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THE PROBLEMS INTRODUCED BY THE NATIONAL AERONAUTICS AND SPACE ACT OF 1958

By GERALD D. O'BRIEN*

[Address delivered before the Patent, Trademark and Copyright Conference of the State Bar of California. San Francisco, California, September 25, 1959]

Members of the Bar of the State of California

It is indeed an honor that you have conferred upon me—this invitation to participate in this meeting of your Bar Association. I have given some careful and serious thought as to what I might say to you this morning, paying heed to the known qualities of leadership of your members and dynamics of your organization. I would perhaps be unloyal as a patent attorney to our American patent system if I did not profit by this opportunity to present to you the problem as I see it that has been brought about by the enactment of the Congress of the United States of the patent provisions contained in the National Aeronautics and Space Act of 1958. In order to provide a frame of reference for statement of this problem, I should like first to discuss with you in a general way the essence of the patent provisions of the NASA Act, pointing out at the same time certain interpretations that we at NASA, as we have come to call ourselves, have placed upon this law in an attempt to lessen some of the administrative burdens and hardships that may otherwise be imposed upon our contractors through its implementation. Second, I should like to deliberate with you concerning the attendant legislative problem that will be facing the Congress. And third, to consider with you whether there is anything that the members of the Bar acting individually or through the Bar Association can do to bring about such remedial action which, in your honest opinion, is necessary in the best interests of the Government, industry, and the American patent system.

When the patent provisions of the NASA Act were enacted, and mind you, these provisions were first introduced into this law by the Conference Committee of the House and the Senate with little or no opportunity for hearings, when this Act first appeared, the Paul Reveres or the watchdogs of our American patent system promptly arose to inform and to alarm both the Patent Bar and industry of the dangerous situation which they believe to have been thrust upon us. They proposed an active and aggres-

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1 An extract of the relevant provisions appears at pp. 298–99 infra.
sive campaign to vigorously and unceasingly attack this provision of this Act, and in the words of the former Congressman from Texas, Fritz Lanham, to "expose the jeopards" in their haunts.

I am sure you all know what, if not who, these "jeopards" are. They are the individuals who unknowingly or by design would place our American patent system in jeopardy. With this as a background, I propose that we now examine the patent provisions of this law, noting especially those provisions which have been viewed by many as being so destructive of the incentives provided under our American patent system. For those of you who are not familiar with them, the patent provisions of the NASA Act provide that certain inventions made under a contract of NASA will become the exclusive property of the United States except that the Administrator may waive all or any part of these rights if he believes the interests of the United States would be served thereby. The other novel feature is a provision pertaining to patentability; the act provides that no patent shall issue for an invention which the Commissioner of Patents determines to have significant utility in aeronautical and space activities unless the Administrator is provided a copy of the application and a statement from the applicant stating the circumstances under which the invention was made. It is my view that the fundamental basis for the attack upon this act by both industry and the Patent Bar is their abhorrence of the idea that the Government should seek ownership of inventions which are made in the performance of governmental contracts.

Gentlemen, on first reading, section 305 of the NASA Act may appear to require that all inventions made in the performance of a contract for NASA become the exclusive property of the United States. This is the first and greatest misconception of the act. The act provides that whenever any invention is made in the performance of any work under any contract of the Administration and the Administrator determines that one or two factual situations exist, then, and only then, does the invention become the exclusive property of the United States. This provision of the law is the first pronouncement by the Congress of the United States of a criterion which is to be used by an agency of the United States Government in determining the division of rights between the Government and its contractors in the inventions which are made by such contractors, and has importance therefore as indicating a trend in the development of a Government philosophy toward patents.

Under the criterion which the Congress has established, the relation of the invention, in the technological sense, to the contractor’s employee-inventor’s duties is the key to the determination of these rights in inventions. In our implementation of this provision of the act, we have reasoned that the Congress, by use of the phraseology therein contained, would not
have intended that this provision of the law should apply to every contract of the Administration but only to those contracts which involve the performance of work of a particular type which would be encountered under research and development types of contracts. Therefore, the application of this provision of the law is limited by regulations which have been promulgated by NASA to certain classes of contracts.

