

# THE PUZZLING SIDE OF CHESS

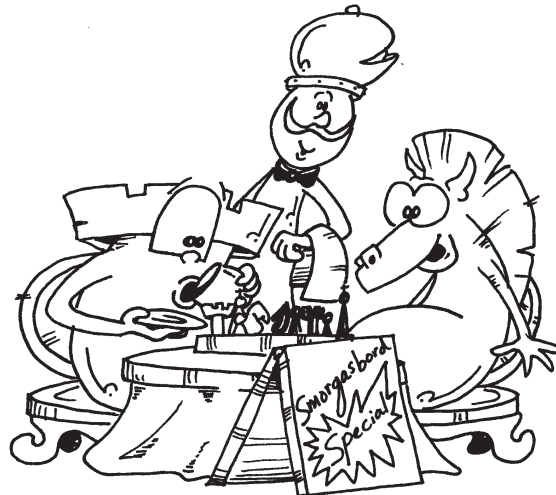
Jeff Coakley

## SMORGASBORD XXXIX

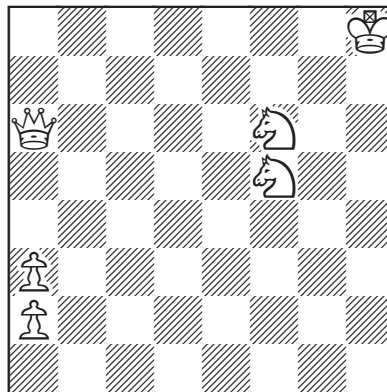
number 240

October 28, 2024

Another month slips by. Another typical collection of seven problems. What else is there to say? Here they are.



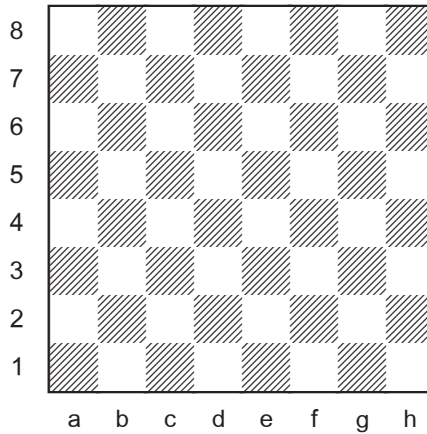
### Triple Loyd 93



Place the black king on the board so that:

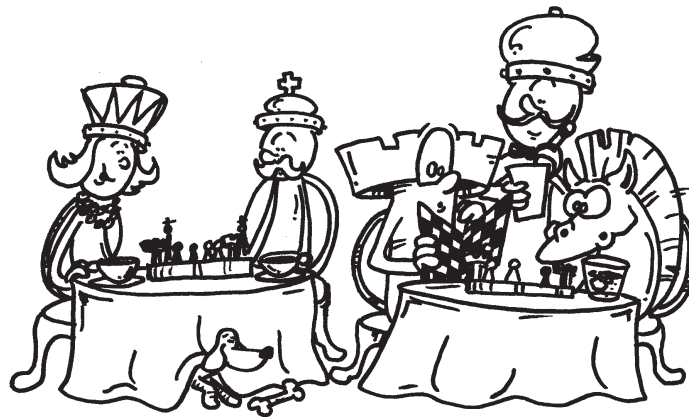
- Black is in checkmate.
- Black is in stalemate.
- White has mate in 1.

## Double Check Maximizer

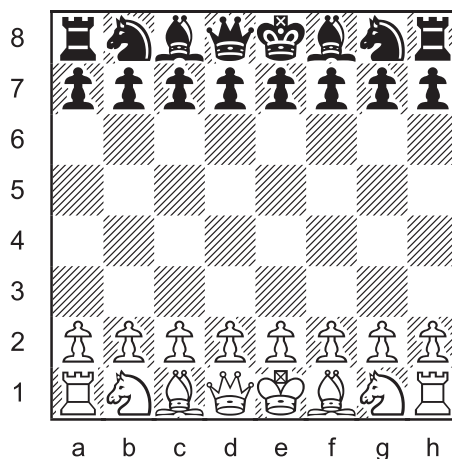


Construct a legal position in which White has the most moves that give double check.

