

PUZZLES

WHEN FIGURES ARE FICKLE

TWO excellent examples of the tricks which figures will play are offered this week by P. Mora, whose two puzzles lead the current list. Q.E.D. provides a more leisurely problem, and the rest are sharpeners of different sorts.

PROBLEMS

Bar

Ten men entered a bar and stood in two groups of five. In each group there was a round of shouts, complete, so that each man paid out 2/6. The hotel's takings from the ten were therefore 25/-. At the same time, another ten men were in another part of the hotel bar, standing in two groups of six and four. In each group there was a complete round of shouts. The groups of four paid out a total of 8/-. and the group of six paid out a total of 18/-. The hotel's takings from these ten were therefore 26/-. Did the publican lose on the first group or gain on the second? — (From P. Mora, *Taucata*.)

Tote

I go to the races with £55. I invest £20 on the first race leaving £35; £20 on the second race leaving £15, £9 on the third race leaving £6; and £6 on the fourth race leaving £0. I have now invested £55 and the total of the sums I have had left is £56. Did I beat the totalisator or did it beat me? — (Problem from P. Mora.)

Age

The other day I asked a friend of mine how old he was. He explained that it was rude of me to ask, but he didn't mind saying that: "If you multiply my two digits together, the number formed will be my age 22 years ago, and if you add all the digits of the two ages you will have one-third of my present age." I managed this after some calculation. How old was he? — (From Sylvia.)

Professionals

We have had puzzles like this one before, but Laurence Hayston's setting out is a variation:

There are six authors in a railway carriage. Their names are Black, White, Pink, Grey, Brown and Green.

They are (but not respectively), Essayist, Poet, Humorist, Novelist, Historian, Playwright. Each is reading a book written by one of the others. Black is reading essays. Grey is reading a book written by the man sitting opposite him. Brown is sitting between the humorist and the essayist. Pink is sitting next to the playwright. The essayist is facing the historian. Green is reading plays. Brown is the novelist's brother-in-law. Black is in a corner seat and has no interest in history. Green is facing the novelist. Pink is reading a book by the humorist. White never reads poetry.

Where is each author sitting, what does he write and what is he reading? — (From L. Hayston, *New Brighton*.)

Keep it Down

R.C.J.M. suggests an elaboration of the Keep It Down problem used in the issue of September 27. He sends a

diagram of one large triangle (equilateral) with three triangles inverted inside it to make nine smaller triangles. This diagram has to be traced without lifting the pen from paper or crossing any line.

Smokes

A box of 50 cigarettes cost the same in shillings and pence as the tobacco I bought at the same time cost in pence and shillings. And the change out of a 10/- note was the same as the cost of the cigarettes. What did the cigarettes cost me? — (Problem from R.C.J.M., *Invercargill*.)

Exchange

Q.E.D., of Henderson, sends this problem. He says: "The idea is to reverse the positions of the six counters so that the three white pieces occupy the positions now held by the three black, and vice versa. Each piece may be moved one square only at a time, or two squares by jumping over one of the other colour. Two pieces may not be in any one square at the same time.



Matrimonial

Can a man marry his widow's sister? — (Question from A.G., *Palmerston North*.)

Metalwork

A friend of mine had 40 square feet of sheet metal from which he wished to make a tank with a square base and vertical sides. Naturally he desired to obtain a tank with maximum capacity. All joints were to be welded, with no overlap. He asked me to let him know what the size of the finished article would be. I was able to oblige. What would it be? — (From X.G.T.)

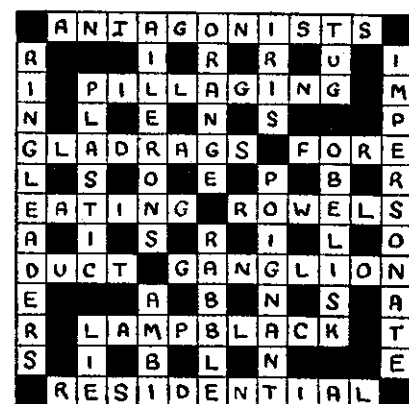
ANSWERS

(Refer to Issue of November 15)

Goodshot and his Code: R.G., who sent this, has not yet been able to hit on the solution. When such a redoubtable puzzler fails, who could imagine the PP succeeding! Nothing doing.

Trucks: 10 minutes. (L.W.R. notes that Arthur fills two trucks while George fills one.)

THE LISTENER CROSSWORD (Answer to No. 34)



Digits: 7744 (88). — (From R.C.J.M.)

Spiral: 216 feet 8 inches, or height plus circumference. — (From R.C.J.M., who notes as proof: "Take a cylinder of paper. The spiral equals the hypotenuse of a right-angled triangle, the two sides of which are 40 feet (one-fifth of 200) and 16 feet 8 inches; in which case the hypotenuse is 43 feet 4 inches. Therefore the garland is five x 43ft. 8in., which equals 216ft. 8in.")

