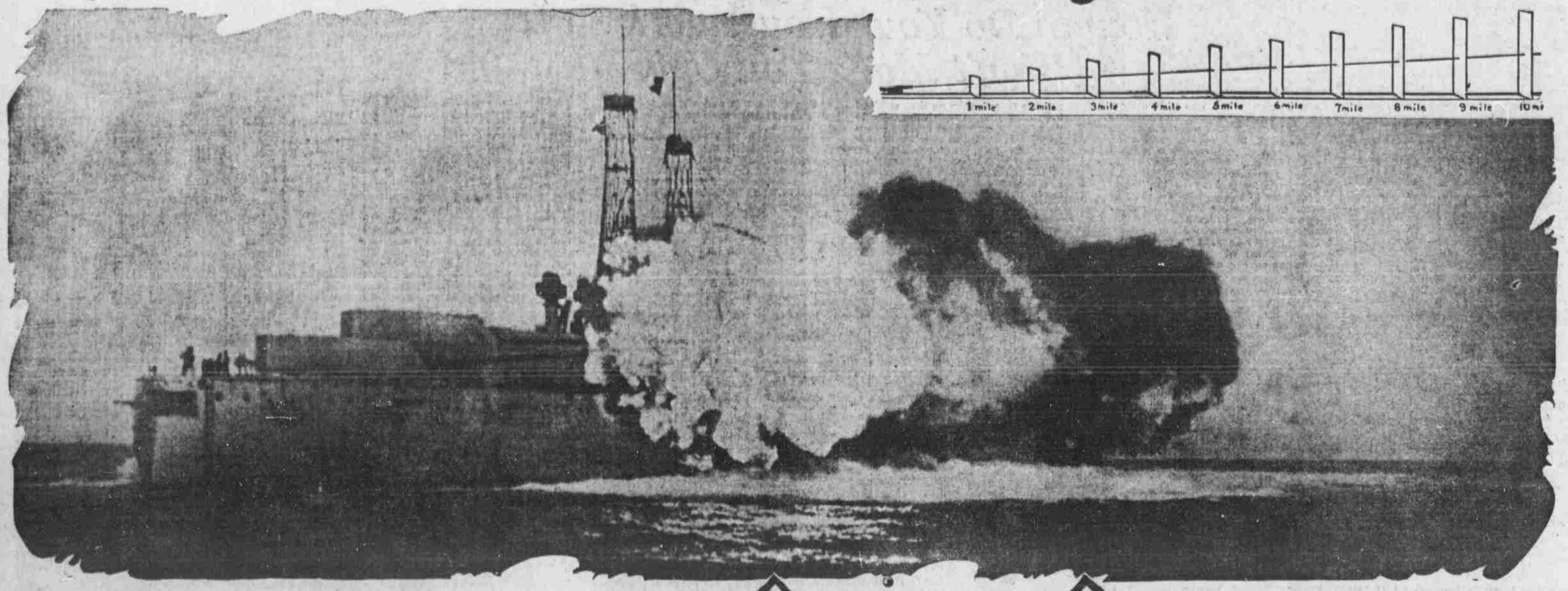
How We Smashed the World's Big Gun Record



One of the Most Remarkable Photographs Ever Taken, Showing the Dreadnought Arkansas Firing a Broadside of Big Guns During the Recent Target Practise Off the Virginia Capes, in which the World's Big Gun Record Was Made. The Diagram Shows Why the Record, which Was Made On a Small Target at One Mile, Was as Good as if it Had Been Made at Ten Miles on the Larger Targets Used for Longer Ranges.

THREE years ago the gunners on board the battleship New Hampshire fired four twelve-inch shells at a moving target six miles distant and scored four hits. This feat was accomplished in one minute and thirty-six seconds. The achievement was regarded as phenomenal. It broke all previous records of our own gunners, and no foreign gunner ever came anyway near such a score.

