



# THE PUZZLING SIDE OF CHESS

Jeff Coakley

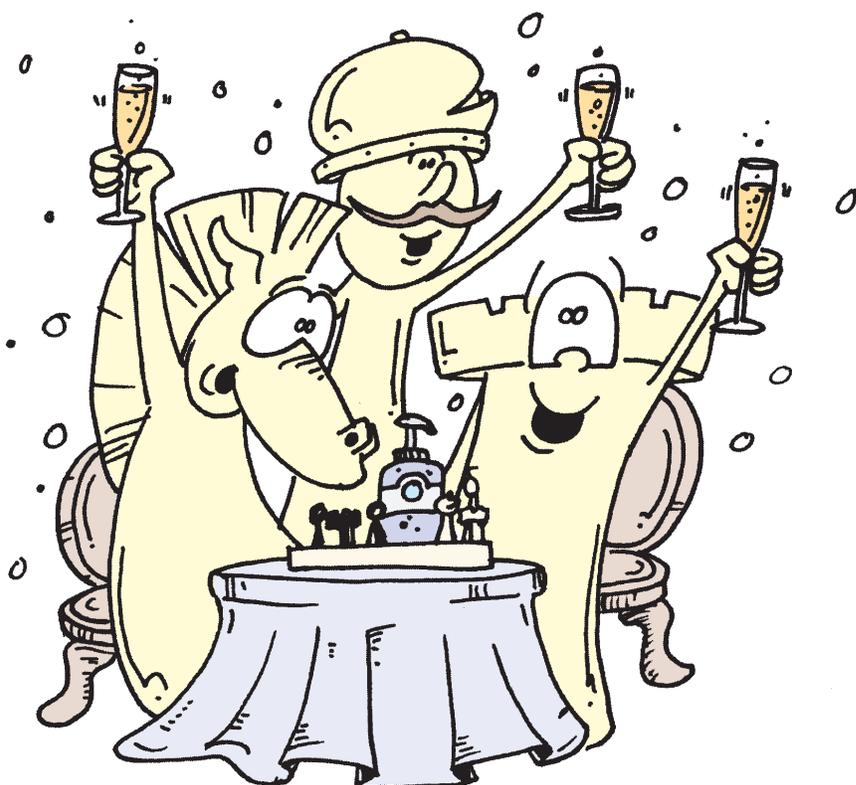
## RETRO WORLD VI: A Look Into The Future

number 197

December 31, 2020

*Retrograde analysis* is a form of logical reasoning in which past events are deduced from details in the present situation. In chess, its common use is to determine the move or moves that led to a given position.

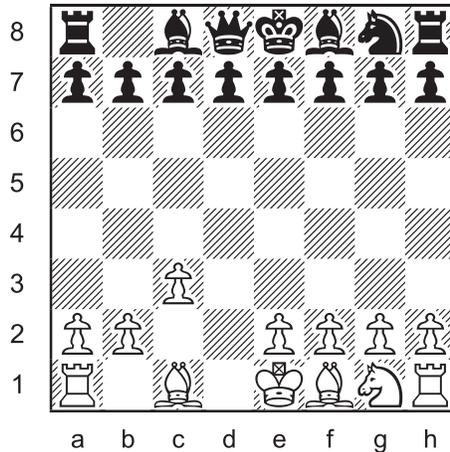
This column presents eight retro problems: 3 proof games, 2 rebuses, and 3 last movers. The final composition is especially noteworthy as it marks a new milestone for the *allumwandlung* theme. Composed by the grandest of retro masters, Andrey Frolkin, it achieves promotions to queen, rook, bishop, and knight on the last 4 single moves!



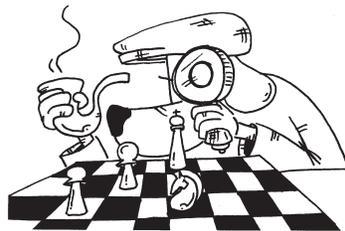
*Raise your glasses, friends. Here's to a brighter future!*

The first problem is a relatively easy proof game. Only nine moves deep: 5 white, 4 black. As noted in previous columns, PGs greater than four moves are labelled “longer” on the *Puzzling Side*. If you like “4.0 shorties”, there are currently 89 of them in the archives.

