

tral American ruins and to the four manuscripts or books preserved in the European museums. Combinations of straight lines and dots are strong proof of the southern origin of the manuscript. There have been several fraudulently sculptured stones found in the United States, but they are all totally different from this, and do not appear either aboriginal in concept or execution.

"I have sent the box and the birch bark to the Smithsonian Institution at Washington for further examination, with a request for an opinion as to their meaning and age. Whatever may be said the find is one of great interest and value to the archaeological world, and there is every indication that it points to an exploring party sent north from the Aztec country."

"WARREN K. MOOREHEAD,

"Curator Department of Archaeology, Ohio State University."

The most generally accepted belief concerning the Aztecs has been that they came from some portion of Asia. It is supposed they made their advent into Mexico about the year 1130. For from that time or soon after their history seems to have been interwoven with that of the Toltecs, a race of people who seem to have left records of history before the Aztecs began to make evidence of theirs, although the latter are declared by archaeologists to have antedated the Toltecs in point of residence in Mexico.

Owing to the indefiniteness which has enshrouded the origin of this remarkable people there has been any amount of discussion and controversy among scientists learned in archaeology as to the origin of the Aztecs. While the belief previously stated, that this race had its birth in Asia, was widely cherished there were many who differed from the statement that it was immediately from Asia that the Aztecs came who settled Mexico. These scientists held that no matter where this people came from in the first place they had previously to entering the borders of Mexico found residence in other portions of the North American continent.

Some declared the Aztecs found their way to America from Japan. It certainly is true that every year at least one Japanese junk drifts from a point close to the shores of Japan to the California coast. Instances of this sort have been known where the Japanese fishermen who composed the crew of the junk when she started on her voyage have lived to tell their strange experience. Therefore science has held that in some such manner as this the original North American Aztecs reached these shores. No one has attempted to explain how they managed to extend their wanderings according to what several archaeological discoveries have indicated, but there seems to be scattered evidence, brought to light at rare intervals, of the residence in various portions of the country of members of the Aztec race in fairly good numbers.

All this has, of course, been very largely theory, because the authenticity of the evidence referring to the Aztecs has been frequently denied. At last, however, there seems to be something tangible in this Iowa discovery. That a mere workman should be able to counterfeit the Aztec characters and all that goes with them, of course, an impossibility. The peculiar formation of the characters referred to shows, as Professor Moorehead states, that they were not the product of the skilled hand of a scholar of any tribe of the red Indians. Only the Aztec himself or some one of modern days well learned in the Aztec hieroglyphics could have prepared the birch-bark manuscript.

HOW AMERICAN GUNNERS SHOOT.

The Spaniards have been wondering by what means the gunners on American warships find the bull's eye so regularly. If the method could be kept secret it would of course be a most unpatriotic thing to publish it, because the Dons might in time catch on and imitate. But all the world knows or surmises, since the affair at Manila, that American gunners have a superior something which makes their work remarkably effective, and the secret is sure to be disclosed sooner or later; in fact, its chief features have already been published.

In the first place no man is permitted to aim a gun on an American warship unless he is intelligent. He must have brains of good, original capacity and thorough education and discipline. He must be a man who can be trusted to "pay no attention to anything but orders." His patriotism must be of the cool, deliberate kind that mathematically calculates distances and explosive forces. It must not be of the sort that fires a revolver at a vessel five miles away, as Spanish gunners are wont to do when their hatred of the Stars and Stripes is aggravated by the incidents of a naval engagement.

But the brains, skill, coolness and courage of the American gunner have levied upon the resources of science for assistance, and with a degree of success that has filled with wonder the naval powers of the old world. The inventive genius for which the Yankee is so famous has been brought into play to aid in landing American bombshells where they will do the most good.