A few weeks ago, during elementary target practise off the Virginia capes, the gunners on the dreadnought Arkansas made an even more remarkable record. Firing at a moving target only twelve feet high and twenty-one feet wide, the target moving at the rate of five knots and the battleship at ten knots, one of the big twelve-inch guns fired six shots in fifty-seven seconds and scored six hits!

While the range was only a little over a mile in contrast to the range of six miles in the case of the New Hampshire's previous record, the target was proportionately smaller, and the achievement of the Arkansas' gunners is therefore regarded as clearly establishing the world's record for rapid deepsea big gun firing at a moving target.

The full significance of this feat will be better understood when it is remembered that the test was started with the gun unloaded. At a given signal shell and charge were brought from below and served to the gunners in the turrets, the guns were served and trained on the target, and when the range was determined and the psychological moment for the discharge of the gun arrived the word to fire was given and the first shell was sent crashing at the moving target over a mile away.

Almost before it reached its goal, the big gun, still reverberating from the shock of the last discharge, was loaded again with a fresh charge of powder and shell, again the distance of the target, the velocity of the wind and the various other factors upon which accurate shooting depends were determined and the word to fire was given a second time. Again the shell sped true and found its mark. Five times this feat was repeated, and the total time which elapsed from the moment the gun was supplied with its ammunition for the first shot until the sixth shot was fired was less than a minute—to be exact, fifty-seven seconds!

Such rapid work as that would, of course, have been out of the question but for the perfect team work which characterizes target practise on board our battleships. Not only the men participating in the actual firing of the guns but every soul on board is, to a certain extent, concerned in the general result. Even the cooks, stewards, barbers, musicians and other members of the ship's complement who might otherwise be regarded as supernumeraries, have more or less important functions to perform during target practise. Each occupies what is known as his "battle-station," and the slightest deviation from what is expected of even these minor operatives may directly or indirectly result in reducing the efficiency of the gun crews and spoiling the general result. Shooting straight on a battleship is the work not merely of the turret crew but of the whole ship's complement. They constitute a single team.

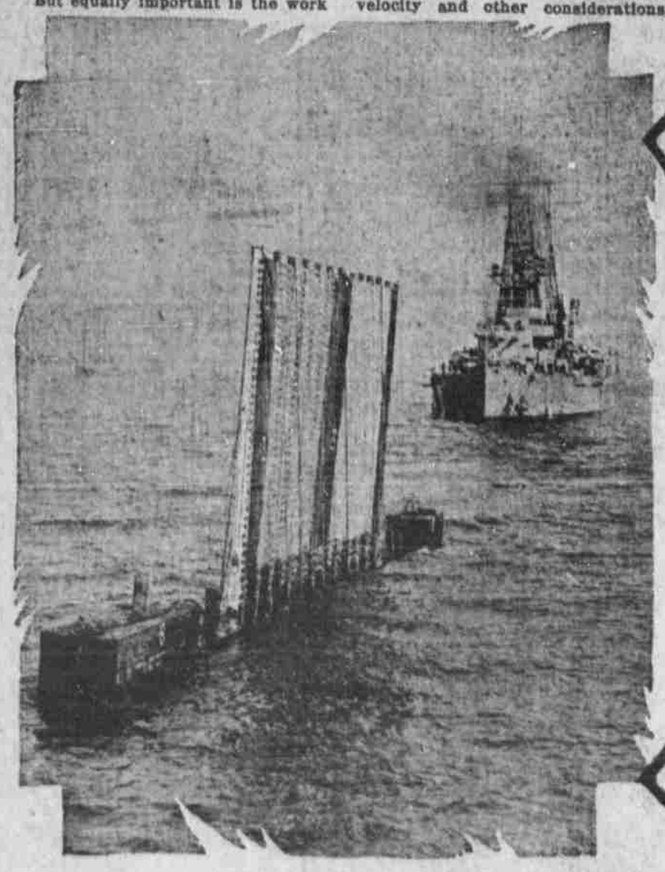
Of course, the function of the sight-setter is of the utmost importance. Unless he sets his sight accurately, the gun-pointer's work counts for nothing. The sight-setter receives his directions from the "spotters" of the fore-control party stationed in the cage-like masts which distinguish American battleships from those of other nations. These "spotters" watch the splash, or fan, of each shot and order an increase or decrease in the distance for the shot which follows.

