court, on due proceedings had, may adjudge and decree to the owner payment of a reasonable royalty or other form of general damages.

This proposed amendment would enable the patentee in all suits where the patent has been found valid and infringed to recover at least a reasonable royalty, and would provide a money recovery in the great majority of patent suits where no recovery would otherwise be possible. The Committee believes that the comparative certainty of financial return would answer one of the most common and strongest reproaches against the patent system, namely, that a patent does not ordinarily pay the inventor any money, and it believes that the incentive to invent would accordingly be greatly increased.

There are some cases in which it seems to many who are familiar with such matters as though the courts were inclined to go to the other extreme and award damages out of all proportion. Where a complainant has shown that profits have been made by the use of an article patented as an entirety, the infringer is liable for all the profits unless he can show—and the burden of proof is on him to show—that a portion of them is a result of some other invention used by him. If the infringer cannot show what proportion of the profits is due to such other invention, then all his profits must go to the complainant. Any rule by which the entire profits are given to a patentee in the absence of proof that they are all due to the invention of the patent sued upon, is unfortunate and sometimes very unjust. The proposed amendment to the statute would permit a court under these circumstances to do substantial justice even though it could not be mathematically exact. In other words, the amendment to the statute would enable a court to avoid awarding either too much or too little.

CONCLUSION

Your Committee, believing that the American patent system is vitally useful in our system of Government, therefore recommends that the reforms herein discussed be enacted into law.

Your Committee also recommends that this report be approved by the National Research Council and that the Committee be continued for the purpose of arousing and coordinating interest in and support for the necessary legislation of various national societies, manufacturing interests, bar associations, and other elements of the public.

L. H. BAERLEND, *Acting Chairman* S. W. STRATTON (see reservation below)
WILLIAM F. DURAND, *Chairman* REID HUNT
(absent in France) FREDERICK P. FISH (see reservation below)
M. I. PUPIN THOMAS EWING
R. A. MILLIKAN

Approved: JAMES T. NEWTON, Commissioner of Patents

RESERVATION BY DR. STRATTON

I agree to the terms of the report with the exception of that portion which refers to the establishment of the Patent Office as a separate government institution. It is not quite clear in my own mind that this would be the best thing to do since in general it is best for all government establishments to be represented in the Cabinet.

(Signed) S. W. STRATTON

RESERVATION BY MR. FISH

I entirely concur in the substance of the conclusions set out in the above report.

I think, however, that the words "if proof is not offered, or" in that portion of proposed Section 4921 which deals with damages and profits, should be omitted so that the sentence in which those words appear should read:

In the absence of adequate proof of the amount that should be awarded as damages or profits, the Court, on due proceedings had, may adjudge and decree to the owner payment of a reasonable royalty or other form of general damages.

I do not think that a statute should directly or indirectly contemplate a condition in litigation in which "proof is not offered." I believe that the clause which I suggest would

accomplish the desired purpose and that the courts in applying the clause would be embarrassed if the phrase "if proof is not offered" were in the statute.

I think also that general damages by way of a reasonable royalty or otherwise should not be awarded unless it appeared that actual damages or actual profits due to the unlawful use of the invention could not be determined and that there should not be any language in the statute which implied that no effort be made to determine such actual damages and profits.

(Signed) FREDERICK P. FISH

PROMPT ACTION BY CHEMISTS NEEDED ON PROHIBITION LEGISLATION

Editor of the Journal of Industrial and Engineering Chemistry:

The passage of the prohibition amendment relegated to the category of history most discussions of morals connected with this subject. With this passage, however, two kinds of chemical responsibility present themselves. We should concern ourselves at once with both of them. They deal with effective enforcement of the will of the people and neither of them can be shouldered by any one but the chemist.

The first responsibility is that of watchful care over both national and state legislation so that those in charge of this legislation may be supplied with honest information which will prevent its lack bringing unnecessary hardship upon chemistry and those utilizing it, by unwise restrictions.

The other responsibility is involved in the importance of every chemist eliminating, as rapidly as may be, the need for un-denatured alcohol in every laboratory and manufacturing operation.