Next, we note that the person who made the invention must be employed to perform certain specified duties under the contract and even then every invention made by such an employee under such a contract will not necessarily become the exclusive property of the United States unless the degree of relation of the invention from a technological point of view to the employment duties of the contractor-employee is such as would require the Administrator to make the "determination."

You may ask why the Government's rights should in any way be dependent upon the contractor-employee's duties and the relationship of the invention to these duties, and what is the philosophy behind this criterion? There is some opinion to the effect that the criterion as established was derived from the case law dealing with the question of the division of rights in inventions between an employer and an employee where the circumstances under which such invention was made are controlling, particularly as it may indicate whether or not there is an implied agreement on the part of the employee to assign his invention to the employer. If the circumstances under which an invention was made by an employee conform with the criterion established under the act, and if under such circumstances there would arise this implied contract to assign the invention to the employer, it is reasoned that the Government should be entitled to the same rights as the employer when the Government is sponsoring the research and development out of which the invention arose and is the principal party in interest.

I do not state positively or with any degree of assurance that this is the philosophy back of this provision of our law nor do I mean to convey the impression that if it is the philosophy, that there is merit in it, and that such philosophy should be supported. I wish only to state that the similarity should be recognized and to inform you that the actions which the Administrator will take in any given instance will, in a great measure, be guided by the common law precepts concerning the division of rights in inventions between an employer and an employee. I might also mention at this time that there are available for distribution here copies of a reprint of an article which appeared in the most recent issue of the *Federal Bar Journal* which deals with this subject. It is recommended if you are interested in pursuing further this aspect of the act.

I think that you will readily agree that this particular provision of the
act could alone impose a heavy burden upon a NASA contractor, and I would like now to refer to the special NASA "Property Rights in Inventions" clause which we have developed and which is prescribed for certain NASA contracts requiring performance of the particular type of work to which I have made reference. This clause and the accompanying instructions of our regulations implement this particular subsection of the act in an endeavor to minimize such burdens.

Strictly speaking, for the Administrator rightfully to make a factual determination under the provisions of the act, it would be necessary in each instance to review all the facts concerning the making of the invention as they pertain to the employee's duties and to the inventive subject matter. A requirement for the submission of such facts in each instance, and the necessity for a review in each instance, could impose a burden upon industry and upon NASA. There will be instances arising under a NASA contract, to the same extent as now exist under DOD contracts, where the contractor is not interested in acquiring rights in an invention. It would be needless to require in such an instance that the contractor submit the written statement of the facts. To avoid such a burden, the patent clause establishes a presumption that any invention made under the contract was, in fact, made under the circumstances described in paragraphs (1) or (2) of subsection 305(a) of the act. There are hazards in this and the contractor must be aware of the fact that the presumption will take effect either immediately upon the submission of the report of the invention, if not accompanied by a statement of facts, or at the times prescribed by the clause subsequent to the submission of the report of the invention, when accompanied by other statements by the contractor and even then, in this latter case, unless the contractor takes the actions which are therein specified.

What are these actions and what are the reasons for this complicated procedure? I should refer at this point to the authority granted to the Administrator under subsection 305(f) of the act wherein he may waive all or any part of the rights of the United States with respect to any invention made in the performance of any work required by a contract of the Administration. We believe that a contractor may well be satisfied with the rights which he could acquire by waiver and may wish to forego the consideration by the Administrator of the facts concerning the making of the invention if he were reasonably certain the waiver he requests would be granted. To accommodate such a contractor, the clause, in effect, provides that the presumptions will not be effective if the contractor requests an advisory opinion concerning the waiver of rights of the United States with respect to the invention. In the event the contractor so requests an advisory opinion,
he will be notified of the action taken and, if unfavorable to his interests, he may still take issue with the presumption. In which event, the contractor shall either submit the written statement or promptly notify the Administrator of his intention to file a patent application for the invention.