**Longer Proof Game 81** (4.5 moves)

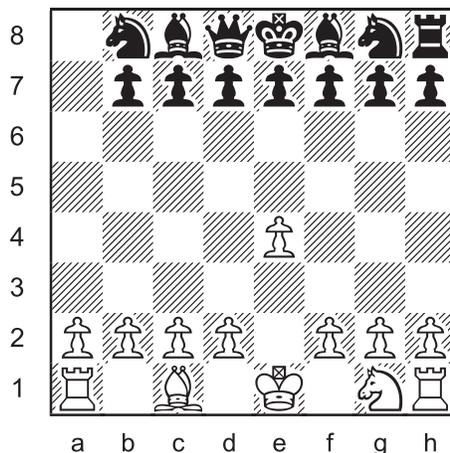


This position was reached after White's fifth turn. What were the moves?



The next game goes two moves further. With each step into the future, the course of past events is much easier to conceal and much harder to reveal. Can you see across time?

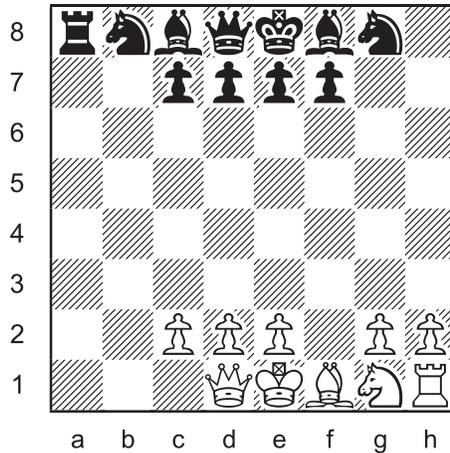
**Longer Proof Game 82** (5.5 moves)



This position was reached after White's sixth turn. What were the moves?

The following problem is the sort of *massacre* proof game that is practically impossible for most humans to solve. Perhaps its charming homebase setting will entice you to try.

**Longer Proof Game 83** (9.5 moves)

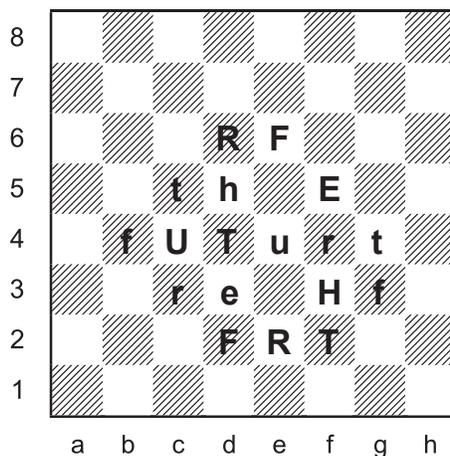


This position was reached after White's tenth turn. What were the moves?

Hopefully the previous puzzles proved sufficiently entertaining. The next items on our agenda are *retro rebuses*. These “chessboard sudokus” are a great form of idle amusement. But please solve responsibly. They can be addictive. For information on rebus rehab programs, contact the *Rebusland Hotline*.

What do you see when you look into the future?

**Rebus 63**  
“The Future”

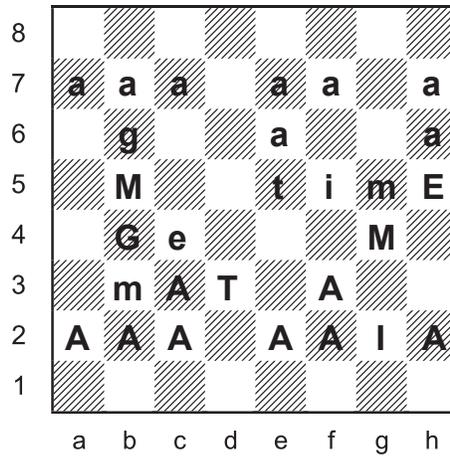


Each letter represents a different type of piece. Uppercase is one colour, lowercase is the other. Determine the position and, if possible, the last move.

The next rebus may throw you for a loop, figuratively and literally. Put on your game face and thinking cap. It's game time!

### Rebus 64

*"game time"*



The letter on g2 is a capital i, not a small L.

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

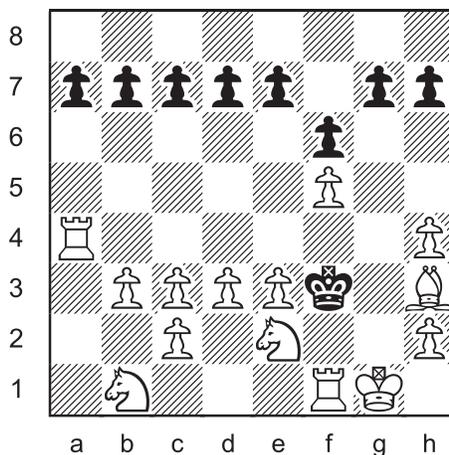


*A Look Into The Future*

Thanks to Nina Omelchuk for the wonderful painting on the previous page. A sheaf of rye is an ancient Ukrainian symbol for the hope of a bountiful new year. The promise of a healthy 2021 will be just that.

