

Patent classification and information retrieval services*

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The Science Reference Library

To provide complete coverage of the patent information services for public and industry provided by the UK Government it is necessary to consider the combined services of the Patent Office and the Science Reference Library (SRL). This Library is a department of the Reference Division of the British Library and started life in 1855 as the Patent Office Library, which accounts for the fact that the Patent Office and the SRL have their main premises in the same building in London. Although under separate administrations they act closely together with obvious advantages for the public, since the SRL is able to draw upon the greater resources of the British Library while having ready access to the patent expertise of the Office. The Science Reference Library is also one of the few libraries associated with industrial property offices in which are made available to the public, not only the world's patent publication, but also a comprehensive collection of books, reports, abstract journals and periodicals in fields of inventive activity. In addition, trade literature from about 8,000 companies may be consulted. The Foreign Patents section of the library holds current patent specifications for nearly 30 countries from the start of publication, as well as official gazettes or other published bibliographical information from 75 countries.

Whom we serve

There are of course many and various users of patent information services, and it has to be the aim of the office and the library to meet their needs. We are expected to co-operate with the professional searcher acting on behalf of industry or an individual client, carrying out state of the art searches, novelty searches, searches for inventive step or infringement searches; the casual visitor seeking the answer to a specific problem; the researcher pursuing a topic in depth; the firm concerned with the latest patents in a particular field or by a particular competitor: the list of users is almost endless. It is necessary therefore that the information should be available as many services, and in various formats, so that each user is able to obtain the information he seeks with the minimum of effort. Also there has to be an awareness of changing needs; and

over the years our services have been expanded and refined to meet those changes. A Patent Office representative co-operates with a Patent Documentation and Classification Committee of the Users of Patent Information.

Document publication

Patent information services must of course centre around the publications of the documents which contain the text and bibliographic data of the applications for patents and granted patents; for it is these documents, which form an essential part in our patent system, which aim to stimulate technical progress by offering an exclusive right to an inventor for a limited period of time in return for making public the technical content of the invention. In the UK we are at present in transition between the 1949 Patents Act and the 1977 Patents Act, the latter having come into force with the Patent Co-operation Treaty (PCT) and the European Patent Convention (EPC) on 1 June 1978. Under the 1949 Act only one document is published, namely at grant; whereas under the 1977 Act publication takes place twice, first after formal examination and search (see figure 1) and secondly after substantive examination and grant. Our services are therefore also in a state of transition since we are concurrently publishing under both Acts.

The Classification Key

Perhaps the most important adjunct of the patent documents is the Classification Key, for it is only by classifying the technical subject matter of each document that it is possible to retrieve those documents in a particular field. In common with some other patent offices, the UK office maintains a domestic classification key which is used throughout the office for the official search files and is regarded by most of our customers as much superior to the Internal Patent Classification (IPC), which, however, we apply to UK documents in accordance with our responsibilities as members of the IPC Union.

The Key is divided into eight Sections, A to H, corresponding closely to the sections of the IPC, and each section has a number of divisions under headings which equate to the IPC sub-classes (see figure 2).

The original grouping of headings into Divisions and Sections in 1963-4 was necessarily based on headings existing at that time, and consequently approximated

*Text of the address given to The Society on 20 Jan. 1981.

Specimen

- (21) Application No. 21089/71
- (22) Filed 19 Apr 1971
- (23) Claims filed 19 Apr 1971
- (30) Priority data
- (31) No. 44/009496
No. 44/0010913
No. 44/0013710
- (32) 29 Jan 1970
6 Feb 1970
17 Feb 1970
- (33) Japan (JP)
- (43) Application published
18 Apr 1974
- (51) INT CL² G03B 17/24
- (52) Domestic classification
G2A A401 A403 A521 A528
A547 A562 A583 A583 A586
A588 A705 A712 A752 ACB
- (56) Documents cited

- (58) Field of search
G2A ACB ACC ACD
- (71) Applicants
Canon Kabushiki
Kaisha
- (74) Agents
R G C Jenkins & Co

(54) Cameras

(57) A camera has means for photographing auxiliary images representing the data on a marginal portion of the film. As shown, in a space 4 in the camera housing is disposed a hollow shaft 6 having a slit 5 in the shaft wall. Rotatably mounted on the shaft and covering the slit are three transparent rings Y, M and D carrying markings

which indicate the year, month, and day respectively. When a lamp L within the shaft is energized, its light passes through the slit and the parts of the rings immediately over the slit, and is reflected by a mirror 8 through a lens system 9¹9² to a marginal portion of the film F. The rings Y, M, D are connected to setting rings Y', M', D' which can be viewed from outside the camera through a window 10 and which can be rotated by gear wheels 14, 15, 16 also manipulatable from outside the camera. Fig. 1 (not shown) is a timing circuit which controls the operation of the lamp L, and which can be adjusted to switch on the lamp for a predetermined time. Other forms of the illuminator and data ring are described and shown.

