

# PATENT NOTES FOR ENGINEERS

*By*

C. D. TUSKA

Published by  
RCA REVIEW  
RADIO CORPORATION OF AMERICA  
RCA LABORATORIES DIVISION,  
Princeton, New Jersey

Copyright, 1947, 1950, 1951, 1954, .  
by Radio Corporation of America,  
RCA Laboratories Division

**FIRST EDITION**

First Printing .....September, 1947  
Second Printing .....May, 1948  
Third Printing .....January, 1949

**SECOND EDITION**

First Printing .....June, 1950

**THIRD EDITION**

First Printing .....July, 1951

**FOURTH EDITION**

First Printing .....January, 1954

Printed in U.S.A.

# PATENT NOTES FOR ENGINEERS

## PREFACE

A little knowledge, it is said, can be a dangerous thing. This may be true when one is taking an affirmative step. It is certainly not true when one has valuable rights capable of being impaired or lost through inaction. In that situation even a bare smattering of knowledge may help to overcome the inertia of ignorance and thus save the day.

I do not mean to imply that this, the Fourth Edition of *Patent Notes for Engineers*, attempts or accomplishes no more than to shed a pinhole of light on the substantive and procedural pitfalls of patent law. On the contrary, this edition of the *Notes*, like its forerunners, happily avoids oversimplification. At the same time, however, the *Notes* stop short of falling into the by now egregious error of giving readers credit for more learning than they possess. The reader of this book will soon find that here is more than a sketch of the field. Here is a thorough treatment, but one which does not proceed on the invalid premise that thoroughness comprehends first assuming that the reader is familiar with the basic principles, then proceeding into a legalistic, technical discussion of esoteric points of law and practice. In this respect the *Notes* depart from more standard approaches. The deviation is both refreshing and desirable.

No one can say with certainty precisely what constitutes invention. Nor can one make a positive statement that certain activity on the part of an inventor does or does not amount to that degree of diligence required by patent law. All one can do in either case, as in almost every question arising in patent prosecution or litigation, is to predict. And all too often a patent attorney or agent is called upon to make a prediction only after the critical period has passed from the realm of the future and the controllable into the area where wise counsel, helpful as it may be for the inventor's next effort, comes too late to reclaim his present venture. What Mr. Tuska's book does is to erect clear warning signals along the path which leads from the conception of an invention in the inventor's mind to his ownership of a patent. Properly heeded, these warnings may constitute the difference between one's acquiring wisdom from bitter experience and his acquiring valuable patent rights.

For many years there existed a vacuum in the literature surrounding our patent system. At one end of the vacuum lay materials directed to the initiate; at the other, literature for the layman. The difficulty was that there was always a class of readers for whom the need was not filled by either. Since it was first published in 1947, *Patent Notes for Engineers* has played an important role in filling the void. This most recent edition of the *Notes* brings its readers up to date. It is therefore an even more indispensable item in the library of the technical man.

Leonard S. Lyon

Lyon and Lyon  
Los Angeles, Cal.  
August 12, 1953

# PATENT NOTES FOR ENGINEERS

## CONTENTS

PREFACE .....	LEONARD S. LYON	—i—
INTRODUCTION .....	C. D. TUSKA	—v—

### CHAPTER

	PAGE
I. INVENTION IN POPULAR SENSE	
1.01 <i>Invention Defined In Popular Sense</i> .....	1
1.02 <i>Unpatented Invention Not Protected</i> .....	1
II. STATUTORY INVENTION	
2.01 <i>No Definition of Statutory Invention</i> .....	4
2.02 <i>Invention Defined Negatively by Courts</i> .....	6
2.03 <i>Exceptions to "Negative Rules"</i> .....	37
2.04 <i>Doctrine of Commercial Success</i> .....	42
III. NATURE OF STATUTORY INVENTION	
3.01 <i>Essentials of Statutory Invention</i> .....	47
3.02 <i>Other Requisites of Statutory Invention</i> .....	54
3.03 <i>Summary</i> .....	66
IV. STATUTORY INVENTION AS A PRACTICAL MATTER	
4.01 <i>Undisclosed Conception of Invention</i> .....	68
4.02 <i>Oral Disclosure of Invention</i> .....	69
4.03 <i>Written Description Is Best Evidence of Invention</i> .....	70
4.04 <i>Reduction to Practice</i> .....	75
4.05 <i>Relation Between Conception of an Invention and Reduction to Practice — Diligence</i> .....	78
4.06 <i>Suggestions</i> .....	79
V. RECORDS OF INVENTION	
5.01 <i>Records of Invention</i> .....	81
5.02 <i>Standard Form for Disclosing Inventions</i> .....	83
5.03 <i>Substance of Disclosure</i> .....	87
VI. PROSECUTION OF PATENT APPLICATIONS	
6.01 <i>Preparation of Patent Application</i> .....	92
6.02 <i>Patent Office Procedure</i> .....	94
6.03 <i>Amending the Application</i> .....	95
6.04 <i>Further Office Action</i> .....	102
6.05 <i>Appeal from Final Rejection</i> .....	104
6.06 <i>Reissues</i> .....	106
6.07 <i>Disclaimers</i> .....	109
6.08 <i>Misjoinder or Nonjoinder of Patentees</i> .....	112
6.09 <i>Summary</i> .....	112

(Continued on next page)

	PAGE
<b>VII. INTERFERENCES</b>	
7.01 <i>Definition of Interference</i> .....	114
7.02 <i>Examiner's Interference Search</i> .....	115
7.03 <i>Claims Proposed for Interference</i> .....	115
7.04 <i>Primary Examiner's Reference to Examiner of Interference</i> .....	115
7.05 <i>Declaration of Interference</i> .....	116
7.06 <i>Avoidance or Postponement of Interference</i> .....	116
7.07 <i>Preliminary Statement</i> .....	119
7.08 <i>Motion Period</i> .....	120
7.09 <i>Testimony in Interferences</i> .....	126
7.10 <i>Priority of Invention</i> .....	129
7.11 <i>Appeals from Adverse Decisions</i> .....	138
7.12 <i>Summary</i> .....	140
<b>VIII. PATENT APPROVAL</b>	
8.01 <i>Patent Approval</i> .....	141
8.02 <i>Patent Approval—Disclosures of Invention</i> .....	143
8.03 <i>Outsider Disclosures</i> .....	144
8.04 <i>Breach of Confidence Cases</i> .....	145
8.05 <i>RCA Policy Concerning Ideas Submitted by Persons Outside the Corporation</i> .....	149
<b>IX. OWNERSHIP AND USE OF PATENTS</b>	
9.01 <i>Ownership of Inventions and Patents</i> .....	154
9.02 <i>Use of Patent</i> .....	161
9.03 <i>Patent Licenses</i> .....	162
9.04 <i>Infringement of Patent</i> .....	163
9.05 <i>Actively Inducing Infringement</i> .....	164
9.06 <i>Contributory Infringement</i> .....	165
TABLE OF CITATIONS .....	170
TABLE OF ILLUSTRATIONS .....	173
INDEX .....	174

# PATENT NOTES FOR ENGINEERS

---

## INTRODUCTION TO FOURTH EDITION

THE draft of the Fourth Edition of *Patent Notes for Engineers* was begun after some hesitation: A bill to codify the patent law was before the Congress. We needed a second printing of the Third Edition, but if the proposed bill became law, the new printing would be out of date by the time the books were bound. On the other hand, a new edition might seem premature if the new patent act became effective, because the new law would lack judicial interpretation.

This hesitation was justified when the Patent Act (Public Law 593, cited "Title 35, United States Code, section —") was passed in the closing days of the Congress, was signed by The President, and became effective on January 1, 1953. To the extent that the new Patent Act is a codification of the law, the Fourth Edition of the book is not premature. The old decisions, which seem pertinent, have been cited. Nevertheless, the reader should make some allowance for the uncertainties of future judicial decisions. The new provisions of the law will be interpreted eventually by the Supreme Court. In the meantime, the risks of prematurity seem to be preferred to being out of date.

As in the case of the earlier editions, these notes represent a serious effort to bridge the technical gap between engineers, research workers, and inventors generally, and their patent attorneys. The gap would soon disappear if the undergraduate curriculums in our colleges and universities included an appropriate course in patents. Such a course should be required, or at least offered, in the case of undergraduates who are receiving instruction in the arts in which they may later make inventions. In any event, whether acquired in school or otherwise, those possessed of a knowledge of patents will be better fitted to enter into vocations in which patents play an important part.

The extent of Chapters II and III and the number of citations have concerned the writer, who preferred brevity but concluded that Statutory Invention should be treated at some length for those who might like to view the field through the experienced eyes of our Courts. Readers who are engaged in work likely to result in inventions are urged to study carefully Chapters IV, V, VI, and VII. These chapters offer practical suggestions for protecting inventions prior to the filing

of patent applications and thereafter by means of adequate notes, witnessed reduction to practice, exercise of diligence, and appropriate records.

The fundamental patent philosophy of these Notes is best expressed in the words of Mr. Chief Justice John Marshall, who in 1832 said:

“To promote the progress of useful arts, is the interest and policy of every enlightened government. It entered into the views of the framers of our constitution, and the power ‘to promote the progress of science and useful arts, by securing for limited times to authors and inventors, the exclusive right to their respective writings and discoveries,’ is among those expressly given to congress. This subject was among the first which followed the organization of our government. It was taken up by the first congress at its second session, and an act was passed authorizing a patent to be issued to the inventor of any useful art, etc. on his petition, ‘granting to such petitioner, his heirs, administrators or assigns, for any term not exceeding fourteen years, the sole and exclusive right and liberty of making, using, and vending to others to be used, the said invention or discovery.’ The law further declares that the patent ‘shall be good and available to the grantee or grantees by force of this act to all and every intent and purpose herein contained.’ The amendatory act of 1793 contains the same language, and it cannot be doubted that the settled purpose of the United States has ever been, and continues to be, to confer on the authors of useful inventions an exclusive right in their inventions for the time mentioned in their patent. It is the reward stipulated for the advantages derived by the public for the exertions of the individual, and is intended as a stimulus to those exertions. The laws which are passed to give effect to this purpose ought, we think, to be construed in the spirit in which they have been made; and to execute the contract fairly on the part of the United States, where the full benefit has been actually received: if this can be done without transcending the intention of the statute, or countenancing acts which are fraudulent or may prove mischievous. The public yields nothing which it has not agreed to yield; it receives all which it has contracted to receive. The full benefit of the discovery, after its enjoyment by the discoverer for fourteen years, is preserved; and for his exclusive enjoyment of it during that time the public faith is pledged. \* \* \*” Grant v. Raymond, 31 U. S. 218, 241, 242.

C. D. TUSKA

Director of Patent Department,  
Radio Corporation of America,  
RCA Laboratories Division

Princeton, N. J.  
January 20, 1953



# PATENT NOTES FOR ENGINEERS

---

## CHAPTER I

### INVENTION IN THE POPULAR SENSE

#### 1.01. *Invention Defined in Popular Sense.*

Patents are granted by the Government to promote the arts by rewarding inventors for their discoveries or inventions. In discussing patents and inventions, it would be helpful to begin by defining invention. Even in a popular sense "invention" seems to be an exceedingly difficult word to define. The dictionary definitions —

The power of inventing, or conceiving, devising, originating, etc.; inventive skill or ingenuity. Something invented.—(Webster's Collegiate Dictionary—Fifth Edition) or

The act of inventing or discovering through study, experience, etc.; a devising or contriving, especially that which has not before existed.—(Webster's New International Dictionary, Second Edition)

may not meet all of the precise rules of good definitions. The truth of the matter is that the term invention as used in the United States is yet to be defined precisely.

When the word is used in a popular sense as defined in the dictionaries, certain fundamental aspects appear: a mental act, an element of skill, and a requirement of novelty. When statutory invention is discussed in the next chapter, additional requirements will be found. Since invention usually starts with the mental act or conception, it follows that the conceiver (1) can keep his invention secret, (2) can disclose to others by word of mouth or otherwise, or (3) can by writing or by any suitable means make the information or invention available to the public.

#### 1.02. *Unpatented Invention Not Protected.*

If the inventor has no interest in protecting his invention by filing a patent application, he can at first keep it secret. At a later date he can disclose to others in any fashion he desires; he can talk about the invention; he can write about the invention; and he can make the writings public. In brief, he can do as he pleases, for the invention is exclusively his. However, he has not protected the invention; he may soon lose the right to obtain a patent; and he has no assurances that he will receive due credit for his work.

1. Suppose the inventor elects to keep the secret — some other person may come along even at a later date and, having independently made the same invention, may patent the invention, or may make it public, and receive full credit. The inventor who keeps his own secret can rarely establish that he was the earlier conceiver and there are other consequences. For example, an inventor who first elected to keep his invention secret and later elected to file a patent application, has been denied a patent on the grounds that secrecy and patentability are incompatible and that secrecy keeps the invention from becoming available to the public in due course (*Quist v. Ostrom*, 106 O.G. 1501).

2. The "popular inventor" may publish his invention and one might think that was sufficient; however, another and independent inventor may file a patent application within a year of the publication date, "swear back of the publication date" under the Rules of Practice of the United States Patent Office, and obtain a patent valid on its face. The holder of that patent can keep the public, including the "popular inventor," from practicing the invention for the period of the patent — for such is the reward. At considerable trouble and expense the "popular inventor" might prove his invention was earlier and that the issued patent was invalid, and thereby obtain for himself and the public the right to use the invention.

3. Then there is the possibility that some dishonest person might appropriate the invention and improperly obtain a patent. Again the patent might be proven invalid provided adequate written records, and witnesses thereto, were available. Nevertheless, it is usually very troublesome and very expensive to prove that a patent is invalid. The best protection is to have a patent application filed promptly, in the name of the first inventor, before publishing a description of the invention.

4. While there are doubtless many other examples of the lack of protection for an inventor who fails to take advantage of the protective character of a patent application, the foregoing suffices to point out the dangers encountered by an independent inventor. There are additional considerations when the inventor is an employee. If an engineer is using the facilities of his employer and is developing an invention at the expense of his employer, the only protection afforded the employer lies in the prompt filing of a patent application. Without the protection of a patent system, there is little incentive for one to spend substantial sums in developing new devices, new methods, new materials, or new systems only to see the new things made available to a competitor who contributes nothing or to a copyist who rushes in to take advantage of the work of another.

A research worker, independent or employed, and activated only by a desire to contribute to the never ending advance and without a thought of gain or personal honor, may fall short of his goal if he fails adequately to protect his invention because by his failure he may let another get a patent and "tax the public" for the use of the invention. A newcomer may obtain a patent because the research worker "slept on his rights."

• CHAPTER II

STATUTORY INVENTION

**2.01. No Definition of Statutory Invention.**

Statutory invention is harder to define than invention in a popular sense, which was considered in the preceding chapter. One may turn to the United States Constitution and to the Federal Statutes, but he will find no definition of invention. If the many decisions of the Courts are examined one finds no acceptable definition, although many of the decisions frankly state the problem.

1. Article I, Section 8 of the Constitution of the United States is as follows:

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

Notwithstanding the fact that it is this article which is the basis of the right of the Federal Government to grant patents, one will not find in the article either “patents” or “inventions” or their definitions. The lack of definition of these words in the Constitution is not surprising if it is realized that the Constitution is a framework and is not a detailed plan of our form of Government. Incidentally, the words “inventions” and “discoveries” are generally used synonymously in patent law so that we may read Article I, Section 8 as if it said “discoveries or inventions.”

2. Inventions and discoveries are not defined in the latest patent law (Title 35, United States Code), but the following definitions are set forth:

When used in this title unless the context otherwise indicates—

§ 100. (a) The term “invention” means invention or discovery.

(b) The term “process” means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

3. The Courts have recognized the difficulty of defining the word “invention” and have struggled with the problem in their deliberations. By way of example, Mr. Justice Brown speaking for the United States Supreme Court in *McClain v. Ortmyer*, 141 U.S. 419, 426, said: —

“\* \* \* What shall be construed as invention within the meaning of the patent laws has been made the subject of a great amount

of .orities, and a large number of cases, pa. recent volumes of reports, turn solely upon the .velty. By some, invention is described as the contriving o. .ructing of that which had not before existed; and by another, giving a construction to the patent law, as "the finding out, contriving, devising or creating something new and useful, which did not exist before, by an operation of the intellect." To say that the act of invention is the production of something new and useful does not solve the difficulty of giving an accurate definition, since the question of what is new as distinguished from that which is a colorable variation of what is old, is usually the very question in issue. To say that it involves an operation of the intellect, is a product of intuition, or of something akin to genius, as distinguished from mere mechanical skill, draws one somewhat nearer to an appreciation of the true distinction, but it does not adequately express the idea. The truth is the word cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not. In a given case we may be able to say that there is present invention of a very high order. In another, we can see that there is lacking that impalpable something which distinguishes invention from simple mechanical skill. Courts, adopting fixed principles as a guide, have by a process of exclusion determined that certain variations in old devices do or do not involve invention; but whether the variation relied upon in a particular case is anything more than ordinary mechanical skill is a question which cannot be answered by applying the test of any general definition."

The United States Court of Appeals for the Third Circuit had this to say about defining invention in the case of *Pyrene Manufacturing Co. v. Boyce et al* (292 F. 480) :

"\* \* \* It is a trite saying that invention defies definition. Yet through long use, the word has acquired certain characteristics which at least give direction to its meaning. Invention is a concept, a thing evolved from the mind. It is not a revelation of something which exists and was unknown, but is the creation of something which did not exist before, possessing the elements of novelty and utility in kind and measure different and greater than what the art might expect from its skilled workers."

4. In two of the text books this is said about invention:—

"An invention is the result of an inventive act; it consists in (1) a mental operation involving the conception of an idea and (2) a physical operation involving the reduction to practice of the inventive concept. An invention is the product of original thought; it is a concept, a thing evolved from the mind. It involves the spontaneous conception or "happy thought" of some idea not previously present to the mind of the inventor; it is the creation of something which did not exist before." (Walker on Patents, Deller Edition, Vol. 1, page 110.)

"It has been stated that the inventive act consists of both a mental part and a physical part. The mental part is technically known as "the conception", while the physical part is known as "the reduction to practice." Conception, the mental part of the inventive act, has been defined as the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice." (Patentability and Validity by Caesar and Rivise, published in 1936).

While the foregoing leaves the reader without an acceptable definition of invention, it does give a background for appreciating the following words of Judge Learned Hand:

"Objective tests may be of value vaguely to give us a sense of direction, but the final destination can be only loosely indicated. An invention is a new display of ingenuity beyond the compass of the routinier, and in the end that is all that can be said about it. Courts cannot avoid the duty of divining as best they can what the day to day capacity of the ordinary artisan will produce. This they attempt by looking at the history of the art, the occasion for the invention, its success, its independent repetition at about the same time, and the state of the underlying art, which was a condition upon its appearance at all. Yet, when all is said, there will remain cases when we can only fall back upon such good sense as we may have, and in these we cannot help exposing the inventor to the hazard inherent in hypostatizing such modifications in the existing arts as are within the limited imagination of the journeyman. There comes a point when the question must be resolved by a subjective opinion as to what seems an easy step and what does not. We must try to correct our standard by such objective references as we can, but in the end the judgment will appear, and no doubt be, to a large extent personal and in that sense arbitrary." (Kirsch Mfg. Co. v. Gould Mersereau Co., Inc., 6 F. (2d) 793, 794).

In view of the difficulties, the burden of determining whether or not an invention has been made should be shifted to the patent attorneys. If the patent attorneys have reasonable doubt, they can file a patent application, and thus let the Commissioner of Patents decide. If the Commissioner refuses to grant a patent on the application, an appeal can be taken to the Courts, who in the final analysis determine if a patent should be issued or if an issued patent is valid.

## 2.02. *Invention Defined Negatively by the Courts.*

Although a concise definition of invention has not been found, there are a number of definitions of what is not invention. These "negative rules" of the Courts have arisen mainly in connection with appeals from refusals of the Commissioner of Patents to grant patents and in patent infringement suits in which the validity of the patents

was an issue. In applying these negative rules one must be extremely cautious, because for almost every negative rule, there are certain exceptions and many of these exceptions involve subtle distinctions.

While it may seem undesirable to expand the text by quoting from a large number of decisions an abundance of decisions does seem to be the most practical way to give a background to the questions of what is and what is not invention. For the readers who may be interested in an example of the application of the rules of what is or is not invention, representative decisions respectively supporting some of the rules and the exceptions have been selected.

**1. The exercise of ordinary mechanical or electrical engineering skill does not involve invention.**

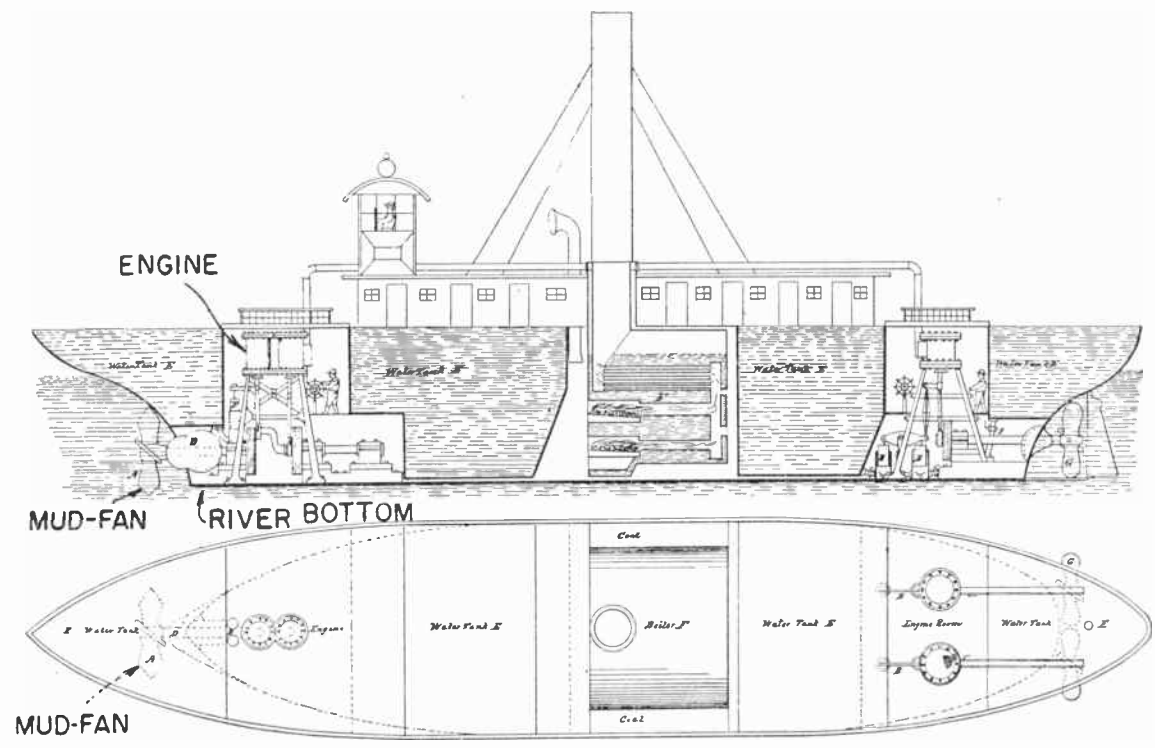
The Brady patent, granted December 17, 1867, was for a dredge-boat with stern driving propellers. The boat included a "mud-fan" which projected from the bow and below the bottom of the boat. The mud-fan was driven by a separate engine. Water was permitted to flow into watertight compartments to sink the boat to the required operating level. The mud-fan was driven to displace the sand and mud on the river bottom and to stir them and mix them with the water so that they were carried off by the current. (See page 8.)

The Court's opinion showed that it was old to dredge by driving a stern propelled boat either stern first or bow first into a bar to stir up the material of the bar. It was old to use watertight compartments to determine the operating draft of a vessel. The opinion also describes an ordinary central paddle-wheel boat which was provided with two revolving conical-shaped screws for cutting and stirring up the river bottom. While there was other prior art, and while there was a doubt whether Brady or General McAlester was the first inventor, the Court decided, among other things, that there was no invention in the Brady patent in view of the prior art. Mr. Justice Bradley delivered the opinion of the Court, which includes the following:

"The process of development in manufactures creates a constant demand for new appliances, which the skill of ordinary head workmen and engineers is generally adequate to devise, and which, indeed, are the natural and proper outgrowth of such development. Each step forward prepares the way for the next, and each is usually taken by spontaneous trials and attempts in a hundred different places. To grant to a single party a monopoly of every slight advance made, except where the exercise of invention somewhat above ordinary mechanical or engineering skill is distinctly shown, is unjust in principle and injurious in its consequences.

"The design of the patent laws is to reward those who make some substantial discovery or invention which adds to our knowl-





BRADY U.S. PATENT 72,360



edge and makes a step in advance in the useful arts. Such inventors are worthy of all favor. It is never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. \* \* \* (Atlantic Works v. Brady, 107 U. S. 192, 199, 200).

**2. The substitution of superior material, which is not new, for the inferior material previously employed, is not invention.**

The Hotchkiss et al. patent No. 2197 was issued on July 29, 1841 for an improved method of making knobs of potter's clay. The knob included a cavity, largest at the bottom, in the form of a dovetail or wedge reversed, into which was inserted a shank. The shank was fastened by pouring metal in a fused state into the taper cavity. Hotchkiss et al. sued Greenwood et al. for infringement. On appeal to the U. S. Supreme Court, the question of patentability with regard to the substitution of a superior material, which was not new, for the inferior material previously used, was dismissed by Mr. Justice Nelson, speaking for the majority of the Court, as follows:

"But in the case before us, the knob is not new, nor the metallic shank and spindle, nor the dovetail form of the cavity in the knob, nor the means by which the metallic shank is securely fastened therein. All these were well known, and in common use; and the only thing new is the substitution of a knob of a different material from that heretofore used in connection with this arrangement.

"Now it may very well be, that, by connecting the clay or porcelain knob with the metallic shank in this well-known mode, an article is produced better and cheaper than in the case of the metallic or wood knob; but this does not result from any new mechanical device or contrivance, but from the fact that the material of which the knob is composed happens to be better adapted to the purpose for which it is made. The improvement consists in the superiority of the material, and which is not new, over that previously employed in making the knob.

"But this, of itself, can never be the subject of a patent. No one will pretend that a machine, made, in whole or in part, of materials better adapted to the purpose for which it is used than the materials of which the old one is constructed, and for that reason better and cheaper, can be distinguished from the old one; or, in the sense of the patent law, can entitle the manufacturer to a patent.

"The difference is formal, and destitute of ingenuity or invention. It may afford evidence of judgment and skill in the selection and adaptation of the materials in the manufacture of the instrument for the purposes intended, but nothing more." (Hotchkiss et al. v. Greenwood et al., 52 U. S. 248, 265, 266).

### 3. Mere enlargement is not invention.

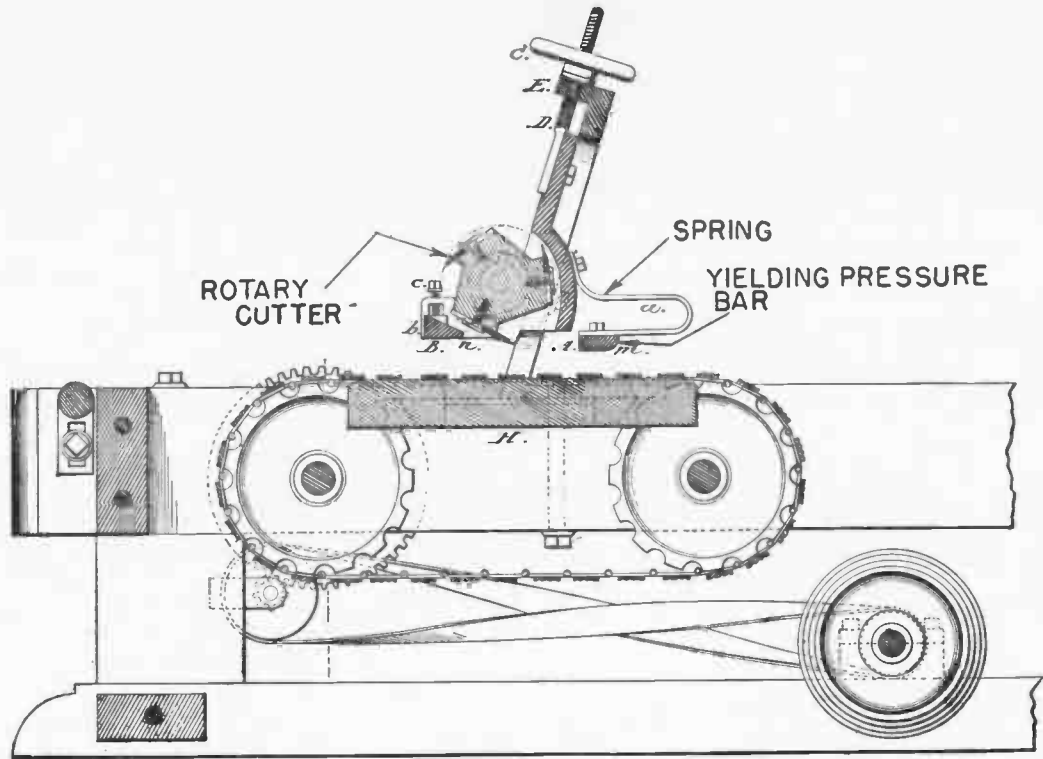
The owners of Woodbury Patent 138,462 for an improvement in planing machines sued one Keith for an infringement and among the questions submitted on appeal to the U. S. Supreme Court was this: Does mere enlargement involve invention? The Woodbury patent covered a rotary cutter and a yielding pressure bar arranged to counteract the fluttering or tremor caused by the cutter knives operating on the wood to be planed. The pressure bar was massive and rigid and was mounted on springs. Within reasonable limits the pressure bar accommodated itself to varying irregularities in the surface of the material to be planed.

The defendant proved that an Anson machine was built and operated in the manufacture of sash and blinds in 1843, which was earlier than Woodbury's earliest invention date. Mr. Justice Field delivered the opinion of the Court and, with respect to the foregoing question, said:

"The appellant contends that the Anson machine fails to be an anticipation of the Woodbury invention, because, as they say, it has no solid bed. It plainly has, however, a solid bed, adequate for the purposes for which the machine was intended and used,—for cutting and planing light material, sash, and blinds, and the bed is sufficiently solid for such uses. It may be admitted it would be too weak for general planing work upon boards or plank. It is comparatively a small machine. It would not cease to be the same machine, in principle, if any one or all of its constituents were enlarged or strengthened, so that it might perform heavier work. True, the bed is divided by a slit running longitudinally from one end to the other, but the two parts are arranged so as to constitute one bed, and it is not perceived why, if enlarged, it would not answer all the purposes of the Woodbury machine. Mere enlargement is not invention. The simplest mechanic can make such a modification." (Planing Machine Co. v. Keith, 101 U. S. 479, 490).

### 4. Mere change in form produced by mechanical division is not invention.

Milligan and Higgins Glue Company sued George Upton for alleged infringement of Goddard Reissued Patent 4072 for an improvement in the manufacture of glue. The improvement consisted in breaking the hard, angular flakes of ordinary glue into small uniform grains. The ordinary glue was hard to package and slow to dissolve in water. The improved glue was more quickly soluble, more pleasing in appearance, consequently more merchantable, and brought a higher price. The only claim was to the comminuted glue as a new article of manufacture. The suit reached the U. S. Supreme Court on appeal.



WOODBURY U.S. PATENT 138,462

The Court's opinion, delivered by Mr. Justice Field, included the following:

"A distinction must be observed between a new article of commerce and a new article which, as such, is patentable. Any change in form from a previous condition may render the article new in commerce; as powdered sugar is a different article in commerce from loaf sugar, and ground coffee is a different article in commerce from coffee in the berry. But to render the article new in the sense of the patent law, it must be more or less efficacious, or possess new properties by a combination with other ingredients; not from a mere change of form produced by a mechanical division." (*Glue Co. v. Upton*, 97 U. S. 3, 6).

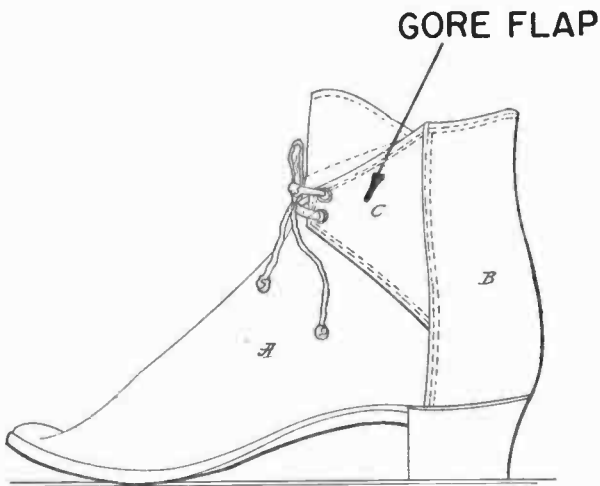
**5. Mere changes in form, proportions, degree, or arrangement do not involve invention, especially when no new principles or new functions are involved.**

(a) Evory and Heston had granted to them U. S. Patent 59,375 on November 6, 1866, for an improvement in boots and shoes. The improvement consisted in a waterproof shoe having on each side an expansion-gore flap. The arrangement made the upper part of the shoe readily expansible to admit the foot. Thereafter, the flaps were folded forward over the instep and were secured by a buckle or suitable lacing.

The evidence showed that several types of watertight shoes had been made with gores or gussets which enlarged to permit the foot to be inserted in the shoe, and with flaps which could be folded and secured. After reviewing the evidence, Mr. Justice Lamar, speaking for the Court, said:

"We think, therefore, the claim in this case must be regarded as being for a manufactured article, and not for a mode of producing it. This being true, it is difficult to see any patentable device or function in the Evory and Heston shoe. It is a mere aggregation of old parts with only such changes of form or arrangement as a skillful mechanic could readily devise—the natural outgrowth of the development of mechanical skill as distinguished from invention. The changes made by Evory and Heston in the construction of a watertight shoe were changes of degree only, and did not involve any new principle. Their shoe performed no new function. In the construction of it the vamp, the quarters and the expansible gore flap were cut somewhat differently, it is true, from like parts of the shoes constructed under the earlier patents referred to, but they subserved the same purposes.

"It is well settled that not every improvement in an article is patentable. The test is that the improvement must be the product of an original conception. \* \* \* And a mere carrying forward or more extended application of an original idea—a mere improvement in degree—is not invention. In *Smith v. Nichols*, 21 Wall.



EVORY & HESTON  
U.S. PATENT 59,375

112, 118, 119, Mr. Justice Strong, delivering the opinion of the court, said: 'A patentable invention is a mental result. It must be new and shown to be of practical utility. Everything within the domain of the conception belongs to him who conceived it. The machine, process, or product is but the material reflex and embodiment. A new idea may be ingrafted upon an old invention, be distinct from the conception which preceded it, and be an improvement. In such case it is patentable. The prior patentee cannot use it without the consent of the improver, and the latter cannot use the original invention without the consent of the former. But a mere carrying forward or new or more extended application of the original thought, a change only in form, proportions or degree, the substitution of equivalents, doing substantially the same thing in the same way, by substantially the same means, with better results, is not such invention as will sustain a patent. These rules apply alike, whether what preceded was covered by a patent or rested only in public knowledge and use. In neither case can there be an invasion of such domain and an appropriation of anything found there. In one case everything belongs to the prior patentee; in the other, to the public at large.'

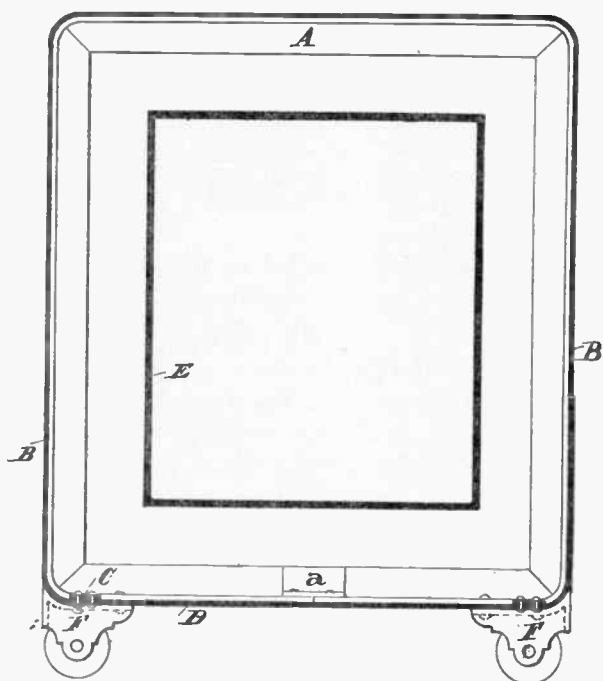
"Neither is it invention to combine old devices into a new article without producing any new mode of operation. \* \* \*

"In the recent case of *Hill v. Wooster*, decided January 13 of this year, 132 U. S. 693, 700, it is said; 'This court, however, has repeatedly held that, under the Constitution and the acts of Congress, a person, to be entitled to a patent, must have invented or discovered some new and useful art, machine, manufacture or composition of matter, or some new and useful improvement thereof, and that "it is not enough that a thing shall be new, in the sense that in the shape or form in which it is produced it shall not have been before known, and that it shall be useful, but it must, under the Constitution and the statute, amount to an invention or discovery;"' citing a long line of authorities.

"We are of the opinion that the patent in suit does not meet the requirements of the rules deduced from the decisions to which we have referred. We do not think there is any patentable invention in it; but, on the contrary, that it is merely a carrying forward of the original idea of the earlier patents on the same subject—simply a change in form and arrangement of the constituent parts of the shoe, or an improvement in degree only." (*Burt v. Evory*, 133 U. S. 349, 358, 359).

(b) Moses Mosler's U. S. Patents, 273,585 granted March 6, 1883 and 281,640 granted July 17, 1883, related to improvements in fireproof safes and included claims to a particular safe having round corners. All of the features of the safe, except the round corners, were found to be old. On that point Mr. Justice Blatchford, who delivered the opinion of the Court, said:

"\* \* \* that, although the patentee was the first to employ the combination claimed in the manufacture of round-cornered safes,



MOSLER U.S. PATENT 273,585

the change from square-cornered safes was only a change in form; and that the combination was nothing more than an aggregation.

\* \* \* (Mosler Safe and Lock Co. v. Mosler, 127 U. S. 354, 363).

(c) In declaring Hamline Q. French's U. S. Patent 244,224, which issued on July 12, 1881 for an improvement in "roofs for vaults," invalid, the U. S. Supreme Court, speaking through Mr. Justice Blatchford, said:

"\* \* \* Where the roof-stones are wider, as in the Billaud roof, there need be only a narrow ridge-stone, while where the roof-stones are narrower, as in the patented device, a wider ridge-stone or cap-stone is necessary. In the latter case the cap-stone must rest upon the gable-stones. In the former case it need not do so. But, in each case, the vertical seam into which water could enter is covered, and the structure is held together and locked at the roof, so as to be made enduring by the locking and the weight of the roof. The question is one of degree only, as to the size of the ridge-stone or cap-stone and the corresponding width of the roof-stones.

\* \* \* (French v. Carter, 137 U. S. 239, 245).

**6. Unification or multiplication of parts ordinarily involves no more than the exercise of mere mechanical skill, and hence is not invention.**

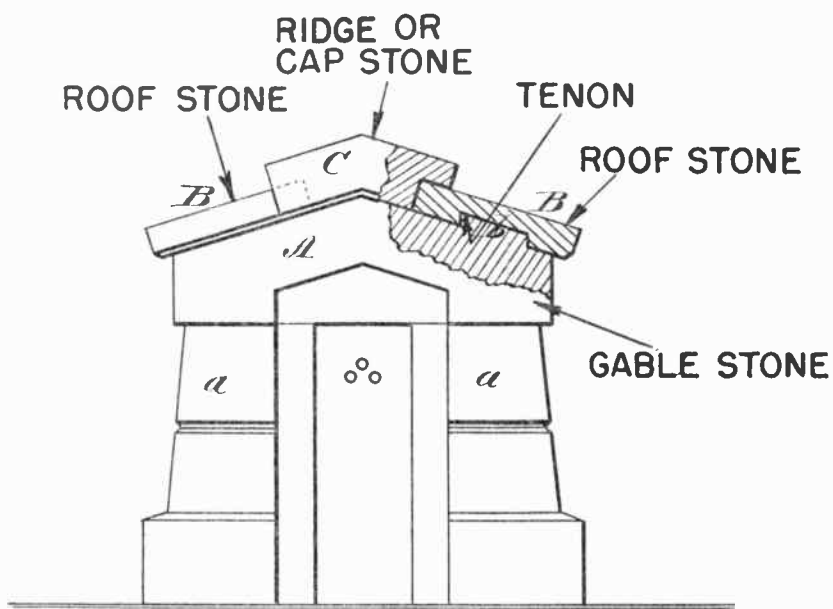
(a) U. S. Patent 206,074 was granted to Philo D. Beckwith on July 16, 1878 for an improvement in stove grates. The patent claimed a circular grate having a thin closed portion, a thick open portion, strengthened by ribs, and with a toothed periphery opposite the open part of the grate. The prior art included grates having the features of the Beckwith grate except that the latter was circular and the former rectangular to fit a rectangular firebox. Moreover, one prior art grate contained all the elements of the Beckwith grate, except that, being adapted for burning coal, it was cast in two pieces, while the Beckwith grate was cast in one piece. (See page 18.)

The U. S. Supreme Court, in an opinion delivered by Mr. Justice Jackson, held that:

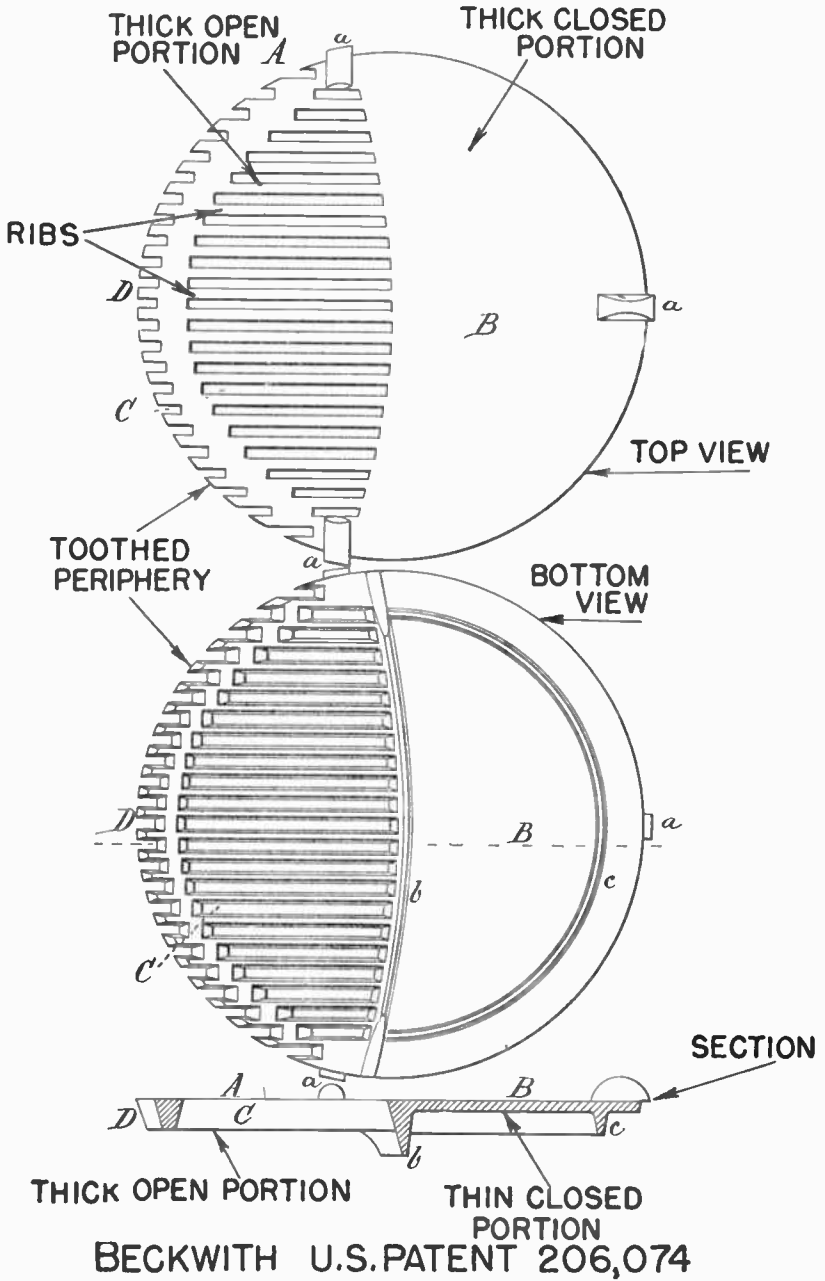
"\* \* \* As to the third patent (Beckwith 206,074) it is void because the claims in it were clearly anticipated, and because it involves no invention to cast in one piece an article which has formerly been cast in two pieces and put together, nor to make the shape of the grate correspond with that of the firepot." (Howard v. Detroit Stove Works, 150 U. S. 164, 170).

