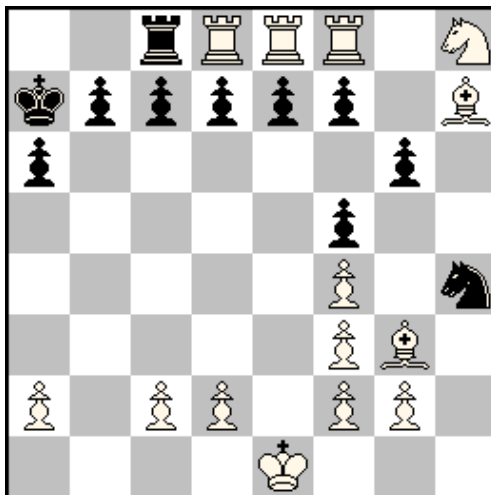


Thierry LE GLEUHER
 2rRRR1N/kppppp1B/p5p1/5p2/5P1n/5PB1/P1PP1PP1/4K3



R572 The Problemist 28.3
 May 2021

Solution in
 The Problemist 28.6
 November 2021

(14+11)
 Origin of the Rooks?

Retro:

1.Ke2-e1 Kb8-a7 2.Rg8-f8 Ka8-b8 3.Rg7-g8 Kb8-a8 4.Bg8-h7 Ka8-b8 5.Rh7-g7 Kb8-a8 6.Rh5-h7 Ka8-b8 7.Rg5-h5 Kb8-a8 8.Bh7-g8 Ka8-b8 9.Rg8-e8 Kb8-a8 10.Rg7-g8 Ka8-b8 11.Bg8-h7 Kb8-a8 12.Rh7-g7 Ka8-b8 13.Rh5-h7 Kb8-a8 14.Bh7-g8 Ka8-b8 15.Bh2-g3 Kb8-a8 16.Bg1-h2 Ka8-b8 17.Rg3-g5 Kb8-a8 18.Rg5-h5 Ka8-b8 19.Rh3-g3 Kb8-a8 20.Rg3-g5 Ka8-b8 21.Rh1-h3 Kb8-a8 22.Rh3-g3 Ka8-b8 23.Bh2-g1 Kb8-a8 24.Bg3-h2 Ka8-b8 25.Ra1-h1 Kb8-a8 26.Rh1-h3 Ka8-b8 27.Rb1-h1 Kb8-a8 28.Rg8-d8 Ka8-b8 29.Rg7-g8 Kb8-a8 30.Bg8-h7 Ka8-b8 31.Rh7-g7 Kb8-a8 32.Rh5-h7 Ka8-b8 33.Rg5-h5 Kb8-a8 34.Bh2-g3 Ka8-b8 35.Bg1-h2 Kb8-a8 36.Bh7-g8 Rg8-c8 37.Rg3-g5 Rg7-g8 38.Bg8-h7 Rh7-g7 39.Rh3-g3 Rh5-h7 40.Rh1-h3 Rg5-h5 41.Bh2-g1 Rg3-g5 42.Rd1-h1 Rh3-g3 43.Bg3-h2 Rh1-h3 44.Kd3-e2 Re1-h1 45.Kc3-d3 Re4-e1 46.Rh1-d1 Re1-e4 47.Kb2-c3 Rg1-e1 48.Rf1-b1 Ka7-b8 49.Rd1-a1 Kb6-a7 50.Kc1-b2 Kc5-b6 51.O-O-O
 100 single moves have been played after the 000 and the diagram position is nul.

The bRc8 is the bQRa8

The wRd8 is the promoted Rook

The wRe8 is the wKRh1

The wRf8 is the wQRa1

For the first time, we can precisely determine the origin of 4(1+3) free Rooks in a classic retro without additional condition.

We also note that for the first time the circuit of the wK is completely determined in a classic retro without additional condition (OOO-b2-c3-d3-e2-e1 no more no less!)

Analyse of the position:

The bPs structure in the North-east corner requires 2 captures by bP, i.e. the 2 missing white units (wQ and wN).

With the promotion of wPb to a8 (b2→b7×a7-a8=R), the other captures by wPs (e2×f3, h2×g3×f4) and the capture at home of bBc8, all captures are established.

Blacks cannot retract:

- g7-g6 as long as the bBf8 has not returned,
- h7×g6 which is illegal because of wBh7,
- a7-a6 as long as the wR has not been unpromoted and the wP brought to at least b6.

White cannot retract:

- e2×f3 as long as the wBf1 has not returned home,
- g3×f4 as long as the wB blocked in the 3 squares (g1-h2-g3) has not escaped by h4.

So, the first decapture will come from b6×bBa7 after the unpromotion of a wR on a8. After which the bB brought back into play will return to f8 so that we can retract g7-g6 (taking care to put the bR back in the North-west corner), free the wBg8, retract g6×f5, which allows the wB to come back in f1, then retract e2×f3. The bN will also be able to leave h4, also allowing wBg1 to come out of its cage, to be able to retract g3×f4, then h2×g3.

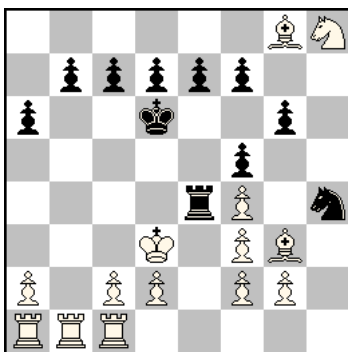
To unpromote a wR in a8, you have to make the bR go beyond the three wRs, but the Rooks corridor is very long (a7-a8-b8-c8-d8-e8-f8-g8-g7-h7-h6-h5-g5-g4-g3-h3-h3-h1-g1-f1-e1).

Try:

retro:

1.Ke2-e1 Ka8-a7 2.Bh2-g3 Kb8-a8 3.Bg1-h2 Ka8-b8 4.Rg8-f8 Kb8-a8 5.Rg7-g8 Ka8-b8 6.Bg8-h7 Kb8-a8 7.Rh7-g7 Ka8-b8 8.Rh5-h7 Kb8-a8 9.Rg5-h5 Ka8-b8 10.Rg3-g5 Kb8-a8 11.Rh3-g3 Ka8-b8 12.Rh1-h3 Kb8-a8 13.Bh7-g8 Ka8-b8 14.Rg8-e8 Kb8-a8 15.Rg7-g8 Ka8-b8 16.Bg8-h7 Kb8-a8 17.Rh7-g7 Ka8-b8 18.Rh5-h7 Kb8-a8 19.Bh7-g8 Ka8-b8 20.Rg5-h5 Kb8-a8 21.Rg3-g5 Ka8-b8 22.Rh3-g3 Kb8-a8 23.Bh2-g1 Ka8-b8 24.Bg3-h2 Kb8-a8 25.Ra1-h1 Ka8-b8 26.Rh1-h3 Kb8-a8 27.Bh2-g3 Ka8-b8 28.Rg8-d8 Kb8-a8 29.Rg7-g8 Ka8-b8 30.Bg8-h7 Kb8-a8 31.Rh7-g7 Ka7-b8 32.Rh5-h7 Kb6-a7 33.Bh7-g8 Kc6-b6 34.Rg5-h5 Kd6-c6 35.Rb1-h1 Kc6-d6 36.Rg3-g5 Rg8-c8 37.Rh3-g3 Rg7-g8 38.Bg8-h7 Rh7-g7 39.Bg3-h2 Rh5-h7 40.Rh1-h3 Rg5-h5 41.Bh2-g3 Rg3-g5 42.Rd1-h1 Rh3-g3 43.Bg3-h2 Rh1-h3 44.Kd3-e2 Re1-h1 45.Rc1-d1 Re4-e1 and the bR has just cleared the way for a wR (see diagram below)

6BN/1ppppp2/p2k2p1/5p2/4rP1n/3K1PB1/P1PP1PP1/RRR5



We can now see that from this position, it is illusory to hope to bring a wR to a8 in order to unpromote on time. It takes 12 more white moves to reach a8 (46.Rh1-c1 ... 56.Ra8-g8 Kd6-c6 57.a7-a8=R), which would not be legal with regarding the 50-move rule.

As you cannot shorten the corridor, nor do another uncapture, nor retract another Pawn move, you must perform a White castling during the sequence.

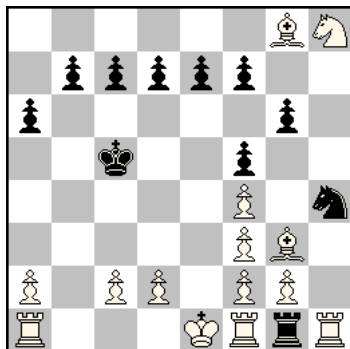
(14+11) after the retro-move 44...Re4-e1

The best that can be done is to start from the intermediate position below, in which the wRh1 came from the promotion in a8 and joined h1 following the corridor, the bRg1 came from the

North-west corner and did not yet been able to cross the promoted wR, the wRa1 and the wK have not yet moved and of course the last wRf1 comes from h1.

