CHESSICS 7

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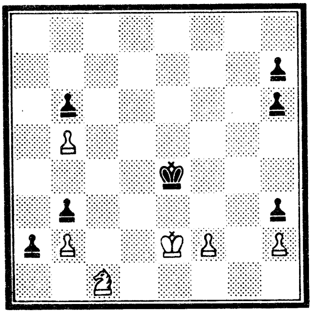
Stalematemates

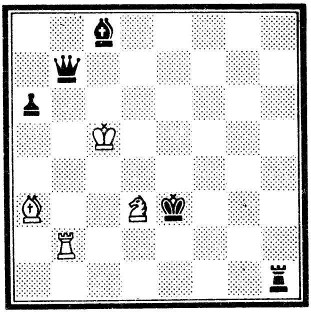
The response to my "stalematemate" article in the September 1978 issue of The Problemist has been very encouraging. The solutions and list of solvers will of course appear in The Problemist in due course. The following ten original compositions have been submitted for publication in Chessics as a result of my request in that article, and all the composers should have received a set of back issues of Chessics as their prize.

Composers should note that it is my general policy to send a copy of the issue containing their original problems to them free of charge, or to credit the value of the issue at least to their subscription if they happen also to be subscribers.

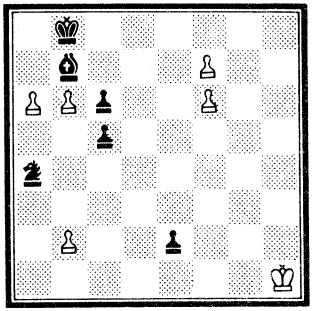
202 S. YLIKARJULA
Series HPM in 31



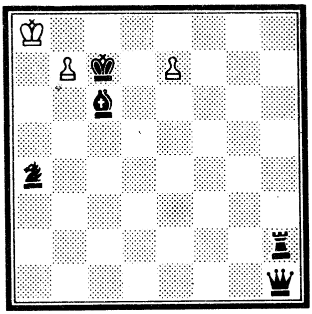
203 S. Y.
HPM in 8



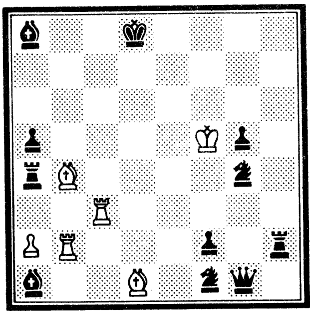
204 S. Y.
HPM in 8



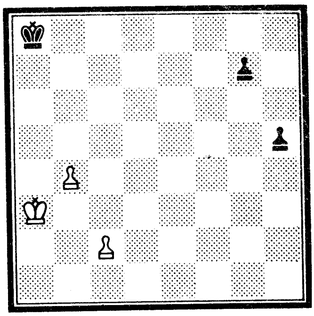
205 G. DONATI
HPM in 5 (b) Sa4-a5



206 B. LENDER
HPM in 7



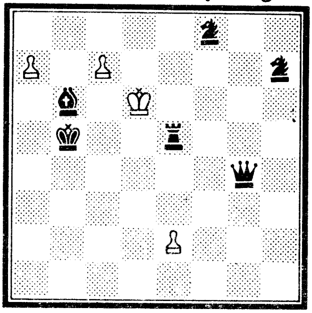
207 Z.K. BODNAR
HPM in 12



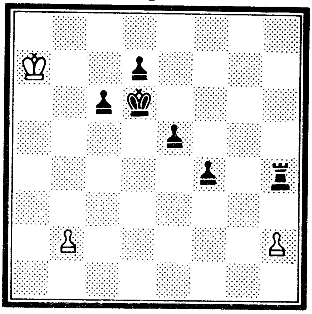
In a "stalematemate" finale Black is checkmated and White would be stalemated if (a) it were his turn to move and (b) he were prohibited from capturing the Black king. In the stipulations above HPM stands for Helpstalematemate.

A piece that is prevented from capturing the Black king by the above prohibition alone (i.e., is not also pinned) I call a "cat". Hence the motto to 208.

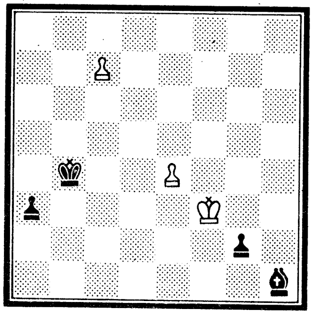
208 Z.K.B.
HPM by discovery in 11
"Some cats hunt by knight"



209 Z.K.B.
H ideal PM in 13
"Four pious pawns"

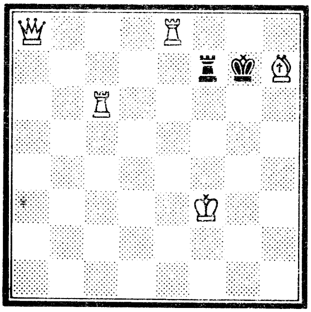


210 Z.K.B.
HPM in 13

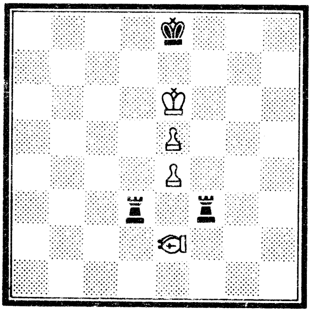


In Turncoat Chess (211) any piece guarded by the opponent at the start and end of a player's move changes to the opponent's colour. In 211 the WK starts in check, and no move White makes can prevent the WB turning Black. In (a) the board is a vertical cylinder; which has a and h files considered adjacent, while in (b) it becomes a horizontal cylinder; which has the 1st and 8th ranks joined.

