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901 Prior Art

Extract from Rule 104. (a) On taking up an application for examination, the examiner shall make a thorough study thereof and shall make a thorough investigation of the available prior art relating to the subject matter of the invention sought to be patented.

901.01 Canceled Matter in U.S. Patent Files

Canceled matter in the application file of a U.S. patent is not a proper reference.

901.02 Abandoned and Forfeited Applications

Rule 108. *Abandoned and forfeited applications not cited.* Abandoned and forfeited applications as such will not be cited as references.

Where a forfeited or abandoned application is referred to in an issued U.S. patent the disclosure of the application is incorporated by reference into the disclosure of the patent and is available to the public. See Rule 14(b).

In re Heritage, 1950 C.D. 419; 639 O.G. 638 holds that where a patent refers to and relies upon the disclosure of a copending abandoned application, such disclosure is available as a reference.

It has also been held that where the reference patent refers to a copending but abandoned application which discloses subject matter in common with the patent, the effective

date of the reference as to the common subject matter is the filing date of the abandoned application. *Ex parte Clifford*, 49 U.S.P.Q. 152; *Ex parte Peterson*, 63 U.S.P.Q. 99; and *In re Switzer et al.*, 612 O.G. 11.

901.03 Pending Applications

U.S. applications which are pending before the Office are secret and so are not available as references (Rule 14a) except that claims in one application may be rejected on the *claimed* subject matter of a copending application of the same inventor (822.01) or assignee (305).

Published abstracts of applications are references (901.06(d)).

901.04 U.S. Patents

The following different series of U.S. patents are being, or in the past have been issued. The date of patenting given on the face of each copy is the publication date and is the one usually cited. The filing date, in most instances also given on the face of the patent, is ordinarily the effective date as a reference.

X-Series. These are the approximately 10,000 patents issued between 1790 and July 4, 1836. They were not originally numbered, but have been arbitrarily assigned numbers in the sequence in which they were issued. The number should *not* be cited. When copies are ordered, the patentee's name and date of issue suffice for identification. Copies in stock are arranged chronologically.

1836 Series. The mechanical, electrical, and chemical patents issued since 1836 and frequently designated as "utility" patents, are included in this series. A citation by number only is understood to refer to this series. This series comprises the bulk of all U.S. patents issued. Some U.S. patents issued in 1861 bear two numbers but only the larger number should be cited.

Reissue Series. Reissued patents (1401) have been given a separate series of numbers, preceded by "Re." In citing the letters must be given, e.g., Re 1776. The date that it is effective as a reference is the effective date of the original patent application, not the filing date of the reissue application.

A. I. Series. From 1838 to 1861, patents covering an inventor's improvement on his own patented device were given a separate series of numbers preceded by "A.I." to indicate Additional Improvement. In citing, the letters must be given, e.g., A.I. 113. About 300 such patents were issued.

Plant Patent Series. When the statutes were amended to provide for patenting certain types

of plants (Chapter 1600) these patents were given a separate series of numbers. In citing, the letters "P.P." must be given, e.g., P.P. 13.

Design Patents. Patents for designs (Chapter 1500) are issued under a separate series of numbers. In citing, the letter "D" must be given, e.g., D. 140,000.

901.05 Foreign Patents

For a comprehensive list of the patent publications officially issued by foreign governments and detailed instructions for their use see "Manual of Foreign Patents" by Belknap Severance, 161 pages, published 1935 by the Patent Office Society.

A pamphlet entitled "Guide to the Search Department of the (British) Patent Office Library," is published by the British Patent Office. A copy of this pamphlet is in the Scientific Library. Appendix 1 of this pamphlet consists of a concordance of British, United States and German classes.

901.05(a) Citation Dates

Source	Citation date
Australia.....	Complete specification accepted.
Austria.....	Ausgegeben.
Belgium.....	Brevet Octroyé or Octrooi Torgekend.
Canada.....	Issued.
Czechoslovakia.....	Vydano.
Denmark.....	Udstedt.
Finland.....	Julkaistu.
France.....	Délivré.
Germany.....	Ausgegeben.
Germany (East).....	Tag der Ausgabe der Patentschrift.
Great Britain.....	Complete specification published or complete specification accepted.
Hungary.....	Megjelent.
India.....	Complete specification left.
Ireland.....	Complete specification accepted.
Italy.....	Dcs., Rilasciato or Data di Concessione.
Netherlands.....	Uitgegeven.
Norway.....	Offentliggjort.
Philippines.....	Patented.
Poland.....	Undesignated date on top right of patent.
Sweden.....	Publicerat or offentliggjort.
Switzerland.....	Publié or Veröffentlicht or Publicato.

The dates indicated in the table are customarily used in the identification of foreign patents which are cited as references. These dates

are not in all cases the effective dates of the references, either as printed publications or as patents and when the dates become critical, it may be necessary to establish the exact effective date of the reference.

See 901.05(b).

901.05(b) Other Significant Data

Occasionally, the exact date of foreign patenting becomes material. This is the sealing date in the case of Australia, Great Britain, India and Ireland and does not appear on the printed copies of the patents. If necessary, this information can be secured from the Scientific Library. For the effective dates of Belgian patents, see the Memorandum of March 2, 1959, which has been reproduced in 41 J.P.O.S. at page 440. For the effective dates of Italian patents, see the Memorandum of October 25, 1960 distributed to all Examiners. Comments concerning German, French and Belgian procedure in granting patents are found in *Ex parte Gruschwitz et al.*, 138 U.S.P.Q. 505. This case did not involve anticipation but the bar of foreign patenting under 35 U.S.C. 102(d).

German allowed applications have been issued in printed form beginning September 1, 1955. Those printed from this date up to December 31, 1956, are captioned "Patentmeldung." They should be cited as "German printed applications" and identified by the name of the applicant and serial number of the application; the date of printing is the date following the words "Bekanntgemacht am." The applications printed after January 1, 1957, are captioned "Auslegeschrift" and have an additional number which is larger than 1,000,000; this new number should be used instead of the original serial number. The date following "Ausgabe der Auslegeschrift" should be cited. In addition to the above, data customarily given in citing foreign patents should be used.

Certain British applications had become void and hence lack a date of acceptance. Nevertheless, they were given a number in the patent series. The date of publication (year only) is given following the statement "Printed for His Majesty's Stationery Office," and this should be cited.

British specifications prior to 1916 have printed in large heavy type at the head of the first page of the specification a number and year, as 1451 A.D. 1912. This, together with the name, as required by the rules, is always the proper citation of the patent. The year given at the head of the specification is either the year of filing or the year of acceptance, but

in either case it is the official designation of the patent.

The year printed on the drawing is not always the year for correct designation of the patent. Where it is not, the correct year is shown by a small superior number or exponent placed to the right and above the serial number of the patent, as—

1910—No. 499¹¹

1912—No. 19421¹³

In instances of this kind the patent should be cited as No. 499 of 1911 or No. 19421 of 1913.

Some countries issue patents of addition and they should be identified as such and the number of the addition patent should be cited.

"Patents of addition" generally cover improvements of a patented parent invention and can be obtained by the proprietor of the parent invention. Inventiveness in relation to the parent invention need not be demonstrated and the term is governed by the term of the parent patent.

For citation of the number of pages of drawing and specification, see 707.05(e).

