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PATENTS IN RELATION TO PROCUREMENT OF MUNITIONS AND MATERIEL

by

Lieut. Col. Robert H. Young, Air Res.

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Since the beginning of recorded history and until the World War occurred, military authorities have been ultra conservative in the adoption and use of new types of munitions and devices of military value - offensive and defensive.

This can be illustrated by the fact that after the introduction of gun powder and firm arms in Europe, knights in armor mounted on horses armed with hand weapons comprised the main forces of the miltary caste, and it was not until Gustavus Adolphus in about 1720 taught the world how to use infantry armed with guns and bayonets to defeat mounted soldiers, that foot soldiers became the main reliance of armies.

Cortez in the invasion of Mexico used mounted soldiers with breast plates and helmets; but carried with him crude breech loading cannon and muzzle loading muskets.

In the war between the States, both armies used mainly muzzle loading smooth bore muskets, although breach loading rifles were known and available. In fact some of the soldiers on both sides were armed with flint locks at the beginning of the war which were no better than the muskets that the soldiers under Braddock carried, more than one hundred years before.

In the Spanish War, many regiments carried single shot Springfield 45 calibre black powder rifles of short range and high trajectory. The artillery was just as antiquated - although smokeless powder and repeating arms had been well developed, and some of them were used by the enemy.

Four and Six mule-team wagons comprised the highest type of transportation in the Army, long after the development of commercial motor vehicles.

For many years semaphore and flag signals comprised the principal means of army communication, although the Signal Corps did introduce the field telegraph toward the end of the Civil War for communication between the headquarters of some of the principal commanders.

The Navy was equally conservative. It is said that a Board of Naval Officers investigated and tested a steam driven war ship and advised adversely on its adoption, because the machinery and coal occupied so much space in the vessel that there would not be sufficient room for supplies for a long cruise notwithstanding the fact that the speed of travel made by steam over sails would more than compensate for the space that it occupied in the distance and time covered from one port to another.

The point is that the preponderance of man power was the major consideration, Napoleon Bonaparte, Stonewall Jackson and General Forrest used the same tactics. As stated by Forrest, it was his strategy -

"To git the mostest men thar furstest"

After the Franco-Prussian war and our war with Spain, the surviving Civil War Commanders died or retired; a new day dawned. What followed?

Telephones
Rapid Fire Guns
Motor Vehicles
Airplanes, including all accessories relating to propellers, engines, gun synchronizing gear, flying instruments, ground equipment, and other devices too numerous to mention
Dirigibles
Parachutes
Radio
Submarines
Anti-aircraft guns and bomb sights
Tanks
Poison Gas
Flame Throwers
Hand grenades
Automatic Rifles and many other related devices.

Modern Military and Naval Authorities seized upon new developments and adapted them to military use. They set up within the several Services and Branches experimental, research and engineering laboratories and plants designed to use and improve them.

All of these thousands of devices and improvements were the product of the inventive faculties of this, and other countries, and most of them were the subject of Letters Patent of the United States and foreign countries.

The relation between the Government and such patentees within and without the Government services, has been the subject of evolution and development, and there should probably be a further change of policy adopted to encourage further improvements and betterments, so that the military and naval services may reap the full benefit of modern development.

For the purpose of discussing the possible changes and improved relations between patentees and the Government, it is necessary to study the patent system and its relation to the public and to the Government.

WHAT IS A PATENT?

A patent creates a monopoly, vesting in individuals or corporations, the exclusive right to make, use and vend in certain lines or to practice some particular art. The grants of such monopolies are known as Letters Patent, that is - open or public documents.

After the British Crown was prohibited by the Statute of Monopolies of 1623 in the reign of James I, from distributing monopolies in trade and commodities to Court favorites, the only patents that remained valid related to new inventions brought into or produced within the realm and they were limited in tenure to a definite number of years.

It is the theory of modern patent law that the Government will reward an inventor for producing something that is new and useful to mankind by extending to him a monopoly for a limited period, after the expiration of which term it becomes public property.

Several of the American Colonies before the Revolution established patent systems for inventions. The first patent granted in America occurred in 1641, by the General Court of the Massachusetts Bay Colony.

The patent system of the United States has its foundation in the Constitution (Art. 1, Sec. 8) -

> "The Congress shall have power ***** to promote the progress of science and useful arts, by securing for limited terms to authors and inventors the exclusive right to their respective writings and discoveries".

George Washington in his first inaugural address on April 30, 1789, said -

> "I cannot forbear intimating to you the expediency of giving effectual encouragement, as well as to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them at home".

The first patent law was enacted April 10, 1790, and many have been subsequently passed by the Congress.

The first patent of the United States was signed by George Washington, Thomas Jefferson and Edmund Randolph, and was dated January 31, 1791. Abraham Lincoln applied for and was granted a patent.

Thus it will be seen that the patents system is one of the most beneficent institutions of progressive Governments. Yet it is still subject to the criticism and opposition of many persons who are unfamiliar with its background and public benefits, and who are inclined to associate it with the immoral and arbitrary practices of the Royal Grants of Monopolies that rose to such abuse in the reign of Queen Elizabeth of England.

A PATENT OF THE UNITED STATES IS PROPERTY

It has been held by the Supreme Court of the United States in Cramp & Sons vs. Curtis Turbine Co. (246 U.S. 28) that -

> "The rights secured under the grant of letters patent by the United States were property and protected by the guarantees of the Constitution and not subject therefore to be appropriated even for public use without adequate compensation."

Something of a conflict with that stated principle occurs with the other principle that the Government in its sovereign capacity is immune to suit except as and under the conditions that it consents by law to be sued.

Prior to the year 1910 no right to sue the United States for the unauthorized use of a patent existed, and the only right of action had to be founded in contract express or implied. On June 25th of that year an Act of

Congress was approved by the President, the pertinent parts of which provides that -

> "whenever an invention described in and covered by a patent of the United States shall hereafter be used by the United States without license of the owner thereof or lawful right to use the same, such owner may recover reasonable compensation for such use by suit in the Court of Claims."

