

with very extensive floor space for tables, is exceptionally adapted to the needs of an extensive exhibition of the annual progress of science.

HENRY F. OSBORN.

CORRESPONDENCE.

AN INTERNATIONAL SCIENTIFIC CATALOGUE AND CONGRESS.

EDITOR OF SCIENCE: *Dear Sir*:—In considering your very courteous invitation to contribute something of present interest to your valuable journal, it has occurred to me that I could not perhaps do better than to follow the example set in your issue of Feb. 15th, by the distinguished representatives of my *alma mater*, Prof. Bowditch and his committee, in their report to the Harvard University Council on the circular of the Royal Society, respecting the proposed International Catalogue. My letter of reply to this circular does not, as you will see, in any way conflict or interfere with the recommendations made in that excellent report. It deals almost entirely with other points in the circular which are not directly noticed in the report.

Should the suggestions which I have ventured to make, especially in regard to the meetings of an International Congress of Science in connection with the proposed Catalogue, be finally approved and carried into effect, they may lead to practical results of great importance. Such meetings, held from time to time—perhaps in various cities of the two continents—may not only bring together from all parts of the globe the most eminent votaries and friends of science in fraternal conference, but may help not a little, with other influences which are now constantly at work, in converting Tennyson's 'parliament of man' and 'federation of the world' from a poetical vision into a beneficent reality.

Yours faithfully,

HORATIO HALE.

CLINTON, ONTARIO, CANADA,

May 30, 1894.

GENTLEMEN: As you have honored me by addressing to me a copy of your important circular letter, in which you solicit from the recipient the expression of his views respecting the establishment of a 'Central Office or Bureau,' by 'international coöperation,' for the purpose of preparing and publishing, at brief intervals, a catalogue of all scientific publications of every description (whether appearing in periodicals or independently), I cannot, in due courtesy, decline to offer in response such considerations as occur to me, however inadequate they may seem in comparison with others which will reach you from better qualified correspondents.

That the proposed scheme is both highly desirable and abundantly feasible cannot reasonably be doubted by any one who is aware of the immense increase in the number of scientific publications of late years, and the equally rapid increase of scientific associations, public libraries and high institutions of learning, for most of which such a catalogue will be found of very great advantage and ultimately a necessity. The most convenient 'method of inaugurating the scheme' would seem to be by first ascertaining the probable annual cost, which can readily be judged through the experience already gained by the Royal Society in the publication of its annual 'Catalogue of Scientific Papers,' and then by appointing in each (presumed) contributing country, under some appropriate title, an 'Aid Bureau,' which should be an existing institution of high standing, and one that either is already, or can easily be placed, in touch with the chief scientific associations, colleges and public libraries of the country, and can ascertain the amount of contributions which could be obtained from them. In the United States, for example, such a suitable Aid Bureau at once presents itself in the Smith-

sonian Institution. In Canada and in each of the other British colonies which possesses a Royal Society, this Society will naturally assume the office. In every other country some institution of similar position and character will readily be found.

As to the place of the Central Bureau, and the directing authority under which it should be inaugurated, one would suppose that there can hardly be two opinions. That this place should be London, and this authority the Royal Society of England, would seem to be necessary conclusions from the existing circumstances, at least at the outset. Both place and directory might, of course, be changed hereafter, if this should be found desirable.

It would seem specially advisable, for the purpose of arousing and maintaining an interest in the object in view, and of ensuring the cordial coöperation of all concerned in the work, that general meetings should be held—either annually, or biennially, or triennially, as might be found most convenient—of representatives of all the contributing bodies, or at least of all that contribute a certain defined amount to the fund. Such meetings might be held either at the place of the central office or at other places, as might be decided, from time to time, by the assembled representatives. Such an assemblage would constitute an International Congress of Science, possessing much of the character of those congresses of geologists, of anthropologists, of Orientalists, of Americanists and the like, which have of late years been found so popular and useful, but differing from them in possessing to some extent a representative character, and with it a defined purpose and authority. Its purpose would be that of maintaining a connection among the students of all the sciences throughout the globe, not only by personal acquaintance or correspondence, but also and especially through the medium of the Central Bureau and the Catalogue,

which would be directly under the authority of the Congress. In general it may be said that this Congress would speedily become for the whole civilized world what the modern Association for the Advancement of Science is for its own country; with the important difference, however, that the Congress, besides the personal influence of its meetings and the interest that would attach to the volume recording the proceedings of each meeting, would have the much greater influence and usefulness resulting from the permanent activity of its Central Office and the frequent issue of its catalogue of scientific publications.