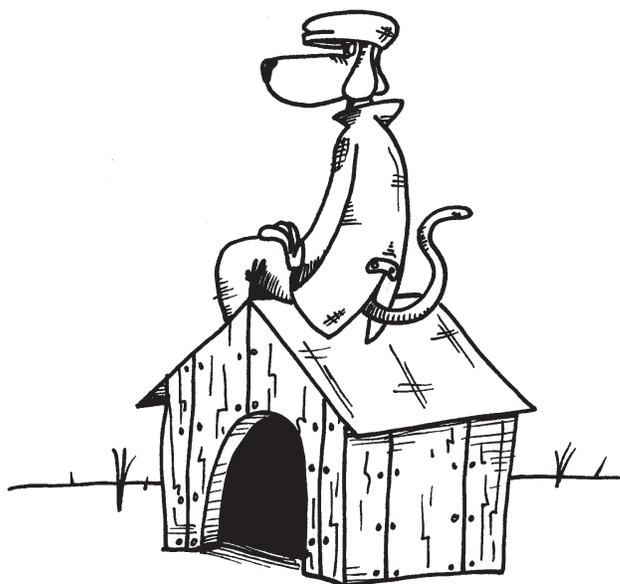
Nina's art has appeared many times on the *Puzzling Side of Chess* as well as in several articles on rebuses in the *ChessProblems.ca Bulletin*. For those who may not know, she is Andrey Frolkin's loving wife and muse.

### Retro 51



What were the last 3 moves?

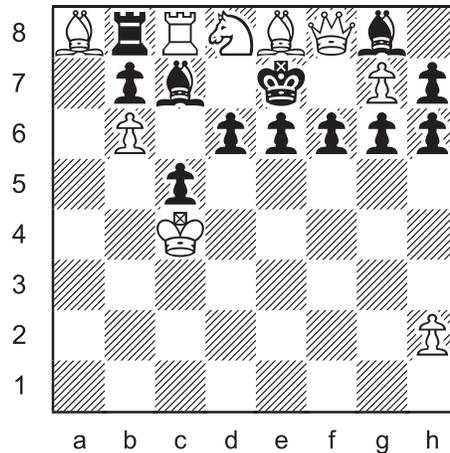
As usual in retro problems, determine the last moves precisely. A complete move description includes the square a piece came from, whether a capture was made, and if so, what type of piece was taken. Moves are counted separately for White and Black. "Last 8 moves" means four turns by each side.



*Pondering the eternal moment between past and future.*

As a prelude to our grand finale, here is a retro classic from 40 years ago by the renowned team of Andrei Kornilov and Andrey Frolkin. To the best of my knowledge, it is the only composition in which all moves are exactly determined and *allumwandlung* is accomplished on the last four retractions by White. For those not in the know, *allumwandlung* (German for “all-change”) is the promotion of queen, rook, bishop, and knight in a single problem. Fun stuff.

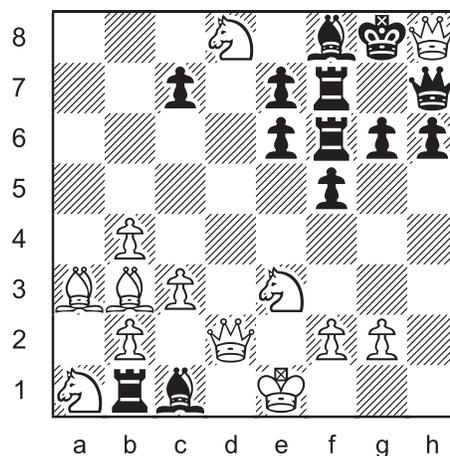
### Retro 52



What were the last 8 moves?

And now, ladies and gentlemen, the problem you’ve all been waiting for. Or perhaps you just jumped ahead. It’s a masterpiece from the present, destined to be a classic of the past for future generations of retro enthusiasts. *Allumwandlung* in four consecutive single moves. Four cheers for Andrey Frolkin!!!!

### Retro 53



What were the last 8 moves?

## SOLUTIONS

Solutions for last move problems are written in long algebraic notation, giving departure and destination squares, as well as the type of piece taken if a capture is made. For more information about retrograde analysis, see *Chess Mysteries in a Retro World* (column 30).