Some foreign countries list the references cited during the prosecution. These, especially if they are U.S. patents, may be helpful, either as references of interest to the examiner or to suggest an overlooked field of search.

901.05(c) Obtaining Copies

Prints of foreign patents classified in arts in other divisions can be had by an Examiner if he thinks the patents would be of frequent use in his own class (905.01).

901.05(d) Translation

Examiners may request translators in the Translation Section (Ext. 2431 or 3340) to assist them orally or with written translations of any specifications in languages with which the examiner is not familiar. (See 901.06(a), *Translations—Requests for Translations*, and 903.03, *Classification of Foreign Patents*, below.) Alternative versions of specifications, in English or other languages known to the Examiner, can commonly be found. Searches for alternate versions are performed in the Stack Service Section of the Scientific Library (Ext. 2470). As a substitute for translation, this service materially reduces the apparent problem posed by a foreign language specification.

901.06 Non-Patent Publications

All printed publication may be used as references, the date to be cited being the publica-

tion date. Recognized abbreviations of names of periodicals may be used in their citation (707.05(e)).

There are some publications kept or circulated in every group and each assistant Examiner should ascertain which are available in his group and whether or not any of them is likely to bear on any class assigned to him.

901.06(a) Scientific Library

The technical literature, foreign patents and services supplied by the Scientific Library are important to the Examiner for two primary reasons. In the first place, they provide material which must be known or searched to determine whether claims of applications are directly anticipated, and therefore unpatentable under the provisions of 35 U.S.C. 102(a) or (b). In the second place, in cases in which the primary search indicates that there is some novelty as compared to any single reference in the art, the library handbooks, textbooks, periodicals, reports and other materials assist in deciding the question of patentable invention (35 U.S.C. 103). They enable the examiner to make a further study to determine whether the features novel in the particular combination searched would be obvious to a person skilled in the art from the general state of knowledge as reflected in the technical literature.

MATERIALS AVAILABLE

Foreign Patents

The Library receives foreign patents by exchange from almost all countries which issue printed patents. These patents are bound into book collections which include one set arranged in numerical order and, for most principal countries, another set in order of the classification used by that country. The date of receipt of each patent is stamped on the first (i.e., numerically arranged) copy of the patent and in a ledger. To ascertain whether a copy of a foreign patent has been received inquiry should be made of the Stack Service Section on Extension 2470.

The Library has a set of officially published abstracts known as *British Abridgments*. These are classified according to broad subjects.

Foreign Patent Journals

Most foreign countries issue official patent and trademark journals corresponding to the *Official Gazette*. Patent journals are shelved under country names in the patent collections, and with the numerical sets of those countries which print their patents. Trademark jour-

nals constitute a separate collection which is presently shelved in the Arlington warehouse.

Books

A representative selection of books published in the United States and Great Britain in the fields of applied technology is systematically acquired by the Library. In addition to the English language books, there is a modest selection from French and German literature, mostly in the field of chemistry. There are also collections in the various examining groups of books and trade catalogs pertinent to the arts which they examine. The Design Patent Group has a great many manufacturers' catalogs.

In selecting books and periodicals to be ordered, the Librarian and his staff obtain assistance from members of the Examining Corps, and suggestions concerning materials to be obtained are welcomed at any time. A monthly list of accessions is circulated to all examining groups at the beginning of each month and the books are placed on inspection in the Library for several weeks thereafter. Duplicate copies of books on this list, or any other pertinent book, may be ordered by Examiners for use in the groups by addressing a memorandum to the Librarian over the signature of the Primary Examiner.

The books and trade catalogs procured for permanent assignment to the examining groups are recorded in the Library's main catalog, and copies of these books usually are available in the Library.

Technical Periodicals

Over 1,500 technical periodicals are received. These include publications of many important scientific and technical societies. The list includes a number of titles in the design patent field and in fields of interest to non-examining areas of the Office.

Most of the periodicals received by the Library are circulated to examining groups. Once each year the Library sends to each group a list of all titles currently circulated to them with request for suggestions for changes. This systematic procedure does not preclude the requesting of subscriptions for new titles at any time, and the Library itself will occasionally add new titles. The Library is alert to new periodical publications and it acquires sample copies which it sends to groups likely to be interested with a request for review and recommendation.

An important part of the duties of each Examiner involves constant inspection of non-patent literature pertinent to the class or classes

that he examines. He should fill out a form PO-253 for each item needed in connection with search in his arts. All information required by the order form should be given, including the name of the publication, the particular pages desired, and each class and subclass in which he desires a copy, and the order approved by the Primary Examiner. The order should be sent to the Document Services Branch (with the publication where possible).

Technical Documents

Almost all unclassified and declassified technical documents issued by the Atomic Energy Commission and agencies such as the Office of Technical Services, Armed Services Technical Information Agency, National Aeronautics and Space Administration, and the National Bureau of Standards, are received.

AIDS TO SEARCHING

Encyclopedic works, published indexes, and abstracting vehicles which assist searches in patents and technical literatures are constantly increasing in number and quality. The Library welcomes suggestions for acquisition of available or forthcoming aids to searching. In conducting library searches, examiners are encouraged to supplement their own familiarity, skill, and available time by assignments to patent aids and by queries addressed to the Circulation and Reference Section of the Library (Ext. 2500).

CARD CATALOGS

Main Catalog

This card catalog is located in the Reference Room and lists all materials in the Library, the Law Library and Examining Groups except patent specifications and Atomic Energy Commission documents. If an examiner finds that the book he desires is not on the shelf he may be able to ascertain through the card catalog that another copy is available elsewhere in the Office. Examiners sometimes acquire material independently of the Library, and it is important that any such material should be sent to the Library's Technical Processes Branch for cataloging to assure that it may be recorded for the benefit of the entire office.

The Library of Congress classification scheme is used in classifying the books, bound periodicals, and documents other than those of the Atomic Energy Commission and the books in the Law Library. A printed outline of this

scheme is kept on one of the reading tables on the second floor of the book stacks. The examiner will find it helpful in determining the general subject area of the field in which he is interested. Catalog cards are made for the author, title when distinctive, and subjects. Bound volumes of periodicals are cataloged, classified and maintained on the bookshelves, while those which have not yet been bound are separately located in alphabetical order. At the beginning of the main card catalog, there is a separate card listing of bound periodicals and foreign patent and trademark journals.

Catalog of Atomic Energy Commission Documents

This catalog is separate from the main card catalog and lists unclassified and declassified AEC documents by series. Publication of these cards was terminated on July 1, 1959, but information of this kind from publications subsequent to that date can be obtained from *Nuclear Science Abstracts*.

Underwood Card Digest

This is a card catalog of patent decisions made by the Commissioner and by the various courts. Each card contains a digest of the decision.

LIBRARY SERVICES

Foreign Patent Information

Upon request made to the Circulation and Reference Section (Ext. 2500) the Library will procure individual typewritten copies of patents from countries which issue, but do not print them. Where applicable, the dates of opening to inspection, of issuance and of publication will be requested of the foreign patent office. The copy of each patent so acquired is retained in a special file in the Stack Service Section, and a photocopy thereof is submitted to the examiner.

Technical Documents

When technical reports, such as those published by U.S. Government agencies and their contractors are desired, the Library should be provided with all necessary identifying data, including the report number if available. The Library will obtain printed copies whenever they are available but it may sometimes be possible to obtain only a microfilm or microprint copy.