Most legislative bodies now in session have under consideration bills to put into effective operation prohibition of the manufacture, sale, possession, and use of intoxicants or intoxicating liquors. Many of these bills will be enacted. These bills are necessarily drastic in character because of the evasions which they anticipate. The legislative committees in charge of these bills are usually selected because of their interest in prohibition rather than with a view to protecting the toes of science or industry. If the present Ohio legislature is any guide, however, these committees are unusual in their willingness to listen to citation of unnecessary interference with scientific work or with the manufacture of non-beverage products. This does not mean that the committees are in any sense lax. They are not. They do not hesitate to ask a petitioner, for instance, if he is "aware that Ohio is dry;" and to tell him that "this bill is going to keep it dry."

This latter is the keynote or purpose of the legislation. The Ohio Senate Bill No. 4 and House Bill No. 24, for instance, are entitled "A bill to prohibit the liquor traffic and to provide for the enforcement of such prohibition." This bill is an emergency act made necessary to provide enforcement of the prohibition amendment to the Constitution of Ohio adopted by vote of the people November 5, 1918, which becomes effective May 27, 1919. The Ohio bill is very carefully drawn, very simple, and comparatively brief. It makes a very obvious effort to protect non-beverage industry.

The authors of the bill, however, did not have chemical knowledge or advice, and were unacquainted with the extent to which ethyl alcohol is used in chemical and other scientific work. For this reason, careful inspection of such bills by chemists and chemical manufacturers is imperative to avoid irritation in the working of the acts. There are, doubtless, those who would not be displeased at irritating operation of these acts but those of us who must act as the sand in the gears do not care to officiate if we can retrieve ourselves in advance. Whether prohibition has come to stay or not is a matter for debate or watchful waiting. Chemistry must not suffer in the interim or it is our fault as chemists.

Taking an active part personally in hearings on the Ohio bill makes it simple as an illustration in point to furnish warnings. The bill, as presented, contained the following undesirable features:

1—No provision was made for the manufacture, sale, and use of "unmedicated" ethyl alcohol for scientific or any other purpose. In fact, ethyl alcohol as such ceased to exist in Ohio under the provisions of the bill. Provision was made for "medicated" alcohol only.

2—No machinery was provided for the dispensing of alcohol in any form "medicated" or "unmedicated" to scientific workers and students in chemical and other scientific laboratories in universities or other organizations.

3—The possession of "any equipment for the manufacture of intoxicating liquor" was forbidden, except as therein provided. Provision was then made for the non-interference of the act with a number of items omitting, however, the ordinary distillation equipment of scientific laboratories or of dye, chemical, and other manufacturing plants not engaged in beverage preparation.

4—The words "medicated alcohol" were used and not clearly coordinated with "denatured alcohol."

5—Alcohol manufacture in Ohio was permitted by the bill but it could actually not be manufactured in the state for the reason that it was "unlawful * * * to possess any equipment for the manufacture of intoxicating liquors * * * except as herein provided." The provision was subsequently made for permission to manufacture but no provision was made for "possession" of the "unlawful" equipment.

6—General permission only and no explicit permission was given for the use of alcohol in the manufacture of "chemicals, dyes, and other preparations" of a non-beverage character. Since the administration of the act is to repose in a commissioner, all ostensible latitude allowed him in general terms obviously gives him power to tighten the operation of the act but it is doubtful whether he is thereby empowered to do things not specifically permitted, especially in an act whose effects rest on permissions and omissions.

7—The fixing of affidavits to record books and labels of containers provided for retail drug dispensing becomes highly cumbersome in a scientific or educational laboratory and the required variation was not provided.

8—The bond assessed for "other persons" not physicians and druggists, which would include chemists and other scientific workers in educational and plant laboratories, because of no other provision for them, was excessive. It was aimed to cover irresponsible users. It was not less than \$2000 and not more than \$3000, as against the manufacturer of patent medicines, toilet articles, flavoring extracts of \$100 to \$5000, and physicians \$200 to \$1000. It should be omitted entirely or applied to directors of laboratories and then on at least as favorable terms as the petty manufacturer or physician.

It is important that those in charge of such bills as we are discussing should scrutinize carefully every effort at amendment to avoid accidental or deliberate interference with its effectiveness. It is evident, however, that any assistance which chemists and others can give to those in charge of such bills will tend to prevent unnecessary irritation in chemical and manufacturing work, thus helping ourselves and assisting in an honest effectiveness of the legislation.

