CHAPTER XXXVII—PATENTS, TRADEMARKS, AND COPYRIGHTS

Executive Orders

10096 Providing for a uniform patent policy for the Government with respect to invention made by Government employees and for the administration of such policy.

Executive Order 10096—Providing for a uniform patent policy for the Government with respect to inventions made by Government employees and for the administration of such policy

SOURCE: The provisions of Executive Order 10096 of Jan. 23, 1950, appear at 15 FR 389, 3 CFR, 1949-1953 Comp., p. 292, unless otherwise noted.

CROSS REFERENCE: For information concerning the functions transferred between the Commerce Department and the Government Patents Board, see EO 9865 of June 14, 1947, 12 FR 3907, 3 CFR, 1943-1948 Comp., p. 651.

WHEREAS inventive advances in scientific and technological fields frequently result from governmental activities carried on by Government employees; and

WHEREAS the Government of the United States is expending large sums of money annually for the conduct of these activities; and

WHEREAS these advances constitute a vast national resource; and

WHEREAS it is fitting and proper that the inventive product of functions of the Government, carried out by Government employees, should be available to the Government; and

WHEREAS the rights of Government employees in their inventions should be recognized in appropriate instances; and

WHEREAS the carrying out of the policy of this order requires appropriate administrative arrangements:

NOW, THEREFORE, by virtue of the authority vested in me by the Constitution and statutes, and as President of the United States and Commander in Chief of the armed forces of the United States, in the interest of the establishment and operation of a uniform patent policy for the Government with respect to inventions made by Government employees, it is hereby ordered as follows:

1. The following basic policy is established for all Government agencies with respect to inventions hereafter made by any Government employee:

(a) The Government shall obtain the entire right, title and interest in and to all inventions made by any Government employee (1) during working hours, or (2) with a contribution by the Government of facilities, equipment, materials, funds, or information, or of time or services of other Government employees on official duty, or (3) which bear a direct relation to or are made in consequence of the official duties of the inventor.

(b) In any case where the contribution of the Government, as measured by any one or more of the criteria set forth in paragraph (a) last above, to the invention is insufficient equitably to justify a requirement of assignment to the Government of the entire right, title and interest to such invention, or in any case where the Government has insufficient interest in an invention to obtain entire right, title and interest therein (although the Government could obtain some under paragraph (a), above), the Government agency concerned, subject to the approval of the Chairman of the Government Patents Board (provided for in paragraph 3 of this order and hereinafter referred to as the Chairman), shall leave title to such invention in the employee, subject, however, to the reservation to the Government of a non-exclusive, irrevocable, royalty-free license in the invention with power to grant licenses for all governmental purposes, such reservation, in the terms thereof, to appear, where practicable, in any patent, domestic or foreign, which may issue on such invention.

(c) In applying the provisions of paragraphs (a) and (b), above, to the facts and circumstances relating to the making of any particular invention, it shall be presumed that an invention made by an employee who is employed or assigned (i) to invent or improve or perfect any art, machine, manufacture, or composition of matter, (ii) to conduct or perform research, development work, or both, (iii) to supervise, direct, coordinate, or review Government financed or conducted research, development work, or both, or (iv) to act in a liaison capacity among governmental or nongovernmental agencies or individuals engaged in such work, or made by an employee included within any other category of employees specified by regulations issued pursuant to section 4(b) hereof, falls within the provisions of paragraph (a), above, and it shall be presumed that any invention made by any other employee falls within the provisions of paragraph (b), above. Either presumption may be rebutted by the facts or circumstances attendant upon the conditions under which any particular invention is made and, notwithstanding the foregoing, shall not preclude a determination that the invention falls within the provisions of paragraph (d) next below.

(d) In any case wherein the Government neither (1) pursuant to the provisions of paragraph (a) above, obtains entire right, title and interest in and to an invention nor (2) pursuant to the provisions of paragraph (b) above, reserves a non-exclusive, irrevocable, royalty-free license in the invention with power to grant licenses for all governmental purposes, the Government shall leave the entire right, title and interest in and to the invention in the Government employee, subject to law.

(e) Actions taken, and rights acquired, under the foregoing provisions of this section, shall be reported to the Chairman in accordance with procedures established by him.

2. Subject to considerations of national security, or public health, safety, or welfare, the following basic policy is established for the collection, and dissemination to the public, of information concerning inventions resulting from Government research and development activities:

(a) When an invention is made under circumstances defined in paragraph 1(a) of this order giving the United States the right to title thereto, the Government agency concerned shall either prepare and file an application for patent therefor in the United States Patent Office or make a full disclosure of the invention promptly to the Chairman, who may, if he determines the Government interest so requires, cause application for patent to be filed or cause the invention to be fully disclosed by publication thereof: *Provided, however*, That, consistent with present practice of the Department of Agriculture, no application for patent shall, without the approval of the Secretary of Agriculture, be filed in respect of any variety of plant invented by any employee of that Department.

(b) [Revoked]

[Sec. 2(b) revoked by EO 10695 of Jan. 16, 1957, 22 FR 365, 3 CFR, 1954-1958 Comp., p. 355]

3. (a) [Revoked]

(b) The Government Patents Board shall advise and confer with the Chairman concerning the operation of those aspects of the Government's patent policy which are affected by the provisions of this order or of Executive Order No. 9865, and suggest modifications or improvements where necessary.

(c) [Revoked]

(d) The Chairman shall establish such committees and other working groups as may be required to advise or assist him in the performance of any of his functions.

(e) The Chairman of the Government Patents Board and the Chairman of the Interdepartmental Committee on Scientific Research and Development (provided for by Executive Order No. 9912 of December 24, 1947) shall establish and maintain such mutual consultation as will effect the proper coordination of affairs of common concern.

[Sec. 3(a) and (c) revoked by EO 10930 of Mar. 24, 1961, 26 FR 2583, 3 CFR, 1959-1963 Comp., p. 456]

4. With a view to obtaining uniform application of the policies set out in this order and uniform operations thereunder, the Chairman is authorized and directed:

(a) To consult and advise with Government agencies concerning the application and operation of the policies outlined herein;

(b) After consultation with the Government Patents Board, to formulate and submit to the President for approval such proposed rules and regulations as may be necessary or desirable to implement and effectuate the aforesaid policies, together with the recommendations of the Government Patents Board thereon;

(c) To submit annually a report to the President concerning the operation of such policies, and from time to time such recommendations for modification thereof as may be deemed desirable;

(d) To determine with finality any controversies or disputes between any Government agency and its employees, to the extent submitted by any party to the dispute, concerning the ownership of inventions made by such employees or rights therein; and

(e) To perform such other or further functions or duties as may from time to time be prescribed by the President or by statute.

5. The functions and duties of the Secretary of Commerce and the Department of Commerce under the provisions of Executive Order No. 9865 of June 14, 1947 are hereby transferred to the Chairman and the whole or any part of such functions and duties may be delegated by him to any Government agency or officer: *Provided*, That said Executive Order No. 9865 shall not be deemed to be amended or affected by any provision of this Executive order other than this paragraph 5.

6. Each Government agency shall take all steps appropriate to effectuate this order, including the promulgation of necessary regulations which shall not be inconsistent with this order or with regulations issued pursuant to paragraph 4 (b) hereof.

7. As used in this Executive order, the next stated terms, in singular and plural, are defined as follows for the purposes hereof:

(a) "Government agency" includes any executive department and any independent commission, board, office, agency, authority, or other establishment of the Executive Branch of the Government of the United States (including any such independent regulatory commission or board, any such wholly-owned corporation, and the Smithsonian Institution), but excludes the Atomic Energy Commission.

(b) "Government employee" includes any officer or employee, civilian or military, of any Government agency, except such part-time consultants or employees as may be excluded by regulations promulgated pursuant to paragraph 4(b) hereof.

(c) "Invention" includes any art, machine, manufacture, design or composition of matter, or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the patent laws of the United States.

EDITORIAL NOTE: Executive Order 10096 is further amended by Executive Order 10930 of Mar. 24, 1961, 26 FR 2583, 3 CFR, 1959-1963 Comp., p. 456. The provisions of Executive Order 10930 are set forth below:

SECTION 1. The Government Patents Board, established by section 3(a) of Executive Order No. 10096 of January 23, 1950, and all positions established thereunder or pursuant thereto are hereby abolished.

SEC. 2. All functions of the Government Patents Board and of the Chairman thereof under the said Executive Order No. 10096, except the functions of conference and consultation between the Board and the Chairman, are hereby transferred to the Secretary of Commerce, who may provide for the performance of such transferred functions by such officer, employee, or agency of the Department of Commerce as he may designate.

SEC. 3. The Secretary of Commerce shall make such provision as may be necessary and consonant with law for the disposition or transfer of property, personnel, records, and funds of the Government Patents Board.

SEC. 4. Except to the extent that they may be inconsistent with this order, all determinations, regulations, rules, rulings, orders, and other actions made or issued by the Government Patents Board, or by any Government agency with respect to

any function transferred by this order, shall continue in full force and effect until amended, modified, or revoked by appropriate authority.

SEC. 5. Subsections (a) and (c) of section 3 of Executive Order No. 10096 are hereby revoked, and all other provisions of that order are hereby amended to the extent that they are inconsistent with the provisions of this order.

Public Law 95-224
95th Congress

An Act

To distinguish Federal grant and cooperative agreement relationships from Federal procurement relationships, and for other purposes.

Feb. 3, 1978
[H.R. 7691]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act be cited as the "Federal Grant and Cooperative Agreement Act of 1977".

Federal Grant and Cooperative Agreement Act of 1977.
41 USC 501 note.

FINDINGS AND PURPOSE

41 USC 501.

SEC. 2. (a) The Congress finds that—

(1) there is a need to distinguish Federal assistance relationships from Federal procurement relationships and thereby to standardize usage and clarify the meaning of the legal instruments which reflect such relationships;

(2) uncertainty as to the meaning of such terms as "contract", "grant", and "cooperative agreement" and the relationships they reflect causes operational inconsistencies, confusion, inefficiency, and waste for recipients of awards as well as for executive agencies; and

(3) the Commission on Government Procurement has documented these findings and concluded that a reduction of the existing inconsistencies, confusion, inefficiency, and waste is feasible and necessary through legislative action.

(b) The purposes of this Act are—

(1) to characterize the relationship between the Federal Government and contractors, State and local governments, and other recipients in the acquisition of property and services and in the furnishing of assistance by the Federal Government so as to promote a better understanding of Federal spending and help eliminate unnecessary administrative requirements on recipients of Federal awards;

(2) to establish Government-wide criteria for selection of appropriate legal instruments to achieve uniformity in the use by the executive agencies of such instruments, a clear definition of the relationships they reflect, and a better understanding of the responsibilities of the parties;

(3) to promote increased discipline in the selection and use of types of contract, grant agreement, and cooperative agreements and to maximize competition in the award of contracts and encourage competition, where deemed appropriate, in the award of grants and cooperative agreements; and

(4) to require a study of the relationship between the Federal Government and grantees and other recipients in Federal assistance programs and the feasibility of developing a comprehensive system of guideline for the use of grant and cooperative agreements, and other forms of Federal assistance in carrying out such programs.

29-139 O - 78 (2)

DEFINITIONS

USC 502. SEC. 3. As used in this Act, the term—

(1) "State government" means any of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, any territory or possession of the United States, any agency or instrumentality of a State, and any multi-State, regional, or interstate entity which has governmental functions;

(2) "local government" means any unit of government within a State, a county, municipality, city, town, township, local public authority, special district, intrastate district, council of governments, sponsor group representative organization, other interstate government entity, or any other instrumentality of a local government;

(3) "other recipient" means any person or recipient other than a State or local government who is authorized to receive Federal assistance or procurement contracts and includes any charitable or educational institution;

(4) "executive agency" means any executive department as defined in section 101 of title 5, United States Code, a military department as defined in section 102 of title 5, United States Code, an independent establishment as defined in section 104 of title 5, United States Code (except that it shall not include the General Accounting Office), a wholly owned Government corporation; and

(5) "grant or cooperative agreement" does not include any agreement under which only direct Federal cash assistance to individuals, a subsidy, a loan, a loan guarantee, or insurance is provided.

USE OF CONTRACTS

1 USC 503. SEC. 4. Each executive agency shall use a type of procurement contract as the legal instrument reflecting a relationship between the Federal Government and a State or local government or other recipient—

(1) whenever the principal purpose of the instrument is the acquisition, by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; or

(2) whenever an executive agency determines in a specific instance that the use of a type of procurement contract is appropriate.

