

## INTRODUCTORY.

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*Object of the report.*—The present volume is the third of a series designed to present the principal statistics concerning the mineral products of the United States, together with such descriptive matter as will throw light upon the condition of the industries which these products materially affect, or will aid in utilizing material which has no value at present. In the first volume the state of the mineral industries was presented as it appeared in 1882, and the statistics were extended through the first six months of the calendar year 1883. The second volume carried the statistics to December 31, 1884, and gave the changes during the calendar years 1883 and 1884, together with information supplementary to the first volume. The present report deals with the changes in 1885, and carries the statistics to December 31 of that year. The repetition of all matter except statistical tables is avoided wherever possible, hence the three reports should be consulted together. The omission from the present report of certain subjects which have been treated in the former volumes may be taken as indicating that the changes are slight in so far as information has been obtainable by this office.

*Acknowledgments.*—It is impossible to mention even the names of all the persons who have freely given valuable assistance, often at a great sacrifice of time and labor, in the compilation of a report embracing statistics from so large a territory. In any important chapters of the book the contributions have been obtained from experts whose entire attention has been given for years to the study of the subjects under which their names appear; and hence these articles contain more valuable and extended information than could otherwise have been secured. It is gratifying to testify to the general courtesy and hearty co-operation of the manufacturers and dealers in responding to the numerous requests for information.

*Delay in publication.*—It is recognized that the value of statistical information depends largely upon promptness in publication. This has, however, been partly sacrificed in order to make use of every available aid towards accuracy, particularly with subjects like coal, where the information must be sought from very many sources. Delay in a single subject thus extends to the whole report. Advance sheets of the important subjects have been published, however, as soon as the information was complete. All the matter in the book, moreover, has been

subjected to revision much later than the end of the period treated. The delay in printing and binding has been much less than could reasonably have been expected in a season of great pressure at the Government Printing Office.

*The period included in the report* is the calendar year 1885. The tables of production are made to conform to this period except where information is only obtainable for other divisions of time, as in the reports of imports and exports furnished for fiscal years by the Bureau of Statistics, and in a few industries where the seasons of production or manufacture make more actual divisions. Thus the manufacture of artificial fertilizers has been given from May 1 to April 30, because the most active season would be divided at December 31.

*The methods of statistical inquiry.*—A canvass of the United States for precise returns has been made concerning some of the industries; with others this is impossible within a period consistent with valuable statistics, unless made at a disproportionate expenditure of money. The composition of aggregates by such a system is also open to serious danger when the returns are withheld from a single point of production. The estimates of authorities are therefore of more practical value where the detailed canvass would be too complicated, provided these estimates are checked by actual returns from all available sources. Both of these systems are used in this report with results which are by no means uniform in their accuracy. They simply represent the best figures attainable. Fortunately the greater the industrial importance of a mineral the greater are usually the facilities for determining its output. With some substances, such as copper and pig iron, the production can be given to within a small fraction of a per cent. In other cases the widely scattered points of production make this impossible, and the statement of an exact figure of production would then imply a co-operation among the producers which frequently does not yet exist. As a matter of fact, a large proportion of the results are direct returns.