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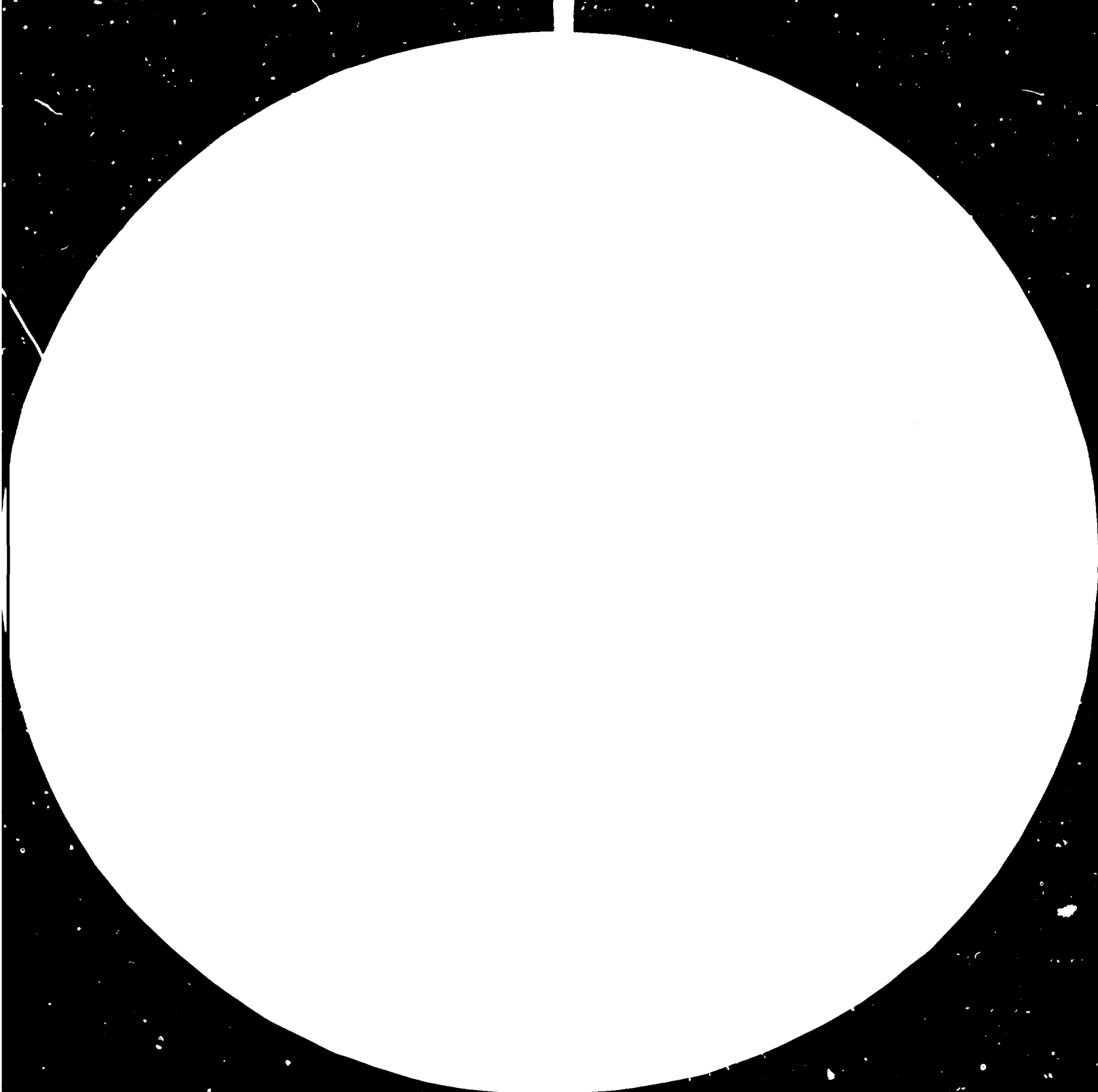
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Classification (IPC)*.

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Industrial and Technological Information Bank (INTIB)

Industrial Information Section
UNIDO Technology Programme

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FOREWORD

The Industrial and Technological Information Bank (INTIB) came into existence in 1977 as a UNIDO pilot operation in four industrial sectors: Iron and Steel, Fertilizers, Agricultural Machinery and Implements, and Agro-Industries. After its successful completion, INTIB has become a permanent activity of UNIDO covering, for the time being, 20 industrial sectors. Its main objective is to facilitate the choice of technology for decision makers in developing countries.

Users' Guides to the International Patent Classification (IPC) were produced by WIPO in co-operation with the European Patent Office in the four sectors selected for the pilot operation of INTIB. They are intended to facilitate access to patent information through the use of the UNIDO Thesaurus of Industrial Development Terms. The Guides stress the importance of patent information for technology selection and describe the process of the identification of patent documents using the International Patent Classification (IPC).

It is hoped that this document will be of assistance to industrial information facilities in developing countries in identifying technologies of relevance to investment decision-making on the basis of appropriate choices of technologies.

Dr. Abd-El Rahman Khane
Executive Director

PREFACE

This Users' Guide to the International Patent Classification (IPC) is one of a series dealing with the use of the IPC to retrieve technological information from patent documents. Each Guide considers a well-defined technical section of direct relevance to the development process in developing countries and gives detailed guidance as to how pertinent technological disclosures contained in patent documents may be identified by using the IPC.

The series of Users' Guides to the IPC so far covers the following technical sections:

- Guide No. I - Fertilizers
- Guide No. II - Iron and Steel
- Guide No. III - Agricultural Machinery
and Implements
- Guide No. IV - Agro-Industries

The Guides have been produced by the World Intellectual Property Organization, Geneva, in consultation with the European Patent Office, Munich, following an agreement with the United Nations Industrial Development Organization, Vienna.

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Arpad Bogsch
Director General
WIPO

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INTRODUCTION

1. Today, in many fields of technology, scientific and technological development is advancing at a very fast pace. Scientific and technological information is assuming increasing importance as a vital resource in the development of national economies, and has become a major factor in the formulation of national policy decisions.
2. Scientific and technological information is primarily to be found in patent documents and in technical and scientific books and periodicals. Access to that information, which is vast and rapidly expanding, demands the use of an efficient, widely accepted, classification system. This Guide describes, in general terms, the usefulness of patent documents as a source of technological information and explains how the International Patent Classification (IPC) may be used to retrieve technological information concerning AGRO-INDUSTRIES.

PATENT DOCUMENTS AS A SOURCE OF TECHNOLOGICAL INFORMATION

3. In this Guide, the expression "patent documents," means published patents for invention and published patent applications. It also includes other published documents reflecting other forms of protection for inventions, such as inventors' certificates or utility models.
4. By technical and scientific books and periodicals is meant such books and periodicals which contain texts that describe solutions to technical problems. They are sometimes referred to in English as "non-patent literature."
5. The expression "patent information" is used in this Guide not (as in some other contexts) to indicate information about patents and patent applications but to mean the technological information content of patent documents.

Characteristics of patent documents

6. In searching for, and retrieving, technological information, patent documents have more practical importance than periodicals and books. This is so for several reasons, the most important of which are briefly described in the following paragraphs.
7. One reason is that patent documents should and, in fact, usually do, disclose solutions of technical problems more clearly, more completely and in more detail than most periodicals and books. They have to do so; otherwise the said disclosures do not qualify as "patents for invention".
8. Another reason is that patent documents bear classification symbols of a classification system--the IPC--which was so devised that it should facilitate the finding of the state of the art in a given technology. Later parts of this Guide give a detailed introduction to the IPC and deal exhaustively with the retrieval, by use of the IPC, of patent documents concerned with AGRO-INDUSTRIES. Articles in periodicals and books usually do not show any classification symbols or, if they do, the classification is usually one which has not been devised for the purposes of finding the state of the art.
9. An additional reason for which patent documents are generally more useful than periodicals and books is that patent documents are drafted in a certain style and their contents are divided in certain parts which follow each other in a certain order. And this is true not only in respect of the patent documents of a given country but also in respect of the patent documents of all countries. The resulting advantage is that a searcher reads documents which have a structure with which he is familiar. Such uniform structure does not always exist in the case of articles in periodicals and books.
10. Finally, there is still another reason for which patent documents are more useful than periodicals and books. This reason lies in the fact that, characteristically, any given patent application tries to prove that the invention claimed in it is something new, and something representing the required inventive step, in relation to former inventions claimed in older patent applications.

11. Patent documents also possess a certain number of specific characteristics that make them eminently suitable for retrieval of technological information, e.g.: they normally disclose information on new inventions earlier than is disclosed in other sources of technological information; a high proportion of patent documents contain an abstract; patent documents belonging to the same family* are frequently in a number of different languages.

12. The preceding assertions can be proven by statistics. It is estimated that only less than 10% of all the publications cited against the average patent application are citations of articles in periodicals or books. The rest, that is, on average more than 90% of the publications cited against the average patent application, are citations of patent documents.

13. Patent documents are, then, useful sources of technological information with clear advantages over other sources of technological information. There are, however, a certain number of limitations to this usefulness, which are the following:

- (a) new technology is not always sufficiently inventive to be patentable;
- (b) even where a patent has been granted by an examining Patent Office, this is not a guarantee that the invention is absolutely new;
- (c) although patent documents should be, and generally are, written in a way which allows the invention to be executed on the basis of them alone, it will frequently be cheaper and faster in practice to execute it with the cooperation of the inventor (for example, by acquiring his know-how and blueprints under a contract concluded with him) than without such cooperation.

