

Chapter 900 Prior Art, Classification, Search

- 901. Prior Art
 - 901.01 Canceled Matter in U. S. Patent Files
 - 901.02 Abandoned and Forfeited Applications
 - 901.03 Pending Applications
 - 901.04 U. S. Patents
 - 901.05 Foreign Patents
 - 901.05 (a) Citation Dates and Information
 - 901.05 (b) Countries Not Sending Complete Copies
 - 901.05 (c) Obtaining Copies
 - 901.05 (d) Translation
 - 901.06 Non-Patent Publications
 - 901.06 (a) Scientific Library
 - 901.06 (b) Requests for Obtaining
 - 901.06 (c) Alien Property Custodian Publications
 - 901.06 (d) Abstracts of U. S. Applications
 - 901.07 Arrangement of Art in Examining Divisions
 - 901.08 Borrowing References
 - 901.09 Missing Copies—Replacement
- 902 Official Publications and Indices of U. S. Patents
 - 902.01 Manual of Classification
 - 902.02 Definitions
 - 902.02 (a) Search Notes
 - 902.02 (b) Search Cards
 - 902.03 U. S. Patent Classification Indices
 - 902.03 (a) Numerical
 - 902.03 (b) Blue Slip
 - 902.03 (c) Subclass Lists
 - 902.03 (d) Count
 - 902.04 Classification Orders and Bulletins
- 903 Classification
 - 903.01 Statutory Authority
 - 903.02 Basis and Principles of Classification
 - 903.02 (a) New and Revised Classes
 - 903.02 (b) Scope of a Class
 - 903.03 Of Foreign Patents
 - 903.04 Stamping Examiners' and Search Room Copies
 - 903.05 Transfer of U. S. Patents
 - 903.06 Ordering Official Cross-References
 - 903.06 (a) Discovery of New Cross-References
 - 903.07 Classifying and Cross-Referencing at Allowance or before Issue
 - 903.07 (a) Cross-References — Keeping Systematic Notes during Prosecution
 - 903.07 (b) Issuing in Another Division Without Transfer
 - 903.08 Applications—Assignment and Transfer
 - 903.08 (a) Transfer of Improperly Classified Application
 - 903.08 (b) Classification and Assignment to Assistant Examiner
 - 903.08 (c) Immediate Inspection of Amendments

- 903.08 (d) Transfer Procedure
- 903.08 (e) General Rules
- 903.08 (f) Classification Examiner's Decision
- 903.08 (g) Transfer to Another Division after Decision
- 904 How to Search
 - 904.01 Analysis of Claims
 - 904.01 (a) Variant Embodiments within Scope of Claim
 - 904.01 (b) Equivalents
 - 904.01 (c) Analogous Arts
 - 904.01 (d) Outlining Field of Search
 - 904.02 Selecting Pertinent References
- 905 Miscellaneous
 - 905.01 Orders for Photostats
 - 905.02 Orders for Soft Copies
 - 905.02 (a) Return of Soft Copies
 - 905.03 Orders for Patented and Abandoned Files
 - 905.04 Marking Examiners' Copies

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 File

Canceled matter in the application file of a U. S. patent is not a proper reference, since it is neither a patent nor a printed publication. See *Fessenden v. Wilson et al.*, 1931 C. D. 419; 410 O. G. 815.

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.

[Old Rule 177]

Where a forfeited or abandoned application is referred to in an issued U. S. patent and such patent relies upon the disclosure of the abandoned or forfeited application, such disclosure is incorporated by reference into the disclosure of the patent and is available to the public. See 101, Rule 14.

In *Ex parte Heritage*, 77 U. S. P. Q. 179, it was held 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 (101 Rule 14) except that claims in one application may be rejected on the *claimed* subject matter of a copending application of the same inventor or assignee (305).

Published abstracts of pending 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. When copies are ordered, in addition to the X number, the patentee's name and date of issue *must* be given, since copies in stock are filed alphabetically.

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.

