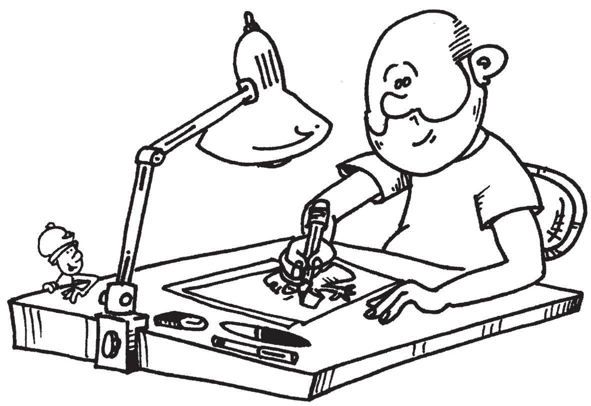
THE PUZZLING SIDE OF CHESS

Jeff Coakley

REBUS PIECES part 3

number 243 January 24, 2025

This column is the next in a series about the kind of pieces used in rebuses. Parts 1 and 2 covered positions with 4 or 5 piece-types. This time we present problems with just 3 piece-types. The first is dedicated to Antoine Duff, the illustrious illustrator for the Puzzling Side of Chess.



Rebus 122

"*Duff*"

	D						
u	f	U					
u	U	d					
F		f					

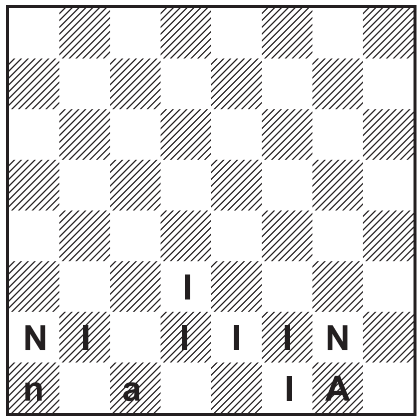
Each letter represents a different type of piece.
Uppercase is one colour, lowercase is the other.
Determine the position and, if possible, the last move.

There are ten combinations of 3 piece-types. One of the three pieces is a king. The others are QR, QB, QN, Qp, RB, RN, Rp, BN, Bp, Np. Five of these combos are included in this column.

The following rebus celebrates the 60th birthday of Nina Omelchuk, the wife of Andriy Frolkin and artist whose paintings adorn our articles.

Rebus 123

"*Nina*"

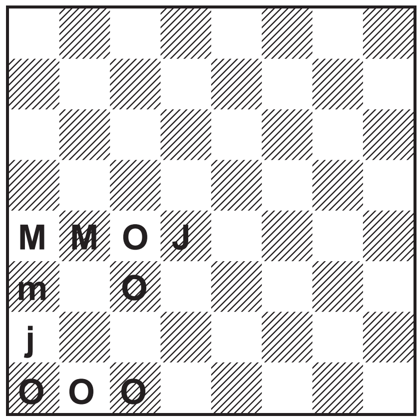


Each letter represents a different type of piece.
Uppercase is one colour, lowercase is the other.
Determine the position and the last move.

With only three piece-types on the board, the compositional options for establishing the assignment of colours are greatly reduced. In most rebuses, colours are decided in one way or another by the pawns. But 6 of the 10 three-piece combinations do not include pawns. The previous problem was a rare case where castling determines colours. A different promotional gimmick is employed in “mojo” and “neon”.

Rebus 124

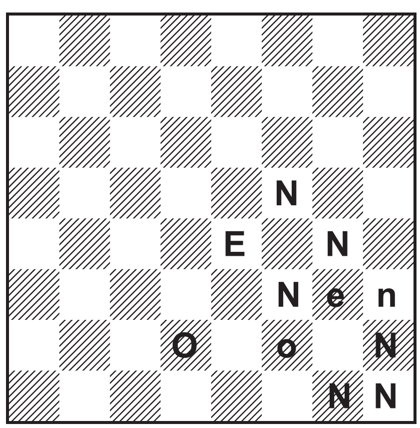
“*mojo*”



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.

Rebus 125

“*neon*”



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

The puzzles so far have been rather basic. The next two should offer experienced solvers more of a challenge.

With high hopes and best wishes, this rebus rings in the new year with unconditional positivity. Yes!

