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THE UNITED STATES HYDROGRAPHIC OFFICE has so largely increased its field of work and usefulness within the last few years, that the hydrographer's report to the chief of Bureau of Navigation will receive attention not only from the naval service and the maritime community, but from a large portion of the scientific world, and the public generally. In fact, there can be no more praiseworthy object kept in view by officers of both the army and the navy than the maintenance and encouragement of public interest in, and acquaintance with, the organization, management, and general conduct of at least such of their offices and bureaus as appeal in any special way to popular interest. There is undoubtedly no branch of the Navy Department to which this consideration is so applicable as to the Hydrographic Office, in view of the recent extension of its field of work by means of the branch offices established already in six of our principal seaports (Boston, New York, Philadelphia, Baltimore, New Orleans, and San Francisco), and authorized in two more (Norfolk, Va., and Portland, Ore.). The importance of this step, carried into effect by the recent hydrographer, Commander J. R. Bartlett, with the support of the chief of Bureau of Navigation, Commodore John G. Walker, is so great, in its relation to the navy, the maritime community, and the shipping interests of the whole country, that a brief review of the working of these branch offices may well be given in this connection. Complete sets of charts, sailing-directions, light-lists, and other nautical publications, are kept at hand, together with standard barometers and thermometers; and masters of vessels can obtain the latest and most reliable information regarding every subject connected with navigation. These facilities have been so generally taken advantage of, that chambers of commerce, maritime exchanges, marine insurance companies, and other commercial bodies, are enthusiastic in their approval. Advantage has been taken of the cordial relations thus established with shipping men to collect a large amount of data relative to hydrography and marine meteorology, much of it of a high order of scientific as well as practical value; and every effort is made to publish the results, in order that they may be known and utilized. Thus the publication of the 'Monthly Pilot Chart' was a very happy thought, and it has become of recognized value and authority, and a most important adjunct in the work of the office. The tabulated statements accompanying the hydrographer's report, giving in detail the work of each branch office during the year, illustrate what an important part these offices play in the collection and dissemination of nautical information. It is highly gratifying to learn from the report of the present hydrographer, Lieut. G. L. Dyer, U.S.N., that the standard of efficiency already attained is likely to be maintained, and even increased, and that, while the relations of the office to the navy are of course regarded as of paramount importance, its *raison d'être* being to supply our vessels of war with reliable charts and nautical information of every kind, its relations to the commercial marine are given their proper share of attention also, and a broad view is taken of the part that the office has taken, and should continue to take, in facilitating the scientific study of every problem relating to the ocean. In this connection too much praise cannot be given to the cordial co-operation between this office and the Signal Service, in collecting and utilizing, without either duplication of work or friction of any kind, meteorological data relative to the ocean and the land.

IN LOOKING OVER the columns of the technical journals devoted to electrical industries, one is struck with the rapidity with which the applications of electricity are being extended. Dozens of new electric-lighting stations are commenced each week, while the applications of electric motors to street-car and stationary work occupy a considerable space in these journals. This is very encouraging, and shows that electric-lighting and the distribution of power have taken a permanent place, and are, under certain circumstances, paying investments. But, at the same time that we read of this rapid growth, we note an extension in another and less promising direction. New companies are being constantly incorporated for the manufacture of electrical apparatus, — lighting and motor systems, storage and primary batteries, fire-alarm and gas-lighting systems, — few of them with a capital of less than a hundred thousand dollars, the majority with a capital varying from that figure to one or two millions. If we will investigate these corporations, we will find that in many of them a large amount of the stock is reserved for the patent rights and for the promoters, and the amount left to supply the working capital is a comparatively small proportion of the whole. The investors find themselves in the position of subscribing the total working capital to a company, paying from the profits liberal salaries to the officers of the company, who are usually the incorporators and the owners of the patents, and who, controlling the majority of the stock, can fix their own compensation; and finally they receive only a small proportion of the earnings, — in many companies from one-half to one-tenth, — if there happens to be any. It should be remembered by investors that patents, unless they are fundamental in their character, are not of very great value. A larger part of the new corporations that have been recently formed operate under patents that are little better than a number of other devices for accomplish-

ing the same purpose. Edison, for his fundamental and valuable patents in electric-lighting, has received less share in the stock of the Edison Company than have the patentees of some small improvement in an electric gas-lighting or fire-alarm device in the companies that have been formed to promote them. It is too often the case that the small cash capital subscribed is used to make a good showing for the company until the promoters have sold their stock, when the company is very liable to suspend. All this very seriously retards the progress of electrical industry. Neither those who lose in companies like the above, nor their friends, are very likely to invest again; and the result is, that the companies that can do legitimate and remunerative work have trouble in getting the capital necessary to develop their business as fast as they would otherwise be able. That there is an immense field for work, and remunerative work, is shown by the wonderful growth of such companies as the Edison, Brush, Thomson-Houston, Westinghouse, Sprague, and others. But we would advise all investors in electrical companies to first find whether they are legitimate business enterprises, with a fair amount of capital allowed for patents, supposing they work under patents, and then to try and find out whether there is any merit in the plan that is to be introduced. The promoters of the company are not the best persons from whom to take evidence as to its value. As for investments in local lighting companies, if there is an efficient management, and if a proper local franchise can be obtained, then, unless a very uneconomical system is chosen, and the local conditions are unusually unfavorable, it is the experience of the last few years that the company should pay good dividends. While we believe, then, that electricity offers an excellent field for investment, and that well-managed companies will pay, yet we cannot too strongly urge investors not to rush blindly into investments on the strength of the representation of interested parties. The advantages of electricity for lighting must lead to its almost universal adoption in the near future, while its adaptability to the distribution of energy opens an almost limitless field for motor-work. The one thing that could most retard its progress would be a condition of public distrust caused by unwise investors, who will equally injure electrical interests and themselves.

