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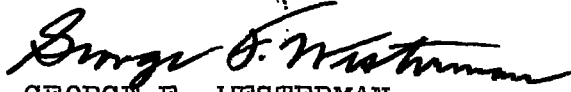
DEPARTMENT OF THE ARMY
OFFICE OF THE JUDGE ADVOCATE GENERAL
WASHINGTON 25, D. C.

JUL 21 1953

SUBJECT: Part II of Final Report of Armed Services Patent
Policy Review BoardTO: National Security Agency
Washington 25, D. C.
ATTN: Mr. Henry B. Stauffer, NSA 3024

Pursuant to your telephonic request of 20 July 1953 there is inclosed a copy of Part II of the subject report. It is requested that the report be treated as though it carried a military classification of "Confidential" and not be disclosed to persons other than those of your agency concerned with patent and related matters.

FOR THE JUDGE ADVOCATE GENERAL:

1 Incl:
Cy of Pt II
of subj rpt.

GEORGE F. WESTERMAN
Major, JAGC
Chief, Patents Division

FINAL REPORT

PART II

ARMED SERVICES

PATENT POLICY REVIEW BOARD

4 September 1952

4 September 1952

From: Armed Services Patent Policy Review Board
To: Secretary of the Army
Secretary of the Navy
Secretary of the Air Force

1. There is transmitted herewith Part II of the Report of the Patent Policy Review Board. This Part covers,

Patent policy relating to the division of patent rights as between the Armed Services and its employees.

2. Part II completes the Report.


REAR ADMIRAL C.M. BOLSTER (Chairman)


MAJOR GENERAL E.M. BRANNON

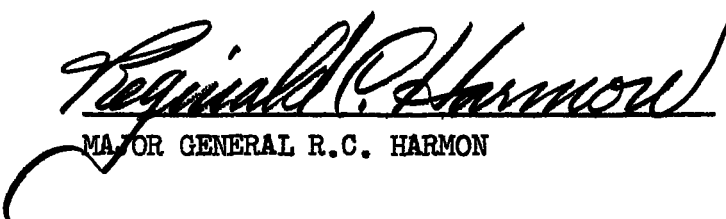

MAJOR GENERAL R.C. HARMON

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A P P E N D I C E SAPPENDIXTITLEPageG
NExecutive Order 10096
Government Patents Board Report of
"A Proposed Government Incentive Awards
and Rewards Program With Respect to
Government Employees"

55

(not
duplicated)

RECOMMENDATIONS OF THE ARMED SERVICES PATENT POLICY REVIEW BOARD

See Report
Page

The Board recommends that:

- 53 (1) THAT THE PRESIDENT BE REQUESTED TO EXEMPT THE ARMED SERVICES FROM THE POLICY PROVISIONS OF EXECUTIVE ORDER 10096;
- 53 (2) THAT THE FOLLOWING POLICY BE ESTABLISHED FOR THE ARMED SERVICES:

THE FOLLOWING POLICY SHALL GOVERN THE DIVISION OF RIGHTS IN AND TO INVENTIONS MADE BY EMPLOYEES OF THE DEPARTMENT OF DEFENSE:

(i) WHEN AN EMPLOYEE'S EMPLOYMENT IS IN RESEARCH AND DEVELOPMENT

(a) TITLE TO ANY INVENTION MADE BY SUCH EMPLOYEE IN CONNECTION WITH PERFORMING HIS ASSIGNED ACTIVITY AND WHICH IS DIRECTLY RELATED TO THE SUBJECT MATTER THEREOF SHALL BE IN THE GOVERNMENT;

(b) TITLE TO ANY INVENTION MADE BY SUCH EMPLOYEE NOT WITHIN HIS ASSIGNED ACTIVITIES OR NOT DIRECTLY RELATED THERETO SHALL BE IN THE EMPLOYER, SUBJECT TO GRANTING TO THE GOVERNMENT AN IRREVOCABLE, ROYALTY FREE, WORLD-WIDE LICENSE IN AND TO SAID INVENTION WHEN THE INVENTION IS MADE ON GOVERNMENT TIME OR WITH THE USE OF GOVERNMENT MONEY, FACILITIES, MATERIAL OR OTHER GOVERNMENT PERSONNEL.

(ii) WHEN AN EMPLOYEE'S EMPLOYMENT IS NOT IN RESEARCH AND DEVELOPMENT

(a) TITLE TO ANY INVENTION MADE BY SUCH EMPLOYEE SHALL REMAIN IN SUCH EMPLOYEE, SUBJECT TO THE GRANTING TO THE GOVERNMENT AN IRREVOCABLE, ROYALTY FREE, WORLD-WIDE LICENSE IN AND TO SAID INVENTION WHEN THE INVENTION IS MADE ON GOVERNMENT TIME OR WITH THE USE OF GOVERNMENT MONEY, FACILITIES, MATERIAL OR OTHER GOVERNMENT PERSONNEL.

*Obviously
an error.
Also See p. 53
I*

See Report
Page

(iii) EXCEPT AS PROVIDED ABOVE

(a) TITLE TO AN INVENTION MADE BY ANY
EMPLOYEE SHALL BE IN THE EMPLOYEE, SUB-
JECT TO NO RIGHTS IN THE GOVERNMENT.

THE SECRETARY OF EACH DEPARTMENT OF THE ARMED SERVICES SHALL
PROMULGATE RULES AND REGULATIONS FOR ADMINISTERING THE ABOVE
POLICY.

54 (3) THAT AWARDS LEGISLATION SIMILAR TO H. R. 7316 BE INCLUDED
IN THE DEPARTMENT OF DEFENSE LEGISLATIVE PROGRAM.

PART II

DIVISION OF RIGHTS IN AND TO
INVENTIONS MADE BY GOVERNMENT EMPLOYEESSECTION IJUDICIAL AND LEGISLATIVE HISTORY

21 -
See
p 18

The present policy for the division of rights in and to inventions of Government employees is set forth in Executive Order 10096 (Appendix G) which was issued on 23 January 1950. Before considering it, a review of the Judicial and Legislative history of the policy will aid in an understanding of the problem.

JUDICIAL HISTORY

The question of the proper disposition of rights as between the Government and its employees to inventions of the latter is an old one. It has been repeatedly raised in the courts and before the Congress for almost a century.

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The rules governing the disposition of rights were clearly defined in 1933 by the Supreme Court, in the case of the United States vs. Dubilier Condenser Corporation, (289 U. S. 178), herein referred to as the Dubilier Case. In any instance where the Congress considered a different set of rules necessary it enacted legislation to that effect.^{1) 2)}

In the Dubilier Case, the Supreme Court enunciated a guiding set of equitable principles, and there is no dispute between the AGR³⁾ and the various Government departments as to what those principles are. The AGR states them on page 135, Vol. III, as follows:

"The mere fact that an inventor was employed by the Federal Government at the time he conceived an invention or reduced it to practice does not give the United States any interest in the invention or in a patent issued thereon. But like the private employer, the Government may obtain certain rights in the invention of its employee because of the circumstances in which it was made. These rights may consist either of equitable ownership or of a shop right (a free license) to use the invention."

The above doctrine was not new in 1933. It was first suggested by the Supreme Court in 1870, clearly established by the Court in *Solomons vs. U. S.*, (137 US 342, 346), in 1890 and merely restated in the Dubilier Case.

-
- 1) TVA Act of 1933, (16 USC 831d(i))
 - 2) National Science Foundation Act of 1950, (42 USC 1861-1875)
 - 3) Attorney General's Report of 1947

In *Solomons vs. 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 employee, 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."

The Government, when it brought its action against *Dubilier*, recognized the existing laws, for the Court pointed out:

"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." (Page 193)

After emphasizing that the Government was requesting the Court to force an assignment, even though it was shown that the employees were not assigned to devise or invent, the Court said:

"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 statute so declares." (Page 197)

Thereafter the Court reviewed the repeated attempts to have legislation enacted to change the law. One recommendation was to have the law make the express terms of employment into a contract whereby 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 should, upon demand of a special board, be assigned by the employee to an agent of the Government. The Court concluded that:

"Congress has refrained from imposing upon Government servants a contract obligation of the sort above described." (Page 208)

Nevertheless the AGR argued that the heads of departments have authority under (5 USC 22)¹⁾ to issue regulations compelling employees to assign their inventions to the Government even under circumstances in which the Supreme Court has only recognized a shop right or license to exist.

In the Dubilier Case the Court mentioned the attempts of Government departments to impose obligations upon its employees by means of regulations but as the case before the Court did not involve such a regulation it said:

"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." (Page 208)

But the Court further added:

"It is suggested that the election rests with the authoritative officers of the Government. Under what power, express or implied, may such officers, by 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." (pp. 208-209) (Emphasis ours)

1) (5 USC 22) - Departmental regulations. The head of each department is authorized to prescribe regulations, not inconsistent with law, for the government of his department, the conduct of its officers and clerks, the distribution and performance of its business, and the custody, use, and preservation of the records, papers, and property appertaining to it.

The only Government agencies which had established a set of rules different from those promulgated by the Supreme Court were the Bureau of Standards and the Department of the Interior. The former doubted the legality of its practice of requiring employees to assign. (AGR, Vol. II, p. 99) The latter admitted it had title to over one hundred patents or applications to which the Department's

" * * * employees had been personally entitled under existing legislation and Court decisions * * *"
(AGR, Vol. II, p. 195) (Emphasis ours)

Prior to 1933 the Executive Branch of the Government had always recognized that the establishment of patent policy so far as the rights of Government employees were concerned was a matter for the Congress. The Court sums up this history (pp. 205-207) as follows:

"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. In the hearings and reports upon this measure 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 against 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.' 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.

"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.'

"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.'

"The committee recommended legislation to create an Inter-departmental 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." (Emphasis ours)

Except for the statutes mentioned under Legislative History, the Congress has not changed the Law. As pointed out subsequently in the discussion of the 1910 Act, the last Congress again expressed its intent that the Dubilier Case is still controlling.

The reluctance of the Courts and Congress to change the Law may be best explained by one more quote from the Dubilier Case (pp. 188-190):

"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 Thread Co. vs. Willimantic Linen Co., 140 U.S. 481, 489; Symington Co. vs. National Castings Co., 250 U.S. 383, 386; Pyrene Mfg. Co. vs. 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 vs. Kingsland, 1 How. 202; Solomons vs. United States, 137 U. S. 342; Lane & Bodley Co. vs. 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."

LEGISLATIVE HISTORY

Prior to the AGR the Executive Branch of the Government frequently referred the present problem to the Congress, and the Congress repeatedly refused to pass any overall legislation on the subject.

