to play

No. 152
Andrew Buchanan
Retro Mailing List 2007


Last move?
a) Black to play
b) White to play

No. 153
Roberto Osorio
Jorge Lois
Retro Mailing List 2007


Last move?
a) Black to play
b) White to play

No. 154
Werner Keym
Retro Mailing List 2007


Last move?
a) Black to play
b) White to play

No. 155
Werner Keym
Retro Mailing List 2007


Last move?
a) Black to play
b) White to play

No. 156
Werner Keym
Retro Mailing List 2007


Last move?
a) Black to play
b) White to play

No. 154-156 are all a challenge to advanced solvers. No. 154: a) wKd1-c1, b) $\mathrm{bBb} 1-\mathrm{a} 2$; bOfficer $\times \mathrm{Bc} 1 ; \mathrm{bPg} \times \mathrm{Ph} \rightarrow \mathrm{h} 1 \mathrm{X}, \mathrm{bPh} \rightarrow \mathrm{h} 1 \mathrm{X}, \mathrm{wPg} \rightarrow \mathrm{g} 8 \mathrm{X}$. The wPs captured 10 times; backward bPb6-b7? would lock up the bBc8. The bPa7 (Pa7×Xb6-b5) or the $\mathrm{bPe} 7(\mathrm{Pe} 7 \rightarrow \mathrm{a} 3-\mathrm{a} 2 \times \mathrm{Xb} 1 \mathrm{~B})$ captured the promoted officer X , but not the lightsquared wB. So backward $\mathrm{bBb} 1 \times \mathrm{Xa} 2$ ? is impossible for the lack of a sacrificial piece.

In no. 155 the bPs captured 7 times, bOfficer $\times \mathrm{Bf} 1$. The wPb 2 captured 5 times on dark squares, wOfficer $\times$ Ph. Backward bPd $7 \times$ Xc6? or bPe $7 \times$ Xd6? would lock up a bishop, since wPf $6 \times \operatorname{Pg} 7$ is necessary. At first the release below must be performed by wSg1-f3 ~ Kh1-h2 Kg3-f2, then follows wPf3 $\times$ Be4. Therefore backward in a) wPf $6 \times \operatorname{Pg} 7$, in b) bPb $3 \times \mathrm{Pa} 2$. 'Simple in form, rich in content.'

No. 156: a) w0-0-0, b) bPh2-h1S. Here is the genesis of this complex position for sceptists as to the issue of legality: $\mathrm{bS} \times \mathrm{Bc} 1-$, $\mathrm{wSg}-, \mathrm{wPg} 2 \times \mathrm{Bf} 3 \times \mathrm{Pe} 4$, $\mathrm{wBf} \rightarrow \mathrm{f} 5, \mathrm{~g} 7 \rightarrow \mathrm{~g} 2, \mathrm{~h} 2 \times \mathrm{Qg} 3, \mathrm{~h} 7 \rightarrow \mathrm{~h} 2$, wBf5-h3, g3-g4, f2 2 Be3, bR $\rightarrow \mathrm{g} 3, \mathrm{bR} \rightarrow \mathrm{f} 2$, $\mathrm{c} 7 \rightarrow \mathrm{c} 3, \mathrm{f} 7 \rightarrow \mathrm{f} 3, \mathrm{bK} \rightarrow \mathrm{e} 5, \mathrm{e} 3 \times \mathrm{Sf} 4+$, $\mathrm{bKe} 5-\mathrm{d} 4, \mathrm{~d} 2 \times \mathrm{Pc} 3+, \mathrm{bKd} 4-\mathrm{e} 3, \mathrm{wQ} \rightarrow \mathrm{c} 4, \mathrm{~d} 7 \rightarrow \mathrm{~d} 3$, $\mathrm{e} 2 \times \mathrm{d} 3, \mathrm{bRf} 2-\mathrm{d} 2$, wRh1-f1, bS $\rightarrow \mathrm{g} 1, \mathrm{~b} 7 \rightarrow \mathrm{~b} 3, \mathrm{a} 2 \times \mathrm{b} 3, \mathrm{a} 7 \rightarrow \mathrm{a} 2 \times$ Sb1B, d3-d4, bRd2-d3, wRf1 $\rightarrow \mathrm{d} 1$, bRd3-d2, wS-f2 and then bBb1-a2, wQc4-f1 bRd2-d3 wRd1-d2 bPh2h1S w0-0-0 - quod erat demonstrandum.

Equal Last Move (ELM) is a duplex form created by Roberto Osorio in 2007. The stipulation 'Equal last move?' requires the same last move of White, if Black is to play, and of Black, if White is to play, e.g. $\mathrm{wQ} \times \mathrm{S}$ and $\mathrm{bQ} \times \mathrm{S} .57$ of the 60 possible last moves exist as economical records (not e.p., $0-0-0,0-0$ ). You will find them in www.janko.at/Retros.

No. 157
Bernd Schwarzkopf
Retro Mailing List 2007


Equal last move?

No. 158
Jorge Lois
Roberto Osorio
Retro Mailing List 2007


Equal last move?

No. 159
Bernd Schwarzkopf
Werner Keym
Retro Mailing List 2009


Equal last move?

In no. 157 White's last move was wKg2-h2 h2-h1B+, therefore Black's last move was bKh5-h4 (equal move: K-).

In no. 158 White's last move was not $\mathrm{Kf} 8 / \mathrm{Kg} 7-\mathrm{g} 8$ (illegal), but $\mathrm{g} 7 \times \mathrm{Xh} 8 \mathrm{~S}$, therefore Black's equal last move was $\mathrm{a} 2 \times \mathrm{Xb} 1 \mathrm{~S}$. The intersection set of the moves $\mathrm{wPg} 7 \times \mathrm{B} / \mathrm{Sh} 8 \mathrm{~S}$ and $\mathrm{bPa} 2 \times \mathrm{b} 1 \mathrm{Q} / \mathrm{R} / \mathrm{Sb} 1 \mathrm{~S}$ is the solution: $\mathrm{P} \times \mathrm{S}=\mathrm{S}$.

In no. 159 Black's last move was not Kh2-h1 (illegal), but Pf $2 / \mathrm{h} 2 \times \mathrm{Xg} 1 \mathrm{R}$, therefore White's equal last move was $\mathrm{Ph} 7 \times \mathrm{Xg} 8 \mathrm{R}$. The intersection set of the moves $\mathrm{wPh} 7 \times \mathrm{Q} / \mathrm{Rg} 8 \mathrm{R}$ and $\mathrm{bBh} 2 \times \mathrm{Q} / \mathrm{Bg} 1 \mathrm{R}$ results in the solution: $\mathrm{P} \times \mathrm{Q}=\mathrm{R}$. The try $\mathrm{bPf} 2 \times \mathrm{Qg} 1 \mathrm{R}$ ? is illegal.

What is typical of ELM records: It is easy to solve them, yet anything but easy to construct them.

In a problem with the stipulation 'Which is the next move?' it can be proved who did not move last and who must make the next being absolutely unambiguous. There are two types (A: neither king is in check; C : a king is in check), but less than 60 economical records (cp. the classical last move records no. 124-147), since some moves (e.g. promotions) cannot be unique. Most records are quite simple miniatures. You will find the economical records of this type in Die Schwalbe, December 2007.

No. 160
Frank Christiaans
Die Schwalbe 1993


Next move?

No. 161
Werner Keym
Main-Post 1966 (v)


Next move?

No. 162
Werner Keym
Bernd Schwarzkopf
Die Schwalbe 1992


Problem without words

In no. 160 the last move was not $\mathrm{bKa} 2-\mathrm{a} 1$ ? nor $\mathrm{bKa} 2 \times \mathrm{Ra}$ ? because of retrostalemate, but $\mathrm{wBb} 1 \times \mathrm{Xc} 2$ or $\mathrm{wPa} 2 \times \mathrm{Xb} 3$. So the next move is $1 . \mathrm{Ka} 2$ !.

In no. 161 the wPs captured 13 times, so there is no sacrificial piece for the white king or bishop. The last moves were wPg2-g4 Kg4-h4 B-f3+. So the next move is $\mathrm{bPf} 4 \times \mathrm{g} 3$ e.p.!. In 1966 no. 161 was published with the stipulation 'Mate in 3 moves'. Solution: 1.bPf4 $\times \mathrm{g} 3$ e.p.! Rf4+2.K $\times \mathrm{g} 5 \mathrm{~g} 7-\mathrm{g} 8 \mathrm{Q}+3 . \mathrm{K} \times \mathrm{f} 4 / \mathrm{Kh} 6 \mathrm{Qg} 4 / \mathrm{Qg} 6 \#$.

In no. 162 White moved last and the next move is bQa8-a7\#. No. 162 is not only the record for the move Q- of the type 'Which is the next move?' (type A), but also (because of the mate Qa7\#) the economical record for the type 'Problem without words' (= 'Which is the next and final move?').

In a problem with the stipulation 'Problem without words' it can be proved a) who moved last, b) who is to play and c) which forced move results in mate or stalemate. You will find the economical records of this type in Die Schwalbe, August 1993.


Problem without words

No. 164
Werner Keym
Allgemeine Zeitung Mainz 1993


Problem without words

No. 165
Frank Christiaans
Die Schwalbe 1993


Problem without words

No. 163 is a joined problem by Karl Fabel and myself. He composed a one-mover with a forced mate by the en-passant capture, I found a more economical setting and the new stipulation. The white pawns captured 13 times. Black captured 3 pieces: $\mathrm{bPh} \times \mathrm{Sg}, \mathrm{bPg} \times \mathrm{Sh}$ and $\mathrm{bPb} \times \mathrm{Xa} \rightarrow \mathrm{a} 1 \mathrm{X}$ (furthermore $\mathrm{bPa} \rightarrow \mathrm{a} 1 \mathrm{X}$ ). So for lack of a sacrificial piece the last move was not bPe5xXf4? (with 1.Bf2\#), but wPg2-g4 $\mathrm{Kg} 4-\mathrm{h} 4 \mathrm{f} 2-\mathrm{f} 3+$. Therefore $1 . \mathrm{bPf} 4 \times \mathrm{g} 3$ e.p.\#! is forced. This first rendering fascinated the solvers. [A more economical setting is possible by replacing Qf6 by Bf6 and Bg 1 by Sg 1 , but then the try 1.Bf2\#? would be lost.]

In no. 164, too, the next and last move is a forced en-passant capture: $1 . \mathrm{h} 4 \times \mathrm{g} 3 \#$ !. In type $C$ (king in check) this works out much more easily. The last move was not wPg3-g4\#? which would not allow a previous black move, but wPg2-g4+.

No. 165 is more difficult. The black pawns a-d captured 6 times, furthermore $\mathrm{bPg} \times \mathrm{Ph} \rightarrow \mathrm{h} 1 \mathrm{X}$ and $\mathrm{bPh} \rightarrow \mathrm{h} 1 \mathrm{X}$. The white pawns captured 10 times. So there is no sacrificial piece for bK or bR or wK. Therefore the last move was wKe1-d1 (before bKcl-b1) and Black to play is forced to mate by 1.Kb2\#. Well done.

In a problem with the stipulation 'Which was the first move?' the first and unique move of a definite piece is required. No king is in check and it is not stated who is to play (= type A). This record theme was created by Bernd Schwarzkopf in 1981. There are 60 possible moves, but not the same as in the classical last move records since it cannot be proved that moves of knights are the first moves, for a chess game may begin as follows: $1 . \mathrm{Sb} 1-\mathrm{c} 3 \sim 2$.Ra1-b1 $\sim 3 . \mathrm{Rb} 1-\mathrm{al} \sim 4 . \mathrm{Sc} 3-\mathrm{b} 1$. On the other hand it is easy to show the first move of a promoted knight.

No. 166
Bernd Schwarzkopf
Wolfgang Dittmann
Godehard Murkisch
feenschach 1981


Which was the $1^{s t}$ move of the rook?

No. 167
Michel Caillaud
feenschach 1984


Which was the $1^{s t}$ move of the white queen?

No. 168
Gerd Wilts
Die Schwalbe 2010


Which was the $1^{s t}$ move of the white king?

In no. 166 the white pawns captured the missing 15 black pieces. So the first move of the wRh was not Rh1 $\times \mathrm{Xg} 1$, but Rh1-g1.

No. 167 is an excellent retro problem. The release of the position depends on wPd $2 \times$ Be3 (before bBf8 $\rightarrow \mathrm{e} 3$ and $\mathrm{bPe} 7 \times \mathrm{Xd} 6$, before $\mathrm{wPd} 6 \times \mathrm{Xc} 7$ and bK-c8). So the last moves were $1 . \mathrm{Kc} 1-\mathrm{c} 2 \mathrm{c} 5 \times \mathrm{Rd} 42 . \mathrm{Rd} 1-\mathrm{d} 4 \mathrm{c} 6-\mathrm{c} 53.0-0-0 \mathrm{f} 5 \times \mathrm{Qe} 44 . \mathrm{Qa} 4-\mathrm{e} 4 \mathrm{~g} 6 \times \mathrm{Sf} 5$ $5 . \mathrm{Qd} 1 \times \mathrm{Pa} 4 \mathrm{f} 6 \times$ Be5 6.c2-c3 f7-f6 7.Bc3-e5 a5-a4 8.Bd2-c3 a6-a5 9.Bc1-d2 a7-a6 $10 . \mathrm{d} 2 \times \mathrm{Be} 3$. This is the record (with 18 pieces!) for the first move $\mathrm{Q} \times \mathrm{P}$.

No. 168: The last moves were 1.Qd1-e1 f6-f5 2. $\mathrm{Ke} 1 \times \mathrm{Sf1} \mathrm{Qg} 1-\mathrm{h} 2$ 3.Rh2-h3 Se3× Bf1 and then 4.Rh3-h2 Sc4-e3 5.Rh2-h3 Sd6-c4 6.Rh3-h2 Se4-d6 7.Rh2-h3 Sg5-e4 8.Rh3-h2 f7-f6 9.Rh2-h3 Sh3-g5 10.c4 $\times$ Pd5 Bf6-h4 10.b3 $\times$ Pc4 Kh4-h5. This is the record for the first move $\mathrm{K} \times \mathrm{S}$. Superb!

## Endgame studies with retro aspect

Studies with a satisfactory content of both retro and endgame are rare. That came to be true with most entries of the $2^{\text {nd }}$ International Team Match 1968-70 as well with the theme 'Retrograde analysis in the endgame study'.

No. 169
Jan Knöppel
Springaren 1961


Win

No. 170
Jan Knöppel
$2^{\text {nd }}$ Int. Team Match
1968-70 $4^{\text {th }}$ Place


Draw

## No. 171 <br> Werner Keym

Die Schwalbe 1997


Win

No. 169 (FIDE-Album): The wPs captured the 8 missing black pieces, among them the two promoted officers born on $\mathrm{f} 1(=\mathrm{bPg}$ and bPh$)$; wBc 1 died on c 1 ; the bPa captured twice. So there is no sacrificial piece for bK or bS . The last moves were $1 . . . \mathrm{c} 7-\mathrm{c} 5!2 . \mathrm{c} 5 \times$ Qb6 (or $2 . \mathrm{c} 5 \times$ Rb6) Qf6-b6 $3 . \mathrm{d} 4 \times$ Rf5 Qf1-f6 $4 . \mathrm{e} 3 \times$ Bd4 f2-f1Q $5 . \mathrm{c} 4 \times$ Bb5 g $3 \times$ Rf2. Therefore $\mathbf{1 . b 5} \times \mathbf{c 6}$ e.p.! Sb4 2.c7! 1:0, not $2 . \mathrm{c} 6 \times \mathrm{b} 7$ ? Kc1 $3 . \mathrm{b} 8 \mathrm{Q} \mathrm{Sc} 2+4 . \mathrm{K} \times \mathrm{a} 2 \mathrm{Sb} 4+$ with perpetual check.

No. 170: The bPs captured the 9 missing white pieces. The wPs a, b and e captured four times. There are only 3 sacrificial pieces for the promotions of the wPs f,g and h. So the bK or the bR must have moved. 1.Ke6! Kf8 2.Kf6 Kg8 3.Rg7+ Kf8 4.Ra7 Ke8 5.Ke6 Kd8 6.Kd6 Kc8 7.Ra8+ Kb7 8.R $\times$ h8 a5 (8...b1Q 9.Rh7+ 10.Rh8+ 11.Rh7+ =) 9.Rh7+ Ka6 10.K $\times$ c6 b1Q 11.Rh8 Ka7 12.Rh7+ Ka6 13.Rh8 Qh1+ 14. $\mathbf{R} \times$ h1 15.Rh8/Rh7 etc. $=$

No. 171: The wPs captured six times, the bPh4 three times. Backward not Kc4-b4? $\mathrm{d} 2-\mathrm{d} 3+$ (then $\mathrm{Bc} 1 \rightarrow \mathrm{f} 8$ impossible) nor $\mathrm{c} 2 \times \mathrm{Pd} 3 \mathrm{X}$ ? (then bPd7 $\rightarrow \mathrm{d} 3$ illegal), but c7-c5! Rd6-a6+. Therefore 1.b5 $\times \mathbf{c 6}$ e.p.! $\mathbf{Q} \times \mathbf{f 8}$ ( $1 \ldots \mathrm{~K} \times$ a4 $2 . \mathrm{Rb6} \mathrm{Q} \times f 8$ ) 2.Rb6+ $\times \times \mathbf{a 4}$ 3.0-0! (3.Kf2? $\mathrm{R} \times \mathrm{h} 2+4 . \mathrm{R} \times \mathrm{h} 2$ Qd8 0:1) $\mathbf{Q b 4} 4 . \mathrm{R} \times \mathbf{b 4} \mathbf{+} \mathbf{a 5} \times \mathbf{b 4} / \mathbf{K} \times \mathbf{b} 4 \mathbf{5 . K g} 2$ conquers the rook and wins, e.g. $5 \ldots \mathrm{~h} 4 \times \mathrm{g} 36 . \mathrm{K} \times \mathrm{h} 3 \mathrm{~g} 3 \times \mathrm{h} 27 . \mathrm{K} \times \mathrm{h} 2 \mathrm{~Kb} 58 . \mathrm{c} 7 \mathrm{Kc} 6$ $9 . \mathrm{R} \times \mathrm{f} 7$. First rendering of en-passant key and castling in a study. It is even a Valladao study since the promotion of a pawn is necessary for the win.


Partial Retrograde Analysis (p. 106) is the rare theme of the study no. 172:
a) If $0-0-0$ is permitted and $\mathrm{g} 5 \times \mathrm{f} 6$ e.p. is not permitted, then $\mathbf{1 . c 5} \times \mathbf{d 6}$ e.p.! 1:0 (1.Kf6? 0-0-0 2.e7 Re8 3.g7 e3 4.g7×h8Q Rxh8 5.g6 Kc7 6.g7 Rc8 7.Kf7 e2 8.g8Q $\mathrm{R} \times \mathrm{g} 89 . \mathrm{K} \times \mathrm{g} 8 \mathrm{e} 1 \mathrm{Q} 10 . \mathrm{Kf} 8 \mathrm{~d} 411 . \mathrm{e} 8 \mathrm{Q} \mathrm{Q} \times \mathrm{e} 8+12 . \mathrm{K} \times \mathrm{e} 8 \mathrm{~d} 313 . \mathrm{h} 6 \mathrm{~d} 214 . \mathrm{h} 7 \mathrm{~d} 1 \mathrm{Q}$ 15.h8Q Qd8+ 0:1).
b) If 0-0-0 is permitted and c5 $\times \mathrm{d} 6$ e.p. is not permitted, then $\mathbf{1 . g 5} \times \mathbf{f 6}$ e.p.! (1.Kf6? as a)) e3 2.g7 0-0-0 (2. . Sf7+ 3.Kd4/Kf4 Sh6 4.f7+ Ke7 5.f8Q+ R $\times f 86 . g 7 \times f 8 Q+$ Kxf8 7.c7 1:0) 3.e7 Sf7+ 4.Ke6 e2 5.K $\times$ f7 e1Q 6.e7 $\times$ d8Q+ K $\times$ d8 7.g8Q+ 1:0.
c) If $\mathrm{c} 5 \times \mathrm{b} 6$ e.p. and $\mathrm{g} 5 \times \mathrm{f} 6$ e.p. are not permitted, then $0-0-0$ is not permitted. In this case 1.Kf6! (1.g7? Ke7 2.h6 e3 3.h7 e2 4.g8Q e1D+ 0:1) Kd8 (1...Kf8 2.g7+ Kg8 3.g6 e3 4.h6 $\mathrm{S} \times \mathrm{g} 65 . \mathrm{K} \times \mathrm{g} 6 \sim 7 . \mathrm{h} 7 \#$ or $1 . . \mathrm{S} \times \mathrm{g} 62 . \mathrm{h} 5 \times \mathrm{g} 6 \mathrm{Kd} 83 . \mathrm{g} 7 / \mathrm{h} 5 \mathrm{Kc} 7$ 4.h5/g7 e3 5.h6 e2 6.h7 e1Q 7.g8Q R $\times$ g8 8.h7×g8Q 1:0) 2.g7 Kc7 3.h6 e3 4.h7 e2 5.g8Q e1Q 6.Q $\times$ a8 Qc3+ 7.Ke7 Qg7+ (7. . Sg6+ 8.Kf7 Se5+ 9.Kg8 S $\times \mathrm{c} 610 . \mathrm{h} 8 \mathrm{Q}$ 1:0) 8.Ke8 Qg6+ 9.Kf8 1:0.

No. 173 deals with Retro-Strategy (p. 115). If the wRf2 comes from a1, then w0-0 is not permitted, but b0-0-0; it is all the same, if it comes from b 8 (as a promoted R ), for in this case a black promoted officer ( $\mathrm{f} 7 \rightarrow \mathrm{f} 1 \mathrm{X}$ ) from f 1 is needed as a sacrificial piece. If the wRf2, however, comes from d 8 or $f 8$, then $\mathrm{b} 0-0-0$ is not permitted, but w0-0. Therefore not $1 . \operatorname{Rhf} 1$ ? $0-0-0$ ! nor $1 . S g 6$ ? b6 $\times \mathrm{c} 5$ ! $2 . \operatorname{Rhf} 10-0-0$ or $2.0-0$ c4 3.Kh1 Q $\times$ f2, but $\mathbf{1 . 0 - 0 !} \mathbf{b 6} \times \mathbf{c 5}$ (1...b5 2.d4 $3 . \operatorname{Sg} 6$ or $1 \ldots$ g5 $2 . S g 6$ or $1 . .$. Qa5 2.Sd7 Qg5+ 3.Sg2) 2.c4 g6 3.Kh1 1:0, e.g. 3...Qa4 4.S×g6 (or 4.d3) Qd1 5.R×d1 R×g6 6.Rdf1.

## Four castlings in retro problems

In no. 174-176 the question of which castling is permitted can only be answered by retroanalysis.

No. 174
Werner Keym
Schach 1971


Mate in 3

No. 175
Werner Keym
Die Schwalbe 1971 (v)


Mate in 3

No. 176
André Hazebrouck
Die Schwalbe 1972
Special Prize


Who can mate in 5 ?

No. 174: The wPs captured 7 pieces, among them the promoted piece from b1 (earlier $\mathrm{bPa} 4 \times \mathrm{Bb} 3 \rightarrow \mathrm{~b} 1 \mathrm{X}$ ), besides $\mathrm{a} 2 \rightarrow \mathrm{a} 8 \mathrm{X}$ (b0-0-0 not permitted) and $\mathrm{d} 6 \times \mathrm{Xc} 5$. Therefore 1.0-0! [thr. 2.g5 3.Qd7\#] Rf8 2.Rae1+ Kd8 3.R×f8\#, 1...Kd8/Ke7 2.g5 Ke7/Ke8/Rd8 3.Qd7/Qd7/Rae1\#. Try: 1.0-0-0?/g5? 0-0!.
No. 175: The $\mathrm{wPs}(\mathrm{wPh} 2 \times \mathrm{Xg} 3)$ captured 6 pieces, among them the promoted officer X from a1 (earlier $\mathrm{a} 7 \rightarrow \mathrm{a} 1 \mathrm{X}$ ); besides $\mathrm{sPb} 7 \times \mathrm{Sc} 6, \mathrm{bPd} \times \mathrm{Be}, \mathrm{bPf} 7 \times \mathrm{Pg} 6$. So w0-0-0 is not permitted. Therefore not $1.0-0-0!? \ldots 3 . \mathrm{Q} / \mathrm{R} \#$ nor 1.Rf1? 0-0-0! 2.Q×c6 Rd1+, but 1.0-0! 0-0-0/Ke7/Kd8 2.Q×c6 Kb8/Rd8/Kc8 3.Qb7/Rf7/Q×a8\#, 1...Ra6 2.Qd3 ~3.Qd7\#.
No. 176 (FIDE-Album): $\mathrm{wPa} \times \mathrm{Pb}, \mathrm{bPa} \times \mathrm{Pb}, \mathrm{wPd} 2 \times \mathrm{Se} 3, \mathrm{wPf} \times \mathrm{Pg}, \mathrm{bPh} \times \mathrm{Pg}$, $\mathrm{h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$, f7×Xe6. So only b0-0 is not permitted: 1.wQc7! $\mathrm{Q} \times \mathrm{h} 1+2 . \mathrm{Kd} 2$ Qc1+/Qd1+/Qe1+ 3.R $\times \mathrm{c} 1 / \mathrm{R} \times \mathrm{d} 1 / \mathrm{R} \times \mathrm{e} 1, \mathrm{~K} \times \mathrm{e} 1 \mathrm{Kf8} 4 . \mathrm{Q} \times \mathrm{e} 7+\mathrm{Kg} 85 . \mathrm{Qf7} \mathrm{\#}$. Not 1.wQg7? $\mathrm{Q} \times \mathrm{h} 1+2 . \mathrm{Kd} 2 \mathrm{Q}+3 . \mathrm{R} \times \mathrm{Q} 0-0-0$ !, not 1.bQc2?/bQg2? $\mathrm{Q} \times \mathrm{h} 8+2 . \mathrm{Kd} 7 \mathrm{Q}+$ $3 . \mathrm{R} \times \mathrm{Q} 0-0!/ 0-0-0!$. See $P D B$ for further examples by $A$. Hazebrouck. The computer does not solve no. 174 nor 176, but it gives two solutions for no. 175!
'Any chess problem can in principle be solved by trial, error and exhaustion, provided only that the problem is exhausted before the solver'.
(John D. Beasley)

## Text problems

The following text problems, the authors of which are in some cases unknown, do not require any weary or complicated calculations; instead, they present some spectacular effects. Many of them are computer-defying and what matters most of all, they are unambiguous and unique in the best sense of the term.

No. 177: Can eight white pieces ( $K, Q, R, R, B, B, S, S$ ) guard all empty squares of the chessboard?
No, if the bishops occupy squares of different colours: at least one square will remain unguarded (e.g. Kf5 Qh2 Ra7 Rb8 Bd4 Be4 Se3 Sf3, square c1). Yes, if they occupy squares of the same colour (e.g. Kc3 Qf6 Ra8 Rh1 Bc6 Bf3 Sd5 Se4).

No. 178: Werner Keym, Die Schwalbe 1988. On how many squares can a king be double-checked by two queens?
On all 64 squares. The bK can be in double check from two wQs on the $6^{\text {th }}-8^{\text {th }}$ ranks as a result of disclosed check following pawn promotion (e.g. wQa8 b7 bKc6 Sc8 and $\mathrm{b} 7 \times \mathrm{c} 8 \mathrm{Q}++$ ) as well as on the $4^{\text {th }}$ and $6^{\text {th }}$ ranks as a result of an e.-p. capture (e.g. wQc8 Qg8 g5 bKg4 f5 and g5 $\times \mathrm{f} 6$ e.p.++). The situation is analogous for the wK on ranks 1-3 and 5. 'An amusing idea.'

No. 179: From a large quadrate, which consists of 64 small quadrates, two small quadrates are removed in the bottom left and upper right corners. Can the resulting figure be fully covered with 31 rectangles the area of which amounts to that of two small quadrates?
No. Colour the quadrates of this figure in the way the chessboard squares are coloured. Then it will consist of 32 light and 30 dark squares, while each rectangle covers 1 light and 1 dark square. An elegant proof by means of the chessboard!

No. 180: Can a queen run through the 9 squares of the quadrate al-c1-c3-a3 in four moves?
Yes, if this quadrate is part of the standard $8 \times 8$ chessboard: Qc3-a1-a4-d1-b1. No, in case of a $3 \times 3$ board.

No. 181: Henry E. Dudeney, Amusements in Mathematics 1917 (Original or reprint?). The queen starts from e1 and in five moves covers the longest non-crossing path possible. How? [distances are measured between square centers]
The nicer path is e1-h1-h8-a1-a8-g8 ( 33,899 length units), but the longer one is e1-h1-a8-h8-h2-c7 (33,970 length units). 'A brilliant piece.'

No. 182: Werner Keym, Die Schwalbe 1991 (v). In which mate position with the kings and a white piece did this piece have to make at least three moves from the initial game array to the mate position?
Only in the mate position wKd3 Qd2 bKd1.
No. 183: Werner Keym, König \& Turm 2004. The centers of the squares occupied by three pieces form the apexes of a triangle. Its area can be decreased through five different moves of the white king to one, two, three, four, or five sixths. What is this (legal) position?
The only position is wKe1 Rh1 bKb5. Its area amounts to 6 area units (AU). The move Kf2 decreases it to $1 \mathrm{AU}(1 / 6) ; 0-0$, to $2 \mathrm{AU}(2 / 6)$; Ke 2 , to $3 \mathrm{AU}(3 / 6)$; Kf1, to $4 \mathrm{AU}(4 / 6)$, and Kd 2 , to $5 \mathrm{AU}(5 / 6)$.

No. 184: Alex Fishbein, The Problemist 2016, Commendation ex aequo. Find an orthodox game that ends with 7...Kxb7\#.
1.d4 c5 2.d4xc5 Sa6 3.Q $\times \mathrm{d} 7+\mathrm{K} \times \mathrm{d} 74 . \mathrm{Kd} 2 \mathrm{Kc} 7+5 . \mathrm{Kc} 3$ Be6 6.c6 Rc8 7.c6×b7 $\mathrm{K} \times$ b7\#. 7 moves are the current record (cp. P0008162).

No. 185: Gerd Wilts, Eigenartige Schachprobleme 2010. In a game in 11 single moves, 6 checks were delivered. How did the game go?
1.d4 e5 2.Kd2 Qg5+ 3.Kc3 e5×d4+4.Q×d4 Qg3+5.Qe3+ Qe5+ 6.Q×e5+

No. 186: Werner Keym, The Problemist 1990. Construct symmetrical positions with the kings and a third piece (that is, the centers of the three occupied squares lie on a line) which remain symmetrical after a checking move. What can the third piece be?
Pawn through promotion (wKa1 Pa7 bKa5 and a7-a8Q+), rook through castling (wKe1 Ra1 bKh1 and $0-0-0+$ ), and - which is the point - knight on a nightrider line (wKa1 Sc2 bKg4 and Sc2-e3+). [A nightrider is a long-distance knight, which can make moves like Sa1-e3 or Sa1-d7.]

No. 187: Werner Keym, Die Schwalbe 1993, 2nd commendation. What is the maximum number of squares that can become reachable for an unpinned white piece as result of a move by a) another white piece, b) a black piece?
a) The maximum number of new moves to be performed is 12 ; these options become available for the wRh 1 following $0-0$ (castling is considered to be a king move!) (e1 ... a1 and $\mathrm{f} 2 \ldots \mathrm{f} 8$ ). b) The maximum number of new reachable squares is 9 , resulting from an e.p. capture, e.g. wQh3 g4 bPh 4 and $\mathrm{h} 4 \times \mathrm{g} 3$ e.p. ( $\mathrm{g} 4 \ldots \mathrm{c} 8$ and h 5 $\ldots$ h8). When first being confronted with the stipulation of this problem who would have thought of the two special moves, castling and en-passant?

No. 188: Werner Keym, Die Schwalbe 1987. How many legal positions with the kings and a rook are there in which the ratio of the number of moves that the three pieces can make is 1:2:3 and becomes 2:1:3 after a white and a black move?
Only the position bKa8 wKe1 wRh1 (possible moves 3:6:9 = 1:2:3) and 1.0-0 Kb7 ( $8: 4: 12=2: 1: 3$ ); e.g. $\mathrm{bKb} 8 \times$ Sa8 was played and $0-0$ is legal. The wrong answer is wKa bKe 8 bRh 8 ( $0-0$ is illegal, since the $\mathrm{bK} / \mathrm{bR}$ made the last move). This is the first ever problem where the ratio of possible moves is involved. Cp. P1204512 and P1347496.

No. 189: Werner Keym and Bernd Schwarzkopf, Die Schwalbe 2005 (c). Construct an economical legal mate position (Black is mate). All possible mirror reflections of this position are not legal mate positions.
The only position is wKg1 Rf1 Rf2 (Qf2 is not economical) Pa 2 bKb 1 (last move: $0-0+$ ). Illegal are the mirror positions wKb1 Rc1 Rc2 Ph2 bKg1 or wKc1 Rd1 Rd2 Pi2 bKh1 or wKg8 Rf8 Rf7 Pa7 bKb8 or wKh2 Rg3 Rh3 Pg8 bKh7. A legal position, but without a mate, is $w \mathrm{Kg} 1 \mathrm{Rf} 2 \mathrm{Rg} 2 \mathrm{Pf} 7 \mathrm{bKg} 6$. Two brains, one find.

No. 190: Werner Keym, Eigenartige Schachprobleme 2010. The pieces making up a position have made the smallest possible number of moves. White mates in 1 move. How many pieces are necessary?
Only 4 pieces are necessary: wKe1 Qd1 Qg8 bKe8 and 1.Ke7 Qdd8\#. If Qg8 is a promoted piece and the last moves were $\mathrm{h} 7 \times \mathrm{Xg} 8 \mathrm{Q} \mathrm{X}-\mathrm{g} 8$, not a single piece had to make any moves. This was extremely hard to find even for experienced solvers.

No. 191: Karl Fabel, Die Schwalbe 1937. Construct a position with the kings and two white rooks in which White can mate in four different ways.
wKe1 Rc2 Rh1 bKa1 and 1.Kd2/Ke2/Kf2/0-0\#.

Solution no. 188


Solution no. 189


Solution no. 190


Solution no. 191


No. 192: Werner Keym, Die Schwalbe 1994. Is there a chess piece the moves of which can all be forced (without any exception)?
All moves performed by a knight can be forced by zugzwang. On the contrary, certain moves by the kings ( $0-0$ ), queens (Qd1-a1), rooks (Rh1-h3), bishops (Bc3h8), and pawns (a2-a4 and c7-c8B) cannot be forced.

No. 193: Werner Keym, The Problemist 1991. Construct a legal position with three pieces in which the distance (measured between square centers) between the first and the second piece is half as long as that between the second and the third piece, but after a white move it is four times as long.
First piece bKg 1 , second wKe1, third wRa1; 1.0-0-0+. 'Quite elusive.'
No. 194: Werner Keym, Allgemeine Zeitung Mainz 1994. In a chess game, all pieces on the board occupy light squares. Does such a circumstance make no difference for White in any case?
In almost all cases it makes no difference; but in one case (bKe8 and bRa8 and legal castling) this can be unfavourable for White.

No. 195: Werner Keym, Die Schwalbe 1994, $1^{\text {st }}$ HM, version. What common feature is shared on a standard chessboard only by a2, g4 and h5 as the starting squares for a particular white piece?
The ratio of the number of light squares to the number of dark squares that can be reached by a white pawn from a2, g4 and h5 is $15: 12,10: 8$, and 5:4, i.e. 5:4 in each case. This common feature is in fact 'simple'; but nobody found out about it in 1994 - not even with the assistance of the computer.

No. 196: Werner Keym, Die Schwalbe 2014, Ist $^{s t}$ HM. Construct a position with the kings and a bishop which has the following features: the $w K$ and the $B$ have made the fewest possible number of moves; there is only one possibility to add a) a white, b) a black piece for a mate position. 3 solutions.

Tries: in the positions Ke 1 Bd 3 Ke 3 and Ke 1 Bf 3 (promotee) Ke 3 there are two possibilities in b ), namely $\mathrm{bQc} 1 / \mathrm{Rc} 1 \#$ and $\mathrm{bQg} 1 / \mathrm{Rg} 1 \#$. Here are the three solutions: 1) Kg1 Bc1 Kf3 (last move $\mathrm{bK} \times \mathrm{Xf} 3$; only move of wK was w0-0) with $+\mathrm{wQg} 2 \#$ and +sQg2\#; 2) Kf1 Kh2 Be1 (promotee) with +wQg2\# and bQf2\#; 3) Kc1 Ka2 Bd1 (promotee) (only move of $w K$ was $w 0-0-0$ ) and $+w Q b 2 \#$ and $+b Q c 2 \# . ~-~ T h u s, ~$ all four options of move possibilities are presented in the tries and solutions for the wK (not to move; to make an ordinary move; short castling; long castling) and for the B (wB on a light/dark square; bB on a light/dark square; moreover, original Bs and promoted Bs ).

No. 197 (FIDE-Album): Werner Keym, Die Schwalbe 2006, 2 ${ }^{\text {nd }}$ Prize. With the two kings (on different coloured squares), one officer and one pawn, construct a position in which it can be proved that a piece, in the course of the retro-play, cannot have occupied precisely 4 light squares. Same question with b) 5, c) 6, d) 7 light squares.

Solution no. 197a

1.0-0+
bK could not occupy
d1, e2, f1, h1

Solution no. 197b

1.0-0-0+
bK could not occupy
d1, e2, f1, a2, b1

Solution no. 197c

1...0-0-0+
wK could not occupy d7, e8, f7, a8, c6, e6

Solution no. 197d

$1 \ldots 0-0+$, wK
could not occupy d7, e8, f7, e6, g6, g8, h7

No. 198: Werner Keym, Die Schwalbe 2013, Prize. Every square on an ordinary $8 \times 8$ chessboard carries a number, a different one in each case. The sum of the numbers carried by those squares on which white and black pieces are arranged in a legal position remains unchanged at each stage after White's $I^{\text {st }}$, Black's $1^{\text {st }}$, White's $2^{\text {nd }}$ and Black's $2^{\text {nd }}$ move. On which of these moves is no capture made?
The only moves that fulfil the condition of the unchanged sum are the following: enpassant capture, White's castling, Black's castling, capturing move from the square carrying the number 0 . The right order of these moves is 1 ) en-passant capture (White), castling or capturing move from the square 0 (Black), 2) castling (White), capturing move from the square 0 or castling (Black). So on White's $2^{\text {nd }}$ move no capture is made. Surprise: We do not know the number nor the kind of the pieces nor the numbers on the squares, yet the solution is unambiguous. No. 197 and no. 198 are my best text problems.

## Asymmetry

You will find more than three thousand symmetrical problems in $P D B$ ( $\mathrm{K}=$ 'symmetrical position'). Many of them have a symmetrical key, i.e. a move which keeps the symmetry of the position. In general they are less interesting than the problems with an asymmetrical key as no. 200-217.

No. 200
a) Bror Larsson

Eskilstuna-Kuriren 1945

No. 199
Sam Loyd
Chess Strategy 1878


Mate in 2
b) Jan Hartong

Bulletin Ouvrier des
Echecs 1948


Mate in 2
a) diagram
b) all 1 file to right

No. 201
Miroslav Stosic
problem 1971
$1{ }^{\text {st }}$ Prize


Mate in 2

No. 199: On this problem Loyd himself gives the following comment: 'It is a little bagatelle I once posed in the shape of an arrow, and sent to a friend, who, from the nature of the solution, christened it Peek-a-Bo. My friend, Capt. Mackenzie, has shown it for years as the funniest problem he ever saw. He used to bet that no one could solve it "without taking back" a move.' Solution: $1 . \mathrm{B} \times \mathrm{g} 7+\mathrm{Kg} 8 / \mathrm{Kh} 7$ 2.Bf6\#. This problem is a curious cross between asymmetry (position: wQb3 and wBc2) and symmetry (solution: $1 . \mathrm{B} \times \mathrm{g} 7+$ ).

No. 200a: Thematic try: 1.Qb4? f6,f5!. Solution: 1.Qh4! [thr. 2.Qh8\#] d6,d5/f6,f5 2.Qa4/Qh5\#. - No. 200b: Try: 1.Q1?. Solution: 1.Qa1! [thr. 2.Qa8\#] e5/g5 2.Qa3/Qh8\#. (No. 200a/b: FIDE-Album)

No. 201 (FIDE-Album): Six tries by the bishop are refuted by six flights of the king: 1.Ba3/Bb4/B $\times c 7 / \mathrm{Bg} 3 / \mathrm{Bf4/B} \times \mathrm{e} 7$ ? $\mathrm{Kc} 3 / \mathrm{K} \times \mathrm{c} 4 / \mathrm{Kc5} / \mathrm{Ke} 3 / \mathrm{K} \times \mathrm{e} 4 / \mathrm{Ke5}$ !.

Solution: 1.Bh2! Kc3 2.Be5\# and 1...Kc5/Ke3 2.Bg1\#

No. 202 (left)
Heinrich Wagner
Wiener Schachzeitung

1926
No. 203 (right)
Herbert Hultberg
Tidskrift för Schack 1947


Mate in 3

No. 204
Thomas R. Dawson
Falkirk Herald 1914


Mate in 3

No. 205
Gerhard P. Latzel
Lippische Landeszeitung 1951 HM


Mate in 3

No. 202: Thematic try: 1.Ra3? Bd4/e5... Solution: 1.Rc3! Ba3 2.K $\times$ a3 Ka1 3.Rc1\#, 1...B×c3 2.K×c3 Kc1 3.Ra1\#, 1...Ba1 2.R×a1+K×a1 3.Rc1\#, 1...Bc1 2.Ra1+K $\times$ al $3 . \mathrm{R} \times \mathrm{c} 1$ \#. Sacrifices of the rooks with zugzwang, star-flight of the bishop. Cp. P1167955.