14. Each year more than one million patent documents are published by some 70 countries. Some countries publish a patent document as a patent application and later as the granted patent. Other countries publish only the granted patent. The following twelve countries publish 80% of the world's total patent documents:

Japan	439,000	Canada	23,000
Germany (Federal Republic of)	146,000*	Spain	21,000*
Soviet Union	70,000	Australia	21,000
France	58,000	Netherlands	18,000
United States of America	49,000	Sweden	16,500
United Kingdom	43,000	Italy	12,000

(Based on WIPO Statistics for 1979) * including utility model publications

THE INTERNATIONAL PATENT CLASSIFICATION (IPC)

15. The IPC is based on an international multilateral treaty administered by the International Bureau of WIPO (the Strasbourg Agreement Concerning the International Patent Classification of 1971). The symbol or symbols of the classification to which the technical invention described in a patent document belongs are usually indicated on the patent document by the Patent Office of the country where the application was filed. Thus, the document will be retrievable according to its subject matter with the help of the IPC.

16. The IPC is now applied by over 40 Patent Offices which, taken together, issue over 90% of the patent documents of the world. By the end of 1980, some ten million patent documents had been provided with the classification symbols of the IPC. Approximately 4.0 million of them are in English, 2.0 million in French and 1.5 million in German. The remainder are in various other languages, mainly Dutch, Japanese and Russian.

17. Many years of international cooperation, which started in 1956 under the auspices of the Council of Europe, resulted, in 1971, in the Strasbourg Agreement Concerning the International Patent Classification which provided a worldwide forum for the development of the IPC.

* Patent documents published in different countries but relating to the same invention are generally called a "patent family".

18. The IPC, being a means for obtaining an internationally uniform classification of patent documents, has as its primary purpose the establishment of an effective search tool for the retrieval of patent documents by Patent Offices and other users to establish the novelty and evaluate the inventive step (including the assessment of technical advance and useful results or utility) of patent applications.

19. The IPC, furthermore, has the important purposes of serving as:

- (a) an instrument for the orderly arrangement of patent documents in order to facilitate access to the information contained therein;
- (b) a basis for selective dissemination of information to all users of patent information;
- (c) a basis for investigating the state of the art in given fields of technology;
- (d) a basis for the preparation of industrial property statistics which in turn permit the assessment of technological development in specific areas.

20. Keeping the IPC up to date and allotting its symbols to new patent documents is one of the largest international efforts, at least in terms of expert manpower at international and national levels, in information processing today. At the international level, an estimated 120 work-months per year, and, at the national level, an estimated 240 work-months per year, are devoted to revising the IPC and adapting it to newly developing technologies and the needs of the users. The yearly effort to allot the IPC symbols to new patent documents is estimated at approximately 600 work-months (90,000 hours) of work by highly qualified Patent Office staff. It should be emphasized that such new patent documents can, subject to a possible check of the classification allotted, be directly inserted into the appropriate place in a search file organized according to the IPC.

21. The third edition of the IPC came into force on January 1, 1980. It comprises nine volumes, being the Guide and the Classification itself. The Guide, which is contained in Volume 9, explains the layout, use of symbols, principles, rules and application of the Classification contained in Volumes 1 to 8. In the following paragraphs a short outline will be given of the system and principles of the IPC as well as of the most important rules.

Layout and Use of Symbols

22. The IPC is a hierarchical system comprising the following classification levels, which are listed in hierarchical order:

- Sections,
- Classes,
- Subclasses,
- Groups (main groups and subgroups).

23. These different classification levels are characterized by a letter or a number. A complete classification symbol consists of a combination in which each of these levels is represented. The third edition of the IPC consists of:

- 8 sections,
- 118 classes,
- 617 subclasses, about
- 7,000 main groups, and approximately
- 47,000 subgroups.

24. The IPC is divided into eight sections, each designated by a capital letter (section symbol), as follows:

- Section A HUMAN NECESSITIES
- Section B PERFORMING OPERATIONS; TRANSPORTING
- Section C CHEMISTRY AND METALLURGY

- Section D TEXTILES AND PAPER
- Section E FIXED CONSTRUCTIONS
- Section F MECHANICAL ENGINEERING; LIGHTING;
HEATING; WEAPONS; BLASTING
- Section G PHYSICS
- Section H ELECTRICITY

25. Each class symbol consists of the section symbol followed by a two-digit number, e.g. A 01. Each subclass symbol consists of the class symbol followed by a capital letter, e.g. A 01 B.

26. Each group symbol consists of the subclass followed by two numbers separated by an oblique stroke, either as:

- main group symbol, which consists of the subclass symbol followed by a one to three digit number, the oblique stroke and the number 00:

Example: A 01 B 1/00

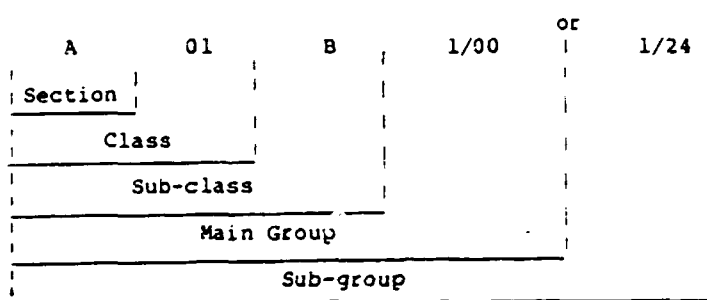
- sub-group symbol, which consists of the subclass symbol followed by the one to three digit number of its main group, the oblique stroke and a number of at least two digits other than 00:

Example: A 01 B 1/24

Any third digit after the oblique stroke is to be read as a decimal subdivision of the second digit, e.g., "/215" is to be read as "twenty one point five," and not "two hundred and fifteen."

27. A complete classification symbol comprises the combined symbols representing the section, class, subclass and main group or sub-group:

Example:



28. The hierarchy among groups is determined solely by the dots preceding the titles of sub-groups. These dots are used in place of, and avoid repetition of, the titles of hierarchically directly superior groups:

Example: A 24 B 7/00 Cutting tobacco (hand cutting tool B 26 B;
slicing in general B 26 D 4/00)
7/04 . by machines with revolving knives
7/08 . . with several knives which act one after
the other
7/10 . . . with cutter axes parallel to the
feeding direction

Without the use of hierarchical levels, sub-group A 24 B 7/10 would have to have a title such as: "Cutting tobacco by machines with several revolving knives acting one after the other with cutter axes parallel to the feeding direction."

29. In many cases, a class, subclass or group title is followed by a phrase in brackets referring to another place in the IPC. Such a phrase indicates that the subject matter identified is classified in the place referred to (or in one or more places where several are referred to). An example of such a reference can be seen in Appendix III to this document under the symbol A 24 B 7/00.

30. In certain places of the Classification, some particular classification rules are specified. The purpose of these rules is to limit multiple classification, to improve consistency and to facilitate searching.

31. The places where such rules apply are clearly marked by a note at the highest place covered by such classification rules. Such rules are:

- (a) Precedence Note - The most frequently occurring rule is the "precedence note", indicating which one of two or more places has priority in the classification of a technical subject which can be classified in more than one of these;
- (b) Last Place Rule - In certain parts or places of the Classification, where a particular technical subject is covered by two or more places of the same hierarchical level or indentation, a "last place rule" has been introduced. According to this rule, such a technical subject is classified in the one of these places which appears last in the Classification. This rule is applied successively at each hierarchical level or indentation at which the technical subject in question is covered by two or more places. In each part of the Classification (class, subclass or group), where this rule applies, this rule is clearly set out in a note specific to the subject matter concerned. The "last place rule" is in effect a systematic precedence rule which obviates the need for separate precedence notes in each of the places concerned;
- (c) Other Rules - In a limited number of places in the Classification other particular rules exist which are clearly specified in notes at the places concerned.

Relevant sub-groups of the IPC concerned with AGRO-INDUSTRIES

32. The aim of identifying basic technical information necessitates the carrying out of a so-called "information search," which is made to familiarize the inquirer with the state of the art in a particular field of technology.

33. Before making a search, it is essential to establish clearly what is being sought, i.e. the technical subject has to be determined. Having formulated a clear statement of the technical subject which is being sought, the searcher has to identify the proper place for this subject in the IPC. Although the IPC is a relatively logical subdivision of technology, it is advisable for the uninitiated searcher to approach the system using the Catchword Index to the IPC, which has been elaborated in several languages, e.g., in English, French, German, Japanese and Spanish.

34. Consideration of the statement of the technical subject sought will bring to mind a word which covers broadly or specifically the field of technology with which this subject is clearly concerned. As most of the words of the Catchword Index are nouns, it is preferable to consider the name given to the relevant process or device, although it may be useful to consider other words. The Catchword Index may indicate to the searcher a precise group of the IPC as the proper place for the technical subject being sought, but often there can only be an indication of the subclass or possibly only the class or range of classes concerned.

35. A sample page of the Official Catchword Index appears in Appendix I to this document and shows, for example, the catchword "FRUIT" with a number of subordinate entries with references to specific places in the IPC.

36. If use of the Catchword Index does not lead to a pertinent field of search, the "Contents of Section" (see Appendix II to this document) appearing at the beginning of each section of the IPC should be consulted. The eight sections should be scanned and the possible classes should be selected. Thereafter, the searcher should turn to those classes in order to select the subclass (or subclasses) which most satisfactorily covers the subject. The references and notes appearing in the selected subclass title should be checked for an indication of subclass content and for possible distinctions between subclasses, which in turn may indicate that the location of the desired subject is elsewhere. It is also essential to consult any notes or references appearing in the title of the relevant class, since these may also affect the subclass content.

