

BETWEEN :

IMPERIAL CHEMICAL INDUS- }  
TRIES LIMITED ..... }

APPELLANT;

Toronto  
1966  
June 7-8  
Ottawa  
June 29

AND

THE COMMISSIONER OF PATENTS . . . . RESPONDENT.

*Patents—Substance used in “medicine”—Meaning of—Prohibition of claim for—Patent Act, s. 41(1)—General anaesthetic.*

Appellant appealed from the decision of the Commissioner of Patents refusing to issue a patent to appellant with respect to a claim for a general anaesthetic commercially known as “Halothane” on the ground that it was “intended for medicine” within the meaning of s. 41(1) of the *Patent Act*.

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*Held*, the word "medicine" in its broad meaning includes "halothane", a medical drug or agent used in medicine in the treatment of patients and an integral essential part of surgical therapy of disease, a part of the therapeutic regimen.

APPEAL from decision of Commissioner of Patents.

*Harold G. Fox, Q.C.* for appellant.

*C. R. O. Munro, Q.C.* and *B. D. Collins* for respondent.

GIBSON J.:—This is an appeal from the decision of the Commissioner of Patents refusing to issue a patent to the appellant containing certain claims numbered 9, 10 and 11 for a substance known commercially as Halothane<sup>1</sup> on the

<sup>1</sup> HALOTHANE—CHBrCl-CE<sub>3</sub> Mol. Wt. 197.4

Halothane is 2-bromo-2-chloro-1,1,1-trifluoroethane.

It contains 0.01 per cent w/w of Thymol.

Description. A colourless, mobile, heavy liquid; odour, characteristic, resembling that of chloroform; taste, sweet, burning. Non-inflammable.

Solubility. Soluble, at 20°, in 400 parts of water; miscible with *dehydrated alcohol*, with *chloroform*, with *solvent ether*, with *trichloroethylene*, and with fixed and volatile oils.

Identification. A. Ignite 0.3 ml. with molten *sodium*, cool extract with 2 ml. of water, filter, and add 0.5 ml. of *glacial acetic acid*. Add 0.1 ml. of this solution to a mixture of 0.1 ml. of a freshly prepared 0.1 per cent w/v solution of *sodium alizarinsulphonate* and 0.1 ml. of *zirconyl nitrate solution*; the red colour becomes clear yellow.

B. To 5 ml. add 5 ml. of *sulphuric acid*; the acid forms the upper layer (distinction from chloroform and from trichloroethylene).

Acidity or alkalinity. Shake 20 ml. with 20 ml. of *carbon dioxide-free water* for three minutes; the aqueous layer requires for neutralisation not more than 0.1 ml. of N/100 *sodium hydroxide* or 0.6 ml. of N/100 *hydrochloric acid*, *bromocresol purple solution* being used as indicator.

Distillation range. Distils completely between 49° and 51°, not less than 95 per cent v/v distilling within a range of 1°, page 1009.

Refractive index. At 20°, 1.3695 to 1.3705, page 1016.

Weight per ml. At 20°, 1.869 to 1.874 g., page 1017.

Chloride and bromide; Free chlorine and free bromine. Complies with the test for Chloride; Free chlorine described under Tetrachloroethylene, page 819.

Thymol. Complies with the test described under Tetrachloroethylene, page 819, using a 0.225 per cent w/v solution of *thymol* in *carbon tetrachloride*.

Non-volatile matter. Complies with the test described under Tetrachloroethylene, page 819.

Storage. Halothane should be kept in a well-closed container, protected from light, and stored in a cool place.

Action and Use General anaesthetic. (*The British Pharmacopoeia*, 1963, p. 353)

grounds that such is prohibited by s. 41(1)<sup>1</sup> of the *Patent Act*, R.S.C. 1952, c. 203.

The facts are as follows:

The application to the Commissioner of Patents of the appellant for a patent relates to a substance known commercially as Halothane and processes for its preparation.

Claim 1 of the application as filed reads:

"The new chemical compound 1:1:1-trifluoro-2-bromo-2-chloroethane".

Claims 2-6 were for processes for the manufacture of the substance.

