deal to mitigate the evils arising from their use by adhering to the following principles, which I herewith respectfully submit to your consideration:

1. By resolutely refusing to carry in stock any nostrum containing poisons, especially habit producing poisons. The requirements of the "pure food and drugs act" make it easy to decide which nostrum would come under this heading.

2. By refusing to permit himself to become a nostrum manufacturer or to enter into partnership with one. For, knowing as he does, that it is impossible to be successful in this business without practicing fraud or foisting poisons upon the people, and doing them an untold amount of harm, the pharmacist as an honest partner of the physician in efforts to alleviate suffering and prevent disease, will not soil his hands with money obtained by dishonesty or at the expense of human suffering.

3. By not pushing the sale of "patent medicines" or advertising them in his store windows or upon his fixtures. For, recognizing the fact that "patent medicines" are at best makeshifts, often dangerous ones, it is derogatory to the dignity of the pharmacist as a scientific man to give them his endorsement, which advertising the article certainly means. Indeed, it is not a high compliment even to the business ability of the druggist to have him use his valuable window space to push the sale of articles upon which he makes a minimum profit, instead of using it for the promotion of the sale of goods that yield better returns.

4. By not joining the ranks of "price cutters." For, as I see it, price cutting on "patent medicines" merely means that, as there is very litle profit in them anyway, a dealer sacrifices all the profit in order to make more on other goods he hopes to sell to the same customer. What matters it, if the price cutter sells more "patent medicines" than you do, if the people come to appreciate you as a professional pharmacist? For professional services people always pay well and pay it gladly.

Ladies and gentlemen, the motto of this great association, of which I am proud to be a member, is not a mere dream: *"Pharmacia vera prevalebit,"* True pharmacy will prevail.

THE NECESSITY FOR A PHARMACOPŒIAL SUPPLEMENT.*

GEORGE H. MEEKER, PHAR. D., LL. D.

The ideal of all professions is to achieve for every member ethical and scientific excellence. Volumes might be written in defining these professional goals; but after all the spirit of the ethical is merely the "golden rule," while science is essentially the "knowledge of why"—the former satisfies the conscience; the latter, the reason. If within any profession some elected or self-constituted group of members should assert the right of a star-chamber censorship over the consciences and reasons of the members, such right would be promptly repudiated—royal prerogatives having no place in democratic science.

Yet it might be quite possible that unconsciously and by insensible degrees a

* Read before the Scientific Section of the Philadelphia Branch.

profession should drift into the foregoing deplorable relationship with one of its committees; and such is believed to be the actual state of relations between the pharmaceutic profession and the revision committee of the United States Pharmacopœia. Let at once be disclaimed any suggestion that the revision committee has either deliberately compassed undesirable conditions or that it would strive to perpetuate any recognized wrong. The point of view is merely that, while the work of the revision committee is on the whole most admirable and praiseworthy, yet a wrong does exist and should be recognized and remedied. This wrong is that the revision committee establishes the various standards of the Pharmacopœia, but does not deign to furnish the public and profession with anything more than fragmentary and casual reasons for these standards. While the committee confers with many manufacturers and scientific specialists, the profession as a whole neither participates in these conferences nor has ready access to the facts. Such a course is not only unwarrantable as noted above, but also dangerous and unjust.

It is high time for the revision committee to avail itself of the authority given it by the following resolutions of the National Convention of 1900:

"Resolved, That the Committee of Revision be authorized to prepare, and the Board of Trustees be authorized to publish, a supplement to the United States Pharmacopoeia, if in the opinion of the Committee of Revision it be deemed advisable."

Let the revision committee issue a supplement to the Pharmacopœia arranged so far as practicable similarly to the Pharmacopœia itself and setting forth seriatim its *reasons* for the official standards. There would be ample sale of the book to meet the expenses of publication; and one of the greatest wrongs of American pharmacy would be righted. Any objection that such a volume would be too large is invalid. It would require no great skill by intelligent arrangement of the contents of the Supplement, and by exclusion of unessentials, to produce a volume of approximately the same bulk as the Pharmacopœia. The first issue of the Supplement would doubtless have many faults to be gradually eliminated in subsequent issues. Upon the issue of the Supplement would begin a new era in pharmacy. No longer would the profession and the public be compelled to accept pharmacopœal standards blindly. Every one would work in the light; and the intelligent and active criticism made possible would rapidly improve the Pharmacopœia and eliminate the existing opportunities for special privileges.

How humiliating it is to a pharmacist, when, as a professional man, he is forced to admit that he is ignorant of the reasons for his own standards—since a certain committee sets his standards for him and fails to furnish him with a statement of the conditions which dictated these standards. Would not the American public, which recognized the United States Pharmacopœia in Sections 6 and 7 of the Federal Foods and Drugs Act of 1906, feel that it had been treated disingenously if it awoke to the fact that it had placed the drug standards of 95,000,000 citizens under the star-chamber control of a group of men who are independent of the American electorate and who do not even take the profession into their entire confidence? Does any one believe that with a full knowledge of these circumstances, the Supreme Court would sustain the Federal Foods and Drugs Act of 1906 in so far as concerns its recognition of the United State Pharmacopœia?