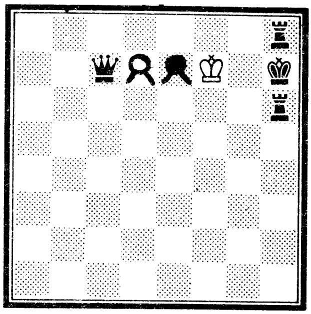
211 M. CRUMLISH
HPM in $2\frac{1}{2}$
Turncoat Chess
(a) V cyl. (b) H cyl.



212 G.P.JELLISS
HPM in $2\frac{1}{2}$
Ski-Bishop e2



213 G.P.J.
Add WP for HPM in 2
Equihoppers d7;e7



In problems 211 and 212 the $\frac{1}{2}$-move stipulation indicates that White makes the first move, although Black as usual is the victim of the checkmate.

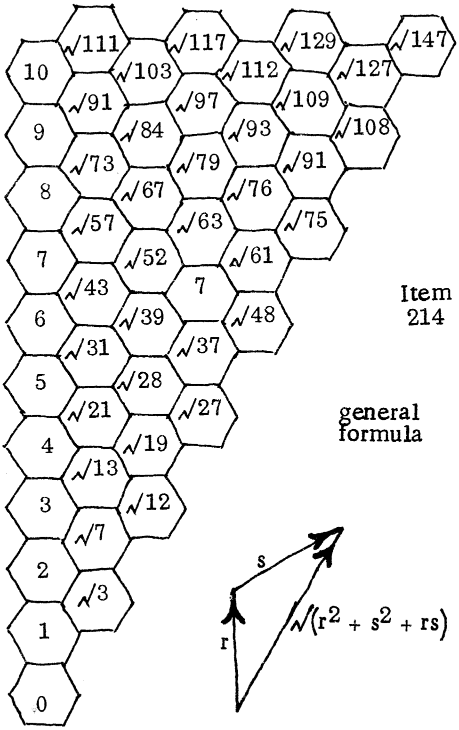
The ski-bishop (212) moves like a bishop but makes a ski-jump over the first square in the bishop's ride; the two Black Rs are therefore not in any way restricting the ski-Bs field of movement.

The Black equihopper in 213 is "partially pinned" by the Ed7, since it can only move along the pin-line to g7 (a "totally pinned" piece is unable to make any move at all). Partial pinning is an interesting subject that I'm sure has a lot of scope for development - even in orthodox forms.

Honeycomb Leapers

As is well known, there are just two ways of covering a plane with regular polygonal tiles all of the same shape, size and orientation; namely the tessellations of squares and hexagons.

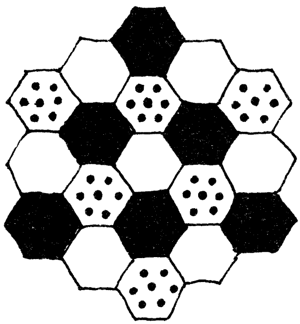
As on squared boards, it is possible to investigate the properties of LEAPERS on the honeycomb-type boards. Taking as unit the distance from centre to centre of hexagons with a common side the lengths of leap from a given cell (0) work out as shown in the diagram below. A general formula is given alongside.



By analogy with the squared-board case the 1-rider ("rook") determines the "orthogonal" rows of cells and the $\sqrt{3}$-rider ("bishop") determines the "diagonals". As on the squares the honeycomb bishops are confined to a part of the board only - but there are three types instead of two. Their domains on the board can be distinguished by tri-coloured "chequering" of the hexagons.

Item 214

general formula

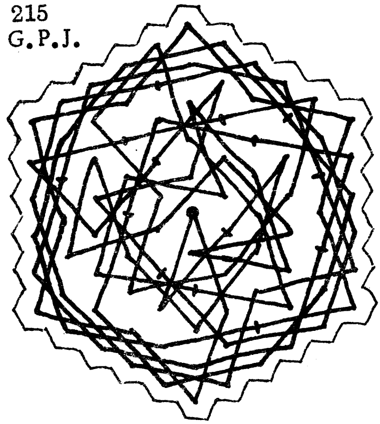


The $\sqrt{5}$-leaper on the squares is the familiar knight, while the $\sqrt{7}$-leaper on the honeycomb is the piece given the name of "knight" in existing hexagonal forms of chess (e.g., Mr W. Glinski's version which has been much publicised recently). The knight is in each case the first leaper that can reach a square not a rook or bishop move away, and can check a "king" (combined 1-leaper and $\sqrt{3}$-leaper) or attack a "queen" (combined rook and bishop) with impunity.

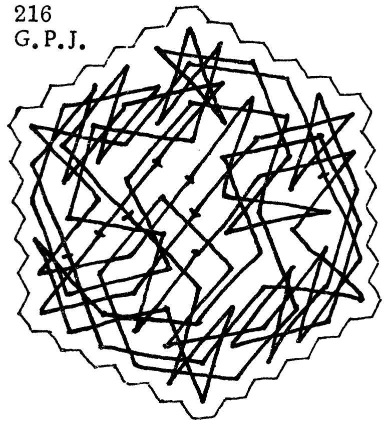
Note that the 7-leaper, like the 5-leaper on squared boards is the first double-pattern fixed-distance leaper on the honeycomb. More will be said about this and other leapers in subsequent articles - for the present the "knight" will suffice.