Why should the contractor wish to file the application before rights in the invention have been settled? Subsection 305(d) of the act provides for a review by the Board of Patent Interferences and the Court of Customs and Patent Appeals of any action taken by the Administrator on applications for patents filed in the Patent Office. By filing his application before a determination has been made, the action of the Administrator is made subject to review as provided by this subsection.

The clause therefore provides that the presumption will not be effective immediately upon the submission of the report of the invention if the contractor notifies the Administrator of his intention to file a United States patent application for such invention. We give the contractor eight months from the date of the furnishing of such report to file the application. If the contractor should fail to file the patent application within the eight-month period prescribed in the clause, then the presumption stated in the clause shall take effect. If, however, the contractor files the patent application within the eight-month period therein prescribed, he must also file with the Commissioner at the time of the filing of the application a written statement conforming with the act and giving facts concerning the making of the invention. The contractor will also furnish us with a copy of the application and the written statement so that the Administrator may review the information furnished and notify the contractor of his decision as to whether or not he believes the invention to have been made under the circumstances set forth in paragraphs (1) and (2) of subsection 305(a) of the act.

This procedure which I have just outlined was presented for the first time in the third revision of the NASA "Property Rights in Inventions" clause, copies of which are available here today. This provision, although complicated procedurally, was incorporated into our patent clause largely at the request of industry and the Patent Bar. We at NASA have struggled long with subsection 305(a) of the act and have had some difficulty in making our position clear to contractors. This may be attributable to the terminology used in the act, especially as to the use of the word "determination."

Now you will note from a reading of the act that the act doesn't require the Administrator to make a determination in each case. It merely states that whenever he does so, the invention becomes the exclusive property of the United States. We do not propose to leave in doubt the rights which the contractor has in his inventions, and under our patent regulations the
Administrator will consider every invention reported by a contractor and rule "yes" or "no" on the question of whether or not a determination is to be made, whether based upon a consideration of the facts, or upon the presumption as set forth in the contract.

The criterion which the Congress has established for determining the division of rights in inventions made under contract with NASA deals only with the acquisition of title to the invention and the act does not deal with the acquisition of lesser rights. We have, however, included in paragraph (f) of the NASA "Property Rights in Inventions" clause a provision wherein the Government shall receive at least a royalty-free license in all inventions made under contract with NASA, irrespective of whether the invention is determined to have been made under the circumstances set forth in subsection 305(a). We were subject to some criticism initially upon the inclusion of this provision in our "Patent Rights" clause, basically because the act did not require NASA to obtain such rights. I think, however, industry and the Bar have in the main withdrawn their objections to the inclusion of this provision when they have been informed of its purpose. We felt that the inclusion of this provision was desirable for the reason that the Administrator of NASA might feel a greater necessity strictly to apply the criterion for the taking of title if the Government were to receive nothing if it did not, in fact, receive the title. If, however, the Government is to acquire at least a royalty-free license in any instance, then the Administrator may apply this criterion for determining whether or not the invention should be the exclusive property of the United States with a greater degree of liberality than would otherwise be the case.

There have also been many misconceptions as well as objections directed toward the provisions of subsection 305(b) of the NASA Act, which subsection relates to the requirements which are to be imposed upon NASA contractors to report their inventions. These objections as well as these misconceptions are perhaps attributable to the fact that the obligations imposed upon the contractor are broadly stated. First, it may appear that the contractors are required to report every trifling modification or innovation that they may make under a contract, thereby imposing an unnecessary burden upon them and a needless expense upon the Government. Second, this subsection of the act requiring the contractor to furnish a written report containing full and complete technical information could perhaps be interpreted as requiring the contractor to furnish manufacturing information or such other information of a proprietary character concerning any invention. We, of course, do not regard this subsection of the act as a technical data provision and our Patent Regulations, Part 1, copies of which are available here today, interpret this subsection of the act so as to make the obligation imposed upon a NASA contractor to
report his inventions no more severe than are the obligations of a contractor of any agency of the Department of Defense.

