

## WORRIES TRULY RURAL

**T**HERE is a sweet rural atmosphere about The Page this week. Cows, ducks, geese, turkeys, cats, dogs cause all the worries. The PP hopes to hear from country readers.

Last week we noted the strange methods used by some parents for describing their families. This week, as you will see, we find that farmers cause quite as much trouble with the same sort of circumlocutory method of description. Instead of saying he bought so many cows at so much per head, the farmer likes to say that he bought so many sheep at half the price he paid last year, which was too dear anyway, so work it out for yourself.

But here they are:

### PROBLEMS

#### Farm Labour

A farmer's house is situated in the centre one of nine squares in a square estate. It is a square house and has one window in each side. From each window he can see three paddocks, square, and of the same area as the section on which his house is built. There are eight men working in each of the other eight square paddocks. A new man arrives and asks for a job. The sly old farmer says to the newcomer: "If you can fit yourself into one of my paddocks so that I can still see 24 men from each window you can have a job." To the farmer's astonishment, he being a simple man in all matters not pertaining to money, the new man succeeded in meeting this condition. Could you?

If you can manage that, try and find out the greatest number of men that could work on the farm with the same condition still imposed.

—(Problem from R.C.J.M.).

#### Ducks, Geese, and Turkeys

A farmer said to his son: "I have as many ducks as I have geese and turkeys. If I had twice as many turkeys I should then have as many turkeys as geese, and I should also have 13 more geese and turkeys than ducks. How many of each have I?"

#### Counting the Cows

A farmer had a number of cows. "How many are there?" he was asked. "Reckon for yourself," he answered. If I had as many more and half as many more and seven besides, I should have just 32." How many cows had he?

#### A Mystifying Race

Tabby, and Spot, a cat and a dog, ran a race from a tree to a stake and back, a round distance of 75 yards. Spot sprang five feet at one bound, and the cat only made three feet; but Tabby made five springs to Spot's three. Each made only full-length jumps. What was the result of the race?—(Problem from R.G., Waihi, who warns us to beware).

#### For the Hostess

How many different ways can you arrange eight people round a table?—(Problem from J. C. Lesnie, Auckland).

### ANSWERS

(Refer to issue of September 6):

**Draughts:** We hope that everyone is still trying hard.

**Who was Eliza?**

Brown, 21 shares; Mrs Brown (Mary), 71; Smith, 49; Mrs. Smith (Jane), 169; Robinson, 289; Mrs. Robinson (Eliza), 1001.

### CORRESPONDENCE

**R. Martin (Glen Afton):** Checking back through the files, we find your dog and fence puzzle was not acknowledged. Thanks, but the dog has jumped before.

**C.B. (Orangapai):** Many thanks, but we have used it before.

**Wee Johnny (Auckland):** Has been exercising himself over the problem submitted by Dum. Johnny writes: If you look at it, you will find that one of the four statements made by Sweeney is that he is an honest man. If he only tells one lie (according to the rules), that is it, since, if any other lie were told, that statement would be a lie ipso facto. Accordingly, we must accept everything else Sweeney says as true. For that reason, Lewis did it. However, your correspondent has made a slip. Brady says: 'Sweeney did it, I go to church every Sunday.' Both of these statements must be lies, in terms of Sweeney's partial honesty, and there Brady breaks the rule of one lie to three truths.

### A Gamekeeper's Problem

A gamekeeper has to pay £3 for his game licence, and on the average he shoots one bird with every third cartridge. If cartridges cost him 2d each, and the birds fetch 7s a brace when sold, how many birds must be shot in order to pay his expenses?

**L.C.H. (Christchurch):** Has gone one better than most other puzzlers with F.D.B.'s problem. Although he took 121 moves to transpose 1 and 4, he has extended the problem to an exercise in a complete reversal of the positions of the blocks. This took him 167 moves. Perhaps other puzzlers will like to try and get the same result. L.C.H. has changed them all round, but kept them in the same numerical order.

**Lillian (Hawera):** Sends the details of her method of putting 1 where 4 was, but still wants to see how the transposition was effected. If we must, we must, especially since XXX (Christchurch) asks: "What is all this nonsense about not being able to give us the solution?" H. L. Tempest's statement is selected for the purpose:

(Key: U means up, A means across, D means down).

9U, 4A, 3D, 2D, 1D, 5A, 6U, 7UA, 1A, 2U, 3A, 9A, 4A, 8D, 7D, 1A, 2A, 3U, 4A, 8A, 7D, 9A, 4U, 8A, 7A, 9D, 1D, 6D, 5A, 2U, 3U, 4U, 7U, 8U, 9A, 1D, 4A, 2D, 3D, 5A, 6U, 4U, 1U, 9A, 8D, 7D, 3D, 2D, 5D, 6A, 4U, 5A, 3U, 2U, 7U, 8U, 9A, 1D, 5D, 4D, 6A, 2U, 3U, 5A, 1U, 9A, 7D, 8D, 5D, 3D, 2D, 6A, 4U, 1U, 5A, 8UA, 3D, 2A, 8U, 7U, 3A, 2D, 7AU, 3U, 2U, 9A, 5D, 1D, 8A, 7A, 6D, 4A, 7UA, 4A, 6A, 2U, 3A, 1A, 8D, 7D, 4A, 6A, 2A, 3U, 1A, 8AU, 5U, 9A, 1D, 2D, 3D, 4A.—Total, 112 moves.

**L.P. (Lower Hutt):** Thank you, but we've had that one.

**J.B. (Hawera):** Reports that in F.D.B.'s problem he exchanged the two pieces in 116 single moves, and shifted No. 1 in 67.