Like the knight on the chessboard the knight on the honeycomb can tour. In the tours shown here it makes a grand circuit of the Glinskian board of 91 cells. Such tours are easier to construct than those on the chessboard since three $\sqrt{7}$ leaps can form a triangle, and it is often possible to join a cell that has been missed out of an attempted tour into the circuit by deleting one move and diverting the path through the omitted cell. This method can obviously be called TRIANGULATION; it was used to construct the first tour shown below, which was completed and sent to Mr Glinski on 10th of January 1974, but has not as far as I know been published elsewhere. This method of triangulation of course always results in tours containing 60 degree angles. However, the second tour below shows that, by different methods, a tour with no 60 degree turns can be constructed.

215
G.P.J.



216
G.P.J.



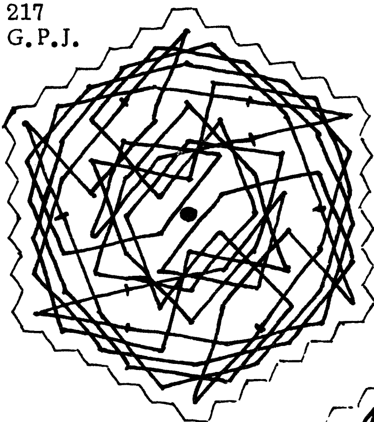
The above tours are asymmetric - a symmetric closed tour of the 91 cell board (or any hexagonal board) by the knight is impossible - for a symmetric tour to be possible by a free leaper (able to reach any cell from any other) the $3n(n+1)+1$ moves must fall into twos or threes symmetrically placed, and the odd one left over must therefore be a move bisected by the centre point of the board - but no single-pattern free leaper can have such a move, since they all move between cells of differing colours (otherwise they would not be free, but confined to one colour).

Symmetry is possible however if the centre cell of the board is omitted. The next three tours show Bi- Tri- and Hexa- Symmetric closed centreless tours of the 91 cell board.

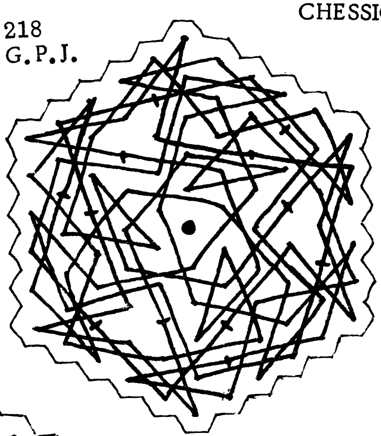
PROGRAMME

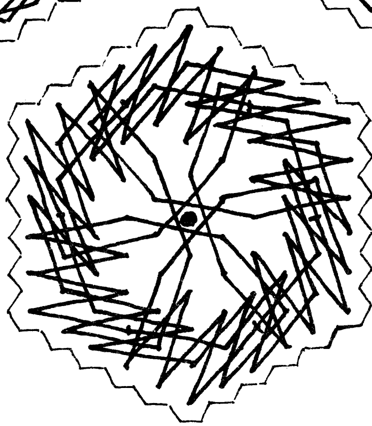
The next three issues of Chessics, numbers 8, 9, and 10, will be devoted to the themes of Kings, Pieces, and Pawns respectively. Composers are invited to submit ideas relating to these themes. Some lively correspondence has already been in progress with some of our contributors on the question of "What is a Pawn?" Do you have a definition? The question of "What is a Piece?" also presents problems of clear definition. For instance a "cyclic" piece is one that acts as if the board were a cylinder. If all the pieces are cyclic does this make the board a cylinder? Or is it just that we then have no way of distinguishing whether it is the board or the men that are cyclic? A good question for Einstein's centenary year.

217
G. P. J.



218
G. P. J.





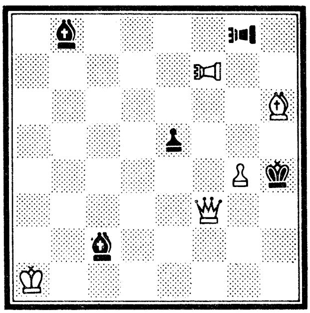
219
G. P. J.

Mach 2

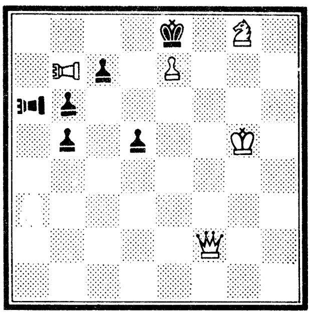
By A. I. Houston

These three PAO problems are corrections or modifications of problems by Z. Mach that appeared in the Fairy Chess Review. Paos (or Chinese Cannon) move like rooks but capture by hoppimg over a single piece of any colour to any distance beyond, along rook lines. Thus in the second diagram b7 can move to a7 or b8 or can capture b5 but has no other move available, and at b8 it does not check the Black king.