USE OF GRANT AGREEMENTS

1 USC 504. SEC. 5. Each executive agency shall use a type of grant agreement as the legal instrument reflecting a relationship between the Federal Government and a State or local government or other recipient whenever—

Transfers. (1) the principal purpose of the relationship is the transfer of money, property, services, or anything of value to the State or local government or other recipient in order to accomplish a public purpose of support or stimulation authorized by Federal statute, rather than acquisition, by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; and

(2) no substantial involvement is anticipated between the executive agency, acting for the Federal Government, and the State or local government or other recipient during performance of the contemplated activity.

USE OF COOPERATIVE AGREEMENTS

SEC. 6. Each executive agency shall use a type of cooperative agreement as the legal instrument reflecting a relationship between the Federal Government and a State or local government or other recipient whenever— 41 USC 505.

(1) the principal purpose of the relationship is the transfer of money, property, services, or anything of value to the State or local government or other recipient to accomplish a public purpose of support or stimulation authorized by Federal statute, rather than acquisition, by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; and Transfers.

(2) substantial involvement is anticipated between the executive agency, acting for the Federal Government, and the State or local government or other recipient during performance of the contemplated activity.

AUTHORIZATIONS

SEC. 7. (a) Notwithstanding any other provision of law, each executive agency authorized by law to enter into contracts, grant or cooperative agreements, or similar arrangements is authorized and directed to enter into and use types of contracts, grant agreements, or cooperative agreements as required by this Act. Contracts, grant or cooperative agreements. 41 USC 506.

(b) The authority to make contracts, grants, and cooperative agreements for the conduct of basic or applied scientific research at nonprofit institutions of higher education, or at nonprofit organizations whose primary purpose is the conduct of scientific research shall include discretionary authority, when it is deemed by the head of the executive agency to be in furtherance of the objectives of the agency, to vest in such institutions or organizations, without further obligation to the Government, or on such other terms and conditions as deemed appropriate, title to equipment or other tangible personal property purchased with such funds. Scientific research.

STUDY OF FEDERAL ASSISTANCE PROGRAMS

SEC. 8. The Director of the Office of Management and Budget, in cooperation with the executive agencies, shall undertake a study to develop a better understanding of alternative means of implementing Federal assistance programs, and to determine the feasibility of developing a comprehensive system of guidance for Federal assistance programs. Such study shall include a thorough consideration of the findings and recommendations of the Commission on Government Procurement relating to the feasibility of developing such a system. The Director shall consult with and to the extent practicable, involve representatives of the executive agencies, the Congress, the General Accounting Office, and State and local governments, other recipients and other interested members of the public. The result of the study shall be reported to the Committee on Government Operations of the House of Representatives and the Committee on Governmental Affairs of the Senate at the earliest practicable date, but in no event later than two years after the date of enactment of this Act. The report on the study shall include (1) detailed descriptions of the alternative means of implementing Federal assistance programs and of the circumstances in which the use of each appears to be most desirable, (2) detailed 41 USC 507. Contents. Consultation. Report to congressional committees.

descriptions of the basic characteristics and an outline of such comprehensive system of guidance for Federal assistance programs, the development of which may be determined feasible, and (3) recommendations concerning arrangements to proceed with the full development of such comprehensive system of guidance and for such administrative or statutory changes, including changes in the provisions of sections 3 through 7 of this Act, as may be deemed appropriate on the basis of the findings of the study.

GUIDELINES

USC 508.

SEC. 9. The Director of the Office of Management and Budget is authorized to issue supplementary interpretative guidelines to promote consistent and efficient use of contract, grants agreement, and cooperative agreements as defined in this Act.

REPEALS AND SAVINGS PROVISIONS

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SEC. 10. (a) The Act entitled "An Act to authorize the expenditure of funds through grants for support of scientific research, and for other purposes", approved September 6, 1958 (72 Stat. 1793; 42 U.S.C. 1891 and 1892), is repealed, effective one year after the date of enactment of this Act.

USC 501 note.

(b) Nothing in this Act shall be construed to render void or voidable any existing contract, grant, cooperative agreement, or other contract, grant, or cooperative agreement entered into up to one year after the date of enactment of this Act.

USC 509.

(c) Nothing in this Act shall require the establishment of a single relationship between the Federal Government and a State or local government or other recipient on a jointly funded project, involving funds from more than one program or appropriation where different relationships would otherwise be appropriate for different components of the project.

pted actions. SC 501 note. ration date.

(d) The Director of the Office of Management and Budget may except individual transactions or programs of any executive agency from the application of the provisions of this Act. This authority shall expire one year after receipt by the Congress of the study provided for in section 8 of this Act.

Approved February 3, 1978.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 95-481 (Comm. on Government Operations).
SENATE REPORT No. 95-449 accompanying S. 431 (Comm. on Governmental Affairs).
CONGRESSIONAL RECORD:
Vol. 123 (1977): Sept. 27, considered and passed House.
Oct. 1, considered and passed Senate, amended, in lieu of S. 431.
Vol. 124 (1978): Jan. 19, House agreed to Senate amendment.

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TITLE:

Managing Attorney
Browdy and Neimark

EDUCATION:

B.S.C.E., 1953 from the University of Illinois (U. of I.)
J.D., 1956 from the U. of I.
L.L.D., Honorary Doctor of Laws, 1985 from the U. of I.

Post graduate courses in electronics, advanced chemistry, biochemistry, and medicinal chemistry.

Judge Advocate General's Procurement Law School, University of Virginia, 1961.

MAJOR PROFESSIONAL ACCOMPLISHMENTS:

- o 1969 to 1975-Developed and implemented the Institutional Patent Agreement Policy and Regulations for Department of Health, Education and Welfare (DHEW). These served as precursor of P.L. 96-517 and the basis for decentralized university technology management programs.
- o Aided universities and other DHEW contractors in the delivery of over 75 health-related inventions to the marketplace and the licensing of many other inventions.
- o 1963 to 1978-Managed the DHEW patent portfolio and technology licensing program.
- o Architect of P.L. 96-517, the University and Small Business Patent Act of 1980, which built on DHEW experience and established a national policy of small business and university ownership of technology resulting from federal research.
- o 1980 to 1982-Developed the implementing regulations for P.L. 96-517 (OMB Circular A-124).
- o 1982-Assisted the Senate Small Business Committee in the conception of P.L. 97-207, the Small Business Innovation Development Act of 1982.

- o Developed the President's Patent Policy Memorandum of 1983 which expanded contractor ownership policies to those not covered by P.L. 96-517.
- o 1984-Architect of P.L. 98-620, which extends and improves the concept of P.L. 96-517.
- o 1984 to 1987-Developed the implementing regulations for P.L. 98-620 (37 C.F.R. 401).
- o 1982 to 1987-Designed and assisted in creating the "Office of Federal Technology Management" in the Department of Commerce.
- o Architect of P.L. 99-502, the Federal Laboratory Technology Transfer Act of 1986, which extends the concepts of decentralized technology management of P.L. 96-517 to inventions made at Federally managed laboratories.
- o 1987-Assisted in development of Executive Order 12591 "Facilitating Access to Science and Technology."

EXPERIENCE:

BROWDY AND NEIMARK, 1990 to Present

Managing Attorney

Responsible for the management of **BROWDY AND NEIMARK**, a 35 person law firm specializing since 1952 in intellectual property law including patents, trademarks, trade secrets, copyrights, unfair competition, and related licensing and litigation.

BROWDY AND NEIMARK is particularly noted for its involvement with the life sciences, including molecular biology, microbiology, immunology, pharmacology, and biomedical engineering. In addition to managing the firm, also pursues the prosecution of patent applications and license agreements for the firm.

MAXWELL COMMUNICATIONS CORPORATION, 1987 to 1989

Vice President, Legal and Technology Affairs, University Sciences and Engineering Technology (USET)

Responsible for identification of acquisition candidates for new Maxwell technology management corporation (USET) and design and development of an on-line technology database for commercial sale.

DEPARTMENT OF COMMERCE, 1982 to 1988

Director, Office of Federal Technology Management, Office of Productivity, Technology and Innovation

Responsible for the identification of problems that would affect the licensing and utilization of technology resulting from Federally-funded research. Government-wide administrative, legislative or regulatory positions developed and implemented.

SMALL BUSINESS ADMINISTRATION, 1980 to 1982

Assistant Chief Counsel for Patents and Research and Development

Responsible for the resolution of intellectual property, and research and development problems that affect small business through administrative, legislative or regulatory recommendations. (On loan to Office of Federal Procurement Policy, OMB to develop OMB Circular A-124.)

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, 1966 to 1980

Department Patent Counsel, Office of General Counsel

Responsible for administration of the Department's technology licensing and patent program including legal and administrative services relating to patents, inventions, copyrights and licensing of intellectual property resulting from the Department's multi-billion dollar research program.

NATIONAL INSTITUTES OF HEALTH, 1963 to 1965

Patent Counsel, Office of the Director

AIR FORCE SYSTEMS COMMAND, 1961 to 1963

Patent Advisor, Office of Judge Advocate General

ARMY ORDNANCE, 1960 to 1961

Patent Advisor, Office of the Judge Advocate General

U.S. PATENT OFFICE, 1956 to 1959

Patent Examiner

INTERAGENCY EXECUTIVE AND LEGISLATIVE COMMITTEE AND COMMISSION SERVICE:

Chairman of Department of Commerce Interagency Committee to Implement the Federal Technology Transfer Act of 1986.

Chairman of the Subcommittee on University Patent Policy of the Federal Council for Science, Engineering and Technology, 1971 to 1978.

Vice-Chairman of the Subcommittee on Intellectual Property of the Federal Council for Science, Engineering and Technology, 1974 to 1978.

Technical Advisor on Intellectual Property and Research and Development to Subcommittee on the Constitution of Senate Judiciary, 1976 to 1980.

House Committee on Science and Technology's Workshop on Aid to the Handicapped, 1980 (recommendations resulted in Orphan Drug Act).

DHEW Interagency Committee on Significant Drugs with Little Commercial Value, 1978 (Recommendations lead to Orphan Drug Act).

Subcommittee on Trade Secret and Data Confidentiality, Council on Environmental Quality, 1978.

Draftsman for the Patent Task Force for the Commission on Government Procurement, 1971.

Draftsman of the Disclosure of Research Information for the Report of the President's Biomedical Research Panel, 1976.

Interagency Drafting Committee for Development of the Federal Property Management Regulations on Licensing of Government-Owned Inventions, 1980 to 1982.

Interagency Drafting Committee for Development of the Patent Rights Clause for the Non-Nuclear Energy Research and Development Act of 1974.

Interagency Drafting Committee for Development of Standard Patent Rights Clauses for use in the Federal Procurement Regulations, 1971 to 1986.

PROFESSIONAL SOCIETIES:

American Bar Association
Federal Bar Association
American Intellectual Property Law Association
Licensing Executive Society
Association of University Technology Managers (AUTM)
Maryland Patent Law Association

BAR MEMBERSHIP:

Illinois, District of Columbia, U.S. Patent Office and United States Supreme Court

SPECIAL AWARDS:

Presidential Citation

For development of patent section of the Nonnuclear Energy Research and Development Act, 1974.

Small Business Administration

Outstanding Performance Citation, 1980

Department of Commerce

Secretarial Citation for development of President Reagan's February 18, 1983 memorandum on Government Patent Policy

Outstanding Performance Citations, 1984, 1985, 1986 and 1987

1983 Department Silver Medal for "contribution leading to new products, industries and jobs through the commercialization of Federally funded technologies."

1987 Department Bronze Medal for "passage of the Federal Technology Transfer Act of 1986."

University of Illinois

Chi Epsilon, National Civil Engineering Society for high Scholastic Achievement

Honorary Doctor of Laws, 1985 for "commitment and dedication to improving the national environment for research (which has) led to a national technology alliance involving the Federal government, universities, and private industry." (Copy Attached)

Society of University Patent Administrators (now AUTM)

1983, "The Birch Award" for "unselfish commitment to establish and preserve the values of the technology transfer process."

