

Interesting Discoveries in Yucatan.

In Yucatan some discoveries have been made, of a very interesting character, mainly by Dr. Le Plongeon, the agent of the American Archaeological Institute, who has excavated the ruins of Mayapan, once the capital of the Mayas, a powerful tribe among the aboriginal inhabitants. The later history of this important town is well known; for less than a century before the arrival of the Spanish invaders, the king of the tribe had been murdered by his nobles, his followers dispersed, and the royal city destroyed, so that the objects brought to light by Dr. Le Plongeon's exertions find their place immediately as historical documents. Among other things, portrait sculptures of the unfortunate king have been discovered, which are at once recognized as similar in face and figure to bass-reliefs at Chichen-Itza, the metropolis of Yucatan, where the lords paramount of the country held their court, and where the king of the Mayas is represented as doing a sort of homage to his suzerain. This coincidence seems to point to a period of special artistic development throughout that region, when pictorial or sculptured representations of the affairs of daily life had become somewhat habitual. Further proofs of enlightenment are found in astronomical instruments, such as stone dials of accurate workmanship, which were found still standing on a smooth platform of stone, covered only with a few inches of vegetable mould. Various observations were made in regard to the religious emblems discovered, but beyond a strong resemblance of some of them to those of Eastern Asia, no extraordinary developments are made. Dr. Le Plongeon's accounts show a remarkable and interesting continuity of language, family names, and even of habits, between the ancient inhabitants of Yucatan and their modern descendants. It has been well said that all archaeological discovery originates in the endeavor to investigate traditions, which survive after stone and brick have crumbled to dust; and it is very probable that further acquaintance with the friendly and civilized natives may furnish clues to discoveries of great importance.—*American Architect.*

How the Weather Indications are Determined.

At the Signal Service Bureau in Washington the weather indications are recorded at 5 A.M., 11 A.M., 4 P.M., and 11 P.M. daily. A reporter undertakes to tell how the work is done, and this is what he sees:

Take a seat in the indication room with me, and we will see how the weather is gotten up. It is now 4 o'clock, Washington time, and telegrams are pouring in from all parts of the United States, Canada, British America, West Indies, Nova Scotia, and falling into the lap of the sergeant in charge. The territory covered is from Olympia, in Victoria, on the northwest coast of British America, across to Sydney, above Newfoundland, thence down to Havana, across to San Diego, California, and thence back again. There's a girdle for Puck. At a certain hour of the day—3 o'clock Washington time—observations are taken at all the stations, and then they begin to come in, chasing each other over the wires pell-mell, like a crowd of unruly school boys. These dispatches are called off to six gentlemen, each of whom sits before a map, one noting the thermometer, another the barometer, a third the condition of the weather, and so on. These are transferred to one large map, and then Old Probabilities makes his appearance. He glances over all; sees where a storm was at 1 A.M., and notes where it was at 3 o'clock. He takes into consideration the wind currents, the humidity, and all the minor details which his experience and learning have taught him. Not a word is spoken in the room. Old Probs is in a deep study. In a moment he will speak to fifty millions of people, and a few more over in Canada. His stenographer appears, and the indications are dictated for New England, then the Middle States, the South, West, Mississippi Valley, then, perhaps, a storm bulletin twenty-four hours in advance to warn some special section of the country.

Among the innovations made by General Hazen is the furnishing to sections of the country special reports of floods, the condition of rivers, and their probable rise or fall within the twenty-four hours following at given points. Then again reports are made for the Southern States on the weather during cotton picking time, signals being displayed from the telegraph stations denoting clear or bad weather coming. It is in contemplation to furnish the agricultural sections with indications for harvest time, so that the farmers will know when to cut their grain and when to take it in. The idea was to have small cannon at telegraph stations, and if a storm should be discovered in the night,

which promised great damage, to awaken the farmers so they might save what they could. But it has been found that most country telegraph offices close at such an early hour that this cannot be carried out.