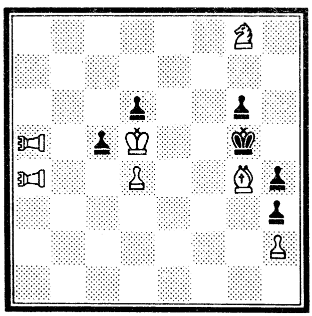
220 A. I. H. after Z. M.
(5252 FCR August 1942)
Mate in 2



221 A. I. H. after Z. M.
(5201 FCR June 1942)
Mate in 2



222 A. I. H. after Z. M.
(4813 FCR June 1941)
Mate in 2



Reflecting Grasshoppers

from ideas by P. H. JOHNSON

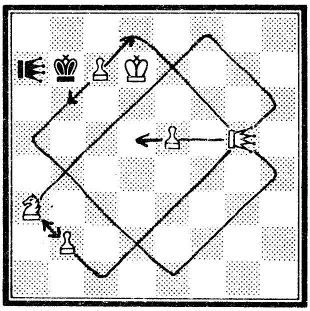
REFLECTING PIECES have been around at least since the first ARCHBISHOP problem by G. Leathem (Number 423 in the Problemist Fairy Chess Supplement, June 1932: WKh1, Aa2, Ah6; BKf6, Pc3, Ph7 for Mate in 2 by 1. Aa2xh7. This was improved by F.F.L. Alexander who moved WK to b2, Pc3 to e3 and removed Ph7, when the key becomes 1. Ka1). The same issue contained the famous Fox family of ArchB problems which is reproduced in Dawson's collection of C. M. Fox"s problems.

The archbishop is a REFLECTING BISHOP restricted to One Bounce Per Go.

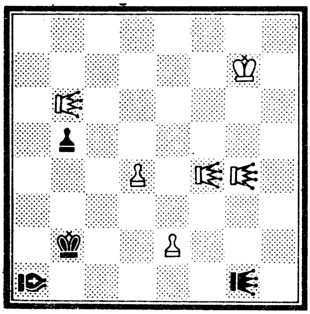
The first five problems here show P. H. Johnson's new invention, which he calls the FLY. This is a grasshopper with the added power of reflecting diagonally. The reflection can occur anywhere along the line of movement - even at the point where it is above the hurdle. Thus the Fg5 in 223 guards d5 over e5, b6 and d8 over c7, a3 over b2, and b2 over a3.

In problem 228 the flies are restricted, like archbishops, to one bounce per go.

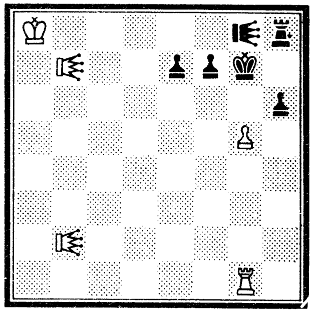
223 P. H. JOHNSON
Serieshelpmate in 6
Flies g5;a7



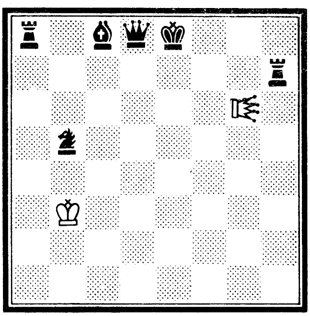
224 P. H. J.
Serieshelpmate in 8
Flies b6, f4, g4;g1
Reflecting bishop a1



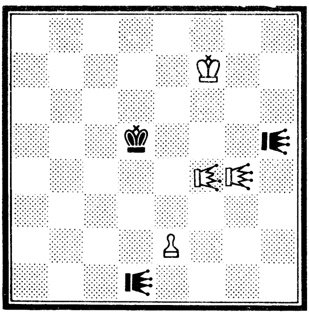
225 P. H. J.
Helpmate in 2
Flies b2, b7;g8



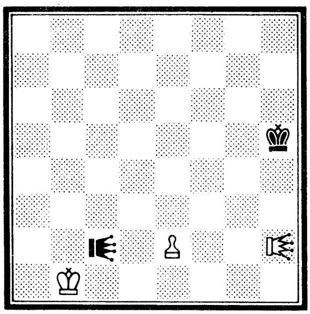
226 G. P. JELLISS
Serieshelpmate in 7
Fly g6



227 G. P. J. after P. H. J.
Serieshelpmate in 4
Flies f4, g4;d1, h5



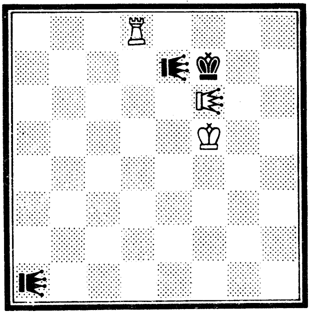
228 G. P. J.
Helpmate in 5
Flies h2;c2
One bounce per go



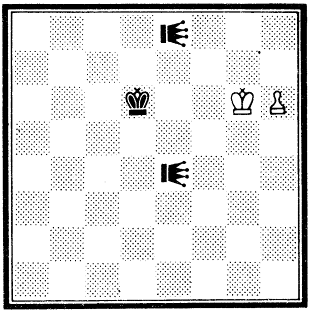
The next two problems show that the REFLECTING GRASSHOPPER is not quite the same as the fly, since it has the strange property of the reflecting rook-hop.