Prior to that Act, it was the accepted principle that the officer or employee of the Government who used in the Government service a patented device, became personally responsible and it was the purpose of the Act of 1910, to relieve individuals of that liability and -

> "to provide additional protection of owners of patents of the United States".

This Act of 1910 was generally accepted as making the Government solely responsible for the use of patent rights of its contractors and manufacturers and relieving the latter from any liability. Some decisions seemed to indicate that conclusion.

Then in the midst of the War with Germany, a bomb was exploded in the method of procurement of materiel by two decisions of the Supreme Court of the United States, dated March 4, 1918, to wit: Cramp & Sons v. Curtis Turbine Co. (246 U.S. 28) and Marconi v Simon (246 U.S. 46). These decisions in effect held that a contractor or manufacturer of a patented article for the Government is not exempt from liability to the owner for any patents involved.

These decisions caused consternation among contractors, who descended upon government officers, and represented that they had assumed their undertakings on the mutual understanding that they were immune to patent litigation, and now found themselves subject to suits at law and equity for profits and damages.

Secretary of War Baker, met the situation by declaring that an emergency existed and directed that contracts be so modified as to have the Government assume all liability for the

infringement of patents necessarily involved in their performance and completion.

The Acting Secretary of the Navy, Franklin Delano Roosevelt, on April 20, 1918, addressed the following letter to the Chairman, Committee on Naval Affairs, House of Representatives:

> "This Department is confronted with a difficult situation as a result of a recent decision by the Supreme Court affecting the Government's rights as to the manufacture and use of patented inventions, and it seems necessary that amendment be made of the Act of June 25, 1910, entitled 'An Act to Provide Additional Protection for the Owners of Patents of the United States and for other Purposes.' "
>
> "The case in which the court's decision was rendered is that of William Cramp & Sons Ship and Engine Building Company, Petitioner, vs International Curtis Marine Turbine Company of the United States, and the decision is, in effect, so far as it is of importance here, that a contractor for the manufacture of a patented article for the Government is not exempt unless he is only a contributory infringer, from injunction and other interference through litigation by the patentee."
>
> "A prior decision of the Supreme Court, that in the case of Crozier v Krupp, had been interpreted as having the opposite meaning and the Department was able up to the time of the later decision, March 4th last, to proceed satisfactorily with the procuring of such patented articles as it needed, leaving the matter of compensation to patentees for adjustment by direct agreement or if necessary by resort to the Court of Claims under the above mentioned Act of 1910. Now, however, manufacturers are exposed to expensive litigation involving the possibilities of prohibitive injunction, payment of royalties, rendering of accounts, and payment of punitive damages, and they are reluctant to take contracts that may bring such severe consequences."

"The situation promises serious disadvantages to the public interests and in order that vital activities of this Department may not be restricted unduly at this time and also with a view to enabling dissatisfied patentees to obtain just and adequate compensation in all cases conformable to the declared purpose of said act, I have the Honor to request that the act be amended by the insertion of a proper provision therefor in the pending naval appropriation bill."

"The changes desired are shown in the accompanying draft of provision, which would, if inserted in the naval appropriation bill, accomplish the desired result satisfactorily to the Department, and favorable consideration of this matter is urgently requested."

In response to such request, an amendment to the Act of 1910 was passed by Congress and approved by the President on July 2, 1918, which provided that the entire remedy of the owner of a patent shall be by suit against the United States for recovery of his reasonable and entire compensation.

It may be briefly said that several United States Courts in several decisions have dismissed suits for infringement of patents against contractors or manufacturers for the Government, holding that they were without jurisdiction, and that the only right of action lies against the United States.

Then the Supreme Court of the United States in Richmond Co. v. United States (decided January 3, 1928, 275 U.S. 331) after reviewing the history of the Act of 1918, said:

"The purpose of the amendment was to relieve the contractor entirely from liability of every kind of infringement of patents in manufacturing anything for the Government and to limit the owner of the patent and his assigns and all claiming through or under him to suit against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture."

Thus it will be seen that patent rights comprise property protected by the guaranties of the Constitution; that the Government deliberately abandoned its immunity to

suit by the owners of patents for their unauthorized use by the Act of 1910, and then by the Amendment of 1918, assumed the entire responsibility for the use of patent by its contractors; relieved such contractors therefrom, and discharged the Courts from jurisdiction of such claims against the contractors and placed the entire liability upon the Government, which law was initiated by the incumbent President of the United States.

ENGINEERING DESIGNS

Prior to the year 1926, the engineers and designers of airplanes complained that no recognition was given to engineering development and designs of aircraft whereby superior and beneficial results accrued, which organizations did not conform to nor rise to the dignity of patentability. It was shown to a Select Committee of the Congress that the Chief of the Air Corps had undertaken to purchase or compensate for engineering types and designs, which procedure and expenditures were disallowed by the Comptroller General, upon the theory that no authority vested in a public officer to expend funds except in the commuting of a right of action against the United States. Inasmuch as there was no authority in law to sue the Government, either in contract or tort, such purchases were disallowed. In this situation and upon the recommendation of the Committee, the Aeronautical Act of 1926, extended jurisdiction to the Court of Claims to the claim of any person who complains that his design thereafter developed relating to aircraft or any components thereof are used or manufactured by or for the Government without just compensation from either the Government or any other source, may within four years from the date of such use file suit in the Court of Claims for the recovery of his reasonable and entire compensation. Therefore, designs of aircraft and component parts thereof become legal property somewhat of the order of Letters Patent. The same law might well be applied to other types of munitions and army supplies.

SAVE-HARMLESS CLAUSES

Under the direction of the Secretary of War and the advice of the Judge Advocate General, and other war time agencies, the terms and provisions of procurement contracts were modified to include what had been termed "save-harmless clauses" which undertook to express the legal relations between or among the Government, the contractor with the Government, and the owners

of patents not in privity with either party. Several types came into practice which may be stated in generality —

(a) The Government assumed entire responsibility for the use or infringement of patent rights involved;

(b) The Government assumed liability for patent rights involved, except as to patents owned by or in which the contractor was in privity, as to which latter the contractor assumed responsibility;

(c) In the Air Corps - the Government assumed liability excepting as to the patents of the Manufacturers Aircraft Association, when the contractor was a subscriber and/or a licensee under the Cross License Agreement relating to aircraft.

