

AS-14 AS-70 24 Sep 47 U.S. Patent Nos. 2,405,570 and 2,401,507

- 2.
1. a. With respect to paragraph 1a of Action 1 -- In so far as can be determined from the patent files, the cases probably did not arise out of government contracts.
 - b. With respect to paragraph 1b of Action 1 -- The applications were under secrecy orders until the Patent Office general rescinding order of 30 November 1945.
 - c. With respect to paragraph 1c of Action 1 -- The classification was not changed by request of any Army, Navy, or OSRD representative.
2. With respect to paragraphs 2 and 3 of Action 1 -- The device under Patent Number 2,405,570, a detailed discussion of which is attached herewith, is inherently much more secure than the device in Patent Number 2,401,507, a detailed discussion of which has been previously forwarded. If Dehn's device could be used practically in view of its plain text auto feature and used under proper conditions with respect to cryptographic security, it would undoubtedly offer a very difficult cryptanalytic problem and, to make a very conservative guess, might not be solvable under conditions set forth in paragraph 3 of policy directed 10 April 1947, Subject, "Procedure for Release of Information Concerning Secret Patents."

3 Incls

1. Desc of Pat 2,405,570
2. Analysis of Pat 2,405,570
3. Photostat of Dehn Patent

S. KULLBACK
Chief, Research Laboratories Division
Ext 321

3. AS-10 AS-14 15 Oct 47 U. S. Patent Nos. 2,405,570 and 2,401,507

1. About three months ago, in preparing recommendations in connection with similar matters, I encountered a casual reference to two recently issued U.S. patents on cryptographic apparatus. Not being familiar with these cases I sent for copies of the issued patents and certain questions having arisen in my mind in connection with them, the matter was taken up with AS-70 in Action 1 on this carrier sheet. Action 2 contains the replies to the questions asked.
2. It will be noted that the two applications had been under secrecy orders and were released by the patent office without the usual approval or concurrence of the Army, Navy, or OSRD. One of these patents (Dehn) covers a cryptographic machine of considerable security. Had the Army or Navy been consulted the probabilities are that the application would not have been declassified so soon.
3. In view of the fact that the damage has already been done, since the two patents are now in the domain of public knowledge, it is difficult to suggest remedial action that would be practicable. Even if revocation of the patents would conceivably repair the damage,

As-10 AS-14 15 Oct 47 U.S. Patent Nos. 2,405,570 and 2,401,507

no mechanism exists whereby an ordinary patent once issued can be revoked or withdrawn. However, in the sole case of patents on atomic energy, Sec. 11 (a) (1) of the Atomic Energy Act (Public Law 585) provides that "Any patent granted for any such invention or discovery is hereby revoked, and just compensation shall be made therefor"; also subsection (a) (2) of the same Section provides that "Any rights conferred by any patent heretofore granted for any invention or discovery are hereby revoked to the extent that such invention or discovery is so used, and just compensation shall be made therefor."

4. It is believed inadvisable to initiate action that might lead toward the enactment of legislation of similar character, to be applicable in the case of cryptographic inventions and patents. The probabilities in favor of the passage of such legislation are believed to be remote and even if passed the value of such legislation would be very doubtful.

5. The present situation as regards the withholding from issue of patents on cryptographic inventions of non-governmental origin is somewhat nebulous. Mr. Stauffer, of AS-70, informs me that no cases of new applications have come to him for some time and that whether this is because none has been filed or because the Patent Office is no longer submitting such cases to the Army and Navy is unknown to him.

6. It is recommended that:

a. The present situation as to whether the war-time regulations respecting the submission to the Army and the Navy of patent applications covering cryptographic inventions by non-government inventors, for opinion as to whether such applications should be held up or not are still in effect or have expired be investigated at once.

b. That the attention of the Commissioner of Patents be invited to the failure on the part of the Patent Office to submit the two subject cases to the Army or Navy for approval for release before allowing the respective applications to go to issue.

c. That the Commissioner of Patents be requested to direct Patent Office personnel to be more careful in future in connection with other similar cases still pending, if any.

AS-10 AS-14 15 Oct 47

U.S. Patent Nos. 2,405,570 and 2,401,507

2 Incls

1. Patent No. 2,405,570
2. Patent No. 2,401,507

WILLIAM F. FRIEDMAN
Chief, Communications Research
Ext 215

~~To: AS-20~~

To From Subject: U.S. Patent Nos 2,405,570 and 2,401,507
 3 AS-20 AS-14 / 1

About three months ago, in preparing recommendations in connection with similar matters, I encountered a casual reference to two recently issued U.S. patents on cryptographic apparatus. Not being familiar with these cases I sent for copies of the issued patents and certain questions having arisen in my mind in connection with them, the matter was taken up with AS-70 in Action 1 on this carrier sheet. Action 2 contains the replies to the questions asked.

2. It will be noted that the two applications had been under secrecy orders and were released by the patent office without the usual approval or concurrence of the Army, Navy, or OSRD. One of these patents (Dehn) covers a cryptographic machine of considerable security. Had the Army or Navy been consulted the probabilities are that the application would not have been declassified so soon.

3. In view of the fact that the damage has already been done, since the two patents are now in the public domain of knowledge, it is difficult to ^{suggest} find remedial action that would be practicable, ~~and would repair the damage in these cases.~~

Even if revocation of the patents would conceivably repair the damage, no mechanism exists whereby an ordinary patent once issued can be revoked or withdrawn. However, in the sole case of patents on atomic energy, Sec. 11 (a) (1) of the Atomic Energy Act (Public Law 585) provides that "Any patent granted for any such invention or discovery is hereby revoked, and just compensation shall be made therefor"; also subsection (a) (2) of the same Section provides that "Any rights conferred by any patent heretofore granted for

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