Rebus 126

"*yes*"

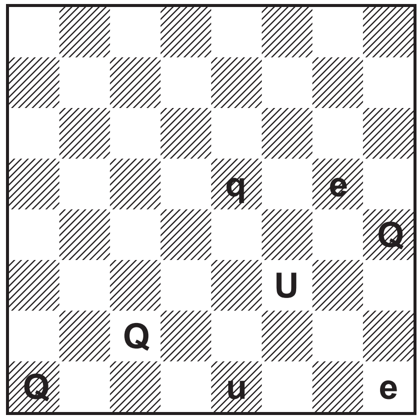
	Y						
E					S		
E	y	E		S	s	S	
s		s	S	e	S	s	S
E	s	S	e		e	s	s

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.

Our final rebus presents yet another approach to colouration. You won’t need to stand in line long. The queue is short.

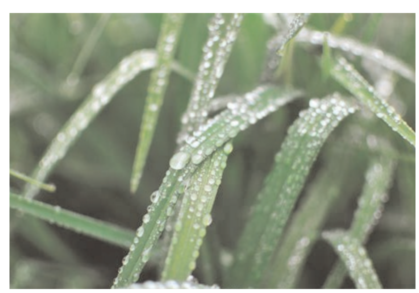
Rebus 127

“*queue*”



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

Riddle: “*Words of advice before entering the unknown.*”

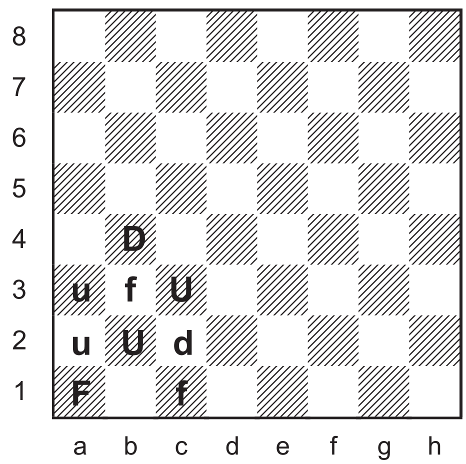


SOLUTIONS

All chess rebuses are joint compositions by Andriy Frolkin and Jeff Coakley, *Puzzling Side of Chess* (2025).

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

Rebus 122



"Duff"

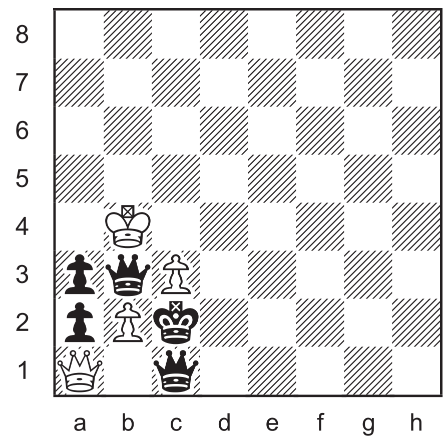
D = king

U = pawn

F = queen

caps = white

last move:
1...Q>b3+

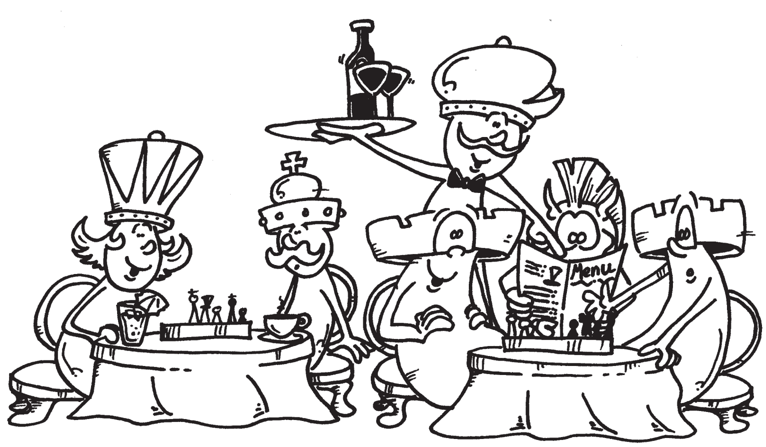


(4 + 5)

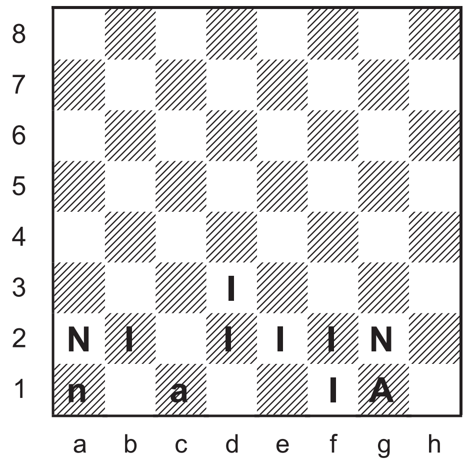
Three piece-types with queens and pawns.