(d) The Government assumed liability for such necessary and unavoidable use of patents involved or employed in the performance of the contract whereby it retained a closer control of the liability assumed.

Strange as it may seem in view of these recitals, violent criticism was launched against the practice of using the save-harmless clauses notwithstanding the fact that the Court of Claims of the United States had sustained the practice in an adjudicated case - Winchester Repeating Arms Company V The United States, decided April 10, 1916, which held:

Syllabus:

"Where in an indemnifying contract, the Government agrees to hold 'harmless' the manufacturers against suits for patent infringement, it is an express covenant upon their part to assume all expenses incident to an attack by alleged patentees, and plaintiff was entitled to the full consideration of the contract undiminished by the cost of defending suits for infringement of patent."

"While the circuit court is powerless to allow attorneys' fees as part of the costs in patent litigation, said costs were included in the express and independent agreement between the parties to hold harmless from suits for infringement of patent, and said agreement contemplated the whole course of legal procedure from beginning to end."

All of the questions raised were considered by the Select Committee of the House of Representatives, which as to this subject rendered the following report:

> "The save-harmless clause as now used is the result of legislation by the Congress."
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> "Prior to the Act of June 25, 1910 (36 Stat. 851), no liability for patent infringement, to use that term strictly, existed on the part of the Government, for the reason that such an infringement is a tort, and the Congress had never consented to permit the Government to be sued on tort. That act provided: 'whenever an invention described in and covered by a patent of the United States shall hereafter be used or manufactured by or for the United States without license of the owner thereof or lawful rights to use the same, such owner's remedy shall be by suit in the Court of Claims' with certain provisions which are not material to this discussion."
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> "The United States Supreme Court in the case of Crozier v Krupp, (224 U.S. 203) clearly states the situation as it existed prior to the above act and the object which the Congress desired to accomplish by the enactment of that act in the following words:
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>> 'The text of this statute leaves no room to doubt that it was adopted in contemplation of the contingency of the assertion by a patentee that rights secured by him by a patent had been invaded for the benefit of the United States by one of its officers, that is that such officer under the conditions stated had infringed a patent.'
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> "The enactment of the statute, we think, grew out of the operation of the prior statute law concerning the right to sue the United States for the act of an officer in infringing a patent as interpreted by repeated decisions of this court: United States v Palmer (128 U.S. 62); Schillinger v United States (155 U.S. 16); United States v Berdon Fire Arms Mfg. Co. (156 U.S. 552); Russel v United States,

(198 U.S. 229). The effect of the statute was thus pointed out in the last cited case (198 U.S. (P. 234)

"We held in Russell v United States, (182 U.S. 516; 530) that in order to give the Court of Claims jurisdiction under the act of March 3, 1887 (24 Stat. 505, c. 359), defining claims of which the Court of Claims had jurisdiction, the demand sued on must be founded on a convention between the parties -'a coming together of the minds.' And we excluded, as not meeting this condition, those contracts or obligations that the law is said to imply from a tort. Schillinger v United States (155 U.S. 163); United States v Berdan Firearms Manufacturing Co., (156 U.S. 552)."

"In other words the situation prior to the passage of the Act of 1910 was this: Where it was asserted that an officer of the Government had infringed a patent right belonging to another, in other words, had taken his property for the benefit of the Government - the power to sue the United States for redress did not obtain unless from the proof it was established that a contract to pay could be implied - that is to say, that no right of action existed against the United States for a mere act of wrong doing by its officers. Evidently inspired by the injustice of this rule as applied to rights of the character of those embraced by patents, because of the frequent possibility of their infringement by the acts of officers under circumstances which would not justify the implication of a contract, the intention of the statute to create a remedy for this condition is illustrated by the declaration in the title that the statute was enacted to provide additional protection for owners of patents. To secure this end, in comprehensive terms the statute provides that whenever an invention described in and covered by a patent of the United States shall 'hereafter by used by the United States without license of the owner thereof or lawful right to use the same, such owner may recover reasonable compensation for such use by suit in the Court of Claims."

That is to say, it adds to the right to sue the United States in the Court of Claims already conferred when contract relations exist the right to sue even although no element of contract is present. And to render the power thus conferred efficacious the statute endows any owner of a patent with the right to establish contradictorily with the United States the truth of his belief that his rights have been in whole or in part appropriated by an officer of the United States, and if he does so establish such appropriation that the United States shall be considered as having ratified the act of the officer and be treated as responsible pecunarily for the consequences.

"We find nothing to justify the charge that the save-harmless clause is wrong in principle or an authority granted to the officials of the United States to aircraft manufacturers to steal patents of inventors."

"As stated by General Patrick it 'merely puts in simple language the law of Congress.' "

Several other angles of the problem developed in the emergency of the war and the decisions of the Supreme Court. Their solution must be taken under consideration in getting a complet picture and understanding of the past as it will be applied to the present and future. These include the complicated and conflicting ownership of patents relating to aircraft out of which resulted the formation of the Manufacturers Aircraft Association and the adoption of the Cross License Agreement; the equally complicated and conflicting relations between the owners of patents relating to radio; also what occurred when the United States collaborated with the British Government in the adoption and procurement of aeronautical supplies and devices; and then the complications which resulted in the attempt to cooperate with privately owned engineering and industrial organizations in the development of military devices, which can be illustrated in the origin, conception, engineering development and final accomplishment of the Earth Inductor Compass. The latter experience illustrates the overlapping and intermingling cooperation of Government officers and experts of the Bureau of Standards, the Materiel Division of the Air Corps, of contractors with the Government and individual inventors.