Forward play from the intermediate following position:

6BN/1ppppp2/p5p1/2k2p2/5P1n/5PB1/P1PP1PP1/R3KRrR

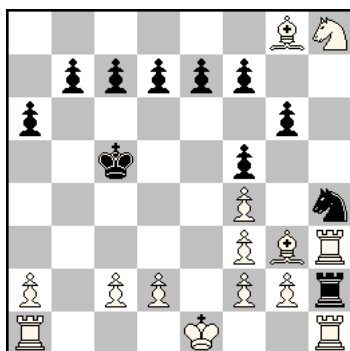


(14+11)

1.000 Kb6 2.Kb2 Ka7 3.Ra1 Ka8 4.Rfb1 Re1 5.Kc3 Re4 6.Rhc1 Re1 7.Kd3 Rh1 8.Ke2 Rh3 9.Bh2 Rg3 10.Rh1 Rg5 11.Bg3 Rh5 12.Rh3 Rh7 13.Bh2 Rg7 14.Bh7 Rg8 15.Rg3 Rc8 16.Bg8 Kb8 17.Rg5 Ka8 18.Rh5 Kb8 19.Rh7 Ka8 20.Rg7 Kb8 21.Bh7 Ka8 22.Rg8 Kb8 23.Rd8 Ka8 24.Bg8 Kb8 25.Bg3 Ka8 26.Rh1 Kb8 27.Rh3 Ka8 28.Bh2 Kb8 29.Rg3 Ka8 30.Rg5 Kb8 31.Rh5 Ka8 32.Rh7 Kb8 33.Rg7 Ka8 34.Bh7 Kb8 35.Rgg8 Ka8 36.Rge8 Kb8 37.Bg8 Ka8 38.Rh1 Kb8 39.Bg3 Ka8 40.Rh3 Kb8 41.Bh2 Ka8 42.Rg3 Kb8 43.Rg5 Ka8 44.Rh5 Kb8 45.Rh7 Ka8 46.Rg7 Kb8 47.Bh7 Ka8 48.Rgg8 Kb8 49.Rgf8 Ka8 50.Bg3 Ka7 51.Ke1 (nul)

If we try to perform the w00:

6BN/1ppppp2/p5p1/2k2p2/5P1n/5PBR/P1PP1PPr/R3K2R



(14+11)

1.00 Kb6 2.Rfb1+ Ka7 3.Kf1 Rh1+ 4.Ke2 Re1+ 5.Kd3 Re4 6.Rhh1 Ka8 7.Rhc1 Re1 8.Rd1 Rh1 and we get the same position as from the 000, but with 1 more move, which no longer allows to the diagram position to be reached on the 51st White move (but on the 52nd). Try to play 8.Bh2 instead of 8.Rd1 (tempo move lengthens the solution and does not allow the diagram position to be reached until the 53rd White move).

Many problems (including one of mine) already used this matrix or a similar matrix. The closest should be:

Pascal Wassong 4ème Mention d'Honneur Europe Echecs 1984

437, Europe Echecs 310 (oct. 84)

P0001567

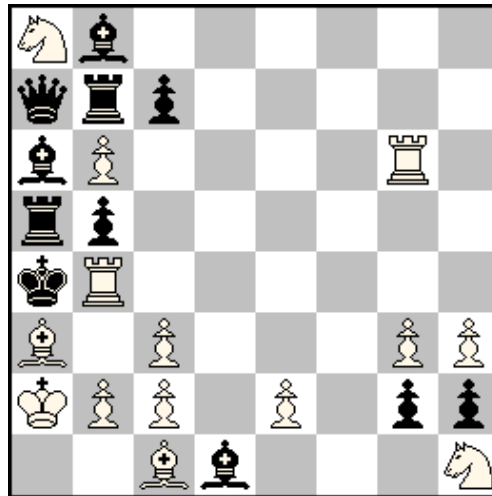
1b6/1pp1ppKp/2p3p1/n1p1B1R1/2P5/1P3P2/b1PPPKPP/n3rB1R

(14+11)

Les Blancs ont-ils roqué ?

But in Pascal problem, only 2 wR are determined and wK performed a determined walk (not a circuit).

Thierry LE GLEUHER
 Nb6/qrp5/bP4R1/rp6/kR6/B1P3PP/KPP1P1pp/2Bb3N



(14+11)
 47 last single moves?

18555v p.296 Die Schwalbe
 311 Oktober 2021

Correction of
 18555 Die Schwalbe 308
 April 2021

Retro : 1.Rb3-b4# d2-d1=B 2.Bf8-a3 d3-d2 3.f7-f8=B d4-d3 4.f6-f7 d5-d4 5.f5-f6 d6-d5 6.f4-f5 d7-d6 7.f2-f4 f3×Bg2 8.Rd6-g6 f4-f3 9.Rd1-d6 f5-f4 10.Rg1-d1 f6-f5 11.Bf1-g2 f7-f6 12.g2-g3 g3×Qh2 13.Kb1-a2 g4-g3 14.Qg3-h2 g5-g4 15.h2-h3 g6-g5 16.Qh3-g3 g7-g6 17.Qd3×Ph3 h4-h3 18.Be3-c1 h5-h4 19.Kc1-b1 h6-h5 20.Kd1-c1 h7-h6 21.Bc1×Pe3 e4-e3 22.Ke1-d1 e5-e4 23.Qd1-d3 e6-e5 24.d2×Nc3

After the last checking move (Rb3-b4# or possibly Rb3×Xb4#), the bKs cage seems to be able to open only by d2×Xc3.

Can the bK's cage be opened differently?

- Can the wPb6 come from c5?
 This requires 4 captures by wP (a×b×c×b6 and d2×c3). The wPf, g and h could not shift and we would have had f2→f8=B, g2-g3 and h2-h3. The bPh2 and g2 should therefore capture the 2 missing white units (f3×Bg2 and g3×Qh2). But one of the bPe or h must be useful, while neither can leave his own column. That is impossible.
- Can the bPb5 come from c6?
 This requires 2 captures by bP (b7×c6×b5). The bPh2 and g2 played in the axe. One so had f2×Xg3 and g2×Xh3. The wPh was therefore promoted to Bishop by avoiding the bPh, which requires one more capture pby wP than available. That is impossible.

→ **The black cage will only open by retracting d2×Xc3.**

In this case, it should be noted that the exit of the bK and the bR is not enough to free the northwest corner. The presence of the bBa6 requires to resume following a5×Xb6 and above all prevents the promotion of the bPa in the axis, which could not return until a6!

After the retro-move a5×Xb6, could bPa and b cross to allow a promotion in a1?

(e.g.: $a2 \rightarrow a5$ / $b7 \times bPa4(a1=X$ / $a7 \times b6-b5$ / $a5 \times b6$)

The bPa and b have captured the 2 missing white units, so the bPh2 and g2 have played in the axe, which imposes as above $f2 \times g3$, $g2 \times h3$ and the wPh2 should avoid the bPh to promote on black square, which always makes one capture in excess.

The bPb did not capture.

→ The bPa has been captured for free before the arrival of the wPa in a5!

So, there are only 4 other black units available for other captures.

If the wPh was promoted to Bishop (on black square), the wPh3 and g3 come respectively from g2 and f2, which makes 4 captures by wP. The wPh has been promoted in the axe in h8. The bP in h2 had to avoid it, which requires 2 captures by the bPs currently in h2 and g2. It is then impossible to use the bPe! → Impossible.

If the wPg was promoted to Bishop, it captured once, the wPf also captured ($f2 \times g3$), which is still 4 captures by wPs. The wPh3 comes from h2 and as before the bPh2 and g2 claim 2 captures. It is still impossible to use the bPe! → Impossible.

→ This is the Pbf that has been promoted to Bishop on black square!

- $f \times g \times f \rightarrow f8=B$, so $h2-h3$ and as above, the bPe could not be used.
- $f \times e \times f \rightarrow f8=B$ and it is the bPh that could not be used.

→ So, we had $f2 \rightarrow f8=B$

If the wPg and h crossed, $bPf3 \times g2$ should be retracted and the second capture by bP was $e \times f \rightarrow f1=X$ and bPg has been captured by $h2 \times bPg3$. It is therefore necessary first to unpromote a black piece in f1, then retract $f2-f3 \rightarrow f8=B$, then $f3 \times g2$. But no black piece is available to be unpromoted.

→ The wPh and g played in the axis.

White must therefore play at least:

$Bc1 \rightarrow c1$ (2 moves) because it is necessary to let the wK pass, $Bf1-g2(1)$, $Qd1-d6-h2(2)$ the shortest, $Ke1-a2(4)$ the 000 is not possible without wR available, $Rg1 \rightarrow g6(3)$, $f2 \rightarrow f8=B-a3(6)$, $Na8(0)$, $Nh1(0)$, $d2 \times Nc3(1)$, $g2-g3(1)$, and $Rb3-b4+(1)$, i.e. a minimum of 21 moves.

Of course, the bK must already be in a4 before $d2 \times c3$ because of the presence of the wRb3.

You must therefore find at least 21 black Pawn moves:

$d7 \rightarrow d1=B(6)$, $f7 \rightarrow f3 \times g2(5)$, $g7 \rightarrow g3 \times h2(5)$, it means 16.

We can add for free $e6 \rightarrow e3(3)$ which can be captured on e3 by the wB without additional white move, for a total of 19 (not since e7, because the bPe7 and g7 cannot both start from the 7th row because of bBf8). But that is not enough!

It is therefore necessary to add one or more moves of the bPh.

- 1 tempo would not be enough, because it would take at least 1 additional white move to capture on h6 (for example: $Bc1 \times h6 \times e3-c1$ or $Rg1-d1-d6 \times h6-g6$).

- 2 tempos either if the bPh is captured on h5 (+2 for the wQ with Qd1-d5×h5-e5-h2), (or +2 in theory for a wR).
- 3 tempos and you must therefore at least push the bPh to h4! (but +3 for the wB with Bc1×e3-g5×h4-g5-c1, or +2 for the wQ but you have to go through d4 (and h4) giving check without the possibility of screen (1 FB screen promoted by Bf8-b4-a3 would add a move), +4 for wNh1 ???).

We must therefore think to the improbable ... bPh has been captured on h3 (4 tempos)!

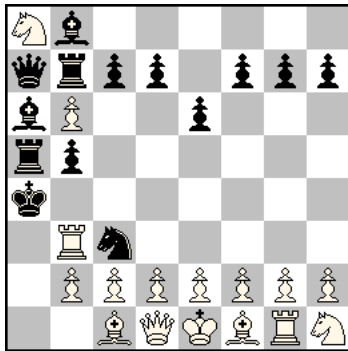
In h3 the capture cannot be performed by a wR this time, because wRg1 is not in play until the South-West corner is not open.

With a wN it would take +5 (N×h3-f4-h5-g3-h1), because N×h3-f2-h1 is not possible as f2 would be occupied.

