

PATENTS & DESIGNS



FOURTH ANNUAL REPORT
OF
THE PATENT OFFICE

(Under the Patents Act, 1970)

1975-76

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**FOURTH ANNUAL REPORT
OF THE
CONTROLLER-GENERAL OF PATENTS, DESIGNS AND
TRADE MARKS UNDER SECTION 155 OF THE
PATENTS ACT, 1970 (39 OF 1970)
1975-76**

The progress and prosperity of a nation is normally evaluated in terms of its self-sufficiency in goods and services and standing in the international markets. These in turn depend on the development of industry and agriculture in the country. The extent to which science and technology have been developed and sophisticated is an index of the development of industry and agriculture. Science and technology depend on inventive activity and utilization of inventions both indigenous and foreign in the country. Inventors and research workers are inspired by the prospect of recognition and monetary gain either by way of rewards, remuneration or profits on the exploitation of their inventions. Unless inventions are protected no one is likely to make any investments for their utilization or exploitation. The system of granting patents is the most accepted and adopted method of encouraging inventors. Recognition of inventorship, protection of those interested in commercially working inventions and consequent prospect of profits, protection of the public against abuses resorted to by the successful entrepreneurs and exploiters of useful inventions are the basic objects of patent system. The Patents Act, 1970 contains provisions for the realisation of the basic objects of the patent system in India.

The Patents Act, 1970 is administered by the Controller-General of Patents, Designs and Trade Marks through the Patent Office and its branches, assisted by a team of officers specialised in different disciplines of science and technology and subordinate officers. A short succinct review of the activity of the Patent Office as a whole during the year 1975-76 is set forth in this Report.

The Patent Office continued to remain under the charge of Dr. S. Vedarman, Controller-General of Patents, Designs and Trade Marks.

ESTABLISHMENT

The sanctioned staff strength of the Patent Office, Calcutta and the Patent Office Branches at Bombay and Madras and the

actual working staff strength as on the 31st March, 1976 are given in Appendix 'G'.

PATENT APPLICATIONS

The number of applications for Patents made in 1975-76 was 2996 compared to 3406 applications made in 1974-75.

The number of applications for patents which originated in India was 1163, constituting approximately 39% of the total number of applications made during the year. A classified list of applications for patents received according to the country or state of origin is shown in Appendices 'A' and 'I'.

The number of applications for patents received from Indian nationals, foreigners resident in India and from abroad during the years 1967 to 1972 and during 1972-73 to 1975-76 are shown in Appendices 'B' and 'H'.

Of the number of applications for patents which originated abroad the United States of America contributed the largest number, viz., 561 applications.

Out of the 2996 applications, 686 applications were accompanied by provisional specifications and the remaining 2310 applications were accompanied by complete specifications. 51 complete specifications were filed in connection with applications accompanied by provisional specifications made during the year and 278 complete specifications were filed in connection with similar applications made in the preceding years. In the case of 177 applications accompanied by provisional specifications, extension of time for filing complete specifications was allowed.

In the case of 47 applications, extension of time was obtained for filing declarations if inventorship as required under sub-rule (5) of Rule 14 of the Patents Rules, 1972.

Requests under sub-section (1) of Section 17 of the Patents Act, 1970 for post-dating applications for patents were made in three cases.

The number of convention applications filed during the year was 315.

The number of applications for patents of addition made during the year was 38.

Out of the 1163 applications which originated in India the States of Maharashtra, Delhi and West Bengal respectively contributed 302, 287 and 132 applications and the States of Gujarat, Tamil Nadu, Karnataka, Uttar Pradesh, Kerala, Andhra Pradesh, Bihar, Haryana, Madhya Pradesh, Punjab and Rajasthan contributed 78, 74, 70, 55, 38, 36, 21, 15, 15, 15 and 12 applications respectively. The remaining applications were contributed by the States of Assam (3), Orissa (3) and Jammu and Kashmir (1) and the Union Territories of Pondicherry (5) and Goa (1).

Examination of applications for patents.—At the commencement of the year there were 5401 applications for patents awaiting examination and to these 2996 applications were added during the year. The position of these 8397 applications at the end of the year was as under.

