~~SECRET~~

12 August 1948

SUBJECT: Return of Papers in the Case of Patent Application Serial No. 443,320

TO: Deputy Chief, Army Security Agency

The accompanying papers were informally forwarded to me for information and return. I have examined them very carefully and am returning them herewith.

However, in the hope that my views thereon will not be out of order, I am attaching hereto some comments for your personal consideration and possible use in support of my request that a reply to my letter of 8 December 1947 to the Director of Intelligence be sent me. The desirability of a more formal completion of the record in this case lends support to my request.

2 Incls
1. Original Correspondence
2. Comments

WILLIAM F. FRIEDMAN

This was never sent F

I went on sick leave and didn't return until about 15 Nov 48. I did not take up the matter again until 3 Jan 49, when I saw these papers back with no formal reply regarding my letter of 8 Dec 47 to D/I thru Chief, ASA. F

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COMMENTS ON PAPERS IN THE CASE OF PATENT APPLICATION SERIAL NO. 443,320

1. Comment No. 1 from the D/I, GSUSA to the JAG, dated 29 December 1947, is obviously written on the basis of an acceptance of the premise that the inventors of the subject Patent Application possess commercially exploitable reversionary rights. Raising no question on that score, it clearly reflects the spirit in which the 29 April 1946 policy of the A.C. of S., G-2 was written. It also accepts without question the decision of the duly constituted Signal Corps Patent Board to the effect that the subject invention was not the result of "specific designation to invent." The Comment concludes with a request for information as to the action which might be taken to dispose to the Government of the inventors' commercially exploitable reversionary rights. On this point some remarks are made in Par. 14 below. Comment No. 1 also, but not too clearly, requests information with respect to the question raised in paragraph 2b of my letter of 8 December 1947, as to the possibility of my obtaining the assistance of legal counsel. On this point some remarks are made in paragraph 7 below.

2. Comment No. 2, from the JAGO to the Chief Signal Officer, dated 7 January 1948, requests that the JAG be advised of the facts determined by the Signal Corps Patent Board, on which decision rendered by that Board in the subject application was based. Just why the JAG wanted these facts is not clear, because in the final analysis they were not used by the JAG in Comment No. 5. It is possible that the JAG has the authority to make a determination of <u>factual</u> matters within the jurisdiction of a duly authorized Board; but this may be a moot point. In a somewhat similar case involving factual evidence, the Attorney General in a letter dated 27 September 1935 to the Secretary of War, stated, in substance, "that inasmuch as the question propounded depends entirely on questions of fact, the War Department 'ought to make this factual finding.'" (See Par 3 of Inclosure 3 to this memorandum.) Inasmuch as the matter at issue in my case involves questions of fact, the factual finding of the Signal Corps Patent Board, having the proper jurisdiction, is of prime importance. However, as already indicated above, the JAG in the final analysis did not question the factual finding of the Signal Corps Patent Board.

3. Par. 1 of Comment No. 3, from the Legal Division, OCSigO to the Chief, Army Security Agency, dated 15 January 1948,

refers the matter to this Agency "for the reason that the subject patent application is now being prosecuted and is under the general jurisdiction of the Army Security Agency and also because the joint inventors are now employees of the Army Security Agency." It further states, in Par. 2, that "A search of the files in this office failed to reveal written or documentary evidence upon which the Signal Corps Patent Board based its decision that the subject application was not the result of specific designation to invent." The implication or inference that might be drawn from the wording of the foregoing statement is that the files of the OCSigO should contain such documentary evidence but that such evidence is missing. On this point it may be noted that, since practically all of the files pertaining to the Signal Intelligence Service were turned over sometime ago by the Chief Officer to this Agency, no such documentary evidence, even if it had existed at one time, could now be expected to be found in the files of the OCSigO; and for this reason, I feel that the wording of the statement is a bit unfortunate. The absence of any documentary evidence of the sort sought should, it seems to me, be taken as evidence pointing to the indication that there was no specific designation to invent the specific device, as is required under Par. 9a(1) of AR 850-50, before the Government can take all rights in an invention. I take this opportunity to affirm that there was never any specific designation to invent the specific device and therefore such documentary evidence as that sought, by the Chief, Legal Division, OCSigO, could hardly exist. I also take this opportunity to point out that the Signal Corps Patent Board in its findings stated that the inventions arose in connection with and as a result of the official duties of the inventors, but that there was no specific designation to invent the things described." (Underlining mine.) In other words, the Board was adhering to the provisions of AR 850-50. The omission of the underlined words ("the things described") from Par. 2 of Comment No. 3 is highly significant. Perhaps it indicates a change in policy in the OCSigO and, if so, the new policy is certainly at variance with AR 850-50.