But equally important is the work of the gun-pointer, who follows the target in his telescope, and of the gun trainer, the man who swings the turret right and left, always following the target.

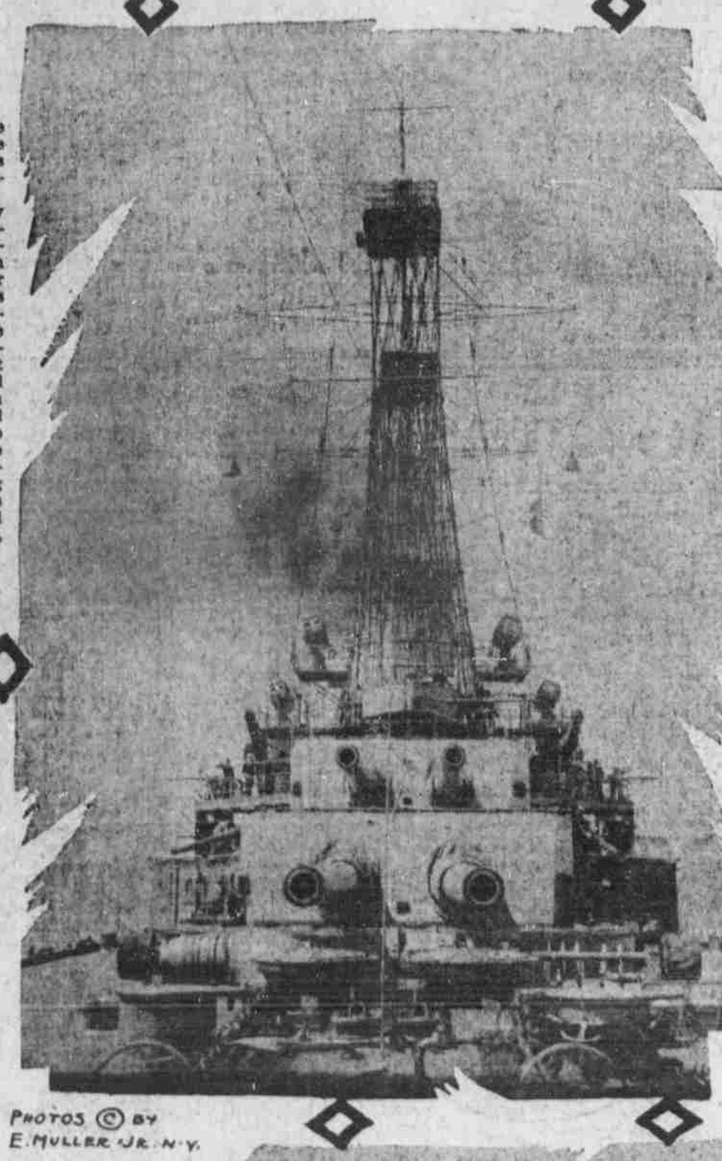
To return to the record made by the Arkansas, the fact that the distance was only 1,800 yards compared with the range of six or seven miles, in the case of the regular Winter battle practise tests, does not in any way diminish the excellence of the score. It is a simple matter to demonstrate that the gunner who can hit a target twelve feet high at a distance of a mile would be able to hit a target 120 feet high at a distance of ten miles, provided the charge was powerful enough to send it that distance, and in the regular battle practise the larger targets are used. Of course, in firing the greater distance, allowances would have to be made for wind velocity and other considerations, but such computations are readily settled.

For the purpose of target practise special shells, known as "blind" shells, are used. A regular twelve-inch shell costs from $225 to $250, and a full charge of powder to fire it costs about $203. But the special shell used for target practise costs only $36 and the powder used to send the shell a distance of a mile or so costs only a little more than $100. To establish the world's record cost the Arkansas, by actual computation, just $966.

