

"To the fourth element, Christianity, attention is given not only by way of historical instruction, but especially in the course of ethics, in such a measure that the pupil obtains an insight into the historic importance and the civilizing effects of Christianity, to the influence of which all the civilized Western nations owe their mental superiority over the other people of the globe."

To raise the standard of the university, I aimed at an elimination of the elementary studies which until now impeded true university work. These elementary studies were placed on the curriculum of the middle school, which was at the same time relieved from premature specialization. The former threefold division (English, German, French) was made to yield to one uniform course for every student. The endless variety of preparatory schools was reduced to two; viz., the elementary school and the new lyceum. The latter provides for an organically constructed course of studies extending over ten years. The student will now come to the university not only better prepared than formerly, and with a sufficient knowledge of three European languages, but also at a considerably earlier age.

Thus we see education in a steady progress in Japan. The many deficiencies and drawbacks which the hasty introduction of Western learning has brought about are the natural outgrowth of the circumstances. However deficient, the system of Western leaning employed until now has done good work, but it has outgrown itself with the advanced state of Western learning which the Japanese have now acquired. The fact that not only is the government aware both of the importance of education and of the deficiencies of the present system, but that so illustrious a body as the Gakushu Kwai in, that imitation of the Académie Française in Tokio, has given its attention to the educational question, justifies the hope that the steady progress made hitherto will be continued in the future.

#### DANGER FROM HEAVY SEAS.

THE following reports received by the United States Hydrographic Office illustrate the danger to vessels from the terrific seas that may be encountered during the winter storms in the North Atlantic. It may well be remembered that by heaving-to in time and riding out the worst of the storm, using oil to prevent seas from breaking on board, very serious damage may be prevented.

Second Officer Paterson of the British steamship "Vancouver" (Capt. Williams) furnishes the following additional details relative to the disaster that happened to that vessel on Nov. 7, eastward of the Strait of Belle Isle: "Toward midnight of the 6th the wind hauled west-north-west, bringing a tremendous sea along with it, which, with the head sea still running, caused a very treacherous cross-sea. We kept shipping heavy bodies of water, but without damage, the ship rising to the sea very nicely until 6 A.M., when two tremendous seas seemed to meet close aboard, and, the ship not rising to them in time, passed right over her, causing fearful havoc. The starboard breakwater on the fore-castle-head, of heavy pitch pine, was torn out of the deck. The iron rails on the fore-castle-head went also, and the light-tower was badly damaged. A large square iron companion on the main deck was bulged in, and an iron bulkhead crushed. The two iron doors of the alley-way were torn down, and the mass of water rushed through the alley and burst in the saloon-door, flooding the cabin. But the worst damage was caused on top of the saloon deck: the chart-house, wheel-house, and bridge were swept clear over the side, leaving only a portion of the weather side of the bridge, with the third officer, who was saved. The captain, who was in his room, and the quartermaster at the wheel, were both carried away with the wreckage. Another quartermaster was in the wheelhouse, and he was found lying across the brass pedestal of the steering-gear, very badly cut up. The lookout on the lee side of the bridge was jammed among the wreckage, and badly hurt; and two stewards, who were in the alley-way, were injured. The whole affair was over in a minute, so quickly that the captain and quartermaster had no time, probably, to realize what had happened."

Capt. Leask of the British steamship "Venetian" sailed from Liverpool on his westward trip Nov. 24. On Nov. 30, at 7.30 A.M.

(about latitude 47° north, longitude 41° west), a mountainous sea came tumbling on board over the bows, rushing down the deck with tremendous force. It stove a hole in one of the bow plates above the main deck (breaking four angle-irons inside the plates), badly damaged three life-boats, carried away six ventilators, and stove in the engine-room skylight. One of the iron turrets, which protects No. 4 hatch, was torn from its fastenings and somewhat damaged.

The British steamship "Maryland" was in latitude 39° north, longitude 65° west, at noon, Greenwich mean time, Nov. 30. The wind increased from south-east during the day and night, and on the morning of Dec. 1 it was blowing with hurricane force. At 7 A.M. an enormous sea was shipped that ran as high as the fore-yard, carrying away the bridge, chart house, steering-gear, and all boats but one. Capt. Luckhurst was killed, together with the boatswain and cook; Chief Officer Lloyd was seriously injured; some 350 head of cattle were killed; and all nautical instruments, compasses, etc., were swept away. The only chart left after this terrible disaster was a copy of the "Pilot Chart," which was utilized in navigating the ship back to Delaware Breakwater.