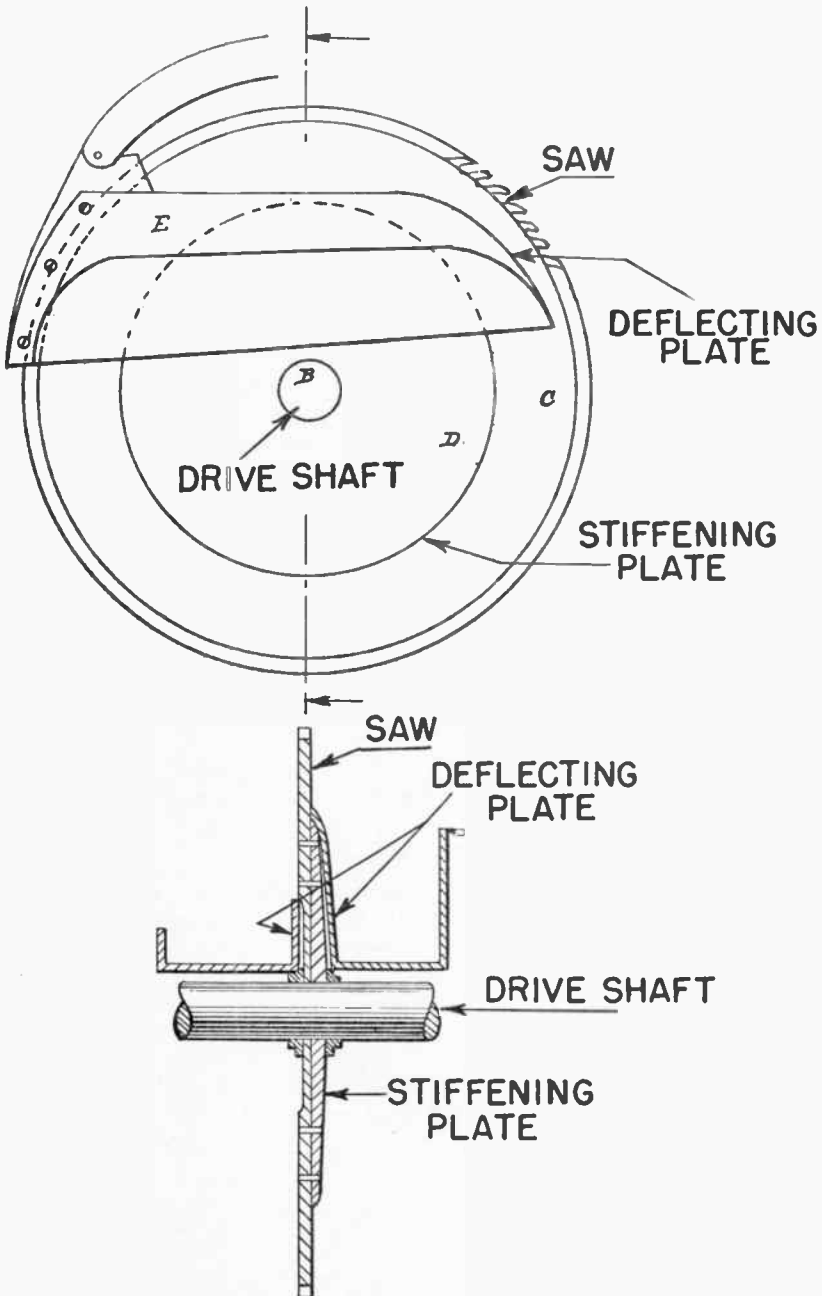
Myers and Eunson U. S. Patent 10,965, granted May 23, 1854 for an improved circular saw, claimed a circular saw with deflecting plates disposed at the sides. (See page 19.) The plates enlarged or expanded the saw kerf, thus preventing the material being sawed from coming in contact with the sides of the saw and binding the edge of





FRENCH U.S. PATENT 244,224





MYERS & EUNSON U.S. PATENT 10,965

the saw near the teeth. The deflecting plates also made it possible to stiffen the saw by a suitable plate whereby a thinner saw could be used with a saving of the sawed material. In reviewing the decision of the lower Court, the U. S. Supreme Court stated the question of invention as follows:

“Grant that two such plates are in certain cases better than one used alone, still the question arises whether it involves any invention to add the second plate to a machine already constructed with one plate. Beyond doubt, every operator who had used a machine having one deflecting plate knew full well what the function was that the deflecting plate was designed to accomplish, and the reasons for placing it at the side of the saw are obvious to the understanding of every one who ever witnessed the operation of a circular saw. Ordinary mechanics know how to use bolts, rivets, and screws, and it is obvious that any one knowing how to use such devices would know how to arrange a deflecting plate at one side of a circular saw which had such a device properly arranged on the other side, it being conceded that both deflecting plates are constructed and arranged precisely alike, except that one is placed on one side of the saw and the other on the opposite side. Both are attached to the frame in the same manner; nor is it shown, either in the specifications or drawings, that there is anything peculiar in the means employed for arranging the deflecting plates at the sides of the saw, or in attaching the same to the frame. Both are alike, except that the outer end of the one on the same side as the strengthening plate projects farther from the saw than the inner end, and that the other is rather smaller in diameter, and that the ends project about an equal distance from the saw.”

\* \* \* \* \*

and after reviewing a large number of decisions on patentability concluded:

“For these reasons, we are all of the opinion that the claim of the improvement described as the employment or use of two deflecting plates, one placed on each side of the circular saw, for the purposes set forth in the specification, is void, because it does not constitute a patentable invention.” (Dunbar v. Myers, 94 U. S. 187, 195, 200—Quoting Mr. Justice Clifford).

**7. Ordinarily no invention is involved in converting from a manual or hand operation to a mechanical operation if there has been no substantial change in the mechanics or method of making the product.**

(a) Marchand's U. S. Patent 273,569 was granted on March 6, 1883 for “an improved method of making hydrogen peroxide by cooling the acid solution (sulphuric or nitric, etc.), imparting thereto a continuous movement of rotation, as well in vertical as in horizontal planes, such, for example, as imparted by a revolving screw in a receptacle, and adding to the acid solution a binoxide (barium or calcium) in

small quantities, while maintaining the low temperature and the rotary or eddying movements, \* \* \*

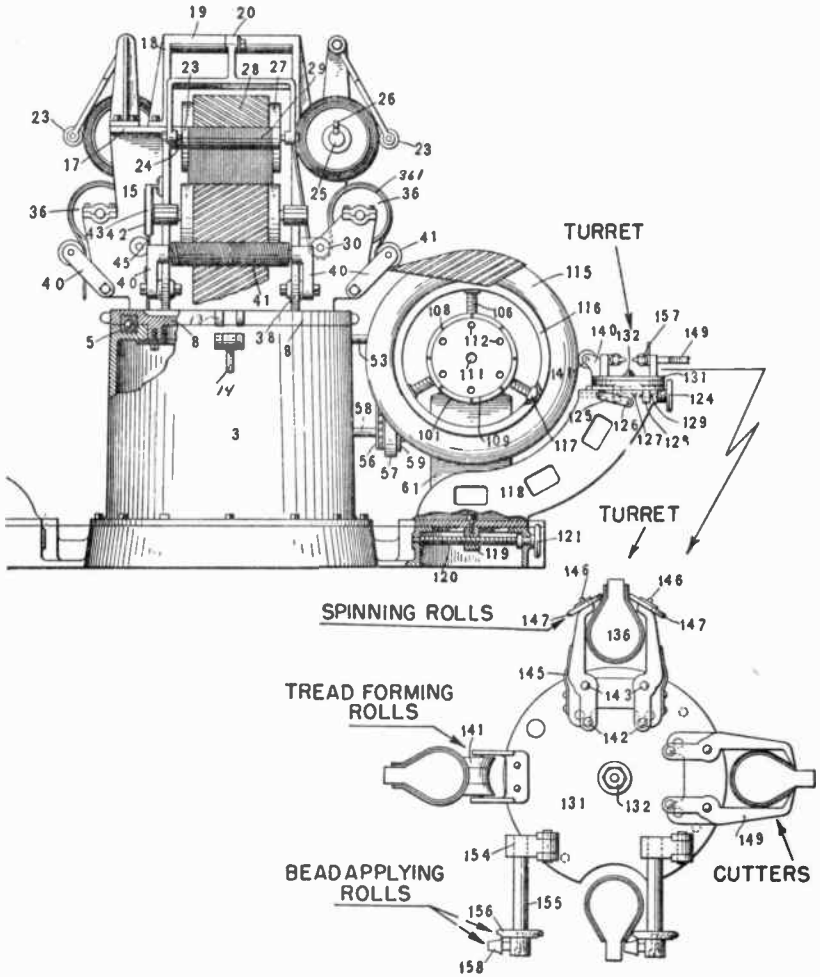
It was admittedly old to make hydrogen peroxide by adding from time to time barium or calcium binoxide, mixed with water, to a dilute acid, refrigerating the solution, and agitating or stirring the solution by hand. The Marchand patent alleged that rapid movement of a mechanical stirrer was more favorable in point of rapidity and yield. The trial Court asked itself the question: "Does it constitute invention to stir, by a well known and simple mechanical device, what was before stirred by hand?". Judge Coxe answered in the negative (23 Blatchford 435). The U. S. Supreme Court concurred in *Marchand v. Emken*, (132 U. S. 195).

(b) Rubber tires for automobiles were first made by hand on an annular core, which revolved on a shaft. The operator coated the core with a cement and affixed a strip of rubber impregnated fabric, stretching and cutting it so as to cover the circumference of the core. Revolving the core slowly, the operator patted and stretched the fabric, thus pressing and shaping the fabric by his fingers and by hand tools so that it adhered smoothly to the core. Additional layers of fabric were added. The fabric was cut on the bias and the layers arranged with the warp threads extending alternately in opposite directions diagonally over the core. While the tread portion of the tire offered no difficulty, it was hard to prevent wrinkling and bagginess as the material was shaped to the sides of the core. At first a saw-tooth tool was used along the sides of the core to stretch the fabric and thus to avoid wrinkles, and then a spinning roller was spun in a diagonal direction along the fabric down the core side. However, the operators found that by increasing the speed of rotation of the core and by using only the spinning roller, they could secure better results.

Beginning about 1894, a number of patents were issued for tire making machines. In 1909, State applied for a patent on an improved tire making machine. The State machine, in addition to a rotatable core, included a turret with four independent tools: The first was the tread roller, the second the spinning rollers, the third the stitching rolls, and the fourth the bead attaching rolls. The operator rotated the turret to bring into operation the desired tool in the same manner as he had previously used hand tools.

In holding the State Patent 941,962 invalid (See page 22), Mr. Chief Justice Taft, delivering the opinion of the Court, included the following:

"The change from hand to the use of machinery often involves invention. In the making of tires, it has in fact resulted, because of the use of power, in speed of manufacture and possibly in some



STATE U.S. PATENT 941,962

greater uniformity of the product. But the record does not show that there has been substantial change in the mechanics or method of making. The steps are the same and the succession from one to the other are as in the manual art, and the transfer from hand to power was by the usual appliances and had all been indicated before the State patent." (Thropp's Sons Co. v. Seiberling, 264 U. S. 320, 328).

**8. No invention resides in adding means to make a device movable when, without such means, the device would not be movable.**

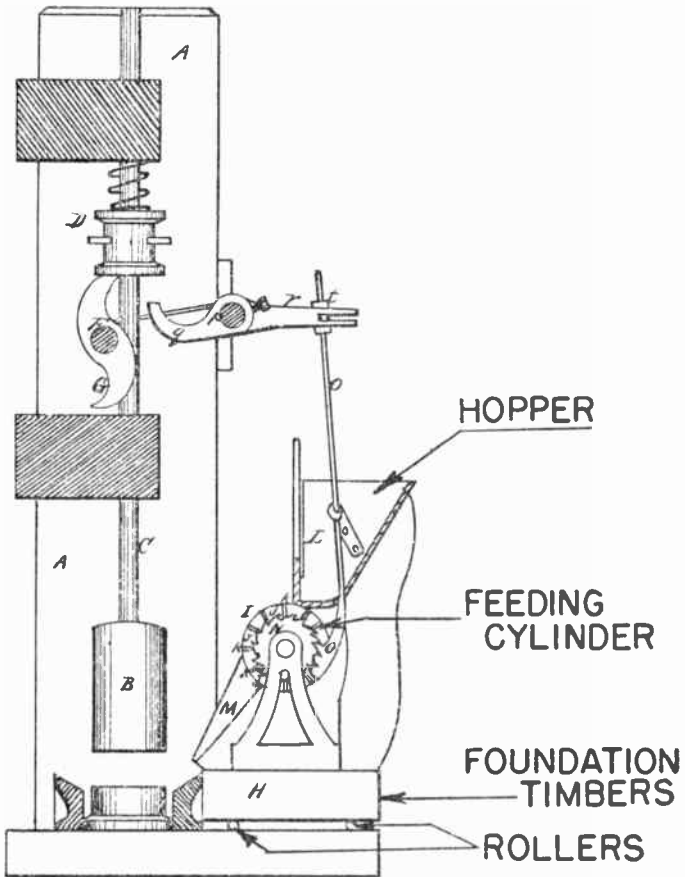
U. S. Patent 140,250 was granted on June 24, 1873 to Cusenbary and Mars for an improvement in ore-stamp feeders (See page 24). The feeding cylinder was mounted on foundation timbers. These timbers were mounted upon rollers, so that the cylinder and frame could be moved about as desired. We need not concern ourselves with the balance of the description, because the decision of the U. S. Supreme Court rested in part on claim 1 which covered the device as described above.

The following is included in the opinion of the Court, which was delivered by Mr. Justice Blatchford:

"It is contended, in defence, that claim 1 of the patent is really a claim only for making the timbers movable, by mounting them upon rollers, so as to be able to move the cylinder and frame about as desired, and that this required no exercise of any inventive faculty. This seems to be the purport of the invention, as stated in the specification. It is the movable character of the frame on which the feed cylinder is mounted, so that the cylinder and frame may be readily shifted from place to place, when repairs are desired, that is designated as the invention. When the mill is in operation, the movable feature is not brought into play. It is only when the mill is out of operation that the movable feature is to be used. The first claim does not appear to cover the functions or operation of the feeding cylinder I, as a part of the mill when in operation; and, interpreting it by its own language, as well as by that of the description in the specification, it covers only the mounting upon rollers of the timbers which carry the feeding cylinder. Merely putting rollers under an article, so as to make it movable, when, without the rollers, it would not be movable, does not involve the inventive faculty, and is not patentable. \* \* \* (Hendy v. Miners' Iron Works, 127 U. S. 370, 374, 375).

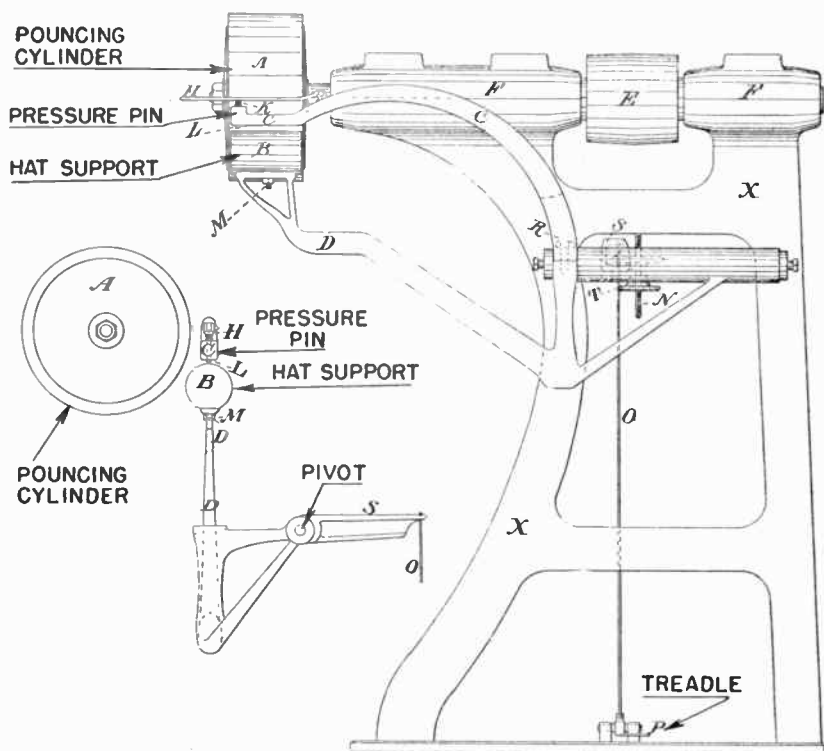
**9. Omission of parts and their attendant functions, unless the omission causes a new mode of operation of the parts retained, is not invention.**

U. S. Patent 220,889, which was granted to Edmund B. Taylor for improvements in machines for pouncing hats, came before the U. S. Supreme Court in an appeal decided April 3, 1893. Grinding off the



CUSENBARY & MARS  
U.S. PATENT 140,250





TAYLOR U.S. PATENT 220,889

rough surface of the wool or fur of which a hat is made, by the use of pumice, is termed "pouncing." While the operation was originally performed by hand, machines came into use about 1866. The Taylor patent, which was an alleged improvement, claimed (See page 25.)

"The combination of the support for the hat and the self feeding pouncing cylinder, whereby the hat is drawn over the support B in the direction of the pouncing cylinder."

An earlier patent, Eickemeyer No. 97,178, disclosed a machine with a rotating pouncing cylinder, a support for the hat to be pounced, and a feed roller. Taylor had omitted Eickemeyer's feed roller. The operator of the Taylor machine guided the hat and permitted the pouncing cylinder to draw the hat in the direction of the cylinder.

In the opinion of the court, delivered by Mr. Justice Brown, the following is found:

"On examination of Eickemeyer's device, however, it is difficult to see wherein the feed roll is so far essential to the operation of the machine that it would not perform practically the same function as the Taylor patent, if the feed roll were omitted. There would still be left a support for the hat by and upon which it could be held up to the pouncing cylinder. The feeding of the hat, instead of being accomplished or assisted by the feed roll, would be done entirely by hand as contemplated in the Taylor patent. Indeed, all the significance of the words 'self-feeding' in this connection appears to be that, when the hat is pressed against the pouncing cylinder, it has a tendency to feed in the direction in which the cylinder revolves, and it is difficult to see why in either machine the hat may not be fed in the opposite direction.

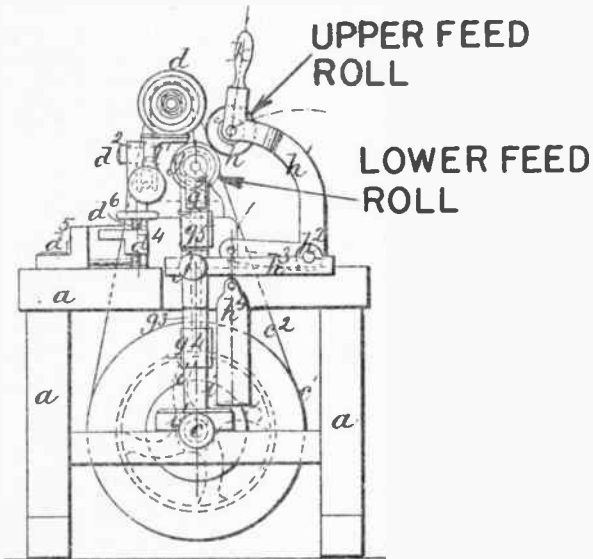
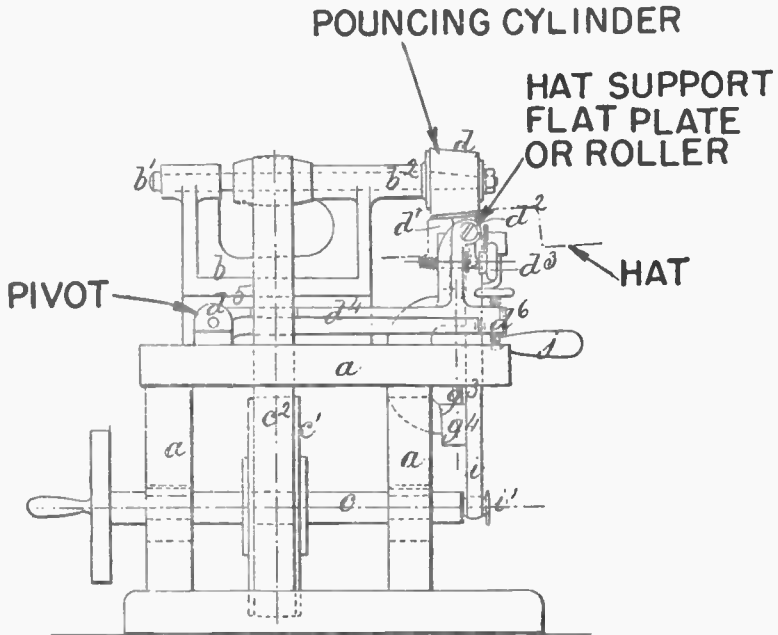
"In the Eickemeyer machine it was fed in the opposite direction by the aid of the feeding-roll, and the same thing, it would seem, may be done, by the application of a little more force, in the Taylor patent.

"The case then really resolves itself into the question whether the omission of the feed roll involves invention; and in view of the fact that the hat support and pouncing cylinder of the Eickemeyer patent will accomplish practically the same functions as the Taylor device, though not so perfectly, we hold it does not—in other words, it required no invention to omit the feed roll of the Eickemeyer patent, and to make the subsidiary changes necessary to produce a working device." (Hat Pouncing Machine Co. v. Hedden, 148 U. S. 482, 489).

**10. Duplication of parts, unless the duplication causes a new mode of operation, or produces a new unitary result, is not invention.**

The basis of the foregoing rule can be found from the following quotation from the U. S. Supreme Court's opinion, delivered by Mr. Justice Woods:

"A glance at the specification and claim of the patent granted to the complainant Slawson shows that the invention described



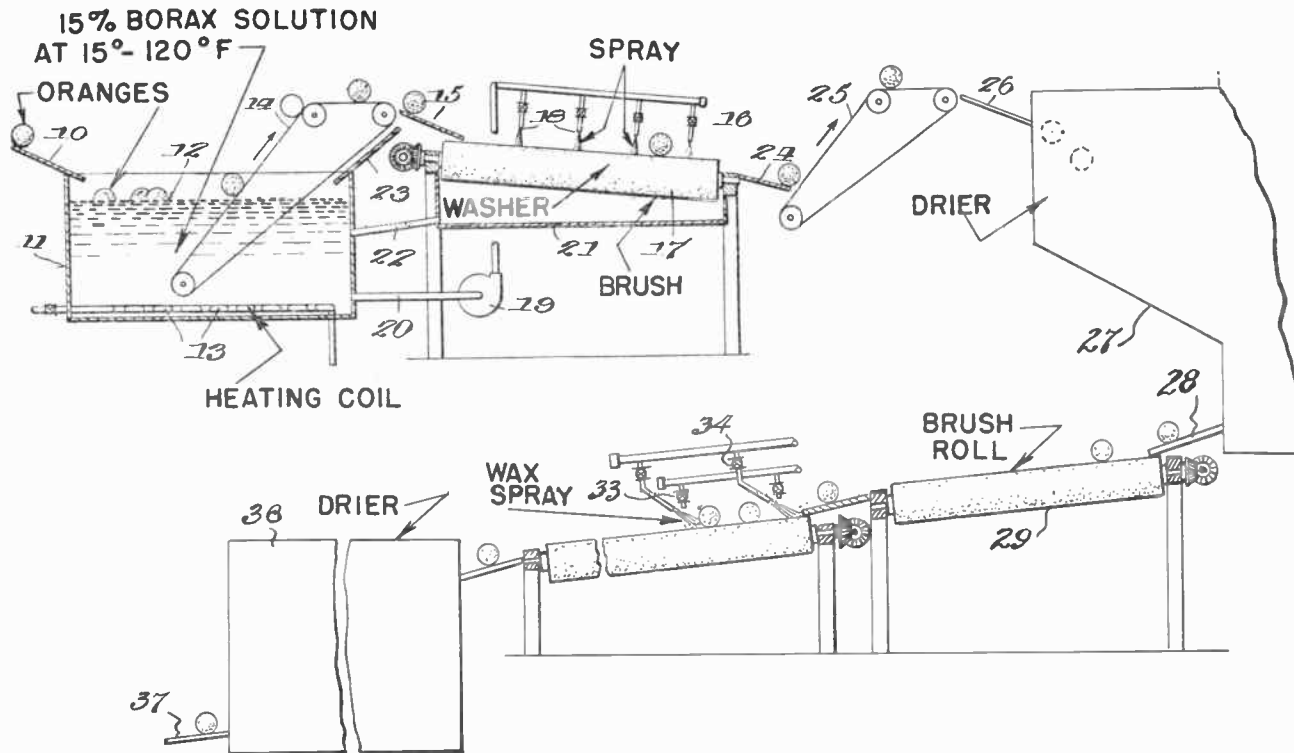
EICKEMEYER U.S. PATENT 97,178

therein consists simply in the placing, in the ordinary fare-box used on street cars and omnibuses, of a glass panel opposite to the glass panel next the driver, usually inserted in such boxes. The patent does not cover the fare-box, it does not cover the insertion in the side of the fare-box next the driver of a glass panel, nor a combination of these two elements. It consists merely in putting an additional pane of glass in the fare-box opposite the side next the driver, so that the passengers can through it see the interior of the box. Such a contrivance does not embody or require invention. It requires no more invention than the placing of an additional pane of glass in a showcase for the display of goods, or the putting of an additional window in a room opposite one already there. It would occur to any mechanic engaged in constructing fare-boxes, that it might be advantageous to insert two glass panes—one next the driver and the other next the interior of the car. But this would not be invention within the meaning of the patent law. \* \* \* It is not a combination of the fare-box having one glass panel with an additional glass panel, but is a mere duplication of the glass panel. Doubtless, a fare-box with two glass panels, arranged as described in the patent, is better than a fare-box with only one. But it is not every improvement that embodies a patentable invention. This rule was fairly illustrated in *Stimpson v. Woodman*, 10 Wall. 117, in which it was held that where a roller, in a particular combination, had been used before without particular designs on it, and a roller, with designs on it, had been used in another combination, it was not a patentable invention to place designs on the roller in the first combination, and that such a change, with the existing knowledge in the art, involved simply mechanical skill, which is not patentable." (*Slawson v. Grand Street R.R. Co.*, 107 U. S. 649, 653).

**11. Substituting a part for an equivalent part of a machine, process, manufacture, or composition of matter, is not invention unless the substituted part not only performs the function of the part for which it was substituted but also performs another function by another mode of operation.**

Brogden and Trowbridge were granted U. S. Patent 1,529,461 relating to an improvement in the art of preparing fresh fruit for market. The process of preparing the fruit for market comprised: "Subjecting fruit to the action of an aqueous solution of borax, the fluidity, strength and temperature of the treating solution, and the duration of the treatment, being such that exposed rind or skin tissues of the fruit are effectively impregnated with borax and rendered resistant to blue mold decay, while at the same time the fruit is not scalded nor is its freshness or edibility otherwise substantially impaired."

A Bishop patent of 1901 described and claimed a method of treat-



BROGDEN & TROWBRIDGE U.S. PATENT 1,529,461

ing articles of food which consisted in washing them with a solution of boracic acid and then applying a coating of gelatin. Bishop patent described the application of the treatment to fruits and other foods to prevent their usual rapid decay, and the patent disclosed that the bath was a harmless antiseptic which purified, cleansed and killed all germs.

In holding the Brogden and Trowbridge patent invalid, Mr. Justice McReynolds, speaking for the U. S. Supreme Court, said in part:—

“That boracic (boric) acid—a weak acid—and borax, with an alkaline reaction, inhibit the rapid development of blue mold has long been known. Both are compounds of boron and contain the “boric acid radical.” Their antiseptic quality is due to the presence of that element. For present purposes, the two must be regarded as equivalents, and the mere substitution of one for the other would not involve invention or avoid infringement.” (*American Fruit Growers v. Brogden*, 283 U. S. 1, 14).

**12. Change in proportions of a device or machine or manufacture will seldom amount to invention, but it may be invention to change the proportions of the ingredients of a chemical combination or other composition of matter.**

(a) In a suit for infringement of U. S. Patent 325,410, which was granted to Oliver H. Hicks for a package of toilet paper in the form of an oval roll, it was shown that prior to Hicks' invention a small toilet-paper case for an oval form of paper had been patented by one Peacock and another small oval shaped toilet paper package had been sold.

The infringement suit involving the Hicks patent reached the U. S. Supreme Court. The opinion of the Court, delivered by Mr. Justice Brown, included the following:

“But construing this claim as for an oval or oblong roll, it is clearly anticipated by the patent granted March 6, 1883, to one Peacock, for a toilet-paper case, used for carrying toilet paper, which was wound in an oval form about a spool or core, precisely as described in plaintiff's patent. Apparently it differs from the Hicks roll only in being smaller and having its core hinged to a stiff case, in which the paper for convenience was carried.

“There was also put in evidence by the defendant a device known as the Wheeler Pocket Companion, which was a small package of toilet paper of an oval form, differing from those covered by the Hicks patent only in size, and in the fact that no attention was paid to the relation of the inner to the outer convolutions, and no intent shown that when one convolution was torn off the end of the next would drop into position to be grasped. While neither of these devices is a precise anticipation of the Hicks patent in the manner in which they are used, it is impossible to say that a mere enlargement of these devices to the size contemplated by Hicks

would constitute invention, although by such enlargement the roll became capable of being used in a somewhat different manner." (Morgan Envelope Co. v. Albany Paper Co., 152 U. S. 425, 429, 430).

(b) However, in *Hicks v. Kelsey*, 18 Wallace 670, 674, it was observed by Mr. Justice Bradley that "in compositions of matter a different ingredient changes the nature of the composition, whereas an iron bar in place of a wooden one, and subserving the same purpose, does not change the identity of a machine."

**13. The application of an old process or machine to an analogous subject, with no change in the manner of application, and no new result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated.**

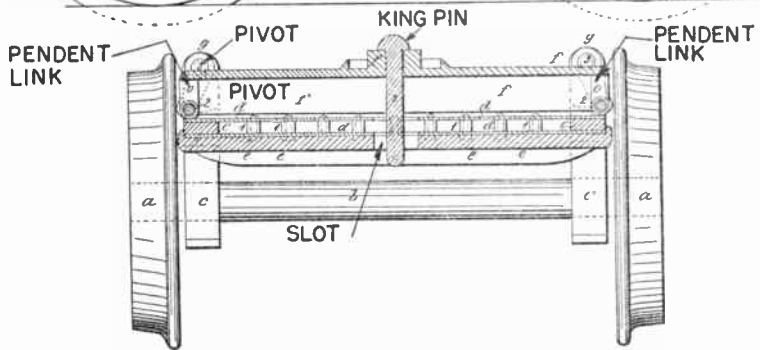
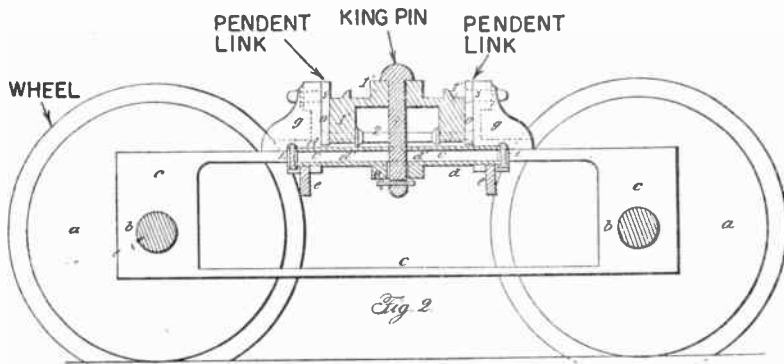
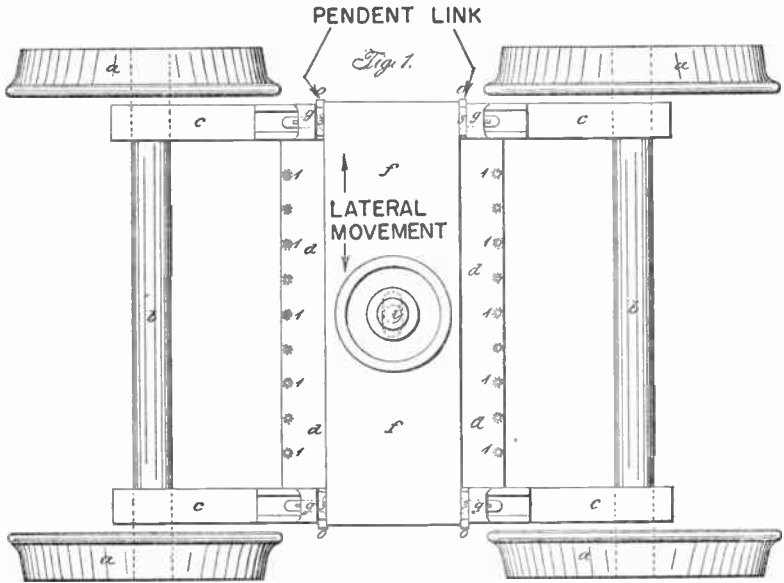
A patent was granted on February 11, 1862 to Alba F. Smith for an improvement in trucks for locomotive engines. The engines were equipped with a truck or pilot wheels provided with pendent links, to allow a lateral movement, so that the driving wheels of the locomotive engine could continue to move correctly on a curved track, in consequence of the lateral movement allowed by the pendent links, the forward part of the engine traveling as a tangent to the curve, while the axles of the drivers remained nearly parallel to the radial line of the curve. (See page 32.)

When the Smith patent reached the U. S. Supreme Court, in an infringement suit, the Court reviewed the prior art and concluded that the trucks of railroad cars had, prior to Smith, included all of the elements of Smith's trucks. Mr. Justice Gray, speaking for the Court, held the patent invalid in the following terms:

"In the case at bar, the old contrivance of a railroad truck, swivelling upon the king-bolt, with transverse slot, and pendent divergent links, already in use under railroad cars, is applied in the old way, without any novelty in the mode of applying it, to the analogous purpose of forming the forward truck of a locomotive engine. This application is not a new invention, and therefore not a valid subject of a patent." (*Pennsylvania Railroad Co. v. Locomotive Truck Co.*, 110 U. S. 490, 498).

**14. A mere aggregation of elements or a mere aggregation of separate results is not invention.**

U. S. Patent 1,455,141 was granted to Lowell and Dunmore for an improved radio receiving device energized from 60-cycle alternating current. The nature of the invention may be understood by referring to claim 3 which, with elements identified by letters for further consideration, reads as follows: (See page 33.)



SMITH U.S. PATENT 34,377



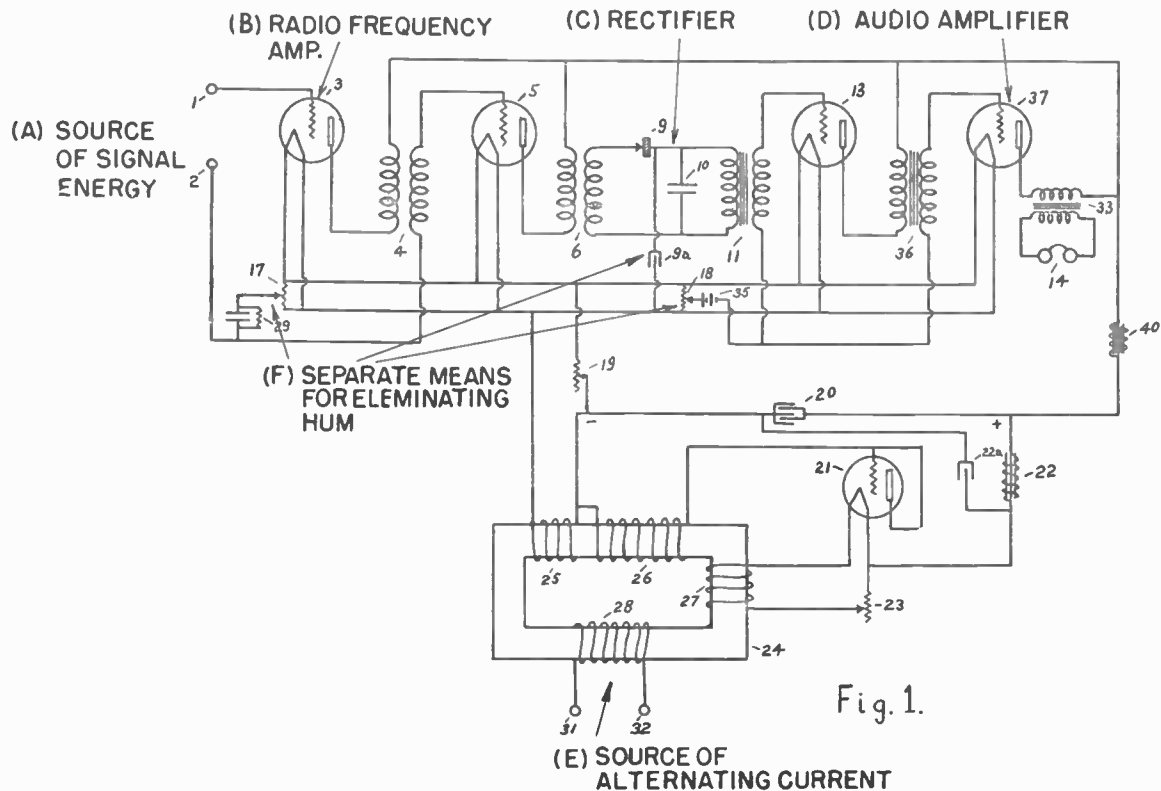


Fig. 1.

(E) SOURCE OF ALTERNATING CURRENT  
 LOWELL & DUNMORE U.S. PATENT 1,455,141

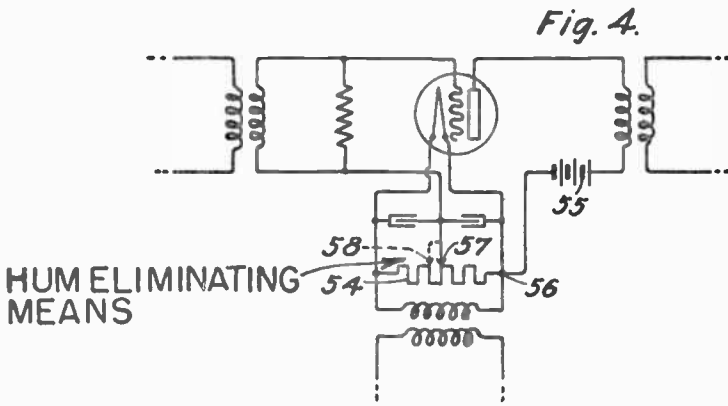
"In an apparatus for the reception of radio signals the combination (A) of a source of signal energy, (B) means for amplifying said signal energy at radio frequencies, (C) means for rectifying said energy, (D) means for amplifying said energy at audio frequencies, (E) a source of alternating current for supplying power to said amplifying means and (F) separate means connected to each of said amplifying and rectifying means for eliminating the hum of said alternating current in said apparatus."

While the District Court held the claim valid and infringed, the U. S. Circuit Court of Appeals, Third Circuit, pointed out that the means lettered A, B, C, D and E were unquestionably old and Lowell and Dunmore did not improve these means but simply used them as they found them. Moreover, the hum elimination means (F) was taught by Heising in his U. S. Patent 1,432,022 and by White in his U. S. Patent 1,195,632 (See page 36.), both patents being earlier than the Lowell and Dunmore invention. Finally, the Court observed that the hum in each of the amplifying and rectifying means was independent and that the hum elimination means in each section of the receiver controlled the hum independently of the other sections and in the same manner as the prior art devices controlled hum.

Mr. Justice Woolley, speaking for the Court, said:

"Therefore, in the final analysis, the claimed invention consists in applying curbed alternating current to the detector section and the audio frequency amplifier section and also to the radio frequency amplifier section in the same way that it had previously been applied to the last named section. Is this invention?"

"It might be invention if, when operating, some hum should develop in the first section and pass over to the second section, or if hum in these two sections should invade the third section and be suppressed before it reaches the loud speaker by the three hum eliminators coacting to that end. In other words, there might be invention if the hum eliminators, though separately placed, functioned together on the circuits of all sections in eliminating wandering hum. There is, however, no suggestion of such hum action, and no such inter-relation or coaction of separately placed hum eliminating means is claimed for the invention. Instead of doing anything like this, the plaintiffs themselves claim that the hum is killed 'at the source'—at the mid-point connection—that each eliminator stops hum in the tubes of its own section, or rather, as we look at it, each eliminator prevents hum from developing in the tubes with which it alone is connected, leaving nothing for the other eliminators connected with the other sections to do with the tubes of its section or with hum in them. So it appears that each eliminator performs in the apparatus of the combination claim the same function it performed in the device from which it was taken \* \* \*; that is, each does its own work in its own section and is through. The result, in theory at least, is complete hum prevention or elimination in each section by each eliminator. It follows



HEISING U.S. PATENT 1,432,022

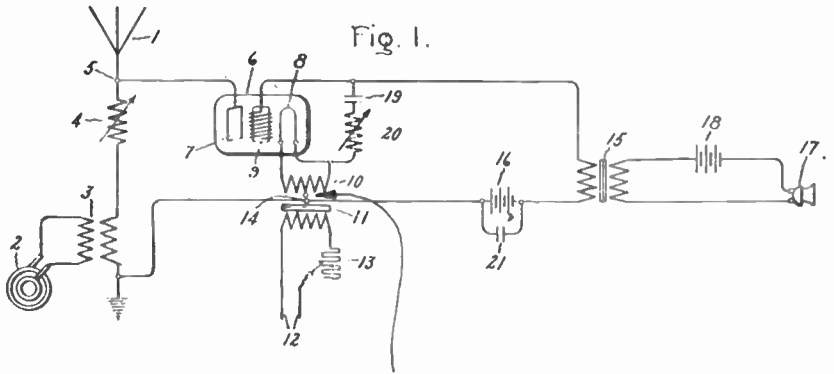


Fig. 1.

HUM ELIMINATING MEANS

WHITE U.S. PATENT 1,195,632

that the effect of the operation of all the eliminators is an aggregation of separate results \* \* \*, all alike and all admittedly obtained by prior art means. From the very nature of the circuit connections, the three eliminators act independently of one another \* \* \*. Operating separately yet in conjunction with the other elements of the combination, they evolve no new co-operative function, \* \* \*, and the new result, as claimed, is only that which arises from the well-known operation of each one of the several elements of the combination. \* \* \*” (Radio Corporation of America v. Dubilier Condenser Corp. et al, 12 U. S. P. Q. 466, 469, 470.)

### 2.03. *Exceptions to “Negative Rules”.*

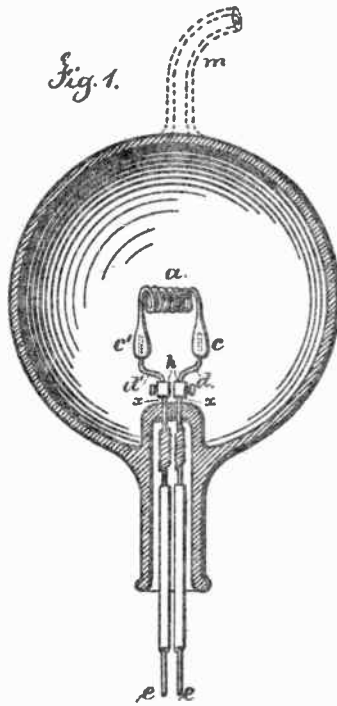
In the application of the so-called “negative rules of invention” numerous exceptions were indicated. At the risk of unduly expanding this section a few of the well established exceptions will be set forth.

1. Perhaps the most famous exception to the rule that mere changes in form, proportions, degree or arrangement do not involve invention, is found in the decision involving the Edison Incandescent Lamp patent. The earlier electric lamps had filaments having a diameter of the order of 1/32nd of an inch. The earlier lamps had a low voltage and high current rating, and did not give much light. The Edison lamp differed from the earlier carbon filaments only in the diameter of the filament being 1/64th inch or less and in the corresponding increase in resistance. The Edison lamp was of high voltage and low current rating. By the reduction of filament diameter the resistance had been increased four times and the radiating surface reduced two times with a resulting increase of the ratio of resistance to radiating surface of eight times. These changes made it much more economical to transmit the power from the generator to the lamp because the transmission line losses were reduced. (See page 38.)

In holding the Edison lamp patent valid, Circuit Judge Lacombe rendered the opinion which included the following:

“ . . . It is true that carbon burners still break down, that the improvements neither of Edison nor of other inventors have made them absolutely stable, and in a sense it may be said that Edison only made them more stable than they were before, that it is a matter of degree. But the degree of difference between carbons that lasted one hour and carbons that lasted hundreds of hours seems to have been precisely the difference between failure and success, and the combination which first achieved the result ‘long desired, sometimes sought and never before attained’ is a patentable invention.” (Edison Electric Light Co. v. United States Electric Lighting Co., 52 Fed. 300.)

2. The rule that the substitution of superior material, which is not new, for the inferior material previously employed, is not invention



EDISON  
U.S. PATENT  
223,898

meets a classic exception in *Smith v. Goodyear Dental Vulcanite Co.* The invention before the Court was claimed in Cummings Reissue Patent No. 1904 for an improvement in artificial gums and palates. Prior to Cummings gutta-percha, porcelain paste, gold, silver, tin, platinum and other materials had been used in the manufacture of plates for false teeth. The patentee formed the plates, to which the teeth had been attached, of hard rubber or vulcanite. The plates were vulcanized by Goodyear's process whereby a one piece structure was formed. (See page 40.)

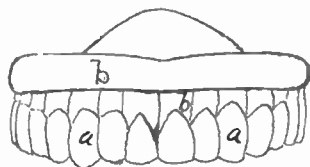
After reviewing *Hotchkiss v. Greenwood*, 52 U. S. 248, which had held that there was no invention in substituting porcelain knobs for knobs of iron, brass, wood, or glass, Mr. Justice Strong, delivered the United States Supreme Court's majority opinion, including the following:

"The case (*Hotchkiss v. Greenwood*) does decide that employing one known material in place of another is not invention, if the result be only greater cheapness and durability of the product. But this is all. It does not decide that no use of one material in lieu of another in the formation of a manufacture can, in any case, amount to invention, or be the subject of a patent. If such a substitution involves a new mode of construction, or develops new uses and properties of the article formed, it may amount to invention. The substitution may be something more than formal. It may require contrivance, in which case the mode of making it would be patentable; or the result may be the production of an analogous but substantially different manufacture. This was intimated very clearly in the case of *Hicks v. Kelsey*, 18 Wall. 670, where it was said, 'The use of one material instead of another in constructing a known machine is, in most cases, so obviously a matter of mere mechanical judgment, and not of invention, that it cannot be called an invention, unless some new and useful result, as increase of efficiency, or a decided saving in the operation, be obtained.' But where there is some new and useful result, where a machine has acquired new functions and useful properties, it may be patentable as an invention, though the only change made in the machine has been supplanting one of its materials by another. This is true of all combinations, whether they be of materials or processes." (*Smith v. Goodyear Dental Vulcanite Company*, 93 U.S. 486, 496, 497).

3. The exception to the rule that the omission of parts and their attendant functions is not invention is expressed in an appeal involving a process patent which omitted a step in the prior art process along with the parts used in the omitted step. The appeal reached the U. S. Supreme Court, which rendered a decision sustaining the patent.