- A. Without promoted pieces or promoting moves.
- B. Without promoting moves. Promoted pieces allowed.
- C. Promoted pieces and promoting moves allowed.

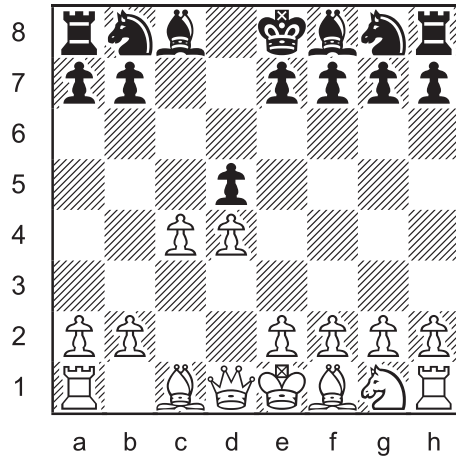


## Synthetic Game 57

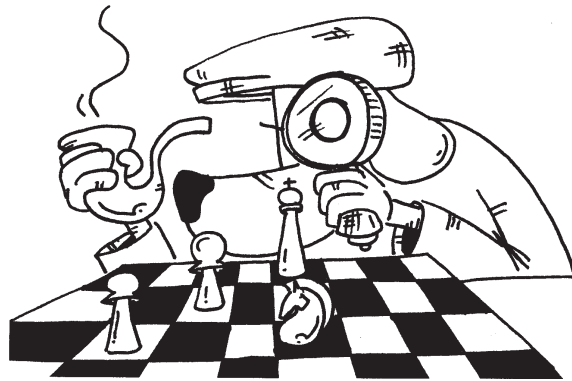


Compose a game that ends with the non-capture 11.Ke8#.

**Longer Proof Game 133** (5.0 moves)

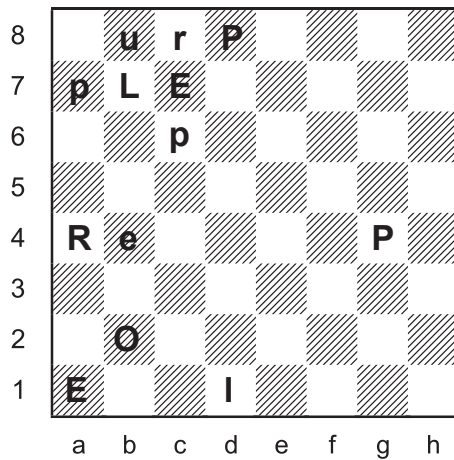


This position was reached after Black's fifth turn. What were the moves?



**Rebus 121**

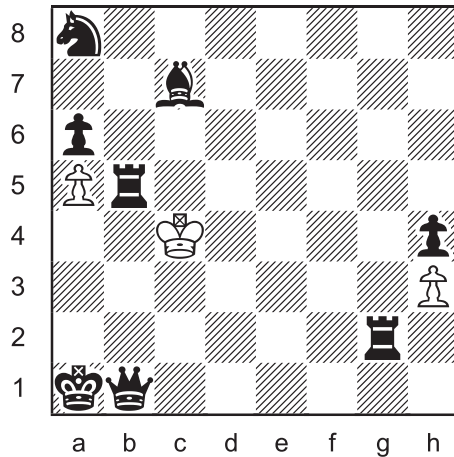
*"purple people"*



Each letter represents a different type of piece.  
Uppercase is one colour, lowercase is the other.  
Determine the position.

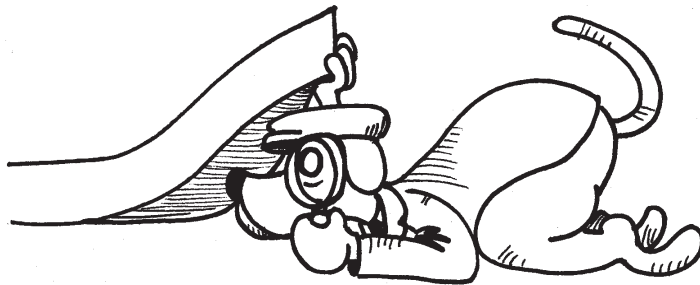
*The letter on d1 is a small L, not a capital i.*

