NEW GUN MARVEL MAY SHOOT 5 TONS 200 TO 300 MILES

Noiseless and Smokeless Weapon Has Muzzle Velocity Up to Five Miles a Second.

TEST IN WOOLWORTH TOWER

Miniature Drives Slug Into Sheet of Steel With Click Like a Cash Register.

LOOKS LIKE PNEUMATIC TOOL

Invention Can Be Used for Riveting Under Water and May Have Many Other Purposes.

A new gun, with a velocity ranging from 1 to 5 miles a second, which may be developed to hurl a projectile of 5 tons from 200 to 300 miles, was demonstrated yesterday afternoon in the tower of the Woolworth Building by Dr. Miller Reese Hutchison, former Chief Engineer to Thomas A. Edison. The weapon was not equipped with a silencer, but it was noiseless and smokeless, and fired without recoil.

Soon after Dr. Hitchison had interested himself in the invention, which he predicted could find a wide range of uses in the peaceful arts, he was apprised of its tremendous destructive power by one of the most able ordnance experts in the country. This expert was so interested in the weapon that, according to Dr. Hutchison, after he had concluded his inspection, he remarked:

"This gun will do more eventually to bring about peace than the Peace Conference. It will make war too terrible for nations to engage in wars."

But in spite of its potential destructiveness, the weapon was tested yesterday with the greatest confidence in its safety by Dr. Hitchison in the presence of more than a score of witnesses in one of the rooms of his suite.

On the fifty-first floor of the world's tallest building, Dr. Hitchison's proving grounds consisted of a box of sand such as he might have used to plant window flowers. The box was placed on the floor of his office, and on top of the sand was a plate of regular boiler steel three-quarters of an inch thick.

Sounds Like Cash Register.

Pointing the muzzle of the weapon vertically downward, perhaps in line with the heads of scores of unsuspecting tenants, Dr. Hutchison placed the muzzle flush against the boiler plate, the same as a riveter places the nozzle of his pneumatic hammer, which the weapon resembles, against a steel beam. A slight pressure on the handle of the weapon was followed by a click that sounded something like a cash register.

Lifting the gun from its position on the steel plate, a steel slug, three inches long and one-half inch in diameter, was revealed lodged in the plate. The propectile had been stopped midway on its flight through the steel, its nose projecting on one side about the same distance that the tail end projected on the other.

The gun was designed so that its projectile may be stopped in its passage through a sheet of steel with the precision that a subway train can be stopped. The tail end of the projectile used in the demonstration was threaded and served the purpose of a bolt to which a nut was fitted, as Dr. Hutchison explained how the threaded slug could be used to bolt on another plate to the hull of a leaking ship at sea.

The adaptability of the gun for underwater riveting was recently tested at the New York Navy Yard in the presence of experts by Frank Crilley, the world's champion diver. He went to a depth of 35 feet in regulation diving gear, and shot a slug through a plate of steel three-eighths of an inch thick. The diver said that there was no percussion under water from the gun, and no recoil. He could not be convinced that the projectile had been discharged until the plate was drawn to the surface with the slug piercing it. The plate was taken to a laboratory, where a pressure of eight tons was required to force the slug out of its place.

Power Without Noise.

"One curious feature of the gun," explained Dr. Hutchison, "is that its tremendous velocity seems to force a steel object literally to retreat before the projectile as if the plate were melted. It closes up quickly before the projectile escapes and seals the perfora-

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tion about the projectile. The gun uses smokeless gunpowder, operates without noise, recoil or flash, and an unheard of muzzle velocity can be acquired.

"The present velocity of 2,850 feet per second attained by the naval 14-inch guns is about the maximum for large ordnance now in use. Muzzle velocities not exceeding 4,000 feet per second are the greatest in high-power rifles."

Dr. Hutchison pointed out that the high-power rifles attained their velocities with small projectiles, and that their barrels were long and their powder charges about three times as great as used in the gun he demonstrated.

The reason why so much greater velocity has been developed in the new gun was due to the application of the principle of burning gunpowder, which does not permit of waste, and in the second place makes it possible to burn every bit of powder before the projectile even starts to move. The impulse projecting the missile is thus intensified without increasing the chamber pressure, which, as in the case of most guns of this type, does not exceed twenty tons per square inch, explained Dr. Hutchison.

The demonstration gun used by Dr. Hutchison developed a velocity of one mile a second. He said that after he had examined the weapon he understood that this velocity could be increased at will to as much as five miles per second, because the problem was purely one of mathematics, involving a proportioning of parts of the weapon without interfering with the size of the bullet.