GB 2131711 A
GB 0760119
GB 2061943 A
US 3982113
GB 1486192

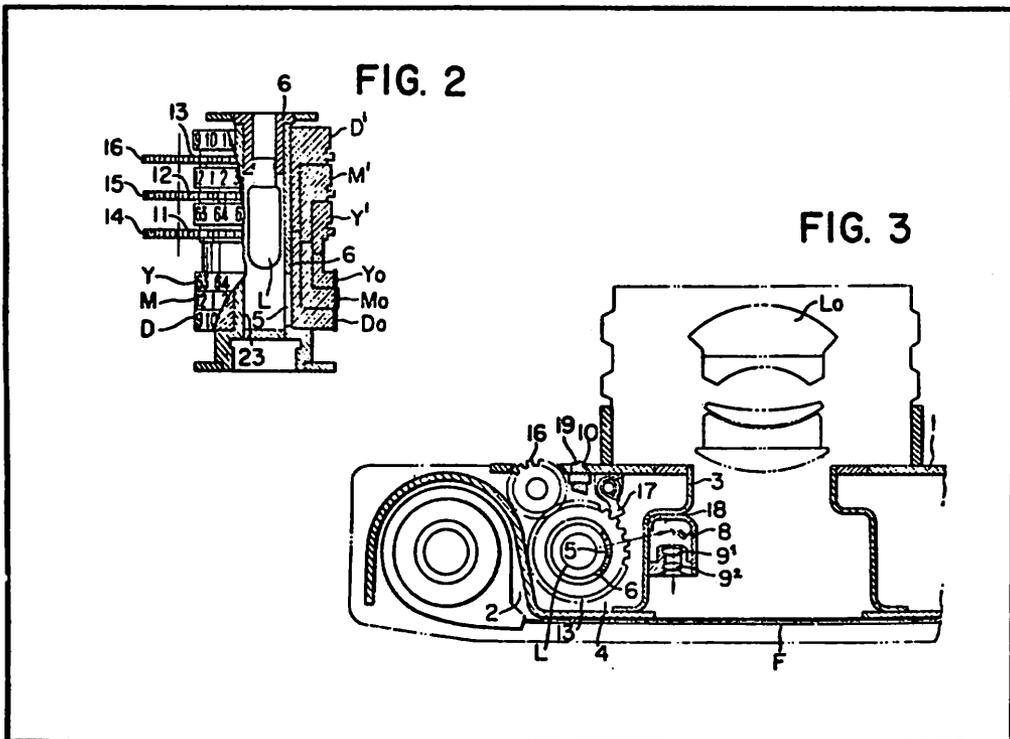


Figure 1. The front page of a patent application under the 1977 Patents Act.

GB2350235A

only roughly to the sub-classes of the IPC. When a heading is revised now, or a new heading is created, the IPC is examined to see whether it has a sub-class which would be satisfactory as a basis for the new or revised heading. The US classification is also examined when a heading is revised or created to obtain useful information on subject-matter grouping and descriptive terms. A number of headings are identical with international [ICIREPAT] shared-use systems.

Preceding each heading is an introduction defining in general terms the principal subject matter which is the concern of the heading, with references to any other subject matter which may be included and to exclusions (see figure 3). It is also the practice to define the relationship of the heading subject matter with the current edition of the IPC, and to provide a documentation record which includes the current availability of file lists (see below for explanation of file lists) and the state of the official search files. It is the intention in future editions of the Classification Key to include against each term the frequency with which this term has been applied to the documents in the official search files. These term frequencies will be of considerable help to the public searcher in deciding whether or not to search widely by consulting all documents bearing a particular term, or whether, in the interests of economy and time, the search should be limited to those documents bearing the term in combination with another term. The term frequencies will also enable the activity in a particular technical area to be assessed by comparing the frequencies applied to a term or terms between the two editions of the key.