OTHER:

Guest Lecturer, 1980 to 1987, George Washington University Procurement Law - "Technology Transfer and Government Intellectual Property Policy"

PERSONAL:

Married to Carole H. Latker, Ph.D., Health Scientist Administrator, National Institutes of Health

Two Children:
Miriam E. Sell, M.D.
Richard E. Latker, Student

PUBLICATIONS, PRESENTATIONS, AND TESTIMONY:

"Washington in Review", Presentation to Society of University Patent Administrators, February, 1988.

"Commercializing the Results of Federal Research and Development", Testimony before the Senate Judiciary Committee, February, 1987.

"Public Law 98-620 Regulations", Presentation to Society of University Patent Administrators, June, 1986.

"Transfer of Technology Resulting from Government Funded Research", Presentation to Licensing Executive Society, May, 1986.

"Small Business Innovation Research Program", Testimony before U.S. House of Representatives Committee on Small Business, May, 1986.

"Federal Initiatives for Innovation," Presentation to American Intellectual Property Law Association, May, 1984.

"Technology Management", Presentation to Aerospace Industries Association of America, April, 1983.

"Current Status of Legislation Affecting the Licensing of Technology", Presentation to Licensing Executive Society, October, 1980.

"The Philosophy of Different Policies on Disposing of Government Funded Inventions", Presentation to Government Patent Lawyers Association, April, 1979.

"The Ramifications of the Small Business and University Patent Procedures Act", Presentation to the 2nd Annual TechEx World Fair, March, 1979.

"The Impact of Laws and Regulations on the Innovation Process", Presentation to Society of University Patent Administrators, February, 1977.

"University Policies for Consulting Overload Instructional Activities and Intellectual Property", Presentation to Second Annual Academic Planning Conference, January, 1976.

"Current Government Patent Policy as Applicable to Universities and Nonprofit Organization", Presentation to American Patent Law Association, January, 1976.

"The Protection of Intellectual Property Under the Fourth Exemption of the Freedom of Information Act", Presentation to Academy of Pharmaceutical Sciences, November, 1975.

"Current Trends in Government Patent Policy", Presentation to New Jersey Patent Bar Association, September, 1975.

"Current Trends in Technology Transfer", Presentation to Third Annual University/Industry Forum Technology Exchange, February, 1975.

"Universities Opportunities and Responsibilities", Presentation to Conference on Technology Transfer, Case Western University, October, 1974.

"The Availability of New Technology to Industry from American Universities and Technological Institutes", Presentation to National Congress, April, 1973.

"Science Policy Implications of DNA Recombinant Molecule Research", Testimony before U.S. House of Representatives Committee on Science and Technology, May, 1977.

"Government Patent Policy", Testimony before U.S. House of Representatives Committee on Science and Technology, September, 1976.

"Utilization of Government-Owned Health and Welfare Inventions", Journal of the Patent Office Society, November, 1965.

Citation of

UNIVERSITY OF ILLINOIS, MAY 19, 1985

NORMAN J. LATKER

for the

HONORARY DEGREE OF DOCTOR OF LAWS

Norman J. Latker, Director of the Office of Federal Technology Management Policy, U.S. Department of Commerce. Government administrator and public servant, your commitment and dedication to improving the national environment for research has led to a national technology alliance involving the federal government, universities, and private industry. You have worked tirelessly in various capacities as a respected public servant to institute change and improvement in U.S. patent laws. You prudently recognized the need for a better system of administration to enhance transfer of important inventions and research from universities to the private sector for commercial development. Your efforts for significant change in national policy for the betterment of the nation have earned you the widespread respect of your colleagues in the legal and academic communities. The University of Illinois is glad to join research institutions throughout the world which have recognized you as a leader in patent law and technology transfer. On recommendation of the Senate of the Urbana-Champaign campus, I present you to the President of the University for the honorary degree of Doctor of Laws.

Presentation by: Peter H. Hay, Dean of the College of Law, University of Illinois at Urbana-Champaign

and this was recognized by plaintiff's expert, the patentee was not entitled to claim all structures which exercised the desired function, but only those which he himself invented, and a device which produces the same result through translation of force operates in a substantially different manner than one in which force is directly applied. This is not infringement, Westinghouse v. Boyden Power Brake Co., 170 U. S. 537, 568, especially where the patent is not a generic one and the patentee is entitled to but a narrow range of equivalents. See Directoplate Corp. v. Donaldson Lith. Co., 51 Fed. (2d) 199 (C. C. A. 6). There are two tests of equivalency (1) identity of function, and (2) substantial identity of way of performing that function. Walker on Patents, 6th Ed. 511. Primary as well as secondary patents are infringed by no substitutions that do not fully respond to these tests. Even if identity of function were present, the patent not being a primary one, the requirement of substantial identity of way should not be considered so elastic as [illegible] important difference in manner of operation.

There is no infringement, and the decree below is affirmed.

Supreme Court of the United States

UNITED STATES OF AMERICA v. DUBILIER CONDENSER CORPORATION

Nos. 316, 317, 318 Decided Apr. 10, 1933

Patents—Patents—

Patent is not, accurately speaking, a monopoly, for it is not created by executive authority at expense of and to prejudice of all community except grantee of patent; inventor deprives public of nothing which it enjoyed before his discovery but gives something of value to community by adding to sum of human knowledge; he may keep invention secret and reap its fruits indefinitely; in consideration of its disclosure and consequent benefit to community, patent is granted.

Patents—Specification—Sufficiency of disclosure—

Law requires such disclosure to be made in application for patent that others skilled in art may understand invention and how to put it to use.

Patents—Title—Employer and employee—

Patent is property and title can pass only by assignment; if not yet issued, agreement to assign when issued, if valid as contract, will be specifically enforced; respective rights and obligations of employer and employee, touching invention conceived by latter, spring from contract of employment; one employed to make invention who succeeds during term of service in accomplishing that task is bound to assign to employer patent obtained; on other hand if employment be general, albeit it covers field of labor and effort in performance of which employee conceived the invention for what he obtained patent, contract is not so broadly construed as to require assignment of patent.

Patents—Patentability—Invention—

Invention consists neither in finding out laws of nature nor in fruitful research as to operation of natural laws but in discovering how those laws may be utilized or applied for beneficial purpose by a process, a device or a machine; it is result of inventive act, birth of an idea, and its reduction to practice; product of original thought; concept demonstrated to be true by practical application or embodiment in tangible form; embodiment is not the invention and is not subject of a patent.

Patents—Title—Employer and employee—

Employment merely to design or construct or devise methods of manufacture is not same as employment to invent; shop right is that, where servant during hours of employment working with master's materials and appliances conceives and perfects invention for which he obtains patent, he must accord master non-exclusive right to practice invention; but employer has no equity to demand conveyance of invention; this remains property of him who conceived it together with right conferred by patent to exclude all others than employer from accruing benefits.

Patents—Title—

Title of the patentee is subject to no superior right of Government; grant is not, as in England, a matter of grace or favor so that conditions may be annexed at

pleasure of executive; laws passed by Congress alone may be looked to for guidance as to extent of limitations of respective rights of inventor and public; Constitution evinces no public policy which requires holder of patent to cede use or benefit of invention to United States.

Patents—Applicants—
No servant of United States has by statute been disqualified for applying for and receiving patent for his invention save officers and employees of Patent Office during period for which they hold their appointments.

Patents—Title—Government employees—
Supreme Court has applied rules enforced as between private employers and servants to relation between Government and its officers and employees; United States is entitled, in same way and to same extent as private employer, to shop rights, that is, free and non-exclusive use of patent which results from efforts of those employed in their working hours and with material belonging to Government; statutes, decisions and administrative practice negate existence of duty binding one in service of Government different from obligation of one in private employment; United States like any other employer, if it desires assignment of employee's rights, must prove contractual obligation on part of employee to assign patents to Government; employees of Bureau of Standards who did not agree to exercise inventive faculties in their work and who made invention not within its scope need not assign patents to Government; written evidence of employment does not mention research, much less invention; never was word said to employees prior to discoveries concerning invention or patents or duties or obligations respecting these matters; other employees of Bureau of Standards and other departments had, while so employed, received numerous patents and enjoyed exclusive rights against all private persons without let or hindrance from Government;* no act of Congress authorizes United States to take patent or to hold one by assignment; no statutory authority exists for transfer of patents to any department or officer of Government or for administration of patents or issuance of licenses on behalf of the United States; inventors do not hold patents in trust for Government.

Patents—Title—Government employee—
Act of 1883 and as amended in 1928 provides patent without fee for Government employee who in course of employ conceives invention; he should afford Government free use thereof but should be protected in right to exclude all others; similar right accrues to Government employee paying fees for patent.

Patents—Jurisdiction of courts—
Until 1910 Court of Claims was without jurisdiction to award compensation to owner of patent for unauthorized use by United States or its agents; power extended only to trial of claims based upon express or implied contracts for such use; in 1910 Congress enlarged jurisdiction to embrace former class of claims, but imposing restriction that it should not extend to owners of patents obtained by employees of Government while in service.

Patents—Title—Government employees—
Congress has refrained from imposing upon Government servants contract obligation to assign to Government patent for invention discovered or developed during period of Government service and incidental to line of official duties, and court will not assume such contract obligations.

Patents—Radio Receiving Apparatus title transfer refused—
1455141, Lowell & Dunmore, Radio Receiving Apparatus, title transfer refused.
1606212, Dunmore & Lowell, Power Amplifier, title transfer refused.
1635117, Dunmore, Signal Receiving System, title transfer refused.

On writs of certiorari to the United States Circuit Court of Appeals for the Third Circuit.

THOMAS D. THACHER, Solicitor General (CHARLES B. RUGG, Assistant Attorney General, ALEXANDER HOLTZOFF, PAUL D. MILLER and H. BRIAN HOLLAND with him on the brief) for petitioner; JAMES H. HUGHES, JR. (E. ENNALLS BERL, JOHN B. BRADY and WARD & GRAY with him on the brief) for respondent.

Mr. Justice ROBERTS delivered the opinion of the Court.—Three suits were

*The remaining portion of the syllabus was based upon a paragraph deleted from the opinion by order of the court. (See Note, p. 161.)

brought in the District Court for Delaware against the respondent as exclusive licensee under three separate patents issued to Francis W. Dunmore and Percival D. Lowell. The bills recite that the inventions were made while the patentees were employed in the radio laboratories of the Bureau of Standards, and are therefore, in equity, the property of the United States. The prayers are for a declaration that the respondent is a trustee for the Government, and, as such, required to assign to the United States all its right, title and interest in the patents, for an accounting of all moneys received as licensee, and for general relief. The District Court consolidated the cases for trial, and after a hearing dismissed the bills.[1] The Court of Appeals for the Third Circuit affirmed the decree.[2]

The courts below concurred in findings which are not challenged and, in summary, are:

The Bureau of Standards is a subdivision of the Department of Commerce.[3] Its functions consist in the custody of standards; the comparison of standards used in scientific investigations, engineering, manufacturing, commerce, and educational institutions with those adopted or recognized by the Government; the construction of standards, their multiple or subdivisions; the testing and calibration of standard measuring apparatus; the solution of problems which arise in connection with standards; and the physical properties of materials. In 1915 the Bureau was also charged by Congress with the duty of investigation and standardization of methods and instruments employed in radio communication, for which special appropriations were made.[4] In recent years it has been engaged in research and testing work of various kinds for the benefit of private industries, other departments of the Government, and the general public.[5]

The Bureau is composed of divisions, each charged with a specified field of activity, one of which is the electrical division. These are further subdivided into sections. One section of the electrical division is the radio section. In 1921 and 1922 the employees in the laboratory of this section numbered approximately twenty men doing technical work and some draftsmen and mechanics. The twenty were engaged in testing radio apparatus and methods and in radio research work. They were subdivided into ten groups, each group having a chief. The work of each group was defined in outlines by the chief or alternate chief of the section.

Dunmore and Lowell were employed in the radio section and engaged in research and testing in the laboratory. In the outlines of laboratory work the subject of "airplane radio" was assigned to the group of which Dunmore was chief and Lowell a member. The subject of "radio receiving sets" was assigned to a group of which J. L. Preston was chief, but to which neither Lowell nor Dunmore belonged.

In May, 1921, the Air Corps of the Army and the Bureau of Standards entered into an arrangement whereby the latter undertook the prosecution of forty-four research projects for the benefit of the Air Corps. To pay the cost of such work, the Corps transferred and allocated to the Bureau the sum of $267,500. Projects Nos. 37 to 42, inclusive, relating to the use of radio in connection with aircraft, were assigned to the radio section and $25,000 was allocated to pay the cost of the work. Project No. 38 was styled "visual indicator for radio signals," and suggested the construction of a modification of what was known as an "Eckhart recorder." Project No. 42 was styled "airship bomb control and marine torpedo control." Both were problems of design merely.