After several objections by the Examiner and consequent amendments a Supplementary Amendment was filed on June 25, 1964, in which the following claims were asserted:

1. A process for the manufacture of 1:1:1-trifluoro-2-bromo-2-chloroethane which comprises reacting a compound selected from the group consisting of 1:1:1-trifluoro-2-chloroethane and 1:1:1-trifluoro-2-bromoethane with a halogen selected from the group consisting of bromine in the case of 1:1:1-trifluoro-2-chloroethane and chlorine in the case of 1:1:1-trifluoro-2-bromoethane.
2. A process as claimed in claim 1 wherein 1:1:1-trifluoro-2-chloroethane is reacted with bromine in the gaseous phase at a temperature in the range of 350°-600°C.
3. A process as claimed in claim 2 wherein the reaction temperature is in the range 425°-475°C.
4. A process as claimed in claim 3 wherein the molar ratio of 1:1:1-trifluoro-2-chloroethane to bromine is in the range of 1.5:1 to 2:1.
5. A process as claimed in claim 1 wherein 1:1:1-trifluoro-2-bromoethane is reacted with chlorine in the gaseous phase at a temperature in the range 300°-475°C.
6. A process as claimed in claim 5 wherein the reaction temperature is in the range 350°-400°C.
7. A process as claimed in claim 6 wherein the molar ratio of 1:1:1-trifluoro-2-bromoethane to chlorine is in the range 5:1 to 1:1.
8. A process as claimed in claim 7 wherein the molar ratio of 1:1:1-trifluoro-2-bromoethane to chlorine is in the range 3:1 to 2:1.
9. 1:1:1-trifluoro-2-bromo-2-chloroethane.
10. A respirable gaseous anaesthetic mixture comprising 1:1:1-trifluoro-2-bromo-2-chloroethane in admixture with oxygen, said oxygen being present in a proportional amount proper for respiratory purposes.

<sup>1</sup> 41(1) In the case of *inventions relating substances* prepared or produced by chemical processes and *intended* for food or *medicine*, the specification shall not include claims for the substance itself, except when prepared or produced by the methods or processes of manufacture particularly described and claimed or by their obvious chemical equivalents.

(Italics are mine).

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11. A respirable gaseous anaesthetic mixture comprising 1:1:1-trifluoro-2-bromo-2-chloroethane in admixture with oxygen and at least one other inhalation anaesthetic, said oxygen being present in a proportional amount proper for respiratory purposes.

By this amendment the appellant requested that claims 10 and 11 be left in abeyance pending the decision of this Court as to the patentability of product claim 9 in the form asserted in the said Supplementary Amendment.

By Official Letter dated December 24, 1964, claim 9 was finally rejected, the Examiner pointing out that claims 10 and 11 would be unallowable if claim 9 is unallowable.

From this Final Rejection the Appellant appealed to this Court by Notice of Motion dated January 22, 1965.

It is agreed that Halothane is a substance prepared or produced by chemical processes within the meaning of section 41(1) of the *Patent Act*, and that it may be characterized as a general inhalant, volatile anaesthetic.

The only question for decision on this appeal, therefore, is whether or not Halothane as claimed in claim 9 of the said application of the appellant is "a substance . . . intended for medicine" within the meaning of s. 41(1) of the *Patent Act*.

In *Loi sur les brevets*<sup>1</sup>, the word employed in s. 41(1) is "médication".

The word "medicine" and the word "médication" as so used are not terms of art. Instead they are words of the vernacular, of common parlance, and must therefore be interpreted in their ordinary sense.

The court was referred to definitions of the word "medicine" and the word "médication" contained in a great number of dictionaries in both the English and French languages published from 1868 to practically the present time and to certain judicial decisions defining the same, for the purpose of assisting in judicially defining the meaning in this statutory context<sup>2</sup>.

The correct judicial approach to the question for decision has been definitively stated by the Supreme Court of Canada. (See Martland J. in *Parke, Davis & Company v.*

<sup>1</sup> S R.C. 1952, c. 203.

<sup>2</sup> See Schedule "A" to these Reasons for some of the dictionaries and other definitions.

*Fine Chemicals of Canada Limited*<sup>1</sup> where he said, "I agree with Thurlow, J. that the word 'medicine', as used in s. 41 of the Act, should be interpreted broadly. . .").

One particular part of the evidence that perhaps should be mentioned is the affidavit evidence of Dr. Ridley Keneford, filed on this appeal. It established that he was an expert in anaesthetics and that he had studied 39 publications, which he listed, dealing with anaesthetics and as a result stated, "During my studies of the publications set out in paragraphs 3-42 above, I have not seen any anaesthetic agent described or referred to as a 'medicine'."

This finding of Dr. Keneford is exactly what one would expect, as will be explained in greater detail in these reasons. But putting the matter briefly now, it should be noted that experts dealing with specific medicines always refer to them specifically in terms appropriate to their specialty and do not refer to them when writing or speaking of them by the broad genus of "medicine". Laymen, however, sometimes do so.