For example in 230 the Ge4 can hop over e8 to e7. If the WK moved to e7 however it would not be in check from the Ge4 since it would block the path of the G to the hurdle at e8

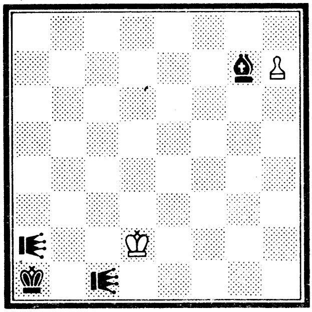
229 G.P.J.
HM2 (b) f6-h1
Reflecting Gs f6; a1, e7



230 G.P.J.
Helpmate in 3
Reflecting Gs e4, e8
One bounce per go



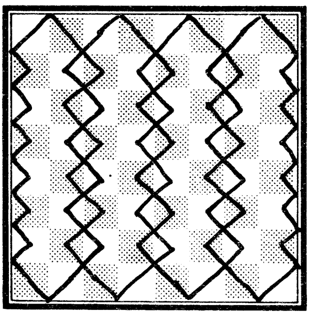
231 G.P.J.
Helpmate in 2
Diffracting Gs a2, c1
(a) One bounce per go
(b) Exactly 1B/Go



F. Calvet has recently introduced a new type of "reflecting" bishop - called a CARDINAL - which changes the colour of the squares on which it runs when it is "reflected" - for example, it may run b2-a3-a4-e8 (and would carry on -f8-h6-h5-d1-c1-b2 if permitted more bounces). To avoid confusion it might be a good idea to call these pieces DIFFRACTING BISHOPS. To complete the story therefore the last problem above tries out some DIFFRACTING GRASSHOPPERS. In 222(b) the DGs are restricted to exactly one bounce per go - in other words they lose the normal grasshopper part of their move power.

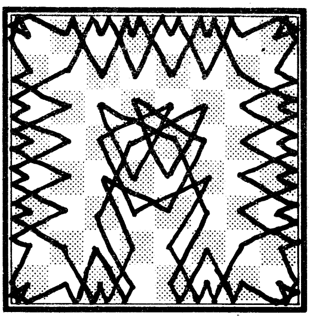
These thoughts provide me with an excuse to publish the following DIFFRACTIONAL tours of fers, knight and alfil (or bishop, nightrider and alfilrider). The idea is to show the maximum possible number of diffractions in each case.

232 G.P.J.
Diffracting fers tour
22 diffractions



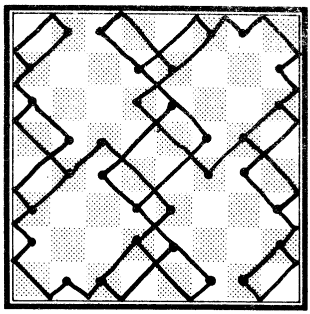
H-symmetry

233 G.P.J.
Diffracting knight tour
54 diffractions



U-symmetry

234 G.P.J.
Diffracting alfil tour
24 diffractions



S-symmetry

Solutions to Chessics 3

GRID CHESS

1. (a) 1. BBa5 Bf7 2. Bd8 Bg6 and 1. Wbf7 Bb2 2. Ka2 Bxf7
   (b) 1. BBf7 Rf1 2. OO Bxf7 and 1. WRb3 OO 2. Pe3 Ra8
   The WBa2 is the WbP which promoted at e8, so that castling by Black is illegal. The requirement for "illegal" play in (b) of course is not a licence for mayhem but is a shorthand way of saying that the play must be contrary to the retroanalytical evidence. Perhaps there should be a special term for this type of illegality. Retroanalytical twinning of this type is not uncommon, but the existence of the "illegal" solution is not usually explicitly stated.
   COOKS: (a) 1. Bd4 Bb4 2. Bb2 Bc5 or xd6 (b) 1. Pg6 Rb3 2. OO R--

2. 1. Bg5 Ke6/Re5 2. Qg6 and Ke5/Re6 2. Qf4 but COOKS: 1. Qg6 or 1. Rd4xd5. The heavy setting with the 2WR, 2WB and BS must have been a residue from another idea that never got off the ground. Remove these and add WSf6, WPc4, WKb6 for mate in two by 1. Sd5 followed by the same play as above.

3. 1. Kg2 Kf5 2. Kf1 Kg4 3. Be4 Kf3 4. Pg2 Kf2
4. (a) 1. Sd2 Kb1 2. Kb3 Kc1 3. Kc2 Pcxb2 4. Sc4 (not Sb3)
   (b) 1. Pb4 Kc1 2. Kb3 Kb1 3. Kb2 Pc2 4. Se3 (not Sc3)

Remember that Subversives do not themselves give check.

5. 1. WKb8(WKb7, BKb8) Pb4(Pb3) 2. Kc8(Kd8) Pb2(Pb1=B) 3. Ke8(Kf8) Bg6(Bh6+) 4. Kg8(Kh8) Bg7(Bg8, Kh7) 5. Kh6(Kh5) Bxd5(Bc5) 6. Kh4(Kh3) Ba7(Ba8, Kb7) 7. Kh2(Kh1) BK moves, mate. "Makes me dizzy" (D. N.) "The WK takes the escalator to the basement" (G. P. J.)
6. 1-3. Kg6 4-8. Kxd6 9-11. Kg6 12-14. Kxe3 15-18. Ka5 for Sd3 mate.

7. The stipulation of this problem should say Torus + Grid (not Griddle) and the paragraph above should state that the BK is in check (via h1) but would not be in check under Griddle rules. The confusion was entirely mine, not ASMD's. The solution is then: Kg1, Kf2, Ke3, Kd4 for Qh8 mate (moving via h1). In the mate the Ec4 guards e4 over h8. Note that the other three routes of the BK to d4, via a7, g7 or a1 are prevented either by the grid or by WQ check or both.

8. 1. Kf1 Pe2/Kf6/Kd7 2. Gb7-c6/Rh6/Gb7-e4. With G-hop two ways over one hurdle

9. 1. Kd5 Bf3+ 2. Ke4 Ba8
10. 1. Md6 Me6 2. Mf5 Mf3

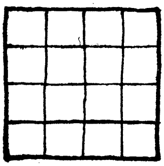
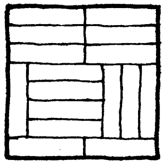
The theme in these two is change of axis of symmetry from orthogonal to diagonal. Note that in the initial position here the Md3 and d5 are pinned by the WM.