## Multi-Wham 90



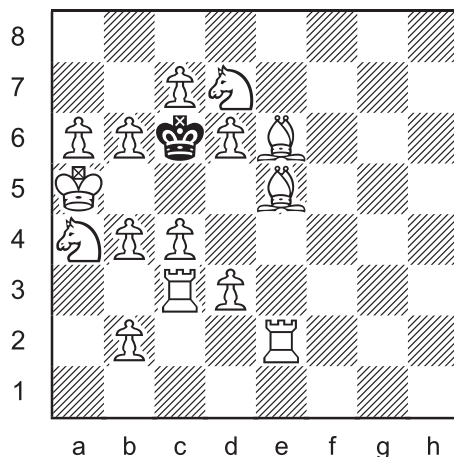
series-mate in 23

White plays twenty-three moves in a row to mate Black.



Our final puzzle is by two great masters of retro-composition, Andrey Frolkin and Andrew Buchanan. First presented two years ago at a programming conference in Sicily called *A Practical Algorithm for Chess Unwinnability*, it achieves a compositional task previously considered impossible. Step one: Whose turn is it?

## Retro 54



What was the last move?

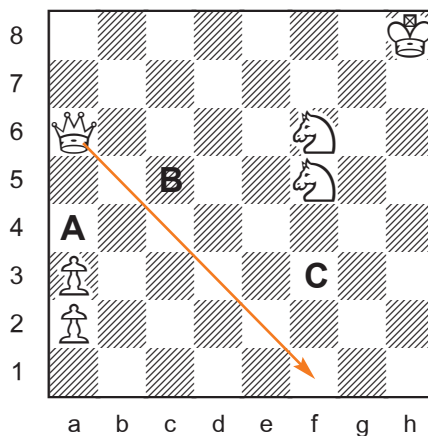
## SOLUTIONS

Except for Retro 54, all problems by J. Coakley, *Puzzling Side of Chess* (2024). Rebus 121 is a joint composition with Andrey Frolkin.

**PDF hyperlinks.** You can advance to the solution of any puzzle by clicking on the underlined title above the diagram. To return to the puzzle, click on the title above the solution diagram.

**Archives.** Past columns are available in the *Puzzling Side* archives.

### Triple Loyd 93

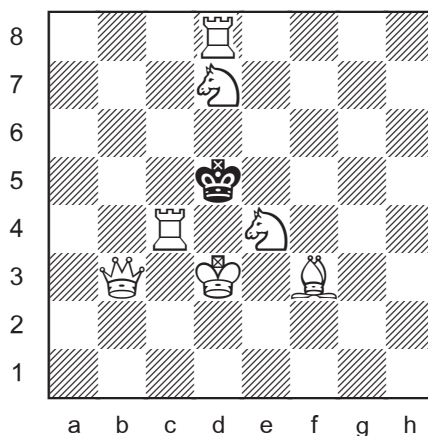


- A. Ka4#
- B. Kc5=
- C. Kf3 (Qf1#)

Doubled pawns, doubled knights.

### Double Check Maximizer

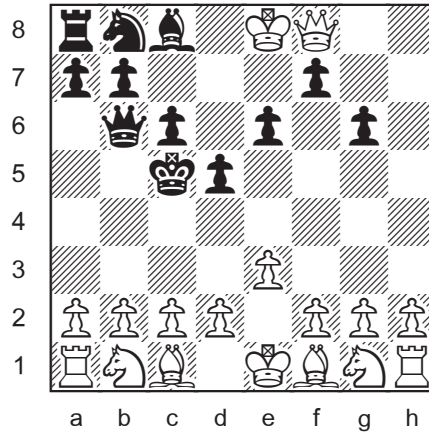
A. No promoted pieces or promoting moves



6 double checks  
(4 knight, 2 rook)  
Which one is mate?