I presume that many of you here this morning in your practice before the Patent Office have been burdened by the requirements of the Commissioner of Patents for the submission of written statements executed under oath, setting forth the full facts and circumstances under which the invention covered by the application was made and the relation, if any, of the invention to the performance of work under a contract with NASA. The obligation for requiring these statements is imposed upon the Commissioner of Patents by subsection 305(c) of the NASA Act. The Patent Bar and industry have with justification been severely critical of subsections 305(c), (d) and (e) of the act. Their criticism has, in the main, been based upon the contention that these subsections of the act could be interpreted as granting the Administrator authority to assert exclusive public ownership upon any invention upon which an application has been filed in the Patent Office when it is believed to have significant utility in the conduct of aeronautical and space activities; and that the taking of title in such instances may be without compensation. This provision of the NASA Act has its counterpart in section 152 of the Atomic Energy Act of 1954 (42 U.S.C. 2182). The clauses are so similar that it would appear that the AEC Act was a model from which this provision of the NASA Act was prepared.

We regard the provisions of subsections 305(c), (d) and (e) as having two principal purposes: First, as I have indicated, these provisions provide a means whereby a contractor of NASA may, if he desires, have any "determinations" of the Administrator with respect to rights in inventions subjected to an impartial review by the Board of Patent Interferences of the United States Patent Office and the Court of Customs and Patent Appeals. This requires the filing of an application for patent in the United States Patent Office before any determination has been made by the Administrator; second, these provisions of the Act give the Government an opportunity to police the patent provisions of the act.

As to the administrative difficulties which you may have encountered in dealing with this provision of the act, we believe that these are attributable to the lack of a clear interpretation both in the Patent Office and at NASA as to what the Congress intended by use of the term "significant utility in the conduct of aeronautical and space activities." For you will note that it is only with respect to those inventions that have this "significant utility" that the Commissioner of Patents is obligated by law to secure from the applicant those written statements to which I have made prior reference. We have recently met with officials of the Patent Office in order to work out some procedures and understandings whereby the burdens imposed upon applicants by this provision of the act will be lessened. The
Commissioner of Patents has been informed that NASA would have no objection to the adoption by the Patent Office of a procedure whereby no written statements will be requested of applicants for patents having a filing date prior to October 1, 1958, which is the date upon which NASA was established. As to those applications which are filed subsequent to October 1, 1958, we are endeavoring to work out with the officials of the Patent Office appropriate restrictive interpretations of the term "significant utility in the conduct of aeronautical and space activities."

I have previously made reference to the authority of the Administrator under subsection 305(f) of the NASA Act to waive all or any part of the rights of the United States with respect to any invention made in the performance of any work required by a contractor of NASA when the Administrator determined that the interests of the United States will be served thereby. We have published in the Federal Register on March 5, 1959 our regulations governing waiver of rights in inventions, which are entitled Part 3 of our Patent Regulations. We scheduled a public hearing on these Regulations which was held in Washington on May 18, 1959. We are now in the process of issuing the revised edition of our Waiver Regulations to incorporate in the revision certain recommendations of industry and of the Patent Bar. Generally, these Regulations attempt first to identify the class of inventions for which waiver will not ordinarily be made and the class of inventions for which waiver of rights will ordinarily be made, and second, to specify the extent of the rights the Government is waiving, the conditions which may be imposed on the waiver, as well as the procedures for obtaining waivers.

We will not have time here this morning to discuss in any detail our Waiver Regulations, but I would like to say that it has been our general objective to try by definition to include in the first class of inventions for which waiver will not generally be granted those inventions which are peculiarly useful in space activities, that is, the exotic type of invention, and those inventions of basic importance to continued research in aeronautics. These inventions would have little, if any, commercial value.