D = ♔	Letter with one uppercase, one lowercase.	
U = ♙	U ≠ ♕	Three checks (a3 b2 c3).
	U ≠ ♖	Impossible double check (b2 c3).
	U ≠ ♗	Impossible check (a3).
	U ≠ ♘	Impossible check (a2).
caps = white	If caps = black	Impossible check (a3).
F = ♕	F ≠ ♖	Impossible check (b3).
	F ≠ ♘	Impossible check (a1).
	F ≠ ♗	Impossible bishop (a1) with white pawn on b2.

last move: **1...Q>b3+** This move may or may not have been a capture.

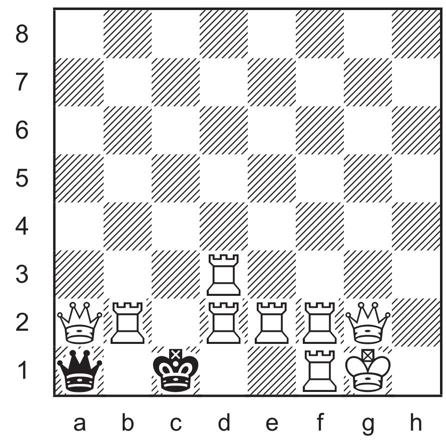


Rebus 123



"Nina"

N = queen
I = rook
A = king
caps = white
last move:
1.0-0#



(9 + 2)

Three piece-types with queens and rooks.

A = ♔ Letter with one uppercase, one lowercase.

N I ≠ ♙ On 1st rank.

I = ♖ I ≠ ♕♗ Impossible double check (b2 d2).
I ≠ ♘ Impossible double check (d3 e2).

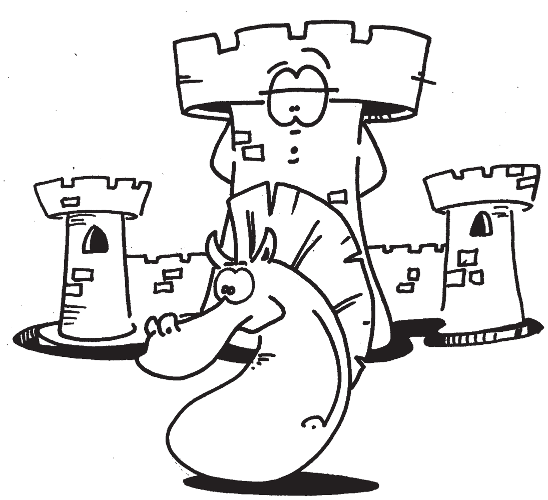
The king on c1 is in check by the rook on f1.

last move: **1.0-0+** The only way to explain the rook check. The last move was not a discovered check by 1.Ne1-g2+ with N = ♘ because it would be an impossible double check (a2).

caps = white Castling on 1st rank.

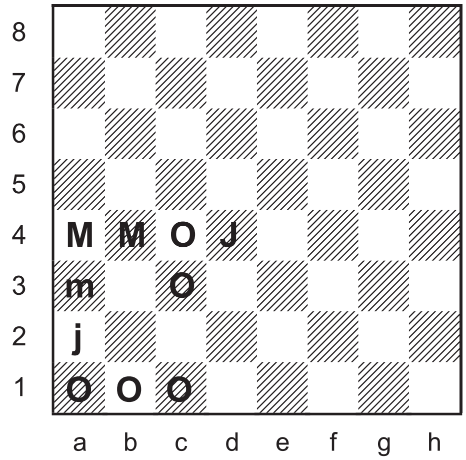
N = ♕ N ≠ ♘ Impossible double check (a2).
N ≠ ♗ If N = ♗
Black had no move on their previous turn!

With N = ♕, Black's previous move was ...Qb1>a1. It may or may not have been a capture.