A I R C R A F T

In the year 1916, there were two principal groups of patents relating to aeroplanes, one of which was owned by the Wright-Martin Company and the other by the Curtiss Aeroplane & Motor Corporation. These two companies were engaged in suits against each other for infringement, and neither of them held such a controlling measure of patent rights that it could build an airplane without trespassing upon the other.

It is obvious that no other manufacturer could construct airplanes without procuring a license from both, and the status of the litigation between the two companies was such that few outsiders would venture into the industry.

Both groups were inclined to charge excessive rates of royalties.

In this state of affairs, Franklin D. Roosevelt, Acting Secretary of the Navy, addressed the National Advisory Committee for Aeronautics on January 13, 1917 as follows:

> "I desire to bring to the attention of the Executive Committee of the National Advisory Committee for Aeronautics, the serious state of affairs which is being brought about by the uncertainty of the situation as regards aeronautic patents.
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> Various companies are threatening all other airplane and seaplane companies with suits for infringement of patents. The result is a general demoralization of the entire trade. It is difficult to get orders filled because some companies will not expend any more money on their plants for fear that suits brought against them will force them out of business.
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> To protect themselves in case they are forced to pay large license fees the companies have greatly increased the sale prices of their products. As the Army and the Navy are the principal purchasers of aircraft in this country, they are bearing the brunt of this levy.
>
> It is thought that the National Advisory Committee for Aeronautics might be able in some way to render great assistance to the Navy by undertaking a study of this question and suggesting some line of action to be taken."

The Acting Secretary of War addressed a similar letter to the National Advisory Committee for Aeronautics.

That Committee recommended the formation of a holding corporation for airplane patents for the granting of Cross Licenses among all Subscribers, the collection of royalties and distribution of the royalties received between Wright-Martin Company, the Curtiss Aeroplane & Motor Company and the Holding Company, which came on to be known as the Manufacturers Aircraft Association.

The Secretary of War requested and obtained the opinion of Attorney General T. W. Gregory, as to whether that arrangement was legal. Secretary Baker recited the situation as it existed and asked to be advised as follows:

> "In accordance with the arrangement thus developed, the War Department now desires to proceed with the placing of contracts for airplanes with airplane manufacturers thus organized, and in order that the legal status of such organization may be properly determined, the Department desires to invite the attention of the Department of Justice to the articles of agreement of the Manufacturers Aircraft Association, and to ask an opinion regarding the legal status of such Association, and in particular, as to whether such articles are in any respect in controvention to the anti-trust statutes of the United States.

In reply the Attorney General made a complete analysis of the facts and law involved, and said:

> "Not to go into further detail, it suffices to say that upon the data submitted to me I am of the opinion that the Association, Inc., as now constituted and the cross-license agreement under which it is now operated, are not in controvention of the anti-trust laws of the United States."

This Cross-License Agreement was immediately attacked on numerous grounds, and the Aircraft Board which has been created by President Wilson, requested a Committee of prominent Patent Lawyers to advise as to the reasonableness of the rates of royalties which the Cross License Agreement provided for. This Committee in summary said:

"We are informed that the machines to be built for the United States Government will cost anywhere from $4,500 to upwards of $20,000, each according to the type of machine. The royalty of $200 provided for in the cross-licensing agreement for a license under all of the patents controlled by the several companies who shall become parties to the agreement, is thus slig tly less than five per cent on the lowest priced machines and approximately one per cent on the cost of the highest priced machines."

"In fact in our opinion that amount in question would be a perfectly reasonable royalty under the Wright patent alone, and possibly under the Bell et al patent lone, to say nothing of the other patents covered by the cross-licensing agreement. We are informed that a considerable time prior to the date of the cross-license agreement, one manufacturing concern procured a license from the Wright-Company under the Wright patent above referred to and paid $1,000 per machine as royalty on a considerable number of machines which it built under the license."

This did not quiet the criticism and opposition to whatever was attempted in dealing with the owners of patents, and President Wilson requested Justice Charles Evans Hughes to investigate and report upon the practices involved in the Cross License Agreement. In response he rendered a report entirely sustaining the practice in part as follows:

> "Whatever may be said of the charge that this arrangement tends to discourage future inventions, one of its results was to enable the Government through contractors, to secure the use of all necessary patents at a fixed cost and with little friction. It was not entered into until the Attorney General had given an opinion that it did not conflict with the anti-trust laws. I find no basis for the suggestion that in bringing it about the members of the Aircraft Board were actuated by an unlawful or dishonest motive."

The Select Committee of Congress in its report of December 14, 1925, also gave the practice a clean bill of health.

Officials within the Government Service conducted such a criticism of the status of the Manufacturers Aircraft Association and the Cross-License Agreement that the Controller General disallowed payment of royalties thereunder. Thereupon a suit was brought against the United States in the Court of Claims of the United States, and a judgment was rendered in favor of the Manufacturers Aircraft Association in the sum of $363,500. Every possible consideration that could be brought against the practice was considered and disposed of.

Thus it can be said that the practice of dealing with a complicated group of patents relating to a mechanical organization by cross-licensing is supported by the judgment of Franklin D. Roosevelt, Newton D. Baker, Charles Evans Hughes, The Select Committee of the House of Representatives, and the United States Court of Claims.

RADIO PATENTS

Something of a similar condition developed in respect of patents on radio after the Supreme Court decisions previously mentioned.

Many controlling patents were held by the Marconi Company and the DeForrest Company. They had been involved in litigation against each other. Injunctions and certain judgments had issued whereby it was impossible for either to manufacture the necessary radio equipments desired by the Government without violating the orders of the Courts and both companies were frightened by the decisions of the Supreme Court. It would appear that they would be responsible for the completion of the contracts that each had taken with the Government.

In that situation the arrangement was made that each and others involved would suspend their rights for the period of the war and depand upon a negotiated settlement with the Government covering all phases of the radio situation through a Board which was created by the Secretary of War, Secretary of the Navy and the Attorney General. A precept was signed by those three cabinet ministers which may be summarized as follows:

> "Now therefore it is directed that the officers and representatives of the War Department, Navy Department, the Department of Justice; and any successors of any of said members **** shall continue

as a Board ***** to investigate, hear and examine the questions relating to the liability involved in the use by the Government of patents on radio apparatus and similar devices and render to the several heads of the Departments mentioned their conclusions and recommendations therein."