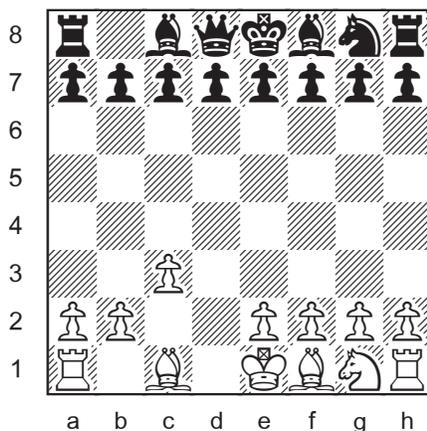
**PDF hyperlinks.** You can advance to the solution of any puzzle by clicking on the underlined title above the diagram. To return to the puzzle, click on the title above the solution diagram.

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

### Longer Proof Game 81 (4.5 moves)

J. Coakley 2020

*The Puzzling Side of Chess*



1.c4 Na6 2.c5 Nxc5 3.Qa4 Nxa4 4.Nc3 Nxc3 5.dxc3

Black knight ramble tamble.

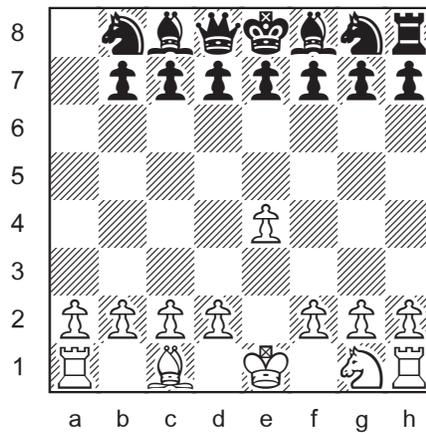


*No stone unturned.*

### Longer Proof Game 82 (5.5 moves)

J. Coakley 2020

*The Puzzling Side of Chess*



1.e4 a6 2.Bxa6 Rxa6 3.Na3 Rxa3 4.Kf1 Re3 5.Qe1 Rxe1+ 6.Kxe1

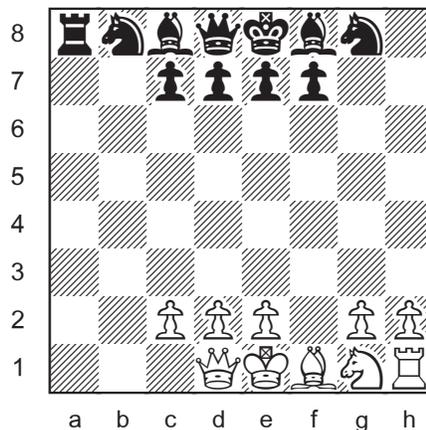
A switchback capture by the white king, aka the *Orbán effect*.

**82b:** For a full homebase version, delete the pawn on e4.  
Substitute 1.e3 and 4...Rxe3.

### Longer Proof Game 83 (9.5 moves)

J. Coakley 2020

*The Puzzling Side of Chess*



1.f4 a5 2.f5 a4 3.f6 a3 4.fxg7 axb2 5.gxh8=Q bxa1=Q  
6.Qxh7 Qxa2 7.Qe4 Qxb1 8.Qxb7 Qxc1 9.Qb1 Qxd1+ 10.Qxd1

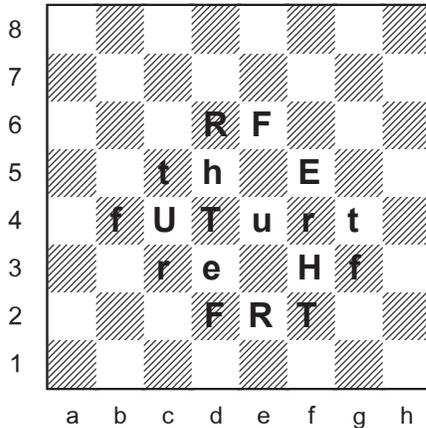
Homebase position. Two promotions to queen.  
Two QxQ captures on d1. White Pronkin queen.

