

MERWIN.



ESIGNED originally as a deadly anti-aircraft weapon, Germany's highly-touted 88-millimeter cannon proved equally destructive against English tanks and infantry. At Bir Hacheim and elsewhere on the embattled African Desert last year, this lethal, all-purpose gun smashed British Valentine and Crusader tanks to bits, contributed more than any other single factor to Rommel's rout of the gallant, but hopelessly out-classed Eighth Army, paved the way for his irresistible advance to the gates of Alexandria.

Later, when the Nazi-styled "Desert Fox" started his drive against the American Second Corps in Tunisia, he sent 60-ton "Tiger" tanks to blast wide swaths through U. S. mobile formations, depending on his vaunted 88s to make a break-through stick.

Successful, at first, in tearing a gaping hole in our loosely-held lines, Rommel soon saw his tanks, guns and infantry blown apart by U. S. M-7 tank destroyers armed with 105-millimeter cannon and M-10s whose long-range 3-inch guns outhit, outmaneuvered and outranged Germany's theretofore invulnerable superweapon.

Rommel's intended Tunisian "surprise party" didn't materialize because he reckoned without the host of squealers "singing" for American technicians. Guns that had set a veteran British army back on its heels proved no match, after the initial setback, for our less-experienced Yanks equipped with weapons designed to beat the supposedly unbeatable general at his own game.

Why Rommel's Attack Boomeranged

The Nazi attack boomeranged because American Ordnance specialists, with British cooperation, had examined a captured 88millimeter gun months before at Maryland's Aberdeen Proving Ground, discovered, and developed appropriate artillery to reach and penetrates its weak spots. Every gun, from smallest side-arm to largest howitzer, every

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tank, truck or other conveyance, every airplane and item of equipment abandoned by the retreating enemy, whether it be emergency ration or new type haversack falling into Allied hands, is carefully scrutinized for tell-tale clues to foe's tactics and resources.

The detective work begins in foxholes and slit trenches of noman's land, where Ordnance officers and enlisted men advance under fire with combat troops, pick up samples, snap pictures, take measurements and make estimates of types of enemy equipment likely to reveal significant details of necessity-mothered invention and accomplishment, the devastating battle-efficacy of which U. S. war experts will quickly find a way to nullify.

Seized Equipment Analyzed

The evidence is then shipped back to seven different American testing centers (Picatinny (N. J.), Rock Island (Ill.), Watertown (Mass.), Frankford (Pa.), Watervliet (N. Y.) Arsenals, Aberdeen (Md.) Proving Ground and Springfield (Mass.) Armory) for exhaustive analysis. Metallurgists, spectrographers, other scientific wizards break down, test and study new Axis alloys, fuels, lubricating oils, powder, chemicals and armor to discover material shortages, learn how they have been overcome with substitutes. Equipment taken by the British is forwarded to us for inspection, and vice versa. Findings of allied Ordnance centers are made available to friendly belligerents.

Each testing center specializes in a particular field. Non-ferrous metal parts found on the battlefront or removed from captured weapons, after observation and testing at Aberdeen, for example, are sent to Frankford Arsenal for further grilling under a spectrograph, a device which photographs light waves produced by burning metal in an electric arc, records the metallic content

of the specimen under observation. Watertown's ferrous metals-testing laboratory daily makes more than 1,000 chemical analyses, tensile and micrographic tests and radiographs of American as well as captured enemy equipment. At Picatinny, Axis explosives and propellants are taken apart to determine range of enemy guns and thickness of armor required to stop them. Because of the explosive nature of the matériel under inspection, the work there is very often dangerous.

"Bazooka" Is New U. S. Weapon

Rock Island Arsenal cracks captured fuels and lubricants, reveals extent of Adolf's and Tojo's success with substitute fuels, and just how high their high-octane is. Watervliet Arsenal and Springfield Armory conduct tests of a hush-hush nature.

Tabulated at Allied Ordnance headquarters is a mass of information which has proved invaluable in preparing our soldiers for

the type of opposition they will meet.

When the Germans began making tanks too thick-skinned for the projectiles of our 37-millimeter anti-tank guns, American ingenuity created the "bazooka" to protect infantry against armored forces. This two-man affair, carried by hand, fires a small rocket projectile with such force and explosive power that it will destroy tanks or pillboxes at short and medium ranges.

New "secret weapons" placed in operation by the Axis don't

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ABERDEEN PROVING GROUND function long before American experts know just what makes them Abandoned Nazi tick, develop measures to counteract them. tanks, Jap Zeros crashing inside our lines, eventually divulge their innermost complexities to eager U. S. Ordnance engineers dedicated to saving the lives of our American land and sea fighters.



BRITISH OFFICER CAREFULLY CHECKS BREECH OF AN ARTILLERY PIECE ON BATTLEFIELD NALYSIS REPORT WILL ACCOMPANY GUN BACK TO AN ALLIED ORDNANCE CENTER



WESTERN DESERT GIVE CAPTURED DEGREE, COLLECT VALUABLE DATA CONCERNING ITS STRONG AND WEAK POINTS



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