the average prosecution time per patent to 3½ years.

The association points out that the patent examiner thus holds a key position in the advancement of American technology and that the only way to reduce these delays and clear the way for marketing the new products and processes is to employ new patent examiners to pass on the backlog of applications that have piled up in almost every technical field.

Steps have already been taken in this direction, and approximately 100 new patent examiners have been added to the examining staff since last June. It is understood that the Patent Office wants 300 new patent examiners in 1956; 125 in the first quarter, 25 in the second quarter, and 75 in each of the last two quarters. There are immediate openings for engineers and scientists who can accept appointments in Washington now.

Patent examiners pass on applications for patents in a wide range of technical fields to determine whether they are novel and whether invention is involved. This calls for a study of the issued patents and the related scientific literature. The association points out that the technical graduates who apply will find the job both interesting and stimulating and one that keeps them in close touch with the latest technical developments. The job offers opportunities for rapid advancement within the Patent Office. Washington also offers unusual opportunities to carry on graduate studies at the same time.

Salaries for examiners start at $4345 a year, and it is possible to reach a salary of $7570 in 5½ years, with salaries in excess of $13,000 available. The Patent Office also offers vacations and sick leave and pension benefits.

Engineers and scientists who hold a college degree in engineering or applied science, or a degree with a major in chemistry or physics, or with certain combined credits in these fields, are eligible for appointment as patent examiners, without examination, upon application to the Commissioner of Patents in Washington, D.C.

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General Principles of Cooperation on Biological Abstracting

At their annual meeting on 18 Feb. 1956, the trustees of *Biological Abstracts* formulated and adopted the following general principles to guide their future course in matters of cooperation on biological abstracting.

Recent studies of the literature of biology and its coverage by abstracting services make it very evident that there is an urgent need for a wider and more efficient coverage of the world's biological literature. In an effort to provide biologists with a truly comprehensive abstract coverage of biology, the trustees of *Biological Abstracts* have adopted the following general principles of cooperation on biological abstracting as the basis on which they are prepared to cooperate with any and all abstracting and indexing services.

1) *Introduction*: (i) There is great need for more efficient abstract coverage of world biological literature. (ii) Certain areas of the literature of biology are well covered, but others are relatively untouched. (iii) Conservation of the time and efforts of biologists makes it imperative to devise ways to avoid duplication in abstracting services. (iv) An abstract is considered to be a greatly condensed version of an original research paper.

2) *Parties to any agreement*: (i) Biological Abstracts, Inc., would welcome the opportunity to negotiate specific bilateral agreements with any abstracting service under the broad terms of this instrument. (ii) These principles are so phrased that any abstracting service or association of scientists may cooperate. (iii) Indexing services are also invited to cooperate.

3) *Clear indication of areas of core coverage by a cooperating service*: (i) A hard *core of journals* which a cooperating service proposes to *abstract* as completely as possible should be made known in advance. (ii) Duplication of the abstracting of *core journals* should be avoided by each service, when possible. (iii) Service in a given country should give first consideration to adequate coverage of the major journals of its own country. Ease of access, speed of getting journal to abstractor, page proof, and language are factors that determine journal coverage. (iv) Services with limited subject interests could also participate by indicating the journals they would cover completely.

4) *Selective abstracting*: (i) To provide broad coverage, a cooperating service may, in addition to its core coverage, *publish* abstracts selected with reference to subject matter as well as geographic and linguistic representation. (ii) Selective abstracting may be done by staff and/or voluntary abstractors. (iii) Selective abstracting may also be accomplished by use of abstracts prepared by other services and reprinted under bilateral agreements.

5) *Permission to use abstracts of other services*: (i) By mutual agreement one service may use the abstracts prepared and published by another service, provided that credit for the source is given with each abstract. (ii) Percentage or number of abstracts so used would be specified in the agreement in order to insure that each service would be a substantial producer of new abstracts. (iii) Initially the percentage of abstracts used under reprint privileges should be a relatively small portion of the abstracts prepared by a cooperating service in order to protect the small specialized service from unfair competition. (iv) Selective reprinting would permit a cooperating service to include or exclude abstracts according to its own standards.

6) *Promotion of wider international cooperation*: (i) Greater international cooperation should be sought through appropriate international organizations. (ii) Wide publicity should be given to the availability of cooperation under the foregoing terms. (iii) The ICSU (International Council of Scientific Unions) Abstracting Board, which is promoting successful international cooperation in physics abstracting and is beginning to expand its services to chemistry, should be encouraged by UNESCO (United Nations Educational, Scientific, and Cultural Organization) to include biology in its scope. (iv) Cooperation in the abstracting of biology in medicine should be stimulated through CIOMS (Council for International Organizations of Medical Sciences) and WHO (World Health Organization). (v) Similarly, in agriculture the services of FAO (Food and Agriculture Organization) should be solicited. (vi) As opportunities develop, negotiations looking toward further integration of comparable services will be explored.

News Briefs

■ D. B. Carlisle and C. G. Butler have reported [*Nature*, **177**, 276 (1956)] that the "queen substance" of honey bees that normally inhibits ovarian development in worker bees would also inhibit ovarian development when injected into prawns from which the eyestalks had been removed. In prawns the sinus glands of the eyestalks contain a hormone that inhibits ovarian development during a part of the year. When eyestalks are removed from prawns with regressed ovaries, the ovaries grow rapidly. Thus, the alcohol extract of a queen bee has the same inhibitory effect as the eyestalk hormone.

In a reciprocal experiment, sinus glands were dispersed in a Potter homogenizer in 67-percent sucrose syrup. This was added to a pollen-candy mixture and fed to newly emerged bees; the control group was fed a pollen-candy mixture without any sinus gland additive. There was a highly significant inhibition of ovarian growth in the experimental group of bees after 19 days of such feeding.