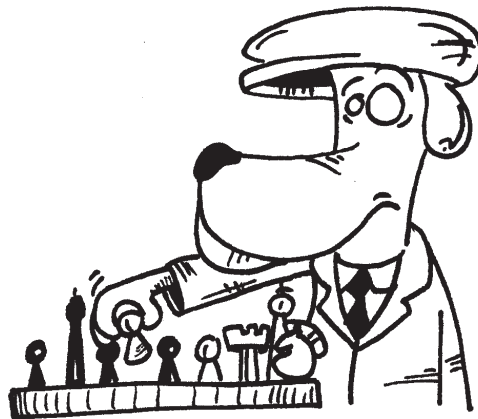


## Synthetic Game 57

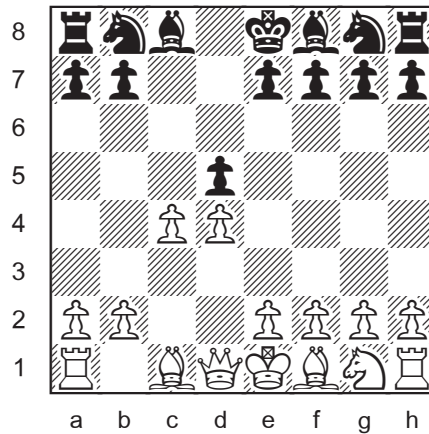


1.e3 h5 2.Qxh5 e6 3.Qxh8 Ke7 4.Ke2 Kd6 5.Kf3 Ne7 6.Kg4 g6  
7.Kg5 c6 8.Qxf8 Kc5 9.Kf6 Qb6 10.Kxe7 d5 11.Ke8#

The moves can be played in various orders.



## Longer Proof Game 133 (5.0 moves)



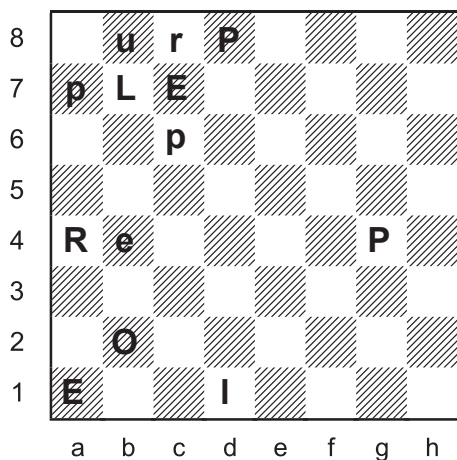
1.d4 c5 2.Nd2 Qb6 3.Nb3 Qxb3 4.cxb3 c4 5.bxc4 d5

Normal position, strange moves.

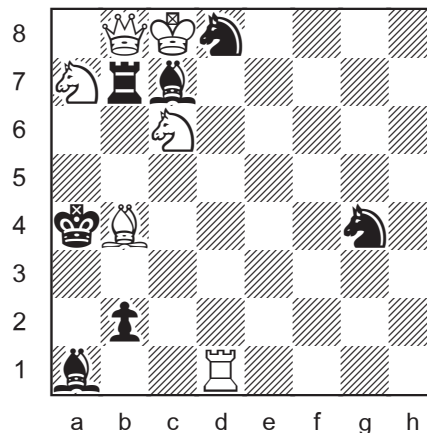
## Rebus 121

Andrey Frolkin & Jeff Coakley

*"purple people"*



P = knight  
 U = queen  
 R = king  
 L = rook  
 E = bishop  
 O = pawn  
 caps = black



(6 + 7)

♔ = (LR)

Letters with one uppercase, one lowercase.

O = ♙

Only letter not on 1st or 8th rank.

P = ♘

Regardless of king assignment.

P ≠ ♔ ♖ Both kings in check.

P ≠ ♕ ♗ Both kings in check.

E = ♗

Regardless of king assignment.

E ≠ ♔ ♖ Both kings in check.

caps = black

There cannot be a white bishop on a1 with a white pawn on b2.

U = ♑

Regardless of king assignment.

LR ≠ ♑ Both kings in check.

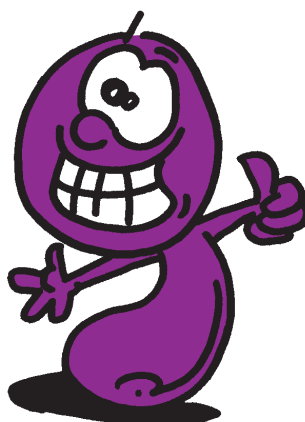
LR = (♔ ♖)

L = ♖

L ≠ ♑ Impossible check (♑b8).