This must therefore be done with the wQ in +2 moves, which with h2-h3 will be +3, while Black will play +4 moves.

Intermediate position:

Nb6/qrpp1ppp/bP2p3/rp6/k7/1Rn5/1PPPPPPP/2BQKBRN



16+14

Forward solution:

1.d×c3 e5 2.Qd3 e4 3.Kd1 e3 4.B×e3 h6 5.Kc1 h5 6.Kb1 h4 7.Bc1 h3 8.Q×h3 g6 9.Qg3 g5 10.h3 g4 11.Qh2 g3 12.Ka2 g×h2 13.g3 f6 14.Bg2 f5 15.Rd1 f4 16.Rd6 f3 17.Rg6 f×g2 18.f4 d6 19.f5 d5 20.f6 d4 21.f7 d3 22.f8=B d2 23.Ba3 d1=B 24.Rb4#

First problem of this type in which the bPh is captured in the 3rd row before the h2-h3 opening!

The matrix is symmetrically similar to that used by Andrei Frolkin (last 50 moves?) and Dmitrij Baibikov (cooked) (see appendix).

But on the left of the chessboard the wK and wQ are reversed, forcing a different sequence.

The problem is very difficult to solve, because it implements the completely new maneuver Q×a3 / a2-a3 which it will be difficult to envisage if one knows the Frolkin problem.

In particular, there is a very attractive natural try from the following intermediate position:

b7/rPpppp1p/qP4p1/rp6/k7/1Rn4P/1PPPPPPP/1n1BQKBRN

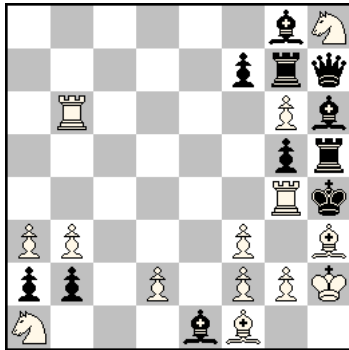
1.d×c3 g5 2.Qd6 g4 3.Qh2 g3 4.Kd1 g×h2 ...

Admittedly, this is not a length record, but the novelty of the h3 capture is more than original.

Note that there is a symmetrical position with an almost identical solution (below).

Thierry Le Gleuher

6bN/5prq/1R4Pb/6pr/6Rk/PP3P1B/pp1P1PPK/N3bB2



(14+11)

47 last single moves?

Appendix:

Andreï Frolkin

P0008856

3462 U.S. Problem Bulletin 104 (1992) (correction of P0002192)

7b/4B1Pr/4K1pq/5ppr/3N3k/PP1pRP1R/pp1P1PP1/1Q2b2n (13+13)

48 last single moves ?

Dmitry Baibikov (cooked)

P1009466

289 Shakhmatnaya Kompozitsiya 49 (2003)

5BRb/4Q1Pr/4K1pq/6pr/3N1p1k/PP1p1P1R/pp1P1PP1/4b2n (13+13)

50 last single moves? C-

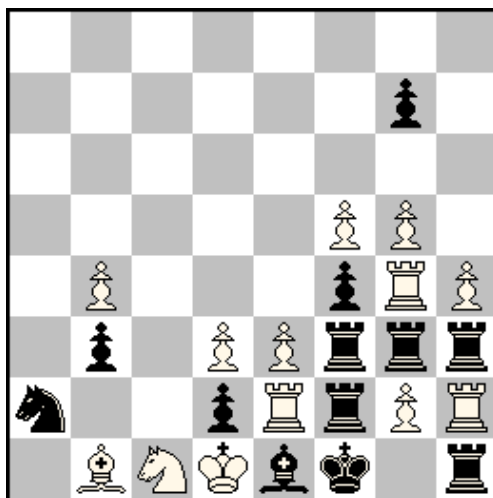
From the following intermediate position:

6bN/ppp1pprq/3p2Pb/6pr/7k/5nR1/PPPPPPP1/NRBQKB2

1.d×Nf3 d5 2.Qe2 d4 3.Qe3 d3 ... then symmetrical solution to the preceding problem.

... 4.B×d3 a6 5.Kf1 a5 6.Kg1 a4 7.Bf1 a3 8.Q×a3 b6 9.Qb3 b5 10.a3 b4 11.Qa2 b3 12.Kh2 b×a2 13.b3 c6 14.Bb2 c5 15.Re1 c4 16.Re6 c3 17.Rb6 c×b2 18.c4 e6 19.c5 e5 20.c6 e4 21.c7 e3 22.c8=B e2 23.Bh3 e1=B 24.Rg4#

Thierry LE GLEUHER
8/6p1/8/5PP1/1P3pRP/1p1PPrrr/n2pRrPR/1BNKbk1r



R546
The Problemist 27.6
November 2019

Solution in
The Problemist 26.4 July
2020

(13+12)
DUPLEX
102 last single moves?

a)

wPs captured the 4 black missing units (bQ, bQB, bN, bP).

Thus, wPb4 comes from b2, and the promoted wR has been promoted in the 'a' column in the axe (a2→a8=R).

So, bPa must have let it pass switching in b column (one capture).

bPb must have been promoted on c1 (or a1) (2nd capture): b7×c→c1=R

bPh must have moved in column 'g' (3rd and last capture) on order to be captured.

Thus, bPc and e have been promoted in the axe: c7→c1=R and e7→e1=R

It is not possible to take back immediately a4×b3, nor c2×d3.

The retro-move e4×f5 is of course forbidden since bP promoted on e1 is not back until e5, because if it is the case one of the two Pawns e3 or e4 should have play in the axe.

Blacks will have only the possibility to move in the Southeast cage. Whites, at the opposite, can move their Bb1, which is free on 2 squares.

For that reason, the wRe2 is frozen, because she will not be able to be replaced by a black unit immediately. In fact, Rf2-e2 should imply another bRe1, which is forbidden due to the check to wK, and Re1-e2 force to have changed the bB by the other wR. But Black would have no tempo available during this manoeuver.

Equally, wRg4 cannot come from g3, because Black would be retro-pat again.

To open the cage, we need to take back h3-h4, if there is a bB in g3, because the bK is limited to squares f1-g1-h1-h2!

But that is not enough, because after n.h3-h4 Bh4-g3, it always impossible to play the wRg4. We need to play back wPh until h2. For that, the bK should have been ideally positioned.

Of course, it is impossible to turn around the wPg2 in the counter clockwise, because the wRh2 cannot cross the bK on the first row.

Black to move:

Retro:

1.Bc2-b1 Kg1-f1 2.Bb1-c2 Rf1-f2 3.Bc2-b1 Rf2-f3 4.Bb1-c2 Rf3-g3 5.Bc2-b1 Rg3-h3 6.Rh3-h2 Rh2-h1 7.Bb1-c2 Kh1-g1 8.Bc2-b1 Rg1-f1 9.Bb1-c2 Rf1-f2 10.Bc2-b1 Rf2-f3 11.Bb1-c2 Rf3-g3 12.Rg3-h3 Rh3-h2 13.Bc2-b1 Kh2-h1 14.Bb1-c2 Rh1-g1 15.Bc2-b1 Kg1-h2 16.Bb1-c2 Rh2-h1 17.Bc2-b1 Kh1-g1 18.Bb1-c2 Rg1-f1 19.Bc2-b1 Rf1-f2 20.Bb1-c2 Rf2-f3 21.Rf3-g3 Rg3-h3 22.Bc2-b1 Rh3-h2 23.Bb1-c2 Kh2-h1 24.Bc2-b1 Rh1-g1 25.Bb1-c2 Kg1-h2 26.Bc2-b1 Rh2-h1 27.Bb1-c2 Kh1-g1 28.Bc2-b1 Rg1-f1 29.Bb1-c2 Rf1-f2 30.Rf2-f3 Rf3-g3 31.Bc2-b1 Rg3-h3 32.Bb1-c2 Rh3-h2 33.Bc2-b1 Kh2-h1 34.Bb1-c2 Rh1-g1 35.Bc2-b1 Rg1-f1 36.Rf1-f2 Bf2-e1 37.Re1-f1 Rf1-g1 38.Bb1-c2 Rg1-h1 39.Bc2-b1 Kh1-h2 40.Bb1-c2 Rh2-h3 41.Bc2-b1 Rh3-g3 42.Bb1-c2 Bg3-f2 43.Bc2-b1 Rf2-f1 44.Bb1-c2 Rf1g1 45.Bc2-b1 Kg1-h1 46.Bb1-c2 Rh1-h2 47.Bc2-b1 Kh2-g1 48.Bb1-c2 Rg1-h1 49.Bc2-b1 Kh1-h2 50.Bb1-c2 Rh2-h3 51.h3-h4 Bh4-g3 52.Bc2-b1 then 52.... Rg3-f3 (or 52.Bg3-h4 53.Bb1-c2 Bh4-g3 ...) 53.Bb1-c2 Rf3-f2 54.Bc2-b1 Rf2-f1 55.Bb1-c2 Rf1-g1 56.Bc2-b1 Kg1-h1 57.Bb1-c2 Rh1-h2 58.h2-h3 Rh3-g3 59.Bc2-b1 Bg3-h4 60.Bb1-c2 Rh8-h3 etc...

The diagram position is draw and 103 last single moves are determined.

White to move:

Retro:

1.... Kg1-f1 2.Bc2-b1 ... 51.h3-h4 Bh4-g3 52.Bb1-c2 then similar continuation ...

Here, there are 99 single moves between the diagram position and the retro-move h3-h4.

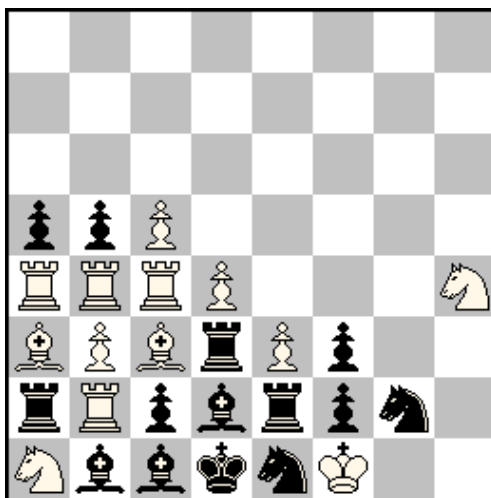
Of course, try to insert another manoeuver in the solution would lead to overshoot 101 single moves, which would be incompatible with the 50 moves rule.