## Rebus 63

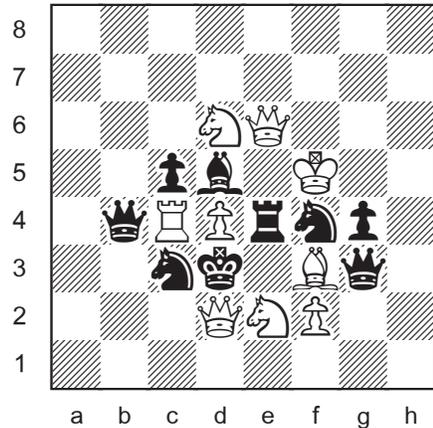
Andrey Frolkin & Jeff Coakley 2020

*The Puzzling Side of Chess*

"The Future"



F = queen  
 U = rook  
 T = pawn  
 R = knight  
 E = king  
 H = bishop  
 caps = white  
 last move:  
 1.Q>d2+



(9 + 9)

A conundrum of discombobulating conglomeration.

♔ = (HUE) Letters with one uppercase, one lowercase.

HU ≠ ♔ If H or U = ♔

♔ = Ø? The assignment of queen to any letter results in an illegal position with both kings in check.

E = ♔

F = ♔ The assignment of queen to any other letter places both kings in check.

The king on d3 is in check by the queen on d2.

T = ♖ T ≠ ♖ Impossible double check (d2 d4).

T ≠ ♗ Both kings in check (d2 g4).

T ≠ ♘ Impossible double check (d2 f2).

**caps = white**

If caps = black

Impossible double check (white pawn g4).

R = ♘ R ≠ ♖ Both kings in check (d2 f4).

R ≠ ♗ Impossible double check (d2 e2).

U = ♖ U ≠ ♗ Triple check (d2 c4 e4).

H = ♗

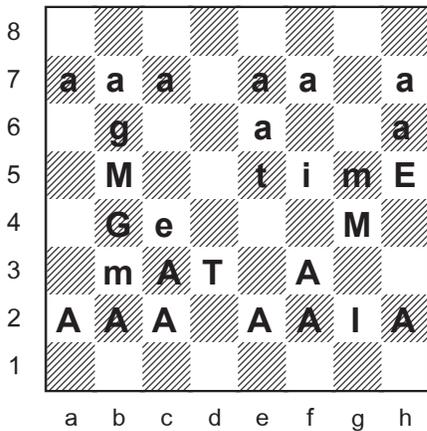
The last move **1.Q>d2+** may or may not have been a capture.

## Rebus 64

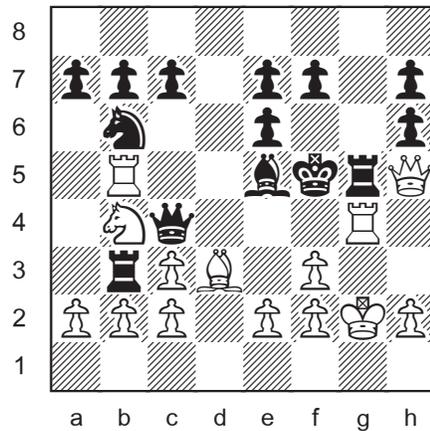
Andrey Frolkin & Jeff Coakley 2020

*The Puzzling Side of Chess*

“game time”



G = knight  
 A = pawn  
 M = rook  
 E = queen  
 T = bishop  
 I = king  
 caps = white  
 last move:  
 1.Re4-g4+



(14 + 14)

Letter count: 8A, 2M, E, G, I, T

8a, 2m, e, g, i, t

There are 4 missing pieces, 2 for each side.

A = ♖ If A ≠ ♖

There are 12 promoted A's, which is impossible. Twelve promotions would require 4 'pawn x pawn' captures. But at least two pawns are on the board, so the four missing pieces include two officers.

caps = white The pawn formation with caps = black requires too many captures.

♔ = (EGIT) Letters with one uppercase, one lowercase.

M ≠ ♖ There are 4 M's. Promoted pieces are impossible with 16 pawns on the board.

M ≠ ♗ Both uppercase M's are on light squares.

M ≠ ♘ Captures by pawns on c3, e6, f3, h6 allowed the kings, queens, rooks, and bishops to escape from the 1st and 8th ranks. The first of these captures had to be the capture of a knight. So there cannot be 4 knights on the board.

M = ♖

EGIT = (♔♕♗♘)

These four letters all have one uppercase and one lowercase. Therefore each side is missing one bishop and one knight.



## Rebus 64 *continued*

Before -1.Re4-g4+ (diagram), White was in check by the rook on g5. A capture on g5 was impossible, so Black's previous move had to be a discovered check. It was not -1...Kg4-f5+? because the king would be in an impossible double check on g4 (Re4 Pf3). Black's move had to be **-1...Bg3-e5+**.