Rebus 124

“mojo”



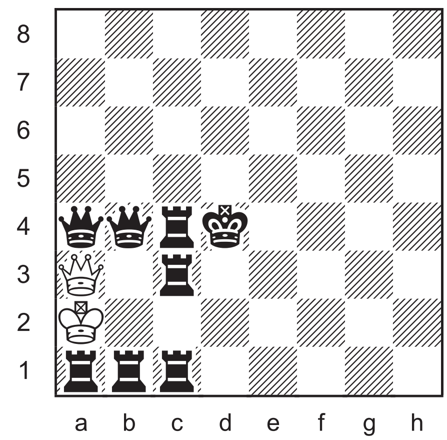
M = queen

O = rook

J = king

caps = black

last move:
1...b2xa1=R#



(2 + 8)

Three piece-types with queens and rooks.

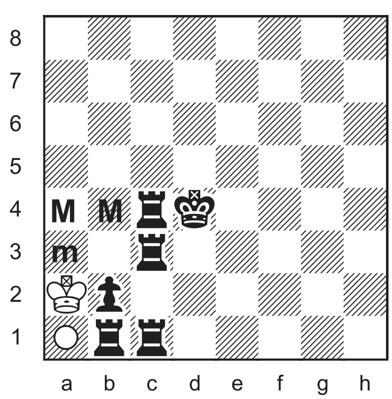
J = ♔	Letter with one uppercase, one lowercase.	
O = ♖	O ≠ ♙	On 1st rank.
	O ≠ ♕♗	Impossible double check (b1 c4).
	O ≠ ♘	Impossible double check (c1 c3).

The king on a2 is in <u>check</u> by the rook on a1.

last move: **1...b2xa1=R#** Only way to explain the rook check. The type of piece captured is unknown.

caps = black Uppercase promotion on 1st rank.

M = ♕	M ≠ ♘	Impossible double check (b4).
	M ≠ ♗♙	With a black pawn on b2, before the capture on a1, White would have no move on their previous turn. Diagram.

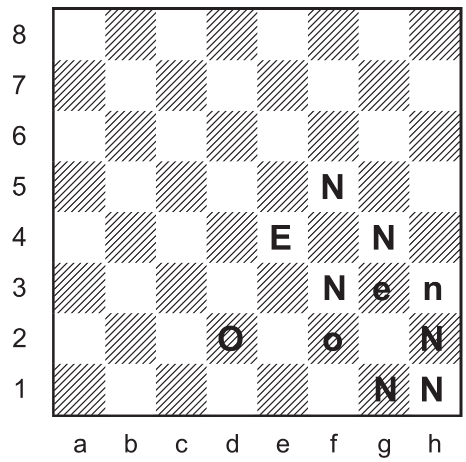


White’s last move was not by the piece on a1. If it is a knight, it could not have moved from b3 or c2 because it would give check on those squares.

White’s last move was not Kb3-a2 because the king would be an impossible double check on b3 (♗/♙a4 and ♖c3).

With M = ♕, White’s last move was 1.Qb3>a3. This move may or may not have been a capture.

Rebus 125



“neon”

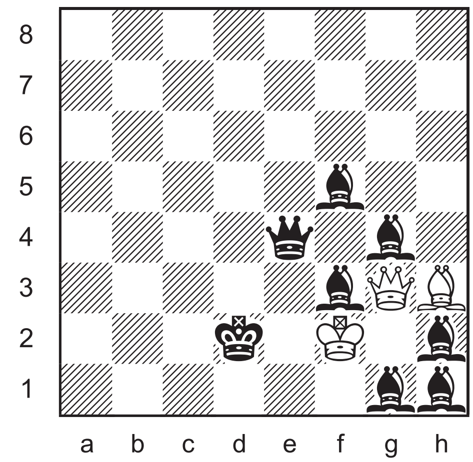
N = bishop

E = queen

O = king

caps = black

last move:
1...g2-g1=B+



(3 + 8)

Three piece-types with queens and bishops.

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

E ≠ ♔   If E = ♔

N ≠ ♙   On 1st rank.

N ≠ ♕♖   Triple check (f3 g1 g4).

N ≠ ♗   Impossible check (h2).

N ≠ ♘   Impossible double check (f5 h1).

N = Ø?   No piece can be assigned to letter N.

O = ♔

N = ♗   N ≠ ♙   On 1st rank.

N ≠ ♕♖   Impossible double check (f3 h2).

N ≠ ♘   Impossible double check (g4 h1).

The king on f2 is in check by the bishop on g1.

Last move: **1...g2-g1=B+**. Only way to explain the bishop check.

caps = black   Uppercase promotion on 1st rank.

E = ♕   E ≠ ♘   Impossible double check (e4).

