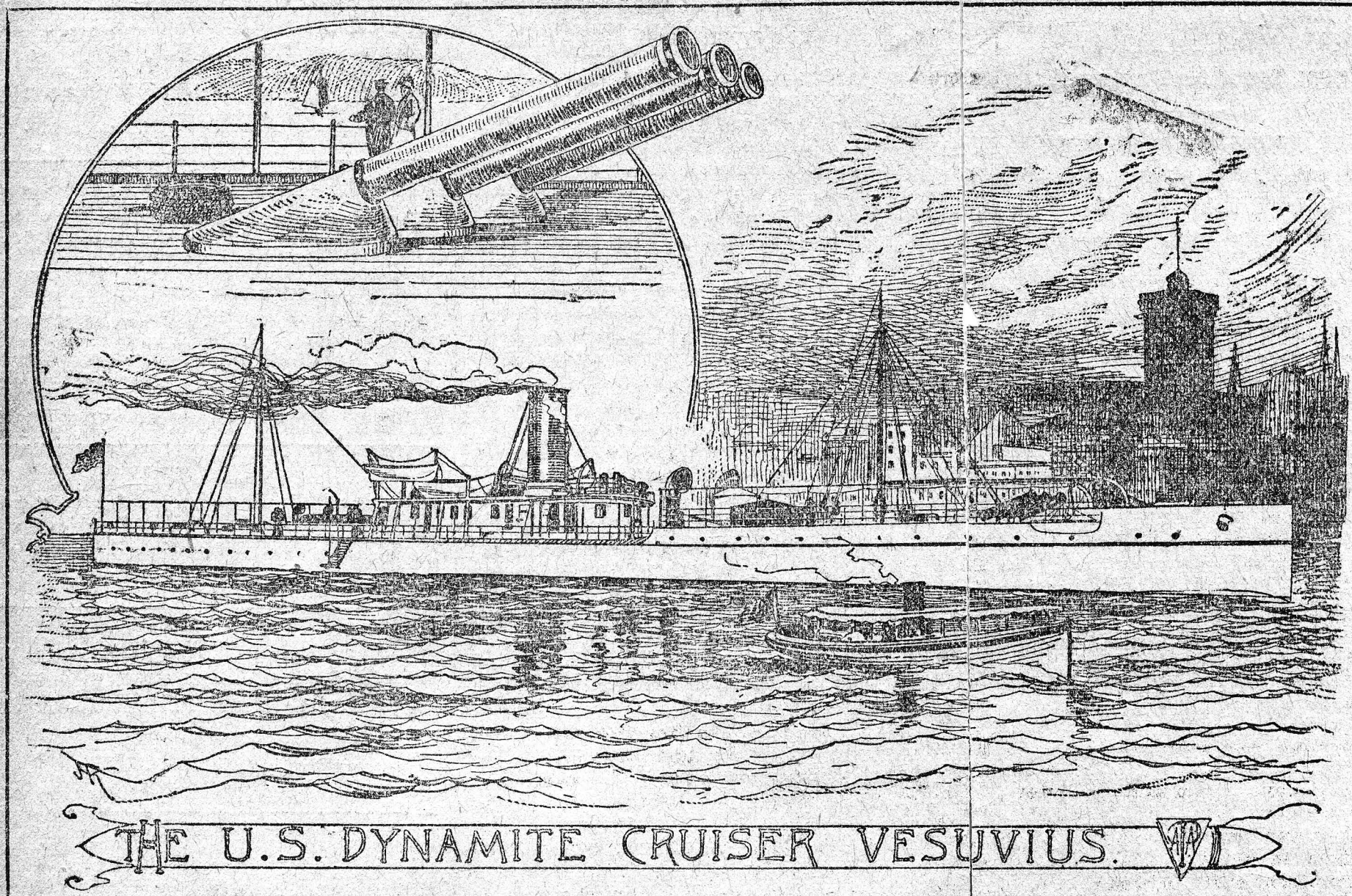




TO THROW DYNAMITE.