In the summer of 1921 Dunmore, as chief of the group to which "airplane radio" problems had been assigned, without further instructions from his superiors, picked out for himself one of these navy problems, that of operating a relay for remote control of bombs on airships and topedoes in the sea, "as one of particular interest and having perhaps a rather easy solution, and worked on it." In September he solved it,

In the midst of aircraft investigations and numerous routine problems of the section, Dunmore was wrestling in his own mind, impelled thereto solely by his own scientific curiosity, with the subject of substituing house-lighting alternating current for direct battery current in radio apparatus. He obtained a relay for operating a telegraph instrument which was in no way related to the remote control relay devised for aircraft use. The conception of the application of alternating current concerned partic-

[1] 49 F. (2d) 806 [9 U. S. Pat. Q. 181].

[2] 59 F. (2d) 881 [18 U. S. Pat. Q. 887].

[3] See Act of March 3, 1901, 31 Stat. 1449; Act of February 14, 1903, Sec. 4, 32 Stat. 826.

[4] Act of March 4, 1915, 38 Stat. 1044; Act of May 29, 1920, 41 Stat. 684; Act of March 3, 1921, 41 Stat. 1308.

[5] The fees charged cover merely the cost of the service rendered, as provided in the Act of June 30, 1932, Sec. 312, 47 Stat. 410.

ularly broadcast reception. This idea was conceived by Dunmore August 3, 1921, and he reduced the invention to practice December 16, 1921. Early in 1922 he advised his superior of his invention and spent additional time in perfecting the details. February 27, 1922, he filed an application for a patent.

In the fall of 1921 both Dunmore and Lowell were considering the problem of applying alternating current to broadcast receiving sets. This project was not involved in or suggested by the problems with which the radio section was then dealing and was not assigned by any superior as a task to be solved by either of these employees. It was independent of their work and voluntarily assumed.

While performing their regular tasks they experimented at the laboratory in devising apparatus for operating a radio receiving set by alternating current with the hum incident thereto eliminated. The invention was completed on December 10, 1921. Before its completion no instructions were received from and no conversations relative to the invention were held by these employees with the head of the radio section, or with any superior.

They also conceived the idea of energizing a dynamic type of loud speaker from an alternating current house-lighting circuit and reduced the invention to practice on January 25, 1922. March 21, 1922, they filed an application for a "power amplifier." The conception embodied in this patent was devised by the patentees without suggestion, instruction, or assignment from any superior.

Dunmore and Lowell were permitted by their chief, after the discoveries had been brought to his attention, to pursue their work in the laboratory and to perfect the devices embodying their inventions. No one advised them prior to the filing of applications for patents that they would be expected to assign the patents to the United States or to grant the Government exclusive rights thereunder.

The respondent concedes that the United States may practice the inventions without payment of royalty, but asserts that all others are excluded, during the life of the patents, from using them without the respondent's consent. The petitioner insists that the circumstances require a declaration either that the Government has sole and exclusive property in the inventions or that they have been dedicated to the public so that anyone may use them.

First. By Article I, Section 8, clause 8 of the Constitution, Congress is given power to promote the progress of science and the useful arts by securing for limited times to inventors the exclusive rights to their respective discoveries. R. S. 4886 as amended (U. S. Code, Title 35, § 31) is the last of a series of statutes which since 1793 have implemented the constitutional provision.

Though often so characterized a patent is not, accurately speaking, a monopoly, for it is not created by the executive authority at the expense and to the prejudice of all the community except the grantee of the patent. Seymour v. Osborne, 11 Wall. 516, 533. The term monopoly connotes the giving of an exclusive privilege for buying, selling, working or using a thing which the public freely enjoyed prior to the grant.[6] Thus a monopoly takes something from the people. An inventor deprives the public of nothing which it enjoyed before his discovery, but gives something of value to the community by adding to the sum of human knowledge. United States v. Bell Telephone Co., 167 U. S. 224, 239; Paper Bag Patent Case, 210 U. S. 405, 424; Brooks v. Jenkins, 3 McLean 432, 437; Parker v. Haworth, 4 McLean 370, 372; Allen v. Hunter, 6 McLean 303, 305-306; Attorney General v. Rumford Chemical Works, 2 Bann. & Ard. 298, 302. He may keep his invention secret and reap its fruits indefinitely. In consideration of its disclosure and the consequent benefit to the community, the patent is granted. An exclusive enjoyment is guaranteed him for seventeen years, but upon the expiration of that period, the knowledge of the invention enures to the people, who are thus enabled without restriction to practice it and profit by its use. Kendall v. Winsor, 21 How. 322, 327; United States v. Bell Telephone Co., *supra*, p. 239. To this end the law requires such disclosure to be made in the application for patent that others skilled in the art may understand the invention and how to put it to use.[7]

A patent is property and title to it can pass only by assignment. If not yet issued an agreement to assign when issued, if valid as a contract, will be specifically enforced. The respective rights and obligations of employer and employee, touching an invention conceived by the latter, spring from the contract of employment.

[6] Webster's New International Dictionary: "Monopoly."

[7] U. S. Code, Tit. 35, § 33.

One employed to make an invention, who succeeds, during his term of service, in accomplishing that task, is bound to assign to his employer any patent obtained. The reason is that he has only produced that which he was employed to invent. His invention is the precise subject of the contract of employment. A term of the agreement necessarily is that what he is paid to produce belongs to his paymaster. Standard Parts Company v. Peck, 264 U. S. 52. On the other hand, if the employment be general, albeit it covers a field of labor and effort in the performance of which the employee conceived the invention for which he obtained a patent, the contract is not so broadly construed as to require an assignment of the patent. Hapgood v. Hewitt, 119 U. S. 226; Dalzell v. Dueber Watch Case Mfg. Co., 149 U. S. 315. In the latter case it was said:

"But a manufacturing corporation, which has employed a skilled workman, for a stated compensation, to take charge of its works, and to devote his time and services to devising and making improvements in articles there manufactured, is not entitled to a conveyance of patents obtained for inventions made by him while so employed, in the absence of express agreement to that effect."

The reluctance of courts to imply or infer an agreement by the employee to assign his patent is due to a recognition of the peculiar nature of the act of invention, which consists neither in finding out the laws of nature, nor in fruitful research as to the operation of natural laws, but in discovering how those laws may be utilized or applied for some beneficial purpose, by a process, a device or a machine. It is the result of an inventive act, the birth of an idea and its reduction to practice; the product of original thought; a concept demonstrated to be true by practical application or embodiment in tangible form. Clark Tread Co. v. Willimantic Linen Co., 140 U. S. 481, 489; Symington Co. v. National Castings Co., 250 U. S. 383, 386; Pyrene Mfg. Co. v. Boyce, 292 Fed. 480, 481.

Though the mental concept is embodied or realized in a mechanism or a physical or chemical aggregate, the embodiment is not the invention and is not the subject of a patent. This distinction between the idea and its application in practice is the basis of the rule that employment merely to design or to construct or to devise methods of manufacture is not the same as employment to invent. Recognition of the nature of the act of invention also defines the limits of the so-called shop right, which shortly stated, is that where a servant, during his hours of employment, working with his master's materials and appliances, conceives and perfects an invention for which he obtains a patent, he must accord his master a non-exclusive right to practice the invention. McClurg v. Kingsland, 1 How. 202; Solomons v. United States, 137 U. S. 342; Lane & Bodley Co. v. Locke, 150 U. S. 193. This is an application of equitable principles. Since the servant uses his master's time, facilities and materials to attain a concrete result, the latter is in equity entitled to use that which embodies his own property and to duplicate it as often as he may find occasion to employ similar appliances in his business. But the employer in such a case has no equity to demand a conveyance of the invention, which is the original conception of the employee alone, in which the employer had no part. This remains the property of him who conceived it, together with the right conferred by the patent, to exclude all others than the employer from the accruing benefits. These principles are settled as respects private employment.

Second. Does the character of the service call for different rules as to the relative rights of the United States and its employees?

The title of a patentee is subject to no superior right of the Government. The grant of letters patent is not, as in England, a matter of grace or favor, so that conditions may be annexed at the pleasure of the executive. To the laws passed by the Congress, and to them alone, may we look for guidance as to the extent and the limitations of the respective rights of the inventor and the public. Attorney General v. Rumford Chemical Works, *supra*, at pp. 303-4. And this court has held that the Constitution evinces no public policy which requires the holder of a patent to cede the use or benefit of the invention to the United States, even though the discovery concerns matters which can properly be used only by the Government; as, for example, munitions of war. James v. Campbell, 104 U. S. 356, 358. Hollister v. Benedict Mfg. Co., 113 U. S. 59, 67.

No servant of the United States has by statute been disqualified from applying for and receiving a patent for his invention, save officers and employees of the Patent Office during the period for which they hold their appointments.[8]

[8] R. S. 480; U. S. Code, Tit. 35, § 4.

This being so, this court has applied the rules enforced as between private employers and their servants to the relation between the Government and its officers and employees.

United States v. Burns, 12 Wall. 246, was a suit in the Court of Claims by an army officer as assignee of a patent obtained by another such officer for a military tent, to recover royalty under a contract made by the Secretary of War for the use of the tents. The court said, in affirming a judgment for the plaintiff:

"If an officer in the military service, not specially employed to make experiments with a view to suggest improvements, devises a new and valuable improvement in arms, tents, or any other kind of war material, he is entitled to the benefit of it, and to letters-patent for the improvement from the United States, equally with any other citizen not engaged in such service; and the government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making compensation to him."

In United States v. Palmer, 128 U. S. 262, Palmer, a lieutenant in the army, patented certain improvements in infantry accoutrements. An army board recommended their use and the Secretary of War confirmed the recommendation. The United States manufactured and purchased a large number of the articles. Palmer brought suit in the Court of Claims for a sum alleged to be a fair and reasonable royalty. From a judgment for the plaintiff the United States appealed. This court, in affirming, said:

"It was at one time somewhat doubted whether the government might not be entitled to the use and benefit of every patented invention, by analogy to the English law which reserves this right to the crown. But that notion no longer exists. It was ignored in the case of Burns."

These principles were recognized in later cases involving the relative rights of the Government and its employees in instances where the subject-matter of the patent was useful to the public generally. While these did not involve a claim to an assignment of the patent, the court reiterated the views earlier announced.

In Solomons v. United States, 137 U. S. 342, 346, it was said:

"The government has no more power to appropriate a man's property invested in a patent than it has to take his property invested in real estate; nor does the mere fact that an inventor is at the time of his invention in the employ of the government transfer to it any title to, or interest in it. An employe, performing all the duties assigned to him in his department of service, may exercise his inventive faculties in any direction he chooses, with the assurance that whatever invention he may thus conceive and perfect is his individual property. There is no difference between the government and any other employer in this respect."

And in Gill v. United States, 160 U. S. 426, 435:

"There is no doubt whatever of the proposition laid down in Solomons case, that the mere fact that a person is in the employ of the government does not preclude him from making improvements in the machines with which he is connected, and obtaining patents therefor, as his individual property, and that in such case the government would have no more right to seize upon and appropriate such property, than any other proprietor would have. * * *"

The distinction between an employment to make an invention and a general employment in the course of which the servant conceives an invention has been recognized by the executive department of the Government. A lieutenant in the navy patented an anchor while he was on duty in the Bureau of Equipment and Recruiting, which was charged with the duty of furnishing anchors for the navy; he was not while attached to the bureau specially employed to make experiments with a view to suggesting improvements to anchors or assigned the duty of making or improving. The Attorney General advised that as the invention did not relate to a matter as to which the lieutenant was specially directed to experiment with a view to suggesting improvements he was entitled to compensation from the Government for the use of his invention in addition to his salary or pay as a navy officer.[9]

A similar ruling was made with respect to an ensign who obtained a patent for improvements in "B. L. R. ordnance" and who offered to sell the improvements, or the right to use them, to the Government. It was held that the navy might properly make a contract with him to this end.[10]

[9] 19 Opinions Attorney-General, 407.

