

homa, and eastern Colorado. Coffin's short report deals with the Dakota artesian basin and contains little of value.

The papers mentioned last in our title are the irrigation bulletins of the Census Office. These have been prepared by Mr. F. H. Newell, special agent on irrigation, and they cover nearly all the territory in which irrigation has been or may be practised, except California and Nevada, and these States are under consideration. In these bulletins we have accounts of what has been done in the separate States, together with a general outline of the physical conditions. One of them is devoted to artesian wells, and in it mention is made of the various artesian areas of the States. The latest of the series is largely statistical in its character and contains four maps of the country west of the 97th meridian, upon which are shown the irrigated areas, the size of crops produced by irrigation, the proportion of irrigated land to the whole, and finally the average size of the irrigated crop holdings in various sections. This notice is already too long to enter into the details of these bulletins: we can only commend them to those making a study of this important subject.

The diverse origin and character of the publications treated of in this notice, all of them, however, emanating from the general government, cannot fail to give rise to some thought. It is observed that the Geological Survey, the Weather Bureau, the Irrigation Inquiry Branch of the Department of Agriculture, and the Census Office are all concerned in their production. It is true that the Weather Bureau is now an integral part of the Department of Agriculture, but it was not when the report in question was issued. There are, then, three separate departments of the government concerned with this work. Where it is thus divided there is certain to be more or less duplication. It will be remembered that when the surveys of our western territory under Hayden, Wheeler, and Powell were being carried on, there was a continual clash and more or less repetition. When they were finally consolidated under one head, this duplication was done away with and the work executed with equal thoroughness.

If, now, the various offices investigating the irrigation question were consolidated under one management, the danger of duplication, and the expenditure of money twice over for the same work would be avoided. The intimate connection between the matter of irrigation and the agriculture of the country shows the advisability of placing it under the control of the Secretary of Agriculture. There has already emanated from that department one of the most valuable of recent reports. The connection of the Weather Bureau would facilitate the collection of rainfall and temperature statistics; and the establishment of a Bureau of Irrigation with a corps of irrigation experts, all under the control of one head, would give in the end far better results than can be expected from the diverse character the work now presents. The U. S. Geological Survey and the Census Office are collecting statistics of rainfall, estimating the flow of streams or studying the relations of soil to climate. These may properly be regarded as the work of the Weather Bureau. So, too, when the irrigation inquiry of the Department of Agriculture was in existence, it duplicated portions of the work of the Geological Survey. The time now seems ripe for a consolidation of the various irrigation inquiries. The headquarters of this Bureau of Irrigation seems by right to be the Department of Agriculture.

JOSEPH F. JAMES.

AMONG THE PUBLISHERS.

A CURIOUS undertaking, entitled "The Scientific Roll; and Magazine of Systematized Notes," has been conducted for some years by Alexander Ramsay of London. Three parts concerning meteorology are before us, with sub-title, "Climate: Baric Condition." These are occupied by a bibliography from 1688 to 1850, apparently not complete, extended abstracts from antiquated authors, and an injudicious essay by the author on "Why does the Barometer Rise and Fall?" The author's industry is praiseworthy, but the results of his industry do not seem to us of high value to modern students.

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