The legislative history has been so well reviewed in *United States vs. Dubilier Condenser Corporation*, 289 U. S. 178, (referred to herein as the Dubilier Case), beginning at page 205, that it is not deemed necessary to restate it here, except to discuss briefly the five statutes which Congress has seen fit to enact relating specifically to inventions of Government employees. These are:

- (a) The Act of 3 March 1883 as amended in 1928 (35 USC 45)
- (b) The Act of 8 July 1870 (35 USC 68)
- (c) The Tennessee Valley Authority Act of 1933, (16 USC 831d(i))
- (d) National Science Foundation (42 USC 1861-75)
- (e) The Act of 25 June 1910 (28 USC 1498) as amended in 1952 by P.L. 582, 82nd Congress.

ACT OF 1883

The Act of 1883 provided that when a Government employee makes an invention he may file an application in the United States Patent Office without payment of the Patent Office fees, if the proper Government official certifies that the invention might be useful to the Government. If the employee does file his application under this Act then he must agree to grant a license to the Government for governmental use.

The Act is purely permissive as far as Government employees are concerned. It does not require employees to file under the statute. If any employee does not choose to take advantage of the Act he may file his application in the normal manner and pay the Patent Office fees.

When the statute was originally enacted it included the following provision:

"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 payment to him of any royalty thereon, which stipulation shall be included in the patent." (Emphasis ours)

The underscored portion of the above provision was variously interpreted by the different departments of the Government. Some, including the Armed Services, held that it acted as a dedication of the patent to the public. Others held to the contrary. Finally, in *Squier vs. American Tel. & Tel. Co.*, (21 F(2d) 747), the district court held that a patent issued under the 1883 Act as quoted above was open to free public use.

After repeated attempts to have this provision removed, the Congress in 1928 amended the statute to avoid dedication. As amended, the pertinent portion now reads: (35 USC 45)

"Provided, That the applicant in his application shall state that the invention described therein, if patented, may be manufactured and 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."

At the time that the amendment was before Congress, the Congress had full opportunity to establish a different policy. Instead of amending the statute to avoid dedication to the public, the Congress could have taken away all rights of employees to their inventions. The Congress did not choose to do so.

In discussing the 1928 amendment, the Supreme Court, in a footnote to the *Dubilier Case* (Page 203), again reiterated that any changes in the law relating to the disposition of employees' rights in their inventions is the province of the Congress.

ACT OF 1870 (35 USC 68)

The Act of 1870 is the only statute that Congress has enacted barring specified Government employees from obtaining patents. This excludes officers and employees of the Patent Office from acquiring or taking, directly or indirectly, except by inheritance or bequest, any right or interest in a patent during the period for which they hold their appointments.

The statute is an equitable one. It is obviously aimed at the employees of the Patent Office, not because they were Government employees, but because their employment in the Patent Office would give them an opportunity to use their knowledge and position in a manner which might be inequitable or unjust to other inventors or to the Government.

TENNESSEE VALLEY AUTHORITY ACT (16 USC 831d(1)).

The Tennessee Valley Authority Act of 1933 provided:

"That any invention or discovery made by virtue of or incidental to such service by an employee of the Government of the United States serving under this section, or by any employee of the Corporation, together with any patents which may be granted thereon,

shall be the sole and exclusive property of the Corporation, which is hereby authorized to grant such licenses thereunder as shall be authorized by the Board; Provided further, That the Board may pay to such inventor such sum from the income from sale of licenses as it may deem proper."

This is a most interesting statute for the following reasons:

(1) It is the one time Congress has authorized a Government Agency to grant licenses under Government-owned patents; and

(2) It authorizes the inventor to share in the profits.

If, as claimed by the AGR, title to an invention by an employee may be taken by administrative action, then the inclusion of the above provision in the TVA Act was unnecessary.

NATIONAL SCIENCE FOUNDATION ACT OF 1950 (42 USC 1871)

The Act provides (Section 12(b)):

"No officer or employee of the Foundation shall acquire, retain, or transfer any rights, under the patent laws of the United States or otherwise, in any invention which he may make or produce in connection with performing his assigned activities and which is directly related to the subject matter thereof: Provided, however, That this subsection shall not be construed to prevent any officer or employee of the Foundation from executing any application for patent on any such invention for the purpose of assigning the same to the Government or its nominee in accordance with such rules and regulations as the Director may establish". (Emphasis ours)

As pointed out in Part I of this Report, there was considerable discussion in both the House and the Senate as to what patent provisions should be placed in the Act. Many contended that the proposed policies enunciated in the Attorney General's report should be adopted but these recommendations were rejected. The Congress again did nothing more than reiterate what had long been Government policy when it enacted 12(b), above. In effect this section states that an employee shall assign his invention to the Government only when he makes an invention...:

"In connection with performing his assigned activity and which is directly related to the subject matter thereof".

It should be noted that two conditions are required before an employee of the National Science Foundation must assign his invention. First, it must fall within his assigned activities and second, it must be directly related to the subject matter thereof. This was the rule set down in the Dubilier Case.

THE ACT OF 1910 (28 USC 1498, AS AMENDED BY P. L. 582, 82nd CONGRESS)

This is one of the most important statutes with relation to Government patent problems. Prior to 1910 a patent owner did not have a remedy against the Government for infringement of his patent. By this statute the Court of Claims was vested with jurisdiction to hear patent cases for unauthorized use by the Government. In considering the Bill the Congress had before it the question of whether Government employees should be permitted to bring suit against the Government and the House Committee made specific reference to the equitable doctrine governing the disposition of employees' rights in and to their inventions and patents as defined by the Supreme Court in *Solomons vs. U. S.* 137 USC 342 and recognized these doctrines as being the law. The report stated as follows:

"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." (House Report 1288, 61st Congress., 2nd Sess.)

Following the enactment of the 1910 Act the Services always took the viewpoint that in proper cases they could still buy an employee's rights but the AGR argues otherwise. If the AGR is right, an employee would be forever debarred from recovering from the Government for use of his invention, even though the law, as enunciated by the Supreme Court and pertinent statutes established that the Government had no rights in the invention.

Except for two amendments which are not pertinent here, the 1910 Act remained unchanged until the 82nd Congress. The 82nd Congress, by P. L. 582, amended the statutes as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the fourth paragraph of section 1498 of title 28, United States Code, is amended by substituting the following therefor:

'A Government employee shall have the right to bring suit against the Government under this section except where he was in a position to order, influence, or induce use of the invention by the Government. This section shall not confer a right of action on any patentee or any assignee of such patentee with respect to any invention discovered or invented by a person while in the employment or service of the United States, where the invention was related to the official functions of the employee, in cases in which such functions included research and development, or in the making of which Government time, materials or facilities were used.'

Approved July 17, 1952

The House Report, No. 1726 (Page 3) and Senate Report, No. 1992, (Page 2), state as follows:

"In the Dubilier case (289 U.S. 178) the Supreme Court established that if an inventor is hired to invent or assigned to invent, title is in the employer. If he is not so hired or assigned and he uses the time, facilities, information, or the like of the employer, then title remains in the employee, but the employer has a license. In any other instance, full right, title, and interest remains in the employee. The right to sue, pursuant to this bill, in large part, follows title under the present law as established by the Dubilier case and similar decisions. If title is in the employee and he is not in a position to influence or reduce the use of the invention by the Government, he is accorded the right to bring a suit against the Government in the Court of Claims.

"The amendment passed by the subcommittee will permit a Government employee who makes an invention before entering the Government service to sue on the patent covering that invention the same as any other patentee, except where he is actually in a position to induce the use of his patented device by the Government. It will also permit a Government employee who makes an invention completely outside of his official function to maintain a suit against the Government without penalizing the Government unduly by inviting the filing of numerous suits by the Government employee-patentees where the invention is made in the general line of duty.

"It is recognized that Government employees sometimes make inventions that are wholly unrelated to their official functions and in the making of which neither Government time nor materials are used. In these cases, equity demands that the employee-inventor be adequately rewarded if his invention is used by the Government."

Here again the Congress has expressed its intent that the rules established in the Dubilier case be followed. This is not ancient history. The Law was approved on 17 July 1952.

SUMMARY

The judicial and legislative history on the problem of the proper division of rights in and to inventions of Government employees establishes the following:

- (1) That the Law applicable to Government employees is no different than the Law relating to a private employer and employee;
- (2) That the establishment of a policy different from the rules enunciated by the Supreme Court is vested only in the Congress;
- (3) That where the Congress has deemed it necessary to apply different rules it has done so by specific legislation; and
- (4) That where the Congress has not enacted specific legislation it is the intent of the Congress that the rules in the Dubilier case be followed.

SECTION IIARMED SERVICES PATENT POLICY PRIOR
TO EXECUTIVE ORDER 10096

Thoroughly familiar with the decisions of the Supreme Court and legislation on the subject, the Armed Services had followed a policy which it considered to be consistent with the rules laid down by the Supreme Court.

The complexities of the problem are clearly set forth in the following quote from *United States vs. Dubilier Condenser Corporation*, (289 U.S. 178, pp. 197-199):

"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 statute so declares.

"Where shall the courts set the limits 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 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 *United States vs. Burns*, supra, *Solomons vs. United States*, supra, and *Gill vs. 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 re-

searches 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 a skilled 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." (Emphasis ours)

With such knowledge before it the policy followed by the Services, prior to Executive Order 10096, with respect to employees' inventions and patents was:

So far as affects rights pertaining to inventions and patents, the status of persons in the services is similar to that of persons in other occupations, and in connection with such rights the relation between the Services and each person in its service, whether officer, enlisted person, or civilian employee (all referred to hereinafter as employee) is the relation

between employer and employee; and the Service recognizes the rights of the employee in and to inventions and patents as established by the law pertaining to employer and employee, with certain exceptions incident to Government service.

Those rights in each case must be determined by the facts in the particular case. For the purpose of illustration, however, there are described below certain assumed situations based on facts and circumstances that frequently occur, in which the respective rights of the parties may be clearly defined.

"(a) The title to the invention and to any patent secured on it by the employee vests in the employer when

An employee is directed to make or improve a specific device, means, method, or process, and in the performance of such duty he makes an invention directly bearing upon that particular device, means, method, or process, or

The complete control of the invention is necessary in order for the employer to realize all the benefits which he anticipated would flow to him by the employment of the employee.

"(b) The title to the invention and to any patent secured on it by the employee, including all commercial and foreign rights, resides in the employee, but subject to a license to the employer when

An employee not assigned to duty as in (a) makes an invention and uses the employer's time or facilities or other employees in the development of the invention. In such case the Government requires a nonexclusive, irrevocable, and unlimited right to make and use, and have made for the Government's use, devices embodying the invention, and to sell such devices as provided for by law regarding the sale of public property.

