ORDNANCE

Propaganda Weapons

Death rays and invisible noiseless bombers, claimed by the Nazis, will probably never materialize. Rocket shells and towed air-mines are real, however.

➤ NONE OF the weapons or planes which the Nazis are using for defensive or offensive warfare are secret. Claimed devices, such as death rays, bacteria, and invisible noiseless bombers, will probably never materialize. These statements are made on the basis of the Nazis' own declarations (*The Aeroplane*, June 16).

Of the weapons which the Nazis do have, the most widely used is the rocket shell. Other weapons include towed air-mines and a jet-propelled radio-controlled winged bomb.

According to the latest information, the Nazis are using two types of rocket-shells. The small ones are carried in pairs under the wings of single-seated fighter planes. The diameter of the head of the small rocket-shell is about 2.5 inches. Larger rocket shells, with the diameter of the head being around six inches, are fired from twin-motor fighter bombers. They are similar to the rocket projectiles being used by the Royal Air Force and the U. S. Navy. A salvo of eight rocket-shells from an Allied plane is equal to the broadside of a light cruiser.

The rocket shells were developed around 1929 by the late Max Valier, according to specifications released by the German Junkers Aircraft Works. The original designs were perfected by a group of research workers under the direction of Prof. Georg Madelung, one-time designer of military aircraft for the Junkers firm.

German fighters jockeying into position to fire their rocket shells are easy targets for speedy, heavily armed U. S. fighter planes, the article states.

The Nazi towed air-mines are, in reality, finned bombs weighing up to 500 pounds and towed at 1,000 feet or more behind twin-motored aircraft. As soon as they reach the target, the bomb is fired electrically. They were designed to blow up slow-moving heavy bombers sent by the Allies to raid Germany. Today, however, the Nazi planes towing air-mines are an easy target for fast-moving Lightnings, Thunderbolts, and Mustangs which are now carrying the Allied war over Germany.

The German radio-controlled winged bomb was originally designed and used against Allied convoys at Salerno. In appearance it resembles the jet-propelled pilotless planes being sent against England. The fuselage formed by the bomb is about 20 feet long, and the wingspan is about 12 feet. The weight of the bomb exceeds one ton in some instances.

The bomb casing houses a radio control unit. A rocket or jet-propulsion device is attached underneath the bomb to give initial forward speed or to increase the final velocity. The bombs are carried in pairs by heavy German fighter-bombers and are released from altitudes as high as 5,000 feet. After release, the speed of the rocket may approach 350 miles an hour. The fuse in the bomb may be detonated by radio impulse from the parent plane, which must fly a parallel course with the bomb, after release, right up to the target, exposing itself to anti-aircraft fire.

The British article states that the radio-controlled winged bomb was designed by Prof. H. Wagner, who is also assumed to be responsible for a similar armor-piercing bomb which the Nazis probably used for the sinking of the Italian battleship Roma. Wagner's winged bombs are poor weapons from the military standpoint, because they are good targets for anti-aircraft fire during the flight, *The Aeroplane* declares.

A fundamental reason, the journal continues, for introducing imaginary and real weapons that are poor from a military standpoint is to camouflage the plight of the German armed forces, and especially that of the Luftwaffe.

Science News Letter, July 29, 1944

CARTOGRAPHY

Rubber Contour Maps Used To Instruct Landing Forces

➤ COLLAPSIBLE rubber contour maps of enemy coastlines are being used successfully to give American landing forces accurate, well-developed knowledge of their coming battleground. When not in use, the light-weight maps can be folded or rolled into small packets for easy carriage.

Rubber models of Salerno, indicating enemy gun emplacements and pillboxes as well as natural landmarks, were used to give Gen. Mark E. Clark's army of invasion a graphic picture of what to expect, where the enemy was most likely to be concealed, and where they themselves could fox-hole with the greatest safety.

The original models are based upon aerial photographs and information from all possible sources. From these data, the model is built at the Navy's Amphibious Division, Norfolk Base, Va., showing the coastline rising to mountains, with all existing buildings and construction as well as natural landmarks.

From the original model, a plaster negative is cast. On this negative model natural rubber latex is sprayed and dried, according to a method developed by the United States Rubber Company. After reinforcements are inserted, to prevent the thin layer of rubber from collapsing in its mountainous areas, the model is cured, stripped from the mold, painted to simulate the actual landscape, and the completed map is ready for study by invasion forces right up to the time of the landing.

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AGROSTOLOGY

Buffalo Grass Now Holds Soil Under Plane Tires

➤ BUFFALO GRASS, the tough, curly-leaved growth that carpeted the Plains in the old days of the million-headed herd, is reappearing in a new role on airfields of the West, the U. S. Department of Agriculture discloses. Notable for its ability to live and grow even when trampled down day after day by countless heavy hooves, and to withstand practically any extremes in climate, buffalo grass has proved to be an excellent ground cover for fields where bombers bring down their ponderous weight on massive tires. It is also useful on the drill grounds of Western cantonments, where trampling boots grind at it all day long.

Plant breeders of the Agricultural Research Administration, working at Hays, Kans., have developed an especially hardy, tough strain of this species. This has the official designation of 1-i, which naturally has turned into a nickname: "one-eye." Last year's seed "one-eye" crop, amounting to 5,000 pounds, has been distributed partly to military organizations for immediate use, partly to growers for further seed production.

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