A perusal of dictionary definitions, judicial decisions and text book authorities leads to the conclusion that there is both a restricted definition and a broad definition of "medicine" commonly and generally understood and used. The method by which this conclusion is reached may be stated briefly:

1. A "medicine" in modern parlance has come to mean, *inter alia*, a drug, a therapeutic agent, a biological agent, and a pharmaceutical specialty.
2. "Medicines" are to-day categorized under specifics such as antihistamines, anti-infectives, autonomic drugs, cardiovascular drugs, antianemia agents, hemostatics, diagnostic agents, expectorant and cough preparations, gastrointestinal drugs, hormones, local anaesthetics, oxytocics, vitamins, anaesthetics, and spasmolytic agents and so forth. In other words, generally speaking, it is seldom that anyone speaks of "medicines" anymore. And in this connection, it is interesting to note that in the Vade-mecum International of Canada in its list of "pharmaceutical specialties and biologicals" available to doctors in

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<sup>1</sup> [1959] S.C.R. 219 at 226.

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Canada, "Halothane" is listed described by Hoechst Pharmaceuticals of Canada Ltd. as an "inhalation anaesthetic".

3. All of these specifics may be referred to merely as medical drugs or medical agents, without further categorizing as in 1 above.
4. Some of these medical drugs or medical agents are used to cure or heal a patient *per se*, and are sometimes referred to as therapeutic agents (even though there are many therapeutic agents which do not cure or heal *per se*, but are used for a particular purpose in the treatment of a patient), while others are used in the course of the whole treatment of the patient. In this connection, for instance in the case of the former kind of medical drugs or medical agents, an antibiotic, say, e.g., penicillin, comes closest perhaps, but even then, it often happens that other medical drugs or agents are necessary as supportive therapy when the antibiotic appears to be specific for a particular type of infection.
5. The former kind of medical drugs or agents are "medicines" in a restricted meaning, while the latter kind are "medicines" in the broad meaning.

"Halothane" is not a medical drug or agent that cures *per se*, but instead is a medical drug or agent used in medicine in the treatment of patients and is an integral essential part of surgical therapy of disease, a part of the therapeutic regimen.

Therefore in my opinion, "Halothane" is a substance intended for "medicine" within the meaning of s. 41(1) of the *Patent Act*, and as a consequence, the appeal is dismissed with costs.

## SCHEDULE "A"

## DEFINITIONS

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## ANAESTHETIC

- A. 1. Insensible, deprived of sensibility.  
 3. Producing, or connected with the production of, insensibility.
- B. An anaesthetic agent; an agent which produces insensibility.  
*(Oxford Dictionary Vol. I, page 301)*

## FUNDAMENTALS OF INHALATION ANESTHESIA

## Theoretic Considerations.

With the exception of trichloroethylene, which is partially changed in the body, inhalation anesthetics are absorbed, transported, and excreted without change in chemical constitution. Thus anesthetic gases and vapors are inert or nonreactive substances. They are almost entirely recoverable from the lungs save for small quantities lost by diffusion through the skin and surgical wound, or through solution in the urine. (*Introduction to Anesthesia, The Principles of Safe Practice, Second Edition, 1961*)

## Anesthetic—

General—An agent which produces general anesthesia either by injection or by inhalation. (*Blakiston's Illustrated Pocket Medical Dictionary, Second Edition*)

## Anaesthetic

2. Any drug or chemical used to produce anaesthesia. (*The British Medical Dictionary*)

## Anesthesiology by John Adriani, M.D.

To be surgically useful, an anesthetic drug or method of producing anesthesia must fulfill two purposes: it must abolish reflex activity and other responses to stimuli and it must provide muscle relaxation. A third requirement, loss of consciousness, is desirable but not always necessary.

## General Anesthetics

The general anesthetics are volatile substances which are administered by inhalation, or nonvolatile drugs which are administered by routes other than inhalation. The volatile drugs differ in pharmacologic characteristics from the nonvolatile. The members in each group are similar pharmacologically and are used for the same purposes.

The volatile drugs are complete anesthetics. They cause a blockade along the path from the periphery to the pain perception centers. The loss of sensibility is accompanied by a loss of consciousness. Loss of muscle tone of varying degrees is obtained, depending upon the potency of the drug. Volatile anesthetics are inert; that is, they are not altered by the cells. They are eliminated unchanged by exhalation. They are gases, or highly volatile liquids, which boil below 60°C. With the exception of nitrous

oxide, currently used drugs are hydrocarbons, ethers, halogenated hydrocarbons or halogenated ethers. Three gases, nitrous oxide, ethylene and cyclopropane, and a variety of liquids, among which are ether, vinyl ether, fluorene, chloroform, ethyl chloride, halothane, methoxyflurane and trichlorethylene, are used.