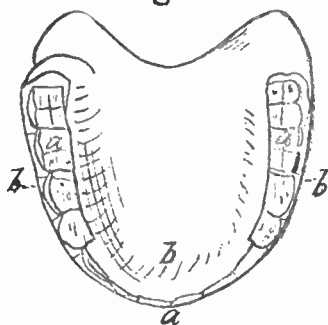
U. S. Patent 168,164 was granted to Alfred B. Lawther for an improved process for treating oleaginous seeds. His process, which

Fig. 1



FRONT

Fig. 2.



SOFFIT

CUMMINGS  
REISSUE U.S. PATENT  
1904



provided a greater yield of oil and a saving of time and power with respect to prior methods, omitted one of the steps of the prior process for extracting oil. The prior process consisted of crushing the oil seeds between revolving rollers, and completing the imperfect crushing by passing the crushed seeds under heavy stones known as mullers along with a quantity of water. Thereafter the crushed and moistened seeds were taken from the mullers and stirred in a heated steam-jacketed reservoir preparatory to being pressed for extracting the oil.

The difficulty with the prior process was that the seeds were either overground, whereby a pasty mass was formed and oil was absorbed in the mass, or were underground, whereby the yield was reduced because the presses were incapable of extracting from the seed the full amount of the oil. This difficulty was overcome by Lawther's process in which the seeds were conveyed to very powerful revolving rollers so that the oil cells of the seeds were fully crushed and disintegrated. The crushed seeds were then passed directly to the mixing machine to be stirred and moistened and heated. Thereafter the mass was transferred to the presses.

Lawther appealed from an adverse decision of the Circuit Court to the U. S. Supreme Court. The Supreme Court, in reviewing the lower Court's decision to the effect that Lawther's patent could not be sustained as a patent for a process, sustained the patent, and rendered the following opinion concerning the invention:

"The view thus taken by the court below seems to us open to some criticism. If, as that court says, and we think rightly says, the omission of the muller-stones is a real improvement in the process of obtaining the oil from the flaxseed; if it produces more oil and better oil-cakes, and it is new, and was not used before, why is it not a patentable discovery? And why is not such new method of obtaining the oil and making the oil-cakes a process? There is no new machinery. The rollers are an old instrument, the mixing machinery is old, the hydraulic press is old; the only thing that is new is the mode of using and applying these old instrumentalities. And what is that but a new process? This process consists of a series of acts done to the flaxseed. It is a mode of treatment. The first part of the process is to crush the seed between rollers. Perhaps, as this is the only breaking and crushing of the seed which is done, the rollers are required to be stronger than before. But if so, it is no less a process.

"The evidence shows that, although the crushing of the seed by two horizontal rollers, and then passing it, thus crushed, under the muller-stones, was the old method commonly used, yet that, for several years before Lawther took out his patent, a more thorough crushing had been effected by the employment of four or five strong and heavy rollers arranged on top of one another in a stack, still using the muller-stones to grind and moisten the crushed seed after

it was passed through the rollers. The invention of Lawther consisted in discarding the muller-stones and passing the crushed seed directly into a mixing machine to be stirred, moistened, and heated by jets of steam or water, and then transferring the mass to the presses for the expression of the oil by hydraulic or other power.

"The machinery and apparatus used by Lawther had all been used before. His only discovery was an improvement in the process. He found that, by altogether omitting one of the steps of the former process—the grinding and mixing under the muller-stones—and mixing in the mixing-machine by means of steam, a great improvement was effected in the result.

"Why should it be doubted that such a discovery is patentable? It is highly useful, and it is shown by the evidence to have been the result of careful and long-continued experiments, and the application of much ingenuity.

"By the omission of the mullers greater care may be necessary on the part of the workman in carrying on the operations, especially in watching the moistening and mixing process so as to produce the proper moisture and consistency of the mass before subjecting it to hydraulic pressure. But though it be true that the new process does require greater care and even greater skill, on the part of the workman than was formerly required, this does not change its character as being that of a process, nor does it materially affect its utility." (Lawther v. Hamilton, 124 U. S. 1, 6, 7; Opinion delivered by Mr. Justice Bradley.)

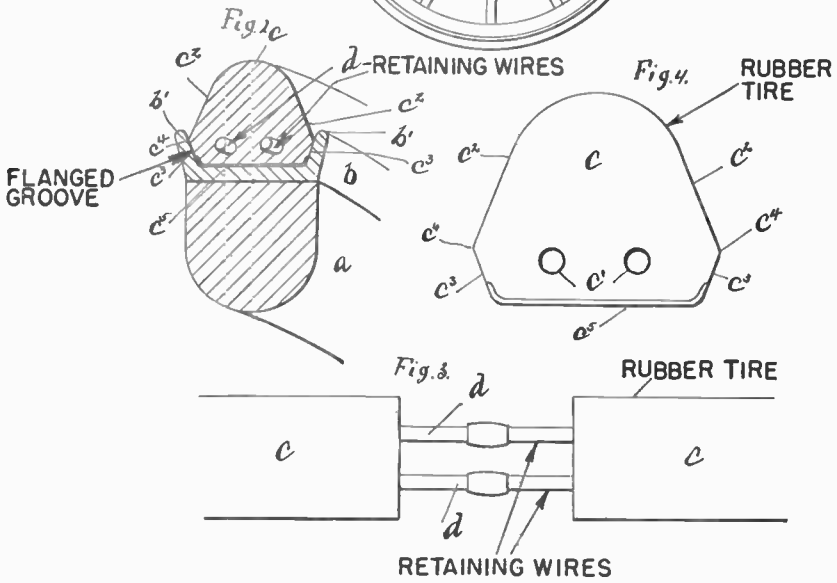
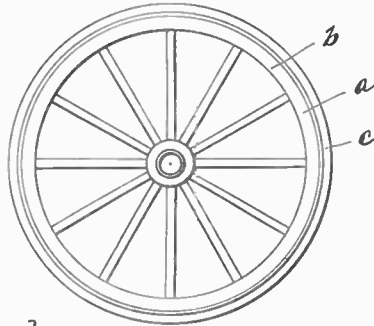
#### 2.04. *Doctrine of commercial success.*

In the immediately preceding paragraphs there appeared some of the rules established by numerous Court decisions holding that specific patents did not involve invention. In considering the problem of whether or not a specific patent involves invention, the Courts often give due weight to evidence of "commercial success." The commercial success test is applied when the other facts leave the question of invention in doubt.

The Courts, in many cases in which the presence of invention was in doubt and in which the evidence indicated that there had been a long existing and an unsatisfied demand for the substance of the invention, and in which the invention had met with outstanding commercial success, have decided that invention was involved.

By way of example, there is the case of the Grant patent involving an improved solid rubber tire, which was secured by means of two retaining wires to a wheel having a broad circumferential flanged groove. The retaining wires passed entirely within the base portion of the tire and in the region bounded by the flanged groove. Thus retained, the tire could creep around the wheel and could respond to lateral blows. In holding that invention was involved, Mr. Justice McKenna, delivering the Supreme Court opinion, said:

Fig 1



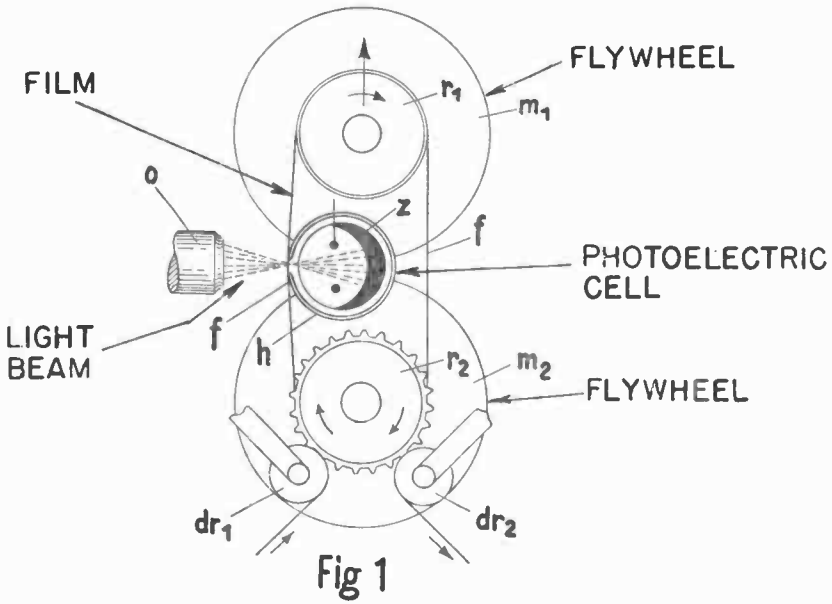
GRANT U.S. PATENT 554,675

"That the tire is an invention is fortified by all of the presumptions, the presumption of the patent by that arising from the utility of the tire. And we have said that the utility of a device may be attested by the litigation over it, as litigation 'shows and measures the existence of the public demand for its use.' \* \* \* We have shown the litigation to which the Grant tire has been subjected."

"We have taken for granted in our discussion that the Grant tire immediately established and has ever since maintained its supremacy over all other rubber tires and has been commercially successful while they have been failures. The assumption is justified by the concession of counsel." (Diamond Rubber Co. v. Consolidated Tire Co., 220 U.S. 428, 441).

While the weight of commercial success has been a factor in many cases, it is clear that certain essential facts must be present and that the Courts will not otherwise apply the doctrine. For example, in the famous sound picture case involving the so-called "flywheel" patent of Vogt et al, Mr. Justice Stone, speaking for the U. S. Supreme Court, offered the following comment about commercial success:

"The court below, attributing the rapid development of the sound motion picture industry to the invention in the patent in suit, thought, as respondent earnestly argues here, that its utility and commercial success must be accepted as convincing evidence of invention. But we think that want of invention would have to be far more doubtful than it is to be aided by evidence of commercial success, indicating that it brought realization of a long-felt want. \* \* \* Moreover, the record fails to show that there was any long-felt or generally recognized want in the motion picture industry for the device defined by the flywheel claims, or that the use of sound motion pictures was delayed by the inability of those skilled in the art to add a flywheel to the apparatus in order to give the desired uniformity of motion to linear phonograms. \* \* \* There was no public demand for sound motion pictures before 1926, when the disc system of the Western Electric Company was first publicly used in conjunction with moving pictures. Before change to the photographic film system could be accomplished, it was necessary to await the development of numerous electrical devices not embraced in the present claims. Among them were adequate amplifiers, loud speakers and microphones. Progress in the perfection of these appliances was achieved rapidly, after the public acceptance of the sound picture in 1926, through the efforts of many independent workers in the field. When the need arose for a mechanism suitable to move film records with such speed-constancy as to reproduce the sound successfully, it was forthcoming. Only the skill of the art was required to adapt the flywheel device to familiar types of mechanism to secure the desired result." (Altoona Publix Theatres, Inc. v. American Tri-Ergon Corp., et al., 294 U. S. 477, 487, 488.)



VOGT ET AL. U.S. PATENT 1,713,726

Before going forward to the next phase of the subject, it is emphasized that the foregoing rules must be applied with great care. Not only are there many exceptions but there are fine distinctions. Moreover, not all of the "negative rules of invention" were set down and by no means were all of the exceptions enumerated. Thus this phase of the discussion comes back to the starting point, namely, the difficulty of defining invention either positively or negatively. Probably the truth is that in each case, especially those in which the facts are even slightly different from the preceding cases, the Patent Office and the Courts must in the end use their best judgment, guided by what they consider appropriate rules, to determine the presence or absence of that mysterious and indefinable thing—"patentable invention."

## CHAPTER III

### NATURE OF STATUTORY INVENTION

#### 3.01. *Essentials of Statutory Invention.*

In the two preceding chapters the difficulty of defining affirmatively the word "invention" was considered. A few of the U. S. Supreme Court opinions from which certain "negative rules" and exceptions to the rules, may be deduced were also considered. In the present chapter the essentials of statutory invention will be enumerated and discussed. Several sections of Chapter 10 of the statute setting forth patentability of inventions are as follows:

#### § 101. Inventions patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

§ 102. Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless—

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or
- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States, or
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or
- (f) he did not himself invent the subject matter sought to be patented, or
- (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable

diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

§ 103. Conditions for patentability; non-obvious subject matter.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The statute specifies the general conditions under which a patent may be obtained. It is the immediate purpose to examine these conditions. In considering these conditions one by one the reader should not overlook the fact that an applicant for a patent must comply with all of the statutory requirements.

1. The statute starts by specifying "a person shall be entitled to a patent \* \* \*". The term "a person" ordinarily means the person who made the invention, and there is no present requirement of citizenship, age, or sex. If two or more persons jointly made the invention, it is necessary that they file a joint application. If in fact an invention was made jointly by several inventors, a sole application by one of the inventors may lead to a void patent. A joint application in the case of an invention made actually by a sole inventor may lead also to a void patent. In general, any application made by one who is not the inventor, or the one designated by statute, may lead to a void patent.\*

"The patent law makes it essential to the validity of a patent, that it shall be granted on the application, supported by the oath, of the original and first inventor, (or of his executor or administrator), whether the patent is issued to him or to his assignee. A patent which is not supported by the oath of the inventor, but applied for by one who is not the inventor, is unauthorized by law, and void, and, whether taken out in the name of the applicant or any assignee of his, confers no rights as against the public." Quoting from Opinion of U. S. Supreme Court, delivered by Mr. Justice Gray in *Kennedy v. Hazelton*, 128 U. S. 667, 672.

Therefore, the person or persons, who made the invention, must make the application for a U. S. patent. Exceptions found in the present statute will be considered in Chapter Sections. an application for the invention of the deceased or insane person.

In the present instance, the term "person" does not include corporations, partnerships, companies, and organizations. Since corpo-

\* However, see § 116, 117, 118 and 256 of the Statute.



rations, etc. are impersonal and therefore lack the mental capacity to invent, they cannot be the applicants for a United States Letters Patent. However, the exclusion does not mean that corporations and the like cannot obtain patents by assignment. It is found that many inventors have the mistaken impression that the company or corporation in which they are employed can file applications for patents for their inventions. While the laws of some foreign countries permit corporations, importers, and others to file patent applications,† the United States requires that the inventor or inventors must file their application for letters patent.

2. An invention or discovery must be "new and useful" to be patentable. The word "new" is used in a statutory sense which is somewhat different from the dictionary meaning. For example, while an invention must be new in the sense of "not formerly known", it will be found that mere prior knowledge or use of an invention in a foreign country will ordinarily not defeat the claim of a domestic inventor who made the invention independently of the foreign knowledge or use. If the foreign use was described in a foreign patent or in a foreign publication prior to the invention of a domestic inventor, the patent of the domestic inventor may be declared invalid. Generally speaking, to obtain a valid U. S. Letters Patent the inventor must bring into existence or must discover that which was not known in this country or published, prior to his invention. Other qualifications with respect to novelty will develop subsequently.

The term "useful" in a patent sense means that the invention must be operable or capable of producing a result. The result may be imperfect and therefore may be subject to considerable improvement, or the results may not lead to commercial success. Nevertheless such results are held to be evidence of sufficiently useful inventions in a patent sense. However, in some cases the usefulness of an invention may lie in the commission of a fraud, or in the performance of a lottery, or in the corruption of the public morals, and in such cases the inventions have been held to lack utility in the patentable sense. If an invention has a "good function" and an "evil function", the good function is usually considered sufficient. Since a complete discussion of utility with respect to good and bad functions would lead one far afield, the reader may conclude that utility is not negated because the invention falls far short of perfection, provided the results prove advantageous in the ordinary pursuits of life. The patent standard of usefulness is probably far below a critical engineering standard of utility.

---

† England—Statute of Monopolies (21 Jac. 1, Ch. 3).

While the invention must possess utility, it must also possess novelty to be patentable. J. B. Blair's U. S. Patent 66938 was for an eraser for lead-pencils. The eraser consisted of a piece of rubber of suitable shape. The rubber included an aperture slightly smaller than the pencil so that the inherent elasticity of the rubber held it on the pencil. In declaring the patent invalid the Court pointed out that rubber erasers were old and that the clinging effect of a small aperture in rubber on a larger insert was known. The Chief Justice in rendering the opinion of the Supreme Court said: (See page 50.)

"An idea of itself is not patentable, but a new device by which it may be made practically useful is. The idea of this patentee was a good one, but his device to give it effect, though useful, was not new. Consequently he took nothing by his patent." (Rubber-Tip Pencil Company v. Howard, 87 U. S. 498, 507.)

3. The third requirement of invention refers to the fields or subject matter of invention in the following terms: (a) process, (b) machine, (c) manufacture, or (d) composition of matter. These terms are sometimes defined differently in the decisions of the Courts than in the dictionary.

(a) As defined in the Act the term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material. These terms are used in their broadest sense. For example, quoting Mr. Justice Bradley:

"A process is a mode of treatment of certain materials to produce a given result. It is an act, or series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery. In the language of the patent law, it is an art." (Cochrane v. Deener, 94 U. S. 780, 788.)

(b) Art has been used synonymously with "science" and to include methods, modes of treatment, and processes.

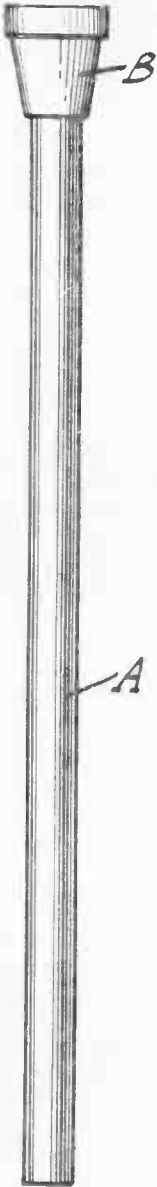
(c) Since the words "method" and "process" are generally used synonymously by the Courts, there is not much point in going beyond the following dictionary definition of method—"an orderly procedure or process."

(d) "Machine" was defined by the U. S. Supreme Court in 1853 in the following language:

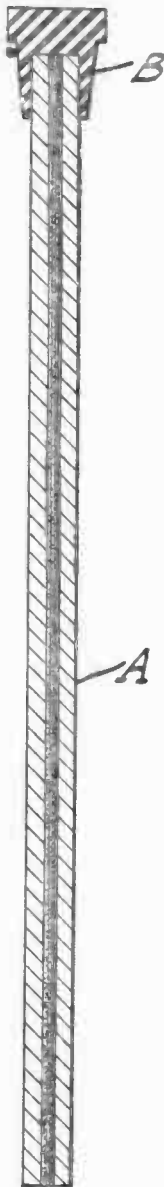
"The term machine includes every mechanical device or combination of mechanical powers and devices to perform some function and to produce a certain effect or result." (Quoting Mr. Justice Grier in Corning et al v. Burden, 56 U. S. 252, 267.)

(e) "Manufacture" is used in the broad sense of anything made by the hand of man or by a machine directed by man. Not every

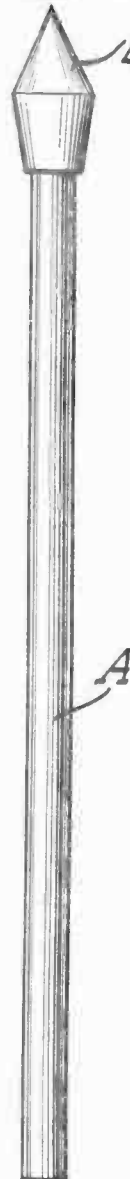
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



BLAIR U.S. PATENT 66,938

“manufacture” or “article of manufacture”—for these terms are used synonymously—is patentable:

“But to render the article new in the sense of the patent law, it must be more or less efficacious, or possess new properties by combination with other ingredients. \* \* \*” (Quoting Mr. Justice Field in *Glue Co. v. Upton*, 97 U. S. 3, 6.)

(f) Composition of matter or material is the substance or compound resulting from a mechanical mixing of substances or elements, or from chemical reaction or chemical union of two or more elements. Not all compositions of matter are patentable for they, like “manufactures”, must pass the usual tests of invention.

For example in upholding the lower Court’s instructions to the jury, which held Tyler’s patent for a new compound of fusel oil and mineral and earthy oils invalid, Mr. Justice Grier said:

“The patent states that ‘the exact quantity of fusel oil which is necessary to produce the most desirable compound must be determined by experiment.’

“Now a machine which consists of a combination of devices is the subject of invention, and its effects may be calculated a priori, while a discovery of a new substance by means of chemical combinations of known materials is empirical and discovered by experiment. Where a patent is claimed for such a discovery, it should state the component parts of the new manufacture claimed with clearness and precision, and not leave the person attempting to use the discovery to find it out ‘by experiment.’ The law requires the applicant for a patent-right to deliver a written description of the manner and process of making and compounding his new-discovered compound. The art is new; and therefore persons cannot be presumed to be skilled in it, or to anticipate the result of chemical combinations of elements not in daily use.” (*Tyler v. Boston*, 74 U. S. 327, 330.)

In holding valid Wood’s patent of 1836 for bricks and tile made of a mixture of fine anthracite coal and clay, Mr. Chief Justice Taney said:

“But when the specification of a new composition of matter gives only the names of the substances which are to be mixed together, without stating any relative proportion, undoubtedly it would be the duty of the court to declare the patent to be void. And the same rule would prevail where it was apparent that the proportions were stated ambiguously and vaguely. For in such cases it would be evident, on the face of the specification, that no one could use the invention without first ascertaining by experiment the exact proportion of the different ingredients required to produce the result intended to be obtained. And if the specification before us was liable to either of these objections the patent would be void, and the instruction given by the Circuit Court undoubtedly right.

"But we do not think this degree of vagueness and uncertainty exists. The patentee gives a certain proportion as a general rule; that is, three fourths of a bushel of coal-dust to one thousand bricks. It is true he also states that clay which requires the most burning will require the greatest proportion of coal-dust; and that some clay may require one eighth more than the proportions given, and some not more than half a bushel instead of three fourths. The two last-mentioned proportions may, however, be justly considered as exceptions to the rule he has stated; and as applicable to those cases only where the clay has some peculiarity, and differs in quality from that ordinarily employed in making bricks. Indeed, in most compositions of matter, some small difference in the proportions must occasionally be required, since the ingredients proposed to be compounded must sometimes be in some degree superior or inferior to those most commonly used." (*Wood v. Underhill et al.*, 46 U. S. 1, 5.)

(e) The statute continues with the words—"or any new and useful improvements thereof". The words "new and useful" have the same meaning here as attributed to them in Section 2 of the present chapter. An improvement is the betterment of that which came before. The improvement may be the result of an addition, or a subtraction, or substitution, or a modification of the prior art. A mere improvement, possessed of both novelty and utility, is not the only requirement of statutory invention; the improvement must also be an invention or a discovery to be patentable.

As a practical matter almost all of our present day patents relate to improvements. It is difficult to identify any invention of recent times which is not an improvement of some earlier invention. By way of discussion, one may go back to the year 1837 and consider Samuel F. B. Morse's invention of the telegraph. The Morse telegraph was undoubtedly a pioneer invention in one sense but viewed as a forward step in the very old art of communication by signalling, the Morse telegraph was an improvement. Whether Morse is considered as the creator of a new art or as the improver of an old one, his invention was most meritorious and worthy of the highest praise. The Courts do not hesitate to sustain patents and to praise inventions which are avowed improvements. (*Eibel Co. v. Paper Co.*, 261 U. S. 45, 63.)

4. Chapter 15 § 161 of the statute includes provisions for plant patents in the following language:

"Whoever invents or discovers and asexually reproduces any distinct and new variety of plant, other than a tuberpropagated plant, may obtain a patent therefor, subject to the conditions and requirements of this title.

"The provisions of this title relating to patents for inventions shall apply to patents for plants, except as otherwise provided."

Since these notes are directed primarily to engineers, it seems desirable to omit further comment with respect to plant patents and to continue the consideration of the remaining conditions of statutory invention.

### 3.02. *Other Requisites of Statutory Invention.*

Statutory invention falling within the preliminary requirements outlined in § 101 and § 102 may be protected unless one or more of seven conditions arise. It is the present purpose to consider, one by one, these additional conditions or prohibitions most of which really relate to newness, novelty, or originality:

1. The first of the additional conditions is "unless the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent." By these words the public is protected, because if the invention is known or has been used by others in this country prior to the alleged invention, the public should not be deprived, even for a limited time, of the right to continue to use or to profit by earlier knowledge. In brief, the inventor is not entitled to a reward at the expense of the public already possessed of the invention. To grant a patent for an invention previously known in this country would retard rather than "promote the progress of science and useful arts."

It should be noted that mere "use or knowledge" in a foreign country—unknown to an inventor in this country before his invention—will not invalidate a United States Letters Patent. In Mr. Justice Holmes' language \* \* \* "a previous foreign invention does not invalidate a patent granted here if it has not been patented or described in a printed publication." (Alexander Milburn Company v. Davis-Bournonville Company, 270 U. S. 390, 400.)

In commenting on foreign use the Supreme Court said:

"\* \* \* and it is clear that proof of prior use in a foreign country will not supersede a patent granted here, unless the alleged invention was patented in some foreign country. Proof of such foreign manufacture and use, if known to the applicant for a patent, may be evidence tending to show that he is not the inventor of the alleged new improvement; but it is not sufficient to supersede the patent if he did not borrow his supposed invention from that source, unless the foreign inventor obtained a patent for his improvement, or the same was described in some printed publication." (Roemer v. Simon, 95 U. S. 214, 218, 219.)

However the Court held that Roemer's U. S. Patent No. 56,801 for an improvement in travelling-bags was invalid in view of the testimony

of five admittedly credible witnesses that the thing patented had been previously known and used extensively in this country :

“Competent proof of a prior patent anywhere is entirely wanting, nor is there any satisfactory evidence that the invention was previously described in any printed publication; but the evidence shows beyond any reasonable doubt that the thing patented was known and used extensively by others in this country before the invention or discovery made by the patentee, as set forth and described in the bill of complaint. Such was the finding of the court below; and the evidence is so full to the point, and is so fully set forth in the record and in the opinion delivered in the Circuit Court, that it is not necessary to reproduce it in the present opinion.” (Roemer v. Simon, supra.)

The clause “or patented or described in a printed publication in this or any foreign country,” like the preceding one, is for the protection of the public. If the alleged invention has been patented or published before the date of the invention, the public is presumed to have all the essential information and either has (if the invention is not patented) or will have (at the expiration of the prior patent) the right to use that information. But a word of caution—the published information must be clear and concise to anticipate a patent. As in the preceding case one who is not the original inventor is not entitled to a reward at the expense of the public.

The immediate conditions which defeat patentability may be restated as follows: (a) if the invention has been patented in this country or in a foreign country prior to the instant invention, or (b) if the invention has been described in a printed publication in this country or in a foreign country prior to the instant invention, the patent issuing on an application claiming an invention made under any one of the foregoing conditions is void.

As to “patented in this country” it is clear that the United States Patent becomes an effective reference as a patent from the day the patent issues. Moreover, the patent is an effective reference for all it discloses in the specifications and drawings whether or not claimed by the patentee. The writer has found that many engineers study the claims of a patent cited as a reference against a pending application; however it is clear that, if the filing date of the patent is sufficiently early, the patent is a good reference for all it discloses.

With respect to foreign patents, they are good references for what they clearly disclose. (In re Cross, 16 USPQ 10, 11.) The patents of different foreign countries have different effective dates. Some of the foreign patents may have one effective date as a patent and another effective date as a publication. The questions involving the effective-



ness of foreign patents are varied and entirely too numerous to be considered within the scope of these notes. The effects of foreign patents as references can be summarized by quoting from Mr. Justice Bradley's opinion in *Elizabeth v. Pavement Co.*, 97 U. S. 126, 130:

"It would be very difficult to sustain Nicholson's patent if Hosking's stood in his way. But the only evidence of the invention of the latter is derived from an English patent, the specification of which was not enrolled until March, 1850, nearly two years after Nicholson had put his pavement down in its completed form, by way of experiment, in Boston. A foreign patent, or other foreign printed publication describing an invention, is no defence to a suit upon a patent of the United States, unless published anterior to the making of the invention or discovery secured by the latter, provided that the American patentee, at the time of making application for his patent, believed himself to be the first inventor or discoverer of the thing patented.<sup>1</sup> He is obliged to make oath to such belief when he applies for his patent; and it will be presumed that such was his belief, until the contrary is proven. That was the law as it stood when Nicholson obtained his original patent, and it is the law still. \* \* \* Since nothing appears to show that Nicholson had any knowledge of Hosking's invention or patent prior to his application for a patent in March, 1854, and since the evidence is very full to the effect that he had made his invention as early as 1848, the patent of Hosking cannot avail the defence in this suit."

Referring to "printed publications", which negative novelty, it is proper to describe a printed publication as anything printed and offered for sale or distributed to the public generally, without any injunction of secrecy. This would not include printed matter not distributed or offered for distribution but it would include printed matter deposited in a public library and available to the public. The invention in question must be anticipated within the printed matter by an adequate description and this may be fulfilled by written matter or drawing or both. The description should be sufficient to teach one, skilled in the art to which it relates, how to practice the invention to be anticipated.

The attitude of the courts is indicated by the following paragraph which is from Mr. Justice Clifford's opinion in *Seymour v. Osborne*, 78 U. S. 516, 555:

"Patented inventions cannot be superseded by the mere introduction of a foreign publication of the kind, though of prior date, unless the description and drawings contain and exhibit a substantial representation of the patented improvement, in such full, clear, and exact terms as to enable any person skilled in the art

---

<sup>1</sup> Nevertheless, a foreign patent more than one year prior to the filing date of the U. S. application constitutes a statutory bar.



or science to which it appertains, to make, construct, and practice the invention to the same practical extent as they would be enabled to do if the information was derived from a prior patent. Mere vague and general representations will not support such a defence, as the knowledge supposed to be derived from the publication must be sufficient to enable those skilled in the art or science to understand the nature and operation of the invention, and to carry it into practical use. Whatever may be the particular circumstances under which the publication takes place, the account published, to be of any effect to support such a defence must be an account of a complete and operative invention capable of being put into practical operation."

2. The second condition of § 102 is as follows:

"unless the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States."

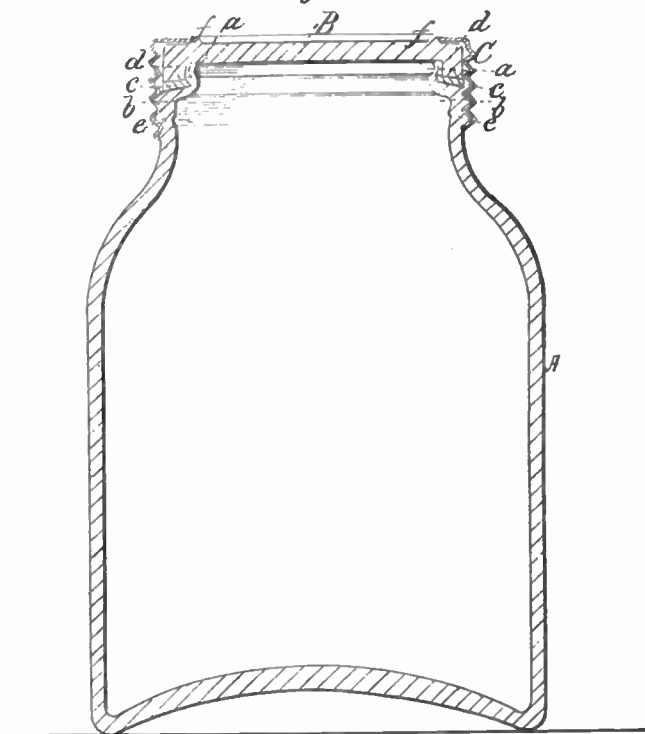
The effect of the foregoing is to place a time limit on filing applications for United States Letters Patent. The inventor may obtain the patent provided the invention of the patent has not been patented or described in *any country*, or has not been in public use or on sale *in the United States*, more than one year prior to the date of the application for patent in the United States. The "patented or described in a printed publication" portion of § 102(b) has meanings corresponding to those discussed in referring to § 102(a). The difference in (a) and (b) lie in the priority of invention or the timely filing of the application respectively.

Now turning to the matters of public use or on sale in this country: At the outset, use or foreign sale can be dismissed because the expression "in this country" definitely limits the use or sale of the device of the invention to the United States. (*Gandy v. Main Belting Co.*, 143 U. S. 587, 592, 593.)

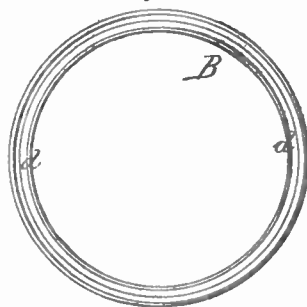
With respect to "public use" it will be found that public use or sale by the inventor or with the consent of the inventor for a period of more than one year (formerly two years) prior to his application for a patent, will defeat the patent because by his consent the inventor has presumably abandoned his invention to the public. U. S. Letters Patent 102,913 was issued on May 10, 1870 to John L. Mason for an improvement in fruit-jars. He sold his patent to Consolidated Fruit-Jar Company. The Company sued one Wright to restrain an alleged infringement. Mason had completed his invention in June 1859 at which time he had at least two dozen jars made. Some the jars he gave away; others he sold to get the money they yielded and to test salability in the market. Mason failed to file a patent application until January

PATENT NOTES FOR ENGINEERS

*Fig: 1*



*Fig: 2*



MASON U.S. PATENT 102,913

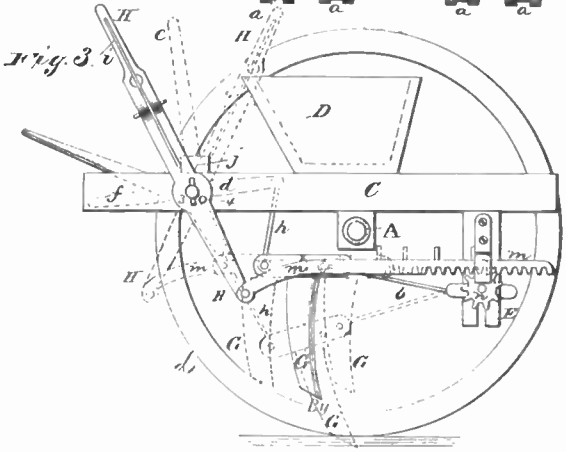
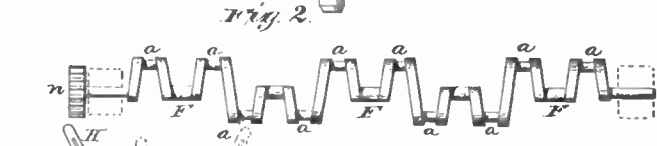
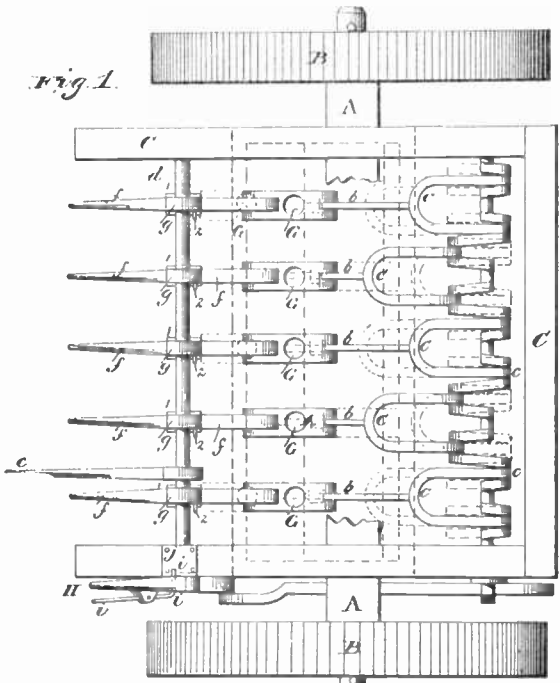
15, 1868 and had no explanation for the inexcusable delay. In holding the Mason patent void, Mr. Justice Swayne, speaking for the U. S. Supreme Court, quoted the following with approval:

"In *Pitts v. Hall*, 2 Blatchf. 235, Mr. Justice Nelson said, "The patentee may forfeit his right to the invention if he constructs it and vends it to others to use, or if he uses it publicly himself in the ordinary way of a public use of a machine at any time prior to two years before he makes his application for a patent. That is, he is not allowed to derive any benefit from the sale or the use of his machine, without forfeiting his right, except within two years prior to the time he makes his application.' \* \* \* The result must always depend upon the purpose and incidents accompanying the act or acts relied upon." (*Consolidated Fruit-Jar Co. v. Wright*, 94 U. S. 92, 94.)

While the foregoing case covers the situation in which the inventor himself made the sale and thereafter let the statutory period pass without filing his patent application, it is more often found that the device of the invention was put in public use or on sale by others and that the inventor filed his application after the statutory period of public use or sale had passed. In *Anderson v. Miller*, 129 U. S. 70, the Supreme Court, speaking through Mr. Justice Lamar, said: "\* \* \* It is satisfactorily shown by the evidence in the record that for more than two years prior to the application for the patent in question, the appellees had been manufacturing, at their place of business in Richmond, Virginia, garments identical in pattern with those that are now alleged to infringe appellant's patent." The Court then affirmed the lower Court's dismissal of the bill alleging infringement.

In holding the Davis and Allen Patent Reissue No. 8589 for an improvement in grain drills invalid, the U. S. Supreme Court referred to the testimony of one Powers, who was selling grain drills at Madison, Wisconsin in 1862. He worked out a device to set the shovels of a grain drill to form either single or double rows or ranks, which was the invention of the Davis and Allen Reissue Patent. Powers testified that he used two such devices and that the devices worked perfectly. In holding the Reissue Patent invalid, Mr. Justice Blatchford said:

"\* \* \* If claim 1 of the reissue is given a construction which includes any arrangement for shifting not substantially using a rotating crank-shaft, it becomes a claim which could not lawfully have been granted in the original patent; and, as a claim in a reissued patent, it is invalid, within the defences set up in the answer, because the application for the reissue was made nearly eleven years after the original patent was granted, and after machines effecting the shifting by other means than a rotating crank-shaft had gone into use subsequently to the date of the orig-



DAVIS U.S. REISSUE PATENT 8,589

inal patent, and no sufficient excuse is given for the laches and delay. The same remarks apply to claim 3 of the reissue." (*Brown & Others v. Davis & Others*, 116 U. S. 237, 251.)

While public use or sale in this country will defeat a patent issued on an application filed after the statutory period, the Courts have recognized that there are occasions when the successful testing of an invention may be such that some public use is required. A good example is found in inventions relating to roads. Samuel Nicholson invented an improvement in wooden pavements and as an experiment he arranged to put down in 1854 a section of the improved road on a street in Boston. The Nicholson road was exposed to public view and was travelled for several years. The road proved successful and Nicholson obtained a patent therefor. The Supreme Court held that the experimental road was not a "public use or a sale of the invention" in the following portion of its opinion:

"If, now, we apply the same principles to this case, the analogy will be seen at once. Nicholson wished to experiment on his pavement. He believed it to be a good thing, but he was not sure; and the only mode in which he could test it was to place a specimen of it in a public roadway. He did this at his own expense, and with the consent of the owners of the road. Durability was one of the qualities to be attained. He wanted to know whether his pavement would stand, and whether it could resist decay. Its character for durability could not be ascertained without its being subjected to use for a considerable time. He subjected it to such use, in good faith, for the simple purpose of ascertaining whether it was what he claimed it to be. Did he do any thing more than the inventor of the supposed machine might do, in testing his invention? The public had the incidental use of the pavement, it is true; but was the invention in public use, within the meaning of the statute? We think not. The proprietors of the road alone used the invention, and used it at Nicholson's request, by way of experiment. The only way in which they could use it was by allowing the public to pass over the pavement.

"Had the city of Boston, or other parties, used the invention, by laying down the pavement in other streets and places, with Nicholson's consent and allowance, then, indeed, the invention itself would have been in public use, within the meaning of the law; but this was not the case. Nicholson did not sell it, nor allow others to use it or sell it. He did not let it go beyond his control. He did nothing that indicated any intent to do so. He kept it under his own eyes, and never for a moment abandoned the intent to obtain a patent for it.

"In this connection, it is proper to make another remark. It is not a public knowledge of his invention that precludes the inventor from obtaining a patent for it, but a public use or sale of it. In England, formerly, as well as under our Patent Act of 1793, if

an inventor did not keep his invention secret, if a knowledge of it became public before his application for a patent, he could not obtain one. To be patentable, an invention must not have been known or used before the application; but this has not been the law of this country since the passage of the act of 1836, and it has been very much qualified in England. \* \* \* Therefore, if it were true that during the whole period in which the pavement was used, the public knew how it was constructed, it would make no difference in the result.

“It is sometimes said that an inventor acquires an undue advantage over the public by delaying to take out a patent, inasmuch as he thereby preserves the monopoly to himself for a longer period than is allowed by the policy of the law; but this cannot be said with justice when the delay is occasioned by a bona fide effort to bring his invention to perfection, or to ascertain whether it will answer the purpose intended. His monopoly only continues for the allotted period, in any event; and it is the interest of the public, as well as himself, that the invention should be perfect and properly tested, before a patent is granted for it. Any attempt to use it for a profit, and not by way of experiment, for a longer period than two years before the application, would deprive the inventor of his right to a patent.” (Elizabeth v. Pavement Co., 97 U. S. 126, 136, 137.)

The expression “on sale in this country, etc.” has been held to include either “offered for sale” or “sold” and it is clear that the sale of a single device or a very limited number of devices involving the invention claimed in a patent issuing on an application filed after the statutory period would render the patent void. (Hall v. Macneale, 107 U.S. 90, 96, 97.) The decisions involving prior sales and the circumstances under which the prior sales become statutory bars to a valid patent, or are held not a bar to obtaining a valid patent, are many. For those who are especially interested reference is made to the patent law books and to the opinions of the Courts.

3. The third of the additional conditions for obtaining a valid patent is found in the following: “unless he has abandoned the invention”. These words refer to an inventor abandoning his invention. An abandonment may be (a) actual, (b) constructive or (c) statutory. By way of examples: (a) The inventor may undertake to complete his concept of the invention by reducing it to physical form, and after unsuccessful experiments, he may intentionally abandon the invention. (b) The inventor may file a patent application disclosing more than he claims and upon the issuing of his patent, he has abandoned to the public that which he has not claimed; moreover some patents are issued in which the claimed invention is specifically dedicated to the public. (c) A patent may issue inadvertently

with claims to more than the patentee was entitled as original inventor and by filing a disclaimer\* the patentee may abandon that to which he was not entitled and thereby claim properly that which is truly and justly his own. Furthermore, one party to an interference may file a written disclaimer, or concession of priority or abandonment of invention.†

There are other examples of ways in which an inventor may abandon his invention; for example, if an applicant should cancel a claim, without any reservation, he is said to abandon the invention of the cancelled claim. By acquiescence in a Patent Office rejection of claims, the applicant may abandon the invention of the rejected claims. A good summary of abandonment is found in the following Supreme Court decision brought up by writ of error from the Circuit Court of the United States for the district of Rhode Island. The lower Court had set aside the defendant's prayer for instructions to the jury, and included in the instructions the following:

"And that if the jury should find that the plaintiff's declaration and conduct were such as to justify the defendants in believing he did not intend to take letters patent, but to rely on the difficulty of imitating his machine, and the means he took to keep it secret, this would be a defence to the action. And they were further instructed, that to constitute such an abandonment to the public as would destroy the plaintiff's right to take a patent, in a case where it did not appear any sale of the thing patented had been made, and there was no open public exhibition of the machine, the jury must find that he intended to give up and relinquish his right to take letters patent. But if the plaintiff did intend not to take a patent, and manifested that intent by his declarations or conduct, and thereupon it was copied by the defendant, and so went into use, the plaintiff could not afterwards take a valid patent."

In approving the foregoing instructions, the U. S. Supreme Court, speaking through Mr. Justice Daniel said:

"It is the unquestionable right of every inventor to confer gratuitously the benefits of his ingenuity upon the public, and this he may do either by express declaration or by conduct equally significant with language—such, for instance, as an acquiescence with full knowledge in the use of his invention by others; or he may forfeit his rights as an inventor by a wilful or negligent postponement of his claims, or by an attempt to withhold the benefit of his improvement from the public until a similar or the same improvement should have been made and introduced by others. Whilst the remuneration of genius and useful ingenuity is a duty incumbent upon the public, the rights and welfare of the community must be fairly dealt with and effectually guarded. Con-

\* 35 U. S. C. 253.

† Rule 262 from Rules of Practice, U. S. Patent Office, Page 76.



siderations of individual emolument can never be permitted to operate to the injury of these. But, whilst inventors are bound to diligence and fairness in their dealings with the public, with reference to their discoveries on the other hand, they are by obligations equally strong entitled to protection against frauds or wrongs practiced to pirate from them the results of thought and labor, in which nearly a lifetime may have been exhausted; the fruits of more than the *viginti annorum lucubrationes*, which fruits the public are ultimately to gather. The shield of this protection has been constantly interposed between the inventor and fraudulent spoliator by the courts in England, and most signally and effectually has this been done by this court, as is seen in the cases of *Pennock and Sellers v. Dialogue*, (2, Peters, 1,) and of *Shaw v. Cooper*, (7, Peters, 292). These may be regarded as leading cases upon the questions of the abrogation or relinquishment of patent privileges as resulting from avowed intention, from abandonment or neglect, or from use known and assented to. (*Kendall et al. v. Winsor*, 62 U. S. 322, 329).

4. The fourth of the additional conditions is:

“unless the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States” .

The foregoing condition makes it possible to obtain a valid patent in the United States on an application filed in the United States more than twelve months after the applicant or his legal representatives or assigns have filed abroad, provided the invention is not *first patented* by the granting of the foreign patent on the application filed abroad more than twelve months earlier than the filing of the application in the United States.

5. The fifth condition:

“unless the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent”

was added to show legislative approval of the “court made law” found in Mr. Justice Holmes’ decision in *Alexander Milburn v. Davis-Bournonville*.

Prior to the Supreme Court’s decision in *Alexander Milburn Company v. Davis Bournonville Company* (*supra*), there was a conflict between decisions of some of the Circuit Courts of Appeals as to the effect of a patent issuing on a prior application showing but not claiming the invention of the patent in suit: A patent had issued to Whitford on an improvement in welding and cutting apparatus. Whitford filed his application on March 4, 1911 and his patent issued on June 4, 1912. The defense was that Whitford was not the first



inventor because Clifford had filed an application on January 31, 1911 and had issued to him on February 6, 1912 a patent which did not claim but included a complete and adequate description of the Whitford invention. The Supreme Court held that Clifford's prior description in his patent application was evidence that Whitford was not the first inventor and that an adequate description in a patent had the same effect from the date of the patent application as any printed publication. (*Alexander Milburn Co. v. Davis Bournonville Co.*, supra.)

