GERMAN VENGEANCE WEAPON, V-2
(The Rocket Bomb)

Development of a long range rocket has been on a priority basis with German scientists for at least 5 years. The result of their intensive efforts became apparent last September when the first rocket bomb, the so-called V-2 (or experimental model A-4), was launched against the United Kingdom.

Just as the 1908 automobile and the 1916 tank were forerunners of bigger and better models, so today the 1944 rockets may be termed forerunners of bigger and better types---instruments which in the future may revolutionize the science of warfare or the mode of transport in eras of peace. Today, however, present knowledge of fuels imposes definite limitations on the distance and speed of rockets. Until more potent fuels are developed and design is radically altered, the performance of rockets is not likely to become unduly spectacular over that now known.

GENERAL CHARACTERISTICS

The V-2 is a cylindrical instrument, 45 feet 10 inches in length and 5 feet 6 inches maximum diameter, having six sections as follows: (1) war head 5 feet 7 inches; (2) radio compartment, 4 feet 7½ inches; (3) liquid oxygen tank, 9 feet 11 inches; (4) alcohol tank, 9 feet 11 inches; (5) hydrogen peroxide turbine unit and two pumps for the liquid oxygen and alcohol plus other control equipment, 4 feet 2 inches; and (6) combustion chamber, 5 feet. Four large external fins are located at the rear.

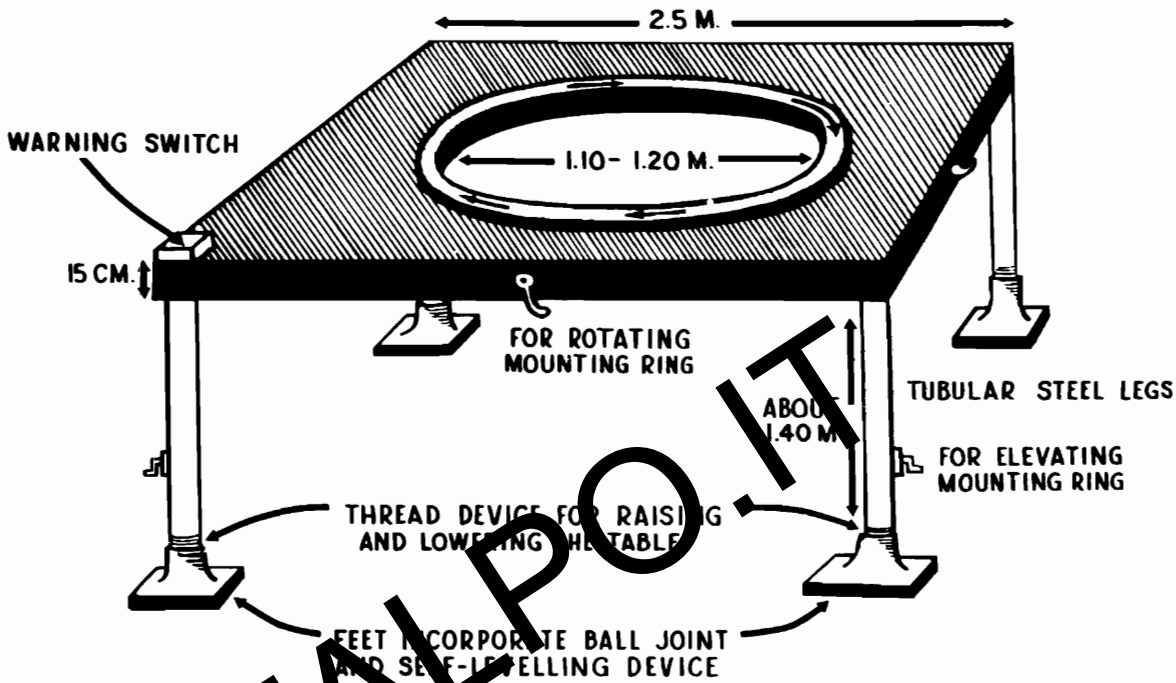
The war head weighs 2,000 pounds of which 1,600 pounds is aluminumized TNT explosive. The blast effect extending about one-fourth mile, is equivalent to that of the V-1 flying bomb. More severe damage, however, occurs in the immediate vicinity of the point of impact owing to the mass of the projectile and its tremendous striking velocity which is approximately 3,700 feet per second. The war head penetrates about one-half its length before detonating, the explosion forming a crater about 35 feet in diameter and 15 feet deep.

RADIO COMPARTMENT

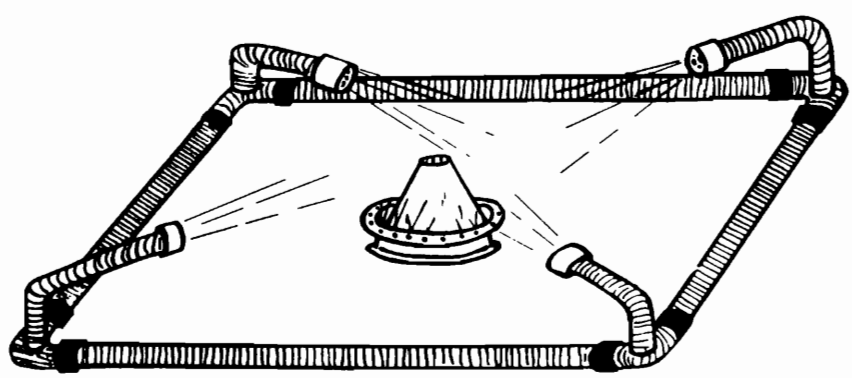
The radio compartment is divided equally into four sections by means of radial plywood sheets This compartment houses the following equipment: (1) Type E-230 receiver, also used in the German glide bombs Hs-293 and Fx1400, to receive control signals for the elevators and ailerons; (2) a combination receiver transmitter used to retransmit a received signal on a different frequency; (3) a 12-tube receiver, transformers, and a panel mounting 12 relays; and (4) a modulator and transmitter.

The function of each of the radio sections has not been clearly determined. Section one probably controls the flight azimuth. Equipment in

MOUNT FOR LARGE ROCKETS (V-2)



FIRING TABLE



SPRAY UNIT
MOUNTED UNDER TABLE
WATER USED TO COOL TABLE

ROCKET TRAJECTORY