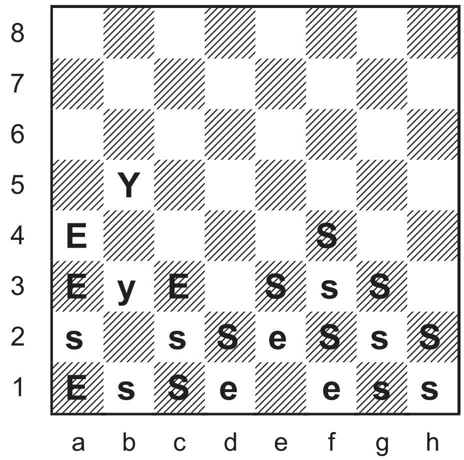
E ≠ ♖ ♙   With a black pawn on b2, there would be no last move for White.

With E = ♕, White’s previous move was 1.Q>g3. This move may or may not have been a capture.

If you are looking for more chess rebuses, check out the *rebus index* in the appendix to column 188. It lists numerous articles and over 290 problems, most of which are readily available online.

Rebus 126

"yes"



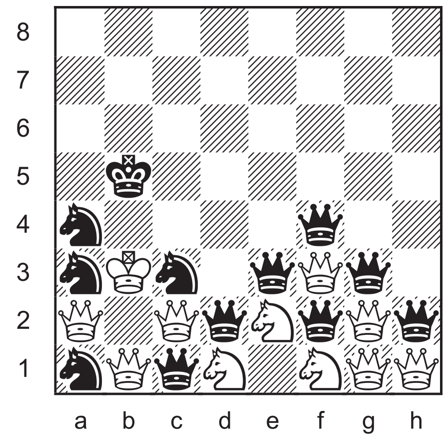
Y = king

E = knight

S = queen

caps = black

last move:
1...b2xa1=N+



(11 + 12)

Three piece-types with queens and knights.

Y = ♔ Letter with one uppercase, one lowercase.

ES ≠ ♙ On 1st rank.

E = ♘ E ≠ ♕♖ Impossible double check (a3 c3).

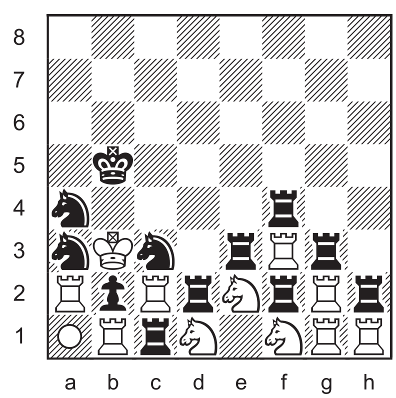
E ≠ ♗ Impossible check (a4).

The king on b3 is in check by the knight on a1.

Last move: **1...b2xa1=N+**. Only way to explain the knight check.
The type of piece captured is unknown.

caps = black Uppercase promotion on 1st rank.

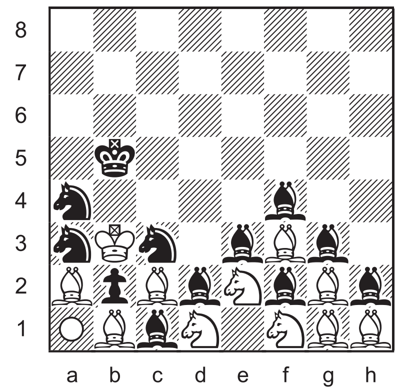
S ≠ ♖ No previous move for White.



The diagram shows the position before 1...b2xa1=N+.
There is an unknown type of white piece on a1.

Rebus 126 *continued*

S ≠ ♗



(12+12)

The position is illegal because of the *bishop ratio* (a comparison of the number of light and dark bishops for each side).

White has promoted 5 light-square bishops and a knight. Black has promoted 6 dark-square bishops and a knight. Black also has a passed pawn on b2, which would promote on a light square if it makes no capture.

For argument's sake, let's say that the white piece on a1 is a rook. In that case, the missing pieces are white QRpp and black QRRB.

There are 14 pro-passers (promoted pieces and passed pawns). The missing pieces, 6 officers and 2 pawns, can account for up to 18 pro-passers. (6 x 2) + (2 x 3) = 18   But they cannot account for the ratio of white light bishops and black dark bishops.

PRO-PASSER THEORY

Pro-passer theory is an analytic tool for determining the legality of a position based on the number of passed pawns, promoted pieces, and missing pieces.