Anesthetics are protoplasmic poisons with three notable characteristics: they have a special predilection for nervous tissue, they ultimately affect all protoplasm as concentrations are increased and their action is reversible within limits. Once the drug is removed, the physiologic state of the cell reverts to normal. (*Christopher's Text-book of Surgery*, Eighth Edition, 1964)

Anesthetic, anaesthetic—A drug which causes the loss of sensation general—A. which affect consciousness, hence deaden the sensations of the whole organism; such as, ether, chloroform, nitrous oxide, etc. (*Hackh's Chemical Dictionary*, Third Edition).

Halothane (CF<sub>2</sub>-CHClBr) (Fluothane)

It seems very probable that halothane leaves the body by the same route as it enters it, namely the lungs, but the exact mode of excretion, and the possibility of any metabolic breakdown, have not been reported. (*A Practice of Anaesthesia* by W. D. Wylie, M.A., M.B. (Cantab.), M.R.C.P., F.F.A.R.C.S. and H. C. Churchill-Davidson, M.A., M.D. (Cantab.), F.F.A.R.C.S., 1961)

Anaesthetic, Anesthetic—

1. Having no perception or sense of touch. 2. A medicine having the power of rendering the recipient insensible to pain. An anaesthetic is *general* or *local* according as it produces general or local anaesthesia. (*Lippincott's Medical Dictionary*, 1897).

Anaesthetic— . . .

B. As *substantive* (Pl): A class of medicines which, when inhaled in the form of vapour, destroy consciousness for a time, and with it the sense of pain. Garrod makes anaesthetics the third order of his sub-class, defined as medicines acting especially upon the brain proper, but probably also upon other portions of the central nervous system. Among the uses to which they are put are the alleviation of pain and spasm, the production of unconsciousness during surgical operations or parturition, and the procuring of sleep in delirium. The best known are chloroform, ether, and nitrous oxide. . . . (*The Encyclopaedic Dictionary*, Vol. 1 Special Edition, 1903)

Order 3—Anaesthetics.

Substances which when inhaled in the form of vapour possess the property of destroying consciousness, and at the same time causing insensibility to pain: they are therefore soporifics and anodynes, but their effect is more immediate and much less persistent than that of ordinary narcotics.

Chloroform.

Bichloride of methylene.

Ether.

Protoxide of nitrogen (nitrous oxide).

Tetrachloride of carbon

### *Effects of Anesthetics.*

These have been sufficiently detailed under the respective heads of the above anaesthetic agents

### *Therapeutic applications of Anaesthetics.*

1 To alleviate pain and spasm.

2 To produce unconsciousness and insensibility to pain during surgical operations and parturition

3. To procure sleep and diminish violence in delirium tremens and some other forms of cerebral disturbance.

4. To cause relaxation of the muscular system, in order to facilitate the reduction of dislocations and of hernia.

. . .



(*The Essentials of Materia Medica and Therapeutics* by Sir Alfred Baring Garrod, M.D., F.R.S., Third Edition, 1868)

Anaesthetics—Medical agents employed for the production of insensibility, especially during surgical operations . . . (*Winston's Cumulative Loose-Leaf Encyclopedia*, 1920)

Anaesthetic—A. 1. Insensible, deprived of sensibility . . . 2. Unfeeling, unemotional . . . 3. Producing, or connected with the production of, insensibility. B. An anaesthetic agent; an agent which produces insensibility. (*The Oxford English Dictionary*, 1933)

Anesthetic—...

3. A drug that produces local or general anesthesia . . . general—a drug that produces general anesthesia. (*Stedman's Medical Dictionary*, Twentieth Edition, 1961)

Anesthetic—1. Pertaining to or characterized by anesthesia. 2. Producing anesthesia. 3. A drug that causes insensibility. (*The Putnam Medical Dictionary*, 1961)

Anesthetic—1. Pertaining to, characterized by, or producing anesthesia. 2. A drug or agent that is used to abolish the sensation of pain. general—an agent which produces general anesthesia. (*Dorland's Illustrated Medical Dictionary*, 24th Edition, 1965)

## DRUG

*Food and Drugs Act*, R.S.C. 1952, Ch. 123 Section 2(j)

"Medicine" means any substance or mixtures of substances that may be used in restoring, correcting or modifying organic functions.

