Puzzle Corner

Allan Gottlieb, '67

The answers to problems 1 through 5, from last month's column, will be given next month. By the way, there really was a third problem. The following line was left out of my last column:
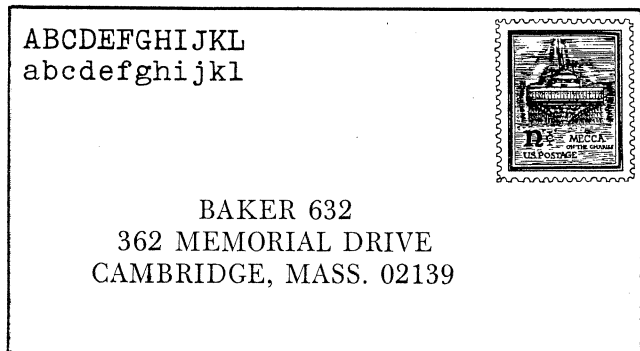
(3) *Four Techmen and three . . .*

Insert this line directly above:

. . . . . Harvies swim ashore to a desert . . .

Correspondence

I *like* to get answers to the problems, saving me from having to work them out myself. Send your answers to:

ABCDEFGHIJKL
abcdefghijkl

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*And Now, Presenting
This Issue's Problems*

8. What is the minimum number of (a) Kings, (b) Queens, (c) Rooks, (d) Knights, (e) Bishops which can be put on an 8x8 chessboard so as to command or occupy all the space?

9. What is the remainder when $((12,371)^{56}+34)^{28}$ is divided by 111?

10. Is the number $(2^{1093}-2)$ evenly divisible by $(1093)^2$?

11. Given a rubber tire T with circles C1 and C2; also a hole h: (Note that C1 and C2 are interlocked!)
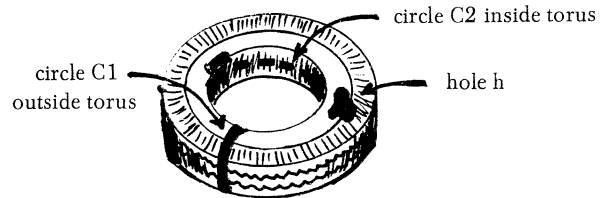
Turn T inside-out through the hole, h, and get
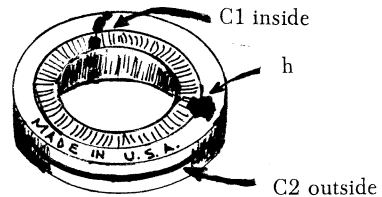
But now C1 and C2 are not interconnected! How come?

12. The following problem was submitted by Harvey Friedman, '68. Unfortunately, I have, as yet, no solution:

Let C = (x ϵ R s.t. in base 3 x has no 1). Is every real number the sum of infinitely many elements of C?

 Department

13. Lawrence (Frisbee) Risman, '67, has suggested the following variation to Problem 7:

If a chicken and a half lays an egg and a half in a day and a half, how many chickens do six roosters lay in six days? Upon asking several dorm-mates, Frisbee received the following answers:

(a) 24.
(b) 69.
(c) Roosters don't lay eggs.

14. The following is false: VII = I.   Move one line to form a true equality.