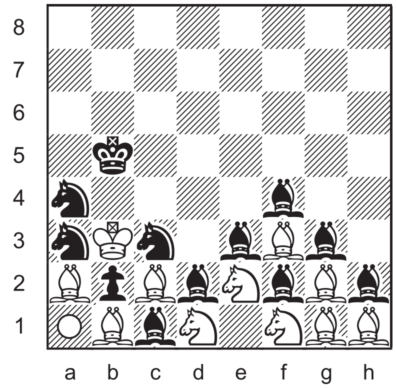
A pro-passer is a promoted piece or a passed pawn. In this theory, they count as the same thing.

Missing pieces are divided into two categories: pawns and officers.
'Pawn x officer' captures can create 2 pro-passers (one per side).
'Pawn x pawn' captures can create 3 pro-passers (two for capturing side).

For a position to be legal, there must be a sufficient number of missing officers and pawns to create the required number of pro-passers. If the calculation shows insufficient missing pieces, the position is illegal.

However, a favourable count, with an apparently sufficient number of missing pieces, does not prove that the number of pro-passers is legal. There are numerous situations that can still make the position illegal: doubled pawns, inverted pawns, the colour of promotion squares for promoted bishops, or the need for additional captures. In these cases, deeper analysis is required.

Rebus 126 *continued*



(12+12)

A 'pawn x officer' capture by itself can account for two promotions, one by each side. But the promotions take place on the same colour squares. For example, if the white a-pawn captures a black rook on b7, it can then promote on the <u>dark</u> square b8 and the black a-pawn can advance to promote on the <u>dark</u> square a1. To promote on opposite colour squares requires an additional capture.

A 'pawn x pawn' capture by itself can account for three promotions, two by the capturing side. But all three promotions take place on the same colour squares.

In this position, one too many captures are needed to account for the bishop ratio. Here is an "approximate proof":

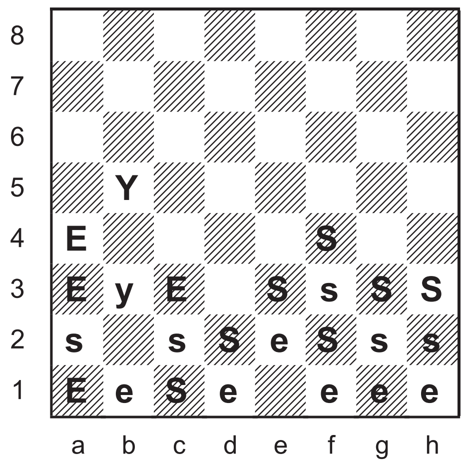
> *The board is divided into four sectors. Each sector consists of two adjacent files (ab, cd, ef, gh).*
>
> *Black made two 'pawn x pawn' captures, each in a different sector, to promote 4 dark bishops. These captures also created 2 white dark passers* (*passed pawns that would promote on a dark square without an additional capture*)*. The six remaining missing pieces are all officers. Four 'pawn x officer' cross-captures* (*two by each side*) *were made in the other two sectors. With these captures, White was able to promote 2 light bishops and Black 2 dark bishops. The captures also created 2 white dark passers and 2 black light passers. At this point, Black has promoted the required 6 dark bishops but White has only promoted 2 light bishops. White has 4 dark passers. To promote 3 more light bishops would require three additional captures, but there are only two missing white pieces unaccounted for.*

S = ♕

As some of you may have noticed, this problem is very similar to rebus 120 in column 238. As is the following version with a different combination of piece-types.

Rebus 126b

“eyes”



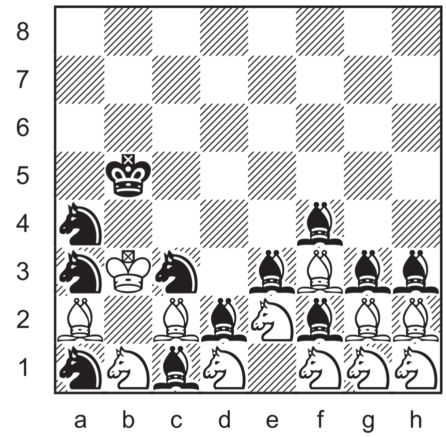
E = knight

Y = king

S = bishop

caps = black

last move:
1...b2xa1=N+



(12 + 12)

Three piece-types with knights and bishops.

The initial analysis is the same as rebus 126.