That Board heard and considered many claims relating to Radio Apparatus and they were classified under sixteen headings:

Complete transmitters and receivers
Receivers
Transmitters
Detectors (crystals)

Arc Transmitters
Receiving tuners
Vacuum tubes
Wave changers

Wave meters
Decrometers
Quenched gaps
Directing finding apparatus
Audion Detectors
Condensers
Radio telephones
Amplifiers

In the presentation of each of these claims the owners of the patents agreed to abide by the conclusions and actions of the Inter-departmental Radio Board.

INTERNATIONAL RELATIONS IN PATENTS

When the United States declared war against Germany and became an ally or associate of England and France, it was found that those countries had made many developments relating to munitions and more particularly to aircraft during the two years that they had been engaged in war which had been kept secret and which the United States and they desired would become available to use by the United States, but the private property rights involved had to be taken into account.

Colonel Bolling went to England and France and made with England what came to be known as the Bolling Agreement, in which England agreed to disclose to the United States and for its use all of its latest and best developments, and assume the entire liability to the owners of such designs and patents belonging to British subjects that would be employed by the United States during the War, provided that the United States would compensate for such user as occurred after the war. It was also arranged that the liability should be determined by a Commission representing both countries which would be assembled after the War.

In the year 1922, England and the United States each appointed three representatives which came to be known as the Bolling Commission or the Commission for the adjustment of Foreign Claims. Sessions of this Joint Commission were held in London throughout the winter of 1922 and 1923, when every claimant was heard as to past and future uses. England paid to its citizens over $600,000 for uses made of their inventions during the war by the United States and the United States paid approximately $50,000 for the right to use a few of them after the war. They included the airplanes and engines that the British had developed and which were employed by the United States, together with bomb sights, propellers, navigating instruments, synchronizing gears and airplanes, and many more devices too numerous to mention. Congress made a special appropriation to cover the entire proceeding.

MIXED PROPERTY IN INVENTIONS

The problem of properly and legally dealing with the property rights involved in patents and inventions became complicated by the over-lapping and intermingled relations between the Government and unrelated owners of patents. This can be illustrated by the development of the Earth Inductor Compass. The Air Corps of the Army allotted a fund to the Bureau of Standards for experimental work in the production of an Earth Inductor Compass. Two distinguished scientists, Dr. Briggs and Dr. Heyl, made a basic invention and constructed a crude embodiment. This work was performed by Government employees on Government time and at Government pay. Applications for patent for their inventions were prepared and filed by Patent Attorneys employed by the Government. The crude embodiment of the device was taken to McCook Field of the Air Corps, where it was given further development. This development was further refined by an Engineering Company under contract with the United States, in which certain improvements were accomplished, and for which the Government paid as an engineering project. With this background, the Air Corps entered into a contract with the Pioneer Instrument Company for further refinement and stipulated that any inventions or improvements produced would inure to the benefit of the Government. One of the engineers of that Company filed several applications for patent for inventions which he made as an employee thereof and that Company later on advertised and claimed the Earth Inductor Compass as the accomplishment of the Pioneer Instrument Company and brought a claim against the Government under his patents. It can be seen that very careful consideration must be given to the language and conditions of contracts when such overlapping relations exist in the development and refinement of a device.

INVENTIONS BY GOVERNMENT EMPLOYEES

Thus far no reference has been made to the property rights of inventors employed by the Government in their relation to the Government and to industry. This has been a controversial subject, but has been quite well clarified by recent Court decisions.

In 1883 Congress passed an Act embodied in the Appropriations for the Department of Agriculture which authorized the Commissioner of Patents to accept applications and grant patents to officers and employees of the United States without the payment of Government fees, provided the applicants stipulated that the inventions, if patented, might be used by the Government or its officers or by any other person in the United States without the payment of royalty. There was much uncertainty as to the meaning of the words "Or any other person in the United States" because it might be held that such language comprised a dedication to the public which in many cases was not intended. By an Act of April 30, 1928, that law was so amended as to make it clear that these conditions only related to uses by or for the United States and by officers of the Government on its behalf. This means that commercial rights under such inventions are reserved to the patentees.

By the Act of 1910, as amended, the right to sue the Government was not extended to persons who were officers or employees at the time they made inventions or at the time they might present a claim.

Under these laws and some decisions relating to the subject of employer and employee, some of the Departments of the Government undertook to claim that all inventions made by Government employees vested in the United States and denied to such inventors any private commercial rights.

This controversy was litigated and finally decided by the Supreme Court of the United States in dealing with the inventions made by Dunmore and Lowell, employees of the Bureau of Standards. In this decision of April 10, 1933, the entire subject of employer and employee, and more particularly that of the officer and employee of the Government was reviewed

and determined. It was held that the Government was entitled to use the invention of an employee for its own purposes and requirements, but that in every other respect the invention and patent was the property of the officer and employee.

One further consideration should be developed.

THE RESPONSIBILITY OF OFFICERS

It has been previously said that jurisdiction has been extended to the United States Courts to proceedings against the Government under contract express or implied by the owner of a patent, and that a contract can be spelled out of the actions and expressions of officers, upon which recovery has been accomplished.

The Court of Claims held in the case of Lampert Manufacturing Supply Co. v United States (C. C. 65, page 579) that the burden is upon the Government to show the absence of authority to contract - that is to say prove a negative - when officers and agents have been held out to be responsible representatives for the obvious duties of their positions. The Court said:

> "The courts will assume that an officer in the performance of an official act, not only took all necessary preliminary steps required but acted within the circumference of his authority. There is a preseumption in favor of the legality of his official act (United States v Coe, 170 U.S. 681,697) which must be overcome by satisfactory proof that the officer exceeded his powers (Fauvergen v United States, 18 How.) etc."