37. When the correct subclass has been identified, the main group which, in the light of its full wording and any existing notes and references, most clearly includes the subject being sought should then be selected.
38. The most indented sub-group (i.e., having most dots) under the selected main group, which still covers the subject sought, should be chosen for search.
39. After completing the search in a chosen group, it should be considered whether the superior group (i.e., having fewer dots) under which it is indented should be searched, since a wider subject which includes the subject sought may be classified there.
40. Appendix III to this document shows an excerpt of the IPC giving the whole of sub-class A 24 B relating to manufacture and preparation of tobacco for smoking and chewing, and Appendix IV shows photocopies of front pages of patent documents published by the United States Patent and Trademark Office (US Patent No. 4,155,295), by the Egyptian Patent Office (EG Patent No. 10156) and by the International Bureau of WIPO (PCT International Application No. WO 81/00956).
41. Appendix V gives an exhaustive list of thesaurus terms as defined by UNIDO as relevant to the industrial sector "AGRO-INDUSTRIES." Against each term is listed the IPC symbol(s) most appropriate for the technological subject of the term. Where necessary detailed explanatory notes are given.
42. Against each IPC symbol, or group of symbols, statistical information giving the patent activity in each industrial sector is given in Appendix V. The statistics give the number of patent documents published in the year 1978, based upon information received from INPADOC (see paragraph 47 below), on which the symbol, or group of symbols, is printed. The total number of patent documents relevant to each industrial sector may be estimated by multiplying the figure given in Appendix V by a factor of 10, although that factor naturally varies between industrial sectors.

RETRIEVAL OF PATENT DOCUMENTS RELATING TO AGRO-INDUSTRIES USING THE IPC

43. There are several ways to take cognizance of the enormous amount of technological information contained in patent documents, namely, the consultation of patent document collections organized according to the IPC or other (national) classification systems or the consultation of secondary sources of patent information, e.g., patent gazettes, abstracts services, Selective Dissemination of Information (SDI) or international referral services which, in many cases, contain also references to patent documents.
44. In view of the enormous amount of patent documents published each year, the user will almost certainly like to restrict the number of patent documents which he is interested in reading to a strict minimum. It is, therefore, likely that he will first rely on a secondary information source for a first selection of relevant documents.

Patent gazettes

45. To assist users in identifying primary sources of patent information, most Industrial Property Offices publish patent gazettes (also named official gazettes or official bulletins). These gazettes usually contain a certain number of indexes, e.g., by classification symbol, by name of applicant, etc., and contain entries consisting of bibliographic data relating to and marked also on the newly published patent documents. Some of these gazettes also contain abstracts of patent documents.

Abstracts services

46. As set forth above, many patent gazettes contain abstracts, as also do patent documents (see Appendix IV containing the first page of US Patent No. 4,155,295). There are also many patent documents which are officially published in a given language but of which abstracts--that is, a description of their technological content in a few lines--are available in another language. For example, the Japanese Patent Office publishes English abstracts of a substantial portion of its published unexamined patent applications,

whilst Derwent Publications Limited, a private firm in London, publishes each year tens of thousands of abstracts in English of patent documents published in many languages, including Russian and Japanese. Chemical Abstracts, a publication of Chemical Abstracts Service (CAS), a subsidiary of the American Chemical Society, Columbus, Ohio, United States of America, publishes abstracts in the chemical and chemical engineering field supplemented by indexes produced weekly.

International referral services

47. A truly international referral service for patent information came into existence in 1972. In that year, the International Patent Documentation Center (INPADOC) was created in Vienna by virtue of an Agreement between WIPO and the Republic of Austria. INPADOC stores, in a machine-readable data bank, the most important bibliographic data of each patent document, i.e., the title of the invention, its classification symbol, relevant dates, names and numbers. The said bibliographic data are either obtained from Industrial Property Offices in machine-readable form or input by INPADOC on the basis of the announcements published in patent gazettes.

48. At present, bibliographic data pertaining to patent documents published by the following 46 countries are included on a current basis in the data bank of INPADOC: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Cuba, Cyprus, Czechoslovakia, Denmark, Egypt, Finland, France, German Democratic Republic, Germany (Federal Republic of), Greece, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Kenya, Luxembourg, Malawi, Monaco, Mongolia, Netherlands, Norway, Philippines, Poland, Portugal, Republic of Korea, Romania, South Africa, Soviet Union, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States of America, Yugoslavia, Zambia. The data bank is growing at a rate of 16,000 patent documents per week (more than 90% of the world total) and is the largest computerized data bank of bibliographic data relating to patent documents in the world.

49. INPADOC processes the bibliographic data and provides services to government authorities and the public. The data bank can be used for answering many kinds of questions, the two most important being the following. Firstly, the data bank can be asked to identify all the patent documents belonging to any given symbol of the more than 54,000 symbols of the IPC. Here lies of course the main usefulness of the Center in giving industry and other users access to the achievements of modern technology. The Patent Classification Service (PCS) provided by INPADOC gives, on microfiche, the bibliographic data of each patent document belonging to each IPC symbol. An alternative service gives information concerning one, or a selected number of, IPC symbols. An example of the PCS is given in Appendix VI to this document. Secondly, the data bank can provide all the patent documents which in various countries have been filed for the same invention by--usually, but not necessarily--the same person, company or enterprise. Thus, one can obtain information at a glance as to the likelihood of the invention being protected in various countries, and, which is of greater interest for the purpose of access to technological information, as to the likelihood of the invention being described in different languages. INPADOC is also studying the possibility of using its services in the preparation of industrial property statistics.

50. To replace the burdensome scanning of various patent gazettes published by many countries, INPADOC publishes each week an international patent gazette, the INPADOC Patent Gazette (IPG). The IPG, which is published on microfiche, consists of three basic indexes, i.e., by number, by IPC symbol, and by standardized applicant's name, respectively each containing references to all patent documents stored in INPADOC's data bank in the previous week. The index by IPC symbol, the Selected Classification Service (SCS), is particularly useful as a current-awareness service. An example of the SCS is given in Appendix VI. Users thus can follow easily and week by week any field of technology or the activities of any given company, enterprise or applicant.

Access to the primary sources of information

51. Each Patent Office has a collection of all the patent documents it has published. Each major Patent Office also has complete, or largely complete, collections of patent documents published by the Patent Offices of the other countries or at least of most of them. These collections are either in

numerical order or classified order or both. Some libraries (in developed countries) also have more or less complete collections of domestic and foreign published patent documents. Members of the general public usually are allowed to consult such collections. In major Patent Offices and major libraries, specialized staff is usually available to assist the public in locating published patent documents it is interested in.

52. Patent Offices and the libraries mentioned above are usually equipped to furnish copies of published patent documents contained in their collections to anyone who wants them and pays the prescribed price. Unit prices, mostly independent of the number of pages of the patent document, range from US dollar 0.50 for a US patent to approximately US dollars 5.00 for a Soviet Union patent. The average price per patent document, on standing order, is approximately US dollars 2.00.

53. It should be emphasized that the patent document collections available throughout the world are the result of a broad free-of-charge exchange of currently issued patent documents among countries and, more especially, among the Patent Offices of those countries under bilateral and multilateral exchange agreements. The patent documents are exchanged in the form of paper copies or in microform. It is estimated that a total of more than 15 million copies of patent documents per year are exchanged in this way. Secondary sources of patent information in the form of patent gazettes are also exchanged free of charge on a broad basis. In order to promote national and regional infrastructures, WIPO has successfully developed and sponsored procurement and exchange of primary and secondary sources of patent information for developing countries.

Conclusions

54. This Guide is intended to give the basic approach in obtaining the state of the technology in a given industrial sector in the most economic way by consulting selected patent documents.

55. For those individuals and institutions who have easy access to patent libraries and to the updated official editions of the IPC the way of action is straightforward;

- Step I - determine which of the UNIDO Thesaurus Keywords (Appendix V) reflect the main features of the technology in question;
- Step II - find out (using the second column of the Appendix V) which of the IPC units correspond to that keyword;
- Step III - consult the IPC to find out (from the definitions of main groups and subgroups) the groups to be searched;
- Step IV - select patent documents published within a certain period and classified by the symbols of the given IPC group (the average number of patent documents published with a particular subgroup symbol is about 20 per year);
- Step V - analyse selected documents and, if necessary, other relevant documents cited in the selected ones.

56. For those users whose location or other circumstances prevent them from consulting in person the official edition of the IPC Step III might be facilitated by Appendix V-A which gives supplementary information by reproducing definitions of certain groups of the IPC. This has been done in those cases (marked by daggers in Appendix V) where a keyword corresponds to more than one main group of the IPC.

57. Selection and reproduction, if necessary, of the relevant patent documents (Step IV) for the interested users may be performed on a commercial basis by the above-mentioned INPADOC (Möhlwaldplatz 4, A-1041 Vienna, Austria) or by national Patent Offices or libraries (some of these institutions provide such a service).

58. Governmental institutions of developing countries may also avail themselves of still another possibility, namely, the WIPO State-of-the-Art Search program. Established as one of the forms of technical assistance to developing countries, this program enables a user to receive, free of charge, a report on the latest achievements and the general technological level in a particular field specified in the user's request and also copies of relevant patent documents.

References

1. Strasbourg Agreement Concerning the International Patent Classification of March 24, 1971 (WIPO Publication No. 275).
2. The International Patent Classification, Third Edition, 1979, and the Official Catchword Index to the Third Edition (published by Carl Heymanns Verlag KG, Steinsdorfstrasse 10, Postfach 275, Munich, Federal Republic of Germany).
3. World Patents Index; World Patents Abstracts (Derwent Publications Ltd., Rochdale House, 128 Theobalds Road, London WC1X 8RP, United Kingdom).
4. INPADOC, General Information (WIPO/INPADOC Publication No. 426 (E P G)).

