

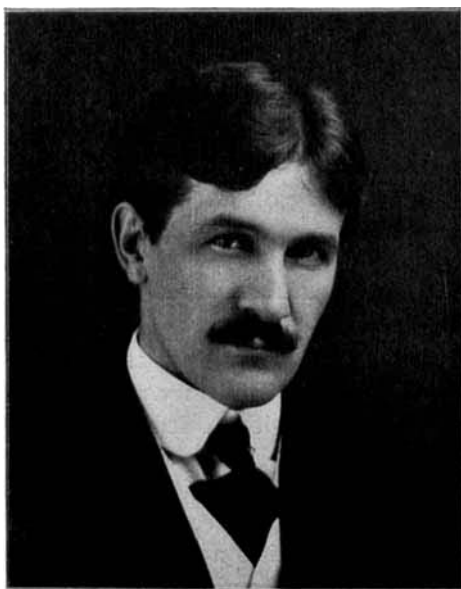
Section on Practical Pharmacy and Dispensing

Papers Presented at the Sixtieth Annual Convention

THE CHAIRMAN'S ADDRESS.

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The word Pharmacy in its original Greek form was applied synonymously to the use of any kind of drug, potion or magical spell, including also poison and the various forms of witchcraft, and doubtless it is a survival of this element of mysticism which many of the laity associate with our profession even at the present day. The term Pharmacy as at present understood to imply a knowledge of the preparation, preservation and compounding of drugs and medicines, came



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into existence almost simultaneously with the birth of the sixteenth century—A. D. 1597.

That Pharmacy in a somewhat undeveloped state occupied a conspicuous rank from time immemorial is shown by reviewing the pages of history, both sacred and secular. References innumerable reveal the fact that the art, in one form or another, was practiced in antiquity by divers persons under various guises all over the Orient; e. g., under the cognomen of physician-priests, such as the

Egyptian priests of Isis, the art was practiced under special dispensation of some king or ruler, the prescription being accompanied by a series of incantations and spells; the early Israelites, referred to in Exodus, is another familiar instance where the apothecary is commanded to prepare a fragrant ointment for use, etc. China, Arabia, Egypt, India, ancient Rome, Sicily, Greece and other countries of the great interior sea, furnish abundant evidence of the practice of both pharmacy and medicine hundreds of years before the dawn of the Christian era. Another class of these early practitioners associated the practice of the art with that of Astrology under the supposition that all plants, animals and minerals were influenced by the heavenly planets. One of their theories was to the effect that certain flowers grown under a particular planet indicated their employment for all diseases and constitutions supposed to come under the same planet. In very truth, the word recipe which physicians employ when beginning a prescription, is simply a survival of the ancient sign, which originally meant an invocation to Jupiter.

In antiquity, the compounding and preparing of drugs was originally carried on by the early physicians, who likewise formulated their own *materia medica*. Ours is not a new science, nor an original art, and it may interest some of you, therefore, to know that many drugs and medicinal preparations employed before the dawn of Christianity are still in vogue today and are approved in many of our modern Pharmacopoeias. Let me quote you a few passing illustrations: Pythagoras, who lived 6 B. C., was the first to employ Vinegar of Squill, and wrote a whole book on the various properties of the drug. The Chinese practiced the art at a very early period, and distilled Alcohol hundreds of years before any other nation. Noah, of biblical fame, was among the first to engage in wine making. Included in the *materia medica* of Hippocrates are such drugs as Myrrh, Galbanum, Valerian, Garlic, Aconite, Belladonna, the animal drug Castor, and a whole host of others. Later came Dioscorides, who mentioned some 400 drugs in his voluminous works, and to this list Galen, a century later, contributed about 200 more. The Compound Canella Powder—*Hiera Picra*—was first compounded by him, and was only a few decades ago dropped from our official text-book.

The Diachylon Ointment was invented by Menecrates, A. D. 1, and was employed for practically the same purpose as it is today. Would occasion and knowledge permit, this list could be continued in extenso.

But ours is the enlightened twentieth century, and the study and application of modern methods and conditions is perhaps of more material concern. It is a long road from Empiricism to the highly specialized art of pharmacy of today. Science with her magic wand has wrought marvelous changes and transported us into a new realm of *materia medica* and diagnosis, and the problem before us—the chief aim and object for which we as an Association are banded together and assembled here today—is the conscientious application of these newer principles and discoveries to modern pharmacy, to the end that greater economic service and higher efficiency shall obtain for all who are engaged in the practice of the art.