This statute was repealed in 1953 by 1 & 2 Elizabeth II Ch. 38. In that statute the word "medicine" was not defined but the word "drug" was defined in section 2(f) as follows:

(f) "drug" includes any substance or mixture manufactured, sold or represented for use in

- (i) the diagnosis, treatment, mitigation or prevention of a disease, disorder, abnormal physical state, or the symptoms thereof, in man or animal,
- (ii) restoring, correcting or modifying organic functions in man or animal, or
- (iii) disinfection in premises in which food is manufactured, prepared or kept, or for the control of vermin in such premises;

Drug—1 Any chemical substance, synthetic or extracted from plant or animal tissue and of known or unknown composition, which is used as a medicament to prevent or cure disease. (*The British Medical Dictionary*)

Drug—(1) A substance used as medicine. It is assumed that drugs contain a pharmacophore and anchoring group (q.v.). (2) A material derived from vegetable or animal sources. crude—The commercial form of a drug which requires refining before use. inorganic—Inorganic salts, acids, or bases used as medicines; e.g., sodium bicarbonate, mercury salts. official—D. listed in Pharmacopoeias. (*Hackh's Chemical Dictionary*, Third Edition)

Drug—Any substance used in the composition of medicine; a substance used to stupefy or poison or for self-indulgence; (*Chambers' Twentieth Century Dictionary*, 1952)

Drug—1. Any substance used as a medicine in the treatment of disease.

2. To give medicine, usually with the sense of giving medicine in unnecessarily large quantities. 3. To narcotize. (*Stedman's Medical Dictionary*, Twentieth Edition, 1961)

Drug—A substance use as a medicine, or in the compounding of a medicine. crude d, an unrefined drug containing all its ingredients. (*The Putnam Medical Dictionary*, 1961)

## MEDICINE

Medicine—1 Art of restoring and preserving health, especially by means of remedial substances and regulation of diet etc. as opp. to surgery and obstetrics; substance, esp one taken internally. (*The Concise Oxford Dictionary* 4th Ed. 1950, reprinted 1954.)

“Medicine” is that department of knowledge and practice which is concerned with the cure, alleviation and prevention of disease in human beings and with the restoration and preservation of health. Also, in a more restricted sense, applied to that branch of this department which is the province of the physician in the modern application of the term; the art of restoring and preserving health of human beings by the administration of remedial substances and the regulation of diets, habits and conditions of life. (*In re Ontario Medical Act* (1906), 13 O.L.R. 501 (C.A.))

“Medicine”—1. That department of knowledge and practice which is concerned with the cure, alleviation, and prevention of disease in human beings, and with the restoration and preservation of health. Also, in a more restricted sense, applied to that branch of this department which is the province of the physician, in the modern application of the term; the art of restoring and preserving the health of human beings by the administration of remedial substances and the regulation of diet, habits, and conditions of life; distinguished from Surgery and Obstetrics. (*Oxford English Dictionary*, 1933, Vol. VI, p. 295 )

“Medicine”—1. The science and art concerned with the cure, alleviation and prevention of disease, and with the restoration and preservation of health. Also, less widely, that branch which is the province of the physician; the art of restoring and preserving health by means of remedial substances and the regulation of diet, habits, etc., dist. from *surgery* and *obstetrics*.

2. A medicament, especially one taken internally; also medicaments generally, “physic” ME (*Shorter Oxford Dictionary*, 1933 reprinted 1939)

“Medicine”—1. Any substance used for treating disease.

2. The science of treating disease; the healing art. In a restricted sense, that branch of the healing art dealing with internal disease, which can be treated by a physician. (*New Gould Medical Dictionary* 1951; *Blakiston's New Gould Medical Dictionary*, Second Edition, 1956)

“Medicine”—1. A drug. 2. The art of preventing or curing disease; the science which treats of disease in all its relations. 3. The study and treatment of general diseases or those affecting the internal parts of the body, distinguished from surgery. (*Stedman's Medical Dictionary* 1942)

“Medicine”: any substance used in the treatment of disease; the science of healing and prevention of disease, esp. by remedies other than surgical treatment. (*Collins New English Dictionary*, 1956)

“Medicament” (1) A substance used in curative treatment. (*Oxford English Dictionary*, 1933, Vol. VI, p. 293)

A medical witness stated that by “medicine” is meant anything which will influence the functions of the body. The definition of “medicine” in Webster's Dictionary is: “any substance administered in the treatment of disease; a remedial agent; a remedy” and the definition of “disease” is: “an alteration in the state of the body or of some of its organs interrupting or disturbing the performance of the vital functions and causing or threatening pain or weakness” The two definitions seem to coincide if disease is the failure of some function to operate normally and medicine is something which is intended to restore the normal working of the affected function. (*Naurne v. Stephen Smith & Co. Ltd et al*, (1943) 1 K.B. 17 at 21 per *Atkinson, J.*)

The word "medicine" . . . in English is equivalent to the word "physic". (*Royal College of Physicians of London v. General Medical Council* (1893) 68 L.T. 496 at 499, per Smith L.J.)