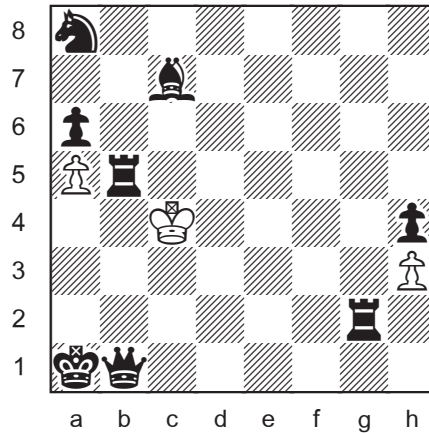
R = ♔

An unusual rebus for two reasons. The final piece assigned is the king and neither king is in check.





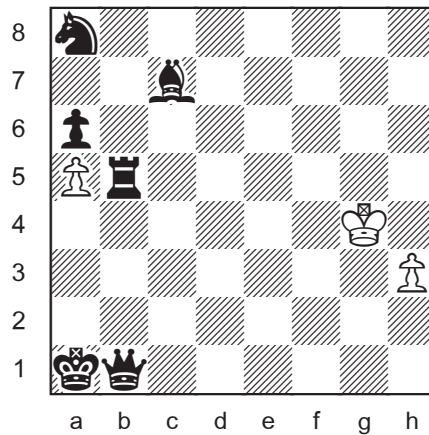
## Multi-Wham 90



series-mate in 23

The first moves are easy. The white king must capture the pawn on h4.

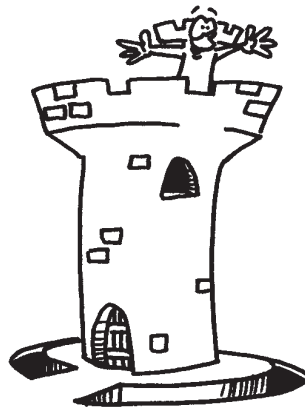
1.Kd4 2.Ke3 3.Kf3 4.Kxg2 5.Kf3 6.Kg4 7.Kxh4 8.Kg4

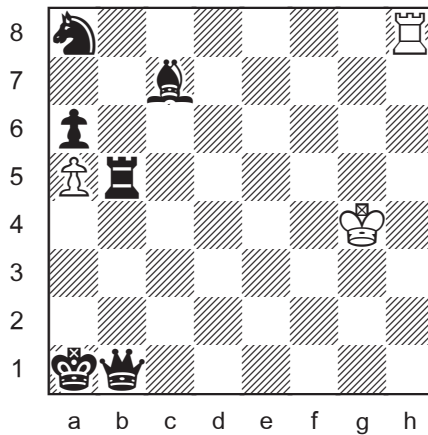


The next moves are easy. The white h-pawn must promote.

9.h4 10.h5 11.h6 12.h7 13.h8=R

Promoting to queen or bishop would be check. Promoting to knight is five moves slower than a rook.

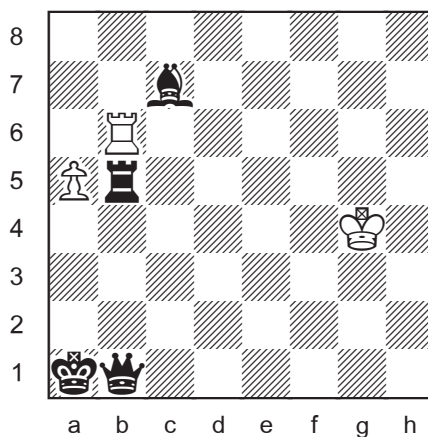




The next two moves are easy. The white rook must free the a-pawn. But where does the rook go after the capture?

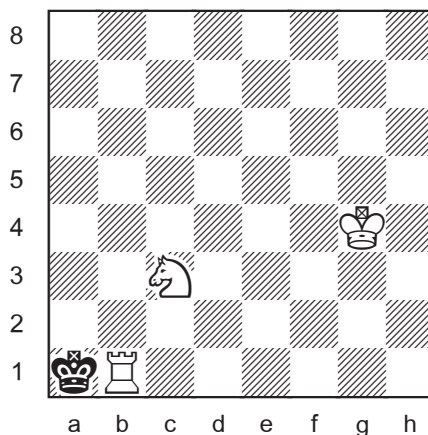
14.Rxa8 15.Rxa6 16.Rb6

The mating formation has to be envisioned at this point.



The rest is easy if you've seen the mate.