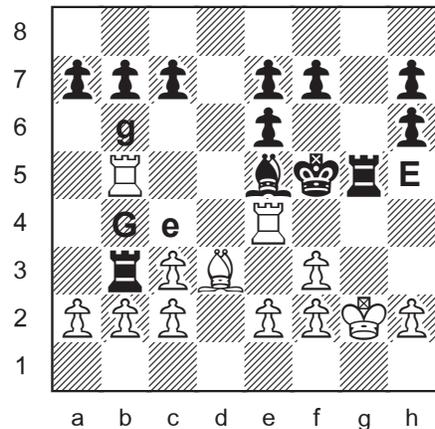
Before that move, the black king was in check by the rook on b5. Once again, the check could only happen with a discovery. There is one option.

**G** = ♘

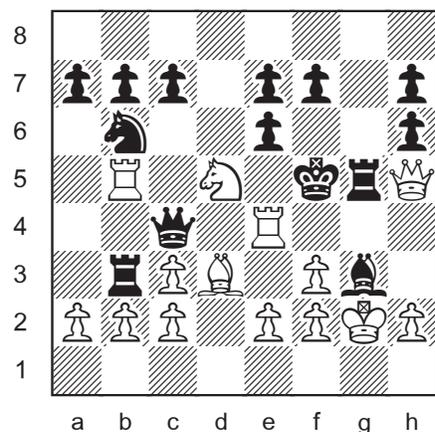
White's previous move: **-2.Nd5-b4+**

**E** = ♔

From the diagram at right, the forward play was 1.Nd5-b4+ Bg3-e5+ 2.Re4-g4+. Three disco checks in a row.



*caps = white*



*3 moves ago*

## Time Loops

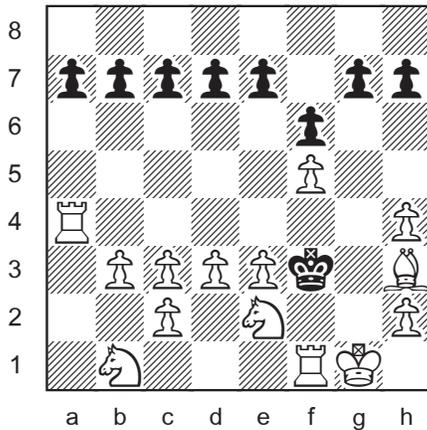
Recognising the time loops involving same-colour bishops is a necessary step in determining the position. The argument given here reaches that deduction directly by establishing that the four missing pieces are knights and bishops. But other approaches to solving this rebus would encounter additional time loops. For example, suppose we considered a scenario where  $M = \text{♘}$ . In that case, the missing pieces captured by pawns are rooks and bishops. However, no rook or bishop could escape until after an escaped rook or bishop was captured. That time loop eliminates the possibility of  $M = \text{♘}$ .



## Retro 51

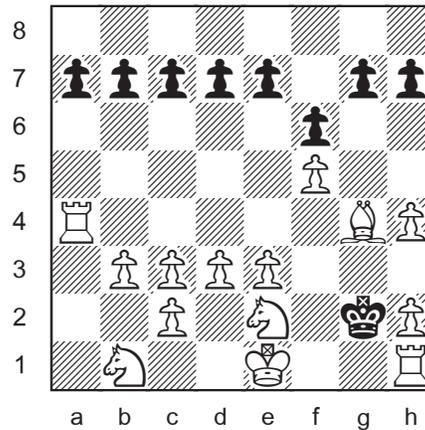
J. Coakley 2010

Winning Chess Puzzles For Kids Volume 2



retro notation:

- 1. 0-0+      Kg2-f3
- 2. Bg4-h3+



*position 3 moves ago*

forward notation:

- 1. Bg4-h3+      Kg2-f3
- 2. 0-0+

Black is in check by the rook on f1.

The last move was not -1.f2xe3+ because there was no black piece to capture on e3. Besides the king, only 3 black pieces could have escaped from behind the black row of pawns (2N + Q). These were captured earlier by white pawns on b3, c3, and either h3 or h4.

The last move was not -1.Rf1+ because there is not a legal previous move for Black. The black king could not move from e4, f4, or g4 on the previous turn because he would be in an impossible double check on those squares. A black piece did not move to f1 followed by the capture -1.Rxf1+ because all the black pieces that escaped from behind the pawns were already taken.

So the last move had to be **-1.O-O+**.

With the white king on e1 and rook on h1, the previous move by Black was not a king move from e4, f4, or g4 because he would be in an impossible double check on those squares. The black move had to be **-1...Kg2-f3**. This move was not a capture. White is missing 2 pieces: queen and dark-square bishop. The black king would be an impossible double check on g2 with a white queen on f3.