The word "medicine" is comprehensive enough to include everything which is to be applied for the purpose of healing, whether externally or internally. (*Berry v. Henderson* (1870) 5 Q.B. 296 at 304 per Lush J.)

This was a case under the Pharmacy Act, 1868 which related to the labelling of a "medicine" supplied by an apothecary to his patient.

2. any substance or preparation used in the treatment of disease; medicament; also medicaments generally, "physic". Now commonly restricted to medicaments taken internally. (*Oxford Dictionary* Vol. VI, p. 295.)

The latter term "medicine" includes remedies used externally upon the body as well as internally. (*M's Application* (1922) 39 R.P.C. 261 at 262 per Sir Edward Pollock, S.G.)

Medicine—1 Any substance used for treating disease.

Anatomic—That system which deals with the anatomic changes in diseased organs and their connection with symptoms manifested during life. (*Blakiston's Illustrated Pocket Medical Dictionary*, Second Edition)

Medicine—1. The art of preserving and restoring health, esp. the non-surgical branch of this 2. Drugs, potions, used in medicine, any such drug. (*The Pocket Oxford Dictionary*, 1942)

Medicine—1. The science and art of the treatment of disease and maintenance of health. In particular, the branch concerned with the non-surgical aspects of treatment of disease. 2. Any drug or other substance given or taken for the above purpose . . . (*The British Medical Dictionary*)

Medicine—(1) The science and art of healing. (2) A drug or substance administered to the body to correct a disturbance of its normal function clinical . . . (*Hackh's Chemical Dictionary*, Third Edition)

Medicine—1. The art and science of healing or curing disease by the administration of drugs. 2 A medicinal substance or preparation. (*Lippincott's Medical Dictionary*, 1897)

Medicine—

I. Ordinary Language:

1. Literally:

(1) Physic, a remedy, a remedial agent, an antidote to disease; any substance prescribed for the alleviation or removal of disease.

Medicines are administered, as a rule, by the mouth, but sometimes also by the rectum, by inhalation into the lungs, by hypodermic injection into the cellular tissue, or in some rare cases by injection into the veins. Garrod makes three divisions of medicines: (1) Internal remedies, administered for their effects upon the system, both before and after absorption into the blood; (2) external remedies, which act locally, and are not intended to affect the constitution; (3) chemical agents used for other than their medicinal properties. . . .

(2) A science and art directed first to the prevention of diseases, and secondly to their cure; the practice of medicine as distinguished from that of surgery or midwifery, but not entirely separable from either, involving also a sound knowledge of anatomy, physiology, pathology, chemistry, and allied subjects.

. . .

II. Technically:

1. Science: In the same senses as I (1) & (2). (*The Encyclopaedic Dictionary*, Vol. I Special Edition, 1903)

## CLASSIFICATION OF MEDICINES.

Medicines have been very differently classified, at different times, by authors on *Materia Medica* and *Therapeutics*; some adopting a chemical and natural historical division, as is the case with the previous part of the present volume; others a physiological and therapeutic classification. For the purpose of rendering a complete account of the action and use of each medicine, the former method is, doubtless, the more convenient and instructive, as all the facts pertaining to the action of individual drugs are thereby brought before the mind and easily retained; but when a knowledge of the value of remedies is required for practical purposes, to effect a desired object in the treatment of disease, then a classification based upon some physiological grounds will be found to be the more feasible.

In the following classification, the author has been guided by a desire to make it one of practical utility rather than of scientific interest; and he feels assured that in the present imperfect state of our knowledge of the action of medicines upon the animal economy, he shall best effect this by referring his arrangement to the organs and structures of the body which are influenced by the drugs rather than to the character of the action thereby exercised.

It has been the object of the author to retain such grouping of medicines as experience has long confirmed and ratified, and to avoid such subtleties of division as serve only to perplex the mind and lead to no useful results.

Class II.—Medicines whose principal effects are seen upon the nervous system.

Subclass 1. Medicines acting especially on the brain proper, but probably also upon other portions of the central nervous system.	Order 1. Exhilarants. 2. Narcotics, sporifics, and anodynes. 3. Anaesthetics.
Subclass 2. Medicines acting especially upon the spinal cord.	Order 1. Spinal stimulants. 2. Spinal sedatives.
Subclass 3. Medicines acting upon some portions of the central nervous centres, and on the ganglionic system.	Order 1. Antispasmodics. 2. Nervine tonics and antiperiodics
Class III.—Medicines acting chiefly on the heart and circulating system; probably often through the sympathetic system of nerves.	Order 1. Vascular stimulants. 2. Vascular sedatives. 3. Vascular tonics.

