A WIRING FOR A 676 RELAY MACHINE **{8}**

Contents Non-energised points of the main chain rows looked at during running. Full "machine - gunning"- if necessary with a scanner on the second input - at a stop. [This screed has an unusual type of differential relay].

$\alpha\ \beta$ relay → $\alpha\ \beta$ pt. of diagonal board

Differential coil

The relay is down if the differential coil above is energised otherwise it is up.

All the differential coils on any row are commoned

A

a b 1

A switch

Procedure with single main chain A .....J switch
Switches A.....J closed. Others opened.
Input on an impossible stecker.
The wiring controlled by the relays is so arranged that if any two relays in the same col. are both down, the machine passes onto the next position.
This accounts for a single main chain with the input on an impossible stecker

Main chain A.....J
Subsid. chains K....N, P.....S say.
Switches A.....j closed, others opened.
Input on an impossible stecker.
There will certainly be a straight without contradiction on the main chain when the machine stops. After the stop the current is switched automatically to the input line giving the story & either

(a) the story can be machine-gunned in the normal Jumbo fashion

or (b) the 676 relays can have dual wiring, so that in the one case the stop is thrown out if two relays in the same col. are up. This will operate instantaneously when the machine has stopped & the current has been switched over to the appropriate line. This is combined with the following switching device in place of the A switches in diagram 1

hand operated - set at beginning of run

Automatically closed when machine stops.

In the second form the machine could be used for a self-stecker job (with an advantage in the case of a subsidiary chain). *

This machine deals very well with the case of open 13, open 12 & subsid. 2, open 8 & various susid. bits.

If the diagonal board were connected permanently to a plugboard we could have subsid. chain control & diagonal selection, using a separate set of relays - actually diagonal selection would need no extra relays.

The practical objection to the method (*) of running a self-stecker menu has been raised before.
1) ? Would diagonal selection be too much work for the relays.
2) ? Would subsidiary chain control take too much current from the machine.

3) ? The possibility of a method whereby, having found a story on the main chain, the turn-over mechanism is disconnected & the current is fed in at the appropriate input line while the machine is still running - subsid. chain control & diagonal selection could be brought in at this stage if the objections to (1) & (2) are weighty. It might be necessary to take the risk of not more than one story / position of the first two wheels. It will necessitate an obvious modification to the switching device in fig. (2).

4) Lawn has worked out a wiring for the 676 relays which only necessitates 3 point relays.

<u>Multiple scanning on 676 relays</u>

676 relays as before

<u>Use A</u> e.g. Baby Jumbo. two five chains.
Ordinary diagonal board running with double input.
At a stop - 676 relay machine gun.
Machine scans the first five chain - at each straight it scans the second five chain, instantaneous testing by the 676 relays.

Use B The main chain is long enough for a 25:1 boxing assumption - we can use 676 relays on main chain while machine is running. At a stop we scan on the second chain - useful for open 10 & subsid. 4 say.