4. Par. 1 of Comment No. 4, from the Chief, Army Security Agency to the JAG, dated 19 Feb. 1948, also is worded so as to allow the same implication or inference to be drawn, viz, that certain documentary evidence which should be in the files is not in the files. Here again I feel that the wording is unfortunate because, as already noted, the Signal Corps Patent Board, obviously using as its guide AR 850-50, then operated on the basis that the absence of documentary evidence showing a specific designation to invent the specific device automatically placed the subject invention under the category indicated in Par. 9a(2) of

AR-380-5. Comment No. 4 does go on to submit certain data "as evidence which may have been considered by the Signal Corps Patent Board in reaching its decision." Nowhere in those data can there be found any document which can be regarded as a specific designation to invent the subject invention. As a matter of fact, far from there having been a specific designation to invent the subject invention, after having invented it (the date of conception, according to the official record, is 1 September 1939), it took two years to convince the OCSigO that the idea was sufficiently useful to develop.

5. a. Comment No. 5, from the Patents Division, JAGO to the D/I, dated 11 May 1948, sets out as though the JAG unreservedly accepts the G-2 policy. It certainly raises no question as to its legality. But in Par. 2 the JAG focuses attention on one section of one of the three conditions set forth in the G-2 policy and in that paragraph points out that "among the conditions which must be met to bring an invention within this policy is that the invention must 'not relate to matters as to which the employee was specifically directed to experiment with a view to such improvements.'" The JAG then proceeds to cite the "Patent Memoranda" which I signed, and also certain duties as they existed under date of 16 March 1942 (a date, incidentally, more than two years subsequent to the date of conception of the subject invention); he thereupon states that "In view of the above it is the opinion of this office that Mr. Friedman was specifically directed to experiment with a view to such improvements and hence does not come within the policy announced in the memorandum of 29 April 1946 for the Chief, Army Security Agency."

b. Three things will be noted in connection with the foregoing opinion: first, the JAG does not question the validity of the factual finding of the Signal Corps Patent Board in the subject invention; second, the JAG does not raise any question as to the validity, legality or illegality of the G-2 policy; and third, the JAG does not raise any question as to the validity of the addition, in the G-2 policy, of the condition which he cites as making me ineligible under the G-2 policy and which is at variance with AR 850-50. The condition to which I here refer is: "... and where discovery or invention of cryptographic principles or devices has been made by a civilian employee and does not relate to a matter as to which the employee was specifically directed to experiment with a view to such improvements ... ." That this condition is something new that has been either intentionally or inadvertently added to AR 850-50 can be seen from the fact that the same clause goes on as follows:

"nor was produced as a result of any specific employment or contract to invent a specific device or article." The latter condition is the only one which governs whether the Government has all rights in an invention, the employee none, for according to AR 850-50, paragraph 9a(1) only where there has been a specific designation to invent the specific device or article does the inventor have no rights. The JAG did not question the injection of another condition over and beyond that contained in AR 850-50, as he might have done were he seeking also to conserve the rights of inventors as he has in other cases, such as the well-known Dr. Green case.

