

electrodes for picking up thought waves are placed just back of the outer edge of the slits between the eyelids. This position suggests, the scientists point out in their report in the journal, *SCIENCE* (Nov. 12), that the source of the thought waves may be the temporal lobes of the brain.

Science News Letter, November 27, 1948

ORDNANCE

Soviet Tanks Lack Finish But Are Termed Efficient

► RUSSIAN TANKS are rough-looking, but first class fighting machines, declares Col. Robert J. Icks, an Ordnance Reserve officer, in the technical journal, *ORDNANCE* (Nov.-Dec.). They have thick armor and good guns, and can dish it out as well as take it.

Commenting on their apparent lack of finish, a Russian once remarked to Col. Icks, "To us a tank is built to last for only three shots. One you may get off and may miss, the second the enemy gets off and may miss, and third either one of you hits. It had better be you that hits him because he isn't going to miss the next time."

Tank designers of the USSR, Col. Icks points out, are able to take advantage of information contributed by lend-lease and captured enemy materiel, as well as by their espionage service. In addition, they have many captured and conscripted German tank experts working for them.

In the meantime, the Army has announced the unveiling of the new Patton tank, which took place at the Detroit Arsenal on Armistice Day, with the widow of the famous tank commander of World War II doing the christening.

The Patton tank resembles the present medium M26, but has a speed of 30 miles an hour instead of 20 and it carries as principal weapon a 90-millimeter gun. A waterproof electric system will enable it to ford deep streams, and it can be "winterized" to operate at temperatures as low as 65 degrees below zero Fahrenheit.

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MEDICINE

Chloromycetin May Conquer Cholera and Dysentery

► DYSENTERY, cholera, and two relatively new diseases, Q fever and rickettsialpox, are the next diseases expected to fall before the healing power of chloromycetin, streptomycin-like remedy dug out of a sample of earth from Venezuela. These prospects were disclosed by Army scientists at the meeting of the American Public Health Association in Boston. The recently crystallized drug has already shown rapidly curative effects in five other plagues, epidemic typhus, scrub typhus, murine typhus, typhoid fever and Rocky Mountain spotted fever.

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MR. N. Y. SCIENTIST'S DREAM HOUSE—The architect's conception of building in which the New York Academy of Sciences hopes to house its numerous activities is shown here. A \$1,000,000 drive is underway to purchase and maintain new quarters. Fourth oldest scientific society in America, the Academy was founded in New York City in 1817. It now lists more than 4,000 members.

AERONAUTICS

Foresee Automatic Flying

In 15 years airplanes will be equipped with all-weather flying aids, radar, television and other devices which will permit automatic flight, expert predicts.

► COMPLETELY automatic, weather-proof flying will be possible through use of present flying aids, plus radar, television, electronic computing machines and un-built devices for the future—and we'll have it in 15 years.

That's what Howard K. Morgan, vice-chairman of the Radio Technical Commission of Aeronautics, foresaw in connection with the demonstrations of the best there is today in aviation traffic control and navigation.

Devices for greater automatic flight safety recommended by the RTCA were shown at the Wier Cook Airport, Indianapolis, Ind., where the Civil Aeronautics Administration all-weather flying aids are installed.

Already the big airlines are expected to be equipped with the new all-weather devices in the near future. Mr. Morgan, who is assistant research director for Bendix Aviation Corporation Radio Division, pointed out that by 1963 the longer range "ultimate common system" outlined by RTCA is expected to be completed.

The list of devices that will bring aviation closer to automatic flight will include: very high frequency omni-directional range

stations, operating on static-free radio waves which will provide very many flying courses radiating like the spokes of a wheel; and stations and measuring equipment linked with an automatic computer which will enable a plane to take a straight course past several ranges. Distance-measuring equipment, a link in the omnirange system, provides aircraft continuously with measurement of distance to stations.

Very important is an instrument landing system to make an electronic pathway to the runway. This will enable a pilot to make a safe landing when ceiling and visibility are below present minimums. The devices include beam radar to watch the fixed beam approach, giving a double check on the electronic pathway down to the runway.

Additional devices are improved runway- and approach-lighting to guide the final approach, also radar instruments to spot planes in the air, and to let them know by radio how many other planes are aloft and where they are. This automatic system will use devices already in existence and many which are now known to be possible but are not yet developed.

Science News Letter, November 27, 1948