6. The sixth condition states:

"unless he did not himself invent the subject matter sought to be patented".

It means simply that one who is not the original inventor may not obtain a valid patent. For example, one who derives the invention from someone else could not be the inventor of the derived subject matter. Also, one who reads or learns of a discovery or invention of another and who proceeds to file an application for such subject matter can not obtain a valid patent for himself. Remember that § 101 provides that the invention is patentable to *whoever invents or discovers*. It is not invention to crib another's invention or discovery. Cribbed inventions lead to invalid patents and sometimes to punishment for taking a false oath.

The seventh and final condition preventing a person's being entitled to a patent is as follows:

"unless before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it."

As to the meaning of abandoned, suppressed, or concealed, the words are probably used in the present law as they have been used in the now repealed statutes. By way of further explanation see Page 136, Section 6, Abandoned Experiment, and Page 137, Section 7, Suppression or Concealment of Invention.

Many of the cited clauses of § 102 pertain to priority of the invention of the applicant relative to patents, patents, publications, or public use or sale incorporating essentially the same inventions, or to the earlier invention made by another in this country. The paragraph terminates by suggesting some tests to be applied to determine priority, as follows:

"In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other."

### 3.03. Summary.

In this chapter consideration was given especially to the provisions of § 101 and § 102 which set forth the conditions which must be met in obtaining a valid patent. Any person, who complies fully with the requisites of the statute, may obtain a patent. The several requisites have been explained clause by clause and the application of the statute has been illustrated by reference to other statutes and to a few of the opinions of the Courts.

The reader should remember that the patent law (Public 593) became effective January 1, 1953 and that no actual decisions, based upon the Act, have been rendered at the time of this writing. To the extent that the present law is merely a codification, the writer believes that many of the prior decisions will continue to apply, and that it is better to illuminate the text by such prior decisions than to omit such citations.

Remembering that the statute is for the protection of both inventor and public, it is fitting to summarize by quoting the following paragraphs of Mr. Justice M'Lean who delivered the opinion of the U. S. Supreme Court in *Shaw v. Cooper*, 32 U. S. 292, 320:

"The patent law was designed for the public benefit, as well as for the benefit of inventors. For a valuable invention, the public, on the inventor's complying with certain conditions, give him, for a limited period, the profits arising from the sale of the thing invented. This holds out an inducement for the exercise of genius and skill in making discoveries which may be useful to society, and profitable to the discoverer. But it was not the intention of this law, to take from the public, that of which they were fairly in possession.

"In the progress of society, the range of discoveries in the mechanic arts, in science, and in all things which promote the public convenience, as a matter of course, will be enlarged. This results from the aggregation of mind, and the diversity of talents and pursuits, which exist in every intelligent community. And it would be extremely impolitic to retard or embarrass this advance, by withdrawing from the public any useful invention or art, and making it a subject of private monopoly. Against this consequence, the legislature have carefully guarded in the laws they have passed on the subject.

"It is undoubtedly just that every discoverer should realize the benefits resulting from his discovery, for the period contemplated by law. But these can only be secured by a substantial compliance with every legal requisite. His exclusive right does not rest alone upon his discovery; but also upon the legal sanctions which have been given to it, and the forms of law with which it has been clothed.

"No matter by what means an invention may be communicated

to the public, before a patent is obtained; any acquiescence in the public use, by the inventor, will be an abandonment of his right. If the right were asserted by him who fraudulently obtained it, perhaps no lapse of time could give it validity. But the public stand in an entirely different relation to the inventor.

"The invention passes into the possession of innocent persons, who have no knowledge of the fraud, and at a considerable expense, perhaps, they appropriate it to their own use. The inventor or his agent has full knowledge of these facts, but fails to assert his right; shall he afterwards be permitted to assert it with effect? Is not this such evidence of acquiescence in the public use, on his part, as justly forfeits his right?"

### Summary Outline of Patentable Invention Requirements

The law (Title 35, U.S.C.) recites these conditions for patentability:

1. Person(s) make invention or discovery
2. Patentable invention must be
 

{	new and useful	}	process, machine, manufacture, composition of matter, or any new and useful improve- ment thereof,
---	----------------------	---	---
3. Unless
 

{	<ol style="list-style-type: none"> <li>(a) known or used by others in U. S., or patented or described in a printed publication in U. S. or foreign country, before applicant's invention,</li> <li>(b) patented or described in any printed publication in the U. S. or foreign country, or public use or sale in U. S., more than 1 year prior to the date of his application for U. S. Patent, or</li> <li>(c) abandoned, or</li> <li>(d) invention was first patented by applicant or his assigns in a foreign country prior to date of application for U. S. Patent on an application filed more than twelve months before the U. S. application, or</li> <li>(e) invention was described in a patent granted on an application filed by another in U. S. before applicant's invention, or</li> <li>(f) applicant did not invent subject matter of invention, or</li> <li>(g) before applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it.</li> </ol>
---	---

## CHAPTER IV

### STATUTORY INVENTION AS A PRACTICAL MATTER

#### 4.01. *Undisclosed Conception of Invention.*

While it is difficult to define invention, it has been possible to set forth in the preceding chapters some of the recognizable characteristics. As one of those characteristics, it was found that invention involved a mental picture or conception. It was also apparent that statutory invention included a factor of novelty because if an invention was known or used by others in this country, patented or described in a printed publication, or in public use or on sale in this country before the invention or more than one year prior to the patent application, it is impossible to obtain a valid patent. When the novelty of an invention is considered, the time when the invention was made becomes a necessary reference point. This may be of great practical importance as will be shown by examining situations which have arisen or which might arise.

As a first case, consider an invention which appeared in the mind of the inventor. The invention may be a very simple solution of a perplexing problem. The means for putting the invention into physical form may be so elementary that no tests or trials are necessary. In fact the entire means are seen as clearly in the mind of the inventor as if he had before him an excellent photograph of the entire device. After the inventive concept our inventor does nothing more; he does not tell his associates about it; he does not write about it; he does not make any sketches or drawings. That condition of affairs might continue for days, months or years and after a period of inaction, the inventor might file a patent application.

If there were no intervening rights of the public such as prior use, a prior sale, or a prior publication, or if there were no prior inventors to be considered, the resultant patent would be valid. However, if there should be a prior invention of the same subject matter, or if any one of the prior statutory conditions should arise, it becomes important to ascertain exactly when the previously undisclosed invention was made. Later the text will show that the time of the physical embodiment of the invention is an essential factor, but for the moment consider the instant of the mental picture as the time of the invention. The burden is on the inventor and he is possessed of NO EVIDENCE other than his unsupported word, and that is not acceptable proof to

the Courts. It makes no difference how honest the inventor may be; or how great may be the inventor's reputation; or how accurate his memory. The Courts have consistently held that the evidence of any invention must be produced and must be corroborated. Without corroborative evidence the date of the invention will be held to the date of the patent application, and that date is too late for the assumed conditions. The inventor has lost out because he can not establish the date of his invention.

"Conception is an act of the mind and it has no value as evidence until its existence has been manifested and proved by exterior acts or declarations \* \* \*" (Downs v. Andrews 1928 C.D. 137, 145).

Inventors should not let their inventions lie dormant in their minds because against a rival who makes adequate notes, explains the invention to others, and has the notes duly dated and witnessed, the "sleeper or dreamer" can not prevail. But what is even more important—the "do nothing" inventor gives nothing to the public and the dormant invention fails to promote the progress of the arts and sciences and the welfare of our country.

#### 4.02. *Oral Disclosure of Invention.*

The next case for consideration is that of an inventor who, after making his invention or discovery, has made an oral disclosure to others but neither the inventor nor the disclosees did anything to record the facts. Later the application for letters patent is filed and subsequently the time of the invention becomes an issue. Can the facts be proven?

The disclosees can testify as to the disclosure and the time thereof. But it will not be an easy matter to recall all of the details of the disclosure, omitting for the moment the time factor, and if the witnesses are according to the average, they will not agree as to subject matter. The Courts expect some variation in the testimony of witnesses and such variation, within proper limits, carries a conviction that the witnesses are trying to tell the truth. Nevertheless will the Court be able to find from the mass of the testimony a clear concise description of the subject matter of the invention? Most of us can appreciate how very unsatisfactory this sort of testimony may be and how extremely difficult it is to establish the detailed facts of the invention orally disclosed.

Return now to the time factor: If the time elapsing between the disclosure and the testimony is several years, the Courts, being well aware of our vagaries, are very hesitant to rely upon our memories. Memories play tricks upon the best of us. Sometimes a witness can associate the time of a very important event in his life with the time

of the disclosure, but more often the witness can not find any association of the disclosure and the time of the disclosure of the invention, and an outstanding or time marking event. Sometimes the witness selects an imposing series of related events but his selection, upon cross examination, proves erroneous.

Sufficient hints have been given of the difficulties which are apt to await an inventor who must rely solely on the recollections of his associates to whom he disclosed his invention for the subject matter and the date thereof. This may be summarized by referring to the words of Mr. Justice Brown, who, speaking for the Supreme Court, said:

“\* \* \* As we have had occasion before to observe, oral testimony, unsupported by patents or exhibits, tending to show prior use of a device regularly patented is, in the nature of the case, open to grave suspicion. \* \* \* Granting the witnesses to be of the highest character, and never so conscientious in their desire to tell only the truth, the possibility of their being mistaken as to the exact device used, which, though bearing a general resemblance to the one patented, may differ from it in the very particular which makes it patentable, are such as to render oral testimony peculiarly untrustworthy; particularly so if the testimony be taken after the lapse of years from the time the alleged anticipating device was used. If there be added to this a personal bias, or an incentive to color the testimony in the interest of the party calling the witness, to say nothing of downright perjury, its value is, of course, still more seriously impaired. This case is an apt illustration of the wisdom of the rule requiring such anticipations to be proven by evidence so cogent as to leave no reasonable doubt in the mind of the court, that the transaction occurred substantially as stated. The very exhibit produced by the witness Heller contradicted, so far as it could contradict, his testimony, and the witnesses who ought to have corroborated his story, gave a version which showed it to be untrue in more than one important particular.” (Deering v. Winona Harvester Works, 155 U.S. 286, 300, 301.)

#### 4.03. *Written Description Is Best Evidence of Invention.*

It can be inferred from sections 4.01 and 4.02 that a written description is the best evidence of invention but that is a far cry from saying that any written document is sufficient to prove priority of invention. The description must be no less clear than is required in a patent application claiming the invention; i.e.,

“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth

the best mode contemplated by the inventor of carrying out his invention." (35 U.S.C. Section 112 Specification)

The foregoing relates to the written description of the invention. The time of the invention is often an important factor, the sufficiency of the proof is even more important, and adequate corroboration is of the greatest importance. Some of the factors will be considered and in each of the immediately following cases it is assumed that the written disclosure is adequate.

1. In the first assumed case the written description or drawings are not dated, are not signed by the inventor, and are not witnessed. Under such conditions—if the documents were not disclosed to others—the evidentiary value of the description and drawings is slight. The documents are self-serving and only slightly better than the unsupported word of the inventor.

One of the leading cases in point was quoted with approval by Judge Alvey of the Court of Appeals of the District of Columbia in rendering the Court's opinion in *Winslow v. Austin*, 1899 C. D., 301, 303-304:

"It is very true, as declared by this court in the case of *Mergenthaler v. Scudder*, \* \* \* the fact of conception by an inventor for the purpose of establishing priority cannot be proved by his mere allegation nor by his unsupported testimony, where there has been no disclosure to others or embodiment of the invention in some clearly perceptible form, such as drawings or models, with sufficient proof of identity in point of time. For if such unsupported proof of the inventor himself could be received as sufficient evidence of conception in many cases there would be no way of effectually rebutting or disproving such evidence; but it does not follow from this principle that the party upon whom is cast the onus of proving the fact of priority of invention is an incompetent witness to testify as to the fact of priority. The competency or admissibility of the evidence is one thing, but the sufficiency of it to establish a fact is quite a different thing. A party may testify but his testimony may not be taken without corroboration as sufficient to establish a particular fact. In this case, however, the testimony of Austin is strongly corroborated in very material particulars by other and independent testimony."

In an interference, involving a spark plug, after decisions by the Examiner of Interferences and by the Board of Appeals holding that the appellant had failed to establish conception of the invention prior to his opponent, the appellant took his case to the Court of Customs and Patent Appeals. In commenting on one portion of the evidence the Court said:

"With respect to Exhibit 1, it was testified that the witness Daze made it from a sketch, in evidence as Exhibit 4. This sketch is not signed, dated, or witnessed, and it does not show the entire



plug. A careful examination of Exhibit 4 convinces us, as it did the tribunals of the Patent Office, that it has little, if any, evidentiary worth. We do not see how the plug, Exhibit 1, could be made from the sketch, Exhibit 4." (Quoting Judge Jackson in *Kasarjian v. Paulson*—1938 C.D. 781, 783, 784.)

In the foregoing appeal, while the sufficiency of the sketch was in doubt, the Court clearly gave weight to the lack of signature, date, and witnesses. It is evident that the sketch was disclosed to the witness Daze, who made the plug; otherwise, the evidence might have been characterized as worthless.

If the inventor, having an adequate written description, had sent it to another person for safekeeping, it might be acceptable evidence of conception as of the time the document was received. Quoting from Judge Shepard in *Peters v. Hopkins* (1910 C. D. 278, 280):

"It is quite true that this supporting evidence must ordinarily consist of disclosures of the invention as conceived, to others. Such disclosures may be in writing, or be made orally and with or without the aid of sketches or models. If in writing or through sketches or models, the same must be proved in some satisfactory manner, and if oral only, the party to whom the disclosure is made, or some other person, who may have overheard it, must be able to reproduce it with reasonable certainty. As admitted, however, by the Commissioner, in his opinion, heretofore quoted, there may be cases in which conception can be established by other means than the disclosures referred to. For example: An inventor might write a complete description of his invention and deposit the same in a sealed packet with another person for safekeeping, without making any disclosure of the contents. The production of the packet with proof of the date of the receipt would be sufficient evidence of the existence of the conception on that date. Other conditions more or less probable might be imagined."

2. In the second assumed case the written description is dated, and is signed by the inventor, who kept the document in his possession, but the document was not disclosed to others at the time it was made and is not witnessed and dated by witnesses. In the absence of corroboration such evidence will not support the burden of proof. If the document had been shown to others and explained to them, the witnesses could testify as to the facts but usually it will be difficult to prove the date of the disclosure. Moreover, the Court will look with doubt upon any situation in which no acceptable explanation is offered as to why the inventor failed to have witnesses sign and date the written disclosure.

It is usually of vital importance to establish the date on which the written description was made and the date on which the conception was disclosed. The importance will be understood by reading the following quotations:



Judge Hatfield, speaking for the United States Court of Customs and Patent Appeals, in *Sloan v. Peterson et al* (1942 C. D. 499, 510) said:

"The drawing appearing on exhibit 15, having been properly identified, is sufficient to establish conception by appellant of the involved invention. However, the date when that drawing was made is of vital importance, and it is strange indeed, particularly in view of the hereinbefore related facts and circumstances, that counsel for appellant, who, with meticulous care, examined appellant's witnesses as to the dates appearing on other of appellant's documentary exhibits, did not interrogate at least one of them regarding the date appearing on exhibit 15. Counsel for appellant was, of course, aware that it was essential that some evidence be submitted to establish that exhibit 15 was, in fact, made on the date which it bears—February 14, 1935. There being no such evidence, we are unable to hold that appellant is entitled to February 14, 1935, for conception of the involved invention."

In *Britton et al v. Hass et al* (38 U. S. P. Q. 495, 496, 497) the Board of Appeals of the Patent Office held:

"Coleman testifies that all the notebooks of the laboratory were kept in great security at the time such as being even locked in the safe over night. Although there are some broad allegations that Dr. Britton may have inspected such laboratory notebooks and that final reports of work done in the laboratory were made up and that these reports may have been seen by other members or officers of the Dow Chemical Company, we are convinced after a review of the testimonial record submitted on the behalf of Britton and Coleman that it is not proven beyond reasonable doubt that any one at that time or so far as shown subsequently at any available date inspected these particular notebooks or reports or that the matter contained therein was disclosed to or discussed with any one so that they understood the matter involved or particularly had their attention drawn to the specific matter relating to counts 1, 2 and 4 here involved. We accordingly hold that neither Coleman separately nor Coleman or Britton can be said to have established corroboration in these matters. Mere recording of data in a private memorandum book by an applicant cannot, we believe, be accorded the necessary weight for proof beyond reasonable doubt, if in fact any weight of disclosure and thus corroboration."

3. In the third assumed case the written disclosure is dated and is signed by the inventor and by witnesses. However, the witnesses were not competent to understand the disclosure. On cross examination it is made clear that the witnesses merely signed their names and set down the date of their signing without an adequate understanding of the invention. In principle it is doubtful if a witness who is not competent to understand an invention, when it is disclosed to him, can corroborate the testimony of the inventor with respect to the inventor or the date thereof.

In the appeal involving Kirkegaard and Jebsen v. Ries (1906 C. D. 485, 487, 488) Commissioner of Patents Allen in delivering his opinion said:

"Exhibit No. 2 shows all the features of the issue except the two-part ring. This drawing is dated November 27, 1903, which is several days prior to the date fixed by Kirkegaard and the witnesses called by him when the conversation between Ries and Kirkegaard took place. Exhibit No. 3 shows all the features of the issue and is dated December 4, 1903. The witnesses to the drawings are stenographers who were accustomed to visit the office of Ries. It appears from the testimony of these witnesses that their names were placed on the drawings at the dates following the same. It does not appear, however, that any one of these witnesses understood the invention in issue except in a general way that the invention related to bottle-stoppers which could be taken off and again replaced. There is no testimony whatever to show the condition of the drawings at the time they were witnessed. It is doubtful if these drawings can be considered a disclosure of the invention in issue at the dates which they bear. \* \* \*

4. The fourth assumed case is that of a written description of an invention. The description is dated and is signed by two persons who clearly understood the invention. This sounds like proof which carries conviction but if the two signers happened to be the joint conceivers of the invention in question, there is an insurmountable difficulty. The testimony of joint inventors cannot be used to corroborate each other's testimony.

The principle is well stated by Judge Shepard of the Court of Appeals of the District of Columbia in Garrels et al v. Freeman (1903 C. D. 542, 545, 546):

"4. Freeman's evidence, having established his conception of the invention at a date prior to the filing of the appellants' application, entitled him to the award of priority over them unless overcome by evidence of sufficient weight to carry their conception back of his established date. This they undertook to do by testifying on their own behalf to a joint conception at an earlier date. No witness was called to prove a disclosure of the invention by them, and there are no independent circumstances established by the evidence tending to corroborate their statements.

These unsupported statements of the two rival claimants were held insufficient to overcome the priority that had been established by satisfactory proof on the part of Freeman, in accordance with a long-established rule in such cases. \* \* \*

The contention on behalf of the appellants is that the enforcement of this rule is a denial of the competency of an interested party to testify on his own behalf; and they insist that the evidence of such a party, being admissible, must be accepted, when unimpeached and uncontradicted, as sufficient proof of his claimed date of conception.

This contention, we think, is answered in the following extract from the opinion of the Chief Justice in *Winslow v. Austin*: \* \* \*

‘Nor do we see sufficient ground for making an exception in this case to the settled rule respecting the weight of evidence of the complete conception of an invention that is required to antedate another whose conception has been established under the same rule, because there have been two witnesses to the fact instead of one. These witnesses are the two opposing applicants who jointly lay claim to the one invention, the one conception. The conception of one is incomplete without conjunction with the other. All the reasons, consequently, which underlie the rule apply with the same force where there are joint inventors, instead of a single one.’”

In section 4.03 a few examples have been given of the need of an adequate written description, adequate drawings, dated and signed documents, competent witnesses and other factors which are required to prove conception of invention. It should be remembered that in each of the supporting cases inventors lost their right to a patent because they were unable to produce sufficient proof of their inventive concept and its disclosure to others.

A similar situation might arise if a patent owner (plaintiff) sued an infringer (defendant), who produced sufficient evidence that the identical invention was known or used in this country prior to the application date of the patent in suit but not early enough to be a statutory bar. In such cases the plaintiff must establish the fact that the invention of the patent in suit was made before the date of the prior knowledge or use proven by the defendant. If the plaintiff is unable to establish priority of the invention, the patent in suit will be declared invalid.

#### **4.04. Reduction to Practice.**

One might infer from the immediately preceding sections that a conception of invention, sufficiently proven with respect to subject matter and with respect to time, is all that is required as a practical statutory matter to establish the inventor's right to a patent for his invention. Nothing could be further from the truth. While the Patent Office and the Courts place stress on the evidence of conception of the invention, they place greater stress on the reduction to practice of the invention. In fact, the Courts hold that an invention lacks completion until it is reduced to practice.

“It is evident that the invention was not completed until the construction of the machine. A conception of the mind is not an invention until represented in some physical form, and unsuccessful experiments, or projects, abandoned by the inventor, are equally destitute of that character. These propositions have been so often reiterated as to be elementary.” (*Clark Thread Co. v. Willimantic Linen Co.*—140 U.S. 481, 489.)

"The law appears to be well established that a conception evidenced by disclosure, drawings, and even a model, confers no rights upon an inventor unless followed by some other act, such as actual reduction to practice, or filing an application for a patent. A conception of this character is not a complete invention under the patent laws. It may constitute an invention in a popular sense, but it does not make the inventor the 'original and first inventor' under the statutes." (*Automatic Weighing Machine Co. v. Pneumatic Scale Corp.*, 166 Fed. 288).

**1. The actual reduction to practice of an invention required by the Courts and by the Patent Office involves the embodiment of the invention in physical or tangible form and a successful demonstration that the embodiment is capable of producing the intended result.**

"\* \* \* A process is reduced to practice when it is successfully performed. A machine is reduced to practice when it is assembled, adjusted and used. A manufacture is reduced to practice when it is completely manufactured. A composition of matter is reduced to practice when it is completely composed. \* \* \*" (Quoting Mr. Chief Justice Taft, *Corona Co. v. Dovan Corp.*, 276 U.S. 358, 383)

"Complete invention must amount to demonstration. It must be shown to have passed the region of experiment—of possible or probable failure—and to have arrived at certainty by being embodied in the form intended, capable of producing the desired results \* \* \*" (*Hunter v. Strikeman*, 1898 C.D. 564.)

"Machines and articles of manufacture are reduced to practice when they are embodied in physical or tangible form and their practicability for the intended purpose is adequately demonstrated." (*Paul v. Hess*, 1905 C.D. 610.)

**2. Actual reduction to practice, like conception and disclosure of invention, must be corroborated by a witness or by witnesses who saw and understood demonstration.**

In *Ireland v. Smith* (1938 C.D. 672, 678) after quoting at length the testimony of the witnesses, Judge Lenroot, speaking for the Court of Customs and Patent Appeals, said:

"There is clearly no corroboration of appellant's claim of successful reduction to practice on July 4, 1929.

"The claim of a party that devices were fully completed, tested, and operated prior to date of filing an application requires corroboration in order to establish reduction to practice of an invention. *Janette v. Folds and Persons*, 17 C.C.P.A. (Patents) 879, 38 F.(2d) 361."

**3. Corroboration of an actual reduction to practice must be on the following points: (a) subject matter of the invention, (b) time of the reduction to practice, and (c) evidence that the test of the invention was successful.**

The foregoing statement of the law follows from the fact that

whoever first perfects an invention is usually entitled to the patent and if an inventor is to prevail over an opponent, the inventor's witnesses must corroborate the inventor in at least the three points enumerated.

"He is the first inventor in the sense of the patent law, and entitled to a patent for his invention, who first perfected and adapted the same to use, and it is well settled that until the invention is so perfected and adapted to use it is not patentable under the patent laws. \* \* \*" (Seymour v. Osborne, 78 U.S. 516, 552.)

The corroborating testimony usually must be based upon more than unsupported memories and vague ideas as to dates. In Interference No. 75285, Kell v. Farnsworth v. Gray, three witnesses gave testimony to corroborate Kell's successful reduction to practice of an invention relating to television but Kell lost principally because:

"The oral testimony based solely on the unsupported memories of all three corroborating witnesses is so vague as to dates and the specific apparatus with which the results they allegedly saw were accomplished that little weight can be accorded such testimony to definitely establish on or before a fixed date that the invention in issue was successfully completed."

**4. Constructive reduction to practice is a fiction of patent law in which the filing of a patent application disclosing an operable invention is held equivalent to an actual reduction to practice.**

The constructive reduction to practice bears the date on which the complete application was filed and while constructive reduction to practice does not have to be corroborated, the disclosure of the application may be subjected to searching scrutiny to determine if it will produce the intended result.

In a decision by Assistant Commissioner Fenning in *Skinner v. Swartwout* (1922 C.D. 26, 27, 28) the following appears:

"A complete and allowable application for patent has regularly been held the equivalent of an actual reduction to practice of the invention. Such a constructive reduction to practice is allowed the applicant on the theory that he has placed in permanent form his invention and such permanent form must be a form which will operate to produce the results claimed for it.

"It seems clear in the present case that the purpose of both inventors was to provide valve-operating mechanism which would be superior to the valve-operating mechanism in use at the time the present applicants entered the field. Swartwout's testimony, as well as that of his father and brother, indicates that it was his purpose to produce something which was more efficient than the engines on the market. It would seem reasonable, therefore, to apply to his disclosure a test to determine whether it actually would produce a more efficient machine than those on the market. In applying this test no extraordinary sympathy should be ex-

tended to Swartwout. He has not produced an actual reduction to practice of his invention, but asks the technical benefit of the substitute for a reduction which his application affords. The postulant for a technical benefit can not object to a searching scrutiny of his disclosure. It seems proper then to determine whether the actual structure illustrated in his application drawings and described in his specification will produce the result which he was endeavoring to get. \* \* \*

Skinner has produced as witnesses engineers who are familiar with the actual construction and operation of machinery, including the specific type of steam engine on which both parties here were working. These witnesses, being familiar with prior art devices, are able to demonstrate that an error is inherent in the Swartwout structure, as disclosed in his drawings, which is in excess of the error present in the prior art devices. Admittedly, the Swartwout device was not operative as shown in the drawings originally filed. Skinner's brief points out that six attempts have been made to correct Swartwout's drawings in one respect or another. Nevertheless, the drawings as now corrected do not disclose a structure which will eliminate the errors due to expansion and contraction in the prior art devices. \* \* \*

Swartwout's attorney objected to the testimony on operativeness introduced by Skinner, but he was unable to discredit the witnesses on cross examination and there is nothing in the record to attack their reliability or to indicate that the conclusions which they draw are incorrect. At the proper time Skinner moved to dissolve the interference on the ground that Swartwout's device was inoperative, and it is appropriate to consider that matter here.

"The witnesses Mueller and Stevens clearly demonstrate that there would be a greater error in an engine built in accordance with the drawings of the Swartwout application than was present in the prior art devices. (Mueller, Q. 4; Stevens, Q. 19 and Q. 42.)"

Because of a defect in Swartwout's disclosure—which was proven inoperable—Swartwout lost to his opponent Skinner.

There are numerous other requisites for constructive reduction to practice; such as: the application must be complete; the application must not be invalid; the application must not have been abandoned; the application must not contain new matter; the device of the application must be operative without more than mere mechanical skill; a foreign application filed more than a year before the U. S. application is not a reduction to practice; and the application must disclose the subject-matter in controversy (Patent Office Practice by McCrady, pages 303, 304.)

#### 4.05. *Relation Between Conception of an Invention and Reduction to Practice — Diligence.*

In the ordinary course of events an inventor conceives an invention first and later may reduce the invention to practice. He is entitled to



the date of the conception of the invention rather than the date of the reduction to practice, provided he was diligent in the perfecting of the invention:

"In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other." (35 U.S.C. 102g)

"Under our patent system, he who first arrives at a complete conception of the inventive thought is entitled to recognition and reward, unless and until the interest of the public is compromised by his lack of diligence in demonstrating that his invention is capable of useful operation. The public may justly demand of the inventor who seeks a legal monopoly that within a reasonable time the invention be brought to such a stage of perfection as to be adapted to actual use." (*Laas v. Scott*, 161 F. 122, 126.)

"That the man who first reduces an invention to practice is prima facie the first and true inventor, but that the man who first conceives, and in a mental sense first invents, a machine, art, or composition of matter, may date his patentable invention back to the time of its conception, if he connects the conception with its reduction to practice by reasonable diligence on his part, so that they are substantially one continuous act." (*Christie v. Seybold*, 55 F. 69, 77).

The question of diligence usually is of little importance unless another inventor enters the field after conception of the invention by the earlier inventor and before the earlier inventor has reduced the invention to practice. If the second inventor conceives the invention and reduces it to practice before the first inventor has perfected the invention, the first inventor will lose his right to the patent if he was not diligently trying to reduce the invention to practice from a period just before the second inventor entered the field and continuing to the reduction to practice, unless he can offer an acceptable excuse for his lack of diligence.

"It is elementary that, where diligence is involved in reducing an invention to practice, diligence must be established at and immediately before the opposing party entered the field, and it must continue until there is an actual or constructive reduction to practice by the party claiming diligence.

"It is also well established that absence of activity during the critical period, if due to reasonable excuses or reasons for failure of action, will not be held to be lack of diligence." (Quoting Judge Lenroot of the United States Court of Customs and Patent Appeals, *Brown, Jr. v. Barton*, 1939 C.D. 279, 285.)

#### 4.06. *Suggestions.*

1. Prepare promptly adequate written descriptions of your inventions.

2. Sign and date the document.
3. Show the document to competent witnesses.
4. Explain the invention described in the document to the witnesses.
5. Have the witnesses sign and date the document.
6. Be diligent in reducing the invention to practice actually or constructively.
7. If the invention is to be actually reduced to practice, keep adequately written, dated, and witnessed notes of the preparations, tests, etc.
8. When ready for a successful demonstration of the invention, explain the demonstration to competent witnesses and have them sign and date the notes describing the demonstration.



## CHAPTER V

### RECORDS OF INVENTION

#### 5.01. *Records of Invention.*

In the preceding chapter some of the practical aspects of statutory invention were discussed. While the discussion suggested the desirability of keeping written records, no specific recommendations were made as to the actual form of the records. The manner of recording engineering notes and inventions will be considered in the present chapter and some suggestions will be made as to form.

1. Records of invention may be written or printed, in pencil or in ink, or typewritten. It is not essential that the records be in the handwriting of the inventor. In one interference, a shorthand diary was offered as a disclosure of invention. It appeared that the shorthand could be transcribed by persons familiar with one of the known systems. The Court approved of the shorthand record (*Burson v. Vogel*, 1907 CD 669).

While unique records have been accepted, it is desirable to use conventional mediums, such as a good grade of paper and typewritten or longhand ink entries. The notes may be illustrated with photographs, drawings, charts, graphs, and any other helpful matter. It is desirable to follow some regular form, but this is largely a matter of personal preference.

In the *Radio Corporation of America*, there are two approved methods of keeping engineering notes. The older method consists of using bound notebooks which are serially numbered. The notebooks are assigned by number to the engineers. These notebooks are provided with duplicate pages and a piece of carbon transfer paper so that duplicate notes may be made. The duplicate pages are or were made for a reason not of immediate interest. It is expected that the engineers will enter in their notebooks suitable records of their design, test, and experimental work, which may or may not involve invention. Needless to say, the notebook entries should be signed and dated by the engineer and duly signed and dated by competent witnesses.

The newer method involves the use of a photographic machine which is used at regular intervals to photograph the notes kept by the engineers. The engineers use loose leaf sheets which are preferably 8½" x 11", but smaller size sheets may be used. The individual sheets are signed and dated by the inventor and are dated, stamped, and signed by witnesses. The stamp indicates that the notes were disclosed

to the witnesses and understood by them. The individual sheets are kept by the engineers, but at regular intervals the sheets are collected and are put through the photographic device for recording on microfilm. The main film becomes a chronological record of all engineering notes for the particular period and the record shows the date and identifies the notes of the individual engineers. A second film is made and divided into sections corresponding to the notes or records of a particular engineer. In this manner the individual records may be connected together and filed in the name of the individual as his chronological record.

Thereafter the notes are returned to the individual engineers and at suitable intervals are indexed and bound together to suit the individual requirements. Some engineers prefer that their notes be bound in accordance with subject matter and others prefer chronological binding. The bound records may be kept by the individuals or filed in the library. While there are some advantages in the described system, it is not recommended for a small group because of its complexity.

Regardless of whether the older or the newer system or almost any other system of recording notes is used, the disclosures are no better than the individual efforts to keep an accurate and careful account of the work. It is worth repeating that the substance of the notes is more important than the form.

2. A well kept engineering notebook should establish the essential facts. Among the essential facts are the subject matter of the notes, the time of the recorded work and the time when the record was made, and the names and dates of the witnesses to whom the work and the notes were disclosed.

a. As to subject matter, "the descriptions should speak for themselves." That is, the described experiments, tests, measurements, designs, drawings, etc., should enable one reasonably skilled in the art to which they pertain to understand the disclosures without requiring the verbal explanation of the engineer. This is probably asking a great deal, but nevertheless it is a goal which the engineer should set for himself. Learn to write clearly and concisely.

b. The time when the work was done is of importance; the time when the notes were made may also be of importance. Form a habit of dating the notes to indicate when the tests and experiments were performed. Also make a habit of dating your signature so that you can testify when you did the work and when you signed the notes.

c. It is very important that you disclose the work and the notes to witnesses competent to understand what you have disclosed and re-

corded. Ask the witnesses to sign and date the notes and to indicate that they understood the disclosure. If a test or demonstration was successful, note that fact in the record, so that the witnesses can subscribe to it. Include any essential facts which will help you and your witnesses to recall the work in later years. Have witnesses see the test and so state above their signatures on your notes:

“\* \* \* regardless of the high character of appellants (the inventors) and the persuasiveness of their testimony, we are bound by the well-established rule of patent law that independent corroboration of the testimony of inventors is essential to establish actual reduction to practice of an invention, and that reports, official or otherwise, which are self-serving statements, cannot be considered as corroborative evidence of such reduction to practice.

It is unfortunate that many inventors are not aware of this rule of law.” (Crane et al v. Carlson, 125 F(2d) 709, 713.) (In that case the report written by the inventors was signed by a witness to the report but not to the tests.)

d. If you are working on a complex system in which some of the components are well known in the art, refer to the known devices by adequate references. For example, if you are using a particular type of amplifier and do not wish to take time to describe it in detail, refer to a published description or to a patent. If necessary, refer to a prior disclosure of your own.

### **5.02. Standard Form for Disclosing Inventions.**

While engineering records of invention may contain sufficient information for preparing a patent application, for establishing the nature of the invention, and for proving the time when the invention was conceived and reduced to practice, it is desirable, especially in a large organization, to make a separate written disclosure of invention. One reason for the separate disclosure is to select from an extensive engineering record those portions which the engineer believes may involve invention. An engineer, after specializing in an art, has some notion of what is new and useful, and therefore he is in a good position to call such matters to the attention of the patent attorney. If an engineer were to explain all of his engineering notes to a patent attorney, the total time consumed would probably exceed the time required to prepare a brief disclosure. One of the advantages in submitting written disclosures is that the engineer can forward the disclosures as they are prepared, without waiting for the attorney to call to discuss the notes. Furthermore, in a large organization it would be difficult for a limited patent personnel to review, within a limited time, all engineering notes, as might be necessary to ascertain if some other engineer had made the same invention at an earlier date.

By sending promptly to the patent department their disclosures of

inventions, all engineers have an equal opportunity to get credit for their inventions in the monthly reports which the patent department submits to the management. The disclosures are acknowledged, are docketed in the order received, and are assigned to an attorney who specializes in the subject matter of the invention. The attorney can study the disclosures and can prepare the patent applications of related disclosures, as far as possible in the order in which the inventions were made. When several disclosures of the same invention are made by different engineers, the attorney can confer with the interested parties to determine who first made the invention.

The engineers are aided by a disclosure of invention form, because the essential entries follow a regular order and tend to minimize oversights. The RCA patent disclosure data sheet is reproduced on the following page. The form was developed to meet the needs of the engineers and the requirements of the patent department.

Considering the entries in the order indicated, the following explanation of the form is presented: (A) The disclosure is addressed to the Domestic Patent Operations Manager of the Patent Department. (B) The disclosure of the invention is submitted in pursuance of the inventor's employment agreement. (C) The relation of the invention to the field to which it pertains is indicated by its title. (D) The block in the upper right hand corner is for the patent department date-stamp and docket information. (E) The purpose of the invention is stated. For example, to improve an existing system or to provide a new method or a new device or a new composition of matter, etc. (F) The detailed description of the invention is made on additional sheets, papers, prints, and samples forming part of the disclosure as identified.

The next three items deal with dates and are *very important*: (G) Invention conceived ..... (H) Construction of the device completed on ..... (I) The complete device first tested on ..... (J) Has there been any experimental use .....? (K) Is commercial use scheduled? ..... and items 9 and 10 are self-explanatory. Item 11 is to identify publications or reports describing the invention.

The items (L), (M), (N), and (O) are to provide necessary information with respect to government contracts, which require the contractor to take some action with respect to inventions or patent applications. The item (P) provides for a reference to engineering notebooks. (Q) The inventor's full name, or names, if there is more than one inventor, should be given because patent applications must be made in the full name(s) of the inventor(s). The Patent Department needs the inventor's business addresses. (R) The inventor(s) should apply their signature(s).

Pat. 3009 11-52



PATENT DISCLOSURE DATA SHEET

To: Domestic Patent Operations Manager
RADIO CORPORATION OF AMERICA (A) Date
DAVID SARNOFF RESEARCH CENTER
PRINCETON, NEW JERSEY

(For Patent Dept. Use Only)
(D)

The herein described invention is submitted pursuant to my employment agreement. (B)

1. DESCRIPTIVE TITLE: (C)
2. PURPOSE, SUMMARY AND PROBABLE USES: (E)

- (F)
3. Attached hereto is "Detailed Description" comprising Form Pat. 3010 ( ) pages and the following papers, prints, samples, etc.
4. Invention conceived (G), 195... 5. Construction of the device completed on (H), 195...
6. The completed device first tested on (I), 195...
7. Has there been any experimental use? (Yes (J) No... ) 8. Is commercial use scheduled? (Yes (K) No... )
9. If answer to 7 or 8 is "Yes", explain
10. If this invention has been described in any publication or report, identify:
11. Was invention conceived or first actually reduced to practice (a) in the performance of the experimental, developmental or research work called for by a Government Contract (Yes No ) or (b) in the performance of any experimental, developmental or research work relating to the subject matter of a Government Contract and which was done upon the understanding that a contract would be awarded? (Yes No ) (L)
12. Numbers of Contracts referred to in 11: (a) (M), (b)
13. Is the invention embodied in any material furnished or to be furnished under a Government Contract? (Yes (N) No )
14. Numbers of Contracts referred to in 13: (O)
15. Invention disclosed in Engineering Notebook No (P), Pages
16. Type or print full name(s), home address(es), occupation number(s), place of employment, etc. (Q)
(1) Name City County State
Street City County State
Occ. No. Div. or Subsidiary Bldg. No. Floor City State Tel. No.
(2) Name City County State
Street City County State
Occ. No. Div. or Subsidiary Bldg. No. Floor City State Tel. No.
17. Sign full name(s) (1) (R) (T)

(S) SPACE BELOW RESERVED FOR WITNESS

(T) (An effort should be made to obtain the signature of the person to whom the inventor(s) first disclosed the invention)
18. The invention was first explained to me by the above identified inventor(s) on (U), 195..., and is understood by me.

(V) Signature of Witness Date of Signature, 195...

Please Fill in ALL Blank Spaces

Submit Original - Keep Copy for Your Files

Pat. 3010 7-52



**PATENT DISCLOSURE DATA SHEET**

DESCRIPTIVE TITLE: \_\_\_\_\_

3 DETAILED DESCRIPTION:

\_\_\_\_\_  
Inventor(s) \_\_\_\_\_ Date

WITNESSED AND UNDERSTOOD BY

\_\_\_\_\_  
Date

(For Patent Dept. Use Only)

(S) It is important to have the disclosure witnessed and dated in the space provided. (T) The desirability of obtaining the signature of the person to whom the inventor first disclosed is called to the inventor's attention because it is important to establish the earliest possible date. (U) The entry indicates that the witness understood the disclosure on the date it was first disclosed to him. The additional disclosure sheets also bear the legend, "Witnessed and understood by" in the space provided for the signature of the witness.

(V) It is noted that the date of the explanation of the disclosure may or may not be the same as the date of the witness's signature.

The thus described disclosure sheet is made in duplicate. The original is sent to the RCA Patent Department and the copy is kept by the engineer for his records. By using the loose-leaf form the disclosure may be conveniently typewritten. (The earlier RCA disclosure forms were in bound books, which were not adapted to typewriting.) The disclosure may be in the inventor's handwriting. Ink is recommended over pencil, but ink is not a Patent Department requirement. The form assures a logical disclosure and minimizes the possibility of overlooking essential entries. The standard form gives the patent department an opportunity of standardizing its files. The form also provides a ready means of checking invention dates without calling on the inventor for the information. The docket entries on the disclosure are very helpful in patent interference matters and have been accepted as satisfactory evidence by opposing counsel (Hefelev. Brown).

### **5.03. Substance of Disclosure.**

The substance of a disclosure of invention is of the greatest importance because, if the disclosure is inadequate, all that is based upon it is apt to fail. In the case of a conflict, it will not help very much to show *when* an invention was made if it is impossible to show *what* invention was made. Furthermore, a patent application based upon an inadequate disclosure is not apt to result in an adequate patent. A hazy disclosure usually leads to a hazy patent, which may be held invalid as failing to teach those skilled in the art how to practice the invention. An inoperative disclosure generally leads to an inoperative patent, which is worthless. On the other hand, a clear, concise disclosure is the best starting point for a good patent. The following suggestions may be helpful in preparing a disclosure of invention:

1. Prepare the disclosure so that it will teach one skilled in the art to which the invention pertains how to practice the invention. Remember the invention may be very clear and distinct in your own mind, but it is your written words which convey the ideas to the reader. Do



not take things for granted; the reader will not start with the same concept that you have, and if you skip over portions, the reader will be unable to understand the invention. Picture the reader as being many miles away, and you are going to describe your invention to him in this one communication. Perhaps the remote reader does not have a dictionary with him; therefore, it is best to use ordinary words. Drawings, sketches, photographs and block diagrams, especially those with the proper legends, often tell the story better than many words. Do not hesitate to use enough words and enough illustrations to make your disclosure understandable to the reader, but remember that length does not necessarily lead to clarity. Accurate brevity is a great virtue.

2. A patent application cannot be based merely upon a happy idea. The patent must disclose a means or a method for putting the invention into actual use, and it will fail in that if it does not disclose the means. Therefore, let your disclosure show or describe the means. As you would shun a plague, shun "happy idea" inventions, with no means for producing the desired inventive result. If you will do this, you will earn the ever-lasting gratitude of your patent attorney associates.

Now disclosing the "means" does not require that you provide a detailed mechanical drawing of a radio chassis, if your invention relates to a radio circuit. However, if your "happy idea" requires a limiter amplifier and will not work without one, you must disclose that particular amplifier with sufficient detail so that it will be clear to those skilled in the art. In the event that a limiter amplifier is merely an element of the invention, and if limiter amplifiers are adequately described in a printed publication or a patent, there is ordinarily no objection to making reference to such descriptions. If you have previously disclosed an invention which forms an element in a second invention, reference to the first disclosure may save time for you and for the patent attorney. Briefly, you are not required to describe that which is well known to those skilled in the art, but in relying on this rule do not make it a guessing game for the patent attorney and others interested in your disclosure. If you wish to rely upon a reference, please give a proper citation.

3. By way of example, an excellent disclosure\* of invention is reproduced on the following pages. While the original disclosure included all essential dates and names of witnesses, these confidential matters have been eliminated from the reproduction, as only the subject matter of the disclosure is of interest here. The disclosure was duly docketed, a patent application was prepared and filed, the Patent (No. 2,086,615) issued to G. L. Grundmann on July 13, 1937, and the invention is being used commercially.

---

\* An earlier form was used for this disclosure.



DISCLOSURE OF INVENTION

(Data Sheet)

**ATTENTION OF PATENT DEPARTMENT:**

The herein described invention is being submitted in pursuance of my employment agreement with the RCA Victor Company, Inc.

**THE INVENTION RELATES TO:** High Frequency Wave Meter

**PURPOSE OF INVENTION:** To permit the determination of frequencies above 300 M.C. to an accuracy of at least .001 per cent by a simple form of frequency meter.

**BRIEF DESCRIPTION:** This frequency meter consists mainly of a concentric  $\frac{1}{4}$  wavelength transmission line arranged mechanically so that tuning of the line may be accomplished by changing the length of the inner conductor without altering the coupling to the signal source under measurement or to the resonance indicating voltmeter. A wide range of frequencies are covered by making the inner conductor interchangeable with others of like design but of different length.

The method of operation is as follows: The unknown signal is coupled to the frequency meter through a coupling loop inserted through a slot in the side of the outer shell as shown on the following

(Continued on next page)

**Attached hereto and forming a part of this disclosure are additional papers, namely:**

Pages 2, 3 and other material, such as samples, blueprints, etc. as follows .....

**I first thought of the invention on** (Date)

**The invention is described in my notebook No. 2105, on page 27 (selectivity curve for such a circuit shown on p. 22, curve sheet "C")**

**If device was built, when was it completed?** (Date)

**Was device tested? Yes.**

**If so, when?** (Date)

**This disclosure was written on** (Date)

**The invention was first explained to me on** (Date)

**My full name is** Gustave Louis Grundmann (signed)

**SPACE BELOW RESERVED FOR WITNESS**

*(Signature of Witness)*

*(Date of Signature)*

page. The micrometer head knob is turned until resonance is indicated by the V. T. voltmeter coupled as shown on page 3. If no resonance indication is obtained then change the inner conductor to one of a different length until resonance is indicated. (When resonance is indicated the length of the tuning rod will be approximately  $\frac{\lambda}{4}$  cm. long.) The scale reading of the micrometer head is then referred to the calibration curve and the frequency determined from the calibration chart.

The instrument was originally calibrated by the use of measurements made on Lecher wires.