[10] 20 Opinions Attorney-General, 329. And compare Report Judge Advocate General of the Navy, 1901, p. 6; Digest, Opinions Judge Advocate General of the Army, 1912-1930, p. 287; Opinions, Judge Advocate General of the Army, 1918, Vol. 2, pp. 529, 988, 1066.

The United States is entitled, in the same way and to the same extent as a private employer, to shop-rights, that is, the free and non-exclusive use of a patent which results from efforts of its employee in his working hours and with material belonging to the Government. Solomons v. United States, *supra*, pp. 346-7; McAleer v. United States, 150 U. S. 424; Gill v. United States, *supra*.

The statutes, decisions and administrative practice negate the existence of a duty binding one in the service of the Government different from the obligation of one in private employment.

Third. When the United States filed its bills it recognized the law as heretofore declared; realized that it must like any other employer, if it desired an assignment of the respondent's rights, prove a contractual obligation on the part of Lowell and Dunmore to assign the patents to the Government. The averments clearly disclose this. The bill in No. 316 is typical. After reciting that the employees were laboratory apprentice and associate physicist and laboratory assistant and associate physicist respectively and that one of their duties was "to carry on investigation research and experimentation in such problems relating to radio and wireless as might be assigned to them by their superiors," it is charged "in the course of his employment as aforesaid, there was assigned to said Lowell by his superiors in said radio section, for investigation and research, the problem of developing a radio receiving set capable of operation by alternating current. * * *"

Thus the Government understood that respondent could be deprived of rights under the patents only by proof that Dunmore and Lowell were employed to devise the inventions. The findings of the courts below show how far the proofs fell short of sustaining these averments.

The Government is consequently driven to the contention that though the employees were not specifically assigned the task of making the inventions (as in Standard Parts Co. v. Peck, *supra*) still, as the discoveries were "within the general field of their research and inventive work" the United States is entitled to an assignment of the patents. The courts below expressly found that Dunmore and Lowell did not agree to exercise their inventive faculties in their work and that invention was not within its scope. In this connection it is to be remembered that the written evidence of their employment does not mention research, much less invention; that never was there a word said to either of them, prior to their discoveries, concerning invention or patents or their duties or obligations respecting these matters; that as shown by the records of the patent office, employees of the Bureau of Standards and other departments had while so employed received numerous patents and enjoyed the exclusive rights obtained as against all private persons without let or hindrance from the Government.[11]

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[11] No exhaustive examination of the official records has been attempted. It is sufficient, however, for present purposes, to call attention to the following instances.

Dr. Frederick A. Kolster was employed in the radio section, Bureau of Standards, from December, 1912, until about March 1, 1921. He applied for the following patents: No. 1,609,866, for radio apparatus, application dated November 26, 1920. No. 1,447,165, for radio method and apparatus, application dated January 30, 1919. No. 1,811,654, for radio method and apparatus, application dated March 25, 1916. No. 1,894,560, for apparatus for transmitting radiant energy, application dated November 24, 1916. The Patent Office records show assignments of these patents to Federal Telegraph Company, San Francisco, Cal., of which Dr. Kolster is now president. He testified that these are all subject to a non-exclusive license in the United States to use and practice the same.

Burten McCollum was an employee of the Bureau of Standards between 1911 and 1924. On the dates mentioned he filed the following applications for patents, which were issued to him. No. 1,035,378, alternating current induction motor, March 11, 1912. No. 1,156,864, induction motor, February 25, 1915. No. 1,226,091, alternating current induction motor, August 2, 1915. No. 1,724,495, method and apparatus for determining the slope of subsurface rock boundaries, October 24, 1923. No. 1,724,720, method and apparatus for studying subsurface contours, October 12, 1923. The last two inventions were assigned to McCollum Geological Explorations, Inc., a Delaware corporation.

Herbert B. Brooks, while an employee of the Bureau between 1912 and 1930, filed November 1, 1919, an application on which patent No. 1,357,197, for an electric transformer, was issued.

William W. Coblentz, an employee of the Bureau of Standards from 1918, and still such at the date of the trial, on the dates mentioned, filed applications on which patents issued as follows: No. 1,418,862, for electrical resistance, September 22, 1920. No. 1,458,165, system of electrical control, September 22, 1920. No. 1,450,061, optical method for producing pulsating electric current, August 6, 1920. No. 1,563,557, optical means for rectifying alternating currents, September 18, 1923. The Patent Office records show that all of these stand in the name of Coblentz, but are subject to a license to the United States of America.

August Hund, who was an employee of the Bureau from 1922 to 1927, on the dates mentioned filed applications on which letters patent issued, No. 1,649,828, method of preparing Piezo-electric plates, September 30, 1925. No. 1,688,713, Piezo-electric-crystal oscillator system, May 10, 1927. No. 1,688,714, Piezo-electric-crystal apparatus, May 12, 1927. No. 1,648,689, condenser transmitter, April 10, 1926. All of these patents are shown of record to have been assigned to Wired Radio Inc., a corporation.

Paul R. Heyl and Lyman J. Briggs, while employees of the Bureau, filed an application January 11, 1922, for patent No. 1,660,751, on inductor compass, and assigned the same to the

In no proper sense may it be said that the contract of employment contemplated invention; everything that Dunmore and Lowell knew negatived the theory that they were employed to invent; they knew, on the contrary, that the past and then present practice was that the employees of the Bureau were alowed to take patents on their inventions and have the benenfits thereby conferred save as to use by the United States. The circumstances preclude the implication of any agreement to assign their inventions or patents.

*Moreover no court could, however clear the proof of such a contract, order the execution of an assignment. No Act of Congress has been called to our attention authorizing the United States to take a patent or to hold one by assignment. No statutory authority exists for the transfer of a patent to any department or officer of the Government, or for the administration of patents, or the issuance of licenses on behalf of the United States. In these circumstances no public policy requires us to deprive the inventor of his exclusive rights as respects the general public and to lodge them in a dead hand incapable of turning the patent to account for the benefit of the public.

The record affords even less basis for inferring a contract on the part of the inventors to refrain from patenting their discoveries than for finding an agreement to assign them.

The bills aver that the inventions and patents are held in trust for the United States, and that the court should so declare. It is claimed that as the work of the Bureau, including all that Dunmore and Lowell did, was in the public interest, these public servants had dedicated the offspring of their brains to the public, and so held their patents in trust for the common weal, represented here in a corporate capacity by the United States. The patentees, we are told, should surrender the patents for cancellation, and the respondent must also give up its rights under the patents.

The trust cannot be express. Every fact in the case negatives the existence of one. Nor can it arise *ex maleficio*. The employees' conduct was not fraudulent in any respect. They promptly disclosed their inventions. Their superiors encouraged them to proceed in perfecting and applying the discoveries. Their note books and reports disclosed the work they were doing, and there is not a syllable to suggest their use of time or material was clandestine or improper. No word was spoken regarding any claim of title by the Government until after applications for patents were filed. And, as we have seen, no such trust has been spelled out of the relation of master and servant, even in the cases where the employee has perfected his invention by the use of his employer's time and materials. The cases recognizing the doctrine of shop rights may be said to fix a trust upon the employee in favor of his master as respects the use of the invention by the latter, but they do not affect the title to the patent and the exclusive rights conferred by it against the public.

The Government's position in reality is, and must be, that a public policy, to be declared by a court, forbids one employed by the United States, for scientific research, to obtain a patent for what he invents, though neither the Constitution nor any satute so declares.

Where shall the courts set the limit of the doctrine? For confessedly, it must be limited. The field of research is as broad as that of science itself. If the petitioner is entitled to a cancellation of the patents in this case, would it be so entitled, if the employees had done their work at home, in their own time and with their own appliances and materials? What is to be said of an invention evolved as the result of the solution of a problem in a realm apart from that to which the employee is assigned by his official superiors? We have seen that the Bureau has numerous divisions. It is entirely possible that an employee in one division may make an invention falling within the work of some other division. Indeed this case presents that exact situation, for the inventions in question had to do with radio reception, a matter assigned to a group of which Dunmore and Lowell were not members. Did the mere fact of their employment by the Bureau require these employees

Aeronautical Instrument Company of Pittsburgh, Pennsylvania.

C. W. Burrows was an employee of the Bureau of Standards between 1912 and 1919. While such employee he filed applications on the dates mentioned for patents which were issued, No. 1,322,405, October 4, 1917, method and apparatus for testing magnetizable objects by magnetic leakage; assigned to Magnetic Analysis Corporation, Long Island City, N. Y. No. 1,329,578, relay, March 13, 1918; exclusive license issued to make, use and sell for the field of railway signaling and train control, to Union Switch & Signal Company, Swissvale, Pa. No. 1,459,970, method of and apparatus for testing magnetizable objects, July 25, 1917; assigned to Magnetic Analysis Corporation, Long Island City, N. Y.

John A. Willoughby, an employee of the Bureau of Standards between 1918 and 1922, while so employed, on June 26, 1919, applied for and was granted a patent, No. 1,555,845, for a loop antenna.

*This paragraph was deleted from the opinion by order of May 8, 1933.

to cede to the public every device they might conceive?

Is the doctrine to be applied only where the employment is in a bureau devoted to scientific investigation *pro bono publico?* Unless it is to be so circumscribed the statements of this court in Burns v. United States, *supra*, Solomons v. United States, *supra*, and Gill v. United States, *supra*, must be held for naught.

Again, what are to be defined as bureaus devoted entirely to scientific research? It is common knowledge that many in the Department of Agriculture conduct researches and investigations, that divisions of the War and Navy Departments do the like, and doubtless there are many other bureaus and sections in various departments of government where employees are set the task of solving problems all of which involve more or less of science. Shall the field of the scientist be distinguished from the art of as killed mechanic? Is it conceivable that one working on a formula for a drug or an antiseptic in the Department of Agriculture stands in a different class from a machinist in an arsenal? Is the distinction to be that where the government department is, so to speak, a business department operating a business activity of the government, the employee has the same rights as one in private employment, whereas if his work be for a bureau interested more particularly in what may be termed scientific research he is upon notice that whatever he invents in the field of activity of the bureau, broadly defined, belongs to the public and is unpatentable? Illustrations of the difficulties which would attend an attempt to define the policy for which the Government contends might be multiplied indefinitely.

The courts ought not to declare any such policy; its formulation belongs solely to the Congress. Will permission to an employee to enjoy patent rights as against all others than the Government tend to the improvement of the public service by attracting a higher class of employees? Is there in fact greater benefit to the people in a dedication to the public of inventions conceived by officers of government, than in their exploitation under patents by private industry? Should certain classes of invention be treated in one way and other classes differently? These are not legal questions, which courts are competent to answer. They are practical questions, and the decision as to what will accomplish the greatest good for the inventor, the Government and the public rests with the Congress. We should not read into the patent laws limitations and conditions which the legislature has not expressed.

Fourth. Moreover, we are of opinion Congress has approved a policy at variance with the petitioner's contentions. This is demonstrated by examination of two statutes, with their legislative history, and the hearings and debates respecting proposed legislation which failed of passage.

Since 1883 there has been in force an act [12] which provides:

"The Secretary of the Interior [now the Secretary of Commerce, act of February 14, 1903, c. 552, Sec. 12, 32 Stat. 830] and the Commissioner of Patents are authorized to grant any officer of the government, except officers and employees of the Patent Office, a patent for any invention of the classes mentioned in section forty-eight hundred and eighty-six of the Revised Statutes, when such invention is used or to be used in the public service, without the payment of any fee: Provided, That the applicant in his application shall state that the invention described therein, if patented, may be used by the government or any of its officers or employees in the prosecution of work for the government, or by any other person in the United States, without the payment to him of any royalty thereon, which stipulation shall be included in the patent."

This law was evidently intended to encourage government employees to obtain patents, by relieving them of the payment of the usual fees. The condition upon which the privilege was accorded is stated as the grant of free use by the government, "its officers or employees in the prosecution of work for the government, *or by any other person in the United States.*" For some time the effect of the italicized phrase was a matter of doubt.

In 1910 the Judge Advocate General of the Army rendered an opinion to the effect that one taking a patent pursuant to the act threw his invention "open to public and private use in the United States." [13] It was later realized that this view made such a patent a contradiction in terms, for it secured no exclusive right to anyone. In 1918 the Judge Advocate General gave a well-reasoned opinion [14] holding that if the statute were construed to involve a dedication to the public, the so-called patent would at most amount to

[12] Act of March 3, 1883, c. 143, 22 Stat. 625.