The powder used for these tests, while perfectly good for immediate use, is of the kind which has about lived its life and which would, within a few months, so deteriorate as to become worthless.



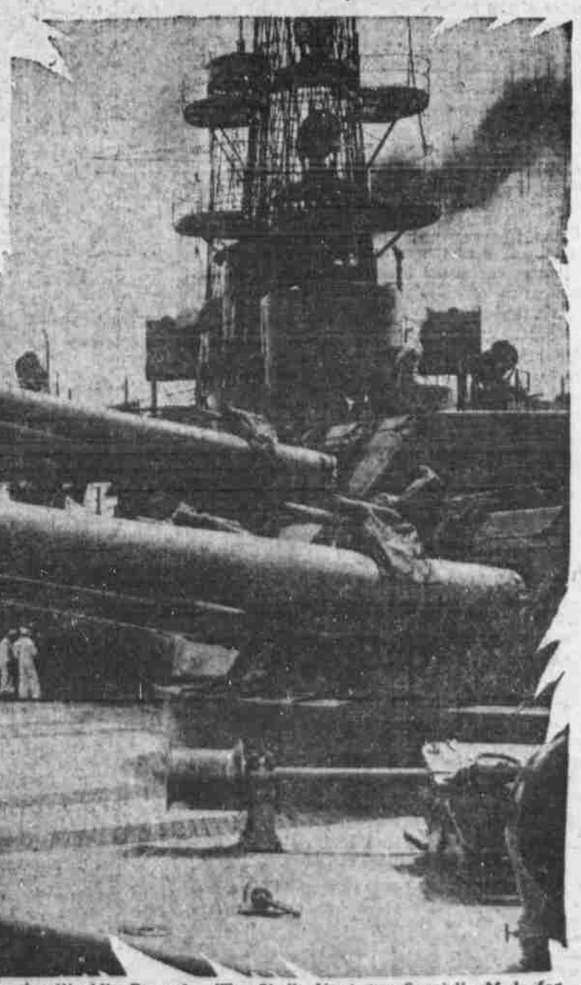
This Is the Target, Only Twelve Feet High and Twenty-one Feet Wide, Which Was Struck Six Times in Fifty-seven Seconds by Six Shells Fired from a Single Twelve-inch Gun. The Remarkable Feature About This Feat Was That the Target Was Moving at the Rate of Five Knots and the Arkansas at the Rate of Ten Knots When the Shots Were Fired.



PHOTOS © BY E. MULLER JR. N.Y.

The Fighting Mast on Board the Arkansas. These Fighting Masts Are Characteristic of the American Navy. They Are Made of Soft Steel and Are Constructed in Such a Way That Three-fourths of Them May Be Shot Away Without Demolishing Them. The Fighting Mast Is One of the Most Vital Parts of a Battleship. It Is from This Vantage Point That the Firing of All the Big Guns Is Controlled.

Remarkable Photographs Showing How the Dreadnought Arkansas Hit a Twelve-foot Moving Target a Mile Away Six Times in Fifty-Seven Seconds



The Big Twelve-inch Guns on Board the Dreadnought Arkansas, Which Made the World's Record. The Shells Used Are Specially Made for Target Practise. They Are Called "Blind" Shells. The Powder Charge Costs Considerably Less Than That Used in Actual Warfare.

Why Twins Grow Faster and Better

RECENT scientific investigations seem to establish the fact that twins or triplets brought up together will each grow faster and better than one child brought up alone.

In the case of various small animals with which interesting experiments have been made it has been found that they grow much more rapidly when not kept separate. One investigator believes this may be due to the fact that two or more little animals cuddling close together do not have to develop so much bodily heat as if they were kept alone, and are therefore able to turn more of the energy value of their food into growth.

Another theory is that the faster growth is not a matter of heat, but simply due to the fact that animals brought up together are less restless, sleep better and are more comfortable generally.

As one scientist points out, the cuddling theory would hardly apply to twins or triplets brought up in homes where their bodies are kept at a proper temperature by artificial means.