11. Sf4, Ke5, Rd4, Ba3, Bb2 for PxS.
12. Kf4, Kg3, Kh2, Sh1, Kh3, Sf3, Kg2, Kxf3.
    COOKS: Kf4, Kg3, Sf3, Kg2, Sa1, Kxf3 and Qh7, Kd5, Qe7, Sb3, Sd1, Sb2, Pe4.
    My rules for the neutral king are at variance with those established by K. J. G. Moves such as Ke5 in position 11 are considered illegal since they are regarded as moves into check. K. J. Goodare himself composed an all-neutrals problem: FCR 9843, April 1954; Ke4, Rc8, Rg8, Be4, Pe2, HM3 with symmetric finale. Play: Rc5, Bc6, Kd5, Rg6, Rd6, Pe4 mate.

13. 1. Kc2(Qd1) Qg4 2. Kd3 Qe2 mate.

GRID DISSECTIONS

1. Dissections into tetrominoes

2x2 grid

1(a)

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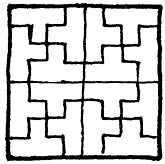
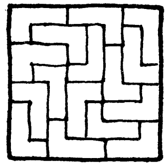
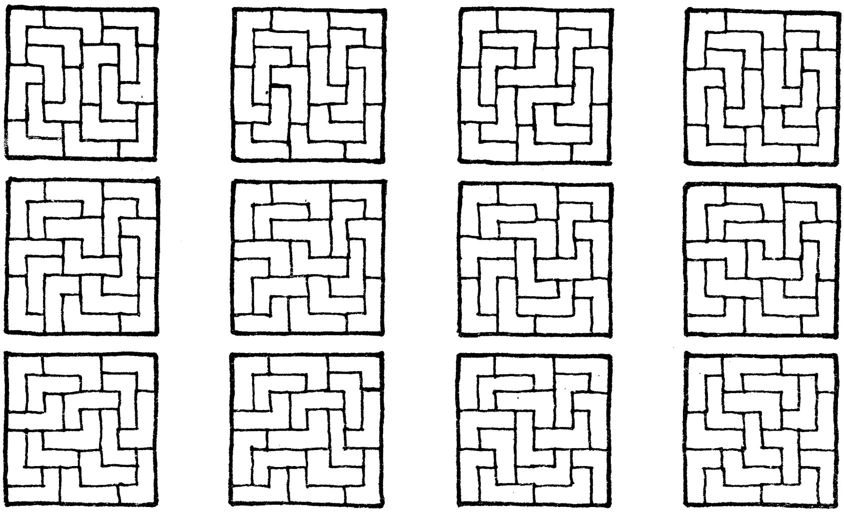
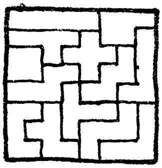
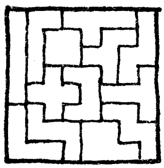
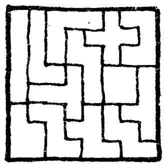
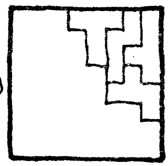

1(c)


2. L-shaped tetrominoes , showing no crossroads and no sub-rectangles. There are exactly twelve solutions. The first three are symmetric; the second and third differ only by rotation of the central pair. (These are the geometrically distinct dissections; rotations, reflections and chequerings of the patterns being discounted).



3 & 4. Dissections into pentominoes and 2x2. The idea of the twinning in 4. is that the two dissections should have as many pieces as possible placed differently.

3

4(a)

4(b)

but also (a)


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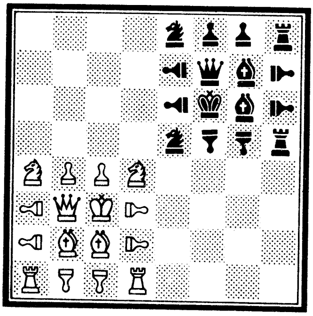
THE TORUS

1. 1. Bg2 Bf3 2. Kxc6 Bxg2.
   "Diagonal magic" (C.C.L.S.)
2. 1. Kb5 Nd8+ 2. Kc5 Rc6.
   and 1. Pd4 Ng4 2. Kd5 Re5.
3. 1. Bd4 Bh8 2. Pf5 Rxd4.
   Neither Black rider can make a waiting move by circling the board.
4. 1. Pe2 Bc5 2. Ba1 Rd4 3. Ke3 Bxa7.
5. (a) 1. Kb5 Ra6 2. R6c5 Rdb6.
   (b) 1. Kd4 Ree3 2. R6c5 Rcd3.
6. Bg6 (not f5) Ka1/a3/c1/c3 2. Bxe5/e7/g5/g7.
7. 1. Bh1 Pd8=Q+ 2. Kg1 Qd6+ 3. Kg2 Sf4. and
   1. Bf7 Pd8=B 2. Kf8 Ba3+ 3. Ke8 Sc1.
8. 1. Pd4 Kc4 2. Ka3+ Kd5 3. Kb3 Rd6 4. Pe4. and
   1. Ga4-a4 Re6 2. Pe4 Kd4 3. Kg3+ Ke5 4. Pd4.
   But also: 1. Ga6-a6 (over h5).