The revision of the Classification Key is undertaken by examiners seconded to a Classification Section within the Patent Office. The Examiners adopt a common agreed policy towards revision of the key within the limits imposed by the subject-matter of individual headings. During revision the classification examiners work very closely with the examiners carrying out examination, so that experience of reclassification and knowledge of the policy thereof are combined with the experience of those performing examination on the subject matter of the headings. The Classification Key is supplemented by a Reference Index in the form of catchwords.

A great advantage of using a domestic classification is the ability to revise the system with a consistent policy, and reclassify the documents in the official search files frequently to meet the demands of changes in technology, as compared with the lengthy revision periods and compromise policies caused by the need for international agreement of the IPC.

The provision of an abstract and drawing, if appropriate, on the front page of each 'A' document published under the 1977 Patents Act enables the reader of the document to be directed immediately to the

SECTION A. Human necessities.

DIVISION A1.

Agriculture; Animal husbandry.

- A —Fishing &c.
- B —Soil working &c.
- D —Manuring, sowing &c.
- E —Treating plants &c.
- F —Harvesting &c.
- M—Animal husbandry.
- P —Coupling agricultural implements to tractors.
- X —Seaweed, marking animals &c.

DIVISION A2.

Food; Tobacco.

- A —Bakery apparatus &c.
- B —Food preparations.
- C —Cigarettes, tobacco &c.
- D —Preserving food &c.
- M—Smokers' accessories
- Q —Treating grain, seeds &c.
- U —Preparing meat &c.

DIVISION A3.

Apparel; Footwear; Jewellery.

- B —Boots and shoes.
- H —Dress fastenings, jewellery &c.
- V —Wearing apparel &c.

DIVISION A4.

Furniture; Household articles.

- A —Portable vessels, table articles &c.
- B —Cabinets, shelves, runners &c.
- C —Cutting foodstuffs &c.
- D —Cooking apparatus &c.
- E —Infusing.
- F —Cleaning &c.
- G —Bags, baskets, cases &c.
- H —Tables, stands, furniture frames &c.
- J —Seats, beds, stools &c.
- K —Brushes &c.
- M—Mattresses, upholstery &c.
- N —Baths, basins &c.
- P —Umbrellas &c.
- S —Carpets, bedding, curtains &c.
- T —Shop fittings &c.
- U —Furniture accessories &c.
- V —Toiletry &c.
- X —Miscellaneous household articles.

Figure 2. Page from pamphlet, 'Structure of the Classification Key'.

This heading is the general heading for subject-matter relating to brushes, *i.e.* devices having a plurality of bristles or like filamentary elements which, by a form of a scraping action, introduce material to, or remove material from a surface, *e.g.* paintbrushes, mops, brooms, or arrange hair or the like into desired formations. Also classified here is subject-matter relating to:—

- . apparatus and processes for making and finishing brushes
- . reservoir fed brushes and similar devices for the same function, *e.g.* pads and squeegee devices
- . brushes and pads associated with other apparatus
- . ancillary equipment, *i.e.* sheaths, cases, stands, holders and supports, means for preventing drying and hardening of brushes, drip preventers and catches

In this heading the following term is used with the following meaning:—

- . applicator member—a brush, mop, pad, squeegee or the like (*including* a glove) by which a liquid or solid medium is applied to or spread on a surface

Explanation of subject-matter and relationships with other headings

Apparatus and processes for making and finishing brushes

Classified here are disclosures relating to apparatus and processes for preparing and arranging bristles &c prior to brush assembly, for assembling the bristles or tufts thereof with other brush parts and for ancillary operations concerning the bristles, *i.e.* flowering, grinding, splitting and trimming.

However, subject-matter relating to the separating and sorting (but not tufting) of bristles and bristle substitutes is to be found in DIF, Spinning processes.