Manufacturers' Catalogs and Advertising Circulars

These publications will be obtained by the Library upon request. The Library does not obtain duplicate copies and therefore the Group copy is used to fill photocopy requests. Many copies of this type of material are received and they are sent to the groups for recommendations as to retention. They must be returned to the Technical Processes Branch of the Library with information as to whether the groups wishes to retain them. If they are to be retained by the group, they will be cataloged by the Library and returned; otherwise they may be sent to another group.

The Technical Processes Branch will assist examiners who wish to build up collections of catalogs or circulars pertinent to their arts, by writing for copies to companies listed under pertinent subject headings in *Thomas' Register of American Manufacturers* and *MacRae's Bluebook*. *Thomas' Register* gives product classifications, an alphabetical list of trade names, brands, etc.; international trade section, boards of trade, and other commercial organizations, leading trade papers; and volume 4 is an index providing a product finding guide to the contents of the first three volumes. *Thomas Micro-Catalogs*, consisting of a film viewing machine and a set of catalogs of about 2,450 American manufacturing firms in the form of sheets of microfilm, is available in the Reading Room (Room 1895) near the 4-volume *Thomas Register of American Manufacturers*, which serves as an index for the file. *MacRae's Bluebook* is a comprehensive listing of sources of industrial equipment, products and materials, alphabetically arranged by product headings. The principal arrangement is by subject and there is also an index to advertisers. The Examiner should be aware of *Sweet's Catalog Service*, an annual publication which consists of six separately bound files of manufacturers' catalogs covering architecture, engineering, process industries, mechanical industries, power plants and product design.

Loan of Books and Other Publications

General

All Library materials other than the books in the main reference collection in the Reference Room (1895) may be charged out at the circulation desk. Materials should be kept as briefly as possible, and ordinarily no longer than two weeks. Since all library materials are used for reference purposes, none may be taken outside of the Commerce Building. Examiners may use the Commerce Department Library but may not charge out its books.

Books needed from that Library for official use should be obtained through the Scientific Library by means of interlibrary loan as described in the following paragraph.

Interlibrary Loans

On request the Circulation and Reference Section will borrow from other libraries materials not available in the Scientific Library. In return for this service, the Library loans its materials to other libraries in the District of Columbia so that occasionally an Examiner may find that the item he desires is unavailable. These materials which are out on interlibrary loan may be recalled for the Examiner if required for immediate use. To borrow books from another library is costly in terms of both time and effort; therefore, it is library policy not to borrow materials unless strictly pertinent to official use. Law books cannot be borrowed by the Library for use by Examiners in connection with law courses.

When a book or periodical is borrowed from another library, and cited in an office action, a photocopy of the portion cited should be ordered immediately and placed in an appropriate class and subclass. This class and subclass should be cited in the office letter. A separate file of duplicate photocopies of borrowed references is maintained in the Stack Service Section.

Reference Services

General

The staff of the Circulation and Reference Section (Ext. 2500, Room 1895) will assist examiners in the use of the card catalogs and other resources of the Library, in pointing out publications which will help the examiners define the limits of the field of search, and in providing information for use in prior art searches. Upon request, it will provide bibliographies on given subjects. As requested by examiners, it performs searches in foreign patent journals to ascertain the dates of opening to public inspection, of grant or sealing, and of publication of specified foreign patent applications.

Procurement of Patents

The Circulation and Reference Section will initiate action to procure specified foreign patents which are not in the Library's collections. (See 901.06 (a), *LIBRARY SERVICES—Foreign Patent Information*, above.)

Publication Dates of Nonpatent Materials

Requests pertaining to the earliest date of publication or first distribution to the public of publications for which this information is required should be made to the Circulation and Reference Section. A duplicate copy of the reply incorporating this information will be forwarded to the examiner.

Alternate Versions of Foreign Patents

The problem of using a patent published in an unfamiliar language can be materially reduced by discovery of an approximate equivalent in English or a familiar foreign language. Searches for alternate versions are undertaken by the Stack Service Section of the Library (Ext. 2470).

*Translations**Requests for Translations*

Examiners may consult the Translation Section at any time for oral assistance in trans-

lating foreign patents or literature. If it is determined that a written translation of part or all of a patent, periodical article, or book is required, request should be made to the Chief Librarian. Translations are made from all of the principal European languages and from Japanese. The Library will have required translations from other languages made elsewhere.

Card Index of Available Translations

This index lists all translations which have been made by the Translation Section of the

Library and a few others gathered from miscellaneous sources. The card file and over 10,000 translations of foreign patents and trademarks with some periodical articles and excerpts from books are located in the Translation Section. Translations, which are available to examiners and non-Office personnel, are indexed by country, patent or trademark number, and patentee or author. A copy of any translations coming to an examiner from outside of the Office should be furnished to the Translation Section so that it may make a copy for its files. In this case the source is indicated on the translation so that it will not be certified as an official translation of the Patent Office.

All examiners are provided with a pamphlet, "The Patent Office Scientific Library," which gives further details concerning library services.

901.06(b) Borrowed Publications

Whenever it is necessary to borrow reference material from other libraries including the main Commerce library, for official use, or to obtain catalogues, bulletins or other literature, a letter to this effect is sent to the Librarian, Scientific Library. (Basis: Circular of Oct. 7, 1922.)

A PHOTOCOPY SHOULD IMMEDIATELY BE ORDERED OF THE PORTION OF ANY BORROWED BOOK WHICH IS CITED IN AN OFFICE ACTION. SUCH PHOTOCOPY SHOULD BE PLACED IN AN APPROPRIATE CLASS AND SUBCLASS AND SUCH CLASS AND SUBCLASS MUST BE CITED IN THE OFFICE LETTER. See 707.05 for citation data.

As the Examiner currently inspects non-patent literature pertinent to the class or classes that he examines, he should fill out a form PO-250 for each item or part thereof that is essential in connection with search in his arts. The publication, the particular pages desired, each class and subclass in which he desires a copy and the other information on the order form should be given and the order approved by Primary Examiner.

The order should be sent to the Manuscript and Lithographic Branch with the publication (where possible).

A reasonable effort should be made to avoid duplication of disclosures that are patented or about to be patented. (Basis: Notice of October 31, 1949.)

901.06(c) Alien Property Custodian Publications

Applications vested in the Alien Property Custodian during World War II were published in 1943 even though they had not become patents.

Care must be taken not to refer to these publications as patents; they should be designated as A.P.C. published applications.

An A.P.C. published application may be used by the examiner as a basis for rejection only as a printed publication effective from the date of publication which is printed on each copy.

The manner of citing one of these publications is as follows: A.P.C. Application of -----, Ser. No. -----, Published -----

Before citing any A.P.C. published application, and before each subsequent action, the examiner should verify whether the application has become abandoned or patented. If it has become abandoned, the examiner's action should state this fact. If it has become patented the patent is to be cited. The patent should be substituted for the printed application as the basis for the rejection unless the date of publication is material. (Basis: Notice of May 14, 1943.)

The Scientific Library contains a complete set of A.P.C. published applications arranged numerically in bound volumes.

901.06(d) Abstracts of U.S. Applications

For a period of years, it was possible to have an abstract of an abandoned application published, containing a brief description of the subject matter and a figure of the drawing, if any. See 711.06 and 711.06(a).