(a) Examined during the year	3,898
(i) Found in order for acceptance on first examination	4
(ii) Documents returned on first examination for meeting objections	3,894
(b) Applications deemed to have been abandoned due to the nonfiling of the complete specification within the prescribed time	623
(c) Applications awaiting examination at the end of the year	3876

TREND OF INVENTIONS

Chemical Industries.—Most of the applications for patents originated abroad and these were concerned with the preparation of drugs like cephalosporin, penicillin, tetracyclin, rifamycin, benzodiazepin, benzenesulphonyl ureas and benzimidazoles and steroids, dyes such as azo, phthalocyanines, xanthenes and some reactive dyestuffs, polyesters and polyamides, hydrocarbons like butadiene and other petroleum hydrocarbons and heterocyclic compounds such as pyridines, indoles, azoles, piperazines, isochromins, coumarins, thiophenes, pyrimidines, quinolines, isoquinolines, thiazines and azepines. Other inventions in this field were mainly for the preparation of cyclo-hexanone, oxime, amides, proteins, aminophenylamides, oxirane derivatives, acrylonitrile, aminopropanol derivatives, ethers, anthraquinones, some alkaloids and some alicyclic compounds and esters. Interest was also shown in the production of synthetic filaments, films, fibres, carbonisation and gasification of coals, chars and cracking of hydrocarbons.

Indian inventions were mainly for dyestuffs like azo, phthalocyanines and reactive dyestuffs, drugs like thiamine derivatives, saponins, azetidines, gonadotropin, piperazines and for the preparation of drugs and drug-intermediates from indigenous sources and compounds like pyridine, coumarin and other heterocyclic compounds. Indian inventors also showed interest in the preparation of halo-phosphono-dithionates, cyano-diphenyls, proteins, tertiary butyl phenols, amides, imides, polyose, ortho-amino-phenol and dicyclo-pentadiene. A few Indian inventions were concerned with the preparation of powdered cellulose, ligno-cellulose, nylon sheets, hydrogenation of unsaturated fatty acids and developing centrifugal extractors.

In the field of inorganic chemistry, the preparations of phosphoric acid, phosphates, sulphuric acid, nitric acid, boron nitrides, iso-cyanates, titanium dioxide, ammonia were subjects of some of the inventions originating abroad.

Appreciable interest was shown by inventors abroad in the production of different types of catalysts such as those used in oxidation, hydrogenation, fluidised beds and for cracking the preparation of thermo-setting compositions, polyethylene compositions, soap bar, detergents and different filtering apparatus. Other inventions originating abroad related to the manufacture of glass, explosives and non-metals like carbon black and charcoal black.

Indian inventions were mainly for the preparation of sodium hydrosulphite, titanium dioxide, chromium oxide, ammonium-perchlorate, carbon-disulphide and potassium-silicate. Indian inventors also showed interest in the development of ion-exchange apparatus and the manufacture of activated carbon, charcoal black, sulphur from gypsum and preparation of gasoline, preparation of soaps from paraffin, sealing wax, tobacco filters, upflow filter and fuel filters.

Metallurgy.—Most of the inventions in this field were of foreign origin. Foreign inventors have shown considerable interest in the fields of alloy manufacture, specially in aluminium base alloys, light alloys and ferrous alloys, centrifugal castings, foundry moulds, ingot mould, gas manufacture from solid and liquid fuels, steel making processes and sponge iron manufacture, in blast furnaces and refining of zinc and aluminium. Development in surface treatment and heat-treatment of steel, grain refinement of aluminium, repairing of castings and moulds, coking and hydrocarbonization of coal, rotary kiln and hot blast stoves for blast furnace, non-destructive testing of steel and

metals, nodular iron, beneficiation of titaniferous and manganese oxide ores and coating of steel and metals, drew interest of many foreign inventors.

Indian inventors have shown keen interest in processes for corrosion inhibition of steel, aluminium and light alloys, in the recovery of nickel, cobalt, copper, lead, tellurium and mercury, coating of steel and metals. Some of the inventors were interested in developing coke oven batteries, fuel manufacture, vertical shaft kilns, the manufacture of combustible gas, producing malleable iron, producing rare earth metals, extraction of titanium oxide from alum sludge and utilization of mill scale.