#### LETTERS TO THE EDITOR.

*\*\*\* Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

*The editor will be glad to publish any queries consonant with the character of the journal.*

*On request, twenty copies of the number containing his communication will be furnished free to any correspondent.*

#### Copper Implements.

WHILE most of the implements made of native copper by the aborigines have probably found their way to the melting-pot, when discovered in recent years, a moderate number have escaped. Could full notes be secured of those found in the State of New York, it would possibly appear that they form a large proportion of all those known. Besides those of which I have merely heard, I have figured about thirty-five articles, two-thirds of them from this vicinity. Since I drew some of these for Dr. Abbott's "Primitive Industries," I have met with several well worthy of notice.

The largest of these is a long chisel, found near Oxford, Chenango County, N.Y., in 1856. Like most others, it is flattened on one side and ridged on the other, and of nearly uniform width throughout. It measures 14½ inches in length by 1½ in breadth, and weighs 5½ pounds. This is the exact counterpart of a smaller one found here some years since. The latter is 11½ inches long by 1½ broad, and is 2 pounds 14 ounces in weight. Both are very fine examples.

I have seen several copper chisels with expanded edges, a number of spear-heads, knives, gouges, tubes, and nondescript articles. In no case here have I met with an implement perforated for attachment to a handle, and very few with a socket. A figure of one with both these has been sent me, the implement having been found at Cold Spring, on the Hudson River, and closely resembling some from the West. The most remarkable one with a socket, of which I know, recently came to light here. It is a massive implement, and the raised and angularly inclined edges seem intended to receive a handle, resembling some of the figures in Foster's "Prehistoric Races," but more No. 4 of Fig. 87 in Squier's "Ancient Monuments." That was one of a number from Brockville, on the St. Lawrence River. The raised edges are at the broad end, extending about one-third of the length on either side. Between these the general surface is depressed, rising by an abrupt shoulder ¾ inches from the broad end. This shoulder is a little over a quarter of an inch high, but is sufficient to prevent the handle from slipping through the socket towards the narrower end. I am inclined to think the handle was sometimes removed, and the broad end used as a gouge, the ends being about equally sharp before they were hammered by some later hand. It is 10½ inches long, 2½ broad at the wide end, and 1½ at the narrower, weighing 3 pounds 2 ounces.

There is a class of recent copper articles found in New York which may have interest for some. Under this, for convenience,

I place those of bronze and brass, which have no distinction in form or age, but vary in composition. Bronze rings are among these, made by the French, and usually adorned with letters or symbols. Oval and angular medals are also found of a similar character, but of a higher type. Bracelets of copper wire, earrings of the same, pendants of rolled copper, and other things, belong to the same period. Until the close of the seventeenth century this material was commonly used in Indian trade and adornment. Early in the eighteenth silver ornaments came in, and have not yet quite passed away. Wherever found, it is safe to place silver articles in the latter period.

Among the recent copper articles found in the Iroquois district of New York, the flat and triangular arrow-heads of sheet copper may be noticed. They were probably made in the Indian towns, as shreds of this copper may still be found on New York Iroquois sites of the seventeenth century. The base is usually straight and narrow, and the two straight sides longer in proportion; but the arrow is not large, and may have a perforation or not. I mention these thus particularly, because they are precisely like those found with the Fall River remains, often termed "The Skeleton in Armor," and supposed by a few persons to be characteristic of the Northmen. The mode of attachment was the same in both cases.

Two recent writers have referred to this skeleton, with opposite views. Professor R. B. Anderson, in "America not discovered by Columbus," said this was found in 1831 (an error in date), and seems sure that the grave was that of a viking. He states that the metal and style corresponded with "old Northern armors" of the tenth century. On the other hand, Mr. J. W. Foster, in the appendix to his "Prehistoric Races," says that the skeleton "represents simply all that was mortal of a Narragansett Indian, rigged out in European trappings."