[13] See Squier v. American T. & T. Co., 21 F. (2d) 747, 748.

[14] November 30, 1918; Opinions of Judge Advocate General, 1918, Vol. 2, p. 1028.

a publication or prior reference. He concluded that the intent of the act was that the free use of the invention extended only to the Government or those doing work for it. A similar construction was adopted in an opinion of the Attorney General.[15] Several federal courts referred to the statute and in *dicta* indicated disagreement with the views expressed in these later opinions.[16]

The departments of government were anxious to have the situation cleared and repeatedly requested that the act be amended. Pursuant to the recommendations of the War Department an amendment was enacted April 30, 1928.[17] The proviso was changed to read:

"Provided, That the applicant in his application shall state that the invention described therein, if patented, may be manufactured or used by or for the Government for governmental purposes without the payment to him of any royalty thereon, which stipulation shall be included in the patent."

The legislative history of the amendment clearly discloses the purpose to save to the employee his right to exclude the public.[18] In the report of the Senate Committee on Patents submitted with the amendment, the object of the bill was said to be the protection of the interests of the Government, primarily by securing patents on inventions made by officers and employees, presently useful in the interest of the national defense or those which may prove useful in the interest of national defense in the future; and secondarily, to encourage the patenting of inventions by officers and employees of the Government with the view to further protection of the Government against suits for infringement of patents. The Committee stated that the bill had the approval of the Commissioner of Patents and was introduced at the request of the Secretary of War. Appended to the report is a copy of a letter of the Secretary of War addressed to the committees of both Houses stating that the language of the legislation then existing was susceptible of two interpretations contrary to each other. The letter quoted the proviso of the section as it then stood, and continued:

"It is clear that a literal construction of this proviso would work a dedication to the public of every patent taken out under the act. If the proviso must be construed literally we would have a situation wherein all the patents taken out under the act would be nullified by the very terms of the act under which they were granted, for the reason that a patent which does not carry with it the limited monopoly referred to in the Constitution is in reality not a patent at all. The only value that a patent has is the right that it extends to the patentee to exclude all others from making, using, or selling the invention for a certain period of years. A patent that is dedicated to the public is virtually the same as a patent that has expired."

After referring to the interpretation of the Judge Advocate General and the Attorney General and mentioning that no satisfactory adjudication of the question has been afforded by the courts, the letter went on to state:

"Because of the ambiguity referred to and the unsettled condition that has arisen therefrom, it has become the policy of the War Department to advise all its personnel who desire to file applications for letters patent, to do so under the general law and pay the required patent-office fee in each case."

And added:

"If the proposed legislation is enacted into law, Government officers and employees may unhesitatingly avail themselves of the benefits of the act with full assurance that in so doing their patent is not dedicated to the public by operation of law. The War Department has been favoring legislation along the lines of the proposed bill for the past five or six years."

When the bill came up for passage in the House a colloquy occurred which clearly disclosed the purpose of the amendment.[19] The intent was that a gov-

[15] 32 Opinions Attorney General, 145.

[16] See Squier v. American Tel. & Tel. Co., 7 F. (2d) 831, 21 F. (2d) 747; Hazeltine Corporation v. Electric Service Engineering Corp., 16 F. (2d) 662; Hazeltine Corporation v. A. W. Grebe & Co., 21 F. (2d) 648; Selden Co. v. National Aniline & Chemical Co., 48 F. (2d) 270.

[17] 45 Stat. 467, 468.

[18] Report No. 871, 70th Cong., 1st Sess., House of Representatives, to accompany H. R. 6103; Report No. 765, 70th Cong., 1st Sess., Senate, to accompany H. R. 6103; Cong. Rec., House of Representatives, March 19, 1928, 70th Cong., 1st Sess., p. 5013; Cong. Rec., Senate, April 24, 1928, 70th Cong., 1st Sess., p. 7066.

[19] Cong. Rec., 70th Cong., 1st Sess., Vol. 69, Part 5, p. 5013:

"Mr. LaGuardia. Mr. Speaker, reserving the right to object, is not the proviso too broad? Suppose an employee of the Government invents some improvement which is very valuable, is he compelled to give the Government free use of it?

"Mr. Vestal [who reported the bill for the Committee and was in charge of it]. If he is employed by the Government and the invention is made while working in his capacity as an agent of the Government. If the head of the bureau certifies this invention will be used by the Government, then the Government, of course, gets it without the payment of any royalty.

"Mr. LaGuardia. The same as a factory rule?

"Mr. Vestal. Yes; but the man who takes out the patent has his commercial rights outside.

"Mr. LaGuardia. Outside of the Government?

"Mr. Vestal. Yes.

"Mr. LaGuardia. But the custom is, and with-

ernment employee who in the course of his employment conceives an invention should afford the government free use thereof, but should be protected in his right to exclude all others. If Dunmore and Lowell, who tendered the Government a non-exclusive license without royalty, and always understood that the Government might use their inventions freely, had proceeded under the act of 1883, they would have retained their rights as against all but the United States. This is clear from the executive interpretation of the act. But for greater security they pursued the very course then advised by the law officers of the Government. It would be surprising if they thus lost all rights as patentees; especially so, since Congress has now confirmed the soundness of the views held by the law officers of the Government.

Until the year 1910 the Court of Claims was without jurisdiction to award compensation to the owner of a patent for unauthorized use by the United States or its agents. Its power extended only to the trial of claims based upon an express or implied contract for such use.[20] In that year Congress enlarged the jurisdiction to embrace the former class of claims.[21] In giving consent to be sued, the restriction was imposed that it should not extend to owners of patents obtained by employees of the Government while in the service. From this it is inferred that Congress recognized no right in such patentees to exclude the public from practicing the invention. But an examination of the legislative record completely refutes the contention.

The House Committee in reporting the bill, after referring to the law as laid down in the Solomons case, said: "The United States in such a case has an implied license to use the patent without compensation, for the reason that the inventor used the time or the money or the material of the United States in perfecting his invention. The use by the United States of such a patented invention without any authority from the owner thereof is a lawful use under existing law, and we have inserted the words 'or lawful right to use the same' in order to make it plain that we do not intend to make any change in existing law in this respect, and do not intend to give the owner of such a patent any claim against the United States for its use."[22] From this it is clear that Congress had no purpose to declare a policy at variance with the decisions of this court.

The executive departments have advocated legislation regulating the taking of patents by government employees and the administration by government agencies of the patents so obtained. In 1919 and 1920 a bill sponsored by the Interior Department was introduced. It provided for the voluntary assignment or license by any government employee, to the Federal Trade Commission, of a patent applied for by him, and the licensing of manufacturers by the Commission, the license fees to be paid into the Treasury and such part of them as the President might deem equitable to be turned over to the patentee.[23] In the hearings and reports upon this measure

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out this bill, the Government has the right to the use of the improvement without payment if it is invented in Government time and in Government work.

"Mr. Vestal. That is correct; and then on top of that, may I say that a number of instances have occurred where an employee of the Government, instead of taking out a patent had some one else take out the patent and the Government has been involved in a number of suits. There is now $600,000,000 worth of such claims in the Court of Claims."

It will be noted from the last statement of the gentleman in charge of the bill that Congress was concerned with questions of policy in the adoption of the amendment. These, as stated above, are questions of business policy and business judgment—what is to the best advantage of the Government and the public. They are not questions as to which the courts ought to invade the province of the Congress.

[20] See Belknap v. Schild, 161 U. S. 10, 16; Eager v. United States, 35 C. Cls. 556.

[21] Act of June 25, 1910, 36 Stat. 851: (See Crozier v. Krupp, 224 U. S. 290.)

"That whenever an invention described in and covered by a patent of the United States shall hereafter be used by the United States without license of he owner thereof or lawful to use the same, such owner may recover reasonable compensation for such use by suit in the Court of Claims: Provided, however, That said Court of Claims shall not entertain a suit or reward compensation under the provisions of this Act where the claim for compensation is based on the use by the United States of any article heretofore owned, leased, used by, or in the possession of the United States: Provided further, That in any such suit the United States may avail itself of any and all defenses, general or special, which might be pleaded by a defendant in an action for infringement, as set forth in Title Sixty of the Revised Statutes, or otherwise: And provided further, That the benefits of this Act shall not inure to any patentee, who, when he makes such claim is in the employment or service of the Government of the United States; or the assignee of any such patentee; nor shall this Act apply to any device discovered or invented by such employee during the time of his employment or service."

The Act was amended in resepcts immaterial to the present question, July 1, 1918, 40 Stat. 705. See William Cramp & Sons Co. v. Curtis Turbine Co., 246 U. S. 28; Richmond Screw Anchor Co. v. United States, 275 U. S. 331, 343. As amended it appears in U. S. C., Tit. 35, § 68.

[22] House Report 1288, 61st Cong., 2d Sess.

[23] S. 5265, 65th Cong., 3d Sess.; S. 3223, 66th Cong., 2d Sess.; H. R. 9982, 66th Cong., 2d Sess.; H. R. 11984, 66th Cong., 3d Sess.

stress was laid not only upon the fact that action by an employee thereunder would be voluntary, but that the inventor would be protected at least to some extent in his private right of exclusion. It was recognized that the Government could not compel an assignment, was incapable of taking such assignment or administering the patent, and that it had shop rights in a patent perfected by the use of government material and in government working time. Nothing contained in the bill itself or in the hearings or reports indicates any intent to change the existing and well understood rights of government employees who obtain patents for their inventions made while in the service. The measure failed of passage.

In 1923 the President sent to the Congress the report of an interdepartmental patents board created by executive order to study the question of patents within the government service and to recommend regulations establishing a policy to be followed in respect thereof. The report adverted to the fact that in the absence of a contract providing otherwise a patent taken out by a government employee, and any invention developed by one in the public service, is the sole property of the inventor. The committee recommended strongly aganist public dedication of such an invention, saying that this in effect voids a patent, and, if this were not so, "there is little incentive for anyone to take up a patent and spend time, effort, and money * * * on its commercial development without at least some measure of protection against others free to take the patent as developed by him and compete in its use. In such a case one of the chief objects of the patent law would be defeated." [24] In full accord is the statement on behalf of the Department of the Interior in a memorandum furnished with respect to the bill introduced in 1919.[25]

With respect to a policy of permitting the patentee to take a patent and control it in his own interest (subject, of course, to the government's right of use, if any) the committee said:

"* * * it must not be lost sight of that in general it is the constitutional right of every patentee to exploit his patent as he may desire, however expedient it may appear to endeavor to modify this right in the interest of the public when the patentee is in the Government service." [26]

Concerning a requirement that all patents obtained by government employees be assigned to the United States or its agent the committee said:

"* * * it would, on the one hand, render difficult securing the best sort of technical men for the service and, on the other, would influence technical workers to resign in order to exploit inventions which they might evolve and suppress while still in the service. There has always been more or less of a tendency for able men in the service to do this, particularly in view of the comparative meagerness of Government salaries; thus the Government has suffered loss among its most capable class of workers." [27]

The committee recommended legislation to create an Interdepartmental Patents Board; and further that the law make it part of the express terms of employment, having the effect of a contract, that any patent application made or patent granted for an invention discovered or developed during the period of government service and incident to the line of official duties, which in the judgment of the board should, in the interest of the national defense, or otherwise in the public interest, be controlled by the government, should upon demand by the board be assigned by the employee to an agent of the Government. The recommended measures were not adopted.

Fifth. Congress has refrained from imposing upon government servants a contract obligation of the sort above described. At least one department has attempted to do so by regulation.[28] Since the record in this case discloses that the Bureau of Standards had no such regulation, it is unnecessary to consider whether the various departments have power to impose such a contract upon employees without authorization by act of Congress. The question is more difficult under our form of government than under that of Great Britain, where such departmental regulations seem to settle the matter.[29]

All of this legislative history emphasizes what we have stated—that the courts are incompetent to answer the difficult question whether the patentee is to be allowed his exclusive right or compelled to dedicate his invention to the public. It is suggested that the election rests with the authoritative officers of the Government. Under what power, express or implied, may such officers, by

[24] Sen. Doc. No. 83, 68th Cong., 1st Sess., p. 8.

[25] Hearings, Senate Patent Committee, 66th Cong., 2d Sess., January 28, 1920, p. 11.

[26] Sen. Doc. No. 83, 68th Cong., 1st Sess., p. 8.

[27] *Ibid.*, p. 4.