Item 235

Dr Tylor suggests the following opening position for Toral Chess

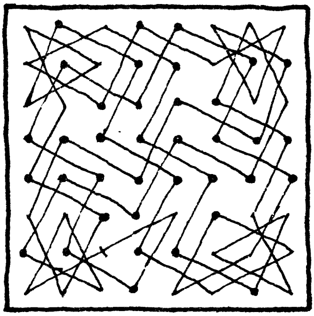


The Pawns move "head-first"
WPs promote at bc23
BPs promote at fg67

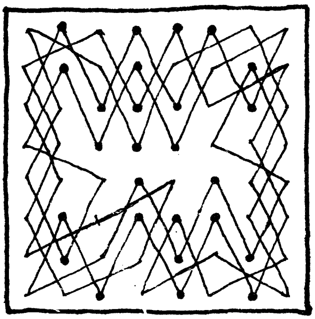
ANGLES IN KNIGHT PATHS

Solutions to these problems were given in Chessics 5. J.J. Secker has however now beaten two of the records given there. C' shows 37 Right angles. B' shows 26 Orthogonally Acute angles.

C'

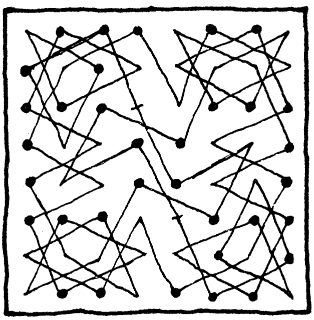


B'

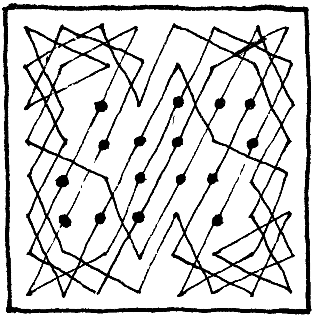


The three diagrams below are solutions of problem 201; they are Symmetric Tours showing 34 Rs, 16 Ss and 26 DAs respectively. C'' is by G.P.J. and the other two are by J.J.S.

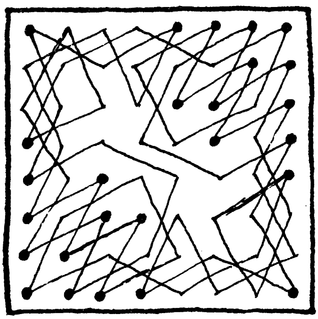
C''



F''



A''



4. 1.Kc1 Kf6 2.Mb2 Ke5 3.Pd2 Kd4 4.Me1 Kc3 5.Kd1 Kb2 mate
but there is a dual 2.Pd2 3.Mb2 . Correction: move Md1 to d4 and WK to f6 for HM4 by 1.Mc2, 2.Me1, 3.Kd1, 4.Pd2. I hope this is now sound.
7. 1.Ke3 Pb4 2.Kd4 Pb5 3.Kc5 Pxa6 4.Pb5 Ke6 5.Kb6 Kd5 6.Pb4 Kc4 7.Ka7 Kb3 8.Mb6 Ka2 9.Ka8 Mb3 10.Pxa3+ Ka1 11.Pa2 Pa7 double stalemate
10. 1.Rc2 Kd3/Kxe3/Mf2 2.Mf2/Re2/Rc4 mate
13. 1.Mf5 Mg4 2.Mg3 Mf2 3.Me2 Md3 mate
"Butterfly pas-de-deux" (D.N.)
14. (a) 1.Kc7 Md8 2.Kc8 mate
(b) 1.Me4 Me5 2.Mf6 Mg6 3.Mh5 Mh4 4.Mg3 mate
Mf7 3.Me8 Md8 4.Mc7 mate
Md4 2.Mc3 Mc2 3.Md1 Me1 4.Mf2 mate
Mb3 3.Ma4 Ma5 4.Mb6 mate
"Now one butterfly controls another - incredible - and beautiful" (D.N.)
15. 1-13.Mc7, a6, b8, c6, ..., e4, ..., g2, e1 for Sd2 mate
"This group alone (13 - 15) would fully justify the Moose" (D.N.)

ALL-IN CHESS

10. 1.Sxa7+ Sb5 2.Pd7+ Pd8=B/S 3.Sa7/Bd7 mate
11. 1.Se7+ Ke3 2.Kf3++ Pe4 3.PxP e.p. + Sc6/d5 4.Sd4/b6 mate
Sd5 2.Se3+ Kxe3 3.Kf3++ Pe4 4.PxP e.p. mate
12. 1.Ba8 Kb5 2.Pa5 Ka6 3.Kc6 Bb7 mate
All men must be moved down one rank to prevent the cook:
1.Bh1 Kd8 2.Kb6 Kb7+ 3.Kb8 Ka8 mate (with duals).
13. 1.Re1 Se3+ 2.Sg4 Pg2 3.Pg1=R Sh2 mate
14. The piece on e6 must be BQ, so that WK is in check, otherwise Rc8 is mate
The play is then: 1.Qc8+ Ke5 2.Pg8=R+ Rg7 3.Rxc8+ Rc7 4.Rg8 mate
Ke6+ 2.Rxc8+ Rc7 3.Pg8=R+ Rg7 4.Rc8 mate
An alternative setting of this problem, which may be preferred, is to remove G and Q and place BBc8, stipulating Mate in 3, with (a)WKe5 and (b)WKe6.
15.. The M should be at a3 for 1.Kb6 Mb8 2.Mc5 Ka6.
16. With WKh6, WMh4, BPh2, BKh1 play HM2½ by 1.Kg5 Kf4 2.Me5 Kg3 3.Kf2.
17. 1.Pb7 Ka7 2.Kb8 Kb6 3.Ga6 Gc8 4.Ka6 Ka8 mate
Cook: 1.Pb7 Ka7 2.Gb6 Kc7 3.Gb8 Ka8 mate
Apologies for the errors in 14-17. This row of problems was inserted prematurely.