Here only 102 last single moves are determined.

So, we have a D25/102, and it is the new record for last single moves for 'D' type (Duplex) with 25 pieces. (It is also the overall record for Duplex).

With black to move, the same diagram is also the record with 25 pieces (B25/103) for type 'B' (it's given which has to play).

Thierry LE GLEUHER (after L. A. Garaza)
 8/8/8/ppP5/rBRP1n1n/RPBRPp1N/bbpbrp2/Nkr1RK2



C20b
 Phénix 303, Janvier 2020

(13+14) C+
 Ortho-reconstruction
 B=410

Problem 112 p.185 La Genesi delle Posizioni 1961 (book 5) with stipulation N=423, is cooked in N=407. But I found a slightly different position to do more than N = 407.

No difficulty to justify the promoted pieces.

Whites : a×b→b8=wB, g×bPh→h8=wR, h2→h8=wR

Blacks : c×d→d1=bR, d×c1→c2, e×wPf2, f7→f3, g7→g1=bB

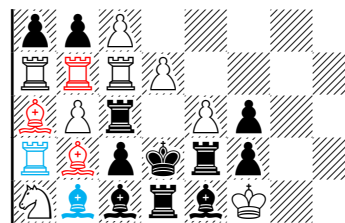
Triangulation of the bK in the cage is possible, but it does not seem possible to return to the starting position with an odd number of moves of the bK (odd number of triangulations).

WinChloe can demonstrate that it is impossible to triangulate in the cage in 1 min 57 sec with a suitable equivalent diagram. It is also impossible if we increase the number of moves (impossible in 1000.5 moves in 6 min 15 sec). It is therefore necessary to consider taking out the bK via d3-e4.

It is easy to realize that the bK cannot arrive by bKc3- d3 (retro-pat quite fast). He must have played bKd2-d3 after bRd3-c3.

So, the only possible exit positions are given on the forsyth position below, with the exception of variants (wRa2↔bBb1) (wRwBwB↔b2, a3, b4). One can also have (wRb4↔bBe1 or c1)
 8/8/8/ppP5/RRRP4/BPr1Pp2/RBpkrp2/NbbrbK2

Exit positions



However, maneuvers are still difficult to find.

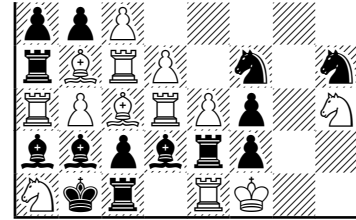
It will therefore be necessary to have the 3 bRs in a row in the double ring, without wR between them in the corridor.

Solution :

1.Ng1 Nh4 2.Nh3 Neg2 3.Ng1 Be1 4.Bd2 Nf4 5.Rc3 Nh5 6.Rbc4
Nf4 7.Bb4 Ra3 8.Ra2 Bb2 9.Bc1 Rdd2 10.Rd3 Nh5 11.Bc3 Nf4
12.Rab4 Ra4 13.Nh3 Ba3 14.B3b2 Nh5 15.Rdc3 Rd3 16.Bd2 Nf4
17.Bbc1 Bb2 18.Ng1 Ra3 19.Ra4 Nh5 20.Rcb4 Nf4 21.Rcc4 Bc3
22.Bb2 Nh5 23.Bdc1 Bcd2 24.Rc3 Nf4 25.Rbc4 Nh5 26.Rab4 Ra4
27.Ba3 Nf4 28.Bcb2 Bc1 29.Nh3 Rdd2 30.Rd3 Nh5 31.Rcc3 Nf4
32.Rbc4 Nh5 33.Bb4 Nf4 34.B2a3 Bb2 35.Ng1 Kc1 36.Nh3 Rd1
37.Rd2 Nh5 38.Rcd3 Nf4 39.Bc3 Nh5 40.Bab4 Nf4 41.Ra3 Ba2
42.Ng1 Kb1 43.Nh3 Rc1 44.Rd1 Bd2 45.Re1

First step, we discard the wR in e1.

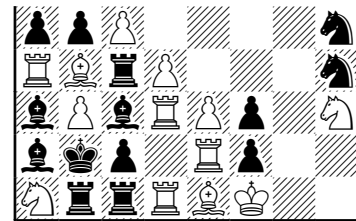
8/8/8/ppP5/rBRP1n1n/RPBRPp1N/bbpbrp2/Nkr1RK2



After 45.Rd1-e1

45. ... Rd1 46.Ng1 Bbc1 47.Bb2 Nh5 48.B4c3 Rb4 49.Ra4 Nf4
50.Ba3 Nh5 51.Bcb2 Bc3 52.Nh3 B1d2 53.Bc1 Bb2 54.Rcc3 Rc4
55.Bb4 Ba3 56.Bb2 Bc1 57.Rd2 Nf4 58.Rcd3 Nh5 59.B2c3 Bcb2
60.Ng1 Rc1 61.Rdd1 Rd2 62.Re2 Nf4 63.Rde1 Rdd1 64.Bd2 Bc3
65.Nh3 Kb2 66.Ng1 Rb1 67.Nh3 Rdc1 68.Rd1 Nh5 69.Be1
After discarding a second wR in e1 (move 63.Rde1), we can now
post an wB. This is the only way to have a wRe2 and an wBe1.

8/8/8/ppP4n/RBRP3n/bPbRPP1N/bkp1Rp2/NrrRBK2

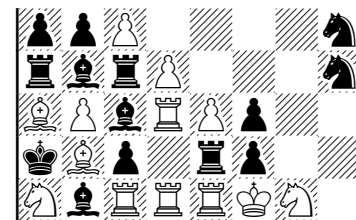


After 69.Bd2-e1

69. ... Nf4 70.R1d2 Rd1 71.Ng1 Kc1 72.Nh3 Rb2 73.Ng1 Bb1 74.Nh3 Ra2 75.Ng1 Bcb2 76.Bc3 Bb4
77.Nh3 Ra3 78.Ng1 Ba2 79.Nh3 Kb1 80.Ng1 Rc1 81.Rd1 Nh5 82.Bcd2 B2c3 83.Nh3 Kb2 84.Ng1 Bb1
85.Nh3 Ka2 86.Ng1 Bb2 87.Nh3 B4c3 88.Rb4 Ra4 89.Ng1 Ka3 90.Nh3 Ba2 91.Ng1 Rb1 92.Nh3 Bc1
93.Ng1 Rb2 94.Nh3 Bb1 95.Ng1 Ra2 96.Nh3 Kb2 97.Ng1 R2a3 98.Nh3 Ka2 99.Ng1 B1b2 100.Bc1
Bd2 101.Nh3 Rc3 102.Rc4 Rb4 103.Ng1 Raa4 104.Nh3 Ba3
105.Bb2 Bc1 106.R3d2 Rd3 107.Rc3 Rc4 108.Ng1 Bb4 109.Ba3
Bb2 110.Rc1 Nf4 111.Rdd1 Nh5 112.Bd2 Nf4 113.Rde1 Nh5
114.Rcd1 Nf4 115.Bc1 Rd2 116.Rd3 B2c3 117.Bcb2 Nh5 118.Rc1
Nf4 119.Red1 Nh5 120.Ree1 Re2

After putting a wR back in e1 (move 113.Rde1), we can now rule
out the isolated bR. It is now necessary to put a bB in e1 to be
able to build the exit position.

8/8/8/ppP4n/rbrP3n/BPbRPP2/kBp1rp2/NbRRRKN1



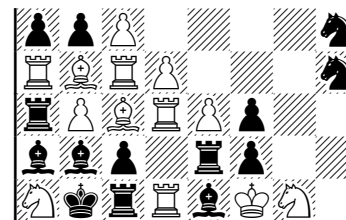
After 120....Rd2-e2

121.R1d2 Nf4 122.Rcd1 Nh5 123.Bc1 Bb2 124.Rc3 Nf4 125.Rdd3 Nh5 126.Bd2 Nf4 127.Rc1 Nh5
128.Red1 Nf4 129.Be1

(Strangely, the shortest solution is through a temporary switch from wB to e1)

129. ... Nh5 130.R1d2 Nf4 131.Rcd1 Bc1 132.Bb2 Ba3 133.Nh3 Rcb4 134.Rc4 Nh5 135.Rdc3 Nf4
136.Rdd3 Bd2 137.Bc1 Bb2 138.Ng1 Ra3 139.Nh3 Rba4 140.Rb4 Nh5 141.Rcc4 Bdc3 142.Bcd2 Bc1
143.Ng1 Kb2 144.Nh3 Ra2 145.Ng1 Ka3 146.Nh3 Rb2 147.Ng1
Ba2 148.Nh3 Rb1 149.Ng1 B3b2 150.Bc3 Bd2 151.Nh3 Rc1
152.Ng1 Bb1 153.Nh3 Ka2 154.Ng1 Ra3 155.Ra4 Nf4 156.Bb4
Bdc3 157.Bd2 Nh5 158.Re1 Rd1 159.Nh3 Bc1 160.Ng1 Kb2
161.Nh3 Ba2 162.Ng1 Kb1 163.Nh3 B3b2 164.Bdc3 Bd2 165.Ng1
Rc1 166.Rd1 Be1 - The bB is now well placed. The output position
has two well-placed units (bRe2 and bBe1)

8/8/8/ppP4n/RBRP3n/rPBRPP2/bbp1rp2/NkrRbKN1

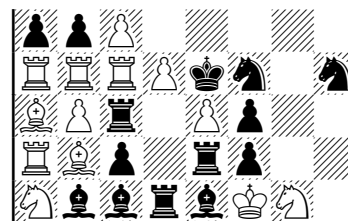


After 166....Bd2-e1

167.R1d2 Rd1 168.Nh3 Kc1 169.Ng1 Bb1 170.Nh3 Ra2 171.Ba3 Nf4 172.Bcb4 Nh5 173.Rdc3 Nf4
 174.Rdd3 Rdd2 175.Ng1 Kd1 176.Nh3 Bc1 177.Bb2 Nh5 178.B4a3 Nf4 179.Rcb4 Nh5 180.Rcc4 Nf4
 181.Bc3 Rb2 182.Ng1 Ba2 183.Nh3 Rb1 184.Bab2 Nh5 185.Ra3 Nf4 186.Rba4 Nh5 187.Bb4 Nf4
 188.B2c3 Bb2 189.Ng1 Rc1 190.Nh3 Bb1 191.Ra2 Nh5 192.Ba3
 Nf4 193.Bcb4 Nh5 194.Rdc3 Rd3 195.Ng1 Kd2 196.Nh3 Rd1
 197.Ng1 Bc1 198.Bb2 Nf4 199.B4a3 Nh5 200.Rcb4 Nf4 201.Rcc4
 Rc3 202.Nh3 Kd3 203.Ng1 Ke4

The BK is finally out and triangulation can begin.