[Appendices I to VI follow]

APPENDIX I

OFFICIAL CATCHWORD INDEX

to the Third Edition (1979) of the
International Patent Classification

FRIEDEL-CRAFTS			FUNCTIONS	
FRIEDEL-CRAFTS			FRYING	A47J 37/00
- reactions	C07B	27/00 29/00 45/46	FUEL(S)	C10L
	C07C		adding materials to -- to im- prove them	C10L
FRIEZES	E04F	19/02	combustion apparatus for liq- uid, gaseous, or fluent --	F23C
FRINGES	D04D	5/00	combustion apparatus for only solid --	F23B
artificial hair --	A41G		feeding -- to combustion ap- paratus	F23K
FROGS			-- based on waste materials	C10L 5/40
- for railway tracks	E01B	7/10 25/06	-- bones	A47J 49/08
			-- briquettes	C10L 5/02
FROST			-- bunkers	B65D E04B 7/22
protecting plants from --	A01G	13/00	-- cells or batteries	H01M 5/00
FROSTING			-- injection peculiar to inter- nal-combustion engines	F02M
- surfaces by abrading	B24B B24C		gaseous --	C10L 3/00
			investigating --	G01N 33/22
FROTHING see FLOTATION, FOAM			liquid --	C10L
			nuclear -- elements for reac- tors	G21C 3/00
FROZEN			obtaining -- from pear	C10F
- sweets	A23G	9/00	regulating or controlling --	F23N
			supply in combustion in general	
FRUCTOSE	C13K	11/00	solid --	C10L 5/00
			storage of --	B65G 3/00
			stoves or ranges using gaseous or liquids --	F24C
			stoves or ranges using solid --	F24B
			treating -- to improve their quality	C10L
FRUIT			FULLING	
apparatus for printing or stamping on --	B41F	17/34	- fibres or fabrics	D06M 3/14
artificial --	A41G	1/00	- hides	C14B
cabinets, racks, or trays for domestic -- storage	A47B	75/00	- textile fabrics	D06C 17/00
cultivation of -- trees	A01G	17/00	FULMINATES	
cutting or slicing --	B26D	1/00 3/00	- in detonating or priming compositions	C07C 131/12 C06B 37/00
devices for coring, destalking or stoning --	A47J	21/00 to 25/00	FUMES	
devices for coring, destalking or stoning -- in bulk	A23N		preventing escape of dirt or --	B08B 15/00
domestic peeling or paring of --	A47J	17/00	removal or treatment of -- in combustion apparatus	F23J
domestic -- presses	A47J	19/00	FUMIGATING	
drying --	A23N	12/00	- for sanitary purposes	A61L
extracting of juices from --	A23N	1/00 19/00	see also DISINFECTING	
- jellies	A23L	1/06	FUNCTIONS	
- juices	A23L	2/02	evaluating --	G06
hand-knives for --	B26B		see also COMPUTING	
packaging --	B65B	25/04		
peeling -- in bulk	A23N	7/08		
picking --	A01D	46/00		
preserving --	A23B	7/00		
stoning -- in bulk	A23N	3/00		
storage of -- on the farm	A01F	4/00 25/00		

SECTION A — HUMAN NECESSITIES

APPENDIX II

CONTENTS OF SECTION (References and notes omitted)

Sub-Section: AGRICULTURE

A 01 AGRICULTURE; FORESTRY; ANIMAL HUSBANDRY; HUNTING; TRAPPING; FISHING 8

A 01 B Soil working in agriculture or forestry; Parts, details, or accessories of agricultural machines or implements, in general 8

A 01 C Planting; Sowing; Fertilising 11

A 01 D Harvesting 12

A 01 F Processing of harvested produce; Hay or straw presses; Devices for storing agricultural or horticultural produce 16

A 01 G Culture of vegetables, flowers, fruit, vines, hops, or seaweed; Forestry; Watering 17

A 01 H New plants 19

A 01 J Manufacture of dairy products (see sub-class A 23 C for chemical matters) 19

A 01 K Animal husbandry; Care of birds, fishes, insects; Fishing 20

A 01 L Shoeing of animals 23

A 01 M Catching or trapping of animals; Apparatus for the destruction of noxious animals or noxious plants 23

A 01 N Preservation of bodies of humans or animals or plants or parts thereof; Biocides, e.g. as disinfectants; Pesticides, as herbicides; Pest repellants or attractants; Plant growth regulators 24

Sub-Section: FOODSTUFFS AND TOBACCO

A 21 BAKING; EDIBLE DOUGHS 30

A 21 B Bakers' ovens; Machines or equipment for baking 30

A 21 C Machines and equipment for making and processing doughs; Handling baked articles made from dough 30

A 21 D Treatment, e.g. preservation, of flour or dough, e.g. by addition of materials; Baking; Bakery products; Preservation thereof 31

A 22 BUTCHERING; MEAT TREATMENT; PROCESSING POULTRY OR FISH 33

A 22 B Slaughtering 33

A 22 C Processing meat, poultry or fish 33

A 23 FOODS OR FOODSTUFFS; THEIR TREATMENT NOT INCLUDED IN OTHER CLASSES 35

A 23 B Preserving, e.g. by canning, meat, fish, eggs, fruit, vegetables, edible, seeds; Chemical ripening of fruit or vegetables; The preserved, ripened, or canned products 35

A 23 C Dairy products, e.g. milk, butter, cheese; Milk or cheese substitutes; Making thereof 35

A 23 D Butter substitutes; Edible oils or fats 37

A 23 F Coffee; Tea; Their substitutes; Manufacture, preparation, or infusion thereof 37

A 23 G Cocoa; Chocolate; Confectionery; Ice-cream 38

A 23 J Proteins; Phosphatides 39

A 23 K Fodder 39

A 23 L Foods or foodstuffs not covered by sub-classes A 23 B to A 23 J; Their preparation, e.g. cooking; Preservation of foods or foodstuffs in general 40

A 23 N Machines or apparatus for treating harvested fruit, vegetables, or flower bulbs in bulk, not otherwise provided for; Peeling vegetables or fruit in bulk; Apparatus for preparing animal feeding-stuffs 41

A 23 P Shaping or working of foodstuffs not fully covered by a single other sub-class 42

A 24 TOBACCO; CIGARS; CIGARETTES; SMOKERS' REQUISITES 43

A 24 B Manufacture and preparation of tobacco for smoking and chewing; Tobacco; Snuff 43

A 24 C Machines for making cigars and cigarettes 44

A 24 D Cigar; Cigarettes; Tobacco smoke filters; Mouthpieces for cigars or cigarettes; Manufacture of tobacco smoke filters or mouthpieces 45

A 24 F Smokers' requisites; Match boxes 45

Sub-Section: PERSONAL AND DOMESTIC ARTICLES

A 41 WEARING APPAREL 47

A 41 B Underwear; Baby linen; Handkerchiefs 47

A 41 C Corsets 47

A 41 D Outwear; Protective garments; Accessories 48

A 41 F Garment fastenings; Suspenders 49

A 41 G Artificial flowers; Wigs; Masks; Feathers 49

Appendix II

A 41 H Appliances or methods for making clothes, e.g. for dress-making, for tailoring, not covered elsewhere 50

A 42 HEADWEAR 51

A 42 B Hats: Head coverings 51

A 42 C Manufacturing and trimming hats and other head coverings 51

A 43 FOOTWEAR 52

A 43 B Footwear 52

A 43 C Fastenings: Laces; Attachments 54

A 43 D Machines; Tools; Equipment; Methods 54

A 44 HABERDASHERY; JEWELLERY 59

A 44 B Buttons, pins, buckles, slide fasteners, etc. 59

A 44 C Jewellery: Bracelets; Other personal adornments; Coins 60

A 45 HAND AND TRAVELLING ARTICLES 62

A 45 B Walking sticks; Umbrellas; Ladies' or like fans 62

A 45 C Purses; Travelling bags and baskets; Suitcases 63

A 45 D Hairdressing or shaving equipment; Manicuring or other cosmetic treatment 64

A 45 F Travelling or camp equipment 67

A 46 BRUSHWARE 69

A 46 B Brushes 69

A 46 D Manufacture of brushes 69

A 47 FURNITURE; DOMESTIC ARTICLES OR APPLIANCES; COFFEE MILLS; SPICE MILLS; SUCTION CLEANERS IN GENERAL 70

A 47 B Tables; Desks; Office furniture; Cabinets; Drawers; General details or furniture 70

A 47 C Chairs; Sofas; Beds 74

A 47 D Furniture specially adapted for children 78

A 47 F Special furniture, fittings, or accessories for shops, storehouses, bars, restaurants, or the like; Paying counters 78

A 47 G Household and table equipment 79

A 47 H Furnishings for windows and doors 81

A 47 J Kitchen equipment; Domestic equipment not covered in sub-class A 47 G; Coffee mills; Spice mills 82

A 47 K Sanitary equipment not otherwise provided for; Toilet accessories 86

A 47 L Domestic washing or cleaning; Suction cleaners in general 88

Sub-Section: HEALTH AND AMUSEMENT

A 61 MEDICAL AND VETERINARY SCIENCE; HYGIENE 92

A 61 E Diagnosis; Surgery; Identification 92

A 61 C Dentistry; Oral or dental hygiene 94

A 61 D Veterinary instruments, implements, tools or methods 35

A 61 F Prostheses; Orthopaedic or nursing appliances; Contraceptive devices; Fomentation; Treatment or protection of eyes or ears; Bandages 95