The other class of inventions for which waiver will ordinarily be granted is subdivided into three classes, as follows: (1) Those which were conceived prior to the contract but are first actually reduced to practice in the performance of the contract. Here, the waiver (and the interests of the United States) is based on the equity of the contractor in having originally owned the invention before the Government came along. No strings are attached to this waiver other than the royalty-free license required by the law. (2) The second subclass of inventions are those which are of predominate commercial utility. (3) The third subclass of inventions which ordinarily will be waived are those in a field of technology where the
contractor's investment is relatively large in comparison to the amount the Government is paying the contractor under the contract for research and development work in this same field.

Under the second and third subclass of inventions, while we propose ordinarily to waive title, we feel that the interests of the Government require an assurance that for so doing the contractor will undertake to develop and put the invention on the market. We feel that this was one of the objectives the Congress had in mind in taking ownership of inventions, to see to it that the invention is made available to the public. We further believe that it is in the interests of the United States to give the contractor the first opportunity to so develop the invention, and that in many cases the security of the exclusive rights provided by the American patent system is necessary to obtain the development of the invention. Consequently, as a condition of the waiver of title in these second and third subclasses of inventions, we tie on the limitations that the inventions must be developed, or licensed, or offered for license within five years, or if it has not been done within five years, that the Administrator will have the right—not necessarily that he will do so—to take another look to see if the invention should or can be developed to the point of practical application.

This is all for the purpose that the contractor may not receive a waiver of rights in an invention, acquire his patent, and then put it on the shelf. He is required either to work it or to license others so to do.

You may properly ask, since NASA is alerted to the discontent of the American Patent Bar and of their persuasions upon industry likewise to be discontent with the patent provisions of the act, what NASA proposes to do about it. The official position of NASA can best be ascertained by reference to a speech by our Administrator wherein, speaking about the patent provision of the act and about the patent policy of the Department of Defense, he said, "Two such contrary patent policies, followed by government agencies working in closely related fields of research and development, can be detrimental to the kind of cooperation that we must have from industry if our joint effort is to go forward with effectiveness and dispatch. We are well aware of the attitude of industry towards this question. In due course, I feel sure that the Congress will want to review the whole subject of our patent requirements. Meanwhile, we are going to make every effort to administer the legal provisions in the patent field fairly and objectively and with due regard for the interests of both Government and industry."

As predicted by our Administrator, the subject of the patent requirements of NASA is now under Congressional review. The Chairman of the House of Representatives Committee on Science and Astronautics has just recently established a special subcommittee to review the patent provisions
of the NASA Act and to inquire into the basic patent problems which have been created by federal activity in scientific research. I was privileged to accompany and to testify with Mr. John A. Johnson, General Counsel of NASA, on the occasion of the first general session of this special patent subcommittee. Mr. Johnson made the headlines on this occasion and I think his testimony is of real importance and significance to us, not only as an indication of what the future may hold, but also as a guide for proposed future action. Mr. Johnson noted especially that the patent policy of NASA is at fundamental variance with the policy followed by the Department of Defense and he stated that it was not only his view but the official view of NASA that it was undesirable for an agency such as NASA to be compelled by legislation to follow a patent policy that is fundamentally divergent from that of the Department of Defense, especially since the Congress was indeed careful in other respects in recognizing that NASA must align its business practices with those of the Department of Defense.

Mr. Johnson further stated that he proposed to leave aside the ultimate question of what is good Government policy with respect to the acquisition of rights in inventions, contending that in his opinion there is something essentially wrong with the United States Government, which, after all, is one legal person, when different agencies of that Government deal with the same company on essentially the same kind of contracts on essentially the same kind of business, involving inventions that are in the same field of technology, and one takes title to the inventions from the contractor and the other leaves title to the inventions with the contractor. He stated that equality is the basic principle of equity and in his view it is more desirable here to have equality of treatment than it is to perpetuate any inequality for fear that you might depart, at least temporarily, from a policy with respect to rights in inventions which would appear ultimately to be best for the Government.

