better-known bacterial diseases and the most modern preventive methods; and lastly a suggestion is given for the equipment of a moderate sized laboratory for the pharmacy.

The book in general is well written, well illustrated, and will be useful for the people for whom it is particularly designed. As a book on bacteriology for the general student, however, it is too narrow in its scope to be of any great value or interest. As its title indicates, it is a pharmaceutical bacteriology, and its place is simply in schools of pharmacy and in the hands of pharmacists.

H. W. C.

The American Year Book. 1911. Edited by FRANCIS G. WICKWARE, B.A., B.Sc. New York, D. Appleton & Co.

The American Year Book in its second issue presents a carefully collected and compiled record of events and progress, largely with reference to the year 1911. There are here gathered facts of use to writers of many kinds, covering many fields, scientific, somewhat aside from science, like history and politics, and others into which science is to-day entering, like economics and the social questions. Industries and occupations are considered under a number of grouped heads, while the sciences themselves and engineering are ranged in some seven groups. There follow the humanities, an epitome of chronology and necrology and some references to the volume of 1910, which, being the first, reviewed and outlined a number of subjects.

There are two criteria for determining the quality of a volume like this; one its actual fitness for the purpose for which it is intended and the other the list of contributors. The first-named can be reliable only after a season of trial, and the excellences or demerits may not be apparent on cursory inspection. Taking the list of names of the authors of the various essays, they should stand for a superlative product. It was Dr. Walter Wyman who prepared the article on Public Health and Hygiene, the revision after his death being done by Dr. Schereschewsky. There are here reviewed the world movements of epidemic diseases and the incidence and movements of the same within the United States. The writer does not fail to note in an authoritative way the measures of defense against the threatened invasion of cholera during the year, the unusual prevalence of smallpox, the improvement in the mortality rate of tuberculosis, the story of anti-typhoid vaccination, not forgetting a word of warning against measles and other diseases so common that no one fears them, yet which take large toll. In this connection it is interesting to note that the infant mortality can be given for eight states, only, Michigan being the sole one away from the Atlantic coast in which the registration is sufficiently good.

International statistics for world and country are presented from authoritative sources, government reports, local bulletins and the like. Some of the items are populations, national revenues and expenditures, products like cotton and wool, grains, coal and iron. These will be invaluable to persons needing such data. The international mortality rates given in the first grouping of figures is from an English source, the Registrar General's Annual Summary. It is curious that while taking places of as low rank in point of population as Stockholm and Bucharest, Prague, Trieste and Melbourne, the latter somewhere not far above 100,000, there are omitted such places as Tokio, Buenos Ayres, Liverpool, Warsaw, Manchester, Naples, etc., so that only about one third of the cities above half a million are represented. There must be better sources than that selected if full information is desired.

The third group, the Problems of Population, takes up many matters, one interesting one being the change in the shape of the head noticeable among the children of immigrants. For history there is a résumé of the political parties and their changes, some words on reciprocity and the tariff; conservation is considered and trusts and court decisions affecting corporations, etc. There is a good deal of space devoted to foreign history. Govern-

ment, national, state and municipal conditions are discussed at length; there is a consideration of economic conditions and labor questions, the items thus far occupying about half the bulky volume.

In matters of science the treatment is of rather restricted divisions, generally by those in the employ of the government or with colleges. In agriculture, Allen, Hooker, Evans, Knight and Glasson, all of them related to some bureau, discuss, respectively, the census of 1911, diseases of live stock, diseases of plants, legislation and horticulture, while Morse, of the Bussey Institute, considers live stock, and Felt, of Albany, the seventeen-year locust. Ethel Marion Smith, of the Bureau of Fisheries, takes up briefly the story of the fisheries. In similar manner Locke and Wilson, of the Massachusetts Institute of Technology, present reviews of mining and ore-dressing and coal, coke and petroleum, while Hofman, of the same school, discusses lead. Here no government expert is heard, but Fulton, president of the South Dakota school, Macgregor, of Columbia, and two engineers and an editor, Stoughton, Fulton and Ingalls, contribute other special articles. Mathematics in general is from the pen of Wilson, of the Massachusetts Tech, while Todd, of Amherst, writes quite at length and in an interesting manner of the astronomical world, outlining the important movements of the science. Geological topics are divided between Woodworth and Palache, of Harvard, Reid, of Johns Hopkins, who discusses vulcanology and De Wolf and Ransome. Meteorology of course is considered by Ward, of Harvard, terrestrial magnetism by Faris, in government employ, and in geography, Davis, of Harvard, is the only college man, Gannett and Littlehales, of Washington, and Adams, editor of the publications of the American Geographical Society, caring for the other sections. Chemistry enlists a full company of experts, Cornell and Columbia tieing the government number, two, with one each from Technology and Wisconsin, while the story of physics is presented by Saunders, of Syracuse. In the same way are taken up zoology, botany, paleontology, ethnology and archeology, the last three together by the presentation of abstracts of the books, publications and society achievements of the year. These notings will serve to show the method in which the subjects are attacked and the kind of men who have contributed the different essays. Psychology and philosophy, medicine and surgery and engineering follow, while religion, the arts and literature round out the whole.

The book is of convenient size, 8vo, well printed on light-weight paper, so that it is—despite its bulk of 900 pages—not inconvenient to hold in the hand, and it is quite well indexed by larger topics, which will probably serve the purpose since the articles are in general not long and are arranged with well-displayed headings.

John Ritchie, Jr.

NOTES ON METEOROLOGY AND CLIMATOLOGY

A NEW AEROLOGICAL LABORATORY

The close relationship between meteorology, the science, and aviation, the art, is becoming more generally recognized as time progresses. At present there is being erected at Rostock, a small city in northern Germany, on an arm of the Baltic Sea, an institution which is to be an aerological observatory as well as an aeronautical laboratory. The aerological researches will be based upon data obtained from aloft by means of kites and balloons, while the aeronautical experiments will consist mainly of the adaptation of aircraft to the conditions thus determined. Professor Otto Krümmel will direct the aerological investigations, while Captain Alfred Hildebrandt will have charge of the aeronautical work, which will include a manufacturing plant. Because of the favorable location especial attention will be paid to hydro-aeroplanes. As is customary in Germany, municipal aid will be given the new institution.

THE NEW YORK METEOROLOGICAL OBSERVATORY

The New York Meteorological Observatory, located in Central Park, New York City, has