A 61 G Transport and accommodation for patients; Operating tables and chairs; Chairs for dentistry; Burial devices 97

A 61 H Physical therapy apparatus, e.g. devices for locating or stimulating reflex points in the body; Artificial respiration; Massage; Baths or washing devices for special purposes or specific parts of the body 97

A 61 J Putting-up pharmaceutical products; Devices for administering food or medicines orally; Baby comforters; Devices for receiving spittle 99

A 61 K Preparations for medical, dental, or toilet purposes 99

A 61 L Methods or apparatus for sterilising materials or objects in general; Disinfection, sterilisation, or deodorisation of air; Chemical aspects of, or use of materials for, bandages or dressings; Materials for surgical suture or for ligaturing blood vessels 105

A 61 M Devices for introducing media into or onto the body; Devices for transducing body media or for taking media from the body 106

A 61 N Electrotherapy; Magnetotherapy; Radiation therapy 107

A 62 LIFE-SAVING; FIRE-FIGHTING 109

A 62 B Devices, apparatus or methods for life-saving 109

A 62 C Fire-fighting 110

A 62 D Chemical means for extinguishing fires or for combating or protecting against harmful chemical agents; Chemical materials for use in breathing apparatus 113

A 63 SPORTS; GAMES; AMUSEMENTS 114

A 63 B Apparatus for physical training, gymnastics, swimming, climbing or fencing; Ball games; Training equipment 114

A 63 C Skates; Skis; Water-shoes; Roller skates; Courts, Rinks 117

A 63 D Bowling-alleys; Bowling games; Boccia, Bowls; Bagatelle; Billiards 118

Appendix II

A 63 F	Card, board, or roulette games: Indoor games using small moving playing bodies: Miscellaneous games	119	A 63 H	Toys, e. g. tops, dolls, hoops, building blocks	121
A 63 G	Merry-go-rounds; Swings; Rocking-horses; Chutes; Switchbacks; Similar devices for public amusement	120	A 63 J	Devices for theatres, circuses, etc.: Conjuring appliances or the like	124
			A 63 K	Racing; Riding sports; Equipment or accessories therefor	124

[Appendix III follows]

A 24 TOBACCO; CIGARS; CIGARETTES; SMOKERS' REQUISITES

A 24 B MANUFACTURE AND PREPARATION OF TOBACCO FOR SMOKING AND CHEWING; TOBACCO; SNUFF

Sub-class Index

PREPARATION	1/00, 3/00	TWISTING MACHINES	11/00
STRIPPING; CUTTING;		CHEMICAL TREATMENT	15/00
HUMIDIFYING	5/00; 7/00; 3/00, 9/00	TOBACCO	13/00

- | | | |
|--|--|---|
| <p>1/00 Preparation of tobacco on the plantation (harvesters for tobacco A 01 D 45/16)</p> <p>1/02 . Arrangements in barns for preparatory treatment of the tobacco, e.g. with devices for drying</p> <p>1/04 . Sifting, sorting, cleaning or removing impurities from tobacco (purifying by sifting or sorting in general B 07 B)</p> <p>1/06 . Stringing tobacco leaves</p> <p>1/08 . Suspending devices for tobacco leaves</p> <p>1/10 . Packing or pressing tobacco</p> <p>3/00 Preparing tobacco in the factory</p> <p>3/02 . Humidifying packed raw tobacco (containers for packaging contents in moist condition B 65 D 81/22)</p> <p>3/04 . Humidifying or drying tobacco bunches or cut tobacco (3/12 takes precedence)</p> <p>3/06 . Loosening tobacco leaves or cut tobacco (3/07 takes precedence)</p> <p>3/07 . Cutting or removing tie leaves; Cutting-off stem butts</p> <p>3/08 . Blending tobacco</p> <p>3/10 . Roasting or cooling tobacco</p> <p>3/12 . Steaming, curing, or flavouring tobacco</p> <p>3/14 . Forming reconstituted tobacco products, e.g. wrapper materials, sheets, imitation leaves, rods, cakes; Forms of such products (delustering A 24 C 1/40; tobacco or cigarette paper D 21 H 5/16)</p> <p>3/16 . Classifying or aligning leaves</p> <p>3/18 . Other treatment of leaves, e.g. puffing, crumpling, cleaning</p> <p>5/00 Stripping tobacco; Treatment of stems or ribs</p> <p>5/02 . by plucking out the stem</p> <p>5/04 . by cutting out the stem</p> <p>5/06 . by stripping leaf-parts from the stem</p> <p>5/08 . by cutting-off, shaving off, pressing flat the thick parts of stems and ribs</p> <p>5/10 . by crushing the leaves with subsequent separating</p> <p>5/12 . Auxiliary devices for stripping</p> <p>5/14 . Flattening machines for leaves or stems</p> <p>5/16 . Other treatment of stems or ribs, e.g. bending, chopping, incising (humidifying 3/04)</p> | <p>7/00 Cutting tobacco (hand cutting tool B 26 B; slicing in general B 26 D 4/00)</p> <p>7/02 . by machines with reciprocating knives</p> <p>7/04 . by machines with revolving knives</p> <p>7/06 . . . with two co-operating sets of knife discs</p> <p>7/08 . . . with several knives which act one after the other</p> <p>7/10 . . . with cutter axes parallel to the feeding direction</p> <p>7/12 . . . with cutter axes transverse to the feeding direction</p> | <p>7/14 . Feeding or regulating devices for tobacco-cutting apparatus</p> <p>9/00 Control of the moisture content of tobacco products, e.g. cigars, cigarettes, pipe tobacco (devices for use by the smoker for controlling the moisture content of tobacco products A 24 F 25/00; humidity control <u>per se</u> G 05 D 22/00)</p> <p>11/00 Tobacco-twisting machines</p> <p>13/00 Tobacco for pipes, for cigars, e.g. cigar inserts, or for cigarettes; Chewing tobacco; Snuff (mechanical treatment 3/00 to 11/00; reconstituted tobacco products 3/14; chemical features or treatment of tobacco 15/00)</p> <p>13/02 . Flakes or shreds of tobacco</p> <p>15/00 Chemical features or treatment of tobacco; Tobacco substitutes (3/00 takes precedence)</p> <p>15/02 (transferred to 15/18, covered by 15/00)</p> <p>15/027,</p> <p>15/033 (transferred to A 24 D 3/00)</p> <p>15/04 to</p> <p>15/08 (transferred to 15/10, 15/18 covered by 15/00)</p> <p>15/10 . Chemical features of tobacco products or tobacco substitutes</p> <p>15/12 . . . of reconstituted tobacco</p> <p>15/14 . . . made of tobacco and a binding agent not derived from tobacco</p> <p>15/16 . . . of tobacco substitutes</p> <p>15/18 . Treatment of tobacco products or tobacco substitutes</p> <p>15/20 . . . Biochemical treatment</p> <p>15/22 . . . by application of electric or wave energy or particle radiation</p> <p>15/24 . . . by extraction; Tobacco extracts</p> <p>15/26 . . . Use of organic solvents for extraction</p> <p>15/28 . . . by chemical substances</p> <p><u>Note</u> In groups 15/30 to 15/42, in the absence of an indication to the contrary, an invention is classified in the last appropriate place for a substance.</p> <p>15/30 . . . by organic substances</p> <p>15/32 by acyclic compounds</p> <p>15/34 containing a carbocyclic ring other than a six-membered aromatic ring</p> <p>15/36 containing a heterocyclic ring</p> <p>15/38 having only nitrogen as hetero-atoms</p> <p>15/40 having only oxygen or sulphur as hetero-atoms</p> <p>15/42 by organic and inorganic substances</p> |
|--|--|---|

[Appendix IV follows]

United States Patent [19]

[11] 4,155,295

Toshihiko Satake

[45] May 22, 1979

[54] RICE PEARLING APPARATUS
[76] Inventor: Toshihiko Satake, 2-38,
Saijonishihonmachi,
Higashihiroshima, Japan

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[21] Appl. No.: 908,805
[22] Filed: May 24, 1978

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26822 8/1971 Japan 426/482

Related U.S. Application Data
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[30] Foreign Application Priority Data
Oct. 29, 1975 [JP] Japan 50-130807

[51] Int. Cl.² B02B 1/04; B02B 3/12
[52] U.S. Cl. 99/516; 99/518;
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[58] Field of Search 99/568, 486-488,
99/516, 518, 520-522, 524, 567, 608, 609, 493,
600; 426/482, 483, 507, 511, 461; 222/25, 57,
134

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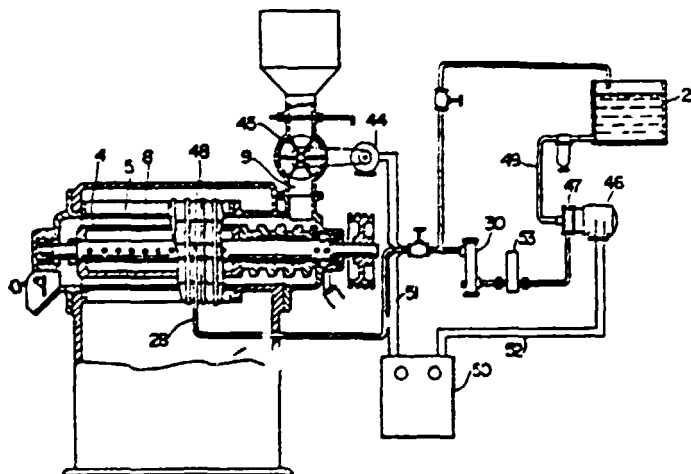
Rice Milling, Autrey and Grigorieff, Agricultural and Food Chemistry, vol. 3, No. 7, pp. 593-599, Jul. 1955.

