

but also in every department of science, to artists and in many branches of industry. A committee has been appointed to consider the subject, as the work promises to be of considerable magnitude, and the results will be looked for with interest.

The Secretary calls attention to the necessity for an increase in the National Museum buildings, which are entirely inadequate. The field of the work of the corps of the Bureau of American Ethnology extended into Maine, New York, Minnesota, Wisconsin, Indian Territory, Oklahoma, California, Arizona, New Mexico, Cuba, Ontario and Nova Scotia, while especial work was done in other districts. The explorations and researches continue to yield valuable results in the form of contributions to the science of ethnology, while the collections made in connection with the work form an important tributary to the National Museum. Some practical importance attaches to the recent work of the bureau in connection with aboriginal agriculture and crop plants. The investigation of the wild-rice industry of the north lake region especially brings out a neglected phase of aboriginal industry and at the same time directs attention to a promising natural resource.

The free interchange of government and scientific publications between this country and the learned of other lands has grown to be one of the most important functions of the Smithsonian Institution. Great numbers of books are annually transported abroad and great quantities are received in exchange each year, the quantity handled aggregating 113,563 packages, weighing 409,991 pounds. The exchanges are in no sense of a commercial nature, for no publications for sale are allowed transmission. It is interesting to note that the expenses of the exchange service were for thirty years made entirely from the income of the Smithsonian Institution, but when public documents began to form so large a part of the transmissions as to become an unbearable strain on its resources, Congress began to make appropriations for the work.

The National Zoological Park is being constantly made more interesting by the introduction of new specimens. The extremely limited appropriations allowed by Congress have made it almost impossible to carry out the original programme of procuring a large collection of specimens of our native animals. The Astrophysical Observatory possesses a considerable quantity of apparatus which was employed in the observations on the solar eclipse of May 28, 1900, and we shall take pleasure in publishing in a subsequent number of our SUPPLEMENT full particulars of the work of observing the eclipse.

On the whole the Smithsonian Institution seems to be admirably administered with a view to carrying out the wishes of the original founder.

THE BALDWIN-ZIEGLER EXPEDITION TO FRANZ JOSEF LAND.

During the coming summer an expedition is to be sent to Franz Josef Land. It will be known as the Baldwin-Ziegler Expedition, and will be under the direct command of Mr. Evelyn B. Baldwin, formerly of the United States Weather Bureau. It is understood that the cost of the undertaking will be borne by Mr. William Ziegler, a wealthy and public-spirited resident of New York city. The principal objects of the expedition are to make magnetic, meteorological, gravity, and astronomical observations, in addition to surveying and hydrographic work, for which elaborate preparations are being made. It is also intended to make extensive collections of the flora and fauna of the region, as well as to gather specimens which will adequately represent the geographical formations.

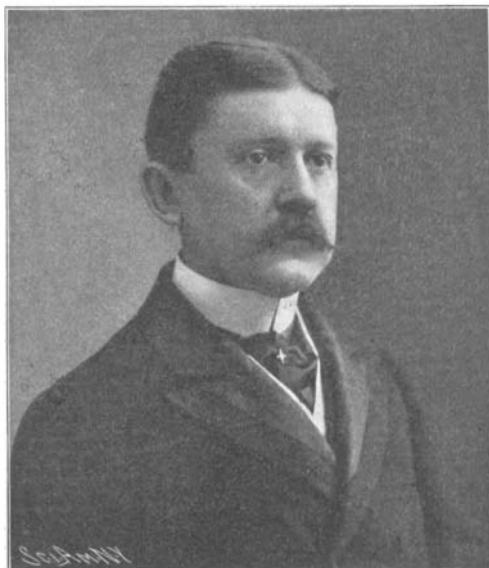
The expedition will take two steam whalers and one or more steam launches, the latter being designed especially for use in shallow waters.