A contracting officer or one occupying a position of responsibility might thus unintentionally involve his Government in an obligation unless he is fully informed of the legal status of his action, when he undertakes to contract within the realm of his authority and obvious duties and deals with the property of patents.

Then there may occur a seeming contradiction when an officer deliberatley attempts to stipulate off the effect of the law governing a transaction and the property rights involved relating to patents.

The practice has recently developed in the War Department of requiring the contractor with the Government to assume the entire liability for the use of patents in the performance of the contract.

The following is a typical clause:

> "Patents. The contractor shall hold and save the Government, its officers, agents, servants, and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any patented or unpatented invention, article, or appliance manufactured or used in the performance of this contract, including their use by the Government."

Where any patent or patents are to be expected from the operation of this article, such exceptions will be specifically stated, by reference to the patent number, date of issue, and name of patentee, in a proviso to be added to the article.

This provision is a manifest attempt to stipulate off and nullify the law of Congress as interpreted by the Courts. If the clause is not absolutely void, it is futile for its intended purposes, and only produces a complication without any material benefits.

The Act of 1918 very definitely imposes the liability involved upon the United States, and absolves the Contractor. That conclusion is inevitable from the decisions mentioned.

The owner of a patent that may be infringed is not privy to such a contract, and is in no manner bound.

How, therefore, will this practice operate?

The owner of a patent will sue the United States. It is his only recourse.

The Government will be obliged to defend the case in the Court. Just as much labor and expense will be incurred as if there were no provision as the one quoted. Such a proceeding frequently consumes several years in the Court, and is very expensive.

If an award or judgment is obtained, the Government must pay the bill, and then look to the Contractor for reimbursement if he can be found, is still in existence and solvent. If the Contractor declines to pay, the Government is then obliged to bring suit against him, perhaps in his local Court, and before a jury of his neighbors.

Thus, the Government may have to bear the expense of two suits instead of one, and take its chances of recovery in the one against the Contractor.

It is also reasonable to assume that a prudent contractor will consider the possible cost of the liability assumed, and include it in his first price. Thus, the Government in effect will pay the cost in advance of a claim, take the chance of having to pay again for any judgment of the Court and then take further chance of recovery against the Contractor.

A Court of Equity might properly hold that a contractor under these circumstances has surrendered his immunity to injunction, and issue a restraining order against him; and the Government would be right back to the condition that Franklin D. Roosevelt undertook to have corrected by law.

ULTRA VIRES

If and when the Government should sue a contractor in the premise recited, it is possible that he would set up the doctrine of ultra vires in defense. That doctrine may be defined:

> "It denotes the act or contract of a corporation beyond the powers conferred upon it in its charter. It is variously applied to its authorized acts performed in an unauthorized manner; its authorized acts performed by agents of the corporation unauthorized so to act; positively illegal acts of the corporation; but most specifically to its contracts to perform acts for which it is unimpowered in its charter. The general rule is that ultra vires contracts cannot be enforced and any stockholder or creditor can bring restraining suits against the corporation."

There does not appear to be any decision that is "on all fours" with the circumstances here involved, and there are some authorities that would have to be encountered in which

it was held the beneficiary under a contract would be estopped from setting up the rule as a defense. These decisions, however, are also unequal to the conditions under consideration.

It just seems to be obvious, however, that a contracting officer of the Government is not competent to suspend and nullify the express will of Congress as embodied in the law governing a transaction.

DISCUSSION AND SUGGESTIONS

There are many details and side lights that could be developed which would only relate to ramifications of the major premise, which time and the occasion does not warrant discussing, but a few definite conclusions are inevitable.

(a) Most of the grief that has been described occurred in the midst of the greatest war in history. It is the duty of the Army to anticipate and prevent similar conditions before the next war occurs. The theory should be adopted that the Army is always at war, and have its organization so assembled and oiled that no such conditions could recur.

(b) Every effort should be made to encourage inventors and designers to submit their devices for consideration, and abandon the attitude of Admiral Farragut toward torpedoes as applied to patents.

The following principles and practices should be recognized and respected at all times:

1. Patents and Designs are property and may not be appropriated and used by the Government with impunity;

2. The Government is liable for the unauthorized use thereof.

3. A contractor with the Government is immune to liability to the owner of a patent.

4. It is incompetent for an officer of the Government and a contractor with the Government to stipulate that the law relating to a contract and property shall be reversed and the contractor assume the patent liability in its contracts.

5. The Government must assume the liability that rests upon it, and insert "in simple language the law of Congress."

6. The War and Navy Departments should follow the suggestions of the Select Committee of the House of Representatives -

> "That means should be provided whereby the inventor who alleges violation of his patents by the Government may apply for relief other than by resort to the Court of Claims."

I could recommend the character of such an agency which could go very far in bringing to the Government confidentially many developments that inventors now conceal - and the Army and the Navy would be highly benefitted, but that is not pertinent to the present occasion and discussion - but must be met elsewhere.

It can be further said that the best informed Government official on the whole subject is the President of the United States.

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Discussion Following Lecture

Q. Colonel Young, I am intrigued with the condition that exists when a contractor has a contract with the Government. He is perfectly free, the way I look at it, to use patented items. If an organization has a patent and they want to get into a contract with the Government, that organization can not sue any one to get its patent rights back but any other organization that has never produced that item can come in and manufacture the item and the Government must pay them for it. In other words, the organization without the patent can underbid the organization that owns the patent on any contract that they have with the Government. That does not seem just. It would seem to me that something should be done to prevent that.

A. That certain agency, as I suggested, might very well take that under consideration. There is, of course, a differential in favor of the contractor who owns a patent that gives him an advantage in competing with an organization that does not own a patent. Colonel Hall will remember a

situation years ago when the Curtiss Aeroplane and Motor Company brought out a fine new type and design of airplane. The Government made the mistake (I hold it was a mistake) to advertise for competitive bids for the device which that company had produced and a tramp manufacturer with no background or responsibility or engineering organization underbid the Curtiss Company. Therefore, there is a differential that I should say should properly apply to the concern that has built up a development and owns the property rights involved and the patents on their improvements. Is that what you had in mind, sir?