Primary Examiner—Stanley N. Gilreath
Attorney, Agent, or Firm—Jay L. Chaskin

[57] ABSTRACT

A rice pearling apparatus of the type including a pearling chamber formed by a pearling roll and a multiple-bored debranning-pearling cylinder surrounding the roll, and a device for feeding rice to the pearling cylinder, further comprises a device for supplying water to the pearling chamber, flow meters for measuring and indicating the rates of rice and water flow into the chamber, and a device for regulating the respective flow rates of rice and water.

1 Claim, 5 Drawing Figures



EG



جمهورية مصر العربية

أكاديمية البحث العلمي والتكنولوجيا

مكتب براءات الاختراع

Int Cl² A 24 b, 15 / 00

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	[٥٢]
براءة أصلية رقم ١٠١٥٦	[١١]
براءة إضافية رقم	[٦١]
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Appendix IV
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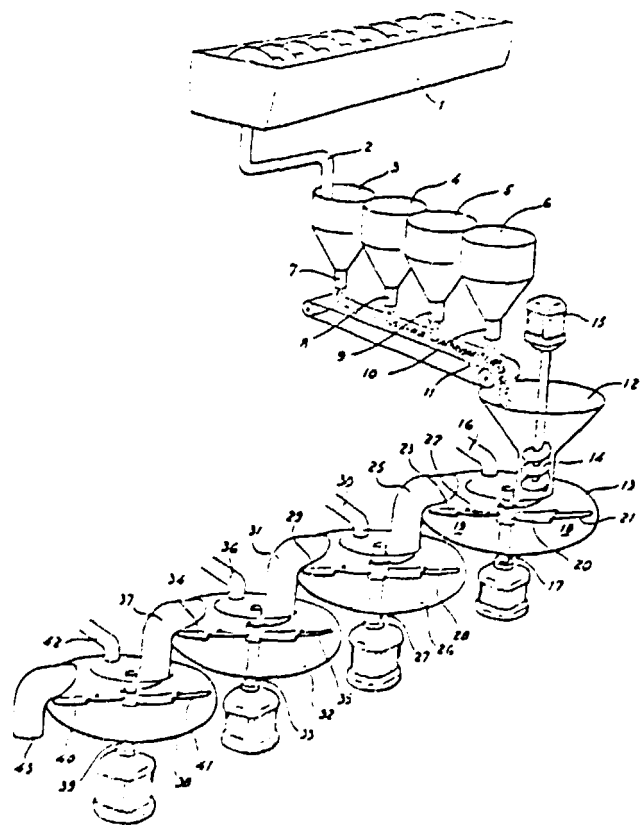
(81) Designated States: AU, CH, DE, DK, FI, FR (European patent), GB, NL, NO, SU, US.

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(54) Title: APPARATUS FOR DISINTEGRATING AND MIXING FOODSTUFFS

(57) Abstract

Sausage mix with good homogeneity has been produced in batches. However, upon changing over to continuous production, difficulty has been encountered in achieving homogeneity. According to the present invention this is achieved by permitting the sausage mix to pass through an annular space in which one or more cutting members (20) and one or more mixing members (21) move along the centre line of the space, the sausage mix being influenced in such a manner as to move about the centre line during its passage through said annular space.



[Appendix V follows]

APPENDIX V

Agro-Industries: Concordance Table

UNIDO Thesaurus Keywords (with clarification)	Equivalent symbols of the IPC (Third Edition)	Statistical data (No. of patent documents published in 1978)
<u>Code 061100 Cereals, Sugars, Starch</u>		
GRAIN CEREALS - preparation of grain for milling milling grain auxiliary devices for grain mills preservation of cereals dough baking	+ B02B 1/00 to 7/02 B02C 9/00 to 9/04 B02C 11/00 to 11/08 A23B 9/00 + A21C and A21D + A21B	214 35 12 31 1,166 285
ROOT & TUBER CEREALS - preparation thereof peeling potatoes etc.	A23L 1/214 to 1/216 A23N 7/02	65 12
CEREAL PRODUCTS - foods containing cereal products	A23L 1/10 to 1/102	454
CANE SUGAR - cutting; shredding extraction of juice	C13C 1/02 to 1/04 C13D 1/02 to 1/06	8 14
BEET SUGAR - cutting; slicing extraction of juice	C13C 1/06 C13D 1/03 to 1/12	2 23
ANY SUGAR - purification of juices processing of the raw sugar	+ C13D 3/00 to 3/18 C13F 1/00 to 5/00 C13J 1/00 to 1/08	74 115 25
OTHER SUGAR } - sucrose from molasses SUGAR DERIVATIVES } invert sugar glucose lactose maltose fructose other sugars	C13K 3/00 C13K 1/00 to 1/10 C13K 5/00 C13K 7/00 C13K 11/00 C13K 13/00	115 8 13 77 70
STARCH; STARCH PRODUCTS; SYRUPS - starch starch products in food glucose syrups honey-like syrups other syrups	C13L 1/00 to 1/12 A23L 1/195 C13K 1/00 to 1/10 A23L 1/08 A23L 1/09	108 24 115 8 17
SUGAR CONFECTIONERY - sweetmeats; confectionery	+ A23G 3/00 to 7/02	531
<u>Code 061200 Meat, Poultry and Fish Products</u>		
MEAT; MEAT PRODUCTS & BY-PRODUCTS - slaughtering processing preserving meat products	+ A22B 1/00 to 7/00 + A22C 5/00 to 18/00 A23B 4/00 to 4/14 A23L 1/31 to 1/313 (see also processing)	148 591 400 165
POULTRY; POULTRY PRODUCTS & BY-PRODUCTS - slaughtering processing preserving products	A22B 3/08 A22C 21/00 to 21/06 A23B 4/00 to 4/14 A23L 1/315 to 1/313 (see also processing)	6 39 400 22
FISH; FISH PRODUCTS & BY-PRODUCTS - slaughtering processing preserving fish products	+ A22B 3/08 A22C 25/00 to 29/04 A23B 4/00 to 4/14 A23L 1/325 to 1/323 (see also processing)	6 371 400 242
OTHER ANIMAL PROTEIN - egg products preservation of egg products obtaining animal protein	A23L 1/32 A23B 5/00 to 5/06 A23J 1/00 to 1/10 and 1/20 to 1/22	79 30 217
<u>Code 061300 Dairy Products & Eggs</u>		
MILK - milking apparatus mechanical treatment of milk concentration, evaporation, drying preservation milk preparations; milk powder	+ A01J 1/00 to 9/10 A01J 11/00 to 11/16 A23C 1/00 to 1/16 A21C 3/00 to 3/08 A23C 9/00 to 9/20	224 42 21 61 192
CHEESE & CURD - cheese making (mechanical aspects) cheese making (chemical aspects) cheese substitutes	+ A01J 25/00 to 27/04 A23C 19/00 to 19/16 A23C 20/00 to 20/02	151 236 36
BUTTER; CREAM - butter making (mechanical aspects) butter making (chemical aspects) cream making (mechanical aspects) cream making (chemical aspects)	+ A01J 15/00 to 23/00 A23C 15/00 to 15/20 + A01J 11/10 to 11/14 and 13/00 A23C 13/00	17 8 46 28
CASEIN - obtaining casein from milk working-up of casein	A23J 1/20 to 1/22 A23J 3/02	64 34

+ For details see paragraph 56 and Appendix V-A

Appendix V

UNIDO Thesaurus Keywords (with clarification)	Equivalent symbols of the IPC (Third Edition)	Statistical data (No. of patent documents published in 1978)
OTHER MILK PRODUCTS - buttermilk whey; other butter substitutes cream substitutes milk substitutes	+ A23C 17/00 to 17/02 A23C 21/00 to 23/00 A23D 3/00 to 3/04 A23L 1/19 A23C 11/00 to 11/10	4 94 86 32 70
EGGS - incubators testing; sorting, cleaning, grading of eggs housing of birds preserving of eggs protein from eggs egg products	A01K 41/00 to 41/06 A01K 43/00 to 43/10 A01K 31/00 to 31/22 A23B 5/00 to 5/06 A23J 1/08 to 1/09 A23L 1/32	19 26 82 50 7 78
<u>Code 61400 Fats and Oils*</u>		
Production of fats or oils from raw materials	C11B 1/00 to 1/16	80
Refining of fats and oils	C11B 3/00 to 3/16	123
Preservation of fats and oils	C11B 5/00	29
Separation of fats and oils	C11B 7/00	38
Recovery of fats and oils	C11B 13/00	25
Solidification of fats and oils	C11B 15/00	6
MARGARINE, SHORTENING, VEGETABLE GHEE - margarine other edible fat or oil products	A23D 3/00 to 3/04 A23D 5/00 to 5/04	86 146
<u>Code 061500 Fruit and Vegetable Products**</u>		
- juice extraction coring or stoning hulling, husking, cracking shells peeling cleaning, blanching, drying, roasting other processing treatment of pulse	+ A23N 1/00 to 1/02 A23N 3/00 to 4/24 A23N 5/00 to 5/08 A23N 7/00 to 7/10 A23N 12/00 to 12/12 A23N 15/00 to 15/12 A23L 1/20 to 1/209	55 51 34 79 99 119 387
<u>Code 061600 Beverages and Tobacco***</u>		
WATER - treatment of water, waste-water, sewage, sludge	+ C02P 1/00 to 11/14	8,026
NON-ALCOHOLIC BEVERAGES - non-alcoholic beverages	A23L 2/00 to 2/40	241
WINE - wine	C12G 1/00 to 1/08	103
BEER & MALT - preparation of malt brewing beer	+ C12C 1/00 to 1/18 C12C 3/00 to 11/06	47 150
DISTILLED ALCOHOLIC BEVERAGES - distillation or rectification of fermented solutions	+ C12F 1/00 to 5/00	41
OTHER BEVERAGES - other alcoholic beverages	C12G 3/00 to 3/12	135
TOBACCO CURING & BLENDING - preparation at plantation preparation at the factory - CURING - BLENDING stripping cutting moisture control twisting chemical aspects of treating tobacco	A24B 1/00 to 1/10 A24B 3/00 to 3/12 A24B 3/12 A24B 3/08 A24B 5/00 to 5/16 A24B 7/00 to 7/14 A24B 9/00 A24B 11/00 A24B 15/00 to 15/42	79 263 105 11 16 20 11 - 305

* The IPC is not subdivided according to the origin of the fat or oil but according to the method of processing it.