c. However, thinking purely legalistically, one can only concede that the JAG is correct in his stated opinion and on the grounds he cites. It is clear that nobody can take issue with his opinion. But the result is that the JAG's opinion in this case raises a question as to the validity of the G-2 policy. For it makes it perfectly clear that the G-2 policy has included as an additional condition of eligibility something not present in the governing Army Regulations. If the addition was the result of inadvertence or of an unintentional misapprehension of the significance of Par. 9a(1) of AR 850-50, then the policy should be amended. But if the addition was indeed intentional and was made with a full appreciation of the significance of the cited paragraph of AR 850-50, then it makes an absurdity of the policy, since no Army Security Agency officer, warrant officer, enlisted man, or civilian employee, with the possible exception of the very few employees who are not asked to sign our "Patent Memorandum," would be eligible thereunder. It is possible, of course, that the aforesaid addition was intentional, but I find this difficult to believe, since it negates the whole idea on which the policy is based, viz., a realization that inventors of classified equipment ought to be treated as fairl as inventors of unclassified equipment.

d. In view of the opinion of the JAG in this case, it seems to me, therefore, that the G-2 policy should be reexamined to see whether the questionable clause which has been added to the conditions beyond those cited in AR 850-50 should not be removed, or else the whole policy rescinded as being meaningless or of no help to the inventors of classified crypto-equipment.

6. Pars. 3 and 4 of Comment No. 5 assume that services of counsel are desired by me in order to assist in prosecuting a claim against the Government. No claim has been instituted and none is contemplated. The only thing that this part of

my letter of 8 December 1947 wanted to accomplish was to try to obtain help in preparing a case based on a policy established by proper authority, whereby certain inventors might receive benefits from rights reserved to them by AR 850-50 and thus be treated as equitably as the generality of inventors in the Department of the Army. When a civilian employee files a statement under Executive Order 9817 (Regulations Governing Awards to Federal Employees for Meritorious Suggestions) he is not regarded, I feel sure, as having filed a "claim." My letter of 8 December 1947 to the D/I can hardly be considered as establishing evidence that I have instituted or am contemplating instituting legal action of the nature of a claim likely to eventuate in court proceedings. For this reason I am very unhappy about the whole of paragraph 4 of Comment No. 5 for its implications.

7. a. In Par. 3 of Comment No. 5, in connection with the possible service of counsel to assist in the preparation of a case, the JAG states that his "office is of the view that it is highly improbable that Mr. Friedman could secure the service of a private counsel to assist him in his claim without disclosing to the counsel classified matter relating to his patent." I find it difficult to agree with this view. I would like to reiterate what I stated in my original letter of 8 December 1947, v.z, that the understanding, in connection with the possible employment of counsel, would be that no details of the construction or operation of the equipment would or need be disclosed.

b. However, I can easily see that from a strictly legal viewpoint the JAG may be warranted in assuming that my course in this correspondence might eventuate in a claim in the legal sense of the word. But suppose, for a moment, that it should, and that I might want the assistance of counsel, the JAG's opinion leaves the implication that the assistance of such counsel would or might be denied me. On this point I can only say that it would certainly appear to be a queer anomaly under our laws that a man who believes that his property rights are in jeopardy should not be permitted to have the benefit of assistance of counsel in attempting to establish or protect those rights. A precedent for permitting such counsel where secret matters are involved is to be seen in the Atomic Energy Act of 1946, Sec. 11(e)(2)(D) of which specifically provides that "Any person making application under this subsection [i.e., for compensation in connection with the use of secret inventions in the atomic energy field] shall have the right to be represented by counsel."

c. However, the JAG makes no final determination on this point as to whether I may have the benefit of the assistance of counsel, leaving it up to the Director of Intelligence for decision. The latter has not yet made any comment upon this point, and I feel that this question, asked in my original letter, ought to be answered.