This heading is residual for other operations in the manufacture of brushes which are classified in the headings for the operations where such exist *e.g.*:—

- . B5A, Moulding plastic substances &c
- . B5L, Sawing, Woodworking &c

Associations of brushes, pads and squeegee devices with other apparatus

Excluded are:—

- . brushing apparatus for particular applications covered by the relevant headings, *e.g.* A4F, Cleaning &c; B5L, Coating-apparatus; DIS, Finishing fabrics &c; EIG, Rail and roadways
- . fittings for administering electricity and magnetism — A5R, Medical, dental and veterinary equipment
- . brushes with cloths stretched thereover, rubbing and polishing pads — A4F, Cleaning &c
- . windscreen wiping and other window-cleaning assemblies — A4F, Cleaning &c
- . brushes combined with garment hangers — A4U, Furniture accessories &c
- . attachments to, and modifications of, brushes and brooms for hanging or standing up — B4K, Hand tools handles &c
- . machines for applying material to webs by rollers, brushes, pads and other spreading devices — B2L, Coating-apparatus &c
- . brushes mounted on taps — F2V, Fluid-pressure control valves &c
- . brush, pad and squeegee devices in which a fluid is fed from a reservoir or other supply to the surface to be treated

Excluded is subject-matter concerning:—

- . hand-held reservoir appliances with a single ball applicator — B6P, Writing appliances &c
 - . reservoir squeegees adapted for window-cleaning or windscreen wiping — A4F, Cleaning &c
 - . hand supported brushes and pads driven by hand or power
- This term provides for disclosures of brushes &c combined with means for rotating or otherwise moving the bristles &c with respect to other brush parts, *other than* by mere contact of the bristles &c with the surface to be treated.
- . associations of brushes with other apparatus and combination brush articles
- As well as functionally related associations of brushes with other apparatus not provided for above this term also includes combination of brushes with such articles as mirrors, shoe horns &c, to provide a plurality of independent functions.

Figure 3. Classification of brushes in Classification Key.

technical subject of the invention and the advance in that subject (see figure 1). These abstracts are, however, useful as search material in their own right, and as such are published weekly in pamphlet form at the same time as the documents. Each published abstract is a reproduction of the front page of the patent document from which it derives and therefore includes the classification and bibliographic data. Abridgements prepared by the examiners are published for documents published under the 1949 Patents Act.

Indexes

The abstracts and abridgements are published yearly in bound volumes; accompanying the abstracts and abridgements within each bound volume is that section of the Classification Key relating to the headings within the particular volume, together with an applicants' name index indicating the documents published by each applicant within the volume, and a subject matter index which lists the classification marks from the Key which have been assigned during the period covered by the volume, together with the publication numbers of the documents classified under each mark. To supplement the bound abstract/abridgements volumes there are published at the same time, and covering the same ranges of patent documents as the volumes, an Applicants Names Index and Division and Heading Allotment Indexes. The Name Index includes a shortened form of the title of the documents and cross-references to communicatees and assignees.

It is apparent from the content of the bound abstract/abridgement volumes and the associated indexes that they comprise a self-contained searching tool. It is possible to obtain the appropriate mark for subject matter to be searched from the section of the Classification Key, locate this mark in the subject matter index, and thus obtain the numbers of all the abstracts/abridgements which have been allotted this mark and which will be present in the volume. This method of searching is used extensively by the public in libraries and industry, since it requires storage only for the volumes, rather than the considerably more bulky patent documents; and individual organizations need only receive the subject-matter unit(s) pertinent to their operations.

An Official Journal (Patents) [OJ(P)] is published by the Patent Office each week, on the same day as publication of the patent documents. The Journal's main function is to provide indexes relating to proceedings under the Patent Acts as well as official notices, announcements of the availability of recent judgments and decisions, and general information relating to information retrieval services. (See figures 4 and 5.)

To render the information of OJ(P) more readily accessible the library maintains a series of registers to

ABT PRODUCTS LTD Trolley for transporting boat	8038228
AMF INC Time clock	8038460
AMFU LTD Gasket manufacture [36727 15 Nov 1980, GB]	8038419
A-T-O INC Power and free trolley apparatus [26 Sept 1978] [837275 27 Sept 1977, US]	8038455
ABRAHAMS, J Disposable oven lining	8038377
ABRU ALUMINIUM LTD Step ladders [42321 7 Dec 1979, GB]	8038609
ADWEST ENG LTD Apparatus for producing valve rotors	8038610
AIRMASTER ENG LTD Dust extraction	8038183
AIRWICK AG Powdered carpet cleaner [100175 4 Dec 1979, US]	8038648
AISIN-WARNER KK Belt-type stepless shifter [157226 3 Dec 1979, JP]	8038558
AKERS MEK VERKSTED A/S Load transferring device [3977 6 Dec 1979, NO]	8038697
AKZO NV Flexible tube [2949373 7 Dec 1979 and 3 April 1980, DE]	8038686
— Production of sheet-form mat [2948848 5 Dec 1979, DE]	8038689
AKZONA INC Electrical connector [120457 11 Feb 1980, US]	8038463
ALBANY INTERNATIONAL CORPORATION Constant vacuum felt dewatering system [100814 6 Dec 1979, US]	8038225