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. Only 275 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 letters "Des." must be given, e. g., Des. 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 and Information About Foreign Patents

For citation of the number of pages of drawing and specification of a foreign patent see 707.05 (e).

Complete copies of patents issued by the following countries have been received in the past, and except for Russia, are now being received.

Australia. Patents were formerly published by Queensland (1860-88), Victoria (1877-1902), New Zealand (1861-78) and New South Wales.

In Australia, the publication of the previously printed specification is completed by a notice published within two or three weeks from the date of acceptance of the complete specification, which date is printed on the face of the patent. It does not become effective as a patent until sealed. The time interval between publication and sealing date varies according to opposition, extension, etc. The date of acceptance of the complete specification should be cited.

Austria. The publication date, which should be cited, is indicated by "Ausgegeben."

Canada. The Canadian Patent Office issues illustrated briefs in its Official Journal and until the beginning of 1949 these were the only patent reference material available. However, starting with Patent No. 453,746 of January 4, 1949, complete copies are being received for

distribution to the Examiners. The issue date of the patent should be cited.

Czechoslovakia. The publication date, which should be cited, is indicated by "Vydáno."

Denmark. The publication date, which should be cited is indicated by "Offentliggjort."

Finland. The publication date, which should be cited is "Julkaistu" and the patent date is "Patentti myönnettiin." Finnish patents have been received only since August 1946, starting with patent No. 19,872.

France. The date of publication is indicated by "Publié" and the patent date by "Delivré."

In the citation of foreign patents, the publication date is the date ordinarily cited; but in the case of French patents, it is preferable to use the "Delivré" date, since on that date the patent is accessible to the public in the Patent Office at Paris.

French additions should be cited as such along with the serial number of the prior patent to which the addition is related.

The files of French patents are incomplete in that patents Nos. 262,738 to 284,608, inclusive (1897-1898) were not published. Of the patents Nos. 284,609 to 302,569 (1899-1900) only certain ones were published, and of patents Nos. 302,363 to 317,501 (1900-1901) none was published.

Germany. The Ausgegeben date is the one used in the Patent Office as both the publication and patent date.

A pamphlet entitled "Alphabetical Index to the Classification of German Patents," and a set of German patents bound in classes, are kept in the Scientific Library. The German "Auszüge" are in weekly installments. Mr. Lovett's translation of the Manual of Classification of the German Patent Office (edition of 1910) as well as the revised classification and index of 1933, in German, are also in the Scientific Library.

Austria, Denmark, Netherlands, Norway and Sweden follow the German classification.

Great Britain. British patents cover England, Scotland, Wales, Northern Ireland, and the Isle of Man.

In Great Britain the publication of the previously printed specification is completed by a notice published within two or three weeks from the date of acceptance of the complete specification, which date is printed on the face of the patent. It does not become effective as a patent until sealed. The time interval between publication and sealing dates varies according to opposition, extension, etc.

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.

British patents applied for subsequent to January 1, 1916 are numbered in a continuous series starting with 100,000. Hence, for these patents, the year is not necessary for identification and the date of acceptance may be used as giving a much closer approximation to the date of sealing. (Notice of Sept. 30, 1931, Revised)

Those British applications which had been opened to public inspection and had become void, were printed prior to 1940 and given a number in the patent series. These publications can be distinguished from patents by the lack of a date of acceptance. An approximation of the effective date of the publication appears at the end of the specification following the statement "Printed for His Majesty's Stationery Office" and should be cited, except in critical situations where recourse must be had to the British "Journal" in the Scientific Library.

The British Patent Office publishes "Specification Abridgements" of the patents issued by that office. These abridgements are arranged in classes, with all of the patents of a class for a given year bound in a single volume. The bound volumes of these abridgments are to be found in the Scientific Library.

In the case of applications filed in Great Britain under the International Convention, claiming the benefit of an earlier filed foreign application, no provisional specification is permitted and under the Patents Act of 1907, the complete specifications are open to inspection 18 months after the Convention date claimed.