Food and Agriculture.—Indian inventors in this field showed most interest in the development of kerosene pressure stoves and wick for cooking stoves and agricultural implements such as tillers, seeders and threshers, in grinding and crushing machines and also in cooking appliances such as steam and electric cookers and auto kettle as well as in the preparation of foodstuffs such as maize food, processing coconut, preparing fish protein concentrates, instant cooking rice, and processes for obtaining better quality sugar.

Foreign inventors were mainly concerned with the preparation of food products, synthetic meat flavours and vegetable simulated meat from vegetables such as soya protein meat analogue, animal feeds, fertilizers as well as in tea and sugar manufactures.

Health and Sanitation.—Inventions originating abroad related to the preparation of disinfecting compositions, pharmaceutical compositions, antibacterial compositions, herbicidal compositions, insecticidal compositions, and growth inhibiting fungicides. Other inventions related to detecting of bilirubin in body fluids, surgical dressing and sex sterilising devices. A number of inventions related to the various types of fluid flow control valves, and gate valves, pipe-joints, transition couplings, plastic hose pipes, metal tubes and purification of sewages.

Indian inventions related to the preparation of pharmaceutical compositions, insecticidal compositions, anti-cancer agents, anti-fertility vaccines and medicated face powders, sphigmomanometer, inhalation devices, antiseptic lint-pads, biomedical electronic thermometers and different types of valves like fluid-flow control valves. Pipe-joints, water purification processes and demineralisation of water for medicinal purposes were the subject of other Indian inventions.

Civil Engineering.—The number of inventions in this field was comparatively small; these were concerned with bricks, panels, slabs, reinforced concrete, cement and asbestos products, frames, rock drilling devices and piling.

Indian inventions related to bricks, reinforced concrete, collapsible canopy, prefabricated building structures, building construction, portland cement, cement slurries, sliding gates, doors and pile driving.

Mechanical Engineering.—There was a large number of inventions in the field of mechanical engineering most of which originated from abroad. These inventors were mostly interested in disc brakes and braking systems, centrifugal fans and pumps, cooling and ice making, heating systems and solar heaters and heat exchangers, internal combustion engines, various types of mechanisms, pumps, road vehicles and wheels and tyres.

Indian inventions related to centrifugal pumps, air coolers, bicycles, devices for measuring liquid petroleum gas in cylinders, solar heaters, internal combustion engines, devices for saving fuel, torque converter, lathes, printing machines and wheel rims.

Electrical Engineering (Power).—There was a large number of applications for patents in the field of electrical engineering (power), most of which originated from abroad. The inventions related mainly to electric switches, high tension and low tension electric circuit breakers, relays, H.T. & L.T. electric cables and conductors, generators and motors, electric motor control systems, electric supply systems, electric torches, electric testing and measuring apparatus, energy meters, arc furnaces and geysers, transformers with tap changers, rectifiers and electrolytic cells and processes.

The number of Indian inventions in this field increased during the year. The inventors took special interest in dynamo electric machines, electric batteries, electric couplings and cut-outs, electric switching devices, transmission systems and voltage control measuring and testing apparatuses, water heaters, motor control systems, electric lamps, electric current converting devices and electrolysis cells.

Electrical Engineering (Communication).—There were many inventions relating to wireless signalling, as in the previous years, most of which originated abroad. A fairly large number of inventions related to semiconductor devices and communication sys-

tems. The Indian inventors also showed keen interest in semiconductor devices and communications systems. There were also a few inventions relating to pulse generators, integrated circuits, a microwave transmission, electronic switches and antennas.

The number of inventions relating to telephones originating abroad were very few. Indian inventors, however, showed some interest in telephone receivers and locking devices for the same.

Some of the Indian inventions related to television system and receivers, data processing and servo control systems, logic circuits, alarm devices and electro photocopying machines, digital computers, alarm devices and electronic clocks.

Textile Technology.—Foreign inventors were mostly concerned with open end spinning devices, carding engines, winding machines, twistless yarns, shuttleless looms, pile-knitting machines and application of reactive dyestuffs on textile materials.