THE THIRTEENTH ANNUAL REPORT, which President Gilman has just presented to the board of trustees of Johns Hopkins University, is very interesting reading. It incorporates reports, drawn with some attention to detail, by the various heads of departments, dealing with the specific work accomplished under their respective supervision. This is a feature of considerable value to those who are following closely the development of university work in the United States, and is not unfamiliar, as President Barnard has printed such appendices to his annual report to the trustees of Columbia College for several years past. Mr. Gilman characterizes the academic year 1887–88 as one of steady advance. "The number of students has increased, the standard of scholarship has been maintained, the publications have been as many as ever, the fidelity and enthusiasm of the principal teachers cannot be too strongly commended." Reference to the financial condition of the institution is made in these words: "Our only cause for anxiety is one of which you are fully aware, — the loss of income from the stocks which were given to the university by its founder. Your wisdom, gentlemen of the board of trustees, will no doubt devise some efficient relief. I believe it to be a reasonable expectation that the efforts which you have put forth, and which you have encouraged others to put forth, for the establishment of a university, will receive financial support when you are ready to ask for it." The academic staff included, during the year, fifty-seven teachers. The number of students enrolled during the year was four hundred and twenty, of whom one hundred and ninety were residents of Maryland, one hundred and ninety-six of other States, and twenty-five of foreign countries. Of this number, two hundred and thirty were already graduates of other institutions. The degree of B.A. was conferred on thirty-four candidates, and that of Ph.D. upon twenty-seven, during the year.

The guiding principle upon which Mr. Gilman has developed the university is eminently sound. In view of the numerous newspaper reports and articles concerning Columbia College and its development, the perusal of the following passage from the report before us is recommended to the trustees and faculties of the latter institution. "We continue to adhere," says Mr. Gilman, "to a definition which is hallowed by age and confirmed by experience, that a university is a body of teachers and scholars, — *universitas magistrorum et discipulorum*, — a corporation maintained for the conservation and advancement of knowledge, in which those who have been thoroughly prepared for higher studies are encouraged to continue, under competent professors, their intellectual advancement in many branches of science and literature. In this society we recognize two important grades: (*a*) the collegiate students, who are aspirants for the diploma of bachelor of arts, to which they look forward as a certificate that they have completed a liberal course of preliminary study; and (*b*) the university students, including the few who may be candidates for a higher diploma, that of doctor or master (a certificate that they have made special attainments in certain branches of knowledge); and a larger number who, without any reference to a degree, are simply continuing their studies for varying periods. Corresponding to the wants of these two classes of students, we have two methods of instruction, — the rule of the college, which provides discipline, drill, training, in appointed tasks, for definite periods; and the rule of the university, the note of which is opportunity, freedom, encouragement, and guidance in more difficult studies, inquiries, and pursuits."

THE CLAIMS OF THE ENGLISH LANGUAGE TO UNIVERSALITY.[1]

ALL efforts to create a new language for international use are really unnecessary, because we already possess a vehicle of communication, in our native tongue, which, if not perfect, is sufficiently so, and is at least as good as any that has been proposed. Whatever imperfections may be discerned in English, their removal, if thought necessary, can be easily accomplished in books for foreign learners. But, taking our language *as it is*, and comparing it with other languages, I think I may claim assent to a few fundamental propositions.

The first proposition is, English is as readily *understood* by foreign learners as a foreign language is by English learners. This statement might be strengthened; for the inflection of words in other languages requires much preliminary study to enable a learner to translate; whereas the student of English has only to deal with words which are, for the most part, unchanging, and the full meaning of which, consequently, he learns at once. English is therefore, in reality, *more* readily understood by a foreign learner than a foreign language is by an English learner.

The second proposition is, English is as readily pronounced with *intelligibility* by foreign learners as a foreign language is by English learners. Accuracy of pronunciation, according to native standards, is by no means essential to intelligibility. This is especially true of English. We hear speakers mispronounce every element in a sentence, yet they are understood; and the substitution of one sound for another is a very common habit: as in forming *th* instead of *s*, and "lisping all the hissing sounds;" or "croaking the sound of *r* far back in the rasping throat;" or "protruding the sound through the narrow, rounded aperture of the approximated lips;" or in substituting *t* for *k*, as when little Missie "calls her tiny kitten to come, that she may catch it." We understand the lisper, the burrer, the infant prattler, and the foreign stumbler

[1] Address delivered by Dr. A. Melville Bell before the Nineteenth Century Club, New York, Dec. 12, 1888.