Additional copies of abstracts may be obtained by a request directed to the Classification Group, identifying the desired abstract by serial number, and date of publication, and by giving the class and subclass in which the added copy is to be placed. The forms used in ordering copies of U.S. patents may be employed.

The Classification Group has a set of abstracts arranged by serial number for ready reference when only the serial number is known. (Basis: Notice of August 10, 1949.)

901.07 Arrangement of Art in Examining Divisions

In the examining divisions the U.S. patents are arranged in shoes bearing appropriate la-

bels, each showing the class, sub-class, and usually the lowest and highest numbered patents put in the respective shoe. The patents should be arranged in numerical order.

Some U.S. copies are marked "Cross Reference." These are patents which are classified in other classes or subclasses but which have disclosures pertinent to the subclasses in which they are placed as cross references. Cross reference copies may be filed in the shoes along with the copies of the original patents to simplify the tasks of searching and filing.

Copies of foreign patents are usually kept in shoes separate from and immediately following the U.S. patents and are preferably arranged numerically without regard to country.

Non-patent publications or photocopies thereof containing disclosures for particular subclasses, if numerous, should be filed in shoes following the foreign patents, otherwise at the bottom of the last shoe of foreign patents.

901.08 Borrowing References

The search files in each examining division should at all times be complete. Where they are incomplete, the Examiners using such files and relying upon their completeness may miss valuable references. References removed from the files whether for use in the division or otherwise should, of course, be promptly returned.

The following is established as the uniform Office practice in borrowing references (domestic and foreign patents and publications):

a. References may be borrowed and charged for a maximum of two days. In all possible instances, the references should be returned in less than two days, preferably in a few hours. It is the responsibility of the chief of the borrowing division to see that all borrowed references are returned within the time indicated.

b. The file clerk of each division shall review the charges each morning, select all charges over two days old and collect the corresponding borrowed references. The file clerk shall report to his chief for appropriate action any failure to obtain overdue references and any instances where it is necessary repeatedly to collect overdue references.

c. In the case of domestic patents, when it appears that they will be needed for more than two days, particularly where future use is indicated, soft copies should be ordered, but the references may be borrowed for immediate use, if this will facilitate an action. The Patent Copy Sales Branch should give prompt service on Examiner's orders for soft copies. (Basis: Notice of April 6, 1948.)

901.09 Missing Copies—Replacement

When the original copy of a reference is missing from the Examiner's files, a soft copy should be substituted at once and marked—"Keep until original is found." When it definitely appears that the original is lost, the Classification Group should be notified and requested to supply a mounted copy. When received, this is substituted for the soft copy. If the original copy is subsequently found, the substitute copy should be removed from the file and discarded.

902 Official Publications and Indices of U.S. Patents

902.01 Manual of Classification

The Manual of Classification is published in loose-leaf form, and supplementary sheets containing changes are issued from time to time to replace the original sheets.

All manual changes are effected by a series of Classification Orders each of which is currently published in the Official Gazette to the extent necessary to keep the manuals up to date. As these changes are published, each Examiner should enter them in his manual, so that his manual will at all times be complete and up-to-date. As supplementary sheets are issued, the old sheets should be removed, and the new sheets substituted therefor.

There are over 300 classes of utility inventions each having a title descriptive of its subject matter and being identified by one of a series of class numbers (some numbers of the series are blank and not presently assigned to any class). Each class is subdivided into a number of subclasses with each subclass bearing a title descriptive of its subject matter and being identified by a subclass number which in many instances will include decimal fractions. A complete identification of a subclass requires both the class and subclass numbers, the class number appearing first and the subclass number second, e.g., "103-161" identifies Class 103, Subclass 161.

The Manual of Classification has the following parts:

A Brief Statement on the Use of the Manual.

Classes Arranged by Related Subjects. Tabulation of classes, in which the classes are arranged in five major subject groups, with the classes listed under each group by relationship of subject matter. This tabulation is for the purpose of assisting the user in finding the main class pertinent to his search.

Classes Arranged by Examining Division.

Classes Listed Alphabetically by title.

Classes Listed Numerically with titles.

Subclass Schedules. Complete subclass schedules for each class, the utility classes appearing first in numerical sequence of class numbers, and then the design classes in numerical sequence of design class numbers. Design class alphabetical sequence by class names corresponds to numerical sequence. This is not true of the utility classes.

Alphabetical Index. Words and phrases (frequently called titles) identifying various characters of patentable subjects arranged in alphabetical order, with the citation of a class or both class and subclass in which subject matter identified by the title will be found.

902.02 Definitions

All of the utility classes (i.e., classes devoted to technology) except a few unrevised classes have definitions. None of the design classes has definitions.

Such definitions state the subject matter that is found in each defined class and subclass much more explicitly than it is possible to state in short class and subclass titles.

Each examining division has a set of definitions and there are several sets in the Public Search Room. Additional or replacement sheets incorporating all changes and additions are issued from time to time and should be promptly added to each set of definitions.

902.02(a) Search Notes

The definitions have search notes as a part thereof; namely, notes giving information as to where subject matter related to the class will be found (such notes appearing after the class definition), and also notes as to where subject matter pertinent to the subclass will be found (appearing after the subclass definition). These notes are intended to indicate both the relationship and the difference between the separately classified subjects.

Such search notes are not exhaustive and should be regarded as suggestive of additional fields of search, but not as limiting the search.

902.02(b) Search Cards

In one shoe of each defined subclass in both the examining division and the Public Search Room is a "Search Card" having the definition of the subclass and the search notes if any.

902.03 U.S. Patent Classification Indices

The following indices of U.S. patents are available and may be used to obtain classification data of U.S. patents:

902.03(a) Numerical

A numerical index of domestic patents giving their present original classification is in card files in the Public Search Room and in ledger books in the Service Branch of the Classification Group.

A numerically arranged punched card index of both original and officially cross-referenced domestic patents is on file in the Machine Tabulating Branch of the Administrative Services Division.

In each of the above, there is a separate index for each series, X, 1836, AI, Re, PP and D.

902.03(b) Blue Slips

The "blue" issue or classification slips (Form PO-270), starting with patent number 1,987,000, R.E. 19,228, D 126,796, P.P. 1, and for all subsequently issued patents, and containing the original classification and cross-references ordered at time of issue are on file in the Service Branch, Classification Group.

902.03(c) Subclass Lists

Cards representing all U.S. patents, arranged by class and subclass, are available in punched card form in the Machine Tabulating Branch of the Administrative Services Division.

Tabulated lists for each subclass can be obtained, one list for originals and one list for cross-reference and published abstracts of U.S. applications.

902.03(d) Count

In the Service Branch, Classification Group, is maintained a subclass "count," giving the number of U.S. patents originally classified in each class and subclass, and a corresponding "count" for cross-referenced U.S. patents.

902.04 Classification Orders and Bulletins

Classification Orders are issued from time to time giving all changes in the classification that have been made officially, including every change to be made in the Manual of Classification or in the definition books.

Photolithographed copies are distributed to all examining divisions for immediate use.

Each order, except for those portions pertaining to the amendment of existing definitions, is subsequently printed in the Official Gazette.

These orders are from time to time collected and issued as a Classification Bulletin. As

class schedules and definitions are extensively amended to take care of developments subsequent to original classification, they are republished in amended form in Classification Bulletins.