No. 203: Thematic try: 1.Rf6? g6! 2.R×g6+ Kf7/Kf8 3.Rf1+. Solution: 1.Rh6! g6 2.R $\times \mathrm{g} 6+\mathrm{Kh} 7 / \mathrm{Kh} 83 . \mathrm{Rh} 1 \#, 1 \ldots \mathrm{~g} 7 \times \mathrm{h} 6+2 . \mathrm{K} \times \mathrm{h} 6 \mathrm{Kh} 83 . \mathrm{Rf} 8 \#$.

No. 204: Thematic try: $1 . \mathrm{B} \times \mathrm{b} 2$ ? h1B! $2 . \mathrm{b} 7$ stalemate. Solution: $1 . \mathrm{B} \times \mathrm{h} 2$ ! b1B $2 . \mathrm{h} 7$ $\mathrm{Ba} 23 . \mathrm{h} 8 \mathrm{Q} / \mathrm{R} \mathrm{\#}$. A paradox: The surplus of space turns out to be a disadvantage for Black.

No. 205: Thematic try: 1.d4? [thr. 2.d5\#] e4 2.f4 [thr. 3.d5/f5\#] g4×f3 e.p. 3.Q2\#?. Solution: 1.f4! [thr. 2.f5\#] e4 2.d4 [thr. 3.d5/f5\#] c4×d3 e.p. 3.Qa2\#. This problem shows a remarkable feature: the positions after the second white move both in try and solution seem to be the same, but they do not contain the same move rights as to what happens with the en-passant capture.

No. 206
Erich Zepler
Die Schwalbe 1937


Mate in 4

No. 207
Josef J. Breuer
Die Schwalbe 1948


Mate in 4

No. 208
Wolfgang Pauly
Deutsche Schachblätter
1916


Mate in 4

No. 206-208 are outstanding examples of chess composition.
No. 206: Thematical try: 1.Rg1? Bg7! 2.Rc1 Bc3 3.Rc2 3.Ba5!. Solution: 1. Rc1! Bc7 (1... Bc3? 2.Rc2) 2.Rg1! Bg3 3.Rg2 B~4.Rg8\#.

No. 207 (FIDE-Album): 1.Ba7!! f6 2.Sb6! Ke3 3.Sc4+ Kf3 4.Sd2\#. The good old Indian theme in a symmetrical position with a surprising key. This is probably the most famous (a)symmetry problem at all.

No. 208 (FIDE-Album): Solution: 1.Rh7! Kd5 2.d7 Kd6 3.d8S! Kd5 4.Rd7\#, 2... Kc6 3.d8R! (3.d8Q? stalemate) 3. . Kb6 4.Rd6\#, 2 . . Ke6 3.d8R! (3.d8Q? stalemate) 3...Kf6 4.Rd6\#. Three model mates. One of Pauly's symmetrical masterpieces.
'Elegance is the restriction to the essentials in its most beautiful form'.
(Ralf Rothmann)

No. 209


Mate in 5

No. 210
Alexey S. Selezniev
Deutsches Wochenschach 1917 (v)


Draw

No. 211
Werner Keym
Allgemeine Zeitung Mainz 1965 (c)


Draw

No. 209: The symmetrical try $1 . \mathrm{d} 7$ ? is only refuted by $1 . .$. Kel!. This is the thematic try: 1.b7? Ke1! 2.f7 Kf2 3.f8Q+ Kg3 4.Ke3 Kg2/Kg4 5.Qf2+/Qf4+ Kh3!. Solution: 1.f7! (first on the 'wrong' side) Kc1 2.b7! (then on the right side) Kb2 3.b8Q+ Ka3 4.Kc3 Ka2/Ka4 5.Qb2/Qb4\#.

No. 210: Tries: 1.Kd5?/Kf5? b3!/h3! 0:1; thematic try: 1.Kf6? Kf4! 2.Kg6 Kg3! 3.Kf5 h3 4.Ke4 h2 0:1. Solution: 1.Kd6! Kd4! 2.Kc6 Kc3 4.Kd5! b3 4.Ke4 b2
5.Ba2! h3 6.Kf3 h2 7.Kg2 =. An instructive endgame for the theme 'Bishop against two Pawns'.

No. 211: Tries: 1.Bxh3? d2! 2.Ke2 $\mathrm{R} \times \mathrm{f} 2+3$. Kd 1 Rf 34 4. $\mathrm{B} \sim \mathrm{Rd} 3$, analogous with 1.Bxd3? h2. This is the thematic try: 1.Bg4? Rf4 2.B $\times \mathrm{h} 3 \mathrm{~d} 23 . \mathrm{Bg} 4 \mathrm{R} \times \mathrm{g} 44 . \mathrm{Ke} 2$ Rg2 5.Kd1 $\mathrm{R} \times \mathrm{f} 26 . \mathrm{Kc} 2$ 0:1. 1.Be4! (foreplan for the purpose of opening the line e4-h1) Rf4 2.B $\times$ d3 h2 3.Be4 (3.Kg2? $\mathrm{R} \times \mathrm{f} 2+$ !) $\mathrm{R} \times$ e4 4.Kg2 Re2 5.Kh1 R $\times$ f2 stalemate or $\mathbf{5} \ldots$..Kf5 6.Bg3 Kg4 7.B $\times$ h2 Kh3 8.Bg1 $=$. Both bishops are sacrificed for the surprising stalemate.

No. 212
Henrik Eriksson
Stella Polaris 1967
${ }^{\text {st }}$ Prize


Helpmate in 3

No. 213
Wolfgang Pauly
Chess Amateur 1924
$2^{\text {nd }}$ Prize ex aequo


Selfmate in 9

No. 214
Noam Livnat
StrateGems 1998


Add wKQS and bK for an Illegal Cluster

No. 212 (FIDE-Album): 1.Sd5! (asymmetrical) Ka7 (asymmetrical) 2.Sb4 Kb6 (symmetrical position!) 3.Ka4 (asymmetrical) Sc5\#. A successive double setting with an ideal mate!

No. 213: Thematic try: 1.Rc5? Kd6 2.Bg3+ Ke6 3.B?. Solution: 1.Rg5! Kf6 2.Bc3+ Ke6 3.Ba5! Kf6 4.Bd8+ Ke6 5.Rc5 Kd6 6.Qf4+ Ke6 7.Qf7+ Kd6 8.Qf8+ Ke6 9.Rc6+ Bxc6\#. 'Charming and difficult.' 'Elegant echo of idea by Bishop and Queen.'

No. 214: Thematic try: add wKh3 Qh1 Sg3 bKg1?, then there is a legal move: Qf3 $\times$ Xh1+ h2-h1X. Solution: add wKf1 Qh1 Sf2 and bKh2, then there is no legal last move: neither wQf3-h1+? nor wQf3 $\times$ Xh1+?. Cunning. Cp. no. 424.

No. 215 is a similar IC with only one piece on the board: Bernd Schwarzkopf, Die Schwalbe 1987. Add to the wKg7 five white knights and the black king for an Illegal Cluster. Thematic try: knights on f6, f8, g6, g8, h7 and bKg5; without Sg8 the position remains illegal. Solution: knights on f6, f7, g8, h6, h7 and bKe7; without Sh 7 the position becomes legal since the last move could have been $\mathrm{h} 7 \times \mathrm{Xg} 8 \mathrm{~S}+$.

No. 216
Bernd Schwarzkopf
ASymmetrie 2013


Black retracts 1 move, then helpmate in 1

No. 217a
Michel Caillaud
diagrammes 1980


Mate in 1

No. 217b



No. 216: Tries: backward $1 . \mathrm{e} 7 \times$ Qf6??, then $1 . B h 7-\mathrm{g} 8$ and no mate; backward 1.e $7 \times$ Qd6!?, then 1.Ba8 $\mathrm{Qb} 8 \#$, but this position is illegal since Bh7 cannot leave the NE cage. The same circumstance goes for $\mathrm{g} 7 \times$ Qf6!?, then 1.Kf8 Qd8\#. What next? Backward c7 $\times$ Qd6!, then 1.Kd8 Qf8\#. Insidious.

No. 217: a) The last move was not $\mathrm{e} 7 \times$ Xd6? because then the wRc8 would be a promoted piece, which would require three captures (S, S and Q?) by white pawns on $\mathrm{g}, \mathrm{h} 7$ and g 8 . The black queen, however, could not have passed by the king and become a sacrificial piece. Hence Black is on the move and plays 1.g6\#!. b) Here the last move $\mathrm{d} 7 \times$ Xe6! was legal, the white pawns captured three times ( $\mathrm{S}, \mathrm{S}$ and Q ) and a white pawn promoted to rook on b 8 . So the solution is $1 . \mathrm{R} \times \mathrm{g} 8 \#$. Cp. no. 38 .

The asymmetrical position of king and queen in the initial game array plays a part in the famous problems no. 238 by Loyd and no. 310 by Dawson as well as in my text problem no. 182.

An excellent book (in German) on such problems is 'ASymmetrie' by Michael Schlosser \& Martin Minski (Potsdam, 2013; 645 p.).

## Adding pieces!

By adding pieces many options may arise, quite some of them turning out to be wrong. Therefore those problems are varied and attractive, often being a challenge as to retroanalysis. Here the aid offered by the computer is rather limited.

No. 218
Raymond Smullyan
Manchester Guardian 1957


Add the white king.

No. 219
Sam Loyd
Le Sphinx 1866


Add the black king
a) for a stalemate
b) for a mate
c) for a mate in 1
d) on a square where he
can never be mated

No. 220
M. Techritz

Source unknown


Add the kings.
White to play mates in 1

No. 218: the solution is wKc3. The last moves were $\mathrm{Kb} 3 \times \mathrm{Pc} 3+\mathrm{b} 4 \times \mathrm{c} 3$ e.p. c 2 -c 4 B-d5+ (cp. no. 123). The last move record for $\mathrm{K} \times \mathrm{P}$ by B. Pavlovic (no. 147) has the (mirrored) position: wKf3 Bh4 bKe1 Rg5 Be5. An evergreen!

No. 219: a) Kh1, b) Ke3, c) Ka8 and Qc8\#, d) the bK can never be mated by the queen and a dark-squared bishop on g 7 (and - here illegal - on b2). Loyd again.

No. 220: Add $w K f 3$ and $b K h 1$, then mate by $1 . K \times f 2 \#$. Seemingly easy. The simpler stipulation 'Add the kings. Mate in 1' would allow two additional solutions: wKcl and bKa1 with 1.Qb2+/Qd4 $\mathrm{B} \times \mathrm{b} 2 / \mathrm{B} \times \mathrm{d} 4 \#$ as well as $w K g 6 / \mathrm{Kh} 6 \mathrm{bKh} 8$ with 1.Qf6+ B $\times$ f6\#.

No. 221
Ernst O. Martin
Die Schwalbe 1933


Add the black king. Mate in 1

No. 222
Werner Keym
Die Schwalbe 1998


Add a bishop.
Mate in 1
How many solutions?

No. 223
Günther Weeth
Werner Keym
Stuttgarter Zeitung 2005


Add the black king and a black rook.
Mate in 1
3 solutions

No. 221: If you add the bK on b 7 , then Black is on the move with three variants: 1. $\mathrm{K} \times \mathrm{a} 6 / \mathrm{K} \times \mathrm{a} 8 / \mathrm{K} \times \mathrm{c} 7 \mathrm{Bc} 8 / \mathrm{Be} 4 / \mathrm{Rc} 8 \#$.

No. 222 has four solutions: I +wBd5 and 1.Re7\#; II +bBg 8 and $1 . \mathrm{wPf5} \times \mathrm{g} 6$ e.p.\#; III +wBg 6 and $1 . \mathrm{Kg} 8$ Re8\#; IV +bBf 3 and $1 . \mathrm{K} \times \mathrm{g} 5 \mathrm{Rg} 8 \#$. Devilish - because ever so insidious! In 1998 there was only one solver to find the four solutions.

No. 223 caused many flops among solvers. At first two harmless solutions: +bKc6 +bRb5 and 1.Sab8\#, +bKe8 +bRd8 and 1.Sc7\#. Moreover: +bKc8 +bRd8 and $1 . S b 6 \#$, since the last black move was $0-0-0$. A nice try is $+\mathrm{bKa} 8+\mathrm{bRa} 7$ and $1 . \mathrm{Sc} 7 / \mathrm{Sb} 6 \#$ ?, but in this case it was White who moved last.

No. 224

Werner Keym
Heidelberger Tagblatt 1967 (v)


Add the black king.
Mate in 1 single move
How many solutions?

No. 225
Werner Keym
Die Schwalbe 1995


Add 1 pawn.
Mate in 1
How many solutions?

No. 226
Werner Keym
Die Schwalbe 1995


Add 1 piece.
Mate in 1
8 solutions

No. 224-226 are real puzzles. They are suitable for solving contests, especially when the number of the solutions is not stated.

No. 224: There are two solutions: a) +bKc6 and 1.Qb5\#; b) +bKd3, in this case White moved last, therefore not $1.0-0-0 \#$ ?, but $1 . \mathrm{Qg} 1 \#!$ !. Not +bKb2? and 1.Ra2\# since again White moved last. The term 'single move' is necessary; otherwise there would be the solutions $+\mathrm{bKb} 6 / \mathrm{bKc} 5$ and 1.Kc6 Qb5\#.

No. 225 has four solutions:
a) +sPb 4 and $1 . \mathrm{B} \times \mathrm{b} 4 \#$
b) +wPb 4 and $1 . \mathrm{c} 5 \#$
c) +bPc 7 and $1 . c 7-c 5$ b5 $\times \mathrm{c} 6$ e.p.\#
d) +bPe5 and 1.Ke6 Qg6\#

No. 226: In the diagram position Black is on the move.
a) $+w B d 4$ (backward Ke4-f3 possible) and 1.Se5\#
b) $+w$ Sf5 (backward Ke4-f3 possible) and 1.Se5\#
c) +wSe 4 (White moved last) and $1 . \mathrm{K} \times \mathrm{g} 4 \mathrm{Sg} 5 \#$
d) +wBe 4 (White moved last) and $1 . \mathrm{K} \times \mathrm{g} 4 \mathrm{Bg} 2 \#$
e) +bRd1 (last move bR-/ $\times \mathrm{Xd} 1+$ ) and 1.Be1 $\mathrm{R} \times \mathrm{e} 1$ \#
f) + bQd1 (last move bQ- $/ \times \mathrm{Xd} 1+$ ) and 1.Be1 $\mathrm{Q} \times$ e1\#
$\mathrm{g})+\mathrm{bQh} 3$ (White moved last) and 1.Qg2\#
h) $+w R h 1$ (part of 0-0, earlier bKg2-f3) and 1.Rf1\#

Here you see the four theoretical possibilities of White's/Black's turn to move and White's/Black's mate plus half castling.
In 1995 there was only one solver who found the 8 solutions.

No. 227
Werner Keym
Die Schwalbe 1968


Add the black king. Mate in 1

No. 228
Rafael M. Kofman
Vecherny Leningrad 1968
$3^{\text {rd }}$ Prize


Add the white king.
Mate in 2

No. 229
Andrew Buchanan
France-Echecs 2002


Helpmate in 2
b) Add 1 piece.
c) Add 1 piece again.

No. 227: The black king on d 3 or f 3 can be mated by $0-0-0$ or by $0-0$. But with bKf3 there was no previous black move, so it is Black to play. With bKd3 the last move could have been $\mathrm{Kc} 4-\mathrm{d} 3 \mathrm{a} 2 \times \mathrm{Xb} 3+$. So the solution is bKd 3 and $1.0-0-0 \#$. It is important to be aware of the fact that Re 7 and Be 8 are promoted officers. If you put a white queen on e8, the problem will become unsound, for in this case the last moves could have been bKe $4 \times$ Sf3 Se5-f3+ ( $\mathrm{S}=$ promoted officer).

In no. 228 (FIDE-Album) everything would be alright without the white king: 1.Rd1 0-0 2.Rg1\#. But where to place it? Whichever square you choose it proves to be an obstacle, on square el as well. But there is one unexpected method we can have resort to, and this is castling: 1.0-0-0! 0-0 2.Rg1\#. Necessity is the mother of invention.

No. 229: a) $1 . \mathrm{Sa} 6 \mathrm{R} \times \mathrm{a} 62.0-0-0 \mathrm{Ra} 8 \#$; b) (+bRh7) $1.0-0 \mathrm{R} \times \mathrm{f} 62 . \mathrm{Kh} 8 \mathrm{R} \times \mathrm{f} 8 \#$; c) (+bBf5) 1.Kf7 Sf3 2.Kg6 Se5\#. Black moved $\mathrm{Pe} \times \mathrm{Xf}$ and $\mathrm{Pf} \times \mathrm{Xg} \times \mathrm{Rh} 2$, so no white piece may be added. White captured $\mathrm{Pa} 2 \times \mathrm{Xb} 3$ and the wPd promoted to R somewhere. In a) the wPd captured 4 times and promoted to R on h 8 ( $0-0-0$ permitted); the promotion on a8 ( $0-0$ permitted) is possible as well, but not successful since there is no mate because of the flight square h 7 . In b ) with an additional piece the wPd captured only 3 times and promoted on a8 ( $0-0$ permitted) and there is a mate by means of the block (bRh7). In c) with two additional pieces the wPd promoted on $\mathrm{c} 8, \mathrm{~d} 8, \mathrm{e} 8, \mathrm{f} 8$ or g 8 and castling is no longer permitted, but the second block (bBf5) is helpful. A new and surprising idea.

No. 230
Thomas R. Dawson
Chess Amateur 1918


Add a white rook. Mate in 1

No. 231
Karl Fabel
Die Welt 1952


Add the black king. Mate in 1

No. 232
Hans Klüver
Die Welt 1948


Add a white queen. Mate in 1

No. 230-232 are classical showpieces. In no. 230 the wBf1 died on f1. The wPs captured 6 pieces, among them the promoted officer from a1 (earlier b $3 \times$ Ra2!). Therefore not +wRb 1 ? and 1.b3\#, but +wRc 3 ! and 1.b3\#. T. R. Dawson reports that even the editor of the Chess Amateur was taken in by the try +wRb 1 .

No. 231: The try +bKc 1 ? followed by $1.0-0 \#$ is striking. The black king, however, did never leave the $8^{\text {th }}$ rank. Here the genesis of the position: $\mathrm{wS} \times \mathrm{Bf} 8, \mathrm{bS} \times \mathrm{Bc} 1$, $\mathrm{bS} \times$ Bf1, b0-0, bPa $\times$ Qb-b3 $\times$ Ra2-a1X, wPh $2 \times$ Rg $3 \times$ Sf $4 \times$ Se $5 \times \mathrm{Xd6} \times \mathrm{Pc} 7 \times$ Qd 8 R. So +bKh 8 ! and $1 . \mathrm{R} \times \mathrm{f} 8 \#$ is correct.

In no. 232 the wPs captured the 8 missing black pieces, among them the bBc (therefore not backward $\mathrm{b} 7-\mathrm{b} 6$ ?). Backward $\mathrm{a} 2-\mathrm{a} 1 \mathrm{~S}$ ? is illegal, since then there would be too many captures by pawns in view of the 11 white pieces (including the queen), for bPf must pass by wPf. The solution is amazing: +wQf8! and 1.Qf1\#. In this case Black moved last, i.e. Ka2-b1 f7-f8Q+! (earlier bPf $\times \mathrm{Xe} \rightarrow \mathrm{e} 1 \mathrm{X}$ ). Tricky.
'The chess problem is poetic mathematics or mathematical poetry'.
(Philipp Klett)

No. 233
Werner Keym
Die Schwalbe 1987


Add 1 white pawn on the f-file.
Mate in 1

No. 234
Henrik Juel
Thema Danicum 1997
$2^{\text {nd }}$ Prize


Add 1 piece. Last move?

No. 235
Alexander Zolotarev
Shakhmatnaya
Kompozitsiya 1993
$1^{s t} / 2^{n d}$ Prize


Add officers for a legal position.

In no. 233 the wBf1 died on f 1 , the bBc 8 on $\mathrm{c} 8 . \mathrm{Be} 4$ is a promoted officer. Obviously it is illegal to add $+w \operatorname{Pf} 3$ ? or $+w P f 5$ ?. Genesis of the position with wPf6: a $2 \times \mathrm{Qb} 3 \times \mathrm{Xc} 4(\mathrm{X}=\mathrm{bPa}) \times \mathrm{Rd} 5 \times \mathrm{Se} 6 \times \mathrm{Pf} 7 \times \mathrm{Se} / \mathrm{g} 8 \mathrm{~B}, \mathrm{bPh} \times \mathrm{Qg} \times \mathrm{Rf} \times \mathrm{Re}-$ e3, g $7 \times$ Sf6, bBf8 $\rightarrow$ e5, b $2 \times$ Pc $3 \times$ Rd $4 \times$ Be $5 \times$ Pf6, d $2 \times$ Pe3. So White moved last (e.g. d $2 \times$ Pe3), earlier e7-e6. Therefore Black plays $1 . \mathrm{d} 7-\mathrm{d} 5$ and prevents $\mathrm{g} 2-\mathrm{g} 4 \#$. Genesis of the position with wPf7: b $2 \times \mathrm{Pc} 3 \times \mathrm{Rd} 4 \times \mathrm{Se} 5 \times \mathrm{Pf} 6 \times \mathrm{Pg} 7-\mathrm{g} 8 \mathrm{~B}, \mathrm{~d} 2 \times \mathrm{Be} 3$, $\mathrm{h} 7 \times \mathrm{Qg} 6 \times$ Rf5 5 Re $4 \times$ Sd3-d2-d1Q/R/S, a $2 \times$ Qb3 $\times$ Xc $4(\mathrm{X}=\mathrm{bPa}) \times$ Rd $5 \times$ Se6, finally e $6 \times \mathrm{Q} / \mathrm{R} / \mathrm{Sf} 7$ e7-e6. Now the solution is $1 . g 2-\mathrm{g} 4 \#$. Deciding on Pf6 or Pf7 makes a great difference. 'It is impressing, how many retroanalytical subtleties can be deduced from such small material.'

In no. 234 a bBf8 must be added. Critical position: wKc1 Be6 a2 b2 c3 d2 d3 f2 g2 g3 bKe8 Qd8 Ra8 Rb5 Bc8 Bf8 a7 b7 c2 c7 d7 e7 f7 g7. Then 1...d7×Be6 2.a2a3 Qd8-d4 3.a3-a4 Bc8-d7 4.a4×Rb5 Bd7-c6 5.b5 $\times$ Bc6 0-0-0! $6 . c 3 \times$ Qd4 Rd8d7 7.c6×Rd7+ Kc8-b8 8.d7-d8S! Kb8-c8 9.Sd8-c6 Kc8-d7 10.Sc6-b4 (or Sc6-e5+) Kd7-d8 11.Sb4-d5 Kd8-e8 12.Sd5-f6+ g7×Sf6. The added piece is a total idler and only counts for the fulfilment of the stipulation.
In no. 235 (FIDE-Album) these pieces must be added: $\mathrm{wSg} 7, \mathrm{bBg} 4, \mathrm{bSg} 5$. Critical position: wKf6 Qh6 Rg5 Rh4 Bf1 Bh2 Sg1 Sg3 Sg4 b3 c2 e2 f2 g2 h5 bKf4 Qh3 Rf3 Bc8 Bd8 Bh8 Se7 Sg7 b7 c7 d7 e6 f7 g6 h7. Then 1.e $2 \times$ Rf3 e6-e5 2.Bf1-b5 e5-e4 3.Bb5-c6 b7×Bc6 4.b3-b4 Bc8-a6 5.c2-c3 Ba6-c4 6.b4-b5 Bc4-e6 7.Sg4-e3+ Be6-g4 8.Se3-f5 Sg7-e6+ 9.Sf5-g7 e4-e3 10.Rg5-e5+ Se6-g5 11.Re5-e6 Se7-f5+ 12.Re6-e7 e3-e2 13.Sg3-h1+ Sf5-g3 14.Bh2 $\times$ Sg3+. 5 retro unpins!

No. 236
Jens Guballa
Werner Keym
Problem-Forum 2006


Add a black piece so that Black can never castle.
How many solutions?

No. 237
Josef Haas
feenschach 1971
$1^{\text {st }}$ Prize


Add the black king.
Mate in 1 single move
a) $+b P b 4,+b \mathrm{Pg} 5$
b) $+b P b 4,+b P e 7$
c) $+b \mathrm{Bh} 5,+b \mathrm{Pg} 7$
d) $+b P b 4,+b P g 7$

No. 238
Sam Loyd
Chess Monthly 1858


Add the black king.
Mate in 3 moves

No. 236: There are 5 solutions.

1) +bSd 6 , then White is mate.
2) +bRh7, then Rh8 must have moved.
3) +bQa 8 , then Ke 8 must have moved (because of $\mathrm{wKe} 1 \rightarrow \mathrm{e} 8 \rightarrow \mathrm{c} 8$ ).
4) +bBa , then Ke8 must have moved (last move was $\mathrm{b} 7 \times \mathrm{Xc} 6+$ ).
5) +bPa 2 , then Ke 8 or Rh8 must have moved. Genesis of the position: $\mathrm{wS} \times \mathrm{Bf} 8$, $\mathrm{bS} \times \mathrm{Bf} 1, \mathrm{bPb} 7$ und $\mathrm{bPf} 7(\rightarrow \mathrm{a} 2)$ captured 6 pieces on light squares, among them the promoted officer from $\mathrm{f} 8 / \mathrm{h} 8$ (earlier $\mathrm{wPh} \times \mathrm{Xg} \times \mathrm{Xf} / \mathrm{h}$ ), wPb 2 captured twice. 'It is fantastic that each of the five pieces occurs once. It is funny that the K, the R, the K or the R , neither the K nor the R must have moved.'

No. 237: The wPs captured 11 times. a) +bKh5! and 1.Sf6\#; not +bKg1? and $1.0-0-0 \#$, since the bPa had to promote on a1; not +bKe 4 ? and $1 . \mathrm{e} 5 \times \mathrm{d} 6$ e.p.\#, since $\mathrm{f} 6 \times \mathrm{Bg} 5$ was possible as well. b) +bKg 1 ! and $1.0-0-0 \#$; not +bKe 4 ? and $1 . \mathrm{e} 5 \times \mathrm{d} 6$ e.p.\#, since Black had no previous move before d7-d5 and Rc6-g6+. c) +bKe4! and $1 . e 5 \times \mathrm{d} 6$ e.p.\# (before that d7-d5 Rc6-g6+ B-h5); not +bKg 1 ? and $1.0-0-0$ \# because of bPa7-a1X. d) +bKe4! and 1.g1Q\# (Black to play!). To me the best of J. Haas' sophisticated problems with the theme of 'adding pieces'.

No. 238: +bKh4! and 1.d4! Kg4 2.e4+ Kh4 3.g3\# or 1...Kh5 2.Qd3 ~ 3.Qh3\#. According to $S$. Loyd (and to the computer!): unique!

## Adding pieces: construction records

There are countless record constructions, in the field of retro as well. They are fascinating for quite many problemists. Besides they show one specific characteristic in comparison with other problems: a record can only be measured and there is no subjective judgement.

No. 239
Hansjörg Schiegl
feenschach 1973


Adding a black pawn on 33 squares raises the number of White's possible moves.

No. 240
Werner Keym
Die Schwalbe 1969


Adding a black pawn on 42 squares prevents mate in 1

No. 241
Peter Kahl
Die Schwalbe 1974


Adding a white queen on 54 squares changes the turn to move

In no. 239 the record of 33 squares is achieved by line obstructions and unpinning. The same number of squares and of pieces is obtained in a retro problem (P1068549).

No. 240: White can mate in 1 move by $1.0-0 \#$. Castling is permitted: the white pawns (on the a-file) captured 10 pieces, moreover $\mathrm{wPh} \times \mathrm{Pg}-\mathrm{g} 8 \mathrm{X}$; besides $\mathrm{wPg} 2 \rightarrow \mathrm{~g} 7, \mathrm{bPh} \times \mathrm{Xg} \rightarrow \mathrm{g} 1 \mathrm{~S}, \mathrm{bPf} \times \mathrm{Qg}-\mathrm{g} 1 \mathrm{~S}, \mathrm{wPf} 2 \rightarrow \mathrm{f} 8 \mathrm{X}, \mathrm{bPe} 7 \rightarrow \mathrm{e} 2 \times \mathrm{Xf} 1$ S. If you add a black pawn, one sacrificial piece for White will disappear. So one black pawn had to promote on e1 or h1 and castling is not permitted.

No. 241: The last black move could be $\mathrm{bPa} 7 \times \mathrm{Xb} 6$ since there were $3+1$ white pieces and 12 captures by black pawns. This is changed by adding a white queen ( $4+1$ white pieces). In this case the bPb6 did not come from a7, but from c7 (10 captures by black pawns). So White moved last and Black is to play.

## Adding pieces: the stronger the slower

In general a stronger piece mates more quickly than a weaker. But the exception proves the rule.

No. 242
Werner Keym
Die Schwalbe 1997


Add wBal, wRal or wQal. Mate in how many moves?

No. 243
Werner Keym
Stern 1998


Add wSe5, wBe5, wRe5 or wQe5. Mate in how many moves?

No. 244
Ralf Krätschmer
Die Schwalbe 2001


Add wPg7, wSg7, wBg7, wRg7 or wQg7. Mate in how many moves?

No. 242: There is a mate in 1 single move by a bishop (1.Bd4\#). The last move could be a4-a3 because the bPs could capture the 9 missing pieces on light squares. With Ra1 or Qa1 the bPd7 captured the dark-squared bishop on c5 or b4 or a3, so the last move could not be $\mathrm{a} 4-\mathrm{a} 3$ and Black is to play. The rook needs one single move more: 1.bR $\times \mathrm{h} 20-0-0$ \# and the queen even four moves: $1 . \mathrm{bR} \times \mathrm{h} 2 \mathrm{Qg} 7+2 . \mathrm{Kh} 1$ $\mathrm{R} \times \mathrm{h} 2+3 . \mathrm{K} \times \mathrm{h} 2 \mathrm{Kf} 24 . \mathrm{Kh} 3 \mathrm{Qg} 3 \#$.
No. 243: There is a mate in 0 moves by wSe5, in 1 move by wBe5 (1.Rd4\#), in 2 moves by wRe5 (1.Rc3+ Kd4 2.Sc6\#) and - that's the point - in 3 moves by $\mathrm{wQe5}$ since in this position White moved last and Black is to play: $1 . \mathrm{K} \times \mathrm{c} 4 \mathrm{Kc} 2$ ! 2.Kb4 Sc6+ 3.Ka4/Kc4 Qa5/d3\#. 'Chess paradoxical in letztform: the stronger the pieces are the longer the mating will endure. Normally all that works in the opposite direction as was shown by Knud Hannemann [no. 78].'
The first problem with five additions (P, S, B, R, Q) was a retro problem (P 1108924). No. 244 is the first 'normal' problem to master this task. The queen must avoid stalemate, therefore it needs 6 moves.
Pg7 \#2: 1.g8S d2 2.Sh6\#
Sg7 \#3: 1.Se6 d2 2.Sd4 K $\times$ f4 $3 . S \times$ f3\#
Bg7 \#4: 1.f7 d2 2.Bd4 K×f4 3.Bf6+ Sd4 4.R×d4\#
Rg7 \#5: 1.Re7 d2 2.Re2 Sd4 3.Re $\times$ g2+ K $\times$ f4 4.Rd4+ Ke5 5.Re2\#
Qg7 \#6: 1.Qe7 d2 2.Re4 f5×e4 3.Q×e4 Sf5 4.Q×f3+ Kh4 5.Qf2+ Sg3 6.Q×g3\#

## Colouring pieces

It is your job to colour the pieces to get a legal position.

No. 245
Nicolay Burlaiev
Shakhmaty v SSSR 1966


Colour the pieces.
Last move?

No. 246
Gideon Husserl
Israel Ring Tourney
1966-71 $1^{\text {st }}$ Prize


Colour the pieces.
Last move?

No. 247
Andrey Kornilov
Thèmes 641985


Colour the pieces.
Last move?

No. 245: The e.p. trick again: $b P d 4 \times c 3$ e.p. $+c 2-c 4 b 5-b 4+$.
No. 246: A double check was given by wPc $7 \times \operatorname{Sd} 8$ R.
No. 247 is exciting: 9 w . and 8 b . pieces and 8 w . and 7 b . captures. Last move not $\mathrm{g} 2 \times \mathrm{Xh} 3+$ ? ( 10 w . captures), but h2-h3+!. You will find further problems in Die Schwalbe Dec. 1993 and PDB (K='Coloring problem').

Solution no. 245


Solution no. 246


Solution no. 247


## Rotations

Here two kinds of rotations are presented: serious ones and ...

No. 248
Adrian Storisteanu
Rex Multiplex 1983
$1^{\text {st }}$ Prize


Mate in 2
b) Turn $90^{\circ}$ (wKh5)

No. 249
a) Alexander Galitsky

Shakhmatnyi Zhurnal 1900
b) J. R. Venning

Melbourne Leader 1916


Mate in 3
b) Turn $180^{\circ}$

No. 250 Ralf Krätschmer
Die Schwalbe 2010


Mate in how many moves?
b) Turn $90^{\circ}$ (wKf8)
c) Turn $180^{\circ}$
d) Turn $270^{\circ}$ (wKcl)

No. 248: a ) the last move was $\mathrm{bKa} 7-\mathrm{a} 8 \mathrm{~b} 7-\mathrm{b} 8 \mathrm{~B}+$, so $1 . \mathrm{Ra} 7+$ ! $\mathrm{K} \times \mathrm{b} 82 . S c 6 \#$.
b) White moved last, therefore $1 . \mathrm{K} \times \mathrm{h} 7$ ! Sf6+ $2 . \mathrm{Kh} 8 \mathrm{Rg} 8 \#$. Same white moves in reverse order. Lovely.
No. 249: a) 1.Bf6! g7×f6 2.Kf8 f5 3.Sf7\#; b) $1 . \mathrm{Kc} 3!$ b1Q $2 . S c 2+\mathrm{Q} \times \mathrm{c} 2+3 . \mathrm{K} \times \mathrm{c} 2 \#$, 1...b1S+2.K~Sc3 3.B $\times \mathrm{c} 3 \#$.

No. 250: a) \#1 1.d3×e4\#!; b) \#2 1.Be5!; c) \#3 1.Bb1! Rb7; d) \#4 1.Be1! d2+/Sc3 all variants are dual-free. (cp. the early example with duals P1265405)


No. 251
Zvi Roth
Al-Hamishmar 1970 Commendation White retracts 1 move and mates in 1
b) Turn $180^{\circ}$
a) Backward 0-0 and 1.Rh3\#; b) backward d5×e6 e.p. and 1.Rd8\# (FIDE-Album).

No. 252
Werner Keym
Allgemeine Zeitung Mainz
2002


White retracts 1 move and mates in 1
b) Turn $90^{\circ}$ (wKh4)
c) Turn $180^{\circ}$
d) Turn $270^{\circ}$ (wKa5)

No. 253
Werner Keym
Stuttgarter Zeitung 2002


White retracts the last move and mates by a different move. How many retro moves are there?
b) Turn $90^{\circ}$ ( $w K c 2$ )
c) Turn $180^{\circ}$
d) Turn $270^{\circ}$ (wKf7)

No. 254
Nikita Plaksin
Vladimir Levshinsky
diagrammes 1987


Mate in 1
b) Turn $90^{\circ}$ (wKel)
c) Turn $180^{\circ}$

No. 252: a) backward f4-f5+ and 1.Qe5\#; b) backward e2-e3+ and 1.Qf3\#; c) backward c3-c4 and 1.Qd4\#; d) backward e5×d6 e.p.! and 1.Qc1\#. Pleasant.

No. 253: a) there are five possible retro moves: backward $\mathrm{wPa} 7-\mathrm{a} 8 \mathrm{~B} \#$ (before that e.g. g2-g1B) and 1.a7-a8Q\#; backward $w P b 7 \times Q / R / B / S a 8 B \#$ and $1 . b 7 \times Q / R /$ $\mathrm{B} / \mathrm{Sa8Q} \mathrm{\#}$. b) there are three possible retro moves: backward $w \operatorname{Pg} 7 \times \mathrm{Q} / \mathrm{R} / \mathrm{Sh} 8 \mathrm{~B} \#$ and $1 . \mathrm{g} 7 \times \mathrm{Q} / \mathrm{R} / \mathrm{Sh} 8 \mathrm{Q} \#$; backward not $\mathrm{wPg} 7 \times$ Bh8B\#? nor wPh7-h8B\#? (Black had no previous move). c) backward only wPe5 $\times$ d6 e.p.\# (before that d7-d5 e4-e5+) and 1.Bxd5\#. d) there is no other mate except by wK- $/ \times \mathrm{f} 7 \#$. So the right numbers of retro moves are 5-3-1-0. Tricky. (cp. the more complicated example P1004344)

In no. 254 only the white dark-squared bishop is missing. a) the last moves were d7d5 Rc6-e6+ Kd5-e4, White is to play: $1 . \mathrm{e} 5 \times \mathrm{d} 6$ e.p.\#; b) Black is to play: $1 . \mathrm{K} \times \mathrm{d} 3$ $0-0-0 \#$; c) Black is to play: $1 . \mathrm{Ke} 6 \mathrm{~d} 7-\mathrm{d} 8 \mathrm{~S} \#$. This problem presents the three special moves e.p. capture, castling and promotion. A perfect Valladao problem.

No. 255
Mannis Charosh
Fairy Chess Review 1937


Mate in 0 moves

No. 256
Lord Dunsany
Week-End Problems Book 1932


Mate in 4

No. 257
Werner Keym
Main-Post 1968 (v)


Add the black king. Mate in 1

In no. 255-257 the illegal positions must be turned by $180^{\circ}$. In no. 255 the Ba8 cannot come from f1 nor is it a promoted officer. Turn by $180^{\circ}$ : mate!

In no. 256 bK and bQ are not on their original squares. After turning the solution is 1.Sc6/Sd7 (cook) Sf3 ... 4.Sd3\#. If the white rooks and knights change their places it is all ok: 1.Sg6! ... 4.Sd3\# (Werner Keym, Die Schwalbe 2012).

No. 257: The wPs on the h-file seem to have performed 15 captures, among them two promoted officers ( bPa and bPb ). But this is impossible since there are only two white sacrificial pieces. So not +bKh 8 ?? (Black has no previous move) and Bc3\# nor Kd3!? and $0-0-0 \#$, but after turning the board by $180^{\circ}+\mathrm{bKf} 7$ and $\mathrm{g} 7-\mathrm{g} 8 \mathrm{Q} \#$.


## No. 258

Viktor Chepizhny
Bohemian Jubilee Tourney 1962 It Prize
Helpmate in 2
b) Turn $90^{\circ}$ (wKel), c) Turn $180^{\circ}$,
d) Turn $270^{\circ}$ (wKd8)
a) 1.c1R R $\times \mathrm{g} 5$ 2.Rc3 Bc2\#; b) $1 . \mathrm{b} 5 \mathrm{Bc} 3+2 . \mathrm{Kc} 5$ Ba5\#; c) 1.b3 Rb4 2.f6 Bf7\# ; d) 1.g2 Bf4+ 2.Kf2 Bh2\#. A most elegant helpmate problem.

No. 259a
Werner Keym
Main-Post 1969


Add 1 white pawn. Mate in 1

No. 260
Werner Keym
Allgemeine Zeitung Mainz 1968


Add the black king.
Mate in 1

No. 259: In diagram position 259 a the try is +Pb 3 ? and $0-0-0 \#$, in $259 \mathrm{~b}+\mathrm{Ph} 3$ ? and $0-0 \#$, but square h 1 is dark. So the board must be turned by $90^{\circ}$ (anticlockwise: wKh5). Then the solution of 259 a is $+\mathrm{Pf} 2!$ and Rh4\#, of $259 \mathrm{~b}+\mathrm{Pf7}$ ! and f7-f8Q\#. 'Very nice joke.'

In no. 260 there are two different tries: a) +bKc1? and $1.0-0 \#$, but in this case the bK had to move to c 1 via d 1 or d 2 and castling is not permitted; b$)+\mathrm{bKf} 3$ ? and $1.0-0 \#$. This seems to be successful. But square h1 is dark. So the board must be turned by $90^{\circ}$ (clockwise: wKa4). Then you add the black king on a6 (the square a6 was ' cl ' before the rotation!) and mate by $1 . \mathrm{b7}-\mathrm{b} 8 \mathrm{~S} \#$. Twice cant castling and one underpromotion. Many solvers were enthusiastic about this extraordinary problem and composed funny poems added to their solutions. My best retro miniature.

The most famous problem with rotation is no. 76.

## Half moves

The following half move problems are quite serious.

No. 261
Werner Keym
Basler Nachrichten 1968


Minimover

No. 262
Werner Keym
Die Welt 1969


White mates immediately

No. 263
Andrey Kornilov
Shakhmaty v SSSR 1978


Mate in 1.5

No. 261: Not 1.Sb2\#?, since Black did not move last and cannot move next. The stipulation 'Minimover' gives a hint. This problem must be shorter than a one-move problem. So White is just castling, the first part is finished (Ke1-c1, before that $\mathrm{bKc} 2-\mathrm{d} 3$ ), the second must follow: Ra1-d1\#. A more serious stipulation may be 'White mates immediately' or 'Mate in $1 / 2$ move'. Castling is very suitable for half move problems since the laws of chess prescribe that the king has moved first, then the rook, each piece touched by one hand!