Mr. Johnson further stated that he would not expect the Congress to repeal the patent provisions of the act and that he does not believe that NASA would make any such recommendation. He did, however, see merit in the patent provisions of the National Science Foundations and stated that if the Congress were to undertake any radical treatment of the patent provisions of the NASA Act, the enactment of patent provisions similar to those contained in the National Science Foundation Act would probably be the minimum that the Congress ought to undertake. Such an enactment would express the concern of the Congress in protecting the public interest in the field of patents, leaving to the Administrator of NASA great discretion as to how this would be achieved. You may expect, therefore, that
NASA will recommend to the Congress that some remedial action be taken with respect to the patent provisions of the act.

I would think that NASA would wish to avoid being put in the position of the young Lieutenant who was called into the General’s office. The General said, “Young man, have you been making love to my secretary?” Of course the Lieutenant answered, “No, sir.” “All right then,” said the General, “you fire her.” NASA should not be in a position of disavowing any affection for the patent provisions which have been given to us by the Congress for fear that we at NASA may be left with the job of going it alone in the development of good Government patent policy. It seems to me that the special subcommittee may wish to undertake some extensive investigation into the entire question of the Government’s interest in patents. Accordingly, I should see need for every Bar Association, such as your own, to establish some subcommittees to undertake an objective study of this problem in order that you may recommend to the Congress specific courses of action, supported by case histories and good logic.

The fact remains that despite the coexistence for nearly 170 years of patent laws with the steady march to American industrial supremacy, doubts and uncertainties concerning the merits of the patent system still exist. We still witness the paradox of admiration for its fruits and dissatisfaction with its functioning. Perhaps this is because the patent system is in itself paradoxical. It has as an avowed purpose the widest possible use and dissemination of scientific knowledge but starts by conferring upon the inventor power to restrict unto himself use of such knowledge. Its critics say it is a crude and inconsistent system, that it lacks logic, that it is wasteful from an economic point of view, but irrespective of these criticisms it has served over these many years and I am sure only because nothing better has been devised. The sad part of the whole story is as Dr. Vannevar Bush, in speaking of his own experience, stated “The prevalence of profound ignorance of the patent system among attorneys who practice general law is at times appalling.” Here, then, is the challenge. The Patent Bar should take active steps to encourage the introduction of courses on patent law into the curriculum of every law school. The Patent Bar should undertake to contribute more to the legal literature, to inform other members of the Bar as to the functioning of the patent system through articles in law reviews and Bar Association journals.

As to the patent problem which has been introduced by the patent provisions of the NASA Act, the basic question has been asked as to what the overall Government policy should be with respect to the division of rights in inventions made under Government-sponsored research. Involved in this problem are certain misconceptions. Predominate as a misconception is the basic character of the patent grant itself, namely, the right to...
exclude, without which right the patent is reduced to a mere publication. What are the merits in Government ownership of this right to exclude, or from a more logical point of view, what can or should the Government do with the right to exclude to justify or to require its ownership?

I have made reference to the relevance of the common law dealing with the distribution of rights to inventions as between employer and employee. The relevance of the common law might properly be challenged. However, if one assumes that the policy of the present legislation is to regard contractors as employees, then the common law becomes relevant, at least in my view, as a measure of justice. Thus it may be said that the statute is just with regard to contractors being treated as employees to the extent that the statutory criteria conform to the common law principles.

The key issue here is whether the division of rights in inventions should be based upon a traditional concept employed by the Department of Defense or upon a legal doctrine of employer and employee relationship. This issue involves a determination of the merits from a political, economic, and sociological point of view to the adherence to the tradition followed by the Department of Defense, as well as a consideration of the harmful results which could be expected in a departure from such tradition.

It appeared to me in my appearance before the Patent Subcommittee of the Science and Astronautics Committee of the House of Representatives that there are certain members on this Committee who have been impressed with the belief and contention by many that originality can be organized, that the more people that can be equipped with technical knowledge and brought together in groups, the more new ideas, innovations, and inventions will emerge. That originality, like the old Model-T Ford, is now enjoying its first stages of mass production.