903 Classification

903.01 Statutory Authority

The statutory authority for establishing and maintaining a classification is given in the following statute, which states:

35 U.S.C. 9. Classification of patents. The Commissioner may revise and maintain the classification by subject matter of United States letters patent, and such other patents and printed publications as may be necessary or practicable, for the purpose of determining with readiness and accuracy the novelty of inventions for which applications for patent are filed. (Act June 10, 1898, ch. 430, sec. 1, 30 Stat. 440.)

903.02 Basis and Principles of Classification

The basis of classification used in the U.S. Patent Office, the principles followed, and the reasons why such principles were adopted are set forth in two pamphlets:

Classification of Patents, 2nd revision
History of Classification

These are available to every Examiner on request addressed to the Classification Group. Since the classification is the basic tool of every Examiner, these pamphlets and the classification as it at present exists should be studied carefully.

Unofficial subclasses and digests made by patent examiners, if made in accordance with the plan of classification, could be defined and issued as an official part of the classification.

Relative to all such work, the patent examiners doing the same are directed to consult the Examiner of Classification having jurisdiction of the class to the end that, when the work is completed, it can be defined and made official. (Basis: Notice of August 22, 1949.)

903.02(a) New and Revised Classes

The establishment of new classes or subclasses and the revision of old classes are done under the supervision of an Examiner of Classification.

When an old class is to be revised, or a new class formed, an assistant Examiner who has been examining applications in the art involved may be transferred from the examining division to a classification division for the reclassifying work.

The Examiner performing the reclassification secures a set of patent copies of the present classification, by either ordering soft copies or borrowing the Search Room copies. With these copies, by study and successive groupings, he develops an arrangement of the patents which is satisfactory for searching.

The lines marking the confines of the new or revised class and its subclasses are determined, and appropriate definitions drawn, all subject to the supervision and approval of an Examiner of Classification and to the final approval by the Commissioner. Then the Examiner's and the Search Room's copies of the patents included in the new class are collected, arranged and stamped conformably to the new classification. Official cross-references are also prepared and appropriately stamped.

The patents comprised in the new class are entered upon the numerical and subclass indices.

Notification of the new class or subclass is published in the Official Gazette, and Supplementary sheets necessary to correct the loose leaf Manual of Classification are published.

Definitions of all revised classes and subclasses are found in the Classification Bulletins.

903.02(b) Scope of a Class

In using any classification system, it is necessary to analyze the organization of the class or classes to be included in the search.

The initial analysis should determine which one or ones of the several types of subject matter (manufacture, art, apparatus or starting material) are contained in the class being considered.

Further, relative to each type of subject matter, it is necessary to consider each of the various combinations and subcombinations set out below:

Feature Combined with Basic Subject Matter for Some Added Purpose. The added purpose is in excess of the scope of the subject matter for the class, as defined in the class definition, e.g., adding a sifter to a stone crusher which gives the added function of separating the crushed stone.

Feature Combined to Perfect the Basic Subject Matter. Features may be added to the basic subject matter which do not change the character thereof, but do perfect it for its intended purpose, e.g., an overload release means tends to perfect a stone crusher by providing means to stop it on overload and thus prevent ruining the machine. However, this perfecting combined feature adds nothing to the basic character of the machine.

Basic Subject Matter. The combination of features necessary and essential to the fundamental character of the subject matter treated, e.g., a stone crusher requires a minimum number of features as essential before it can function as such.

Subcombinations Specialized to Basic Subject Matter. Each type of basic subject matter may have subcombinations specialized to use therewith, e.g., the crushing element of a stone crusher.

Subcombinations of General Utility. Each type of basic subject matter may have subcombinations which have utility with other and different types of subject matter, e.g., the machine elements of a stone crusher. Subcombinations of this character usually are provided for in some general class so that the Examiner should determine in each instance where they are classified.

903.03 Classification of Foreign Patents

Foreign patents are now distributed by the Translation Section of the Library to the Examining Groups without control or record forms, and they should be marked by the examiner and assigned to the proper class and subclass without recording. NOTE: Since the Library retains copies of these and other foreign patents (See 901.06(a)), a desired foreign patent, known by country and number, can be inspected in the Library or photocopies ordered. When a foreign patent is not properly classifiable in the group to which the Library sent it, the examiner should transmit it to the group in which he considers it to be classifiable, or, if he knows of no such group, he should return it to the Library. Any indication of classification made by the Library is advisory only, and the final decision as to where the patent is to be placed will be made by the examiner in whose art it is found to be classifiable. Foreign patents should be discarded by the Examining Groups without return to the Library when they are found to be exact duplicates of either foreign patents or domestic patents. Such foreign duplicates are discarded to minimize the number of patents to be inspected in making searches.

When a partial translation is desired, return the patent to the Translation Section, Scientific Library, Room 1898-A, with the word "Title" or "Claim" or other specific portion indicated thereon.

The Library invites examiners confronted with language problems in classifying foreign-language patents to call upon its translators for oral language assistance to be provided at the

examiners' desks. Examiners are accordingly encouraged to request this help by contacting the Translation Section by phone (Ext. 2431 or 3340). Examiners are privileged to ask for specific translators if they so desire.

Foreign patents should be classified within two weeks after receipt from the Library.

Time spent in classifying foreign patents is allowed in computing an examiner's output. The method used in classifying foreign patents and the assignment of such work among the examiners of the group are left to the Supervisor. The hours spent by each examiner on this work are noted on the individual examiner's work card (PO-690) under "Other". (Basis: Notice of September 24, 1940, Notice of August 3, 1960, and Notice of May 25, 1961 and Notice of October 17, 1963.)

903.04 Stamping of Examiner's and Search Room Copies

Before each application in issue becomes a patent, the Issue and Gazette Branch forwards the issue slip and the printed Examiner's and Search Room copies of the patent to the Classification Group for stamping and recording of the classification of the patent, preparation of cross-references and transmittal to the Examiner and Search Room on the date of the patent.

After they are so stamped and recorded, the photolithographic copies are retained in the respective classes in the groups and no changes in the classification or the arrangement of the copies are permitted except as set out in 903.05.

The classification printed in the heading of patents issued since 1933 cannot always be relied upon to be the present original classification, since this data is obtained from the file wrapper of the application at time of issue and will not reflect any changes in classification made after the issuance of the patent.

903.05 Transfer of U.S. Patents

The transfer of official copies of U.S. patents, either original or cross-reference, from one class or subclass to another requires the approval of a Classification Examiner. (Basis: Notice of February 20, 1918.)

Examiners must submit to the Classification Group all questions of transfer of patents.

When an Examiner desires to transfer official copies of domestic patents to a different class or subclass, he should have a memorandum list prepared for signature of the Primary Examiner of the numbers of all patents which are to be transferred indicating only the class

and subclass into which each is to be placed. Both originals and properly identified official cross-references may be included in the same list and these may involve transfers to or from any number of different classes or subclasses. Additional cross-reference copies of any listed patent may also be requested. This list with the Examiner's copies of the patents is routed through any other group involved for its prompt approval or comment and is forwarded to the Classification Group.

In those instances where a transfer is approved by a Patent Classifier, the class and subclass designations on both the Examiner and Search Room copies of the patents are changed and the numerical patent index and subclass lists are altered to agree with the new classification. When the transfer is not approved, the copies of the patents will be returned with

a notification thereof. (Basis: Notice of March 9, 1953.)

