INTRODUCTORY.

Acknowledgments.—Contributed papers appear under the names of the writers; but it has been found impossible to give credit for much of the information received from agents and correspondents. As was said in a former report, a mere mention of the names of those who have responded, often at considerable sacrifice of time and trouble, to the thousands of inquiries which have been addressed to them through the mails, would in itself occupy many pages. It would be ingracious, however, to omit testifying to the uniform courtesy and interest displayed by miners, manufacturers, and dealers in mineral products, without whose public spirit and cordial co-operation little could be accomplished.

Scope of the report.—This volume is for the calendar years 1883 and 1884. While it bears the same title, with the exception of the date, as the former one (“Mineral Resources of the United States,” published in 1883), it is not a reprint or second edition of that report. The tables of production are reproduced; but it has been the endeavor to avoid so far as possible, repetition of the descriptive matter—a difficult question sometimes, as for certain mineral industries there is little to add to what has already been said, and as the text of the first report was too concise to bear further condensation. The two volumes should be consulted together. Some of the minor topics treated of in the first report, but regarding which no changes have occurred in the last two years, are omitted. On the other hand, some subjects which were not adequately discussed before are now dealt with at considerable length. This causes an apparent want of proportion between the space allotted to some of the subjects and their relative importance. Such disproportion has seemed unavoidable.

The gold and silver mining industries have been reported on by the late Director of the Mint for the years 1880, 1881, 1882, and 1883; and his report for 1884 will be issued during the present year. It is deemed unadvisable to duplicate this work, and the matter here given is merely a compact statement of the production statistics, in which the estimates of the Director of the Mint for the last four years are accepted as official.

Close of the time covered by this report.—In justification of the statements made by specialists who have contributed to this volume it should be stated that their reports and those of agents represent their views at the time of writing, which in most instances was immediately after the close of the year 1884. The unavoidable delay in publication of
this volume has allowed the lapse of time which has developed some new features, but as this is professedly a report covering only the time ending December 31, 1884, it has been deemed unadvisable to add statements of later events, which will be more properly discussed in a subsequent volume, though in a very few cases late notes have been inserted.

Delay in publication.—Although strenuous efforts were made to complete this work at an earlier date, it was found impracticable to do so. The value of statistical publications depends very largely upon the promptness with which they are issued, and the gentlemen who have assisted in the collection of these statistics were fully impressed with the importance of this consideration. In a compilation covering so many details of equal weight delay in a few branches, or even in a single one, suffices to retard the completion of the whole, no matter how forward the condition of the mass of the matter may be.

Arrangement of matter.—The form of presentation adopted is that which leads to convenience of reference. The sections are divided according to the mineral products discussed, the geographical distribution of occurrences being subsidiary to the grouping by substances. In this way everything relating to copper, for example, will be found in one portion of the book; everything relating to salt, in another, with some few exceptions, where the overlapping is indicated by cross-references. Thus a glance at the table of contents will show where to look for information of a given kind.

Character of the production statistics.—In the case of some products, as for example, quicksilver, the statistics are accurate to the last unit; in others, as iron, they are probably correct to within a small fraction of 1 per cent.; in others, as copper, lead, zinc, mineral waters, salt, etc., they rest upon a large mass of exact individual returns, in which, however, gaps have to be filled by estimates; in still others, as pyrites, natural gas, etc., the totals represent a consolidation of estimates for the several producing localities; in others, as lime, cement, building stone, etc., the figures are the lump estimates of authorities, based on the known changes in the state of the industries since the collection of the census statistics; and finally, some of the estimates are simply the best guesses possible under the circumstances. It has been the endeavor to show with perfect frankness the relative reliability or credibility of these different grades of figures; and indeed, when a product is stated at "about 30,000 tons, worth about $120,000," the use of the round figures speaks for itself. But it will be generally admitted that a round estimate, put forth for what it is honestly worth and no more, is not only better than nothing, but often better than incomplete returns obtained by direct canvass, so far as the total is concerned. And to conduct a complete direct canvass—that is, a census—of all the mineral industries would be out of the question, the expense of the tenth census in the same field having been not less than forty, and probably more than
fifty, times more than the entire cost of the present volume or its predecessor.

The unit of quantity adopted is that commonly used in the several trades. It is a misfortune that the standards of weights and measures accepted in this country are not more uniform; but it is questionable whether a reduction of the units of quantity to uniform terms would much help the matter, since the usage is so different in different industries and also in different parts of the United States.

The ton of 2,240 pounds is in this report called the "long" ton, and that of 2,000 pounds is called the "short" ton; the terms "gross" ton and "net" ton being sometimes misleading, as for instance where "gross ton of ore" might be taken to mean a ton (of perhaps only 2,000 pounds) including moisture, or where "net" might be understood as referring to the weight after deducting the tare of package, etc. In quoting statistics of the European continent the "metre" ton (tonne) of 2,204 pounds avoirdupois is generally adopted and is specified. For Great Britain and its colonies the long ton of 2,240 pounds is the unit. Pounds are avoirdupois throughout, unless otherwise specified.

The statistics of the weights of imports into and exports from the United States are quoted in long tons and long hundredweights (112 pounds), these being the units adopted at the custom-houses.

Calendar and fiscal years.—Unless otherwise specified, years are understood to be calendar years ending December 31. The Government fiscal year ends June 30, and is designated by the number of the calendar year in which it is completed. Imports and exports, with a very few exceptions, are given by fiscal years because they are thus reported by the Treasury Department, and because a considerable delay would ensue if a computation by calendar years were attempted. It is admitted that for purposes of comparison the calendar year would be a more convenient time unit.

Imports and exports.—The very valuable statistics of imports and exports, obtained through the courtesy of the Bureau of Statistics of the Treasury Department, need a word of explanation, inasmuch as some of the tables of back statistics of imports given in this report differ considerably from those published in the former volume of this series. This apparent discrepancy does not involve an error, however. Both sets of figures are correct. The Bureau of Statistics of the Treasury Department, in its annual reports on "commerce and navigation," has, since 1867, published two kinds of import tables: The first embraces (1) imported articles entered for immediate consumption on arrival, plus (2) entries of imported articles for warehouse; the second form of table shows the imports entered for consumption, with rates of duty and amounts of duty collected on each article, and embraces (1) articles entered for immediate consumption on arrival, plus (2) articles withdrawn from warehouse for consumption. The latter import table affords a better idea than the first of the consumption of the various imported
articles, but the total value of the articles which would appear in one table would in many cases differ from the amount shown in the other table by the difference between the amount entered for warehouse and the amount withdrawn from warehouse for consumption. The present import figures are therefore based upon quarterly returns, which include (1) "entries for immediate consumption," plus (2) "withdrawals from warehouse for consumption." These give a clearer view of the consumption in this country than figures including in part entries for warehouse, since the classification and appraisal are more accurate when goods are taken out of warehouse than when first sent to warehouse on a provisional classification. For example, imported iron pyrites containing some copper might at first be classed, on entry, as sulphur ore or iron ore; and afterwards, on appraisal at the time of withdrawal, be known as copper ore, according to the application of the tariff rules. The withdrawals from warehouse are also evidently a better guide as to the demand for consumption during a given period than are the entries for warehouse.