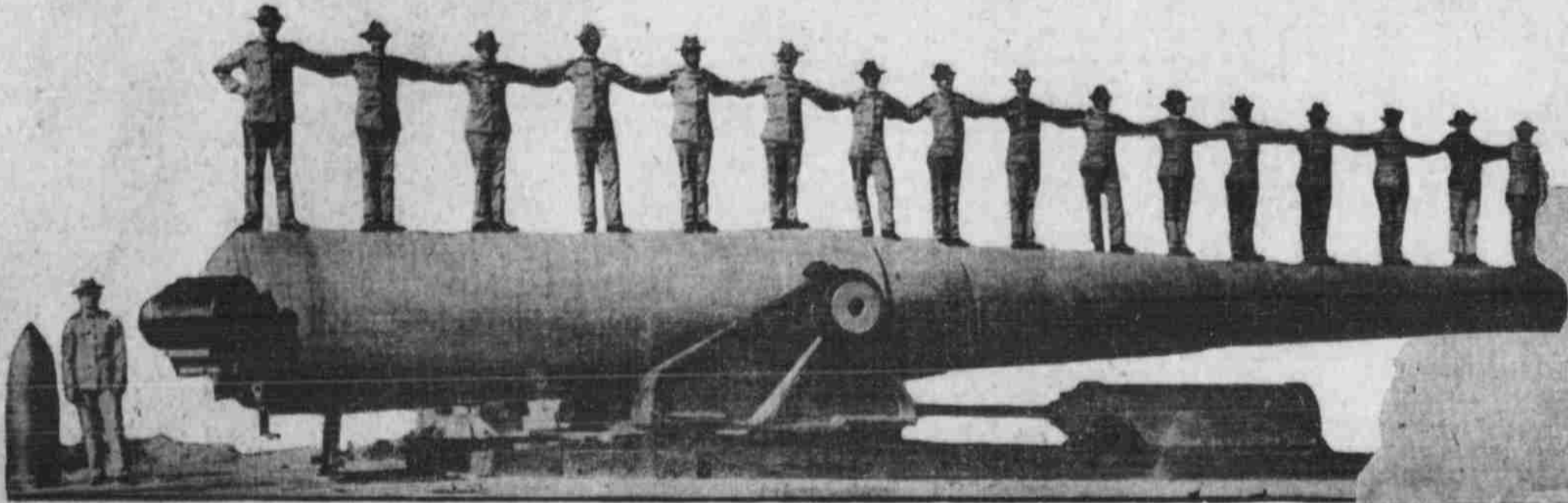


BIGGEST GUN ON EARTH! IT'S OURS



Remarkable Picture of the New Monster 16-Inch Coast Defense Gun and Its Crew. Photo Taken at the Testing Grounds of Sandy Hook.

The First of the New Coast Defense Monsters Arrives in New York Harbor and is Being Tried Out to See if the Giant Will Do All That is Expected of It

THE biggest gun in the world has just arrived in New York harbor. It is being nursed and petted and encouraged and tried out to see if there is anything wrong with it and to make sure that it will do all that it is expected to. This is the first of the giant coast-defense guns which will eventually be scattered around the harbor defense of our big coast cities and the Panama Canal.

It is the biggest gun ever constructed. Some of the great German cannon are of slightly larger calibre, but they are mortars, a different kind of weapon, and do not weigh nearly so much.

There are to be many of these huge guns, according to the War Department's present plans. Seven of them are to be mounted in the forts that guard the entrances of the Panama Canal. Just how many will be provided for the coast defenses of the United States proper is as yet a government secret; but an official board quite a while ago reached the conclusion that eighteen should be mounted for the protection of New York City. Also it recommended that ten should be placed at San Francisco, eight at Boston and four at Hampton Roads, to defend the entrance of Chesapeake Bay.

It is now fully realized that the 12-inch guns which furnish the major armament of our seacoast fortresses are not powerful enough. A battle-cruiser of the Queen Elizabeth type could take up a position beyond reach of their projectiles and, with her rifles of superior range, destroy a large part of New York.