** The IPC is not subdivided according to the type of fruit or vegetable but according to the method of processing it.

*** This subclass is NOT principally concerned with drinking water but with large scale treatment/purification of water in general

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Appendix V

UNIDO Thesaurus Keywords (with clarification)	Equivalent symbols of the IPC (Third Edition)	Statistical data (No. of patent documents published in 1978)
TOBACCO SMOKING PRODUCTS - machines for making cigars or cigarettes smoking tobacco cigars;cigarettes filters,mouthpieces	A24C 1/00 to 5/60 A24B 13/00 to 13/02 A24D 1/00 to 1/18 A24D 3/00 to 3/18	659 10 201 309
OTHER TOBACCO PRODUCTS - chewing tobacco;snuff	A24B 13/00 to 13/02	10
<u>Code 061700 Coffee,Tea,Cocoa,Spices and Food Additives</u>		
COFFEE - coffee;coffee substitutes apparatus for roasting thereof	A23F 5/00 to 5/ 0 A23N 12/08 to 12/ 2	275 30
TEA - tea;tea substitutes	A23F 3/00 to 3/42	154
COCOA;CHOCOLATE - cocoa;chocolate apparatus for roasting thereof	A23G 1/00 to 1/28 A23N 12/08 to 12/12	50
SPICES - natural spices synthetic spices	A23L 1/221 to 1/225 A23L 1/226 to 1/23	97 240
FOOD FLAVOURINGS; COLOURINGS; - flavourings;condiments SEASONING colouring or decolouring agents	A23L 1/22 to 1/24 A23L 1/27 to 1/277	806 91
EXTRACTS & ESSENTIAL OILS - extracts of tea extracts of coffee extracts of spices or flavourings extracts of fungi essential oils	A23F 3/16 to 3/32 A23F 5/24 to 5/42 A23L 1/22 to 1/225 A23L 1/28 C11B 9/00 to 9/02	23 151 187 50 144
CONDIMENTS - see spices;flavourings;seasonings etc.		
PECTIN;AGAR-AGAR;ALGINATES;JELLIES - foods containing these materials	A23L 1/04 to 1/06	127
<u>Code 061800 Other Food Products</u>		
INFANT FOOD) These items are classified according PRE-PREPARED FOODS) to their contents or according to their method of preparation Usually in A 23 L ...		
FOOD ENRICHMENTS - food products containing additives which modify the nutritive quality e.g. vitamins,minerals	A23L 1/30	71
PRESERVATIVES - preservatives for meat fruit;vegetables dough milk cream butter cheese	A23B 4/14 to 4/14 A23B 7/10 to 7/156 A21D 2/00 to 2/38 A23C 3/08 A23C 13/10 A23C 15/20 A23C 19/10 to 19/11	45 53 153 10 2 - 4
PLANT PROTEIN - obtaining proteins from plants	A23J 1/12 to 1/18	242
FISH PROTEIN - obtaining protein from fish or other sea animals	A23J 1/04	21
<u>Code 061900 ANIMAL FOODSTUFFS</u>		
Apparatus specially adapted for preparing animal feedstuffs	A 23 K 1/00 to 3/04 A 23 N 17/00 to 17/02	1,441 28

* The IPC is not subdivided according to the use of the foodstuff but according to the raw materials from which it is made.

Definitions of Selected
Main Groups of the IPC³

<u>Reference in</u> <u>Concordance Table</u>	<u>Definitions appearing</u> <u>in the IPC³</u>
B 02 B 1/00 to 7/02	1/00 Preparing grain for milling or like processes (hulling, husking, decortivating, polishing, removing the awns, or degerming 3/00) 3/00 Hulling; Husking; Decortivating (decortivating textile fibres D 01 B 1/14); Polishing; Removing the awns (in threshing machines A 01 F 12/42); Degerming 5/00 Grain treatment not otherwise provided for 7/00 Auxiliary devices
A 21 C and A 21 D	A 21 C MACHINES AND EQUIPMENT FOR MAKING AND PROCESSING DOUGHS; HANDLING BAKED ARTICLES MADE FROM DOUGH 1/00 Mixing or kneading machines for the preparation of dough (domestic mixing or kneading machines A 7 J 43/00, 44/00) 3/00 Machines or apparatus for shaping batches of dough before subdivision 5/00 Dough-dividing machines 7/00 Machines which homogenise the subdivided dough by working other than by kneading 9/00 Other apparatus for handling dough or dough pieces 11/00 Other machines for forming the dough into its final shape before cooking or baking 13/00 Provers, i.e. apparatus permitting dough to rise 15/00 Apparatus for handling baked articles A 21 D TREATMENT, e.g. PRESERVATION, OF FLOUR OR DOUGH, e.g. BY ADDITION OF MATERIALS; BAKING; BAKERY PRODUCTS; PRESERVATION THEREOF 2/00 Treatment of flour or dough by adding materials thereto (10/00 takes precedence) 4/00 Preserving flour or dough before baking by storage in an inert atmosphere 6/00 Other treatment of flour or dough before baking, e.g. cooling, irradiating, heating 8/00 Methods for preparing dough and for baking (2/00 takes precedence) 10/00 Batters, dough or mixtures before baking 13/00 Finished or partly finished bakery products 15/00 Preserving finished bakery products; Improving (refreshing 17/00; packaging or wrapping bakery products B 65 B, e.g. B 65 B 23/10, 25/16) 17/00 Refreshing bakery products (improving 15/00)

Appendix V-A

Reference in Concordance Table	Definitions appearing in the IPC ³
A 21 B	A 21 B BAKERS' OVENS; MACHINES OR EQUIPMENT FOR BAKING (domestic baking equipment A 47 J 37L00, combustion apparatus F 23; domestic stoves or ranges being wholly or partly ovens F 24 B, C) 1/00 Bakers' ovens 2/00 Baking apparatus employing high-frequency or infra-red heating 3/00 Parts or accessories of ovens 5/00 Baking apparatus for special goods; Other baking apparatus 7/00 Baking plants
C 13 F 1/00 to 5/00	1/00 Thickening, evaporating, or boiling sugar juice (boiling apparatus B 01 B; evaporators B 01 D; centrifuges B 04 B) 3/00 Miscellaneous sugar products, e.g. powdered, lump, or liquid sugar; Working-up of sugar (5/00, C 13 H take precedence; sweetmeats A 23 G 3/00; sucrose syrups A 23 L 1/09; glucose-containing syrups C 13 K 1/00) 5/00 Drying sugar (storing sugar B 65)
A 23 G 3/00 7/02	3/00 Sweetmeats; Confectionery; Marzipan; Coated or filled products 7/00 Other apparatus specially adapted for the chocolate or confectionery industry
A 22 B 1/00 7/00	1/00 Apparatus for fettering animals to be slaughtered 3/00 Slaughtering or stunning (cutting in general B 26) 5/00 Accessories for use during or after slaughtering 7/00 Slaughterhouse arrangements
A 22 C 5/00 18/00	5/00 Apparatus for mixing meat, sausage-meat, or meat products (mixing in general B 01 F) 7/00 Apparatus for pounding, forming, or pressing meat, sausage-meat, or meat products 9/00 Apparatus for tenderising meat, e.g. ham 11/00 Sausage-making 13/00 Sausage casings 15/00 Apparatus for hanging-up meat for sausages (conveyors B 65 G) 17/00 Other devices for processing meat or bones 18/00 Plants, factories, or the like for processing meat (for processing poultry only 21/00; for processing fish only 25/00)