Unauthorized transfers render the subclasses in the Public Search Room no longer duplicates of those in the Examiners' rooms, and also render incorrect the official numerical index and subclass lists. (Basis: Notice of February 20, 1918.)

When it becomes necessary in the course of a transfer to remove copies from the files in the Public Search Room, a dummy a little longer than a patent copy is substituted therefor, and the identification data of the patents withdrawn are written thereon. This dummy is amended if the patents are returned, and should all be returned the dummy is removed.

The procedure for transferring an entire class or subclass from one group to another is given in the Manual of Clerical Operations.

903.06 Practice To Be Followed in Ordering Official Cross-References

The following three alternatives are available for obtaining official cross-reference copies of United States patents.

In many instances, U.S. patents are found which contain disclosure that the searcher believes should be cross-referenced. Such patents should be brought to the attention of the Classification Group for consideration in any of the following ways:

a. Call extension 4087, identify the patent and give the class and subclass to which it is thought it should be cross-referenced.

b. Send to the Classification Group a list of patents and relative to each patent, indicate the class and subclass in which it is thought each should be cross-referenced.

c. The preferred mode of ordering a cross-reference where the Examiner has a soft copy with the pertinent portion marked, is to indicate on the marked soft copy the class and subclass in which it is thought it should be cross-referenced. Such soft copy should be forwarded to the Classification Group where it will be promptly inspected, the necessary action taken and the soft copy returned within two days of its receipt. (Basis: Notice of April 6, 1948.)

903.06(a) Discovery of New Cross-References

In addition to the cross-references officially designated, valuable references are often to be found by an inspection by the Examiner of the Official Gazette each week, as well as by being alert to disclosures revealed during the search. Such patents may be placed as soft copies in the Examiner's files. However, if they contain disclosure properly classifiable in an official subclass they should, with the approval of a Classification Examiner, be given the status of official cross-references, by copies of the patents being mounted and placed in the appropriate subclasses in both the Examiner's files and in the Public Search Room in accordance with the practice enumerated above.

903.07 Classifying and Cross-Referencing at Allowance or Before Issue

Careful attention should be given by Examiners to the classification of all applications pending in their respective divisions. It is the duty of each Primary Examiner to personally

review the classification and cross-referencing made by his assistants of every application passed for issue and to initial the blue slip to show that this review has been made. (Basis: Order 2357 and from Memorandum of Feb. 18, 1952.)

The initial classification of pending applications and the drawings thereof will have been indicated in pencil by the Primary Examiner. See 903.08(b).

However, an application, properly classified at the start of examination, may be improperly classified when it is ready for allowance. The claims as allowed should be reviewed, in order to determine the subject matter covered thereby. It is the disclosed subject matter covered by the allowed claims that determines the original classification of U.S. patents.

Only the correct official classification should be left on the file and drawing of each application when passed for issue. Unofficial subclasses (not established by classification order) should not be indicated on the file wrapper or drawing. (Basis: Notice of Mar. 31, 1914.)

The examiner fills out a blue slip (PO-270) or a salmon slip (PO-328) in the case of designs to indicate the class and subclass in which the patent should be classified and also the classes in which it should appear as a cross reference. Unofficial subclasses should not be indicated on the blue slip, neither as original nor as cross-reference. The Examiner attaches the blue slip to the inside of the left fold of the file wrapper to be forwarded to the Issue and Gazette Branch. (Basis: Order 2952, and Memorandum of May 14, 1952.)

The Examiner also enters the classification appearing on the issue slip in the space provided on the front of the file and in the space provided in the stamping at the left margin of the drawing. Care should be exercised to see that all three entries of the classification are correct and in agreement, particularly after any alteration of one entry, for otherwise the patent will be printed with an erroneous classification or improperly positioned in the Official Gazette.

All Examiners are requested to fill in the class and subclass on the drawings in large numerals using as much of the space provided as feasible. In this way the filing of drawings and subsequent searching by the Issue and Gazette Branch will be greatly aided. (Basis: Memorandum of January 5, 1953.)

In the case of oversized patents, where only a minor portion of the disclosure is pertinent to the subclass in which a cross reference is to be placed, the Examiner may indicate on the Issue Classification Slip that a digest of the patent should be prepared, thus, 74-340 (di-

gest. After the hard copy is printed, the Issue Section of the Classification Service Branch inquires of the Examiner as to which sheets of the patent should constitute the digest. Where an official Classification Order affects an application already passed to issue, the Classification Group makes the necessary changes on the file wrapper, blue slip, and drawing, if any. The Clerk of the Examining Group is notified so that the Serial Register card may be similarly changed.

Applications which already have been sent to the printer will be classified by the Classification Group at the time the patent issues. (Basis: Notice of March 31, 1914.)

903.07(a) Cross-Referencing—Keep Systematic Notes During Prosecution

Throughout the examination of the case, systematic notes should be kept as to cross-references needed either due to claimed or unclaimed disclosure. The several Examiners handling related subject matter should be consulted during prosecution (whether they handle larger unclaimed combinations or claimed or unclaimed, but disclosed, subcombinations), and asked if cross-references are needed. If needed, systematically note the proper class and subclass. It is to be noted that a cross-reference where possible MUST be provided for all CLAIMED disclosure and inserted on the blue slip at time of issue.

903.07(b) Issuing in Another Examining Group Without Transfer

When an Examiner issues a prospective patent in another examining Group, he notes in the space provided on the blue issue slip, *in red ink*, the class and subclass of the other Group, and in parenthesis the number of said other Group. (The initials of said other Primary Examiner must also appear in said space.) In the lower left corner, the Examiner writes his own Group number in black ink. (When the patent issues, the Classification Group will, as a matter of routine, send the necessary notices to the group involved.)

The sending of cases to issue from one group and assigning them to classes in another group is restricted to those situations where both Examiners concur in the proposed classification of the patent, which must be shown by the concurring Examiner initialing the issue slip, or where there has been a ruling by a Patent Classifier, who must initial the slip. (Basis: Notice of March 24, 1937.)

The prints of the drawings, if any, should be forwarded to said other group so as to be available therein for interference search purposes. If the allowed cases of the group passing the case to issue are still being checked for classification, the prints should not be forwarded until the proposed classification has been approved by the Patent Classifier. Where the nature of the disclosure is such that it would be desirable that prints of the drawings be also present in the group passing the case to issue, copies thereof may be ordered for this purpose. (Basis: Notice of September 8, 1952.)

903.08 Applications: Assignment and Transfer

The examining group to which an application is assigned is responsible for its examination until such time as the application is officially transferred to another group by the Application Branch.

The Primary Examiners have full authority to accept any application submitted to them that they believe is properly classifiable in a class in their group. Only where there is a difference of opinion between different groups should cases be submitted to a Patent Classifier.

903.08(a) New Applications

New applications are assigned to the various examining groups in the first instance by the Application Branch.

Upon receiving an application from the Application Branch and before making any entry on the Serial Register or Docket record cards, each Primary Examiner will forthwith decide whether it has been properly assigned to his group.

If the Primary Examiner decides that the application properly belongs in his group, it is processed as a new receipt.

When a new application is received which, in the opinion of the Primary Examiner, does not belong to his Group, he will submit it promptly without any entry being made on the Serial Register or Docket Record cards, to the Examiner of the Group to which he thinks it belongs, on Transfer Inquiry form P.O. 447. (The drawing, if any, is retained as a charge.)

