

cipal; but action in this regard is left to the discretion of the corporation.

It is wished that the fund shall be administered in accordance with the conditions indicated above, so long as the objects there stated shall be regarded as desirable by the committee of the division of geology; but if the time should come when such objects are no longer held by them to be desirable, the income may be applied to such other objects as the corporation may determine; providing only that it shall be administered as a memorial of Nathaniel Southgate Shaler.

ROBERT WINSOR,

W. M. DAVIS,

EDWARD W. ATKINSON.

Whereupon it was voted that the Shaler Memorial Fund be gratefully accepted upon the terms and for the uses stated in the foregoing communication, and that the president and fellows hereby record their satisfaction in the possession of such an enduring and fruitful memorial of Professor Shaler.

THE INLAND WATERWAYS COMMISSION

PRESIDENT ROOSEVELT has appointed an Inland Waterways Commission whose work will not only be of great importance for public welfare, but is also of considerable scientific interest. The objects of the president in appointing the commission are clearly stated in his letter to those whom he has asked to act upon it. It is as follows:

Numerous commercial organizations of the Mississippi Valley have presented petitions asking that I appoint a commission to prepare and report a comprehensive plan for the improvement and control of the river systems of the United States. I have decided to comply with these requests by appointing an Inland Waterways Commission, and I have asked the following gentlemen to act upon it. I shall be much gratified if you will consent to serve.

Hon. Theo. E. Burton, chairman,

Senator Francis G. Newlands,

Senator William Warner,

Hon. John H. Bankhead,

General Alexander Mackenzie,

Dr. W J McGee,

Mr. F. H. Newell,

Mr. Gifford Pinchot,

Hon. Herbert Knox Smith.

In creating this commission I am influenced by broad considerations of national policy. The control of our navigable waterways lies with the federal government, and carries with it corresponding responsibilities and obligations. The energy of our people has hitherto been largely directed toward industrial development connected with field and forest and with coal and iron, and some of these sources of material and power are already largely depleted; while our inland waterways as a whole have thus far received scant attention. It is becoming clear that our streams should be considered and conserved as great natural resources. Works designed to control our waterways have thus far usually been undertaken for a single purpose, such as the improvement of navigation, the development of power, the irrigation of arid lands, the protection of lowlands from floods, or to supply water for domestic and manufacturing purposes. While the rights of the people to these and similar uses of water must be respected, the time has come for merging local projects and uses of the inland waters in a comprehensive plan designed for the benefit of the entire country. Such a plan should consider and include all the uses to which streams may be put, and should bring together and coordinate the points of view of all users of water. The task involved in the full and orderly development and control of the river systems of the United States is a great one, yet it is certainly not too great for us to approach. The results which it seems to promise are even greater.

It is common knowledge that the railroads of the United States are no longer able to move crops and manufactures rapidly enough to secure the prompt transaction of the business of the nation, and there is small prospect of immediate relief. Representative railroad men point out that the products of the northern interior states have doubled in ten years, while the railroad facilities have increased but one eighth, and it is becoming obvious that no development of the railroads possible in the near future will suffice to keep transportation abreast of production. There appears to be but one remedy—the development of a complementary system of transportation by water. The present congestion affects chiefly the people of the Mississippi Valley, and they demand relief. When the congestion of which they complain is relieved, the whole nation will share the good results.

While rivers are natural resources of the first rank, they are liable to become destructive agencies as well, endangering life and property, and

some of our most notable engineering enterprises have grown out of efforts to control them. It was computed by Generals Humphreys and Abbott half a century ago that the Mississippi alone sweeps into its lower reaches and the Gulf 400,000,000 tons of floating sediment each year (about twice the amount of material to be excavated in opening the Panama Canal), besides an enormous but unmeasured amount of earth-salts and soil-matter carried in solution. This vast load not only causes its channels to clog and flood the lowlands of the lower river, but renders the flow capricious and difficult to control. Furthermore, the greater part of the sediment and soil-matter is the most fertile material of the fields and pastures drained by the smaller and larger tributaries. Any plan for utilizing our inland waterways should consider floods and their control by forests and other means; the protection of bottomlands from injury by overflows and uplands from loss by soil-wash; the physics of sediment-charged waters and the physical or other ways of purifying them; the construction of dams and locks, not only to facilitate navigation but to control the character and movement of the waters; and should look to the full use and control of our running waters and the complete artificialization of our waterways for the benefit of our people as a whole.

It is not possible properly to frame so large a plan as this for the control of our rivers without taking account of the orderly development of other natural resources. Therefore, I ask that the Inland Waterways Commission shall consider the relations of the streams to the use of all the great permanent natural resources and their conservation for the making and maintenance of prosperous homes.

Any plan for utilizing our inland waterways, to be feasible, should recognize the means for executing it already in existence, both in the federal departments of War, Interior, Agriculture and Commerce and Labor, and in the states and their subdivisions; and it must not involve unduly burdensome expenditures from the national treasury. The cost will necessarily be large in proportion to the magnitude of the benefits to be conferred, but it will be small in comparison with the \$17,000,000,000 of capital now invested in steam railways in the United States—an amount that would have seemed enormous and incredible half a century ago. Yet the investment has been a constant source of profit to the people and without it our industrial progress would have been impossible.

The questions which will come before the Inland Waterways Commission must necessarily relate to

every part of the United States and affect every interest within its borders. Its plans should be considered in the light of the widest knowledge of the country and its people, and from the most diverse points of view. Accordingly, when its work is sufficiently advanced, I shall add to the commission certain consulting members, with whom I shall ask that its recommendations shall be fully discussed before they are submitted to me. The reports of the commission should include both a general statement of the problem and recommendations as to the manner and means of attacking it.

SCIENTIFIC NOTES AND NEWS

THE bodies of Berthelot and his wife were entombed in state in the Panthéon on March 25 in the presence of President Fallières, the cabinet ministers, the diplomatic corps, members of the French Academy, judges, deputies, senators and deputations from learned societies. M. Briand, minister of education made an address. Every school in France was closed as a sign of mourning.

THE portrait-group of Drs. Halsted, Kelly, Osler and Welch, of the Medical School of the Johns Hopkins University, painted by Mr. John S. Sargent, R.A., was unveiled on the evening of January 19, 1907, in McCoy Hall. The painting was hung at the south end of the hall, where the wall had been appropriately draped. The portrait-group was presented to the university by Miss Garrett and accepted on behalf of the trustees by President Remsen. The Sargent portrait of Miss Garrett was hung in the panel to the left. Dr. Welch gave an account of some of the experiences of the sitters, and Mr. Royal Cortissoz, of the *New York Tribune*, spoke of Sargent as an artist.

At the New York meeting of the American Association for the Advancement of Science, a silver loving cup was presented to Professor W. F. Ganong by Professor G. F. Atkinson on behalf of the former members of the Society of Plant Morphology and Physiology, as a token of appreciation of Professor Ganong's long and efficient services as executive officer of that society.

At the fourth International Mathematical Congress to be held at Rome from April 6 to 11, 1908, lectures have been arranged by Pro-