Evidently, then, our forts must have bigger guns. The new ones (of which the giant just arrived at

Sandy Hook is a type) will be of sixteen-inch calibre, and will throw an explosive projectile eight miles farther.

An idea of the enormous size and effectiveness of this new gun is best conveyed by comparing it, point for point, with the twelve-inch weapon.

The twelve-inch gun is forty feet long. The length of the sixteen-inch breech-loading rifle is nine inches short of fifty feet.

The twelve-inch gun weighs fifty-seven tons. The weight of the sixteen-inch monster is 130 tons—more than twice as great.

The twelve-inch gun throws a 1,000-pound shell thirteen miles. The projectile discharged by the sixteen-inch gun weighs 2,400 pounds and is thrown twenty-one miles.

The firing charge of the twelve-inch gun is 520 pounds of smokeless powder. For the sixteen-inch gun it is 666½ pounds.

The shell of the twelve-inch gun carries an exploding charge of sixty pounds of high explosive. That of the sixteen-inch gun carries 150 pounds.

It may be added that the projectile discharged by the sixteen-inch rifle, weighing more than half a ton, is nearly as tall as a man—when stood on end—or, to speak with exactness, five feet 4 inches high. At a distance of three miles it will strike with an energy of 90,000 foot-tons—enough, as it is reckoned, to smash a battleship at one blow.

The monster gun here described was built by the War Department at Watervliet, N. Y. Thence it was sent a while ago to Sandy Hook. From Sandy Hook it was recently shipped back to Watervliet, in order that it might receive some minor alterations and improvements, particularly in respect to the firing mechanism.

This being accomplished, the gun

was sent to Watertown (near Boston), where the Government maintains what it calls a "carriage factory"—meaning by that term an establishment for making gun carriages.



mortar is thirteen feet long, uses a powder charge of 105 pounds, and throws an 800-pound shell over five miles. One such projectile landing on the deck of a dreadnought would be likely to put her out of action.

A Projectile Shot from the New 16-Inch Gun at Sandy Hook Could Shatter the Largest Building in New York City, 14 Miles Away and Likewise Could Destroy the Largest Battleships in the Fleet of an Invading Enemy.

There it was placed upon the carriage which had been newly made for it, and subjected to a "shop test," to make sure that gun and carriage would work together properly, and finally (a few days ago) the carriage and gun were shipped to Sandy Hook.

A train of specially constructed flat-cars was required for their transportation; and orders were issued by the railroad officials to have all lights in the Hoosic Tunnel extinguished while the war-freight was passing through, lest the presence of such great masses of steel cause a short circuit and set fire to the train.

On reaching Sandy Hook, the gun was placed on its carriage, with the help of powerful machinery ready at hand, and thus made ready for the "firing test." It must be fired several times, to be sure that nothing is wrong with it, and then no time will be lost in forwarding the giant weapon to the isthmus.

Inasmuch as fifty shots will wear the gun out, through destruction of its rifling by the enormous powder pressure, the test firing will be carefully economized.

From the wharf at Sandy Hook the gun and carriage will be transferred by a wrecking derrick to lighters, which will convey them to the Brooklyn Navy Yard, where huge cranes will pick them up and place them on the deck of a freight steamship. Lashed fast to her deck, as a precaution against damage in a possible storm, they will make the voyage to the Atlantic terminus of the Panama Railroad, at Colon. The railroad will carry them on flat cars across the isthmus and the gun will be mounted in an emplacement of one of the forts at the Panama end of the canal. In order to realize the size of the transportation job, one should understand that the war-carriage of the giant gun weighs something like 450 tons. It is of the "disappearing" type (built at a cost of \$125,000), and its counterweight alone—by the help of which the weapon is lowered and raised between shots—is a bit heavier than the gun itself.

