

THE GREAT ICE JAM AT NIAGARA.

BY F. C. PERKINS.

The Niagara Falls and River, and the gorge through which the latter flows, have presented many strange and fantastic sights in the spring of the year, when the frosts of winter loosened their hold upon the waters, and the accumulated ice of the winter passed on its way down the river to Lake Ontario.

The present season has been no exception, and has

time that the Niagara River bridges would be carried away by the ice, which jammed into and far above the piers or abutments. The Great Gorge electric railway on the American side was buried 20 feet under the ice, its pole line and trolley wires wrecked, and the tracks badly damaged. The extent of the damage can hardly be estimated until the tracks are cleared and the ice passes out of the river.

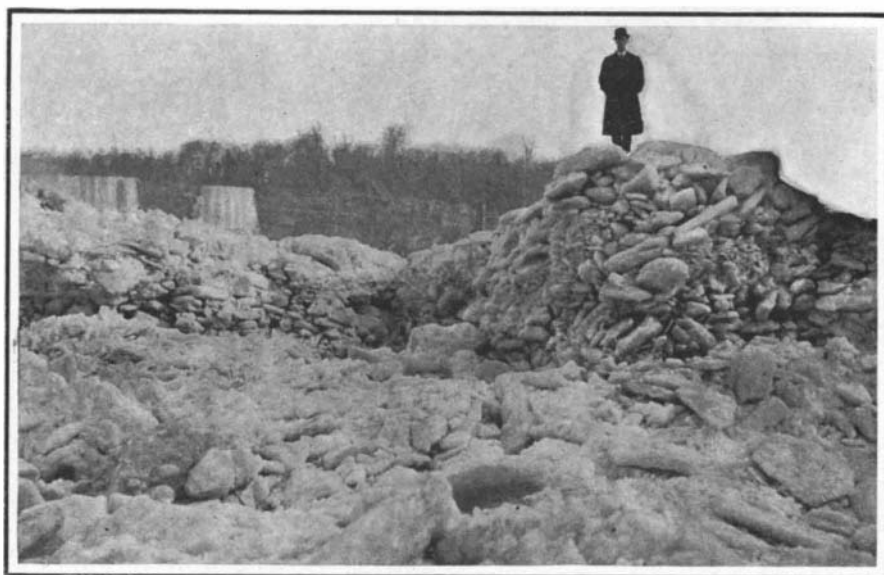
An ordinary ice bridge across the river, just below

was found contained a quantity of saltpeter, and this caused the preservation of the material in question. As one of these pieces shows Greek inscriptions and designs in the style of vases dating from the time of Pericles, it may safely be assumed that it was brought into the Crimea by Grecian colonists.

The continental museums possess only old Egyptian and old Peruvian materials, as regards textiles dating from periods before the advent of Christ; these were



"Maid of the Mist" and dock wrecked by the ice.



Ice jam 50 feet high below the Falls.

indeed surpassed all previous records in the amount of ice that has accumulated below the Falls. The conditions combining to produce the present stupendous jam of ice in the Niagara Gorge were the high water in the upper river carrying large quantities of ice over the falls, and the heavy winds blowing up the Niagara Gorge and holding the ice back in the lower river. The vast quantities of ice which passed over the Falls and through the Rapids and Whirlpool became wedged against the banks and shoals at Lewiston, forming a dam which raised the level of the water 40 or 50 feet above the normal and 20 to 25 feet higher than ever before recorded, and piling the ice so high that a person standing on the ice could touch the under side of the Lewiston Bridge. The water rose so high as to enter the windows and doors of the hydro-electric power plant of the Ontario Power Company, completely shutting down the machinery for several days. The high-tension generators were partly submerged, and although the damage to the plant was not permanent, the electrical machinery was put out of commission, so that the power service on the transmission lines on the American as well as the Canadian side was for a time discontinued.

As soon as possible arrangements were made for a high-tension current supply from the other Canadian power plants above the Falls for temporarily supplying the Canadian power users; while on the American side the 10,000-horse-power gas engine power plant of the Lackawanna Steel Company was utilized for operating the Buffalo and Hamburg Electric Railway, as well as

the Falls, is a wonderful attraction during those winters which are severe enough to cause the ice to form from the American side to the Canadian side. Never before, however, has it been possible to cross the river on the ice at the Rapids, as has been done during the present ice jam.

Many buildings on the banks of the river were overturned by the ice as it passed down the river; and the wreckage of the Niagara Gorge Electric Railway at the Whirlpool Rapids and the Devil's Hole not far from Lewiston was very severe. The worst damage occurred at Lewiston and Queenstown, where many buildings were destroyed, as well as the dock and electric railway tracks.

Not only were the railway lines buried under the ice and debris, but great havoc resulted along the shores of the lower Niagara River for the entire distance from the Falls to Niagara-on-the-Lake. The docks at the mouth of the river at Lake Ontario and Niagara-on-the-Lake were badly damaged, as were the fishing shacks on the river banks.

Conditions finally became so serious that Federal and State aid was requested, and after several attempts to blow up the mass at the mouth of the river with dynamite, the engineers succeeded in partially loosening the jam.

An Ancient Piece of Embroidery.

