

He is a Wizard, With Science For His Confederate.

WONDERFUL BATTERY WORK.

Amazing Results Achieved by Our Coast Defense Experts and the Bewildering Array of Apparatus by Which Accuracy of Fire is Attained.

The war department makes little noise about the condition of the coast defenses. Such activity as one sees about the fortifications reveals little.

Gunnery has shared in the modern tendency to specialize and to become highly scientific in its practice. Gunners are now specialists. A battery is a highly organized mechanism, working almost automatically.

Hitting the target has become almost an exact science. By mechanical means the striking of a target has become so nearly an infallibility that the tugs which tow the floating targets are separated from them by only 600 feet of line.

What is done by the guns in some of our forts is illustrated by what has recently been accomplished at two of the forts along the Atlantic coast. At Boston a target four and a half miles from the fort and moving along the horizon at the rate of five miles an hour was struck by every shot fired from a ten inch battery in less than four minutes.

Battery Parrott, at Fort Monroe, recently was called upon to fire at a moving target an unknown distance away. Actually it was about three and one-half miles away.

One of the firing tests is called "fire command." In this test the gunners are expected to change the fire from one target to another of the three in the string as directed and hit it without changing the speed of the fire.

A gunner of the old school would turn gray if he had suddenly to adapt himself to the new methods in the face of the enemy. Hair line telescopes, surveying instruments, barometers, thermometers, anemometers, weather vanes, tide gauges and stop watches are required to secure the requisite results.

The effect of all of these factors in the combination under all possible conditions has been worked out by experiments and computations and the result utilized in devising apparatus which automatically registers the in-

formation which is essential at such speed that half a dozen half ton shots can be thrown into a ship from a single battery in the space of less than four minutes. The "drift" of the shot is the distance to the right which a revolving projectile from a rifled gun will go in the course of a given distance.

The gunner may have all the knowledge of what to do when a hostile ship appears and know exactly what his gun will do under any given condition, but there are two things which cannot be learned until the exact moment when the gun is to be fired. One is the direction in which the gun is to be pointed, and the other is the amount of elevation or depression which must be given the muzzle in order to have the shot reach the exact spot where the vessel will be when the shot may be expected to reach there.

This permits right and left corrections to be made in sighting the gun after the range has been determined. The amount of elevation which is necessary in order to make the shot "carry" to the exact spot where the enemy will be is "set off" at the gun by means of another mechanism.

A hostile warship is seen in the offing. The two surveying instruments are turned upon it from their respective angles, while the gunner takes his place at the telescope attached to the gun. Others are busily engaged in loading the gun.

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AN ALLIGATOR'S TAIL.

The Muscles of This Wonderful Organ Are Like Springs of Steel.

In whales the tail is set transversely instead of vertically. The reason for this is concealed in long ages of evolution. Fishes have always been as they are now, aquatic, but the ancestors of whales and dolphins lived on dry land, where they crawled about on four good feet.

The sting ray and certain other fishes have a sharp, poisonous spine in the tail with which they can inflict a severe wound, but in the case of the alligator it is by sheer brute force that the tail is useful for defense.

In Mexico I once grasped a three foot iguana by the tail, and I had my strength tested to the utmost to hold on for a single minute. Then, without warning, the great lizard went one way and I the other.

When alarmed their first act is to dive for their holes, but when an eagle is making the attack the swiftness of its flight sometimes intercepts the lizard, and the bird of prey seizes the long tail which is the last visible part of the iguana.

This Time the Lawyer Scored.

A lawyer appeared before one of the New York city boards asking that damages be awarded to certain clients because of a change of grade in their street.

The Honest Chinaman.

You soon learn in China that you can trust a Chinaman to carry through anything he agrees to do for you.

What a Knot Is.

Probably there is no nautical term more frequently used than the word "knot." The word is synonymous with the nautical mile, or 6,080.27 feet, while, as every one knows, the geographical mile is 5,280 feet.

WINTER BUTTERFLIES.

A Hardy Brood For Which Frost and Snow Possess No Terrors.

Coming in one day from a walk in a heavy snowstorm, I dropped upon the evening table some triangular brownish bits that looked at first sight like flakes of dried bark.

Such a reply with a foot of snow on the ground and great probability of a foot more before morning was accepted as a pleasantry and not to be taken seriously. The idea of catching butterflies in a snowstorm seemed too "fishy" for serious consideration.

These insects pass the winter both as chrysalis and as mature butterflies. Normally they remain in the chrysalis form only about two weeks, but it is probable that the severe cold overtakes some before they are fully developed.

COURTING DEATH.

The Work of the Mounted Police of Canada in the Northwest.

The Northwest policeman's first duty is to die if that should be necessary. He is not allowed to shoot a desperado, go up, sit on his carcass, roll a cigarette and then read the warrant.

Numbers of the force have been known to ride or walk into the very mouth of a cocked .45 Colt and never flinch. In about ninety-eight cases out of every hundred the man behind the gun weakened.

Warm Shoes

for cold feet. We have them in all kinds.

A full and complete line of Good Warm Slippers.

Felt Sole Slippers make a present that will be appreciated.

We have anything in the Shoe line that you may need.

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OUR

WHITE SALE

Will be Continued Two Weeks Longer, as so many people have asked us to keep it up, we will do so. The stock of white goods has been getting stronger every day.

72 inch bleached table damask, quality \$1.75, sale price \$1.25 per yard—Napkins to match

72 inch bleached table damask, quality \$1.50, sale price \$1.00 per yard—Napkins to match.

Special lot of Napkins, handsome design, in assorted patterns.

Bleached damask Napkins, 22 and 23 1-2 inch square, real value \$5.00 and \$6.00 per dozen. Sale price \$3.50 and \$4.50 per doz.

90 cent bleached damask, sale price 75 cents per yard.

No space to give you full description of Towels and Toweling, Sheets and Sheeting, Pillows by the pair or the muslin by the yard, Waistings, etc., etc.

The cold weather has given a fresh call for winter goods.

All Ladies', Misses' and Children's Coats at less than manufacturers cost.

Winter Suits and Overcoats for Men and Children at manufacturers cost.

In addition to these special sales we are showing the new styles in early Spring and Summer Dress Goods, Silks and Wash fabrics, Waists and Wasting. Give us a chance to show you the entire stock of special sale values.

The New Early Spring Dress Goods Novelties and Trimmings.

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