G. L. Grundmann (signed)

Witness..... (signed) (dated)

Date..... (dated)

---

(See following page for disclosure drawing)

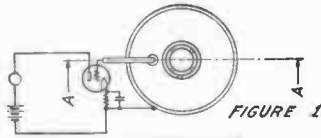


FIGURE 1

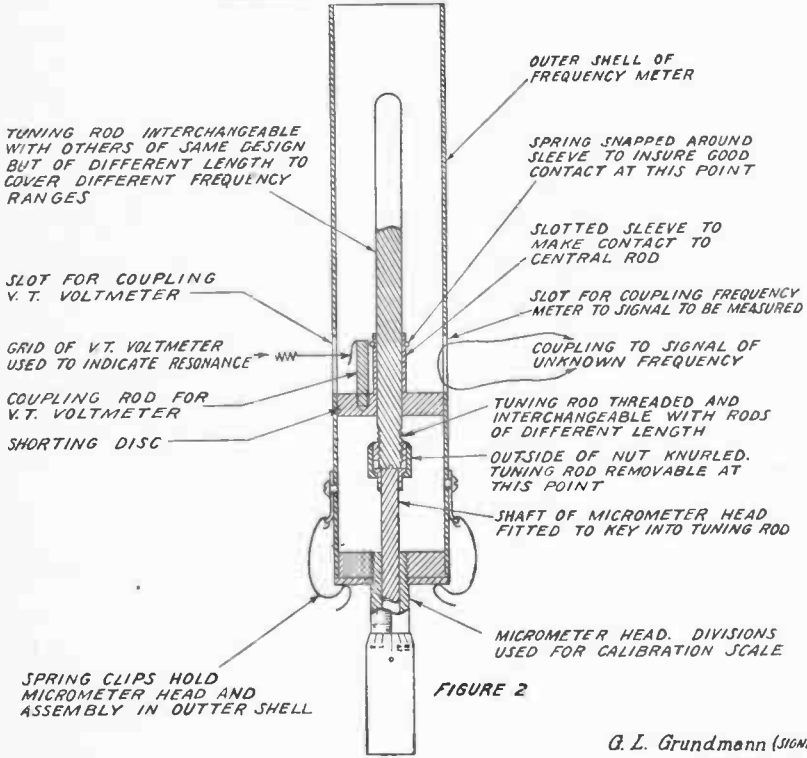


FIGURE 2

SECTION "AA"

TUNING ROD INTERCHANGEABLE WITH OTHERS OF SAME DESIGN BUT OF DIFFERENT LENGTH TO COVER DIFFERENT FREQUENCY RANGES

OUTER SHELL OF FREQUENCY METER

SPRING SNAPPED AROUND SLEEVE TO INSURE GOOD CONTACT AT THIS POINT

SLOT FOR COUPLING V. T. VOLTMETER

SLOTTED SLEEVE TO MAKE CONTACT TO CENTRAL ROD

SLOT FOR COUPLING FREQUENCY METER TO SIGNAL TO BE MEASURED

GRID OF V.T. VOLTMETER USED TO INDICATE RESONANCE

COUPLING TO SIGNAL OF UNKNOWN FREQUENCY

COUPLING ROD FOR V.T. VOLTMETER

TUNING ROD THREADED AND INTERCHANGEABLE WITH RODS OF DIFFERENT LENGTH

SHORTING DISC

OUTSIDE OF NUT KNURLED. TUNING ROD REMOVABLE AT THIS POINT

SHAFT OF MICROMETER HEAD FITTED TO KEY INTO TUNING ROD

SPRING CLIPS HOLD MICROMETER HEAD AND ASSEMBLY IN OUTER SHELL

MICROMETER HEAD. DIVISIONS USED FOR CALIBRATION SCALE

G. L. Grundmann (SIGNED)  
(DATED)

WITNESS:  
G. H. Brown (SIGNED)  
(DATED)

GRUNDMANN DISCLOSURE DRAWING

## CHAPTER VI

### PROSECUTION OF PATENT APPLICATION

#### **6.01. *Preparation of Patent Application.***

After a disclosure of invention has been submitted to the Patent Department, has been docketed, and has been assigned to a patent attorney, the next step is to decide if a patent application should be prepared. This decision is based upon the state of the art and the importance of the invention.

The state of the art is determined by the prior patents and publications. The patent attorney, who specializes in a particular field, acquires a knowledge of the issued patents and keeps abstracts or reference files. By either searching these files or by having a search made in the United States Patent Office, the closest patent art may be found. If the search shows that the invention has been disclosed prior to the date of the subject invention, or more than a year earlier than a patent application can be filed, the application should be made inactive because in the absence of most unusual circumstances, it will be impossible to obtain a valid patent.

In many cases the disclosures of the prior art will not be exactly the same as that of the subject invention, but sufficiently close so that one skilled in the art would consider that the subject invention was substantially anticipated. In other cases the search will disclose references which might be combined to anticipate. In these and in similar situations, it requires the judgment of experience to determine if an application should be filed. The inventor can often aid the attorney in reaching a decision by pointing out just how the references fail to anticipate or in what manner the invention of the subject disclosure differs from the disclosure of the references. In reading anticipatory references, remember it is the disclosure which is important, while the claims define the boundaries of the patent grant and measure the invention. (Paper Bag Case, 210 U.S. 405, 419).

When the search discloses prior inventions which are very close to the subject invention, the engineering or commercial importance of the invention should be considered. If the engineering or commercial aspects of the invention are of great importance, or perhaps the best way of accomplishing the desired result, it may be desirable to file a patent application. In the final analysis the Examiners in the Patent Office, or the Courts, determine if invention is involved. While the Patent Office will pass upon the question of the patentability in

each application for Letters Patent, the Office should not be burdened by filing a multitude of applications for trivial and doubtful inventions.

### 1. *Outline of Specification and Claims*

For the present purposes it may be assumed that the search does not disclose references which anticipate and that the references will aid the attorney in preparing the application, and in drafting the patent claims. Some patent attorneys prefer first to prepare the claims; others write the specification and then the claims. In either event it is customary to make a rough draft of the proposed application. The rough draft is submitted for the consideration of the applicant—or applicants, if there is more than one inventor. The following outline may aid the inventor in considering the draft:

The patent application should clearly and concisely disclose the invention in “the best mode contemplated by the inventor of carrying out his invention”. A definite outline makes for an orderly disclosure. The Rules of Practice, U. S. Patent Office (Rule 77) suggests the outline for the specification. The suggested order is somewhat expanded here:

First—The title indicating the field to which the invention pertains.

Second—A sentence or paragraph stating the nature of the invention and indicating the general field of use.

Third—The prior art is recited in general terms so that the improvement represented by the subject invention may be emphasized or recited by contrast.

Fourth—The objects of the invention are stated broadly and specifically and in intermediate terms.

Fifth—The invention should be summarized briefly in terms commensurate with the claims and objects of the invention (Rule 73).

Sixth—If the invention may be illustrated by drawings, the several figures of the drawings are described briefly. If similar reference characters are applied to similar elements in the drawings, an appropriate statement is made.

Seventh—The invention is then described in some detail by referring to the drawings. Elements or portions that are well known are often described by referring to the prior patents or publications.

Eighth—Rather than to combine the description of the invention with the statement of the mode of operation, some specification writers prefer to follow the description with a section in which the mode of operation is set forth.

Ninth—The mode of operation may be followed by a description of one or more modifications of the invention and, if necessary, their

mode of operation. The modifications should be illustrated in the drawings, if capable of illustration.

Tenth—A summarizing paragraph is very helpful, and is often used to restate briefly the invention.

Eleventh—The claims follow the specification and are of the utmost importance because they are the formal boundaries of the invention. It is very important that the claims cover the invention broadly and specifically. The present Patent Office practice permits the applicant to claim in the same application five species or modifications, provided a generic claim broad enough to cover all five species is allowed (Rule 141).

### 2. *Formal Papers*

The following formal papers, in addition to the specification, drawings, and claims, are required in patent applications: a petition to the Commissioner of Patents, a power of attorney (unless the applicant elects to prosecute his own application), and an oath. The oath must be administered by a duly authorized officer, such as a notary public (Rule 66). The application must be signed by the applicant in person.<sup>1</sup> The signature to the oath will be accepted as the signature to the application provided the oath is attached to and refers to the petition, specification, and claim to which it applies (Rule 57). A filing fee of \$30 and an additional fee of \$1 for each claim over twenty must accompany the application. If the invention and application are assigned at the time the application is filed, the formal papers may include the assignment. Assignments are usually acknowledged before a notary public. There should be no inconsistencies in the application with respect to applicant's residence, citizenship, venue of the oath, or dates. These are a few of the highly technical legal phases of patent application papers. Such matters should be the primary concern of the patent attorney rather than the applicant. A detailed discussion of the legal questions would be outside the scope of these notes.

### 3. *Filing the Application*

When the complete application has been duly executed and has been filed in the U.S. Patent Office, a receipt will be mailed to applicant's attorney. The receipt will include the serial number, the filing date, the title, and applicant's name. The receipt will also designate the Patent Office Division to which the application has been assigned.

## 6.02. *Patent Office Procedure.*

Patent applications are assigned to the examining divisions according to a very complex classification system. The Examiners within

<sup>1</sup> See pages 103 and 104 for exceptions.

each division are also assigned patent applications in accordance with sub-divisions of the main classes handled by their respective divisions. In this manner the Examiners become highly skilled in a particular subject or subjects and they are especially well acquainted with the prior patents and publications pertaining to the subject matter of the art, or more often a portion of the art, which they examine.

#### 1. *The Examination*

In examining an application, applicant's compliance with the law and Rules of Practice, the technical accuracy of the specification, the sufficiency of the disclosure, the correctness of the drawings, and especially the novelty of the claimed invention, are all duly considered. With respect to novelty, the Examiner makes a search through the patent classes to which the invention pertains, to determine the closest prior art, and thereafter he prepares his first action on the application.

#### 2. *Patent Office Action*

The Examiner must notify the applicant of any reason for rejecting a claim. The reasons for the rejection must be fully and precisely stated. The rejection must include information and references so that applicant can judge the propriety of prosecuting his application or of altering his specification. When an application is rejected for want of novelty, the Examiner is required to cite the best references at his command. When the reference shows or describes inventions other than that claimed by applicant, the particular part relied upon must be designated as nearly as practical. The pertinence of the reference, if not obvious, must be clearly explained and the anticipated claim specified (Rules 104, 105, 106 and 107).

#### 3. *Example of Patent Office Action*

For the benefit of those who are not familiar with Patent Office actions, a representative action in an application Serial No. 457,968 (now Eaton & Luck U.S. Patent 2,401,416) is reproduced herewith.

### 6.03. *Amending the Application.*

While an application may be amended before the Examiner's action is received, it is customary to amend after receipt of the Office Actions. Amendments must be filed within six months after the date when any action taken by the Patent Office, is mailed to the applicant, unless a shorter time is specified by the Office in writing. If not amended as required, the application will be held abandoned. However, if a shorter time than six months is specified, an extension of time may be secured upon a sufficient showing (Rules 111, 115, 135 and 136).

#### 1. *General Considerations*

An applicant may respond to a rejection by requesting reconsideration or by amending the application and in some cases both steps may

Div. 65 Room 312

200

Address only  
The Commissioner of Patents,

DEPARTMENT OF COMMERCE  
UNITED STATES PATENT OFFICE  
RICHMOND, VA.

Paper No. 1

All communications respecting this application should give the serial number, date of filing, and name of the applicant.

and not any official by name **SBP/68**

Please find below a communication from the EXAMINER in charge of this application.

★ GPO 16 22217 1

Commissioner of Patents.

Applicant: **T. T. Eaton & D. G. C. Cook**

8280  
7 m/f

C. D. Tuska,  
Patent Dept.,  
R. C. A. Mfg. Co. Inc.,  
Camden, N. J.

Ser. No. 457,968  
Filed Sept. 11, 1942  
For Amplifier for Pulses.

MAILED  
APR 20 1943

This application has been examined.

References:

Wilson	2,255,839	Sept. 16, 1941	178-44-19 ux
Bethenod	1,809,503	June 9, 1931	178-44-19
Lewis	2,217,957	Oct. 15, 1940	178-44-18.

The claims are 1 through 8.

Claim 1 is rejected as obviously fully met by each of the above references.

Claim 2 is rejected on each of the above references. No invention would be required to provide the Wilson and Bethenod device with "means for taking e e e terminals".

Claim 3 is rejected as unpatentable over each of the above references. Each reference shows the method step claimed.

Claims 4, 5, and 6 are rejected on each of the above references. No invention would be required to connect the delay circuit in the anode circuit in Wilson. The source 1 in Bethenod is fully equivalent to an anode circuit.

Claim 7 is rejected as unpatentable over each of the above references. It is ordinarily not invention to provide a repeater wherever necessary.

Claim 8 is rejected as obviously unstatutory.

All claims are rejected.

LOCKETED

Amendment due  
Oct 20, 1943

RECEIVED PATENT DEPT.  
APR 21 1943  
Answered By  
Examined By



be taken. If reconsideration is requested, it is usually on the basis of an error in the Examiner's action. Such error must be pointed out distinctly and specifically in writing. A mere allegation that the Examiner has erred is insufficient and will not be received as a basis for re-examination or reconsideration (Rule 111). If an application is amended, the drawing may be changed to make it conform to the specification as filed, or the specification may be changed to make it conform to the drawing as filed. It is a cardinal principle that no new matter may be inserted in an application. New matter is defined in Rule 118 as: "Matter not found in either",—specification or drawing—"involving a departure from the original disclosure of the application."

New matter cannot be added to the application even though supported by a supplemental oath, and can be shown or claimed only in a separate application. One salient reason for this rule is that if an applicant were permitted to add new matter in a pending application, he could carry an invention back of a statutory bar and thus avoid the immediate effect of the statute. Another reason is that an applicant might be tempted to insert by amendment just enough new matter to disclose the invention of a later inventor who had published a description of his invention. An additional reason that in the absence of the rule, an applicant might file a vague application and by delaying the prosecution, he could wait for the art to develop. As the art developed, the application could be amended to cover specifically the later developments which were not part of the original invention. Do not overlook the importance of the "no new matter rule". See that your application is complete before it is filed.

While the rule against new matter is strictly enforced, the Patent Office rarely objects to an applicant offering an explanation of the mode or theory of an operation of an invention, provided the specification as filed offers a basis for the explanation. However, the explanation must not be an attempt to include a different invention from that disclosed or claimed in the application as filed. In general, the statement of invention should disclose clearly and definitely the invention claimed originally or claimed by amendment. In the event that a claim is inserted in an application which originally showed or described the matter later claimed but not substantially embraced in the statement of invention or in the original claims, a supplemental oath to the effect that the subject matter of the proposed amendment was a part of the invention and was invented before the original application was filed, is required in accordance with Rule 67.

Often the original claims are too broad and are anticipated by the prior art; in such event the claims are narrowed by amendment or are

rewritten to distinguish over the references. This is necessary as the second cardinal rule is that no claims should be drawn which are broad enough to read upon the prior art. Such claims are clearly invalid and are worthless to the patentee and to those who acquire title from him. Experience shows that many inventors are reluctant to study the claims: some inventors insist that they cannot distinguish one claim from another. Nevertheless, from the foregoing, it is clear that the claims are of the utmost importance because: (1) If the claims are too broad, they are invalid. (2) If the claims are too narrow, infringement may be avoided easily. The amending of the claims can be directed to make them narrower or broader. Broadening the claims may involve difficult procedural questions. It is customary to include claims of varying breadth or to amend the claims so that the invention is amply protected as broadly as the prior art permits and with varying degrees of narrowness. It requires skill to amend the claims to obtain the best possible protection. While the attorney is expected to supply the technical skill, the applicant can be of great help by his practical knowledge of the art. Close cooperation between attorney and applicant will lead to the best claims.

## 2. *Form of Amendments*

The paragraphs of this section relate primarily to the form of amendments. Amendments to the specifications and claims are made in writing by requesting the Office to cancel precisely specified portions, or to insert at definitely indicated points certain matter, or both. (Rule 121). In the event that amendatory matter is to be further amended, the prior amendment should be cancelled and the subsequent amendment should be wholly rewritten so that the amendment will not include interlineation or erasure (Rule 124).

Changes in the patent drawings may only be made after obtaining the written permission of the Patent Office. The Office requires that a sketch in permanent ink showing proposed changes, to become part of the record, must be filed (Rule 123(a)). The proposed changes are usually submitted by entering the alterations in red ink on a copy of the drawing as originally filed. The changes are made by the Office Draftsman at the expense of the applicant. Substitute drawings are ordinarily admitted only when required by the Office (Rule 123(b)).

The form of amendments to the claims corresponds to the form of amendments to the specification (Rule 119). If very extensive amendments have been made, it may be preferable to cancel and substitute a completely rewritten claim to take the place of the original claim. In fact if extensive amendments have been made, the Examiner may

require the amended claims rewritten. Additional claims may be offered by amendment. If claims are added or substituted for cancelled claims, the new claims must be numbered consecutively beginning with the number next following the highest numbered claim previously in the application (Rule 126).

### 3. *Overcoming Later Reference—Rule 131*

In this and in the next section the application of Rules 131 and 132 which set forth conditions for overcoming a rejection on references without amending the claims, will be considered. For example, if an expired or an unexpired domestic patent, which substantially shows or describes but does not claim the rejected invention, bears a filing date later than the date when the applicant completed his invention in this country, and provided the date of the patent is not more than one year prior to the filing date of the rejected application, the applicant may make an oath to the facts showing a completion of the invention in this country before the filing date of the reference patent and, upon a sufficient showing, have the Examiner withdraw the rejection on the reference. In a similar manner, if an applicant completed his invention before the date of a foreign patent, or before the date of a printed publication, and has filed the patent application in this country within one year of the date of the foreign patent or printed publication, he may make an oath to the facts showing a completion of the invention in this country before the date of the reference and thus overcome the reference (Rule 131).

While Rule 131 refers to the completion of the invention *in this country*, the inclusion of the italicized words was held by the Court of Customs and Patent Appeals "as not warranted by law." (In *re* McFarlane, 1942 C.D. 254, 261) In the McFarlane Case, the Court followed the reasoning in the decision of the United States Supreme Court in *Electric Storage Battery Co. v. Shimadzu et al.*, 307 U.S. 5. Nevertheless the words "in this country" reappear in the law by virtue of the Boykin Act (35 U.S.C. 109). Dates of invention in foreign countries are made ineffective in 35 U.S.C. 104. However, an exception is made in the case of inventions made abroad by a person domiciled in the U. S., but temporarily abroad serving in the prosecution of war on behalf of the U. S. The term "completion of the invention" means either a reduction to actual practice prior to the date of the reference, or conception of the invention prior to the date of the reference and coupled with due diligence to a subsequent reduction to practice. (*Ex parte* Grassei 1880 C.D. 94) (See Chapter IV, Sections 4.04 and 4.05 for discussion of Reduction to Practice and Diligence.)

Affidavits under Rule 131 must be drawn carefully to state facts and not conclusions. It is customary to attach to the affidavit photostatic copies of the notebook entries or other references to which the affidavit refers as evidence relied upon to establish the completion of the invention. It is permissible to blank out the actual dates because the oath usually states "that the invention was completed in this country prior to (or on or before)" the date of the reference to be overcome, and therefore the exact date is not necessary. Furthermore, knowledge of the actual date might be prejudicial to the applicant's interests if it became available prematurely to an opponent. Parenthetically speaking, Rule 131 is another good reason why the engineers should keep good records, because being able to overcome a rejection, on a reference having a later date than the subject invention, may be the difference between abandoning the application and obtaining the patent.

#### 4. *Overcoming Inoperable Reference—Rule 132*

Occasionally an application may be rejected upon a mode or capability of operation attributed to a reference, or because the alleged invention is held to be inoperative or frivolous or injurious to public health or morals. Affidavits or depositions traversing these references or objections may be presented by or on behalf of the applicant in accordance with the provisions of Rule 132.

#### 5. *Election of Species—Rule 146*

Office Actions on patent applications frequently include a requirement that the applicant in his response elect "that species of his invention to which his claims shall be restricted if no generic claim is finally held allowable". This requirement is based upon Rule 141 which provides that up to five species of an invention may be claimed in one application, if the application also includes an allowable claim generic to all the claimed species. Rule 146 requires the Examiner to make a complete search in his first action to determine if the generic claim or claims are patentable and if he is of the opinion that they are unpatentable, he shall require the election of species.

It is the writer's observation that many applicants have not understood what is meant by the rule and the effect of an election of species. Perhaps even an "oversimplified example" will be helpful. If it is imagined that the invention to be claimed involves the following geometrical areas: a triangle, a square, and a pentagon, a generic claim might be the following: "A geometrical area bounded by intersecting lines." This claim would be broad enough to include each of the three species. The three separate species might be claimed respectively as follows: (1) an area bounded by three intersecting straight lines;

(2) an area bounded by four intersecting straight lines; and (3) an area bounded by five intersecting straight lines.

If the Examiner's search brought forth a prior publication or a prior patent disclosing a geometrical area bounded by a plurality of intersecting *curved* lines, he would reject the generic claim and require an election of one of the three species. Thereupon applicant would have to determine if he would elect to prosecute the claims to the triangle, the square or the pentagon. He might also amend the generic claim by inserting "straight" before lines. This would distinguish from the reference and the Examiner might allow the amended generic claim together with the three claims to the species, if no further prior art were found. Whereupon the application may be allowed; the final fee paid; and the patent issued.

On the other hand, the Examiner might find prior art anticipating the amended generic claim, again reject the generic claim, allow the claim to the elected species, and hold applicant estopped from claiming the non-elected species. Under such circumstances, the applicant may obtain allowance of the parent application and may file a divisional application claiming generically and specifically the two remaining species or the applicant may file two divisional applications claiming respectively each of the remaining species.

#### 6. Requirement of Restriction—Rule 142

There is a requirement for restriction which should not be confused with the election of species and the resulting divisional applications. The requirement in question is based upon the following provision of Rule 142(a): "If two or more independent and distinct inventions are claimed in a single application, the Examiner in his action shall require the applicant in his response to that action to elect that invention to which his claim shall be restricted, this official action being called a requirement for restriction (also known as a requirement for division)." The other inventions may be made the subjects of separate applications, which must conform to the rules applicable to original applications, or may be claimed in the original application if the requirement for restriction is withdrawn or overruled.

The rule relates to applications *claiming two or more distinct inventions* and it does not relate to modifications or species of an invention. More crudely stated, the Patent Office has no intention of examining an application involving what should be several applications for the price of one. If, in fact, there are claims for two separate inventions, the applicant must elect which invention will be claimed in the parent application.

However, it often happens that the Examiner and the applicant may not agree on the facts. In that event the applicant may request reconsideration and must elect a provisional choice of the invention for prosecution. Finally, applicant may petition the Commissioner:

Rule 144 After a final requirement for restriction, the applicant, in addition to making any response due on the remainder of the action, may petition the Commissioner to review the requirement. Petition may be deferred until after final action on or allowance of claims to the invention elected, but must be filed not later than appeal. A petition will not be considered if reconsideration of the requirement was not requested.

Under the old statutes and Patent Office Rules there was a danger in filing a divisional application under conditions in which the question of separate inventions is close and the parent application is prosecuted so that it will issue as a patent before the divisional application becomes a patent. During the course of their lives, either or both of the patents may become involved in an infringement suit. The defendant may allege "double patenting" because two patents have issued on the same invention and at least one of the patents must be invalid. The fact that the Patent Office required division was persuasive but not conclusive. Moreover, Examiners frequently rejected the second application (notwithstanding having required it) on the ground that there was no invention involved in the second application over that in the parent patent.

This apparently unfair situation is cured in the Statutes of 1953 by the following sentence from Section 121: "A patent issuing on an application with respect to which a requirement for restriction under this section has been made, or on an application filed as a result of such a requirement, shall not be used as a reference either in the Patent Office or in the courts against a divisional application or against the original application or any patent issued on either of them, if the divisional application is filed before the issuance of the patent on the other application."

#### **6.04. Further Office Action.**

An amendment may involve one or more of the responses suggested by the immediately foregoing sections and occasionally there are other issues requiring special treatment. The amendment is signed by the applicant or his attorney and is filed in the Patent Office. The amendment then becomes part of the application file, which, after the issuance of the patent, is open for public inspection. In due course the Examiner considers the amendment and reviews the application. He may make a further search and may cite additional references upon which the amended or rewritten or additional claims may be rejected, or the



claims may be rejected on the art of record. He may offer other objections to the application and may even reject claims previously allowed. Whereupon the application may be again amended to meet the latest rejection. Under the present practice, it is customary for the Examiner to give a "final rejection", if the application is not in condition for allowance at the time of the third action of the Office (Rule 113).

### 1. *Final Rejection*

If a final rejection is given, it usually means that an issue has been reached between the applicant and the Examiner. Possibly four courses are then open: 1st. The applicant, provided he responds promptly, may ask for an "advisory action" which is based upon a further amendment, putting the application in condition for allowance. 2nd. The applicant may arrange an appointment to discuss the final rejection and to try to put the application in condition for allowance. 3rd. Applicant may petition the Commissioner regarding objections or requirements not involved in the rejection of any claim (Rule 181). 4th. The applicant may appeal to the Board of Appeals. The course followed depends largely on the facts in each case. As a matter of fact all four courses may be followed, usually in the order listed, and are recommended in important applications.

### 2. *Interference Search*

After all the final requirements have been met and the retained claims allowed, the Examiner makes "an interference search." The purpose of this search is to determine if there are any copending applications of other inventors who are claiming or may be entitled to claim the same invention. If interfering applications are found, an interference will be declared. (The subject of interferences is discussed in Chapter VII). If no interfering applications are found, the application will be passed to issue.

### 3. *Correction of Errors of Nonjoinder, or Misjoinder of Applicants*

In Chapter III, Section 3.01, it is stated that an application for patent must be made by the inventor or inventors if the resulting patent is to be valid. Under the prior patent law the Commissioner of Patents had no authority to add an applicant who inadvertently had not joined in the application even though the nonjoined person was in fact a joint inventor. Under the old practice, misjoinder could be corrected by amendment if the error of including one who was not a joint inventor was discovered while the application was pending. The new law (35 U.S.C. 116) provides that errors of nonjoinder, and misjoinder may be corrected under such terms as the Commissioner prescribes (Rule 45).

Furthermore, the present law provides relief for a situation in which a joint inventor refuses to join in an application for patent, or cannot be found or reached after a diligent effort. Under such circumstances an application may be filed by the other inventor on behalf of himself and the omitted inventor. The Commissioner may grant the patent on proof of the pertinent facts and notice to the omitted inventor. The omitted inventor may subsequently join in the application. Both the old and new patent acts provide that legal representatives of deceased inventors and inventors under legal incapacity may make applications for patents (35 U.S.C. 116, 117).

In the past, the owner of an invention occasionally found that the inventor refused to execute a patent application after agreeing to do so. When time was not a factor, the owner could seek relief in the Courts. However, if the statutory period was drawing to a close, legal proceedings were usually far too slow. Section 118 of the new law rectifies the situation by permitting one possessed of a sufficient proprietary interest to file the application on behalf of and as agent for the inventor who refuses to execute the application or who cannot be found or reached after a diligent effort. The pertinent facts must be proven and the necessity of the action to prevent loss of rights or to prevent irreparable damage must be shown (Rule 47).

#### 4. *Notice of Allowance; Payment of Final Fee*

A notice of allowance will be sent to the applicant, his attorney or his agent, calling for payment of the final fee within six months from the date of such notice of allowance, upon the receipt of which within the time fixed by law, the patent will be prepared for issue (Rule 311). The final fee of \$30.00 must be paid within six months from the date of notice of allowance and if not paid within that period, the application will be forfeited and the patent withheld (Rule 314). "The Commissioner of Patents may in his discretion receive the final fee if paid within one year after the six months' period for payment has passed and the patent shall issue. Each petition for the delayed payment of the final fee shall be accompanied by the final fee and the petition fee, and a verified statement in support of the petition." (Rule 317).

#### 6.05. *Appeal from Final Rejection.*

1. In Paragraph 1 of Section 6.04 it was indicated that when an issue has been reached, the Examiner may give a "final rejection" and that the applicant may appeal to the Board of Appeals. Such appeals are permitted in accordance with the following provisions of Rule 191:

"(a) Every applicant for a patent or for reissue of a patent,



any of the claims of which have been twice rejected, or who has been given a final rejection (Rule 113), may, upon the payment of the fee required by law, appeal from the decision of the primary examiner to the Board of Appeals within the time allowed for response.

“(b) The appeal must identify the rejected claim or claims appealed, and must be signed by the applicant or his duly authorized attorney or agent.

“(c) Except as otherwise provided by Rule 206, appeal when taken must be taken from the rejection of all claims under rejection which applicant proposes to contest. Questions relating to matters not affecting the merits of the invention may be required to be settled before an appeal can be considered \* \* \*.”

2. The appeal, together with the appeal fee, is filed with the Commissioner of Patents within six months from the final rejection. The appeal is submitted to the Primary Examiner. The applicant within the time specified (within sixty days from the date of the appeal, or within the time allowed for response to the appealable action if such is later) is required to file a brief. The brief must include authorities and arguments on which the applicant relies to maintain his appeal. The brief must also set forth a concise explanation of the invention and a copy of the claims involved. The brief should state that the applicant wishes an oral hearing if such is the case. Two extra copies of the brief are required if an oral hearing is requested. Failure to file a timely brief may dismiss the appeal (Rule 192). However, if the examiner's answer states a new ground of rejection, appellant may file a reply thereto within sixty days from the date of such answer; such reply may include any amendment or material appropriate to the new ground.”

3. The Primary Examiner may, and usually does, file a written statement in answer to the applicant's brief. The statement may include an explanation of the invention, of the references, and of the grounds of rejection. A copy of the statement is sent to the applicant, who may file within twenty days, a reply brief directed only to new points of argument raised in the Examiner's statement. If the Primary Examiner finds the appeal irregular as to form or not related to an appealable action, he so states in his decision. Whereupon the applicant may petition the Commissioner, as provided in Rule 181 (Rule 193).

4. According to Rule 196, the Board of Appeals may affirm or reverse the decision of the Primary Examiner in whole or in part on the grounds and on the claims specified by the Examiner. However, the Board may, if it discovers any apparent grounds not involved in the appeal, include in its decision reasons for rejecting the claims. If the

Board reverses the adverse decision of the Primary Examiner, the application is passed to allowance by the Primary Examiner. If the Board files a decision confirming the adverse opinion of the Primary Examiner but also indicating the conditions under which claims might be allowed or that allowed claims should be rejected, the prosecution of the application is reopened before the Primary Examiner in accordance with Rule 196(c). The procedure after the decision of the Board in appeals in which the Board files a statement going beyond affirming or reversing the decision of the Primary Examiner is somewhat involved and is beyond the scope of these notes (Rules 196(b) and (c)).

5. After an adverse decision of the Board of Appeals, an appeal may be taken to the United States Court of Customs and Patent Appeals in accordance with Title 35 U.S.C. Section 141, or the applicant may proceed under Sections 145 or 146 of the Revised Statutes. The appeal under Section 141 is based upon the Patent Office Record. In the case of proceedings under Sections 145 or 146, a new record is made by trying the case before the United States District Court. There are a number of advantages in the procedure before the District Court but the cost is considerably greater than an appeal on the Patent Office Record to the Court of Customs and Patent Appeals. Under conditions prescribed by statute, appeals may be taken to higher Courts.

#### **6.06. Reissues.**

Occasionally, through error without any deceptive intent, a defective patent is issued. Such patent may be deemed wholly or partly inoperative or invalid. For example, the specification or drawing may be defective, or the patentee may have claimed more or less than he had a right to claim in the patent. If the defect occurred without fraudulent or deceptive intent, the patentee may apply for a reissue. The Commissioner of Patents can reissue the patent, upon surrender of such patent and the payment of the fee required by law, for the invention disclosed in the original patent. Consequently the inventor is not deprived "of the compensation thus solemnly promised because he has committed an inadvertent or innocent mistake." (Quoting Chief Justice John Marshall in *Grant v. Raymond*, 31 U.S. 218, 242).

##### *1. Formalities of a Reissue Application*

The formal requirements for and the effect of a reissue are found in the statutes Sections 251 and 252 and in the Rules of Practice (Rules 171 to 179 inclusive). The requirements state that the reissue application may be made and sworn to by the assignee of the entire interest if the application does not seek to enlarge the scope of the claims of the original patent. If the original patent was assigned, a certified

copy of the abstract of title must be filed and the assignee must assent in writing to the reissue. The oath, in addition to the usual provisions, must include the following: (a) A statement that the applicant verily believes the original patent to be inoperative or invalid, and the reason why. (b) When it is claimed that such patent is inoperative or invalid "by reason of a defective specification or drawing," particular specification of such defects. (c) When it is claimed that such patent is inoperative or invalid "by reason of the patentee claiming more or less than he had a right to claim in the patent," a distinct specification of the excess or insufficiency in the claims. (d) Particular specification of the errors relied upon, and how they arose or occurred. (e) A statement that said errors arose "without any deceptive intention" on the part of the applicant. The application must be accompanied by an offer to surrender the original patent. If the original is lost or is inaccessible, an affidavit to that effect must be filed. While the application may be accepted in the absence of the original patent or the affidavit, one or the other must be supplied before the reissue will be allowed.

### 2. *The Reissue Application*

One of the cardinal rules of a reissue application is that no new matter may be introduced. However, the drawings may be made to conform to the specification or the specification to the drawings. The reissue application is examined the same as an original and therefore is subject to rejections, and to objections of the type raised in an original application. Even the original claims may be rejected. Requirements for division or restriction may be made in a reissue application. If the reissue application be refused, the original patent will be returned to applicant upon his request.

### 3. *The Reissue Patent*

When the Reissue Patent is finally granted, it is for the unexpired term of the original patent. That is, the life of the original patent is not extended by the reissue. A few words of caution about reissue patents may not be out of place:

#### (a) *Broadening Claims*

If the claims of an original patent are broadened in the reissue, the reissue application must be filed with great promptness because the Courts do not look with favor on reissue patents with broadened claims and with no favor at all on reissues filed solely to broaden the claims. (*Miller v. Brass Company*, 112 U. S. 350). Moreover, the new Act, § 251 states: "No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent."

(b) *Intervening Rights*

If, after an original patent issues, a manufacturer—knowing of the patent and relying upon the claims—expends money and time and starts manufacturing and selling or using a *non-infringing device*, he acquires an intervening right to continue such manufacture and sale or use even though the device infringes the reissue claims. *Mahn v. Harwood and others* (112 U. S. 354).

What has been “court made law” is now stated in the second paragraph of Section 252 as follows:

“No reissued patent shall abridge or affect the right of any person or his successors in business who made, purchased or used prior to the grant of a reissue anything patented by the reissued patent, to continue the use of, or to sell to others to be used or sold, the specific thing so made, purchased or used, unless the making, using or selling of such thing infringes a valid claim of the reissued patent which was in the original patent. The court before which such matter is in question may provide for the continued manufacture, use or sale of the thing made, purchased or used as specified, or for the manufacture, use or sale of which substantial preparation was made before the grant of the reissue, and it may also provide for the continued practice of any process patented by the reissue, practiced, or for the practice of which substantial preparation was made, prior to the grant of the reissue, to the extent and under such terms as the court deems equitable for the protection of investments made or business commenced before the grant of the reissue.”

(c) *Reissue for Different Invention is Invalid*

A reissue patent which is not for the same invention described and claimed and intended to be secured by the original patent is void. (*U. S. Industrial Chemicals v. Carbide and Carbon Chemical Corp.*, 315 U. S. 668). This rule of the Supreme Court is strictly followed. For example, Pitman Reissue Patent No. 22,301 was involved in *The Girdler Corporation v. E. I. DuPont de Nemours and Co.* (65 U. S. P. Q. 398, 401). The original Pitman Patent included claims concerning the use of high frequency currents for cementing or joining surfaces, such as leather belting or laminations of wood. The original patent (1) set the lower frequency limit as “above 100,000 cycles per second” (2) specified the cementing of safety glass, (3) and was unlimited as to the materials which might be cemented. The reissue patent limited the cementing to “organic materials”; deleted “safety glass”; and specified the frequency as “above at least 600,000 cycles per second.”

The Court said “\* \* \* It would appear (that) discovery of the frequency at 600,000 cycles per second is to have some special merit;

in the original patent no significance is attached to the figure "600,000" nor to any particular frequency. In short, the original patent treated frequency as no part of the invention. It is not that the boundaries of frequency are different, but the inventive act to which Pitman points as justification for the reissue is different. In the reissue patent he states that his was the discovery that organic substances could be joined provided you use current of a specified range, i.e., above at least 600,000 cycles per second. Pitman has drawn a line where no line existed before. Our conclusion is that the reissue covers an invention different from that originally claimed."

The changed claims of the Pitman Reissue were declared invalid by the District Court and the decision was sustained upon appeal. The foregoing is but one of many decisions which indicate the dangers in reissuing patents.

### 6.07. *Disclaimers.*

Prior to the passage of Public Law 593, the Courts considered improper for a patentee or the assignee of a patent to hold—as against the public—claims which are invalid. The knowledge of the invalidity of the claims is brought home after a final decision from which no appeal is taken or in the absence of re-litigation against a different defendant. If, by way of example, certain claims of a patent are declared invalid, the remaining claims were saved by the timely filing of a disclaimer by the patentee or assignee to the effect that the claims in question are no longer held by virtue of the patent or assignment.

1. *Section 253 of the new patent act describes Disclaimers as follows:*

#### § 253. Disclaimer

Whenever, without any deceptive intention, a claim of a patent is invalid the remaining claims shall not thereby be rendered invalid. A patentee, whether of the whole or any sectional interest therein, may, on payment of the fee required by law, make disclaimer of any complete claim, stating therein the extent of his interest in such patent. Such disclaimer shall be in writing, and recorded in the Patent Office; and it shall thereafter be considered as part of the original patent to the extent of the interest possessed by the disclaimant and by those claiming under him.

In like manner any patentee or applicant may disclaim or dedicate to the public the entire term, or any terminal part of the term, of the patent granted or to be granted.

The corresponding rule of the Patent Office (Rule 321) provides:

A disclaimer under 35 U.S.C. 253 must identify the patent and the claim or claims which are disclaimed, and be signed by the person making the disclaimer, who shall state therein the extent of his interest

in the patent. A disclaimer not a disclaimer of a complete claim or claims may be refused recordation. A notice of the disclaimer is published in the Official Gazette and attached to the printed copies of the specification. In like manner any patentee or applicant may disclaim or dedicate to the public the entire term, or any terminal part of the term, of the patent granted or to be granted. (See § 21 for fee.)

## 2. *Timely Filing of Disclaimer*

It is not necessary for a patentee or assignee to wait for a Court to pass upon the validity of the patent claims: If he has reason to believe that some of the claims cover more than he had a right to claim as new, the patentee, or his assignee, may file a disclaimer in accordance with Patent Office Rule 321. In any event after a Court decision holding some of the claims of a patent invalid, many patent attorneys considered it essential either to appeal, relitigate against a different defendant, or disclaim promptly, if the remaining claims are to be saved. Such considerations were undoubtedly based upon numerous Court decisions. The new law does not place any limit on the time within which a disclaimer should be filed; neither did the old statute (R.S. 4917) state precisely what was "unreasonable neglect or delay in filing a disclaimer." Until we have a decision from the U. S. Supreme Court, we might take the safest course by avoiding undue delay. However, it should be noted that the Senate report on the bill stated: ". . . the provision regarding delay is omitted." But note that failing to file a disclaimer, as set forth in 35 U.S.C. 288, prevents the patentee from recovering costs.

### § 288. Action for infringement of a patent containing an invalid claim

Whenever, without deceptive intention, a claim of a patent is invalid, an action may be maintained for the infringement of a claim of the patent which may be valid. The patentee shall recover no costs unless a disclaimer of the invalid claim has been entered at the Patent Office before the commencement of the suit.

The attitude of the Supreme Court in respect of disclaiming promptly is expressed by Mr. Justice McReynolds in the following words:

"When the District Court in Ohio declared claim 2 invalid, the owner of the patent might have appealed to the Circuit Court of Appeals within thirty days and thus secured an early determination of his rights. He did not choose this course but continued to hold himself out as possessor of the sole right to 'make, use and vend' under the rejected claim, for nearly two years. Then he abandoned it. He made no effort promptly to vindicate what he had asserted nor did he surrender it. Thus he failed to earn the offered exemption and now he may not complain." (*Ensten v. Simon, Ascher and Co.*, 282 U.S. 445, 455.)



### 3. *Improper Use of Disclaimer*

While both the disclaimer statute and the reissue statute are designed to correct inadvertent mistakes, there are fundamental differences in the two statutes. A reissue application is examined by the Patent Office; a disclaimer is merely filed in the Office. The claims of a reissue patent are effective on the date of the reissue; a disclaimer operates from the date of the original claims. These differences make it important that the disclaimer should not be used to change the claims, when the only proper remedy is a reissue.

An improper disclaimer is void as was found in the so-called Flywheel Case involving U. S. Patent 1,713,726 of Vogt et al for a "device for phonographs with linear phonogram carriers." Original claim 9 of the patent specified a broad method of "flexing the film arcuately longitudinally at the point of translation and rapidly and uniformly moving the film in a circumferential direction past said point." The disclaimer limited the claim by stating that: "\* \* \* the uniformity of movement of the film past the translation point is effected by subjecting the portion of the film passing said point to the control of the inertia of a rotating weighty mass." Apparatus claim 13 was amended in a corresponding manner. The Supreme Court pointed out that the disclaimer was improper in the following language:

"While the effect of the disclaimer, if valid, was in one sense to narrow the claims, so as to cover the combinations originally appearing in Claims 9 and 13 only when used in conjunction with a flywheel, it also operated to add the flywheel as a new element to each of the combinations described in the claims. The disclaimer is authorized by R.S. § 4917, which provides that when 'through inadvertence, accident, or mistake \* \* \* a patentee has claimed more than that of which he was the \* \* \* inventor \* \* \* his patent shall be valid for all that part which is truly and justly his own,' provided that he or his assigns 'make disclaimer of such parts of the thing patented as he shall not choose to claim \* \* \* stating therein the extent of his interest in such patent.' While this statute affords a wide scope for relinquishment by the patentee of part of the patent mistakenly claimed, where the effect is to restrict or curtail the monopoly of the patent, it does not permit the addition of a new element to the combination previously claimed, whereby the patent originally for one combination is transformed into a new and different one for the new combination."

"If a change such as the present could validly be made, it could only be under the provisions of the re-issue statute, R.S. § 4916, which authorizes the alteration of the original invention in a re-issued patent, upon surrender of the old patent, for its unexpired term. Upon the re-issue 'the specifications and claim in every such case shall be subject to revision and restriction in the same manner

as original applications are.' A patent amended by disclaimer thus speaks from the date of the original patent, while the reissued patent, with respect to the amended claim, speaks from the date of re-issue. If respondent could thus, by disclaimer, add the fly-wheel to the arcuate flexing claim and to the optical claim, he would in effect secure a new patent operating retroactively in a manner not permitted by the re-issue statute and without subjecting the new claims to revision or restriction by the customary patent office procedure required in the case of an original or re-issued patent. Such transformation of a patent is plainly not within the scope of the disclaimer statute, and the attempted disclaimer as applied to Claims 9 and 13 is void. \* \* \* (Altoona Theatres v. Tri-Ergon Corp., 294 U.S. 464, 489-491.)

The old practice of trying to rewrite claims by disclaimer appears to have been considered improper because the new law, in the words of the Senate report, introduced substantive changes: ". . . *only a claim as a whole may be disclaimed. . .*" The second sentence of § 253 states: "A patentee . . . may, upon payment of the fee required by law, make disclaimer of any complete claim. . . ." The Rules of Practice (Rule 321) include a similar provision.

#### **6.08. *Misjoinder or Nonjoinder of Patentees.***

While patents that should have been issued to joint inventors but are issued to a sole inventor and vice versa are probably invalid as stated in Chapter III, the patent law (35 U.S.C. 256) definitely states that the patents thus issued are not to be invalidated, *if such error can be corrected*. The Court in which the question arises, after notice and a hearing of all parties concerned, may order correction of the patent. However, it is not necessary to go before a Court, as an application may be made to the Commissioner of Patents to issue a certificate to delete the name of the erroneously joined person, or to add the name of an omitted joint inventor. In either case it must be established to the satisfaction of the Commissioner that the misjoinder or nonjoinder was the result of an error and not deceptive intent. (Rule 324)

#### **6.09. *Summary.***

From the foregoing it should be clear that the prosecution of a patent application is a highly technical matter. The description of the invention should be clear and concise and as such, should teach one skilled in the art how to practice the invention. It is extremely important that the claims define properly the boundaries of the invention. For the best protection it is desirable that claims of varying breadth be included.

Applicants can often help their attorneys by considering how the claims might be avoided by technical modifications of the invention



and by discussing such possibilities with their attorneys. While applicants or assignees of the entire interest in an invention may prosecute their own cases, they are advised, unless they are familiar with such matters, to employ a competent registered attorney or registered agent (Rules 31 and 32). The wisdom of this advice will become more apparent in the next chapter dealing with the extremely technical interference proceedings.

## CHAPTER VII

### INTERFERENCES

#### 7.01. *Definition of Interference.*

The Commissioner of Patents cannot issue two valid patents for the same invention. Therefore, it often becomes necessary to determine to whom the patent will issue when two or more parties are claiming substantially the same invention. The awarding of the claims to the proper party is based upon a procedure known as an interference. Rule 201 of the Rules of Practice defines an interference as follows:

“An interference is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention \* \* \*”

An interference is one of the most technical of all legal procedures and correspondingly difficult for the layman to understand. Nevertheless, a general understanding of interferences is of the greatest importance to engineers who are making patentable inventions. The importance is emphasized by devoting all of the present chapter to the subject.

Interferences may be declared between two or more copending applications in which substantially the same invention is being claimed, provided the Patent Office has determined that the subject matter is patentable. It is important that the question of patentability be determined first, thus avoiding needless litigation. It would be fruitless to go to all the trouble of determining who of the parties first made the invention, if in fact the invention were unpatentable (Rule 203(a)).

Therefore, assuming that patentable subject matter is involved, an interference may be declared under one of the following conditions:

1. Between two or more applicants.
2. When one or more applicants copy claims from an issued patent and call the Examiner's attention to the patent and to the common subject matter, provided the applicant or applicants can comply with the several formal matters, which will be considered below.
3. In appropriate circumstances and in accordance with Rules 171 etc., a patentee may apply for a reissue patent and, in the reissue application, copy claims from an issued patent for interference purposes.

