

was formerly member of the Naval War College Staff, and the third, Dr. Emery Johnson, is special commissioner on the Traffic and Tolls of the Panama Canal.

Mr. Bakenhus narrates the history of the project, and gives a clear account of the design and construction of the canal. His treatment of the phenomena presented by the landslides is, however, inadequate, and not marked by any originality of thought. They still occur at intervals, seriously reducing the depth of the waterway; it is quite uncertain when they will cease, and until that time comes the canal will not be thoroughly satisfactory as a link in the chain of naval communication between the Atlantic and Pacific Oceans.

Captain Knapp deals with the United States Navy and the Panama Canal, detailing the reductions of sea distance. The strategic aspect of the canal has not received sufficient attention in this country, considering that it was primarily intended for the use of the United States Navy. But if the British public has been in the past somewhat prone to neglect the study of strategy, our condition is one of enlightenment compared to the general misapprehension of such matters by American citizens.

"The United States," says Capt. Knapp, "is not a military nation. There is little consideration and less understanding among the people at large of military matters. The Government has no defined military policy, using military in its wide sense, and it has no defined naval policy."

The plain fact is that the American Government is gambling on the maintenance of the balance of power in Europe. Once let the balance of forces on our side be destroyed and the Monroe doctrine could not be upheld by the naval and military force now at the disposal of the United States, and the whole fabric of American imperial policy would fall. The time which would be required to prepare the United States for war with great Powers is probably under-estimated by most people. The first step must be the education of the people to its necessity, which necessarily takes time. The creation of an adequate staff of trained officers for a large army also takes time; and the building up of a merchant marine, so much required for the navy, is an extremely difficult problem in view of the economic conditions in America.

If the Government of the United States began to-morrow to prepare for a serious war we do not think that the country would be ready in less than twenty years. It is earnestly to be hoped in the interests of Anglo-Saxon civilisation that the great and patriotic democracy of America will turn its keen intelligence to the study of war. V. C.

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#### OUR BOOKSHELF.

*Refuse Disposal: a Practical Manual for Municipal Engineers, Members of Local Authorities, etc.*

By E. R. Matthews. Pp. xiv + 160. (London: C. Griffin and Co., Ltd., 1915.) Price 6s. net.

"It is the purpose of this work to set forth modern methods of collection and disposal, embodying the latest practice, so as to enable the municipal engineer and the local councillor to see what is being done in this and other countries"; and information of the type usually accumulated by local authorities in their consideration of the problem of refuse disposal is presented in large quantity having regard to limitations of space.

Given a sound knowledge of the general principles and practice, the engineer will find the collected data with regard to typical plants serviceable, but for the councillor some assistance to the intelligent application of the information presented might well have taken the place of certain non-essential detail and superfluous photographs.

"Discussion" of the advisability of installing destructors for small communities, promised in both preface and text, resolves itself into a description of certain destructors employed in works and institutions, and the statement that destructors "are equally useful for a village of five hundred population as for a city of 500,000."

The bearing upon the cost of disposal, of the special difficulties of collection, of the provision of adequate attention at the destructor, and of finding any practicable use for the heat generated, in a "village of five hundred population" as compared with a city or even an institution, is apparently unrecognised.

The book deals with the uses of destructor clinker and the construction of chimneys, and concludes with some interesting notes upon the principles of vacuum cleaning and dust collecting.

P. G.

*A List of Geographical Atlases in the Library of Congress, with Bibliographical Notes.* Compiled under the direction of Philip Lee Phillips. Vol. iii. Titles 3266-4087. (Washington: Government Printing Office, 1914.)

THE first two volumes of this valuable work were reviewed in NATURE in 1910 (vol. lxxxiv., p. 325), and as the same general plan and arrangement are followed in vol. iii., a brief notice of this will suffice. It deals almost entirely with acquisitions by the Library of Congress since 1909, but such are the resources at the disposal of this fortunate institution that the present list reaches more than half the bulk of the earlier one. In part this may be due to the somewhat fuller notes and analyses—a feature of great value—but the additions to the collection are extraordinarily numerous and important. They include, e.g., copies of Lafreri's rare Italian atlas, and of Waghenaer's "Speculum Nauticum," the absence of both of which was commented on in our previous notice. But few copies of Lafreri, with title, are known, and no two are quite alike; so that the careful collation now given, and the comparison with Norden-