The constructional ingenuity of this carriage may be judged from the fact that it must endure, without breaking or straining any of its parts, the most tremendous explosive shocks, meanwhile, between shots, lowering the gun eight feet to the loading position and returning it to the firing position. It must do this rapidly, certainly, and easily, by mechanism not liable to get out of order and readily operated by the average soldier. The performance is comparable to that of a 50-ton locomotive and tender, running twenty miles an hour, which should be required to come to a full stop within sixteen feet, or one-third of its length, yet so easily and gently as to suffer not the slightest jar.

The force of the explosion each time the gun is discharged is better realized when it is explained that its firing load of smokeless powder (666½ pounds) is equivalent, in energy developed, to 1,225 pounds of ordinary black powder. One can easily imagine what eighteen such guns could do for the defense of New York, or ten of them for that of San Francisco, against a hostile fleet—especially in view of the fact that, as reckoned by experts, one gun on land is equal to six on ships, calibre for calibre, owing to better protection and steadiness of platform.

This wonderful sixteen-inch rifle, emplaced at the Battery, on the south end of Manhattan Island, could throw shells far beyond New Rochelle on the Sound, Tuckahoe and Hastings-on-the-Hudson would be within easy range. Its shells would pass far above Staten Island and fall half a mile beyond Atlantic Highlands. Perth Amboy could easily be wiped off the map, and residents of Montclair might hear the huge projectiles roaring overhead, to fall three miles distant in the valley beyond. Paterson would be within easy reach, with four miles to spare.

With a range of twenty-one miles a projectile from this gun would mount nearly six miles into the air, reaching a height of 30,516 feet—an altitude at which no human being can get enough oxygen for his lungs to keep him alive.

If Pike's Peak (14,983 feet) were placed on top of Mont Blanc (15,779 feet), midway between the Battery and Hastings-on-the-Hudson, the projectile fired from the Battery would land at Hastings after passing clear over them both with 654 feet to spare!

The giant gun is to be mounted at the Pacific end of the canal, because that entrance is deemed more open to attack by a hostile fleet than the Atlantic entrance. The forts there located have been built on four islands, most conveniently situated for the defensive purpose, which were purchased by the War Department from the Pacific Mail Steamship Company.

On each of these islands is a fort, and each fort will be provided with one sixteen-inch gun of the type here described. The islands have been connected with each other, and also with the mainland, by causeways of solid concrete. In fact, as designed, the four forts are integrated into a single system, and even if an enemy were to capture one of them he could be driven out by concentrating the guns of the others upon it.

On the sea-frontage of each island an inclined plane of concrete rises from the shore with a long and low slant toward the mainland. This is covered with several feet of earth, turfed so as to present the appearance of a greensward. No casual observer would suspect that beneath there are concrete-lined pits concealing formidable guns. Each fort consists of several such gun-pits. It is a series of holes in the ground, with the landscape for a roof; there is nothing for an enemy to shoot at. There will be in each fort several fourteen-inch guns—very formidable weapons, corresponding in size and power to the largest rifles carried by our battleships. In the rear of the ordinary gun-pits, furthermore, will be, on each of the four islands, a battery of four mortars, similarly emplaced. They are short rifled guns of twelve-inch calibre meant for high-angle firing, and to see them an enemy would have to be in a balloon. Such a

The forts at the Atlantic entrance of the canal are three in number, and are situated on the mainland. In other respects their arrangements and armament are much the same. Each of them is to be provided with one giant sixteen-inch rifle.

The seven huge guns thus provided for the defense of the Panama Canal would alone be sufficient to "stand off" the most formidable fleet. Constructed, as they are, in accordance with the very latest military ideas, and armed as they will be, the forts here described are expected to be practically impregnable. That they will ever be captured by attack from the sea is not for a moment to be imagined.

The danger lies in the possibility of attack by an army landed by an enemy a few miles up or down the coast. It is a peril that would be quickly made real if, through the defeat of our fleet, we lost control of the sea. Another danger is from military or naval aeroplanes—one well-aimed bomb would knock a gun and its carriage into a scrap heap.

The Size of a Charge of Powder and Shell for the New Gun Compared to a Man

