towards the progress of chemistry in the whole of its domain.

Neutral countries may be admitted later. The next meeting of the conference will be held in London on July 15–18, that being the date of the annual meeting of the Society of Chemical Industry.

So far as Britain is concerned, the choice of representatives and the supervision of the arrangements for the first meeting will be in the hands of the Federal Council for Pure and Applied Chemistry, of which Sir William Pope is president and Professor H. E. Armstrong the honorary secretary. Until the various nations concerned have chosen their representatives, little can be done, but Sir William Pope and Professor Louis are provisionally acting as the British representatives, and are in communication with their French colleagues.

The meeting in Paris was held under the auspices of the French chemical societies, especially the Société de Chemie Industrielle, the president of which, M. Paul Kestner, presided at some of the meetings.

THE BRITISH IMPERIAL ANTARCTIC EXPEDITION

Plans are being prepared for another Antarctic expedition, which will sail in the famous ship, *Terra Nova,* and be assisted by the latest improvements in aviation and wireless telegraphy. The organization is already in an advanced stage.

It will be known as the "British Imperial Antarctic Expedition," its leader being Mr. John L. Cope. Mr. Cope's name is well known in connection with expeditions to the Antarctic. He accompanied the Imperial Trans-Antarctic Expedition, 1914–17 as surgeon and biologist to the Ross Sea party, and was one of the party of nine who were left on the Great Ice Barrier to lay deposits after the Aurora had broken away from her moorings. Since returning to England Mr. Cope has served in the R.N.V.R. as a lieutenant, but he has never abandoned the idea of organizing a further venture at the earliest possible date.

Arrangements are so far advanced that the expedition will be able to leave England in June, 1920, and Mr. Cope states that the expedition will return in 1926. During the six years continuous communication is to be maintained with the centers of civilization by means of wireless equipment.

The main objects of the expedition will be:

1. To ascertain the position and extent of the mineralogical and other deposits of economic value known to exist in Antarctica, and arrange for their practical development as a further source of imperial wealth.

2. To obtain further evidence of the distribution and migration of the whales of economic value, and to create a British industry.

3. To investigate the meteorological and magnetic conditions of the Ross Sea area and at Cape Ann (Enderby Land) in connection with their influence on similar conditions in Australasia and South Africa, respectively. Such results have been proved of great value by the stations established by the Argentine government in the South Orkneys and by that established on Macquarie Island by the commonwealth of Australia, which has been given up owing to the war.

4. Generally to extend knowledge of Antarctica, especially with a view to obtaining further scientific data of economic importance.

Mr. Cope states that arrangements are being made to take an aeroplane to assist in surveying the interior of the continent. With this machine even a flight to the South Pole is contemplated.

The reason for calling the enterprise the "British Imperial Antarctic Expedition" is that the efforts of Mr. Cope and his comrades will be directed solely for the benefit of the British Empire. The temporary headquarters of the expedition are at 17, Somerset Street, W-1.

OUTLINE MAP OF THE UNITED STATES

The United States Coast and Geodetic Survey has completed a new outline map of the United States on the Lambert conformal conic projection, scale 1-5,000,000.

This map is intended merely as a base to which may be added any kind of special information desired. The shore line is compiled from the most recent Coast and Geodetic Survey charts. State names and boundaries, prin-

cipal rivers, capitals and the largest cities in the different states are also embodied.

The map is of special interest from the fact that it is based on the same system of projection as that employed by the armies of the allied forces in the military operations in France. To meet those requirements and at the request of the army, special publications were prepared by the Coast and Geodetic Survey.

Many methods of projection have been designed to solve the difficult problem of representing a spherical surface on a plane. As different projections have unquestionable merits as well as equally serious defects, the announcement states, any region to be mapped should be made the subject of special study and that system of projection adopted which will give the best results for the area under consideration.

The Mercator projection, almost universally used for nautical charts, is responsible for many false impressions of the relative size of the countries differing in latitude, according to the survey statement. The polyconic projection, widely used and well adapted for both topographic and hydrographic surveys, when used for the whole of the United States in one map has the serious defect of unduly exaggerating the areas on its eastern and western limits. Along the Pacific coast and in Maine the error in scale is as much as 6½ per cent., while at New York it reaches 4¼ per cent.

The value of the new outline map on the Lambert projection can best be realized when it is stated that it shows that throughout the largest and most important part of the United States, that is, between latitude 30½ degrees and 49 degrees, the maximum scale error is only one half of 1 per cent. This amount of scale error of one half of 1 per cent. is frequently less than the distortion due to the method of printing and to changes from the humidity of the air. Only in southernmost Florida and Texas does this projection attain its maximum error of 2 1-3 per cent.

The Lambert projection is well adapted to large areas of predominating east and west dimensions in the United States where the distance across from east to west is 14.5 times that of the distance north and south.

The strength of the Polyconic projection, on the other hand, is along its central meridian. The merits and defects of the two systems of projection may be stated in a general way as being at right angles to each other.

Special features of the Lambert projection that are not found in the Polyconic may be stated briefly as follows:

1. The Lambert projection is conformal—that is, all angles between intersecting lines or curves are preserved, and for any given point (or restricted locality) the ratio of the length of a linear element on the earth's surface to the length of the corresponding map element is constant for all azimuths or directions in which the element may be taken.

2. The meridians are straight lines, and the parallels are concentric circles.

3. It has two axes of strength instead of one, the standard parallels of the map of the United States being latitudes 33 degrees and 45 degrees, and upon these parallels the scale is absolutely true. The scale for any other part of the map, or for any parallel, can be obtained from special publication number 52, page 36, U. S. Coast and Geodetic Survey. By means of these tables the very small scale errors which exist in this projection can be entirely eliminated.

The map measures 25 inches by 39 inches and will be sold by the government at 25 cents.

THE LECONTE MEMORIAL LECTURE IN THE YOSEMITE, 1919

THE University of California through its university extension division will offer free to the public a course of scientific lectures in the Yosemite Valley during June and July, 1919. These are to be known as the LeConte Memorial Lectures in the Yosemite in honor of the name of Joseph LeConte, the famous naturalist and geologist who was for many years a member of the faculty of the University of California. The lecturers and topics for 1919 and the tentative dates are as follows:

I. Professor W. L. Jepson, department of botany, University of California.

1. The Origin and Distribution of But-