The position of no. $\mathbf{2 6 2}$ is illegal, because the wPs captured 15 pieces. Therefore do not play Rh1-f1? (= part of 0-0\#), but remove Pe5 (= part of d5×e6 e.p.\#), then the position is legal. Here, too, the stipulations 'Mate in $1 / 2$ move' and 'Mate in less than 1 move' are possible. There is even a problem with a $3 / 4$ move (P1066698).
No. 263: Tries are three half key moves, namely e.p. capture, castling and promotion (Valladao). a) not 1 . removing c5? (= part of b5 $\times \mathrm{c} 6$ e.p.+) Rb5 $2 . \mathrm{R} \times \mathrm{b} 5$ \# because the previous move c7-c5 locks up the wBb8 which is no promotee in view of 8 wPs ; b) not 1.Ra1-d1? (= part of 0-0-0) Rd4 $2 . \mathrm{R} \times \mathrm{d} 4 \#$ because the wRa5 went from h1 to a5 via e1 and castling is not permitted; c) not 1.f7-e8S+? (= part of $\mathrm{f} 7 \times \mathrm{Xe} 8 \mathrm{~S}$ ) e6 2.Sf6\#, since there is no sacrificial piece X; the wPs captured 6 pieces, but not the bPs $g$ and $h$, which died on $g$ and $h$ for lack of white sacrificial pieces. The solution elucidates the high originality of this problem: $1.5 \times \mathrm{e} 7+!\mathrm{B} \times \mathrm{e} 7$ 2.f7-f8\#! (= part of f7-f8X\#). One might put it as follows: pawn remains pawn!

No. 264
Werner Keym
Die Schwalbe 1971
$1^{s t} / 2^{n d}$ Prize


Add the kings.
Who mates in $1 / 2$ move?

No. 265
Werner Keym
Die Schwalbe 1971
Ceriani Memorial
$1^{s t} / 2^{n d}$ Prize


Who mates in $1 / 2$ move?

No. 266
Werner Keym
Die Schwalbe 1971


Who wins?

No. 264: Not $+\mathrm{wKc} 1 /+\mathrm{bKd} 3$ and Ra1-d1\#?, not $+\mathrm{wKg} 1 /+\mathrm{bKf} 3$ and Rh1-f1\#?, not $+w K f 6 /+b K g 8$ and 1.Rh8-f8\#?, but $+w K d 6 /+b K c 8$ and 1.Ra8-d8\#!. The wPs captured 9 pieces, among them 2 promoted officers ( $\mathrm{f} 7 \rightarrow \mathrm{f} 1 \mathrm{X}, \mathrm{g} 7 \times \mathrm{Bf6} \rightarrow \mathrm{f} 1 \mathrm{X}$ ), besides $\mathrm{h} 5 \times \mathrm{Qg} 4, \mathrm{~h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}, \mathrm{b} 5 \times \mathrm{Xa} 4$. So only b0-0-0 is permitted. 'An extremely beautiful problem of rare economy, an original task with all four half castlings, complete use of the board and fine concentration of the control by the sole bQ - and moreover perfectly retroanalytical content. This problem is a milestone ...,

The position of no. 265 seems to be illegal. It becomes legal if you remote one white or black pawn as part of an e.p. capture. There are 8 (!) possible e.p. captures, but the positions before a) $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.\#?, b) $1 . \mathrm{c} 5 \times \mathrm{b} 6$ e.p.\#?, c) $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.\#?, d) $1 . \mathrm{e} 5 \times \mathrm{d} 6$ e.p.\#? and e) $1 . d 4 \times$ e3 e.p.\#?, f) $1 . f 4 \times$ e3 e.p.\#?, g) $1 . h 4 \times \mathrm{g} 3$ e.p.\#? are illegal, since sacrificial pieces are missing or promotions impossible. Nothing else but removing the $w \operatorname{Pg} 4$ (as a part of $\mathrm{bPf} 4 \times \mathrm{g} 3$ e.p.\#!) results in legality. Genesis of the position: $\mathrm{h} 6 \times \mathrm{Rg} 7, \mathrm{~h} 7 \rightarrow \mathrm{~h} 1 \mathrm{Q}, \mathrm{a} 5 \times \mathrm{Qb} 6, \mathrm{a} 7 \rightarrow \mathrm{a} 3$, e2-e4, d4 $\times$ Be3, d2 $\rightarrow \mathrm{d} 6, \mathrm{c} 6 \times \mathrm{Rd} 5, \mathrm{wS} \times \mathrm{Pe} 7$ and g 2 -g4 $\mathrm{f} 4 \times \mathrm{g} 3$ e.p.\#. Record: 8 times 'half en-passant capture'. Non plus ultra!

No. 266: There are 16 white pieces. The wPs captured 10 pieces, e.g. g $3 \times$ Xh4-h 5 . The last move was $0-0$, the first part (Ke1-g1, before that bQg2-f3) is already done, the second must follow: Rh1-f1. Solution: 1.Rh1-f1! Qg2+! 2.R $\times \mathrm{g} 2 \mathrm{~h} 2+$ ! 3.~ stalemate. 'Therefore: nobody wins! A witty point.'

You will find further examples in PDB ( $\mathrm{K}=$ ‘Finish or retract an unfinished move’).

## Unconventional first move

In the following directmate problems Black is on the move, which can be proved by retroanalysis. However, these are not difficult release problems (numerous such problems can be found in the $\operatorname{PDB}$ ( $\mathrm{K}=$ 'Whose move')), but mostly easy two-move and three-move problems with positions which disguise the fact of Black's being to play in a clever manner..

No. 267
Knud Hannemann
Skakbladet 1929


Mate in 2

No. 268
H. Hjorth

Skakbladet 1911


Mate in 3

No. 269
Axel Akerblom
Svenska Dagbladet 1925


Mate in 2

In the three classical problems no. 267-269 from Scandinavia you will easily see that Black did not move last - but only so if you should come to think at all.

No. 267: The try is $1 . c 8 Q+$ ? $K \times a 72 . Q b 7 \#$, the solution $1 . K \times a 7$ ! c8R! (c8Q? stalemate) 2.Ka6 Ra8\#.

No. 268, too, deals with promotions. The try is 1.f8S? g6 2.Kh6 g5 3.Sg6\#, the solution, however, 1.Kxh7! (1.g6? Kh6 2.g5 f8Q,R\#) f8Q 2.g6 Kf6 3.g5 Qg7\#. As far as I know the author's solution was the sequence with the promotion 1.f8S. After the publication experienced solvers pointed at the obvious fact of Black's being on the move.

No. 269 is a problem with an unexpected variety: 1.f7 $\times$ e6/f6/f5/K $\times \mathrm{g} 1$ ! Sh3/Sf3/ Kf2/Rf6 2.e5/f5/~/Kh1 Be4/Rh6/Rh6/Rf1\#. Unfortunately there is no mate in 2 moves with White to play.

No. 270
Werner Keym
Basler Nachrichten 1969


Mate in 2

No. 271
Werner Keym
Weser-Kurier 1968


Mate in 2

No. 272
Werner Keym
Die Schwalbe 1969


Mate in 2

In no. 270-271 six squares around the black king are not occupied, but they are guarded by white rooks and white knights twice. So Black is on the move.

The solution of no. 270 is $1 . \mathrm{K} \times \mathrm{d} 7!$ Qh7+ 2.Kc8/Kd,e8/Ke6/Kc6 Qc7/Rb8/Sc7/Qb7, Rc5\# (mate dual) and $1 . \mathrm{K} \times \mathrm{b} 5$ ! with echoes. There is no mate in 2 moves with White to play. The same phenomenon can be seen in the predecessor P1108448 and the successor P0007076.

No. 271 is one of my favourites. It is supposed to be the most elegant miniature showing the perfect disguise of Black's turn to move with the black king in the middle of the chessboard. Not $1 . \mathrm{Rb} 6$ !? $\mathrm{K} \times \mathrm{c} 42 . \mathrm{Qd} 4 \#$, but $1 . \mathrm{K} \times \mathrm{e} 6$ ! Rc7 2.Kd5 2.Qf5\# and $1 . \mathrm{K} \times \mathrm{c} 4$ ! $\mathrm{Qd} 4+2 . \mathrm{K} \times \mathrm{b} 3 / \mathrm{Kb} 5 \mathrm{Re} 3 / \mathrm{Rb} 6 \#$. In 2002, on the occasion of my $60^{\text {th }}$ birthday, this problem (along with my photo see p . ii) was published in the newspaper Rhein-Zeitung Koblenz. 223 of 237 entries were incorrect (1.Rb6!?).

In no. 272 there is an asymmetrical try (White to play) with a symmetrical final position: 1.Qf4? $K \times c 52 . Q \times c 7 \#$. Solution: 1. $\mathrm{K} \times \mathrm{c} 5$ ! Qf4 [thr. 2. $\mathrm{Q} \times \mathrm{c} 7 \#] 2 . c 6$ Qd4\# asymmetrical.

No. 273
Hemmo Axt
Die Schwalbe 1976
Fabel Memorial $3^{\text {rd }}$ Prize


Mate in 2

No. 274
Hans Rosset
Die Schwalbe 1978


Mate in 2

No. 275
V. Zatulni

Tcherkaskaja Pravda 1981 $1^{\text {st }}$ Prize


Mate in 2

No. 273 is a miniature containing a remarkable variety of problem moves. There is a try with White to play and four dual-free variants. Not 1.Bd4? $\mathrm{K} \times \mathrm{d} 6$ 2.Rf6\#, but 1.K $\times$ b6! Sc4+ 2.Kc6/Ka6,Ka7 Se7/Ra5\# and 1.K $\times \mathrm{d} 6$ ! Bc7+ 2.Kc6/Ke6 Se7/Rf6\#.

The theme of no. 274 being a double 'star flight' cannot be achieved in a usual two-move problem with White on the move. The solution $1 . \mathrm{K} \times \mathrm{d} 5$ ! Rd7+ $2 . \mathrm{K} \times \mathrm{c} 4 / \mathrm{Kc} 6 / \mathrm{Ke} 4 / \mathrm{Ke} 6 \mathrm{Be} 2 / \mathrm{Ba} 4 / \mathrm{Qf} 3 / \mathrm{Bg} 4 \#$ and $1 . \mathrm{K} \times \mathrm{f} 7$ ! Rd7+ $2 . \mathrm{Ke} 6 / \mathrm{Ke} 8 / \mathrm{Kg} 6 / \mathrm{Kg} 8$ Bg4/Qe7/Qd3/Qa8\# is completely dual-free. Try: 1.Rf4? $\mathrm{K} \times \mathrm{d} 5$ 2.Qd6\#. - Almost the same theme was achieved in the miniature P1145194 (with a mate dual).

No. 275 is highly original. Try with White to play: 1.Bh5? $\sim 2 . S g 5 \#$. Solution: $1 . \mathrm{K} \times \mathrm{g} 4 \mathrm{~g} 8 \mathrm{Q} / \mathrm{R}$ 2.Kh3/Kf5 Sf4,Qe6/Sd2,Qe6,Qg6\#. 1.h $2 \times \mathrm{g} 1 \mathrm{Q} / \mathrm{R} \mathrm{Sf} \times \mathrm{g} 1+2 . \mathrm{K} \times \mathrm{g} 4$ g8Q,R\#; 1.h1S Bh5 2.S $\times$ f2/S $\times$ g3 Sg5/Sf4\#; 1.h1B! g8B!! 2.K $\times$ g4 Be6\#. Such an echo underpromotion cannot be achieved in a usual two-move problem with White on the move.
'Plausible impossibilities should be preferred over implausible possibilities'.
(Aristotle)

No. 276

Werner Keym
Allgemeine Zeitung Mainz
1966


Mate in 2

No. 277
Werner Keym
Die Welt 1968


Mate in 3

No. 278
Werner Keym
Deutsche Schachblätter 1968


Mate in 3
b) $-P e 7$

No. 276: The solution is not $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.? $\mathrm{a} 7 \times \mathrm{b} 6+2 . \mathrm{R} \times \mathrm{b} 6 \#$ since $\mathrm{bPb} 7-\mathrm{b} 5$ could not have been the last move because of the wBa8, but 1.b4! Rb3 zugzwang $2 . \mathrm{b} 4 \times \mathrm{a} 3$ Bb7\#.

No. 277: The last move was not bPg7-g5? because of the wBh8 which then would have to be a promoted officer. This would cause 14 captures altogether (in view of 3 black pieces). Therefore not $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.? $\mathrm{f} 7 \times \mathrm{g} 6+2 . \mathrm{Kg} 4 \mathrm{~g} 53 . \mathrm{Sg} 8 \#$, but $1 . \mathrm{g} 4$ ! Bg2 2.g4×h3 g4 3.h3×g2 g5\#. 'Small material, much content.'

No. 278: There are 16 white pieces. The wPs captured 10 pieces, among them the bBc8. So the last move in a) was not bPd7-d6, but wPg2-g4 Sg4-h2 Rg3-h3+. Therefore the solution is $1 . f 4 \times \mathrm{g} 3$ e.p.! Qc4 2.g2 $\mathrm{R} \times \mathrm{h} 2+3 . \mathrm{K} \times \mathrm{h} 2 \mathrm{Qh} 4 \#$. In b) there are only five black pieces and the wPs did not need to capture the bBc8. So the last move could be d7-d6. In this case the solution is not $1 . e 3$ ? $\mathrm{K} \times \mathrm{g} 1$ !, but 1.e4! $\mathrm{f} 4 \times \mathrm{e} 3$ e.p. $2 . \operatorname{Se} 2 \mathrm{e} 3 \times \mathrm{d} 23 . \mathrm{Sg} 3 \#$. Twice e.p. capture, but each time in a different way.

You will find problems with the unconventional first move especially in the chapter 'Nasty tricks in one-move problems'.

## En-passant key: 'to be or not to be'

The en-passant capture is a curious move. A pawn proceeds to some certain square and captures a pawn on a different square provided that the latter has just made a double step. So the en-passant capture as a key is permitted only if it can be proved that the last move was the double step of the pawn (cp. p. 170). Such problems resisting the computer appeal to solvers.

No. 279
Friedrich Amelung
Düna-Zeitung 1897


Mate in 2

No. 280
J. Perkins

Chess 1950


Mate in 1

No. 281/1
Thomas R. Dawson
Falkirk Herald 1914


Mate in 2

No. 279 is the most economical dual-free rendering of the e.p. key in a directmate problem (cp. 290). It uses the typical position of $w \mathrm{~K}, \mathrm{bP}$ and wP side by side on the $5^{\text {th }}$ rank, which excludes the simple step of the bP (here g6+-g5) as the last black move. The retro play $\mathrm{bKg} 7-\mathrm{h} 6$ ? is illegal as well. So the last move was $\mathrm{g} 7-\mathrm{g} 5$, therefore $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.! Kh5 $2 . \mathrm{R} \times \mathrm{h} 7 \#$.

No. 280: 16 w . pieces are on the chessboard. The moves bBh2+-g1, bS+-b2 or $\mathrm{bS}+-\mathrm{h} 8$ are illegal. So the last move was d7-d5, therefore $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.\#.

No. 281/1 (FIDE-Album) is a famous retro problem (this is the original position, not the one with all the pieces shoved on to one file to the right). The wPs captured the 10 missing black pieces, among them the Bf8. So the last move was not e7-e5, but c7-c5 with the solution $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.! $\sim 2 . \mathrm{c} 7 \#$. - No. 281/2: If you add the stipulation 'Chess 960' (Werner Keym, Die Schwalbe 2017), you get a surprising variation. The dark-squared bB never was on h8 (illegal). If it was on b8 originally, then the last move was e7-e5 (with 1.f5 $\times$ e6 e.p.!), if on f8, then c7-c5 (with $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.!), if on d8, then either c7-c5 (with $1 . b 5 \times c 6$ e.p.!) or e7-e5 (with $1 . f 5 \times$ e6 e.p.!), i.e. PRA within PRA (see p. 106).

No. 282
Sam Loyd
New York Chess
Association 1894


Mate in 4

To no. 282
Critical position
Next move: $17 . \mathrm{b} 6 \times \mathrm{a} 7$


地

No. 283
Wolfgang Hundsdorfer
Deutsches Wochenschach 1909 lth $^{\text {st }}$ Prize


Mate in 3

Sam Loyd was a pioneer in so many fields of chess composition. In no. 282 the wK is not on the $5^{\text {th }}$ rank, yet it can be proved that $\mathrm{f} 7-\mathrm{f} 5$ was the last move. This is Loyd's own (ambiguous) 'proof game': 1.g4 e6 2.Bg2 Sc6 3.Sc3 Bc5 4.Sb5 Qg5 5.Sf3 Qe3 6.f2×e3 Sge7 7.Sh4 Sd4 8.e3×d4 a5 9.Be4 Ba7 10.Bg6 h7×g6 11.Kf2 Rh5 12.Ke3 Rc5 $13 . \mathrm{d} 4 \times \mathrm{c} 5 \mathrm{Sd} 5+14 . \mathrm{Kd} 4 \mathrm{Sb} 615 . c 5 \times \mathrm{b} 6 \mathrm{Bb} 816 . \mathrm{Kc} 5 \mathrm{Ra} 7$ (critical position) $17 . \mathrm{b} 6 \times \mathrm{a} 7 \mathrm{a} 4$ 18.Sd4 b6+ 19.Kb5 Lb7 20.Rf1 Bd5 21.Ka6 Bb3 $22 . \mathrm{a} 2 \times \mathrm{b} 3$ Ke7 23.b4 Kf8 24.Ra3 Kg8 25.Rh3 a3 26.Sb3 a2 27.Kb7 a1R 28.Kc8 Ra5 29.Kd8 Rh5 30.Sa1 Kh7 31.b3 Kh6 32.Bb2 Kh7 33.Be5 g5 34.Sg6 Kh6 35.Rf6 Rh4 36. Bf4 g5 $\times$ f4 37. Qh1 Kg5 38.Qe4 Rh8+ 39.Ke7 Rc8 40.Rh8 Rd8 41.Re8 Rc8 42.Kf8 Rd8 43.Kg8 Rc8 44.Kh7 Rd8 45.Rh8 Rg8 46.Sf8 Kh4 47.g5 Kg4 48.Qg6 Kh3 49.Qh6+ Kg4 and 50.Rf6-g6 f7-f5!, therefore $1 . g 5 \times f 6$ e.p.+! Kf5 2.Rg5+ Ke4 3.Qg6+ Kd4 4.c3,Qd3\#. The retro move 50...f6-f5? would result in stalemate. Loyd considered no. 282 to be one of his best problems.

Many problems with en-passant keys are in the collection Retrograde Analysis by $T$. R. Dawson and W. Hundsdorfer (1915), e.g. no. 283. The Ps captured all missing pieces. The bR must go back to h 8 and the bB to f 8 , earlier $\mathrm{bPg} 7 \times \mathrm{Xh} 6 \mathrm{wXc} 3-$ h6 wKb2-b3 and the knot is resolved. So back 1...c7-c5! 2.g5-g6 Rc6-c2 3.g4g5 Rg6-c6 4.g3-g4 Rg8-g6 5.g2-g3 Bd4-a7 6.h4-h5 Bg7-d4 7.h3-h4 Bf8-g7 8.h2h3 g7×B/Sh6. Therefore $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.+! b5 (1...Qb5 2.Q/B $\times$ b5+) $2 . \mathrm{K} \times$ b4+ Rc3 $3 . \mathrm{R} \times \mathrm{c} 3 \#$. Profound retroanalysis.

No. 284
Harold H. Cross
Fairy Chess Review 1939


Is Black allowed to capture en-passant?

No. 285
Andrey Frolkin
Shakhmaty v SSSR 1986
$2^{\text {nd }}$ Prize


Is Black mate?

To no. 285
Critical position
Next move: $\mathrm{e} 2 \times$ Sf3+


No. 284 (FIDE-Album): Black is allowed to capture en-passant: backward 1.d2-d4! d5 $\times$ Se4 2.Sg5-e4 Rg2-g1 3.Sf3-g5 Rg1-f1 4.Rf1-e1 d6-d5 5.Se1-f3 h7-h6 6.Bc2-d1 Kd1-c1 7.Bf5-c2+. The retro move 1.d3-d4? d5 $\times$ Se4 $2 . d 2-\mathrm{d} 3$ etc. would cause the loss of a tempo and an insoluble retro opposition between the rooks on f 1 .

No. 285 (FIDE-Album): The Bb1 must go to f 1 , the Bg1 to c 1 , the wK to e 1 and the wQ to d 1 in order to retract $\mathrm{wPe} 2 \times \mathrm{Sf} 3$ and $\mathrm{bKg} 4-\mathrm{h} 5$. This aim is reached by 45 unambiguous single moves in retro help play (!), which prove that the last move was not g3-g4?, but $22-\mathrm{g} 4$ !. Here are these moves from the critical position to the diagram position: $1 . \mathrm{e} 2 \times \mathrm{Sf} 3+\mathrm{Kh} 5$ 2.Bb5 a6 3.Kf1 a5 $4 . \mathrm{Kg} 1 \mathrm{a} 45 . \mathrm{B} \times \mathrm{a} 4 \mathrm{~b} 56$.Kh2 b4 7.Kh3 b3 8.B $\times \mathrm{b} 3 \mathrm{c} 69 . \mathrm{Ba} 2 \mathrm{c} 510 . \mathrm{b} 3 \mathrm{c} 411 . \mathrm{Bb} 2 \mathrm{c} 312 . \mathrm{B} \times \mathrm{c} 3 \mathrm{e} 613 . \mathrm{Rb} 2 \mathrm{e} 514 . \mathrm{Bb} 1$ e4 15.Be5 e3 16.Bh2 e2 17.Bg1 e1B 18.Qe2 d6 19.Qe7 d5 20.Qd8 d4 21.Re2 d3 $22 . \mathrm{Se} 3 \mathrm{~d} 3 \times \operatorname{Re} 223 . \mathrm{g} 2-\mathrm{g} 4+$ (miraculous!) and Black can avoid the mate by $\mathrm{h} 4 \times \mathrm{g} 3$ e.p.!. A climax of modern retro composition.


Mate in 2
b) $\mathrm{Pg} 7 \rightarrow e 7$

No. 287
Werner Keym
Schach-Echo 1971


Mate in 3

No. 288
Werner Keym
Allgemeine Zeitung Mainz 1963


Mate in 3

In no. 286-289 'normal' positions disguise the e.p. key. These problems should be published in the 'normal' chess column of a daily newspaper, not in a retro section.

No. 286: a) the last move could have been $\mathrm{a} 5 \times \mathrm{Xb} 4$, therefore no e.p. capture, but 1.b3! ~2.Qa1\#. b) the last move was c7-c5 Rb6-d6+, therefore $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.+!. Genesis of the position: the wPs captured 6 times ( $\mathrm{wPc} \times \mathrm{Xb}$ ); besides $\mathrm{d} 7 \times \mathrm{Xe} 6$, $\mathrm{d} 2 \rightarrow \mathrm{~d} 8 \mathrm{X}, \mathrm{bPa} \times \mathrm{Xb}, \mathrm{a} 2 \rightarrow \mathrm{a} 8 \mathrm{X}$. Malicious! (cp. the similar problem P0006283)

No. 287: The wPs captured 6 times; a bOfficer captured the Pa on the a -file. The last move was not b7-b6? (because of the bBb1) nor Ke $4 \times$ Xf4? nor Q-f5? R-f6+ (for lack of a sacrificial piece), but bPe7-e5 Rd6-f6+ Q-f5, therefore 1.d5×e6 e.p.+! $\mathrm{B} \times \mathrm{b} 82 . \mathrm{Q} \times \mathrm{b} 8+\mathrm{d} 63 . \mathrm{Q} \times \mathrm{d} 6 \#$. 'Sharp-witted.'

No. 288: There are five tries and each has got precisely one refutation: 1.Ra8/B $\times$ b5+/Sb6+/Scd6/Sed6? b5 $\times \mathrm{a} 4 / \mathrm{K} \times \mathrm{d} 8 / \mathrm{K} \times \mathrm{e} 8 / \mathrm{b} 5 \times \mathrm{a} 4 / \mathrm{K} \times \mathrm{d} 8$ !. Therefore many chess friends were at their wits' end because the high number of officers on the board encouraged them to make an effort at mating in a 'serious' manner. But in fact it is a well disguised retro problem. The last moves were b7-b5 Rc6 $\times$ Xa6+. So the solution is $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.+! $\mathrm{K} \times \mathrm{d} 82 . \mathrm{b} 7 \mathrm{~g} 63 . \mathrm{Rd} 6 \#$ and $1 \ldots \mathrm{~K} \times \mathrm{c} 82 . \mathrm{Ra} 8+$ Kb7 3.Bc6\#. 'A brilliant problem, although it conflicts with the established views of composition: capturing key and checking key.' 'After two hours I gave up.' 'I got a headache.' 'A lucky find.' My best retro problem with up to 12 pieces (Meredith).

Retro chic is good. Retro chess is better.


Mate in 2

No. 290
Wilhelm Maßmann
Bodo von Dehn
Die Schwalbe $19593^{\text {rd }}$ HM


Mate in 4

No. 291
Bernd Schwarzkopf
Problemkiste 2005


Stalemate in 2

No. 289: Set play: $1 . . . \mathrm{f} 4 / \mathrm{e} 6 / \mathrm{Se} 6+/ \mathrm{R} \sim / \mathrm{g} 4 \times \mathrm{f} 32 . \mathrm{Qe} 4 / \mathrm{Sf} 6 / \mathrm{B} \times \mathrm{e} 6 / \mathrm{S} \times \mathrm{e} 7 / \mathrm{Q} \times \mathrm{f} 3 \#$, but $1 . . \mathrm{c} 4$; tries: 1.Ra1/e6? g4×f3/S $\times$ h5!. Solution: 1.e5 $\times \mathrm{f} 6$ e.p.! [thr. 2.Qe5\#] e5/e7 $\times \mathrm{f} 6+/ \mathrm{Se} 6+2 . \mathrm{Qe} 4 / \mathrm{S} \times \mathrm{f} 6 / \mathrm{Q} \times \mathrm{e} 6 \#$. Genesis of the position: the wPs captured 6 times; besides $\mathrm{bPh} \times \mathrm{Rg}$ and $\mathrm{h} 2 \rightarrow \mathrm{~h} 5$. The last move was not $\mathrm{h} 4 \times \operatorname{Rg} 3$ ? (too many captures), but $\mathrm{f} 7-\mathrm{f} 5$. A success as to both forward and retro play.

There is no dual-free miniature with the e.p. capture as a key if we disregard no. 291, 292 and the 'A posteriori' problem no. 385. No. 290 is the only directmate miniature: $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.! Ka5 2.b7,Bd7,Be8,Sc8 (duals).

No. 291 is a dual-free stalemate problem: $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.! Kh5 2.Qf4.


No. 292
Hans Gruber \& Theodor Steudel
Süddeutsche Zeitung 1986
White retracts 1 move and mates in 1
Solution: backward Kc5×Pb5 and 1.a5×b6 e.p.\#. Is this a miniature, yes or no?

## 'Nasty tricks' in one-move problems

Castling, en-passant capture and the unconventional first move (Black on the move $=$ Black $\rightarrow$ ) are in Karl Fabel's words the 'three nasty tricks'. Two or three of them occur in the problems of this chapter: as a try (?) or as the solution (!). Here the retroanalytical aspect is no end in itself, but simply helps to present the tricks in onemove problems. In a two or three move problem that is rather easy to implement. (cp. no. 97-105)

No. 293
Karl Fabel
New Statesman 1963


Mate in 1

No. 294
Karl Fabel
Heidelberger Tagblatt
1954


Mate in 1

No. 295
Karl Fabel
Deutsche Schachblätter 1951


Mate in 1

No. 293 is one of the rare miniatures including two of those ominous tricks. Obviously Black did not move last. Therefore not 1.Sh4\#?, but 1.K×f3! 0-0\#.

In no. 294 Black is to move as well. Therefore not $1.0-0 \#$ ?, but $1 . \mathrm{R} \times \mathrm{h} 1 \#$ !.

No. 295: The wPs captured 12 b. pieces (bBf8 as well). Backward not $g 7 \times$ Xf6 nor g7-g5 (with $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.\#?). Black is to play: $1 . \mathrm{g} 5-\mathrm{g} 4!\mathrm{h} 3 \times \mathrm{g} 4 \#$.

The Codex for Chess Composition (see p. 170) as far as concerning our point runs as follows: 'If the first move does not lie with the conventionally party ..., this should either be indicated in the stipulation or deducible from retroanalysis.' According to that it does not follow that Black is allowed to mate. If that is intended, the stipulation should be 'Who mates in n moves?' or similar. As to one-move problems, however, there is an agreement that Black is allowed to mate. So 'Mate in 1 move' comprises four cases: 1) White moves first and mates; 2) White moves first and Black mates; 3) Black moves first (according to retroanalysis) and White mates; 4) Black moves first (according to retroanalysis) and mates.

No. 296
Werner Keym
Die Schwalbe 1968


Mate in 1

No. 297
Werner Keym
Schach-Echo 1967


Mate in 1

No. 298
Werner Keym
Die Schwalbe 1968
$2^{\text {nd }}$ Prize


Mate in 1

No. 296: The wPs captured 13 times. White's dark-squared white bishop is missing. Black did not move last, therefore not 1.Bd5\#?. The last move was not d2-d4? (illegal position of the wPs), but f2-f4! Kf4-e4. The solution is $1 . g 4 \times f 3$ e.p. + ! g2×f3\#. White: \#?, \#!; Black: $\rightarrow$, e.p.?, e.p.!

No. 297 (FIDE-Album): The wPs captured 11 pieces, among them the promoted officer X from g 1 ( earlier $\mathrm{bPh} \times \mathrm{Qg}-\mathrm{g} 1 \mathrm{X}$ ). Hence the last move was not $\mathrm{g} 7-\mathrm{g} 5$ ? $\mathrm{Sg} 5-\mathrm{f} 3+($ not $\mathrm{Sg} 5 \times \mathrm{Xf} 3+$ for lack of a sacrificial piece) retro stalemate, but e2-e4! Ke4-f4. Therefore the solution is not $1 . f 5 \times \mathrm{g} 6$ e.p.\#?, but $1 . \mathrm{d} 4 \times \mathrm{e} 3$ e.p.! f2×e3\#. White: e.p.\#?, \#!; Black: $\rightarrow$; e.p.!

No. 298: Genesis of the position: $\mathfrak{f 7} \rightarrow \mathrm{f} 4$, wPg $4 \times \mathrm{Bf} 5$ (hence the last move was not $\mathrm{d} 7-\mathrm{d} 5$ ? (excluding the bB from c8) with $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p. $\#$ ?), $\mathrm{g} 7 \rightarrow \mathrm{~g} 2$, $\mathrm{wPh} \times \mathrm{Sg}, \mathrm{h} 7 \rightarrow \mathrm{~h} 2$, $\mathrm{bQ} / \mathrm{R} / \mathrm{B} / \mathrm{S}$ captures wPa and wPb . The last moves were e2-e4 bPe3 $\times \mathrm{Pf} 2$, therefore 1.f4×e3 e.p.\#!. 'Brilliant idea.' White: e.p.\#?; Black: $\rightarrow$, e.p.\#!


No. 299: May White mate by $0-0-0$ or b5×c6 e.p.? That's the issue. Genesis of the position: the wPs captured the 4 missing black pieces, among them the Bf8 (hence backward not e7-e6?) and the promoted officer X from g1 (earlier $\mathrm{bPh} \times \mathrm{R} / \mathrm{Sg} \rightarrow \mathrm{g} 1 \mathrm{X}$ ), besides $\mathrm{bPbxS} / \mathrm{Ra}$. So the last move was c6-c5 or c7-c5. a) backward c6-c5? Qc7-b6+ b6×S/Ra5 B-f3 K-g1 B-d5/e4+ is illegal, since the necessary retro moves $\mathrm{a} 3 \times \mathrm{Bb} 4-\mathrm{b} 5$, $\mathrm{bBf} 8 \rightarrow \mathrm{~b} 4$ and e7-e6 lock up both black rooks within their cage; backward c7-c5! Qc6-b6+ b6×S/Ra5 Kd1-e1 (not B-f3 K-g1 since the wQc6, too, guards the squares g2 and h1) Kf1-g1 is possible. Hence not 1.0-0-0\#?, but $1 . b 5 \times \mathrm{c} 6$ e.p.\#!. - b) backward c6-c5! Qc7-b6+ b6×Sa5 B-f3 K-g1 B-d5/e4+ is possible, because the cage is opened by wRh8-d8. Hence not $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.\#?, but 1.0-0-0\#!. a) White: $\rightarrow$, 0-0-0\#?, e.p.\#!; b) White $\rightarrow$, e.p.\#?, 0-0-0\#! - In my opinion this task (white e.p. capture being real, white castling being virtual) can be achieved in a one-move problem only by means of a cage with a wQ. The first rendering was P0004848, after that P1011952 and P0000830. In the twin no. 299 try and solution are changed by a small modification which in a quite unobtrusive manner seems to be deceivingly irrelevant (wSd8/wRd8). None of the 26 pieces may be on a different square. Perhaps my best retro problem.

No. 300 is a retro problem for beginners. Only White's wQ and wR are missing. Hence the last black move could not be bPg $2 \times \mathrm{Q} / \mathrm{Rh} 1 \mathrm{R}$ ? nor $\mathrm{Kg} 2 \times \mathrm{Q} / \mathrm{Rg} 1$ ?. Black is to play. As White threatens to mate by $1.0-0-0$, Black plays $1 . \mathrm{d} 7-\mathrm{d} 5$ ! but now $1 . . . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.\#. White: 0-0-0\#?, e.p.\#!; Black: $\rightarrow$


Mate in 1

No. 302
Werner Keym
Schach-Echo 1967


Mate in 1

No. 303
Werner Keym
Die Schwalbe 1969


Mate in 1

Problems no. 300-306 present the three tricks altogether.
No. 301: Here the retroanalysis is not difficult. The wPs captured 14 times. White's light-squared bishop is missing, hence backward bPd $6 \times$ Be5? was impossible. The retro move e7-e5? Rd6-f6+ (not Rd6 $\times$ Xf6+? for lack of a sacrificial piece) results in a retro stalemate since the bK has no previous move. So the solution is not $1 . \mathrm{f} 5 \times \mathrm{e} 6$ e.p.\#?, but Black is to play: $1 . \mathrm{K} \times \mathrm{f} 3$ ! 0-0\#. White: e.p.\#?, 0-0\#!; Black: $\rightarrow$

No. 302: The wPs captured 11 pieces on the files $\mathrm{b}-\mathrm{g}$, among them the promoted officer from h1 (earlier h7 $\rightarrow \mathrm{h} 1 \mathrm{X}$ ). So 1.0-0\#? is a try. The last moves were wPa2-a4! $\mathrm{bPa} 3 \times \mathrm{Sb} 2$, which forces Black's e.p. capture. 1.b4×a3 e.p.! Qc3\#. White: 0-0\#?, \#!; Black: $\rightarrow$, e.p.!

No. 303: The wPs captured 7 pieces, among them the promoted officer $X$ from al (earlier $\mathrm{a} 7 \rightarrow \mathrm{a} 1 \mathrm{X}$, hence $0-0-0$ not permitted); the bBc 8 died on c 8 . The last move was not $\mathrm{bPg} 3 \times \mathrm{Xh} 2$ ? (too many captures) nor f6-f5/f7-f5? Qf7-g6+/Qf6-g6+? (no previous black move). So neither 1.0-0-0\#? nor 1.g5×f6 e.p.\#? is permitted. Black is to play: $1 . \mathrm{h} 2 \times$ Sg1Q\#!. White: e.p.\#?, $0-0-0 \#$ ?, Black: $\rightarrow$, \#!

No. 304
Karl Fabel
Nenad Petrovic
problem 1953 Comm.


Mate in 1

No. 305
Werner Keym
Die Schwalbe 1968


Mate in 1

No. 306
Werner Keym
Die Schwalbe 2007
Fabel Memorial $2^{\text {nd }}$ Prize


Mate in 1
b) $P d 7 \rightarrow e 7$

No. 304: The wPs captured 8 times; besides $\mathrm{bK} \rightarrow \mathrm{d} 1 \rightarrow \mathrm{a} 1$ ( $0-0$ not permitted) and $\mathrm{wX} \times \mathrm{Bc} 8$ (the bBa4 is a promoted officer). The last moves were not e6-e5? $\mathrm{c} 3 \times \mathrm{Xb} 4+$ ? (too many captures) nor e7-e5? Rf6-b6+ (not Rf6 $\times \mathrm{Xb} 6+$ ? for lack of a sacrificial piece) retro stalemate. Tries: $1 . \mathrm{B} \times \mathrm{e} 5 \#$ ?, $1 . \mathrm{d} 5 \times \mathrm{e} 6$ e.p.\#?, $1 . \mathrm{Ke} 2 \#$ ?, $1.0-0 \#$ ?. Black is to play: 1.d7-d6! Ke2\# and $1 . \mathrm{B} \times \mathrm{b} 5$ ! $\mathrm{B} \times \mathrm{e} 5 \#$. White: \#?, \#?, 0-0\#?, e.p.\#?, \#!; Black: $\rightarrow$

In no. 305 and 306b the three nasty tricks occur in the solution. No. 305 uses the same mechanism as no. 302. The wPs captured 11 pieces on the files b-g, among them the promoted officer X from g 1 (earlier $\mathrm{bPh} \times \mathrm{Qg}-\mathrm{g} 1 \mathrm{X}$ ); besides $\mathrm{h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$. Try: $1.0-0 \#$ ?, but Black is to play since the last moves were wPa2-a4! bPa $3 \times \mathrm{Xb} 2$, which forces Black's e.p. capture: $1 . \mathrm{b} 4 \times \mathrm{a} 3$ e.p.! 0-0\#. White: 0-0\#?, 0-0\#!; Black: $\rightarrow$, e.p.! The first rendering of the three nasty tricks in a one-move problem is P1011955.

No. 306: The wPs captured 9 times. a) one of them captured the promoted officer X from a1 (before that a7 $\rightarrow \mathrm{a} 1 \mathrm{X}$, hence $0-0-0$ is not permitted). The last moves were $\mathrm{f} 3 \times \mathrm{Sg} 2$ Sh4-g2 (earlier e $3 \times \mathrm{Xf} 4$ and e $5 \times \mathrm{Bf} 4$ ). The simple solution is $1 . \mathrm{Ke} 2 \#$. b) backward $\mathrm{f} 3 \times \mathrm{Sg} 2$ ? and earlier e $5 \times$ Bf4 would cause too many captures. The last moves were f 2 - 44 ! $\mathrm{f} 3 \times \mathrm{Sg} 2$, earlier $\mathrm{bPa} 3 \times \mathrm{Bb} 2-\mathrm{b} 1 \mathrm{X}$ and castling is permitted. The solution is $1 . \mathrm{g} 4 \times \mathrm{f} 3$ e.p.! 0-0-0\#. a) White: $\rightarrow$, 0-0-0\#?, \#!; Black: -; b) White: \#?, 0-0-0\#!; Black: $\rightarrow$, e.p.! A small modification of the position results in a great modification of the content. 'Most elegant and with greater retro depth than many other one-movers.'

## Problems out of the ordinary

The following problems have unusual (supplementary) stipulations, contents, chessboards and/or solutions.

No. 307
Werner Keym
Stuttgarter Zeitung 2006


Mate in 1
(Give reasons)

No. 308
Christer Jonsson
Springaren 2017


Helpmate in 2
b) Shift the pieces (al $\rightarrow$ b2)
c) Shift the pieces
(al $\rightarrow c 3$ )

No. 309
Werner Keym
Stuttgarter Zeitung 2008


Remove 1 piece.
Mate in 2
How many solutions?

A mate in 1 or 2 moves with the board occupied by 7 or 8 pieces only - do those problems appear to be suitable for beginners?

No. 307: Even in a one-move problem psychology may play a part. The supplementary stipulation 'Give reasons' led many chess friends into temptation for a mate by Black: 1.Qc7\#?. But that is not correct because the last moves could have been bKd6 $\times$ Pc6 d5 $\times$ c6 e.p. $+\mathrm{c} 7-\mathrm{c} 5$ B-a3+ (the well-known trick, cp. no. 123 and 218).
So the solution is very simple: 1.Qb5\#!. Anti-paradoxical, as one might put it. (cp. P0007173)

No. 308: These are the solutions: a) 1.Kd4 e4 2.Re3 $\mathrm{Q} \times \mathrm{d} 5 \#$, b) 1. $\mathrm{Kg} 5 \mathrm{Q} \times \mathrm{e} 6$ 2.Kh4 $\mathrm{Q} \times \mathrm{g} 4 \#, \mathrm{c}) 1 . \mathrm{Rh} 7 \mathrm{Q} \times \mathrm{f} 72 . \mathrm{Kh} 6 \mathrm{Qf6} \#$. It is interesting to examine the reasons for the solutions being different.

No. 309: If you remove the Sg 2 , there is an asymmetrical solution: 1.Rgg2! ~ 2.Qf8\#. That is not the whole content, of course. There is a second solution, so if you remove the Pd5; then Black did not move last and is to play. $1 . \mathrm{K} \times \mathrm{e} 2$ ! Qd8 2.Kf1/Kf3 2.Qd1\# or as an echo $1 . \mathrm{K} \times \mathrm{g} 4$ ! Qa5 2.Kf3/Kh3 Qh5\#. No. 309 is related to no. 270.