"(c) The title to the invention and to any patent secured on it by the employee is the property of the employee, subject to no right of the employer when

An employee makes an invention not within the circumstances defined in (a) or (b) or concerning which he is not otherwise obligated to the employer."

In the belief that the Executive Branch of the Government not only is controlled by the statutes, but also should be guided by the interpretation of the law as rendered by the Supreme Court of the United States, the policy was established following the decision of the United States Supreme Court in *U. S. vs. Dubilier Condenser Corporation*, (289 U. S. 178).

An examination of the rules as established by the *Dubilier*, and many other cases, shows that the extent to which an employer is entitled to an employee's invention is based on (1) the terms of the employment, and (2) the use made by the employee of the employer's time, facilities, material, etc., in making the invention.

If an employee is initially hired to invent, i.e., to exercise his creative and inventive powers, then all inventions made within the scope of the employee's duties belong to the employer, regardless of when or how made. On the other hand, if an employee is not initially hired to invent, his invention, with one exception, belongs to him, subject only to any implied license or shop right which may have arisen from the employee's use of the employer's material, time, facilities, etc. The exception to the second rule occurs when an employee, not initially hired to invent, during the course of his general employment is designated to invent. Then during that period he is considered as employed to invent and any inventions arising out of the designated employment belong to the employer.

Thus, if an electronic engineer is initially employed to invent, then all inventions he may make while so employed belong to the employer. However, if the same electronic engineer were hired for general employment, but during the course of his employment he is assigned to devise an electronic tube having certain characteristics and producing a desired result, the task requiring originality of thought and use of his inventive faculties, then while he works on this project he is employed to invent and any resulting inventions belong to the employer.

SUMMARY

It is apparent from the foregoing discussion

(1) That the policy of the Armed Services, previous to Executive Order 10096, clearly followed the rules enunciated by the Supreme Court for making a proper division of rights in and to inventions of Government employees;

(2) That the previous policy clearly followed the intent of the Congress in requiring

(a) Assignment when the employee made the invention while performing his assigned activities and the invention is directly related to the subject matter thereof;

(b) That the inventor retain title but gives to the Government a royalty-free license when the invention does not fall within (a) but he utilized Government time, materials, money or facilities in the making of the inventions; or

(c) In all other instances full right, title and interest in the invention remain with the employee.

SECTION IIIPRESENT POLICY UNDER EXECUTIVE ORDER 10096

P. of this part says 23 Jan

Despite all of the Judicial and Legislative History to the contrary, Executive Order 10096 issued on 21 January 1950. Its history is illuminating.

HISTORY OF ORDER

The order was first proposed by the Attorney General in his letter of 11 December 1947 addressed to the Director of the Bureau of the Budget. The letter stated that, except for the Navy and War Departments, the other agencies favored the order.

who did not sell the order?

At a meeting held at the Bureau of the Budget there was opposition from many agencies. The Secretary of Defense wrote as follows on 9 March 1948:

"In short, although I recognize the desirability of establishing a uniform patent policy covering inventions made by Federal employees, I strongly disapprove of the proposed Executive Order. As an alternative, I should like to suggest the establishment of a committee composed of representatives of the governmental departments and agencies whose employees, in performance of their duties, produce a significant number of inventions. This committee could consider in detail the experience of the various departments and agencies concerned and formulate sound and workable criteria for the assignment of employees' inventions to the government. After approval by the President, these criteria could be promulgated as the policy of the administration. Such a committee could also consider the important need for arrangements to replace potential patent rights as incentives to enter and remain in the service of the Federal Government. However, it should not be concerned with stimulation of the exploitation of government-owned inventions by government-financed development or by direct publicity nor with patent policies other than those affecting government employees.

"I should be glad to assist in the formulation and work of such a committee."

Nothing further occurred until 23 October 1949 when a substitute order was submitted for consideration and ten days given for reply. As discussed in Part I of this Report the new order ran to procurement policies as well as employee policies. The Bureau of the Budget did not hold any joint hearing on this order but did have a conference with Defense representatives following the deletion of those portions of the order relating to procurement.

The Bureau of the Budget suggested that Defense try to work out a compromise with Justice. Efforts along this line were made and it was thought that a compromise had been reached. A conference was held at the office of the Head of the Patent Section of the Department of Justice on 20 January 1950, and an advance copy of the proposed compromise policy was submitted. On 21 January a letter was prepared for the signature of the Secretary of Defense for officially transmitting the compromise policy. The 21st of January was a Friday. The letter reached the Secretary of Defense on Monday 23 January but the order was signed the same day.

The prepared letter was forwarded to the Secretary of Defense by the following memorandum from the Assistant Secretary of Defense (L & LD).

"Jan. 21, 1950

"Memo for the Secretary

Recommend signature of the attached letter to John Steelman. This represents an effort to get Steelman to consider the very real interest of the Dept. of Defense in a proposed government-wide patent policy, about to be issued. Percentagewise, Defense Dept. employees have filed 82% of the total government-wide employee patent applications - so we think our views are entitled to serious consideration, etc. Prepared by Felix Larkin, and concurred in by the three services and the Research and Development Board.

Marx Leva"

The letter forwarded by the above memorandum was addressed to Mr. John Steelman and read as follows:

"THE SECRETARY OF DEFENSE
Washington

"Dear John:

"I understand that an Executive Order entitled 'Providing for a Uniform Patent Policy for the Government with Respect to Inventions Made by Government Employees and for the Administration of Such Policy' is being forwarded to the President for approval and signature. The Departments of the Army, Navy and Air Force object to this Order in its present form and recommend that I speak to the President about it. Since I am informed that it is in your hands I thought I would pass on their arguments to you.

"This proposed Executive Order was considered more than two years ago and this Department suggested that a group be formed of the Executive agencies principally concerned with employee inventions to formulate at the working level more effective and acceptable provisions. When the Order was again proposed on October 12, 1949, I made a similar suggestion. Under date of 19 December 1949, following a conference between representatives of this office and of the Bureau of the Budget, certain proposals for revision of the draft Order were submitted to the Bureau of the Budget with a statement that the Department of Defense would be able to operate under an Order containing these modifications. I understand that those modifications were transmitted to the Department of Justice and resulted in some modification of the earlier proposed Executive Order. The modifications made by the Department of Justice, however, do not appear to us to meet the major objections which have been presented to the Bureau of the Budget on various occasions. After further study and discussion within the Department

of Defense and with a representative of the Department of Justice, further revisions were informally submitted to the Bureau of the Budget on January 13, 1950, in an effort to resolve differences on the major remaining issue, namely section 1, which sets forth the criteria governing assignment to the Government of title in employees' inventions. Since then we have continued to consider this matter in informal discussions and have prepared a further revision to replace the present section 1. I am attaching a copy of this revision in a sincere effort to reach a form of Order that will be acceptable to all concerned. You will note that the proposed modification submitted herewith goes substantially further towards the Department of Justice position than the proposals previously submitted.

"The disposition of inventions made by employees of the Department of Defense is a matter of great concern to us. Some idea of the volume of such inventions and its relation to that of other Executive departments and agencies is given by the attached memorandum. With respect to this memorandum, it is important to note that patent applications are filed by this Department only on those inventions which, after rigorous examination, are determined to be of the most substantial value to the Government and shortage of patent attorneys results in the abandonment of many valuable inventions.

"As the subject of disposition of employees' inventions is an extremely complex one, it seems desirable, in order to provide perspective, to review briefly the current practices of the Department of Defense and our objections to the proposed Order in its present form.

"At present the Armed Services in determining the division of rights in employees' inventions follow the equitable principles enunciated by the Supreme Court in U.S. vs. Dubilier, 289 U. S. 178. Under the principles of this decision, the rights acquired by employers (whether Government or private industry) depend upon the employees' work assignment at the time the invention is made. If an employer assigns an employee to a task which envisions the making of an invention, such invention becomes the property of the employer. If, however, an employee makes an invention in the course of his general employment, using his employer's time, or facilities, or services of other employees, the employer receives a license to use the invention and the employee retains all other rights. In all other cases the employee retains all rights to his invention. It should be noted that, even where the Government receives no rights in an employee's invention, the employee is prevented by law

(28 U.S.C. 1498) from bringing suit for its use by the Government.

"Some industrial organizations have modified the rules enunciated in the Dubilier decision by entering into employment agreements with their employees. A recent survey indicates that about half a group of 700 firms contacted (varying in size from those doing a gross business of \$50,000.00 a year to those doing a gross business of over \$30,000,000.00 a year) have adopted such agreements. Of those firms which have adopted such agreements and particularly the larger firms, the great majority have restricted the requirement for agreements to employees engaged in research and development, and to executive employees. In many instances the agreements of industrial firms with the unions limit the rights of the employer in the employees' inventions to a shop right.

"The proposed policy goes beyond the practices of industry. It is the opinion of the Department of Defense that Government employees should not be forced to accept a policy which is more drastic than that generally followed by industry. It is true that civilian employees who are dissatisfied with the policy may resign but members of the Armed Services who are bound by contracts of enlistment may not resign.

"In addition to objecting to the policy, the Order in its present form is objected to for the following reasons:

"1. The Order is too broad in scope in that it subjects to possibly arbitrary determination, subject only to vague and extremely broad limitation, the rights to inventions of employees whose duties have no relation to research and development. Thus, mechanics, electricians, chauffeurs, clerk, charwomen, soldiers, sailors and airmen are subject to this Order, while in industry these and other employees in like categories are subject only to the more limited rules of common law.

"2. The Order would destroy incentive on the part of Government employees who, when they come upon an obstacle, use their ingenuity to overcome same by making inventions. Under the present system, the employee who uses his ingenuity and initiative may look forward to the possibility of financial reward if his invention has any commercial possibility. If, however, bulldozer operators, mechanics, electricians and other types of employees, from whom not even industry requires assignment of inventions, must assign to the Government, their incentive to invent will be lost. Employees in these categories

are a fruitful source of practical inventions that are a result of the solutions of problems encountered in their work. Moreover, by acquiring title to inventions made by non-technical Government employees, the Government does not receive such benefits as would warrant the risk of destroying their incentives inasmuch as the Government by operation of law receives a license under their inventions.

"3. The Order will substantially increase the administrative load and expenses of the Department of Defense in that it will require the preparation and submission to the Chairman of the Government Patents Board of reports on a large number of inventions made by non-research and development employees with respect to which the Government will not and in equity should not take title. Moreover, the Order will add a new Government agency for patent administration, including a new board. With respect to this new board it should be pointed out that although more than 80 percent of the employee inventions reported by Government agencies are made by Armed Services employees, the Army, Navy and Air Force are not represented on the Government Patents Board. There is but one member for the Department of Defense on a board of ten members.