Dr. Edwin H. Land, President of the Polaroid Corporation, in a recent article of the JPOS labeled as nonsense both socially and scientifically the idea of science being a group effort, a national effort, or an international effort—a community mastering knowledge, where the inventions belong to the group, where there are no individuals and no greatness. Fundamentally, there is nothing new to this idea of group research when viewed in its proper perspective and it has been benefited by the patent system for sometime. It had been expounded as early as 1793 by Lavoisier who observed that "Most of the work still to be done in science and the useful arts is precisely that which needs the collaboration and cooperation of many scientists." But is this the same concept of group research that pervades present thinking, for under this concept one does not deny the importance of the individual or contend that he should not be recognized and rewarded for his accomplishments? Fermi is quoted as saying, "There is much to be said for the
small group. It can work quite efficiently but efficiency does not increase proportionately with numbers."

Have we therefore lost the perspective when we speak of corporate type research being applied to work for the Government under contract? Is it not true that this is generally thought of, and perhaps improperly so, as being undertaken in large laboratories where many people are employed on the solution of a particular problem? Mr. S. C. Harland, writing in the Journal of the Textile Institute for February, 1955, was not too optimistic about the effectiveness of large group research establishments. He observed, and I quote, "To go into some of them is extremely depressing. You see crowds of people milling around with an air of fictitious activity, behind a facade of massive mediocrity."

Was the Congress of the view that the research work likely to be performed under contract with NASA would be performed under group research, where accomplishments are attributable to group effort, when it enacted the patent provisions of the NASA Act? Perhaps so, and if so, this premise must be subjected to critical and careful investigation and study for if it is sound, there may also be merit to the contention that the patent system, in placing emphasis upon credit to the individual, destroys or makes difficult effective teamwork in group research because it tends to create dissatisfaction among the unrecognized members of the research group and may lead to secrecy and a general lack of cooperativeness.

I am informed that some managers of group-type research consider it unwise to encourage individuals to make inventions if there is to be any personal advantage or gain for the fear that such recognition of an individual may destroy the teamwork concept. The problem facing the Patent Bar appears, therefore, to be a basic one and is involved in the sociological and political trends of the day, the problem of equality leading to mediocrity. The inevitable conclusion of this type of thinking is that the benefits of the patent system should be denied to the "captive inventor" and be made available only to the inventor not employed in research work, for if employed, the pay check is an adequate incentive.

The point I wish to make is that the Patent Bar must establish its case that a place remains for the independent inventor, especially in group research. If it does this, then perhaps the Congress can be persuaded that the ownership by the Government of contractors' inventions will stifle the stimulation available to the independent inventor under the patent system, which is as important today in the space age as it was in the steam age, the electrical age, or the atomic age.
AERONAUTICS AND SPACE ACT—P.L. 85-568*
[An Extract]
PROPERTY RIGHTS IN INVENTIONS

Sec. 305. (a) Whenever any invention is made in the performance of any work under any contract of the Administration, and the Administrator determines that—

(1) The person who made the invention was employed or assigned to perform research, development, or exploration work and the invention is related to the work he was employed or assigned to perform, or that it was within the scope of his employment duties, whether or not it was made during working hours, or with a contribution by the Government of the use of Government facilities, equipment, materials, allocated funds, information proprietary to the Government, or services of Government employees during working hours; or

(2) the person who made the invention was not employed or assigned to perform research, development, or exploration work, but the invention is nevertheless related to the contract, or to the work or duties he was employed or assigned to perform, and was made during working hours, or with a contribution from the Government of the sort referred to in clause (1), such invention shall be the exclusive property of the United States, and if such invention is patentable a patent therefor shall be issued to the United States upon application made by the Administrator, unless the Administrator waives all or any part of the rights of the United States to such invention in conformity with the provisions of sub-section (f) of this section.

(b) Each contract entered into by the Administrator with any party for the performance of any work shall contain effective provisions under which such party shall furnish promptly to the Administrator a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation which may be made in the performance of any such work.