No. 310
Thomas R. Dawson
Asymmetry 1927


Add the white queen, then stalemate in 1
b) mirrored (al $\leftrightarrow h 1)$

No. 311
Bedrich Formánek
Chess Jokes 2000


Helpstalemate in 2*

No. 312
Pal Benko
Chess Life \& Review 1976


Helpnotmate in 3 White to play

No. 310: The queen is always on the left side of the king. Hence a) Qa1! and 1.a2-a4, not Qd1? and 1.c2-c4, b) Qe1! and 1.f2-f4, not Qh1 and 1.h2-h4. Classical asymmetry.

No. 311: The solution is not difficult: 1.d1S! $\mathrm{Q} \times \mathrm{c} 52 . \mathrm{Sf} 2 \mathrm{Q} \times \mathrm{f} 2$ stalemate. But the little star reminds us of the set play which usually is half a move shorter (here 1.5 moves). Therefore $1 . . . \mathrm{d} 1 \mathrm{Q}$ ! $2 . \mathrm{Qc} 2 \mathrm{Q} \times \mathrm{c} 2$ stalemate. A piquant idea: the white king being stalemated in set play and the black king right so in actual play. But stalemate is considered to be a draw, isn't it.

In no. 312 White and Black collaborate not to checkmate. This following mate is threatening: 1.a7 f1Q/R\#, 1...f1S 2.a8B/S ~ 3.Sb6/Bb7\#. Therefore 1...f1B! $2 . \mathrm{a} 8 \mathrm{~B}$ ! (echo promotion) $\mathrm{Ba6} 3 . \mathrm{Bb} 7+\mathrm{B} \times \mathrm{b} 7$. A genuine novelty!

No. 313
Wilhelm Kluxen
Die Welt 1947


White moves and does not mate

No. 314
Karl Fabel
Rätselstunde 1952


White moves and does not mate

No. 315
Karl Fabel
Die Welt 1951


White moves and does not win

No. 313: Black's unique capture was bPba7 $\times$ Qc6. The last move was $\mathrm{d} 7-\mathrm{d} 5$. So White can play $1 . c 5 \times \mathrm{d} 6$ e.p.! and does not mate.

No. 314: There is no mate after $1 . \operatorname{Rg} 6-\mathrm{c} 6+!\mathrm{Rb} 7 \times \mathrm{h} 7 ; 1$ white bishop is a promoted officer. An earlier example is P0005856.

No. 315: After $1 . \mathrm{c} 4+!\mathrm{R} \times \mathrm{c} 4$ there are two ways: not $2 . \mathrm{Sc} 7+$ ? $\mathrm{R} \times \mathrm{c} 73 . \mathrm{Se} 7+\mathrm{R} \times \mathrm{e} 7$ $4 . e 4+\mathrm{R} \times \mathrm{e} 45 . \mathrm{f} 3 \times \mathrm{e} 4 \#$ win, but $2 . \mathrm{e} 4+!\mathrm{R} \times \mathrm{e} 43 . \mathrm{Se} 7+\mathrm{R} \times \mathrm{e} 74 . \mathrm{Sc} 7+\mathrm{R} \times \mathrm{c} 7$ stalemate.


No. 316
Werner Keym
Allgemeine Zeitung Mainz 2002
Has White been mated?
Not so at all. The last moves seem to be $\mathrm{bPb} 4 \times \mathrm{c} 3$ e.p.+ (the well-known trick) c2-c4 b5-b4+, but then the position is illegal since the black king is locked up. According to the laws of chess Black has to retract the not allowed en-passant capture (backward bPb 4 and wPc 4 ) and to move the Pb 4 he has already touched, i.e. Pb4-b3. This position, however, is stalemate. So the result is a draw.

No. 317

Fritz Giegold
Deutsche Schachblätter $19522^{\text {nd }}$ Place


Mate in 3

No. 318
W. Wolff

Fern vom Alltag 1922


Mate in 3 by the Ra5 which does not move.

No. 319
Werner Keym
Die Schwalbe 1991


Helpmate in $2 *$
1 Bishop does not move

No. 317: 1.Bd4! ( Pe 4 is unpinned in advance) $\mathrm{K} \times \mathrm{h} 42 . \mathrm{f} 4 \mathrm{e} 4 \times \mathrm{f} 3$ e.p. 3.Bf6\# or 1... Kh6 2.Ra5 Kh7 3.R $\times$ h5\#. Giegold's chess problems are famous puzzles. You will find amazing examples in $P D B$ ( $\mathrm{A}=$ 'Giegold').

No. 318: Conditional problems existed as early as in the Middle Ages (see $P D B$ $\mathrm{K}=$ 'conditional problem'). $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.! e4 $2 . \mathrm{Se} 3 \mathrm{~K} \times \mathrm{g} 53 . \mathrm{K} \times \mathrm{d} 6 \#$. What a stunt. There is even a setting without the condition (P1284567).

No. 319 shows new effects. In the set play $1 . . . \mathrm{Be} 4+2 . \mathrm{Kh} 8 \mathrm{Be} 5 \#$ the existing bBa1 is immobile. In the solution 1.Bh8! Bf4 2.a1B! Be4\# the new bBa1 is immobile, but enables the wBh1 to move. 'Two gags in one problem: stipulation and underpromotion.'


No. 320
Old Chinese Puzzle
White to play mates.
Each white piece moves exactly once.
The 'normal' solution would not be so bad: 1.Ra8+ K $\times$ a8 2. Rc8\#, but the king, too, must move. Therefore 1.Rd6! Kc8 2.Ka7 Kc7 3.Rac6\#.

No. 321
Karl Fabel
Am Rande des
Schachbretts 1947


Mate in 1

No. 322
Mark I. Adabashev
"64" 1938


White retracts 1 move, then mate in 1
b) all 1 rank up
c) all 2 ranks up
d) all 3 ranks up

No. 323

## Werner Keym

a) Hannoversche Allgemeine Zeitung 2003
b) Weser-Kurier 1970


Mate in 1
White to play
b) $\mathrm{Sel} \rightarrow d 2$

No. 321: In all proof games from the initial array to the diagram position White has got one move more than has got Black. So Black is to play. Therefore the solution is not $1 . \mathrm{S} \times \mathrm{f} 7 \#$ ?, but $1 . \mathrm{S} \times \mathrm{c} 2 \#!$. A classical parity problem (cp. $P D B \mathrm{~K}=$ 'parity argument').

No. 322: a) Backward c2-c4 and 1.d4-d5\#; b) backward b4×Pc5 and $1 . d 5 \times c 6$ e.p.\# (in this case the previous double step c7-c5 is supposed); c) backward b5 $\times \mathrm{c} 6$ e.p. and 1.d6-d7\#; d) backward c6-c7 and 1.d7-d8S\#. An evergreen!

In no. 323 the solution of a) is trivial: $1 . \mathrm{Sc} 2 \#$; b) seems to be easy as well: 1.Ra4\#?. But it is obvious that Black did not move last. Nevertheless the stipulation runs as follows: 'White to play'. That is possible only if White has just played Kel-c1 as the first part of $0-0-0$ and then plays Ra1-d1 as the second part. After that Black mates by $1 \ldots$ Qb2\#!. Mean!

Variatio delectat - even with one-move problems!

No. 324
Werner Keym
Die Schwalbe 1968


Mate in 2
How many solutions?

No. 325
Thomas R. Dawson
Falkirk Herald 1934
$1^{\text {st }}$ Prize


Mate in 2
b) Black to play

No. 326
Edgar Fielder
Fairy Chess Review 1941


May Black castle?

In no. 324 there are two tries which are intentionally provoked by the question 'How many solutions?': $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.+? $\mathrm{K} \times \mathrm{h} 2$ 2.Qe5\# and 1.0-0-0+? Kf2/K $\times \mathrm{h} 2$ $2 . \mathrm{B} \times \mathrm{c} 5 / \mathrm{Rh} 1 \#$. These tries, however, fail for retroanalytical reasons. All 16 white pieces are on the board. The wPs captured 9 times, the bBf8 died on f8. If the last move was $\mathrm{c} 7-\mathrm{c} 5$ ? Rb6-g6+ (not Rb6×Xg6+? for lack of sacrificial pieces), a previous black move would be missing. So Black is to play. White threatens by 1.0-0-0. Therefore Black's only answer is $1 . \mathrm{K} \times \mathrm{h} 2$ ! Kf2 2.~ Rh1\#. This was the first two-mover to show en-passant capture and castling as the sole tries and Black to play as the sole solution - in a quite simple position.

In no. 325 the bPs captured 9 times, wBf1 died on f1. If White is to play, castling is permitted, therefore $1.0-0!\sim 2$.Re1\#. If Black is to play, either the $w K$ or the wR must have moved and castling is not permitted, therefore 1.Ra6! $\sim$ (not $0-0$ ?) 2.Ra1\#.

No. 326 (FIDE-Album): No, he has already castled! Here are the retro moves: $1 . .$. Kd8-e8 2.Q- Kc8-d8 3.Q- Kb7-c8 4.Q- Rb8-h8 5.-9.Q- Kg8 $\rightarrow$ b7 10.Q- Rc8-b8 11.Qb8- Rf8-c8 12.b7-b8Q 0-0 13.c6×Qb7 Qa8-b7 14.h5-h6 Qd8-a8 15.d5×Bc6 Bb7-c6 16.h4-h5 Bc8-b7 17.d4-d5 c6-c5 $18 . \mathrm{e} 3 \times$ Sd4 Se6-d4 $19 . \mathrm{f} 2 \times$ Re3 b7×Ba6. There is nothing on earth in chess that might be called impossible.

No. 327

Bader Al-Hajiri
(after W. Shinkman)
Website T. Krabbé 2007


Mate in 8
Chess 960

No. 328
Johannes Burbach
Problemkiste 1991


White castles in 4

No. 329
Filip S. Bondarenko
Feenschach 1960


Win

No. 327: In Chess 960, often called Fischer Random Chess, the white king is located between the two rooks on one of the six squares (b1 ... g1). In case of castling on the left side, the king moves to cl and the rook to d 1 (on the right side K to g 1 and R to f 1 ) as usual. So this is the solution: $1.0-0-0$ ! ( Kc 1 and Rd 1 ) $\mathrm{K} \times \mathrm{a} 7$ 2.Rd8 $\mathrm{K} \times \mathrm{a} 6$ 3.Rd7 $\mathrm{K} \times \mathrm{a} 5$ 4.Rd6 $\mathrm{K} \times \mathrm{a} 45$ 5.Rd5 $\mathrm{K} \times \mathrm{a} 3$ 6.Rd4 $\mathrm{K} \times \mathrm{a} 2$ 7.Rd3 Ka1 8.Ra3\#. Thus Shinkman's famous problem (with wKe1 and 1.0-0-0!), which unfortunately has got a cook (1.Kd2!), became correct. Amazing.

In no. 328 the aim is castling, not mating (cp. no. 433). 1.Sd1! zugzwang Bf1 2.Sb2 [thr. 3.0-0-0] Be2 3.Sa4! zugzwang Bd1/Bf1 4.0-0/0-0-0. Try: 1.Sf1? Bd1 2.Sh2 Be2 3.? Asymmetry.

No. 329: 1.Qd8+! Rd6 2.Qb7+ Rc4-c5 3.Qa5+4.Qb3+5.Qd2+6.Qf3+7.Qg5+e5 8.Qf7+9.Qd8+10.Qb7+11.Qa5+12.Qb3+13.Qd2+14.Qf3+ e4 15.Qg5+ 16.Qf7+ 17.Qd8+ 18.Qb7+ 19.Qa5+ 20.Qb3+ Rdc4 21.Qd2\#. A merry-go-round!
'Who is not able to check, will never be able to mate.' Teresa from Avila knew about that as early as in the $16^{\text {th }}$ century.

No. 332
Dirk Borst

No. 330
Werner Keym
Die Schwalbe 2009
HM


To how many squares at most could each of the existing pieces move, if it never moved to a square twice?

No. 331
Werner Keym
Die Schwalbe 1976
Version Die Schwalbe
1996


Mate in 2
Which piece can you put on a different square without modifying the solution?

Thomas Brand Hans-Peter Reich Ulrich Ring
Andernach Meeting 1997 Prize


Does the position remain legal, if any two pieces change their places?

No. 330: The last move was $0-0-0+(1$ square for $w K, 1$ for $w R)$, earlier e.g. $\mathrm{bKg} 1 \times \mathrm{Sh} 1$. Genesis of the position: $\mathrm{wS} \times \mathrm{Sb} 8, \mathrm{wS} \times \mathrm{Bc} 8, \mathrm{wS} \times \mathrm{Qd} 8, \mathrm{~b} 0-0-0$ (1 square for bK ), $\mathrm{wS} \times \mathrm{Rd} 8$; bKc8 $\rightarrow \mathrm{h} 1$ ( 34 squares); bPf7 $\rightarrow \mathrm{a} 2$, then (with wKe1 Qb1 Ra1 Sd1) bPa $2 \times$ Qb1Q und bQb1-c1-b1 $\rightarrow \mathrm{g} 8-\mathrm{f} 7 \rightarrow \mathrm{a} 8$ ( 46 squares); sum: 83 squares. At first the pawn on a 2 moves to b 1 and promotes to queen. After that this queen moves to c 1 and b 1 for the first time. Therefore I use the verb 'move' instead of 'occupy' (for German 'betreten'). Two castlings and a queen promotion in an attractive position. The first example is P1346726.
In no. 331 wBc1 died on c1, bBc8 on c8 and bBf8 on f8. Two promoted officers (one white, one black) were captured on the d- or e-file. Genesis: a) bOfficer $\times \mathrm{Pa}, \mathrm{a} 7 \rightarrow \mathrm{a} 1 \mathrm{X}$ (w0-0-0 not permitted), wOfficer $\times \mathrm{Ph}, \mathrm{h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$ or b ) wOfficer $\times$ Pa, a2 $\rightarrow$ a8X (b0-0-0 not permitted), bOfficer $\times$ Ph, h7 $\rightarrow$ h1X (w0-0 not permitted). Solution: a) 1.0-0! $0-0-0 / \mathrm{e} 7 \times \mathrm{d} 6 / \mathrm{Rf} 52 . \mathrm{Rc} 1 / \mathrm{Sc} 7 / \mathrm{Q} \times \mathrm{e} 7 \#$, b) $1 . \mathrm{Rf} 1$ ! e $7 \times \mathrm{d} 6 / \mathrm{Rf} 52 . \mathrm{Sc} 7 / \mathrm{Q} \times \mathrm{e} 7 \#$. The supplementary question was published in 1996. The answer is singular: whichever piece is put on a different square, the solution is modified, even in the case of Ra1 since then the part b) of the solution (1.Rf1) will be dropped because this will no longer be a problem with Partial Retrograde Analysis! 'Though this be madness, yet there is method in it.' (Shakespeare)
No. 332: Yes. This is the record with 28 pieces. The annual meetings of the friends of fairy chess at Andernach are always creative.

No. 333
Joachim Sontag
Die Welt 1952


Mate in how many moves?
White to play

No. 334
Hans Klüver
Funkschach 1926


White moves and wins the queen.

No. 335
Henry Forsberg
W. Pauly Memorial 1935
$1^{\text {st }}$ Prize


Helpmate in 2
b) bRa6 c) bBa6
d) $b S a 6$ e) $b P a 6$

No. 333: There is no mate at all. White can neither do away with the stalemate position of the bK nor prevent Black from giving perpetual check or from producing stalemate himself: e.g. $1 . \mathrm{Rb} 2 \mathrm{Sa} 2+2 . \mathrm{Kb} 1 / \mathrm{R} \times \mathrm{a} 2 \mathrm{Sc} 3+/ \mathrm{Rc} 2+;$ 1.Rh2 Sa2+ $2 . \mathrm{Kb} 1$ $\mathrm{Sc} 3+3 . \mathrm{Kc} 1 \mathrm{Sa} 2+$ or $3 . \mathrm{Ka} 1$ ?? $\mathrm{R} \times \mathrm{h} 2$ and now it is even White who will be mated. Crazy.

No. 334 is one of my favourites. Obviously White quickly conquers the queen by 1.Sc2!?. What will Black do against $2 . S \times b 4+$ ? Here is the unexpected answer: $1 \ldots$ Re6! and $2 . S \times$ b4\# does not conquer the queen, but the king!! Solution: 1.e8S! [thr. 2.Sc7+ ~ $3 . \mathrm{S} \times \mathrm{a} 6$ ] Bd6 and only then $2 . \mathrm{Sc} 2 \mathrm{~B} \times \mathrm{c} 53 . \mathrm{Sc} 7+$ or $1 \ldots$ Rc6 $2 . \mathrm{Sc} 2$ $B \times c 53 . d 4 \times c 5.78$ of 103 entries were incorrect.

No. 335 is a perfect quintuplet:
a) 1.Qf6 Sc5 2.Qb2 Ra4\# key move by Q/R/B/S/P,
b) 1.Rb6 Rb1 2.Rb3 Ral\# 5 different mates,
c) $1 . \mathrm{Bc} 4 \mathrm{Se} 12 . \mathrm{Ba} 2 \mathrm{Sc} 2 \# \quad$ singular position of the wK ,
d) $1 . \mathrm{Sc} 5 \mathrm{Sc} 12 . \mathrm{Sa} 4 \mathrm{Rb} 3 \# \quad$ Problem chess at its best.
e) 1.Pa5 Rb3+2.Ka4 Sc5\# (cp. no. 244)

No. 336
Andreas Witt
Die Schwalbe 2004
W. Dittmann Jubilee
$2^{\text {nd }}$ Prize


How many possible moves did Black have before his last move
a) $d 5 \times Q e 4$, b) $d 5 \times R e 4$, c) $d 5 \times B d 4$, d) $d 5 \times S e 4$, e) $d 5 \times P e 4, f) e 5-e 4$ ?

No. 337
Werner Keym
Die Schwalbe 1993
$2^{\text {nd }}$ Prize


The centers of the squares occupied by the four pieces are the corners of a square (f7-g8-h7-g6). How can you form 12 squares varying in size in 36 moves and return to the initial square (f7-g8-h7g6) in the $36^{\text {th }}$ move?

No. 338
Andreas Witt
Die Welt 1997


The centers of the squares occupied by the four pieces are the corners of a square (c2-c7-h7-h2). How can you form a square of the same size in 5 moves on different squares of the chessboard?
b) $w S c 2$.

No. 336: Black had 3 possible moves before $\mathrm{d} 5 \times \mathrm{Qe} 4$ ( $\mathrm{d} 5 \times \mathrm{Qe} 4$, Kf5-f6, Kf5-g5), 4 before $\mathrm{d} 5 \times \operatorname{Re} 4,5$ before $\mathrm{d} 5 \times \mathrm{Se} 4,6$ before $\mathrm{d} 5 \times \operatorname{Be} 4,7$ before $\mathrm{d} 5 \times \mathrm{Pe} 4$ and 8 before e5-e4. A retro sextuplet for the anthology.

No. 337: 1) Kg 5 Rf 8 Be 6 (5 area units), 2) $\mathrm{Kg} 4 \mathrm{Re} 8 \mathrm{Bd} 5(10), 3) \mathrm{Kg} 3 \mathrm{Rd} 8 \mathrm{Bc} 4$ (17), 4) $\mathrm{Kg} 2 \mathrm{Rc} 8 \mathrm{Bb} 3(26), 5) \mathrm{Kg} 1 \mathrm{Rb} 8 \mathrm{Ba} 2(37), 6) \mathrm{Kh} 1 \mathrm{Rb} 7 \mathrm{Bb} 1(36), 7) \mathrm{Kh} 2 \mathrm{Rc} 7$ Bc2 (25), 8) Kh3 Rd7 Bd3 (16), 9) Kh4 Re7 Be4 (9), 10) Kh5 Rf7 Bf5 (4), 11) Kh6 $\operatorname{Rg} 7 \operatorname{Bg} 6(1) 12) \mathrm{Bf} 7 \operatorname{Kg} 6 \operatorname{Rg} 8$ (2). New idea with the old Pythagoras $\left(a^{2}+b^{2}=c^{2}\right.$; $\left.c=\sqrt{a^{2}+b^{2}}\right)$.

No. 338: a) is easy: 1.c3 2.Kc8 3.Bf5 4.Rh8 5.Bh3 (with changes of the moves), b) is insidious: 1.Se1 2.Kd8 3.Rh5 4.Bc2 5.Ba4. Pythagoras again!

No. 339
Eric Angelini
Europe Echecs 1990


Add 1 square to the board.
Mate in 2


No. 339: Add a square e9 and then play 1.Se9! zugzwang K $\times$ e 9 2.Qc7\#.
No. 340: There is a mate in 8 moves: 1.Rb1 2.Ka2 ... 5.Ka5 Ka8 6.Kb6 Kb8 7.Rc1 Ka8 8.Rc8\#. a) Without the square c3 White mates in 4 moves: 1.Rh4 Kb3 2.Kb1 Ka3 3.Kc2 Ka2 4.Ra4\#. b) Without the squares a4 and b4 White mates in 1 move: 1.Rh3\#. c) Without the squares g1 and h2 Black draws.

No. 341: a) A mate in 2 moves is possible on the $8 \times 8$ board (1.Bb6! b4 2.Qf1\#); b) a mate in 3 moves on the $4 \times 8$ board (1.Qb1,Qb2,Bb6, $\mathrm{Bb} 8!\ldots$ ); in both cases the last moves could have been Kb7-a6 $\mathrm{d} 5 \times \mathrm{Xc} 6+$. In c), however, that was impossible since the d-file is missing. Hence the last move was b7-b5 and the e.p. capture is allowed: $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.\#! - in 1 move! Cp. P1108931.

No. 342
Werner Keym
Die Schwalbe 2005


Shortest mate on the $4 \times 8$ board (el-h8) from the initial game on b) mirrored (el $\leftrightarrow h 1)$

No. 343
Rolf Wiehagen
feenschach 1992


Helpmate in 5

No. 342: Genesis of the position: a) the dark-squared Bf8 is a promoted officer, the wPs captured 3 times, wOfficer $\times \mathrm{Ph}$, h2-h8B-g7-f8. Hence the last move was not $\mathrm{h} 7 \times \mathrm{Xg} 6$ nor g 7 -g6, but f7-f5 with a mate in 2 moves: $1 . e 5 \times \mathrm{f} 6$ e.p.! e3 2.f7\#. A try in 4 moves is $1 . \mathrm{K} \times \mathrm{g} 6$ ? f4 $2 . \mathrm{B} \times \mathrm{e} 4 \mathrm{f} 33 . \mathrm{K} \sim \mathrm{f} 24 . \mathrm{Bg} 6 \#$. In b) this try ( $1 . \mathrm{K} \times \mathrm{f} 6$ ? g4 ... 4.Bf6\#) exists as well. Here the genesis of the position: the dark-squared Be 1 is a promoted officer, hence bPf7-f6, bPg7-g6, wPe $\rightarrow \mathrm{e} 6 \mathrm{xR} / \mathrm{Sf7} 7 \mathrm{f8B}, \mathrm{e} 7 \rightarrow \mathrm{e} 1 \mathrm{X}$, $\mathrm{wP} \times \mathrm{Xg} / \mathrm{h}, \mathrm{wBf} 8-\mathrm{h} 6 \rightarrow \mathrm{e} 1$. So the last move was not g 7 g 5 . Black is to play: 1.h3! Bg3 2.h2 B $\times \mathrm{h} 2$ 3.g4 Kg 6 , $\mathrm{Ke} 64 . \mathrm{g} 3 \mathrm{~B} \times \mathrm{g} 35$ 5.f5 Be5\#, i.e. a mate in 5 moves. These mirrored twins cannot be achieved on the standard chessboard. 'Original and tricky.'

No. 343: 1.b5 g4 2.b4 g5 3.b4xa3 g6 4.a2 g6xh7 5.a1S h8S\#. A perfect rendering of the 100 Dollar Theme (cp. p. 35) - on a chessboard out of the ordinary.


No. 344

## Thomas R. Dawson

Bolton Football Field 1911
Mate in 21
Move to the free square each time: S R S R B, R S R S B, S R S R K, S K R K, 20.Sf2 Ka3 $21 . \operatorname{Re} 3 \times \mathrm{c} 3 \#$. This problem is called 'Revolver Practice'.

## Partial Retrograde Analysis (PRA)

The castling convention and the en-passant convention are clear. 'Castling is permitted unless it can be proved that it is not permissible.' 'An en-passant capture on the first move is permitted only if it can be proved that the last move was the double step of the pawn which is to be captured.' (Codex for Chess Composition, article 16.1 and 16.2 , see p. 170).

For a long time the cases in which several move rights (castlings and/or e.p. captures) are mutually dependent were unclear. In 2008 the Codex was modified (article 16.3): 'Partial Retrograde Analysis (PRA) convention. Where the rights to castle and/or to capture en-passant are mutually dependent, the solution consists of several mutually exclusive parts. All possible combinations of move rights, taking into account the castling convention and the en-passant convention, form these mutually dependent parts.'

No. 345-353 treat castlings, 354-359 e.p. captures, 360-366 both of them.

No. 345
Sam Loyd
Texas Siftings 1888


Mate in 3

No. 346
Werner Keym
Die Schwalbe 1970


Mate in 2

No. 347
Werner Keym
Die Schwalbe 1972


Helpmate in 2

No. 345: According to 16.1 long castling is permitted, as the Rh8 can have moved last; according to 16.1 short castling is permitted, as the Ra8 can have moved last. However, a proof game from the initial position to the diagram position in which neither the Ke8 nor the Ra8 nor the Rh8 has moved is impossible. So Black does not have the right to castle both long and short, but either long or short. If 0-0-0 is permitted, then the solution is $1 . \mathrm{Qd} 4!\operatorname{Rg} 82 . \mathrm{Qd} 7+\mathrm{Kf} 83 . \mathrm{Q} \times \mathrm{e} 7 \#$; if $0-0$, then $1 . \mathrm{Qg} 5$ ! Kd8 2.Qd5+ K~ 3.Q×a8\#.

But the question remains: what if the Ke8 moved last? Are there three solutions (1.Qd4 and 1.Qg5 and 1.Qc5) in this case? No, since the assumption that the two castlings are not permitted does not correspond with the PRA convention which demands expressly 'to take into account' the castling convention, i.e. to exclude no (castling) right for no reason. In other words: one can prove that the two castlings exclude each other, but not that both of them are not permitted. So only the two above-mentioned partial problems (with the solution either 1.Qd4 or 1.Qg5) remain. Therefore no. 345 does not have two (independent) solutions, but one solution that consists of two parts which - and this is decisive - exclude each other. That's why no. 345 is a two-part PRA problem.

In short, the Partial Retrograde Analysis convention means: If several legal special move rights are mutually dependent, each of these rights should once be acknowledged; this also applies to the remaining rights.

Traditional problems with two solutions need the supplementary stipulation ' 2 solutions'. In PRA problems, however, the number of partial problems is deducible from retroanalysis, that means that the solver himself finds out the number of logical multiple possibilities.

The PRA convention does not prescribe the way in which the partial problems are to be determined. However, there is a formal method which functions well (see p. 114). It is highly suitable for complicated cases (e.g. no. 366).

In no. 346 either $0-0-0$ or $0-0$ is permitted. The wPs captured 14 pieces, among them a promoted piece from h 1 or a1, which eliminates one castling. If $0-0-0$ is permitted, then the solution is not $1 . \mathrm{Qe} 5+$ ? because of Kf 3 ! and White cannot mate since $0-0$ is not allowed, but $1 . \mathrm{Qc} 5+!\mathrm{Kd} 3 / \mathrm{Kf} 32.0-0-0 / \mathrm{Qf} 2 \#$. If $0-0$ is permitted, then not 1.Qe5+? because of Kd3! and White cannot mate since $0-0-0$ is not allowed, but 1.Qg5+! Kf3/Kd3 2.0-0/Qd2\#. PRA in try and solution!

This well-known mechanism of the 'promotion of an edge pawn' clearly shows that the PRA convention deals with special move rights, not with the last move. This move is certainly a possible aid to find out move rights in a position, but in some retro problems (e.g. no. 351-353) it does not play a part.

No. 347 is probably the most economical PRA problem. If $0-0-0$ is permitted, then 1.Kc3! 0-0-0 2.Rc4 Rh3\#; if 0-0, then 1.Kc2! Ra2+ 3.Kc1 0-0\#.

No. 348
Werner Keym
Die Schwalbe 2007 (c)


Helpmate in 2
b) $\mathrm{Bc} 3 \rightarrow d 3$
c) $\mathrm{Bc} 3 \rightarrow$ b1

No. 349
Valery Liskovets
StrateGems 2002


Helpmate in 3
2 solutions

No. 350
Luigi Ceriani
The Problemist 1931


Helpmate in 3

No. 348: Genesis of the position: the bPs captured 8 times, either $\mathrm{wPa} \times \mathrm{Xb} \rightarrow \mathrm{b} 8 \mathrm{X}$ and $\mathrm{h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}(0-0$ not permitted) or $\mathrm{a} 2 \rightarrow \mathrm{a} 8 \mathrm{X}(0-0-0$ not permitted) and $\mathrm{wPh} \times \mathrm{Xg} \rightarrow \mathrm{g} 8 \mathrm{X}$, hence $0-0-0$ and $0-0$ exclude each other (cp. no 346). a) The first single move is different: either 1.0-0-0! Ba5 $2 . \mathrm{b} 5$ Qc7\# or 1.d3! B $\times \mathrm{e} 52.0-0$ Qg7\#; b) here it is the second: $1 . \mathrm{d} 5!\mathrm{c} 4 \times \mathrm{d} 5 / \mathrm{e} 4 \times \mathrm{d} 52.0-0-0 / 0-0 \mathrm{Ba} 6 / \mathrm{Qh} 7 \#$; c) here it is the third: $1 . \mathrm{B} \times \mathrm{e} 4$ ! $\mathrm{B} \times \mathrm{e} 42.0-0-0 / 0-0 \mathrm{Qb} 7 / \mathrm{Qh} 7 \#$. Non plus ultra.

No. 349: A double rendering of PRA and a star flight of the bK. If $0-0-0$ is permitted, then these are the solutions: 1.Kd7! 0-0-0+2.Kc8 Rhe1 3.Rhc7 R $\times$ e8\# and 1.Kd5! $0-0-0+2 . \mathrm{Kc} 4$ Rhe1 3.Bb5 Re4\#. If $0-0$ is permitted, then $1 . \mathrm{Kf7}$ ! $0-0+2 . \mathrm{Kg} 8$ Rae 1 3.Rbg7 R $\times$ e8\# and 1.Kf5! 0-0+ 2.Kg4 Kg2 3.Bh5 h3\#. Nice (a)symmetry.

No. 350: If $0-0-0$ is permitted, then the solution is $1 . \mathrm{R} \times \mathrm{h} 2$ ! $0-0-02 . \mathrm{R} \times \mathrm{e} 2 \mathrm{Rh} 1$ 3.Re7 Rh8\#; if $0-0$, then 1.0-0! a4 2.Kh8 Ra3 3.Rg8 Rh3\#. The rendering of the mutually exclusive white/black castlings is achieved in a brilliant simplicity. Ceriani again!


Mate in 3

No. 352
Werner Keym
Stuttgarter Zeitung 2016


White gives check in 2 moves

No. 353
Werner Keym
Die Schwalbe 2006


Mate in 2

In no. 351 (FIDE-Album) each of the four castlings is permitted: $\mathrm{wS} \times \mathrm{Bf} 8$, $\mathrm{bPd} 3 \times \mathrm{Xc} 2-\mathrm{c} 1 \mathrm{~B} \rightarrow \mathrm{a} 7$, the promoted officers Rb7 and Ra5 either came from a8 and h1 (then only b0-0 and w0-0-0 are permitted) or from h8 and a1 (then only b0-00 and w0-0 are permitted). In the first case the solution is 1.Rf1! Kd8 $2 . \mathrm{Q} \times \mathrm{c} 6 \mathrm{Kc} 8$ $3 . \mathrm{Q} \times \mathrm{c} 7 \#$, in the second 1.Rd1! Kf8/R $\times \mathrm{h} 62 . \mathrm{Qg} 6 / \mathrm{Qg} 6+\mathrm{Kg} 8 / \mathrm{R} \times \mathrm{g} 63 . \mathrm{Q} \times \mathrm{g} 7 / \mathrm{Rh} 8 \#$. So no. 351 (with four castling rights) is 'only' a two-part problem. Tries are: 1.0-0? $0-0-0$ ! and $1.0-0-0$ ? $0-0$ !. After 35 years of efforts without result this is the first realization of a double paradox: if White can castle long, he is only successful when he gives up precisely this right. The same paradox shows off in the case of short castling.

No. 352: Two promoted officers, which are needed as sacrificial pieces on the e-file, came a) from a8 and h1 or b) from h8 and a1. In a) only b0-0 and w0-0-0 are permitted, therefore 1.Rf1! ~ 2.Rf8+ (not 1.Sf5? Kf8!). In b) only b0-0-0 and w0-0 are permitted, therefore $1 . \operatorname{Rd} 1!\sim 2 . R d 8+$ (not $1 . S d 5$ ? Kd8!). This classical rendering of the paradox (cp. no. 351) is suitable to baffle chess players lacking the 'retro look'.

No. 353 is quite different: the bPa and the bPh promoted a) on al and g 1 or b) on b1 and h1 and were captured as sacrificial pieces, moreover two captures by bPs on c and d ; the wPs captured 4 pieces (e.g. $\mathrm{wPh} \times \mathrm{Pg} \rightarrow \mathrm{g} 8 \mathrm{Q}$ ). Solution: a) 1.0-0-0! 0-0-0/0-0 2.Qa8/Qh7\#, b) 1.0-0! 0-0-0/0-0 2.Qa8/Qh7\#. 15 times number 0 in the notation!

No. 354
A well-known pattern


Mate in 2

No. 355
Karl Fabel
Deutsche Schachblätter 1952


Mate in 1
b) $\mathrm{Ba} 6 \rightarrow \mathrm{c} 6, \mathrm{Bg} 6 \rightarrow e 6$

No. 356
Werner Keym
Heidelberger Tagblatt 1967


Mate in 1

No. 354: According to the en-passant convention a) $1 . c 5 \times \mathrm{d} 6$ e.p.? is not allowed since the last move is ambiguous ( $\mathrm{d} 7-\mathrm{d} 5$ or $\mathrm{f} 7-\mathrm{f} 5$ ) and it is the same for b) $1 . \mathrm{g} 5 \times \mathrm{f} 6$ e.p.?. In these cases, however, the PRA convention works and the solution is a) $1 . \mathrm{g} 5 \times \mathrm{f6}$ e.p.! $\sim 2 . \mathrm{f} 7 \#$ or b) $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.? $\sim 2 . \mathrm{d} 7 \#$. Hence there are not two (independent) solutions, but one solution which consists of two parts which exclude each other.

No. 355: The wBc1 died on c 1 and one of the bishops is a promoted officer. So there is no sacrificial piece and the last move was not $\mathrm{b} 6 / \mathrm{d} 6 \times \mathrm{Xc} 5$ ? nor e $6 / \mathrm{g} 6 \times \mathrm{Xf} 5$ ? . The two e.p. captures exclude each other. The solution is either $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.\#. or $1 . f 5 \times$ e6 e.p.\# (PRA). In the twin setting b) Black did not move last and is to play: 1.c4 Sb4\# or 1.e4 Sf4\# (no PRA, but 2 variants)!

No. 356: There are 16 white pieces on the board. Hence the last move was not $\mathrm{bPb} 5 \times \mathrm{Xc} 4$ ? nor $\mathrm{bPh} 5 \times \mathrm{Xg} 4$ ?. So the mate by $1 . \mathrm{Rc} \times \mathrm{e} 3 \#$ ? or $1 . \mathrm{Rg} \times \mathrm{e} 3 \#$ ? is a try. Black is to play. The wPs captured 10 times. The last move was either d2-d4 (then $1 . \mathrm{c} 4 \times \mathrm{d} 3$ e.p.! $\mathrm{B} \times \mathrm{d} 3 \#$ ) or f2-f4 (then $1 . \mathrm{g} 4 \times \mathrm{f} 3$ e.p.! $\mathrm{B} \times \mathrm{f} 3 \#$ ).

No. 357
Werner Keym
Stuttgarter Zeitung 2010


Mate in 2

No. 358
György Paros
Festgriuße 1947


Helpmate in 2

No. 359
Werner Keym
Die Schwalbe 2010


Mate in 2

No. 357: Three e.p. captures exclude each other. The bPs captured 3 times, but not $\mathrm{d} 6 \times \mathrm{Xc} 5$ ? nor $\mathrm{d} 6 \times \mathrm{Xe} 5$ ? (too many captures). If $\mathrm{d} 5 \times \mathrm{c} 6$ e.p. and $\mathrm{d} 5 \times$ e 6 e.p. are not permitted, then the last move was $\mathrm{g} 7-\mathrm{g} 5$, therefore $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.! $\sim 2 . \mathrm{g} 7 \#$. It is the same for e7-e5 (1.d5×e6 e.p.! $\sim 2 . e 7 \#)$ and for c7-c5 Rd6-b6+ ( $1 . \mathrm{d} 5 \times \mathrm{c} 6$ e.p.+! Sc5 $2 . \mathrm{B} \times \mathrm{c} 5 \#$ ). The first dual-free realization of three possible e.p. captures in a directmate problem. - Thomas R. Dawson's early rendering has several duals (P0002175).

No. 358 is probably the earliest helpmate to show three mutually exclusive e.p. captures. If d $4 \times \mathrm{e} 3$ e.p. and $\mathrm{h} 4 \times \mathrm{g} 3$ e.p. are not permitted, the solution is $1 . \mathrm{b} 4 \times \mathrm{c} 3$ e.p.+! $\mathrm{K} \times \mathrm{d} 42 . \mathrm{c} 6 \mathrm{Bd} \# \#$. Analogous procedure with $1 . \mathrm{d} 4 \times \mathrm{e} 3$ e.p.! $\mathrm{B} \times \mathrm{b} 22 . \mathrm{f} 5 \mathrm{Be} 5 \#$ and with $1 . \mathrm{h} 4 \times \mathrm{g} 3$ e.p.! $\mathrm{B} \times \mathrm{b} 42$.Rf1 Bd2\#. Masterly designed. There is even a rendering in a one-move helpmate (P0005589).

No. 359: Bf1 died on $\mathrm{f} 1, \mathrm{Be} 8$ is a promoted officer from c8, not e8, since then 8 captures would be necessary, but the bPh could not promote on g1 (having only the wQ as a sacrificial piece) nor be a sacrificial piece. For the same reason the last moves were not c7-c5 Rd6-b6+ with $1 . \mathrm{d} 5 \times \mathrm{c} 6$ e.p.+? Sc5 $2 . \mathrm{B} \times \mathrm{c} 5 \#$. Hence the last move was either e7-e5 or g7-g5. Therefore the solution is either $1 . \mathrm{d} 5 \times \mathrm{e} 6!\sim 2 . \mathrm{e} 7 \#$ or $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.! $\sim 2 . \mathrm{g} 7 \#$. First realization of one virtual and two real e.p. captures.

No. 360
William A. Langstaff
Chess Amateur 1922


Mate in 2

No. 361
Niels Høeg
Deutsches Wochenschach


Mate in 3

No. 362
Werner Keym
Die Schwalbe 1971


Mate in 3

No. 360: If $0-0$ is allowed, then the last move was $g 7-\mathrm{g} 5$ and the e.p. capture is allowed as well. Hence $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.! 0-0 $2 . \mathrm{h} 7 \#$. If $\mathrm{h} 5 \times \mathrm{g} 6$ e.p. is not permitted, then the bK or the bR must have moved last. In this case the solution is 1.Ke6! $\sim 2$. Rd8\#. A classic two-part problem. There is an earlier, but less economical three-move problem of the same kind (P0002181).

No. 361 is the first four-part problem (with duals). If $0-0-0$ permitted, but not $0-0$, then $1 . S c 6!\mathrm{R} \times$ a1 $2 . \mathrm{Sf} 6+, \mathrm{Sg} 7+\sim 3 . \mathrm{Q} \times$ h8\#. If $0-0$ permitted, but not $0-0-0$, then 1.Sg6! $\mathrm{R} \times$ a1 $2 . \mathrm{Sf6} 6, \mathrm{Sg} 7+$ etc. If $0-0-0$ and $0-0$ permitted, then either $1 . c 5 \times \mathrm{d} 6$ e.p.! Ra5+/R $\times$ a1 $2 . \mathrm{R} \times \mathrm{a} 5 / \mathrm{Sf6} 6, \mathrm{Sg} 7+\sim 3 . \mathrm{Ra} 8 / \mathrm{Q} \times \mathrm{h} 8 \#$ or $1 . \mathrm{g} 5 \times \mathrm{f6}$ e.p.! $\mathrm{R} \times \mathrm{h} 5+/ \mathrm{R} \times \mathrm{a} 1$ $2 . \mathrm{Q} \times \mathrm{h} 5+/ \mathrm{Sg} 7+\sim 3 . \mathrm{R} \times \mathrm{a} 8, \mathrm{Qh} 8 / \mathrm{Q} \times \mathrm{h} 8$ \#. A similar problem with thematic tries (without duals) is P0000891.