"As stated at the outset of this letter, we have consistently opposed the proposals thus far made for an Executive Order on Government employee patent policy. We have not done so in a spirit of obstructionism, but, rather, have repeatedly sought to obtain a workable solution to the problem which we believed could be arrived at by consideration of representatives of interested agencies. In the absence of such inter-agency discussions, the military departments have devoted considerable study to the problem involved in this Order. In this connection, I should like to refer you to a report on the Navy Patent Policy, dated 23 June 1948, which, I am informed, has received the concurrence of the Departments of the Army and Air Force and has been forwarded to the Bureau of the Budget. While the enclosed suggested revision of section 1 goes considerably further than the policies set forth in that report, it is acceptable to the military departments as a compromise and in my opinion it is a reasonable compromise under which the Department of Defense could operate. I hope that you will give it careful consideration.

Sincerely yours,"

Inclosures

The Honorable John R. Steelman
The Assistant to the President
The White House

cc: Honorable Frank Pace, Jr.
- Director, Bureau of the Budget - - - - -

The first enclosure to the above letter was the suggested compromise policy mentioned in the last paragraph of the Secretary of Defense letter and reads as follows:

"Amendment to Section 1 of Proposed
Executive Order Relating to Inventions of
Government Employees

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

(a) The title to the invention and to any patent secured on it vests in the Government when an employee

(1) is employed to invent and makes an invention within the scope of the defined employment; or

(2) is assigned to a task having as its object the devising, the improving or the perfecting of methods or means for accomplishing a prescribed result and makes an invention or reduces one to practice within the scope of the assignment; or

(3) is employed to supervise, direct, coordinate, review, or take official action with reference to the work of those falling within the foregoing categories and makes an invention relating to such work.

(b) The title to the invention and to any patent secured on it resides in the employee but subject to a non-exclusive, irrevocable, royalty-free license to the Government for all governmental purposes the world over when an employee is not employed as in (a) but

(1) makes an invention within the scope of his general employment; or

(2) makes an invention outside the scope of his general employment but utilizing Government time, facilities, materials, or services during working hours of other Government employees.

(c) The title to the invention and to any patent secured on it is the property of the employee subject to no right of the Government when an employee makes an invention not within the circumstances defined in (a) or (b).

"2. (a) It shall be presumed that all employees connected with research, engineering, design or development fall within 1(a) subject to a showing by them that they fall

within 1(b) or 1(c), and also subject to the approval of the Chairman of the Government Patents Board.

(b) It shall be presumed that employees other than those defined in 2 (a) fall within 1(b) subject to a showing by the Government that they fall within 1(a) or a showing by them that they fall within 1(c). The Chairman may, upon his request, review any case falling within this category."

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Also included with the Secretary of Defense letter was a memorandum prepared by the Chief of the Patents Division of the Army tabulating the number of patent applications that had been filed by Government employees. It is here reproduced in full.

"17 January 1950

"MEMORANDUM

"SUBJECT: Government Employee Inventions subject to Government Interest as Recorded in Patent Office

"1. Executive Order 9424, 18 Feb 1944 (9 FR 1959) requires that all instruments evidencing Government interests in patents and patent applications be recorded in the Patent Office.

"2. A search of the Records in the Assignment Division of the Patent Office on 16 January 1950 discloses the following information with respect to inventions made by the employees of the different government departments and agencies.

DEPARTMENT OF DEFENSE

	<u>Patents</u>	<u>Patent Applica- tions</u>
Navy	2132	2441
Army (includes Air Force until recently)	3552	1845
Air Force	74	142
	5758	4428

ALL OTHER GOVERNMENT AGENCIES

Agriculture	982	619
Commerce	129	20
TVA	113	22
Justice	80	231
Interior	80	46
AEC	64	2
Treasury	34	1
Federal Security Agency	14	0
Federal Works Administration	9	0

Maritime Commission	6	0
OSRD	4	3
Bureau of the Budget	3	0
Federal Communications Commission	3	0
Capitol Architect	3	0
Bureau of Econ. Warfare	2	0
Central Statistics Bureau	2	0
Govt. Printing Office	2	0
ICC	2	0
Post Office	2	0
CCC	1	0
Labor Dept.	1	0
Natl. Housing Authority	1	0
War Production Board	1	0
State Dept.	0	1
Genl. Svc. Agency	0	1
Archives	1	0
TOTAL	1539	947

"3. The following summary of the above figures on Government employee inventions contrasts the number made by employees of the Department of Defense as compared by those of all other Departments and agencies combined:

<u>Patents</u>		<u>% of Total</u>
Department of Defense	5758	79.4
All other Govt. Agencies	1539	20.6
TOTAL	7297	100.

<u>Patent Applications</u>		
Department of Defense	4428	82.5
All other Govt. Agencies	947	17.5
TOTAL	5375	100.

<u>Grand Total</u> <u>of</u> <u>Patents and Patent</u> <u>Applications</u>		
Department of Defense	10186	82.0
All other Govt. Agencies	2486	18.0

/s/ George W. Gardes
 GEORGE W. GARDES
 Colonel, JAGC
 Chief, Patents Division"

The final memorandum returning the correspondence to file reads:

"Attached letter was not sent because Executive Order 10096 was signed by President Truman on January 23."

Thus the views of the Defense Department were never considered by those responsible for forwarding the Order to the President for signature. ||

EXECUTIVE ORDER 10096 (Signed January 23, 1950)

The policy established by the Executive Order is found in Paragraphs 1(a) to (d) thereof, here reproduced in full:

"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 same 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."

THE POLICY IS VAGUE AND INDEFINITE

Paragraph 1(a) of the policy establishes three criteria for determining when the Government shall obtain the entire right, title

and interest in and to the invention. The second criterion, however, breaks down into several additional criteria, but for purposes of discussion here they may be considered as one.

Although paragraph 1(a) is mandatory, as written, it is modified by 1(b). This paragraph states that the Government shall obtain a license:

"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 of the invention.
* * *"

Analyzing this it establishes that if any one or more of the criteria is insufficient equitably, then title remains in the employee. Analyzing further the words "any one or more", it will be noted they are in the subjunctive, not the conjunctive. Therefore they must of necessity mean, or otherwise the paragraph is meaningless, that

- (a) If one of the criteria is insufficient equitably then assignment will not be required; or
- (b) If more than one of the criteria is insufficient equitably, then assignment will not be required.

The Armed Services have contended that because of this language it must be initially found that all three of the criteria of paragraph 1(a) are present before the case is one requiring assignment. If any one of the criteria is absent it follows that "one of the criteria is insufficient equitably", for how can a requirement which is absent ever be sufficient equitably?

Carrying this one step further, when all three are present, then title should not be required if any one criterion is insufficient equitably or any combination, i.e., more than one, is insufficient.

However, this interpretation has not been accepted on the assumption that this was not the intent of the Order. It is asserted that the presence of any one of the criteria set forth in paragraph 1(a) is sufficient to require assignment if that one criterion is equitably sufficient.

It becomes apparent that the Order is far more limiting on the rights of employees than either the rules of the Supreme Court or the rule established by the Congress and approved by the President in the National Science Foundation Act. The rule established in the National Science Foundation Act became law subsequent to the issuance of the Order.

Although the question of the cost of administration is discussed later, the present interpretation of the Order results in a heavy administration load. If an agency determines that any one of the criteria in paragraph 1(a) is present and decides to leave title with the employee, then the case must be referred to the Chairman of the Government Patents Board for his approval or disapproval. If the agency determines to take title then the employee must petition the Chairman if he believes title should remain with him.

The result is chaotic, so far as employees are concerned. They do not have any clear-cut indication of what their rights are, nor can anyone advise them. The final interpretation in each case rests entirely with the Chairman of the Government Patents Board. One employee succinctly states it as follows.

"Obviously, the cooperation of the inventor is essential to the operation of the Executive Order and it is my view, that the expressed terms of the Executive Order be clarified to set forth a clear basis for the determination of the respective right of the Government and of the inventor in such full and clear terms that the inventor may be apprized of his rights in and to those inventions which he has made."

THE ORDER IS BROADER THAN INDUSTRIAL PRACTICES

In preparing Executive Order 10096 little consideration was given to the fact that the Armed Services have two distinct types of activities, the first, its research activities, and the second, its production and maintenance activities. Under no decision of the Supreme Court or of any other Court has an employee ever been required to assign his invention to the employer, unless he was specifically hired or assigned to make inventions, yet the Executive Order makes no clear distinction in this regard, it merely presumes.

Much has been said about the Order following industrial practices, and it is alleged by many that most corporations require all employees to sign contract agreements giving the employer control of their inventions. This is a fallacious belief. In preparing the Armed Services Procurement Regulation it was learned that substantially every union contract provides that the employer may obtain only a shop right under an invention made by a union employee, and at times an option to acquire title. It is only the contract employees who may be bound to give more than a shop right.

By far the best study on the subject of Industrial Practice is found in "Trends in Industrial Research and Patent Practices" published by the National Association of Manufacturers. An analysis of replies received from 684 corporations with annual sales running from \$50,000 to over \$30,000,000 indicated that 136 of the corporations required assignment of inventions of employees when they "resulted from his employment activity" and this was the most stringent requirement.

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This is the limitation formerly followed by the Armed Services. They required assignment when "an employee was directed to make or improve a specific device, means, method, or process, and in the performance of such duty he makes an invention bearing upon that particular device, means, method, or process."

231 of the corporations required assignments only when the invention fell within their particular field of business. Six had other types of assignments and 19 did not answer.

Out of the 684 who reported, only 77 required agreements from all personnel and only 173 required agreements from their research and engineering staff. In addition, 32 required agreements, not only from their research and engineering staff but also from their executives and supervisory force. 68 further included all technical employees and 58 also included sales and service personnel.

It becomes evident that the practice in Industry, far from requiring agreements from all personnel, only requires agreements from a very limited number of personnel and only about 25% of the corporations require any agreement.

The figures given above are rather startling when it is considered that Industry exploits inventions for a profit motive, whereas the Armed Services utilize inventions to increase their efficiency and their ability to build a better Army, Navy and Air Force. Industries' liberality is all the more startling when it is realized that their salary scale does not stop at \$10,000 except for the so-called 'super grades'!

