7-a. Transfer information from INPUT station (the tape now presents a code or signal that means subtraction) into COMPUTER REGISTER NO. 4 (the operation-accepting register); and

7-b. Transfer information from COMPUTER REGISTER NO. 5 (the result register) into STORAGE REGISTER NO. 2 (We see that Instruction No. 7 in the first list breaks into two commands).

8-a. Transfer information from STORAGE REGISTER NO. 1 into COMPUTER REGISTER NO. 1.

8-b. Transfer information from STORAGE REGISTER NO. 2 into COMPUTER REGISTER NO. 2.

8-c. Transfer information from INPUT station (the tape now presents a signal which when read will mean comparison) to COMPUTER REGISTER NO. 4. (When the computer is called on to compare a and b we shall suppose it is able to produce 1 if a is greater than b, 0 if a is not greater than b. We note that Instruction No. 8 breaks up into three commands.)

9. Transfer information from COMPUTER REGISTER NO. 5 (the result register) into STORAGE REGISTER NO. 3.

Each of these commands will take place during a complete operating cycle of the machine (see the numbers of the machine cycles in Fig. 1). For each cycle, naturally, the machine requires not only the number and operation

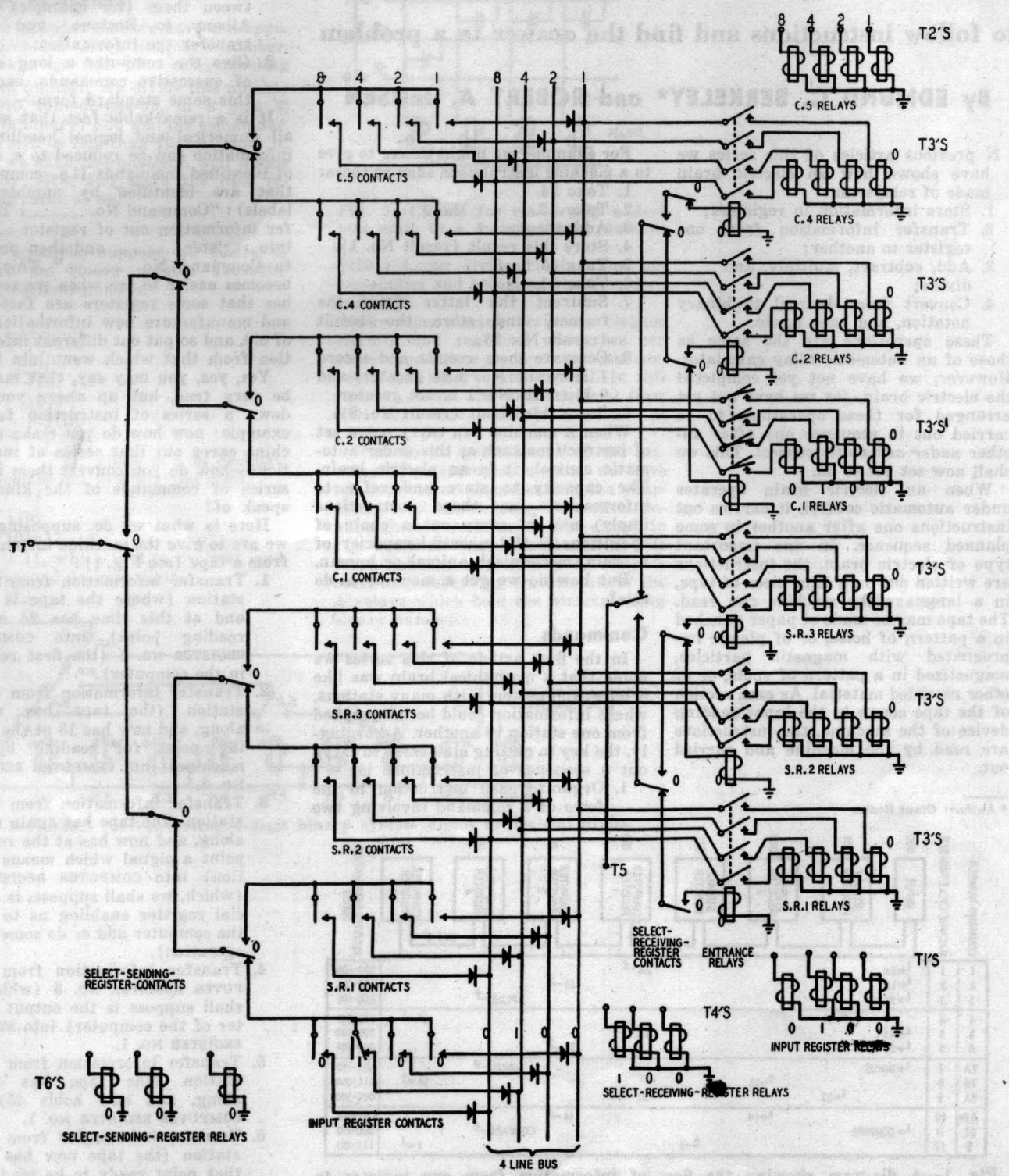

Fig. 2—The main transfer circuit of the electric brain. The 4-line bus is sufficient for transferring one decimal digit coded into binary notation. The circuits shown in red carry current during the first step of the problem.