TEST OF THE NEW GOVERNMENT CRUISER VESUVIUS.

Throwing Five Hundred Pounds of Explosive One Mile a Minute and Keeping it up for a Half Hour Has Already Been Accomplished.

NEW YORK, Jan. 4.—The United States dynamite cruiser Vesuvius has left this port for Port Royal, S. C., when she will endure a three weeks' test. It is expected that this test will show a great advance in the means of American naval warfare. The Vesuvius was launched on April 26, 1888, at Cramps' shipyard, and was commissioned in 1890. She is 246 feet long, has twin screws and a displacement of 950 tons. From the start she was a marked craft. Italy asked the Cramps about the cost of one like her. Spain made official inquiries about her. France sent an admiral to inspect her, and two or three sets of Japanese officials have tumbled all about her in their examination of her engines and guns. In addition to her torpedo guns she carries three three-pounder rapid fire guns. A more innocent looking warship was never floated. Take away the three great torpedo tubes that look like ventilators bent over in her bow, and she would do very well for a yacht of great speed and peculiar design.

It has been proved, however, that this gentle looking craft, if lying at the Battery, could drop 15,000 pounds of gun cotton or dynamite in city hall square in thirty minutes, hurling thirty cartridges, each containing 500 pounds of explosive,

through those ungainly tubes at the rate of one a minute. Each of these so called dynamite guns is 55 feet long and 15 inches in diameter. They protrude through the deck fifteen feet. They are absolutely fixed, and cannot be lowered or raised or swung about. To change their direction of fire the bow of the vessel must be shifted. The distance of the range of fire must be regulated by the amount of compressed air released at the base of the gun—a great amount for a long distance and a smaller amount for a shorter distance.

Each gun has a capacity of shooting ten projectiles, which are stored in revolvers, two for each gun. The only way of loading the guns is to slip the projectiles down the muzzle of the gun and then push them forward into the revolvers, five in each revolver. When a gun is to be fired the lowest section of the tube is dropped, a cartridge or projectile is pushed into it by machinery, the tube is lifted, the signal given, and the man in the conning tower pulls a lever, and away the projectile goes to a distance of a mile or less, according to the amount of compressed air released behind it.

