ETHNOLOGICAL AND ARCHEOLOGICAL COOPERATIVE INVESTIGATION UNDER THE SMITHSONIAN INSTITUTION

IN response to a recent inquiry the Smithsonian Institution has requested the Comptroller General of the United States for an opinion as to the geographic limits included under the special appropriation for cooperative ethnological and archeological researches under the Bureau of American Ethnology.[1] Under date of August 31 reply has been received that expenditures under this appropriation under the wording of the act may be made only within the geographic limits of the United States proper, and may not be extended to the territories of Alaska or Hawaii, or to any other areas which may be under the jurisdiction of the United States but outside of its geographic limits.

C. G. ABBOT,
Secretary, Smithsonian Institution

QUOTATIONS

CHEMICAL ABSTRACTS

THE directors of The American Chemical Society a few months ago addressed a proposal to the society's corporate members, to a selected list of corporations whose prosperity depends on chemistry, and to a few individuals believed to be able, by support, influence, or advice, to assist in carrying out the plan unfolded for the expansion of "Chemical Abstracts." It was pointed out that two things were essential: first, the investment of not less than $50,000 a year in addition to funds which could be taken from the society's resources to enable "Chemical Abstracts" to fulfil its mission; second, the creation of a capital sum, the income of which is to be devoted to the continuation of that work.

The society had turned but seldom to industry for substantial assistance, and some doubted the success of the undertaking. At the St. Louis meeting the group was electrified by the announcement that the Chemical Foundation, Inc., through its president, Francis P. Garvan, had made available the sum of $50,000 per year for five years to be used in such manner as the directors of the society should decide for the development of "Chemical Abstracts." It was also announced that already a considerable sum had been offered by industry, headed by an annual gift of $10,000 for five years from the Allied Chemical & Dye Corp. The announcement of these additional sums further encouraged those responsible for financing the society's programs, since it enabled the directors to complete their part of the agreement with the General Education Board, whose support of the Second Decennial Index to "Chemical Abstracts" was on the basis of a revolving fund to be brought to $100,000 to guarantee the future compilation and publication of such collective indexes.

Since that memorable St. Louis meeting the work has gone forward in a dignified, quiet, yet persistent way, and it has been most heartening to see the splendid spirit with which the industry has responded to the proposal made by the directors. To-day we are able to publish a list of those who have invested in the expansion of "Chemical Abstracts" and, in accordance with the instructions issued by the directors to the secretary of the society, amounts have been indicated only with the consent of the company and where $500 a year or more is involved. We are delighted to announce that industry has met the proposal and that for the next five years "Chemical Abstracts" will expend, in addition to sums from the resources of the society of not less than $110,000 a year, $50,000 on this key to the chemical literature of the world.

The total of one quarter of a million dollars, made available by the Chemical Foundation, becomes the nucleus of a capital sum necessary to guarantee in perpetuity this much-needed support. The work, therefore, is but partially completed, but what has been accomplished will surely facilitate the completion of the effort.

It may not be generally known that in 1927 "Chemical Abstracts" published 32,909 abstracts, of which 7,872 were abstracts of patents. This was an increase of more than 3,700 abstracts in comparison with 1926, which was again nearly as great an increase over 1925. . . .

The number of scientific journals now systematically abstracted is more than 1,300, and they represent many languages. The published "List of Periodicals Abstracted by Chemical Abstracts with Key to Library Files" (225 American and Canadian libraries) is an 89-page pamphlet, available at 35 cents per copy, and said to be by far the most complete list in existence of current periodicals of chemical interest.

"Chemical Abstracts" will continue to strive to excel in completeness, so that the chemist can use abstracts with a feeling of reasonable security against missing anything of value in contemporary chemical literature. The quality of the abstracts, which has been good in spite of the necessity for extreme brevity, will be improved by the reasonable lengthening which is now possible. These abstracts are, for the most part, prepared by specialists actively interested in the various

[1] See SCIENCE, July 13, 1928, pp. 29–30.

subjects. Other specialists serving in the capacity of assistant editors, of which there are 46, give further examination to the prepared abstracts, checking them over before publication. A special feature of "Chemical Abstracts" for many years has been the subject indexes. These are true subject indexes, not indexes of words. The editor gives this work his close personal attention, seeing to it that the indexes are accurate and complete with the entries properly correlated and with superfluous words and entries eliminated. The entry-a-line style, with systematic writing and arrangement of the phrases modifying the subject headings, makes for convenience in use. The author, subject and formula indexes for 1927 contained entries totaling over 150,000.