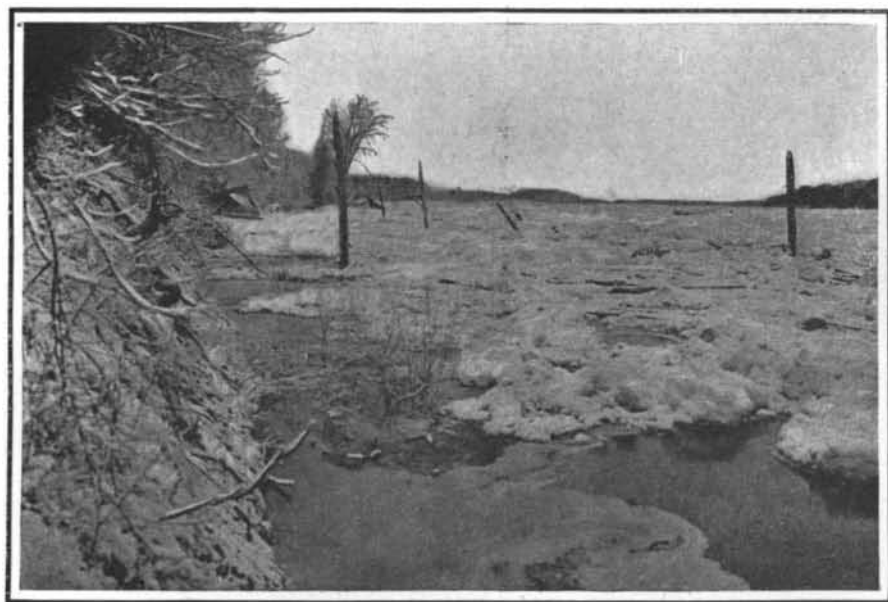
BY ARTHUR H. J. KEANE, M.J.I.

So far as is known, only one piece of embroidery, hailing from the old-time classic period of Grecian

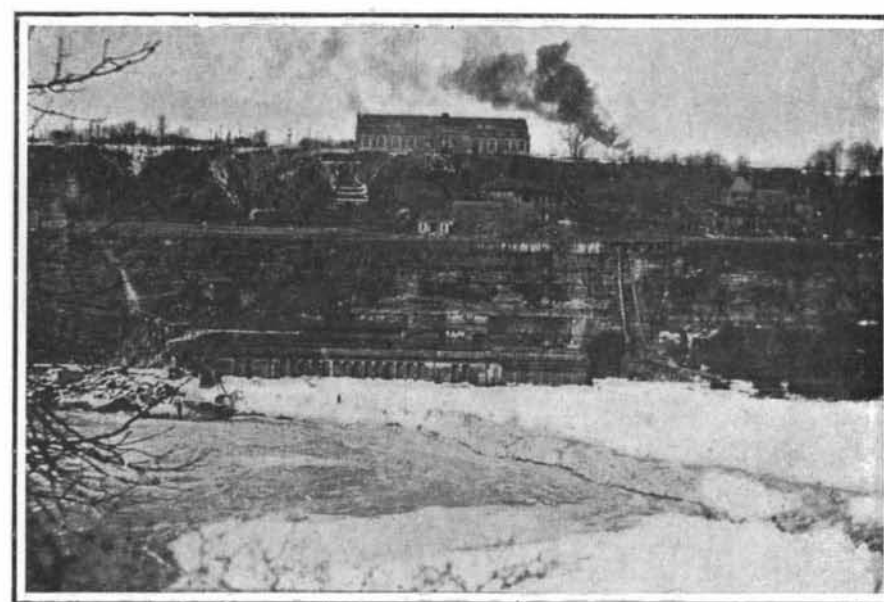
also obtained, thanks to the preservative action of saltpeter and the dryness of the tombs in which they were found.

If it be remembered that so far we have had to depend upon literary descriptions, designs on vases, and faint paintings on statues, for an idea of the textile capabilities of the Greeks, the value of the present piece of genuine embroidery cannot be overestimated, as it shows us that the Greeks favored rhythmic lines, graceful spirals, and curves in pottery and metal work, and also in the textile industry. The background consists of a piece of fine claret-red material. The principal lines of the piece of embroidery, which is about five and three-quarter inches broad, are connected with the material by the chain stitch and overlap, and all the stitches show a yellowish tint. The design was graceful, artistic, and well conceived. Richly-designed woven work was first introduced from India into western lands by Alexander the Great, and the industry prospered in Alexandria to such an extent that, one hundred years after Christ, Martial wrote that Babylonian needlework (embroidery) had been conquered by the weaving shuttles on the Nile. Silk was not available to the Grecian embroiderers, so they embellished their work by means of gold dust, which was caused to adhere to the materials by means of varnish, and small gold spangles were also sewn on to bridal and other festive garments.

A novelty which has come into use in a number of British drafting-rooms is the employment of "cross-



Great Gorge railway buried 15 to 20 feet under the ice.



The ice jam at the plant of the Ontario Power Company.

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for supplying the other power users of the Ontario Power Company between Niagara Falls and Rochester.

The accompanying illustrations show the ice jam at the Falls, and the river filled with millions of tons of ice, which was piled 50 feet high on the Canadian side below the falls, wrecking the well-known electric inclined railway building.

The "Maid of the Mist" was carried high and dry, and its dock completely wrecked. It was feared for a

art, is now in existence; it is to be found in the "Eremitage" at St. Petersburg, where, so far, it has attracted very little attention, as it consisted merely of small pieces, from which it was difficult to form any idea of a complete ornamental design. These pieces were found in the Crimea near Kertsch, in the Kuban district. Although usually all textile materials molder away in the darkness and silence of the tomb, in this case the vault or tomb in which the material

section" tracing cloth for detail drawings. The tracing cloth is ruled with vertical and horizontal lines one-eighth of an inch apart, in the same manner as ordinary cross-section sketching paper. It is claimed that the use of this kind of tracing cloth is the source of considerable saving in time, as it is easier to terminate lines at correct points and it makes it possible to draw simple details directly on the tracing cloth. —Machinery.