Figure 4. Extract from Applications index.

provide readers with a convenient means of following the progress of a patent application through its principal stages. The information given in these registers is taken from announcements published in the Official Journal (Patents), and the registers are posted up weekly.

Computer facilities

Much of the work in a Patent Office lends itself to the use of a computer; particularly the keeping of classification records and the publication of documents and their associated indexes.

The UK Patent Office has steadily developed its use of computer facilities. The present main uses stem from the weekly recording of classification and bibliographic data relating to patent documents currently being processed prior to their publication. This data is held on two main computer files with separate and distinct uses.

The first file is a magnetic tape which carries the bibliographic and classification details of each patent arranged in serial number order. This file is used to provide the Official Journal (Patents) indexes,

A1D—cont

2050787 (8017184) 23 May 1980
KIDD, A W
Pneumatic drills for agricultural use
7919292 2 June 1979 GB
A1D Int Cl³ A01C 15/04

A1E

2050788 (7922493) 28 June 1979
BARNETT, G R
Nutrient film horticulture
A1E Int Cl³ A01G 31/02
2050789 (8017769) 30 May 1980
LENTELL, J G S
Bird scarer
7919216 1 June 1979 GB
A1E Int Cl³ A01M 29/00

A1F

2050790 (7906860) 27 Feb 1979
TRUAX, C E
Mower device
932911 11 Aug 1978 US
A1F Int Cl³ A01D 35/00
2050791 (7934939) 9 Oct 1979
KUBOTA LTD
Harvester
54/87430 25 June 1979 JP
A1F Int Cl³ A01D 67/00
2050792 (8017181) 23 May 1980
GÖBLER, H
Lawnmower blades
2921249 25 May 1979 DE
A1F Int Cl³ A01D 55/18

Figure 5. Extract from publications under 1977 Patents Act.

tabulations used by the printer to set the document front page, Comptroller General's annual report statistics, and registers of recent UK specifications entering the Examiner's official search files. A copy of the weekly update on this file is provided for INPADOC (International Patent Documentation Centre) in Vienna.

The second file is a random-access magnetic disc organized in the alpha-numeric order of UK classification marks and containing under each mark country codes and a sequence of patent specifications numbers having this as a valid classification mark. This file is basically an inversion of the tape file and is used nightly for Examiner and public searches.

In addition to the weekly update the files are amended at frequent intervals because of changes in the Classification Key and the subsequent need to maintain the records in conformity with the official search files. Bibliographic and classification details of foreign documents are added, particularly those issued under the PCT and the EPC, for all these documents are classified according to the domestic classification key

and incorporated in the examiner's search files. The computer files are also used to produce print-outs of the classification and details of any given document or range of documents.

Three services which result directly from the use of the computer are the Selected Patent and the Subject-matter Tabulation Services and The Subject-Matter File Lists. The Selected Patent service provides subscribers with copies of all UK documents relating to any specific technical subject defined by code-marks from the classification key, as soon as they are published; the Subject-Matter Tabulation Service merely provides a tabulated list (or lists) of documents numbers instead of the documents themselves. The Subject-Matters File Lists provide subscribers with a tabulation of the publication numbers of patent documents allotted a selected classification mark or a logical combination of marks, and thus provide a ready means of identifying documents disclosing particular subject matter. The tabulations relating to a single mark serve to provide lists of documents corresponding to the Official search files for the benefit of the public and industry, but those relating to a combination of marks are used by both the public and the examiners to facilitate searching; and, indeed, in some headings; e.g. C2C—Organic Compounds; are used to perform all the official searches.

File-List services

The File-List services consist of three specific types as defined below:

The Series A File-Lists are comprehensive in coverage for documents published from the year 1911 up to publication number 1000000 (July 1965), and are tabulations of the publication numbers of these documents which were allotted a selected mark from the edition of the Classification Key in force in 1965. These lists were originally computer-generated, but are now available for free consultation in bound volumes in the library.