If the latter agrees to accept the application, the transfer is effected by the Clerk of the Group to which the application was originally assigned.

If not accepted it may be promptly and informally submitted to the Classification Group for assignment by oral decision prior to entry. No search for prior art to show classification need be made. The group to which the Patent Classifier assigns it will make the first action

thereon. If the search in connection with the first action develops art showing proper classification elsewhere, the transfer is initiated after a response is received from applicant.

903.08(b) Classification and Assignment to Assistant Examiner

Every application, new or amended and including the drawings, if any, when first assigned to a group must be classified and assigned to an assistant Examiner.

The Primary Examiner assigns them to his assistants, noting in lead pencil in the space provided on the face of the file, the class, and subclass to which the case pertains, and also the initials of the Examiner to whom the case is assigned for examination. The application file is then turned over to the clerk for processing.

903.08(c) Immediate Inspection of Amendments

Upon the receipt of an amendment which makes a transfer proper, steps should be taken promptly in accordance with the transfer procedure outlined in Sec. 903.08(d).

903.08(d) Transfer Procedure

SUBMISSION OF APPLICATIONS FOR CLASSIFICATION

Where the Examiners in different groups are in agreement that an application is properly assignable to one of the groups but are in disagreement as to which one should receive it, the Examiners involved should present their positions orally to the appropriate Patent Classifier for verbal decision. This is generally termed informal submission.

In all other instances, including those instances where a Patent Classifier feels that additional evidence is necessary, applications are submitted for classification as follows: The Examiner having jurisdiction thereof submits a memorandum listing the group or groups and the classes therein in which he believes the case may be classifiable. He makes a search both in his own class and in that to which he thinks the case should be transferred, citing the most pertinent art relative to the question of classification. He should not take time to write either an analysis of the art or an argument. He forwards the file, together with his memorandum, to one of the other groups involved. Each of the other Examiners involved may similarly make a search and cite art without taking the time to

write either an art analysis or an argument. The time involved in making such searches is not lost, since the cited art may be of value to the Examiner to whom the case is assigned. Each Examiner in turn promptly adds his memorandum to the file and the last forwards the file and all papers to the Classification Group. This practice is all that is required by the general rules governing the assignment of applications for examination. See particularly items 4 and 10 of the regulations governing assignment of applications [903.08(e)]. This is generally termed "formal" submission. (Basis: Notice of Nov. 25, 1947.)

903.08(e) General Regulations Governing the Assignment of Applications for Examination

The fact should be borne in mind that the following regulations are only general guides, and exceptions frequently arise because of some unusual condition. The fact should also be kept in view that the Patent Classifiers as well as the Patent Examiners are confronted with an already existing classification, made up of newly revised classes, those revised years ago and which have somewhat outgrown their definitions and limits, and still others made a generation ago and never changed. Also, these classes are based on different theories and plans, some on art, some on structure, some on functions, some on the material worked upon, and some apparently, on no theory or plan at all. The Patent Classifiers cannot change this existing condition as each application comes up for assignment but must seek to dovetail the cases into the patchwork and try to get the applications where they will be best handled. To do this often violates the Patent Classifier's views as to what constitutes a really proper classification.

1. The assignment of applications follows, as far as possible, the rules or principles governing the classification of patents. (See the bulletins: "Plan of Classification" 1900, "The Classification of Patents," 2nd revision, 1946 and "History of Classification of Patents.")

2. The most comprehensive claim, that is the claim to the most extensive combination, governs, and this is true whether there is only one such claim and a large number of other claims, or whether the sets of claims are more evenly divided. It is regarded as just as vital that one complex claim be searched and adjudicated by an Examiner skilled in the art as that a group of such claims be so searched and adjudicated.

3. The claims and statement of invention are generally taken as they read, since any attempt of a Patent Classifier to go behind the record and decide the case upon what is deemed the "real invention" would, it is believed, introduce more errors than such action would cure. The Patent Classifiers cannot possess the specific knowledge of the state of the art in all the classes that the Patent Examiners collectively possess. Further, such questions are matters of merit for the Examiners to determine and are often open to argument and are subject for appeal.

4. The location of the U.S. patents constituting the prior art is generally controlling over all else. (Note: Where time permits, obvious misplacements of the patents constituting the prior art are corrected, but to straighten all lines as the cases come up for assignment would require the time of several men and would often involve a reclassification of an entire class.)

5. Ordinarily an application cannot be assigned to a class which includes one element or part only of several claimed in combination. The claim is treated in its entirety. The question of aggregation is not reviewed by the Patent Classifiers.

6. The Patent Classifiers are authorized in all cases, where they evaluate the facts as warranting it, to assign applications for examination to the group best able to examine the same. Since assignment for examination on this basis will at times be contrary to classification of patents containing the same character of claims, the Patent Classifiers will indicate the proper classification of the patent, if such claims are allowed.

7. When an application has been taken up by an Examiner for action and a requirement to restrict is found necessary, a part of the claims being directed to matter classifiable in the group where the case is being examined, an action requiring restriction should be made without seeking a transfer of the case to another group. The action of the applicant in response to the requirement for restriction may result in making a transfer of the application unnecessary.

8. Ordinarily where all the claims of an application are for an article made of a specific composition or alloy with no other characteristic of the article recited, the application will be assigned to the composition or alloy class.

9. A class of cases exists in which either no art or a divided art is found and in which no rule or principle is involved. (Such cases are placed where, in the judgment of the Patent Classifiers they will be best searched and adjudicated. It is often impossible to so explain a decision in this class of cases as to satisfy, or in any way aid, the Examiners interested. Indeed, the reasons for or against sending such cases one place or another may be so evenly balanced that no reason of any value can be given.)

10. An examiner seeking the transfer of a case should make a search, both of his own class and the class to which he thinks the case should be transferred, and the Examiner in charge of the group should exhibit the result of such search to the Office of Patent Classification. This is the only way to utilize the expert knowledge of the Examiners involved. (Basis: Notice of April 15, 1919.)

903.08(f) Classification Examiner's Decision

An Examiner in the Classification Group decides the question of the proper classification of the application, and returns the application to the division which submitted it enclosing a statement of the grounds of his decision.

903.08(g) Transfer to Another Examining Division After Decision

If the application is to remain in the division which submitted it for classification, no further procedure is necessary. If assigned to another division, the clerk processes the case as described in the Manual of Clerical Operations.

904 How to Search

Having obtained a thorough understanding of the subject matter disclosed and claimed in the application, the Examiner then searches the prior art as disclosed in patents and other printed documents. Any such document used in the rejection of a claim is called a "reference."

904.01 Analysis of Claims

The breadth of claim of the application should always be carefully noted; that is, the Examiner should be fully aware of what the claim does *not* call for, as well as what it does require. For, there is always danger of reading into the claim limitations imported from the specification or drawing.

904.01(a) Variant Embodiments Within Scope of Claim

Substantially every claim includes within its breadth or scope of definition one or more variant embodiments not disclosed by applicant, which would anticipate the terms of the definition. The claim must be so analyzed and understood that any such variant encountered during the search will be recognized and selected.