Inventions originating in India related to blending of jute and cotton fibres, jute and man-made fibres, winding machines, weaving looms, pickers, buffers and laminating apparatus, dyeing of polyamide fibres and washing of textile materials.

Miscellaneous.—Indian inventors displayed great activity in developing locks, vegetable and fruit peelers and safety razors, sofa-cum-bed, folding cradles, paper manufacture and sprinklers and aerosol sprayers. They also showed keen interest in developing display devices, self sealing envelope and filing systems, footwear, cigarette and bidi boxes, movie film and camera, clocks and watches, coinfreed apparatus, fastening elements such as clips and clamps, games and toys, hand tools, lamps, tanning material, mica pulp and sheets, matches, conveyor mechanisms and astronomical instruments.

Foreign inventors showed keen interest in hollow-ware and paper manufacture, packaging for a variety of articles, paint and pigment, sprayers, dispensing closures, writing appliances and flash lights.

MISCELLANEOUS PROCEEDINGS (PATENTS)

Acceptance.—The number of complete specifications notified as accepted during the year was 2487. Extension of time for acceptance was granted in the case of 1016 applications. Applications for postponement of acceptance of complete specifications

under the proviso to Section 22 of the Patents Act, 1970 were received in 32 cases, 5842 applications including 5529 applications relating to food, drug or medicine were deemed to have been abandoned as they were not put in order for acceptance within the statutory time limits.

Claims under Section 20(1) to proceed as applicants or joint applicants.—Claims under Section 20(1) of the Patents Act, 1970, seeking directions of the Controller to proceed as applicants or joint applicants were made in respect of 36 applications. Of these, claims in respect of 24 applications were made before the acceptance of the complete specifications and claims in respect of 12 applications were made after the acceptance of the complete specifications. The 24 claims made before acceptance and 8 of the 12 claims made after acceptance were allowed and necessary directions issued. The claims in respect of 9 applications shown pending at the end of the last year were also allowed and the directions issued.

Opposition to the grant of patents.—The number of oppositions to the grant of patents entered during the year was 29 and the oppositions pending at the beginning of the year were 225. Out of these 254 opposition cases, 43 cases were finally disposed of during the year and the remaining 211 oppositions were pending at the end of the year. Applications for extension of time for giving notice of opposition under sub-section (1) of Section 25 of the Patents Act, 1970 were allowed in 38 cases.

2085 petitions were made for extension of time under Rules 43 and 124 of the Patents Rules, 1972, for filing reply statements, evidence and for amending or correcting irregularities in procedure.

Patents sealed.—The total number of patents sealed during the year was 2320. This included 795 patents granted on applications relating to food, drug or medicine. The number of patents sealed in the name of Indians was 426; this included 51 patents relating to food, drug or medicine. Extension of time for payment of sealing fees was granted in five cases. (Appendix 'K').

Refusal of patent without opposition.—In three cases publications of inventions before the priority dates of claims in the complete specifications were alleged in the notices given to the Controller under Section 27 of the Patents Act, 1970 in the previous year were considered and patents were ordered to be sealed on the concerned applications.

Application for amendment of patent.—Applications for amendment of patents under Section 44 of the Patents Act, 1970 were made in seven cases. Of these, six applications were allowed during the year. The 12 applications pending at the beginning of the year also allowed during the year.

Patents in force.—Altogether 26444 patents were in force on the 31st March, 1976. Of these, 2991 patents stood in the names of Indians (Appendix 'J').

Renewal fees were paid on 21783 patents. Of these, 12660 patents were granted under the Indian Patents and Designs Act, 1911 (repeated) and the remaining 9123 patents were granted under the Patents Act, 1970.

Extension of time to pay the renewal fees was granted in respect of 835 patents.

The cessation of 3194 patents was notified in the Gazette of India, of these, 544 patents stood in the names of Indians.

The numbers of applications made, deemed to have been abandoned and examined, complete specifications accepted and applications on which patents were sealed and other information for the period 1967 to 1972 and for 1972-73 to 1975-76 are given in Appendix 'C'.

