

ODDS AND ENDS

PUZZLES

Weirder and Weirder

Back from our brief holiday, we were reminded of duty by the receipt, from Sumner, of one long letter, weirder and weirder, plus — one aspirin, with a kindly note from Miss Ruth Collins, in which she said she wished us well. We cannot return the aspirin publicly, but we can reciprocate best wishes for 1940 and hope that our correspondent will accept them in the spirit in which hers were accepted here.

But to start at the start: Our last bright effort seems to have been the problem of the ten contrary sheep. Pick-a-back is definitely not allowed. The solution, as usual, is quite easy, but overlong for detailed description here. If you stick to the clue that all moves must bring matches head to tail, and never otherwise, you will manage. The moves shift from end to end of the line with this system.

The outer circumference of the flange of the wheel of the train (in fact, of every wheel), would be the part which at some stage of the journey would move backwards.

The Smiths, Joneses, and Robertsons were in print on January 12, but, luckily, Miss Collins received a copy in Sumner early and hastened to supply the answer — a much better sedative than the pill with it. She says:

Namesakes

As Mr. Robertson lives at Leeds, and the guard's namesake lives at Sheffield, the guard is not Robertson. If £100/2/1 is not evenly divisible by 3, the guard's nearest neighbour is not Mr. Jones. Nor is he Mr. Robertson, who lives the same distance from the guard as the guard's namesake at Sheffield. Therefore the guard's nearest neighbour is Mr. Smith. So the guard's namesake is Mr. Jones. So the guard is Jones. Smith is obviously not the fireman, so Smith is the engineer and Robertson is the fireman.

And now, gentle readers, sit back in your armchairs and absorb some observations on the mathematical situation.

Trickery

From Otago comes our first piece of trickery. J. A. Reid, of Glenorchy, reverting to Salome, that fickle lady, says he noticed in the word-sum the peculiarity that all the letters in her name reappeared in each combination of the word-sum. "I knew," he says, "that 142857 was the only six-figure number that would repeat its figures in the same manner if multiplied by 2, 3, 4, 5, or 6. If multiplied by 7 it produces 999999. This suggests that the same class of figures could be obtained by dividing a row of nines by a prime number. Some of the results of this are no good, some middling, and some all right. Eleven is no good. Neither is

13. Seventeen is middling, and 19 good. Dividing by 19, you get:

52631578947368421.

Multiply this by 2 to get rid of the first big figure, and you get:

105263157894736842,

which will repeat the figures when multiplied by any figure from 2 to 9.

Now, north to Sumner, where Miss Collins has devised another word-sum:

Given that D=5 (she poses), find the values of the other letters in:

DONALD
+GERALD

ROBERT

String Along

And so from sums to suns, and the point where our particular sun casts no shadow between seasons. Miss Collins takes a piece of string and a tennis ball, and another piece of string and the Equator. "A piece of string," she says, "is tied round a tennis ball, and another round the Equator, both fitting

HOW MUCH DID YOU KNOW?

These are the answers to the questions on page 23.

SUNDAY: Madame Betts-Vincent, pianiste (2YA at 8.30 p.m.).

MONDAY: Leopold Stokowski, conductor (1YA at 9.51 p.m.).

TUESDAY: George Eliot, author of "Silas Marner" (3YA at 8.38 p.m.).

WEDNESDAY: Henry Kingsley, author of "Ravenshoe" (4YA at 8 p.m.), and Charles Kingsley, author of "Westward Ho!" (4YA at 8.27 p.m.).

THURSDAY: "Rosamunde" Ballet Music (Schubert); (3YA's dinner music).

FRIDAY: The Oboe, played by Leon Goossens (4YA at 9.25 p.m.).

SATURDAY: Botany Bay (3YA at 8.8 p.m.).

Recorded Personalities in Caricature — No. 3: William McCulloch — Scottish comedian.

tightly. Each piece is lengthened by six inches, and extended to a larger circle, leaving a space between string and tennis ball, and string and earth. In which case is the space the greater?"

Do you see? Well, let's go to sea, in a ship, which sails, according to Miss Collins, in a direct line from one port to another, many thousands of miles away. What part of the ship is it that travels further than the rest?

Ships, and shoes, and sealing wax, of course, all go together, so if you had ten ships, ten shoes, or ten drops of sealing wax, and arranged them as Mr. Reid suggests:

*
* *
* * *
* * * *

How would you invert the pyramid by shifting only three?

Impressive

If troops were moving in an echelon of that formation, it would be quite an impressive manoeuvre to change them so quickly for a retreat, but if you only want to impress, Mr. Reid suggests that you write £12/18/11 on a piece of paper, then persuade a friend to put down a sum of money, less than £12, with the pence figure less than the pounds figure. He should write down the amount of the money he has put down, then reverse the pence and pounds figures, and subtract this reversed number from the original number. To the answer, add the answer with pounds and pence reversed, display the result, and smile. "Perhaps," says Mr. Reid, "some of your readers may be able to explain why the answer is always £12/18/11."

In case you did not get the full import of the explanation, we give Mr. Reid's sample:

4 14 2
-2 14 4 reversed

1 19 10
+10 19 1 reversed

12 18 11

Bookish

More about Sumner and Glenorchy later. Meanwhile, advance north to Waihi, for a massed attack on the old enemy, R.J.G., who has been gazing too long at his bookshelf. He sees on it the three volumes of a large book. They are placed in their proper order on the shelf. The covers of each are one-eighth of an inch thick. The pages of each (in total) are one inch thick, so that each book is one and a quarter inches thick. A bookworm enters page 1, volume 1, and eats his way through to the last page of volume 3. How far does it travel?

Talking of travelling, R.J.G. remembers a business man who was called away on business to X, and before leaving instructed his secretary to forward any mail to his address in Y. After a week had elapsed, he cabled her asking why he had received no mail. She replied that he had taken the key of the box. He posted the key back to her, but still received no mail. Why?

In Raetihi, J. B. Hogg has decided that a dog cannot catch a hare, although the hare is released with a start of 100 yards on a straight flat track without obstacles and as long as you like, and although the greyhound can travel five times as fast as the hare's 15 m.p.h.

He is prepared to argue.

To Correspondents

F.W.K (Nelson): We shall have to brood over those.

G. F. Chippindale (Lower Hutt): You had the train crew right. We shall be climbing the ladders for a week. Thank you.

L.C.T. (Ettrick): We are boiling the potatoes. Any more?

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