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

ethylene is replaced by ammonia. A number of other compounds of these salts were formed and in every case were analogous, in crystallographical character as well as in chemical composition. It is interesting to see two compounds, each of which had appeared for half a century or more to be unique, thus shown to be of the same type, and it is by no means impossible that other salts of this type may yet be discovered.

IN 1886 Linnemann claimed to have discovered in orthite a new metal which he named *austrium*, but this work was never confirmed. Richard Přibram has recently repeated the work of Linnemann and concludes, as had Lecoq de Boisbaudran, that austrium is identical with gallium. But he also concludes from a very thorough spectroscopic examination of the same orthite, that there is a new element present which has not yet been isolated, which is entirely distinct from Linnemann's austrium, and to which Přibram proposes to give the earlier name austrium.

J. L. H.

*THE INTERNATIONAL ASSOCIATION OF ACADEMIES.**

THE Academy will recall the fact that at the conclusion of the mission entrusted to M. Moissan and myself, consent was given to the 'Projet de Statuts pour l'Association internationale des Académies,' drawn up by the delegates of the nine Academies represented at the Conference held at Wiesbaden early in October last, at the invitation of the Academy of Berlin.

The international Association is now constituted; and it includes the eighteen following Academies:

1. Academy of Sciences.....Amsterdam.
2. Prussian Academy of Sciences..Berlin.
3. Academy of Sciences, Literature and the Fine Arts.....Brussels.
4. Hungarian Academy of Science.....Budapest.
5. Academy of Sciences.....Christiania.
6. Society of Sciences.....Göttingen.
7. Academy of Sciences of Denmark.....Copenhagen.
8. Academy of Sciences of Saxony.Leipzig.
9. Royal Society.....London.
10. Academy of Sciences of Bavaria.....Munich.
11. Academy of Inscriptions and Literature.....Paris.
12. Academy of Sciences.....Paris.
13. Academy of Moral and Political Sciences.....Paris.
14. Academy of Sciences.....St. Petersburg.
15. Academy dei Lincei.....Rome.
16. Sweedish Academy of Sciences Stockholm.
17. Academy of Sciences.....Washington.
18. Academy of Sciences.....Vienna.

Amongst the Academies invited to join, one only, the Royal Academy of History of Madrid, has as yet not replied to the request of the Wiesbaden Conference.

The provisional rules take into consideration the possibility of the addition of other learned societies, and in § 2 the conditions and formalities are indicated which will be necessary for the admission of a new Academy.

The Association comprises two Sections, the Section of Literature and the Section of Science. The work will be carried out by general meeting and committee. In principal, the general meeting will be held every three years, and each Academy will send as many delegates as it may deem necessary, but each Academy will have only one vote, which should be given by one of the members of the delegation.

In the interval between two general meetings, the Association is represented by the committee, each Academy being represented on this by one member only, if it concerns itself with only one of the Sections of Literature or Science; it will send two delegates when it is concerned with both Sections. Amongst the eighteen Academies, twelve belong to both Sections and consequently will send two delegates to the committee. Of the other six, four, namely the Royal Society of London, the Academy of Sciences of Paris, the Academy of Stockholm, and the National Academy of Washington, belong to the Section of Science alone, and two, the Academy of Inscriptions and Literature, and the Academy of Moral and Political Sciences, belong to the Section of Literature. Hence the

* Translation in *Nature* of a report made to the Paris Academy of Sciences by M. Darboux, permanent Secretary of the Academy, and published in the *Comptes rendus*.