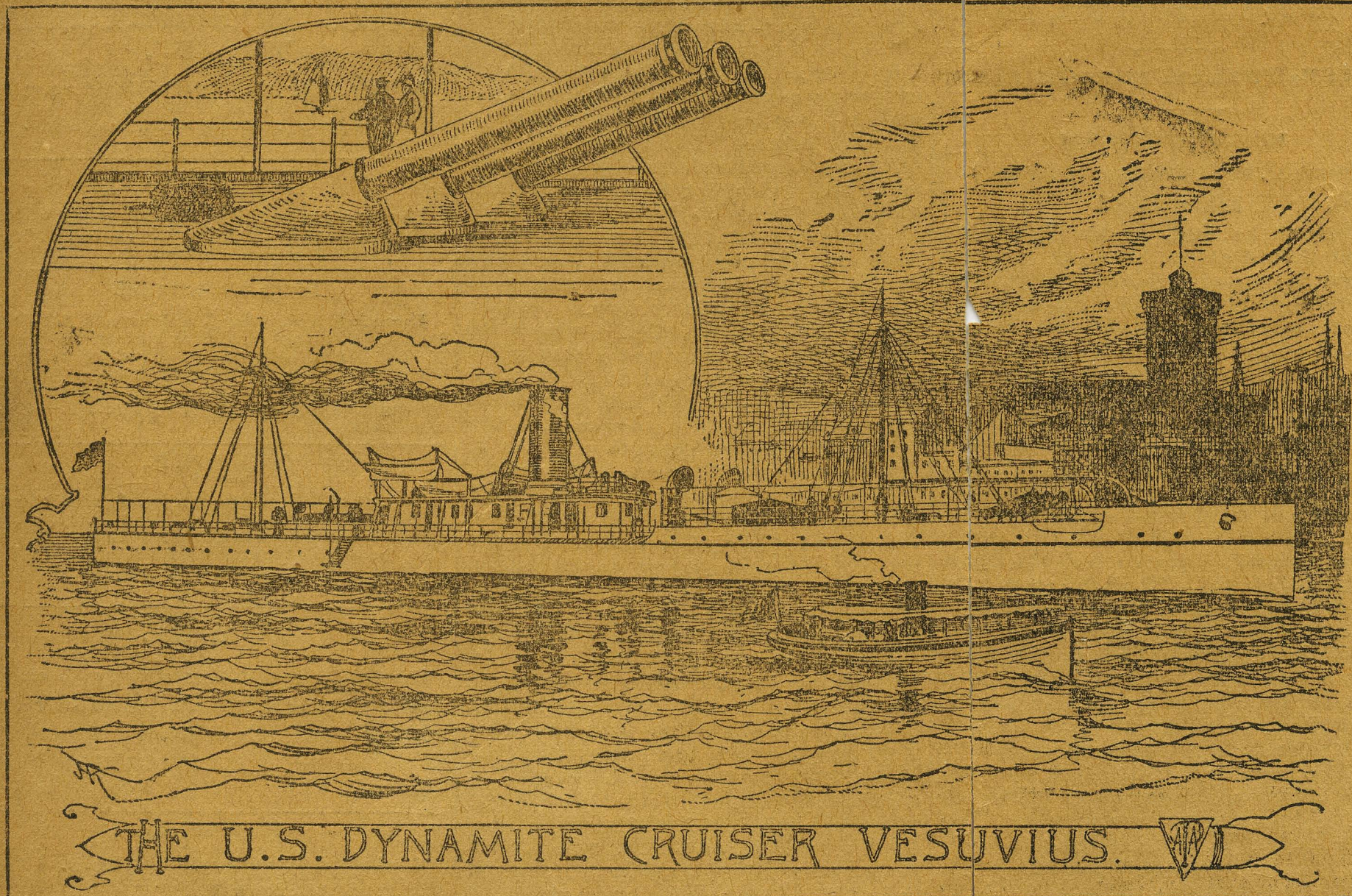
The loaded projectiles that the Vesuvius threw in March, 1890, each contained 500 pounds of gun cotton. They were 8 feet long and 10½ inches in diameter. In the air they looked like iron cigars darting through space in a horizontal line about two hundred and fifty feet high, the pointed end first. By a safety arrangement it is impossible for the cartridge to explode until after a flight of a given distance, say an eighth of a mile. The standard projectile will contain only 200 pounds of explosive, will be 8 feet long, 10 inches in diameter and will weigh about five hundred pounds. Two hun-

dred pounds of explosive will do as much damage practically as 500 pounds. Gun cotton is used rather than dynamite, because it is safer, does not disintegrate and has an equal if not greater rending force.

When the airguns are fired there is a sharp bark, like a crack of light thunder near by, a puff of vapor comes out of the gun, and as it vanishes, instead of rolling away like smoke, the eye catches sight of the projectile in the air about 100 yards from the gun's mouth. It is pointed upward, but almost immediately takes a horizontal position, like a "liner" from a baseball bat, and in 10½ seconds goes a mile. The projectile may be seen easily from a distance of two miles along its whole flight. Just before it reaches the end of its course it dips and explodes upon impact or at a certain number of seconds after impact.

In the trial on the Delaware the first projectile went 200 yards beyond the mile in eleven seconds. It was timed to explode ten seconds after impact. It sank into the river's mud before it exploded. There was a roar, and then a great mass of water raised itself like a floating steel colored mountain or iceberg 300 feet high.

Port Royal has been selected for the coming tests because there is little commerce in the harbor, and the weather is more likely to be favorable than it would be farther north. If the Vesuvius does score the hit that is desired, it is probable that the board will declare her more fit for harbor defence than for general aggressive fighting. She will be a moving fort of high explosive torpedo guns, capable of changing her base swiftly and of terrifying an enemy stealing into a harbor far more than a battery of guns would if mounted on land.



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