The other lists, C and D, are computer-generated on request. The marks for which they are available should normally be taken from the current edition of the Classification Key, but marks from the preceding editions of the Key are usually accepted, since for reclassified headings this allows for the re-classification of the existing search material to be undertaken and the data recorded.

Series C File-Lists are tabulations of the publication numbers of documents allotted a selected mark. There are over 70,000 such lists available, one for each mark of the Classification Key. The lists include for UK published documents search files, e.g. those published under the EPC and PCT; these latter documents having been classified according to the UK Classification Key. Series C Lists are com-

prehensive in their coverage of all UK documents from publication number 1000001 (1965) up to the present, but in certain areas have coverage of documents mostly from 1916 up to the present. After reclassification of a heading, reclassification of the material in the Official search files is normally carried out beyond document number 1000000 and thus there is a continual increase in the numbers of areas for which there is coverage from 1916.

Series D File-Lists are available for the combination search of two or more marks (up to a practical limit of 100 code-marks). The coverage of subject matter and the publication numbers is the same as for *Series C File-Lists*, that is, comprehensive for all headings from document number 1000001 up to the present but in addition covering a period, mostly from 1916, up to document number 1000000 for some headings. The marks specified forming the required combination may be from the same or different headings.

The required relationship between the marks has to be expressed in logical form using only the algebraic expressions 'AND', 'OR' and 'NOT'. The expression 'AND' linking two code-marks indicates that only documents classified by both marks are required; the expression 'OR' linking two marks indicates that documents classified by either mark are required; the expression 'A NOT B' indicates that only documents classified by mark A and not classified by mark B are required. The use of brackets to enclose pairs or groups of marks has the usual arithmetical significance.

The search logic is built up using search lines, with each search line having a practical limit of up to 12 marks. Search patterns are then used to link together the search lines in the desired combination. The search patterns may only refer to search lines, but the search lines may refer to previous search lines, as well as to marks. There is a certain skill to be obtained when writing complicated searches, since up to 100 marks may be utilized!

For the convenience of interpretation of the search results, up to six separate search patterns may be given on a single search request. The resulting File-List will indicate which search pattern or patterns a particular document has responded to. The use of several search patterns is particularly useful where several marks of relevance to the search are available, the combined File-List serving to give a single comprehensive list rather than several individual lists which may themselves contain considerable duplication.

A Bulletin published on a regular basis by the Patent Office gives, in addition to a resumé of the general information retrieval services of the office, together with pending or projected changes, the current availability of File-Lists, together with exceptions. The provision of the File-List service for the public and

industry as well as the corresponding searching facility for the examiners has proved extremely successful, and the 'D' lists in particular provide a unique service which enables sophisticated searches in technically complex areas to be carried out with maximum efficiency. The service is showing a steady increase in its usage and at the present time 6,000 public and 6,000 examiner searches are processed annually.

The Classification Section

The Patent Office has a Classification Section to which examiners and senior examiners are seconded for periods varying from two to four years. This Section is generally responsible for the maintenance of bibliographic and classification data records, the revision of the UK Classification Key, general documentation matters, work in connection with revision of the IPC and international standardization, and last but by no means least, advice to the public and industry on classification, documentation and related matters. Broadly speaking there are within the Section four sub-sections which specialize in chemical, electrical and mechanical subject matter and in records and documentation. Examiners in these sections are competent to deal with questions relating both to domestic and international matters, and members of the public and industry may consult the Section in person or by correspondence. Other sections of the Patent Office deal with questions outside the competence of Classification Section. The library is also able to offer general advice in searching, in particular on the mechanics of searching; for the world of patent documentation is complex and voluminous and its exploitation requires skilled guidance. In addition to the advice provided by the Office and the Library, the Office publishes a number of free pamphlets and in addition *Manual of office practice (Patents)* for which a charge is made. A film *Talking of Patents* can be hired from the Central Film Library; this gives an explanation of the work of the Patent Office and the stages through which a prospective patentee must progress before the grant of his patent.

An account of the work of the Patent Office is given in the Report of the Comptroller General presented annually to Parliament. It provides statistical information and analyses of the year's activity in the industrial property field in this country and gives a summary of the trends revealed in invention. The statistical information includes data on the applications and publications broken down according to the country of residence of the applicant as well as by technical areas.

