

ter of the spot itself was six times that of the earth, about $1' 46''$; but the portion of the sun's surface which was affected was much larger. By the 27th the secondary spots (fig. 4) which accompanied it had become much less conspicuous, while the

quarto of about twelve hundred pages and many plates and maps, is a curious medley, discussing as it does such diverse subjects as the newspaper and periodical press, the resources and sealeries of Alaska, and our ship-building

industry. The appearance of these monographs under one cover is clearly a matter of convenience of distribution only.

The first portion, dealing as it does only with the political and literary press, hardly needs our special attention.

The report on the population, industries, and resources of Alaska, by Ivan Petroff, occupies a hundred and seventy-seven pages, while that on the seal-fisheries and collateral topics, by Henry W. Elliott, covers an equal number, not including indices.

As must always happen when reports of a frontier region remain unpublished for four or five years, the picture presented by them is chiefly useful for comparison with

spot itself was the more marked, and curved tongues above it indicated great activity. From that day the spot began to diminish, and become more regular. On the 1st of August it reached the west limb, in latitude $-11^{\circ} 13'$, having consequently moved $3^{\circ} 33'$ toward the south. The appearance of this spot was heralded on the eastern limb by small, very brilliant chromospheric flames; and its disappearance was followed by small but brilliant protuberances, and by the reversal of the coronal ray 1474^k. It returned on the east at latitude $-10^{\circ} 15'$, but only as a couple of small dots, which vanished on the 21st.

It is worthy of remark, that these two large spots were formed almost at the ends of the same solar diameter, and that each showed a motion towards the pole of its respective hemisphere.

NEW VOLUME OF THE TENTH CENSUS.

THE eighth volume of the census of 1880, just issued from the government press, a bulky

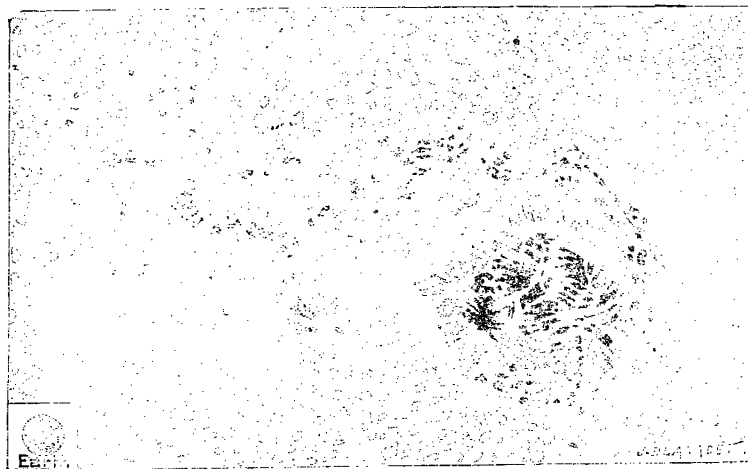


FIG. 3.

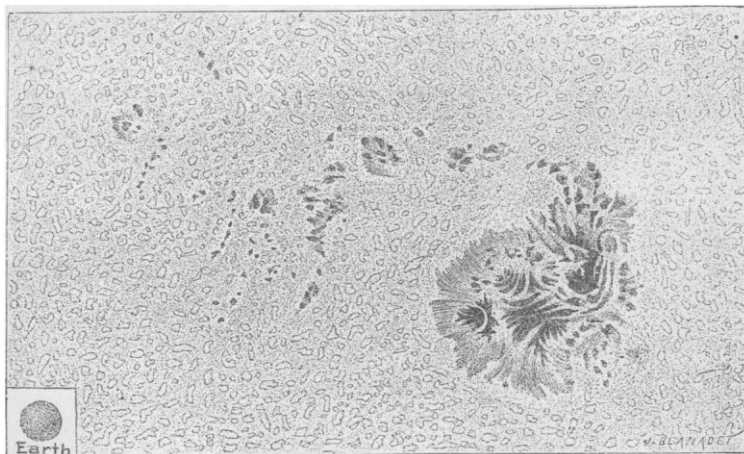


FIG. 4.

preceding or subsequent reports of the same kind. That there should, at the time of publication, be a considerable gap between the state of things as presented in the report, and their actual state, is inevitable; but perhaps in none of the census reports is

the difference more marked than in the one we are considering. The region of Alaska most populous, and most likely to afford room for settlement, and resources for development, as well as the most interesting ethnological features, was not visited by Mr. Petroff, who derives his statistics of south-eastern and western Alaska at second or third hand, or by compilation from already published works.