8/8/8/ppP5/RRRpk1n/BPr1Pp2/RBp1rp2/NbbrbKN1



204.Nh3 Rdd2 205.Ng1 Rdd3 206.Nh3 Rd1 207.Ng1

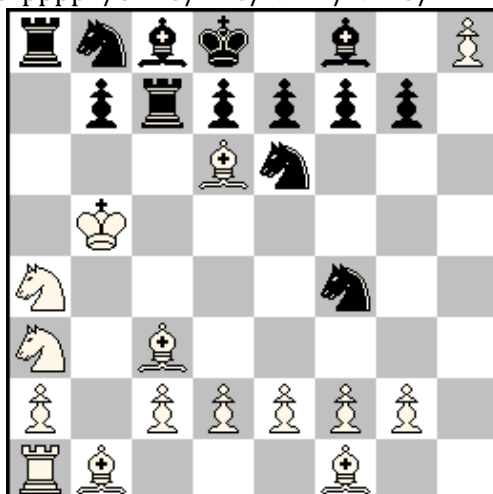
(the triangulation is finished and we go back on the opposite path)

After 203....Kd3-e4

207. ... Kd3 208.Nh3 Kd2 209.Ng1 Rd3 210.Rc3 Nh5 211.Rbc4 Nf4 212.Bb4 Nh5 213.B2a3 Bb2
 214.Nh3 Rc1 215.Ng1 Kd1 216.Nh3 Rdd2 217.Rd3 Nf4 218.Bc3 Nh5 219.Bab4 Nf4 220.R2a3 Ba2
 221.Ng1 Rb1 222.Nh3 Bc1 223.Bb2 Nh5 224.B4c3 Nf4 225.Rab4 Nh5 226.Raa4 Nf4 227.Ba3 Rb2
 228.Ng1 Bb1 229.Nh3 Ra2 230.Bcb2 Nh5 231.Rcc3 Nf4 232.Rbc4 Nh5 233.Bb4 Nf4 234.B2a3 Bb2
 235.Ng1 Kc1 236.Nh3 Rd1 237.Rd2 Nh5 238.Rcd3 Nf4 239.Bc3 Nh5 240.Bab4 Ra3 241.Ng1 Ba2
 242.Nh3 Kb1 243.Ng1 Rc1 244.Rd1 Bd2 245.Re1 Rd1 246.Nh3 Bdc1 247.Bd2 Bc3 248.Ng1 Kb2
 249.Nh3 Bb1 250.Ng1 Ka2 251.Nh3 B1b2 252.Ng1 Rc1 253.Rd1 Nf4 254.Be1 Bd2 255.Bc3 Nh5
 256.Rab4 Ra4 257.Nh3 Ka3 258.Ng1 Ba2 259.Nh3 Rb1 260.Ng1 Bdc1 261.Bcd2 Bc3 262.Nh3 Rb2
 263.Ng1 Bb1 264.Nh3 Ra2 265.Ng1 Kb2 266.Nh3 R2a3 267.Ng1 Ka2 268.Nh3 B1b2 269.Bc1 Bd2
 270.Rcc3 Nf4 271.Rbc4 Rb4 272.Ng1 Raa4 273.Nh3 Ba3 274.Bb2 Bc1 275.R3d2 Nh5 276.Rcd3 Nf4
 277.Rcc3 Rc4 278.Ng1 Bb4 279.Ba3 Bb2 280.Rc1 Nh5 281.Rdd1 Nf4 282.Bd2 Nh5 283.Re1 Nf4
 284.Rcd1 Nh5 285.Bc1 Nf4 286.R3d2 Nh5 287.Rcd3 B2c3 288.Bcb2 Nf4 289.Rc1 Nh5 290.Rdd1 Rd2
 291.Re2 Nf4 292.Rde1 Nh5 293.Rcd1 Nf4 294.Bc1 Bb2 295.Rc3 Rd3 296.Bd2 Nh5 297.Rc1 Nf4
 298.Red1 Nh5 299.Be1 Nf4 300.Rdd2 Nh5 301.Rcd1 Bc1 302.Bb2 Ba3 303.Nh3 Rcb4 304.Rc4 Rc3
 305.Rd3 Bd2 306.Bc1 Bb2 307.Ng1 Ra3 308.Nh3 Rba4 309.Rb4 Rc4 310.Ng1 Bdc3 311.Bcd2 Bc1
 312.Nh3 Kb2 313.Ng1 Ra2 314.Nh3 Ka3 315.Ng1 Rb2 316.Nh3 Ba2 317.Ng1 Rb1 318.Nh3 B1b2
 319.Ng1 Rc1 320.Nh3 Bb1 321.Ng1 Ka2 322.Nh3 Ra3 323.Ra4 Bb4 324.Ng1 B2c3 325.Nh3 Kb2
 326.Ng1 Ba2 327.Nh3 Kb1 328.Ng1 Bb2 329.Bc3 Nf4 330.R1d2 Rd1 331.Nh3 Kc1 332.Ng1 Bb1
 333.Nh3 Ra2 334.Ng1 B4a3 335.Bb4 Bc3 336.Nh3 Rb2 337.Ng1 Ba2 338.Nh3 Rb1 339.Ng1 Kb2
 340.Nh3 Rdc1 341.Rd1 Nh5 342.Bd2 Nf4 343.Rde1 Rd1 344.Ng1 Rbc1 345.Nh3 Kb1 346.Ng1 Bcb2
 347.Bdc3 Rd2 348.Rd1 Nh5 349.Ree1 Re2 350.R1d2 Rd1 351.Nh3 Bc1 352.Bb2 Nf4 353.Rc3 Nh5
 354.Rdd3 Bd2 355.Bc1 Bb2 356.Ba3 Rb4 357.Rc4 Bbc3 358.Bcb2 Bc1 359.Ng1 B3d2 360.Bc3 Nf4
 361.Bab2 Nh5 362.Ra3 Ra4 363.Bb4 Nf4 364.B2c3 Bb2 365.Nh3 Rc1 366.Rd1 Be1 367.R1d2 Rd1
 368.Ng1 Kc1 369.Nh3 Bb1 370.Ra2 Nh5 371.Ba3 Nf4 372.Bcb4 Nh5 373.Rdc3 Nf4 374.Rdd3 Rdd2
 375.Ng1 Kd1 376.Nh3 Bc1 377.Bb2 Nh5 378.B4a3 Nf4 379.Rb4 Nh5 380.Rcc4 Nf4 381.Rdc3 Rd3
 382.Ng1 Bcd2 383.Bc1 Nh5 384.Bab2 Ra3 385.Ra4 Nf4 386.Rcb4 Nh5 387.Rcc4 Bc3 388.Bd2 Nf4
 389.Bbc1 Bb2 390.Rc3 Nh5 391.Rbc4 Nf4 392.Rab4 Ra4 393.Nh3 Ba3 394.Bb2 Nh5 395.Bdc1 Rdd2
 396.Rd3 Nf4 397.Bc3 Bb2 398.Ng1 Ra3 399.Ra4 Nh5 400.Bb4 Nf4 401.Rdc3 Rd3 402.Bd2 Bc1
 403.Rb2 Ra2 404.Ba3 Nh5 405.Rcb4 Nf4 406.Rcc4 Nfg2 407.Bc3 Bed2 408.Nh3 Ne1 409.Ng1 Nhg2
 410.Nh3 (C+ Winchloe)

A lot of research effort to finally an almost negligible improvement. In any cases, we were able to show that we cannot go much more with this matrix and this set of pieces. It's a real shame, because we were not far from the absolute record (pseudo-solution and ortho-solution) of length of 427 held by Luis A. Garaza and Luis Ceriani. Nevertheless, this latest version (B=410) has the merit of replacing the record for an ortho-solution, since it is the original version (cooked) that held the record with N=423 (and the shortest solution was only at N=407).

Thierry LE GLEUHER
 rnbk1b1P/1prpppp1/3Bn3/1K6/N4n2/N1B5/P1PPPPP1/RB3B2



p.12320 Phénix 315
 février 2021

(15+13)
 Longest Proof Game (LPG) in 410,5 moves
 Einstein

Unlike the concept of the shortest proof game, in a longest proof game one must find the longest way to obtain the position. The principle of this new kind is to repeat the same positions several times, but not 3 times because of the rule of nul by triple repetition. In absolute terms, it would also be possible to use the 50-move rule, but it would take a corridor of 13 squares for one of the Kings!

Of course, if we find a longer proof game than the stipulation, it is a demolition, but a shorter solution does not bother in any way, since it is as if we found a longer solution in a classic proof game part (PG or SPG: shortest proof game). The solution in the number of moves of the stipulation must also be unique (without dual). This genre is impossible to implement in orthodox without additional conditions, but surely there are possibilities in fancy chess and Einstein's Chess lends itself wonderfully to the desired effect.