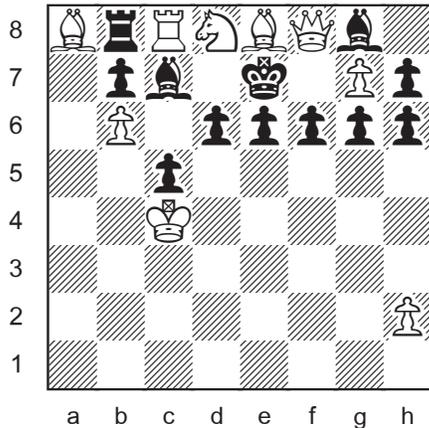
On g2, the king was in check by the bishop at h3, so the previous white move was **-2.Bg4-h3+**.

The preceding play could be -2...Kh3-g2 -3.Bf3-g4+ Kg4-h3 -4.Be4-f3++.

## Retro 52

Andrei Kornilov & Andrey Frolkin 1981

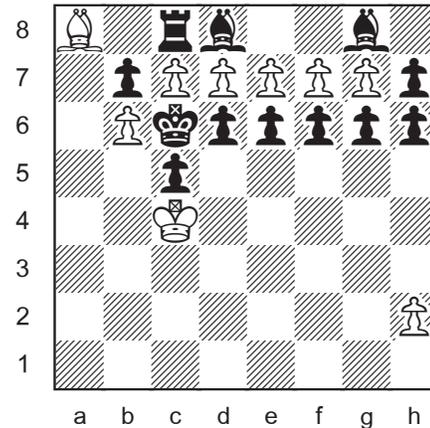
*Die Schwalbe 68*



(9+ 12)

retro notation:

- 1.f7-f8=Q# Kd7-e7
- 2.e7-e8=B+ Kc6-d7
- 3.d7-d8=N+ Bd8-c7
- 4.c7-c8=R+ Rc8-b8



*position 8 moves ago*

forward notation:

- 1. . . . Rc8-b8
- 2. c7-c8=R+ Bd8-c7
- 3. d7-d8=N+ Kc6-d7
- 4. e7-e8=B+ Kd7-e7
- 5. f8-f8=Q#

Allumwandlung: promotions to queen, rook, bishop, and knight.  
Achieved here in four consecutive white moves!

### Analysis

Black is in check by the queen on f8. The last move was obviously **-1.f7-f8=Q#**.

Black's previous move was not -1...Kf8-e7? because on f8 he would be in an impossible check by the pawn on g7.

Black has 8 pawns. The pawn formation, which includes h6 and h7, required the capture of all 7 missing white pieces. The pawn on c5 came from a7, so Black's last move was not -1...c6-c5?

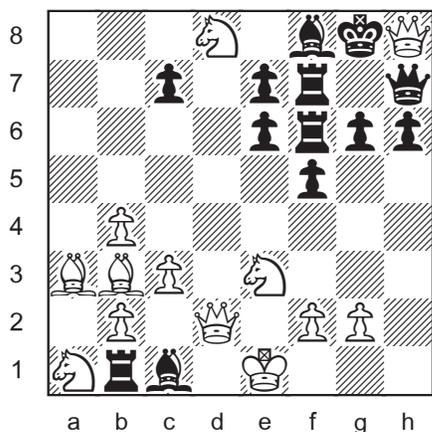
Therefore the last move was the non-capture **-1...Kd7-e7**.

On d7, the king is in check by the bishop at e8. White's preceding move was **-2.e7-e8=B+** preceded by Black's **-2...Kc6-d7**. (It was not -2...Ke8-d7? because the king would be in an impossible check on e8 by the pawn on f7.)

The rest is easy. **-3.d7-d8=N+ Bd8-c7 -4.c7-c8=R+ Rc8-b8**

## Retro 53

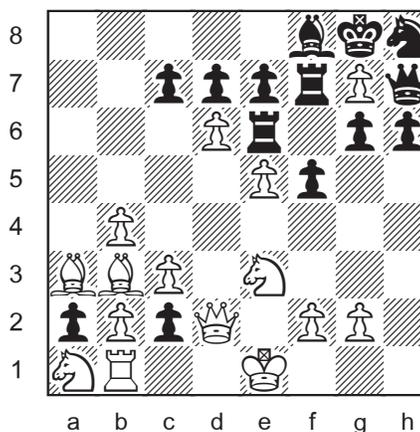
Andrey Frolikin 2020  
*The Puzzling Side of Chess*  
dedicated to Jeff Coakley



(13 + 13)

retro notation:

- 1.g7xNh8=Q+ a2xRb1=R
- 2.d7-d8=N c2-c1=B
- 3.d6-d7 d7xPe6
- 4.e5-e6 Re6-f6



position 8 moves ago

forward notation:

- 1. . . . Re6-f6
- 2. e5-e6 d7xe6
- 3. d6-d7 c2-c1=B
- 4. d7-d8=N a2xRb1=R
- 5. g7xNh8=Q+

Allumwandlung in four consecutive single moves!

