

PUZZLES

SUCCESS OF A SEPTUAGENARIAN

IT really is extraordinary where you see *The Listener* puzzles. In the course of his less strenuous duties the Puzzle Editor often calls on Men of the Moment and Men of the Hour and things like that and if it's on a Wednesday, when the posters first go out on the streets, more than often you find them with their secretaries busy with pencil and paper drawing little diagrams and sending the messenger out for a copy of a lower-form geometry book or logarithm tables.

And they are not all young men. Proof that the ancient and hoary retain their metaphorical noses for a problem arrived, for instance in this week's mail. From Plimmerton "Invicta" writes to say that he is 75 years of age but has completed (word underlined) the chess-board problem. "After many long trials," he explains, "extending over five days. . . . Many times I was within one of right. Thirty-seven and 38 would not fit, and once the first 63 (underlined) were right but 64 was, alas, next door!

Invicta sends his answer, which differs from the one from L.G.L., Motueka, printed last week. We therefore reproduce it:

1	24	37	64	3	14	27	40
36	49	2	13	26	39	4	15
23	12	25	38	63	54	41	28
48	35	50	55	60	57	16	5
51	22	11	58	53	62	29	42
34	47	52	61	56	59	6	17
21	10	45	32	19	8	43	30
46	33	20	9	44	31	18	7

The Matches

Correspondence this week also includes a note from "Newcomer," who whiles away the time in the wilds of Arthur's Pass by bettering the solution given for F. Lovell's "Want to Play with Matches Problem" (June 14). Instead of a series of contiguous parallelograms, Newcomer suggests that the 12 remaining hurdles be fitted in the shape of a hexagon, giving 6 pens as made by 13 hurdles.

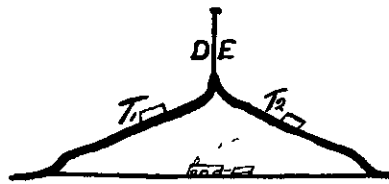
Bricks

As it is a very long time since we had one like this, we also print Newcomer's Problem of the Brick: A brick weighs seven pounds and half a brick; what is the weight of a brick and a half?

Shunters

Hammering away at the shunting problem given by Tane in the issue of May 24, G. Tisbury, of Invercargill, claims that we were wrong in suggesting that the trucks might not be pushed by hand. He says that shunters often do it, and can easily push one or two trucks. We had suggested that this was hard work and that the engine should be made to do the job. To retain the difficulty of the problem (which involved exchanging the positions of two trucks on a loop, with an engine on the main line and the loop divided by a dead-end which would hold only one truck) we have to insist that this shunter must be lazy, and used the engine only. G.T. also suggests that a dead-end holds

nothing. To clear up all this confusion, we give a diagram showing the whole works.



The dead-end (DE) holds only one truck, but from there, of course, a truck can be shunted into either half of the loop. The positions of trucks 1 and 2 have to be exchanged, using only the motive power of the engine on the main line.

Bottles of Wine

By way of a bribe for the above, G.T. sends this problem:

A gentleman who kept some bottles of extra fine wine in a special place in his cellar, had a suspicion that the servants were stealing them. He devised a trap, and went to the cellar to arrange his 28 bottles like this:

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11 11111 11
11111      11111
11 11111 11

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This gave him nine along the top row, nine along the bottom, and nine adding up either side.

At the first chance, the butler snooped into the cellar, noticed the regularity of the arrangement, and decided that he could remove four bottles and yet still leave the same rows totalling nine. He did so. The owner noticed nothing, and soon after the butler took four more, and again re-arranged the bottles to give the totals of nine, up and down, and across. Still the owner noticed nothing. In what way had the butler re-arranged the bottles?

Answers

Tommy and the Pie: It should quickly be noted that every multiple of 8 falls on Tin No. 2 in a backwards direction. Therefore 555 divided by 8 equals 69, plus 3 remainder. Three more counts after No. 2 brings Tommy to Tin No. 3. (Problem and answer from R.G., Waihi.)

The LISTENER CROSSWORD (Answer to No. 15)

Q	U	I	S	L	I	N	G	T	A	R	A
U	C	A	E	A	C	S					
E	B	O	N	Y	C	O	R	N	E	R	S
S	N	E	T	M	T	A					
T	I	R	M	A	T	O	M	S			
I	F	I	R	D	N	S					
O	B	L	O	N	G	T	A	I	E	R	I
N	A	A	C	S							
N	O	M	A	D	A	L	P	S			A
A	I	I	N	S	D	T					
I	G	N	O	R	E	D	A	L	I	B	I
R	G	S	L	L	S	O					
E	B	O	R	P	E	M	I	C	A	N	

squared trees in the plantation at first (27,556) and therefore there must be 167 squared in the finished plantation (27,889). The difference between any two consecutive squares is always odd (says R.G.). Halve this difference and the two whole numbers lying either side of the result will give the side of the squares before and after the operation respectively.