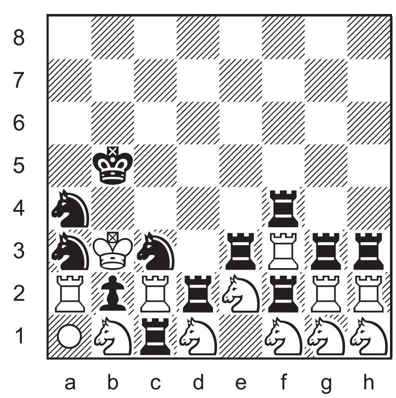
Y = ♔

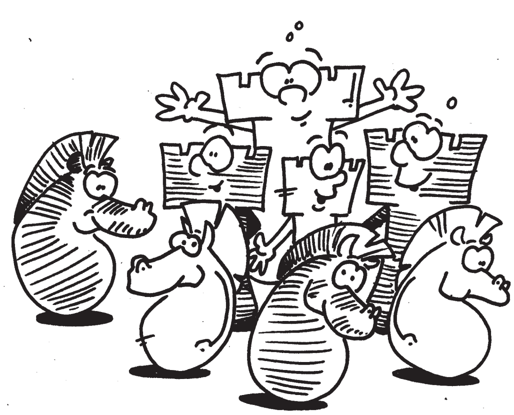
E = ♘

Last move: **1...b2xa1=N+**. Only way to explain the knight check. The type of piece captured is unknown.

caps = black Uppercase promotion on 1st rank.

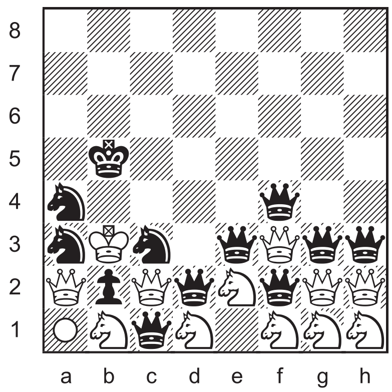
S ≠ ♖ No previous move for White.





Rebus 126b *continued*

S ≠ ♕ Too many promotions.



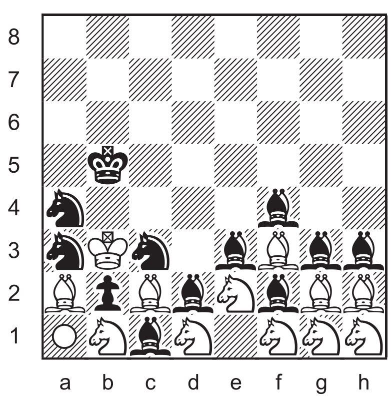
(13 + 12)

White has 8 promoted pieces (4 queens + 4 knights).
Black has 7 promoted pieces (6 queens + 1 knight).
Black has a passed pawn on b2.

There 16 pro-passers (promoted pieces and passed pawns).

Let’s say the white piece on a1 is a rook. Then the missing pieces are white RBB and black RRBB. The capture of 7 officers is insufficient to explain 16 pro-passers. (7 x 2) = 14

S = ♗ The position is legal.

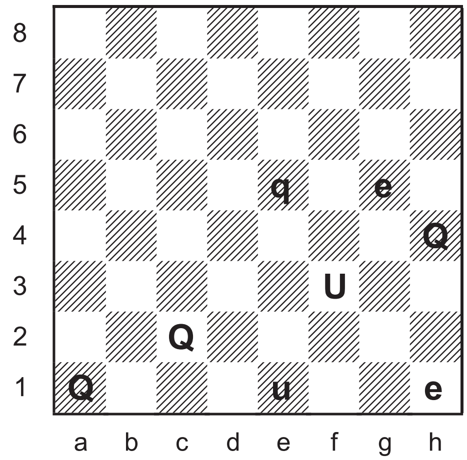


White has 7 promoted pieces (3 bishops + 4 knights).
Black has 6 promoted pieces (5 bishops + 1 knight).
Black has a passed pawn on b2.

There 14 pro-passers (promoted pieces and passed pawns).

The 7 missing pieces are 5 officers and 2 pawns which can explain as many as 16 pro-passers. (5 x 2) + (2 x 3) = 16

Rebus 127

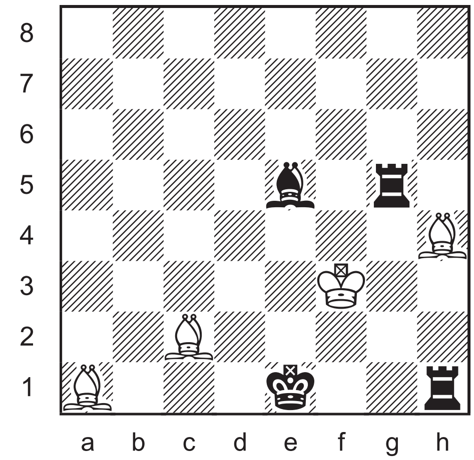


"*queue*"

Q = bishop
U = king
E = rook

caps = white

last move:
1.Kg3xPf3+



(4 + 4)

Three piece-types with rooks and bishops.