As regards the 'character of the work to be carried on in the central office,' there seems little to be added to the suggestions of the circular. The final paragraph, in which it is suggested that "arrangements might be made by which, in addition to preparing the catalogue, scientific data might be tabulated as they come to hand in the papers supplied," could perhaps be enlarged, with much advantage, into the creation of a special 'Bureau of Scientific Correspondence,' to which any member of a contributing body might apply for information on questions of fact. As is well known, it constantly happens that through the unavoidable ignorance in which, to a large extent, students of science have heretofore remained of one another's actions, supposed new discoveries are announced and resulting theories suggested, which have been already made known elsewhere. Every such student will appreciate the advantage of being able to refer to a bureau of specialists for information on doubtful points of this description.

On the question of 'the language or languages in which the catalogue should be published,' there would seem to be little difficulty in deciding. If English and French should be jointly selected for this purpose, there would probably be no ob-

jection from any quarter. There are very few students of science who are not familiar with one or other of these idioms. And the choice will be made generally acceptable by the fact that they very fairly represent the two great Indo-European branches of language, the Teutonic and the Romanic, in which at least nineteen-twentieths of all scientific publications are likely to appear for many years to come. If the time should arrive when the addition of another language may seem advisable, it can readily be made by the proposed congress or any other authority then governing the Central Bureau.

It would, of course, be understood that the deliberations of the congress and of its sections, and the papers read before them, would not necessarily be restricted to the two idioms of the catalogue, but might be in any language which the congress or any section should at the time decide to admit. This decision, it may be assumed, will always be considerate and liberal to the largest possible degree.

I am your obedient servant,

HORATIO HALE.

The Secretaries of the Royal Society,
BURLINGTON HOUSE, LONDON.

SCIENTIFIC LITERATURE.

A Primer of Mayan Hieroglyphics: By DANIEL G. BRINTON. Ginn & Co., Boston. 1895. 8°, pp. 152.

The public mind is becoming more and more interested in the archaeology of Mexico and Central America. At once symptomatic of and a cause of increasing this interest are the numerous explorations of recent years, the exhibition from this region collected for the Exposition, and the notable works published in Mexico, Spain and Germany in connection with the Quadri-centennial celebration of America's discovery.

Nevertheless, students in our own country are somewhat at a disadvantage in this

matter. The literature of the subject is not only scattered, but is in various languages,—Spanish, French and German—and it is not easy to keep track of progress. This little volume, by one who has devoted years to the study of 'the American Race,' and who is a specialist in the languages, literature and life of Isthmian people, will therefore be particularly welcome. It not only summarizes the work done, but is a guide to the original publications wherein discussions have been published.

The Mayan hieroglyphic system was in wide-spread use, being represented on monuments of Yucatan, Tabasco, Chiapas, Guatemala and Western Honduras. Though so often compared with that of the Aztecs, it is certainly more fully developed. On the whole, it can not be said to comprise a very great number of simple elements; these, however, are variously combined and united, and the composite *glyphs* are many. The material for study varies. There are books—Codices—written on long strips of paper, which were folded screen-wise. Four such codices are known, called the Codex Troano, C. Cortesianus, C. Peresianus and C. Dresden; they are in libraries at Madrid, Paris and Dresden. There are also mural inscriptions cut in stone; elaborate series of calculiform characters chiseled on altars and monoliths; pretty cartouches engraved on amulets or ornaments; symbols or characters painted on pottery; glyphs on hard, firm grained boards of wood like those from Tikal.

Are these characters ideograms or phonetic? There are those who believe they are entirely the former; there are others who claim that many are phonetic. Some admit that both occur. Brinton himself invented, years since, the word *ikonomatic*. He believes that there are some true ideograms in the Mayan texts; very many of the characters, however, he believes are in the nature of rebuses. They still betray