The valuable "Bibliography of the Pre-Columbian Discoveries of America," by Mr. P. B. Watson, appended to Professor Ander-

son's little volume, does not include one of the best and most accessible references. In his "Life of Brant," Col. Stone not only gives the Northmen credit for their discoveries, on p. 487 of his second volume, but adds a long note on the subject (pp. li.-lvii.) in the appendix. In this he not only gives a summary of the voyages of the Northmen, but a full account of the grave in the town of Fall River, Mass., opened in 1837. The body was in a sitting posture, the head being a foot below the surface of the ground. The grave was lined with coarse bark, the body enveloped in a coarse cloth made of finer bark. On the breast was an oval "plate of brass, thirteen inches long, six broad at the upper end, and five at the lower." Below this, and reaching around the body, was a belt of brass tubes, set upright and side by side. These thin brass tubes,  $4\frac{1}{2}$  inches long, and less than a quarter of an inch in diameter, were fastened together by sinews. Some arrows were in a bark quiver, parts of the shafts still adhering to some of the heads. "The arrows are of brass, thin, flat, and triangular in shape, with a round hole cut through near the base. The shaft was fastened to the head by inserting the latter in an opening at the end of the wood, and then tying it with a sinew through the round hole,—a mode of constructing the weapon never practised by the Indians."

Part of the flesh had been preserved by contact with the brass; and a figure of the skeleton, with the armor and arrows, was given. No surer test can be applied than to place some Onondaga or Cayuga arrows beside the latter; for like Iroquois arrows are still found, both free and attached to the shafts.

The breast-plate may simply have been the early and plain brass gorget, small specimens of which may still be found in Onondaga County, N. Y., but which was there replaced a little later by the large and highly ornamented silver brooches, some of which covered the entire breast.

I have seen a comparatively early Indian belt from Cayuga County which had parallel rows of very short brass tubes, though

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of the same kind as those from the Fall River grave. In this case several series of perpendicular slits were made in a leather belt, and around the separated parts the brass was rolled, forming short tubes about a quarter of an inch long. Three remaining parallel rows of these were made, about the length of a tube apart. From some sites I have seen longer brass tubes, probably used as beads or pendants, though a number might easily have been arranged in a belt. The position of the body and the articles found at Fall River would place the burial there in the seventeenth century, though Longfellow's ballad has aided a different belief, not quite original with the poet.

Mohawk sites afford many curious articles, among which are thin plates of copper, one edge delicately serrated for a fine saw. These are recent, and were used in making combs and other bone and horn articles. I have not seen these elsewhere.

W. M. BEAUCHAMP.

Baldwinsville, N. Y., Dec. 30.

#### Harmotome from a Canadian Locality.

THE writer has recently observed harmotome in a specimen collected by Dr. A. C. Lawson (now in the museum of the Geological Survey, Ottawa) from one of the silver-bearing true fissure veins which cut the black argillites of the Animikie at one of the mines in the immediate vicinity of Rabbit Mountain, about twenty-two miles west-south-west of Port Arthur, in the district of Thunder Bay, Lake Superior. The crystals, twins of the usual form, are not more than four millimetres in length, and are implanted for the most part on calcite. The associated minerals are purple fluorite, pyrite, and another sulphide not yet fully determined. It may be of some interest to add this, the first recorded occur-

rence of the mineral in Canada, to the few on record for North America of this interesting mineral. A further notice will shortly appear.

W. F. FERRIER.

Geological Survey of Canada, Ottawa, Dec. 27.

#### AMONG THE PUBLISHERS.

THE current number of *The Illustrated American* gives an interesting article from its special correspondent about the Indian troubles, illustrated with portraits of Gen. Miles and Sitting Bull, and scenes in and around the Pine Ridge Agency.

—*Babyhood* begins the new year with every appearance of prosperity. In its January number are "Home Gymnastics for Young Children," by Dr. Mary Taylor Bissell; and "Mumps," by the editor, Dr. Yale. In the department of home instruction, to which *Babyhood* pays much attention, we find an article on "The First Month in French," which is an illustration of a method of teaching young children a foreign language. The author is Mr. Louis Heilprin.

—The next number of the *Publications of the American Academy of Political and Social Science* will be distinctly a foreign one. Three of the leading articles are by foreign scholars. The first, by the eminent *savant* Professor Boehm-Bawerk, on the Austrian economists, contains an account of the recent work in economics by the new school in Austria. Professor Ritchie of Oxford (England), and Professor Ashley of Toronto (Canada), also contribute valuable articles. The most interesting feature of the number, however, is an account of the reform in railway rates in Austria.

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