THE ORDER DESTROYS "INCENTIVE"

The Services were established to uphold our national policies and interests, to support our commerce and our international obligations, and to guard the United States including its overseas possessions and dependencies. To accomplish this purpose it is necessary to build and maintain the most powerful Force in the world. However, no Service can long remain powerful without constantly improving its material and techniques. It must actively participate in research and experimentation and must encourage new ideas and developments, by its employees as well as by industry.

Among its employees the Services have found by experience that the method of leaving commercial rights with the inventors when the law permits, not only is the best and most equitable way of encouraging new ideas by its employees, but also is best suited to attracting into its service scientists and technicians who have the training and background necessary for its research and experimentation program.

Whether or not the ideas originated by its employees are, or may result in, patentable inventions is of secondary importance. Of primary importance is the fact that the employees do originate new ideas. The question of patentability is considered only because the Government must be protected

from the possibility that inventions by its employees may subsequently be patented by others, thereby opening the doors to costly litigations against the Government.

Under the Attorney General Report policy, the requirement of taking title to inventions made "during working hours" or related to the employee's "official functions" would discriminate against inventors. It would be, in effect, penalize inventive employees because their ideas were in the very fields of science or the arts in which the Constitution and Congress wished to encourage new ideas.

Many ideas which are not patentable inventions still have commercial value. Suppose an employee, during working hours, develops a new system of bookkeeping. The employee was not hired to originate new methods of doing bookkeeping but was merely employed to keep the books of one of the bureaus. Systems of doing business are generally not patentable inventions. Not only might the employee receive an award under P.L. 600, 79th Congress, 60 Stat. 809, but he could retain title to his idea and might still get commercial profit by selling it to business firms, or by writing a book on the method and obtaining profits from its sales.

On the other hand, suppose a technician, hired to keep certain radio equipment in repair, while on duty originates a new radio circuit, and this circuit is a patentable invention. This technician was not hired to originate radio circuits, therefore, under P.L. 600 he might also receive a reward. However, since his idea is an invention, the AGR policy could require him to assign all his rights to the Government, thereby denying him any opportunity to realize further gains from his idea. Of course, if the technician happened also to be an enlisted man, then, not only would he lose title to his invention, but he could not receive a reward under P.L. 600, since the Act excludes military personnel from its benefits.

When questioned on what would happen if the AGR patent policy were adopted, one of the Services foremost inventors stated

"Government inventors will not file patent applications without strong incentives. The preparation of patent disclosures, the legal red tape that goes with making patent applications, and the nature of the controversies involved in patent interferences are in themselves distasteful to the average engineer. In addition, they are particularly annoying when they take his time away from the technical work in which he is primarily interested. In commercial companies the initiative is taken by legal engineers in seeking out patentable material in the laboratories and taking steps to protect the company's interest in such matters. Such a process appears to be infeasible at NRL because of the tremendously expanded legal department that would be required to perform this function. If the Government's interests, and therefore, the people's interests, are to be protected, some alternate provision is necessary to get the

engineers to file patent applications. Present Navy policy in this regard provides in part the necessary incentive. Even with this policy it is still necessary to stimulate by direct action the keeping of proper legal records and the filing of important patent applications.

"Present policy is an important factor in attracting and holding a certain type of scientist. This writer testifies that were it not for the hope, through commercial rights on patents, of filling the gap between his Government salary and the average value of his many commercial offers, he would never bother to file patent applications for the Navy. The use of other pressures to force filing of patent applications would only serve to make commercial offers appear even more attractive."

Another Scientist said:

"Incentive systems which definitely offer promotions are not considered feasible under a civil service set-up. Of course, patents could be weighted in considering a promotion chiefly based on other considerations, but it is presumed that that is already the case. Lump-sum payments such as employed in industry to a considerable degree, offer about the only alternative. However, such systems unless carefully administered will result in more 'thumbscrew' patents than the present system and at greater expense to the Government. Moreover, unless the sums are graduated up to large amounts the individual may decide that his personal advantage lies in concealing an important invention until after severing Federal employment. A valuable patentable device would also serve as a strong bargaining point in obtaining other employment."

The above statements were made before the Order issued; the following were recently made by employees:

"Under the present suggestion program, which is considered to be a very good program, there is more profit to government employees in proposing minor and many times insignificant changes such as strategically locating drinking fountains and spittoons than in getting an invention adopted."

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"Industry recognizes that incentive must be provided to stimulate invention and has provided incentives through the medium of higher salaries, bonuses, or profit sharing. (The frequency of use of the incentive system by 233 large companies has been summarized in 28 JPOS 110). While the Government is on a par with industry in providing promotion for the apprentice scientist the difficulty arises among those men having unusual

inventive talent who are usually at the GS-12 to GS-11 Civil Service Grade. In the higher grades promotions become of importance to the organizational structure of the unit. The result is that valuable inventions can be rewarded only to a limited extent. Therefore, present policy is detrimental to the incentive to invent of the most valuable type of talent."

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"On the basis of limited statistical information received a decrease in the number of invention disclosures submitted to patent personnel has already occurred and can be expected to decrease further.

"The Army Ordnance Detroit Arsenal reports the following statistics on the number of invention disclosures received:

<u>"Period</u>	<u>Total Disclosures Received</u>	<u>Percentage of Inventions by Government Employees Only</u>
Jan-1948--Jan-1950	73	49.3
Jan-1950--Jan-1952	125	5.6

Inasmuch as the period Jan-1950--Jan-1952 was a period of increased research activity as compared with the period Jan-1948--Jan-1950, the statistics show a marked decrease in the number of inventions submitted by Government employees."

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"It is an accepted fact that salaries in Government scientific work are less than corresponding salaries in industry by a factor of 3/4 to 1/2. The other circumstances surrounding Government employment, such as prestige, leave privileges, retirement, etc. are at the present time only slightly more advantageous than those offered in industry and are steadily becoming less attractive as Congress whittles away privileges of Government workers and as industry adopts more liberal policies. Consequently, a liberal patent policy might be a deciding factor in recruiting new employees and retaining old employees, particularly with respect to employees with inventive talent."

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"If an employee conceives a new item having very valuable non-military use, he regards these as his own and may resign his position rather than lose all rights in the non-military exploitation of the invention."

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"The Government needs no more than the assurance of 'Freedom of Use' with respect to patents and such use may be secured by a license. The Government should not be interested in excluding others from using inventions

because it is not incommmercial competition. Therefore, it appears that the Government by present policy is taking title to employee inventions for no valid reason."

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"Under the former policy, the Government not only enjoyed all the rights necessary for its operations but in addition, provided a means of rewarding inventors for their contributions at no additional cost. Furthermore, the inventor would be rewarded purely on the worth of his invention as judged by business men."

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"Keeping adequate records for patent purposes, preparing disclosure records and aiding patent personnel in the prosecution of applications is a chore for scientists which requires a certain amount of extra effort. Without any individual stimulus, employees have relaxed their efforts to record inventions. Issuance of a patent in his name in the remote future does not counterbalance human inertia and certainly does not generate an aggressive attitude toward reporting inventions. While in some fields patent personnel may be able to recognize potential invention by inspection of records, logs, and the like, such solution is generally not practical because of the enormous output and swift development in research activities. The cooperation of the inventor is essential."

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Of the foregoing comments the last is particularly significant in pointing up a serious problem, and explains one of the reasons why invention disclosures received from Government employees are falling off. Although research personnel normally maintain notebooks, the Government does not have and never has had enough patent personnel to carefully scrutinize the notebooks to determine whether there is something in them which discloses an invention. It is necessary to depend upon the individual employee to make the disclosure. Employees do not object to making disclosures and heretofore did most of it on their own time, but without any incentive they obviously are not going to utilize their own time for this purpose. If, on the other hand, they must fill out numerous reports and forms, during working hours, the primary purpose for which they were employed is being defeated and the Government is paying extra for that which it does not use.

THE ORDER PREVENTS RETENTION OR HIRING OF COMPETENT PERSONNEL

One needs but to consider the difficulties heretofore encountered in retaining competent personnel to appreciate the value of the incentive of leaving rights with employees.

The difficulty of retaining scientists within the Government is apparent from the report of Mr. John R. Steelman on "Manpower for Research", 11 October 1947. This report states (p. 17):

"Government competition is strong for scientists in the earlier stages of their careers. Due to the general \$10,000 ceiling on salaries, however, the Federal scientific program has difficulty in holding those of longer experience or of outstanding ability. Thus both Government and the universities and colleges are at a sharp disadvantage in salary competition with industry."

The Steelman Report further shows the distribution of scientists in 1937 as follows:

"20% in Government
30% in Industry
50% in Colleges and Universities

Ten years later the Government had succeeded in increasing its number by 2%, whereas the number in industry had risen 12%, the total loss being in colleges and universities."

Thus, in the competition for scientists, between Government and industry, the Government is a poor second. About the only incentive that the Government can offer is the right to retain patent rights for commercial exploitation. Lacking this incentive, the scientists will either transfer to industry, where they will receive better salaries, or go back to the colleges and universities where they will have freedom from many of the restrictions they face as Government employees, and where, in many universities, they will be permitted to act as consultants to industry for remuneration.

In the lower Court decision in United States vs. Dubilier Condenser Corp., (49 F. 2d. 306), p. 312, Judge Niels stated as follows:

"The Bureau of Standards has upon its staff a large number of employees engaged in specific fields of activity and to a certain extent engaged in research work. To hold that every invention made by one of these research workers under the facts disclosed in this case automatically became the property of the United States would, I think, be not only contrary to the law as laid down by the Supreme Court, but have a strong tendency to destroy the morals of the Bureau and take away a just incentive on the part of its employees to make inventions; that is, a personal reward for their efforts, bearing always in mind that the Government is entitled to the full use of all such inventions. 2/

"In commenting upon the retirement of Dr. Samuel W. Stratton, formerly Director of the Bureau of Standards, President Hoover, then Secretary of Commerce, said:

"While the Massachusetts Institute of Technology is to be congratulated on securing Dr. Stratton, one cannot overlook the fact that the desperately poor pay which our Government gives

to great experts makes it impossible for us to retain men capable of performing the great responsibility which is placed upon them. The Institute of Technology, an educational institution, finds no difficulty in paying a man of Dr. Stratton's caliber three times the salary the Government is able to pay him.

'Dr. Stratton has repeatedly refused large offers before, but the inability of the scientific men in the Government to properly support themselves and their families under the living conditions in Washington and to make any provision for old age makes it impossible for any responsible department head to secure such men for public service at Government salaries.'

"Under such conditions, should the normal reward of inventors be withheld from research workers in the Bureau of Standards? I think not. To do so would measurably crush the inventive genius, enthusiasm, and spirit of the employees. It would drive unusual men out of the public service and correspondingly lower the efficiency of the Bureau. If the rules of law heretofore prevailing are to be extended to bring about this result, resort should be had to the Congress and not to the courts."