Failure to sustain would mean that there would be no legal standards; and pharmacists would be themselves to blame. The public has overdone its part in the effort to produce correct standards for the drug traffic. Let us hope that without edicts from the profession the Pharmacopœial Revision Committee will see and perform its duty in the premises.

As the matter stands today, the knowledge of the profession concerning the "purity rubric" is lamentably vague; and is practically confined to the dogmatic provisions of the main body of the Pharmacopœia—as inadequately elucidated by the preface and introduction to the work. The Pharmacopœial preface is admirable as far as it goes; but it should go much further. If the preface to the U. S. P. gave all the information that the public and profession have a right to know, then it would fill the place of the Supplement which is herein advocated. Thus, when its preface tells us that the Revision Committee has adopted the ruling of the Brussels International Pharmaceutic Congress to the effect that potent tinctures should refer to a preparation from ten per cent of active constituent, we have the sort of knowledge that it is our right to have with respect to all other provisions of the U. S. P. Unfortunately, however, we must usually content ourselves with the statement that the standards adopted are those which the Revision Committee consider best for us to have. Diligent search of the Pharmacopœia for real *reasons* for pharmacopœial standards will be found most disappointing.

We do, however, find a few facts that cast light upon the "purity rubric." Thus we are told that the United States Pharmacopœial Convention is incorporated for

"The particular objects and business of * * * establishing one uniform standard and guide for the use of those engaged in the practice of medicine and pharmacy in the United States whereby the identity-strength, and purity of all such medicines and drugs may be accurately determined."

The Pharmacopœial Convention instructing the Revision Committee with respect to the purity and strength of pharmacopœial articles, says:

"The Committee is instructed to revise as carefully as possible the limits of purity and strength of the pharmacopoeial chemicals and preparations for which limiting tests are given. While no concession should be made toward a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles. In the case of natural products the limits of admissible impurities should be placed high enough to exclude any that would not be accepted by other countries.

"Regarding the strength of diluted acids, tinctures and galenical preparations in general, it is recommended that the Committee keep in view the desirability of at least a gradual approach upon mutual concessions toward uniformity with similar preparations of other pharmacopoeias, particularly in the case of potent remedies which are in general use among civilized nations."

The Revision Committee itself informs us that

"The purity standard, or purity 'rubric' * * * is placed * * * immediately before the description, and * * * defines the percentage of small quantities of permissible, innocuous impurities which do not materially affect medicinal action or interfere with pharmaceutical uses. * * * the standard * * * represents what the Committee believes to be obtainable, and which, on the other hand, will not prove burden-

some or impossible for the manufacturer to produce without adding unnecessary and excessive cost to the consumer."

With the foregoing meagre generalities the profession is left to draw its own conclusions—some of which will doubtless be correct; but all of which must be uncertain. But the scientific mind is not and never can be content with mere conclusions. Its demands are ever for a knowledge of the premises upon which the conclusions were based—so that it can check the conclusions and accept them upon their merits or revise them if they be found faulty.

A REVIEW OF THE CHEMISTRY OF DIGITALIS.*

C. H. KIMBERLY, M. SC., PH. D., MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

Digitalis plays such an important part in our present day medicine that its chemistry should be well worked out. If one should read but one report, it would so appear, but the deeper one probes into the results of chemical investigation, the more confused he becomes and finally finds himself unable to decide positively of what it really does consist.

Tracing the steps of its investigation, we find in 1820 it was examined by Pancquay, in 1824 by Lancelot and in 1834 by Leroyer; also about this time it was studied by Homolle and Quevenne. Both Leroyer and Lancelot described a crystalline principle, while Homolle and Quevenne claimed its active principle to be amorphous. In 1868, Nativelle isolated a crystalline principle, but he later thought this to be a compound body. In 1871 Schmeideberg[a] and Killiani independently took up the work and each isolated a crystalline principle which they called *digitoxin* and it appeared that this was the same principle described by Nativelle. For some time this substance commonly known as *digitalin* was the only principle known and a number of substances classed as both scientific and commercial were exploited under that name.

It soon became evident that these products were mixtures, also that digitalin was not the only active constituent, and further effort by Schmeideberg produced the isolation of four glucosids, namely *digitonin, digitoxin, digitalin* and *digitalein,* and he proved also that the digitalin of commerce consisted of various mixtures of these glucosids. He found it difficult to obtain these glucosids in a pure state on account of their easy decomposition. In the years between 1892 and 1899 Killiani confirmed this contention of Schmeideberg, and increased our knowledge of digitalis by information relative to the decomposition products. Work along similar lines during the same and following years has been done by Keller, Cloetta, Boehm, Bargar and Shaw, Brissemoret and Joanne and others though the principal authorities still are Schmeideberg, Killiani and Cloetta. At the present time on account of the complexity of digitalis and the ease with which its constituents decompose it is difficult to isolate them in a pure state, and we are compelled to say "we believe" rather than "we know."

According to Schmeideberg and Killiani, we have the following constituents:

*Read before the Scientific Section of the Philadelphia Branch.