Geometry for Alice: D.P., who sent this Lewis Carroll catch, notes that the proof is quite correct. The diagram as drawn, although it looks correct to the eye, is actually impossible. If it is drawn accurately, ES lies entirely outside the square.

CORRESPONDENCE

Thos. Todd (Gisborne): Discovered that Lewis Carroll had played a trick.

P.J.Q. (Motueka): Reports that Queen Carnivals have been interfering with his mathematics. However, he's managed to keep his hand in by answering several. He did not spend enough time on Tail Tally, but makes up for that with an ingenious answer to

Obscured Palindrome. The word, he points out, could be DAMNMAD. He does not like the fractions in the solution to Ring the Change.

Rob (Ahipara): Suggests this pyramid of words:

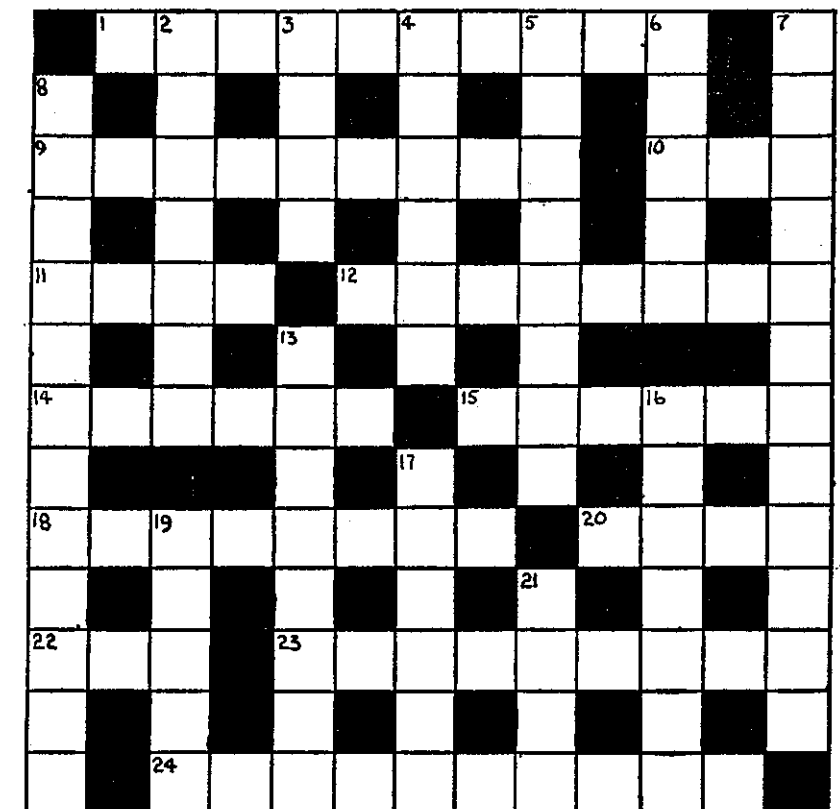
P
Pa
Pat
Pate
Patent
Patent
Patient
Patients

We had temporary doubts about "paten," but the Oxford Dictionary is on Rob's side.

Lillian (Hawera): Sends two solutions to the Draught Board jig-saw, which seems to be a pretty good effort to our inexperienced eye. She says that other similar puzzles are capable of sometimes as many as nine solutions.

D.P. (Gore): Yields to X.G.T. in the matter of Bacchus in Bolonia. He finds he made an error about the 23rd decimal place. Says the second last word in his Lewis Carroll problem about Geometry for Alice should have been "obtuse" instead of "acute." Our typist, a keen puzzler herself, picked that up in D.P.'s wording, where the PP had most regrettably missed it, but the copy became mixed again somewhere in transit. Mutual apologies. Talking about Spiral, D.P. suggests that some readers might like to find the relationship between the height and the circumference for any given number of turns of the spiral round the cylinder. And, about the School Girl problem (October 11), D.P. thinks it might interest puzzlers to keep right on and work out the rest of the 15,567,552,000 possible solutions.

The Listener Crossword (No. 35)



Clues Across

- Remit a plan to a legislative body.
- Put detail into a trite remark.
- You may eat this—or drink it.
- Repetition of sound by reflection of sound waves.
- Steel age (anag.).
- As mild as mournful.
- I'm a Red! (anag.).
- Do bears act in these?
- Copied.
- Briefly, it is.
- The brightest star in the Hyades—it's a bare land.
- Scared? bosh! (anag.).

Clues Down

- As cheap as street ruffians.
- Den for a liar.
- Give me the cue, man, for keen perception.
- Mares led to precious stones.
- One tenth to indicate religious loyalty.
- Change a grand in cents—this is passing beyond the range of human comprehension.
- When cats dip in pie the result may require an operation.
- Combination of grace and air in a vehicle.
- Ripe rum is more corrupt.
- Musical compositions.
- Cab is fundamental.
- This Spanish river may be a bore.