The Bureau of Fisheries (now the Fish and Wildlife Service) has also found "That its top-rank men were being 'lured away' by the higher salaries paid outside the Government." (AGR, Vol. II, p. 195).

The AGR has proposed a system of awards to replace the incentive of leaving commercial rights to inventions with the employees. Major General Phillip B. Fleming, Administrator of the Federal Works Agency, in 1945 stated his opinion that

"while a general system of awards may encourage valuable suggestions, it is not believed to be a sufficient incentive to invent * * *"

and recommended that commercial rights to inventions remain with the employees (AGR, Vol. II, p. 163).

The attitude of the Government employee is not particularly different from that of other human beings; they are seeking a fair return for what they give. The standards of Civil Service employment are very high but the returns are seldom commensurate. Career Government employees may look forward to the possibility of getting to the Grade 15 level but seldom beyond this. One employee, a doctor of philosophy sums it up as follows:

"Several factors made the return to Government Service in 1949 seem attractive, none of which was salary. A liberal patent policy, a liberal annual and sick leave policy, good working conditions, and a freedom of thought and time.

Unfortunately, all of these factors have been taken away from the individual in the past two years.

"A recent article in McCalls magazine compared the salaries of Government and Industrial employees at various levels of responsibilities. Except for secretarial level of employment, Government salaries are about 50 per cent or less of those in industry at comparable levels of responsibility. A liberal patent policy could compensate, in part, for this discrepancy.

"Man is, by nature, selfish. Being selfish he is not prone to give away his ideas or 'gadgets' that took years of time and effort to develop, unless of course, that was the condition under which he accepted employment. Many Government employees did not accept employment under the regulations that now exist, nor were they given any opportunity, until now, to voice their opinion on policy matters that affect their livelihood. In industry an individual with vision and ability is compensated by increased salary or bonus or even a percentage of royalties. In Government, as of now, an individual receives no added remuneration for a patentable idea or process. It is recognized that the Government should be entitled to a royalty-free license on patents developed by Government employees but the employees should have an option to develop the commercial aspects of the invention without prejudice to his position."

Another employee states:

"My educational background includes the degrees, Electrical Engineer and Doctor of Science and approximately 10 years of research experience, eight of which have been at supervisory level. For six years immediately previous to my coming to NRL, I was a member of the staff of the Applied Science Research Laboratory of the University of Cincinnati. During this period I engaged in several researches, two of which brought me to the attention of the Armed Services. I did the basic metallurgical research leading to the successful manufacture of hollow steel aircraft propeller blades for the Air Force, and I invented and developed the electromagnetic underwater log (ship speed indicating device) which will soon undergo acceptance trials for the Navy.

"I was approached by several organizations with offers of what then appeared to be fabulous salaries, but what interested me most was NRL which offered no net increase in salary, but rather the opportunity to procure commercial rights to my inventions and the opportunity to do basic work in the field of magnetic amplifications. I joined NRL as a Unit Head at the P-4 level in September 1949.

"In the two years since joining NRL, I have led first a unit, and then a Section which has consisted for most of the time of only two men besides myself. My work has resulted to

date in eight patent disclosures on new and improved circuitry and a new theoretical approach to solutions of magnetic amplifier problems. There have been four formal publications one in the AIEE and numerous publications and references to this work in Navy and commercial periodicals. I and two of my men have delivered technical papers and served as speakers for meetings of technical societies literally from coast to coast. Visitors from industry and Government bureaus are continually using our laboratory for a source of consultation and information.

"When Executive Order 10096 was announced I immediately sought opinions from legally trained friends both inside and outside the Government. Their net opinions indicated that the results would be detrimental to the National interest and that this arbitrary breach of contract was somewhat illegal. They believed the order would soon be rescinded or declared unconstitutional. It is the latter which has held me to my post, but I have now concluded that this is a false hope, since arbitrary actions on the part of our government are becoming more and more prevalent.

"This has called for a re-evaluation of my position here. I have found that it is no longer to my advantage to remain at NRL and I am now examining some positions in private industry which prove more remunerative for my special talents. I can say, quite frankly, that the offers I am receiving from well established and stable organizations make my present salary look quite small. Since comparisons can now be made only on the basis of salary I seem to have no choice."

Another employee states:

"As an example close to home, I am working on an accelerometer, alone, at home. My job is not to invent an accelerometer nor to improve an existing instrument. If the old Navy policy were in effect I would bring the Navy my ideas, and if they looked good the Navy might desire that I utilize some Navy facilities to produce a still better instrument and a patent owned jointly might eventually be obtained.

"However, with the patent policy in a state of turmoil, I am in no mood to have my title to such an invention clouded by asking professional advice of anyone in the Navy Department."

A former employee who left Government employment with the issuance of the Executive Order states:

"This important development has established me as the leader in this field and this leadership has not been challenged to date. The Signal Corps and the Air Force have offered me contracts, and discussions have been held with the

Bureau of Aeronautics of the Navy for the purpose of determining whether a contract could be arranged. I have consistently declined to accept any contract which would be subject to the provisions of Order 10096. I decline to put myself into any position which will deprive me of a just and reasonable participation in the fruits of my labor through ownership of commercial rights under my patents. Inasmuch as I do not possess a private laboratory so that I could accept one of these proffered contracts as an outside contractor and thereby circumvent order 10096, my further participation in this important field has been stopped completely. I would have no objection to accepting a contract wherein the Government would obtain a royalty-free non-exclusive license under any and all patents which might flow from such a contract provided I could retain commercial rights."

The Chief of Transportation of the United States Army submitted the following:

"Informal discussion with TC employees who had submitted inventive disclosures prior to EO 10096 disclosed that such employees had lost all interest in processing inventive disclosures through the Government or in striving for invention in the course of their general employment. They were also opposed to submitting inventions made on their own time and at their own expense in view of the complicated procedures set out in EO 10096 and regulations thereunder and the ever present possibility that some one may insist upon the Government taking title to a patent covering such an invention. For your information most of the inventions submitted by TC employees for patent applications were made by employees on their own time and at their own expense.

"In view of the above stated comments and the fact that present policy on employee patents is set out in an Executive Order signed by the President, it is not surprising to this office that Armed Services Patent Policy Review Board has not received as many comments as desired on the joint circular above mentioned."

Another employee states:

"To operate effectively, our laboratory absolutely must be able to compete with private industry, for competent physicists and engineers, particularly at the top levels. It is a sober fact that industry is offering \$2,000 more per year than the Government for men with a Master's degree in servomechanisms and no experience. For experienced men the differential is greater. In two years of searching our section has not succeeded in hiring a single man of either category. In that period, industry has siphoned off key personnel throughout the laboratory. There was a time when skilled, aggressive people

could be attracted because they were willing to gamble on an immediate salary loss, confidently expecting commercial patent rights for their outstanding contributions. Executive Order 10096 leaves us totally unable to compete for personnel in fields which parallel the needs of industry. Still worse, we are threatened with the loss of key personnel who feel the order was a breach of contract." (Emphasis added)

The matter of incentive is so important that the Naval Inspector General has recommended that the "Office of Naval Research make strong representations to the Armed Services Patent Policy Review Board, and other Agencies concerned, to alleviate the personnel problems of research employees resulting from the President's Executive Order 10096."

The recommendations followed a visit by the Naval Inspector General to the Naval Research Laboratory, in which it was made clear to him that extreme difficulties were being encountered in recruiting and retaining technical employees by reason of the limitations imposed by the Executive Order.

The difficulties are so clearly set forth in a letter from the Director of the Laboratory, that the body of the letter is quoted in full:

"The conduct of research within the Department of Defense on the framework of Civil Service employment regulations is an essential function, but one attended with the most serious obstacles from personnel recruitment through to the final product of the Laboratory's efforts. In the present state of technical personnel supply and management problems, few of these obstacles are unrelated to the human equation. It is felt that a realistic and positive patent policy could offer most material assistance to the function of the Laboratory through the latter channel.

"At one time it was possible to select technical personnel of research caliber for research problems; the present manpower situation demands the use of available personnel rather than selected men in the former sense. In consequence our research staff now encompasses not only the dedicated scientists, but in substantial degree individuals ranged ~~will~~ toward the opposite extreme. This broader basis of the research effort necessarily exists throughout the research establishments of the Department of Defense. It renders more opportune than ever the formulation of a patent policy geared to research productivity because of the intensified management problem and the increased susceptibility of our personnel to such stimulus.

"A critical encumbrance of Governmental research-personnel administration lies in the massive award and promotion machinery available for the recognition of research productivity. Such facilities should be easily available to management; their absence is acutely embarrassing due to their competitive use

by private research organizations with the fullest freedom. Additionally, industrial award and bonus programs in recognition of inventions are being expanded.

"It is exactly at this juncture that present patent policy fails of any assurance to the productive research employee. When our research personnel pool is most receptive to economic stimulus and their inventive productivity is most critical to the national security, we are faced with the asymptotic case by case resolution of a policy which bodes a confusion enduring through the present emergency. The necessity for reviewing the effects of the present policy was never more pressing, and the prospective results of an affirmative support of individual initiative never more promising.

"Other factors than inventive initiative contribute to the urgency of this review. The essential need for a Department of Defense patent program is freedom of procurement without royalties on Governmental research products. In recent years disclosure of Governmental inventions to representatives of industry has moved far beyond the requirement of procurement, from the final product to the early stages of research programming. The latter takes place, for instance, in consideration of the Laboratory's program and research problems by R.D.B. panels which include members from industry. While it is not believed that this type of disclosure should be limited for the purposes of patent protection any more than is the necessary disclosure for military procurement, manifestly the need for prompt filing of Government patent applications has increased.

"Without any individual stimulus, employees generally relax their efforts to maintain necessary legal records, and the inventive employee frequently hesitates to submit his development to the patent activity for consideration. Issue of a patent in his name in the remote future often does not counterbalance the human inertia, and despite his knowledge that a Government asset is unprotected, he fails to prepare the patent disclosure and undertake its necessary discussion and analysis for patent purposes. While in some fields patent personnel may be able to recognize potential invention by inspection of reports and research logs, such solution is not practical at the Laboratory because of the enormous output by the technical staff and the swift developments in the fields in which they work. If the patent personnel attempted to keep abreast of the general advance in all technical fields of Laboratory research, little if any time would be available for their primary operations. Recognition of probable invention, as a practical matter, must depend essentially on the research staff. Maintenance of adequate notebook records to establish dates of invention can only be secured by the cooperation of the research employees. Reliance on administrative directives apart from personal interest is an unsure procedure in the protection of essential Government rights.