Therapeutic applications of Alteratives.

Class II.—Medicines whose principal effects are upon the nervous system.

(*The Essentials of Materia Medica and Therapeutics* by Sir Alfred Baring Garrod, M.D., F.R.S., 1868)

Medicine—2. Any substance or preparation used in the treatment of disease; a medicament; also, medicaments generally, 'physic'. Now commonly restricted to medicaments taken internally. (*A New English Dictionary on Historical Principles*, Vol. VI, 1908)

Medicine—2. Any substance or preparation used in the treatment of disease; a medicament; also, medicaments generally, 'physic'. Now commonly restricted to medicaments taken internally. (*The Oxford English Dictionary*, Vol. I, 1933)

Medicine—Any substance used (esp. internally) for the treatment or prevention of disease: a drug: . . . (*Chambers' Twentieth Century Dictionary*, 1952)

Medicine—1. Any substance or preparation used in treating disease. 3. A drug or the like used for a purpose not curative, as a love potion, a poison, the alchemists' elixir, etc. (*Webster's New International Dictionary of the English Language*, Second Edition, 1952)

Medicine—1. The science of the treatment of disease, more especially that branch of it which deals with non-surgical diseases of internal organs. 2. Any substance given for the prevention or treatment of disease. (*The Faber Medical Dictionary*, July 1953)

Medicine—1. The science and art concerned with the cure, alleviation, and prevention of disease, and with the restoration and preservation of health. Also, *less widely*, that branch which is the province of the physician; the art of restoring and preserving health by means of remedial substances and the regulation of diet, habits, etc.; dist. from *surgery* and *obstetrics*. 2. A medicament, esp. one taken internally; also, medicaments generally, 'physic'. (*The Shorter Oxford English Dictionary on Historical Principles*, Third Edition, 1959)

Medicine—1. The science and art of diagnosing, treating, curing, and preventing disease, relieving pain, and improving and preserving health. 2. The branch of this science and art that makes use of drugs, diet, etc., as distinguished especially from surgery and obstetrics. 3.a) Any drug or other substance used in treating disease, healing, or relieving pain. (*Webster's New World Dictionary, College Edition*, 1960)

Medicine—1. A drug. 2. The art of preventing or curing disease; the science that treats of disease in all its relations. 3. The study and treatment of general diseases or those affecting the internal parts of the body, distinguished from surgery. (*Stedman's Medical Dictionary, Twentieth Edition*, 1961)

Medicine—1. A drug or remedy. (*The Putnam Medical Dictionary*, 1961)

Medicine—1. Any drug or remedy. (*Dorland's Illustrated Medical Dictionary*, 24th Edition, 1965)

Médication—(du lat. *medicatio*, même signif. fait du v. *medicari*, soulager, dérivé du gr. . . . soin, traitement). Thérap. Effet produit par l'action des médicaments après leur administration. Modification des propriétés vitales. Médications externes. Médications internes.—Système, mode de traitement d'une maladie. (*Dictionnaire national ou Dictionnaire universel de la langue française, Tome second*, 1883, par M. Bescherelle)

Médication—Administration d'un ou plusieurs agents thérapeutiques, pour satisfaire à une indication déterminée, pour produire telle ou telle modification dans la structure ou les fonctions de l'organisme. Médication locale, générale. Médication tonique, astringente.

—Syn. Médication, Traitement—Le traitement a pour but définitif, plus ou moins prochain, de guérir ou de pallier une maladie. La médication a seulement pour but de provoquer un effet particulier qui n'est qu'une sorte d'intermédiaire pour arriver au but définitif. Il est rare qu'un traitement ne comporte pas l'emploi de médications, souvent fort différentes. (*Dictionnaire de la langue française, Tome troisième*, par E. Littré, 1885)

Médication—Emploi d'un ou plusieurs agents thérapeutiques pour produire une action déterminée: faire cracher, vomir, suer, etc. La médication est une partie seulement du *traitement*, qui comprend tous les moyens mis en œuvre pour guérir une maladie. (*Larousse médical illustré*, 1924)

Médication—(de *médicateur*). Thérap. Emploi systématique d'un ou plusieurs agents médicaux dont l'action synergique vise un but thérapeutique déterminé. (*Larousse du XX<sup>e</sup> siècle, Tome quatrième*, 1931)

Médication—«Emploi systématique d'...agents médicaux» (Garnier dans une intention précise. V. Thérapeutique. *Médication calmante, fébrifuge... Médicaments, remèdes employés dans une médication. Le traitement d'une maladie comporte en général plusieurs médications* (Dictionnaire alphabétique et analogique de la langue française, par Paul Robert, Tome quatrième, 1959)

Médicament— . . .