The fact that Mr. Petroff is of Russian extraction, had had several years' experience in Alaska as a private in the U. S. army and as a petty trader at the head of Cook's Inlet, and had translated several Russian works for Mr. H. H. Bancroft's library, gave a warrant for believing that he possessed special qualifications for the work assigned to him. Had the material gathered by him been subjected to a thorough sifting by an impartial statistician, the result would have been more valuable and much more reliable. At present, while the report contains much that is useful, and a great accumulation of facts, with some welcome translations from historical Russian works, it suffers, as a work of reference, from the attempt of the author to cover the faunal distribution of fur animals, history, philology, politics, geography, vulcanism, ethnology, and resources, — a task for which, with all due recognition of Mr. Petroff's merits, it cannot be said that he was qualified, and which has consequently been performed in an often inadequate way.

The report is illustrated by some extremely poor chromolithographic pictures of scenery and natives, which is the more to be regretted, as good photographs exist of most of the different Alaskan races which might easily have been utilized. There is a topographical and ethnological map of large size, and six smaller maps showing distribution of fur animals and forests, and the geographical divisions adopted. The plan is excellent; but the information is much more scanty than would be inferred from the maps, which, in minor details, are not in accord, in some cases, even with what information we have.

The topographical map has already been superseded by better ones in its groundwork, while the topography is necessarily mostly a matter of inference and assumption. This inheres in the nature of the case; but it may be questioned, whether, under the circumstances, such an ostentation of detail was desirable. Sundry old and some new errors have been introduced into it, the most striking of which is the erroneous position of the Yukon between the meridians of 140° and 145° . It is to be presumed that the information upon which

this was based was derived from the traders, who desired to locate the (now abandoned) trading-post of Fort Reliance on the American side of the line, to avoid international questions. The earlier map of the telegraph explorers, and the later running survey by Schwatka, leave no doubt of the error.

The ethnological map is in some respects an advance upon those which have preceded it, although not impregnable to criticism. The spelling of native and Russian names is not according to any uniform system; and the geographical names represent the idiosyncrasies of the author, rather than any standard charts. It is particularly unfortunate that the attempts of the U. S. coast-survey to unify the nomenclature, although already published on some forty or fifty charts, have met with no recognition or co-operation in this report.

The population of the territory, derived partly from estimation and partly from actual count, is 33,425, of which about half are Eskimo. The white population, including creoles, is stated at somewhat over 2,000, which has since been considerably increased in the south-eastern district. A valuable summary of several previous enumerations and estimates shows that there never has been any sound ground for the excessive estimates of 70,000 or 80,000, which are found in most gazetteers. Our space will not permit a detailed review of the various ramifications of the report; but the ethnologist may be particularly cautioned against a too confident reliance on the ethnology of this report as regards the regions not personally inspected by Mr. Petroff, several serious inaccuracies having a place there. The statistics of trade in continental furs since the American purchase are extremely inadequate, owing to the desire of traders to keep their business private, and to the unreported arctic trade; but for this there seems no help. The collection of Russian records of the fur trade by the compiler are particularly valuable, though, as in all such cases, not to be rated as more than reasonable approximations.

The report on the fur-seal fisheries by Mr. Elliott consists of matter several times previously printed, but here revised, and fully illustrated from the author's sketches. It contains by far the best general account of the fur seals of Alaska, together with a quantity of other more or less relevant matters. The estimate of the total number of seals on the islands is, however, evidently much in need of a more exact basis as being the crucial point upon which the regulation of the fishery depends.

