to the purposes of commerce. Nor must it be overlooked that the speed of transmission by Marconi telegraphy must be extremely limited compared with the possibilities of the cable. It is, therefore, not the territory of the telegraph and cable companies that Mr. Marconi can successfully invade with his wireless telegraphy."

CLARENCE KING.

A MEETING of all the scientific men engaged in the work of the U. S. Geological Survey was held in Washington on Saturday, December 28, to express their profound sorrow at the death of Mr. Clarence King, first Director of the Survey. Short but appreciative addresses, eulogistic of the life and work of Mr. King were made by Major J. W. Powell, the successor of Mr. King as director of the survey; Hon. Charles D. Walcott, the present director, and Mr. S. F. Emmons. At the request of the director Mr. Arnold Hague read the following tribute to the character and achievements of Mr. King, which was unanimously adopted by those present as an expression of their admiration of his life and their bereavement in his death:

"It is with profound sorrow that we learn of the death of Clarence King, the first director and, in a sense, the founder of the Geological Survey. In him we have lost not only a great scientific leader, but a genial and accomplished gentleman, whose personal qualities endear him to all who knew him, and whose many acts of loving kindness have left a wide circle of friends in all walks of life to mourn his untimely death.

"As organizer and, during ten years, Chief of the United States Geological Exploration of the Fortieth Parallel, he set higher standards for geological work in the United States and laid the foundations of a systematic survey of the country. He gave practical recognition to the fact that a good topographical map is the essential basis for accurate geological work.

"As first director of the present Geological Survey, he laid down the broad general lines upon which its work should be conducted and which, as followed by his able successors, have led to its present development. He established the principle that a geological survey of the United States should be distinguished among similar organizations by the prominence given to the direct application of scientific results to the development of its mineral wealth.

"In that essential quality of an investigator —scientific imagination—no one surpassed King, and his colleagues have all profited by his suggestiveness. He was never content with the study of science as he found it but always sought to raise the standard of geology as well as to apply known principles to the survey of the country.

"King first introduced microscopical petrography into American geology and, as early as his Fortieth Parallel work, he foreshadowed the application of exact physics to questions of geological dynamics. Early in the history of the present survey he established a physical laboratory. One result of this step was a paper on the 'Age of the Earth' which takes very high rank among modern scientific memoirs. Although in his last years circumstances rendered it necessary for him to devote most of his time to other occupations, he had by no means abandoned plans for geological investigation on a scale worthy of his reputation.

"In Clarence King geological science in America will miss a pioneer and a leader; the Geological Survey loses its broad-minded founder and adviser, and its older members a beloved friend."

MAP OF THE PHILIPPINES.

THE *National Geographic Magazine* publishes as a supplement to its January number a map of the Philippines—5 feet 2 inches by 3 feet. The map is on the scale of 15 miles to an inch and was prepared by the U. S. Signal Office. Every town or hamlet known by the Jesuits or reported to the War Department by its many officers throughout the islands is indicated on the map. It is a compilation of everything now known about the Philippine Archipelago. Sheet I. gives the Northern Philippines and Sheet II. the Southern Philippines, as officially divided by the United States Government. A glance at the map shows how much exploration is needed

in large sections. For instance, on the Island of Mindoro only a few names along the coast are given. The interior of the island is a blank. The progress made by the American Government in the islands is graphically illustrated by the red lines, indicating cables, telegraphs, and telephones, which penetrate to nearly all corners of the archipelago. Nearly seven thousand miles of wire are now strung, whereas three years ago there was not one mile in service. All the telegraph lines are owned by the government and operated by a government department—the United States Signal Corps. The stations noted as commercial stations are open to messages of a private and commercial character, while from the stations noted as military only messages of a military nature can be sent. This map is the first map of the Philippines that has been prepared by American officers. The spelling of the names is that adopted by the United States Board on Geographic Names. The War Department printed an edition of only 400. The demands of the army posts in the Philippines and in the United States exhausted nearly the entire edition, so that only a few remain for public distribution. The National Geographic Society was, however, granted the use of the plate and has printed a large edition, so that each of its members may receive a copy of what is the only up-to-date presentation of all that is now known of the geography of these islands.

THE CARNEGIE INSTITUTION.

The trustees of the institution elected by the incorporators are as follows:

The president of the United States.
The president of the United States Senate.
The speaker of the House of Representatives.
The secretary of the Smithsonian Institution.
The president of the National Academy of Sciences.
Grover Cleveland, New Jersey.
John S. Billings, New York.
William N. Frew, Pennsylvania.
Lyman J. Gage, Illinois.
Daniel C. Gilman, Maryland.
John Hay, District of Columbia.
Abram S. Hewitt, New Jersey.
Henry L. Higginson, Massachusetts.
Henry Hitchcock, Missouri.
Charles L. Hutchinson, Illinois.
William Lindsay, Kentucky.
Seth Low, New York.
Wayne MacVeagh, Pennsylvania.
D. O. Mills, California.
S. Weir Mitchell, Pennsylvania.
W. W. Morrow, California.
Elihu Root, New York.
John G. Spooner, Wisconsin.
Andrew D. White, New York.
Edward D. White, Louisiana.
Charles D. Walcott, District of Columbia.
Carroll D. Wright, District of Columbia.

The official statement of the plans of the institution is as follows:

"It is proposed to found in the city of Washington, in the spirit of Washington, an institution which, with the cooperation of institutions now or hereafter established, there or elsewhere, shall, in the broadest and most liberal manner, encourage investigation, research and discovery, encourage the application of knowledge to the improvement of mankind; provide such buildings, laboratories, books and apparatus as may be needed, and afford instruction of an advanced character to students whenever and wherever found, inside or outside of schools, properly qualified to profit thereby. Among its aims are these:

"1. To increase the efficiency of the universities and other institutions of learning throughout the country, by utilizing and adding to their existing facilities, and by aiding teachers in the various institutions for experimental and other work, in these institutions as far as may be advisable.

"2. To discover the exceptional man in every department of study, whenever and wherever found, and enable him by financial aid to make the work for which he seems specially designed, his life work.

"3. To promote original research, paying great attention thereto, as being one of the chief purposes of this institution.

"4. To increase facilities for higher education.

"5. To enable such students as may find Washington the best point for their special studies to avail themselves of such advantages as may be open to them in the museums,