Q. Yes, that is exactly what I had in mind, but we have no way of knowing what that proper differential is and we have no way of knowing what all the patents are when we go out to buy something, so it looks like it is rather difficult to handle it.

A. Of course under that circumstance the best guess is the one that must be followed. The Comptroller General some years ago authorized the making of a contract with a higher bidder, taking into consideration the differential, or the values of the ownership of patents and superior facilities. Under circumstances of that kind, as and when such a situation was reported to him in advance, he would allow that differential to occur rather than hold the contracting officer blindly to the lowest bod.

Q. What is the present legal distinction in regard to an officer or employee of the Government who develops a patent in connection with his official duties or on his own time entirely aside from his official duties?

A. Under the broad law, or the strict law of employer and employee, if that officer is designated and has been assigned as his duty to develop or invent a particular thing, then the product of that duty inures entirely and exclusively to the United States. If, however, such an invention is incidental to a duty or performed within the time of service, and unless so specifically designated, then the patent rights belong to the inventor subject to the right of use by the Government without compensation due to him. That was the case of Lowell and Dunmore which went to the Supreme Court of the United States. They were engineers at the Bureau of Standards and they made certain inventions in

radio receiving sets. The case is Dubilier Condenser Corp. v U.S. (289 U.S., p. 178). Several of the departments tried to make the rule apply that those inventions and the property rights therein belonged to the Government. The case was carried, as I said, to the Supreme Court of the United States, which court made the decision. It recites all the various conditons and ramifications of relations that can exist between the Government and an officer or employee of the Government.

Q. Up until about June of this year this saving clause was required in contracts, at least in Signal Corps contracts. Do you know whether that saving clause is still required?

A. I do not.

Q. Assume that it is for the purpose of this question. We have a situation where a proposal is issued for material with the saving clause in it —

A. That is to say the contractor saves the Government harmless.

Q. The contracting officer can not do anything - he has to do what he is told to do. The firm holding the patent thinks that the equipment and the amount of the equipment is too small and they do not bid. Sometimes the proposal is readvertised and due to the failure of the firm holding the patents to bid the first time the small firms begin to bid. The small firms get the contract and the firm holding the patent rights comes around and gets after the contracting officer and the small firms and threatens them, and the Government's business is delayed. I do not know why these firms do that except that firms holding the patents think they can force the Government to buy in the open market at their price. Has a contracting officer under such circumstances anything that he can do?

A. If he is proceeding under orders there is not a thing he can do. The only recourse is that the owner of the patents may proceed against the Government and the Government is liable. I will say to you, sir, I guess it is fair for me to say to you, that General Mauborgne reviewed this lecture before it was delivered and is in complete accord with it.

Q. It is a very serious situation.

Q. (General Mauborgne). I am not here to throw a bomb shell into the assembly, but to get further information. I would like to know just what the Government gets when it takes over the patents of the inventor. What use does it ever make of these patents? In other words, here is a case: An engineer in the Government takes out a patent on a certain invention. The Government gets rights to that patent for its own use; the commercial rights go to the inventor. He turns those over to Company A. The other companies come in and bid on a particular piece of apparatus which embodies not only that invention but 640 other inventions. I have yet to see a case where the United States Government has gotten one cent reduction in the cost of a contract because of the fact that it owned one, two, or three inventions which were used in the production of that piece of equipment. What do we do with it when we get it? You can say: "We cross license." That is to say: "We can give authority to other firms to make apparatus for the Government only under that particular patent", but I can not see that we ever get one cent of return for the fact that we took these patents out for these gentlemen. I would like very much to have Colonel Young tell us something about that phase of it because it appears to me we have bought inventions from various people like Hammond, we have obtained a certain number of patents from the Germans and Austrians as a result of our negotiations after the war; we have acquired a great number of patents through the efforts of the Army and Navy officials, but I have never seen the case where the price of a contract with any company on the outside has been reduced because of the fact that the United States Government held the patent. We go out on the open market and take the lowest bidder and no one reduces the price because we happen to have one or more patents involved in a particular piece of goods coming in. Is that not right?

A. The only value I find in it, if you please, is one which is not immediately obvious - it is ultimately obvious. It occurs because the Government becomes immune from suit by those who might otherwise have owned those patents and held the Government responsible. One further consideration: The Rules of Practice in the Patent Office and the law permit an application for a patent that is owned by the Government to occupy a preferential position in that if it should be certified to the Commissioner of Patents that a pending application and its disclosures are material to the national defense that application can be held in the Patent Office under the three year proviso for an indefinite length of time. Meanwhile, as a

matter of military value it does not become disclosed to the world. That has an additional value, I consider, and has been practiced to valuable effect by both the Army and the Navy withholding valuable inventions and disclosures that are important to the defense of the country from being disclosed to outsiders in that manner.

Colonel Jordan: Does that answer your question, General?

General Mauborgne: I do not think the Colonel has cited a case in which we got any money back under the circumstances which I mentioned. I understand very well the background he mentions - that we have a certain immunity in the first case and in the second case we are able to withhold the issue of the patent, but I would like very much to have the Colonel develop that last idea of his a little further. I of course know that we can hold patents from being issued; we can hold them secret in the Patent Office for a certain length of time. Where do the inventor's rights come in in that case? Must it be a case in which the Government official tells this particular inventor: "You are to develop an absolute radio altimeter for the Air Corps and if in so doing you produce an invention all rights then vest in the Government"? In that case I can see how the Government can well go into the Patent Office and say: "Hold up on that, we have all rights and interest to that thing", but when an inventor produces a device the commercial rights of which give him a perfect right to sell to some one on the outside, how do you hold that particular inventor up and prevent his patent from going through the mill? Aren't you in effect interfering with his rights when you do that?

A. You can not do it. In other words, you have got to buy it from him, get an assignment from him, before the rule applies to that situation.

General Mauborgne: You do that in every case where he is a man who is on your payroll. You get an assignment for Government use only, you do not ever get an assignment for that man to say that he foregoes his commercial rights and permits the Government of the United States to hold up that patent as long as it feels necessary. It is a point that is now causing a good deal of trouble in our laboratories.