Appendix V-A

Reference in Concordance Table	Definitions appearing in the IPC ³
A 22 C 25/00 to 29/04	25/00 Processing fish 29/00 Processing shellfish, e.g. oysters, lobsters
A 01 J 1/00 to 9/10	1/00 Devices or accessories for milking by hand (milking stools A 47 C 9/04) 3/00 Milking with catheters 5/00 Appliances for milking mechanically 7/00 Other accessories for milking machines 9/00 Milk receptacles (containers in general B 65 D; devices for tilting and emptying of containers B 65 G 65/23)
A 01 J 25/00 to 27/04	25/00 Cheese-making (coating the cheese 27/02) 27/00 After-treatment of cheese; Coating the cheese
A 01 J 15/00 to 23/00	15/00 Manufacturing butter 17/00 Kneading machines for butter, etc. (mixing or kneading machines for the preparation of dough A 21 C 1/00) 19/00 Hand devices for forming slabs of butter, etc. 21/00 Machines for forming slabs of butter, etc. 23/00 Devices for dividing bulk butter, etc.
A 01 J 11/00 to 11/14 and 13/00	11/00 Apparatus for treating milk (preserving or sterilising A 23 C) 13/00 Tanks for treating cream
A 23 C 21/00 to 23/00	21/00 Whey; Whey preparations (1/00, 3/00, 9/14 take precedence) 23/00 Other dairy products
A 23 N 3/00 to 4/24	3/00 Machines for coring or stoning fruit, characterised by their feeding device (4/00 takes precedence) [2] 4/00 Machines for stoning fruit or removing seed-containing sections from fruit, characterised by their stoning or removing device (for peeling fruit and removing seed-containing sections 7/08; domestic devices for stoning fruit 7 47 J 23/00, for coring fruit A 47 J 25/00)
C 02 F 1/00 to 11/14	1/00 Treatment of water, waste water, or sewage (3/00 to 9/00 take precedence) 3/00 Biological treatment of water, waste water, or sewage 5/00 Softening water; Preventing scale; Adding scale preventatives or scale removers to water, e.g. adding sequestering agents (softening using ion-exchange 1/42)

Appendix V-A

Reference in Concordance Table	Definitions appearing in the IPC
C 02 F 1/00 to 11/4 (continued)	7/00 Aeration of stretches of water 9/00 Multistage treatment of water, waste water or sewage <u>Note</u> This group is intended to cover only those combined treating operations where the interest is directed to the relationship between the steps. It would not normally cover, for example, chemical treatment followed by settlement or biological treatment involving normal mechanical treatment. 11/00 Treatment of sludge; Devices therefor
C 12 C 3/00 to 11/06	3/00 Treatment of hops (hop extraction 9/02) 5/00 Other raw materials for the preparation of beer 7/00 Preparation of wort (malt extract 1/18) 9/00 Methods specially adapted for the making of beerwort 11/00 Fermentation, processes for beer (preparation of wine C 12 G 1/00)
C 12 F 1/00 to 5/00	1/00 Distillation or rectification of fermented solutions (preparation of alcoholic beverages by distillation C 12 G 2/12) 3/00 Recovery of by-products 5/00 Preparation of denatured alcohol
A 24 C 1/00 to 5/60	1/00 Elements of cigar manufacture (combinations of two or more elements of cigar manufacture 3/00; attaching or incorporating filters or mouthpieces 5/47, 5/52; cutting machines in general B 26 D) 3/00 Complete manufacture of cigars; Combinations of two or more elements of cigar manufacture 5/00 Making cigarettes; Making tipping materials for, or attaching filters or mouthpieces to, cigars or cigarettes
A 23 K 1/00 to 3/04	1/00 Animal feeding-stuffs (detoxicating or removing bitter tastes from seeds, e.g. lupin seeds for fodder of food A 23 L 1/20) 3/00 Preservation of materials to produce animal feeding-stuffs

[Appendix VI follows]

SAMPLE OF INPADOC'S PATENT
CLASSIFICATION SERVICE (PCS)

INPADOC		PATENT CLASSIFICATION SERVICE MICROFICHE JULY-1975						PAGE: 796		
I P C	CC	PUBDAT	DOC. NO	I P C (ALL)	CC	PR. DAT	KA	PRIORITY NO.	APPLICANT	TITLE
A23N	1/00	DT	750403 A1	2347517 A23N	1/00	DT	730921 A	73	2347517 SPENGLER, WILLI 7520 BRUCHSA	GERAET ZUM HERSTELLEN VON NATUERLICHEM FRUCHTSAFT
		FR	750207 A1	2236425 A23N	1/00	FR	730713 A	73	7326437 FABBRI FREDERIC	
		FR	750207 A1	2236655 A300	15/26	FR	730702 A	73	7324250 CONST PECA PEYA L CHALGON, FR	
		FR	750502 A1	2246230 A23N	1/00	IT	731003 A	73	29603 AMF PADOVAN SPA	
		FR	750530 A1	2249701 A23N	1/00	FR	731106 A	73	7340375 PIFFARI NYRIAN, FR	
		IL	730330 A1	33451 A23N	1/00	IL	691120 A	69	33451 CENTRE FOR IND RES THE NAT CO UNCIL FOR RES AND DEV LTD	PROCESS FOR THE RECOVERY OF COMPONENTS FROM CITRUS FRUIT
		IL	740630 A1	30401 A23N	1/00	US	711213 A	71	207402 BROWN INT CORP	CITRUS PEEL OIL EXTRACTOR FOR WHOLE FRU IT
		IL	740910 A1	36992 A23N	1/00	FR	700611 A	70	181590 INST TECH IND P 7021440 ROD AGRICOLES TROPICAUX	A METHOD OF OBTAINING A COMPLETE, STABIL IZED EXTRACT OF FRESH KOLA NUTS
		SU	741230 T	454092 A23N	1/00	SU	730404 A	73	1902021	
		SU	750205 T	459211 A23N	1/00	SU	730635 A	73	1927745	
A23N	1/02	IL	740630 A1	30332 A23N	1/02	US	710110 A	71	107212 FMC CORP	WATER SPRAY RING FOR CITRUS FRUIT PROCE SSING APPARATUS
		US	741224 A	3055911 A23N	1/02	US	730430 A	73	355804 ROTEL AG, CH	CENTRIFUGAL JUICE EXTRACTOR
		US	750107 A	3050500 A23N	1/02	US	730705 A	73	377622 BROWN INTERNATI ONAL CORPORATI ON	CITRUS JUICE EXTRACTOR
		US	750210 A	3066520 A23N	1/02	IT	720212 A	72	12033 MONTAGNONI, REY	APPARATUS FOR EXTRACTING JUICE FROM CIT RUS FRUIT
				445J	19/02	IT	720212 A	72	12200 IO	
				B300	9/02					

Appendix VI

I P C SELECTED CLASSIFICATION SERVICE				MICROFICHE		08/1979		PRODUCED: 79-02-23		PAGE: 3 103			
I P C				CC PUB#DAT ED DOC.NO		IPC (ALL)		CC PR.#DAT PRIORITY NO.		EQUIVALENCES (PUB.BL.) APPLICANT		TITLE	
B01F	3/10									CM 71-05-21 A 507733 DE 70-10-15 A 2014693 DK 75-05-26 B 131094 SK 75-10-27 C 131094 FR 71-01-00 C 2038173 GB 72-03-00 A 1266122 JP 70-06-20 B- 53020711 NL 70-10-06 A 7034651 RO 73-12-03 B 128519 US 71-11-09 A 3618903			
B01F	3/12	GB 79-02-14 A	1540790	B01F 7/16 B01F 3/12 B01F 15/02 C37C 63/00 B01F 3/12	DE 77-05-21 77	2723068		DE 70-11-30 A1	2723068	BUSSTIEMERKE KG INST GAZA PH UK SSB GORLOVSKIY KORS OKHIMICHESKIY ZATOD	ADHESIVE MIXER FOR CON ESIVE SPREADING MACHI NES METHOD OF DETOXICATION OF SOLID WASTE OF PH TWALIC ANHITIGICE PROG UCTION		
B01F	3/14	HU 79-01-28 P	172922	B01F 3/14	HU 75-02-05 75AA	801	DE 76-08-19 A1	2602050	HELTEPITESTI TED VEZGE VALLALAT .HU	APPARATUS FOR MIXING S OLID, GRANULAR AND/OR PUSTLINE MATERIALS I NTO FLUID PARTICULAN T FOR PRODUCING SLUDG E AT PIPELINE CARRYIN G			
B01F	5/00	GD 79-01-24 Z	133067	G03C 1/00 B01F 5/00	DD 77-11-14 77	202069			KLINGLER, WERNER M, DO SCHILLE, DIETRIC M, DO SCHNEIDER, ANGEL IKA, DO	VERFAHREN UND VORRICHT UNG ZUR KONTINUIERLIC HEN HERSTELLUNG EINER LICHTSTREIFENSCHUTZSCHICHT DISPERSION			
		FR 79-02-02 B1	2202936	B01J 10/00 B01F 5/00	JP 74-08-26 74	97062	DE 76-03-18 A1 2537962 FR 76-03-26 A1 2202936 GB 70-00-16 A 1521949 JP 76-02-27 A2 51024502 JP 70-11-17 BA 53043200 US 77-12-20 A 4064111	DE 78-10-02 A1 867752 DE 70-12-07 A1 2737329 FR 70-12-29 A1 2393073 JP 79-01-09 A2 54002206 NL 70-12-05 A 7005711	HITACHI CHEMICA L CT LTD				
		GB 79-01-04 A	2000195	C22C 1/02 B01F 5/00	CM 77-06-02 77	6766			ALUSUISSE	PROCESS FOR THE CONTIN UOUS PRODUCTION OF RE TAL ALLOTS			
		GB 79-01-10 A	2000448	B01F 3/02 B01F 5/00	AT 77-07-01 77	4685			WAGNER BIRG AG DE 79-01-04 A1 2825500 ES 79-01-16 A1 471335 FR 79-01-26 A1 2195772 LU 78-12-07 A 79900 NL 79-01-03 A 7006955 SE 79-01-02 A 7007319	METHOD AND APPARATUS F OR MIXING TWO GAS STR EAMS			
		GB 79-01-17 A	2000600	B01F 3/00 B01F 5/00	DE 77-07-11 77	2731279	DE 79-02-01 A1 2731279 NL 79-01-15 A 7007424	KUBA KUNLEFABR IK BAIEBRUNN	APPARATUS SUITABLE FOR DIVIDING A FLOWING R				

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