Hungary. The publication date, which should be cited, is indicated by "Megjelent."

India. Patents of India bear application date and acceptance date. The acceptance date should be cited.

Italy. The patent date, indicated by "Rilasciato," or "Dcs" should be cited.

The Italian Patent Office sent full copies of specifications and plates until the end of 1892. For the next two years briefs of the specifica-

tion were sent. Since the beginning of 1895, the Italian Bulletin has been received here. This gives the titles of inventions and names of inventors. The Italian Patent Office later sent complete copies, having resumed publication thereof October 1, 1925. Only those patents after No. 248,000 are published in serial order.

Japan. The Japanese patents, as received in the U. S. Patent Office, are grouped in booklet form with the date of publication (which should be cited) appearing in English on the front page of the booklet. The patent date in Japanese appears on the face of each of the patents included in the booklet.

The Japanese method of assembling a number of patents in booklet form, above referred to, makes it impracticable to distribute Japanese patents among the examining divisions.

Netherlands. The publication date, which should be cited, is indicated by "Uitgegeven," the patent date being indicated by "Dagteekening."

Norway. The date to be cited is indicated by "Offentliggjort."

Poland. The date of publication, which should be cited, appears in the upper right hand corner of the face of the patent following the word "Warsaw." The word "Udzielono" indicates the patent date.

Russia. The publication date to be cited is indicated by "Opublikovano."

The date of the Russian patent, as also that of the publication, appears in the caption immediately preceding the beginning of the specification.

Sweden. The publication date to be cited is indicated by "Publicerat," while "Beviljat" indicates patent date.

Switzerland. Patents are published in three languages, the publication date to be cited being indicated:

In:	By:
German	Veröffentlicht
French	Publié
Italian	Publicato

901.05 (b) Countries Not Sending Complete Copies

The following countries publish patents by briefs, abstracts, or abridgments only: Argentina (to 1947 only), Belgium, Brazil (only 1908-09 and 1924-26 in Library), Chile, Eire, Yugoslavia (Kingdom of Serbs, Croats and Slovenes), Mexico, New Zealand, Portugal, and Spain.

Of these, the patent publications of Portugal and Spain are not received in the Scientific Library. The data published by Cuba and Venezuela are merely the number and date of

the patent, the title of the invention and name of inventor.

There are some Sardinian patents.

Eire and Yugoslavia patents are received in the Library of Congress, but are not yet received in the Patent Office.

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

A translator in the Scientific Library is available to assist the Examiner with the specifications in various languages with which the Examiner is not familiar. Typed translations can be had, if necessary, of any material to be used.

901.06 Non-Patent Publications

All printed publications may be used as references, the date to be cited being the publication 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 division and each assistant Examiner should ascertain which are available in his division and whether or not any of them is likely to bear on any class assigned to him.

901.06 (a) Scientific Library

The Scientific Library of the Patent Office has a large collection of volumes, including scientific and technical books and periodicals, arranged in accordance with the Library of Congress classification and card indexed as to author, title and subject matter. Since these books and periodicals are maintained for the maximum service to the examination process, frequently the most recent of them are to be found in the examining divisions concerned.

The Library also has bound volumes of foreign patents in numerical order.

The Examiner should acquaint himself with this Library sufficiently to know when it is likely to afford him assistance in his examination of an application. The reference staff of the Library will assist in making use of the Library's holdings.

901.06 (b) Requests for Obtaining

Whenever it is deemed necessary to obtain catalogues, bulletins, or other literature, the request clears through the Scientific Library. A letter for this purpose is addressed to the Librarian, requesting that he order or obtain the needed material.

The Library will borrow reference material from other libraries for official use and for limited time only. Upon receipt of the same the Librarian distributes the literature to the division requesting it. (Circular of Oct. 7, 1922, Revised)

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.

When any A. P. C. application becomes a patent, copies of the printed application may be removed from the files and returned to the Classification Division for disposal if the examiner has no further use for them. (Extract from Notice of May 14, 1943.)