"At the Laboratory, the impact of Executive Order 10096 has begun its development. In the two years since its issue, the Research Department staff has expanded 23%, while invention disclosures for calendar year 1951 fell 5% under the figure for 1949. A comparison based on past experience is probably indicative of what may be expected. The Bureau of Standards has long operated on the basis of complete acquisition of rights in inventions, and is somewhat comparable in size and fields of activity to the Laboratory. The Attorney General's Investigation of Government Patent Practices (Report, Vol. II, PP 98-99) shows that between 1930 and 1943, 59 patents were obtained by the Bureau, and new inventions were being made at the rate of about one a month in late 1944. At the Laboratory, during the 12 years referred to, 314 patents were issued, and new inventions were being reported at the rate of 44 a month through the last half of 1944.

"From the viewpoint of research personnel administrative and Governmental protection in freedom of procurement, present patent policies appear inadequate from the experience of this Laboratory. The Laboratory therefore recommends:

1. That the present confusion on the ownership of patent rights be clarified.
2. That Department of Defense patent policy be framed as an instrumental stimulation to individual initiative in invention.
3. That Department of Defense patent policy compensate in part the difficulties inherent in alternate channels of employee recognition.
4. That Department of Defense patent policy encourage the maintenance of individual research records and disclosure of inventions within the Department for purposes of patent protection.

"From the viewpoints of administrative simplicity and economy of Governmental expenditure, the aims of the last paragraph can best be accomplished by leaving the title with the inventor subject to a Governmental license."

INCREASED GOVERNMENT COSTS

As previously pointed out, invention disclosures are falling off and if as a result thereof another obtains a patent on a device being used by

the Government, the Government will at least be open to a suit and its principal defense would be to prove prior invention. Such a defense could not be raised if the matter has been classified, for classified information is not "public." Moreover, if only paper records are available these cannot be used for Government files are not public and the Congress has repeatedly refused to make them public or to establish a defense for the Government on the basis of "information in its files." It is impossible to even estimate the potential damage that may occur.

It is much easier to establish the actual increase in dollar expenditure that has resulted from the issuance of the Executive Order. Paragraph 3(c) of the Order provides:

"Consonant with law, the agencies referred to in paragraph 3(a) hereof shall as may be necessary for the purpose of effectuating this order furnish assistance to the Board in accordance with section 214 of the Independent Offices Appropriation Act, 1946, 59 Stat. 134, 31 USC 691. The Department of Commerce shall provide necessary office accommodations and facilities for the use of the Board and the Chairman."

The provision of the law reads as follows:

"Appropriations of the executive departments and independent establishments of the Government shall be available for the expenses of committees, boards, or other interagency groups engaged in authorized activities of common interest to such departments and establishments and composed in whole or in part of representatives thereof who receive no additional compensation by virtue of such membership; PROVIDED, That employees of such departments and establishments rendering service for such committees, boards, or other groups, other than as representatives, shall receive no additional compensation by virtue of such service. May 3, 1945, c. 106, Title II, S 214, 59 Stat. 134."

The intent of this Act was to provide administrative support for Interdepartmental Boards or Committees but not to support a permanent organization. At present the office of the Chairman of the Board, including the salary of the Chairman, is being paid from appropriations of other Departments. The following contributions have been made by the Department of Defense:

1951	-	\$35,000
1952	-	50,000

In 1953 \$75,000 was requested but the Chairman of the Board has been informed that in view of cutbacks the Department of Defense may only contribute \$50,000.

Cash outlay isn't all; based on a survey made by the Department of the Army, it is presently taking 400 man hours a month for that Department to administer the Order. Multiplying this by three, which is a fair estimate, inasmuch as the Department of the Navy has a heavier workload and the Department of the Air Force a lighter workload, it amounts to 1200 man hours per month for the three Services. This is a total of 14,400 man hours a year and at the conservative rate of \$2.50 per hour it represents \$36,000.

The above does not take into consideration the meetings of the Government Patents Board, of which there have been at least 22, averaging 2 hours each, or a total of 440 man hours of top Government personnel. In addition, there have been numerous subcommittees drawn from various agencies working out procedures, reports and gathering other miscellaneous information.

It thus appears that it is costing the Department of Defense over \$100,000 a year, not counting what it is costing other agencies.

THE GOVERNMENT PATENTS BOARD IS NOT A BOARD

A further objection is the fact that the Board is not a Board. At present the so-called Board includes the members from -

Department of Agriculture
 Department of Commerce
 Department of the Interior
 Department of Justice
 Department of State
 Department of Defense
 Civil Service Commission
 Federal Security Agency
 National Advisory Committee for Aeronautics
 General Services Administration

The members serve only in an advisory capacity. The Chairman is the only one who may make recommendations to the President with respect to policy. He may accept or reject any recommendation made by the Board or by any other committee he establishes. The Board (Par 3(b)) -

"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."

But the Chairman is authorized and directed;

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

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;

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;

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

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

It is clear that the administration of a problem which relates to the morale of every Government employee is completely removed from the Secretaries of the Departments and placed in the hands of the Chairman of the Government Patents Board. Departments of the Army, Navy and Air Force are represented only through the one member from the Department of Defense. An 80% interest with a 10% representation! The percentage is based on Government employee applications pending in the Patent Office. Of the remaining 20% interest almost 60% represents applications of Department of Agriculture employees. The remainder are scattered through other agencies.

SUMMARY

It may be said from the foregoing discussions that:

- (1) The policy outlined in Executive Order 10096 is vague and indefinite and neither follows the Law, as established by the Supreme Court, of the Rules established by the Congress;
- (2) The Order is broader than the practices followed in Industry;
- (3) The Order has resulted in a reduction of invention disclosures;
- (4) It has destroyed the incentive of employees to make invention disclosures;

(5) It has made recruiting difficult and present employees are considering leaving Government employ;

(6) The Order is costing the Department of Defense at least \$100,000 a year; and

(7) The Board established under the Order is not in fact a Board. Prerogatives of the Secretaries in administering their own Departments has been given to the Chairman of the Government Patents Board.

SECTION IVAWARDS SYSTEM

It has been repeatedly proposed that an Awards System should be established for compensating inventors. There are some Government employees who believe that such an Awards System would offset the ill effects of Executive Order 10096 and some of their reasons for such a system are as follows:

"The reward which an inventor may receive from the commercial exploitation of his invention is not necessarily proportional to the value of the invention to the Government.

"The commercial exploitation of an invention is a difficult matter and one in which the employees, in most cases, are not skilled. An inventor may therefore not be properly rewarded even though his invention is of a value to the Government.

"The exploitation of an invention would absorb a great deal of the employee's time and effort and may thereby impair his value to the Government.

"Under former policy, secrecy between scientists resulted in some cases from a fear of 'idea piracy', which is fatal to the free flow of information, a necessary prerequisite of all research."

Other employees feel that an Awards System is adequate for military inventions but on non-military inventions the commercial rights should be left with the employee. The opinion appears to be unanimous that incentive is desirable and that an Awards System should be established. The important question is the selection of a proper Awards System.

INDUSTRY PRACTICE

Again it would do well to look toward Industrial practice and the following is quoted from Trends in Industrial Research and Patent Practices:

"Q. 6. Is any compensation other than salary stipulated in the contract paid for meritorious inventions?"

"The majority of those reporting state that no extra compensation for a meritorious invention is provided in the employees' contract, only 35% replying that they had such a provision. There is a wide variation as to how compensation, other than salary is to be paid, as appears from the answers to the next following questions.

"Q. 7. If so, is it by:

- a. Promotion and salary increases?
- b. Bonus? Is bonus fixed? Does it vary with importance of invention?
- c. Fixed fee for each invention? Amount?
- d. Royalties?
- e. Other?

"a. Thirty per cent of the 193 companies reporting that they pay such extra compensation stated that it is made by means of promotion and salary increases. g

"b. Twenty-seven per cent pay a bonus which often varies with the importance of the invention, and many of those giving extra compensations (a and b) reward employees by both methods.

"c. A fixed fee for each meritorious invention made by an employee is given by 8% of the companies which pay extra compensations. The amount of the fee varies considerably as between companies, as is illustrated in the following examples. One company reports that \$50 is paid when the patent application is made and \$100 upon the issuance of the patent. Still another pays \$50 upon execution by the employee of the assignment, \$50 upon the grant of the patent and 20% of the amount in royalties received by the company. Another concern states that it pays \$25 upon the filing of each application and \$100 upon the issuance of each patent. Several companies do not have a fixed fee, but give varying amounts according to the merit of the invention. One concern reports that it pays from \$250 to \$500, and another that it pays from \$5 to \$5,000 for an invention which is assigned to it by an employee.

"d. A few manufacturers reported that a percentage of the amount received by them from royalties is paid to employees for meritorious inventions.

"e. One manufacturer reports that he gives 1% of his sales resulting from the invention for the first five years. None of the other companies reported any method of compensating employees other than those set forth above.

"Q. 8. If no additional compensation is paid for the meritorious invention, what is the reason, and how is the matter handled?

"Many companies feel in the case of inventions made by employees whose job it is to develop new ideas, especially those in the research department, that the salary paid is sufficient compensation. Most concerns who do not have any stipulation in the employee's assignment contract, however, believe that the best policy is to reward inventive ability for promotion and salary increases. Sometimes a special bonus is given for exceptional invention and one company states that if definite by

net profits have resulted from a specific invention by an employee, a bonus of approximately 5% of the resulting profits will be paid to such employee.

"A few concerns state that it is difficult to determine the amount which should be paid for a meritorious invention. One manufacturer states. 'Experience has shown that placing of emphasis, especially from a monetary standpoint, has curtailed the free interchange of information within the laboratory and thereby reduced over-all efficiency. Assurance of patent protection for the company is considered to be an element of the job, and this is considered with other elements in promotion or salary increases'.

"Q. 9. If non-technical employees are exempt from assignment agreements do you have a suggestion system covering ideas from these employees?

- a. If patentable suggestion results, is assignment taken when award is made?
- b. If no assignment, what rights does the employer retain when an award is made?

"More than one-half of the companies replying report that they have a suggestion system for rewarding non-technical employees who are exempt from the assignment agreement.

"a. Sixty per cent of those having a suggestion system state that if a patentable suggestion is made an assignment is taken when the award is made. Many, however, require that an assignment be made when the patent application is filed, and some, having no formal system, believe that a patentable idea should be assigned and compensation given according to the value of the invention to the company.