So constant has been this onward march of progress that the era in which we live has wrought a complete revolution both in pharmacy and in the sister pro-

fession of medicine. The simple remedial agents of the vegetable and mineral kingdoms no longer suffice to fulfill the physician's needs, and the whole realm of nature is now called upon to pay homage to the practitioner's art. Such subtle forces as electricity, the atmospheric oxygen, the emanations from radium, certain definite principles from some obscure animal gland or organ, or some newly discovered vegetable ferment—these are but a few of the recent additions to the physician's armamentarium. Included in this newer group also are such agents as remedial sera, bacterial vaccines, opsonins, enzymes both plant and animal, and to this list we may now also include the recently discovered products known as "hormones."

From among this formidable list of remedial agents quite a few deserve special mention at this time. I refer particularly to the various agents of biologic defense, viz., bacterial vaccines, remedial sera and preparations of the various organs of animals. And while we are wont to herald these discoveries as new or original, the fundamental principles underlying these so-called discoveries are recorded by Hippocrates, who in all probability acquired his knowledge from a source even more remote. Although not classed as pharmaceutical products in the modern usage of that term, nevertheless they now occupy a definite place in the domain of preventive medicine, and as such it becomes our duty and business as pharmacists to possess some first-hand knowledge of these peculiar products. The U. S. P. Rev. VIII already includes one of their class, the Serum Antidiphtheriticum, whereas the new Revision will include Vaccine Virus, the Serum of Tetanus, and perhaps others. The chief objection to their official introduction thus far being the difficulty in obtaining sufficiently accurate methods of standardization either of product or process.

SOME MODERN METHODS.

The increased interest in and universal application of biologic knowledge and the importance of absolutely sterile forms of medication, particularly when desired for internal uses, has recently brought into considerable prominence the small sealed glass containers known as Ampuls. Although introduced into France more than thirty years ago, their adoption in this country has only recently been confirmed. They embody an ideal method of preserving, storing and transporting small quantities of medicines which require sterilization before administering.

An innovation noticed the past year is that of several manufacturing pharmacists exploiting galenic preparations of certain potent drugs in original packages, physiologically tested and dated, so as to insure against possible deterioration. No guarantee of permanence is attached to this class of preparations other than the possibility of their being more active therapeutically than the ordinary stock items.

UPLIFTING AGENCIES.

Of the many different influences directly or indirectly affecting the integrity and welfare of our profession, several conspicuous features are particularly noteworthy at this time. *First*, the passage of the Federal Food and Drugs Act several years ago, and the enactment of similar statutes in many of the states

has aroused a new interest in pharmacy with the general public, which has already had a most wholesome effect. New standards of honor for unscrupulous manufacturers of drugs are demanded; new standards of purity and quality—that of compliance with the requirements of our official text-books; and lastly, operating in collaboration with these two agencies—is an awakened public conscience in matters of both food and drugs, the final culmination of which cannot fail to usher in a most promising aspect for the future welfare of our calling. *Second*, the well-directed and practical manner in which the research and investigation is being conducted against the manufacturers of pseudo-scientific pharmaceutical preparations by the Council on Pharmacy and Chemistry of the American Medical Association. The results of their work—that of determining the composition, character, constituents, etc., of pharmaceutical preparations or nostrums—are published in the official journal from time to time, thereby giving undesirable publicity to hundreds of worthless products. Should the American Medical Association now proceed a step further and censor also the many false and misleading statements as to the remedial value of new remedies and proprietaries, it would accomplish a most beneficent mission to pharmacy, to medicine, and to humanity everywhere. *Third*, another significant feature vitally affecting pharmacy is the increased interest and friendly attitude shown our profession by the medical press. It is estimated that there are approximately 100 medical journals published in this country today, and of this number upwards of 30 per cent. are calling the attention of physicians to the merits of the U. S. P. and N. F. preparations. Not a few of these publications are devoting regular departments to Official Preparations.

ANENT COMMERCIALISM.

The cry has gone abroad, and quite frequently of late, that ethical pharmacy is fast losing its wonted prestige, that new “fads,” “isms” and “pathys” have made definite inroads into the domain of both pharmacy and medicine, and that in self defense, other interests have, as a consequence, diverted the pharmacist’s calling to that of an ordinary tradesman. Enough data has already been cited to show that our profession is changing—changing in obedience to a fundamental natural law of evolution—not revolution. We have no quarrel with those whose vision is blinded with the myopia of commercialism and are firmly of the conviction that the question in its final analysis must always remain largely one of individual temperament and inclination. To the wide-awake, conscientious pharmacist, in love with his vocation, who is giving to it the best that is possible, who is utilizing to the best of his advantage the tools at his command in the form of intellectual equipment and opportunity, to such a one the world still pays—as it has always paid—large dividends in sterling coin, named security, material prosperity, and an abiding satisfaction in having done well whatever one’s hands find to do.