(c) No patent may be issued to any applicant other than the Administrator for any invention which appears to the Commissioner of Patents to have significant utility in the conduct of aeronautical and space activities unless the applicant files with the Commissioner, with the application or within thirty days after request therefor by the Commissioner, a written statement executed under oath setting forth the full facts concerning the circumstances under which such invention was made and stating the relationship (if any) of such invention to the performance of any work under any contract of the Administration. Copies of each such statement and the application to which it relates shall be transmitted forthwith by the Commissioner to the Administrator.

(d) Upon any application as to which any such statement has been transmitted to the Administrator, the Commissioner may, if the invention is patentable, issue a patent to the applicant unless the Administrator, within ninety days after receipt of such application and statement, requests that such patent be issued to him on behalf of the United States. If, within such time, the Administrator files such a request with the Commissioner, the Commissioner shall transmit notice thereof to the applicant, and shall issue such patent to the Administrator unless the appli-
cant within thirty days after receipt of such notice requests a hearing before a Board of Patent Interferences on the question whether the Administrator is entitled under this section to receive such patent. The Board may hear and determine, in accordance with rules and procedures established for interference cases, the question so presented, and its determination shall be subject to appeal by the applicant or by the Administrator to the Court of Customs and Patent Appeals in accordance with procedures governing appeals from decisions of the Board of Patent Interferences in other proceedings.

(e) Whenever any patent has been issued to any applicant in conformity with subsection (d), and the Administrator thereafter has reason to believe that the statement filed by the applicant in connection therewith contained any false representation of any material fact, the Administrator within five years after the date of issuance of such patent may file with the Commissioner a request for the transfer to the Administrator of title to such patent on the records of the Commissioner. Notice of any such request shall be transmitted by the Commissioner to the owner of record of such patent, and title to such patent shall be so transferred to the Administrator unless within thirty days after receipt of such notice such owner of record requests a hearing before a Board of Patent Interferences on the question whether any such false representation was contained in such statement. Such question shall be heard and determined, and determination thereof shall be subject to review, in the manner prescribed by subsection (d) for questions arising thereunder. No request made by the Administrator under this subsection for the transfer of title to any patent, and no prosecution for the violation of any criminal statute, shall be barred by any failure of the Administrator to make a request under subsection (d) for the issuance of such patent to him, or by any notice previously given by the Administrator stating that he had no objection to the issuance of such patent to the applicant therefor.

(f) Under such regulations in conformity with this subsection as the Administrator shall prescribe, he may waive all or any part of the rights of the United States under this section with respect to any invention or class of inventions made or which may be made by any person or class of persons in the performance of any work required by any contract of the Administration if the Administrator determines that the interests of the United States will be served thereby. Any such waiver may be made upon such terms and under such conditions as the Administrator shall determine to be required for the protection of the interests of the United States. Each such waiver made with respect to any invention shall be subject to the reservation by the Administrator of an irrevocable, nonexclusive, non-transferrable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government pursuant to any treaty or agreement with the United States. Each proposal for any waiver under this subsection shall be referred to an Inventions and Contributions Board which shall be established by the Administrator within the Administration. Such Board shall accord to each interested party an opportunity for hearing, and shall transmit to the Administrator its findings of fact with respect to such proposal and its recommendations for action to be taken with respect thereto.

(g) The Administrator shall determine, and promulgate regulations specifying, the terms and conditions upon which licenses will be granted by the Administration for the practice by any person (other than an agency of the United States) of any invention for which the Administrator holds a patent on behalf of the United States.
(h) The Administrator is authorized to take all suitable and necessary steps to protect any invention or discovery to which he has title, and to require that contractors or persons who retain title to inventions or discoveries under this section protect the inventions or discoveries to which the Administration has or may acquire a license of use.

(i) The Administration shall be considered a defense agency of the United States for the purpose of Chapter 17 of title 35 of the United States Code.

(j) As used in this section—

(1) the term "person" means any individual, partnership, corporation, association, institution, or other entity;

(2) the term "contract" means any actual or proposed contract, agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder; and

(3) the term "made", when used in relation to any invention, means the conception or first actual reduction to practice of such invention.