As required by the Patents Acts, the Patent Office maintains up-to-date registers on the legal status of published patents and application. These are available for patents granted under the 1949 Act, and for ap-

plications and grants published under the 1977 Act and the EPC, the register in the latter case concerning only those patents which designate the UK.

The diverse services described in this paper have developed over many years in response to the needs of the users of patent documents. Both the Patent Office and the Science Reference Library are aware of the need to keep these services constantly under review to ensure that they keep pace with modern developments, and to this end encourage regular contact with the represen-

tatives of the patent profession; the patent searches and industry.

* * *

Searchers of US patent literature will be helped by the *Guide to United States patent and trademark literature* by Brenda M. Rimmer; The British Library, Science Reference Library, 1980. 24pp. ISBN 0-902914-52-9. (Revises and updates *A guide to United States patent and trademark literature* published by the Library in 1972.)

INDEXERS IN FICTION

This fourth extract in our series is taken from *The weight of the evidence*, by Michael Innes (Gollancz, 1944; Chapter XIII) quoted by kind permission of the author:

[Inspector Hobhouse] went on to seek [Professor] Hissey at his hotel. There he found the scholar in what was apparently his private sitting-room, peacefully arranging multi-coloured slips of pasteboard in a card index.

Hissey beamed upon his visitor. . . . 'If you will take the chair by the window, Inspector, I believe you will find it reasonably comfortable. And please forgive me if I go on with my job. It is almost purely mechanical and will not preoccupy me in the least. At the moment, as it happens, I have a good deal on hand.'

. . . Hissey worked with a good deal of concentration at his coloured cards, so that Hobhouse was inclined to doubt the quality of his interest in anything else whatever. 'What a pleasant day it has been.' Hissey craned his neck slightly in order to look out of the window, rather as one who would corroborate a random guess. 'One really longs to go out and stroll in the sun. But I am under some pressure of work at the moment, tiresomely enough.' And at this Hissey got to his feet and fell to rummaging among piles of papers on a large table; there was, Hobhouse noticed, a good deal of disorder in this more intimate retreat. 'Now, what can have become of that Roman villa at Gub-Gub? I always mix it up with Dab-Dab, I am sorry to say.' He shook his head, perplexed. 'Is it not Shakespeare who speaks of Memory, the warder of the brain? . . .'

. . . Hobhouse ate a whole muffin in silence—and this seemed to suit Mr Hissey very well. Mr Hissey coped with his tea with one hand and his card index with the other; Hobhouse, marking the smooth precision with which he worked, and guessing that the process had been going on uninterruptedly for hours, felt that he was at last gaining a convincing breath of that higher and rarefied air which academic persons are supposed wontedly to breathe.

. . . 'The thing?' Hissey was at his cards again; for a moment he looked up to glance over the tea table. 'Ah, yes. Now, what day would that be?'

'Monday.'

'And this is—?'

'Thursday.'

'To be sure.' Hissey smiled apologetically. 'One rather loses count of the days, you know, when one doesn't go to bed.'

'Doesn't go to bed!' Hobhouse was astonished. 'Don't you go to bed, sir?'

'Dear me, yes. I fear I am really becoming quite careless in my speech. I meant during the last few nights merely. It is my habit when real pressure of work comes along. I ought to add that your visit is really a most pleasant relief. . . .'

. . . Hissey picked up a piece of plum cake. 'I should imagine that such a discovery must constitute a decidedly favourable turn in the investigation—Ah, there is Dab-Dab at last.' And Hissey, his mind clearly half on his cards again, made a dive back to the piles of documents.

. . . 'How very odd.' Hissey, who had been moving his slice of plum cake approximately in the direction of his mouth, was so struck by this circumstance that he paused, looked at the cake in one hand and a pink card in the other, as if in some uncertainty as to which it would be reasonable to file. . . .

'I see.' Hissey had produced another file of cards and was still working tirelessly at his index. . . .

There was silence in Mr Hissey's room, but its owner was no longer absorbed in his learned labours. . . .

No doubt we have all worked under such pressure and with such concentration; but in this case the indexer has inadvertently killed a colleague and is hastening to complete his work before the retribution he knows must fall. May we of the Societies of Indexers never have to work to such a deadline.