U = ♔ Letter with one uppercase, one lowercase.

EQ ≠ ♙ On 1st rank.

Q = ♗ Q ≠ ♕ Impossible double check (a1 h4).

Q ≠ ♘ Both kings in check (c2 e5).

Q ≠ ♖ If Q = ♖ <u>Check</u> (a1).

E ≠ ♘ Both kings in check (g5).

E ≠ ♕♗ Both kings in check (h1).

E = Ø? No piece can be assigned to letter E.

The king on e1 is in <u>check</u> by the bishop on h4.

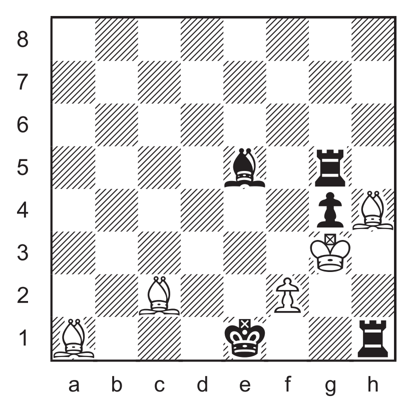
Last move: 1.Kg3>f3+. Only way to explain the bishop check.

Before this move, the king on g3 was in <u>double check</u> by the bishop on e5 and the rook on g5. This could only have occurred by means of an *en passant* capture.

caps = white En passant capture ...g4xf3.

The diagram shows the position 3 moves ago. There followed 1.f2-f4 g4xf3 e.p.++ 2.Kg3xf3+. Three exactly determined last moves.

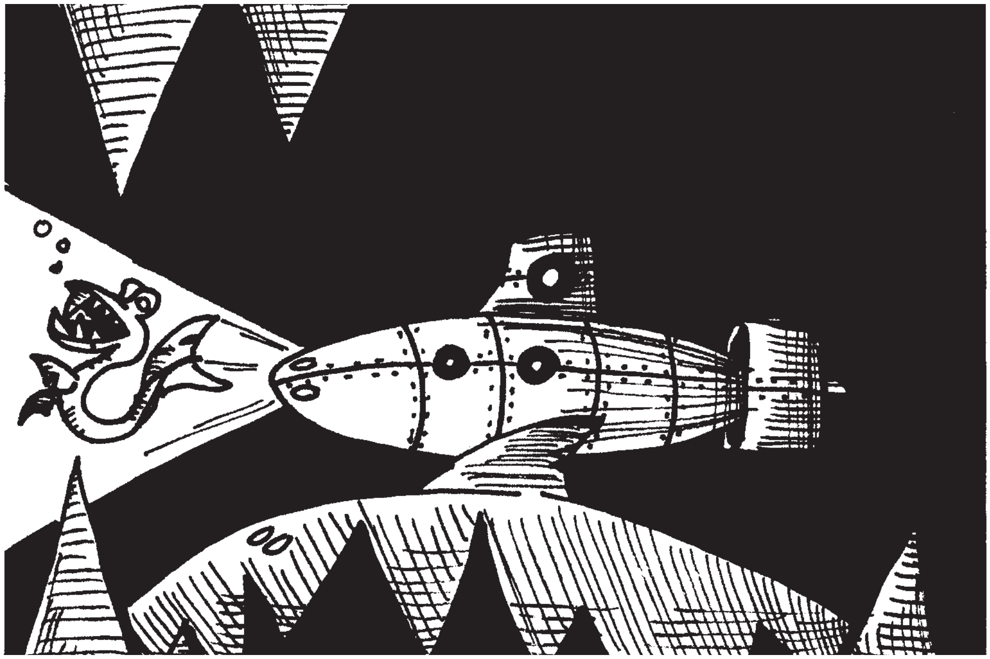
Based on Branko Pavlovic 1950. See *retro 8* in column 30.



position 3 moves ago

REBUS RIDDLE

Words of advice before entering the unknown.



“*Keep an open mind or do not go in.*”

key-pan-O-pen-mine-door-dew-knot-go-N”

Until next time!