8. a. Referring to Par. 5 of Comment No. 5, it is obvious that the JAG does not fully apprehend the basis of the G-2 policy and does not understand why there may be cases in which "it is in the interest of the Government of the United States that an employee have no patent rights in cryptographic principles or devices to dispose of, and for the Government to own the entire interest for security reasons throughout the foreseeable future." The phrase "entire interest" is undoubtedly meant to include all patent rights, domestic as well as foreign.

b. The question of foreign rights in inventions is one which should not be overlooked. Currently, even in those departments or bureaus which have regulations whereby inventors must assign all their U. S. rights to the Government, they are permitted to retain their foreign rights. Of course, in the case of these crypto-inventions, it is in reality the foreign rights which need to be withheld even more than the domestic rights. And, under security regulations, as well as under the terms of the "patent memorandum" signed by employees, these foreign rights are withheld until the patent application is removed from secrecy status. This is, of course, very essential, but the rights of the inventors ought also to receive some consideration, since inventors of non-classified inventions are permitted to exercise all their foreign as well as their domestic commercial rights.

c. Par. 5 of Comment No. 5 states that the Government has "the right to control the prosecution of the patent application and to maintain it in secrecy for so long as security needs demand which are all the rights necessary to meet the Government needs." Everybody grants that the Government has certain needs and rights, but it seems to me that the inventor's rights ought not be completely disregarded. The G-2 policy, by its very existence, tacitly acknowledges that inventors, too, have rights in their inventions, for it was formulated in recognition of those rights as set forth in AR 850-50, and in a realization of the fact that in some cases the inventors might have to wait so long until their commercially exploitable reversionary rights could be made available to them that these rights might be worthless or the inventors

too old to enjoy the benefits from the rights which AR 850-50 reserves to them and which the Congress meant them to enjoy as a reward for their contributions by its legislation in the Act of 1883 (U.S.C., Title 35, Sec. 45), under which Government inventors are relieved of paying the usual fees for obtaining patents in which the Government has shop rights. In this connection further remarks are made in Par. 9b below.

9. a. The last paragraph of Comment No. 5 refers to the G-2 policy as being "highly discriminatory with respect to the great bulk of Government employees who make inventions important to the defense of the United States." On this point two things can be said: first, as already pointed out above, the Director of Intelligence recognized, by setting up the subject policy, that inventors of classified equipment were being treated inequitably as compared with the inventors of unclassified equipment; and secondly, there is no bar to prevent the generality of inventors of classified equipment (other than cryptographic) from trying to obtain similar equitable treatment from the agencies for which they work. If there really is any discrimination in the situation, it is discrimination against the inventors of classified equipment, because inventors of unclassified equipment, even though they have signed the usual patent memorandum, are permitted to exercise their commercially exploitable rights.

b. The JAG says in the foregoing connection that "Many such patent applications are now in secrecy with a number having been in this status for periods ranging up to 17 years." Attention is invited to the following cases of my own and the periods involved:

Patent Application No.		No. of Years in Secrecy
682,096		16
107,244		13
70,412	(joint with Mr. Rowlett)	13
549,086		12
443,320	(present case)	8

If question is raised as to why the patent application having the shortest period of secrecy was selected for consideration under the G-2 policy, the answer is that two reasons motivated the selection. First, the other cases involve cryptographic principles of a much more complex nature so that at the time the present case was initiated (27 Sept 1945), it did not

appear likely that any one of them could or would be released in "the foreseeable future"; whereas there was a possibility that Ser. No. 443,320 might be released, in view of the very large number of people who know all about the equipment by virtue of their war-time employment and duties, and the simpler nature of the equipment. Second, it had been brought to my attention that there was a definite interest on the part of the U. S. Commercial communication companies in the possibility of acquiring the inventors' reversionary rights in the invention and using the equipment in a U. S. worldwide radiotele-type system. There is room to speculate on the nature of the JAG's Comment No. 5 had Patent Application No. 682,096 been selected for test, for this case was filed several years before the "Patent Memorandum" was adopted by the OCSigO. Considering the length of time the cited cases have been held in a secrecy status, I do not believe that I can be charged with being impatient, as is the implication in the JAG's comment that "Many such patent applications now in secrecy with a number having been in this status for periods ranging up to 17 years."