### Analysis

White has 5 pawns and 2 promoted pieces (QN). The three missing white pieces are 2 rooks and a pawn.

Black has 6 pawns and 2 promoted pieces (RB). Both black pawns from the ab-files promoted. The bishop promotion had to occur on the dark square c1 because a bishop could not escape from a1. This required the black b-pawn to make a capture on c2 to promote on c1. Another capture was made by the black pawn on e6. That leaves only one missing white piece unaccounted for. Therefore the black pawns on g6 and h6 did not make a cross-capture and they stand on their original files.

The 3 missing black pieces are 2 knights and a light-square bishop.

Black is in check by the queen on h8, a dark square. The last move could only be **-1.g7xNh8=Q+**. In the position before this move, there are white doubled pawns on the g-file. Earlier in the game, the forward white g-pawn captured the second black knight on the dark square g7.

The other missing black piece, a light-square bishop, was necessarily captured on b3 by the white a-pawn (a2xBb3). This accounts for all missing black pieces.

The capture on b3 has several other retro-consequences. In order for the black b-pawn to promote, it had to capture on c2 before White played a2xBb3. Later, the black a-pawn had to advance to a2 and the white bishop come to a3 before White played b3-b4.

Black's move before -1.g7xNh8=Q+ was not -1...d7xe6? because then, with a black pawn on d7, it would be impossible for White to have promoted their d-pawn or e-pawn.

It was also not -1...c2-c1=B? because the white king would be in check by the rook on b1 before that move.

So Black's last move was **-1...a2xRb1=R**. The piece captured on b1 had to be a rook because the missing white e-pawn could not promote without making a capture.

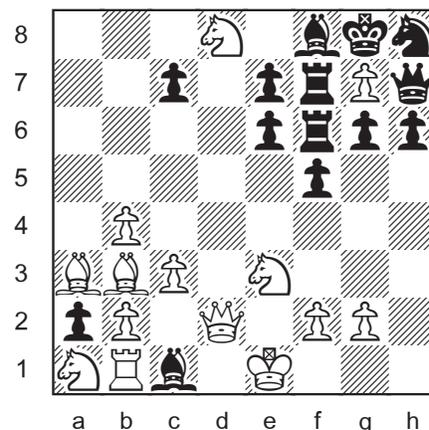
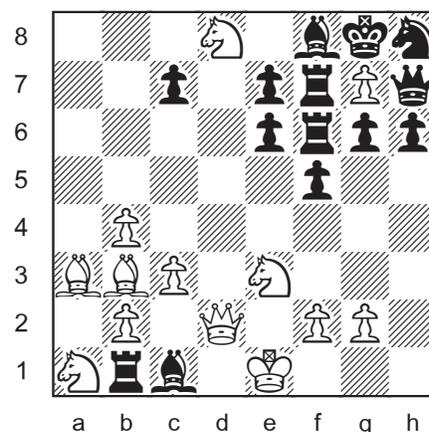
Thus, the white e-pawn was the piece captured on e6 (...d7xe6) and the white rooks were captured on b1 and c2. This accounts for all of the missing pieces.

To avoid retrostalemate, the cage formed by the black kingside pawns must be released before Black's retractions are exhausted. For example, after -2.Ke2-e1? c2-c1=B -3.Kf3-e2, Black has no move on the previous turn. -2.Qe2-d2? Bd2-c1 also fails because the bishop would be checking the king from d2.

The release of the cage is only possible by means of ...d7xe6, freeing the rook on f6. But before that uncapture, the white d-pawn must unpromote and retract to d6.

Therefore the preceding moves were **-2.d7-d8=N c2-c1=B -3.d6-d7 d7xPe6 -4.e5-e6 Rf6-e6**.

*I'm honoured that Andrey chose The Puzzling Side of Chess for the premiere showing of this phenomenal composition. And very grateful for our friendship and collaborations during the past five years.*





*“Wishing a radical change for the better.”*

*Andrey Frokin*

Until the future!

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