



## THE MIGHTY MAGNETRON

**When the British physicist** Edward Bowen arrived in Washington, D.C., in September 1940, he carried a nondescript black metal box. Inside was a curious-looking device: a black disk, with grooves around its rim and thin pipes and wires extending from its ends. Bowen was part of a delegation led by Sir Henry Tizard, who had come seeking the United States' and Canada's aid in the industrial production of England's wartime R&D. The palm-size device, called a cavity magnetron, was their most potent idea. It produced high-power microwaves, and it gave the Americans a way to build radar systems small enough to be mounted in aircraft. Later, the magnetron was used in, among other things, the microwave oven. One invention proved crucial to the war effort; the other gave us exploding Peeps. ■

➔ **For more on the cavity magnetron, see <https://spectrum.ieee.org/pastforward1118>**