Formerly the gunner assumed a distance, elevated his gun and marked the course of the shot and the point where it fell, so that he could be guided by the result. If the shot carried beyond the point aimed at the gun was lowered; if it fell short, the elevation was increased, and this experimental work was continued until after repeated trials the range was determined. The Chicago Record has the following explanation of the improvements upon the old system of gunnery that have been developed in the American navy:

"When the present equipment of battleships was contemplated a serious obstacle was encountered in the fact that no reliable method of determining the range at sea had been perfected. It was recognized that in order to have the big guns work effectively they must be aimed accurately. The development of the range-finder, which solved the problem, was the result of experiments conducted by naval experts, especially Lieut. Flske of the United States navy, who did more than any other individual in bringing this valuable instrument to its present state of perfection. He applied a modification of the principles of land surveying with the transit and engineer's chain, and introduced the electrical devices which greatly simplified the operation of the system and aided materially in solving the problem.

"In practice a base line is carefully measured between two points at opposite ends of the ship and a range finder is permanently fixed at each of these stations. This instrument consists of a powerful telescope, which is mounted on a standard and is capable of horizontal rotation above a graduated disk. Upon the disk and extending an equal distance on each side of the zero point on the graduation is a metallic contact arc. Fixed to the telescope standards is a contact strip, which rotates with the telescope and slides over the contact arcs. If the telescopes of the two instruments are simultaneously converged upon the same point the distance of the object

may be computed readily, after the manner of determining the width of a stream in surveying, but during an engagement the excitement alone would preclude the possibility of accurate calculation, and, besides, the positions of vessels would be changing constantly, so that the time for utilizing trigonometrical data could not be spared. By the use of delicate electrical instruments, however, the distance between the point of observation and the ship, fort or other target is automatically determined, and it is only necessary for the observers to keep the crosshairs of the telescope upon the same point. The electric current will translate the angles into distances and record them by the movement of a needle over an arc graduated into hundreds and thousands of yards. An important part of each equipment is a telephone set, by means of which the operators are constantly in communication.

"The value of an instrument of this kind in bombarding an enemy's stronghold and in an engagement between battleships will be readily appreciated, even by the layman. Its efficiency was attested by the work which it enabled the American squadron to accomplish at San Juan."

Undoubtedly the range-finder will be further perfected to a degree that will cause distance to cut a very small figure in the accuracy of gunnery, making it as easy to hit a far away as a nearby object. War is being more and more reduced to a science, and in the process the American nation is leading the world.

TRIP TO CHICKAMAGUA PARK.

Chickamauga Park, Georgia,
May 10th, 1898.

We, the last of the regular army contingents, arrived here the 29th ult., and are now encamped on this historic and once famous battleground, now preserved as a national park. After 35 years of blissful repose (being principally the resort of pleasure-seekers and relic hunters), it has been aroused from its slumbers and reanimated. The dead have come to life, so to speak, and it has resumed an aspect in some respects similar to '63, with one distinction, and even the very statues, both Union and Confederate that maintain silent sentry over this sacred place, seem to bestow a smile of approbation at knowing this time they are united in a just and common cause. All is life and excitement here and presents a decidedly warlike aspect. Horses and wagons by the hundreds are rushing in every direction; baggage is piled up everywhere, supplies are continually coming in, thousands of soldiers, accompanied by the clank of sword and spur, are hurrying to and fro, and above all the trumpet's clarion sound is continually heard, or the distant strains from bands playing this or that regiment in or out. Lots of hugging, backslapping and handshaking are going on as old comrades meet after many years of separation. Around the once quiet and sleepy depot are booths erected containing necessities and luxuries for the accommodation of the soldier and outfit of the vendor; the barber leans his pier-glass against a tree and as he fans the flies off his bald-headed customer, who complains of his hair standing on end, shouts, "Next."

The various camps are charmingly situated, and viewed from the many points of vantage, make a pretty picture. The heat is intense, in fact, so are we (in tents), but is tempered towards evening by a pleasant breeze, which renders the nights delicious. It is then, as the little spark of a firefly goes flitting by in the purity of the