## Will This 300-Mile Bigger Bertha Make America Supreme in Future Wars?

The Temple gun, using every grain of powder, has a projectile speed of five miles a second

HE most stupendous progress in the concentration of explosive force since gunpowder was invented seven hundred years ago, is now declared by Dr. Miller Reese Hutchison to have been accomplished by Robert Temple, creator of the Temple gun.

Dr. Hutchison has made public demonstrations to prove that this American Bigger Bertha, so far existing in a miniature model only, focuses nearly all of the efficiency of explosives in the projection of its shell, compared with an average of 25 per cent in other big guns.

With these figures as a basis, experts predict that this new piece of ordnance will have a range of three hundred miles with a five-ton shell.

The Temple gun, he says, is noiseless and kickless, despite its terrific propulsive power. Its maximum shell velocity will be five miles a second.

In its present form, if used for riveting, the gun will drive a bullet half its length into a three-quarter-inch steel plate placed against the muzzle of the gun-with no shock or danger to the gunner or spectators.

And Dr. Hutchison went ahead, in his office in the Woolworth Building, and astounded a group of scientific skeptics by shooting a few dozen bullet-rivets into a chunk of armor.

Were it not for the un-

questioned eminence of the engineer who sponsors the inventor, the announcement would be discredited as a hoax. The principle of the gun is being held secret for United States military use.

From 50 to 75 per cent of the ex-

plosive force of the high-power rifles is dissipated in the form of heat and sound. A big gun on a battleship belches forth a twentyfoot tongue of flame when it is fired. It is the direction of all this fierce energy back

According to the figures of ordnance experts, by utilizing every particle of energy in the powder, a supergun built on the principle of present small Temple gun could hurl a five-ton projectile across New York State from New York City to Rochester, a distance

Temple gun can be placed against a three-quarter-inch steel plate at the moment of firing. When the trigger of the gun is pulled, there is no kick and the only sound heard is a sharp clickthe metallic crack of the impact of the steel bullet against the steel plate.

The penetration of the bullet into the steel may be regulated by alteration of the charge. Its range of velocities is from one to five miles a second.

The supergun will have its peacetime as well as its wartime uses. It may be pressed into service as a riveting device. The steel bullets will penetrate steel girders and beams rapidly and quietly. It may be operated under water in salvaging operations and a recent test showed that it was necessary to exert a force equivalent to eight tons before the steel bullet placed under these conditions could be withdrawn.

not even the roar. As explained by Dr. Hutchison, every particle of powder is burned in the Temple gun before the projectile starts to move under the impetus of the expanding gases. Thus the tremendous force of the product gases accumulates until combustion is complete, at which

of the projectile

that nearly quadruples the power of

the Temple gun. Nothing is wasted

of the gun-charge,

with a terrific push. The law of action and reaction accounts for the "kick" of firearms—a great problem to ordnance and ballistic experts. The Temple gun has no recoil and produces no noise when its charge explodes.

The muzzle of the small



The gun in its present form at work as a riveting machine showing bullets that have been driven into the steel plate

As a special service to readers, the Editor will be glad to supply the names and addresses of manufacturers of devices mentioned in Popular Science Monthly