A. General, that has happened. It has happened frequently, sir, that where the Government is involved or

interested in withholding from the public this invention which is of military value they have bought it outright, with certain assignments, and then have taken over the conduct and management of the case in the Patent Office and kept it there for an indefinite length of time. I did it myself, sir, when I was in your service.

General Mauborgne: I know very well you did.

Colonel Jordan: We are getting things we did not know about.

Q. I have a question, Colonel Young, with regard to your statement that the savings clause in the proposals regarding the protection of the Government against patent infringement should be left out of the proposals. Why is that? Is it the assumption that the Government even in times of peace has the right to the use of any patent regardless of who owns them or that that should only apply in time of war? The point that I make is that bidder A uses the patent of bidder B. You stated that bidder B may proceed against the Government. That does not seem to me to be right because the Government is no party to that infringement. Bidder B should proceed against bidder A for infringement, otherwise the Government by that very act is opening up the avenues to patent infringement and would lead to a very chaotic condition in business, to my mind.

A. The point is that the Government itself should have control and be entirely responsible for the infringing use of a third party's property so as to prevent that third party in peace or in an emergency going before a court and having that court stop the performance of a contract with the Government. It was just exactly that that Mr. Roosevelt asked that the Congress should correct in the restrictions or limitations of the law of 1910 as it existed under the decisions of the Supreme Court of March 1918 and until the amendment to that Act of July 2, 1918 was passed at the request of Mr. Roosevelt.

Q. As I understand it then, your position is that in time of peace we are actually at war with respect to any use of patents for war planning purposes?

A. That is correct, sir, and I take that position because right in the middle of that situation which we were

engaged in in 1918 we had to stop and start all over again and there was a considerable amount of confusion. General Maubornge will remember when Dr. De Forest came down at that time and said: "I can not go any further, we can not produce any radio apparatus." The Western Electric Company had the same situation develop and we worked tothether and got straightened out and had the Interdepartmental Radio Board created. They all agreed that they would go along with us and not enforce their injunctions and decisions against each other for the period of the war. It was critical for a while and Dr. DeForest was terribly excited about the conditions that developed.

Q. What are the circumstances under which we can take over foreign patents on M-Day, not only from the country with which we are at war but perhaps another foreign country? What delay will be involved there and how quickly can we take advantage of foreign patents?

A. Do you mean a patent of a foreigner granted by the United States?

Q. That is it.

A. They stand in no different position insofar as their use by the Government is concerned than a patent owned by a citizen of the United States. In the last war a special Act of Congress substantially declared that the patents owned by German citizens were contraband and they were seized and operations were suspended commercially under them except as they were licensed by the Alien Property Custodian. They were seized by the Alien Property Custodian. That was under special war time act.

Q. Do you think we should take steps to incorporate in this law which we expect to incorporate in the Resources Administration on M-Day such a provision again?

A. I do, because they will do the same to any patents which we have in any enemy country and then we will have trading values when peace is declared.

Q. What agreement in international or other law is it then that prohibits one nation from using the patents developed in another nation? What I mean is that one foreign company that we know of is said at least to be purchasing a

small number of items made in this country and then reproducing them at home without any further adieu as far as the original patentee is concerned. Is there any protection?

A. Not the slightest, sir. That is going on right along. It is going on in Soviet Russia and Japan and some other countries that I can mention of my personal knowledge.

Colonel Jordan: There is no action that can be taken?

A. None that I know of.

Q. Is it a matter of common practice for all nations to do that? In other words, we seem, as far as I know, to be respecting the rights of European nations that produce Diesel engines. We have talked a lot about Diesel engines here, and the American Diesel engines are said at least to be inferior to those made in Germany and Switzerland and Sweden and Norway.

A. There are mighty few of them that I would trust.

Q. Is that the reason that we are not infringing their rights or is it a matter of ethics on our part?

A. We are infringing them, if you please, but we have provided means by which they can recover for the infringement that occurs. M. Esnault Pelterie, for instance, a Frenchman, brought suit in the Court of Claims for the use by the United States of the joy stick in an airplane which he claims to be his invention. He had two or three French patents and one very unimportant patent of the United States. He recovered and will be paid a considerable amount of money. Now we are using Esnault Pelterie's joy stick but we provide means by which he can recover against us for such user under our law. However, these other countries, some that I have in mind, conceal their uses. They buy a few articles and copy them - Chinese copies of you please, althought I do not claim that it is the Chinese who are doing that. They just make duplications of them and get away from the ethics that you speak of. We try to make an agreement before we go into the uses of other people's property. I well remember that right after the war there was a great epidemic of leak-proof fuel tanks for airplanes and self-healing tanks. The French had been very prolific in doing that sort of work but in England and in France they had a law which suspended the issue of patents. An inventor could get his patent sealed but it would not be delivered and it was held up. Those inventions, war time

patents, came out and they came flooding over here. Secretary Davis was very much impressed with some of them and his ethics in dealing with those matters was just splendid, therefore we have kept friendships and have had a lot of things brought to us which we would not otherwise have gotten if we had started to take advantage of them. I think it is good policy to maintain that practice.

Q. Isn't it a fact though that unless a foreign inventor has the United States patent that he has no right at all to come into the United States and prevent us from using his invention?

A. That is correct.

Q. In other words, he can not sue unless he has some leg in the American patent field?

A. That is correct, sir.

Colonel Jordan: I want to extend the thanks of The Army Industrial College to you, sir, for a very illuminating talk. By the way, the Colonel paid the College a rather large-sized compliment. He came down three or four days ago, brought his proposed speech, and said he wanted the faculty to criticize it before he delivered it. He did not know whether he was talking along the lines that we wanted - intimating that the faculty here were patent lawyers. I want to thank him for that compliment too.

Colonel Young: Colonel Jordan, I want to thank you and these other gentlemen for the fine attention that you have given to me and the interest that you have shown in the subject which is so dear to my heart.