

THE NEW PEARY EXPEDITION.

The application of Civil Engineer R. E. Peary for five years' leave of absence to continue his Arctic exploration was granted on May 26 by Secretary of the Navy Long, and Mr. Peary will now be detached from duty at the Brooklyn navy yard. Mr. Peary said that no arrangements for his approaching voyage had as yet been made. Preliminary to the polar expedition which Mr. Peary outlined at the American Geographical Society, on January 12, he will make a trip to Whale Sound on the northwest coast of Greenland, where he has friendly relations with the Eskimos. He will take some of these people north with him, and after his visit next summer they will have a year's time to prepare for the expedition and to have furs and provisions in readiness when the expedition arrives. Mr. Peary said: "I shall start on my preliminary voyage about July 10. The expedition will meet the ship at Boston. Several scientific parties will accompany me; there will probably be three parties in all. One will be in charge of Prof. O. H. Hitchcock, of Dartmouth College, and Prof. George H. Barton, of the Massachusetts Institute of Technology, will probably command another. These parties will land on the coast of Labrador, Baffin Land and Greenland. I will return for them on my way home from Whale Sound. The expedition will return in the latter part of September."

A year from the coming July Mr. Peary proposes to start on the main expedition. It is impossible to say how long this will consume, possibly two years and probably not more than four. The expedition will be different from most Arctic expeditions in that the only civilized members of the party will be Mr. Peary and a surgeon. Mr. Peary has decided this question after considerable deliberation.

Mr. Peary says: "Leaving the ship at Whale Sound, with about six families of Eskimos, who will meet me there, I shall push up the coast until I reach Sherard Osborn Fjord, in about latitude 81°. Here I shall establish a colony and a base of supplies. Between this colony and Whale Sound I shall keep a constant line of communication by means of dogs and sledges. The site of this colony I expect to reach in the latter part of August or early in September. Several months will be consumed in collecting supplies.

"The dash for the pole I shall start on about March. We shall push on till we find the termination of Greenland, and from there our path will be across the ice. We shall take all our supplies with us on sledges. How far the land extends to the north no one knows, and this I hope to find out.

"The route which I shall pursue on this expedition is what might be called the 'American route,' owing to the preference which American travelers seem to show for it. I think it preferable to other routes because of the existence of land so much further north. When there is land for a base then there is some fixed point to return to, and depots can also be established as one advances. Nansen has proved how unreliable a ship is as a basis, owing to the tendency of the drifting ice to carry her hundreds of miles from where she was left. The Eskimos can always be relied upon along this route for what I propose to do. Nansen's furthest north was 86° 14'. I hope to advance beyond this and if possible reach the pole. How long it will take I cannot say. I will say, however, if I fail I shall try again."

It is regrettable that the request of a leave of absence for Mr. Peary has been opposed by certain elements in the navy, which pointed to the action of Secretary Herbert last summer in refusing to grant a two years' leave of absence to Mr. Peary to make the same proposed trip. This element asserts that if Mr. Peary wishes to make another Arctic trip he should resign from the navy. We do not see how an officer of the United States navy could be better employed than in making such remarkable explorations as those of Mr. Peary. Civil engineers are common enough, but successful Arctic explorers are rare. Powerful scientific influences were brought to bear in Mr. Peary's behalf, and the order of Secretary Long leaves nothing to be desired.

TORNADO DRILLS IN KANSAS.

In the East we have fire drills in our public schools, and on more than one occasion they have proved to be very effective in an emergency, but in Kansas they have a drill of another kind, for their tornadoes are more to be dreaded than fire, and school children are now being trained in tornado drills. When the tornado strikes a Kansas town the inhabitants at once make for the prairie. It is almost the only way to escape death from the flying debris of houses, falling trees and toppling buildings. The school children are trained to know this, and on these occasions rush pell mell for the nearest bit of clear prairie; but many children have been maimed and some killed in these terrible storms. There has been a movement started throughout the State to have tornado caves built under the school houses, large enough to accommodate all the children while the blow lasts. The tornado drill is very much like a fire drill. The teacher

sounds the alarm on a piano and the children stand up; then a march is played and out they go in good order, down the stairs and into the tornado cave. If the entire building falls into ruins, the children are safe in the tornado-proof cave.