10. The remaining paragraphs of this memorandum have an indirect connection with the accompanying correspondence but have an important bearing on the whole case. They deal with the subject of the "patent memoranda" which I signed and their significance.

11. a. The following is quoted from a memorandum for the Under Secretary of War from the JAG, dated 16 January 1947, Tab 3, Inclosure 1.

> "Since an invention is private property, as held by the Supreme Court in 1890 in Solomons v. United States, 137 U. S. 342,346, and since maintained, it cannot be taken from the owner by the Government without compensation while the 5th Amendment to the Constitution still stands, in the absence of a contract to convey the same to the Government."

b. The final clause in the preceding extract is of pacticular interest in connection with the "Patent Memorandum" which ASA employees are asked to sign. In some quarters the view is currently maintained that the signing of these "patent memoranda" by potential inventors constitutes a contract to convey all rights in inventions to the Government and thus ~~all rights by inventors and~~ entails in every case a complete and irrevocable assignment to the Government.

c. Such a view is not only at variance with the provisions of AR 850-50, which is based upon well-established law, as interpreted by the Supreme Court of the United States, but is also contrary to the policy of the Department of the Army. On these points I take the liberty of submitting to your consideration the documents listed among the inclosures to this memorandum. Those documents will go far to convince anybody who will take the trouble to study them carefully that inventors of classified equipment which must remain classified for a long time are not being "dealt with on the basis of fair dealing," as is deemed equitable and desirable by those in charge of high policy in the Department of the Army.

12. a. Study of the wording of our "Patent Memorandum" itself shows that complete assignment of all rights is neither contemplated nor required. Par. 8 of the latest version (6 June 1946) states:

> "This notice of assignment to develop improvements in arts of value to the Army Security Agency shall not be construed as divesting you of ownership of any invention made by you while engaged on this work except as set forth in the preceding paragraph, but the Army Regulations therequoted will be strictly followed. ..."

b. The phrase "except as set forth in the preceding paragraph" applies to Par. 7 of the patent memorandum, which is merely an exact copy of Par. 9a of AR 850-50. Nowhere does that paragraph give authority to take all rights except where an invention has been "produced as a result of a specific employment or contract to invent the specific device or article."

c. Par. 9a(2) of AR 850-50 states that "In cases where the invention is important in the national defense, the War Department may request a complete assignment." Of the foregoing sentence three things may be said:

(1) First, the phrase "complete assignment" therein means "the complete assignment of the patent application," since a complete assignment of the patent would, under the circumstances, defeat the entire purpose of requesting an assignment for secrecy reasons. The clear inference here is that so long as the application is pending secrecy is possible and such an assignment of the application would make it feasible to keep certain inventions important to

the national defense from becoming public. But unfortunately the Regulation does not say anything about how long an application may be kept pending. In most cases, the length of time is comparatively short, two to five years, and most Government inventors, including myself, are perfectly willing to delay their enjoyment of possible commercial rights for such a period. But when the period extends into many years, that is, in the words of the G-2 policy, "where it is in the interest of the Government of the United States /that/ the Government own the entire interest for security reasons throughout any foreseeable future ...," then it is only equitable that some compensation be made to the inventor for relinquishing his rights for such a long time.

(2) Second, the Regulation says that in the cases under discussion "the War Department may request a complete assignment." It is to be noted that no compulsion can be exercised to force the inventor to accede to such a request. The JAG himself has ruled on this point (see pages 21-22 of Inclosure 4). The "Patent Memorandum" may be thought in some quarters to provide the means or mechanism for such compulsion, since it purports to be a contract or agreement of employment. But since AR 850-50 controls the rights of inventors in the Department of the Army, and since an Army Regulation is issued by order of the Secretary of the Army and no subordinate official has the right to take more or less from an inventor than is required by AR 850-50, the validity of any interpretation of the Patent Memorandum which considers it to be instrument whereby such compulsion can be exercised is open to serious question.