Principaux médicaments: (d'après leur action spécifique). V. Allopathique, homéopathique; curatif (cit) préventif; abluant, absorbant, abstergent (ou abstersif), adjuvant, adoucissant, altérant, analgésique, anesthésique, antibiotique. (Cf. Supplément), antiseptique, antispasmodique, antipyrétique, antithermique, aphrodisiaque, astringent, balsamique, calmant, cardiaque, carminatif, cholagogue, cicatrisant, dépuratif, diurétique, drastique, emménagogue (cit.), épithème, errhin, excitant, fébrifuge, fomentation, fortifiant, helminthique, hémostatique, hypnotique, laxatif, liniment, purgatif, rafraîchissant, réconfortant, reconstituant, relâchant, remontant, résolutif, révulsif, sédatif, sialagogue, somnifère, sternutatoire, stomachique, stomatique, stupéfiant, tonique, topique, vésicatoire, vulnéraire. (*Dictionnaire alphabétique et analogique de la langue française*, par Paul Robert, Tome quatrième, 1959)

Médication— . . .

Encycl. Comme cette définition l'indique, *médication* n'est pas synonyme de *traitement*, et souvent un traitement se compose de plusieurs médications successives... (*Nouveau Larousse illustré, Tome cinquième, Dictionnaire universel encyclopédique*)

Médicament— . . .

1. *Modificateurs de l'appareil digestif* (purgatifs, etc.); 2. *modificateurs de la nutrition* (arsénicaux, phosphoriques, antimoniaux); 3. *modificateurs du sang* (ferro-gingiaux, etc.); 4. *modificateurs du cœur et de la circulation* (digitale, caféine, massages); 5. *modificateurs de l'appareil respiratoire* (térébenthines, kermès, etc.); 6. *modificateurs du système nerveux* (anesthésiques, hypnotiques, etc.); 7. *modificateurs de la peau* (soufre, sulfureux, etc.); 8. *modificateurs de la sécrétion lactée* (sudorifiques, diurétiques, massages, etc.); 9. *modificateurs de l'appareil urinaire* (diurétiques, anurétiques); 10. *modificateurs de l'appareil génital* (omménagogues, abortifs, etc.); 11. *modificateurs sans élection* particulièrement spéciale, tels que les modificateurs des tissus (caustiques, etc.) et les modificateurs généraux (électricité, cures d'air, cures de bains de mer, etc.). Un même médicament peut d'ailleurs, suivant les cas, répondre à une, deux ou plusieurs de ces indications. (*Nouveau Larousse illustré, Tome cinquième, Dictionnaire universel encyclopédique*).

## REMEDY

Remedy—(1) A cure for a disease or other disorder of body or mind; any medicine or treatment which alleviates pain and promotes restoration to health. (*Oxford English Dictionary* Vol. VIII, p 422)

## THERAPY

Therapy—The medical treatment of disease; curative medical treatment. (*Oxford English Dictionary*, Vol. XI, p. 280)

Thérapeutique—Qui a rapport au traitement des maladies Moyens thérapeutiques. 2. La thérapeutique, partie de la médecine qui a pour objet le traitement des maladies, c'est-à-dire qui donne des préceptes sur le choix et l'administration des moyens curatifs des maladies et sur la nature des médications. Cours, manuel de thérapeutique. (*Dictionnaire de la Langue Française* par E Littré, Tome troisième, 1885)

Thérapeutique—. . .

La *thérapeutique symptomatique* cherche à faire disparaître les troubles actuels par des médicaments appropriés sans s'occuper de leur origine, quitte à s'occuper ensuite de celle-ci; la fièvre, par la quinine ou l'antipyrine; la douleur, l'insomnie, par le chloral ou la morphine; les sueurs, par le tanin ou l'atropine; la toux, par l'opium ou les balsamiques; la constipation, par un lavement ou un purgatif; la diarrhée, par du laudanum ou du bismuth. (*Larousse Médical Illustré*, 1924)

Thérapeutique—. . .

Partie de la médecine, qui s'occupe de la connaissance des agents curatifs et de leur emploi rationnel pour soulager ou guérir les malades. (*Larousse du XX<sup>e</sup> siècle, Tome quatrième*, 1931)