Probably no report for the tenth census was

so discouraging to its author as that on the ship-building industry, prepared by Henry Hall, who gives us a detailed history of the rise and fall of this business; and its past prosperity vividly contrasts with the hopeless present and not hopeful future. As a history, the report strikes one as rather stale; but perhaps this was unavoidable, although we might have been spared another repetition of the yarn tracing the origin of 'schooner' from 'How she scoons!'¹ It is a pity that the illustrations should be so crude and cheap.

In criticism of the whole report, we regret that more details of designing, methods of construction, discussion of steam-boilers, machinery, etc., were not given. The lines of the Boston and Baltimore clippers will interest naval architects.

In beginning with fishing-vessels, the author puts his best foot foremost; for here we can make a pretty fair showing still, at least as far as vessels and capital employed are concerned. As we have always looked upon the fisheries as the nursery of seamen, we wish statistics of the nationality of the crews of the offshore fishermen might have been given, though probably they would not have been encouraging. The rapid concentration of the fishing interests to a few towns of course diminishes the interest of our coast people in marine pursuits. The tables given show that New England has as large tonnage, and as much invested capital, as all the rest of our ocean and lake coasts combined; and Massachusetts represents three-fourths of the whole New-England interest. Attention is properly called to the desirability of giving fishing-schooners more depth and freeboard.

Chapter ii. is a short history of our merchant marine, and is followed by a chapter on the present state of ship-building at every point along the coast, from Maine to Alaska. Almost everywhere the same story: 'Harrington, once a prosperous village,' or, 'There is no ship-building at present at Ellsworth,' and so on. The causes are several, — discouragement of foreign trade by tariff and extortionate consulate fees, local taxation and pilotage laws, interference of railroads with coasting-trade, failure of suitable timber-supply, and the greater cost of iron vessels here as compared with England. Bath, Me., is the principal ship-building port, and it is interesting to see the result of systematic work; for, while timber is from seventy-five to three hundred per cent higher, it is still possible to build a ship at forty-five dollars per

ton, as in 1825. On the Pacific coast wooden ship-building is still a growing industry.

The chapter on iron ship-building offers some hope, in the condition of the more important yards, and the cheapening of the cost of iron vessels. This is fortunate, for the next chapter shows how thoroughly the eastern seaboard has been stripped of ship-timber; and, as well known, second-growth timber is very inferior. The supply of yellow pine, now almost exclusively used for planking, is reported large, but we believe it is growing more difficult to obtain the best quality of this useful wood. The Pacific coast still affords abundance of good ship-timber, and the good character given to yellow fir shows that ship-building on the Pacific need not suffer for years to come. Tables of the specific gravities and weights of the different woods used by ship-builders, by Prof. C. S. Sargent and the late Constructor Pook, U.S.N., are given; and the report is closed with statistics of vessels built in the census year, number of hands employed, wages, value of materials, etc.

MINOR BOOK NOTICES.

The electric light: its history, production, and applications. By EM. ALGLAVE and J. BOULARD. Translated from the French by T. O'CONOR SLOANE, E.M., Ph.D. Edited, with notes and additions, by C. M. LUNGREN, C.E. New York, Appleton, 1884. 18+458 p. 8°.

THE fascinating character of the subject, and the great popular interest in it, have stimulated the production of pictorial treatises on electricity and its practical applications. To the specialist many of these modern treatises appear to be uncalled for, or at least seem to be padded with much superfluous and unnecessary matter.

Is there not a curious relation between the expensive furnishing of the offices of many electric-light companies, where the unwary person is induced to invest in stock which has only an imaginary value, and the luxurious editions of many treatises on the electric light? If the office should be embellished, why should not the books that treat of the wares of the company be of *éditions de luxe*?

The work of Alglave and Boulard, edited by Mr. Lungren, contains much extraneous matter; but the general reader will find valuable information in regard to the general features of electric lighting. The treatise does not pretend to be an exhaustive presentation of the subject. One is surprised to find how much interesting matter has been crowded into the

¹ The word is probably of Dutch origin, and the rig can be traced back to earlier times than those of Andrew Robinson of Gloucester.