"Some companies encourage the development of new ideas by their employees through a patent award system. One concern stimulates and rewards original thinking on the part of the employee by giving rewards based on the evaluation of the disclosures, for original or spontaneous ideas, and for the working out of an assigned project ingeniously. Awards in varying amounts are made, first, when the patent application is filed, second, upon the issuance of the patent, and a final award of one-third of the net profits occasioned by the first year's use of the idea. One company reports that if it licenses someone else under the invention 20% of the net revenue received is paid to the employee.

"b. If no assignment is taken of a patentable invention, the employers in general retain only 'shop rights' under the invention, though some claim exclusive rights thereunder.

"Q. 10. If employer sells or licenses employee's patent, does the inventor share financially? In what way?

"Twenty-six per cent of those replying to this question stated that the employee would share financially where the company sells the patent or issues licenses thereunder. The procedure employed showed a wide variation, some giving a share in the royalties received, usually 50%, a few a percentage of the annual profits resulting from the invention, and others reward the employee by means of promotion, salary increases, or a bonus."

A survey of the above shows that industry by and large has some form of incentive for its inventors.

In establishing an awards system for Government employees, one of the most important factors is to do it at the least possible cost to the Government. Inasmuch as the Government does not exploit any inventions nor receive any remuneration from them it is obvious that if the invention fills a governmental need then any other rights are merely so much surplusage so far as the Government is concerned.

In view of this the inexpensive way for the Government to give incentive is to leave commercial rights with the employees when the law so permits.

As heretofore pointed out this was the policy of the Armed Services. This policy should be resumed as the least expensive form of incentive. In those cases where the Government is constrained by law from leaving commercial rights with inventors or where the invention has only military application, then an awards system should be established. It must be recognized that an awards system only has application when an invention actually goes into use. Many inventions made by Government employees are never used by the Government. There are many reasons why they do not go into use. The most important, so far as this discussion is concerned is that the Armed Services have no immediate need for them. However, in the carrying out of research such inventions will arise.

It is equally true that when commercial rights are left with inventors many of the inventions will never go into use but there is a far better possibility that they will, for outside interests will be willing to gamble capital in return for the rights.

PROPOSED LEGISLATION (HR7316)

There was introduced in the last Congress, H. R. 7316, which proposed the establishment of an Awards System for inventions which were communicated to the Government and were used in the National Defense. This Bill was broad enough to include Government employees when the inventions were useful in the National Defense.

The Department of Defense supported this legislation but in the closing days of the Congress it bogged down just as other legislation had bogged down.

The Chairman of the Government Patents Board testified and supported this legislation in principle but recommended that the Board be placed under the President, rather than under the Secretary of Defense. He also submitted a copy of the Report of "A Proposed Government Incentives, Awards and Rewards Program with Respect to Government Employees". Appendix N.

In referring to this Report it must be recognized that it does not necessarily represent the opinion of the Chairman as it is a Report submitted to the Chairman.

The Committee preparing this Report apparently failed to recognize that Executive Order 10096 relates only to patentable inventions. A patentable invention is something quite distinct from a beneficial suggestion. The drafters of our Constitution considered inventions so important that they included a provision in the Constitution to award inventors. This same provision permits awards to authors. These awards are in the nature of a patent or copyright and it is the only place in the Constitution which permits the establishment of "class legislation".

A patentable invention is something new, it must not heretofore have existed and can only be obtained within the prescribed limits set down by the Congress. The award in the nature of a patent gives to the inventor the right to exclude others from its use for a period of seventeen years. In other words, the patent establishes the patent rights, a patent cannot exist independently of the invention but the invention exists independent of the patent. The rights granted by the patent are, of course, lost to the Government employee if the Government takes title and then makes the invention available to everyone.

On the other hand a beneficial suggestion need not be new, it need not be original, it need only be something which is brought to the attention of a governmental agency and used to increase its efficiency. The awards for beneficial suggestions are based on "savings", whereas many inventions cannot be measured on this basis. The atomic bomb is indicative, its cost has been astronomical, and this is true in many instances of other inventions.

fails?
The Proposed Government Incentive Awards and Rewards Program lumps inventions in with all other types of suggestions. It is an excellent statement of the problem but fails completely on one recommendation. Under Recommendations for new legislation, on page 25, paragraph 1(b) reads as follows:

"Employees most likely to produce inventions by reason of the nature of their employment or assigned duties should not necessarily be excluded by reason of such employment. However, for such employees to qualify for an award, their inventions definitely would have to be outstandingly beyond the normal requirements of their work." (Underscoring added)

This is the reason most inventors cannot now get an award under the beneficial suggestion program. If it is their duty to invent, how can they invent beyond their duty? If a man is assigned to invent the hydrogen bomb and invents it, then he has done only what is expected of him. The proposed criteria rule out inventors except possibly the so-called "one-shot inventor", such as the janitor who comes up with a new radio.

The measure of awards should be its usefulness to the National Defense and its application would only be necessary in those cases where the Government is constrained by law to take title to the invention.

Again it is emphasized that the problem should not be confused by lumping inventions with everything else.

SUMMARY

From the foregoing it may be said

- (1) That an awards system is desirable for Armed Forces employee inventors when required to assign their inventions;
- (2) The most inexpensive type of incentive system is to return to the policy of leaving commercial rights with the inventors except when constrained by law from doing so; and
- (3) An awards system similar to H. R. 7316, should be adopted by the Armed Services as it is broad enough to include Government employees who otherwise would not be awarded for use of their inventions.

SECTION VOPINION AND RECOMMENDATIONSOPINION

It is the opinion of the Board (1) that the policy presently enunciated by Executive Order 10096 is detrimental to the National Defense and has caused a demoralizing effect among Government employees; (2) that administration of this vital problem should remain in the hands of the Secretaries of the Departments where it can be administered without additional costs to the Defense Departments; (3) that any policy adopted by the Armed Services should be in conformity with existing law and follow the intent of the Congress; (4) that the policy be sufficiently clear to enable Government employees to anticipate their rights in and to inventions made by them; (5) that when the policy requires the taking of title to an invention the employee inventor should be made eligible for an award if Government use is made of the invention.

RECOMMENDATION

It is recommended:

(1) THAT THE PRESIDENT BE REQUESTED TO EXEMPT THE ARMED SERVICES FROM THE POLICY PROVISIONS OF EXECUTIVE ORDER 10096;

(2) THAT THE FOLLOWING POLICY BE ESTABLISHED FOR THE ARMED SERVICES:

THE FOLLOWING POLICY SHALL GOVERN THE DIVISION OF RIGHTS IN AND TO INVENTIONS MADE BY EMPLOYEES OF THE DEPARTMENT OF DEFENSE:

(1) WHEN AN EMPLOYEE'S EMPLOYMENT IS IN RESEARCH AND DEVELOPMENT

(a) TITLE TO ANY INVENTION MADE BY SUCH EMPLOYEE IN CONNECTION WITH PERFORMING HIS ASSIGNED ACTIVITY AND WHICH IS DIRECTLY RELATED TO THE SUBJECT MATTER THEREOF SHALL BE IN THE GOVERNMENT;

(b) TITLE TO ANY INVENTION MADE BY SUCH EMPLOYEE NOT WITHIN HIS ASSIGNED ACTIVITIES OR NOT DIRECTLY RELATED THERETO SHALL BE IN THE EMPLOYEE, SUBJECT TO GRANTING TO THE GOVERNMENT AN IRREVOCABLE, ROYALTY FREE, WORLD-WIDE LICENSE IN AND TO SAID INVENTION WHEN THE INVENTION IS MADE ON GOVERNMENT TIME OR WITH THE USE OF GOVERNMENT MONEY, FACILITIES, MATERIAL OR OTHER GOVERNMENT PERSONNEL.

(ii) WHEN AN EMPLOYEE'S EMPLOYMENT IS NOT IN RESEARCH AND DEVELOPMENT

(a) TITLE TO ANY INVENTION MADE BY SUCH EMPLOYEE SHALL REMAIN IN SUCH EMPLOYEE, SUBJECT TO THE GRANTING TO THE GOVERNMENT AN IRREVOCABLE, ROYALTY FREE, WORLD-WIDE LICENSE IN AND TO SAID INVENTION WHEN THE INVENTION IS MADE ON GOVERNMENT TIME OR WITH THE USE OF GOVERNMENT MONEY, FACILITIES, MATERIAL OR OTHER GOVERNMENT PERSONNEL.

(iii) EXCEPT AS PROVIDED ABOVE

(a) TITLE TO AN INVENTION MADE BY ANY EMPLOYEE SHALL BE IN THE EMPLOYEE, SUBJECT TO NO RIGHTS IN THE GOVERNMENT.

THE SECRETARY OF EACH DEPARTMENT OF THE ARMED SERVICES SHALL PROMULGATE RULES AND REGULATIONS FOR ADMINISTERING THE ABOVE POLICY.

(3) THAT AWARDS LEGISLATION SIMILAR TO H. R. 7316 BE INCLUDED IN THE DEPARTMENT OF DEFENSE LEGISLATIVE PROGRAM.

APPENDIX G

EXECUTIVE ORDER 10096
January 23, 1950

PROVIDING FOR A UNIFORM PATENT POLICY FOR THE GOVERNMENT
WITH RESPECT TO INVENTIONS MADE BY GOVERNMENT EMPLOYEES
AND FOR THE ADMINISTRATION OF SUCH POLICY

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 same 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 non-governmental 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 provision 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 nonexclusive, 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) Under arrangements made and policies adopted by the Chairman, all inventions or rights therein, including licenses, owned or controlled by the United States or any Government agency shall be indexed, and copies, summaries, analyses and abstracts thereof shall be maintained and made available to all Government agencies and to public libraries, universities, trade associations, scientists and scientific groups, industrial and commercial organizations, and all other interested groups of persons.

3. (a) A Government Patents Board is established consisting of a Chairman of the Government Patents Board, who shall be appointed by the President, and of one representative from each of the following:

Department of Agriculture	Department of Defense
Department of Commerce	Civil Service Commission
Department of the Interior	Federal Security Agency
Department of Justice	National Advisory Committee for Aeronautics
Department of State	General Services Administration

Each such representative, together with an alternate, shall be designated by the head of the agency concerned.

(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) Consonant with law, the agencies referred to in paragraph 3(a) hereof shall as may be necessary for the purpose of effectuating this order furnish assistance to the Board in accordance with section 214 of the Independent Offices Appropriation Act, 1946, 59, Stat. 134, 31 U.S.C. 691. The Department of Commerce shall provide necessary office accommodations and facilities for the use of the Board and the Chairman.

(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.

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.

HARRY S. TRUMAN

THE WHITE HOUSE

January 23, 1950