In each type of subject matter capable of such treatment (e. g., a machine or other apparatus), the subject matter as defined by the claim may be sketched in order to clearly delineate the limitations of the claim. Two or more sketches, each of which is as divergent from the particular disclosure as is permitted by claim recitation, will assist the Examiner in

determining the claim's actual breadth or scope. However, an applicant will not be required to submit such sketches of claim structure (In re Application filed November 16, 1945, 1951 C.D. 1; 646 O.G. 5).

904.01(b) Equivalents

Also, all subject matter that is the patentable equivalent of the subject matter as defined in the claim, even though specifically different from the definition in the claim, must be considered.

904.01(c) Analogous Arts

Not only must the art be searched with which the invention claimed is classifiable, but also all analogous arts regardless of where classified.

The determination of when arts are analogous is at times difficult. It depends upon the necessary essential function or utility of the subject matter covered by the claims, and not what it is called.

For example, a tea mixer and a concrete mixer are for the same art, namely, the mixing art, this being the necessary function of each. Similarly a brick cutting machine and a biscuit cutting machine have the same necessary function.

904.01(d) Outlining Field of Search

In outlining a field of search the Examiner should note every class and subclass that may have material pertinent to the subject matter as claimed, or that may in the future properly be claimed in that case. Every subclass pertinent to each type of invention claimed should be listed, from the largest combination through the various subcombinations to the most elementary part needed to anticipate any disclosure properly claimable in that case.

The following should be kept in mind: (a) that a combination reference is necessary to anticipate a claim drawn to an old or exhausted combination, (b) that a combination reference is valuable as a basic reference where elements thereof may be varied by substituting equivalent elements of a secondary reference, (c) that a convincing aid to a rejection on the ground of old combination is the citation of references showing the subcombinations to have been already recognized as having practical and more general utility, (d) that combination claims at times can be anticipated by combining separately classified subcombinational elements where reasons can be given for holding non-invention in forming the combination, and (e) that in the rejection of a claim on the ground

of aggregation, the citation of references showing the individual utility of the elements may better prove that the aggregative structure is no more than the sum of the features shown by the several elemental patents.

In each action by an Examiner upon an application, he makes an initialed endorsement in ink in the space provided on the left-hand page of the open file wrapper, stating the classes and subclasses of domestic and foreign patents, and the publications in which search for references was made and also the date of the search.

In subsequent actions, if further search is made, notation of the additional field covered is also endorsed and initialed on the file wrapper.

904.02 Selecting Pertinent References

It is a prerequisite to a speedy and just determination of the issues involved in the examination of an application that a careful and exhaustive search be made in the first action. It is not enough that the claims alone be searched, especially if they be broad in their scope; but the search should, in so far as possible, cover the entire claimable subject matter in the case.

It thus results that the Examiner finds references that, while not needed for treating the claims before him, *would be useful in forestalling the possible presentation of claims to other subject matter disclosed by applicant* but shown to be old by these references. To that end, an Examiner may cite at the beginning of his letter two groups of references, one under the heading, "References applied," 707.05 (b) and the other under the heading "References further showing the state of the art" 707.05 (c).

In selecting the references to be cited the Examiner should carefully compare the references with one another and with the applicant's *disclosure* to avoid the citation of an unnecessary number. The Examiner is not called upon to cite *all* the references that may be available, but only the "best." (Rule 106.) Multiplying references, any one of which is as good as, but no better than, the others, adds to the burden and cost of prosecution, and should therefore be avoided. However, if doubt exists as to the inclusion of a reference, it is better to err in citing too much art rather than too little.

While the best reference should always be the one used, yet if this is of a date less than one year prior to the filing date of the application, a second reference, though inferior but not thus open to being overcome under Rule 131, if such reference is found, should be cited and the claims additionally rejected thereon.

In all references, including non-patent, foreign patents and domestic patents, the Exami-

ner should study the specification or description as it relates to every feature in the drawing which he does not thoroughly understand.

905 Miscellaneous

905.01 Orders for Photoprints To Be Signed by Primary Examiner

All orders for photoprints (Form 250) sent to the Document Services Branch from the examining divisions must be signed by the Primary Examiner or in his absence by the Assistant Chief. (Basis: Notice of April 19, 1930.)

905.02 Orders for Soft Copies

Soft copies may be ordered on PO-14 by the Examiner for his use. These orders are filled by employees of Patent Copy Sales Branch. No employees other than those assigned to this Branch have access to the files of printed copies of patents. In emergency cases, orders may be taken to the Chief of the Branch whose approval thereof, if given, will insure immediate filling of said orders. (Basis: Notice of February 25, 1927.)

Form PO-14 includes two boxes, one of which is to be checked by the Examiner if a xerography copy is wanted in the event that the supply of patented copies is exhausted. Making the xerography copy requires several weeks and the Examiner should not reorder the copy during this interval. However, if a copy is needed more promptly, a photoprint on PO-250 should be ordered.

Because of the cost of printing copies of patents economy should be exercised in their use. It is advisable to place in the application file soft copies of those patents cited from other classes. This will avoid a duplicate order when the application as amended is re-examined, or appealed. However, soft copies of patents other than those relied on by the Examiner should be removed from the file before forwarding an appeal to the Board of Appeals. No soft copies should be returned to Patent Copy Sales Branch by Examiners.

905.03 Orders for Patented and Abandoned Files

In the examination of an application it is sometimes necessary to inspect the application papers of some previously abandoned application or granted patent. This is always true in the case of a reissue application.

Patented and abandoned files may be obtained in the Record Room and Abandoned

File Room, respectively, by filling out a slip (PO-125), found there, and leaving this slip with the clerk in charge. The patented files are drawn from the shelves and distributed, the slip being retained by the clerk as a charge. The patent file should be promptly returned when the Examiner has finished with it, and it should not be kept longer than thirty days without renewing the charge. Where the file is needed for the purpose of reissue or interference, this information should be given to the Record Room upon obtaining the file, and as soon as these matters have been disposed of, the file should be returned to the Record Room.

When an interference is declared between a patent and an application and the interference is forwarded to the Examiner of Interference, the clerk in charge of the Record Room should be informed in order that the charge may be changed and the location of the file known at all times. (Basis: Notice of March 19, 1947.)

Examiners may expedite service in obtaining abandoned files in the manner indicated in 711.04(b).

When ordering a patented file from the Record Room, the name of the person ordering the file should appear on the form PO-125. It is important that the Patent Number be stated rather than the number of the application which matured into the patent. An examiner ordering a patented file should also place his division number on the form. If the notation "HOLD" is marked on the form PO-125 the case will be held at the Record Room and in

the absence of such notation it will be sent to the division indicated. Examiners may expedite service by requesting the patented file by telephone and later, at a time indicated by the clerk in charge, the examiner may appear at the record room to complete the Form PO-125 and to pick up the file. If the need for the file is not urgent, examiner time may be saved by sending a form PO-125, completed in the manner indicated above, to the Record Room by regular Office Messenger Service. The file will be delivered by the same Messenger Service to the division indicated on the form or it will be held at the record room only if so requested on the form.

Patent Copy Sales Branch has charge of the drawings in patented cases. Canceled sheets, however, are not retained with the patented drawings but are filed with the "Abandoned Files and Drawings."

905.04 Marking Examiner's Copies of Patents

When the Examiners' copies of patents are sent to their respective divisions to be filed, the assistant Examiners who examined the application should mark in ink on the face of the drawings, or the specifications where there are no drawings, such features as may be deemed advantageous in aiding understanding of the patents in future searches. (Basis: Order 2380.)