With the support which has come to this uniquely useful publication, it will be in a position to care for the normal growth of the chemical literature and at the same time expand the abstracts to the most effective average length. Abstracts are to be made more informational and will appear more promptly. It is planned to give industrial chemistry in all its phases increasing attention.

There is a great feeling of satisfaction when an enterprise has been developed to the point where it excels in its specialty. This is true of "Chemical Abstracts." Not only will chemistry and the American Chemical Society benefit directly from the expansion of "Chemical Abstracts," but the many sciences which depend upon it and which contribute but little to its maintenance will also profit. The cost of "Chemical Abstracts" to users is absurdly low; its nearest competitor is offered at several times its subscription price. The support received, therefore, not only constitutes a sound investment for industry but enables industry in a very practical manner and at relatively small cost to encourage science in general and benefit a great number. It only remains to complete the capital sum required to place "Chemical Abstracts" permanently on the sound foundation its service warrants.—*Industrial and Engineering Chemistry.*

SPECIAL ARTICLES

HEATING EFFECTS OBSERVED IN A HIGH FREQUENCY STATIC FIELD

DURING developmental research on a short-wave radio transmitter, certain striking heating effects in the vicinity of the antenna have been noted. A preliminary study has brought out several points of interest in regard to their magnitude and characteristics.

During operation of a twenty-kilowatt apparatus discharging from a six-foot rod to ground with 60,000,000 alternations per second of 15,000 volts, the mouth temperature of one bystander rose 2.2° F. in fifteen minutes, while several other individuals exhibited a somewhat smaller rise of temperature.

Studies made with a smaller, 750 watt set, arranged to give rapid alternations of 3,000 volts difference of potential between two parallel metal plates, indicate that there is a well-defined relation between the rate of heating of solutions of different salt content and the frequency of voltage alternation. Thus, at a frequency of 25,000,000 cycles, a sodium chloride solution of 0.05 per cent. concentration has the fastest

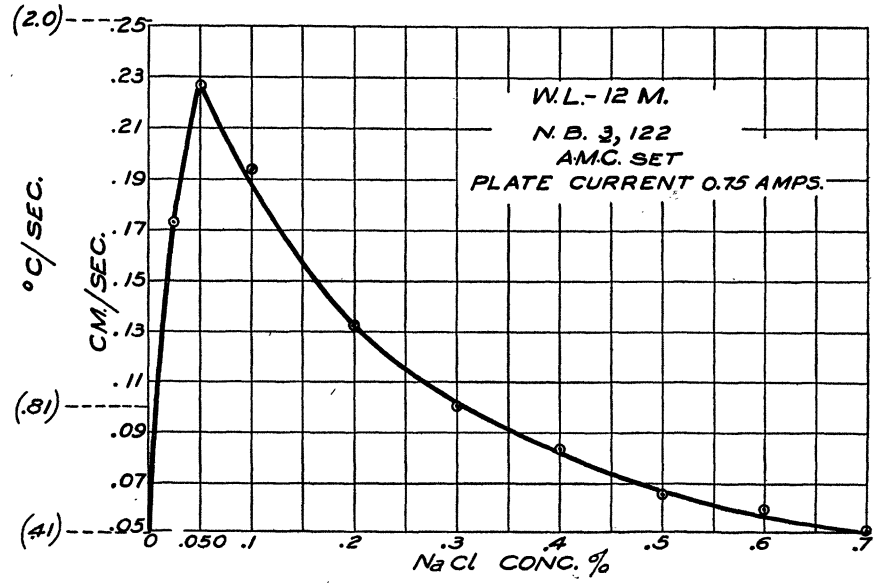

FIG. 1