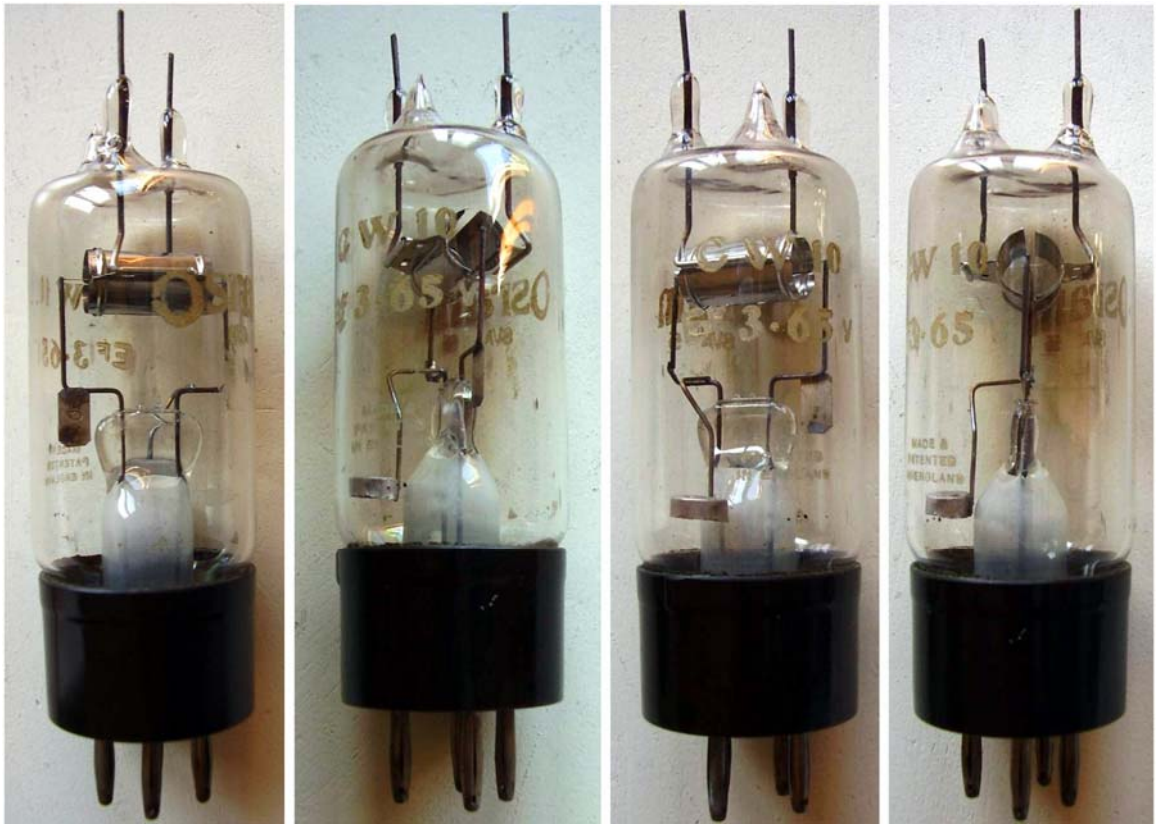
CW10 OSRAM - Magnetron, Split-Anode, 1936



This is a rare sample of split-anode magnetron made by OSRAM. CW10 was developed by Megaw at GEC around 1935 and used in microwave links as well as in an experimental FM CW gunnery radar made by Gollin. CW10 required to operate a magnetic field with lines of force parallel to the electrode axis. Anode voltage up to 1000 V could be applied in typical operation. Of course the magnetic field strength had to be increased with the anode voltage.

Depending upon the external resonating circuit connected to the two anodes, it could oscillate at wavelength down to 22 cm, corresponding to about 1400 MHz. Typical filament voltage was 2 V. Output power could be increased also increasing the filament voltage and then the emission by means of a rheostat. Typical power of 2 W could be obtained at 1300 MHz.

Here a short description of the device from **Wireless World**, November 20th, 1936. The 50 W anode power figure in the article appears exaggerated: probably it refers to peak power during very short bursts or to the power one can expect for the similar but more powerful devices described in the same pages.