"WASHING UP"

THIS week the "washing up" process must begin. Just when it will end we cannot say, for there is much to be done, and not much space in which to do it before The Page expires. First, answers must be cleared away. We start right in:

ANSWERS

(Refer to issue of December 20)

Christmas Cars: The carol was "Christians Awake." The numbers represented Holly and Mistletoe, so: CHR 8151; IS 2122; TI 5139; ANS 1920; AWA 1252; KE 0155. The numbers represented the corresponding letter in the alphabet. *(Problem and answer from C.B., Orangapai.)*

Simple: R.G. says: The continued sums of the figures of any square is 1, 4, 7, or 9. The continued sums of the numbers listed were 1, 4, 6, 7, 7, 7. The continued sum of three of these must equal 1, 4, 7, or 9; i.e.: or a direct total of 10, 13, 16, 18, 19, or 22. Of these only 18 is obtainable by adding 4, 7, 7. One 7 must be omitted; the middle. So add the second, fourth, and sixth numbers and obtain 13286025, which has a root of 3645.

Mystery Sum:

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4358)945686(217
     8716
     ----
     7408
     4358
     ----
     30506
     30506
     -----
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(Problem and answer from Harry Davey, St. Albans.)

A Christmas Recipe: Christmas pudding. (C.B.)

Your Christmas Turkey:

Hamper	Furred
Camper	Burred
Carper	Burned
Carver	Burner
Carved	Turner
Curved	Turney
Curled	Turkey
Furled	

Knight's Tour: When Bob and Bill paid a bill, first Bob paid some, and then Bill paid three bob more than half the rest of the bill; if Bob then paid a bob more than half the rest of the bill and Bill paid the rest, which was five bob less than twice what Bob had last paid, how much of the bill did Bill pay? Answer to that: 11 shillings. *(From R.C.J.M., Invercargill.)*

(Refer to issue of December 27.)

The Monkey's Age: One of The Page's most important functions has been to annoy readers. The PP believes he cannot do better than leave this one unanswered. He does so with a clear conscience. It is a straightforward test of plain reasoning. No genius or special knowledge is required. Concentration and common sense will do the trick.

Wheels: Four yards and five yards. (C.B.)

Tanks: The smaller tank will evidently be filled first (says C.B.). Since water comes into the big tank faster than it leaves the lower, there will be a net gain of 10 gallons a minute. The capacity of both tanks is 90 gallons, therefore it will take nine minutes to fill the tanks. The solution is shortened by ignoring the intermediate pipe.

CORRESPONDENCE

R.W.C. (Christchurch): Seasonal greetings are reciprocated.

Mac: Suggests that no rearrangement of the name of Benito discovers anything flattering. He has found "Be not I. I no bet. O! I bent. It no be. One bit." And, apropos of the swastika, he points out that it is easy to rearrange matches in that form to make the words "I Lie" and the double cross.

P. Mora (Taneatua): Writing about the "Bar" problem, claims that, although it is obvious *what* happened, he wants to know *why* it happened. It seems to the PP that the publican was lucky in that one group of drinkers bought their drinks in a manner which was more profitable to the extent that he received more profit on the extra beers he sold to the second groups. Puzzlers will find this a most interesting problem if they care to examine it further. About "Tote" P. Mora argues in the same way. He says it *is* a fact that after each investment the bettor has the amounts stated in his pocket as change, and that these amounts add up to a total different from that of his original capital. P.M. wants an explanation "in the light of common reasoning." The PP's idea of the matter is this: that it might be a fact that the bettor has those amounts in his pocket as change after each investment; but it is also a fact that with each new investment he takes each amount out of his pocket and creates therein an entirely new situation. It is therefore necessary to forget them in theory, as well as in practice, since they are spent or used as he goes along. The fact that they add to a different total is a simple trick of figures, easily understood when it is examined logically. P.M. cites the case of the three farmers who have to divide 17 sheep among them in parts of one half, one third, and one ninth. They add one sheep, divide according to the stated fractions, and then find there is one over to be returned to its owner. That *seems* to be satisfactory, but actually nine is *not* half of 17, nor is six one third, nor two one ninth. The whole method is mathematically fallacious, and the division is a mathematical impossibility.

R.G. has a good comment to make on this subject. He points out that, by selecting different amounts to deduct, and adding the sums left, hundreds of different results may be obtained; in fact, every whole number from 1 to 1540 (55 plus 54 plus 53 . . . plus 1). P. Mora, therefore, could go to the races and, by adding up his change (but not spending it) he would make a profit on this fallacious theory of a little less than fifteen hundred pounds. The point is, of course, that he gets no change unless he spends money.

R.W.C. Sends "Notable" as the answer to her Missing Words sentence, printed last week in the Correspondence section.