Reminder on the Einstein condition: any unit that plays without taking loses part of its value and transforms according to the scheme : Queen→Rook→Bishop→Knight→Pawn→Pawn. The Pawn, at the end of the chain, remains Pawn. Any unit that captures is strengthened and transformed according to the scheme: Pawn→Knight→Bishop→Rook→Queen→Queen. The Queen, at the end of the chain, remains a Queen. Total removal of promotions (a White Pawn on the 8th row remains a Pawn). A White Pawn on the 1st row (after a Cavalier move) can play 1, 2 or 3 squares with « en passant » capture possible by corresponding to a black Pawn located on the 3rd or 4th row.

Analysis

Blacks have captured only one white unit and the 3 pieces (bRc7, bNd6, bNf4) must be from the original 3 pieces (bQd8, bRh8, bNg8), because no bP can do it (even with a capture).

Whites must therefore arrive at the position by capturing only the bPa, c and h.
 The only way to do this involves: b2-b3×a4=N, N×c3=B, Bc1-a3=N, Qd1-c1=R-b1=B

But where did the bNg8 land?

One hypothesis could be: Ng8-e7=P after Pe7-e6-e5×f4=N, we would also have Rh8-h3=B-d6=N and Qd8-c7=R. But it would then be impossible to provide a white piece to capture in f4, because the white units are needed elsewhere, especially the Rh1 which will have to join d6. This Knight is therefore necessarily in f4 that it reached by Ng8×h6=B-f4=N. The only way to have bRc7 without capture is now to play Qd8-c7=T. The last Knight is therefore obtained by Rh8-h3=B-e6=N.

The bK could only play Ke8-d8-e8 (oscillations) and the bPa, c and h were taken in their respective columns.

In the diagram position, the wK has a corridor of 8 squares (e1-d1-c1-b2-b3-b4-b5-b6), the creation of which is independent of the units from the right of the chessboard.

To lengthen the game as much as possible, it is therefore necessary to create this corridor by carefully keeping the tempos from the units of the columns g and h.

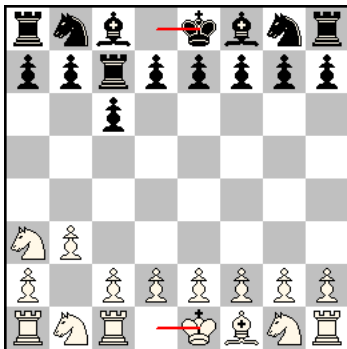
Introduction

It is necessary to release the Kings as soon as possible to start the oscillations:

1.b3 c6 2.Ba3=N Qc7=R 3.Qc1=R

And a first small cage for each King is in place while waiting to make bigger for the White King.

rnb1kbnr/pprppppp/2p5/8/8/NP6/P1PPPPPP/RNR1KBNR



(16+16) after 3.Qc1=R

Now, we can make the Kings oscillate up to the limit of draw by triple repetition of position. But in the position of the diagram, white and black castlings are still possible. This position is therefore not the same, with the Kings in the same places, after they have moved.

3... Kd8 (and here the black castlings will no longer be possible, but the white castlings are still legal) 4.Kd1 (the two Kings have moved and none of the castlings is no longer to be taken into account, but the first position not to repeat 3 times is then the one that is reached after the 4th white move, with wKd1/bKd8

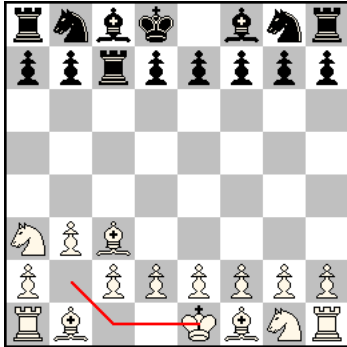
4... Ke8 5.Ke1 Kd8 6.Kd1 (2nd time) Ke8 7.Ke1

7... Kd8 ??? 8.h3 (forced) since it is up to Whites to break the cycle here, because the objective is to enlarge the cage of the wK without wasting time, that is to say by reserving the greatest number of Pawn moves for the largest cages. With this in mind, it is necessary to advance the bPc in c3 at first by saving the other Pawn moves. Certainly, we will lose half a move by breaking the sequence with the Blacks on the 4th move, but it will be beneficial later. Indeed, we will eventually replace the cycle of 7 moves of Kings (current), by a cycle of Kings of 31 moves (final cycle).

7... c5 8.Kd1 Kd8 9.Ke1 Ke8 10.Kd1 Kd8 11.Ke1 c4 12.Kd1 Ke8 13.Ke1 Kd8 14.Kd1 Ke8 15.Ke1 c3 16.Kd1 Kd8 17.Ke1 Ke8 18.Kd1 Kd8 and we still have to lose half a move here, always with

the aim of expanding the wK corridor without wasting time. But this time, you have to play the Nb1 and then the Rc1. 19.Nxc3=B Ke8 20.Ke1 Kd8 21.Kd1 Ke8 22.Ke1 Kd8 23.Rcb1=B
And the White King corridor has just expanded to 4 squares.

rnbk1bnr/pprppppp/8/8/8/NPB5/P1PPPPPP/RB2KBNR



(16+15)
after 52.bxa4=NRcb1=B

With 4 free squares, the longest cycle is to finish with the wK at the other end of the corridor.

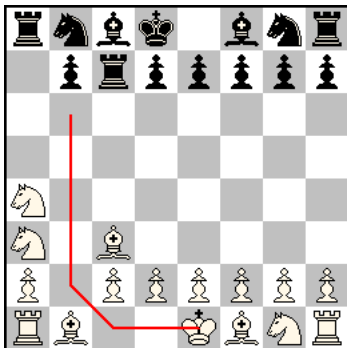
23... Ke8 24.Kd1 Kd8 25.Ke1 (2nd time) Ke8 26.Kd1 Kd8
27.Kc1 (not 27.Ke1 that would make null) Ke8 28.Kb2 Kd8
29.Kc1 (2nd time) Ke8 30.Kb2
It is now up to the bPa to move forward.

30... a6 31.Kc1 Kd8 32.Kb2 Ke8 33.Kc1 Kd8 34.Kd1 Ke8
35.Ke1 Kd8 36.Kd1 Ke8 37.Ke1 a5 38.Kd1 Kd8 39.Ke1 Ke8
40.Kd1 Kd8 41.Kc1 Ke8 42.Kb2 Kd8 43.Kc1 Ke8 44.Kb2 a4
45.Kc1 Kd8 46.Kb2 Ke8 47.Kc1 Kd8 48.Kd1 Ke8 49.Ke1 Kd8
50.Kd1 Ke8 51.Ke1 Kd8 52.bxa4=N

Main strategy

The large corridor of 8 squares is now in place for the wK. This makes it possible to lengthen the game as much as possible using the tempos of the h column.

rnbk1bnr/1prppppp/8/8/N7/N1B5/P1PPPPPP/RB2KBNR



(16+14) after 52.bxa4=N

Between each oscillation cycle of the 2 Kings, both sides can play the moves of the right of the chessboard: Ph2→h6, Ng8×h6=B, Bh6-f4=N, Ph7→h2, Rh1×Ph2=Q, Qh2-h6=R, Rh6-d6=B, Rh8-h3=B, Bh3-e6=N, Ng1-h3=P and Ph3→h8
We notice of course that we can lengthen if the bPh was captured in h2 having played 5 times.

It is also noted that the order of these moves is strictly determined, by the vertical interceptions of the column h and the blocking of the 6th row by the Blacks in e6. The tempo moves will therefore necessarily occur in the order described above.

The corridor has 8 squares, so again the longest journey for the wK consists of progressive switchbacks to finish at the other end of the corridor in each cycle.

52... Ke8 53.Kd1 Kd8 54.Ke1 Ke8 55.Kd1 Kd8 56.Kc1 Ke8 57.Kb2 Kd8 58.Kc1 Ke8 59.Kb2 Kd8
60.Kb3 Ke8 61.Kb4 Kd8 62.Kb3 Ke8 63.Kb4 Kd8 64.Kb5 Ke8 65.Kb6 Kd8 66.Kb5 Ke8 67.Kb6
Kd8 68.h3 (31 moves for the Kings between two white tempos)
68... Ke8 69.Kb5 Kd8 70.Kb6 Ke8 71.Kb5 Kd8 72.Kb4 Ke8 73.Kb3 Kd8 74.Kb4 Ke8 75.Kb3 Kd8
76.Kb2 Ke8 77.Kc1 Kd8 78.Kb2 Ke8 79.Kc1 Kd8 80.Kd1 Ke8 81.Ke1 Kd8 82.Kd1 Ke8 83.Ke1 Kd8
84.h4 Ke8 85.Kd1 Kd8 86.Ke1 Ke8 87.Kd1 Kd8 88.Kc1 Ke8 89.Kb2 Kd8 90.Kc1 Ke8 91.Kb2 Kd8
92.Kb3 Ke8 93.Kb4 Kd8 94.Kb3 Ke8 95.Kb4 Kd8 96.Kb5 Ke8 97.Kb6 Kd8 98.Kb5 Ke8 99.Kb6
Kd8 100.h5 Ke8 101.Kb5 Kd8 102.Kb6 Ke8 103.Kb5 Kd8 104.Kb4 Ke8 105.Kb3 Kd8 106.Kb4
Ke8 107.Kb3 Kd8 108.Kb2 Ke8 109.Kc1 Kd8 110.Kb2 Ke8 111.Kc1 Kd8 112.Kd1 Ke8 113.Ke1
Kd8 114.Kd1 Ke8 115.Ke1 Kd8 116.h6 Ke8 117.Kd1 Kd8 118.Ke1 Ke8 119.Kd1 Kd8 120.Kc1
Ke8 121.Kb2 Kd8 122.Kc1 Ke8 123.Kb2 Kd8 124.Kb3 Ke8 125.Kb4 Kd8 126.Kb3 Ke8 127.Kb4