These are the general conditions under which interferences may be declared. We shall now consider in greater detail the several procedures.

### **7.02. Examiner's Interference Search.**

When an application is ready to be passed to issue, the Examiner is required to make a search to determine if there are any copending applications in which the claims of the application ready for issue might be made. If he discovers a later filed application, i.e., a junior application, he may require the junior applicant to state in writing, under oath, the date and the character of the earliest fact or act, susceptible of proof, which can be relied upon to establish the date of conception of the invention under consideration (Rule 202). If the conception date sworn to by the junior applicant is prior to the senior applicant's filing date, an interference will be declared. If the junior party fails to reply within the required period (not less than thirty days), the Commissioner will proceed upon the assumption that the date of the conception of the invention of the junior applicant is the date of the oath attached to the application. If the earliest date alleged by the junior party does not antedate the filing date of the senior party, ordinarily no interference will be declared.

### **7.03. Claims Proposed for Interference.**

It is unlikely that two applicants would claim the same invention in exactly the same phraseology. This difficulty is met by the Examiner suggesting claims for interference purposes. He may prepare entirely new claims or he may employ the claims from either or both applications.

Such claims are set forth in a letter. Copies of the letter are sent to the applicant, his assignee and his attorney. The letter specifies the time within which the claims must be made in order that an interference may be declared. Upon failure or refusal to make the suggested claims within the specified time, or within an authorized extension of time, it is assumed, without further action, that the applicant has disclaimed the invention covered by the claims (Rule 203(a) and (b)).

### **7.04. Primary Examiner's Reference to Examiners of Interference.**

Assuming that the Primary Examiner has found an interference to exist and that the applicants have prepared their applications by making the same claims, it then becomes the duty of the Primary Examiner to comply with the established Patent Office procedure by sending the following items to the Examiners of Interference: The files; notices of interference for all the parties, disclosing the name

and residence of each party and those of his attorney and of any assignee and, if any party be a patentee, the date and number of the patent; and the issue of the interference clearly and concisely defined in counts which are the conflicting claims. If more than one count is involved, the Primary Examiner specifies the respective claims of the applicants. The Primary Examiner also forwards a statement disclosing and identifying the interfering applications, arranged in the inverse chronological order of the filing of the applications, the issues, the ordinals of the conflicting claims, the name and residence of any assignee, and the names and residences of the attorneys of record (Rule 207(a) and (b)).

It is then the duty of an Examiner of Interferences to examine the files and the Primary Examiner's statement to ascertain if the issues have been clearly defined and to determine if any error is involved. During this period of preparing the interference declaration, the Primary Examiner has jurisdiction, but upon the institution and declaration of the interference, the Examiners of Interferences will take jurisdiction (Rule 211).

#### **7.05. Declaration of Interference.**

After the disposal of all preliminary questions and upon the institution and declaration of the interference, an Examiner of Interferences adds to the prepared notices a designation of the time within which "preliminary statements" must be filed and he forwards notices to the several parties (Rule 209(a) and (b)). The notices are sent to the parties in care of their attorneys, and to their assignees, if the applications have been assigned. If the notices cannot be delivered, the Commissioner of Patents may direct that a notice be published in the Official Gazette of the Patent Office (Rule 209(c)). Thus, the interference is initiated. A copy of a formal declaration is inserted for the benefit of those who are not familiar with the form.

#### **7.06. Avoidance or Postponement of Interference.**

While an interference may be avoided under certain conditions by filing a written disclaimer or concession of priority, or abandonment of the invention (Rule 262), it is here assumed that the interference is to be contested according to the Rules of Practice. The first requirement for the applicant is to prepare and file a "preliminary statement." While the preliminary statement should be filed within the time limit set by an Examiner of Interferences, the time may be extended by presenting a motion, duly served on the other parties, giving the reasons for the requested postponement. Such motions should be pre-

Dr. **5628** 255 Paper No. **9**

**U.S. DEPARTMENT OF COMMERCE**  
**UNITED STATES PATENT OFFICE**  
 WASHINGTON

*Address only*  
 The Commissioner of Patents  
 Washington, D. C.  
 and may not be used by name  
 (Copy sent Assignee)

*All communications concerning this application should give the serial number, date of filing, and name of the applicant.*

Please find below a communication from the EXAMINER in charge of this application.

*Delivered*

*Commissioner of Patents*

**RECEIVED PATENT DEPT.**  
**FEB 14 1940**  
 Answered By

**MAILED**  
**FEB 13 1940**

Applicant: **Wilhelm Runge**  
 Ser. No. .... **208,562**  
 Filed..... **May 18, 1938**  
 For..... **Double Trans Direction Finder with Visual Indicator**

**J. Huff,**  
 Patent Department,  
 RCA Mfg. Co., Inc.,  
 Camden, N. J.

The case, above referred to, is regarded to the Examiner of Interferences because it is adjudged to interfere with others, hereafter specified. The question of priority will be determined in conformity with the Rules. The interference will be identified

as No. **7,976** On or before **April 9, 1940**

the statement demanded by rule 110 must be sealed up and filed with the subject of invention, and name of party filing it, endorsed on the envelope. The subject-matter involved in the interference is

Count 1. In a direction finder the combination which includes a pair of directional antennas and an auxiliary directional antenna, said antennas being rotatably mounted and having similar directional characteristics, an indicator having separate control means for causing a resultant deflection, means for applying the output potential from said auxiliary antenna to one of said control means, and means for applying the difference of the output potentials from said pair of antennas to the other of said control means.

Count 2. In a direction finder the combination which includes a pair of directional antennas and an auxiliary directional antenna, said antennas being rotatably mounted and having similar directional characteristics, a cathode ray indicator having vertical and horizontal deflecting means, means for applying the output potential from said auxiliary antenna to one of said deflecting means, and means for applying the difference of the output potentials from said pair of antennas to the other of said deflecting means.

Count 3. In a direction finder the combination which includes a pair of frame antennas and an auxiliary frame antenna mounted in parallel planes and adapted to rotate about a common axis, an indicator having separate control means for causing a resultant deflection, means for applying the output potential of said auxiliary frame antenna to one of said control means, and means for applying the difference of the output potentials from said pair of frame antennas to the other of said control means.

(Continued on next page)

202,752

Count 4. In a direction finder the combination which includes a pair of directional antennas and an auxiliary directional antenna, said antennas being rotatably mounted and having similar directional characteristics, a pair of receivers, means for applying the output potentials of said pair of antennas in phase opposition to one of said receivers, means for applying the output potential of said auxiliary antenna to the other of said receivers, an indicator, means for controlling the output of said receivers to said indicator, and means for adjusting the relative phase of the output potentials of said receivers.

This interference involves four applications above identified and an application for radio direction finder filed by Paul N. Taylor, whose post office address is Signal Corps Aircraft Radio Laboratory, Dayton, Ohio, and whose attorneys are John F. Moran and Charles A. Rowe, C/O Chief of the Air Corps, Munitions Building, Washington, D. C.

The relation of the counts of this interference to the claims of the respective parties is as follows:-

Counts	By	Claim
1	1	17
2	2	18
3	5	19
4	7	20

Examiner



sented before the preliminary statement is due. It is customary for the parties to stipulate a postponement subject to the approval of the Examiner, who also has the discretion to extend the time on ex parte request or on his own motion (Rule 218).

### 7.07. *Preliminary Statement.*

It is extremely important that the preliminary statement be prepared most carefully, as the parties are strictly held in their proofs to the dates alleged in their respective statements. For example, if a party should succeed in proving an earlier date than that alleged in the preliminary statement, such proof is held to establish only the date alleged. Moreover, it is very difficult to amend a preliminary statement. Rule 216 defines the preliminary statement requirements as follows:

"216. The preliminary statement must state that the applicant made the invention set forth by each count of the interference, and whether the invention was made in the United States or abroad.

"(a) When the invention was made in the United States the preliminary statement must set forth as to the invention defined by each count the following facts relating to conception of the invention, and reduction of the invention to practice;

"(1) The date upon which the first drawing of the invention was made; if a drawing of the invention has not been made prior to the filing date of the application, it must be so stated.

"(2) The date upon which the first written description of the invention was made; if a written description of the invention has not been made prior to the filing date of the application, it must be so stated.

"(3) The date upon which the invention was first disclosed to another person; if the invention was not disclosed to another person prior to the filing date of the application, it must be so stated.

"(4) The date of the first act or acts susceptible of proof (other than acts of the character specified in subparagraphs (1), (2), and (3)) of this paragraph which, if proven, would establish conception of the invention, and a brief description of such act or acts; if there have been no such acts, it must be so stated.

"(5) The date of the actual reduction to practice of the invention; if the invention has not been actually reduced to practice before the filing date of the application, it must be so stated.

"(6) The date after conception of the invention when active exercise of reasonable diligence toward reducing the invention to practice began.

"(b) The preliminary statement in every case must also set forth:

"(1) The serial number and filing date of any prior copending application in the United States by the same applicant, not specified by the examiner in the notice of interference, disclosing the inven-

tion set forth by the counts of the interference the benefit of the filing date of which application may be claimed as the effective filing date of the application or patent involved.

"(2) The filing date and country (and number, if known) of any application for the same invention in a foreign country, the filing date of which may be claimed under 35 U.S.C. 119, second paragraph.

"If a party intends to rely solely on a prior application, domestic or foreign, and on no other evidence, the preliminary statement may so state and may then consist only of the identification of the prior application and need not be signed or sworn to by the inventor."

The foregoing requirements again indicate the importance of keeping records of inventions and laboratory notes. Without adequate records or notes, it is difficult to prepare a satisfactory preliminary statement, but if the records are available, the preparation of the statement presents no difficulties. For example, (1) the first and second requirements, i.e., the date of the first drawing and (2) the date of the first written description, may be taken directly from the earliest record. (3) If the records indicate the date when disclosed to others, that date is included in the third required fact. (4) The fourth requirement gives the party an opportunity to allege and describe other acts or facts which might help to establish conception of the invention. (5) The fifth fact is the very important date of the reduction to practice, which should never be omitted from the inventor's notes. (6) The sixth fact is usually found within the records which trace the inventor's steps between conception of the invention and its reduction to practice.

### **7.08. Motion Period.**

After an interference has been declared and the parties have filed preliminary statements, which are approved by an Examiner of Interferences, the statements are not immediately open to inspection by the opposing parties. Moreover, if a junior party either fails to file a preliminary statement, or does not allege in his statement any date earlier than the filing date of his opponent's application, he is denied access to his opponent's statement. Finally, if the interference should be terminated by dissolution before the preliminary statements are open to inspection by the parties, the several preliminary statements remain sealed (Rule 227).

During the motion period two types of motions may be filed: One type of motion is to dissolve under Rule 232; the other is to amend under Rule 233. These motions are preliminary matters, which are concluded before the interference is ready for taking testimony. In the event that no motions are filed, the motion period is allowed to



pass before the preliminary statements are open to inspection and the time for taking testimony is set.

1. *Motions to Amend Under Rules 231, 233, and 234.*

After the preliminary statements have been approved and within a time fixed by the Examiner of Interferences but not less than thirty days, an applicant may file a motion to amend the interference. The motion may be on one or more of the following points: (1) to add any claims which in an applicant's opinion should be made the basis of an interference between him and any of the other parties, (2) to include any of the claims already in a party's application or patent which should be the basis of an interference between him and the other parties, (3) to add or substitute any other application or patent owned by the moving party and pertinent to the existing issue. In considering the propriety of filing a motion to amend, an engineer can be of great assistance to his attorney because the engineer may have a broader view of the scientific or engineering features of the interfering invention. In a similar manner, the engineer may recall earlier filed applications or issued patents in which the conflicting invention is disclosed.

Such motions must comply with the prescribed formal requirements and must be served upon the other parties (Rules 247 and 248). The motions must be accompanied by the proposed amendment. If the motions are in proper form, they are set for a hearing before the Primary Examiner (Rule 236). A party may oppose the motion but if he relies upon prior patents or publications, due notice must be given at least twenty days before the hearing. Briefs in support of or in opposition to the motions may be filed (Rule 236). After the hearing the Primary Examiner renders a written opinion in which he may admit the amendment in whole or in part or he may deny the motion. If he grants the motion, the interference is redeclared and new preliminary statements are required as to the added claims.

2. *Motion to Dissolve under Rule 232.*

In the preceding section (1) motions to amend were discussed. In this section motions to dissolve an interference will be considered. The following grounds for dissolution of motions are listed under Rule 232: (1) alleging that there has been such informality in declaring the same as will preclude the proper determination of the question of priority of invention, (2) denying the patentability of an applicant's claim, (3) denying the right to make the claim, and (4) if the interference involves a design patent or application, alleging that there is no interference in fact, or if the interference involves a patent, the

claims of which have been copied in modified form. Motions to dissolve on the ground that the counts are unpatentable may not be brought by the parties when one of the parties to the interference is a patentee (Rule 232(b)).

The second and third grounds are the most common basis for a motion to dissolve an interference and are apt to involve scientific or engineering considerations. By way of example, if an interference involving a broad claim has been declared and one of the parties knows of a prior art reference which anticipates the claim, he should file a motion to dissolve. In that event, the reference patent or publication is cited and the moving party shows how the reference anticipates the invention of the claim. An interference should be dissolved under such circumstances because none of the parties is entitled to a patent for an invention lacking in novelty.

While the Patent Office does not hesitate to dissolve an interference in which the counts are anticipated by references cited in a motion to dissolve, there has been a strong tendency to ignore questions of patentability of the invention and to consider only priority once the motion period has passed. The Board of Appeals and the majority of the Courts have gone along with this tendency. However, the Court of Appeals for the District of Columbia has recently indicated that it will not hesitate to consider patentability before priority. One such decision came out of litigation involving three interfering applications of Radtke, Whitson, and Vogt et al. Each of the applications disclosed and claimed broadly a sound reproducing system for converting a sound track on film by means including a photoelectric cell and an appropriate circuit. After considering the prior art, the Court held that the invention involved no more than the substitution of a photoelectric cell for the prior art selenium cell and that there was no inventive problem in the associated circuits. While the appeals were primarily taken to the Court to obtain a decision on priority, the Court held: "But as none of those disclosures constitute invention, the question of priority is immaterial." (Radtke Patents Corp. et al. v. Coe et al., 1942 C. D. 12, 36).

After studying an opponent's application, copies of which may be obtained after the preliminary statements have been filed and approved, one may be of the opinion that his opponent's application does not really disclose the invention in issue. If an invention is not disclosed in an application in interference, such applicant has no right to make the interference claims. The proper procedure is to file a motion for dissolution on the ground that the party whose application is lacking in disclosure has no right to make the claim. A common-sense view

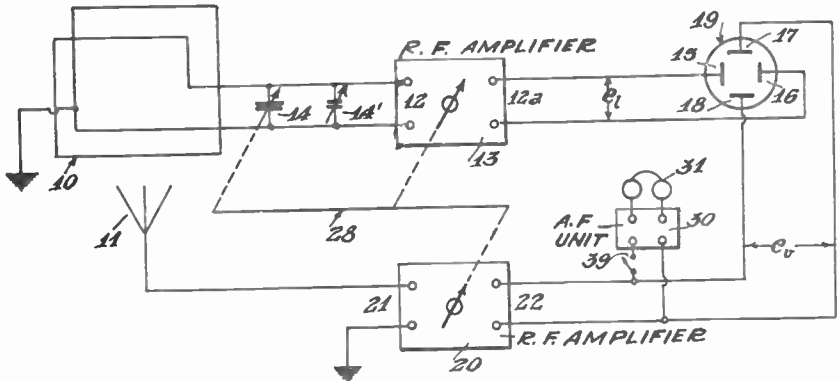
of this situation is that claims not supported by the specification are invalid. Such claims should not be allowed to an applicant even if he should be a senior inventor because his seniority relates to some invention other than the one in issue.

### 3. *Example of Motion to Amend.*

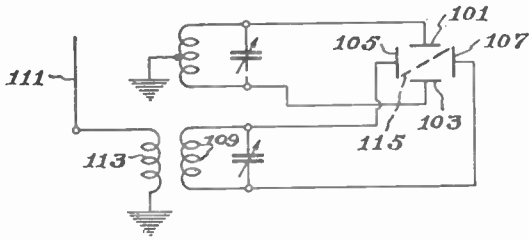
Interference No. 75,424, Hefele v. Brown involved Hefele's application, entitled "Right-Left Indicating Direction Finder Systems," and Brown's application, entitled "Apparatus and Method for Adjusting Transmitting Antennas." The interference was declared on a single broad count which covered the device used by Hefele for direction finding and the apparatus by Brown for adjusting a transmitting antenna. The claim or count described apparatus including a resonant balanced loop antenna, a vertical antenna, a resonant circuit coupled to the vertical antenna, and a cathode ray tube. The loop was connected to one set of the cathode ray tube deflecting electrodes and the resonant circuit was connected to the other set of the deflecting electrodes. (See page 124.)

In using Hefele's device a vertical cathode ray trace was obtained when the loop was in the null position and the trace was tilted to the right or left as the loop was directed to the right or left of the null. In using Brown's apparatus the transmitting antenna was adjusted by varying an inductor interposed between the upper and lower sections of the antenna to obtain the desired disposition of current in the antenna. The correct current disposition was indicated when the cathode ray trace was a straight line, showing that the electric field was in time quadrature with the magnetic field at a predetermined distance (within less than a wavelength) from the base of the antenna. While the Brown apparatus was used as a phase meter, it was also inherently a direction finder and when used even for Brown's purpose gave the same indications of direction as the Hefele device. Incidentally, Brown's apparatus did not require amplifiers as it was used at very short distances; Hefele's device included amplifiers which greatly increased its range.

Hefele's application included a number of specific claims covering a radio direction finder employing the cathode ray tube indicator, and other necessary elements. Since at least some of these specific claims could be read upon Brown's disclosure, a motion to add these claims was made on his behalf on the theory that direction finding was inherent in the Brown apparatus. This motion to add claims was opposed on behalf of Hefele on the principal ground that the Brown application did not disclose the invention of Hefele's specific claims. It was also pointed out that Brown's apparatus was generally used within sight



HEFELE U.S. PATENT 2,329,199



BROWN U.S. PATENT 2,281,668

of the antenna and that the directional characteristic of the apparatus was not used to locate the antenna. Finally the inventions were not the same and therefore Brown should not be permitted to make the specific claims.

On the other hand, it was urged on Brown's behalf that since the directional character of the apparatus was inherent, he should be allowed to make the claims for interference purposes. The few portions of the Brown specification which supported his position were emphasized. Nevertheless, the Primary Examiner denied Brown's motion to add the specific claims on the ground that Brown's application did not disclose the radio direction finder of Hefe's specific claims. An appeal was taken from the Examiner's decision but the Board of Appeals affirmed the Examiner as to Brown's right to make Hefe's specific claims.

#### 4. *Example of Motion to Dissolve.*

An example of a motion to dissolve is found in the same Hefe v. Brown Interference No. 75,424. From the discussion in the preceding section (7.08, 3) it follows that Brown was not allowed to claim the direction finder but how about the original broad interference count? That count did not specify the field of use or the functional operation of the apparatus. It merely described the apparatus in the broadest possible terms regardless of whether it was used to indicate phase or direction. Nevertheless, Hefe filed a motion to dissolve mainly on the ground that Brown did not have the right to make the claim. It was urged on Hefe's behalf that Brown disclosed one invention and that Hefe disclosed a different invention and that no interference in fact existed.

Brown opposed Hefe's motion to dissolve. Brown's attorneys pointed out that the claim was written broadly enough to read on either Brown's or Hefe's apparatus; that the claimed apparatus was the same; and that since both Hefe's and Brown's apparatus was described by the same broad claim, an interference existed. The Primary Examiner denied Hefe's motion to dissolve on the ground that the claim read on the two devices and, since the claim contained no limitations as to the field of use, both Brown and Hefe could make the claim. There was no appeal from this portion of the Examiner's decision. The interference was continued on the single broad count. Testimony was taken, arguments were heard, and briefs were filed. The Examiner of Interference awarded priority to Brown. The decision was affirmed on appeal to the Board of Appeals. The contested count appears as Claim 1 in Brown's U. S. Patent 2,281,668. (Note:

There were other issues involved in *Hefele v. Brown* but they are not of concern here).

### 7.09. *Testimony in Interferences.*

After the preliminary statements have been filed and have been approved, and after all motions to amend under Rule 233 and all motions to dissolve under Rule 232, the preliminary statements are opened for inspection by the opposing parties and the interference is ready for the taking of testimony (Rule 227). There are three exceptions to opening preliminary statements: (1) if a junior party fails to file a preliminary statement, (2) if a party alleges no date in his preliminary statement earlier than the application of another party, or (3) if the interference is terminated by dissolution. In each of these exceptions the preliminary statements remain sealed.

#### 1. *Notice of Time for Taking Testimony.*

When the interference has progressed to the point for the taking of testimony, an Examiner of Interference notifies the parties by a letter assigning times (1) within which the junior applicant shall complete his testimony in chief, (2) within which the senior party shall complete his testimony, and (3) a further time within which the junior party may take rebuttal testimony. If there are more than two parties, times for taking testimony are arranged so that each has an opportunity to prove his case against prior applicants and to rebut evidence of the prior applicants and to meet the evidence of junior applicants.

#### 2. *Notice of Taking Testimony Sent to Opposing Parties.*

Since the junior party must either complete his testimony within the allotted time or obtain a postponement, he must estimate the time required to take the depositions, set the time and place, and serve due notice on his opponents. The notice must state the time and place and the cause or matter in which the depositions are to be used, and must give the names and residences of the witnesses to be examined. Reasonable time must be given for the opposing party to reach the place of the examination. The notice must be served on the adverse party or his attorney by registered mail or by one of the approved methods. The notice must show sworn proof of the fact, time, and mode of service. The notice of the taking of testimony is later attached to the deposition and becomes a part of the record (Rule 273).

#### 3. *Taking of Testimony.*

The testimony is taken before an officer, who is authorized to administer oaths. The officer, for example, a notary public, must not

be connected by blood or marriage with either of the parties, nor interested directly or indirectly, in the interference, unless the parties consent in writing to his officiating. Each witness before testifying is duly sworn according to law by the officer before whom his deposition is to be taken. The witness is questioned first by the attorney for the party on whose behalf the deposition is being taken. Then the witness may be cross examined by the opposing attorney; redirect and further cross examination are permitted. The questions and answers are committed to writing in their regular order by the officer, or by some person not interested in the case either as a party or as an attorney. The testimony is taken stenographically and transcribed unless the parties agree otherwise. The consent is noted in writing. The rules also provide that the presence of the officer during the testimony may be waived by written agreement, e.g., a stipulation in the record. After the testimony is reduced to writing, it is either read to the witness or read by him and is subscribed by the witness in the presence of the officer, unless the reading and the signature be waived on the record by agreement of the parties (Rules 274 and 275).

#### 4. *Objections to Testimony.*

The attorney for either party may object or may take exceptions to questions or to a line of examination which he believes improper, immaterial, incompetent, or irrelevant. The objection or exception is noted on the record, and since the officer before whom the testimony is taken is not competent to rule on the objections, they will be ruled upon in due course by an Examiner of Interferences. In the meantime, the witness is usually directed by his attorney to answer the questions, subject to the stated objections. If a witness is presented for examination but was not named in the notice and if no objection was made by the opposing party, or if the opposing party cross examines such witness, the lack of proper notice is deemed to have been waived.

#### 5. *Testifying.*

A few words about testifying will not be out of place: The questions which an attorney asks a witness are to bring out the facts of the case. The attorney for one of the parties has a duty to bring out all the facts favorable to his client; the attorney for the opposing party will ask the same witness questions which are usually designed to bring forth facts helpful to his client. It is facts that are wanted from a fact witness and not opinions or conclusions.

Witnesses will usually help themselves by answering the questions, as far as the questions permit, without "quibbling." The questions



that are asked should be answered; do not answer some other question! The answer should be responsive but when the question is not understood there must be no hesitation in stating the uncertainty about what is asked. Sometimes it helps to have the question repeated.

While leading questions are objectionable on direct examination, the "sky is the limit" on cross examination. Watch out for "loaded" questions! Pay very careful attention to the question on cross examination, otherwise a clever questioner may have one testifying that "black" is "white." Remember, a question of the type of the classical "Have you stopped beating your wife?" can not be answered with a careless "yes" or "no" if the person in fact "never did beat his wife." One must be a truthful witness but one does not have to become so careless that testimony is given to a half truth or no truth at all.

#### 6. *Formal Matters Pertaining to the Record.*

After the testimony has been completed and after the exhibits have been offered in evidence, the transcript is completed. The officer, before whom the testimony is taken, without delay seals up the evidence, notices, and paper exhibits in an envelope, size permitting. He inscribes on the envelope a certificate giving the title of the case, the name of each witness, the date of sealing and he forwards the envelope to the Commissioner of Patents. However, the parties may reach an agreement on the record concerning the forwarding of the transcript and the custody of the exhibits. These and a number of other formal matters pertaining to the taking of testimony are set forth in the Rules of Practice. For example: Depositions may be taken in foreign countries (Rule 284). Witnesses may be required to attend by the issuance of a subpoena (35 U.S.C. 24). The required number of printed or typewritten copies of the testimony must be furnished in accordance with Rule 253.

#### 7. *Final Hearing.*

After the records of the testimony of all the parties have been filed in the Patent Office, briefs are prepared by the attorneys for the respective parties. The briefs are the written arguments of the parties. The statements of the case in the briefs are usually supported by reference to the record page and to the questions and answers by number. For example (Hefele Record page 101, Q. 33). The brief usually emphasizes the strength of one party's case and the weakness of the opponent's case. The briefs, which are printed if in excess of fifty pages, are filed on the dates set by an Examiner of Interferences. Usually the junior parties file their briefs not less than forty days before the hearing, and the senior party not less than twenty days prior



to the hearing. Reply briefs are filed not less than ten days before the hearing. The briefs must be served on the opposing party in accordance with Rules 247, 248 and 254.

In addition to the times for filing the briefs, a date for a final hearing is set by an Examiner of Interferences. The parties may appear before the Board of Patent Interferences and argue their cases. After the final hearing the Board of Patent Interferences studies the record and the briefs and renders a written decision awarding priority of invention to one of the parties with respect to the several counts. Different counts may be awarded to different parties.

### 7.10. *Priority of Invention.*

At the beginning of this chapter an interference was defined as "a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention." The normal course of an interference has been traced through the preliminary considerations, the declaration, the motion period, the taking of testimony and the final hearing before the Board of Patent Interferences.

Before leaving the subject, which incidentally has been treated more in outline than in detail, some of the predictable decisions under a given set of facts will be considered. Bear in mind that while here the facts are agreed upon, in actual interferences the facts are usually disputable or at least the conclusions that the opposing parties would draw from the established facts are generally in dispute. Also remember that in the Courts and in the Patent Office in addition to the conception of an invention there must be a successful actual or constructive reduction to practice. (See Chapter IV, Section 4.04.)

#### 1. *First to Conceive, First to File, and First to Reduce to Practice.*

In this case we shall assume that the facts establish: (1) that party A was the first to conceive the invention, (2) that A was the first to file an application in the Patent Office, and (3) that the invention was successfully reduced to actual practice. Moreover we shall assume (1) that party B had an application which was filed later than A's application but was copending, and (2) that B's reduction to actual practice, while successful, came later than A's reduction to practice. There is no doubt that, *under the assumed conditions*, priority of invention should be awarded to party A, who was the first to conceive, the first to file, and the first to reduce to actual practice. (Appleby v. Beckman, 1943 C. D. 144, 161).

2. *First to Conceive, First to Reduce to Actual Practice, and Last to File.*

In this assumed case the party A who was first to conceive and first successfully to reduce to actual practice was the last to file. *In the absence of any facts indicating that A suppressed, concealed or abandoned the invention*, he will prevail over an opponent B who was the second to conceive and the second successfully to reduce to actual practice but the first to file a patent application. Briefly A's later inactivity and delay in filing is not material in the absence of proof of actual abandonment, suppression or concealment of the invention. (Hainsworth v. Philipp, 1942 C. D. 532, 535).

3. *First to Conceive and Last to Reduce to Practice.*

In the instant case the order in which the parties filed their applications is omitted as the filing order determines the "burden of proof." That is, the junior party or last to file has the burden of proving his case (1) by a "preponderance of the evidence," if the applications were copending (Boileau v. Godfrey, 1943 C. D. 749, 750) or (2) by establishing priority of invention beyond a reasonable doubt, if the junior party filed after the senior party's patent issued. (Jones v. Winsor, 1943 C. D. 235, 236).

Therefore, apart from the burden of proof, a new problem is presented in which A is assumed to have been the first to conceive and the last to reduce successfully to actual practice. His opponent B conceived the invention after A conceived and successfully reduced the invention to actual practice before A. Decisions in interferences involving the conditions here assumed turn on the diligence of A in the "critical period" commencing just prior to B's entry into the field. If A was lacking in diligence throughout the "critical period", priority of invention should be awarded to B. (Sperry v. Aufero et al, 1943 C. D. 319, 327). However, if A was not lacking in diligence during the critical period, just prior to B's entry into the field, priority should be awarded to A (Petty v. Giles, 1942 C. D. 249, 254).

4. *Exercising Diligence.*

And what is the required diligence? "There is no general rule as to what constitutes diligence applicable to all cases, but what is due diligence must be determined from the particular facts of each case." (Knutson v. Ellson, 1941 C. D. 734, 742). In the cited case Ellson was required to show diligence in reducing the invention to practice from immediately prior to Knutson's filing date of March 31st, 1938, to his own filing date of May 5, 1938. During this critical period Ellson was making efforts toward a commercial exploitation of the invention,

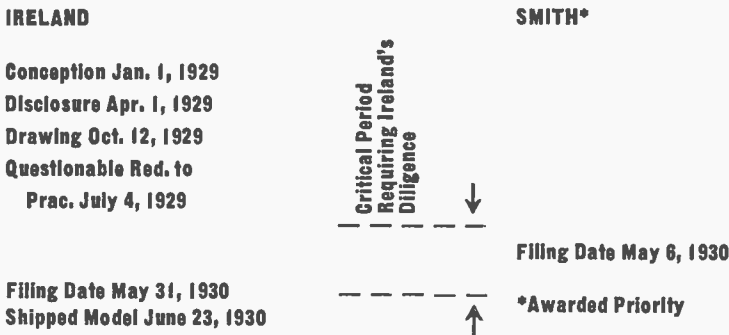
which required funds he did not have but was trying to raise. However, efforts in that direction do not constitute diligence. (*Fageol v. Midboe*, 1932 C. D. 399). The evidence did not show clearly that Ellson sought to retain a patent attorney to prepare the application although he had seen one on one or more occasions during the critical period. The United States Court of Customs and Patent Appeals decided that Ellson had failed to sustain the burden of proving diligence and awarded priority to Knutson. In the case under discussion a constructive reduction to practice was involved; i.e. Ellson by filing a patent application disclosing the invention in operable form, established a constructive reduction to practice. Diligence is also required in interferences involving actual reduction to practice. (*Triplett v. Steinmayer*, 1942 C. D. 687, 693).

5. *Decisions Involving Diligence.*

Consideration of a few decisions involving diligence may be helpful in demonstrating how strictly the tribunals regard the evidence offered by parties attempting to prove their activities during the critical period:

(a) Ireland's Patent 1,866,808 was issued on July 12, 1932 upon an application on May 31st, 1930. In the interference Ireland tried to prove conception of the invention about January 1, 1929, disclosure to others about April 1, 1929, and actual reduction to practice on July 4, 1929. While there were a number of issues, the real issue was Ireland's diligence during the critical period from immediately prior to May 6, 1930 (Smith's filing date) and May 31, 1930 (Ireland's filing date).

*Chronological Outline — Ireland v. Smith*



The invention related to a variable speed timing mechanism for toasters. Ireland proved that he was active for a considerable time prior to Smith's filing date; i.e., he offered in evidence a drawing

dated October 12, 1929 disclosing the invention; a witness testified a model was assembled and tested in the Spring of 1929, but the friend who witnessed a successful test on July 4, 1929 was not produced; although his whereabouts were unknown, it was not shown that the witness was sought; another witness testified rather vaguely about the first model, which was not produced; and there was some evidence indicating that six models of the toaster with the timer were shipped on June 23, 1930. From this evidence Ireland tried to draw the *conclusion* that the tools must have been made and a vast amount of work must have been done before the models could be shipped and therefore he must have been diligent prior to June 23, 1930.

The Court refused to draw these conclusions pointing out:

"The difficulty with appellant's contention is that there is no evidence of any activity upon appellant's part with respect to the invention immediately prior to appellee's filing date, May 6, 1930. He may have been active for a considerable time prior to appellee's filing date, but any such activity occurring at a time not immediately prior to appellee's filing date would be of no avail to appellant in establishing diligence.

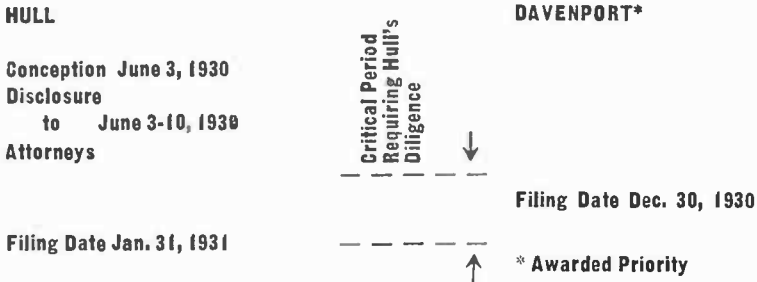
"It would seem that appellant might have established with greater certainty the time when work was performed in the construction of the toaster shipped to Chicago on June 23, 1930. We may surmise that appellant was probably diligent in the matter on May 6, 1930, and immediately prior thereto, and that such diligence continued until May 31, 1930, his filing date; but mere surmise cannot take the place of proof, and there is no proof in the record of such diligence." (Ireland v. Smith, 1938 C.D. 672, 678, 679)

(b) Hull, the first to conceive and the last to reduce to practice, was awarded a date of conception of June 3, 1930. He filed his application on January 31, 1931. Davenport filed his application on December 30, 1930, which is his only date for conception and reduction to practice. The only question was Hull's diligence. It was shown that Hull was employed by Frigidaire of General Motors Corporation and that the patent work was handled by a patent department. The department prepared and delivered to a law firm invention files of all necessary papers and sketches. The law firm had awaiting action 311 disclosures in the first of 1930 and 406 disclosures at the end of the year. Hull's disclosure of invention file was delivered to the law firm within a week of June 3, 1930. The record fails to throw any light on the preparation of the application from the date of the delivery of the disclosure of invention file during the entire period of about eight months.

The Examiner of Interferences held that the critical period was from just before December 30, 1930 to January 31, 1931 and that the

period of five weeks was not in excess of a reasonable time for preparing the application, which consisted of two sheets of drawings and eleven pages of printed specification including six claims. The Examiner gave consideration to the press of immediate business and the activity attendant upon the preparation of the application, and that lack of reasonable diligence could not be imputed to Hull.

*Chronological Outline — Hull v. Davenport*



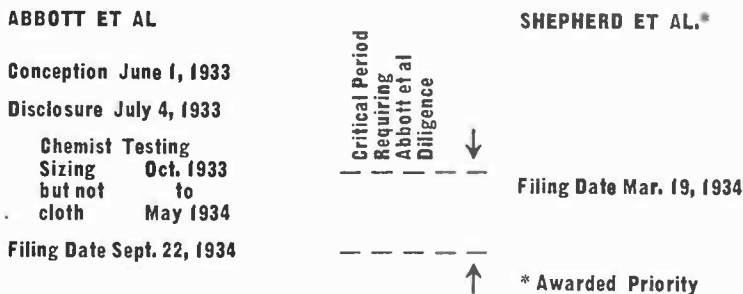
The Board of Appeals considered eight months as the critical period and held that it was too long a period to be accepted as a reasonable time within which to file an application in the absence of a showing of special circumstances. On appeal, the Court of Customs and Patent Appeals resolved this difference in views by holding: "The weight of authority, however, regards his diligence sufficiently shown if it be found that he was diligent from a time just prior to the second conceiver's entrance into the field to the first conceiver's reduction to practice either actually or constructively." The Court also held that merely turning the matter over to an attorney can not account for failure to reduce to practice if in fact the attorney showed inexcusable lack of diligence in preparing the application. Finally in the following words the Court held that Hull had failed to show the diligence the law requires:

"There is, therefore, no showing that appellant was diligently engaged in trying to perfect his invention at the time or just before the time when the appellee entered the field. We cannot presume under the facts in this case that appellant's attorneys were diligent at the time appellee entered the field nor are there any facts proven from which we may conclude that they were diligent at any particular time during the entire eight months period. Of course, they were using diligence when they were engaged in preparing the application, but when the preparation of it began has not been shown. It is not shown that the several hundred cases in the attorneys' hands were taken up in their regular order or that appellant's case was not put to one side and others preferred over it." (Hull v. Davenport, 1937 C.D. 588, 592)

(c) The case of *Abbott et al v. Shepherd et al* reached the United States Court of Appeals for the District of Columbia after the Examiner of Interferences decided in favor of Abbott and decisions adverse to Abbott and in favor of Shepherd were rendered by the Board of Appeals and the District Court. The interference involved an invention relating to a process of weaving into cloth a yarn composed partly of an elastic material. Uneven tensioning of the elastic yarn caused the cloth to pucker. The gist of the invention was to coat the elastic yarn with a sizing. Upon hardening, a coating formed around the thread. The coating was sufficiently rigid to prevent uneven tensioning and sufficiently flexible to permit weaving. After weaving the cloth, the sizing was washed out or dissolved.

Abbott conceived the invention about June 1, 1933 and filed his application on September 22, 1934. Shepherd filed a provisional British Application on March 19, 1934 and shortly thereafter filed a complete application and in due course an application for United States Letters Patent. A division of the U. S. application, filed after September 1934, became involved in the interference. It was held that Shepherd was entitled to a constructive reduction to practice on March 19, 1934. In order for Abbott to prevail it was necessary for him to prove either (1) that he reduced to actual practice before March 19, 1934 or (2) that he was diligent from just prior to March 19, 1934 until his application was filed on September 22, 1934.

*Chronological Outline — Abbott et al v. Shepherd et al*



Abbott, after conceiving the invention about June 1, 1933, first mentioned it on July 4th to Burke, a trained chemist in the employ of Abbott's company. Abbott suggested sizings of starch, casein, and glue. Burke tried out some preliminary compounds and before the end of September reported to Abbott that a sizing would hold in stretched position small rubber bands. Early in October Burke tried the coating on a regular rubber yarn and reported that "it holds \* \* \* sets o.k.

with special size." From then Burke's efforts were given to developing suitable formulas for sizing. Although from the beginning the most suitable formula of the "dextrine type" was satisfactory as to rigidity and as to washing out, Burke concentrated on the dextrine sizing from October 1933 to May 1934.

The Court of Appeals decision reminds the reader that the invention was not in the sizing formula but in the cloth woven with coated or sized elastic yarns in which the sizing was later washed out. The Court held that most of Burke's work from October 1933 to May 1934 was not necessary to reduce the invention to practice. Moreover, Burke very early in his work had found three experimentally workable sizing formulas. Nevertheless "none was tried in actual weaving or knitting," notwithstanding the fact that Abbott, a large owner of interests in extensive textile industries, could have proceeded more directly and diligently. In that respect "it would be a matter at most of only a slight effort to size up and run through a loom some of the "Lastex" yarns." Thus the Court held that Abbott had not reduced to actual practice and that he was lacking in diligence by his long delay in filing his patent application. In summing up, the Court said:

"\* \* \* after completing his invention, he delayed too long in refinement of a minor and non-essential detail of one application of his process, work which belonged to the artisan not to the inventor. However necessary and convincing that activity might have been if the invention claimed had been in the specific formula it finally developed, in relation to the invention in issue it was at most an artisan's sidetrack where the inventor had no business to be when others were coming along the main line. Perfection of utility is to be encouraged. But delay, while one is engaged only in what is already known to the art after the essential idea has been proved, is not that diligence which is required to secure priority in invention." (Abbott et al v. Shepherd et al, 1943 C.D. 37, 53).

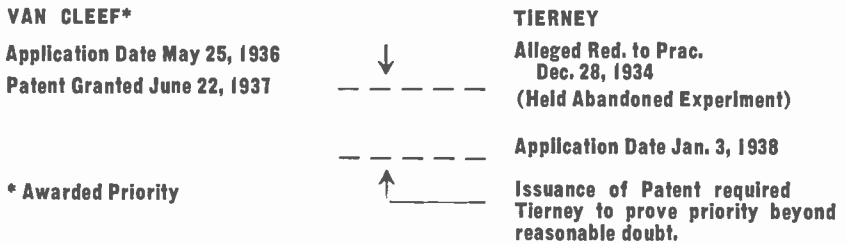
(d) The interference Van Cleef v. Tierney involved Van Cleef Patent No. 2,084,878, granted June 22, 1937 on an application filed May 25, 1936, and an application filed by Tierney on January 3, 1938, apparently after Tierney had actual notice of the Patent. Under the circumstances, Tierney had to establish priority beyond a reasonable doubt.

The invention involved "a tape comprising a strip of rubber hydrohalide and a coating of pressure sensitive rubber base adhesive on one face of the strip." The issue was finally resolved into one of whether Tierney had established a reduction to practice of the invention on December 28, 1934, which was at least six days prior to any date which could be awarded to Van Cleef.



The evidence established that tape was produced under Tierney's direction on December 28, 1934 at the plant of the Minnesota Mining and Manufacturing Company. The tape was only given "an adhesion test," and then it was laid aside without being put to any of the many uses mentioned in Tierney's application. The Tierney application also specified many of the objections to prior art adhesive tapes such as limited flexibility, susceptibility to tear, susceptibility to puncture, humidity and temperature effects, telescoping of roll, oozing of adhesive, manufacturing difficulties and other objections. The evidence indicated that the production tape backing was stretched and distorted; that the tape was ragged and irregular; that it curled; that its appearance was not good; and that the tape was not regarded as commercially satisfactory.

*Chronological Outline — Van Cleef v. Tierney*



Considering the evidence as a whole the Court concluded that the article produced on December 28, 1934 amounted to nothing more than an abandoned experiment and, hence, might not be properly regarded as a reduction to practice of the invention. There seems to be no doubt that the long delay in filing, the issuance of Van Cleef's Patent, and the burden on Tierney of proving his case beyond a reasonable doubt were important factors in the Court's decision. (Van Cleef v. Tierney, 1941 C. D. 423).

6. *Abandoned Experiment.*

If the first to conceive and actually to reduce to practice delays filing a patent application, without abandoning or concealing or suppressing his invention, he will ordinarily be awarded priority of invention. (See Section 7.10, Par. 2). However, the tribunals frequently concluded that the alleged reduction to practice, especially when followed by a long delay before filing a patent application, amounts to an abandoned experiment. For example, in Taylor v. Swingle, 1943 C. D. 630, 634, Taylor tested a circuit breaker in June,



1932. While the tests showed that the device operated successfully under the described circumstances, the United States Court of Customs and Patent Appeals held "that the tests in order to constitute reduction to practice should have been such as to establish utility beyond *probability* of failure admits of no argument." The Court also had doubts that Taylor or his witness Wood at the time of the tests were convinced that the device operated beyond probability of failure. Moreover, from the fact that the device was placed in Taylor's desk for nearly four years before Taylor's application was filed, the Court concluded that the work done in 1932 amounted to nothing more than an abandoned experiment, and therefore awarded priority to Taylor's opponent—Swingle.

#### 7. *Suppression or Concealment of Invention.*

The first to conceive and the first successfully to reduce the invention to practice may have deliberately suppressed or concealed the invention by delaying the filing of a patent application. At a later date the first inventor may be spurred into activity by learning of another party's invention or patent. Notwithstanding the fact that the second party made the invention later, he is awarded priority over the first inventor who suppressed or concealed:

Mason conceived of a clip magazine for firearms and had it completely ready for use in July, 1887. The invention was concealed or suppressed until Hepburn's Patent was issued on September 11, 1894 on an application filed April 3, 1894. Mason, after seeing Hepburn's Patent in the Official Gazette, filed a patent application which was dated three months later than Hepburn's Patent. It appears that Hepburn had made his invention at least as early as April, 1894, which was nearly seven years later than Mason's invention date. Priority was awarded Hepburn because Mason had purposely and without excuse withheld his invention from the public. The Court offered the following explanation:

"Considering, then, this paramount interest of the public in its bearing upon the question as presented here, we think it imperatively demands that a subsequent inventor of a new and useful manufacture or improvement who had diligently pursued his labors to the procurement of a patent in good faith and without any knowledge of the preceding discoveries of another shall, as against that other, who has deliberately concealed the knowledge of his invention from the public, be regarded as the real inventor and as such entitled to his reward. The true ground of the doctrine, we apprehend, lies in the spirit and policy of the patent laws and in the nature of the equity that arises in favor of him who gives the

public the benefit of the knowledge of his invention, who expends his time, labor, and money in discovering, perfecting, and patenting in perfect good faith that which he and all others have been led to believe has never been discovered by reason of the indifference, supineness, or willful act of one who may, in fact, have discovered it long before." (Mason v. Hepburn, 1898 C.D. 510, 516, 517)

### 8. *Summary.*

It would require an analysis of many more decisions to indicate even a few of the "rules" upon which the Examiner of Interferences, the Board of Appeals, and finally the Courts base their decisions in interference cases. The few briefly reported cases indicate the strictness of the tribunals in interpreting the evidence. It is clear that in a close case the path of a junior party is not an easy one. It is imperative that one, who is apt to make inventions, safeguard his efforts by making careful notes of his work. Make sure that the witnesses understand the demonstrations; make sure that the written reports of the demonstrations are adequate; make sure that the reports are witnessed and dated; if possible, preserve the models; identify them by signatures and dates; if the tests were successful, note the success in writing; and do not belittle your own work, your opponent will attend to that!

### 7.11. *Appeals from Adverse Decisions.*

Under the present practice, the decision in interference cases is rendered by the Board of Patent Interferences. There is no appeal to a tribunal within the Patent Office from the decision of the Board. Nevertheless, there are at least two courses open to any party to an interference who is dissatisfied with the final decision on priority.