No. 362: Genesis of the position: bOfficer $\times \mathrm{Pa}, \mathrm{a} 7 \rightarrow \mathrm{a} 1 \mathrm{X}$, the wPs captured 8 pieces ( X as well), not $\mathrm{bPc} 6 \times \mathrm{Xd5}$ ? for lack of a sacrificial piece. If $0-0$ not permitted, then 1.Bf6! $\mathrm{R} \times$ a1 $2 . \mathrm{B} \times \mathrm{g} 6+\mathrm{Kf8} 3 . \mathrm{R} \times \mathrm{h} 8$ \#. If $0-0-0$ not permitted, then 1.Bd6! $\mathrm{R} \times$ a1 $2 . \mathrm{B} \times \mathrm{g} 6+\mathrm{Kd} 83 . \mathrm{R} \times \mathrm{h} 8$ \#. If $0-0-0$ and $0-0$ permitted, then either $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.! Ra5+2.R $\times$ a $5 \mathrm{~g} 2 \times \mathrm{h} 1 \mathrm{Q} / \mathrm{g} 6 \times \mathrm{h} 53 . \mathrm{B} \times \mathrm{g} 6 / \mathrm{Ra} 8 \#$ or $1 . \mathrm{g} 5 \times \mathrm{f} 6$ e.p.! $\mathrm{R} \times \mathrm{h} 5+2 . \mathrm{R} \times \mathrm{h} 5$ $\mathrm{R} \times \mathrm{a} 1 / \mathrm{g} 6 \times \mathrm{h} 5$ 3.Rh8/R $\times$ a8\#. A dual-free economical four-part problem. A four-part problem of a different kind is no. 61 .

No. 363
Werner Keym
Die Schwalbe 1972


Mate in 3

No. 364
Luigi Ceriani
Europe Echecs 1960


Mate in 2

No. 365
Karl Fabel
Die Schwalbe 1970


Mate in 3

No. 363: $\mathrm{bPa} 3 \times \mathrm{Qb} 2-\mathrm{b} 1 \mathrm{~B}, \mathrm{wPc} \times \mathrm{Xd}, \mathrm{c} 7 \rightarrow \mathrm{c} 1 \mathrm{R}, \mathrm{wPd} 4 \times \mathrm{Xc} 5, \quad \mathrm{wPf} \times \mathrm{Pe} \times \mathrm{Qd} 8 \mathrm{~B}$, $\mathrm{wPh} \times$ Pg. If $0-0-0$ not permitted, then 1.Bd6! $\mathrm{S} \times \mathrm{e} 62 . \mathrm{R} \times \mathrm{a} 8+\mathrm{Sd} 8 / \mathrm{Kd7} 3 . \mathrm{B} \times \mathrm{b} 5 \#$. If $0-0$ not permitted, then $1 . \mathrm{Bf} 6$ ! $\mathrm{S} \times \mathrm{e} 62 . \mathrm{B} \times \mathrm{b} 5+\mathrm{Kf8} 3 . \mathrm{R} \times \mathrm{h} 8$ \#. If $0-0-0$ and $0-0$ permitted, then (if the last move was b7-b5) $1 . c 5 \times b 6$ e.p.+! $K \times e 7 / R \times a 4$ $2 . \mathrm{Bc} 5+/ \mathrm{R} \times \mathrm{h} 8+\mathrm{Kd} 8 / \mathrm{K} \times \mathrm{e} 73 . \mathrm{R} \times \mathrm{a} 8 / \mathrm{Bc} 5 \#$ or (if d7-d5) $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.! $\mathrm{S} \times \mathrm{e} 6 / \mathrm{R} \times \mathrm{h} 6$ $2 . \mathrm{B} \times \mathrm{b} 5+\mathrm{Bc} 63 . \mathrm{B} \times \mathrm{c} 6$ \# or (if f7-f5) $1 . \mathrm{g} 5 \times \mathrm{f6}$ e.p.! $\mathrm{B} \times \mathrm{e} 62 . \mathrm{Bb} 5+\mathrm{Bd} 73 . \mathrm{R} \times \mathrm{h} 8 \#$. This is the sole dual-free five-part retro problem. There are predecessors with duals (P000488-0, -1, -3).

No. 364: The wBc1 died on c 1 , the Sa 1 is an original knight. The wRa6 is a promoted officer or it came from al via e1. In the first case the bK has moved and $\mathrm{s} 0-0-0$ and e.p. capture are not permitted; therefore $1.0-0$ ! (1.Tf1? $\mathrm{S} \times \mathrm{c} 2+!$ ) $\sim 2$. Rf8\#. In the second case $w 0-0$ is not permitted, but $\mathrm{s} 0-0-0$ und $\mathrm{c} 5 \times \mathrm{b} 6$ e.p. are permitted (the last move was b7-b5 Rc6×Xa6+); therefore $1 . \mathrm{c} 5 \times \mathrm{b} 6$ e.p.+! $\sim$ 2.Qf8\#. This is the first directmate PRA problem showing mutually exclusive w./b. castlings. Such problems need an e.p. capture (no. 364 and 365) or an additional castling (no. 331 and P0000902).

No. 365: The castlings exclude each other. The Ra6 is a promoted officer or it comes from h1 via e1. In the first case w0-0-0 is permitted (b0-0-0 and b5 $\times \mathrm{c} 6$ e.p. not permitted), therefore 1.0-0-0! (1.Rd1? prevents 3.Qe1\#) $\mathrm{R} \times \mathrm{a} 62 . \mathrm{B} \times \mathrm{b} 5+\mathrm{c} 63$ 3.Qe1\#. In the second case $\mathrm{b} 0-0-0$ and $\mathrm{c} 5 \times \mathrm{b} 6$ e.p. (before that $\mathrm{b} 7-\mathrm{b} 5 \mathrm{Rc} 6-\mathrm{a} 6+$ ) are permitted (w0-0-0 not permitted), therefore $1 . c 5 \times$ b6 e.p.+! c6 $2 . \mathrm{B} \times \mathrm{c} 6+\mathrm{Kd} 83 . \mathrm{R} \times \mathrm{a} 8$ \#.

No. 366
Gerd Rinder
Die Schwalbe 1972


Helpmate in 2

This is an outstanding retro problem. The wPs captured 3 pieces, among them a promoted officer from h1 or a1. a) If $0-0-0$ is permitted, then $0-0$ is not permitted and the last move was $\mathrm{f} 2-\mathrm{f} 4$ or d2-d4. So the solution is either $1 . \operatorname{Pg} 4 \times \mathrm{f} 3$ e.p.! B $\times \mathrm{g} 12$ 2.Qd3 $\mathrm{R} \times \mathrm{h} 4$ \# or $1 . \mathrm{Pc} 4 \times \mathrm{d} 3$ e.p.! $\mathrm{B} \times \mathrm{g} 1$ 2. $\mathrm{Pe} 2 \mathrm{Sd} 2 \#$; both times the move right $0-0-0$ is $a c-$ knowledged, but not executed! b) If $0-0$ is permitted, then $0-0-0$ is not permitted and the last move could be R-a1, hence no e.p. capture is allowed. Therefore the solution is $1 . \mathrm{R} \times \mathrm{g} 3$ ! $\mathrm{S} \times \mathrm{g} 3+2 . \mathrm{Kf} 3$ $0-0 \#$. So no. 366 is 'only' a three-part problem.
The essential difference between the right to castle and the right to capture en-passant is well-known: the right to castle is defined in positive terms since castling is generally permitted; the opposite right is negative. Contrary to that the right to capture en-passant is defined in negative terms since the e.p. capture is generally not permitted; the opposite right is positive.
In the Codex it is not regulated how to find out the partial problems of a PRA problem. Here I am offering a formal method which is suitable for all cases, particularly for complicated ones as no. 366:

1) There exist four special move rights; the opposite rights are marked with '.
$\mathrm{A}=0-0-0$ is permitted
$B=0-0$ is permitted
$\mathrm{C}=\mathrm{Pc} 4 \times \mathrm{d} 3$ e.p. is not permitted
$\mathrm{D}=\mathrm{Pg} 4 \times \mathrm{f} 3$ e.p. is not permitted
$\mathrm{A}^{\prime}=0-0-0$ is not permitted
$\mathrm{B}^{\prime}=0-0$ is not permitted
$\mathrm{C}^{\prime}=\mathrm{Pc} 4 \times \mathrm{d} 3$ e.p. is permitted
$\mathrm{D}^{\prime}=\mathrm{Pg} 4 \times \mathrm{f} 3$ e.p. is permitted
2) The calculation results into $2^{4}=16$ combinations of special move rights:
( ABCD ), ( ABCD '), ( $\mathrm{ABC} \mathrm{C}^{\prime} \mathrm{D}$ ), ( $\mathrm{ABC}^{\prime} \mathrm{D}^{\prime}$ ) -
( $\mathrm{AB}{ }^{\prime} \mathrm{CD}$ ), $\mathbf{A B}^{\prime} \mathbf{C D}^{\prime}, \mathbf{A B}^{\prime} \mathbf{C}^{\prime} \mathbf{D},\left(\mathrm{AB}^{\prime} \mathrm{C}^{\prime} \mathrm{D}^{\prime}\right)$ -
$A^{\prime} B C D, A^{\prime} B C D^{\prime}, A^{\prime} B C^{\prime} D,\left(A^{\prime} B C^{\prime} D^{\prime}\right)-$
$A^{\prime} B^{\prime} C D, A^{\prime} B^{\prime} C^{\prime}, A^{\prime} B^{\prime} C^{\prime} D,\left(A^{\prime} B^{\prime} C^{\prime} D^{\prime}\right)$.
3) The combinations that are not legal are eliminated. These are the eight ones in brackets.
4) The combinations that do not correspond with the castling or en-passant convention are eliminated. These are the five underlined ones.
5) The remaining combinations form the partial problems. They are the three ones put in bold.
6) The first partial problem $\mathbf{A B}{ }^{\prime} \mathbf{C D}{ }^{\prime}$ has the solution $1 . \operatorname{Pg} 4 \times \mathrm{f} 3$ e.p.!, the second $\mathbf{A B}^{\prime} \mathbf{C}^{\prime} \mathbf{D} 1 . \mathrm{Pc} 4 \times \mathrm{d} 3$ e.p.!, the third $\mathbf{A}^{\prime} \mathbf{B C D} 1 . \mathrm{R} \times \mathrm{g} 3$ !. Quod erat demonstrandum.

## Retro-Strategy (RS)

'If in the case of mutual dependency of castling rights a solution is not possible according to the Partial Retrograde Analysis (PRA) convention, then the RetroStrategy (RS) convention should be applied: which ever castling is executed first is deemed to be permissible.' (Codex for Chess Composition p. 170). What does that mean?

No. 367
Werner Keym
Die Schwalbe 2010


Helpmate in 1.5

No. 368
Karl Henke
Schachmatt 1948


Helpmate in 2*

No. 369
Nenad Petrovic
problem $19534^{\text {th }} \mathrm{HM}$


Helpmate in 3

For once we begin with helpmate problems because they are very suitable to show the special feature typical of RS problems. - No. 367 is a basic example. White is to play, hence $0-0-0$ and $0-0$ exclude each other. If $0-0-0$ is permitted ( $1^{\text {st }}$ partial problem), the solution is $1 . \operatorname{Ra} 10-0-02 . \mathrm{Ra} 8 \#$. If $0-0$ is permitted, there is no mate in 1.5 moves ( $2^{\text {nd }}$ partial problem). So a solution according to the PRA is not possible. That is why no. 367 (with the sole solution 1.Ra1! 0-0-0 2.Ra8\#) is a correct RS problem.

No. 368: Here the white castlings exclude each other. If $0-0$ is permitted, the solution is $1 . \mathrm{Kc} 2!\mathrm{Ra} 2+2 . \mathrm{Kc} 10-0 \#$. But there is no mate in 2 moves, if $0-0-0$ is permitted. In the set play, however, we see the opposite: $1 \ldots 0-0-0+2 . \mathrm{Ke} 2 \mathrm{Rd} 2 \#$. Retro-Strategy in the solution and in the set play. - If you add a bPa3 you will get a PRA problem with the keys $1 . \mathrm{Kc} 2$ ! or 1.a2!.

No. 369 (FIDE-Album): The existing pawns were never able to capture. At some given time a king or a rook captured one of the opposite officers. Hence both castlings exclude each other. The solution is 1.Rd8! 0-0-0 2.Rd7 Rf1 3.Kd8 Rf8\#. Try: 1.0-0-0? 0-0-0?? (not permitted) 2.Rd7 Rf1 3.Kd8 Rf8\#. Here Black is in the position to castle first, but he lets White go ahead with castling.

No. 370
Herbert Hultberg
Tidskrift för Schack 1944


Mate in 2

No. 371
Niels Høeg
Die Schwalbe 1933


Mate in 3

No. 370: There are two cases. a) The Rf3 is a promoted officer, hence $0-0-0$ is not permitted, the solution is 1.0-0! (1.Rf1? 0-0-0!) ~ 2.Rf8\#. b) The Rf3 comes from a1, hence $0-0$ is not permitted, there is no mate in 2 moves. A typical RS directmate problem: White castles first and hereby prevents Black's castling.

No. 371 (FIDE-Album): The queen comes from d1 (then 0-0 not permitted) or it is a promoted officer (then $0-0-0$ not permitted) - try yourself, please. Therefore 1. $\mathrm{Q} \times \mathrm{d} 6$ ! Bb7 2.0-0! (2.Rf1? 0-0-0!) ~ 3.Rf8\#. Perfect both in content and form!

PRA and RS have common and different features: the same retroanalysis, partially the same solution. If in the diagram position two castlings exclude each other, this leads to two options:

1) Both retro geneses with their actual castling right are taken into account (principle of equality). Each genesis leads to a solution of one of the parts of the problem ('partial solution'), hence the term Partial Retrograde Analysis. The solutions of the two parts as a whole result in the complete solution. In the course of the solution castling is not obligatory. (cp. no. 345 and 351)
2) The one retro genesis whose castling right leads to a solution is taken into account (principle of priority); this genesis determines the game's history more or less, hence the term Retro-Strategy (e.g.: in no. 370 the move 1.0-0 determines the fact that bK or bR must have moved). In the course of the solution the performance of castling is obligatory. The other retro genesis where the castling right does not allow a solution is irrelevant.

The problems no. 372-374 are offers for retro connoisseurs.

No. 372
Valery Liskovets
Shakhmaty v SSSR 1978


Mate in 3

No. 373
Henry Adamson
The Problemist 1932


Mate in 2

No. 374
Michel Caillaud
Die Schwalbe 2008


Mate in 2

No. 372: The wRa3 comes from h1 (then 0-0-0 not permitted) or it is a promotee from b8 to f8 (then 0-0 not permitted). Solution: 1.Bf6! 0-0 2.Se7+ Kh7 $3 . \mathrm{B} \times \mathrm{f5} \#, 1 \ldots \mathrm{~b} 7 \times \mathrm{c} 62.0-0-0$ ! (2.Rd1? 0-0!) ~ 3.Rd8\#, 1...b3 2.B×f5 0-0 3.Se7\#, $1 \ldots \mathrm{Kf} 8 / \mathrm{R} \times \mathrm{h} 32 . \mathrm{R} \times \mathrm{a} 8 / \mathrm{R} \times \mathrm{h} 3$ etc. Tries: $1.0-0-0$ ? f6!; $1 . \mathrm{R} \times \mathrm{a} 8$ ? b7 $\times \mathrm{c} 62$. Bf6 $0-0$ !. Singular RS problem with real white and black castlings!

No. 373 is the first RS problem (composed in 1916 according to T. R. Dawson). Solution: 1.0-0! (1.Rf1? 0-0-0!) ~ 2.Rf8\# because w0-0 and b0-0-0 exclude each other. Genesis of the position: the bBf8 died on f8; the dark-squared wB is missing. Case a): the last move was $\mathrm{f} 7 \times \mathrm{Pe} 6$ (or $\mathrm{f} 7 \times \mathrm{S} / \mathrm{Q}$ ( $=$ promotee), before that $\mathrm{g} 6 \times \mathrm{h} 7-\mathrm{h} 8 \mathrm{Q} / \mathrm{S})$. If the Ra7 comes from h8 via e8, then b0-0-0 is not permitted; if it is a promotee from d1 or f 1 (not g 1 for lack of sacrificial pieces), then w0-0 is not permitted. Case b): the last move was $\mathrm{d} 7 \times$ Xe6. Then Ba4 is a promotee from f 1 , earlier f2-f1B (w0-0 not permitted) or $\mathrm{g} 2 \times \mathrm{Xf} 1 \mathrm{~B}$ requiring more sacrificial pieces: the $w P g$ and a promotee from f 8 ( $\mathrm{f} 7-\mathrm{f} 8 \mathrm{X}$ and $\mathrm{b} 0-0-0$ not permitted). An excellent problem with a double RS. Another early RS problem is P0001348.

No. 374: Solution: 1.0-0-0! (1.Rd1? 0-0-0!) Rd8/Ra7 2.Sg7/Qb8\#; w0-0-0 and b0-0-0 exclude each other. This RS problem is very original: both the queens are promoted officers from b 8 and c 1 , either can serve as a shield against the other one's checking (e.g. wQd1/bQc1 or bQc8/wQb8). Genesis of the position: a7 $\rightarrow \mathrm{a} 3, \mathrm{~b} 7 \rightarrow \mathrm{~b} 3$, $\mathrm{c} 7-\mathrm{c} 5, \mathrm{c} 2-\mathrm{c} 4, \mathrm{~d} 2 \times$ Se3, h $2 \times \mathrm{Qg} 3, \mathrm{wRh} \rightarrow \mathrm{f} 6, \mathrm{~g} 7 \times \mathrm{Rf} 6, \mathrm{wBc} \rightarrow \mathrm{h} 4, \mathrm{bBf} \rightarrow \mathrm{f} 4, \mathrm{~g} 3 \times$ Bf4, $\mathrm{bS} \rightarrow \mathrm{h} 1$, wBh $\rightarrow \mathrm{h} 2, \mathrm{~h} 7 \times \mathrm{Sg} 6 \times \mathrm{Qf5}$, bRh-f8, $\mathrm{bBc} \rightarrow \mathrm{g} 8$, wS $\rightarrow \mathrm{h} 5$, g2-g3 (locks up the cage), $\mathrm{wBf} \rightarrow \mathrm{c} 2, \mathrm{~b} 3 \times \mathrm{Bc} 2, \mathrm{~b} 2 \rightarrow \mathrm{~b} 7$, $\mathrm{bRa}-\mathrm{d} 8$ (b0-0-0 not permitted), $\mathrm{b} 7-\mathrm{b} 8 \mathrm{Q}$, $\mathrm{wQ} \rightarrow \mathrm{d} 1$, $\mathrm{c} 2-\mathrm{c} 1 \mathrm{Q}, \mathrm{bQ} \rightarrow \mathrm{h} 4, \mathrm{wQ} \rightarrow \mathrm{b} 5, \mathrm{bRd}-\mathrm{a} 8$ and $\mathrm{w} 0-0-0$ is permitted. Deep retroanalysis.

Partial Retrograde Analysis and Retro-Strategy

No. 375
Valery Liskovets
Orbit 2008


Helpmate in 3
b) - Pb7

How many solutions?

No. 376
Valery Liskovets
Shakhmaty v SSSR 1980
$2^{\text {nd }}$ Special Prize


Mate in 4
$R S+P R A$

No. 377
André Hazebrouck
Europe Echecs 1969


Mate in 3
$P R A+R S$

No. 375: a) If $0-0-0$ is permitted, the solution is $1 . \mathrm{Kd} 7!0-0-0+2$.Kc8 2.Rhe 1 3.Rc7 R $\times$ e8\# or, if $0-0$ is permitted, $1 . \mathrm{Kf5}$ ! 0-0+ 2.Kg4 Rae1 3.Rh5 Re4\#: a typical PRA problem with 1 solution which consists of 2 parts (cp. p. 106). The setting b), however, has two solutions, if $0-0$ is permitted: 1.Kf7! 0-0+ 2.Kg8 Rae1 Rag7 $\mathrm{R} \times \mathrm{e} 8 \#$ and $1 . \mathrm{Kf} 5$ ! $0-0+2 . \mathrm{Kg} 4$ Rae 1 3.Rh5 Re4\#. But there is no mate in 3, if $0-0-0$ is permitted: a RS problem with 2 solutions.

No. 376: The Ba7 is a promoted officer. If it comes from a1, b0-0-0 and b0-0 are permitted. Try: 1.Rd1? $\mathrm{g} 6 \times \mathrm{h} 52 . \operatorname{Sd5} / \mathrm{Sf5} 0-0-0!/ 0-0$ !. Therefore $1.0-0-0$ ! and the Ba 7 comes from c1 which requires more sacrificial pieces (e.g. a promotee from a8 or h8). Hence either b0-0-0 or b0-0 is permitted. Solution: either $1 \ldots \mathrm{~g} 6 \times \mathrm{h} 52 . \mathrm{Sd} 5$ Kd7 3.Q×e7+ or $1 . . . \mathrm{g} 6 x h 52 . S f 5$ Kf7 3.Q×e7+.

No. 377: Try: if $1 . \operatorname{Rd1} 1 / \mathrm{Rf} 1$ ?, then $0-0!/ 0-0-0$ !. The bBf8 died on f 8 , Bh6 is a promoted officer. The wPs captured 3 pieces, among them a promotee from a1 or h1, hence the white castlings exclude each other. But each prevents the two black castlings (because of wPd7-d8X). So the solution is either 1.0-0-0! Kf8 2.Rhf1+ Kg8 3.B $\times$ e6\# or 1.0-0! Kd8 2.Rad1+ Kc8 3.B×e6\#, 1...c6 2.Q $\times \mathrm{c} 6+\mathrm{Kd} 83 . \mathrm{Sf7} \#$, $1 .$. Qb7 2.Q $\times$ b7 Rd8 $3 . S \times$ c7\#. (cp. P1080375)

In my opinion the PRA and RS conventions are not sufficient to solve no. 376 and 377. So the stipulations 'RS + PRA' and 'PRA + RS' should be added.

No. 378
Werner Keym
Die Schwalbe 2010


Mate in 3
b) $-B b 5$
c) $+b S h 7$

In a) no more than three castlings are compatible as a maximum: w0-0, w0-0-0, b0-0 with the following genesis of the position: $\mathrm{d} 7 \times \mathrm{Pc} 6, \mathrm{~h} 3 \times \mathrm{Sg} 4$, Pf5 $\times$ Be 6 , $\mathrm{d} 4 \times \mathrm{Qe} 5, \mathrm{f} 3 \times$ Se4, $\mathrm{wX} \times \mathrm{Pa}, \mathrm{a} 2 \rightarrow \mathrm{a} 8 \mathrm{X}$, the last move was h $6 \times \mathrm{Xg} 5$. Tries: 1.Bxg5? 0-0!; 1.Rd1? 0-0!; 1.Rf1? R×a6!. Solution: 1.0-0! [thr. 2.Qd3] Rf8/Kd8 $2 . S \times \mathrm{g} 7+/ \mathrm{Qd} 3+\mathrm{Kd} 8 / \mathrm{Kc} 83 . \mathrm{R} \times \mathrm{f} 8 / \mathrm{Qd} 7 \#$. However, there is a genesis of the position where $\mathrm{b} 0-0-0$ is permitted: $\mathrm{f} 3 \times \mathrm{Se} 4, \mathrm{f} 7 \rightarrow \mathrm{f} 1 \mathrm{X}, \mathrm{a} 4 \times \mathrm{Xb} 5, \mathrm{a} 7 \rightarrow \mathrm{a} 1 \mathrm{X}, \mathrm{b} 5 \times \mathrm{Xc} 6$, $\mathrm{d} 7 \times$ Pc $6, \mathrm{c} 4 \times$ Sd $5 \times$ Be6, $\mathrm{d} 4 \times$ Qe5, g $2 \rightarrow \mathrm{~g} 6, \mathrm{~h} 6 \times$ Qg 5 , $\mathrm{h} 2 \rightarrow \mathrm{~h} 8 \mathrm{Q}$ (= Qa3), the last move was R-h8; here w0-0, $\mathrm{w} 0-0-0$ and b0-0 are not allowed. Tries: $1 . \mathrm{B} \times \mathrm{g} 5$ ? $0-0-$ $0!$; 1.Rf1? R $\times$ a6/0-0-0!. Solution: 1.Rd1! [thr. 2.Qf3] Rd8/Kf8 $2 . S \times \mathrm{c} 7+/ \mathrm{Qf} 3+\mathrm{Kf8} / \mathrm{Kg} 83 . \mathrm{R} \times \mathrm{d} 8 / \mathrm{Qf7} \#$.
So a) is a PRA problem with two parts: either 1.0-0! or 1.Rd1!.
b) The maximum of three castlings is compatible with the convention in either case. If w $0-0 / \mathrm{w} 0-0-0 / \mathrm{b} 0-0$ or $\mathrm{w} 0-0 / \mathrm{w} 0-0-0 / \mathrm{b} 0-0-0$ or $\mathrm{w} 0-0 / \mathrm{b} 0-0 / \mathrm{b} 0-0-0$ are permitted then the solution is $1.0-0$ ! as in version a); in addition to that we see the variant $1 \ldots 0-0-0$ $2 . \mathrm{Sb} 4 / \mathrm{Sc} 5 \sim 3$. Qa8\# - all that with b0-0-0 being permitted. If, however, w0-0-0/b0$0 / \mathrm{b} 0-0-0$ are permitted (last move $\mathrm{f} 6 \times \operatorname{Pg} 5$, earlier $\mathrm{d} 7 \times \mathrm{Bc} 6$ ) then $\mathrm{w} 0-0$ is not allowed and there is no mate in 3 . In such a case the RS convention works: the castling which is executed first ( $\mathrm{w} 0-0$ ) is permitted. By executing $1.0-0$ the case of $w 0-0-0 / \mathrm{b} 0-0 / \mathrm{b} 0-$ $0-0$ becomes obsolete and is eliminated. Solution: $1.0-0$ ! Rf8/Kd8/0-0-0. So b) is a RS problem: 1.0-0.
In c) no castling whatsoever is permitted and both PRA and RS conventions are irrelevant. Genesis of the position: $\mathrm{g} 2 \rightarrow \mathrm{~g} 6, \mathrm{wX} \times \mathrm{Pa}, \mathrm{a} 2 \rightarrow \mathrm{a} 8 \mathrm{X}, \mathrm{h} 6 \times \mathrm{Xg} 5, \mathrm{~h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$, $\mathrm{d} 7 \times \mathrm{Xc} 6, \mathrm{f} 3 \times \mathrm{Se} 4, \mathrm{f} 7 \rightarrow \mathrm{f} 1 \mathrm{X}, \mathrm{c} 4 \times \mathrm{Xd} 5 \times \mathrm{Be} 6, \mathrm{~d} 4 \times \mathrm{Qe5}$. The try with $1 . \mathrm{B} \times \mathrm{g} 5$ ? in version a) and b) now turns out to be the solution in c): 1. $\mathrm{B} \times \mathrm{g} 5$ ! [thr. 2.Qe7 $\times \#$ ] $\mathrm{S} \times \mathrm{g} 5, \mathrm{Sf} 6 / \mathrm{K}-2 . \mathrm{Sf6}+, \mathrm{S} \times \mathrm{f} 6 / \mathrm{Qxe} 7+\sim / \mathrm{K} \sim 3 . \mathrm{R} \times \mathrm{h} 8 / \mathrm{Q} 7 \#$. So c) is a 'normal' retro problem without PRA or RS: 1.B $\times$ g5+.
The deceivingly 'simple' positions with their slight modifications demand different tricky retrograde analyses and show a varied mainly dual-free play with virtual or real castling. My best retro problem with four castlings.

## Special Partial Retrograde Analysis (SPRA)

In problems with the supplementary stipulation 'SPRA' the en-passant capture is permitted, unless the opposite can be proved.

No. 379
Karl Fabel
problem 1953


Mate in 1 SPRA

No. 380
Thomas R. Dawson
Retrograde Analysis 1915


Mate in $2 S P R A$

No. 381
Gerd Wilts
Die Schwalbe 2005


Mate in 1 SPRA

No. 379: Solution: either $1.0-0-0 \#!$ or $1 . d 5 \times$ e6 e.p.\#!. In the second case the last move was e7-e5 and 0-0-0 is not permitted since the Bh4 is a promotee from g1 or e1. Without 'SPRA' that does not work since it cannot be proved that the double step (e7-e5) was the last move. A two-part SPRA problem.

No. 380 shows a double setting. The wPs captured 6 pieces, among them a promoted officer from h1 or a1 (earlier h7 h 1 X or a7 $\rightarrow \mathrm{a} 1 \mathrm{X}$ ). Therefore either $1.0-0-0$ ! $\sim$ 2.Rde1,Rhe1\# or 1.0-0! Bb1 2.Rfe1\#. If the last move was d7-d5 or e7-e5, then earlier $\mathrm{h} 7 \rightarrow \mathrm{~h} 1 \mathrm{~B} / \mathrm{X}$ and $\mathrm{a} 7 \rightarrow \mathrm{a} 1 \mathrm{X}$ ( $0-0$ and $0-0-0$ not permitted) and the solution is either $1 . c 5 \times \mathrm{d} 6$ e.p.! $\sim 2 . S c 5 \#$ or $1 . f 5 \times$ e6 e.p. $+!\mathrm{g} 62 . \mathrm{B} \times \mathrm{g} 6 \#$. A four-part SPRA problem (as no. 381).

To me no. 381 is the perfect SPRA problem. Castling is permitted according to this retro play: $1 \ldots$. .h6-h5 2.Qh5-g6 h7-h6 3.f2-f3 c6-c5 4.Re3-e2 c7-c6 5.Qd1-h5 Rb1-b2 and a bR gets to h8 via f6 and f8; solution: 1.0-0-0\#!. If the last move was c 7 -c5 or $\mathrm{f} 7-\mathrm{f} 5$ or h 7 -h5, this retro play fails (for lack of one tempo). Instead the move $\mathrm{wRc} / \mathrm{d} 1-\mathrm{a} 1$ ( $0-0-0$ not permitted) makes the previous move bRb1-b2 or bQb1a2 possible. In this case the solution is $1 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p.\#! or $1 . \mathrm{g} 5 \times \mathrm{f} 6$ e.p.\#! or $1 . g 5 \times \mathrm{h} 6$ e.p.\#!.

No. 382
Josef Moravec
Thèmes 641959


End of the game?
White to play SPRA

No. 383
Nikita Plaksin
Shakhmaty v SSSR 1978
$9^{\text {th }}$ TT $1^{\text {st }}$ Prize


Mate in 1

No. 382: White loses by 1.Kc3? Ke6, draws by $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.? and wins by $1 . \mathrm{c} 5 \times \mathrm{b} 6$ e.p.!. Small, but nice.

The vague term Retro Variants is no longer used in the Codex. Most of the retro problems which were published with the supplementary stipulation 'Retro Variants' or 'RV' before 2008 are PRA problems after the modification of the Codex in 2008 and now need no supplement. In few former problems, however, an en-passant key is intended, although the double step of the pawn cannot be proved according to the Codex (e.g. no. 379-381). Such problems are solvable by means of a special convention as proposed by G. Rinder in 1970. I call it the Special Partial Retrograde Analysis (SPRA) convention. That is a PRA convention with the special feature that an en-passant capture is permitted unless it can be proved that it is not permissible. Here the right to capture en-passant is analogous with the right to castle. The SPRA should be expressly stipulated.

Variants which occur in the retro play without exerting any effect on the forward game may be regarded as retro variants in a wider sense. Such problems need no supplement. No. 383 is a fine example. The solution is not $1 . S \times f 7 \#$ ?, but $1 . \mathrm{Rf} \times \mathrm{g} 7 \#!$, since White moved last. The retro play implies two variants:
a) 1.Bg1-h2 d2-d1B $2 . \mathrm{Rh} 2-\mathrm{g} 2 \mathrm{~d} 3-\mathrm{d} 23$ 3.Rh4-h2 h2-h1S $4 . \mathrm{Ra} 4-\mathrm{h} 4 \mathrm{~h} 3-\mathrm{h} 25 . \mathrm{Ra} 8-\mathrm{a} 4 \mathrm{~h} 4-$ h3 6.a7-a8R ... 9...d7-d6 10.a2-a4 a3×Xb2
b) $1 . \mathrm{Rg} 1-\mathrm{h} 2 \mathrm{~h} 2-\mathrm{h} 1 \mathrm{~S} 2 . \mathrm{Sd} 2-\mathrm{f} 1 \mathrm{~h} 3-\mathrm{h} 23 . \mathrm{Sc} 4-\mathrm{d} 2 \mathrm{~d} 2-\mathrm{d} 1 \mathrm{~B} 4 . S b 6-\mathrm{c} 4 \mathrm{~d} 3-\mathrm{d} 25 . S a 8-\mathrm{b} 6 \mathrm{~h} 4-$ h3 7.a7-a8S ...
In each variant the promotions are separated according to some retro moves.

## A posteriori (AP)

The en-passant capture as a key is permitted only if it can be proved that the last move was the double step of the pawn which is to be captured (p. 170). In general such a prove is due to the retroanalysis of a position, i.e. the past. However the past can be influenced by the future, i.e. by a castling in the forward play.

No. 384
John F. Keeble
The Problemist FCS 1936


Helpmate in 2.5 AP

No. 385
Werner Keym
Tomislav Petrovic
Hannoversche Allgemeine
Zeitung 1999


Helpmate in 1.5 AP

No. 386
Nenad Petrovic
problem 1954
${ }^{\text {st }}$ Prize


Helpmate in 3* AP

No. 384 is the first AP realization: 1.e5 $\times$ d6 e.p.! 0-0-0! $2 . \mathrm{d} 6 \times \mathrm{e} 7 \mathrm{Rf} 83 . \mathrm{e} 7 \times \mathrm{f} 8 \mathrm{Q}, \mathrm{R} \mathrm{\#}$. After the e.p. key Black castles and hereby 'proves' a posteriori (after the event) that the last move was d7-d5 and the e.p. capture was permitted. Hence the e.p.capture is legalised by the execution of castling. By the way no. 384 is the first helpmate Valladao (p. 28).

No. 385 is the sole AP miniature: $1 . c 5 \times$ b6 e.p.! 0-0-0 $2 . b 7 \#$.
The prize winner no. 386 made the AP idea popular. Set play: $1 \ldots \mathrm{Rg} 12 . \mathrm{B} \times \mathrm{b} 4$ Rg 7 3.Ka5 Ra7\#. The solution is $1 . \mathrm{c} 4 \times \mathrm{b} 3$ e.p.! $0-0!2 . \mathrm{Sd} 5 \mathrm{Rb} 13 . \mathrm{Sb} 4 \mathrm{a} 2 \times \mathrm{b} 3 \#$; $1 . . . \mathrm{Ke} 2$ ? would render the e.p. capture illegal.

Since 1997 the Codex has recommended to add the supplementary stipulation 'AP'. Some composers note it every time, some in directmate problems only, some never ('in order not to betray anything').

No. 387
Gerd Wilts
Rochade Europa 1998 (v)


Helpmate in $2 A P$

No. 388
Luis Garaza
problem 1966


Mate in $2 A P$

No. 389
Valery Liskovets
Die Schwalbe 2004


Mate in 1 AP

No. 387: Here two castlings are necessary for the legalisation of the e.p. capture. The wPs captured 5 times, the Bf1 died on f 1 . The last move was not $\mathrm{wS} \times \mathrm{Xc} 5$ ? nor $\mathrm{a} 2 / \mathrm{c} 2 \times \mathrm{Xb} 3$ ? since then a promoted officer from f1 (w0-0 not permitted) would be needed as a sacrificial piece. If Ke1, Rh1, Ke8 and Rh8 have not made any move, the last moves were c2-c4!c3×Xb2. Therefore $1 . \mathrm{b} 4 \times \mathrm{c} 3$ e.p.! $0-0$ ! (first prove) 2.0-0! (second prove) Rg4\#.

No. 388 is the first correct realization in a directmate problem. If Ke1 and Ra1 have not made any move, the last moves were e7-e5 e $6 \times \mathrm{Xf7}$. Genesis of the position: bOfficer $\times$ Ph, $\mathrm{h} 7 \rightarrow \mathrm{~h} 2$, wOfficer $\times \mathrm{Pd}$, d2 $\rightarrow \mathrm{d} 5$, c5 $\times \mathrm{Sd} 4, \mathrm{c} 2 \rightarrow \mathrm{c} 7$, a $4 \times \mathrm{Bb} 5$, finally e $6 \times$ Qf7 and e7-e5. Hence $1 . d 5 \times$ e6 e.p.! d3 2.0-0-0\#!. 2.Kd2\#? would render the e.p. capture illegal.

No. 389: The wPs captured 11 pieces, among them the promoted officer $X$ from b1 (earlier bPa $\times$ Rb-b1X). The last move was not e6/g6×Xf5? nor h2-h1B? nor $\mathrm{h} 3 \times \mathrm{Sg} 2$ ? because of too many captures. Hence Black is to play and 1.Bh2\#? and $1.0-0-0 \#$ ? are tries. The last move was either Kd1-e1 Kf1-g1 (then no mate in 1) or $\mathrm{h} 2-\mathrm{h} 4 \mathrm{~h} 3 \times \mathrm{Sg} 2$ (then $0-0-0 \#$ possible). Therefore White 'proves' by castling that only h2-h4 was the last move and hereby forces $1 . g 4 \times \mathrm{h} 3$ e.p.! $0-0-0 \#$. For further (complex) AP problems see $P D B$ ( $\mathrm{K}=$ 'A posteriori').

No. 390
Norman A. Macleod
Thèmes 641982


Helpmate in 2
b) $A P$

No. 391
Werner Keym
Die Schwalbe 1972


Win AP
Black to play

No. 392
Gerd Rinder
Die Schwalbe 1973
$1^{\text {st }}$ Prize


Draw AP

No. 390 is bizarre. a) The solution is 1.Kc3! 0-0-0 $2 . \mathrm{R} \times \mathrm{c} 4 \mathrm{R} \times \mathrm{d} 3 \#$. b) After castling in a) the AP solution is $1 . b 4 \times \mathrm{c} 3$ e.p.! e4 $2 . \mathrm{K} \times \mathrm{c} 4 \mathrm{Ra} 4 \#$.

No. 391 is even more bizarre. It is not an endgame study, but an AP problem with the stipulation of a study 'Win'. The bPs captured the 5 missing white pieces, among them the Bc1. Hence the last move was not d2-d3? nor $\mathrm{c} 2 \times \mathrm{Xd} 3$ ? (too many captures). Therefore White 'proves' by castling that the last move was not K-e1 nor R-a1, but d2-d4 and hereby forces Black's key move: $1 \ldots \mathrm{~d} 4 \times \mathrm{c} 3$ e.p.! $2 . \mathrm{b} 2 \times \mathrm{c} 3+$ $\mathrm{K} \times \mathrm{c} 3$ 3.a8Q b2 (3...Kb2 4.Qh8+ Kc2 5.B×b3+) 4.Qh8+ Kb4 5.Qh4+! (5.Q $\times$ b2\#? is too early because the castling has not yet been executed!) $5 \ldots \mathrm{Kc} 3$ (5 ...c4 6.Qe7+ Kc3 7.Qa3+ Kd4 8.Q×b2+) 6.Qf6+ Kb4 7.Qf4+ Kc3 8.Qd2+ Kd4 9.Q×b2+, and the queen conquers $\mathrm{Sg} 1, \mathrm{Pf} 3$ and Pe 2 . After that White will castle and win.

No. 392 is extremely bizarre. Retroanalysis: The bPs captured 9 times. The last move was not $\mathrm{b} 7 \times \mathrm{Xc} 6$ ? (too many captures) nor $\mathrm{g} 7 \times$ Xf6? (locks up Bd8), but K-e8 or $\mathrm{R}-\mathrm{a} 8$ or $\mathrm{b} 7-\mathrm{b} 5$. Black tries to castle in order to prove a posteriori that the last move was only b7-b5. Hereby White will be forced to capture e.p. with a win for Black. 'Solution': $1 . \mathrm{c} 5 \times \mathrm{b} 6$ e.p. $\mathrm{a} 7 \times \mathrm{b} 6+2 . \mathrm{K} \times \mathrm{b} 6$ a1R $3 . \mathrm{Kb} 7 \mathrm{R} 1 \times \mathrm{a} 64 . \mathrm{Rc} 8$ ! and castling is prevented. That means: no castling, no e.p. capture. Hence the diagram position is a stalemate position. If the solver had known that before, he would not have had any reason for racking his brains for a second!

In the AP problems no. 384-392 an en-passant capture is legalised by subsequent castling. The following AP problems show something different (and controversial).

No. 393
Nikita Plaksin

Andrey Lobusov
Die Schwalbe 1975


Mate in 3 AP

No. 394
Mordechai Bronstein
Die Schwalbe 1977


Helpmate in 3 AP

No. 395
Gerd Rinder
Die Schwalbe 1977


Mate in $2 A P$

No. 393: White proves by castling that the Rh1 has never moved so that Black's last move was not $\mathrm{Kg} 1-\mathrm{g} 2$, but d7-d5 (before that Rc6×Xh6+). Hence the solution is $1 . c 5 \times \mathrm{d} 6$ e.p.+! $\mathrm{K} \times \mathrm{g} 32.0-0$ ! $\mathrm{Kg} 4 / \mathrm{a} 1 \mathrm{Q}, \mathrm{R} 3 . \mathrm{g} 7-\mathrm{g} 8 \mathrm{Q}, \mathrm{R} / \mathrm{Qg} 5 \#$. 2.Qg5\#? is too early because the castling has not yet been executed! (cp. no. 391). Retroanalysis: The bPs captured the 3 missing white pieces, hence Pc6/e6 $\times$ Xd5 ? was not possible. The Ba 8 is not a promoted officer since 8 wPs are on the board.

