THE DEPARTMENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

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The teaching of pharmacy subjects is receiving considerable attention by professors of pharmacy. The recent articles by Professors Cox and Cook and the present one by Professor Briggs show the deep interest taken by teachers of pharmacy in the subjects. Comment on these three papers is invited.

C. B. JORDAN, Editor.

THE TEACHING OF DISPENSING PHARMACY.

BY W. PAUL BRIGGS.*

The article of Professor Cox in the November JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION touched upon a point of great interest to me and I believe to all other teachers confronted with the task of teaching Dispensing Pharmacy under the handicaps imposed by the absence of adequate apprentice training. I have worked out a plan which has been tried this year and the results are so gratifying that I feel it may be of interest and, possibly, some small value to others who are so situated.

The background for the Dispensing Course is, as in most schools, a thorough course in the theory and manufacture of the preparations of the U.S. P. X and N. F. V. This along with General Chemistry, Botany and general cultural work constitute the first year. Beginning with the second year (not considering the usual allied subjects) the students study an approved treatise on Compounding and this is correlated with work in the laboratory. Here we use a mimeographed manual of Prescriptions in which I have attempted to present all the various types of prescriptions, grouped as, Mixtures, Solutions, Liniments, Powders, Capsules, Pills, Tablets, Konseals, Plasters, Ampuls, etc. Under each heading I have given typical formulas and complete directions for compounding, principally to teach technic. After preparing several simple solutions, for example, the student then compounds others involving special manipulation, in each case receiving specific directions for the method to be followed. This same plan is followed throughout the various groups of prescriptions and totals about 100. In other words we give directions for preparing each type of prescription without stress upon incompatibility, and along with this the instructor's personal attention developing accuracy, acumen, proper packaging, labeling, prices, etc. This consumes the first semester's work.

For the next two months of the following semester the students compound prescriptions involving incompatibilities, without directions for preparing, and are expected to apply principles brought out in the first semester. All prescriptions must be checked by another student and his initial must be on the prescription. Should a prescription be turned in which is unsatisfactory in any way the student

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checking as well as the compounder lose credit and the prescription is returned and must be prepared again. This has developed a degree of accuracy which I had never been able to attain before. It involves additional work for the instructor but the results amply pay for the effort. All prescriptions are numbered, labeled, capped and dispensed just as in a professional pharmacy. Below each prescription in the manual is sufficient space in which the student briefly discusses the work, and to the left of the ingredients the students use brackets and numbers to indicate the order of mixing. This makes grading of notebooks very simple and some students report that this system of numbers and brackets has been adapted in actual practice, as it requires but a moment and leaves definite instructions to the next pharmacist who compounds the prescription.

From this point prescription work is dropped and the student receives an applied course in qualitative analysis for the remainder of the term.

Beginning with the third year we resume the compounding, but this time from a different angle. From many thousands of prescriptions on the narcotic files of pharmacies located at widely separated sections of the city and suburbs I selected enough of the most useful and typical to bind 50 prescriptions in a book and allow one book for each student. These books are lettered A, B, C, etc., and the prescriptions numbered 1 to 50. These books are rotated among the students so that each student copies or compounds nearly 1000 original prescriptions, assuming the class to be composed of 20 students. This means typical, modern prescriptions in the physician's handwriting without modification-in some cases ambiguous, blurred, crumpled, incompatible, toxic doses, incompatible proprietaries, etc. This course runs for one semester with 2 lectures or recitation periods and 2, 3-hour laboratory periods per week. We begin by having the students copy the prescriptions, changing the quantities to the other system in which it is written, changing synonyms to official titles and official titles to synonyms, translating the directions to household measures and giving the method of compounding. Each student can complete about 8 prescriptions in this manner in a 50-minute period and leave enough time to discuss the previous lesson's work. By using the total 8 hours per week for the first few weeks each student studies about 100 such prescriptions and then the work is transferred to the laboratory where prescriptions in books other than those copied are actually compounded. The class periods now are utilized to point out peculiar phases of penmanship and ways to interpret directions and ingredients from a study of the prescription as a whole. In fact this class carries itself, as the instructional possibilities in dealing with the actual prescription are unlimited. Further, the interest of the students is so keen that if they could they would take this course to the exclusion of all the others.

It has been aptly said that, "To teach John Latin you must not only know Latin but you must know John." Likewise when you can arouse interest in John for Latin you can teach John Latin. Planning these courses and carrying them out require time and effort but the enthusiasm of the students has more than repaid me for the effort. And more—the students learn and retain. What more could an instructor ask?

There is much room for improvement and I would welcome criticism that will be of mutual benefit to all concerned with this paramount subject.