

"Origin of Cultivated Plants." These are only food plants, and the treatment does not pretend to be complete. In the Standard Cyclopedia of Horticulture, the entries of plants described in cultivation exceeds 20,000, although not nearly all these species are domesticated. About 40,000 Latin names are accounted for. This treatment does not cover the cultivated plants of the world, but those of the United States and Canada and those readily drawn from the European trade, with the most prominent species in the island dependencies of the United States. Probably never have species new to cultivation been introduced so rapidly as within very recent years. For example, in the treatment of *Primula* in the Cyclopedia of American Horticulture in 1901, I described twenty-seven species; in the Standard Cyclopedia in 1916, I described 200. All this phalanx comprises in itself a large section of the vegetable kingdom, perhaps as much as nearly one sixth of the Spermatophyta, and it demands the attention of the best phytographic and taxonomic investigation.

The long-repeated statements of origins of cultivated plants are challenged whenever the systematology is seriously attacked, or when the subject is examined under botanical investigations. The case of maize is a striking example; although always explained on the basis of American origin, the reported pre-Columbian references in China need further investigation. The same kind of puzzle associates with many plants, wild as well as domesticated, that are prominent subjects in early travels and writings. Thus Fernald concludes that the wine-berries of the Norsemen were not grapes found on the shores of the present New England, as we have always assumed, and that they were probably mountain cranberries found in Labrador or the

St. Lawrence region. The result of contemporaneous studies is that, from both the historical and biological sides, the foundations are being shocked. Most of my life I have given special attention to the botany of the domesticated flora, yet I should not now care to hazard a pronouncement from this platform on the specific natural-history origin of any one of the more important widespread species of cultivated plants.

THE SYSTEMATIST IS A BIOLOGIST

Whether he works with feral or domestic floras, the systematist of whom I speak is a real investigator. He studies the living material so far as he is able, perhaps growing it for this purpose; tries to understand the influence of environment, the rôle of hybridization and mutation, and preserves his records in the form of ample herbarium sheets. He relates his work to morphology, and desires to arrange it as an expression of lines of development. He may study his material for years before he ventures to describe. It follows that the systematist necessarily, in these days, becomes a specialist; and it further follows that we should encourage, in addition to the few very large and comprehensive establishments, the making of many herbaria and growing collections strong in special lines.

L. H. BAILEY

PATENT REFORM PROSPECTS

THE Patent Office Society is permitted to announce that a composite committee has been created, upon request, by the National Research Council, to make a preliminary study of the problems of the U. S. Patent Office and its service to science and the useful arts. This committee, which is expected to meet in Washington shortly after the middle of December, is understood to comprise, at the outset, the following: Leo H. Baekeland, Wm. F. Durand, Thos. Ewing, Frederick P. Fish, Robert A.

Millikan, Michael I. Pupin and S. W. Stratton.

The action of the National Research Council in forming a committee of this sort is understood to be in conformity with the wishes of Commissioner of Patents J. T. Newton and Secretary of the Interior F. K. Lane, and to be in accord also with the following resolutions originally adopted by the Patent Office Society and concurred in by Mr. Ewing while commissioner of patents:

WHEREAS a section of the charter of the National Academy of Sciences provides that "The academy shall, whenever called upon by any department of the government, investigate, examine and report upon any subject of science or art,"

AND WHEREAS, at the request of the President of the United States, the academy has organized a National Research Council, to bring into effective cooperation existing governmental, educational and other research organizations,

AND WHEREAS the National Research Council is now perfecting its organization for the performance of the above duties,

AND WHEREAS a fundamental activity of the Patent Office is research upon questions of novelty, "in order to promote the progress of science and the arts" by the prompt issuance of proper grants and the refusal of improper grants of patent monopolies,

Now therefore be it resolved by the Patent Office Society:

1. That in its judgment a request for cooperation, advice and assistance should be promptly forwarded to the National Research Council, attention being called to such problems as adequacy of force, adequacy of space, adequacy of library, adequacy of facilities for test and demonstration, adequacy of classification, adequacy of organization, adequacy of scientific, legal and professional standards, adequacy of incentives and opportunities, simplification of procedure, responsiveness to present national and international requirements and to the important advances that might be expected either from an independent study of the above by the National Research Council or from an early effort on its part to coordinate, in the interest of an improved public service, the endeavors of the various national societies, manufacturing interests, patent bar associations, and all others aiming at genuine patent reform.

2. That the concurrence of the Commissioner of

Patents and the Secretary of the Interior in these resolutions be solicited.

3. And that a copy hereof be forwarded to the National Research Council with some expression of the appreciation of this society for the interest already shown, and some appropriate assurance of the determination of this society to render every possible assistance and support to the work of the National Research Council.