There is also a selfmate problem showing the same idea (P1348653).
No. 394: The solution seems to be $1 . \mathrm{Kc} 4$ ? b3+ 2.Kd4 $0-0-0+3 . \mathrm{Kc} 3 \mathrm{Rd} 3 \#$, but castling is not permitted since the last move was K-el or R-a1. Therefore White proves by castling that he is on the move: $1 \ldots 0-0-0$ ! $2 . \mathrm{Kc} 4 \mathrm{~b} 3+3 . \mathrm{Kc} 3 \mathrm{Rd} 3 \#$. Such ideas can be realized in cooperative play, but what about adversary play? See next problem.

No. 395: This solution is simple: 1.Sf6+! Kd8/Kf8 2.Qc7/Bd6\#. But Black, too, claims the right to move first - by subsequent castling: $1 . \mathrm{B} \times \mathrm{b} 7+$ ! Ke3! $2.0-0-0$ ! (2.B~? Bb8, no castling and no first move) Sb6\#. Not $1 . \mathrm{B} \times \mathrm{d} 7$ ? because of $\mathrm{Q} \times \mathrm{a} 8+$ and no castling. Somehow strange, all that!

## Loyd's idea: with/without previous play

Sam Loyd was the first to compose a problem, which has got a shorter solution, if the course of the game is taken into account, and a longer solution, if the diagram position is considered to be the initial position.

No. 396
Sam Loyd
Missouri Democrat 1859


Mate in how many moves?
With/without previous play Incorrect

No. 397
Sam Loyd
Missouri Democrat 1859
Version Erich Zepler 1926


Mate in how many moves?
With/without previous play

No. 398
Werner Keym
Die Schwalbe 1972


Mate in how many moves?
With/without previous play

No. 396 probably is the first problem with Partial Retrograde Analysis (p. 106): either b0-0-0 is permitted (then 1.Qb7!) or b0-0 (then $1 . \mathrm{Q} \times \mathrm{g} 7$ !). Without previous play both castlings are permitted and three moves are necessary: 1.Rg1 (and cook 1.Sh7) $0-0-0 / 0-0 / \mathrm{Kf} 82 . \mathrm{Qc} 7 \# / \mathrm{Q} \times \mathrm{g} 7+/ \mathrm{Q} \times \mathrm{g} 7+S$. Loyd did not succeed in eliminating the cook.

No. 397 is correct: a mate in 2 moves by 1.Qa3! (if $0-0-0$ is permitted) or by $1 . Q \times \mathrm{g} 7$ ! (if 0-0 is permitted) and in 3 moves ( $0-0-0$ and $0-0$ are permitted) by $1 . \operatorname{Rg} 1!0-0-0 / 0-$ 0 2.Qa3/Q×g7~/Kxg7 3.Qa8\#/Sf7\#.

No. 398: The bPs captured 5 pieces, among them a promoted piece from h 8 or a 8 (earlier $\mathrm{wPa} \times \mathrm{Xb}$ and $\mathrm{h} 2 \rightarrow \mathrm{~h} 8 \mathrm{X}$ or $\mathrm{wPh} \times \mathrm{Xg}$ and $\mathrm{a} 2 \rightarrow \mathrm{a} 8 \mathrm{X}$ ). In the first case the solution is $1 . \mathrm{d} 5 \times \mathrm{e} 6!0-0-02 . \mathrm{Ra} \%$, in the second $1 . \mathrm{f} 5 \times \mathrm{e} 6!0-0$ 2.Sh6\#. Without previous play both castlings are permitted and three moves are necessary: $1 . \mathrm{S} \times \mathrm{e} 5$ ! $0-$ $0-0 / 0-02 . \mathrm{Ra} 8+/ \mathrm{Rg} 7+\mathrm{Kb} 7 / \mathrm{Kh} 83 . \mathrm{d} 6 / \mathrm{Sg} 6 \#$. Hence the castlings are actually executed in the two-movers and in the three-mover. This happens to be the first and only realization of Loyd's idea showing real castlings in all variants up to now.

No. 399
Werner Keym
Weser-Kurier 1970


Mate in how many moves?
With/without previous play

No. 400
Werner Keym
Die Zeit 2009


Mate in how many moves?
With/without previous play

No. 401
Valery Liscovets
feenschach 1986


Mate in how many moves?
With/without previous play

It is quite easy to compose problems without real castlings. In no. 399 the solution is either 1.Qc7! (if $0-0-0$ is permitted) Kf8 2.Qf7\# or $1 . \mathrm{Q} \times \mathrm{g} 7$ ! (if $0-0$ is permitted) Kd8 2.Qd7\#. Without previous play three moves are necessary: 1.Qc5! Kd8 2.Qd6+ Kc8/Ke8 3.Rc5/Qe7\#. (cp. P0000876)

No. 400 is a two-mover if $0-0$ is permitted: $1 . \mathrm{Q} \times \mathrm{g} 7!\mathrm{Kd8} 2 . \mathrm{Qd} 7 \#$; it is a threemover if $0-0-0$ is permitted: $1 . \mathrm{Qg} 5$ ! Kf8 2.Qe7+ Kg8 3.Qf7\#. Without previous play ( $0-0-0$ and $0-0$ are permitted) four moves are necessary: 1.Qc5! Kd8 2.Qe7+ Kc8 3.d6 Re8 4.Q×e8\#. A really unexpected outcome. - No. 499 is similar.

No. 401: Loyd's idea can be realized with the en-passant capture as well. The last move was neither $\mathrm{d} 7 \times \mathrm{Xc} 6$ ? nor $\mathrm{f} 7 \times \mathrm{Xg} 6$ ? (too many captures). If $1 . \mathrm{g} 5 \times \mathrm{f} 6$ e.p.? is not permitted, then the solution is $1 . c 5 \times \mathrm{d} 6$ e.p.\#!; if $1 . \mathrm{c} 5 \times \mathrm{d} 6$ e.p.?, then $1 . g 5 \times \mathrm{f} 6$ e.p.\#!. Without previous play two moves are necessary: $1 . \mathrm{B} \times \mathrm{c} 6$ ! $\mathrm{b} 7 \times \mathrm{c} 6 / \mathrm{d} 5 \times \mathrm{c} 4 / \mathrm{f} 5 \times \mathrm{g} 4 / \mathrm{B} \times \mathrm{g} 7+2 . \mathrm{S} \times \mathrm{c} 6 / \mathrm{Rd} 7 / \mathrm{Rf} 7 / \mathrm{Q} \times \mathrm{g} 7 \#$.

Don't forget: The Partial Retrograde Analysis (PRA) convention deals with mutually dependent special move rights (p. 106), not with the last move. Therefore as to problems no. 396-400, if you take into account the previous play, only one castling is not permitted, not both.

## Twins with/without promoted pieces

Twins with the special stipulation 'Promoted pieces in the diagram position are a) permitted, b) not permitted' have the same positions, yet different geneses and solutions.

No. 402
Werner Keym
Allgemeine Zeitung Mainz 1993 (c)


Mate in 3
Promoted pieces in the diagram position are
a) permitted
b) not permitted

No. 403
Werner Keym
Die Schwalbe 1993


Mate in 2
Promoted pieces in the diagram position are
a) permitted
b) not permitted

No. 404
Werner Keym
Hannoversche Allgemeine
Zeitung 1995


Mate in 2
Promoted pieces in the diagram position are
a) permitted
b) not permitted

The idea of such a twin occurred to me in 1993. No. 402 is the first realization. In case a) the last move was a2-a1S; both castlings are permitted, therefore 1.0-0! [thr. 2.Re5+3.Rf8\#] 0-0-0 $2 . \mathrm{R} \times \mathrm{a} 1 \sim 3 . \mathrm{Ra} 8 \#$. b) The last move was either bK-e8 or bRa 8 (earlier $\mathrm{a} 2 \times \mathrm{Xb} 3$, bSb3-a1 and wRa1 $\rightarrow \mathrm{b} 5$ via e1), $0-0$ and $0-0-0$ are not permitted. Therefore 1.Rf5! S $\times \mathrm{c} 2+2 . \mathrm{Kf} 2 \sim 3 . \mathrm{Rh} 8 \#$. Theme: castling.

No. 403 is a rendering in a miniature. [There is even a rendering with five pieces only, if in no. 248 the stipulation is appropriately modified.] In case a) the last move was $\mathrm{g} 2 \times \mathrm{B} / \mathrm{Sh} 1 \mathrm{R}$, therefore $1 . \mathrm{Rf} 6$ ! $\mathrm{R} \times \mathrm{h} 22$.Rf1\#. b) White moved last, therefore $1 . \mathrm{R} \times \mathrm{h} 2$ ! Sf $2+2 . \mathrm{Rg} 2 \mathrm{R} \times \mathrm{g} 2 \#$. Theme: whose move?

No. 404: In case a) the last move was h2-h1S and castling is permitted, therefore 1.0-$0-0!~ \mathrm{~S} \times \mathrm{f} 2, \mathrm{R} \times \mathrm{e} 6 / \mathrm{S} \times \mathrm{g} 32 . \operatorname{Re} 1 / \mathrm{Rd} 4 \#$. b) The following moves occurred: $\mathrm{h} 2 \times \mathrm{Xg} 3$, $\mathrm{bSg} 3-\mathrm{h} 1$ and wRh1 $\rightarrow \mathrm{e} 6$ via e1, hence $0-0-0$ is not permitted. The last move was neither Kd/f4-e4? nor Kd/f4×Qe4? because of illegal checks by bRe5 or wQe4, nor c6 $\times$ Qd5? for lack of a sacrificial piece, nor e $7 \times$ Qf6? (locking up wBd8), but only d7-d5 (before that Rc6-e6+), therefore $1 . c 5 \times$ d6 e.p. + ! c6 $2 . B \times$ c6\#. Theme: castling or en-passant capture.

No. 405
Anatoli Vassilenko
Die Schwalbe 1996
Ceriani Memorial
$2^{\text {nd }}$ Section $2^{\text {nd }}$ Prize


Mate in 2
Promoted pieces in the diagram position are
a) permitted
b) not permitted

No. 406
Werner Keym
Die Schwalbe 1996
$3^{\text {rd }}$ Prize


Who mates in 2 moves? 1 promoted piece exists in the diagram position.

No. 407
Andrey Frolkin
Evgeny Reitsen
Alexander Shvitchenko
Die Schwalbe 1996


What was the last move?
Promoted pieces in the diagram position:
a) 1 white
b) 1 black
c) 1 white and 1 black d) 0

No. 405: In case a) the last moves were Ke7-e8 d7-d8B+; the solution is $1 . \mathrm{Rc} 8$ ! $\mathrm{K} \times \mathrm{f} 8$ 2.Bf6\#, b) White moved last, hence $1 . \mathrm{K} \times \mathrm{d} 8$ Kf7 2.g6 Se6\# or $1 . \mathrm{K} \times \mathrm{f} 8 \mathrm{Re} 7$ $2 . \mathrm{Kg} 8$ Re8\#. Each of the three officers mates once. Elegant rendering of the theme of the (not) permitted promoted pieces.
No. 406 is different. 8 wPs are on the board, so only bS or bB or bQ can be a promoted piece. a) If the knight is a promotee, then the last move can be $\mathrm{b} 2 \times \mathrm{Qa} 1 \mathrm{~S}$ (not e7-e5? because of Bh4), earlier $2 \times \mathrm{Xb} 3$ and $0-0$ is permitted; therefore $1.0-0+$ ! $\mathrm{K} \times \mathrm{g} 32 . \mathrm{B} \times \mathrm{e} 5 \# . \mathrm{b}$ ) If the bishop is a promotee, then the last moves were e7-e5 Rd6g6+; therefore $1 . f 5 \times$ e 6 e.p.+! d6 $2 . B \times$ d6\#. Try: $1.0-0+$ ? $\mathrm{K} \times \mathrm{g} 32 . \mathrm{B} \times \mathrm{e} 5 \#$ but $0-0$ is not permitted because the Ra1 moved to g 6 via e1 for lack of a sacrificial piece (bBf8 died on f8). c) If the queen is a promotee, then White moved last, therefore $1 . \mathrm{B} \times \mathrm{g} 3+$ ! $\mathrm{K} \sim 2 . \mathrm{Q} \times \mathrm{h} 1 \#$. A singular retro triplet with 'four nasty tricks': castling, e.p. capture, promotion, unconventional first move.

No. 407: a) $\mathrm{h} 7 \times \mathrm{Sg} 8 \mathrm{~B}+!$; wBg8 is a promotee, bSg 8 was a promotee (e $7 \rightarrow \mathrm{e} 3 \times \mathrm{Xd} 2-$ d 1 S ), hence neither bQ nor bR is a promotee. b) $\mathrm{Bh} 7 \times \mathrm{Bg} 8+!$; bBg 8 cannot be a promotee from d 1 , so it is bQ or bR . c) $\mathrm{h} 7 \times \mathrm{Bg} 8 \mathrm{~B}+!$; wB and bQ or bR are promotees. d) $\mathrm{Bh} 7 \times \mathrm{Sg} 8+$ ! and no promotee at all; bSg 8 was a promotee; wBa3 can never be a promotee. Very clever.

## Narrow corridors

No. 408
Karl Fabel
Basler Nachrichten 1964


Mate in 1

No. 409
Luigi Ceriani
Sahovski Vjesnik 1951
${ }^{\text {st }}$ Prize (c)


Helpmate in 2.5


Mate in 2

The problems no. 408-412 show bishop corridors. No. 408 (FIDE-Album): Genesis of the position: $\mathrm{d} 7-\mathrm{d} 6, \mathrm{sBc} 8-\mathrm{g} 4, \mathrm{f} 7-\mathrm{f} 5, \mathrm{~g} 7-\mathrm{g} 6, \mathrm{sBf} 8 \rightarrow \mathrm{e} 3, \mathrm{bRa} 8 \rightarrow \mathrm{f} 3, \mathrm{bRh} 8 \rightarrow \mathrm{~g} 3$, $\mathrm{f} 2 \times \mathrm{Bf} 3, \mathrm{~g} 2 \times \mathrm{Rf} 3, \mathrm{~h} 2 \times \mathrm{Rg} 3$, the wBf 1 and the bBg 4 cannot leave the corridor from f 1 to h 5 , one B moves to h1 (evasive move) so that the other can pass by; hence $0-0$ is not permitted. The solution is 1.Kf2\#.

No. 409: Genesis of the position: wBh 2 is a promoted officer; $\mathrm{wS} \times \mathrm{Bc} 8, \mathrm{bS} \times \mathrm{Bc} 1$, a7 $\times$ Sb6, c7 $\times$ Qd6, f2-f4, e2-e3, wBf1-e2, wRh1 $\rightarrow$ f6, e $7 \times$ Rf6, g7-g6, a2 $\rightarrow$ a $7 \times$ Sb8B and a) bRh8-g8 (b0-0 not permitted), bBf8 $\rightarrow \mathrm{h} 8$ ! (evasive move), wBb8 $\rightarrow \mathrm{g} 1$, g2-g3, $\mathrm{wBe} 2 \rightarrow \mathrm{~g} 2, \mathrm{~h} 3 \times \mathrm{Bg} 2, \mathrm{~h} 2-\mathrm{h} 4, \mathrm{wBg} 1-\mathrm{h} 2, \mathrm{~g} 2-\mathrm{g} 1 \mathrm{~S} \rightarrow, \mathrm{bBh} 8 \rightarrow \mathrm{a} 7$ or b ) wKe1-d1 (w0-0-0 not permitted), bBf8 $\rightarrow \mathrm{e} 1!$ (evasive move), wBb8 $\rightarrow \mathrm{g} 1$, bBe $1 \rightarrow \mathrm{a} 7$, g2-g3 etc. The castlings exclude each other (Partial Retrograde Analysis). If w0-0-0 is permitted, then 1.0-0-0! Q $\times$ e3 2.Re1 Qe7 3.c8Q/R\#; if b0-0 is permitted, then $1 . \operatorname{Sg} 50-02 . \mathrm{c} 8 \mathrm{Q}$ Kh8 3.Q×f8\#. This is one solution which consists of two parts which exclude each other. Grandiose!

No. 410: Genesis of the position: $\mathrm{c} 2-\mathrm{c} 3, \mathrm{wQ} \rightarrow \mathrm{c} 6, \mathrm{~d} 7 \times \mathrm{Qc} 6, \mathrm{a} 7-\mathrm{a} 6, \mathrm{bQ} \times \mathrm{Pa} \rightarrow \mathrm{a} 7$, $\mathrm{bBc} 8 \rightarrow \mathrm{f} 3, \mathrm{~h} 7-\mathrm{h} 5, \mathrm{bRh} 8 \rightarrow \mathrm{c} 8$, bSg8 $\rightarrow \mathrm{d} 8$, e7-e6, bBf8 $\rightarrow \mathrm{e} 3$, d2 $\times$ Be3-e4, h2-h3, $\mathrm{wBc} 1 \rightarrow \mathrm{~h} 2, \mathrm{~g} 2-\mathrm{g} 3$, $\mathrm{wSg} 1 \rightarrow$, wTh1-g1 ( $0-0$ not permitted), bBf3-h1 (evasive move), $\mathrm{wBf} 1 \rightarrow \mathrm{~g} 8, \mathrm{~g} 7 \mathrm{~g} 6$, $\mathrm{bBh} 1 \rightarrow \mathrm{f5}$, e $4 \times$ Bf5 5 g 6 . Therefore 1.Ra5!. What a masterpiece! (cp. P0007780)


No. 412
Joaquim Crusats
Problemas 2015


White retracts 7 moves, Black 6, then mate in 1 Proca Retractor

No. 411: Genesis of the position: a) $\mathrm{a} 7 \times \mathrm{Sb} 6$, bRa8 $\rightarrow \mathrm{f} 3$, $\mathrm{g} 2 \times \mathrm{Rf} 3$, wBf1 $\rightarrow \mathrm{h} 5$, $\mathrm{g} 6 \times \mathrm{Bh} 5, \mathrm{a} 2 \rightarrow \mathrm{a} 6, \mathrm{~b} 6 \times \mathrm{Ra} 5, \mathrm{c} 7 \times$ Sb6, d7-d5, bBc8-g4, h2 $\times \mathrm{R} \times \mathrm{B} \times \mathrm{S} \times \mathrm{S} \times \mathrm{Qc} 7, \mathrm{f7} 7 \mathrm{f5}$; $0-0$ is permitted. b) $0-0$ is not permitted, since the $w Q$ is needed as a sacrificial piece for a bP. c) first genesis: $\mathrm{a} 7 \times \mathrm{Sb} 6, \mathrm{bRa} 8 \rightarrow \mathrm{f} 3, \mathrm{~g} 2 \times \mathrm{Rf} 3$, wBf1 $\rightarrow \mathrm{h} 5, \mathrm{~g} 6 \times \mathrm{Bh} 5$, $\mathrm{a} 2 \rightarrow \mathrm{a} 6, \mathrm{~b} 6 \times \mathrm{Ra} 5, \mathrm{c} 7 \times \mathrm{Sb} 6, \mathrm{bS} \times \mathrm{Qd} 1, \mathrm{~h} 2 \times \mathrm{R} \times \mathrm{B} \times \mathrm{S} \times \mathrm{S} \times \mathrm{Qc} 7, \mathrm{~d} 7-\mathrm{d} 6, \mathrm{a} 6-\mathrm{a} 7, \mathrm{bBc} 8-\mathrm{g} 4$, wK- or wR- (0-0 not permitted), f7-f5; second genesis: bS $\times$ Qd1, f7-f5, g7-g6, $\mathrm{c} 7 \times \mathrm{Sb} 6, \mathrm{~h} 2 \times \mathrm{R} \times \mathrm{B} \times \mathrm{S} \times \mathrm{S} \times \mathrm{Qc} 7, \mathrm{~d} 7-\mathrm{d} 6, \mathrm{bBc} 8 \rightarrow \mathrm{~g} 4, \mathrm{bRa} 8 \rightarrow \mathrm{f} 3, \mathrm{~g} 2 \times \mathrm{Rf} 3$ and there is a corridor for the $w B$ or the bB, wRh1- (0-0 not permitted), one B-h1 (evasive move), $\mathrm{wB} \rightarrow \mathrm{h} 5, \mathrm{~g} 6 \times \mathrm{Bh} 5, \mathrm{bB} \rightarrow \mathrm{g} 4$, $\mathrm{wR}-\mathrm{h} 1$. That results in four cases: neither K nor R moved (a), K moved (b), either K or R moved (c), R moved (c). Cp. P1067371.

No. 412: The bPs captured 4 pieces, among them $\mathrm{bPh} \times \operatorname{Pg}-\mathrm{g} 1 \mathrm{~B}$, the wPs captured three times. The aim is backward $1 . S d 7-\mathrm{b} 6$ ? $\sim 2 . S b 6-\mathrm{a} 8$, then $1 . \mathrm{c} 8 \mathrm{~S} \#$, but this fails because of $1 \ldots$ b6-b5!; earlier $\mathrm{a} 7 \times$ Bb6 and there is a corridor for the wB and the bB , one B-a1 (evasive move), 0-0-0 not permitted. Solution: backward 1.Kd2-e1! Rb2a2 2.Rd1-a1 R- 3.Kc1-d2! ~4.0-0-0! ~5.d2-d4 ~ and 6.Sd7-b6 ~ (now 6...b6-b5? is illegal since Black's good evasive move ( $\mathrm{bB}-\mathrm{a} 1$ ) is no longer possible because of 0 -$0-0$ !) 7.Sb6-a8, then 1.c8S\#. Further retro play: bBb8- (Black's bad evasive move), $\mathrm{bPb} 6-\mathrm{b} 5, \mathrm{bPa} 7 \times \mathrm{Bb} 6, \mathrm{wBc} 1 \rightarrow \mathrm{~b} 6, \mathrm{wPb} 2 \times \mathrm{Bc} 3, \mathrm{bBf} 8 \rightarrow \mathrm{c} 3, \mathrm{e} 7 \times \mathrm{Xd6}$ etc. An excellent logical Proca retractor (see p. 137) with an amazing use of the bishop corridor, never seen before.

## Retractors

No. 413
Thomas R. Dawson
Chess Amateur 1920


White retracts 1 move, then mate in 2

No. 414
Nenad Petrovic
problem 1972


White retracts 1 move, then mate in 2

No. 415
Werner Keym
Stuttgarter Zeitung 2005


White retracts 1 move, then mate in 2
b) $B h 8 \rightarrow f 8$

Here you will find retractors with only 1 single retro move (no. 413-419), help retractors with more retro moves (no. 420-422), defensive retractors of the type Høeg (no. 423-428), Proca (no. 430-436) and neither of them (no. 429). In the large field of retro problems the defensive retractor has a special feature and charm: there is adversary play as in the chess game. The players retract alternately and oppose one another with the object of mating the opponent after the next retraction (whenever the forward stipulation is 'mate in n moves').

No. 413: This is T. R. Dawson's most famous retractor: backward h2-h4 and forward 1.h2-h4! g4×h3 e.p. 2.B $\times$ g6\#. - There are even two miniatures with this idea: P0000030 and P1108952, moreover a well-known related two-mover (P0005851).

No. 414 shows a similar idea in a fine setting: backward Kh2-g3! (the previous move was Rf8/g8-h8+, hence $0-0$ is not permitted), then $1 . \mathrm{Kg} 1!\sim 2 . \operatorname{Rc} 8 \#$. Tries: backward $\mathrm{Kh} 2 \times \mathrm{Pg} 3$ ? ( $\mathrm{Ph} 4 \times \mathrm{Xg} 3++$ ) or $\mathrm{Kf} 2-\mathrm{g} 3 / \mathrm{Kg} 2-\mathrm{g} 3$ ?, then $1 . \mathrm{Kg} 1 / \mathrm{Kh} 10-0$ !.

No. 415: a) Backward e $5 \times \mathrm{f} 6$ e.p., then 1.Ba2+ d5 $2 . \mathrm{e} 5 \times \mathrm{d} 6$ e.p.\# or $1 .$. . Ke7 2.Bf6\#. b) Backward e $7 \times$ Sd8R, then $1 . e 8 \mathrm{Q}+\mathrm{K} \times \mathrm{f6} 2$ 2.Qe7\# or $1 . . . \mathrm{Kd} 52$ 2.Qe4\#. Two e.p. captures and two promotions in a miniature.

No. 416
Horst Stempel
Hamburger Problem-
Nachrichten 1950


White retracts 1 move, then mate in 1

No. 417
Valerian Onitiu
Die Schwalbe 1934


White retracts 1 move, then mate in 1

No. 418
Josef Haas
Die Schwalbe 1986 $4^{\text {th }} H M$


White retracts 1 move, then mate in 2

No. 416: Genesis of the position: Bc 1 died on $\mathrm{c} 1, \mathrm{~b} 7-\mathrm{b} 6, \mathrm{bBc} 8 \rightarrow \mathrm{~d} 1, \mathrm{~g} 7-\mathrm{g} 5$, wPa captured $Q, R, R, S$ and $S$ on light squares and promoted to $B$ on $f 8, d 7 \times$ Qe6. The last moves were Bh1-a8! Ke4-f5 Rg2-e2+ Kf3-e4+. So the solution is backward Bh1-a8, then 1.Bh1-e4\#. Astonishing! This is one of the rare problems in which the retro move (from a8 to h1) is executed for retroanalytical reasons only. In order to give mate the bishop could move to b7, c6 etc.

No. 417: Backward 1.0-0-0! g7-g5 2.Be4-h7 g5-g4 3.Bc6×Pe4 e5-e4 4.Ba4-c6 e6-e5 5.Bd1×Pa4 a5-a4 6.Be2-d1 a6-a5 7.Bf1-e2 a7-a6/Kg4-h4 8.e2×Xf3; earlier $\mathrm{bPc} 7 \rightarrow \mathrm{c} 1 \rightarrow \mathrm{Bg} 1 / \mathrm{g} 3, \mathrm{bPh} 6 \times \mathrm{Bg} 5$. So the solution is backward $0-0-0$, then $1 . \mathrm{h} 5 \times \mathrm{g} 6$ e.p.\#!. A well-earned first prize.

No. 418 drove many strong solvers to despair. Backward $\mathrm{b} 3 \times \mathrm{Xa} 4$ ? (then 1.Qxa4+ 2.Qd7\#) would result in 7 captures ( Pg 3 comes from g 2 and Pe 5 from h2), but there are 10 black pieces. Hence backward not e4-e5? nor d3×c4?. Tries: backward Rc2-b2?/Sd3-c5?/Rf7×Pf5?, then $1 . K x g 80-0-0+!$; backward c2-c4?, then $1 . \mathrm{K} \times \mathrm{g} 8$ Qa2+! ( $0-0-0+$ ? 2.Rf8\#). Here is the incredible solution: backward Rf7 $\times$ Bf5! (before that $\mathrm{g} 6-\mathrm{g} 5+$ which is why the wK moved from e1 to h 7 via $\mathrm{f} 7 / \mathrm{ff}$ making 0 -$0-0$ impossible), then $1 . \mathrm{K} \times \mathrm{g} 8 \sim 2$.Rf8\#. 'My favourite problem.' (J. Haas himself)

No. 419
Josef Haas
Mannheimer Morgen 1973


Black retracts 1 move, then helpmate in 1

No. 420
Julius Dorn-Lüttgens
Feenschach 1950


White and Black retract 1 move, then helpmate in 1

No. 421
Kurt Smulders
Probleemblad 1972


White and Black retract 1 move, then helpmate in 1

The most famous help retractor is J. Sunyer's problem with only the kings on the board (no. 39b).

No. 419: Thematic try: backward $\mathrm{Bb} 7 \times \mathrm{Qh} 1$ ?, then $1.0-0-0 \mathrm{Q} \times \mathrm{b} 7 \#$, but $0-0-0$ is not permitted since the wPs captured 7 times and the $w P d$ promoted to queen on d8/e8/f8. The solution is backward e $4 \times \mathrm{d} 3$ e.p.! (which obstructs the way of four (!) long distance pieces), then 1.0-0-0 Qc3\#. Typical style of J. Haas.

No. 420: Backward $0-0 \mathrm{Rh} 8 \times \mathrm{Qh} 2$, then $1.0-0$ Qh7\#. A little gem.
No. 421: Backward $d 7 \times$ Re8Q+e2-e1B, then $1 . e 2-e 1 R d 7 \times c 8 S \#$ Allumwandlung!

No. 422
Janko Furman
Feenschach 1971 (c)


## Black and White retract 1 move, then helpmate in 2.5 AP

Solution: backward b0-0 w0-0-0, then $1 . c 5 \times b 6$ e.p.! Qd7 2.0-0 0-0-0 3.a8Q\# (Valladao). Retroanalysis: ${ }_{\mathrm{w}} \mathrm{Pa} \times \mathrm{B}$ (on a light square) and $\mathrm{w} \mathrm{Pb} 6 \times \mathrm{Ba} 7$ (on a dark square); Bf1 died on f 1 ; the bPs captured $\mathrm{Q}, \mathrm{S}, \mathrm{S}$ (on light squares) and $B$ (on the dark square d6), hence the last move before b0-0 w0-0-0 cannot be e $6 \times \mathrm{Q} / \mathrm{S} / \mathrm{Bd} 5$, but only b7-b5 (before that b6×Ba7). So both white castlings, which make Ke1, Ra1 and Rh1 immobile, are necessary for legalising the e.p. capture (AP), both black castlings are necessary for the mate of the bKc8. A great achievement.

No. 423
Henrik Juel
Werner Keym
Die Schwalbe 2018


White retracts 2 moves, Black 1, then mate in 1 Høeg Retractor
b) $\mathrm{Kb} 4 \rightarrow d 3$

No. 425
Thomas R. Dawson
Magyar Sakkvilag 1926


White retracts 2 moves, Black 1, then mate in 1 Høeg Retractor

No. 426
Jan Knöppel
Stella Polaris 1975
${ }^{\text {st }}$ Prize


White retracts 2 moves, Black 1, then mate in 1 Høeg Retractor

In Defensive Retractors of the type Høeg (so called after Niels Høeg in 1924) the opponent decides whether the retraction made shall be an uncapture, and if so which piece shall be uncaptured.
No. 423: a) White retracts Kc3-b4 and Black must add Rb4, Black retracts Rd4b4+ and White adds Qb4, White retracts c7-c8B, then 1.Qb8\#. In short: backward $1 . \mathrm{Kc} 3 \times \mathrm{Rb} 4$ ! Rd $4 \times \mathrm{Qb} 4+2 . \mathrm{c} 7-\mathrm{c} 8 \mathrm{~B}$, then $1 . \mathrm{Qb} 8 \#$. b) Backward not $1 . \mathrm{Kc} 3 \times \mathrm{Rd} 3$ ? $(\operatorname{Rd} 4 \times \mathrm{Qd} 32 . \mathrm{c} 7-\mathrm{c} 8 \mathrm{~B}$, then 1.Qa6\#) because of $1 . \mathrm{Kc} 3 \times \operatorname{Pd} 3!(\mathrm{e} 4 \times \mathrm{d} 3$ e.p. $2 . \mathrm{d} 2-\mathrm{d} 4$ e5-e4+), but $1 . K d 4 \times$ Sd3! Se $5 \times$ Qd3+ 2.c7-c8B, then 1.Qa6\#.
No. 424 is a symmetrical example with only one piece: Niels Høeg, On retraction chess problems 1927, bKhl. Add the wK, Black and White retract 1 move, then mate in 1, Høeg retractor. Solution: add wKf1; backward Kh $2 \times$ Qh1 Qe $4 \times$ Bh1 (Qe $4 \times \mathrm{Q} / \mathrm{Rh} 1$ ? illegal), then 1.Qh4\#. Try: add wKh3?, backward $\mathrm{Kg} 1 \times \mathrm{Qh} 1$ $\mathrm{Qe} 4 \times \mathrm{Q} / \mathrm{Rh} 1+$ (last move e.g. h2-h1Q/R+). Cp. no. 214.
No. 425: White retracts $\mathrm{c} 7-\mathrm{c} 8 \mathrm{Q}$ !. If Black retracts Bb4-a3, White adds a knight on a3 and retracts Sc5-a6; thereafter Black may add $\mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{P}$ (but not a $S$ giving an illegal check) on a6, then 1.Sc5-b3\#. If Black retracts Bc5-a3, White adds a knight on a3 again and retracts $\mathrm{Sb} 4-\mathrm{a}$; thereafter Black may add $\mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{P}$ (but not a S giving an illegal check) on a6, then 1.Sb4-c2\#.
No. 426 (FIDE-Album) shows the typical Høeg retractor being rich in variants. The wPs captured the missing black pieces, hence there is no capture left for the wK on c 4 or a wP on e4. Backward 1.Kd3-c4 e5-e4+ 2.Se6-c7, then 1.Sg7\#; $1 \ldots \mathrm{~d} 5 \times \mathrm{Qe} 4$ 2.Qe7-e4+, then 1.Qh7\#; $1 \ldots \mathrm{~d} 5 \times \operatorname{Re} 42 . S b 5-\mathrm{c} 7$, then $1 . \mathrm{Sd} 6 \# ; 1 \ldots \mathrm{~d} 5 \times$ Be4 2.Bf3e4+, then $1 . B g 4 \# ; 1 \ldots \mathrm{~d} 5 \times \operatorname{Se} 42 . B h 2-\mathrm{g} 3$, then 1.Sd6\#. Perfect.


White retracts 7 moves, Black 6, then mate in 1 Høeg Retractor

No. 428
Werner Keym
Die Schwalbe 2015


White retracts 2 moves, Black 1, then mate in 2 Høeg Retractor

No. 429
Werner Keym
Die Schwalbe 2006 (c)


White retracts 3 moves, Black 2, then mate in 1 Defensive Retractor 2 solutions

No. 427 shows the 100 Dollar Theme (p. 35) 'backward': 1.h7-h8S a2-a1S . . . 5.h3h4 a6-a5 6.h2-h3 b7×Sa6 (not 6...b7×Qa6? 7.g2×Q/Bf3!) 7.g2×Xf3 (not 7.f2-f3? retro stalemate), then $1 . \mathrm{Sc} 7 \#$.

No. 428 (FIDE-Album): the wPs captured 4 times, wOfficer $\times$ Q/S. Backward not 1.Qb2-c1? because of +bQc 1 !, but $1 . \mathrm{Rb} 2-\mathrm{b} 1$ ! with three cases. a) 1.Rb2-b1??, then the previous move was either b7-b5 (then $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.! $\mathrm{a} 7 \times \mathrm{b} 6+2 . \mathrm{S} \times \mathrm{b} 6 \#$ ) or d7d5 (then $1 . e 5 \times \mathrm{d} 6$ e.p.! e $7 \times \mathrm{d} 62 . S \times \mathrm{d} 6 \#$ ), a two-part PRA problem [-1 \& \#2]. - b) $1 . \mathrm{Rb} 2 \times \mathrm{Qb} 1$ ?, then the previous move was either $\mathrm{b} 7-\mathrm{b} 5$ (then no mate in 2 ) or d7-d5 (then $1 . e 5 \times \mathrm{d} 6$ e.p.! 2.\#), hence $1 . . . \mathrm{b} 7-\mathrm{b} 52 . \mathrm{Ba} 4-\mathrm{c} 2$ (then $1 . c 6 \times \mathrm{b} 7 \#$ ) or $1 . . . \mathrm{d} 7-$ d5 2.Be4-c2 (then $1 . c 6 \times \mathrm{d} 7 \#$ ) [-2 \& \#1]. - c) $1 . \mathrm{Rb} 2 \times \mathrm{Sb} 1!$ Sa3-b1! 2.Qb1-c1 (no more piece can be added), the previous move was either b7-b5 (then $1 . \mathrm{a} 5 \times \mathrm{b} 6$ e.p.! $\mathrm{a} 7 \times \mathrm{b} 6+2 . \mathrm{S} \times \mathrm{b} 6 \#$ ) or d7-d5 (then $1 . \mathrm{e} 5 \times \mathrm{d} 6$ e.p.! e $7 \times \mathrm{d} 62 . \mathrm{S} \times \mathrm{d} 6 \#$ ), a two-part PRA problem again [-2 \& \#2]. Probably the first Høeg Retractor with PRA.

Nr. 429: I. backward 1.Ra2-b2! g5-g4 2.Qb5-b1 g6-g5 (g7-g5 illegal) 3.Qg5b5! (before that g7-g6 4.Ra5-a2 S-g3 5.Re5-a5+), then 1.Q $\times \mathrm{g} 3 \# ;$ 2.Qb4/b6-b1? g7-g5!. II. backward 1.Rc2-b2! g5-g4 2.Qb6-b1 g6-g5 (g7-g5 illegal) 3.Qc7-b6! (before that g7-g6 4.Qc8-c7 S-g3 5.c7-c8Q+), then 1.Q×g3\#; 2.Qb4/b5-b1? g6-g5 3.Qd6/e5-b4/b5 illegal. 1.Qa2-b1? g5-g4 2.Q-a2 g7-g5!. Genesis of the position: $w \mathrm{~Pa} \times \mathrm{Xb} \times \mathrm{Xc}-\mathrm{c} 8 \mathrm{X}, \mathrm{e} 3 \times \mathrm{S} / \mathrm{Xf} 2$, e2-e4, $\mathrm{d} 4 \times \mathrm{X} / \mathrm{Se} 3$, the wPs captured two pieces on c and d, wOfficer $\times \mathrm{Ph}$; the specification Høeg or Proca is not necessary. Mutual decoy by means of threatening retrostalemate, differentiated through either a pawn's single or double step. 'Sophisticated combination of square strategy and retroanalysis. Excellent correspondence of both solutions.'

No. 430
Bruno Sommer
Die Schwalbe 1953


White retracts 2 moves, Black 1, then mate in 1 Proca Retractor

No. 431
Wolfgang Dittmann
feenschach 1979
$1^{\text {st }}$ Prize


White retracts 7 moves, Black 6, then mate in 2 Proca Retractor

No. 432
Janko Furman
feenschach 1974
$1^{s t} / 2^{\text {nd }}$ Prize


White retracts 5 moves, Black 4, then mate in 1 Proca Retractor

In Defensive Retractors of the type Proca (so called after Zeno Proca in 1924) the player making the retraction decides which piece (if any) shall be uncaptured.

No. 430: Genesis of the position: $\mathrm{c} 2-\mathrm{c} 3, \mathrm{f} 2 \times \mathrm{Sf} 3, \mathrm{bPh} 7 \times \operatorname{Bg} 6 \times \mathrm{Xf} 5(=$ promotee from h8) $\times$ Se $4 \times$ Sd $3 \times$ Qc2, d2-d3, wBc $1 \rightarrow$ f6, g $7 \times$ Bf6, bBf8 $\rightarrow$ b4, a3 $\times$ Bb 4, wRa1 $\rightarrow e 6$, d7 $\times$ Re6, f3 $\times$ Se4, Bc8-d7, e4×Rd5, Bd7-c6, d5 $\times$ Bc6, Qd8-d4 and now b4-b5, $0-$ $0-0,0-0$. As you see, White is pressed for time. Solution: backward 1.0-0! 0-0-0 2.b4-b5, then 1.Rh8\#.

No. 431: Backward 1.Kd2 $\times$ Be1! e2-e1B+ 2.Kc3-d2 e4 $\times$ d 3 e.p.+ 3.d2-d4 e5-e4+ $4 . \mathrm{Kd} 3 \times \mathrm{Pc} 3$ ! $\mathrm{b} 4 \times \mathrm{c} 3$ e.p. $+5 . \mathrm{c} 2-\mathrm{c} 4 \mathrm{~b} 5-\mathrm{b} 4+6 . \mathrm{Kc} 4 \times$ Rd3! (genesis of the position: Bc8 died on c 8 , $\mathrm{bBa6}$ comes from d1 or f1, bPs captured 8 times, bOfficer $\times \mathrm{Pa}, \mathrm{wPb} 2$ remained on the b-file; not $6 . \mathrm{Kc} 4-\mathrm{d} 3$ ? c6 6 Rb5+!, earlier b6 $\times$ Rc7-c8R) $6 \ldots \mathrm{c} 6 \times \mathrm{Pb} 5+$ 7.Kc5-c4, then 1.b5-b6\#. Splendid!

No. 432: Backward $1 . \mathrm{e} 5 \times \mathrm{f6}$ e.p. f7-f5 2.f5 $\times$ g6 e.p. g7-g5 3.g5 $\times$ h6 e.p. h7-h5 4.0-$0-0$ ! forces $0-0$ ! $5 . \mathrm{b} 3 \times$ Bc4 (then 1.c8Q\#!) $5 \ldots$ Bf1-c4 $6 . \mathrm{a} 2 \times \mathrm{Qb} 3 \mathrm{Bd} 4-\mathrm{g} 17 . \mathrm{b} 2 \times$ Sc3 Sg1-h3 8.e4-e5 Bf6-d4 9.e3-e4 Be7-f6 10.e2-e3 Bf8-e7 11.f4-f5 Bh3-f1 12.f3-f4 e7-e6 13.f2-f3 Bc8-h3 14.g4-g5 (precisely suitable) $14 \ldots$. . d7×Q/Sc6 15.Q/S-c6 in a legal position. In case of $4 \ldots$ Sh3-f4? (then 1.bBe3\#) White has not enough tempo moves to resolve the position. 3 e.p. captures, 2 castlings, 1 promotion. Superb!
Cp. the Proca miniature no. 108 with 1 e.p. capture, 1 castling, 1 promotion.