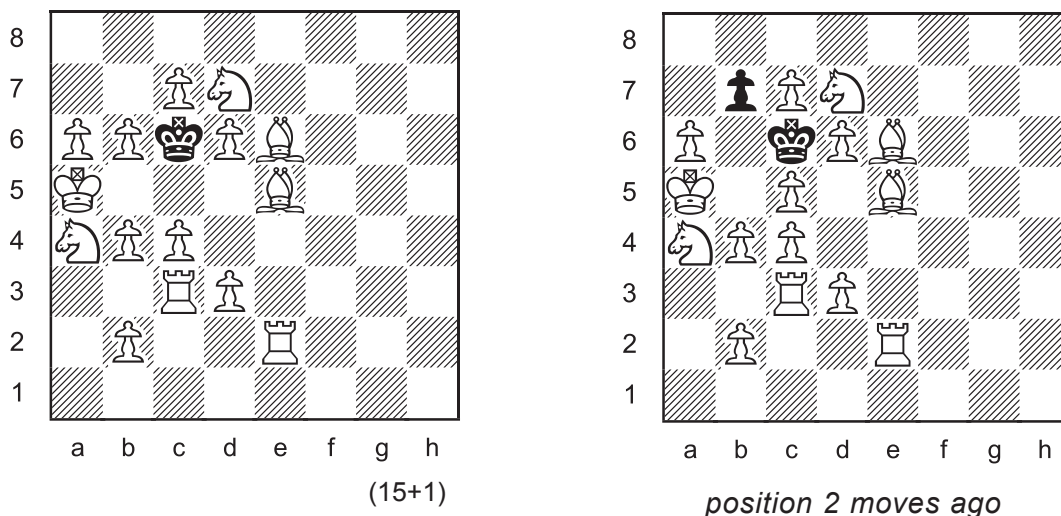
17.a6 18.a7 19.a8=N Promoting to bishop is five moves too slow.  
20.Nxc7 21.Nxb5 22.Nc3 23.Rxb1#



The famous Arabian mate in a pure and ideal setting..

## Retro 54

Andrey Frolkin & Andrew Buchanan 2022  
*A Practical Algorithm for Chess Unwinnability*



Last 2 moves in retro notation: -1.c5xb6 e.p. b7-b5

For forward thinkers, the moves in standard notation from the diagram on the right were: 1...b5 2.cxb6 e.p.  $\frac{1}{2}$ - $\frac{1}{2}$  stalemate

Analysis:

The white pawn formation required 15 captures. That accounts for all of the missing black pieces. The white a-pawn did not make a capture.

In order for the black a-pawn to be captured, it had to capture first onto the b-file. That accounts for the lone missing white piece (queen).

It is important to note that the black b-pawn was also captured on the b-file. It could not have promoted to be captured elsewhere. Therefore, both pieces captured by White on the b-file were pawns.

The last move was not by the black king. He did not move from b7 because he would have been in check by the a-pawn and the previous move by White could not be the capture b5xa6+. He did not move from b5 because he would have been next to the white king. He did not move from c5 because he would have been in triple check. He not move from d5 because he would have been in an impossible double check. On d5, the black king would also have been in an impossible check by the pawn on c4 since b3xc4+ was impossible.

Therefore the last move was by White. And Black is stalemated.

White just moved. For the position before that move to be legal, Black must have a possible move on the preceding turn.

There is no white move that can be retracted to give the black king a legal move on the preceding turn.

The only white move to retract which gives Black a move on their preceding turn is a capture on b6. In that case, Black's previous move was by the captured piece.

So the last move was 1.c5xb6. As explained earlier, the piece captured was necessarily a pawn. But there are two options for Black's previous move: 1...b7-b6+ or 1...b7-b5. In the latter case, White captures on b6 *en passant*!

The diagram at right shows the position if Black's last move was ...b7-b6+. White is in check and the only way out of check is the capture c5xb6. After the capture, Black will be in stalemate. That means that the position is already dead before the capture.

No further moves can be made. White is not allowed to capture on b6 because the game is already over according to the laws of chess.

So Black did not play ...b7-b6+.