#### 1. *Appeals to the Court of Customs and Patent Appeals.* § 141

An appeal from an adverse decision of the Board of Interference Examiners may be taken under the provisions of § 141 of the Statutes by the appellant giving written notice thereof to the Commissioner of Patents within such time from the date of the adverse decision as the Commissioner shall appoint (35 U.S.C. 142).

#### 2. *Civil Action.* § 146

If within 20 days after an appellant has filed an appeal in accordance with the provisions of § 141, another adverse party files a notice with the Commissioner that he elects to proceed in accordance with 35 U.S.C. 146, the appellant's appeal under § 141 will be dismissed by

the U. S. Court of Customs and Patent Appeals and the appellant shall have 30 days within which he may proceed to file a civil action under § 146.

In the event that an appeal is taken to the U. S. Court of Customs and Patent Appeals under § 141, the proceedings are had in accordance with the rules of that Court. While a detailed recital of the Court's rules would unnecessarily lengthen these notes, it may be helpful to explain that the appeal to the C. C. P. A. involves a review of the record of the Patent Office interference proceedings. The Court's rules provide for the printing of the record, for omitting unnecessary portions thereof, for submitting appeals on an agreed state of facts, for a diminution of the record, and for the submission of briefs. In this type of appeal, no new evidence may be added. The decision of the Court is certified to the Commissioner of Patents and governs further proceedings in the case.

### *3. Appeals to the United States District Court.*

If a party, dissatisfied with the decision of the Board of Patent Interferences has not appealed to the U. S. Court of Customs and Patents Appeals, he may file a civil action. The action must be filed within 60 days (or as the Commissioner appoints) after the decision of the Board. The adverse parties are duly notified and the case is brought to trial in the usual manner according to the rules of the United States District Court, which has jurisdiction. In this proceeding, the witnesses for the parties may appear in Court. The witnesses are examined and may be cross-examined. While the testimony and the exhibits of record in the Patent Office may be admitted in evidence, using the old record is generally not advisable because the advantages of this type of proceeding would be partly lost, as the Court would not have the witnesses before it. Moreover, matters which were not sufficiently clear may be clarified, such as questions of operability, or evidence not offered in the Patent Office may be presented. (Wright v. Runge et al., 1940 C. D. 11, 12, 13). The District Court in its decision will grant or deny the relief sought, and if the decision is in favor of the appellant, will authorize the Commissioner to issue the patent.

### *4. Further Appeals.*

While there is no appeal from the decision of the Court of Customs and Patent Appeals, there is an appeal from a decision of the District Court to the Circuit Court of Appeals for the circuit in which the civil action was filed. For example, an adverse decision of the District Court of the District of Columbia in a proceeding under § 146 is appealable

to the United States Court of Appeals for the District of Columbia. This additional appeal may be a further advantage in this type of civil action in the District Court.

#### 5. *Interfering Patents.*

In the event of an adverse decision to the patentee in an interference involving a patent and one or more applications, the patentee or the patent owner, instead of appealing, may wait until his opponent's patent issues and then elect to proceed under the provisions of Sections 291 and 146 of the Statutes. Section 291 provides for relief against interfering patentees by means of a civil action. In such procedure, the Court gives notice to the adverse parties and after due proceedings may adjudge and declare either or both patents valid in whole or in part.

Thus, there are many procedural paths open to those who are dissatisfied with a decision of the Board of Patent Interferences. The choice of procedure usually depends upon the soundness of the lower tribunal's decision, upon the importance of the invention, the question of expense, the possibility of newly discovered evidence, the record in the Patent Office, and similar considerations.

#### 7.12. *Summary.*

It is hoped that the foregoing outline of the many and varied technicalities of interference procedure will not obscure the great importance of keeping understandable and accurate records of invention. Records are essential if an applicant is to carry his date of invention back of his filing date. The testimony of witnesses to whom the invention was disclosed and demonstrated is also essential.

In the preliminary statement, the several dates—conception of invention, disclosure to others, and reduction to practice—are alleged; in the testimony they must be proven. The burden of proof is never light; it requires convincing testimony, supported by documentary and physical exhibits. Many an applicant has actually been the first inventor but his evidence lacked that degree of cogency which convinces the Court of the truth or fact.

Good records must be kept. The models used in the successful demonstration of the invention must be retained. Notes and records must be witnessed and dated!

## CHAPTER VIII

### PATENT APPROVAL

#### 8.01 *Patent Approval*

Prior to the present law (1953), a patent granted the exclusive right to make, use and sell the subject of the invention. This was often misunderstood. The statement really meant the right to exclude others as the present law states in § 154. It does not answer the question of whether you have the right to use the invention. In war your artillery may deny the use of a road to the enemy, while his guns also cover the road or some part of it and so also deny you the use of the road. The usual cliché to express this thought is an older military metaphor: A patent is a sword, not a shield.

In other words, an inventor of a device may obtain a patent on his invention, but, notwithstanding the patent grant to him of the exclusive right to exclude others from making, using or selling the invention throughout the United States, he does not have any right to use the unexpired patents of others. Therefore, one contemplating the manufacture, use, or sale of a device, even if patented, should determine if the device infringes patents under which he has no license. An individual or a company without a patent department would ordinarily consult a patent attorney. An organization with a patent department usually relies upon the department to advise if the proposed device is free of infringement. Such an opinion that the device does not infringe is frequently called "patent approval."

Before commenting on the various matters involved in patent approval, it is noted that in RCA the engineer responsible for a new device is also charged with the responsibility of getting patent approval from the Patent Department. The approval request is made in writing and is transmitted to the Patent Department. The request must include all essential information including circuit diagrams, drawings, and a written description of the device and its mode of operation. The type of information required necessarily varies with the product. The engineer usually points out the features. If he has reason to suspect the existence of adversely held patents or pending patent applications, he is required to advise the Patent Department. This gives the patent attorney an opportunity to direct special attention to the special problems and their solution. A word of advice: Don't deal with your patent attorney or patent department at arm's length.

After all the features are known, a patent search is instituted. When patent approval for a new or modified apparatus, process, or

method is involved, the patent approval investigation is generally called a "right-to-use" search. Patent searches may best be made in the U. S. Patent Office in Washington because the Office patent files are classified according to the claimed inventions. In some instances the RCA files of patents may provide adequate information. Wherever the search may be conducted, the searcher looks for adversely held unexpired patents that include claims which might "read upon" the proposed device. If no such patents are found, patent approval is given, as the device is then presumed to be free of infringing features.

The pending applications for patents cannot be searched because applications in the Patent Office are confidential, and are not open to the public except under special circumstances (35 U.S.C. 122). Such applications may issue as patents with claims reading on the device. That possibility is generally considered a recognized business risk. However, the risk should not be taken blindly, and sometimes when the chances of the issuance of a pertinent patent are measurable, the risk should not be taken.

The risk is small and can be taken when there merely exists the possibility that someone else may have a pending application applicable to our device. But sometimes we have more than the bare possibility—we may have positive indications. For example, someone may have published a technical article in which he noted that he had patent applications pending. Or, someone may have marketed the device with a notice "patent pending." Since the engineer is more apt to know of such facts than is the patent attorney, the engineer should furnish that information if he has it. The patent department can then study the likelihood of an adverse patent issuing, and in effect calculate the business risk. If the features of the new devices are broadly new, patent approval in the absence of a license, or an option to acquire a license, involves more than an ordinary business risk.

If one starts manufacturing and marketing a device which he has copied that would be an invasion of the rights of the owner of a pending application (if the patent were issued), the owner may petition the Commissioner of Patents to have the application made "special" (Rule 102). Not only may an application that has been made "special" be granted promptly, but an attorney, aware of the infringing devices, may easily direct his claims to cover the infringement precisely. When the patent issues, the manufacturer of the infringing device is at a great disadvantage. If he continues to manufacture, he may be sued for infringement. If he negotiates for a license, the patent owner may be either unwilling to grant a license, or he may demand excessive royalties. The only way out of the difficulty may be to cease manufac-



ture, and sale. Briefly, copying is ethically improper and financially unwise!

A right-to-use search may disclose one or more adversely held patents with claims that appear to read on the device submitted for patent approval. The patent attorney should then decide (1) whether the claims actually apply, and (2) whether the claims in question are valid or invalid. These are often very difficult decisions. Both attorneys and courts frequently arrive at diametrically opposite opinions concerning the validity or invalidity of a patent, and infringement or absence of infringement. It is probably true that only the court of last resort can give an authoritative answer to validity and infringement questions.

When confronted with a patent that appears to be infringed it is desirable, and usually necessary, to consult the "file wrapper". The file wrapper of a patent is the official history of the application file in the Patent Office. After a patent issues, the files are open to the public. An inspection may show that the troublesome patent claim was only allowed because the attorney's remarks explained how the claim was limited. He may have in effect disclaimed or limited the scope of the claims. An examination of the patent and the prior art may show that the "best art" was not cited by the Patent Office.

If a patent claim appears to read equally well on prior art—not cited by the Examiner—and on the proposed device, the patent may not be infringed or the claim may be invalid. Since the foregoing, and other factors, must be carefully considered, the one requesting patent approval should allow adequate time for the task. Moreover, it is extremely important that all the features be described. Finally, the one requesting approval should refer specifically to the origin of a feature that he has found in the literature, in a competitor's apparatus, or elsewhere. When provided with such information, a patent attorney may be able to advise if the feature is in the public domain, or is or may become an adversely held exclusive right. Under some circumstances the attorney may recommend early negotiations for a license. Under other circumstances the attorney may be satisfied that the adversely held patent is invalid and that infringement is no more than a slight business risk.

### **8.02. Patent Approval—Disclosures of Invention**

Another phase of patent approval involves the disclosure of new inventions that may be incorporated in a new device or may be described in a technical article to be published. Disclose new inventions to the Patent Department as early as possible so that patent applications may be filed before the device is marketed or before the technical paper is

published. While the patent statutes of the United States permit an application to be filed within one year after a device is sold or offered for sale, or is described in a printed publication, some foreign patent laws do not recognize the year of grace permitted a U. S. inventor. Therefore, to preserve foreign rights, an application for United States Letters Patent should be filed prior to sale or publication.\*

While disclosures of new inventions to the Patent Department may be made concurrently with the request for patent approval, the better practice is to disclose the inventions as early as possible. Earlier disclosures give the Patent Department an opportunity to prepare applications before any critical dates. The disclosure is usually evidence of conception of an invention. The early disclosure gives the inventor a better chance to prevail if his application becomes involved in an interference, or if he has to prove his date of invention. On the other hand, if the inventions are first disclosed in marketed apparatus or by technical publications, the inventor's competitors, possibly having filed first, may be able to modify claims in their pending patent applications. Thereby they can claim the exact invention, not necessarily as they conceived it, but as called to their attention. In some situations a competitor may be spurred into activity in filing a patent application on an invention which might otherwise have "slept in a notebook". It has been amply demonstrated in practice that an inventor assumes unnecessary risks if he discloses his inventions to the world prior to filing. In any event, if he does not first file his U. S. patent application, he will jeopardize some foreign rights.

### 8.03 *Outsider Disclosures*

Organizations whose products are well known receive numerous suggestions from outsiders. The suggestions come from stockholders, users of the product, potential inventors, and interested laymen. The suggestions may be "ideas"; sometimes "invention" is present. The proper handling of these suggestions is very difficult because the handling involves both public relations and possibly legal complications. Since engineers are asked for their opinions as to the value or utility of the suggestions, a brief statement of the problems may help to guide them along the right course.

Some companies refuse to consider an idea until the submitter signs a legal agreement holding the company harmless from any obligations, or giving the company the entire right to determine compensation, if any. This procedure would be all right if the submitter first asked "how shall I submit my idea?" But often the submitter transmits

---

\* See 35 U.S.C. 102.



the idea without asking any initial question. To take care of ideas submitted prior to agreement, some companies assign all disclosures from outsiders to a person without technical skill. This person puts the disclosure in a confidential file and suggests that the outsider execute the formal agreement otherwise his disclosure will not be considered on its merits by a technically qualified representative.

Policies and regulations vary greatly throughout industry, but many of the nationally recognized concerns have written policies and procedures for controlling the handling of disclosures from outsiders. The policies vary from very strict to very liberal. The policy of the Radio Corporation of America appears in a booklet which is sent to outsiders. The RCA policy statement is reproduced in Section 8.05.

Since the proper handling of disclosures is very important, some of the problems will be stated: Outsiders may insist that their disclosure was incorporated in a new product after they were advised that the company was not interested, and that regardless of patent rights they are entitled to compensation. Outsiders may allege that their disclosure was submitted in confidence and that using the disclosure, regardless of patentability, is a breach of confidence. Outsiders may submit information contained in their pending patent applications; the information may be reviewed by an engineer, whose report indicates that the information is not of interest and is impractical. Thereafter, another engineer, unaware of the rejection by the first engineer and quite independently making the same invention, puts the invention into a device. Then the adverse patent issues and the company is threatened with an infringement suit. Even if the patent does not issue, the outsider is "convinced" that the company improperly appropriated his idea or invention.

#### **8.04 Breach of Confidence Cases**

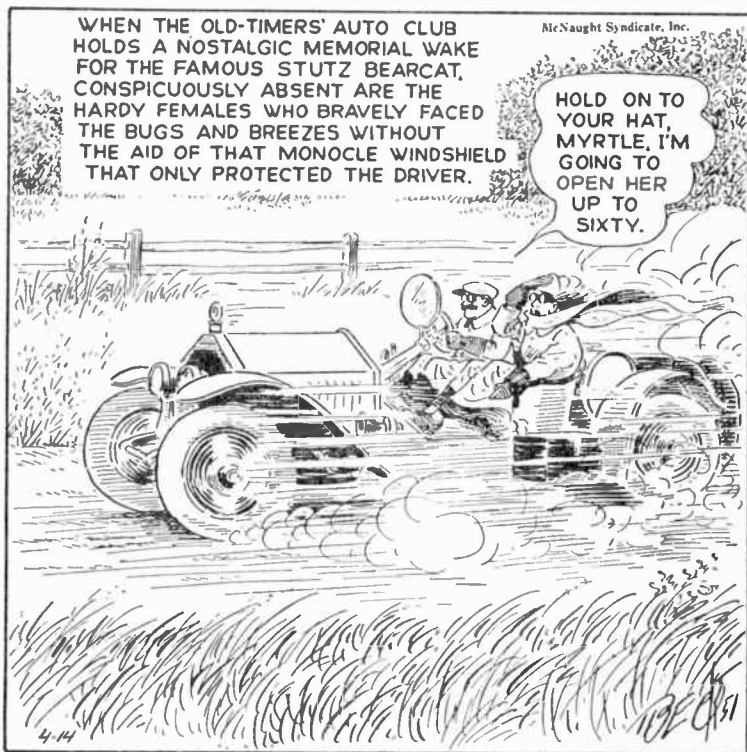
Perhaps a typical case, in which the submitter prevailed, is the best method of high-lighting the danger. One case involving an automobile design has been selected because the submitter (Booth) prevailed on the charge of breach of confidence notwithstanding the invalidity of his patent. (*Booth v. Stutz Motor Car Company of America, Inc., et al*, 56 Fed. (2d) 962).

Booth submitted to Stutz complete plans and sketches. These were clearly of interest to Stutz, because the Chief Engineer of Stutz wrote an enthusiastic report about the features and sales appeal of Booth's automobile design. Thereafter, Stutz advised Booth that no further consideration could be given Booth's design.

Stutz had been losing money. A new president was appointed. He decided a new car should be designed. He worked with the Chief

## All In A Lifetime

## Recollections

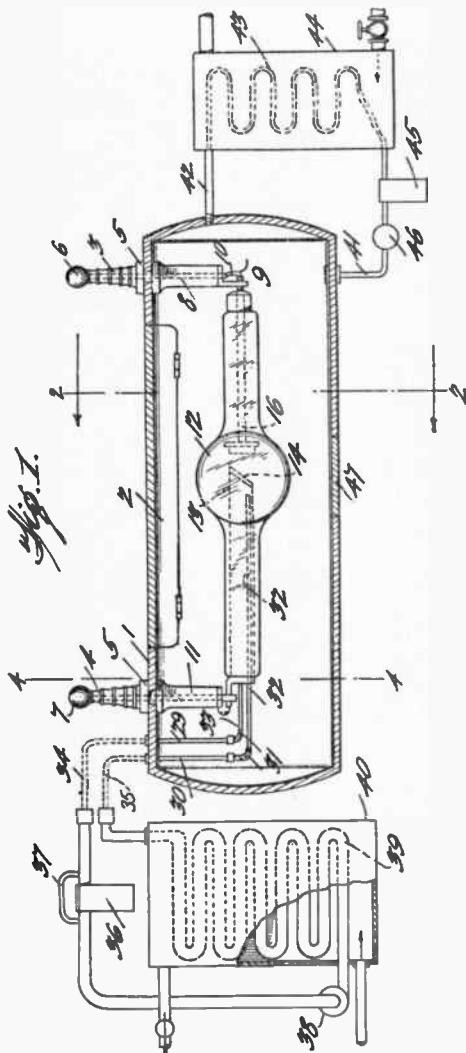


Reproduced through the courtesy of Frank Beck and McNaught Syndicate, Inc.

Engineer. Their design included many features found in Booth's design. The Chief Engineer denied purposeful appropriation of features disclosed by Booth.

The District Court declared Booth's patent invalid, and dismissed Booth's claim based on breach of confidence. On appeal the higher Court held that even though the patent was invalid, and the prior art was public knowledge available to Stutz, still Booth was entitled to recover because salient design features submitted by him were incorporated in the car. They did contribute to Stutz' success, and they were submitted in confidence with the expectation of payment if used.

In another suit involving an X-ray device, both (1) valid patent claims and (2) breach of trust were involved. (The Kelley-Koett Manufacturing Company v. McEuen, 53 USPQ 586). McEuen was actively engaged in high voltage X-ray therapy. He observed that high voltage tubes were apt to be damaged by heating and that high voltages



Mc EUEN U.S. PATENT  
2,040,441

represented dangers to the patient and operator. He proposed to solve the problem by using a dielectric coolant and by providing a flexible insulated connection to circulate the coolant within the anode.

McEuen asked Kelley-Koett if it wished "to help develop a new type of tube and apparatus for Deep X-ray Therapy" for which he had a patent application. He provided Kelley-Koett with complete information and stated that the features should not be used without his consent. At the same time he offered Kelley-Koett the opportunity of purchasing a license on a royalty basis.

Although there was some testimony to the contrary, the Court concluded that Kelley-Koett did not design its commercial X-ray equipment independently of the information submitted by McEuen. The lower Court held that the patent was valid and infringed and that a breach of trust and confidence had been committed for which damages would be assessed. The higher Court modified the finding (1) by holding four out of six claims valid and infringed, and (2) by limiting McEuen's recovery for the breach of trust and confidence to "the same royalties or profits for machines manufactured before the patent issued as after", but not exemplary damages.

These two cases illustrate the difficulty of a defense when charged with breach of confidence or trust, or, as it is sometimes termed, "unjust enrichment". While the recited cases were decided in the plaintiff's favor, it should be noted that many more cases of unjust enrichment are decided for the defendant than are decided for the plaintiff. Probably the proportion of decisions favorable to the defendant may be explained in part by the obvious care exercised by the defendant corporations. This is particularly true in the automotive field. (Larson v. General Motors Corporation, 148 F. (2d) 319; Pennington Engineering Company v. Houde Engineering Corporation, 57 USPQ 422; de Filippis v. Chrysler Corporation et al, 72 USPQ 288; Moore v. Ford Motor Company, 43 F. (2d) 685; Lueddecke v. Chevrolet Motor Co. et al, 70 F. (2d) 345; Gilbert v. General Motors Corporation, 51 USPQ 181; etc.) While these defendants prevailed, it should be noted that considerable caution was exercised in avoiding breaches of confidence, copying disclosures of outsiders, and maintaining a clear record; nevertheless, they had to defend themselves. We should not overlook the possibility that many cases never went to trial because the prospective defendant was uncertain as to the outcome of the litigation.

Avoid copying—even the appearance of copying—and avoid unnecessary litigation.

### 8.05 RCA Policy Concerning Ideas Submitted by Persons Outside the Corporation (From pamphlet of same title)

*"I have an idea . . ."*

Each year Radio Corporation of America receives hundreds of letters from all over the world offering suggestions which the writers hope may be of value. RCA appreciates the interest in it shown by the writers of these letters.

We realize that, no matter how extensive our research and development activities may be, useful improvements will be made by independent investigators. Consequently, each suggestion from an outsider is given careful consideration provided it has been submitted to RCA in accordance with the conditions set forth in this pamphlet.

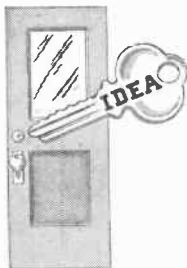
It has been our experience, however, that in most cases no rights can, in fact, be predicated upon the suggestions made by the writers of the letters. This may be due to the fact that an idea to which the suggestion relates is so old as to be freely available for public use, or it may be the subject of a patent, a pending application or an earlier disclosure of someone else. Thus, RCA may already have a legal right to use the idea, in which case there can be no actual or implied restriction of this right as a result of the subsequent submission to RCA of a similar idea.

In case of doubt as to the respective rights of RCA and an outsider, it is the practice of RCA to determine such rights in accordance with the principles of the rules of the United States Patent Office applicable to such matters.

This pamphlet has been prepared for the purpose of advising those outside RCA as to the procedure to be followed in submitting ideas and the conditions under which they will be considered so as to protect the rights of both parties and to avoid future misunderstanding.

*What is an invention?*

The Patent Statutes provide that "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof may obtain a patent therefor, . . .", unless the invention was known or used by others in this country before the invention thereof by the applicant for patent and providing certain conditions have been fulfilled. However, it is well established that not every idea, or every new



arrangement or process constitutes "invention." Generally speaking, a patentable "invention" consists of a novel idea for a machine, article of manufacture or process together with conception of actual means for putting the idea into practice, provided the machine or article produced or the process performed would not have been obvious to one skilled in the art.

Before submitting an idea to RCA, the first step, therefore, is to make certain that the invention has been completed and that the details of how it is to be accomplished have been worked out. Unless this is done before submission, we may have to withhold any consideration of the idea. Ordinarily we cannot consider a suggestion which is no more than the recognition of a need.

*How should an invention be submitted to RCA?*

If an outsider has made an invention, the most preferred practice would be for him to consult a patent attorney, obtain a patent and then simply send RCA a copy of the issued patent. If, on the other hand, an outsider has an idea he believes to be patentable, but for which a patent has not been issued, it will be considered by RCA only if submitted with a written agreement (in the form provided on page 7\*) that no confidential relationship is established between RCA and the outsider and that RCA is not obligated in any other respect than to indicate the extent of its interest, if any.

It was pointed out above that a patent may be obtained by anyone who has made an invention which was not previously known or used by others. RCA employs hundreds of research scientists and engineers who are continually making inventions in radio, electronic and many diverse fields. In case two inventors independently complete similar inventions, it may become necessary to determine which one is entitled to a patent.



The rules governing such cases are too complicated to be explained here, but it will be appreciated that it is essential that each inventor be able to establish the date he made the invention and to prove the exact nature of the invention. In order to avoid any misunderstanding or controversy on this point, RCA desires outside inventors who have not yet obtained a patent to take every step within their means to protect their interests to their own satisfaction. In the order of


\* Page 153 of this volume.



preference, it is suggested that one of the following procedures be employed in the case of an unpatented invention:

1. File an application for a patent and then submit a copy of the specification, claims and drawings to RCA.

2. Reduce the invention to practice by building and successfully operating the device or by practicing the method. Have at least two witnesses who understand the invention witness the operation,



Make a complete written description, in duplicate, of the objects and purpose of the invention, describing its construction and operation in detail, including whatever drawings or sketches are necessary to understand it. Sign and date one copy of the papers and have them signed and dated by two reliable witnesses who understand the invention. The inventor should carefully preserve the signed copy and may then submit the unsigned and undated copy to RCA.

3. Make a complete written description and drawings of the invention, have these witnessed and dated as set forth in paragraph 2 above, and then submit a copy to RCA.

RCA will not retain material on unpatented ideas which is submitted to it by an outsider unless submitted in accordance with the procedure set forth in this pamphlet. RCA reserves the right to make duplicate copies of any submitted material which it returns. A model of an invention should not be sent unless this is specifically requested. It is not desirable to attempt to present an idea in person or by telephone. If a personal interview is necessary, or a demonstration of any device appears desirable, appropriate arrangements will be made later.

### *Unpatentable Ideas*

Many ideas may be good but unpatentable because they do not amount to invention or are ideas pertaining to improvements in business methods; or plans relating to sales promotion or advertising. All such ideas and plans are unpatentable, and for that reason the rights of the public are almost always so complete that the ideas cannot be considered of special value to RCA. In every case, the compensation, if any, for unpatentable ideas must be left entirely to the company.

### *Reservations and Conditions*

It is the definite policy of RCA to consider unpatented ideas and suggestions when they have been submitted by the public in the manner described in this pamphlet but only upon the understanding that such

submission is gratuitous and unsolicited; that it creates no confidential relationship with RCA, that it entails no obligation on the part of RCA to adopt any such idea or suggestion or to compensate for its use, and that RCA is in no way obligated to compensate the submitter for expenses incurred by him in connection with the submission to RCA unless such expenditures are authorized by RCA in advance. If RCA believes that a suggestion or idea so submitted does involve a patentable invention of technical and commercial importance to RCA and that the person who has submitted the suggestion or idea is entitled to compensation for it, RCA reserves the sole right to determine what that compensation should be.

RCA must decline to consider any unpatented suggestion or idea, whether patentable or unpatentable, the submission of which is accompanied by any reservation or condition whatever or which is or appears to have been submitted in confidence and RCA will not, by reason of the receipt of a communication on that basis, assume any obligation to the submitter.

All submissions must be in the English language. All correspondence relating to patents, suggestions, ideas or inventions should be mailed to RCA at the address given on the front of this pamphlet.

#### *Acceptance of Terms and Conditions*

For the reasons set forth in this pamphlet, RCA will consider unpatented ideas submitted by the public only in accordance with the terms and conditions set forth herein and only after receipt of a letter in the form which appears on page 7 hereof, properly filled out and signed by the submitting party. Any unpatented idea submitted in advance of receiving such a letter will be held in escrow. If such a letter is received, the idea will then be considered. If no such letter is received within ten (10) days, the material submitted will be returned to the sender.

***(See following page for form of agreement required  
of persons submitting unpatented idea.)***



....., 19...

RADIO CORPORATION OF AMERICA  
ATTENTION: PATENT DEPARTMENT

.....  
.....

Dear Sirs:

- \* I am submitting to you in writing with this letter
  - \* I have heretofore submitted to you with my letter dated ....., 19....
- (\*Strike out whichever is inapplicable)

some suggestions or ideas which may prove useful in your business, and I request that you consider them. I understand that, because of the large number of suggestions or ideas which are submitted to you by many different people (including many suggestions or ideas which are not new or which may already have been conceived by one of your own employees), you require the acceptance by me of certain conditions before you give consideration to my own suggestions or ideas.

I have read your pamphlet entitled "RCA Policy Concerning Ideas Submitted by Persons Outside the Corporation" (Form Pat. 3080 9-53) and understand its contents. I agree that the submission of my suggestions or ideas (as well as any additional ones which I may hereafter submit as incidental to the material originally submitted), and any consideration which may be given to them at my request by Radio Corporation of America, shall be strictly in accordance with the terms and conditions of your pamphlet aforesaid and of this letter, without obligation of any kind assumed by, or implied against, Radio Corporation of America unless or until such is expressed in a formal written contract between us. I do not hereby give Radio Corporation of America any rights under any patents I now have or may later obtain covering my suggestions or ideas, but, in consideration of its examining them, I hereby release Radio Corporation of America from any liability in connection with my said suggestions or ideas because of use of any portion thereof, except such liability as may accrue under valid patents now or hereafter issued.

List of enclosures, if any:

Very truly yours,

.....  
..... (Signature of Submitter)

.....  
..... (Address)

.....  
.....

## CHAPTER IX

### OWNERSHIP AND USE OF PATENTS

#### 9.01. *Ownership of Inventions and Patents.*

##### 1. *Free-lance Inventor.*

In the absence of an expressed or implied agreement, an invention is the exclusive property of the inventor. He may keep, give away, or sell his invention because it is his property. A buyer of an exclusive right in an invention is apt to insist that a patent application be filed on behalf of the inventor and that the sale of the invention include an assignment of the patent application and the patents issuing thereon. Some other buyer might be content with less than the exclusive right to the invention; he might be willing to acquire a license to use the invention in certain fields, in specified states or territories, or for a limited term. A non-exclusive licensee is also apt to insist that a patent application be filed because in the ultimate absence of a patent, the inventor would be unable to prevent non-licensees from using the invention. Such a situation would hardly attract licensees who would pay for the right to practice the invention while their non-licensed competitors might use the invention without any obligation to pay the inventor. Thus it is clear that a free-lance inventor should protect his inventions, and make licenses attractive by obtaining patents.

The patent itself is evidence that the Government has granted the patentee, and his assigns, the right, for a limited term of 17 years, to exclude others from making, using, or selling the invention throughout the United States. "Patents have the attributes of personal property" (§ 261). A photostatic copy of a patent grant is reproduced on the following page. In the instant case the patent was assigned at the time the application was filed and since the assignment was recorded promptly, the patent was assigned on its face to the assignee.

If the inventor has not previously assigned the patent application, the patent will be issued to him. He will be free to dispose of the invention and patent in accordance with the second paragraph of § 261:

Applications for patent, patents, or any interest therein, shall be assignable in law by an instrument in writing. The applicant, patentee, or his assigns or legal representatives may in like manner grant and convey an exclusive right under his application for patent, or patents, to the whole or any specified part of the United States.

D/P

2,653,387



**THE UNITED STATES OF AMERICA**

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

Whereas David George Croft Luck and Leslie Lewis Burns, Jr., of Princeton, New Jersey, assignors to Radio Corporation of America, a corporation of Delaware,

PRESENTED TO THE Commissioner of Patents a petition praying FOR THE GRANT OF LETTERS PATENT FOR AN ALLEGED NEW AND USEFUL INVENTION THE TITLE AND A DESCRIPTION OF WHICH ARE CONTAINED IN THE SPECIFICATION OF WHICH A COPY IS HEREBY ANNEXED AND MADE A PART HEREOF AND COMPLETE WITH THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED; AND

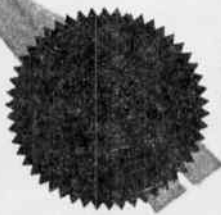
Whereas UPON THE EXAMINATION MADE THE SAID CLAIMANT s jpc ADJUDGED TO BE JUSTLY ENTITLED TO A PATENT UNDER THE LAW.

NOW THEREFORE THESE Letters Patent ARE TO GRANT UNTO THE SAID

Radio Corporation of America, its successors OR ASSIGNS

FOR THE TERM OF SEVENTEEN YEARS FROM THE DATE OF THIS GRANT

THE RIGHT TO EXCLUDE OTHERS FROM MAKING, USING OR SELLING THE SAID INVENTION THROUGHOUT THE UNITED STATES.



In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington this twenty-second day of September, in the year of our Lord one thousand nine hundred and fifty-three, and of the Independence of the United States of America the one hundred and seventy-eighth.

Attest:

*E. J. Sawyer*  
Acting Chief Clerk

*Robert C. Watson*  
Commissioner of Patents

In accordance with the paragraph of the statute quoted above, it is clear that (1) an applicant for a patent or the patentee may assign his property in the patent; (2) those to whom the applicant or patentee has assigned his interest may also assign their interests; (3) the right to the patent grant does not have to be assigned in its entirety but may be divided as to any specified part of the United States; and (4) in the event of the death or incapacity of the patentee, his legal representative acquires title in the patent, which may be assigned by the representative.

While it may not be clear from reading the statute, the owner of a patent may sell shares in the grant; may grant licenses to others to make, use, or sell the invention of the patent; may dedicate the patent to the public; or may simply hold the patent without using or attempting to use it. Briefly, the patentee or his assigns are free to make any lawful disposition of the property in the patent, which may be treated like any other property and is entitled to the same protection. (*Seymour v. Osborne*, 78 U.S. 516, 533).

## 2. *Inventor Subject to Employment Agreement*

One, who is employed or is about to be employed, is likely to be asked to sign a written agreement dealing with the right to inventions made during the course of his employment. It is usual for an employer to request his employees, who have been hired to make inventions or who because of the nature of their employment are normally expected to make inventions, to enter into such employment agreement. The agreement usually provides: (1) that the employee will assign, or actually does assign to his employer or his employer's nominee, the inventions made during the course of his employment and relating to the employer's business; (2) that the employee will disclose the inventions he makes during the course of his employment, and within the scope of the agreement, to his employer; (3) that the employee upon request will assist in the preparation of patent applications for such inventions; (4) that the employee will execute and assign such patent applications and the patents issuing thereon; and (5) that he will do whatsoever is necessary to vest the title in the inventions and patents in his employer or his employer's nominee. By way of illustration reference is made to the RCA employment agreement (Form Pat. 3074—See pages 157 and 158.)

The usual consideration for the assignment is the employment, although some employers give incentive payments in addition to salary or wages. While the foregoing represents the general run of patent agreements between employer and employee, many other conditions might be expressed. When the conditions are lawful, the written

Form Pat. 2074-7-58



RADIO CORPORATION OF AMERICA

Name ..... Dep't ..... Place ..... Date ..... 19.....  
(Type or Print Full Name—No Initials)

**AGREEMENT**

IN CONSIDERATION of my employment by the Radio Corporation of America, hereafter called the Corporation, I agree:

I. That I will communicate to the Patent Department of the Corporation (Note 1) all inventions made or conceived by me from the time of entering the Corporation's employ until I leave, along electrical, acoustical and optical lines and along all lines of the work, investigations or obligations of the Corporation and of those companies in which it has a substantial interest, or resulting from or suggested by any work which I may do for the Corporation, or at its request, and will assist the Corporation and its nominees in every proper way (entirely at its expense) to obtain for its own benefit patents for these inventions in any and all countries, the inventions to be and remain the property of the Corporation or its nominees whether patented or not.

II. That if I am transferred, by a written order of the Corporation, to an occupation in which I am not (a) hired to invent or (b) normally expected to invent, the obligations hereof to assign inventions shall be suspended for the period of such transfer, except in respect of inventions made during the course of a contract between the Corporation and the U. S. Government, or a representative thereof, requiring the granting of patent rights to the Government.

III. That the inventions described in the accompanying papers comprise all the unpatented inventions which I made or conceived prior to my employment by the Corporation, and which I desire shall be excluded from this agreement: Number of inventions to be excluded ( ). (Note 2)

IV. That I have not entered into any other agreement(s) which will prevent full compliance with the terms of this agreement except the following, a true copy of each of which is attached: (Note 3)

(Signature) .....  
(Sign Full Name—No Initials)

Witness:

.....  
 Original to be signed by employee, witnessed by Head of Department, or his duly authorized assistant, and forwarded to Patent Department, Radio Corporation of America, RCA Laboratories Division, Princeton, N. J. Copy retained by Personnel Department. Copy to be given to employee.

- Note 1. Patent Department, RCA Laboratories Division, Princeton, N. J.
- Note 2. Insert the total number of inventions or "None".
- Note 3. If no such other agreement(s), insert "None".

(OVER)

#### GENERAL

The men who are asked to sign this agreement are those who in the natural course of events may be brought in touch with the problems which are from time to time presented to the Radio Corporation of America for solution, and with the efforts which are being made by various engineers attached to the Corporation to solve these problems. Without an agreement to assign inventions along the line of the Corporation's activities it would be impossible to put these men in any such relations with the Corporation's work, and to bring them into free and open relations with those engineers who are regularly assigning inventions to the Corporation.

While the Corporation holds out no promise of additional compensation for assignment of inventions, its policy is to recognize all good service of whatever nature, by proper adjustment of the salaries of employees, by advancement in opportunity and responsibility and otherwise. Inventive ability is in general recognized as an element of value just as designing ability, executive ability and other similar traits are recognized.

#### INVENTIONS TO BE EXCLUDED

As the employee is to assign inventions which he makes after he enters the employ of the Corporation, then for his own protection as well as in the interests of the Corporation it is desirable that records should be made of the unpatented inventions which he possesses at the time of employment and which he may wish to exclude from the operation of the contract and to take up specially with the Corporation if they were such that the Corporation would be likely to be interested in them.

If exclusions of inventions are made, the employee shall attach to this agreement an adequate description of each such invention. The description shall comprise (a) title, (b) purpose of the invention, (c) mode of operation, and (d) drawings, if any. The description to be acceptable should be sufficiently complete to enable qualified persons to distinguish between the invention made or conceived by the employee prior to his employment by the Corporation, and any invention made by him, or another employee, along the same line of work during the course of his employment by the Corporation.

Photostatic copies of the employee's original disclosure papers and drawings will be accepted in lieu of the foregoing description if they adequately disclose the excluded invention.

It is not necessary to record issued patents, pending patent applications or prior inventions previously disclosed and assigned to a former employer.

#### CONFIDENTIAL INFORMATION

It is obvious that during his employment a man may acquire many records and data and much confidential information which under no circumstances should he use after the termination of the employment. There is also much that is marginal, or as to which doubt may arise. It is difficult exactly to draw the line in writing; a man's own sense of propriety is usually the safest guide in each particular case. The more experience he has the more careful he becomes in such matters. The Corporation will in many cases be glad to have the employee use such information, but expects the employee to obtain permission in each case when doubt arises.

agreement determines the relations of the parties and the ownership of the inventions and patents.

Often the employment agreements include some restriction relating to the use of confidential information obtained during the course of employment after the employment has terminated. When the restraints are reasonable, they are enforceable. The restraints must not become a perpetual bar to the employee obtaining gainful employment. The attitude of the Courts is well expressed in *Sternberg v. O'Brien*, 48 N.J. Eq. 379, which was recently quoted with approval in *Sprague Electric Company v. Cornell-Dubilier Electric Corp.*, 66 U.S.P.Q. 431, 435:

"The law is settled that a contract in restraint of labor which seeks to prevent one of the contracting parties from exercising his skill or labor generally, without limitation as to place or time, or which attempts to put a restraint upon his right to labor or to exercise his skill greater than is necessary for the fair protection of the other party to the contract, is void."

While the Courts are reluctant to enforce contracts unnecessarily restraining labor, reasonable and temporary restraints are not only not set aside, but the employer may recover substantial damages from an employee who violates his employment agreement.

Conmar Products Corporation sued Henry Tibony, formerly one of its employees, who had learned Conmar's trade secrets during the course of his employment. Tibony was under a contract not to disclose such trade secrets. He left Conmar and assisted the Lamar Corporation in designing certain machines which infringed patents owned by Conmar and in doing so Tibony not only imparted Conmar's trade secrets but contributed to the infringement.

Tibony failed to attend the trial and the matter was referred to a Special Master for an accounting. The Special Master attributed \$16,556.62 as Tibony's gain from the Lamar work plus smaller amounts for work with other companies. When the findings were referred back to the District Court, Tibony offered a number of objections which were overruled. In approving the findings the Court said:

"Until such time as contracts are no longer to be accorded a recognized status in our law, it is believed that there is nothing reactionary in the view that this defendant must be held to have deliberately and intentionally committed a serious breach of an enforceable written contract into which he freely entered." (*Conmar Products Corporation v. Tibony*, 67 U.S.P.Q. 323, 327.)

### 3. *Ownership of Invention and Patent Rights in Absence of Agreement*

Considerable litigation over invention and patent rights between employers and employees, especially between those who have not



entered into written agreements, has defined fairly definitely the question of ownership. The general rule is that in the absence of an agreement, the right to an invention and patent belong to the employee who made the invention; *but there are two extremely important limitations*. The rule and the limitations are well expressed by Mr. Justice Brewer speaking for the United States Supreme Court in *Solomons v. United States*, 137 U.S. 342, 346:

“\* \* \* The government has no more power to appropriate a man's property invested in a patent than it has to take his property invested in real estate; nor does the mere fact that an inventor is at the time of his invention in the employ of the government transfer to it any title to, or interest in it. An employé, performing all the duties assigned to him in his department of service, may exercise his inventive faculties in any direction he chooses, with the assurance that whatever invention he may thus conceive and perfect is his individual property. There is no difference between the government and any other employer in this respect. But this general rule is subject to these limitations. If one is employed to devise or perfect an instrument, or a means for accomplishing a prescribed result, he cannot, after successfully accomplishing the work for which he was employed, plead title thereto as against his employer. That which he has been employed and paid to accomplish becomes, when accomplished, the property of his employer. Whatever rights as an individual he may have had in and to his inventive powers, and that which they are able to accomplish, he has sold in advance to his employer. So, also, when one is in the employ of another in a certain line of work, and devises an improved method or instrument for doing that work, and uses the property of his employer and the services of other employés to develop and put in practicable form his invention, and explicitly assents to the use by his employer of such invention, a jury, or a court trying the facts, is warranted in finding that he has so far recognized the obligations of service flowing from his employment and the benefits resulting from his use of the property, and the assistance of the co-employés, of his employer, as to have given to such employer an irrevocable license to use such invention. The case of *McClurg v. Kingsland*, 1 How. 202, (42 U.S. 202) is in point.”

The doctrine of a shop right or employer's license has been stated by the Court in *Grip Nut Co. v. Sharp*, 66 U.S.P.Q. 391, 395 as follows:—

“It will be enough to say that the inventions here in issue were developed and perfected in plaintiff's plant with its time, materials and appliances, and wholly at its expense; hence the court correctly concluded that plaintiff had shop rights under the patents. We are fortified in this belief since the principle has been established that if an employee in the course of his employment makes an invention using his employer's time and materials, the employer has a free



indefeasible license and shop right under the invention and any patent covering the invention, which shop right is co-extensive with the business requirements of the employer, \* \* \*; that is to say, because the servant uses his master's time, facilities and materials to attain a concrete result, the employer is entitled to use that which embodies his own property, and to duplicate it as often as he may find occasion to employ similar appliances in his business.  
\* \* \*

### 9.02. Use of Patent.

As stated in Section 9.01 a patent is a grant to the patentee, who may use or not use the grant provided he does so lawfully. For example, in the Paper Bag Patent Case, (210 U.S. 405, 425) the United States Supreme Court adopted for a second time the language of the Circuit Court of Appeals for the Sixth Circuit in *Heaton Peninsular Company v. Eureka Specialty Company*, 77 Fed. Rep. 294 as follows:

“\* \* \* If he [a patentee] sees fit, he may reserve to himself the exclusive use of the invention or discovery. If he will neither use his device nor permit others to use it, he has but suppressed his own, \* \* \* his title is exclusive, and so clearly within the constitutional provisions in respect to private property that he is neither bound to use his discovery himself or permit others to use it. The dictum found in *Hoe v. Knapp*\*, 17 Fed. Rep. 204, is not supported by reason or authority.”

The doctrine that a patentee is not bound to use or to permit others to use his invention during the term of the patent has been repeatedly affirmed in the United States. Laws in many foreign countries require the patentee or his assignee “to work the patent”, and in such countries a very limited working of the patent seems sufficient.

If a patentee elects to use the patent himself, he may make, use and sell the machine, composition or device of the claimed invention. He may practice any combination of the three rights, i. e., make, use or sell. He may employ others to exercise one or more of the three rights and exercise one or more of the rights himself. In some cases geographic division may be employed so that the patentee operates in one section of the country and licenses others to operate in the remaining sections. A patentee might license others in certain fields and reserve all other fields to himself, e. g., the license might cover non-commercial uses such as radio in the home, and the reserved field might include commercial uses such as in theatres.

A patentee, patent owner, or licensee under a patent must bear in mind that the right granted him by the Government to exclude others from making, using, or selling *does not include the right to use the*

---

\* Note in *Hoe v. Knapp* the lower Court held that a patentee was bound to use the patent or allow others to use it on reasonable terms.

*unexpired patents of others.* This restriction applies in two directions: (1) If there is an earlier patent with broad claims, the earlier patent stands squarely in the path and excludes the manufacture, use or sale of the later invention, in the absence of a license, until the earlier patent has expired. (2) If a later inventor makes an improvement over the earlier invention, the owner of the patent on the earlier invention has no right to use the improvement. In *Odiorne v. Winkley*, 18 Fed. Case 581, Judge Story voiced the first restriction in the following words:

“The original inventor of a machine is exclusively entitled to a patent for it. If another person invents an improvement on such a machine he can entitle himself to a patent for such improvement only, and does not thereby acquire a right to patent and use the original machine; and if he does procure a patent for the whole of such a machine with the improvement, and not for the improvement only, his patent is too broad, and therefore void.”

### 9.03. *Patent Licenses.*

Licenses to use a patent were mentioned in Section 9.02 in connection with the patentee's or patent owner's active engagement in the practice of his invention. Instead of participating in the actual use of the invention, many patent owners prefer to license others to make, use or sell the invention. The present section is directed to a general consideration of patent licenses.

Patent licenses may involve a variety of forms but generally licenses are: (1) exclusive or non-exclusive, (2) transferable or non-transferable, (3) divisible or indivisible, (4) subject to payment of royalties or royalty-free, and (5) limited or unlimited. The limitations imposed might apply with respect to time, territory, field of use, or to combinations of the three functions; i.e., (1) manufacture, (2) use, or (3) sale. The number of combinations of terms or conditions of a patent license is almost unlimited. The most common form of license is non-exclusive, non-transferable, subject to royalties based on extent of use, with a grant of the right to make, use, or sell the invention of the patent.

The nature, conditions, and terms of a license depend upon many things; such as, the custom of the industry in which the invention is to be used; the demands of the licensor, who grants the license; and the interest and needs of the licensee, who acquires the license. It is unusual for the licensor to agree to do more than to permit the licensee to use the patent. However, although it is unusual, the licensor may agree to protect his licensee against infringement suits which are brought against the licensee practicing the patented invention. In other license agreements the licensor may agree to sue those who

infringe the licensed patent. In this connection it is noted that a non-exclusive licensee does not have the right to bring an infringement suit. The right to sue belongs to the patent owner or his exclusive licensee. As a practical matter many licensors do sue infringers to have their patents adjudicated whereby infringers may be enjoined from further infringement. This increases the value of their licenses.

It may not be out of place to voice a few comments about the value of licenses. The average free-lance patentee strives to get a high return from his invention but in doing so he may ask too much royalty. It is easy to understand his viewpoint: he may believe that his invention is the sole means of accomplishing the desired result; and therefore, he may believe that he can extract whatever royalty he pleases. But the truth is that very few inventions are "the sole means," and if they are, most inventions do not stay long in that class.