THE LEIPSIK EXHIBITION.

The Leipsic Trade and Industrial Exhibition, opened by the King of Saxony on April 24, proves, in respect to readiness and completeness, no exception to its predecessors. Judging, however, from present exhibits, the undertaking, excepting some very few branches of industry, like the rubber trade, bids fair to be the most important Europe has witnessed for many a decade. The machinery exhibit is far richer than at the late Berlin exhibition.

The exhibition covers an area of more than 400,000 square meters, and is on reclaimed ground belonging to the city. The guarantee fund amounts to 2,000,000 marks—rather a moderate sum compared with the magnitude of the undertaking. For Americans, the exhibition will be found exceedingly instructive, the display of surgical instruments and carriages being remarkable. The latter exhibit shows how quick the Germans are to learn of other nations, especially of the United States.

The main entrance, in white and green, the Saxon colors, is in the form of a segment of a circle, flanked by two needlelike pyramids. The lay of the grounds and the long vista from the main entrance to the main building are on the same lines as those of the Berlin exhibition, although lacking the grandeur of the latter.

To the right of the main entrance is picturesque "Old Leipsic," or, as it is called here, the "Fair Quarter," a most careful and interesting reproduction of this quarter of the city 400 years ago. The antiquarian will distinguish the old Rathhaus or town hall; Auerbach's Cellar, immortalized by Goethe in his Faust; the old citadel, the Pleissenburg, at present undergoing demolition to make way for the new City Hall; the old scales and debtors' tower. To make the illusion complete, all the attendants, waiters and waitresses are dressed in the costume of those days. A large statue of the Emperor Maximilian, who in 1497 conferred on Leipsic the privileges of the fair, still held every year, stands at the entrance to the Rathhaus.

The Horticultural Hall, the next building we come to, covering an area of 2,500 meters, is partly laid out in very tasty grounds, where the profusion of roses and other flowers is uninfluenced by the cold night air without, and the delicate flowers can thrive without being retarded in their growth by changes of the weather. A South American landscape, very ingeniously arranged with regard to perspective, attracts all eyes. A ram's head over the entrance to the next building informs us that we are at the Textile Exhibit, which is more backward than any other department here represented except cycles, the goods not even having been unpacked. The exhibit is, however, according to all accounts, destined to do full credit to this Saxon industry, which will be referred to later. A large building, still rather empty, will be devoted exclusively to lighting apparatus, more especially to incandescent lighting, so much in vogue in Germany. We now cross the electric belt railway, and passing through the entrance to the medieval Castle Lauffers, which is to contain the Alpine Panorama, we emerge into the main avenue. Leaving behind us the great main building, covering an area of 23,500 square meters, we pass on our left the large building containing the sausage factory of Nietschmann, besieged day and night by hungry crowds, and come to the building containing the very interesting exhibit of the city of Leipsic. Adjoining the latter is the Kunsthalle or Art Gallery, containing the works of some 600 artists. Opposite, on the other side of the pond, is the spacious building destined to contain the Cycle Exhibit, of which at present there are only meager traces. Next door is the Main Restaurant, the resort of the upper ten. Branching off here, from the main avenue, we reach the square, encircled by buildings, the aim of whose proprietors it is to provide for the wants of the inner man. All the great German breweries are represented here. At one corner we are offered cooling American drinks, from another the strains of a mandolin and Italian gondolier's song invite us to take a peep at the warmer blooded Southrons. Paying toll at the entrance to the old bridge, vividly reminding us by its primitive construction of the covered bridges of New England, we enter the Thuringian Village, one of the most delectable sights of the exhibition. Everything is true to life, the very houses having been taken to pieces and set up again here. The Old Mill, the country inns, the dance on the green, the bleating of the sheep, and, above all, the pretty little village church and beautiful cloisters, all enchaining us to this cozy spot. Leaving the village, we have finished the round and are now at the main building, the rich contents of which must be reserved for another article. The various articles exposed by the 3,500 exhibitors will reward us for the time spent upon them.