Kd8 128.Kb5 Ke8 129.Kb6 Kd8 130.Kb5 Ke8 131.Kb6 **N×h6=B** (30 moves only for the Kings if you go from a white tempo to a black tempo)

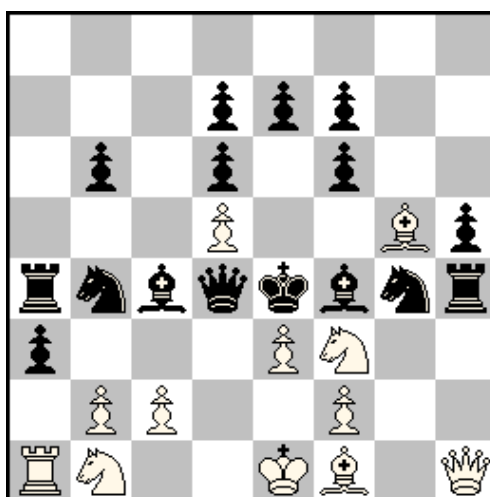
132.Kb5 Kd8 133.Kb6 Ke8 134.Kb5 Kd8 135.Kb4 Ke8 136.Kb3 Kd8 137.Kb4 Ke8 138.Kb3 Kd8 139.Kb2 Ke8 140.Kc1 Kd8 141.Kb2 Ke8 142.Kc1 Kd8 143.Kd1 Ke8 144.Ke1 Kd8 145.Kd1 Ke8 146.Ke1 **Bf4=N** (and only 29 moves for the Kings between two black tempos). It's always longer than the other option of making a big round trip with the wK:

(try : ... 132.Kb5 Kd8 133.Kb4 Ke8 134.Kb3 Kd8 135.Kb2 Ke8 136.Kc1 Kd8 137.Kd1 Ke8 138.Ke1 Kd8 139.Kd1 Ke8 140.Kc1 Kd8 141.Kb2 Ke8 142.Kb3 Kd8 143.Kb4 Ke8 144.Kb5 Kd8 145.Kb6 **Bf4=N** and 28 King moves only)

147.Kd1 Kd8 148.Ke1 Ke8 149.Kd1 Kd8 150.Kc1 Ke8 151.Kb2 Kd8 152.Kc1 Ke8 153.Kb2 Kd8 154.Kb3 Ke8 155.Kb4 Kd8 156.Kb3 Ke8 157.Kb4 Kd8 158.Kb5 Ke8 159.Kb6 Kd8 160.Kb5 Ke8 161.Kb6 **h6** 162.Kb5 Kd8 163.Kb6 Ke8 164.Kb5 Kd8 165.Kb4 Ke8 166.Kb3 Kd8 167.Kb4 Ke8 168.Kb3 Kd8 169.Kb2 Ke8 170.Kc1 Kd8 171.Kb2 Ke8 172.Kc1 Kd8 173.Kd1 Ke8 174.Ke1 Kd8 175.Kd1 Ke8 176.Ke1 **h5** 177.Kd1 Kd8 178.Ke1 Ke8 179.Kd1 Kd8 180.Kc1 Ke8 181.Kb2 Kd8 182.Kc1 Ke8 183.Kb2 Kd8 184.Kb3 Ke8 185.Kb4 Kd8 186.Kb3 Ke8 187.Kb4 Kd8 188.Kb5 Ke8 189.Kb6 Kd8 190.Kb5 Ke8 191.Kb6 **h4** 192.Kb5 Kd8 193.Kb6 Ke8 194.Kb5 Kd8 195.Kb4 Ke8 196.Kb3 Kd8 197.Kb4 Ke8 198.Kb3 Kd8 199.Kb2 Ke8 200.Kc1 Kd8 201.Kb2 Ke8 202.Kc1 Kd8 203.Kd1 Ke8 204.Ke1 Kd8 205.Kd1 Ke8 206.Ke1 **h3** 207.Kd1 Kd8 208.Ke1 Ke8 209.Kd1 Kd8 210.Kc1 Ke8 211.Kb2 Kd8 212.Kc1 Ke8 213.Kb2 Kd8 214.Kb3 Ke8 215.Kb4 Kd8 216.Kb3 Ke8 217.Kb4 Kd8 218.Kb5 Ke8 219.Kb6 Kd8 220.Kb5 Ke8 221.Kb6 **h2** 222.Kb5 Kd8 223.Kb6 Ke8 224.Kb5 Kd8 225.Kb4 Ke8 226.Kb3 Kd8 227.Kb4 Ke8 228.Kb3 Kd8 229.Kb2 Ke8 230.Kc1 Kd8 231.Kb2 Ke8 232.Kc1 Kd8 233.Kd1 Ke8 234.Ke1 Kd8 235.Kd1 Ke8 236.Ke1 Kd8 237.**R×h2=Q** (30 moves for the Kings if we go from a black tempo to a white tempo)

237... Ke8 238.Kd1 Kd8 239.Ke1 Ke8 240.Kd1 Kd8 241.Kc1 Ke8 242.Kb2 Kd8 243.Kc1 Ke8 244.Kb2 Kd8 245.Kb3 Ke8 246.Kb4 Kd8 247.Kb3 Ke8 248.Kb4 Kd8 249.Kb5 Ke8 250.Kb6 Kd8 251.Kb5 Ke8 252.Kb6 Kd8 253.**Qh6=R** Ke8 254.Kb5 Kd8 255.Kb6 Ke8 256.Kb5 Kd8 257.Kb4 Ke8 258.Kb3 Kd8 259.Kb4 Ke8 260.Kb3 Kd8 261.Kb2 Ke8 262.Kc1 Kd8 263.Kb2 Ke8 264.Kc1 Kd8 265.Kd1 Ke8 266.Ke1 Kd8 267.Kd1 Ke8 268.Ke1 Kd8 269.**Rd6=B** Ke8 270.Kd1 Kd8 271.Ke1 Ke8 272.Kd1 Kd8 273.Kc1 Ke8 274.Kb2 Kd8 275.Kc1 Ke8 276.Kb2 Kd8 277.Kb3 Ke8 278.Kb4 Kd8 279.Kb3 Ke8 280.Kb4 Kd8 281.Kb5 Ke8 282.Kb6 Kd8 283.Kb5 Ke8 284.Kb6 **Rh3=B** 285.Kb5 Kd8 286.Kb6 Ke8 287.Kb5 Kd8 288.Kb4 Ke8 289.Kb3 Kd8 290.Kb4 Ke8 291.Kb3 Kd8 292.Kb2 Ke8 293.Kc1 Kd8 294.Kb2 Ke8 295.Kc1 Kd8 296.Kd1 Ke8 297.Ke1 Kd8 298.Kd1 Ke8 299.Ke1 **Be6=N** 300.Kd1 Kd8 301.Ke1 Ke8 302.Kd1 Kd8 303.Kc1 Ke8 304.Kb2 Kd8 305.Kc1 Ke8 306.Kb2 Kd8 307.Kb3 Ke8 308.Kb4 Kd8 309.Kb3 Ke8 310.Kb4 Kd8 311.Kb5 Ke8 312.Kb6 Kd8 313.Kb5 Ke8 314.Kb6 Kd8 315.**Nh3=P** Ke8 316.Kb5 Kd8 317.Kb6 Ke8 318.Kb5 Kd8 319.Kb4 Ke8 320.Kb3 Kd8 321.Kb4 Ke8 322.Kb3 Kd8 323.Kb2 Ke8 324.Kc1 Kd8 325.Kb2 Ke8 326.Kc1 Kd8 327.Kd1 Ke8 328.Ke1 Kd8 329.Kd1 Ke8 330.Ke1 Kd8 331.**h4** Ke8 332.Kd1 Kd8 333.Ke1 Ke8 334.Kd1 Kd8 335.Kc1 Ke8 336.Kb2 Kd8 337.Kc1 Ke8 338.Kb2 Kd8 339.Kb3 Ke8 340.Kb4 Kd8 341.Kb3 Ke8 342.Kb4 Kd8 343.Kb5 Ke8 344.Kb6 Kd8 345.Kb5 Ke8 346.Kb6 Kd8 347.**h5** Ke8 348.Kb5 Kd8 349.Kb6 Ke8 350.Kb5 Kd8 351.Kb4 Ke8 352.Kb3 Kd8 353.Kb4 Ke8 354.Kb3 Kd8 355.Kb2 Ke8 356.Kc1 Kd8 357.Kb2 Ke8 358.Kc1 Kd8 359.Kd1 Ke8 360.Ke1 Kd8 361.Kd1 Ke8 362.Ke1 Kd8 363.**h6** Ke8 364.Kd1 Kd8 365.Ke1 Ke8 366.Kd1 Kd8 367.Kc1 Ke8 368.Kb2 Kd8 369.Kc1 Ke8 370.Kb2 Kd8 371.Kb3 Ke8 372.Kb4 Kd8 373.Kb3 Ke8 374.Kb4 Kd8 375.Kb5 Ke8 376.Kb6 Kd8 377.Kb5 Ke8 378.Kb6 Kd8 379.**h7** Ke8 380.Kb5 Kd8 381.Kb6 Ke8 382.Kb5 Kd8 383.Kb4 Ke8 384.Kb3 Kd8 385.Kb4 Ke8 386.Kb3 Kd8 387.Kb2 Ke8 388.Kc1 Kd8 389.Kb2 Ke8 390.Kc1 Kd8 391.Kd1 Ke8 392.Ke1 Kd8 393.Kd1 Ke8 394.Ke1 Kd8 395.**h8** Ke8 396.Kd1 Kd8 397.Ke1 Ke8 398.Kd1 Kd8 399.Kc1 Ke8 400.Kb2 Kd8 401.Kc1 Ke8 402.Kb2 Kd8 403.Kb3 Ke8 404.Kb4 Kd8 405.Kb3 Ke8 406.Kb4 Kd8 407.Kb5 Ke8 408.Kb6 Kd8 409.Kb5 Ke8 410.Kb6 Kd8 411.Kb5 = (null by triple repetition of position and we cannot go further with this diagram, what needed to be demonstrated)

Thierry LE GLEUHER
8/3ppp2/1p1p1p2/3P2Bp/rnbqkbnr/p3PN2/1PP2P2/RN2KB1Q



8707, Phénix 306-307 -
Avril-Mai 2020

(12+16)

C+

PG in 26.0 moves?