If the price of a license is high, a great effort will be made to find a cheaper or even a better means to produce the result. Rarely does that effort fail. On the other hand, there are always those who are willing to infringe and to take their chances on the outcome of an infringement suit. The infringer may be and usually is well fortified with prior art, and, not infrequently in the present cycle, the patent will be declared invalid by the trial court. Even if the patent should be valid, there is a reasonable chance, that the natural developments of the art will displace the invention.

On the other hand there may be no suits or there may be no attempt to avoid the patent and yet the license fails to bring substantial returns. In such situations the license fees or royalties may weigh too heavy in the final price. If the royalty rates were lower, the returns might be greater. There can be no doubt that even a patent cannot set aside the "law of diminishing returns." The "law" does operate and experience demonstrates that royalty rates on the low side of reasonable are apt to produce more income than excessively high rates.

#### 9.04. *Infringement of Patents.*

Section 271 of the Patent Statutes (Public Law 593) provides, with some exceptions:

(a) Whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

(c) Whoever sells a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part

of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use, shall be liable as a contributory infringer.

(d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent; (3) sought to enforce his patent rights against infringement or contributory infringement.

The foregoing statutory definition (a) of an infringer seems reasonably clear. If the courts interpret the language of paragraph (a) along the lines of reasoning in past decisions, the present definition includes individuals, partnerships, and corporations. Any one of the specified acts—making, using, or selling—constitutes an infringement. An engineer should be constantly alert to avoid infringing patents or placing his employer in the category of an infringer. An early request for patent approval is the first step in avoiding infringement.

After an engineer has described the apparatus, system, material, or process, and has made a complete statement of all essential facts in his request for patent approval to make, use, or sell the subject matter of his request, ordinarily his patent department or his patent attorney searches for adversely held patents that might be infringed. It is the responsibility of the patent attorney to determine whether or not there is infringement. If there is infringement, patent approval should be withheld.

#### 9.05. *Actively Inducing Infringement.*

The second definition (b) involving one who "actively induces infringement" may seem clear to a casual reader. Nevertheless experienced patent attorneys will ask many questions about the boundary lines of the definition. While the boundaries will be determined ultimately by the courts, it might help the engineers to know how far the Circuit Court in California went in 1899 in *Risdon Iron and Locomotive Works v. Trent* (92 Fed. Rep. 375,390).

The invention of the patent in suit related to an ore-crushing mill. Mr. L. C. Trent, the defendant, denied that he made, used, or sold the mill. Trent was the architect. His firm L. C. Trent and Co. furnished the plans for the mill. The machinery was principally made by the mill owner at the owner's factory and substantially in accord with plans

furnished by Trent and Co. The mill building was erected by Trent and Co. Trent and Co. placed the machinery in the mill building and fitted it for operation. Compensation for the service was a percentage of the cost of material and labor. No charge was made for the plans.

The firm of L. C. Trent and Co., of which Trent was a member, advertised that it would furnish crushing mills of the infringing design. While the firm sold and erected mills, it had no foundry, machine shop, or iron works of its own. After receiving an order, the firm advertised for bids from manufacturers for the making of the machinery. Trent, as an individual, had twenty-five years of experience in that line of business and he knew what he was doing in selecting and designing the mill. He profited by the adoption of his plans at least to the extent of a commission for services as contractor and builder. Thus the court arrived at the conclusion that Mr. Trent was an active contributor to the infringement and was personally liable.

#### 9.06. *Contributory Infringement.*

The third definition (c) relating to contributory infringement appears to require both the sale of a material part of the invention and an intent to infringe the patent. The material part is characterized further as "not a staple article or commodity of commerce suitable for substantial non-infringing use."

While the doctrine of contributory infringement is old, the appearance of a contributory infringement definition in the statutes is new. The court-made doctrine may have started about 1871 in *Wallace et al v. Holmes et al*, Case No. 17,100, 29 Fed. Cases 74.

The defendants, *Holmes et al*, made and sold lamp burners. The plaintiffs, *Wallace et al*, alleged that the lamp infringed *Collins U. S. Patent 49,984* for "improvement in lamps." The patent disclosed and claimed an oil lamp including a wick-tube, a chimney, a chimney rest, and a cone with peripheral springs designed to press against the glass of the chimney to hold it in place. In this arrangement air, passing through perforations in the chimney rest, impinged on the lower part of the chimney and kept it cool.

The lamp burner made and sold by the defendants did not include the chimney. It was proved that the burner alone was utterly useless. Also that the chimney alone was wholly useless. The defendants did not supply the chimney, leaving the purchasers to do so. The defendants argued that since the patent claimed the combination of elements, there was no infringement because the defendants omitted a material element of the combination in selling only the burner.

The court pointed out that the manufacturer of the chimney could

use the same defense and that would leave the complainants to seek, as the infringers, the individual purchasers who combined the burner and chimney. Such a course would, considering the small value of each separate lamp and the trouble and expense of prosecution, make the complainants helpless and remediless. The court then recognized the rule that a patent for a combination, merely, is not infringed by one who uses one or more of the parts, but not all to produce the same results, but concluded ". . . this rule will not protect these defendants." Then, carefully tracing the logic of the case, the court held that the defendants were "active parties to the whole infringement, consenting and acting to that end, manufacturing and selling for that purpose."

In the foregoing case the burner, less the chimney, was certainly a material part of the patented lamp combination. It seems clear that the defendants intended that the purchaser add the lamp chimney and thus complete the infringement. While the expression "contributory infringement" does not appear, many patent attorneys believe this decision represents the starting point of the doctrine.

Gradually the doctrine of contributory infringement grew. The courts were inclined to accept the decision in *Wallace et al v. Holmes et al* as a proper application of the law. The decision was followed frequently. The doctrine was expanded as a result of court decisions involving contractual and license restrictions. By agreement a licensee or user might be required to purchase unpatented materials which in some cases were not even a part of the patented combination. Such a situation arose in *Henry v. Dick Co.* (224 U.S. 1). The Dick Company sold a rotary mimeograph machine. The machine included a "License Restriction" reciting that the machine "may be used only with stencil paper, ink and other supplies made by the A. B. Dick Company, Chicago, U.S.A." The stencil paper and the ink were not patented. Henry, with knowledge of the license, sold ink to the purchaser of a Dick machine for use therein.

In due course Henry was sued for contributory infringement, and the following question was certified to the Supreme Court: "Did the acts of the defendants constitute contributory infringement of the complainant's patents?" The majority of the Justices answered affirmatively. Mr. Chief Justice White, Mr. Justice Hughes, and Mr. Justice Lamar concurring, dissented. The Chief Justice saw danger signs. For example ". . . This inevitably causes the contentions now upheld to come to this, that a patentee in selling the machine covered by his patent has power to extend the patent so as to cause it to embrace things which it does not include; in other words, to exercise legislative power of a far-reaching and dangerous character." The majority and



minority opinions together cover over 60 printed pages. Many decisions are cited and analyzed. The legal philosophy is ably and brilliantly presented. Naturally, the majority opinion prevailed, but not for long.

The *Henry v. Dick* decision was handed down in 1911 at the October term. Six years later we find the Supreme Court overruling its 1911 decision in *Henry v. Dick Co.* The majority decision in 1917 in the *Motion Picture Patents Company v. Universal Film Manufacturing Company et al* (243 U.S. 502) provided a negative answer to these questions:

“First. May a patentee or his assignee license another to manufacture and sell a patented machine, and by a mere notice attached to it limit its use by the purchaser or by the purchaser’s lessee, to films which are no part of the patented machine, and which are not patented?

“Second. May the assignee of a patent, which has licensed another to make and sell the machine covered by it, by a mere notice attached to such machine, limit the use of it by the purchaser or by the purchaser’s lessee to terms not stated in the notice, but which are to be fixed, after sale, by such assignee, in its discretion?”

The *Precision Machine Company*, under a restricted license, had sold a motion picture projection machine, involving the invention of U. S. Patent 707,934, to the *Seventy-Second Street Amusement Company*. The machine was fully paid for when *Prague Amusement Company* acquired the machine as part of the equipment of the playhouse leased by *Prague* from the *Seventy-Second Street Amusement Company*. After the reissue patent (directed to the motion picture film) expired, the defendant *Universal Film Manufacturing Company* made two films which were sold through *Universal Film Exchange* to the defendant *Prague* for use on the machine. The films were thus used. Whereupon the plaintiff notified *Seventy-Second Street Amusement Company* and *Universal Film Exchange* that they were infringing U. S. Patent No. 707,934. As in the earlier *Henry v. Dick Co.* case, the machine carried the restrictive license notice.

In the *Motion Picture* case, the above recited questions were answered in the negative by the majority of the Supreme Court. Mr. Justice Holmes filed a dissent with which Mr. Justice McKenna and Mr. Justice Van Devanter concurred. Since the *Motion Picture* case decision, the Supreme Court has consistently held that the owner of a patent may not employ it to secure a limited monopoly of an unpatented material used in applying the invention. Generally speaking, the Court has refused to grant the owners of patents relief from direct and contributory infringement on a showing that the patents were



used "as the effective means of restraining competition with its sale of an unpatented article." See *Leitch Mfg. Co. v. Barber Co.* (302 U. S. 458); *Carbice Corp. v. American Patents Corp.* (283 U. S. 27); *Morton Salt v. G. S. Suppinger Co.* (314 U. S. 488); *B. B. Chemical Co. v. Ellis* (314 U. S. 495); *Mercoid v. Mid-Continent Co.* (320 U. S. 661); *Mercoid v. Minneapolis-Honeywell* (320 U. S. 680) and others.

Mr. Justice Douglas speaking for the majority in the first *Mercoid* case said:

"The result of this decision, together with those which have preceded it, is to limit substantially the doctrine of contributory infringement. What residuum may be left we need not stop to consider. It is sufficient to say that in whatever posture the issue may be tendered courts of equity will withhold relief where the patentee and those claiming under him are using the patent privilege contrary to the public interest."

In the second *Mercoid* case at page 684 Mr. Justice Douglas held:

"The fact that an unpatented part of a combination patent may distinguish the invention does not draw to it the privileges of a patent. That may be done only in the manner provided by law. However worthy it may be, however essential to the patent, an unpatented part of a combination patent is no more entitled to monopolistic protection than any other unpatented device. For as we pointed out in *Mercoid v. Mid-Continent Investment Co.*, *supra*, a patent on a combination is a patent on the assembled or functioning whole, not on the separate parts. The legality of any attempt to bring unpatented goods within the protection of the patent is measured by the anti-trust laws not by the patent law. For the reasons stated in *Mercoid v. Mid-Continent Investment Co.*, *supra*, the effort here made to control competition in this unpatented device plainly violates the anti-trust laws, even apart from the price-fixing provisions of the license agreements. It follows that petitioner is entitled to be relieved against the consequences of those acts. It likewise follows that respondent may not obtain from a court of equity any decree which directly or indirectly helps it to subvert the public policy which underlies the grant of its patent. *Morton Salt Co. v. G. S. Suppinger Co.*, 314 U. S. 488, 494; *B. B. Chemical Co. v. Ellis*, 314 U. S. 495."

The many decisions—starting in 1871 with *Lamp Case*, extending through the *Motion Picture* case in 1916 and beyond—demonstrate that the pendulum of judicial decisions has swung from one extreme to another. Probably the decisions influenced the Congress in including in paragraph (d) of Section 271 a statutory directive that patent owners are entitled to relief for infringement and contributory infringement, relief which some believe denied since about 1916 by the long line of Supreme Court decisions.

Now we appear to be starting anew with "actively induced infringements," "contributory infringements," and the right "to relief for infringement or contributory infringement" without being deemed guilty of misuse of a patent under the circumstances set forth. It is idle to speculate about the ultimate meaning of the statutory language but it is not idle to urge engineers and others responsible for design, manufacture, use or sale of apparatus, component parts, or processes to exercise care. We have tried to point out in a general way the areas of possible infringement, both direct and contributory. The latter is more subtle, less well defined, and therefore perhaps more dangerous.

Be careful. Do not infringe. Avoid actively inducing or contributing to an infringement.

## TABLE OF CITATIONS

	PAGE
ABBOTT ET AL V. SHEPHERD ET AL .....	131
ALEXANDER MILBURN Co. v. DAVIS-BOURNONVILLE Co. ....	54
ALTOONA PUBLIX THEATRES INC. v. AMERICAN TRI-ERGO Corp., ET AL	44
ALTOONA THEATRES v. TRI-ERGO Corp. ....	111
AMERICAN FRUIT GROWERS v. BROGDEN .....	30
ANDERSON v. MILLER .....	59
APPLEBY v. BECKMAN .....	129
ATLANTIC WORKS v. BRADY .....	7
AUTOMATIC WEIGHING MACHINE Co. v. PNEUMATIC SCALE Corp.....	76
BOILEAU v. GODFREY .....	130
BOOTH v. STUTZ MOTOR CAR Co. OF AMERICA, INC. ET AL .....	141
BRITTON ET AL v. HASS ET AL .....	73
BROWN, JR. v. BARTON .....	79
BROWN v. DAVIS .....	59
BURSON v. VOGEL .....	81
BURT v. EVORY .....	14
CARBICE Corp. v. AMERICAN PATENTS Corp. ....	168
CHEMICAL, B. B. Co. v. ELLIS .....	168
CHRISTIE v. SEYBOLD .....	79
CLARK THREAD Co. v. WILLIMANTIC LINEN Co. ....	75
COCHRAN v. DEENER .....	50
CONMAR PRODUCTS CORPORATION v. TIBONY .....	158
CONSOLIDATED FRUIT-JAR Co. v. WRIGHT .....	59
CONSTITUTION OF THE UNITED STATES .....	4
CORNING ET AL v. BURDEN .....	50
CORONA Co. v. DOVAN Corp. ....	76
CRANE ET AL v. CARLSON .....	83
DEERING v. WINONA HARVESTER WORKS .....	70
DE FILIPPS v. CHRYSLER Corp. ET AL .....	144
DIAMOND RUBBER Co. v. CONSOLIDATED TIRE Co. ....	44
DOWNES v. ANDREWS .....	69
DUNBAR v. MYERS .....	20
EDISON ELECTRIC LIGHT Co. v. UNITED STATES ELECTRIC LIGHTING Co.	37
EIBEL Co. v. PAPER Co. ....	53
ELECTRIC STORAGE BATTERY Co. v. SHIMADZU ET AL .....	99
ELIZABETH v. PAVEMENT Co. ....	56, 62
ENSTEN v. SIMON, ASCHER AND Co. ....	110
FAGEOL v. MIDBOE .....	131
FEDERAL STATUTE (R.S. 4886) .....	4
FRENCH v. CARTER .....	16
GANDY v. MAIN BELTING Co. ....	57
GARRELS ET AL v. FREEMAN .....	74
GILBERT v. GENERAL MOTORS Corp. ....	144
GIRDLER Corp. v. E. I. DUPONT DE NEMOURS AND Co. ....	108
GLUE Co. v. UPTON .....	12, 52

TABLE OF CITATIONS

171

	PAGE
GRANT v. RAYMOND .....	Intro., 106
GRASSEI, EX PARTE .....	99
GRIP NUT CO. v. SHARP .....	159
HAINSWORTH v. PHILIPP .....	130
HALL v. MACNEALE .....	62
HAT POUNCING MACHINE CO. v. HEDDEN .....	26
HEATON PENINSULAR CO. v. EUREKA SPECIALTY CO. ....	156
HEFELE v. BROWN .....	123
HENDY v. MINERS' IRON WORKS .....	23
HENRY v. DICK CO. ....	166, 167
HICKS v. KELSEY .....	31
HILL v. WOOSTER .....	14
HOE v. KNAPP .....	160
HOTCHKISS ET AL v. GREENWOOD ET AL .....	9
HOWARD v. DETROIT STOVE WORKS .....	16
HULL v. DAVENPORT .....	132
HUNTER v. STRIKEMAN .....	76
IRELAND v. SMITH .....	76, 132
JANETTE v. FOLDS AND PERSONS .....	76
JONES v. WINSOR .....	130
KASARJIAN v. PAULSON .....	71
KELL v. FARNSWORTH v. GRAY .....	77
KELLEY-KOETT MANUFACTURING CO. v. McEUEEN .....	143
KENDALL ET AL v. WINSOR .....	63
KENNEDY v. HAZELTON .....	48
KIRKEGAARD AND JEBSEN v. RIES .....	74
KIRSCH MFG. CO. v. GOULD MERSEREAU CO., INC. ....	6
KNUTSON v. ELLSON .....	130
LAAS v. SCOTT .....	79
LARSON v. GENERAL MOTORS CORP. ....	144
LAWTHER v. HAMILTON .....	41
LEITCH MFG. CO. v. BARBER CO. ....	168
LUEDDECKE v. CHEVROLET MOTOR CO. ET AL .....	144
MAHN v. HARWOOD .....	108
MARCHAND v. EMKEN .....	21
MASON v. HEPBURN .....	133
McCLAIN v. ORTMAYER .....	4
McCLURG v. KINGSLAND .....	159
McFARLANE .....	99
MERCOID v. MID-CONTINENT CO. ....	168
MERCOID v. MINNEAPOLIS-HONEYWELL .....	168
MILLER v. BRASS CO. ....	107
MOORE v. FORD MOTOR CO. ....	144
MORGAN ENVELOPE CO. v. ALBANY PAPER CO. ....	30
MORTON SALT v. G. S. SUPPINGER CO. ....	168
MOSLER SAFE AND LOCK CO. v. MOSLER .....	16
MOTION PICTURE CASE .....	167, 168
MOTION PICTURE PATENTS CO. v. UNIVERSAL FILM MFG. CO. ET AL....	167
ODIORNE v. WINKLEY .....	161
PAPER BAG CASE .....	92

	PAGE
PAPER BAG PATENT CASE .....	156
PATENTABILITY AND VALIDITY BY CAESAR AND RIVISE .....	6
PAUL V. HESS .....	76
PENNINGTON ENGINEERING CO. V. HOUDE ENGINEERING CORP.....	144
PENNSYLVANIA RAILROAD CO. V. LOCOMOTIVE TRUCK CO. ....	31
PETERS V. HOPKINS .....	72
PETTY V. GILES .....	130
PITTS V. HALL .....	59
PLANING MACHINE CO. V. KEITH .....	10
PYRENE MANUFACTURING CO. V. BOYCE ET AL .....	5
QUIST V. OSTROM .....	2
RADIO CORPORATION OF AMERICA V. DUBILIER CONDENSER CORP.....	34
RADTKE PATENTS CORP. ET AL V. COE ET AL .....	122
RISDON IRON & LOCOMOTIVE WORKS V. TRENT .....	164
ROEMER V. SIMON .....	54
RUBBER-TIP PENCIL CO. V. HOWARD .....	50
SEYMOUR V. OSBORNE .....	56, 77, 155
SHAW V. COOPER .....	66
SKINNER V. SWARTWOUT .....	77
SLAWSON V. GRAND ST. R. R. CO. ....	28
SLOAN V. PETERSON ET AL .....	73
SMITH V. GOODYEAR DENTAL VULCANITE CO. ....	39
SMITH V. NICHOLS .....	12
SOLOMONS V. UNITED STATES .....	159
SPERRY V. AUFIERO ET AL .....	130
SPRAGUE ELECTRIC CO. V. CORNELL-DUBILIER ELECTRIC CORP. ....	158
TAYLOR V. SWINGLE .....	132
THROPP'S SONS CO. V. SEIBERLING .....	21
TRENT V. RISDON IRON & LOCOMOTIVE WORKS .....	164
TRIPLETT V. STEINMAYER .....	131
TYLER V. BOSTON .....	52
U. S. INDUSTRIAL CHEMICALS V. CARBIDE AND CARBON CHEMICAL CORP.	108
VAN CLEEF V. TIERNEY .....	132
WALKER ON PATENTS .....	5
WALLACE ET AL V. HOLMES ET AL .....	165, 166
WINSLOW V. AUSTIN .....	71, 75
WOOD V. UNDERHILL ET AL .....	52
WRIGHT V. RUNGE ET AL .....	135

## TABLE OF ILLUSTRATIONS

"ALL IN A LIFETIME" (STUTZ BEARCAT) .....	146
BECKWITH U. S. PATENT .....	18
BLAIR U. S. PATENT .....	51
BRADY U. S. PATENT .....	8
BROGDEN AND TROWBRIDGE U. S. PATENT .....	29
BROWN U. S. PATENT .....	124
CUMMINGS REISSUE U. S. PATENT .....	40
CUSENBARY AND MARS U. S. PATENT .....	24
DAVIS AND ALLEN U. S. REISSUE PATENT .....	60
DECLARATION OF INTERFERENCES BY PATENT OFFICE .....	117, 118
DISCLOSURE OF INVENTION (Sample) .....	89
EDISON U. S. PATENT .....	38
EICKEMEYER U. S. PATENT .....	27
EMPLOYMENT AGREEMENT .....	157, 158
EVORY AND HESTON U. S. PATENT .....	13
FRENCH U. S. PATENT .....	17
GRANT U. S. PATENT .....	43
GRUNDMANN DISCLOSURE DRAWING .....	91
HEFELE U. S. PATENT .....	124
HEISING U. S. PATENT .....	35
LOWELL AND DUNMORE U. S. PATENT .....	33
MASON U. S. PATENT .....	58
McEUEU U. S. PATENT .....	147
MOSLER U. S. PATENT .....	15
MYERS AND EUNSON U. S. PATENT .....	19
PATENT GRANT (Sample) .....	155
PATENT DISCLOSURE DATA SHEET .....	85, 86
PATENT OFFICE ACTION (Sample) .....	96
SMITH U. S. PATENT .....	32
STATE U. S. PATENT .....	22
SUMMARY OUTLINE OF PATENTABLE INVENTION REQUIREMENTS.....	67
TAYLOR U. S. PATENT .....	25
VOGT, MASSOLE AND ENGL U. S. PATENT .....	45
WHITE U. S. PATENT .....	36
WOODBURY U. S. PATENT .....	11

## INDEX

### A

Abandoned experiment .....	136
Abandonment of interference .....	114
Abandonment of invention .....	62
Absence of employment agreement .....	159
Action, advisory .....	103
Action, Patent Office .....	95
Actively inducing infringement .....	163, 164, 165, 169
Acts, infringing specified .....	164
Actual reduction to practice .....	75, 76
Adding means to make device operable, no invention .....	23
Adequate description .....	75
Adequate drawings, dated and signed documents .....	75
Adverse decisions, appeals from .....	138
Advisory action .....	103
Affidavits under Rule 131 .....	100
Aggregation of elements, no invention .....	31
Agreement	
absence of .....	159
employment .....	156
restrictions .....	159
violation .....	159
Allowance of application .....	104
Amendments	
form .....	98
when due .....	95
Analogous subject .....	31
"A Person", term .....	47
Appeals	
from adverse decisions .....	138
from adverse decisions, summary .....	140
from final rejection .....	103, 104
further appeals .....	139
to Board of Appeals .....	104, 105
to the Court of Customs and Patent Appeals .....	139
to U. S. District Court .....	140
Application	
allowance .....	104
assignment .....	141
divisional .....	102
filing .....	94
final fee .....	104
for patent .....	92, 93
forfeited .....	104
preparation of .....	92
prosecution .....	94
reissue .....	106



Application of an old process or machine to an analogous subject, no invention .....	31
Approval to manufacture, use, sell, publish .....	141
Arrangement, proportion, degree .....	12
Art, definition of term .....	50
Artificial gums and palates, patent .....	39
Assignment of application .....	141
Attorney .....	92
Avoidance or postponement of interference .....	116

## B

Bag, paper, patent .....	161
Board of Appeals .....	104
when due .....	105
Boat, dredge, patent .....	7
Breach of confidence cases .....	145
Briefs	
at final hearing in interference .....	128
Board of Appeals .....	104
service on opposing party .....	128

## C

Cancelling claims .....	63
Changes, drawings .....	98
Changes in proportions of a device or machine, no invention .....	30
Changes, specification .....	97
Characteristics, recognizable .....	68
Circular grate, patent .....	16
Circular saw, patent .....	20
Civil Action .....	138
Claim, cancel .....	63
Claims proposed for interference .....	115
Claims, rejection of .....	95
Claims and specification .....	93
Clip magazine for firearms, patent .....	137
Commercial success .....	42
Commissioner of Patents .....	6, 114
Competent witnesses .....	75
Complete invention .....	76
Composition of matter, definition of term .....	52
Concealment or suppression of invention .....	137
Conception of invention .....	69
undisclosed .....	68
Conception and reduction to practice .....	78
Concession of priority, interference .....	116
Confidence cases, breach of .....	145
Consideration, general .....	95
Constitution Article I, sec. 8 .....	4
Constructive reduction to practice .....	78

Contributory infringement	
definition of .....	165
doctrine of .....	165
expression of .....	166
starting point of doctrine .....	166
Converting manual to mechanical operation, no invention .....	20, 77
Copying .....	143
Corroboration of actual reduction to practice .....	76
Court of Customs and Patent Appeals .....	138
Custody, of testimony and exhibits .....	129

## D

Data sheet, disclosure .....	84
Dated and signed written description .....	74
Decisions, appeals from adverse .....	138
Decisions involving diligence .....	130
Decisions, predictable in interference .....	129
Definition of actively .....	164
Definition of contributory infringement .....	165
Definition of invention .....	1
negatively defined .....	6
statutory .....	4, 52
textbook .....	5
Definition of statutory infringement .....	164
Definition of terms "Art", "Machine", "Manufacture", and "Composition of Matter" .....	50, 52
Definition, new matter .....	97
Degree, arrangement, proportion .....	12
Depositions .....	126
Description, written .....	70, 71, 72, 73, 74, 75, 79
Device, or machine .....	30
Device, radio receiving, patent .....	31
Diligence .....	78, 79, 130, 131, 132
decisions .....	131
exercising .....	130
Disclaimer, interference .....	116
Disclaimers .....	109
Disclosure	
data sheet .....	84
example .....	88
form .....	83
invention .....	83
invention, oral .....	69
preparation .....	87
substance .....	87
witnesses .....	73, 74
written description .....	70, 71, 72, 73, 74, 75, 79
Disclosures of invention	
outsider .....	144
patent approval .....	143

Discoveries .....	4
Divisional patent .....	101
Divisional patent application .....	101, 102
Division, requirement of .....	101
Doctrine of contributory infringement .....	165
Documentary evidence .....	77
Drawings, changes in .....	98
Drawings, dated and signed documents .....	75
Dredge boat, patent .....	7
Drills, grain, patent .....	59
Duplication of parts, no invention .....	26

## E

Election of species .....	100
Elements, aggregation of .....	31
Embodiment, physical .....	68
Employer protection .....	2
Employer's license .....	160
Employer's shop right .....	160
Employment agreement	
absence of .....	159
inventor subject to .....	156
restrictions .....	162
violation .....	162
Engine, locomotive trucks, patent .....	31
Engineering notebooks .....	81
Enlargement .....	10
Eraser, patent .....	50
Essentials .....	47
Evidence	
documentary required .....	70
of invention .....	69
Evidence of invention for interference .....	70
Examination .....	95
Example, disclosure .....	88
Example of Motion to Amend .....	120
Example of Motion to Dissolve .....	121
Exceptions .....	47
Exercising diligence .....	130
Exercising ordinary skill .....	7
Exhibits in interference .....	128
Experiment, abandoned .....	136

## F

Failure to file Preliminary Statement .....	120
Feeder — ore stamp, patent .....	23
Fees .....	103, 104
Filing the application .....	94
Filing motions to amend, time for .....	121
Final hearing .....	128

Final hearing briefs .....	128
Final hearing — date set by Examiner of Interference .....	128
Final rejection .....	103
Firearms, magazine clip, patent .....	137
First inventor .....	77
Flywheel, patent .....	44
Forfeited application .....	104
Formal matters pertaining to interference record .....	128
Formal papers .....	94
Forms	
amendments .....	98
disclosure data sheet .....	84
for disclosing inventions .....	83
Forms of license .....	162
Free-lance inventor .....	154
Fruit jars, patent .....	59
Further appeals .....	139
Further office action .....	102

## G

General consideration .....	95
Glue, patent .....	10
Government, license from .....	161
Grain drills, patent .....	59
Grate, circular, patent .....	16
Gums, artificial, patent .....	39

## H

Hats, pouncing, patent .....	23
"Happy idea" .....	88
Hydrogen peroxide, patent .....	21

## I

Idea, happy .....	88
Ideas submitted by outsiders, policy .....	149
Improper use of disclaimer .....	111
Improvement .....	53
Incandescent lamp, patent .....	37
Infringement	
active contribution .....	165
actively inducing .....	165
contributory .....	165
intent to infringe .....	165
making, using or selling .....	164
personal liability for .....	165
Inoperable reference .....	100
Intent to infringe patent .....	165
Interference	
abandonment .....	116
avoidance or postponement .....	116

Interference (*continued*)

briefs at final hearing .....	128
briefs at final hearing — when due .....	128
briefs — service on opposing party .....	128
claims proposed for .....	115
conception .....	78
concession of priority .....	116
corroboration .....	76
custody of testimony and exhibits .....	128
declaration of .....	116
diligence .....	78, 130, 131, 132, 133
disclaimer .....	116
documentary evidence .....	77
evidence of invention .....	70
exhibits .....	128
final hearing .....	128
formal matters pertaining to record .....	128
laboratory, notes for .....	120
motion to amend .....	121, 123
motion to dissolve — example .....	125
motion to dissolve — rule 232 .....	126
motion period .....	120
motions — various .....	120
notice of taking testimony .....	126
notice of taking testimony — service on opposing parties .....	126
notice of time for taking testimony .....	126
officer before whom testimony is taken .....	126
postponement .....	116
predictable decisions .....	129
preliminary statement .....	119
preliminary statement, failure to file .....	121
preliminary statements — when opened for inspection .....	126
printing — when may be dispensed with .....	128
priority of invention .....	129
records of inventions for .....	120
reduction to practice .....	75, 76, 77, 78, 79, 129, 130, 131, 132
search — examiner's .....	103
taking of testimony .....	126
testifying .....	127
testimony .....	126
forwarding to Patent Office .....	128
objection to .....	127
requirements in taking .....	126, 127
when printing required and when may be dispensed with ..	128
witness — testifying .....	127
witnesses — competent .....	73
witnesses may be subpoenaed .....	128
Interfering patents .....	140
Intervening rights .....	107
Invalidity .....	2

Invention .....	4
abandonment .....	62
complete .....	76
concealment of .....	137
conception .....	68
constructive reduction to practice .....	78
definition of, popular .....	1
statutory .....	4, 54
textbook .....	5
disclosure .....	83, 85
disclosures .....	143
evidence .....	70
form of disclosing .....	83
how to be submitted by outsiders .....	144
negative rules .....	37
negatively defined .....	6
new and useful .....	49
not in public use or on sale in this country .....	57
not known or used by others .....	54
not patented or described in any printed publication .....	55
novelty .....	68
oral disclosure .....	69
ownership of .....	154
ownership of in absence of agreement .....	159
patent approval .....	143
patentable requirements .....	67
popular inventor .....	2
preparation of disclosure .....	87
priority of .....	129
protection .....	2
publication of .....	143
records of .....	81
records of for interference .....	119
reduction to practice .....	78
secrecy and patentability .....	1, 2
statutory .....	4, 54
subject matter .....	50
substance of disclosure .....	87
suppression of .....	137
time of .....	71
undisclosed .....	68
unpatented .....	1
useful (term) .....	49
Inventor .....	
first .....	77
free-lance .....	154
"popular" .....	2
subject to employment agreement .....	156

### J

Jars — fruit, patent .....	59
----------------------------	----

## K

Knob, patent .....	9
--------------------	---

## L

Laboratory notes for interference .....	120
Lamp case .....	168
Lamps — incandescent, patent .....	37
License	
employer's (shop right) .....	160
forms of .....	162
government .....	161
patentee may license .....	162
value of .....	163
Locomotive engine — trucks, patent .....	31

## M

Machine .....	30
Machine, definition of term .....	50
Machine or device, change in proportions .....	30
Machine, planing, patent .....	10
Machine, substituting a part .....	28
Machines for pouncing hats, patent .....	23
Magazine, firearms clip, patent .....	137
Manufacture, approval to .....	141
Manufacture, definition of term .....	50
Material, substitution of .....	9
Matter, composition of .....	52
Matter, new defined .....	97
Matter, subject .....	50
Mechanical operation, converting manual .....	20
Mechanism (speed timing) for toasters, patent .....	131
Mental picture .....	68
Mere change form, no invention .....	10
Mere change in proportion, degree, arrangement, no invention .....	12
Mere enlargement, no invention .....	10
Methods of keeping engineering notes .....	81
Morse invention, telegraph .....	53
Motion period, interference .....	120
Motions	
to amend, example .....	123
to amend, notice re opposition .....	121
to amend, opposition .....	121
to amend, Rules 231, 232, 234 .....	120
to amend, service upon other parties .....	121
to amend under Rules 231, 233, 234, time for filing .....	121
to dissolve, example .....	125
to dissolve, Rule 232 .....	121
Movable device, adding means .....	23
Multiplication or unification of parts .....	16



## N

Negative rules of invention .....	37
Negatively defined, invention .....	6
New and useful invention .....	49
New matter, definition .....	97
No invention	
adding means to make a device movable .....	23
aggregation of elements .....	31
application of an old process or machine to an analogous subject .....	31
change in proportions of a device or machine .....	30
converting manual to mechanical operation .....	20
duplication of parts .....	26
exercise of ordinary skill .....	7
mere change of form .....	10
mere change in proportion, degree, arrangement .....	12
mere enlargement .....	10
omission of parts and their functions .....	23
substituting a part for an equivalent part of a machine.....	28
substitution of material .....	9
unification or multiplication of parts .....	16
Not in public use or on sale in this country .....	57
Not known or used by others .....	54
Not patented or described in any printed publication .....	55
Notebooks, engineering .....	81
Notes, laboratory .....	120
Notice of allowance .....	104
Notice of taking testimony .....	126
Notice of taking testimony, service on opposing parties .....	126
Notice of time for taking testimony .....	126
Novelty of invention .....	68

## O

Objections to testimony .....	127
Office action .....	96
Office action, further .....	102
Omission of parts and their functions, no invention .....	23
"On sale in this country, etc." .....	62
Opinions	
Alvey, Judge .....	71
Blatchford, Justice .....	14, 16, 23, 59
Bradley, Justice .....	7, 31, 42, 50, 56
Brown, Justice .....	5, 26, 30, 70
Clifford, Justice .....	20, 56
Commissioner of Patents .....	6
Coxe, Judge .....	21
Daniel, Justice .....	63
Douglas, Justice .....	168
Field, Justice .....	10, 12
Gray, Justice .....	31
Grier, Justice .....	52

Opinions (*continued*)

Hand, Judge Learned .....	6
Hatfield, Judge .....	73
Holmes, Justice .....	54, 167
Hughes, Justice .....	166
Jackson, Justice .....	16
Lacombe, Circuit Judge .....	37
Lamar, Justice .....	12, 59, 166
Lenroot, Judge .....	76, 79
Marshall, Chief Justice .....	—v—
McKenna, Justice .....	42, 167
M'Lean, Justice .....	66
Nelson, Justice .....	9
Shepard, Judge .....	74
Strong, Justice .....	14, 39
Swayne, Justice .....	59
Taft, Chief Justice .....	21
Taney, Chief Justice .....	52
Van Devanter, Justice .....	167
White, Chief Justice .....	166
Woods, Justice .....	26
Woolley, Justice .....	34
Oral disclosure .....	69
Ore-stamp feeders, patent .....	23
Outsider disclosures .....	144
RCA policy .....	149
Overcoming inoperable reference .....	100
Overcoming later reference .....	99
Ownership of inventions .....	154
Ownership of inventions in absence of agreement .....	159
Ownership of patents .....	154

## P

Palates and gums, artificial, patent .....	39
Paper bag, patent .....	161
Paper, toilet, patent .....	30
Particular patents	
Allen and Davis Reissue No. 8589 .....	60
Beckwith No. 206,074 .....	16
Bishop of 1901 .....	28
Blair No. 66,938 .....	51
Brady No. 72,360 .....	7, 9
Brogden and Trowbridge No. 1,529,461 .....	28
Brown No. 2,281,668 .....	124
Collins No. 49,984 .....	165
Cummings Reissue No. 1904 .....	39
Cusenbary and Mars No. 140,250 .....	23
Davenport, Quincy and Hotchkiss No. 2197 .....	9
Davis and Allen Reissue No. 8589 .....	60
Dunmore and Lowell No. 1,455,141 .....	31
Eaton & Luck No. 2,401,416 .....	95

Particular patents (*continued*)

Edison No. 223,898 .....	37
Eickemeyer No. 97,178 .....	26
Evroy and Heston No. 59,375 .....	12
French No. 244,224 .....	16
Goddard Reissue No. 4072 .....	10
Grant No. 554,675 .....	42
Hefele No. 2,329,199 .....	123, 124
Heising No. 1,432,022 .....	34
Heston and Evroy No. 59,375 .....	12
Hicks No. 325,410 .....	30
Hotchkiss, Davenport and Quincy No. 2197 .....	9
Latham No. 707,934 .....	167
Lawther No. 168,164 .....	39
Lowell and Dunmore No. 1,455,141 .....	31
Marchand No. 273,569 .....	20
Mars and Cusenbary No. 140,250 .....	23
Mason No. 102,913 .....	58
McEuen U. S. Patent 2,040,441 .....	147
Mosler No. 273,585 .....	14
Nicholson Reissue No. 1583 .....	61
Quincy, Hotchkiss and Davenport No. 2197 .....	9
Roemer No. 56,801 .....	54
Smith No. 34,377 .....	31
State No. 941,962 .....	21
Taylor No. 220,889 .....	23
Trowbridge and Brogden No. 1,529,461 .....	28
Vogt, Massolle and Engl No. 1,713,726 .....	44
Wood No. 1836 .....	52
Woodbury No. 138,462 .....	10
Parts, omission of and function .....	23
Patent approval .....	141
breach of confidence cases .....	145
disclosures of invention .....	143
outsider disclosures .....	144
publication of new inventions .....	143
to manufacture, use and sell .....	141
Patents, Commissioner of .....	6
Patent Office .....	94
Patentability and secrecy .....	1, 2
Patentable invention requirements .....	67
Patentee, license .....	162
Patents	
application for .....	92, 93, 94
assignment of .....	156
attorney .....	92
combination of elements .....	165
infringement .....	163
interfering .....	140
licenses .....	162
Office action .....	96

Patents ( <i>continued</i> )	
ownership of .....	154
philosophy of .....	—v—
plant .....	53
reissue .....	106, 107
term of .....	105, 154
use by inventor .....	161
use of .....	161
valid .....	65
Palates, artificial gum, patent .....	39
Peroxide, hydrogen, patent .....	21
Personal liability for infringement .....	165
Philosophy of patents .....	—v—
Physical embodiment .....	68
Picture, mental .....	68
Planing machine, patent .....	10
Plant patents .....	53
Plates, gum, patent .....	39
Plug, spark, patent .....	71
Policy concerning ideas submitted by persons outside the corporation..	149
Postponement or avoidance of interference .....	116
Pouncing hats, patent .....	23
Predictable decisions, interference .....	129
Preliminary statement .....	119
failure to file .....	120
when opened for inspection .....	125, 126
Preparation of disclosure .....	87
"Printed publications" .....	56
Printing of testimony, when required .....	128
Printing, when may be dispensed with .....	128
Prior art, search of .....	92
Priority, concession in interference .....	116
Priority of invention, interference .....	129
Priority of invention, summary .....	138
Proportion, degree, arrangement .....	12
Protecting employer .....	2
Protecting invention .....	2
Protecting research .....	2
Publication of new inventions, patent approval .....	139
Publications, printed .....	56
Public use .....	57, 59, 61
Public use or sale .....	61
Preparation of patent application .....	92
Prosecution of patent application .....	92
<b>R</b>	
Radio receiving device, patent .....	31
RCA policy concerning ideas submitted by persons outside the corporation .....	149
Receiving device, radio, patent .....	31
Recognizable characteristics .....	68

Records	
of invention	81
of inventions for interference	116
Reduction to practice	75, 76, 77, 78, 125, 126, 127
Reduction to practice, constructive	77
Reduction to practice, corroboration of actual	76
Reference inoperable, overcoming	100
Reference, overcoming later	99
Reissue application	106, 107
Reissue patent	107, 108
Reissue patent, term of	107
Rejection of claims	95
Rejection, final	103
Relief from infringement or contributory infringement	168
Requirement of division	101
Requirements for patentability	67
Requirements for preliminary statement	119
Research protection	2
Restrictions, employment agreement	159
Right to sue	162
Rights, shop	160
Roads	61
Rubber tires, patent	21, 42
Rules of practice	1
Rule 21	110
Rule 31	113
Rule 32	113
Rule 45	103
Rule 47	104
Rule 57	94
Rule 66	94
Rule 67	97
Rule 73	93
Rule 77	93
Rule 102	138
Rule 104	95, 99
Rule 105	95
Rule 106	95
Rule 107	95
Rule 111	95, 97
Rule 113	103, 105
Rule 115	95, 97
Rule 118	97
Rule 119	98
Rule 121	98, 102
Rule 123 (a)	98
Rule 123 (b)	98
Rule 124	98
Rule 126	99
Rule 131	99

Rules of Practice (*continued*)

Rule 132 .....	99, 100
Rule 135 .....	95, 97
Rule 136 .....	95, 97
Rule 141 .....	94, 100
Rule 142 .....	101
Rule 142 (a) .....	101
Rule 144 .....	102
Rule 146 .....	100
Rule 171-179 incl. ....	106, 114
Rule 181 .....	103, 105
Rule 191 .....	104
Rule 192 .....	105
Rule 193 .....	105
Rule 196 .....	105
Rule 196 (b) .....	106
Rule 196 (c) .....	106
Rule 201 .....	114
Rule 202 .....	115
Rule 203 (a) .....	114, 115
Rule 203 (b) .....	115
Rule 206 .....	105
Rule 207 (a) .....	116
Rule 207 (b) .....	116
Rule 209 (a) .....	116
Rule 209 (b) .....	116
Rule 209 (c) .....	116
Rule 211 .....	116
Rule 216 .....	119
Rule 218 .....	119
Rule 227 .....	120
Rule 231 .....	121
Rule 232 .....	120, 121
Rule 232 (b) .....	122
Rule 233 .....	120, 121
Rule 234 .....	121
Rule 236 .....	121
Rule 247 .....	121, 129
Rule 248 .....	121, 129
Rule 253 .....	128
Rule 254 .....	129
Rule 262 .....	116
Rule 273 .....	126
Rule 274 .....	127
Rule 275 .....	127
Rule 284 .....	128
Rule 311 .....	104
Rule 314 .....	104
Rule 317 .....	104
Rule 321 .....	109, 112
Rule 324 .....	112

## S

Safes, patent .....	14
Sale — approval .....	141
Sale, in this country .....	62
Sale of a material part of the invention .....	165
Sale, public use .....	61
Saw, circular, patent .....	20
Search of prior art .....	92
Search, interference, by Examiner .....	103
Secrecy and patentability .....	2
Secrets, trade .....	159
Seeds, patent .....	39
Sell, approval to .....	141
Shoe, waterproof, patent .....	12
Shop rights .....	160
Signed and dated written description .....	72
Skill, exercise ordinary .....	7
Spark plug, patent .....	71
Species, election .....	100
Specification and claims .....	93
Speed timing mechanism for toasters, patent .....	131
Stamp, ore feeder, patent .....	23
<b>Statutes</b>	
U.S.C. Title 35, Sec. 24 .....	128
U.S.C. Title 35, Sec. 100 .....	4
U.S.C. Title 35, Sec. 112 .....	70
U.S.C. Title 35, Sec. 141 & 142 .....	106, 138, 139
U.S.C. Title 35, Sec. 145 or 146 .....	106, 138, 139
U.S.C. Title 35, Sec. 251 & 252 .....	106, 107, 108
U.S.C. Title 35, Sec. 253 .....	109, 112
U.S.C. Title 35, Sec. 261 .....	154
U.S.C. Title 35, Sec. 271 (Public Law 593) .....	163, 168
U.S.C. Title 35, Sec. 288 .....	110
Statutory infringement definition .....	164
Statutory invention .....	4, 54
Subject, analogous .....	31
Subject matter of invention .....	50
Subpoena, for witnesses .....	128
Substance of disclosure .....	87
Substituting a part for an equivalent part of a machine, no invention .....	28
Substitution of material, no invention .....	9
Success, commercial .....	42
Sue, right to .....	162
Suggestions on diligence .....	79
Summary, appeals from adverse decisions .....	138
Summary outline of patentable invention requirements .....	67
Summary, priority of invention .....	138
Suppression or concealment of invention .....	137

## T

Taking of testimony .....	126
Taking of testimony, officer before whom taken .....	126
Tape, patent .....	135
Technical publications — patent approval .....	143
Telegraph, Morse invention, patent .....	53
Term "Any person" .....	47
Term of reissue patent .....	107
Term of patent .....	154
Terms: art, machine, manufacture, composition of matter .....	50
Testifying .....	127
Testimony	
forwarding to Patent Office .....	128
in interference .....	126
objections to .....	127
officer before whom taken .....	126
requirements in taking .....	126
taking of .....	126
when printing required .....	128
Text book definition of invention .....	5, 6
Time for filing motions to amend .....	121
Time of invention .....	71
Timely filing of disclaimer .....	110
Tire, rubber, patent .....	21, 42
Toaster, patent .....	131
Toilet paper, patent .....	30
Trade secrets .....	159
Trucks for locomotive engines, patent .....	31

## U

Undisclosed invention .....	68
Unification or multiplication of parts, no invention .....	16
United States District Court .....	134
United States, sale in .....	62
Unpatented invention .....	1
Use, approval to .....	141
Use of patents .....	141, 154
Use or sale, public .....	61
"Useful", term .....	49
Useful and new invention .....	49

## V

Valid patent .....	65
Validity .....	67
Value of license .....	163
Violation, employment agreement .....	159



## W

Waterproof, shoe, patent .....	12
Weaving, patent .....	134
Witness, testifying in interference .....	127
Witnesses .....	72, 73
Witnesses, competent .....	75
Witnesses, may be subpoenaed .....	127
Written description .....	70, 71, 72, 73, 74, 75
Written disclosure witnessed .....	73







