

(b) Output fuse in the positive H.T. lead, immediately before the first reservoir condenser (f_2 , Fig. 1.). In this position the fuse protects the whole of the apparatus and the rectifier from damage due to a short circuit or earth. This fuse should be rated to melt at a current equal to twice the normal D.C. load on the rectifier.

PARALLEL WORKING

It is usually possible to select from the Mullard range of full-wave rectifiers (see pp. 41 to 46) a valve of suitable output for H.T. supply to most standard apparatus. When a larger output than that given by a single valve is required, *the parallel operation of two or more rectifiers should never be adopted.*

Even the slight difference in impedance which invariably exists between any pair of valves will

cause the valve with the lower impedance to take the larger share of the load. The more heavily loaded valve will become hotter than the other valve or valves; the temperature of its filament will therefore rise, its emission will be increased and its impedance consequently decreased, causing it to take a still larger proportion of the load. This effect is cumulative, and the one valve will eventually take practically all the load and will fail prematurely.

If it is essential to have an output greater than can be obtained from a single rectifier, it is permissible to use two full-wave rectifiers providing each valve is used as a half-wave rectifier with its two anodes paralleled as shown in Fig. 2.

It is preferable, however, to divide the load, so that one rectifier will feed each portion.

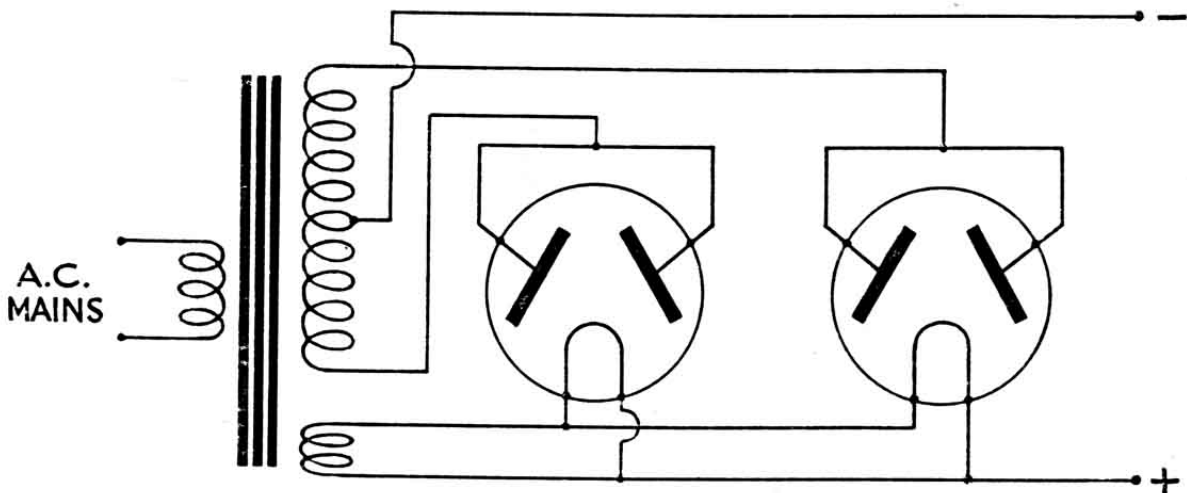


Fig. 2.
Two full wave rectifiers operated as half wave rectifiers with anodes paralleled.