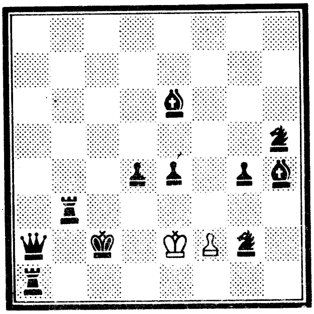
KRIEGSPIEL

Note: ATA = are there any
BHM = black has moved

1. (a) 1.Ph8 = S Pf5/Kf5 2.Sg6/Rf3 mate
(b) 1.Ph8 = B and try 2.Bc3
if playable (i.e. 1...Pf5) then 3.Bd2 mate
if not (i.e. 1...Kf5) then 2.Rf3+ and 3.Rxf6 mate
2. Set: ATA? Yes, try Pxe3 and play 2.Se2. No, 2.Sc2.
Play: 1.Rh3 threat 2.Se2. ATA? Yes, try Pxd3 and play 2.Rh4. No, 2.Se2.
3. 1.Rd7 if check, 2.Se5, 3.Sc4+ 4.Sb6 mate. if BHM, 2.Rd8, 3.Rh8 if now check, 4.Rg8+, 5.Rg5 mate. if BHM, 4.Rd8, 5Rd1 mate.
Note that if W tries 2.Rd6 instead of 2.Rd8 then the line with K on b1 requires 4.Rd6 with positii n repeated three times - a DRAW.
4. 1.Pxp ATA? Yes, (i.e. ...Gb4) 2.OO and then, if check (2...Gb1) 3.Rf6 mate
if BHM (2...Gb6) 3.Qc7 mate
No, (i.e. ... Ge4) 2.Rf1 and then, if check (2...Gh1) 3.Rf6 mate
if BHM (2...Gc6) 3.Qd7 mate

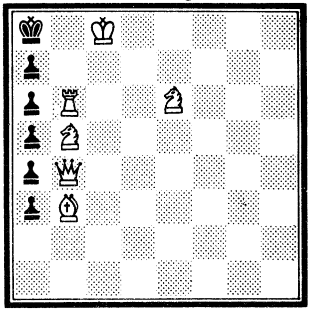
FULL MOVE TASKS - 236 beats ASMD's maximum by one. Higher figures are of course possible with promotion in play. See results published in Die Schwalbe.

236 N. PETROVIC
10 mates after each move



This concludes the solutions to C3

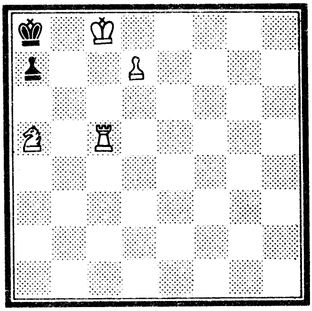
237 A. S. M. Dickins
How many mates in 1?



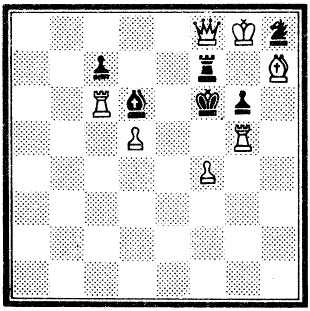
In 237 the author omits to say whether the play is orthodox or fairy - so you can try any stipulation you like that will give a new mate sequence (partially or totally forced). If you can beat the author"s total (which is over 21) a £2 prize is offerred.

Quasi-Orthodox Corner

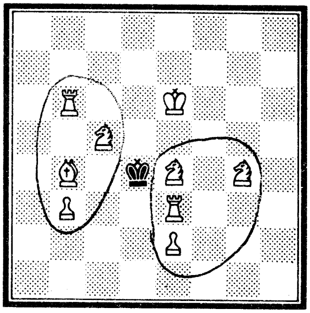
238 N. A. MACLEOD
Mate in 2 (2 Ways)



239 W. WEBER
Selfmate in 3

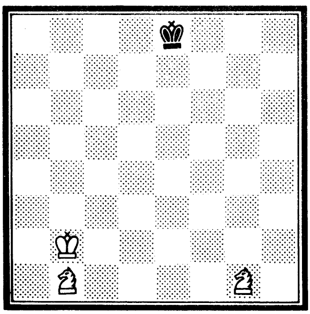


240 G. P. JELLISS
Mate in 2 - see text
"Real Square"

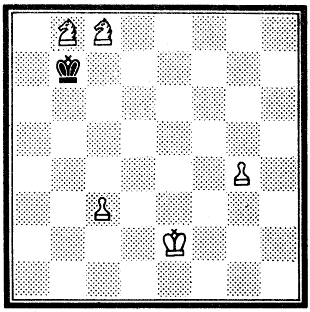


238 was sent as a New Year's Greeting card - in nineteen languages.
240 is Mate in 2 (a) with the force on the left (b) with the force on the right.

241 E. T. O. SLATER
Helpmate in 4



242 E. T. O. S.
HM4 with set play



243 F. M. MIHALEK
Helpmate in 4