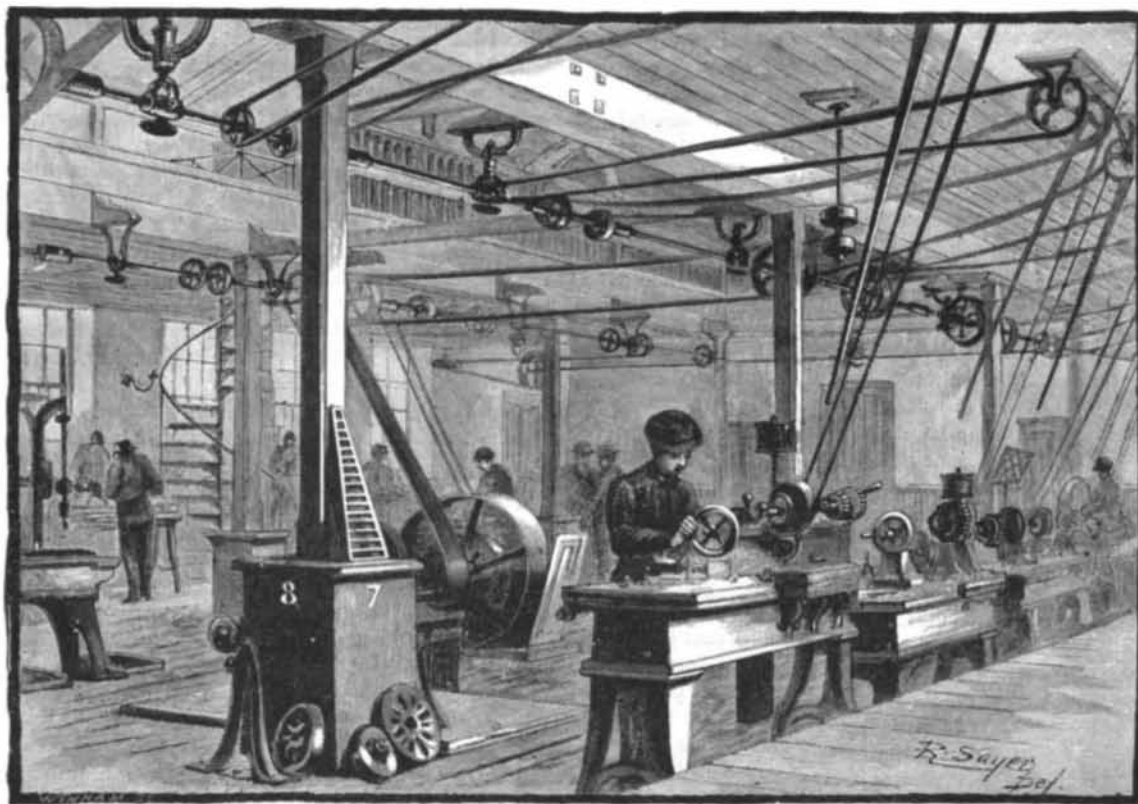
OPENING OF THE NEW WORKSHOP OF THE STEVENS INSTITUTE OF TECHNOLOGY.

This useful institution, as most of our readers know, is situated on the west bank of the Hudson River, in Hoboken, N. J., opposite Eighteenth street, New York, and one mile distant from our city limits. The unqualified success which for several years past has attended the efforts of the faculty in giving to the students, in connection with scientific study,

**TOOL ROOM.—STEVENS INSTITUTE.**

the opportunities for practical instruction in the mechanic arts, has rendered it desirable to enlarge and extend this branch of the establishment. The workshop has, therefore, been removed from the basement into the former lecture room of the institution, a building 50 by 80 feet, with high open roof and double galleries. This beautiful apartment has been generously fitted up by President Henry Morton, at his own cost, as a workshop for the students. He has filled it with the finest specimens of steam engines, lathes, planers, drills, milling machines, grinding wheels, and other mechanical appliances, all of which were formally presented by him to the trustees on the evening of May 14, and the occasion was one of much interest. The shop, brilliantly illuminated with the electric light and the machinery all in full operation, presented a very animated scene when the visitors entered.