**T.M.C.:** Was attracted by H.G.L.'s request that S.G.E. should provide a simple formula for the sum of the cubes of consecutive numbers, starting with 1 and ending with n. He supplies it: "The sum of the cubes will be the

square of the sum of the same numbers." He gives his working, which we shall spare readers. It has been sent on to H.G.L., together with a letter from:

**S.G.E.:** who also supplies an answer for H.G.L., but it looks a little different from T.M.C.'s. H.G.L. shall decide between them. In case other readers are interested, we print S.G.E.'s request that H.G.L. should now occupy himself studying the statement that  $(n-1)!!+1$  is a multiple of n if and only if n is a prime number. These two opponents seem to be enjoying themselves immensely.

**W. Robinson (Rotorua):** Maintains that his solution to "Time for the Guard" was quite correct—440 feet. He says R. Martin and M.E. made the mistake of basing their calculations on 29 1-5s, the time it took the clock to strike. And X.G.T.'s answer, says W.R., "takes the biscuit."

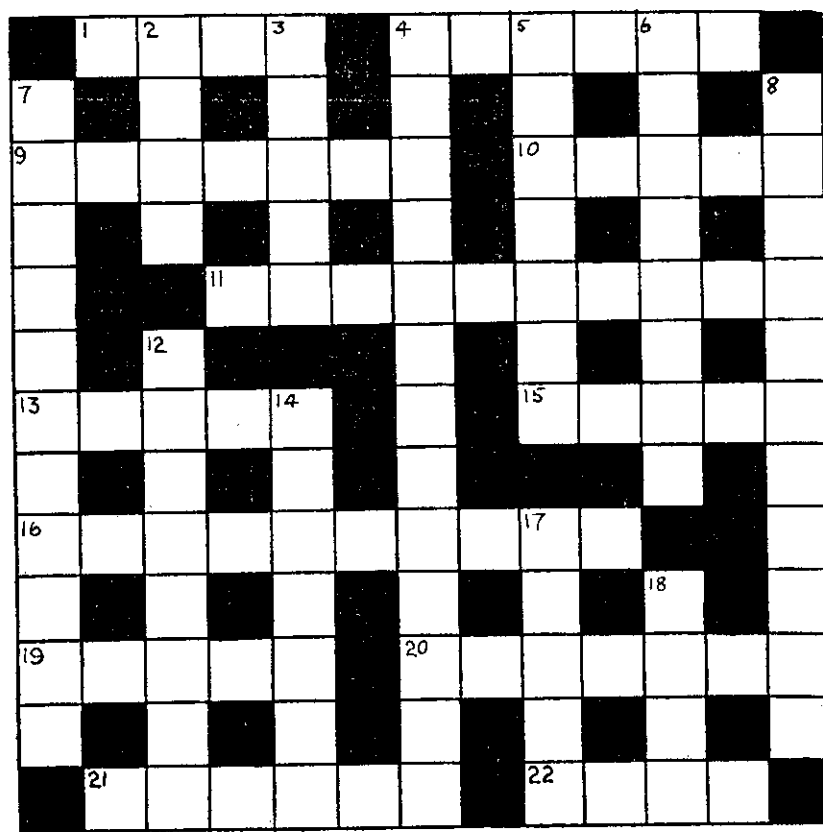
**Puzzled (Waihi Beach):** Sends this: "Owing to its rotatory movement, a rifle bullet fired vertically into the air takes longer to come down

than to go up. A spherical bullet also takes longer in its descent than in its ascent. The question is, why? It is not due to the force of the explosion, as many are prone to think. It is the same with a cricket ball, thrown vertically upwards, only in this case, the difference in time is infinitely small."

The correspondent found this query in an overseas magazine, he says. The wording is somewhat misleading. The rotatory movement does not govern the speed of the bullet's descent. When the bullet is fired, it has a muzzle velocity which is gradually reduced by friction against the air, and by the drag of gravity. Its rotatory movement keeps it in a straight line and reduces air friction by keeping it from turning over on itself. As it reaches the peak of its trajectory, that muzzle velocity is overcome by the air friction, and gravity is allowed to pull it back to earth. The drag of gravity, however, is not as great as the force of the bullet's muzzle velocity, so its descent is slower than its ascent, because the friction of the air remains constant in its effect. The relatively small difference in the upward and downward speeds of a cricket ball may be explained by the fact that the initial force imparted to it by the person throwing is not so much greater than the downward pull of gravity. Indirectly, therefore, in all cases, the difference in speeds is due to the force of the explosion. At least, that is how the PP sees the situation. Perhaps there are some ordnance experts who would enlighten us further?

## The Listener Crossword (No. 25)

(Constructed by R.W.C.)



### Clues Across

- Nickname of P. G. Wodehouse
- With a harp I am an outcast.
- An old-fashioned measure bounded by a heavenly body.
- Plenty from the Canadian national emblem.
- Nine in a disorderly temper are most distinguished.
- Barter.
- If you come to this you meet with disaster.
- Dean's tract (Anag.).
- Common cause of tears in the kitchen.
- A brilliant beltman?
- Superficial disguise—mostly nerver!
- Related by a dolt?

### Clues Down

- Another national emblem.
- Grinder secured from an initial exchange in the sort of radiation that comes from the sun.
- Red crape lupin (Anag.).
- Rare gin is uplifting.
- Of order, perfect; of a bed, quite the reverse.
- Compose a sonnet to it—this is merely showing off.
- Ice and fire combined with tact to form a testimonial.
- Vain male expresses astonishment.
- Indispensable quality.
- Met me to find an ant.
- The first of the household gods is reduced and distorted to become true.