The implied determination of the Patent Office Society to do its part in an effort to improve the work and conditions of the Patent Office, and to gain therein all possible support on the part of scientists, engineers and manufacturers, is further indicated in the accompanying resolutions relating to the proposed Institute for the History of Science, for which a Washington location is by it advocated—this latter proposal being already accorded the invaluable support of the Washington Academy of Sciences.

RESOLUTIONS ADOPTED BY THE PATENT OFFICE SOCIETY, BY ITS AUTHORIZED EXECUTIVE COMMITTEE

That the attention of all interested in the possibilities of the proposed Institute for the History of Science be called to the advantages of such a location and organization for that institute, whenever it shall be established, as shall render its resources easily available not only to highly trained specialists but also to practising engineers, to examiners of patents, and, so far as practicable, to the general public.

That, in the judgment of the Patent Office Society, the present moment of prominence of American ideals and of recognized dependence upon the facts and principles of science is none too early for preliminary steps toward the establishment in this country of an Institute of the general character already proposed (by George Sarton, and others, in *SCIENCE*, March 23, 1917), such institute to be independent, liberally endowed and adequate not only to the requirements of our present national life, but also to that great era of internationalism and general enlightenment upon which even the avoidance of war may hereafter depend.

That the special committee in hand relations with the National Research Council be directed to emphasize to that body the foregoing conclusions as perhaps pertinent to purposes shared by it; to

solicit the concurrence therein of both the local and the national scientific and engineering societies, and to publish the same generally, or in its discretion, always with careful regard to the aims of those to whom the project is due.

The following questions raised in a report made to the Patent Office corps by a special committee charged to cooperate with the personnel committee of the National Research Council will indicate something of the tendency of measures for which it is hoped to gain early consideration:

What does the Patent Office need besides men and materials?

Feeling that the time is at hand when the Patent Office must enter upon either a period of very rapid decline or else upon a period of revitalization and expansion, shall we not test the notion that it may actually be easier, and in every respect better, for the office, exhibiting a new vision of its task, to ask a great deal more, rather than to continue its petition for the very, very little that has so often been denied it?

Relying upon the assistance of the composite committee generously formed by the National Research Council—

Can assistance be got, even now, in the making of a genuine advance in the indispensable work of reclassification of patents and of literature?

Can all who are employed in the work of examination be in any way further encouraged and aided to become specialists in one or another of the branches of applied science—rather than mere rule-parrots and picture-matchers? And would a proposed departmental organization of the office aid to this end?

Can these gains against dilatory prosecution made under the energetic efforts of Commissioner Ewing be rendered secure for the future by (*e. g.*), dating the terms of patent monopolies from the date of filing—in order to create an incentive for diligent rather than dilatory prosecution?

Could any adjustment of extra fees for extra claims discourage the “fog-artists” and create an incentive for a more genuine effort on the part of attorneys to find the meat of the coconut—instead of putting it up to the office, the courts or the public to do so?

Can any elevation of the standards of practise (effected perhaps with the assistance of the patent bar) relieve the office at the same time from an undue burden of editorial work and from any suspicion of complicity in the wholesale netting of

“suckers” by men who indulge in misleading advertisements or contingent prosecution?

Can the divisions of the office advantageously be grouped into departments, each comprising several divisions handling analogous problems—a chemical department, an electrical department, an “instrument” department, a motive power department and the like, each under some expert of distinction in a particular field, and this body of experts having not only authority within their respective departments, but exercising collectively an enlightened and final appellate jurisdiction?

Can the salaries of these proposed department heads (constituting an enlarged and strengthened board) and the salaries of chiefs of divisions, and of others, be made such as to justify able and provident men in remaining for a much longer average term within this branch of the service?

Could the establishment in Washington of some great related institution, such as the proposed Institute for the History of Science, aid materially by an assembling, in this vicinity, of permanent exhibits genuinely illustrative of the advance of, *e. g.*, the chemical arts, the electrical arts, the motive power arts, the transport arts, etc., with a corresponding assembling and arrangement of pertinent literature from all the world, and with such an administrative organization as shall supplement the resources of this office, among others, sustaining its standards, while at the same time providing, in support of those who can maintain their scholarly interests and professional instincts, something of the stimulus and the opportunities of a true national university?

The mentioned special committee of the Patent Office Society takes this means of urging upon all interested the forwarding of any patent reform suggestions at once to Dr. Wm. F. Durand, National Research Council, Washington, D. C. It is not expected that patent reform can claim primary consideration during the continuance of the war, but it is felt that the time is ripe for at least a study of conditions and a renewed consideration of certain fundamentals from which it is felt that the office—charged “to promote the progress of science and the useful arts”—has departed through lack of information and support.

BERT RUSSELL, *Secretary,*
H. J. JEWETT, *Chairman,*
Special Committee, Patent Office Section