[28] See Annual Report, Department of Agriculture, for 1907, p. 775. See Selden Co. v. National Aniline & Chemical Co. Inc., 48 F. (2d) 270, 273.

[29] Queen's Regulations (Addenda 1895, 1st February); Ch. 1, Instructions for Officers in General, pp. 15-16.

administrative fiat, determine the nature and extent of rights exercised under a charter granted a patentee pursuant to constitutional and legislative provisions? Apart from the fact that express authority is nowhere to be found, the question arises, who are the authoritative officers whose determination shall bind the United States and the patentee? The Government's position comes to this—that the courts may not reexamine the exercise of an authority by some officer, not named, purporting to deprive the patentee of the rights conferred upon him by law. Nothing would be settled by such a holding, except that the determination of the reciprocal rights and obligations of the Government and its employee as respects inventions are to be adjudicated, without review, by an unspecified department head or bureau chief. Hitherto both the executive and the legislative branches of the Government have concurred in what we consider the correct view,—that any such declaration of policy must come from Congress and that no power to declare it is vested in administrative officers.

The decrees are affirmed.

Mr. Justice STONE, dissenting.—I think the decrees should be reversed.

The Court's conclusion that the employment of Dunmore and Lowell did not contemplate that they should exercise inventive faculties in their service to the government, and that both courts below so found, seems to render superfluous much that is said in the opinion. For it has not been contended and I certainly do not contend, that if such were the fact there would be any foundation for the claim asserted by the government. But I think the record does not support the Court's conclusion of fact. I am also unable to agree with the reasoning of the opinion, although on my view of the facts it would lead to the reversal of the decree below, which I favor.

When originally organized[1] as a subdivision of the Department of Commerce, the functions of the Bureau of Standards consisted principally of the custody, comparison, construction, testing and calibration of standards and the solution of problems arising in connection with standards. But in the course of its investigation of standards of quality and performance it has gradually expanded into a laboratory for research of the broadest character in various branches of science and industry and particularly in the field of engineering.[2] Work of this nature is carried on for other government departments,[3] the general public[4] and private industries.[5] It is almost entirely supported by public funds,[6] and is maintained in the public interest. In 1915, as the importance of radio to the government and to the public increased, Congress appropriated funds[7] to the Bureau "for investigation and standardization of methods and instruments employed in radio communication." Similar annual appropriations have been made since and public funds were allotted by Acts of July 1, 1916, c. 209, 39 Stat. 262, 324 and October 6, 1917, c. 79, 40 Stat. 345, 375, for the construction of a

[1] Act of March 3, 1901, 31 Stat. 1449; Act of February 14, 1903, § 4, 32 Stat. 825, 826. For an account of the origin and development of the Bureau and its predecessor, see Weber, The Bureau of Standards, 1-75.

[2] Much of the expansion of the Bureau's activities in this direction took place during the war. See Annual Report of the Director, Bureau of Standards, for 1919, p. 25; War Work of the Bureau of Standards (1921), Misc. Publications of the Bureau of Standards No. 46. The scope of the Bureau's scientific work is revealed by the annual reports of the Director. See also the bibliography of Bureau publications for the years 1901-1925, Circular of the Bureau of Standards No. 24 (1925).

[3] The Act of May 29, 1920, 41 Stat. 681, 683, 684, permitted other departments to transfer funds to the Bureau of Standards for such purposes, though even before that time it was one of the major functions of the Bureau to be of assistance to other branches of the service. See e. g. Annual Reports of the Director for 1915, 1916, 1917, p. 16; Annual Report for 1918, p. 18; compare Annual Report for 1921, p. 23; for 1922, p. 10.

[4] The consuming public is directly benefited not only by the Bureau's work in improving the standards of quality and performance of industry, but also by the assistance which it lends to governmental bodies, state and city. See Annual Reports of the Director for 1915, 1916, 1917, p. 14; Annual Report for 1918, p. 16; National Bureau of Standards, Its Functions and Activity, Circular of the Bureau of Standards, No. 1 (1925), pp. 28, 33.

[5] Cooperation with private industry has been the major method relied upon to make the accomplishments of the Bureau effective. See Annual Report for 1922, p. 7; Annual Report for 1923, p. 8. A system of research associates permits industrial groups to maintain men at the Bureau for research of mutual concern. The plan has facilitated co-operation. See Annual Report for 1923, p. 4; Annual Report for 1924, p. 35; Annual Report for 1925, p. 38; Annual Reports for 1926, 1928, 1929, 1931, 1932, p. 1; Research Associates at the Bureau of Standards, Bureau Circular No. 296 (1926). For a list of cooperating organizations as of December 1, 1926, see Misc. Publications No. 90 (1927).

[6] No fees have been charged except to cover the cost of testing, but the Act of June 30, 1932, c. 314, § 312, 47 Stat. 410, directs that "for all comparisons, calibrations, tests or investigations, performed" by the Bureau, except those performed for the Government of the United States or a State, "a fee sufficient in each case to compensate the * * * Bureau * * * for the entire cost of the services rendered shall be charged. * * *"

[7] Act of March 4, 1915, c. 141, 38 Stat. 997, 1044.

fireproof laboratory building "to provide additional space to be used for research and testing in radio communication," as well as "space and facilities for cooperative research and experimental work in radio communication" by other departments of the government. Thus, the conduct of research and scientific investigation in the field of radio has been a duty imposed by law upon the Bureau of Standards since 1915.

Radio research has been conducted in the Radio Section of the Electrical Division of the Bureau. In 1921 and 1922, when Dunmore and Lowell made the inventions in controversy, they were employed in this section as members of the scientific staff. They were not, of course, engaged to invent, in the sense in which a carpenter is employed to build a chest, but they were employed to conduct scientific investigations in a laboratory devoted principally to applied rather than pure science with full knowledge and expectation of all concerned that their investigations might normally lead, as they did, to invention. The Bureau was as much devoted to the advancement of the radio art by invention as by discovery which falls short of it. Hence, invention in the field of radio was a goal intimately related to and embraced within the purposes of the work of the scientific staff.

Both courts below found that Dunmore and Lowell were impelled to make these inventions "solely by their own scientific curiosity." They undoubtedly proceeded upon their own initiative beyond the specific problems upon which they were authorized or directed to work by their superiors in the Bureau, who did not actively supervise their work in its inventive stages. But the evidence leaves no doubt that in all they did they were following the established practice of the Section. For members of the research staff were expected and encouraged to follow their own scientific impulses in pursuing their researches and discoveries to the point of useful application, whether they involved invention or not, and even though they did not relate to the immediate problem in hand. After the inventions had been conceived they were disclosed by the inventors to their chief and they devoted considerable time to perfecting them, with his express approval. All the work was carried on by them in the government laboratory with the use of government materials and facilities, during the hours for which they received a government salary. Its progress was recorded throughout in weekly and monthly reports which they were required to file, as well as in their laboratory notebooks. It seems clear that in thus exercising their inventive powers in the pursuit of ideas reaching beyond their specific assignments, the inventors were discharging the duties expected of scientists employed in the laboratory; Dunmore as well as his supervisors, testified that such was their conception of the nature of the work. The conclusion is irresistible that their scientific curiosity was precisely what gave the inventors value as research workers; the government employed it and gave it free rein in performing the broad duty of the Bureau of advancing the radio art by discovery and invention.

The courts below did not find that there was any agreement between the government and the inventors as to their relative rights in the patents and there was no evidence to support such a finding. They did not find, and upon the facts in evidence and within the range of judicial notice, they could not find that the work done by Dunmore and Lowell leading to the inventions in controversy was not within the scope of their employment. Such a finding was unnecessary to support the decisions below, which proceeded on the theory relied on by the respondent here, that in the absence of an express contract to assign it, an employer is entitled to the full benefit of the patent granted to an employee, only when it is for a particular invention which the employee was specifically hired or directed to make. The bare references by the court below to the obvious facts that "research" and "invention" are not synonymous, and that all research work in the Bureau is not concerned with invention fall far short of a finding that the work in the Bureau did not contemplate invention at all. Those references were directed to a different end, to the establishment of what is conceded here, that Dunmore and Lowell were not specifically hired or directed to make the inventions because in doing so they proceeded beyond the assignments given them by their superiors. The court's conception of the law, applied to this ultimate fact, led inevitably to its stated conclusion that the claim of the government is without support in reason or authority "unless we should regard a general employment for research work as synonymous with a particular employment (or assignment) for inventive work."

The opinion of this Court apparently rejects the distinction between specific employment or assignment and general

employment to invent, adopted by the court below and supported by authority, in favor of the broader position urged by the government that wherever the employee's duties involve the exercise of inventive powers, the employer is entitled to an assignment of the patent on any invention made in the scope of the general employment. As I view the facts, I think such a rule, to which this Court has not hitherto given explicit support, would require a decree in favor of the government. It would also require a decree in favor of a private employer, on the ground stated by the court that as the employee "has only produced what he is employed to invent," a specifically enforcible "term of the agreement necessarily is that what he is paid to produce belongs to his paymaster." A theory of decision so mechanical is not forced upon us by precedent and cannot, I think, be supported.

What the employee agrees to assign to his employer is always a question of fact. It cannot he said that merely because an employee agrees to invent, he also agrees to assign any patent secured for the invention. Accordingly, if an assignment is ordered in such a case it is no more to be explained and supported as the specific enforcement of an agreement to transfer property in the patent than is the shopright which equity likewise decrees, where the employment does not contemplate invention. All the varying and conflicting language of the books cannot obscure the reality that in any case where the rights of the employer to the invention are not fixed by express contract, and no agreement in fact may fairly be implied, equity determines after the event what they shall be. In thus adjudicating *in invitum* the consequences of the employment relationship, equity must reconcile the conflicting claims of the employee who has evolved the idea and the employer who has paid him for his time and supplied the materials utilized in experimentation and construction. A task so delicate cannot be performed by accepting the formula advanced by the petitioner any more than by adopting that urged by the respondent, though both are not without support in the opinions of this Court. Compare Hapgood v. Hewitt, 119 U. S. 226; Dalzell v. Dueber Mfg. Co., 149 U. S. 315; Solomons v. United States, 137 U. S. 342, 346; Gill v. United States, 160 U. S. 426, 435; Standard Parts Co. v. Peck, 264 U. S. 52.

Where the employment does not contemplate the exercise of inventive talent the policy of the patent laws to stimulate invention by awarding the benefits of the monopoly to the inventor and not to someone else leads to a ready compromise: a shop-right gives the employer an adequate share in the unanticipated boon.[3] Hapgood v. Hewitt, *supra;* Lane & Bailey Co. v. Locke, 150 U. S. 193; Dalzell v. Dueber Mfg. Co., *supra;* Pressed Steel Car Co. v. Hansen, 137 Fed. 403; Amdyco Corp. v. Urquhart, 39 F. (2d) 943, aff'd 51 F. (2d) 1072; Ingle v. Landis Tool Co., 272 Fed. 464; see Beecroft & Blackman v. Rooney, 268 Fed. 545, 549.

But where, as in this case, the employment contemplates invention, the adequacy of such a compromise is more doubtful not because it contravenes an agreement for an assignment, which may not exist, but because, arguably, as the patent is the fruit of the very work which the employee is hired to do and for which he is paid, it should no more be withheld from the employer, in equity and good conscience, than the product of any other service which the employee engages to render. This result has been reached where the contract was to devise a means for solving a defined problem, Standard Parts Co. v. Peck, *supra,* and the decision has been thought to establish the employer's right wherever the employee is hired or assigned to evolve a process or mechanism for meeting a specific need. Magnetic Mfg. Co. v. Dings Magnetic Separator Co., 16 F. (2d) 739; Goodyear Tire and Rubber Co. v. Miller, 22 F. (2d) 353, 356; Houghton v. United States, 23 F. (2d) 386. But the court below and others have thought (Pressed Steel Car Co. v. Hansen, *supra;* Houghton v. United States, *supra;* Amdyco Corp. v. Urquhart, *supra*), as the respondent argues, that only in cases where the employment or assignment is thus specific may the employer demand all the benefits of the employee's invention. The basis of such a limitation is not articulate in the cases. There is at least a question whether its application may not be attributed, in some instances, to the readier implication of an actual promise to assign the patent, where the duty is to invent a specific thing (see Pressed Steel Car Co. v. Hansen, *supra,* 415), or, in any case, to the reluctance of equity logically to extend, in this field, the principle that the right to claim the service includes the right to claim its product. The latter alternative may find support in the policy of the patent laws

[3] See the cases collected in 80 Columbia Law Rev. 1172; 86 Harvard Law Rev. 468.

to secure to the inventor the fruits of his inventive genius, in the hardship which may be involved in imposing a duty to assign all inventions, see Dalzell v. Dueber Mfg. Co., *supra*, 323, cf. Aspinwall Mfg. Co. v. Gill, 32 Fed. 697, 700, and in a possible inequality in bargaining power of employer and employee. But compare Goodyear Tire & Rubber Co. v. Miller, *supra*, 355; Hulse v. Bonsack Mach. Co., 65 Fed. 864, 868; see 30 Columbia Law Rev. 1172, 1176-8. There is no reason for determining now the weight which should be accorded these objections to complete control of the invention by the employer, in cases of ordinary employment for private purposes. Once it is recognized, as it must be, that the function of the Court in every case is to determine whether the employee may, in equity and good conscience retain the benets of the patent, it is apparent that the present case turns upon considerations which distinguish it from any which has thus far been decided.