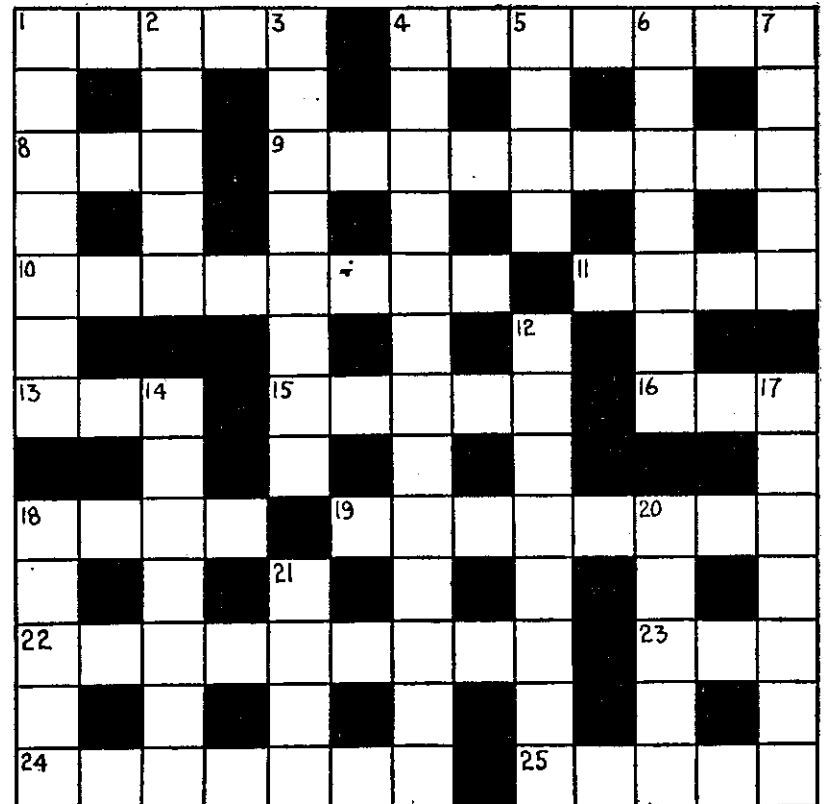
Condensed Crossword:

T E A R
H A R E
I R I S
S L A T

Trees: 27,889 trees. Originally there were 27,667 trees, forming a square 166 x 166, with 111 over. With the addition of 222 trees, they were planted in a square 167 by 167.

A correct answer came from R.G., who notes that half of 333 is 166½, and that difference between 166 squared plus 167 squared is 333. There were 166

The Listener Crossword No. 16



Clues Across

- "For pines are gossip pines the wide world through, And full of — tales to sigh or sing." ("Brumana," by James Elroy Flecker).
- "If I take the wings of the —, and dwell in the uttermost parts of the sea." (Psalm 139)
- "If — and ans were pots and pans There'd be no work for tinkers' hands." (Old Proverb).
- "And to such wondrous doings brought his horse As he had been — and demi-natured With the brave beast." ("Hamlet").
- "My Lord — upon more advice Hath sent you here this ring." ("Merchant of Venice").
- "Full — a gem of purest ray serene." (Gray).
- "Thus we may see," quoth he, "how the world —" ("As You Like It").
- "Our — now are ended." ("The Tempest").
- Diogenes' solution to the housing problem.
- "My mother thought 'What — the boy.'" ("The Miller's Daughter," by Tennyson).
- "In shape no bigger than an agate-stone On the forefinger of an —" ("Romeo and Juliet").
- The scene of a battle (1859) between the French under Napoleon III. and the Austrians under Francis Joseph.
- "That either have the hearts to stay Nor wit enough to — away." (Butler).
- "Some vague — of delight In gazing up an alpine height." ("Two Voices," by Tennyson).

- "Age shall not weary them, nor the — condemn." (Laurence Binyon).

Clues Down

- "My heart leaps up when I behold A — in the sky." (Wordsworth).
- "They haven't got no — The fallen sons of Eve." ("Song of Quoodle," by Chesterton).
- "But the age of — is gone . . . and the glory of Europe is extinguished for ever." (Burke).
- "That's the common fate of your —; they draw their designs so subtle that their very fineness breaks them." (Dryden).
- "The fine song for singing, the — song to hear." (Stevenson).
- "We still have slept together, Rose at an —, learnt, play'd, eat together." ("As You Like It").
- "He that is — thinks the world turns round." ("Taming of the Shrew").
- "As headstrong as an — on the banks of the Nile." (Mrs. Malaprop, in "The Rivals").
- "Blank to Zoroaster on his terrace Blind to — on his turret." (Brown-ing).
- "Yes, we have no —." (Song of the early 1920's).
- "Where through the long-drawn — and fretted vault The pealing anthem smells the note of praise." (Gray).
- "Alas! Malvolio, this is not my writing. . . . But, out of question, 'tis —'s hand." ("Twelfth Night").
- Half a tropical disease.