FOG AND PHOTOGRAPHY.

The most important feature of the remodeling of his studio by M. Lafayette, the well-known photographer, is the arrangement by which the studio is cleared of fog—one of the most deadly enemies of the camera. To put the case simply, the difficulty which has to be met is the freeing of the atmosphere from the foreign opaque substances which it has absorbed, and which break up the rays of the electric light, nullify its penetration and are themselves photographed in the front of the sitter. The system in question gets rid of these opaque impurities by keeping the fog out of the studio in the first place, and secondly by thoroughly drying the air inside, and so precipitating the solids which obscure it. Artifice gives you the transparent air of Southern skies, says the English Mechanic. The artifice in this case is represented by a warming and ventilating apparatus and may be best explained as follows: Starting at the air inlet, where the fresh air is admitted into the building, there is a specially constructed filter through which the air must pass, and in so doing be freed of its impurities. It is then drawn through a warming apparatus composed of coils of steel steam piping completely cased in a sheet steel casing, thereby eliminating all risk of fire. These heating coils are supplied with steam from a low pressure steam boiler, which is so arranged in relation to the heater that the steam flows automatically from the boiler to the heater, and the condensed water returns automatically to the boiler.

The air having been purified and warmed to about the heat of a summer atmosphere, is then passed through an electrically driven fan and conveyed to the different parts of the building by sheet iron ducts, the sizes of these being carefully proportioned, so that an equal distribution of warm air is obtained over the entire building. The fresh air enters the room near the ceiling, and the top of the room acts as a reservoir into which the fresh air is introduced, and whence it is gradually dispersed over the whole room, doing away entirely with draughts. The vitiated air is drawn out through outlets at the bottom, and both inlets and outlets are fitted with louver registers, so that they can be regulated at will. In hot weather the fresh air is brought into the building, filtered, passed through a cooling chamber, and taken over the building in a like manner, and thus both in winter and in summer the warming, cooling, and ventilation of the building is under entire control.

THE NEW THAMES TUNNEL OPENED.

The new tunnel under the Thames, Blackwall, London, was opened on May 22. In the procession was the Prince and Princess of Wales, the Duke of York, Duke of Portland, engineers and many invited guests. The procession started in the West End, going through Pall Mall, Northumberland Avenue, the Embankment, Queen Victoria Street, thence through Whitechapel to the entrance of the tunnel. The procession then proceeded through the tunnel, which was illuminated by three rows of electric lights. At Greenwich there was erected a dais upon which the members of the royal party took their places and from which the Prince of Wales, in the name of the Queen, declared the tunnel open to public traffic. The state trumpeters blew a blast, the royal salute was fired by the Artillery Company and the Bishop of London pronounced the benediction. The Prince of Wales was then presented by the committee with a gold medal, struck for the occasion.

THE DETROIT MEETING OF THE A. A. A. S.

The American Association for the Advancement of Science will meet at Detroit, Mich., August 9 to 14, and arrangements for the entertainment of the members are well in hand. The Hon. Thomas W. Palmer, the well known World's Fair executive, is acting as chairman of the general and finance committee. The new high school building, with a good auditorium and rooms for the meetings of sections and committees, affords ample accommodation for the American Association and allied societies. The citizens of Detroit have seconded the invitation of the American Association inviting the British Association to meet in that city the week preceding their meeting at Toronto, and it will be the endeavor of the citizens of Detroit to extend the same courtesies to the foreign body as to the American Association itself.

ENGINEERS' SOCIETY MEETING.

The regular monthly meeting of the Engineers' Society of Western Pennsylvania was held in the lecture room of the society's house, 410 Penn Avenue, Pittsburgh, Pa., on May 18, 1897, at 8 P. M.

The paper, "High Frequency Currents and X Rays," was by Mr. H. W. Fisher, and was copiously illustrated by electrical experiments.

A great number of phenomena of high frequency currents were shown and a very powerful X ray apparatus was operated, by which the beating of the heart, etc., could be seen.

The attendance was very large and appreciative. The discussion at the close was participated in by Messrs. C. F. Scott, John Brashear and others, who highly complimented the lecturer on his presentation.