T.M.C. (Mt. Albert): Supplies the code which Goodshot used (November 15) to send his message to London:

```
 6  5  4  3  2  1  0  9  8  7
: a  b  c  d  e  f  g  h  i  j
. k  l  m  n  o  p  q  r  s  t
  u  v  w  x  y  z
```

The answer was "Dromedary," easily secured from T.M.C.'s clue. The same correspondent, commenting on Geometry for Alice (November 15) gives a method for proving that any triangle (or most) is (or are) isosceles. Here it is:

In a triangle with base BC and apex A, AO bisects the angle BAC and OT is the perpendicular bisector of BC. RO and SO are perpendiculars from O to AB and AC. In the triangles ARO and AOS, because the angle RAO equals the angle OAS, the right angle ORA equals the right angle OSA, and AO is common; the triangles are congruent. Therefore AR equals AS, and OR equals OS. In the triangles BOT, TOC, because BT equals TC, the right angle BTO equals the right angle OTC and OT is common; the triangles are congruent. Therefore OB equals OC. In the triangles ROB and SOC, because OB equals OC, OR equals OS, and the right angle BRO equals the right angle OSC; the triangles are congruent. Therefore BR equals SC. Therefore BR plus AR equals AS plus SC. Therefore AB equals AC. Therefore the triangle ABC is isosceles.

TMC supplies a problem which will not be answered here, since puzzlers should be able to work it out with paper and scissors. It's about Mrs. Smith, who wanted a table cloth printed with a red cross for a special event. The cross as printed measured one foot in all its dimensions and there was one foot to spare at each side of it. After the event, she decided she wanted the cloth plain again. She cut out the cross and sewed the two pieces of plain cloth together with one join only. How did she manage that?

R.C.J.M. (Invercargill): This is a belated acknowledgment of R.C.J.M.'s belated correction of his answer to Brickbats (Printed November 22, answered December 6). We printed 37.79 pounds and R.C.J.M. corrects his answer to 39.79 pounds.

There is still much material to be acknowledged and discussed. It looks as if the PP will be leaving a lot behind him when he goes. See next week.

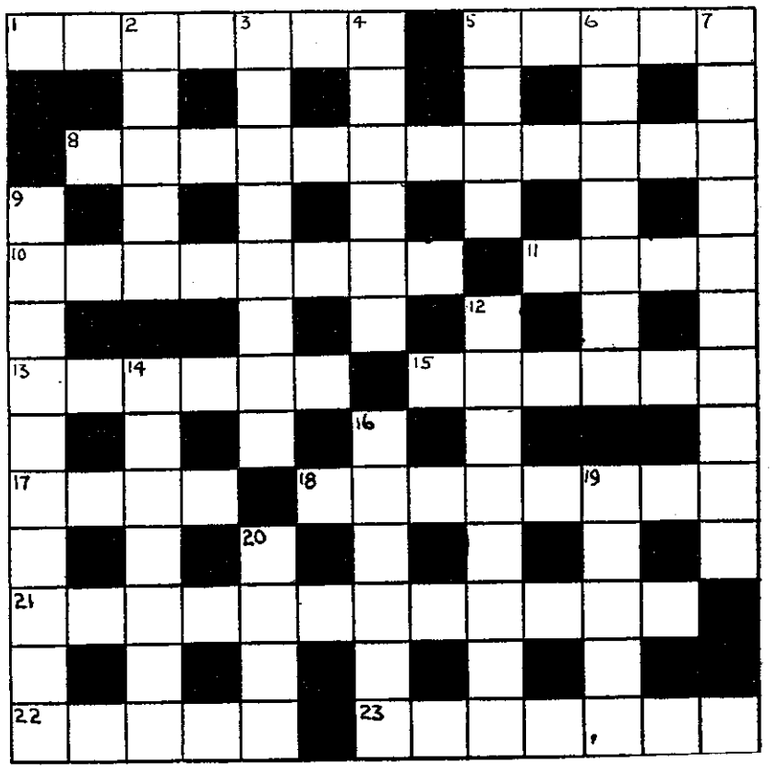
THE LISTENER CROSSWORD

(Answer to No. 39)

A			M	I	S	B	E	H	A	V	E	D
P		A		D			E		I		I	
S	I	M	P	E	R		B	R	O	O	M	S
E		B		A		A		N		L		P
	S	A	P	L	I	N	G		S	O	L	E
C		S		I		Y		A		N		R
A	S	S	E	S	S		S	T	I	C	K	S
R		A		M		A		L		E		E
E	D	D	Y		S	P	R	A	W	L	S	
L		R		R		T		N		L		E
E	R	E	B	U	S		S	T	R	O	P	S
S		S		S				I		S		P
S	U	S	T	E	N	A	N	C	E			Y

The Listener Crossword (No. 40)

(Constructed by R.W.C.)



Clues Across

1. I follow a swallow-like bird for a drink.
5. In term I display episcopal head-dress.
8. In nice temper! (anag.)
10. Dark mane from a narcotic plant.
11. Unintelligent memory.
13. Lor', man! This is nothing unusual!
15. It fell into a narrow strip.
17. Exist backwards? Of course this is not good.
18. Pert sins (anag.).
21. P.C. Soot creeps into an instrument for examining the components of light
22. 'Tis an elegant material.
23. He dares to be clipped!

Clues Down

2. Inhabitant of an ancient city to be found in 13 across.
3. From rice came a much more popular eatable.
4. Spot where water enters the pipe—i.e., tank.
5. If you have this in the garden you should never be poor.
6. Of lint I make a thin metal wrapping.
7. "———, my dear Watson!" as the great Holmes used to say.
9. Rearrange us in a manse if you need a stenographer.
12. Clean nib for a compass.
14. Minaret (anag.).
16. Slips furtively backwards for table silver.
19. Drunkard in a French door.
20. A derisive exclamation is turned in order to stupefy.