The proceedings were opened by President Morton, who made a very admirable presentation address, in which he gave an outline of what the institution had done and aimed to do in the future for its pupils. Mr. Dod, of the trustees,

**THE NEW WORKSHOP OF THE STEVENS INSTITUTE OF TECHNOLOGY.**

accepted the gift of the President. Mr. Coleman Sellers, the eminent mechanic, followed with an excellent address, in which he paid a glowing tribute to the character of President Morton and spoke of the requisites for the education of the young mechanic. Mr. Horatio Allen and others also made addresses. The proceedings closed with a reception at the residence of the president. We give the addresses of the various speakers in our SUPPLEMENT. One of our engravings is an interior view of the new workshop. The other shows the tool room.

The Pauperizing of English Labor.

The Macmillans have lately published a volume of thoughtful sermons by the Vicar of Granborough, England. In the introduction to the volume, the author insists upon the duty of the church to take a more active part in trying to ameliorate the condition of the English poor. He says: "I am the vicar of a rural parish in which more than 70 per cent of the population are potential paupers—that is to say, that out of some 70 families in the village, more than 50 are either actual or prospective recipients of the bounty of the poor law. I have not a single laboring man past work in my parish who is not either in the workhouse or in receipt of outdoor relief. When I lived among Sheffield workmen I used sometimes to come across people who asserted that they would rather starve than receive parish pay. I have never even heard of such a case in Buckinghamshire. I fear I have hardly a laborer in my parish who, if he were sick or out of work, would not welcome the visit of the relieving officer. Failing the 'wages of work,' the Bucks laborer learns to think of 'wages of the parish' as his of right. . . . We have fifty cottages, but have not one laborer's home with three bedrooms. We have seventeen with only one. Our death rate, which is generally so accurate an index of social condition, sounds satisfactory; it is only 18 per 1,000; but then one-third of our deaths are infants under the age of 1. I need not, however, multiply deplorable statistics of that kind."

How Japanese Fans are Made.

A British consul in Japan gives the following particulars touching the manufacture of folding fans at Osaka:

As in many other branches of industry, the principle of division of labor is carried out in the fan-making trade. The bamboo ribs are made in Osaka and Kioto by private individuals in their own houses, and combinations of the various notches cut in the lower part are left to one of the finishing workmen, who forms the various patterns of the handle according to plans prepared by the designer. In like manner the designer gives out to the engravers the patterns which his experience teaches him will be most likely to be salable during the ensuing season; and when the different blocks have been cut, it still rests with him to say what colors are to be used for the two sides of each fan. In fact, this official holds, if not the best paid, at any rate the most important, position on the staff in ordinary. When the printed sheets which are to form the two sides of the fans have been handed over to the workman, together with the sets of bamboo slips which are to form the ribs, his first business is to fold the two sheets of which the fan is to be composed, so that they will retain the crease, and this is done by putting them between two pieces of paper, well saturated with oil, and properly creased. The four are then folded together and placed under a heavy weight.

When sufficient time has elapsed the sheets are taken out and the moulds used again, the released sheets being packed up for at least twenty-four hours in their folds. The next process is to take the ribs, which are temporarily arranged in

order on a wire, and "set" them into their places on one of the sheets, after it has been spread out on a block and pasted. A dish of paste then gives the woodwork adhesive powers and that part of the process, is finished by affixing the remaining sheet of paper. The fan has to be folded up and opened three or four times before the folds take the proper shape; and by the time the fan is put up to dry it has received far more handling than any foreign paper could stand; indeed, foreign paper has been tried, and had to be given up as unsuitable for the work; but with great care the Osaka fanmakers have been able to make some fans with printed pictures which have been sent over from America, though they were invariably obliged to use one face of Japanese paper. The qualities of native paper now used are not nearly so good as those of which the old fans were made, and, in consequence, the style of manufacture has had to be changed. Instead of first pasting the two faces of the fan together and

then running in pointed ribs, the ribs are square, and are pasted in their places in the manner described above. The outside lacquered pieces and the fancy work are all done in Osaka and Kioto, and some of the designs in lacquer on bone are really artistic; but the demand for the highly ornamented description of fans is not sufficient to encourage the production of large quantities of first-class work. When the insides are dry, the riveting of the pieces together, including the outer covering, is rapidly done, and a dash of varnish quickly finishes the fan.