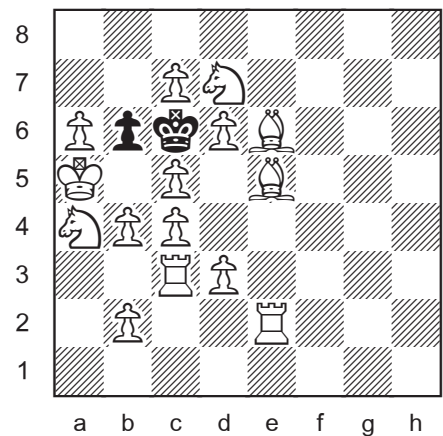
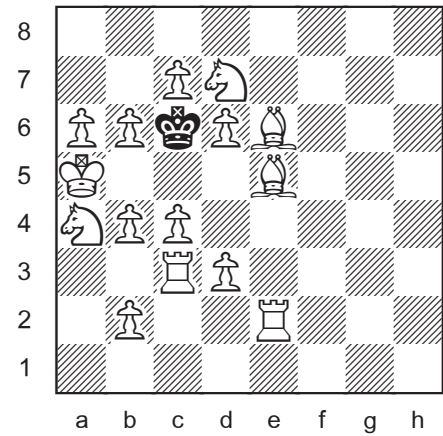
FIDE rule 5.2.2. "The game is drawn when a position has arisen in which neither player can checkmate the opponent's king with any series of legal moves. The game is said to end in a 'dead position'. This immediately ends the game."

For the capture on b6 to be legal, White must necessarily have had an option to not give stalemate. That is only possible if the preceding black move was ...b7-b5. Then, instead of 1.c5xb6 e.p. stalemate, White could have played some other move because the white king is not in check.

This type of deductive reasoning in retroanalysis is called *dead reckoning*. A detailed explanation is given in column 127. Other DR problems appear in columns 116, 127, 145, 149, 176, 178, 228.

The last two moves were 1...b7-b5 2.c5xb6 e.p.

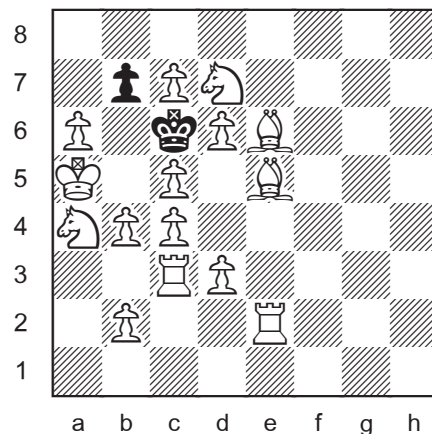
See the next page for the position before those moves.



position after ...b7-b6+

So what was White's previous move before Black's ...b7-b5? Once again, it must be the capture of a black piece which moved on the preceding turn. The only possibility is d4xc5. The black piece captured on c5 could have been a queen, bishop, or knight, but not a rook or pawn.

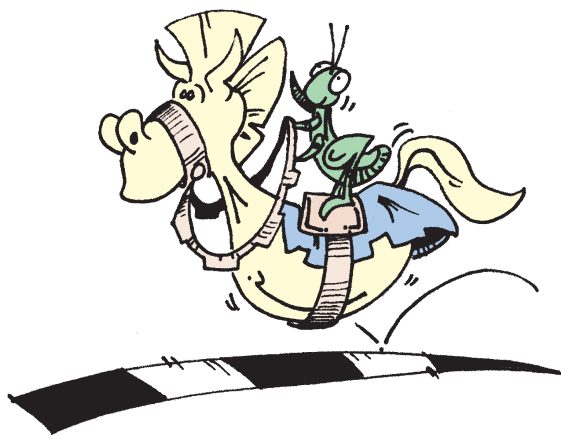
This composition is a one-of-a-kind last mover! It is the only example of a type A position in which the last move is an *en passant* capture, a task previously considered impossible!



position before ...b7-b5

Positions involving retrograde analysis can be divided into three types based on how we know whose turn it is. In type A positions, we are not told whose turn it is and neither player is in check. In type B, we are told whose turn it is. In type C, one side is in check.

Andrey Frolkin and Andrew Buchanan accomplished the impossible by means of dead reckoning. They have recently composed a new version of this problem in which the last 6 moves are exactly determined. It will appear in an upcoming issue of *The Hopper*, an online magazine dedicated to retrograde analysis. Check it out. [www.thehoppermagazine.com](http://www.thehoppermagazine.com)



Until next time!

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