901.06 (d) Abstracts of U. S. Applications

U. S. applications which the inventor intends to abandon now may be published in abstract form upon the request of the applicant (711.06 to 711.06 (f)). These abstracts contain a figure of the application drawing, if any, and a brief description of the subject matter of the application. The publication date of the abstract should be cited.

901.07 Arrangement of Art in Examining Divisions

In the examining divisions the U. S. patents are arranged in shoes bearing appropriate labels, 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 replaced.

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. (Extract from Notice of Apr. 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 Division 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 changes are published currently in classification orders. These orders are printed in the Official Gazette. 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 at present 302 classes of utility inventions. Each of the classes bears a class number ranging from 1 through 346 (there being 44 blank numbers). Each class has a title, and each class is subdivided into a number of subclasses each of which has a number. A complete identification of a subclass requires both the class and subclass number, the class number appearing first and the subclass number second, e. g., "13-13" identifies Class 13, Subclass 13.

The Manual of Classification has the following parts:

A Brief Statement on the Use of the Manual. Immediately following the flyleaf is a brief statement on how to use the manual.

Classes Arranged by Related Subjects. Next are tables 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 of the classes 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. Next are the 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. There is an alphabetical index to the manual, in which words and phrases (frequently called titles) identifying various characters of patentable subjects are 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 twelve 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.

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 punch 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 Des.

902.03 (b) Blue Slips

The "blue" or issue slips, starting with patent number 1,987,000, Re. 19,228, Des. 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 punch 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 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:

Act June 10, 1898, ch. 423, sec. 1, 30 Stat. 440, provided: "That for the purpose of determining with more readiness and accuracy the novelty of inventions for which applications for letters patent are or may be filed in the United States Patent Office, and to prevent the issuance of letters patent of the United States for inventions which are not new, the Commissioner of Patents is hereby authorized and directed to revise

and perfect the classification, by subjects-matter, of all letters patent and printed publications in the United States Patent Office which constitute the field of search in the examination as to the novelty of invention for which applications for patents are or may be filed."

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.

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 is usually 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, usually by ordering soft 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 to General Utility. Each type of basic subject matter may have subcombination 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

It would be advisable for the classification Examiners to classify foreign patents, but there has never been a corps large enough to do it. The present procedure is for the Scientific Library to distribute the foreign patent copies and lists of the same in triplicate to the exam-

ining divisions. The patent Examiners classify those patents belonging in their own division or note the proper division to which the patent should be sent, if the patent does not belong in their division. The lists in triplicate are filled in with the proper classifications of the patents, or the division to which the patent belongs, and returned together with the patents belonging to other divisions, to the Scientific Library.

An Examiner should be on the alert to note foreign patents which are exact duplicates of domestic patents, or duplicates of other foreign patents. Except in the case of the foreign duplicate which has the earliest effective date, or which is in a more widely read language than a foreign patent already received, such duplicates should not be placed in the shoe cases, where they needlessly increase the number of patents to be inspected in making a search, but may be discarded.

The data of the foreign patents discarded should be written on the one retained or on the U. S. Patent of which they are duplicates.

Since foreign patents, in addition to duplicating the disclosure of other patents, sometimes disclose additional subject matter, care should be exercised to avoid discarding a patent having a useful disclosure.

Time spent in classifying foreign patents is allowed in computing an Examiner's output subject, however, to the condition that the total time allowed for each division for any six months period (October through March and April through September) shall not exceed a number of days equal to one-half the number of Examiners in the division . . . The method used in classifying foreign patents and the assignment of such work among the Examiners of the division are left to the Primary Examiner of the division. The time spent by each Examiner on this work is reported in days on the monthly work report in the column under "Remarks." (Extract from Notice of Sept. 24, 1940.)

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 (Form 574 of 582) together with the printed Examiner's and Search Room copies of the patent to the Classification Group for review, stamping and recording of the classification of the patent 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 divisions and no changes in the classification or the arrangement of the copies are permitted except with the approval of the Classification Group as set out in 903.05.