In regard to increasing the size of the projectile, that was a matter on which he did not undertake to pass judgment, but left verification to the ordnance expert. Dr. Hutchison was asked to reveal the name of this expert, but said that the latter did not wish to have his name mentioned, because of his connection with a large ordnance concern. He said that this man was recognized as one of the ablest students of that subject in the country, and quoted him as having said:

Bigger Than Big Bertha.

"I see no difficulty to prevent the development of this gun so that it will shoot a projectile of several tons several hundred miles. It should be possible to shoot a projectile weighing five tons at least 300 miles. I can think of no way in which you can fail to increase the effect of the gun that shelled Paris, at the same time using a projectile two and a half times larger than Big Bertha."

The gun was only eight inches long, in the shape of a cylinder. It looked like it was all barrel. Into the muzzle of the cylinder, about one inch in diameter, the slugs were fitted which Dr. Hutchison used in his demonstration. In the opposite end from the slug was a copper cap to fire the charge. The interior of the cylinder contained the secret.

The cylinder was placed in a holder built on almost the identical plan of a pneumatic hammer, with a handle at one end. In piercing the boiler plate, Dr. Hutchison stooped directly over the gun and pressed the muzzle to the sheet of steel at a point not more than six inches distance from his feet. At his right elbow sat Hudson Maxim, inventor of smokeless powder. On the opposite side of the room stood one of his associates, who was invited by Dr. Hutchison to come nearer if he desired to witness the test.

"I'm quite close enough," said the invited member, while the others in the room held their breath in suspense.

When Dr. Hutchison let go, it was difficult for the silencer-trained ear of Mr. Maxim to detect the report. He was asked afterward what he thought of the gun, and admited that it was a remarkable demonstration. Mr. Maxim received from Dr. Hutchison an explanation that the report was eliminated by the confinement of the expanding gases to the chamber from which the projectile had been ejected. Some kind of ingenious escapement permitted of the discharge of the gases, which made a noise like a prolonged hiss.

Mr. Maxim admitted, however, that he did not foresee any great possibilities for the gun as a weapon of war. He did predict that it would find innumerable usages in the industrial arts.

The weapon was the invention of John Temple, a British subject, who discovered the principle in 1915, and really developed it after coming to the United States later on. He first came to this country in 1888, and returned to his native country at the beginning of the war, when he had an opportunity to study practically every type of gun used by the Allies.

First Made Pneumatic Tools.

For years he had been at work developing pneumatic tools manufactured eventually by the Ingersoll-Rand Company, among them being the Temple-Ingersoll electric rock drills and tools of various descriptions. The perfection of his remarkable gun was brought to the attention of William L. Saunders, Chairman of the Board of that Corporation, who, during the war, was head of the Naval Consulting Board, to which, for a time were submitted all the inventions offered for possible use against the Germans.

Mr. Saunders was impressed with the idea worked out by Mr. Temple and referred him to Dr. Hutchison, who also was connected with the Navy Consulting Board. Dr. Hutchison interested himself in the invention with the belief that its possibilities as a tool of construction ultimately would prove to be of more importance than its powers for destruction.

The weapon was demonstrated in the offices of Dr. Hutchison at a gathering of inventors and newspaper men, brought together by the announcement of the formation of Miller, Reese, Hutchison, Inc., recently organized under New Hampshire charter. This is an organization of inventors, engineers, scientists and others who propose to investigate and develop worthwhile inventions through co-operative efforts.

Among Dr. Hutchison's associates are Sir Edgar Rees Hones, M. P., of London, former Chief of the Priorities Division of the British Ministry of Munitions, who is a European Director; Hudson Maxim, Rear Admiral Samuel M. McGowan, U. S. N., retired; William M. Williams, former United States Commissioner of Internal Revenue; Alfred D. Flinn, Deputy Chief Engineer in the construction of the Catskill Water Supply; F. D. Carney, consulting engineer and metallurgist; George E. Dean, patent expert; Richard B. Scandrett Jr., attorney, and Embury McLean, treasurer of the engineer company.

Dr. Hutchison also announced that he had about completed an invention which would enable 50 to 60 per cent. of the deaf mutes in institutions in this country to hear and ultimately to learn to speak. A man whose wealth was estimated by Dr. Hutchison at $150,000,000 is interested in his proposal to found an institute for this purpose.

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