it was decided at an International Conference held in London in June, 1900, to publish, beginning with the year 1901, an International Catalogue of Scientific Literature, which is to be issued only in the form of annual volumes at first. The Catalogue is to include both an author and a subject index. It will comprise the following subjects: Mathematics, Mechanics, Physics, Chemistry, Astronomy, Meteorology (including Terrestrial Magnetism), Mineralogy (including Petrology and Crystallography), Geology, Geography (Mathematical and Physical), Paleontology, General Biology, Botany, Zoology, Human Anatomy, Physical Anthropology, Physiology (including Experimental Psychology, Pharmacology and Experimental Pathology), and Bacteriology; in all 17 subjects. At least one volume will be given to each subject, and it is proposed that not all the volumes shall be issued at once, but in four groups, as soon as possible after the first of January, April, July and October respectively. The subscription price for a complete set of the whole Catalogue in 17 volumes is £17, say $85.00.

The Smithsonian Institution has provisionally undertaken to represent the interests of the Catalogue in the United States, and will receive promises of subscriptions. The publication of the Catalogue cannot be undertaken unless subscriptions for about 300 complete sets a year (equivalent to about £5000) *for five years* be guaranteed beforehand. Germany has guaranteed subscriptions to the extent of 45 complete sets (or £750), and the Royal Society of London has guaranteed the same for Great Britain and Ireland; it is hoped that at least an equal number of subscriptions will be guaranteed in the United States. It is most important that the necessary guarantee for subscriptions should be completed before September 30th, at the very latest, hence it is desirable that promises of subscriptions in the United States should be sent in before September 15th.

The prices of individual volumes will be eventually fixed by the Central Bureau, and will vary, but so that the aggregate of the individual volumes will amount to £17. In England the Royal Society is making arrangements by which, in the case of special institutions desiring only parts of the whole Catalogue, the subscription for a complete set may be divided among them. It is learned that subscriptions to about 90 sets are yet required, and of these, besides the 45 sets guaranteed by the Royal Society, a Fellow of that Society has guaranteed 45 additional sets on condition that the United States would subscribe for a like amount. It thus appears that the success of this undertaking now depends upon the subscriptions received in this country.

Very respectfully yours,

RICHARD RATHBUN,
Assistant Secretary.

SMITHSONIAN INSTITUTION, August 6, 1900.

THE BUFFALO EXPOSITION.

TO THE EDITOR OF SCIENCE: I should be glad if you would let me call the attention of your readers to the Department of Ethnology and Archæology of the Pan American Exposition.

The exposition has provided a circular building 128 feet in diameter, and has also arranged for a 'Six Nation' Indian exhibit on the grounds, with a representation of the typic 'Long House' of the Iroquois and an attendance of some 60 Indians, who will be engaged in such industries as basket-making, woodwork, etc. As these Indians are pagans, and have preserved to a great degree their ancient customs, they will celebrate in appropriate seasons their various thanksgiving festivals, dances and other rites.

Every precaution will be taken to protect exhibits against fire or theft and loss in packing and unpacking. It is expected, therefore, that a large amount of valuable archæologic material will be placed at the disposal of this department by museums and individual collectors. In fact, it is not too early to assure the public that the promises of such institutions as the American Museum of Natural History, The Peabody Museum, University of Pennsylvania, University of Chicago and the Buffalo Society of Natural Sciences as well as the friendly co-operation of the Ministers of the South American Republics, guarantee the success of this department. At the same time, there is always room for more, and as the aim

of this Department is not so much to get together a large miscellaneous collection of relics as to afford a means of popular instruction in American archæology, it is desired that students from all parts of the country shall send exhibits or memoranda descriptive of results obtained in their special fields of labor. For example, one exhibit will show the animals domesticated by the Aborigines of the Western Continent, and will explain why the lack of large useful animals capable of domestication hampered the development of civilization in the New World.

Through the co-operation of the Department of Agriculture and Horticulture, exhibits will be made of the plants cultivated in both North and South America before the discovery.

Often the placard is of as great value as the specimen, and one of the features of the exhibit will be cases describing in brief various types of stone age implements and the methods of manufacturing them. Any student of American archæology who has elaborated some special phase of the subject and wishes to place his work before the public may send on manuscript, and placards will be made from it, with due credit to the investigator.

A. L. Benedict.

NOTES ON INORGANIC CHEMISTRY.

The first installment of the promised revision of the atomic weight of iron by Professor Theodore W. Richards has appeared in the *Zeitschrift für anorganische Chemie*, the work being done in conjunction with Dr. Gregory P. Baxter. The method used is the reduction of ferric oxid by hydrogen, the temperature used being 900°. The oxid was formed in two different ways: first, by precipitation from ferric nitrate of the hydroxid, which was dehydrated at 900°; second, by direct heating of the nitrate at 900°. The first method gave in two experiments the figure 55.90. The series by the second method —five experiments — gave 55.883. This is slightly lower than the generally accepted figure, 56.0, and the paper discusses briefly possible sources of error in earlier determinations. Further work on other compounds is to be carried out.

A few years ago Krüger described a red solution formed by leading chlorin into an alkaline solution of copper, which was supposed to contain a salt of a cupric acid. This work has been repeated by F. Mawrow and described in the *Zeitschrift für anorganische Chemie*. So far from getting the above results, a brown powder resulted, having the approximate composition of 6 CuO, H_2O. The proportion of active oxygen was never more than a small fraction of a per cent., whether the experiment was carried out at a boiling temperature, or cooled by ice.

In the *Annales de chimie et de physique*, G. Baudran describes a very considerable series of 'tartar emetics,' double tartrates of metals and alkalies, corresponding to the ordinary tartar emetic, potassium antimonyl tartrate. They are generally formed by dissolving the hydroxid of the metal in tartaric acid, and treating the product with an alkaline tartrate. The emetics of manganese, bismuth, iron, aluminum, and chromium were formed, as well as borotartaric acid and potassium borotartrate.

As far back as 1829 a salt was discovered by Zeise, formed by the action of alcohol upon platinum chlorid, which he called acechlorplatin and to which he gave the formula (in modern nomenclature) KCl, C_2H_4, $PtCl_2$, H_2O. For a few years this compound, combustible chlorid of platinum as it was sometimes called, excited much attention, and Liebig and others attacked unsuccessfully the composition proposed by Zeise; but standing alone as it did, with no compounds of analogous character, for more than half a century few workers have noticed it, though Birnbaum in 1868 proved the correctness of Zeise's proposed composition. In 1844 Reiset formed a compound by the action of ammonium nitrate on the salt of Magnus which he considered to be platosammin chlorid, $Pt(NH_3)_2Cl_2$, but which Cossa proved fifty years later was salt of a platosemiammin chlorid, $PtNH_3Cl_2$. Now in the last number of the *Zeitschrift für anorganischen Chemie*, S. M. Jörgensen, who has so enlarged our knowledge of the platinum and other metallic bases, shows the complete analogy between these salts of Zeise and of Cossa, the latter giving a double alkali salt of formula KCl, NH_3, $PtCl_2$,H_2O, which corresponds exactly to a salt of Zeise in which