

RADIO

Radio Station in France Has Washington Hookup

➤ OVER 400,000 words a day are sent out by the Army's super radio station in France, that has direct hookups with London, Washington and the Army's worldwide radio communications system, the War Department states. The multiple-channel 40-kilowatt station, costing an estimated \$2,000,000, was sending and receiving trans-Atlantic messages 25 days after it arrived in France in 1,000 shipping boxes.

The power of this station may be compared to some of the major standard broadcasting stations in the United States. Station KNX in Los Angeles, WBBM in Chicago, WLW in Cincinnati and WABC in New York are all rated 50 kilowatts, and these are among the most powerful broadcasting stations in the country.

Combat-line communications are built around radio. All field units have their own networks. In addition, every tank has a radio, and a certain number of infantrymen from each company are equipped with "walkie-talkie" sets. Because of its elasticity, radio can keep men stitched together into a fighting team in almost any situation.

Many times during the racing pursuit of the Nazis toward Germany, wire could not keep the immediate pace with fast-moving armored columns. The Signal Corps solved the problem by intro-



LAP-SIZE PIANO—Harold B. Rhodes demonstrates his new portable piano, which he invented for bed-patients, to soldier patients at Bolling Field Hospital. In building this instrument with filed tubes instead of strings, he used aluminum tubing from the hydraulic system of wrecked planes and plywood from abandoned engine crates. Eight models have already been built for demonstration at each of the AAF convalescent hospitals in this country.

ducing a system of very high frequency radio relay stations. This system consists of broadcasting stations 25 to 100 miles apart, each beamed on the next, like a chain of elephants hanging onto each other's tails. This system was first tried out in North Africa.

The equipment used is similar to that employed by police scout cars, only more elaborate. It provides four teleprinter circuits for the transmission of printed messages plus three radio-telephone circuits for voice transmission. The actual equipment was developed in the United States and England.

Science News Letter, February 17, 1945

CHEMISTRY

"Bottled Gas" for Use in Combustion Engines

➤ "BOTTLED GAS," now widely sold in cylinders for kitchen purposes in areas beyond the reach of city gas mains, is made available for use in internal combustion engines, both automotive and stationary, through an adapter on which U. S. patent 2,368,680 has been issued to John Riise of Doylestown, Ohio.

This fuel consists of a mixture of

butane, propane and other light hydrocarbons that are gases under ordinary conditions but readily liquefy under pressure. This makes their handling in cylinders easy and economical.

Mr. Riise re-converts the liquid fuel into a gas by warming it in a water-jacketed cylinder around which water from the engine's cooking system circulates. In place of the carburetor he uses a special mixing valve, to add the correct proportion of air.

Science News Letter, February 17, 1945

MATHEMATICS DICTIONARY

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