The inventors were not only employed to engage in work which unmistakably required them to exercise their inventive genius as occasion arose; they were a part of a public enterprise. It was devoted to the improvement of the art of radio communication for the benefit of the people of the United States, carried on in a government laboratory, maintained by public funds. Considerations which might favor the employee where the interest of the employer is only in private gain are therefore of slight significance; the policy dominating the research in the Bureau, as the inventors knew, was that of the government to further the interests of the public by advancing the radio art. For the work to be successful, the government must be free to use the results for the benefit of the public in the most effective way. A patent monopoly in individual employees, carrying with it the power to suppress the invention, or at least to exclude others from using it, would destroy this freedom; a shopright in the government would not confer it. For these employees, in the circumstances, to attempt to withhold from the public and from the government the full benefit of the inventions which it has paid them to produce, appears to me so unconscionable and inequitable as to demand the interposition of a court exercising chancery powers. A court which habitually enjoins a mortgagor from acquiring and setting up a tax title adversely to the mortgagee, Middletown Savings Bank v. Bacharach, 46 Conn. 513, 524; Chamberlain v. Forbes, 126 Mich. 86; Waring v. National Savings & Trust Co., 138 Md. 367; see 2 Jones on Mortgages (8th ed.), § 841, should find no difficulty in enjoining these employees and the respondent claiming under them from asserting, under the patent laws, rights which would defeat the very object of their employment. The capacity of equitable doctrine for growth and of courts of equity to mould it to new situations, was not exhausted with the establishment of the employer's shopright. See Essex Trust Co. v. Enwright, 214 Mass. 507; Meinhard v. Salmon, 249 N. Y. 458.

If, in the application of familiar principles to the situation presented here, we must advance somewhat beyond the decided cases, I see nothing revolutionary in the step. We need not be deterred by fear of the necessity, inescapable in the development of the law, of setting limits to the doctrine we apply, as the need arises. That prospect does not require us to shut our eyes to the obvious consequences of the decree which has been rendered here. The result is repugnant to common notions of justice and to policy as well, and the case must turn upon these considerations if we abandon the illusion that equity is called upon merely to enforce a contract, albeit, one that is "implied." The case would be more dramatic if the inventions produced at public expense were important to the preservation of human life, or the public health, or the agricultural resources of the country. The principle is the same here, though the inventions are of importance only in the furtherance of human happiness. In enlisting their scientific talent and curiosity in the performance of the public service in which the Bureau was engaged, Dunmore and Lowell necessarily renounced the prospect of deriving from their work commercial rewards incompatible with it.[9] Hence, there is nothing oppressive

[9] It has been said that many scientists in the employ of the Government regard the acceptance of patent rights leading to commercial rewards in any case as an abasement of their work. Hearings on Exploitation of Inventions by Government Employees, Senate Committee on Patents, 65th Cong., 3d Sess. (1919), pp. 16, 17; see also the Hearings before the same Committee, January 23, 1920, 66th Cong., 2d Sess. (1920), p. 5. The opinion of the Court attributes importance to the fact, seemingly irrelevant, that other employees of the Bureau have in some instances in the past taken out patents on their inventions which, so far as appears, the Government has not prevented them from enjoying. The circumstances under which those inventions were made do not appear. But even if they were the same as those in the present case there is no basis for contending that because the Government saw fit not to assert its rights in other cases

or unconscionable in requiring them or their licensee to surrender their patents at the instance of the United States, as there probably would be if the inventions had not been made within the scope of their employment or if the employment did not contemplate invention at all.

The issue raised here is unaffected by legislation. Undoubtedly the power rests with Congress to enact a rule of decision for determining the ownership and control of patents on inventions made by government employees in the course of their employment. But I find no basis for saying that Congress has done so or that it has manifested any affirmative policy for the disposition of cases of this kind, which is at variance with the considerations which are controlling here.

The Act of June 25, 1910, 36 Stat. 851, as amended July 1, 1918, 40 Stat. 704, 705, permitted patentees to sue the government in the Court of Claims for the unauthorized use of their patents. It was in effect an eminent domain statute by which just compensation was secured to the patentee, whose patent had been used by the government. See Richmond Screw Anchor Co. v. United States, 275 U. S. 331. This statute excluded government employees from the benefits of the Act in order, as the House Committee Report explicitly points out, to leave unaffected the shoprights of the government. See H. R. Report No. 1288, 61st Cong. 2d Sess. A statute thus aimed at protecting in every case the minimum rights of the government can hardly be taken to deny other and greater rights growing out of the special equity of cases like the present.

The Act of April 30, 1928, 45 Stat. 467, 468, amending an earlier statute of 1883 (22 Stat. 625), so as to permit a patent to be issued to a government employee without payment of fees, for any invention which the head of a department or independent bureau certifies "is used or liable to be used in the public service," and which the application specifies may, if patented, "be manufactured and used by or for the Government for governmental purposes without the payment of * * * any royalty," was passed, it is true, with the general purpose of encouraging government employees to take out patents on their inventions. But this purpose was not, as the opinion of the Court suggests, born of a Congressional intent that a government employee who conceives an invention in the course of his employment should be protected in his right to exclude all others but the government from using it. Congress was concerned neither with enlarging nor with narrowing the relative rights of the government and its employees.[10] This is apparent from the language of the statute that the patent shall be issued without a fee "subject to existing law," as well as from the records of its legislative history.[11]

The purpose of Congress in facilitating the patenting of inventions by government employees was to protect the existing right of the government to use all devices invented in the service, whether or not the patentee was employed to use his inventive powers. Experience had shown that this shopright was jeopardized unless the employee applied for a patent, since without the disclosure incident to the application the government was frequently hampered in its defense of claims by orders asserting priority of invention. But doubt which had arisen whether an application for a patent under the Act of 1883 did not operate to dedicate the patent to the public,[12] and reluctance to pay the fees otherwise required, had led government employees to neglect to make applications, even when they were entitled to the benefits of the monopoly subject only to the government's right of use. This doubt the amendment removed. It can hardly be contended that in removing it in order to aid the government in the protection of its shopright, Congress declared a policy that it should have no greater right to control a patent procured either under this special statute or under the general patent laws by fraud or any other type of inequitable conduct. Had such a policy been declared, it is difficult to see on what basis we could award the

it has lost them in this. Moreeover, there is no necessary inconsistency in the Government's position if it concluded in those cases that the public interest would be served best by permitting the employees to exploit their inventions themselves, and adopted a contrary conclusion here.

[10] Throughout the various speculations in committee as to what those rights were, it was generally agreed that they were intended to remain unchanged by the bill. See Hearings before the House Committee on Patents, 68th Cong., 2d Sess., on H. R. 3267 and 11403 (1925); Hearings before the same Committee, 70th Cong., 1st Sess. (1928), especially at pp. 8-13. The discussion on the floor of the House, referred to in the opinion of the Court (see note 19) does not indicate the contrary.

[11] In addition to the hearings cited *supra*, note 10, see H. R. Report No. 1596, 68th Cong., 2nd Sess.; H. R. Report No. 871, Senate Report No. 765, 70th Cong., 1st Sess. The bill was originally a companion proposal to the Federal Trade Commission bill discussed *infra*, note 18. See the references given there.

[12] See Selden Co. v. National Aniline & Chemical Co., 48 F. (2d) 270, 272; Squier v. American Telephone & Telegraph Co., 7 F. (2d) 881, 882, affirming 21 F. (2d) 747.

government a remedy, as it seems to be agreed we would, if Dunmore and Lowell had been specifically employed to make the inventions. There is nothing to indicate that Congress adopted one policy for such a case and a contrary one for this.

Other legislation proposed but not enacted,[18] requires but a word. Even had Congress expressly rejected a bill purporting to enact into law the rule of decision which I think applicable here, its failure to act could not be accorded the force of law. But no such legislation has been proposed to Congress, and that which was suggested may have been and probably was defeated for reasons unconnected with the issue presented in this case. The legislative record does show, as the opinion of the Court states, that it is a difficult question which has been the subject of consideration at least since the war, whether the public interest is best served by the dedication of an invention to the public or by its exploitation with patent protection under license from the government or the inventor. But the difficulty of resolving the question does not justify a decree which does answer it in favor of permitting government employees such as these to exploit their inventions without restriction, rather than one which would require the cancellation of their patents or their assignment to the United States.

The decrees should be reversed.

Mr. Justice CARDOZO concurs in this opinion.

Mr. Chief Justice HUGHES (dissenting).—I agree with Mr. Justice STONE'S analysis of the facts showing the nature of the employment of Dunmore and Lowell, and with his conclusions as to the legal effect of that employment. As the people of the United States should have the unrestricted benefit of the inventions in such a case, I think that the appropriate remedy would be to cancel the patents.

[18] The bill referred to in the opinion of the Court was one sponsored by the executive departments to endow the Federal Trade Commission with the power to accept assignments of patents from Government employees and administer them in the public interest. It passed the Senate on one occasion and the House on another but failed to become a law. (S. 5265, 65th Cong., 3d Sess., S. 3226, 66th Cong., 1st Sess., H. R. 9932, 66th Cong., 1st Sess., H. R. 11984, 66th Cong., 3d Sess.). In the course of hearings and debates many points of view were expressed. See Hearings on Exploitation of Inventions by Government Employees, Senate Committee on Patents, 65th Cong., 3d Sess. (1919); Hearing before the same Committee, 66th Cong., 2d Sess. (1920); Senate Report No. 405, H. R. Report No. 595, 66th Cong., 2d Sess., recommending passage. See 59 Cong. Rec., 2800, 2421, 2430, 3908, 4682, 4771, 8359, 8360, 8485, 8490; 60 *ibid.* 856; Conference Report, H. R. No. 1294, Sen. Doc. No. 379, 66th Cong., 3d Sess. And see 60 Cong. Rec., 2890, 3229, 3264-3269, 3537. Differences were stressed in the purposes and needs of different agencies of the Government. See especially Hearings (1919), *supra*, pp. 22, 24-5. The need of commercial incentives to private exploiters, as well as the general desirability of such exploitation were admitted, but the dangers were recognized as well. It was thought that the public interest would best be served by the establishment of a single agency for Government control, with the power to determine upon some compensation for the inventor.

After the death of this bill in the Senate, February 21, 1921, the subject was again considered by an Interdepartmental Board established by executive order of President Harding, August 9, 1922. Its report was transmitted to Congress by President Coolidge, in December, 1923. Sen. Doc. No. 88, 68th Cong., 1st Sess. The Board found that there had never been any general governmental policy established with respect to inventions, that whether public dedication, private exploitation or governmental control and administration is desirable, depends largely on the nature of the invention. Accordingly, legislation was recommended establishing a permanent Interdepartmental Patents Board with the power to demand assignments of patents on those inventions thereafter developed in the service which "in the interest of the national defense, or otherwise in the public interest" should be controlled by the Government. No action was taken upon this proposal.

Since that time the Director of the Bureau of Standards has recommended that a "uniform, equitable policy of procedure" be defined for the Government by legislation. (Annual Report for 1925, p. 40.) In the Report for 1931 it is said (p. 46) that the "patent policy of this Bureau has always been that patentable devices developed by employees paid out of public funds belong to the public," and the Report for 1932 adds (p. 40) "if not so dedicated directly, the vested rights should be held by the Government."