Franz Josef Land, once believed to be a continent and now known to consist of a group of islands, lies in the Arctic Ocean, north of Novaia Zemlia. It is in a higher latitude than any other known land in the eastern portion of the Polar Basin. It was discovered by an Austro-Hungarian expedition in 1873. The region was penetrated by a sledging party for a distance of about 125 miles. Payer, the commander of the land party, advanced up Austria Sound as far as Cape Fligely (82° 5' north lat.) from which point—1,000 feet above the level of the sea—he observed mountains far away to the north, beyond the 83d degree. At this point it may be stated that Jackson, who visited the region later, found that no such land as Petermann Land existed. To the northwest high land rose above the open water. In the vicinity of the cape bears and foxes were plentiful, and seals were observed in large numbers about the edge of the ice. The abundance of animal life was most propitious for the explorers. Several eminent authorities regard this region as a most favorable starting-point for future journeys northward. Admiral Sir George Nares, of the British navy, went so far as to say that its extreme importance as a base for future operations has been proved. Admiral Albert Markham, in his recent work on Sir John Franklin, regards the region as "the

objective from which future Arctic exploration should be carried out." Admiral Sir Erasmus Ommaney declared that "as all other points afford no hopes of penetration to the northward, we must now accept Franz Josef Land as the base for future operations;" and Sir Allen Young in like terms considers that it must be regarded as "the only land extending far to the north by which such journeys can be made."

The now celebrated Jackson-Harmsworth Expedition visited this land in 1894 and remained there for three years. While their object does not seem to have been to actually reach the North Pole, the hope was indulged that a thoroughly scientific exploration of Franz Josef Land might be made and that they might reach a point so far north as to afford facilities for a nearer approach to the North Pole than had hitherto been accomplished.

With the aid of his co-travelers Mr. Jackson found Franz Josef Land to consist of numerous islands instead of a continent, as had been previously believed. The idea of gaining a very high latitude was therefore abandoned, their special efforts being then devoted to a thorough examination of the group. Magnetic, meteorological and other observations were taken constantly and collections made in almost every branch of natural history. Winter quarters were established on Northbrook Island to the southwest of the group. Walruses, bears and seals were found in abundance. During the three years of their stay at the island the "Windward" paid a visit, but being frozen in, was compelled to remain a year. It returned with supplies in July, 1896. A month previous Dr. Nansen and Lieut. F. H. Johansen, who wintered in Franz Josef Land about 100 miles from Jackson, arrived at the island in their kyaks, and a cordial welcome was given them. In the following summer the "Windward" again



MR. EDWARD B. MOORE,
Assistant Commissioner of Patents.

visited Franz Josef Land, and on this occasion Jackson and his party returned home.

The collections which they made included rocks, fossils, silicified wood, plants, including phænogams, cryptogams, and lichens; eggs of snow bunting, eider duck, glaucous gull, kittiwake gull, ivory gull, Richardson's skua, Brünnich's guillemot, black guillemot and little auk; and birds, including the snow bunting, Lapland bunting, shore lark, common swallow, snowy owl, jerfalcon, Brent goose, eider duck, turnstone, Bonaparte's sandpiper, sanderling, Arctic tern, Ross' gull, glaucous gull, ivory gull, kittiwake, Richardson's skua, pomatorhine skua, Mandt's guillemot, little auk, Brünnich's guillemot, red-throated diver, and fulmar petrel. No traces of previous human occupation were found by the explorers.

Shortly before sailing from England in 1894 Mr. Jackson read a very interesting paper before the Royal Geographical Society of London, in which he summed up the advantages of the region for exploring purposes under these four principal heads:

"I. The accessibility of Franz Josef Land late in the summer when approached along the meridian of 45° E., or some meridian between that of 45° and 50° E. This accessibility has been proved, in my opinion, by the voyages of Mr. Leigh Smith and the little Dutch ship 'Wilhem Barents'."

"II. The northward extension of Franz Josef Land to a latitude as high as 82.5° at Cape Fligely, and some twenty or so miles further if we accept Payer's view that Cape Sherard Osborne is continuous with that portion of the country he called Prince Rodolf's Land. The long stretch of *terra firma* forms a safe route for advance or retreat, and provides all we need in the way of sites for our depots and cairns."