(3) Finally, referring again to the memorandum dated 16 January 1947, for the Under Secretary of War from the JAG himself, it is stated (see Tab 3 of Inclosure 1):

"Considered both from the legal standpoint and as a question of practical, operative administrative policy, a uniform equitable policy of procedure for the Government controlling its relations with Government employees as to their inventions and patents is highly desirable, but, because of public interest and the personal legal rights of the parties involved, such policy can be defined only by Congress (underlining by JAG) and no power to declare such a policy is, or can be, legally vested in administrative officers. This identical point is stated at length (pp. 205-209) by Justice Roberts in writing the decision of the Supreme Court in United States v Dublilier Condenser Corp, 289 U. S. 178, which same point was also concurred in by Justice Stone and Justice Cardozo in separate opinions (pp 219-223) in that case."

To the foregoing I will add that the point made by Justice Roberts in the decision of reference is as follows:

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

"All of this legislative history emphasizes what we have stated--that the courts are incompetent to answer the difficult question whether the patentee is to be allowed his exclusive right or compelled to dedicate his invention to the public. It is suggested that the election rests with the authoritative officers of the Government. Under what power, express or implied, may such officers, by 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[1] comes to this--that the courts may not re-examine 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."

d. The foregoing quotations are offered in support of a possible contention that the validity of any "patent memoranda" such as the ones which our employees are asked to sign is open to question, since they are presented by an administrative officer of the Government who has no power to make a declaration of policy to determine the nature and extent of rights exercised under a charter granted a patentee pursuant to constitutional and legislative provisions.

e. In connection with the foregoing possible contention, the following extract from U. S. Code Title 5, Ch. 1, Sec. 22, is cited:

> "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." (R.S. 161)

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[1]In this case the Government was the plaintiff.

Whether any contract or agreement such as our patent memorandum purports to be is or is not inconsistent with law seems to be a somewhat moot point, since its adoption is not even a common or frequent practice within Government departments and bureaus. It is not used by the Air Force or by the Navy, for example.

13. Finally, a comment of a general nature. It is difficult to understand why Comment No. 1 was sent by the Director of Intelligence to the JAG. It would seem that the official file dealing with the G-2 policy would show what means or mechanism was contemplated or established for acquiring the inventor's reversionary commercial rights, that is, whether Congressional action in the nature of a private bill or the use of regular or special Department of the Army appropriations, etc., was envisaged. If the file were to fail to show what means or mechanism was contemplated or envisaged, this would tend to indicate that the G-2 policy is based upon nothing more substantial than a hope that some way could or would be found when and if a case should arise. This is hard to believe. It is my feeling that some mechanism such as that suggested by the JAG in the following extract (see p. 23 of Inclosure 4) was envisaged:

> "If the Government desires complete ownership it can only accomplish this result by negotiations with the inventor looking toward either a donation of the invention to the Government, or based on a purchase at a fair and reasonable price. The latter alternative obviously pre-supposes that a specific fund has been provided by Congress for the purpose, or that a definite sum has been requested for this particular purpose from the Congress and included in an appropriation bill."

7 Incls

1. Ltr 27 Jan 47 to President from Mr. Royall, w/Tabs 1,2,3
2. Memo from JAG, 14 Apr frm Chief,Patents Div., JAGO
3. 2d Ind, 17 Jan 36, to Asst Sec. War frm JAG
4. 2d Ind, 19 Apr 35, to TAG frm JAG
5. Memo for Rcd, 18 Dec 46, Conf. on "Proposed Patent Policy"
6. "Brief Relative to Meaning of Patent Memo No. 5
7. Brief dtd 15 Feb 47 by Chief, Pat. Sec., Legal Div, OCSigO

WILLIAM F. FRIEDMAN