No. 433
Günther Lauinger
Hanspeter Suwe
Wolfgang Dittmann
0-0 1979 1 $1^{\text {st }} 2^{\text {nd }}$ Prize


White retracts 3 moves, Black 2, then White castles
Proca Retractor

No. 434
Wolfgang Dittmann
The Problemist 1980
$2^{\text {nd }} H M$


White retracts 7 moves, Black 6, then mate in 1 Proca Retractor

No. 435
Günther Weeth
Werner Keym
Die Schwalbe 2017


White retracts 11 moves, Black 10, then mate in 1 Proca Retractor

No. 433 is probably the first Proca with the stipulation 'Castling'. Backward $1 . \mathrm{Rh} 4 \times$ Rh1! $\sim(\mathrm{Rh}-/ \times \mathrm{h} 1+$, Pg $2 \times \mathrm{h} 1 \mathrm{R}+$, Ph2-h1R + , Sf1-/ $\times \mathrm{d} 2+$ ) $2 . \mathrm{Ra} 4 \times$ Bh $4 \sim$ (R-/x+, Pg3-/x+, Sg3×f1+) 3.Ra1-a4 (not 3.Ra1 $\times$ Xa4? since the wPs captured 12 times) - and now $1.0-0-0$. I would have expected $0-0$.
If in a chess game an identical position occurs three times, a player can demand a draw. Identical position means the same kind of pieces on the same squares with the same move rights. In problem chess this 'draw by repetition' works automatically. In general the player who starts the draw pendulum forces the opponent to perform an unfavourable move. For this manoeuvre retractors are very suitable.
No. 434: Solution: backward 1.a5×b6 e.p.! b7-b5 2.Kc4-c3 (= ${ }^{\text {st }}$ time) Sc7a8 3.Kc3-c4 (prevents Sb5/d5-c7) Sa8-c7 4.Kc4-c3 (= $2^{\text {nd }}$ time) Sc7-a8 5.Kc3c4 and now $5 \ldots$ Sa8-c7 would be the $3^{\text {rd }}$ time, which is not permitted; therefore $5 \ldots \mathrm{Sa} 8 \times \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{Sc} 76 . \mathrm{Kc} 4-\mathrm{c} 3$ forces $\mathrm{Rf} 8 \times \mathrm{Sg} 8 / \mathrm{Rf} 8-\mathrm{g} 87 . \mathrm{Sh} 6-\mathrm{g} 8 / \mathrm{K} \sim$, then $1 . \mathrm{e} 7 \times \mathrm{f} 8 \mathrm{Q}, \mathrm{R} \#$. This is the so-called 'draw pendulum' (cp. P1346005). Difficult.

No. 435: Solution: backward 1.g3-g4 (hence bBh2 is a promotee from g1) Bg1-h2 2.Rc8-a8 B- $3 . \operatorname{Rg} 8 \times$ Bc8 B- $4 . \operatorname{Rg} 7-\mathrm{g} 8$ B- $5 . \operatorname{Rg} 5 \times \operatorname{Pg} 7$ (prevents earlier h $2 \times \mathrm{Pg} 3$ ) B-6.Ra5-g5 Bh2-g1 7.Ra4 $\times \mathrm{Pa} 5 \mathrm{Bg} 1-\mathrm{h} 2$ starts the pendulum (7...a7/a6-a5? is illegal because it locks up the bR, which is needed as a sacrificial piece on b4 or g3) 8.Ra3a4 Bh2-g1 9.Ra4-a3 Bg1-h2 10.Ra3-a4 forces h2×Sg1B! (not 10...Bh2-g1? which results in $11 . R a 4-\mathrm{a} 3=3^{\text {rd }}$ time) $11 . \mathrm{Ra} 4-\mathrm{a} 3$, then $1 . \mathrm{Se} 2 \#$. A shortened or 'amputated' pendulum. Very difficult.

No. 436
Joaquim Crusats
Roberto Osorio
Andrey Frolkin
Die Schwalbe 2017
W. Keym JT Prize


White retracts 23 moves, Black 22, then mate in 1 Proca Retractor

The aim is backward f 3 - f 4 , then $1 . \mathrm{Bg} 4 \#$. Therefore the bSh6 must be forced to move.
Solution: backward 1.c5 $\times$ Pd6 e.p.! (a) d7-d5 $2 . \mathrm{d} 5 \times$ Pe6 e.p. e7-e5 $3 . e 5 \times$ Pf6 e.p. f7-f5 $4 . e 4-$ e5! (b) Bg8-h7 5.Bd2-c1 Bh7-g8 6.Ba5-d2 Bg8h7 7.Bc7×Pa5! Bh7-g8 8.Bb8-c7 Bg8-h7 9.b7b8B Bh7-g8 10.b6-b7 Bg8-h7 11.b5-b6! ( $1^{\text {st }}$ time) (c) Bh7-g8 12.Kg1-h1 Bg8-h7 13.Kh1g1 ( $2^{\text {nd }}$ time) Bh7-g8 $14 . \mathrm{Kg} 1-\mathrm{h} 1 \mathrm{a6}-\mathrm{a} 5$ ! ( $1^{\text {st }}$ time; 14...Bg8-h7? 15.Kh1-g1! forces a7-a5 ... 20.\#) 15.Kh1-g1 Bg8-h7 16.Kg1-h1 Bh7-g8 ( $2^{\text {nd }}$ time) 17.Kh1-g1 Bg8-h7 18.Kg1-h1 a7-a6! (avoids $3^{\text {rd }}$ time) 19.Kh1-g1 Bh7-g8 $20 . \mathrm{Kg} 1-\mathrm{h} 1$ Bg8-h7 (2 ${ }^{\text {nd }}$ time) 21.Kh1-g1 Bh7-g8 22.Kg1-h1 $\mathrm{S} \sim \mathrm{h} 6$ (avoids the $3^{\text {rd }}$ time) and at last 23.f3-f4, then $1 . B-/ \times \mathrm{g} 4 \#$.
(a) $1 . g 5 \times$ Pf6 e.p.? f7-f5 $2 . f 5 \times$ Pe6 e.p. e7-e5 $3 . e 5 \times$ Pd6 e.p. d7-d5 $\ldots$ fails because $7 . \mathrm{Bc} 7 \times \mathrm{Pa} 5$ is illegal (too many captures).
(b) $4 . \mathrm{Kg} 1-\mathrm{h} 1$ ? White starts the pendulum and seems to be successful. $4 \ldots \mathrm{Bg} 8-\mathrm{h} 7$ 5.Kh1-g1 Bh7-g8 (2 ${ }^{\text {nd }}$ time) $6 . \mathrm{Kg} 1-\mathrm{h} 1 \mathrm{Bg} 8-\mathrm{h} 77 . \mathrm{Kh} 1-\mathrm{g} 1$ e4-e3 (avoids $3^{\text {rd }}$ time) ... 11.Kh1-g1 S $\sim$ h6 (avoids $3^{\text {rd }}$ time) 12.f3-f4, then $1 . \mathrm{B}(\times) \mathrm{g} 4 \#$. However, Black has a special defense: he retracts $4 \ldots$. e4-e 3 ! If the pendulum is started from this position on, the bB can occupy the same square for a $3^{\text {rd }}$ time, reach a position with the same pieces on the same squares, but without the same move rights and thereby prove that he has the right to play e $4 \times \mathrm{d} 3$ e.p. In this case White would be forced to retract 5.d2-d4 or f2-f4; then Black would have the advantage to start the (new) pendulum! This defense is parried by $4 . e 4-\mathrm{e} 5$, it is true, but by playing $4 \ldots$. Bg8-h7 Black can start a pendulum.
(c) White uses the same trick as Black in (b): at the right moment he retracts b5-b6 and thereby claims the right to play b5 $\times$ a6 e.p. which would force Black to retract a7-a5; thus White gets the advantage to start the (new) pendulum - this time with success!

An outstanding, most original chess problem! Extremely difficult.

## 50 move rule

No. 437
Nikita Plaksin
Shakhmaty v SSSR 1980
Special Prize


Draw

To no. 437
Critical position
Next move: f3-f4


There are three special rules for a draw: repetition rule (see p. 138), dead position rule (see p. 141) and 50 move rule. The latter means: the game may be drawn if each player has made at least the last 50 moves without the move of any pawn and without any capture. In retro problems this 'draw by $\mathbf{5 0}$ move rule' works automatically.

No. 437: The shortest proof game from the critical position to the diagram position needs less than 50 moves if wKe1 and wRa1 may make moves; in this case Black will easily win. White, however, castles and thereby proves that wKe1 and wRal have not yet moved; in this case the shortest proof game needs exactly 50 moves and White can draw: 1.f3-f4 (move of a pawn) $\sim 2.17$.Rf2 $\rightarrow \mathrm{g} 7$ Bh7 8./10.R $\rightarrow$ b7 11.Bb8 12./14.R $\rightarrow \mathrm{c} 3 \mathrm{Ra} 7$ 15...Rb7 16.Ba7 Rb8 17...Rg8 18.Bb8 Rg7 19...Bg8 20./22...R $\rightarrow$ g5 23...Bh7 24./26...Rb7 27.Ba7 Rb8 28.Rca3 Rg8 29.Bb8 Rg7 30.Ra7 Bg8 31.Rb7 Rh7 32.Ba7 Rh5 33.Rb8 Bh7 34.Rg8 Rg3 35.Rg7 Bg8 36.Rh7 Rf3 37.Rh6 Kg7 38.Bb3 Kf8 39.Ba4 Ke8 40.Rh7 Kd8 41.Rg7 Bh7 42.Bb8 Kc8 43.Rg8+ Kb7 44...Rf2 45./47...Rh $\rightarrow$ f3 48... Bg3 49.Re8 Bg8 50.Rf8 Qg7 (= no. 437) and 51.0-0-0! draw ( $=50$ moves one after the other without capture/pawn's move). A chess problem out of the box indeed! Genesis of the critical position: $\mathrm{b} 2 \rightarrow \mathrm{~b} 5$, a5xSb4, Ra8 $\rightarrow \mathrm{b} 3$, Bc1 $\rightarrow$ b8, a2 $\rightarrow \mathrm{a} 8 \mathrm{X}, \mathrm{Sg} 8 \rightarrow \mathrm{~h} 4, \mathrm{~h} 7 \times \mathrm{Qg} 6 \times \mathrm{Xf5}, \mathrm{Rh} 8 \rightarrow \mathrm{a} 2$, wS-h8, bS-a8, b7-b6, Bc8 $\rightarrow \mathrm{g} 8$, g7-g6, Bf8 $\rightarrow \mathrm{h} 2$, Ke8 $\rightarrow \mathrm{f} 6$, e2-e3, Bf1-c4, f2-f3, bRb$\mathrm{b} 2, \mathrm{Rh} \rightarrow \mathrm{f} 2, \mathrm{Qd} 8 \rightarrow \mathrm{e} 5$. You will find further examples in $P D B\left(\mathrm{~K}={ }^{\prime} 50\right.$ move rule').

## Dead position rule

No. 438
Andrew Buchanan
The Problemist 2001


Who moved last?

No. 439
Andrew Buchanan
Retro mailing list 2007


Black to move. Last move?

No. 440
Nikita Plaksin
feenschach 1993


White retracts 1 move, then stalemate in 1

According to the Laws of Chess (1997) the game is drawn when a position is reached from which a checkmate cannot occur by any possible series of legal moves, even with the most unskilled play. This immediately ends the game (Art. 9.6). The game is said to end in a 'dead position'. This 'dead position rule' works in retro problems as well (see p. 170). Andrew Buchanan, who was the first to see the chance of applying this rule to problems, created the term 'Dead Reckoning'.
No. 438: There was a dead position in the case of $\mathrm{bKa} 7 \times \mathrm{B} / \mathrm{Sa} 8$ or $\mathrm{bKb} 8 \times \mathrm{B} / \mathrm{Sa} 8$. There was a dead position as well in the case of $\mathrm{bKa} 7 \times \mathrm{Q} / \mathrm{Ra} 8$ or $\mathrm{bKb} 8 \times \mathrm{Q} / \mathrm{Ra} 8$ because the bK is forced to capture $\mathrm{Q} / \mathrm{R}$; hence the position before the capture (i.e. $\mathrm{bKa} 7, \mathrm{bKb} 8$ and $\mathrm{wQ} / \mathrm{Ra} 8$ ) was already drawn. Therefore White moved last (i.e. $\mathrm{wK} \times \mathrm{Q} / \mathrm{R} / \mathrm{Pc} 6$, not $\mathrm{wK} \times \mathrm{B} / \mathrm{Sc} 6$ because of dead position!).
No. 439: In ordinary retro problems the last move can only be an e.p. capture if this move is giving check (see no. 145 and p. 38, type A and type B). No. 439 shows a baffling exception in type B by means of the dead position rule. White's last move was f5-f6 or $\mathrm{g} 5 \times \mathrm{f} 6$ or $\mathrm{g} 5 \times \mathrm{f} 6$ e.p. The position with wPf5 was 'dead' because each move (f5-f6 or f5 $\times \mathrm{g} 6$ ) must result in a draw. The position with wPg 5 and bXf 6 (last move X-f6) was 'dead' as well because the move $\mathrm{g} 5 \times \mathrm{Xf6}$ is forced and results in a draw. The position with wPg5 and bPf5 (last move f7-f5), however, was not a forced draw because the moves $1 . \mathrm{e} 4 \mathrm{xf} 5 \mathrm{~g} 6 \mathrm{xf} 52 . \mathrm{g} 6 \mathrm{f} 4$ etc. (no draw) had been possible. You will find further and more complex examples in Buchanan's articles and in PDB ( $\mathrm{K}=$ ‘dead position').
No. 440 is a fore-runner which I happened to discover. White does not retract Ka3a4? (this position would be 'dead'), but $\mathrm{Ka} 3 \times \mathrm{Pa} 4$ !, then $1 . \mathrm{B} \times \mathrm{a} 2$ stalemate (= draw)!

## Special Illegal Clusters

The stipulation 'Illegal Cluster' means that certain pieces have to be added to the incomplete diagram position in such a way that an illegal position arises which becomes legal by the removal of any one of the pieces (except the kings). So the first aim of an IC is to produce illegality. Illegal Clusters do not know any weasels per definitionem.

No. 441
Thomas R. Dawson
The Problemist 1933


Add 6 bPs for an Illegal Cluster

No. 442
Hans Gruber
feenschach 1979


Add 1 wS and 4 wPs for an Illegal Cluster b) $w K \rightarrow d 7$

No. 443
Hans Heinrich Schmitz
feenschach 1981


Add 24 pieces for an Illegal Cluster

No. 441: The position of the solution (see below) is illegal because the bPs captured 15 times, however, there are 2 white pieces. This position becomes legal if one wP or one bP is removed. - No. 442: In the position of the solution in a) as well as in b) the check by the (promoted) knight is illegal. - In no. 443 (FIDE-Album) 24 pieces have to be added. That is still the current record.

Solution no. 441


You will find many Illegal Clusters in $P D B$ ( $\mathrm{K}=‘$ 'Illegal Cluster'), but only few with an empty chessboard as no. 444-446. The first realization was P1108914.

No. 444: Werner Keym, Die Schwalbe 2008. Construct an Illegal Cluster with $w K R P P P P$ and $b K$. If you remove a certain piece, you will obtain a position with the two last single moves being unambiguous.
Solution: wKg1 Rf1 a2 b2 e2 f2 bKa1. Last moves without Pe2: $0-0+\mathrm{Kb} 1 \times \mathrm{Sa} 1$.
No. 445: Werner Keym, Die Schwalbe 2008. Construct an Illegal Cluster with $w K R B S S S S S S$ and $b K B$. The white pieces stand on light squares.
Solution: wKc8 Re2 Bb3 Sa2 Sa4 Sc2 Sf3 Sh3 Sh5 bKd6 Bg4. The position before bKe6 $\times$ Pd6+ e $5 \times \mathrm{d} 6$ e.p. $+\mathrm{d} 7-\mathrm{d} 5$ is illegal because of the illegal check by Bb 3 . Without Re2 the last move was bKe6 $\times$ S/Rd6+. Quite complicated.

No. 446 (FIDE-Album): Werner Keym, Die Schwalbe 2014. Construct an Illegal Cluster with $w K$ and $b K$ and a) wRBSP, b) P instead of $S, c) S$ instead of $B, d) B$ instead of $R$. Each occupied square must have two occupied squares adjacent to it. The black king must stand as far away as possible from its original square e8.
Solution below: a) without Rb7 the last moves were wPc5 $\times$ b6 e.p.+ b7-b5 c4-c5+ (e.p. capture); b) without Bh 1 or Ph 2 the last move was $0-0-0+$ (castling), the mirrored position with $\mathrm{wKg} 1 / \mathrm{bKc} 1$ is legal ( $0-0+\mathrm{Kc} 2-\mathrm{c} 1$ ); c) the position before $\mathrm{wPb} 7 \times \mathrm{Q} / \mathrm{R} / \mathrm{B} / \mathrm{Sa} 8 \mathrm{R}+$ is illegal (promotion with capture), the mirrored position with $\mathrm{wKd} 5 / \mathrm{bKa} 7$ is legal ( $\mathrm{wPb} 7 \times \mathrm{Xa} 8 \mathrm{R}+\mathrm{Ka6}-\mathrm{a} 7$ ); d) the position before $\mathrm{wPb} 7-\mathrm{b} 8 \mathrm{~B}$ is illegal (promotion without capture). This is a complete Valladao. It is extremely difficult to find the solution d) because of its hexagonal form.

Solution no. 446a


Solution no. 446b


Solution no. 446c


Solution no. 446d


## Shortest Proof Games

Since 1980 short proof games (SPG) have generally ranked in retro columns. Their seemingly inexhaustible themes and tasks are fascinating for composers and solvers. You will find thousands of them in $P D B$ ( $\mathrm{K}=$ ‘unique proof game'). Unique or unambiguous means that the whole sequence of moves is running without any dual.

No. 447
Geza Schweig
Tukon 1938


Proof game in 4.0

No. 448
Tibor Orban
Die Schwalbe 1976
Commendation


Proof game in exactly 4.0

No. 449
Werner Keym
Die Schwalbe 1992


Proof game in 6.5

No. 447 and 448 are two famous puzzles which will attract attention at every chess club. The 'wrong' knight in No. 447 is amazing: 1.Sc3 d6 2.Sd5 Sd7 3.S $\times$ e 7 Sdf6 $4 . \mathrm{S} \times \mathrm{g} 8 \mathrm{~S} \times \mathrm{g} 8$. - In no. 448 a solution in 3 moves is simple (1.e4 e6 2.Bb5 c6 3. $\mathrm{B} \times \mathrm{c} 6 \mathrm{~d} 7 \times \mathrm{c} 6$ or $2 . \mathrm{Bc} 4 \mathrm{c} 63 . \mathrm{B} \times \mathrm{e} 6 \mathrm{~d} 7 \times \mathrm{e} 6$ ), but the stipulation is 4 moves. 1.e 4 e6 2.Bb5 Ke7! 3.Bxd7 c6 4.Be8! K $\times$ e8. 'A devilish trap.' - No. 449 presents the raid of a bishop having the effect of a billiard ball: 1.d4 Sh6 $2 . \mathrm{B} \times \mathrm{h} 6 \mathrm{~g} 53 . \mathrm{B} \times \mathrm{f} 8 \mathrm{Sc} 6$ $4 . \mathrm{B} \times \mathrm{e} 7 \mathrm{~S} \times \mathrm{d} 45 . \mathrm{B} \times \mathrm{d} 8 \mathrm{Sb} 36 . \mathrm{B} \times \mathrm{g} 5 \mathrm{Sc} 17 . \mathrm{B} \times \mathrm{c} 1$.


No. 450
Gerd Wilts
Probleemblad 2004
Proof game in a) 7.5 b) 12.0
a) 1.f4 Sa6 2.f5 Rb8 3.f6 $\mathrm{S} \times \mathrm{f} 64 . \mathrm{e} 4 \mathrm{~S} \times \mathrm{e} 45 . \mathrm{Bc} 4$ S $\times$ d2 $6 . \mathrm{Se} 2$ Se4 7.Qd4 f6 8.Sd2; b) 1....5.d4 f6 6.Bd3 Kf7 7.Se2 Ke6 8.d5+ K×d5 9.Bb5+ Ke5 10.Qd4+ Ke6 11.Sd2 Kf7 12.Bc4+ Ke8. Both times the play is unambiguous, although in b) it is much longer than in a).

No. 451
François Labelle
StrateGems 2012


Proof game in 19.5

No. 452
Dmitri Pronkin
Die Schwalbe 1985
${ }^{\text {st }}$ Prize


Proof game in 12.5 2 solutions

No. 453
Andrey Frolkin
Die Schwalbe 1987


Proof game in 18.5

No. 451 (FIDE-Album) is the first unambiguous SPG with the two kings only. 1.c4 e5 2. Qb3 Qh4 3. $\mathrm{Q} \times \mathrm{b} 7 \mathrm{Q} \times \mathrm{h} 24 . \mathrm{Q} \times \mathrm{b} 8 \mathrm{Q} \times \mathrm{g} 15 . \mathrm{R} \times \mathrm{h} 7 \mathrm{R} \times \mathrm{b} 86 . \mathrm{R} \times \mathrm{g} 7 \mathrm{R} \times \mathrm{b} 27 . \mathrm{R} \times \mathrm{f} 7$ $\mathrm{R} \times \mathrm{a} 28 . \mathrm{R} \times \mathrm{d} 7 \mathrm{R} \times \mathrm{d} 29 . \mathrm{R} \times \mathrm{a} 7 \mathrm{~K} \times \mathrm{d} 710 . \mathrm{R} \times \mathrm{c} 7+\mathrm{Kd} 611 . \mathrm{R} \times \mathrm{c} 8 \mathrm{Q} \times \mathrm{g} 212 . \mathrm{R} \times \mathrm{f} 8$ Kc5 13.R $\times \mathrm{g} 8 \mathrm{R} \times \mathrm{g} 8$ 14.B $\times \mathrm{g} 2 \mathrm{R} \times \mathrm{g} 215 . \mathrm{Sc} 3 \mathrm{R} \times \mathrm{f} 216 . \mathrm{K} \times \mathrm{f} 2 \mathrm{~K} \times \mathrm{c} 417 . \mathrm{Kf} 3 \mathrm{~K} \times \mathrm{c} 3$ $18 . \mathrm{B} \times \mathrm{d} 2+\mathrm{K} \times \mathrm{d} 2$ 19.Ke4 $\mathrm{K} \times \mathrm{e} 220 . \mathrm{K} \times \mathrm{e} 5$.

No. 452 (FIDE-Album): I 1.b4 Sf6 2.Bb2 Se4 3.Bf6 e7×f6 4.b5 Qe7 5.b6 Qa3 6.b6×a7 Bc5 7.a7×b8B Ra6 8.Ba7 Rd6 9.Bb6 Kd8 10.Ba5 b6 11.Bc3 Bb7 12.Bb2 Kc8 13.Bc1; II 1.Sc3 Sf6 2.Sd5 Se4 3.Sf6+ e7×f6 4.b4 Qe7 5.b5 Qa3 6.b6 Bc5 $7 . \mathrm{b} 6 \times \mathrm{a} 7 \mathrm{~b} 68 . \mathrm{a} 7 \times \mathrm{b} 8 \mathrm{~S}$ Bb7 9.Sa6 0-0-0 10.Sb4 Rde8 11.Sd5 Re6 12.Sc3 Rd6 13.Sb1. A fantastic double setting: the $\mathrm{wBc} 1 / \mathrm{wSb} 1$ is captured on f 6 , the wPb promotes to $\mathrm{B} / \mathrm{S}$ on $\mathrm{b} 8, \mathrm{~B} / \mathrm{S}$ moves to $\mathrm{c} 1 / \mathrm{b} 1$.

No. 453: 1.d4 a5 2.Qd3 Ra6 3.Qg3 Rf6 4.Be3 Rf3 5.e2×f3 g6 6.Se2 Bh6 7.Sc1 Bg5 8.Be2 Sh6 9.0-0 0-0 10.Rd1 Kg7 11.Rd3 Kf6 12.Ra3 Ke6 13.b3 Kd5 14.c4+ Kc6 15.Sc3 Kb6 16.d5+ c5 17.d5×c6 e.p.+ Ka6 18.c5+ b5 19.c5×b6 e.p.\#. Here we admire two castlings and two e.p. captures. Such a task has not yet been achieved in a classical retro problem (release problem).

Shortest proof games behave in relation to classical retro problems in the same way as moremovers in relation to studies. Some themes and tasks can only be realized by means of the stipulation requiring a definite number of moves (e.g. no. 453 and 454 or Babson task).

No. 454
Unto Heinonen
Springaren 1996


Proof game in 19.0

No. 455
Michel Caillaud
Die Schwalbe 1981


Proof game in 30.0

No. 456
Silvio Baier
FIDE World Cup 2015
${ }^{\text {st }}$ Prize


Proof game in 32.5

In no. 454 (FIDE-Album) the white rooks change their places as well as do the black rooks.1.b4 c5 2.b5 Qc7 3.b6 Qg3 4.h $2 \times \mathrm{g} 3 \mathrm{~h} 65 . \mathrm{R} \times \mathrm{h} 6 \mathrm{a} 7 \times \mathrm{b} 66 . \mathrm{Rc} 6 \mathrm{R} \times \mathrm{a} 2$ 7.Sa3 R×c2 8.Bb2 Rc4 9.Sc2 Rch4 10.e4 g6 11.Bc4 Bh6 12.Se2 Be3 13.d2×e3 e6 14.Qd3 Se7 15.0-0-0 0-0 16.R×c8 Sbc6! 17.Ra8 Rh8 18.Ra1 Ra8 19.Rh1 Sb8. This double change of places has not yet been achieved in a classical retro problem (release problem).

No. 455 (FIDE-Album): 1.b4 c5 2.b5 Sc6 3.b5×c6 b6 4.c7 Bb7 5.c8R Bf3 6.g2×f3 Rb8 7.Bh3 Rb7 8.Be6 Rc7 9.Sh3 Rc6 10.Rg1 Rd6 11.Rg4 Rd3 12.Ra4 Rd5 13.d4 Sh6 14.Qd2 Sf5 15.Qh6 Rd6 16.Bf4 Rc6 17.Sd2 Rc7 18.0-0-0 Rb7 19.Rg1 Rb8 20.Rg6 h7× g6 21.Qh7 Ra8 22.Qg8 Rh4 23.Bg3 Re4 24.Bb3 Re6 25.Sf4 Rc6 26.Sh5 Rc7 27.f4 Rb7 28.Rc6 Qc7 29.Re6 Kd8 30.Re3 Kc8. 13 moves of the bRa8 for 1 tempo!

No. 456 (FIDE-Album): 1.Sf3 d5 2.Rg1 Bh3 3.g2×h3 d4 4.Rg6 d3 5.Ra6 g5 6.c4 g4 7.c5 g3 8.c6 g2 9.Qa4 g1=B 10.Bg2 Bg7 11.Kf1 Bc3 12.Se1 Sf6 13.f4 Be3 14.d2×e3 d2 $15 . \mathrm{e} 4 \mathrm{~d} 1=\mathrm{B} 16 . \mathrm{Be} 3 \mathrm{Bb} 317 . \mathrm{Bb} 6 \mathrm{c} 7 \times \mathrm{b} 618 . \mathrm{c} 7+$ Sc6 19.c8=B Qc7 20.Be6 f7×e6 21.Sa3 0-0-0 22.Rd1 e5 23.Rd4 Be6 24.Qd1 Sb8 25.Rda4 Rd3 26.f5 Sd5 27.f6 Qd8 28.f7 Kc7 29.f8=B Bc8 30.Bh6 Rf8+ 31.Bf3 Rf5 32.Bc1 h6 33.Sb1. There are fine echoes: 1 promoted $w B$ and 1 promoted bB were captured, Bc 1 and Bc 8 are promoted officers, $\mathrm{Qd} 1, \mathrm{Qd} 8, \mathrm{Sb} 1, \mathrm{Sb} 8$ go and return to their original squares.


Proof game in 18.0

No. 458
Nicolas Dupont
Gerd Wilts
Probleemblad 2009


Proof game in 31.5

No. 459
Dmitri Pronkin
Andrey Frolkin
Die Schwalbe 1989
Prize


Proof game in 57.5

No. 457: 1.d4 Sa6 2.d5 Sc5 3.d6 a6 4.d6×c7 d5 5.f4 Bh3 6.c8B Qb6 7.f5 Qb3 8.f6 b6 9.f6 $\times \mathrm{g} 7$ f5 10.Bb7 Sf6 11.g8B Bh6 12.Be6 Be3 13.Bec8 0-0 14.Be6+ Kh8 15.Bg8 $\mathrm{R} \times \mathrm{g} 8$ 16.Bc8 $\mathrm{R} \times \mathrm{g} 2$ 17.Be6 Rxh2 18.Bg8 $\mathrm{R} \times \mathrm{g} 8$. Amazing moves of the promoted bishops: Bc8-b7-c8-e6-g8, Bg8-e6-c8-e6-g8. White homebase position.

No. 458 (FIDE-Album: 12 points): 1.e4 a6 2.Bb5 a6 $\times$ b5 3.h4 Ra6 4.h5 Rg6 5.h6 Sf6 $6 . \mathrm{h} 6 \times \mathrm{g} 7 \mathrm{~h} 57 . \mathrm{a} 4 \mathrm{~h} 48 . \mathrm{a} 5 \mathrm{~h} 39 . \mathrm{a} 6 \mathrm{~h} 210 . \mathrm{a} 7 \mathrm{~h} 2 \times \mathrm{g} 1 \mathrm{~S}$ 11.Ra6 Sh3 12.Rc6 d7×c6 13.e5 Kd7 14.e6+ Kd6 15.e6×f7 e5 16.f4 e4 17.f5 Ke5 18.g8B Bc5 19.f8S e3 20.Bc4 Be6 21.a8R Sbd7 22.Ra1 Qa8 23.Sh7 Rd8 24.Bf1 Se8 25.f6 e2 26.f7 e2×d1B 27.f8Q Bh5 28.Qf3 Bb3 29.Qd1 Kf4 30.Sg5 Se5 31.Sf3 Rdd6 32.Sg1. Incredible: Ra1, Qd1, Bf1 and Sg1 are promoted pieces. First realization.

No. 459 (FIDE-Album): $1 . \mathrm{a} 4 \mathrm{~h} 52 . \mathrm{a} 5 \mathrm{~h} 43 . \mathrm{a} 6 \mathrm{~h} 34 . \mathrm{a} 6 \times \mathrm{b} 7 \mathrm{~h} 3 \times \mathrm{g} 25 . \mathrm{h} 4 \mathrm{~d} 56 . \mathrm{h} 5 \mathrm{~d} 4$ 7.h6 d3 8.h7 d3×c2 9.d4 a5 10.Bh6 c1R 11.e4 Rc5 12.Se2 Rh5 13.e5 c5 14.e6 Sc6 15.b8R a4 16.Rb4 a3 17.Ra4 c4 18.b4 c3 19.b5 c2 20.b6 c1R 21.b7 Rc4 22.b8R Qa5+ 23.Rbb4 Bb7 24.Sc3 0-0-0 25.e6×f7 e5 26.Rc1 Bc5 27.f8R a2 28.Rf3 a1R 29.Sa2 g1R 30.Rfa3 Rg6 31.f4 Re6 32.f5 g5 33.f6 g4 34.f7 g3 35.f8R g2 36.Rf5 g1R 37.Bf8 Rg7 38.Sg3 e4 39.Bd3 e3 40.0-0 e2 41.Rcc3 e1R 42.Bc2 R1e3 43.d5 Rdd7 44.d6 Rdf7 45.d7+ Kb8 46.Qd6+ Ka8 47.Qc7 Sge7 48.d8R+ Sc8 49.Rdd3 Rhg8 50.h8R Rae1 51.Rh6 R1e2 52.R1f2 Rce4 53.Kf1 Bd4 54.Rfc5 Se5 55.Sf5 Sc4 56.Sd6 Sb2 57.Rbc4 Sb6 58.Qb8+. The length record for an unambiguous SPG improved from 15 moves (Dawson 1913) to 41.5 (Fabel 1954) and 47.0 (Caillaud 1982) and (finally?) to 57.5 . End of the story?

## Further favourite retro problems of mine



Release the position!

Auxiliary diagram to no. 460


No. 461
Harry Goldsteen
(after A. Frolkin)
Probleemblad 1989


Mate in 1

No. 460 and 461 are ideal retro problems. No. 460 (FIDE-Album: 12 points): wPs captured 2 times, a7 $\rightarrow$ a1X, $77 \times$ Sf6, wX $\times$ Ph. Backward 1.Sb4-a6 d7-d6 2.Sd3-b4 Rd2-e2 3.Sc1-d3 Re2-d2+ 4.Sb3-c1 Ba2-b1 5.Sa5-b3 Bb1-a2+ 6.Sc4-a5 Ba2-b1 7.Sd6-c4 Bb1-a2+ 8.Sf5-d6 Rg5-g4 9.Sh6-f5 Rg4-g5+ 10.Sf5×Ph6! Rg5g4 11.Sd6-f5 Rg4-g5+ 12.Sc4-d6 Ba2-b1 13.Sa5-c4 Bb1-a2+ 14.Sb3-a5 Ba2-b1 15.Sc1-b3 Bb1-a2+ 16.Sd3-c1 Rd2-e2 17.Re2-e1 h7-h6! 18.Re1-f1 Sf1-h2 19.g5-g6 Bh2-g3 20.Bg3-f2 Sf2-d1 (= auxiliary diagram for those who prefer to play forward). 8 retro shields for 1 tempo (h7-h6). Cp. P1067419 with 10 retro shields.

No. 461: 1.e7×f8Q,R\#. Backward 1...Sh7-f8+ 2.Be $8 \times$ Rf7 Rf8 $\times$ Sf7 $3 . S e 5-f 7$ Rf7-f8+ 4.Sc4-e5 Rf8 $\times$ Sf7 5 .Sh6-f7 Rf7-f8+ $6 . S a 3-c 4$ Rf8 $\times$ Sf7 7.Sg5f7 Rf7-f8+ $8 . S b 5-\mathrm{a} 3 \mathrm{Rf} 8 \times$ Sf7 9. Se5-f7 Rf7-f8+ $10 . \mathrm{Sc} 7-\mathrm{b} 5 \mathrm{Rf} 8 \times$ Sf7 $11 . \mathrm{Sb} 5 \times$ Qc7 Qc8-c7 12.Qd8d7 Qc7×Sc8+ 13.Bd7-e8 Re8-f8 14.Sh3-g5 Rf8e8 15.Sg5-f7 Rf7-f8+ 16.Qf8-d8 Qd8-c7 17.Be8d7 Kc7-b8 18.Sa3-b5+ Bb8-a7 19.Sa7-c8 Kc8-c7 20.Sb5-a7+ (= diagram to no. 461).

To no. 461


No. 462
Luigi Ceriani
Fairy Chess Review 1948


Which was the first move of the black queen?

No. 463
Andrey Frolkin
Die Schwalbe 1978


Which queen is not a promoted piece?

To no. 463
Critical Position
Next move: d7xQc6


No. 462: Genesis of the position: wSb1-a3, wRa1-b1, wSa3 $\rightarrow$ a1, bSg8-h6, bRh8g8, bSh6 $\rightarrow \mathrm{h} 8$, g2-g3, wBf1 $\rightarrow \mathrm{g} 6, \mathrm{~h} 7 \times$ Bg6, f2-f4, wRh1 $\rightarrow \mathrm{h} 7$, a7-a5, bRa8 $\rightarrow \mathrm{h} 6$, wSg1 $\rightarrow \mathrm{e} 6$, wSe6 $\times$ Qd8! (why this?), wSd8 $\rightarrow \mathrm{e} 4$, sKe8-d8! (because the bK must occupy the free square d 8 to avoid the check of the knight moving to h5 via f6!), wSe4-f6-h5, e7 $\times$ Qf6, bBf8 $\rightarrow \mathrm{a} 7$, bRg8 $\rightarrow \mathrm{b} 3$, bSb8 $\rightarrow \mathrm{e} 8$, d7-d6, $2 \times \mathrm{Rb} 3$, $\mathrm{a} 5 \rightarrow \mathrm{a} 2 \times \mathrm{Rb} 1 \mathrm{Q}$ ! and the first move of this 'new' queen was Qb1-a2!. A humorous classic. - An economical rendering is P1346004 and a double setting P0005016.

No. 463: The last moves were c7-c8Q+ b2-b1Q! (not e7-e6? which would lock up the sacrificial piece $b B f 8$ ). In the critical position the move $d 7 \times X c 6$ opens the cage on the $8^{\text {th }}$ rank and locks up the pieces on the a- and b-files. If the white knights were captured on the b-file, then the original white queen remained as the sole sacrificial piece for sPd 7 . After $\mathrm{d} 7 \times$ Qc6 follows $\mathrm{bBc} 8 \rightarrow \mathrm{~d} 5$, then e7-e6. Thereafter the 3 white pawns on the f-file and wPe captured 4 times. These 4 pawns and wPd promoted to 5 white queens on d 8 and e8. So all 7 queens are promoted pieces! Quite astonishing!
'Retroanalysis is higher mathematics of human logic, abstraction and imagination'.
(Emanuel Lasker)

No. 464
Niels Høeg
Retrograde Analysis 1915


Last moves?

No. 465
Andrey Frolkin
Die Schwalbe 1986


Before at least 71 single moves an e.p. capture was executed

To no. 465
Critical Position
Next move: h5xg6 e.p.


No. 464 (FIDE-Album): All 16 white pieces are on the board, the wPs captured 6 times, hence there is no sacrificial piece for any officer. Solution: backward 1.Rd8d7+! forces d7-d6 2. f5 $\times$ e6 e.p.+ (the well-known e.p. trick, cp. no. 123, 218 and 307) 2 . . .e7-e5 3.f4-f5+ Kd6-c7 (what else?) $4 . \mathrm{b} 5 \times \mathrm{c} 6$ e.p. $+\mathrm{c} 7-\mathrm{c} 55$ 5.b4-b5+ Ke6-d6 $6 . \mathrm{g} 5 \times \mathrm{f} 6$ e.p.+ f7-f5 $7 . \mathrm{g} 4-\mathrm{g} 5+$. No. 464 presents three white en-passant captures which has remained unsurpassed up to now. A classic.

No. 465: This is the shortest game from the critical position (the last moves were bPg7-g5 Sg5-h3+ a7-a6 Rh3-h2 Sh2-g4 Qh4-f4 Sf4-g2+) to the diagram position: 1.h5×g6 e.p. Kh6-h5 2.g6-g7 a6-a5 3.g7-g8S a5-a4 4.Sg8-e7 b7-b6 5.Se7-g6 b6b5 6.Sg6-h4 b5-b4 7.Sh3-g5 Kh5-h6 8.Rh2-h3 Kh6-h5 9.Sg5-f7 Sg4-h2 10.a3×Pb4 Sh2-g4 11.b4-b5 ~ 12.b5-b6 ~ 13.b6-b7 ~ 14.b7-b8B ~ 15.Bb8-d6 ~ 16.Bd6f8 ~ 17.Bf8-g7 ~ 18.Bg7-h8 ~ 19.b3-b4 ~ 20.b4-b5 ~ 21.b5-b6 ~ 22.b6-b7 ~ 23.b7-b8B ~ 24.Sf7-d6 ~ 25.Sd6-b5 ~ 26.Sb5-c3 ~ 27.Sc3-e2 ~ 28.Bb8-d6 ~ 29.Bd6-f8 Sg4-h2 30.Bf8-g7! Sh2-g4 31.Bg7-h6 Sg4-h2 32.Bh6-g5 Sh2-g4 33.Sf1h2 a4-a3 34.Rg1-f1 a3-a2 35.Se2-g1 h7-h6 36.Sh4-g6+ Sg2-h4+. So the e.p. capture was executed at least 71 single moves before. That is the record for an ambiguous sequence of moves.

No. 466
Nenad Petrovic
Die Schwalbe 1986
$173^{\text {rd }}$ TT $2^{\text {nd }}$ Entry Prize


Before at least 159
single moves castling was executed

No. 467
Thomas Volet
Die Schwalbe 1980
$1^{\text {st }}$ Prize


On how many squares were captures made?

No. 466: This is the shortest game from the critical position to the diagram position: 1.0-0 ~ 2.Sh1 Qg3 3.h2×g3 6.Kg4 h3 7.Kf4 Rf6+ 8.Ke4 Re5+ 9.Kd4 Re4+ 10.Kc5 Rf5+ 11.Kb6 Rhh5 12.Ka7 b6! 13.K~ Ba6 14.~ Bc4 15.Rg1 Ba2 16.b3+! Kb4 17.Bb2 h2 18.Bf6 h2 2 Rg1R! (therefore w0-0) 19.Bh4 f6 20.~ g5 21.~ g5 $\times$ Bh4 22.~ h3 23.Qc1 h2 24.Qb2 Rb1 25.Qe5 Rb2 26.~ Bb1 27.~ Ra2 28.Qb2 Ra8 29.Qc1 Ba2 30.Qg1 h2×Qg1R 32.~ Rb2 33.~ Bb1 35.~ Rba6 36.~ Rfa5 40.~ Kd1 41.Rd3 Ke1 42.Rd4 Kf1 43.Ra4 Kg1 44.Ra2 Rea4 45.Rb2 Ba2 46.Rb1+ Kh2 47.Rg1 Bb1 49.~ Rb2 50.~ Ba2 52.~ Rf1 53.~ Bb1 55.~ Rb2 56.~ Ba2 58.~ Rbel 59.~ Bb1 62.~ Rhb2 63.~ Ba2 65.~ Rbd1 66.~ Bb1 68.~ Rb2 69.~ Ba2 71.~ Rbc1 72.~ Bb1 74.~ Rb2 75.~ Ba2 76.~ Rcb1 77.~ Rdc1 78.~ Red1 79.Kb8 Rfe1 80.Rf1. We admire some subtle reasons for castling: $\mathrm{wKg} 1 \rightarrow \mathrm{a} 7$, $\mathrm{b} 7-\mathrm{b} 6$ (the cage is closed for wK and opened for bB ), $\mathrm{bBc} 8 \rightarrow \mathrm{a} 2, \mathrm{~b} 2-\mathrm{b} 3, \mathrm{wBc} 1 \rightarrow \mathrm{~h} 4$, $\mathrm{wQd} 1 \rightarrow \mathrm{e} 5 \rightarrow \mathrm{c} 1 \rightarrow \mathrm{~g} 1$. So castling was executed at least 159 single moves before. That is the record for an ambiguous sequence of moves.