The classification printed in the heading of patents issued since 1933 can not always be relied upon to be the present original classification, since this data is obtained from the blue slip prior to any changes in classification made at the time of issue or 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 an Examiner of Classification. (Extract from Notice of Feb. 20, 1918.)

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

When an Examiner desires to transfer domestic patents from one class or sub-class to another, he should have the patents listed on triplicate transfer blanks (Form 566), as explained in section 51 of the Clerical Operations Manual stating thereon both the class and sub-class from which and to which they are to be transferred. Transfers of original patents and of cross references must be on separate blanks. All patents listed on a blank must involve transfer from a single class to a single class. This blank is forwarded with the Examiner's copies of the patents to the Classification Division but is routed through any other division involved for its approval or comment. If the transfer is approved, the class and subclass designations on the patents are changed, and the classification indices are changed to agree with the new classification.

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. (Extract from Notice of Feb. 20, 1918.)

When it becomes necessary in the course of a transfer to remove copies from the files in the Public Search Room, a red 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.

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. (Extract from Notice of Apr. 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. (Extract from Order 2357.)

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 issue. 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 al-

lowed 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. (Extract from 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. The Examiner attaches the blue slip to the left hand corner of the drawing, being careful to insert the pin or staple outside of the margin line (or if no drawing, to the inside of the left fold of the file wrapper) to be forwarded to the Issue and Gazette Branch. (Extract from Order 2952.)

The Primary Examiner personally reviews the classification and cross-referencing made by his assistants of every application passed for issue and initials the blue slip to show this review has been made. (Extract from Memorandum of Feb. 18, 1952.)

The classification of all applications which have been passed to issue, which would be changed by any changes, made in the official classification by classification order, are corrected by the Classification Group to show the changed classification on the file wrapper, blue slip and drawing, if any. The Classification Group notifies the Docket Clerk of the classification changes so that the Docket and Serial Register cards may be similarly corrected.

Applications which already have been sent to the printer will be classified by the Classification Group at the time the patent issues. (Extract from Notice of Mar. 31, 1914, Revised.)

SERIAL NO.		PATENT NO.	
FILED	CLASS	SUBCLASS	
NAME			
CROSS-REFERENCE IN			
DIV.	ASSISTANT EXAMINER	APP'D. PRIMARY EXR.	CHECKED CLASS. EXR.
FORM PO-270 (REV. 2-20-52) U.S. DEPARTMENT OF COMMERCE A4.27 COMM-OC 42987 CLASSIFICATION SLIP PATENT OFFICE			

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.

All of these should be inserted on the blue slip at time of issue.

903.07 (b) Issuing in Another Division Without Transfer

Where a prospective patent is to be classified in a division other than the one which is sending the application to issue, the Examiner, after indicating in blue or black ink on the blue issue slip the class and subclass number in which the patent is to appear, designates *in red ink* on the blue slip the division to which the patent is to be sent. For example, the third line of the blue issue slip, in such cases will read:

Class 18 subclass 51 (div. 15)

The division passing the case to issue will insert its own number as usual in the space provided in the lower left hand corner. (When the patent issues, the Classification Division will, as a matter of routine, send the necessary notices to the divisions involved.)

The sending of cases to issue from one division and assigning them to classes in another division 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 slip, or where there has been a ruling by a Classification Examiner, who must initial the slip.

The drawing should be retained in the division that sent the case to issued. (Notice of Mar. 24, 1937, Revised.)

903.08 Applications: Assignment and Transfer

Applications are assigned originally by the Application Branch, accepted by the examining divisions, or transferred to other divisions, as explained in 903.08 (a).

903.08 (a) Transfer of Improperly Classified Application

Upon receiving an application from the Application Branch and before entering it upon the register, each Primary Examiner will forthwith decide whether it has been properly assigned to his division.

The Primary Examiners have full authority to accept any application submitted to them that they believe is properly classifiable in a class in their division. Only where there is a difference

of opinion amongst Primary Examiners, should cases be submitted to a Classification Examiner.