Restoration of lapsed patents.—Applications for restoration of 97 lapsed patents were filed during the year. Out of these, 55 applications were allowed and the respective patents restored. The remaining 42 applications were pending consideration at the end of the year. Out of these 42 pending cases the restoration of patent in one case had been opposed; this opposition was also pending.

The 55 applications for restoration of lapsed patents shown pending at the end of last year were allowed during the year and the patents concerned were restored.

Application for compensation by persons who began to avail themselves of patented invention between the date when the patent ceased to have effect and the date of the advertisement of the application for restoration of the patent.—One application for compensation filed previously was still pending, being held in abeyance at the request of the applicant.

Surrender of patents.—Notices of offer to surrender eight patents pending disposal at the end of the last year were still pending.

Amendments.—497 applications for amendment of applications, specifications and drawings were filed during the year. Out of these, 454 applications filed were before acceptance and 38 applications after acceptance of the complete specifications; the remaining five applications were filed after sealing patents on the corresponding applications.

All the 38 applications for amendments shown pending at the end of 1974-75 and the four applications pending since 1973-74 were allowed during the year.

**Compulsory licence under Section 84 and oppositions there-
to.**—Two applications for the grant of compulsory licences in respect of two patents were pending at the beginning of the year. The grant of licence on one of these applications was refused as the term of the patent in respect of which compulsory licence was sought for expired in the meantime. On the other application the compulsory licence was, however, granted dismissing the two oppositions filed against the grant of the licence. Later during the year, the licensee applied under Section 93(4) of the Patents Act, 1970 for grant of licences on two more patents held by the same patentee for satisfactory working of the patent on which licence was granted under Section 84. These licences were also granted.

Endorsement of patents with the words "Licences of right".—During the period under report particulars of 273 patents endorsed with the words "Licences of right" were published in the Official Gazette.

Application for settlement of the terms of licence.—One application for settlement of the terms of a licence for working an invention covered by a patent endorsed with the words "Licences of right" was received by the Controller during the year. The applicant for the licence also applied for permission for working the said invention pending decision of the Controller settling terms of licence. Both applications were pending.

Application for review of Controller's decision.—During the year two applications for review of decisions given in opposition proceedings were filed. Both applications were refused after due consideration.

Hearings.—38 hearings were posted in respect of the different proceedings relating to patents during the year.

Entries in the Register of Patents.—The number of entries made in the Register of Patents regarding names and addresses of the grantees of patents, notifications of amendments, restoration, etc., was 3827. 209 entries regarding assignments and transmissions were also made on applications made under Section 69 of the Patents Act, 1970. In most of the cases, the monetary considerations in respect of the assignments were nominal. It was thus difficult to estimate the actual commercial value of these Patents. A few of the assignments, the considerations for which exceeded Rs. 1,000/- are given in Appendix 'D'.

Correction of clerical errors and alteration of names and addresses, etc.—Requests for the correction of clerical errors in respect of seven patents were received. Six of these requests were allowed and one request was pending. *Suo motu* correction of clerical errors in patents, patent applications and specifications under Section 78(3) were made in 17 cases.

Notices of alteration of names, addresses and addresses for service in the Register of Patents were received in 301 cases and 26 notices were pending disposal at the beginning of the period. Out of these, 319 notices were allowed and the remaining 8 notices were pending.

Duplicate patents.—Duplicate patent was issued in one case only.

Information in respect of patents and patent applications under Section 153 of the Patents Act, 1970.—Information under Section 153 of the Act was asked for in 205 cases.

Certified copies.—Certified copies of specifications and other documents in respect of patents under Sections 72 and 147 of the Patents Act, 1970 were supplied in 87 cases.

Inspection of Register of Patents.—The Register of Patents kept at the Head Office and the copies of the Register available at the Branch Offices were inspected 339 times.

Directions of Controller under Section 35 of the Patents Act, 1970 and consequential actions thereon.—During the period ending 31st March, 1976 directions prohibiting the publication of information with respect to the subject-matter of 34 applications for patents were issued. There were 18 applications on which the directions issued prior to 1st April, 1975 were continued. Out of these 52 applications, directions in respect of 32 applications were revoked during the year. Directions in respect of 20 applications were still continued.