"III. The still further extension to the north of what, perhaps, I should call the Franz Josef Land group. Standing on Cape Fligely, Payer saw, sixty or seventy miles to the north, the high outlines of an ice-covered

land of apparently large extent. This he called Petermann Land, and this land lies undoubtedly in a latitude as far north as any yet reached. There is absolutely nothing known of it beyond this, but it is a reasonable hypothesis to maintain that a land of such elevation would probably reach at least to the eighty-fourth degree north latitude, and who knows how much further?"

"It is this land we shall try to reach after we have safely landed, and in the early days of the following spring marched over the ice of Austria Sound, a gulf which penetrates the country to Cape Fligely; or if this be not so favorable to us as it proved to Payer, along the shores that reach down to the Sound."

"IV. The fourth consideration is provided by the observations of Payer, confirmed by the winter experience of Mr. Leigh Smith. And this consideration is a strong one—the great abundance of animal life on the southern shores of Franz Josef Land during the winter as well as in the summer."

Although the results of exploring expeditions have always been hazardous subjects of speculation, it is confidently expected that the enterprise of the present year will be at least as successful as any that have yet been made in that region, while it is natural to hope that our American effort will eclipse all others in brilliancy of exploit and results of practical usefulness, and perhaps even pave a definite pathway to that long sought goal of explorers—the North Pole.

THE NEW ASSISTANT COMMISSIONER OF PATENTS.

The new Assistant Commissioner of Patents, vice Walter H. Chamberlain, resigned, is Mr. Edward B. Moore, late Principal Examiner of the Thirty-fifth Division of the Patent Office. Mr. Moore was born at Grand Rapids, Mich., and he entered the Patent Office some fifteen years ago and at once set himself resolutely to the task of fitting himself for promotion. Eleven years later he was appointed to the position of Principal Examiner and later made a Chief Examiner of the office. Mr. Moore was chosen to represent the Patent Office at the recent Paris Exposition. The Office made no formal exhibit on that occasion, but many interesting models were loaned for exhibition purposes. Mr. Moore has had under his supervision the examination of all cases relating to educational appliances, accouterments, baggage, advertising devices, bundle carriers, fluid pressure regulators, packing and storing vessels, buckles, buttons and clasps, constituting a very wide range of subjects and involving extended technical knowledge upon his part.

Mr. Moore is noted for the justice of his decisions, by which the interests of the inventor and those of the public are equally safeguarded. In his new office Mr. Moore will have an excellent opportunity of again demonstrating his fitness as to the general and technical requirements which are imperatively demanded for the effective performance of the difficult and responsible duties which devolve upon the Assistant Commissioner of Patents.

OPENING OF THE PAN-AMERICAN EXPOSITION.

The gates of the Pan-American Exposition were closed on April 21, and every available man was put to work in order to offset the damaging effects of the severe snowstorm which visited Buffalo. The damage to the buildings is very slight, but the delay in the landscape work and the building of roadways is a great hindrance. It was intended to have this portion of the work so complete that it would be possible to have the Fair practically complete on the opening day. The storm, however, was so severe that the managers decided to postpone the formal opening until Dedication Day on May 20. It is not intended to postpone the actual opening, but there will be no ceremonies until May 20. As the Fair will be very complete at that time and the weather will probably be better, the change seems to be a wise one. The first two weeks of every fair that has ever been held have seen incompleting buildings and empty exhibition spaces.

According to German press reports, the project involving the construction of an electric railway between Rome and Naples, which was agitated some time ago but afterward abandoned, has been revived. Two Neapolitan engineers, it is stated, have prepared new plans for the road, which have been submitted to the ministry of public works. The contemplated railway will run along the shore via Cancelli, Mondragone, Minturno, Formia, Fondi, Terracina, and Cisterna to Rome, with a branch line, by way of Marano and Guigliano, to Capodimonti, the summer residence of the King. It will be double-tracked, with a total length of 135 miles.

A Swiss engineer named Sutter nearly lost his life while conducting some experiments with his airship at Arbon, near Lake Constance. His airship is similar to that of Count Zeppelin. The machine rose to a height of 150 feet, and then became unmanageable and fell.