LAXITY AND INDIFFERENCE, THE CAUSE.

Opportunities affording material gain and indirectly tending to elevate the professional side of our art, are constantly being ignored or overlooked by many, who otherwise are capable pharmacists. All will agree that the prescription

counter affords the most profitable source of the pharmacist's revenue. Why so many of our fellow-workers devote so much of their time and effort toward featuring soda water, fake nostrums, and side lines is one of the anomalies of our calling. It adds nothing to your prestige and little to your purse to be known in your community as a "soda water store." On the other hand, if the prescription department were given more thought and consideration, greater demonstration made of your ability and capability as a pharmacist, new methods, new remedies or preparations exploited from time to time to the prescriber, much of this lost prestige could be regained. In short, reverse the existing order and take the physician into your pharmaceutical confidence, so to speak. Show him the therapeutic advantages of administering certain drugs or medicaments in galenical form as against ready-made tablets; explain to him any new ideas you may employ in the way of compounding or dispensing his medicines; suggest improved formula or improved form of medication, all of which methods are perfectly ethical and legitimate. When one pauses to consider the inadequate amount of instruction our medical brethren receive in pharmacy and materia medica—not more than 120 hours in the curricula of our best schools—we may imagine the avidity with which this information is sought for and digested. Experience has proven that physicians invariably appreciate these little proffered courtesies.

MODEL PHARMACISTS.

The question of the certification of pharmacists, suggested by former Chairman Otto Raubenheimer several years ago, is still being agitated in some quarters. A committee of pharmacists—members of this Association—are to confer with a similar committee of physicians in New York City next month to discuss the matter. Doubtless we all would welcome the introduction of some such process of eliminating the morally and socially unfit from our rank and file, but the probability of such an ideal condition in pharmacy, in our humble judgment, seems rather premature. The pharmacists of the metropolitan city deserve our hearty approval for taking the initiative in this direction.

SOME SIMPLE SUGGESTIONS.

Taking then, a broad view of the present day aspect of pharmacy, it will be noted that there is a general upward tendency—one of improvement rather than of decline. To adapt ourselves then, as a profession, to the rapidly changing order is the problem. And while we realize that the status of the pharmacist—both moral and professional—is not quite what we would like to see, may I enumerate a few suggestive means and measures in the hope that they may inspire some of our fellow-workers to higher ideals and a nobler conception of the worthy profession of pharmacy.

1. Put character and personality in all your work. They are the two chief assets of a successful career, no matter whether pharmacist, physician, ploughman or president.
2. Study your physicians' needs and hobbies.
3. Study new drugs, new remedies and incompatibilities.

4. Be a specialist in drugs and prescriptions and emphasize the fact to the medical profession and the laity as well.

5. Study the official preparations—both U. S. P. and N. F. Try and suggest improved formula for present or any new preparation. The new Year Book now affords a fine outlet for all such original work.

6. Make all the preparations and chemicals you can. It is more economical and the experience is invaluable. There can be no better nor purer drug than U. S. P. and N. F.

7. Make your prescription counter a model of neatness and order, as nowhere else is the character of the store so apparent to the physician. Let neatness and accuracy characterize all your work.

8. Read the drug journals and afterwards bind them at small cost for reference. To a practical pharmacist, reference works are as indispensable as mortar and pestle.

9. Be ethical—which simply means honesty in practice in all your dealings with the public.

And finally, take inspiration occasionally from the maxim of Franklin: "Keep thy shop, and thy shop will keep thee."

In concluding this discursive address, I desire at this time to extend my sincere thanks to the Association which has so signally honored me with this important office, to my associates for their kindly assistance, to the numerous contributors to this year's work, and to the unselfish company of men who are directing pharmacy's onward march of progress—the Council of the American Pharmaceutical Association.

PHARMACY IN ITS HIGHER DEVELOPMENT.

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This paper deals with the subject of BIOLOGICS. It is not intended as a technical treatise but is rather designed for the commercial pharmacist—the man who handles these products for revenue—and to whose interest it is that he become conversant with the various products, mode of preparation, uses, and their proper preservation.

In the United States biological products are generally produced by the large pharmaceutical houses operating special laboratories under Government license. They are marketed through the medium of the drug trade which is the legitimate channel for their distribution. The average pharmacist however fails to appreciate the intimate relationship between these advanced therapeutic agents and those which have heretofore occupied his active attention and as a consequence is neglectful of an opportunity to materially advance his professional status. In-