1.h4 h5 2.Rh3 Nh6 3.Rf3 Rg8 4.Rf6 gxf6 5.a4 Rg4 6.a5 Rxh4 7.a6 Nxa6 8.g4 Nb4 9.g5 a5 10.g6 a4
11.g7 a3 12.g8=Q Ra4 13.Qg3 Ng4 14.Qd6 cxd6 15.d4 Qb6 16.d5 Qd4 17.Bh6 b6 18.Bg7 Ba6
19.Bh8 Bh6 20.Bg7 Bf4 21.Bh6 Bc4 22.Bg5 Kf8 23.e3 Kg7 24.Qf3 Kg6 25.Qh1 Kf5 26.Nf3 Ke4

No promoted piece on the diagram position, wQ Ceriani-Frolkin, a switchback of the wB, and Bishop's corridor.

Logical demonstration:

- 1) There are normally 26 black moves to obtain the position, even if the Rook h4 actually comes from a8, even if the 0-0 was performed and whatever the route of bK (by East or West). The only way to eventually win a black move would be to capture twice with the bP, so that the bR can go directly in h4 in 1 move. For this it would be necessary that the bP (c7, g7 and h7) capture the 4 missing white pieces including the PBa. But this one could not be captured directly (too far away) and could not be promoted either because he could not capture any black pieces to avoid the bPa (16 black pieces present on the chessboard) and the bP could not give him the passage either since there would be in this case no more white pieces available to be captured.

→ As a result, black Rooks had to play 4 moves: bRa8-a4 and bRh8-g8-g4-h4 (possibly bRh8-c8-c4-h4) or bRa8-a4-h4 and bRh8-a8-a4. If the bRh starts from square f8 after a hypothetical black 0-0, we have the same count. We can note additionally that the 0-0-0 does not make the bK lose a move either, but that there is then only one solution for the bRs: bRc8-c4-h4 and bRh8-a8-a4.

→ The other black trajectories are therefore practically frozen:

bQd8-b6-d4 (2 moves)

bBc8-a6-c4 (2)

We note here that for the bBc8 to be able to clear its initial square, it is necessary that the bQ is already in d4, which invalidates the hypothesis of the trajectory bRh8-c8-c4-h4.

- bBf8-h6-f4 (2)

- bNb8-b4 (2)

- bNg8-g4 (2)

- bKe8-e4 (5)

- 2) As the bPa then advanced in the axis, the only options then remaining to make the wPa disappear, will be to capture it in a6 with the bNb8 or bBc8.
- 3) The wPh was also unable to get out of its column and had to be captured also in h6 (with bN or bB) or h4 (with bR).
- 4) Of course now the bPs doubled in the diagram position required the capture of the last 2 missing white pieces. That imposes the promotion of the wPg which had to be promoted in the axis, then be taken in d6 or have replaced another white piece captured by a bP.
- 5) The right question to ask now is: can we really capture wPh in h6?

Tries :

1.h4 Na6 2.h5 Nb4 3.h6 N×h6 and now, no time to capture a white piece in d6 or f6, you have to pass the wPg before playing the bN in g4! ... 4.g4 Rg8 5.g5 Ng4 and bR can no longer go in h4 in two moves since g8! Play 4... Rb8 does not solve the problem.

1.Nc3 Na6 2.Ne4 Nb4 3.Nf6+ g×f6 4.h4 Bh6 5.h5 Bf4 6.h6 N×h6 but the wB will no longer be able to reach g6!

1.Nc3 Na6 2.Ne4 Nb4 3.Nf6+ g×f6 4.h4 Nh6 5.h5 Rg8 6.Rh3 Rg4 7.Rd3 Rh4 8.Rd6 c×d6 9.g4 Qb6 10.g5 Kd8 11.a4 Kc7 12.a5 Kc6 13.a6 Ng4 14.g6 Kd5 15.d4 Ke4 16.d5 Qd4 17.Bh6 b6 18.Bg7 B×a6 19.Bh8 Bc4 20.h6 B×h6 21.g7 a5 22.g8=N Bf4 23.Nh6 a4 24.Nf5 a3 25.Bg7
but many white moves are missing.

1.d4 Na6 2.Qd2 Nb4 3.Qf4 Nh6 4.Qd6 c×d6 5.a4 Qb6 6.d5 Qd4 7.a5 b6 8.a6 B×a6 9.h4 Bc4 10.Rh3 a5 11.Rf3 a4 12.Rf6 g×f6 13.g4 a3 14.g5 Ra4 15.g6 Ng4 once again the bRh no longer passes.

→ The PBh was captured in h4 by the TN.

- 6) How could the Bishops on black square cross paths, knowing that the bB played bBf8-h6-g4?
Not many options available!

wBc1-g5-h4 / bNh6 / bRg4 / bBf8-h6-f4 / wBh4-g5 and now only h2-h4 / bR×h4, the wPg will have been promoted before. But the wR can no longer come out normally, because the wPe3 closes the cage by the North and we would have to extract it by moving the wK! In the best case it will simply be a matter of going to replace the wRa1 captured earlier, but the whole thing would take at least 30 moves, which is far too much.

→ The solution is therefore to send the wB to h8, in order to clear the corridor, then return behind the bB to g5. This maneuver will take 6 moves to the wB.

- 7) Let's take sum of the white moves:

wBg5 (6)

wQh1 (2)

wNf3 (1)

wPe2 (1)

wPd2 (2)

wPa2 (3) (captured in a6)

wPh2 (1) (captured in h4)

wPg2-g8=Q-g3-d6 (7) minimum strategy

wRh1 (3) minimum strategy

That is a total of 26, which corresponds to the number of expected moves.

This minimal strategy is therefore validated (with a Ceriani-Frolkin Queen)

- 8) So, we need to have in the order: h4 / wRh1-h3-f3-f6 / g×Rf6 / g2-g8=Q-d6 which takes at least 11 moves for Whites. So, you need another 10 black moves, which is impossible without playing the bPa.

→ It is therefore necessary to capture the wPa quickly with the bNb8.

9) What were then the first 3 black moves?

Try: 1.a4 Nh6 2.a5 Rg8 3.a6 N×a6 4.h4 Nb4 5.Rh3 a5 6.Rf3 a4 7.Rf6 g×f6 8.d4 Rg4 9.d5 R×h4 10.g4 a3 11.g5 Ra4 12.g6 Ng4 13.g7 h5 14.g8=Q but the Blacks have no more moves and moreover the promoted Queen could not reach d6 in 2 moves.

Solution:

1.h4 h5 2.Rh3 Nh6 3.Rf3 Rg8 4.Rf6 g×f6 (and blacks have a bit of air)

5.a4 Rg4 6.a5 R×h4 7.a6 (just in time to release black moves)

7... N×a6 8.g4 Nb4 9.g5 a5 10.g6 a4 11.g7 a3 12.g8=Q Ra4 13.Qg3 Ng4 14.Qd6 ç×d6

15.d4 Qb6 (two options seem to be possible here: pass the bK from the West or later from the East)

... 16.Bh6 Kd8 17.e3 Kc7 18.Qf3 (and the bK can no longer move forward)

... 16.Bh6 Kd8 17.Bg7 Kc7 18.Bh8 Bh6 19.e3 Bf4 20.Qf3 (again the same problem)

You have to resolve to go through the other side

... **16.d5 Qd4 17.Bh6 b6 18.Bg7 Ba6 19.Bh8 Bh6** (and the bK can not pass immediately on g7 controlled! It is necessary to evacuate the wB as soon as possible)

20.Bg7 Bf4 21.Bh6 Bc4 (saving free move!)

22.Bg5 Kf8 23.e3 Kg7 24.Qf3 Kg6 25.Qh1 Kf5 26.Nf3 Ke4

With identified Constraints Jacobi v.0.7.5 can find the solution in 1 h 54 min 3 sec
 stipulation dia26.0 forsyth 8/3ppp2/1p1p1p2/3P2Bp/rsbqkbsr/p3PN2/1PP2P2/RN2KB1Q
 constraints Bc1>h6>g7>h8>g7>h6>g5(6..6) Nb1(0..0) Ng1>f3(1..1) Ra1(0..0) Rh1>h3~(3..3)
 Bf1(0..0) Qd1>f3>h1(2..2) Ke1(0..0) Pa2>a4>a5>a6(3..3) Ph2>h4(1..1)
 Pg2>g4>g5>g6>g7~(7..7) Pd2>d4>d5(2..2) Pe2>e3(1..1)
 6843.395 s

Remarks:

Certainly it is longer than Ubaidulaiev, but he had two wR promoted on the diagram!

Ubaidulaiev

R91, Problemesis 33 (juin 03)

1st Recommandation

7Q/p1ppp2p/2pRp2R/8/rnbqkbnr/8/PPPP1P2/RNB1K1NR

PG in 22.0

1.e4 Na6 2.Bb5 Rb8 3.Bc6 b×c6 4.h4 Rb4 5.h5 Ra4 6.h6 Nb4 7.h×g7 Nh6 8.g8=R Ba6 9.Rg6 Rg8

10.Rd6 Rg4 11.e5 Rh4 12.e6 f×e6 13.g4 Kf7 14.g5 Kg6 15.Qh5+ Kf5 16.g6+ Ke4 17.g7 Ng4

18.g8=R Bh6 19.Rg6 Bf4 20.Rh6 Qh8 21.Qe8 Qd4 22.Qh8 Bc4