

ORDNANCE

More Giant Guns

Army's 240 millimeter howitzer and eight-inch rifle which can be easily transported, will play big role in coming battles.

► LOUDER and deeper big-gun voices are to be added to the quarrel at Europe's disputed barricades, it has been made plain by the new Army orders for eight- and ten-fold increases in production of heavy ammunition, and for speeding up the making of the powerful barrels that will hurl them at Nazi fortifications.

In particular, the most powerful pleaders for a peaceful world that will roll over Europe's roads in the hot months ahead are the Army's 240 millimeter howitzer and eight-inch rifle. They are the bigger brothers of the two heavy pieces that won fame in the North African and Sicilian campaigns, the 155 millimeter "Long Tom" rifle and the howitzer of the same caliber. These weapons, of approximately six-inch caliber, are not being displaced; it is just that two huskier members of their family have arrived to back them up.

ENGRAVING BONDS — *On the left you see the steel engraving plate being carefully polished by hand to remove the surplus ink while leaving it in the crevices. The worker at the right is placing on the inked plate the wet paper which will be war bonds after the printing is done. Eight bonds are printed on the one sheet.*

The 240 millimeter howitzer throws a shell weighing about 350 pounds to an extreme range of 25,000 yards, or nearly 15 miles. Like all howitzers, it is intended to be fired at a moderately high angle, so that this crushing blow comes down on the enemy from above.

The eight-inch rifle, strictly speaking, is a 7.87 inch gun, for its caliber is officially given as 200 millimeters. Its shell weighs about 100 pounds less than that of the 240 millimeter howitzer, but it can hurl it much farther, to an extreme range of 35,000 yards, or more than 20 miles. Normally, however, it will not be used for such long, looping swings; advantage will be taken of its terrific muzzle velocity of 2,850 feet a second to drive upper-cuts straight at the face of enemy steel-and-concrete emplacements. This gun is as big as the main battery rifles of a heavy cruiser, and can hit with as much authority.

The really important thing about both these guns is that they travel on wheels, over ordinary roads, towed by heavy tractors. To lighten the load on bridges, each gun is separated into two parts for transportation in huge, pneumatic-tired carriers. It is thus possible now to send heavy ordnance, of calibers hitherto regarded as restricted to railway guns, into

any fighting zone where wheeled vehicles can go at all.

So far as is known, the Germans have nothing that even approaches these two heavy weapons. Much was heard for a time of their 170 millimeter rifle in the Italian fighting. This, however, is only slightly heavier than our 165 millimeter "Long Tom."

It might be summed up as a good gun on a bad carriage—like a prize-fighter who can punch but has poor legs. Captured specimens of the German 170 have solid tires, like old-fashioned coal-trucks, so that it cannot possibly move at much more than a horse-trot speed. Our heavy pieces can move at any speed the towing vehicle can make. In a war where victory still goes to "the one that kin get there fustest with the mostest," that is a very important factor.

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TECHNOLOGY

War Bonds Made Carefully By Engraving Process

See Front Cover

► YOUR WAR BONDS are made as carefully as your cash. They are engraved, not printed. By the engraving process, ink is absorbed from the tiny crevices etched in a polished steel plate, while type printing is done by pressing the paper against the inked surface of type. Your paper money is engraved. The same presses are used for War Bonds. The flat steel plate is inked and wiped mechanically. Then the plate must be carefully polished by hand to remove all