The second point emphasized herein is at once a responsibility and an opportunity. We, as chemists, should eliminate all unnecessary use of un-denatured ethyl alcohol. We have for years been pleading with the internal revenue bureau for a sane policy in the denaturing of alcohol for use in the arts because of the otherwise dead load thrown upon certain manufactures. There are probably few, if any, chemical manufactures which really require un-denatured alcohol or alcohol usable as a beverage or which cannot find a suitable denaturant. We

now have the need for reducing cumbersome tape in the hands of "prohibition commissioners" in the operation of our laboratories. This is the need and our responsibility. The opportunity lies in the field for research thus opened up in analytical and other forms of chemistry for the replacement of ethyl alcohol by a denatured product or a substitute. If our chemists attack the question of the influence of these other mixtures and substances on our chemical methods and operations, we will likely eliminate entirely the need for un-denatured ethyl alcohol and our laboratories will be thus largely removed from the field of law enforcement tedium. To a lesser extent these ideas also apply in industry. The ultimate beneficial influence of irritating or adverse legislation on chemical manufactures is well known and was ably handled but recently by Dr. T. B. Wagner in *THIS JOURNAL*, 6 (1914), 71.

Without wishing to enter the prohibition controversy as such, it is the opinion of the writer that in the interest of the public welfare, chemists everywhere should interest themselves in making these prohibitory laws cover such frightful intoxicants as ether which the unscrupulous will pander in the absence of alcohol. Bills should cover all "liquid intoxicants" at least. The tendency is to mention alcoholics solely.

If we are concerned about the opportunities of the chemist for public service this whole matter is a case where we must help ourselves and where we will be rendering useful service.

JAMES R. WITHROW

LABORATORY OF INDUSTRIAL CHEMISTRY
THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO
February 12, 1919

AMERICAN DYES INSTITUTE

At the meeting on February 7, 1919, of the American Dyes Institute, the association formed recently by the combination of the American Dyestuff Manufacturers Association and the American Dyes Institute, announcement was made of the election and appointment of the following officers and committees:

President: W. H. Cottingham, The Sherwin-Williams Company.

Secretary-Treasurer: H. E. Danner.

Counsel: Arthur J. Eddy.

Executive Committee: L. A. Ault, The Ault & Wiborg Company; J. Merritt Matthews, The Grasselli Chemical Company; Frank Hemingway, Frank Hemingway, Inc.; August Merz, The Heller & Merz Company; R. C. Jeffcott, Marden, Orth & Hastings Corporation; W. T. Miller, National Aniline & Chemical Company; M. R. Poucher, E. I. du Pont de Nemours & Company.

Board of Governors: C. S. Althouse, The Althouse Chemical Co., Reading, Pa.; B. R. Armour, American Aniline Products, Inc., New York City; L. A. Ault, The Ault & Wiborg Co., Cincinnati, Ohio; R. P. Dicks, Dicks, David Co., Inc., New York City; B. P. Donnelly, Holland Aniline Co., Holland, Mich.; Frank Hemingway, Frank Hemingway, Inc., New York City; R. C. Jeffcott, Marden, Orth & Hastings Corp., New York City; R. W. Kemp, Holliday-Kemp Co., New York City; G. A. Martin, The Sherwin-Williams Co., Cleveland, Ohio; J. M. Matthews, The Grasselli Chemical Co., Cleveland, Ohio; August Merz, The Heller & Merz Co., Newark, N. J.; W. T. Miller, National Aniline & Chemical Co., Inc., New York City; J. T. Pardee, Dow Chemical Company, Inc., Midland, Mich.; E. W. Pierce, Zobel Color Works, Inc., New York City; M. R. Poucher, E. I. du Pont de Nemours & Co., Wilmington, Del.; G. S. Whaley, John Campbell & Co., New York City; S. W. Wilder, Merrimac Chemical Co., Boston, Mass.

CHEMICAL WARFARE SERVICE ASSISTS IN SECURING EMPLOYMENT

An invitation is extended to civilian chemists of the Ordnance and Quartermaster Departments to make use of the services of the Chemical Warfare Service for securing employment.

MARSTON T. BOGERT

Colonel, C. W. S., U. S. A.

Chief, Relations Section

WASHINGTON, D. C.
January 24, 1919