When a new application is received and in the Primary Examiner's opinion the application does not belong to his division, he will submit

it without entry on his register, to the Examiner of the division to which he thinks it belongs.

If the latter agrees to accept the application, the Examiner to whom the application was originally sent instructs the clerk of his division

to forward the application to the Application Branch for transfer to the other division.

If, however, no other division will accept the new application, the clerk makes a complete entry in the "Register of Pending Applications"; and the Primary Examiner submits the application for transfer in accordance with the transfer procedure outline in 903.08 (d).

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 division must be classified and assigned to an assistant Examiner.

The Primary Examiner assigns them to his assistants, noting in lead pencil in the upper left hand corner of the face of the file, the class, and subclass to which the case pertains, and also the numeral of the desk or the initials of the Examiner to whom the case is assigned for examination. The application file is then turned over to the clerk of the division, who then processes the file as a new receipt.

903.08 (c) Immediate Inspection of Amendments

Steps to transfer an application, should be taken promptly on receipt of any amendment thereto which makes the transfer proper, and in accordance with the transfer procedure of section 903.08 (d).

903.08 (d) Transfer Procedure

Submission of Applications for Classification

In order to lessen the Examiner time required for submission of applications for classification, all should be submitted in one of the following two ways:

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

2. In all other instances, including those instances where a Classification Examiner feels that additional evidence is necessary, applications are submitted for classification as follows: The Examiner having jurisdiction thereof submits a memorandum listing the division or divisions and the classes therein in which he believes the case may be classifiable and makes a search both in his own class and the class to which he thinks the case should be transferred and cites 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 the Examiner of another division involved. He also fills out blank Form 573 and has it receipted by such Examiner and retains the receipted form as a charge. Each other Examiner 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 eliminates the time consumed in evaluating the art and expounding reasons for proposed assignments; it 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 application [903.08 (e)]. This is generally termed formal submission. (Notice of Nov. 25, 1947, Revised.)

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 Classification Examiners 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 Classification Examiners 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 Classification Examiner'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 Classification Examiner 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 Classification Examiners 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 Classification Examiners.

6. The Examiners of Classification are authorized in all cases, where they evaluate the facts as warranting it, to assign applications for examination to the division 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 Examiners of Classification 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 divide is found necessary, a part of the claims being directed to matter classifiable in the division where the case is being examined, an action requiring division should be made without seeking a transfer of the case to another division. The action of the applicant in response to the requirement of division may result in making a transfer of the application unnecessary.

8. Ordinarily where a claim is for an article made of a specific composition or an alloy, and there exists a class of such articles, the application will be assigned to such class, unless a question as to the novelty of the composition or alloy broadly is raised, in which case the application should go to the division having the class of composition of matter or of alloys to determine the question of novelty of material.

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 Classification Examiner 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 division exhibit the result of such search to the Classification Group. This is the only way to utilize the expert knowledge of the Examiners involved. (Notice of Apr. 15, 1919, Revised.)

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 section 7-1.1 of the Clerical Operations Manual.

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 un-

derstood 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.

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 substituted by 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 sub-combinational 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 Examiner 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 Photostats To Be Signed by Primary Examiner

All orders for photostats or for photoprints (Form 247) sent to the Manuscript and Lithographic Branch from the examining divisions must be signed by the Primary Examiner or in his absence by the Assistant Chief. (Extract from Notice of Apr. 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. (Notice of Feb. 25, 1927, Revised.)

Copies of patents retail at twenty-five cents each (design patents at ten cents each) and 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.

905.02 (a) Return of Soft Copies

All soft copies which are in perfect condition and unmarked and which are not deemed useful for cross-reference or other purposes should be returned to the Patent Copy Sales Branch from time to time for replacement on the shelves. (Notice of Feb. 2, 1924, Revised.)

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. (Notice of Mar. 19, 1947, Revised.)

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. (Order 2380, Revised.)