No. 467: Backward $1 \ldots \mathrm{Kg} 4 \times \operatorname{Ph} 3$ 2.h2-h3+ Kf3 $\times \operatorname{Pg} 43 . g 3-\mathrm{g} 4 \mathrm{Ke} 4 \times \operatorname{Pf} 32 . f 2-$ $\mathrm{f} 3+\mathrm{Kd} 5 \times$ Pe4 5.e3-e4+ Kc4×Pd5 6.d4-d5 Kc5-c4 7.d3-d4+ Kb6×Pc5 8.c4-c5+ Ka5 $\times$ Pb6 9.b5-b6 Kb6×Pa5 10.a4-a5+ S-e2,Bh3-g2 11.b4-b5 Sb5-a7 12.e2-e3,g2g3 Ka7-b6 13.d2-d3 Kb8-a7 14.c3-c4 Kc8-b8 15.c2-c3 Kd8-c8 16.a3-a4 Qc8-d7 17.a2-a3 Rd7-e7 18.Re7-f7. The black king captured pawns on 8 squares. An epochmaking task.

No. 468
Dmitri Baibikov
Phénix 2015


Last 60 single moves?

To no. 468
Critical position
Next move: c4-c5


No. 468 (FIDE-Album: 12 points): Backward $1 . . . \mathrm{Qb} 8 \times$ Sb7\# 2.Qh4-f2 (a)(b) g3g2 3.Qh8-h4 g4-g3 4.h7-h8Q g5-g4 5.h6-h7 g6-g5 6.g5 $\times$ Sh6 Sf5-h6 (c) $7 . \mathrm{g} 4-\mathrm{g} 5$ Se3-f5 8.g3-g4 Sc4-e3 9.Sa4-b6 Sb6-c4+ 10.Sc3-a4 h3-h2 11.Se4-c3 h4-h3 12.Sf6e4 h5-h4 13.Sg8-f6 h6-h5 14.g7-g8S h7-h6 15.h6×Sg7 Sf5-g7 16.h5-h6 Se3-f5 17.h4-h5 Sc4-e3 (d) 18.h3-h4 Sa5-c4 19.Sd8-b7 Sb7-a5+ 20.Sf7-d8 f4-f3 21.Sh6-f7 f5-f4 22.Sg8-h6 f6-f5 23.g7-g8S f7-f6 24.f6×Sg7 Sf5-g7 25.h2-h3 Se3-f5 26.f5f6 Sc2-e3 27.f4-f5 Sa1-c2 28.f3-f4 a2-a1S 29.f2-f3 a3-a2 30.a2×Rb3 Ka4-b4 (e) 31.c4-c5 (diagram to no. 468) etc.

Here are the amazing tries: (a) 2.Qg3-f2? f4-f3 3.Qg8-g3 f5-f4 4.g7-g8Q f7-f5 $5 . \mathrm{f} 6 \times \mathrm{Sg} 7 \mathrm{Se} 6-\mathrm{g} 7$ 6.f5-f6 Sd8-e6 7.Sa5-b7 Sb7-d8+ 8.Sc4-a5 h3-h2 9.Se3-c4 h4-h3 10.Sg4-e3 h5-h4 11.Sf6-g4 h6-h5 12.Sg8-f6 g3-g2 3.g7-g8S g4-g3 14.g6-g7 g5-g4 $15 . \mathrm{h} 5 \times$ Sg6 Sf4-g6 16.h4-h5 Sd3-f4 17.f4-f5 Se1-d3 18.f3-f4 Sc2-e1 19.f2-f3 Sa1c2 20.h3-h4 a2-a1S 21.h2-h3 a3-a2 22.a2×R/Sb3 Ka/c4-b4 23.Sc/a4-b6+ and illegal check by bRc6. - (b) 2.Qe3-f2? h3-h2 3.Qf4-e3 h4-h3 4.Qg5-f4 h5-h4 5.Qg8-g5 h6-h5 6.g7-g8Q h7-h6 7.h6×Sg7 Sf5-g7 8.h5-h6 Se3-f5 9.h4-h5 Sc4-e3 10.Sa4-b6 Sb6-c4+ 11.Sc3-a4 f4-f3 12.Se4-c3 f5-f4 13.Sf6-e4 g3-g2 14.Sg8-f6 f6-f5 15.g7g8S g4-g3 16.g6-g7 g5-g4 17.f5×Sg6 Sf4-g6 18.h3-h4 Sd3-f4 19.h2-h3 Se1-d3 20.f4-f5 Sc2-e1 21.f4-f3 Sa1-c2 22.f2-f3 a2-a1S retro stalemate. - (c) 6...Sf7-h6? 7.g4-g5 Sd8-f7 8.Sa5-b7 Sb7-d8+ 9.Sc4-a5 h3-h2 10.Se3-c4 h4-h3 11.Sf5-e3 h5-h4 12.Sh6-f5 f4-f3 13.Sg8-h6 h6-h5 14.g7-g8S h7-h6 15.h6×Sg7 Sf5-g7 16.g3-g4 Se3f5 17.h5-h6 Sc2-e3 18.h4-h5 Sa1-c2 19.h3-h4 a2-a1S 20.h2-h3 a3-a2 21.a2×R/Sb3 $\mathrm{Ka} / \mathrm{c} 4-\mathrm{b} 422 . \mathrm{Sa} / \mathrm{a} 4-\mathrm{b} 6+$ and illegal check by bRc6. - (d) 17...Sc2-e3? 18.h3-h4 Sa1-c2 19.h2-h3 a2-a1S retro stalemate. - (e) 30...Kc4-b4? 31.Ka5-a6 Sd8-b7+ 32.Ka6-a5 Sb7-d8+ 33.Ka5-a6 with forced repetition of moves.

No. 468 surpasses the previous record (P0006113) by 5 single moves. Clear position without obviously promoted pieces, wonderful play on the whole board, unpromotion of knights, retro unpin. To me this problem is one of the top ten of classical retro problems.

There are two other great retro records set up as late as in the $21^{\text {st }}$ century:

- 33 successive checks during the last 66 single moves (=P1185294)
- 185 moves in a dualistic shortest proof game ( $=\mathrm{P} 1345778$ )


If in this book you miss
your favourite retro problem, you may use this diagram for it.

The classical dual-free length records without retro aspect are:

- 226 moves in a directmate problem ( $=\mathrm{P} 1298048$ ) set up in 1982
- 28 moves in a helpmate problem (=P0559197) set up in 1934
- 223 moves in a selfmate problem ( $=$ P1176536) set up in 2006


## My favourite 12 points problems

The following six problems obtained the maximum number of 12 points in the FIDEAlbums which shows a very rare achievement. The albums are official collections of excellent chess problems. The first albums comprise the problems published in 1914-44 and 1945-55, then in a period of three years (1956-58, 1959-62 ... 201012). Three judges per section select the best problems for the album.

No. 469
Valentin Rudenko
Viktor Chepizhny
Loshinsky Memorial 1982
$1^{\text {st }}$ Prize


Mate in 2

No. 470
Michael Keller
Probleemblad 1980


Mate in 3

No. 471
Hans Peter Rehm
Loshinsky Memorial 1982
(v) $I^{\text {st }}$ Prize


Mate in 6

No. 469: Set play: $1 . . . \mathrm{K} \times \mathrm{d} 7 / \mathrm{S} \times \mathrm{d} 72 . \operatorname{Rd} 4 / \mathrm{R} \times \mathrm{c} 4 \#$. Thematic try: $1 . \mathrm{Bd} 4$ ? $\mathrm{K} \times \mathrm{d} 7$ ?/ $S \times d 7$ ? 2.R×e7/Re6\#, 1...Re8!. Solution: 1.Rd5! K $\times$ d5/Rb3 2.Rd4/R×c4\#. Perfectly changed and transferred mates.

No. 470 presents reciprocally changed mates. Set play: $1 \ldots \mathrm{Q} \times \mathrm{e} 62 . \mathrm{Bh} 4+\mathrm{S} \times \mathrm{h} 4$ $3 . f 4 \times \mathrm{e} 5 \#$ or $1 . . . \mathrm{S} \times \mathrm{e} 62 . \mathrm{f} 4 \times \mathrm{e} 5+\mathrm{S} \times \mathrm{e} 53 . B h 4 \#$. Solution: 1.Qa6! [thr. 2.Sd5+ $\mathrm{B} \times \mathrm{d} 5$ 3.g5\#] $\mathrm{Q} \times \mathrm{e} 6$ 2.f4×e5+ Q×e5/S×e5 3.Sd5/Bh4\# or 1...S×e6 2.Bh4+ $\mathrm{Sg} 5 / \mathrm{S} \times \mathrm{h} 43 . \mathrm{Sd} 5 / \mathrm{f} 4 \times \mathrm{e} 5 \#$. Problem chess at its best.

No. 471: 1.Qh8! Re5 2.Qh6 Reb5 3.Be5 B $\times \mathrm{e} 54 . \mathrm{Qg} 5 \mathrm{Bd} 65 . \mathrm{Se} 5 \mathrm{~B} \times \mathrm{e} 5 / \mathrm{R} \times \mathrm{e} 5$ $6 . \mathrm{Q} \times \mathrm{f} 5 / \mathrm{Q} \times \mathrm{f} 4 \#$ or $1 . .$. Be5 2.Qh5 Bd6 3.Se5 R×e5 4.Qg5 Reb5 5.Be5 B $\times \mathrm{e} 5 / \mathrm{R} \times \mathrm{e} 5$ $6 . \mathrm{Q} \times \mathrm{f} 5 / \mathrm{Q} \times \mathrm{f} 4 \#$. Logically successive foreplans, interferences of rook and bishop. Logic pure.

No. 472
Yehuda Hoch
Mandil Memorial 1980
${ }^{\text {st }}$ Prize


Win

No. 473
Zivko Janewski
Fadil Abdurahmanovic
Mat 1987 1t Prize


Helpmate in 2
4 solutions

No. 474
Andrey Selivanov
Uralski Problemist 2000 $1^{s t} / 2^{n d}$ Prize


Selfmate in 5

No. 472: Try: 1.R $\times f 6+$ ? Ka7 2. Qg7+ Qc7 3.Rf7 Rc1+ 4.K $\times \mathrm{g} 2 \mathrm{Rc} 2+5 . \mathrm{Kf} 3$ Rc3+ 6.Ke4 Rc4+ 7.Kd5 Rc5+ 8.Ke6 Rc6+ 9.Kf5 Rc5+ 10.Kg6 Rc6+ 11.Kh7 K $\times$ a6 $12 . \mathrm{R} \times \mathrm{c} 7 \mathrm{R} \times \mathrm{c} 7$ 13. $\mathrm{Q} \times \mathrm{c} 7$ stalemate. Solution: 1.a5+! K $\times \mathbf{a 6} \mathbf{2 . R} \times \mathbf{f 6}+\mathbf{K a 7 ~ 3 . Q g 7 +}$ Qc7 4.Rf7 Rc1+5.K $\times$ g2 Rc2+ 6.Kf3 Rc3+ 7.Ke4 Rc4+ 8.Kd5 Rc5+ 9.Ke6 Rc6+ 10.Kf5 Rc5+ 11.Kg6 Rc6+ 12.Kh7 Ka8 13.Qg8+ (13.R $\times \mathrm{c} 7$ ? $\mathrm{R} \times \mathrm{c} 7$ 14. $\mathrm{Q} \times \mathrm{c} 7$ stalemate) Qc8 14.Rf8 Rc7+ 15.Kh8 Ka7 16.Qg1+ (16.R $\times$ c8? $\mathrm{R} \times \mathrm{c} 817 . \mathrm{Q} \times \mathrm{c} 8$ stalemate) 1:0 Thematic try, systematic manoeuvre, avoidance of stalemate, chameleon echo.

No. 473: I 1.Qd5 Bc2 2.S×d6 Bd3\#; II 1.Bd7 c7 2.Bb5 d7\#; III 1.b5 Kf2 2.R×d6 $\mathrm{K} \times \mathrm{f} 3 \#$; IV 1.Bd5 $\mathrm{B} \times \mathrm{d} 52 . \mathrm{Q} \times \mathrm{d} 6 \mathrm{~B} \times \mathrm{f} 3 \#$. Direct white battery, direct self-pin and black unpin, mate with pinning of three black pieces. Impressive!

No. 474: 1.Ke1? f5? 2.Qd5+ Ke3 3.Bc4 f4 4.Bf1 f3 5.Qd1 f2\#, 1...f6!
1.Be6! (zugzwang)
1...f7×e6 2.Qg5 e5 3.Bg3 e4 4.Be1 e3 5.Qg1 e2\#
$1 .$. f6 2.Bh3 f5 3.Bg4+ f5 $\times \mathrm{g} 44 . \mathrm{Qe} 1 \mathrm{~g} 35 . \mathrm{Bg} 1 \mathrm{~g} 2 \#$
1...f5 2.Qd1+ Ke3 3.Ke1 f4 4.Bh3 f3 5.Bf1 f2\#

Three echo model mates in a miniature. Wonderful!
'In a good chess problem, correctness is essential, beauty necessary, and difficulty desirable'.
(Konrad Erlin)

## 1 position - 1000 problems

In 1932 nobody would have foreseen that an extremely simple position with only two kings and two pawns would stimulate so many problemists to compose more than 1000 problems with new kinds of stipulations (see $P D B K=$ 'Vielväterstellung').


Helpmate in 2
Solution: 1.a6 b7+ 2.Ka7 b8Q\#
No. 476: Julius Dohrn-Lüttgens \& Erich Gleisberg, Schachmatt 1949. Black makes 8 moves in a row and helps White to mate in 1.
1.a5 ... 5.a1B 6.Be5 7.Bb8 8.Ba7 b7\#.

No. 477: Robert J. Darvall, Fairy Chess Review 1949. Who wins?
White moved last. So Black wins by $1 . \mathrm{a} 7 \times \mathrm{b} 6$.
No. 478: Bror Larsson, Feenschach 1954. White retracts 1 move, then mate in 1. Backward Kc7×Sc8, then 1.b7\#; not Kc7-c8? (Black had no previous move)
No. 479: Werner Keym, The Problemist 1976. How many last moves are there?
26 moves! 10 by $\mathrm{Pa} 5 / \mathrm{Pc} 5 \times \mathrm{Q}, \mathrm{R}, \mathrm{B}, \mathrm{S}, \mathrm{Pb} 6 ; 2$ by $\mathrm{Pa} 5 / \mathrm{Pc} 5 \times \mathrm{Pb} 6$ e.p.; 12 by $\mathrm{Kc} 7 / \mathrm{Kd} 7 / \mathrm{Kd} 8 \times \mathrm{Q}, \mathrm{R}, \mathrm{B}, \mathrm{Sc} 8 ; 2$ by Kd7/Kd8-c8. Neither Pb5-b6? nor Kc7-c8? , since there would be no previous move for Black.
No. 480: Frank Müller \& Werner Keym, Die Schwalbe 2018. Add 5 equal a) white, b) black pieces for an Illegal Cluster.
a) White rooks on a6, b8, c6, c7, d7. Without Ra6 or Rc6 or Rd7 the last move was $\mathrm{Rb} 7 \times \mathrm{Sb} 8+$. Without Pa 7 the last move could be $\mathrm{Rb} 7 \times \mathrm{Bb} 8+$. b) Black pawns on a2, a3, a4, a5, a6. The black pawns captured 15 times, however, there are 2 white pieces.

## Chess jokes

No. 481
Werner Keym
Allgemeine Zeitung Mainz 1997


Add a piece on hl so that every chess player can $\overline{\text { mate }}$ in 2

No. 482
Joaquim Crusats
Problemas 2017


Add the black king, then mate in $1 / 2$ move 2 solutions

No. 483
Werner Keym
Stuttgarter Zeitung 2018


Mate in 2
Equal rights for the queen

No. 481: There will be a mate in 3 moves with $w Q h 1$ (not $1 . \mathrm{Q} \times \mathrm{b} 7$ ? stalemate, but 1.Ra2+ etc.) and in 2 moves with wRh1 (1.Ra2+ $\mathrm{K} \times \mathrm{b} 12.0-0 \#$ ) or with wBh1 ( $1 . \mathrm{B} \times \mathrm{b} 7 \mathrm{~K} \times \mathrm{b} 12 . \mathrm{Rd} 1 \#$ ). Not every chess player, however, does know the castling convention in problem chess (castling is permitted unless the opposite can be proved). So wBh1 is the sole solution!

No. 482: The queen is partly a rook, partly a bishop. Solution I: $+\mathrm{bKd} 5,+w R d 1$ (the rook remains on d 1 ) and +Bf 3 \#, the bishop moves from d1 to f 3 (= $1 / 2$ move!). Solution II: $+\mathrm{bKh} 5,+\mathrm{wBd} 1$ (the bishop remains on d1) and + Rh1\#, the rook moves from d1 to h1 ( $=1 / 2$ move!). Quite convincing, isn't it?

No. 483: In ultra-modern chess equal rights mean that not only the king has got the right to castle, but the queen as well! So the solution is $1 .{ }^{\prime} 0-0$ ’ $+(=\mathrm{Qb} 1$ and Rc1) Kd2/Kd4 2.Qc2/Qe4\#. Politically correct!?

No. 484
Valery Dubrovski
Redkie shanry plyus 1996


Mate in 2
Retro castling

No. 485
Bedrich Formánek
Chess Jokes 2000


Helpmate in 1.5
b) $R h 8 \rightarrow a 8$

No. 486
Werner Keym
Stuttgarter Zeitung 2018


Black retracts 1 move, then helpmate in 1
a) First solution?
b) Second solution?

No. 484: Solution: 1.0-0-0! [thr. 2.Qa5\#] Bb4 2.Qb2\# or $1 . . . \mathrm{B} \times \mathrm{b} 32 .{ }^{〔} 0-0-0$ ’ $\#$ by retro castling ( $\mathrm{Rd} 1 \rightarrow \mathrm{a} 1$ and $\mathrm{Kc} 1 \rightarrow \mathrm{e} 1$ ). White knows how to use his head.

No. 485: a) Castling is permitted since the last move could have been $\mathrm{Ph} 5 \times \mathrm{Xg} 4+$. Therefore the solution is $1 . R h 3!0-02 . R \times$ g4\#. b) The bRa8 has been 'moved' from h 8 to a8, hence castling is not permitted. That is why the solution is not $1 . \mathrm{Rb} 3$ ? $0-0-0$ 2.Rc4\#, but only 1.Rd7! Kf8 $2 . R \times$ a8\#. Quite logical or what?

No. 486: a) The first solution is backward $\mathrm{Kg} 2 \times \mathrm{Rh} 1$, then $1 . \mathrm{Kf} 30-0 \#$. b) The second solution is $\mathrm{Kg} 1 \times$ Rh1 (before that e.g. Rh-h1+), then $1 . \mathrm{Kg} 2 \mathrm{Bd} 5 \#$. If you begin with solution b ), then the rook must have moved (Rh-h1+) and castling and solution a) are no more permitted. Orthodox - beyond any doubt?

No. 487
Werner Keym
Die Schwalbe 1969


Add a white rook and mate immediately

No. 488
Rudolf L'hermet
150 Exzentrische
Schachaufgaben 1910


White retracts 1 move, then mate in 1

No. 489
Karl Fabel
Parallèle 501950


White retracts 1 move, then mate in 2

No. 487: Here it is Black to play unless a white rook is added on h1. In this case the last move was $0-0$ (before that $\mathrm{Kg} 2 / 3-\mathrm{f} 3$ ) and the first part $\mathrm{Ke} 1-\mathrm{g} 1$ has already been done. So the second part must follow: Rh1-f1\#.

No. 488: That was a game at odds. White started the game without wRa1; Rg2 is a promoted piece. Therefore White retracts the move ' $0-0-0$ ' (without wRa1) and puts the king on e1. Then follows 1.0-0\#.

No. 489: That was a game at odds as well. White started the game without wRa1 nor wRh1; Rh3 is a promoted piece. Therefore White retracts the move ' $0-0$ ' (without wRh1) and puts the king on e1. Then he plays $1 . ‘ 0-0-0$ ’ (without wRa1) and puts the king on c 1 followed by $1 .$. Ka1 2.Ra3\#.

No. 490
Hieronymus Fischer
Vossische Zeitung 1921


Mate in 1

No. 491
Werner Keym
Stuttgarter Zeitung 2012


Add 1 piece, then mate in 1

No. 492
Sam Loyd
American Chess Journal 1876


A mate in the middle of the board, with only 1 knight and 2 rooks

No. 490: Since there are 8 black pawns, neither Rf4 nor Rh4 can be a promoted piece. However, the original Rh8 could never leave the NE cage. Hence the position is illegal. So either of the rooks must be put on h8. In the case of Rf4 the solution is 1.Be6\#, in the case of Rh4 it is 1.Sh6\#.

No. 491: This problem was part of the following story: On New Year's Eve a problemist presents his latest composition on a great magnetic board at the chess club, but nobody finds the solution. At midnight the chess players go outside to watch the fireworks. In the meantime the problemist puts the position with the five pieces on several boards on the tables and removes the pieces from the magnetic board. After the chess players have returned to their boards, some of them quickly find the solution. How come? - Unlike the magnetic board the ordinary boards do not have numbers nor letters on the border. So what is meant by the 'right' position of the board is ambiguous. By adding a white bishop on ' d 1 ' (in no. 491) it can be proved that the board must be turned by $180^{\circ}$. Then the solution will be easy: $1 . \mathrm{K} \times \mathrm{d} 8$ b7-b8Q\#. A similar idea is shown in problem P1347825 with only four pieces.

No. 492: It is clear that this is a mate in the middle of the board, but it is clear as well that this is an illegal position which can never occur in an actual game. For such a joke Loyd did not care about convention.

## Strange chess stories

## Charles XII at Bender

## No. 493a

Sam Loyd
Chess Monthly 1859


Mate in 3

No. 493b


Mate in 4

No. 493c


Mate in 5

The story introduces an imaginary incident during the siege of Charles the Twelfth of Sweden by the Turks at Bender in 1713. Charles beguiled this period by means of drill and chess, and used frequently to play with his minister, Christian Albert Grothusen. One day while so engaged, the game had advanced to the stage represented in No. 493a and Charles (White) had just announced a mate in three. Scarcely had he uttered the words, when a Turkish bullet, shattering the window, dashed the white Knight off the board in fragments. Grothusen started violently, but Charles, with the utmost coolness, begged him to put back the other Knight and work out the mate, observing that it was pretty enough. But another glance at the board mad Charles smile: 'We do not need the Knight. I can give it to you, and still mate in four!' (No. 493b). Who would believe it, he had barely spoken when a second bullet flew across the room, and the Pawn at h2 shared the fate of the Knight. Grothusen turned pale. 'You have our good friends the Turks with you,' said the King, unconcerned, 'it can scarcely be expected that I should contend against such odds; but let me see if I cannot dispense with that unlucky Pawn. I have it!' he shouted, with a tremendous laugh, 'I feel great pleasure in informing you that there is undoubtedly a mate in five' (No. 493c). (from: Sam Loyd and his chess problems).

No. 493a: 1. $\mathrm{R} \times \mathrm{g} 3 \mathrm{~B} \times \mathrm{g} 3 / \mathrm{B} \times \mathrm{e} 12 . \mathrm{Sf} 3 / \mathrm{Rh} 3+\mathrm{B} \sim / \mathrm{Bh} 43 . \mathrm{g} 4 \#$
No. 493b: $1 . \mathrm{h} 2 \times \mathrm{g} 3$ Be3 2.Rg4 Bg5 3.Rh4+ B $\times$ h4 4.g4\#
No. 493c: 1.Rb7 Be3 2.Rb1 Bg5 3.Rh1+ Bh4 4.Rh2 g3×h2 5.g4\# or $1 \ldots$...Bg $12 . \mathrm{Rb} 1$ Bh2 3.Re1 Kh4 4.Kg6 ~ 5.Re4\#

Specialities for New Year's Eve

No. 494
Karl Fabel


Mate in 3 with the rook that stands on $h 8$

It's New Year's Eve, and Mr White and Mr Black are enjoying a quiet game of chess. There's a rather nice aroma coming from their grog. Black, who's a problemist, is as usual in a poor position, but he always keeps his hopes up right to the end. Then White announces, 'Mate in 3 moves' and immediately shows how: $1 . R \times h 7+$ $K \times h 7$ 2.Rg8 Kh6 3.Rh8\#. 'Humph,' growls Black, 'why do you have to use force? - it could be done differently.' He sets the position up again. 'Mate in 3 moves, but with the Rook that's on h8! That's surely not too much to ask.' White can't find the solution, but maybe the crafty reader can?

Solution: Black's 'creative' solution is: 1.Rhg8 $\mathrm{B} \times \mathrm{g} 82 . \mathrm{f} \times \mathrm{g} 8 \mathrm{R}$ ! (the pawn promotes to the rook that had previously been on h8) Kh7 3.Rh8\#, and this rook is back on h8. Let's drink to a Happy New Year!
[This idea was already presented in 1914 (P1182118) and in a miniature in 2018 (P1346725).]

No. 495
Werner Keym
Stuttgarter Zeitung
31-12-2005


Mate in 3 without moving the queen

A New Year's Eve game down at the chess club is just coming to an end. Suddenly White wagers a bottle of cognac that he can mate in 3 without moving the Queen. The only mating sequence Black can see is $1 . e 8 Q+K d 52 . Q b 7+c 63 . Q b \times c 6 \#$, so he accepts the wager. White proudly shows what he has thought up: 1.e8Q+Kd5 2.c4+ $d 4 \times c 3$ e.p. 3.Qe8-e4\#. But Black objects, because he can plainly see that Qe8-e 4 is a Q-move. White replies that he said 'without moving the Queen', meaning the $Q$ already on $b 4$. Opinions are divided on the matter. At this point a spectator intervenes and wagers that White can indeed mate in 3 without any Queen-move at all. Who wins the cognac, White, Black, or the spectator?

Solution: The spectator. White can mate himself in 3! 1.e8Q+ Kd5 2.c4+ d4xc3 e.p. $3.0-0-0+$ Sd3\#. Hey presto, a Valladao for New Year's Eve!

## A 'compromise' on New Year's Eve

No. 496
Werner Keym
Stuttgarter Zeitung
31-12-1999


Snapshot of a typical New Year's Eve game. Quite a few glasses have been emptied, and Black is just about to give mate when he brushes a pawn off the board with his sleeve. Now the argument starts up: was it a white pawn or a black pawn, and which square was it on? Eventually White suggests a compromise: 'First of all you decide on the colour, and then I'll decide on the square.' Black is happy with this. Was he right to be?

Solution: No, he wasn't. With a white pawn on c7 White can achieve stalemate: $1 . c 7 \times \mathrm{d} 8 \mathrm{Q}+\mathrm{Kb} 7(\mathrm{~K} \times \mathrm{d} 8$ ? stalemate) $2 . \mathrm{Qc} 7+\mathrm{Ka6} / \mathrm{Ka} 83 . \mathrm{Qb6}+/ \mathrm{Qb} 8+\mathrm{K} \times \mathrm{Q}$. With a black pawn on d 7 he can prove that Black's last move ( $0-0-0 \#$ ) was illegal. This is because the white king can only have got into the corner via d8, so the black king must have moved. According to the 'touch-move' rule Black must take back $0-0-0$ and play a king-move instead. Stalemate again! A fine way to start the third millennium!

Sherlock Holmes and Dr Watson were travelling by train from Basel to Rotterdam for the problemists' congress. They had not been in Germany long when Watson spied a slip of paper on the floor. Written on it was: Ka8 Bg5 Bh7 Kd8 Be7, helpmate in 2, 1st move 1.Ke8. Watson took out his pocket set and soon said, 'There's something amiss here. 1.Ke8 is wrong; the correct solution is 1.Kc8! Bf4 2.Bd8 Bf5 mate.' Holmes said nothing.

A few hours later, when they were already in Holland, they came back from the restaurant-car and Watson found another slip of paper with a chess problem on it: Kc4 Pa6 Kc8 Pc5 Pc6 Pc7, helpmate in 3, 1st move 1.Kb7. 'Again there's something wrong,' said Watson immediately. '1.Kb7 is a move into check and so impossible. Maybe it's another mistake?' And before long he said: 'Yes indeed, you can mate by 1.Kb8! a7+ 2.Kb7 K×c5 3.Ka6 a8Q. Curious. What is your view, Holmes?'

| No. 497a No. 497b | No. 498a | No. 498b |
| :--- | :--- | :--- | :--- |

Barry P. Barnes Klüver Memorial Tourney 1990-93 $1^{\text {st }} / 2^{\text {nd }}$ Prize

'It's not curious to me,' replied the latter. 'The first slip of paper comes from Germany. B is Bauer (pawn) in German, and it works with three pawns: 1.Ke8 g6 2.Kf8 h8Q mate. The second is from Holland. P means Paard (knight) in Dutch, and the key is correct: 1.Kb7 $K \times c 5$ 2.Ka8 Kb6 $3 . S b 8 S \times c 7$ mate.' 'But what's it all about?' asked a perplexed Watson. 'I think I know,’ answered Holmes. 'A chess problemist gave the slips of paper to the guard as a way of testing us. B is for Bishop and Bauer, P is for Pawn and Paard. So this may well be Barry P. Barnes, whom we shall meet in Rotterdam. He has composed two 'international twins' for us. Rather nice.' And as usual the famous detective was right.
(Abridged version of B. P. Barnes' original English text)

## Calculation and thought

No. 499
Werner Keym
Stuttgarter Zeitung 2009


Mate in twice 2 moves

Down at the chess club they are holding a solving contest with a rather special problem. The first person to solve it will win a magnum of champagne. An old fox, who's a keen solver, and a young whippersnapper, who uses his mobile phone even for playing chess, simultaneously hand in different but not incorrect solutions. Eventually the contest controller gives the judgment of Solomon: 'The bottle goes to everyone present!' Great rejoicing at the club: they're all happy. How come?

Solution: The decision is a wise one, since both solvers are right, even if only partially. The mobile spits out the moves 1.Qc5! Kd8 2.Qe7+ Kc8 3.d6 Re8 4.Q×e8\#, i.e. mate in 4 ( $=$ twice 2 ) moves (cf. no. 400). The problemist, however, sees that Black may castle either long or short. If $0-0-0$ is permitted, then 1.Qc7! Kf8 2.Qf7\#; and if $0-0$, then $1 . Q \times \mathrm{g} 7!\mathrm{Kd} 82 . \mathrm{Qd} 7 \#$. Both of these are twice 2 moves!

A Problem for Musicians?


At the conclusion of a chess evening a lover of both problems and music shows an easy twomover. The mating sequence is quickly found: 1.Rg8 Kh4 2.Rh6\#. 'That's simple,' says the problem-lover, 'but there is another puzzle. If you invert or reflect this position, you can certainly still mate in two, but the musicological significance is lost. Is that simple as well?'

Solution: The four men stand on B1, A6, C8, H5, which gives B-A-C-H and the year of his birth 1-6-8-5. If you invert the position you get BACH and 8314 , and if you reflect it you get GHFA and 1685 . Both of these are musicologically unsound.
'Chess, like love, like music, has the power to make men happy'.
(Siegbert Tarrasch)

## Ten 100 Euro tasks

As far as I know the following tasks have not yet been achieved. I am offering 100 Euro for the first realization of each of these ten tasks.

## a) without retro aspect

1) 100 Dollar theme with only one promoted piece (p. 35)
2) Babson task in helpmate with 4 solutions and 4 different keys (cp. no. 88)
3) Babson task without duals in all full length variants (mainline and sidelines) (cp. no. 94-96)
4) Valladao task and AUW in helpmate and endgame study (cp. no. 114-116)
5) Keym task: Valladao task and AUW and Excelsior walk in directmate and helpmate (cp. no. 116 and 117)
6) Oudot task: dual-free one-line helpmate with promotions of three black pawns to queens
b) with retro aspect
7) Illegal Cluster without any piece on the chessboard nor any additional condition (cp. 444-446)
8) four castlings or en-passant captures $(2+2$ or $1+3$ or $0+4)$ in a classical release problem (not in a proof game as no. 453)
9) interchange of white rooks and interchange of black rooks in a classical release problem (not in a proof game as no. 454)
10) dual-free walk of a king to the four corners in a proof game

Do you remember the song of The Everly Brothers?
'Problems, problems, problems, all day long. Will my problems work out right or wrong?'

## The editor's choice



A: a) Try: 1.Qg3? (thr. 2.Sd4\#) Qa1!; solution: 1.Bh8! (thr. 2.Sg7\#) B $\times$ e $5 / \mathrm{B} \times \mathrm{f} 5$ 2.e $\times$ d8S/e8Q,R\#. b) Try: 1.Bh7 (thr. 2.Sg6\#) Sf8!; solution 1.Qg2! (thr. 2.Sd3\#) $B \times e 4 / B \times f 42 . \mathrm{Qb} 2 / \mathrm{Bb} 2 \#$. Mate change between the twin positions effected by different setting, not by the key move, to be sure. A task brilliantly performed. One ought to study the changes carefully as they are effected by shifting the position in a subtle way with pawns d7 and e7: the black pawn loses its option of the double step, whereas the white pawn is deprived of its option of promotion.
B (FIDE-Album): Set play: 1...0-0-0 2.Qf2 R $\times \mathrm{d} 3 \#$. Solution: $1 . \mathrm{Q} \times$ a1+! Kd2 2.Kb2 Rb4\#. The black piece on the first move of the solution captures the white piece which mates in set play.
C: a) If the last move was Kg2-f1\# there would be a forced mate by $1 . \mathrm{Kg} 2-\mathrm{fl} / \mathrm{g} 1 \#$. Therefore White retracts $\mathrm{Kg} 2 \times$ Bf1! (previous move: Be2-f1+ or Pf2-f1B+) and then $1 . \mathrm{Kg} 2-\mathrm{g} 1+$ ! does not result in a mate. b) If the last move was $\mathrm{Kg} 2-\mathrm{g} 1$ \# there would be a forced mate by $1 . \mathrm{Kg} 2-\mathrm{f} 1 / \mathrm{g} 1 \#$. Therefore White retracts $\mathrm{Kg} 2 \times \mathrm{Sg} 1$ ! (previous move: $\mathrm{Se} 2-\mathrm{g} 1+$ or $\mathrm{Pf} 2 \times \mathrm{Xg} 1 \mathrm{~S}+$ ) and then $1 . \mathrm{Kg} 2-\mathrm{f} 1+$ ! does not result in a mate. Reciprocal change of both the mating move and the non-mating move connected with black underpromotions.
Finally a special 'cluster problem' by myself (P1348873).
Godehard Murkisch

## Codex for Chess Composition

This codex deals with general principles of chess composition activities such as composition, solving and publication. The codex is intended to be descriptive, rather than prescriptive ...

Article 15 - First move
If the first move does not lie with the conventional party ..., this should either be indicated in the stipulation or deducible from retroanalysis.

Article 16 - Castling and En-passant capture
(1) Castling convention. Castling is permitted unless it can be proved that it is not permissible.
(2) En-passant convention. An en-passant capture on the first move is permitted only if it can be proved that the last move was the double step of the pawn which is to be captured.
(3) Partial Retrograde Analysis (PRA) convention. Where the rights to castle and/or to capture en-passant are mutually dependent, the solution consists of several mutually exclusive parts. All possible combinations of move rights, taking into account the castling convention and the en-passant convention, form these mutually dependent parts. If in the case of mutual dependency of castling rights a solution is not possible according to the PRA convention, then the Retro-Strategy (RS) convention should be applied: whichever castling is executed first is deemed to be permissible.
(4) Other conventions should be expressly stipulated, for example if in the course of the solution an en-passant capture has to be legalised by subsequent castling (a posteriori (AP) convention).

## Article 17A - Dead Position Rule

Unless expressly stipulated, the rule of dead position does not apply to the solution of chess compositions except for retro-problems.

Annotation: Article 15 was resolved in 1974 at Wiesbaden, article 16 (except for the sentence 'If in the case . . . permissible.') in 2008 at Jurmala, this sentence in 2009 in Rio de Janeiro, article 17A in 2015 at Ostroda.

## Glossary

(v): later version of a problem
(c): later correction of a problem

PDB (Chess Problem Database Server): a free easy-to-use source of about 400,000 problems. See http://pdb.dieschwalbe.de and enter PROBID = 'P1012377' for a single problem (= no. 1 by W. E. Candy) or $\mathrm{K}=$ 'symmetrical position' for a theme.

Pieces: king (K), queen (Q), rook (R), bishop (B), knight (S), pawn (P). Officers: Q, R, B, S.

Allumwandlung: promotion to Q and R and B and S .
Letztform: best and unsurpassable realization
Miniature: problem with at most 7 pieces
Zugzwang: compulsion to move (with a negative result)
Directmate problem: White moves first and gives mate in n moves against any defense. A mate in 2 moves comprises 3 single moves.

Selfmate problem: White moves first and forces Black to give mate in n moves. A selfmate in 2 moves comprises 4 single moves.
Helpmate problem: Black moves first and helps White to give mate in n moves; a helpmate in 2 or 2.0 moves comprises 4 single moves. A helpmate in 2.5 moves comprises 5 single moves; in this case White moves first.
Unconventional first move: if the first move does not lie with the conventional party, this should either be indicated in the stipulation or deducible from retroanalysis.

The real play comprises the moves executed in the course of the solution. The virtual play comprises possible moves, especially in (thematical) tries and in set play. In the set play Black moves first in a directmate or selfmate problem, White in a helpmate problem. A star * points to the set play.
Retrograde analysis or retroanalysis: process of proving what the 'history' (i.e. the last one or more moves) of a given position must have been.

The genesis of the position states the important moves from the initial position to the diagram position; these moves need not be unique.

A virtual retro move results in a retro stalemate, if this move leads to an illegal position where one party has got no previous move so that the initial game array cannot be reached.

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## The funny side of chess!

Patient: Will I live to be eighty, Doctor?
Doctor: How old are you now?
Patient: Sixty-two.
Doctor: Do you drink?
Patient: Not very much.
Doctor: Do you smoke?
Patient: Not at all.
Doctor: Do you do any womanizing?
Patient: Certainly not, doctor.
Doctor: Do you like playing chess, by any chance?
Patient: No, doctor, I don't.
Doctor: Then why do you want to live till eighty?

## Retro-


analyst

## Chess World Championship: a proposal out of the box

The Chess World Championship match should be decided neither by rapid chess nor by blitz chess nor by Armageddon, but instead by classic chess.

## Proposal

The competition consists of two parts: prologue and match.

## 1. Prologue

1.1 Who plays White in the first game is decided by lot.
1.2 There are then 4 rapid chess games. If one player gets 2.5 points, the prologue is over.
1.3 Otherwise, the result is $2: 2$, and now 2 blitz chess games will follow. If one player gets 1.5 points, the prologue is over.
1.4 Otherwise, the result is $1: 1$, and now further blitz chess games will follow. The first win of a game will end the prologue.
1.5 We now have a prologue winner and a prologue loser.
2. Match
2.1 There is an odd number of classic chess games (e.g. 13).
2.2 The prologue loser plays White in the odd-numbered games ( $1,3,5, \ldots 13$ ).
2.3 If the prologue loser gets 7 points, he will be the champion.
2.4 If the prologue winner gets 6.5 points, he will be the champion.

## Comment

- The conditions for the champion and the challenger are equal.
- The prologue will take 2-4 days.
- The advantage for the prologue loser is that he has White in the first and the last game.
- The advantage for the prologue winner is that he wins the championship in case of tie.
- The championship match is decided by at most 13 classic chess games and there may be much excitement towards the end: in the $13^{\text {th }}$ game the prologue loser has White and must win, whereas the prologue winner has Black and must draw.
- The match will end by a fixed day. This is important for organizers, sponsors, media, and audience.


## INGENIOUS CHESS PUZZLES

Here is a stupendous anthology of 500 extraordinary chess problems to broaden your chess horizons and exhaust your grey matter. Some problems appear ordinary, but most are tricky and insidious. Many require researching the 'history' of the position (retrograde analysis). Dive into a fascinating, sometimes even bizarre world of subtle or spectacular chess surprises.


Mate in 2 moves
A simple problem?
However, most of the 'solvers' were wrong. How about you?

There is even a suggestion for a better procedure in the Chess World Championship Match.

Werner Keym is a German expert in chess problems showing castling, en-passant capture and pawn promotion. For years problem-lovers have enjoyed his computer-defying puzzles, his funny chess jokes and his stories in the tradition of Sam Loyd.
'Logic will get you from A to B. Imagination will take you everywhere'. (Albert Einstein)

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## Errata

p. 42, no. 139: not 'Feenschach 1956 ', but 'Fairy Chess Review 1956'
p. 42, no. 144: only 'Die Schwalbe 2007, $2^{\text {nd }} H M$ '
p. 45, no. 155: not 'Retro Mailing List 2007', but 'Die Schwalbe 2007, $2^{\text {nd }}$ commendation'
p. 137 , no. 431, stipulation: '... then mate in 1 Proca Retractor'

