fill one of these prescriptions, but he had brought out the account, and he had figured out himself how much money he had gotten on two prescriptions. He had been impressed with the thought that this was one of the best answers to the statement that professional pharmacy did not pay—that on these two prescriptions alone a profit of over $100 had been made. Mr. Mayo said it had afforded him great pleasure to testify to this particular phase of the matter. This work had been done in a rather small store, in a remodeled residence on a corner. The prescription room only measured some 12 by 15 feet, had no elaborate marble-tops in it, but was one of the most complete and neatest and cleanest places he had been in for a long time; and it had done his heart good to see a "real pharmacist." It was not only important that the pharmacist should make money, but he should know whether he was making it or not, and how he made it, if he did make it. The system of accounting in this case was so accurate and readily comprehended that one could find out in five minutes how this man had made his money.

H. A. B. Dunning, of Baltimore, said that a very simple process in use in his establishment for making camphorated ampoules was to simply fill the ampoule by the use of a subcutaneous syringe, seal the ampoules and place in an Arnold Sterilizer, sterilizing the ampoules and contents at the same time. Being sealed, no camphor could be lost. His apparatus only cost 75 cents.

LOTIO ALBA.

OTTO RAUBENHEIMER, PH. G., BROOKLYN, N. Y.

The prescription calls for Lotio Alba. In this age of white dress, white flag, white cross, white linen, white plague, white slavery and whitewashing, undoubtedly White Lotion, or White Wash, will be of interest to the pharmacist. However, he is at a loss as he is unable to find a formula for this preparation, even if he is equipped with a good sized pharmaceutical library. No pharmacopœia, no National Formulary, no other formulary, and no dispensatory, *the* book which is looked upon to give all kinds of pharmaceutical information, mentions Lotio Alba. Even such authorities as Remington, Caspari, Arny, Fenner, Hager, Dietrich, Buchheister, Hell, Dorvault, Orosi, MacEwan, Martindale and others, and such standard works as the British Pharmaceutical Codex, and the Pharmaceutical Journal Formulary do not mention Lotio Alba.

Upon getting in touch with the physician the pharmacist is informed that this preparation is used largely in hospital and dispensary practice. If the pharmacist is fortunate enough to possess a hospital formulary, as for instance, that of Bellevue and Allied Hospitals in New York City, then he at last finds a formula for Lotio Alba, or White Wash, which is composed of zinc oxide, solution of lead subacetate, glycerin and lime water. This however, is not the preparation which the physician intends to be used against acne, pimples, blackheads or other skin affections. Lotio Alba is composed of zinc sulphate, sulphurated potassa and water, or rose water.

The writer, as chairman of the Committee on the A. Ph. A. Recipe Book, is well aware of the fact how difficult it is to find a formula for Lotio Alba. It

is for this reason that in the July number of the Journal of the A. Ph. A., 1912, page 761, he has published the following formula:

LOTIO ALBA
White Lotion
Lotio Sulphurata

Zinc sulphate	5 gm.
Sulphurated potassa	5 gm.
Water, or Rose water, a sufficient quantity to make	125 cc.

Dissolve each chemical in 60 cc. of water, or rose water, which latter is preferred by some dermatologists and also by some patients on account of its odor. Filter each solution and mix by slowly pouring the potassa solution into the zinc solution, then add sufficient water or rose water to make 125 cc.

If the pharmacist is a member of the A. Ph. A. and keeps or binds the Journal of the A. Ph. A., or if he is a reader of The Practical Druggist, he can find this formula in the Journal, as said before, or in The Practical Druggist for November, 1912, page 44. This prescription originally came from France and was introduced into the U. S. around the 70's and has been used extensively since, in fact its use in dermatology seems to be on the increase.

Potassa Sulphurata, Sulphurated Potassa or "Liver of Sulphur" was official in U. S. P. 1890, and must have been of some importance at that time, as it was admitted into the Appendix of the N. F. III, page 226, together with a formula for its preparation. There is a great difference in this substance in its physical characteristics, as well as its chemical composition. As can be seen from the specimens exhibited it varies from a dark liver-brown color to dark yellow, dark green, light green or even gray. When fresh it has a strong characteristic hydrogen sulphide odor which, however, upon exposure gradually decreases so that old "liver of sulphur" does not resemble liver or sulphur, being practically odorless and worthless. Owing to its rapid deterioration, it is absolutely necessary to keep it in well stoppered bottles, which is one of the specifications in the monograph of the National Formulary. Chemically, sulphurated potassa is a mixture of potassium trisulphide, K_2S_3, and potassium thiosulphate, $K_2S_2O_3$. Sulphurated potassa when prepared according to the N. F. should be almost completely soluble in two parts of water. On account of the importance of this chemical and inasmuch as it will be readmitted into the U. S. P. IX, no doubt some one, if not the writer, will give us a paper on the history and chemistry of potassa sulphurata.

The value of White Lotion depends upon the strength of sulphurated potassa. If the latter is fresh and contains the proper amount of potassium polysulphides, then the solution of zinc sulphate will be decomposed into zinc sulphide, which is a white precipitate and which is desired by the prescribing physician and which is of value in the treatment of acne, etc.

Prescriptions calling for 2 oz. of Lotio Alba, containing 1 dram of each chemical, have been compounded in different pharmacies in New York, Brooklyn and elsewhere and samples of same are herewith submitted. For better comparison these specimens are put in uniform bottles.

The color of these lotions varies from a pure white to gray or brown, some of them being so dark so as to deserve the title "Black Lotion." As to the precipitate this ranges from a very coarse to a very fine texture. Some precipitates are very dense, others are very bulky. In fact one sample is colorless like water, evidently having been filtered in order to improve (?) its appearance! This wide variation most certainly deserves the careful attention which pharmacists must pay to the preparation of Lotio Alba.

In the formula for Lotio Alba given above the writer has taken the pains to specify the proper manipulation. The following should be borne in mind:

I. The zinc sulphate solution should be filtered, if necessary.

II. The potassa sulphurata employed must be fresh and must possess a strong H_2S odor.

III. It is absolutely necessary to filter the sulphurated potassa solution, to remove any insoluble portion, which would act as an irritant to an inflamed skin.

IV. In order to obtain a finely divided precipitate it is necessary to have both solutions as much diluted as possible.

V. According to the experience of the writer and other prominent pharmacists it is best to *slowly* pour the potassa solution with constant agitation into the zinc solution. By this method a more bulky precipitate is obtained, which is the desideratum of the prescriber.

VI. The lotion should be dispensed with a "shake well" label.

As stated above, the author, as chairman of the Committee of the A. Ph. A. Recipe Book has proposed a formula containing 5 gm. each of zinc sulphate and sulphurated potassa in 125 cc. of water. Dermatologists all over the country prescribe this lotion in different strengths, generally varying from 1 to 2 drams of each chemical in 4 oz. of water or rose water.

Sulphurated potassa is a mixture of polysulphides, potassium thiosulphate and potassium sulphate. The best variety, that is one which has not been overheated, contains potassium trisulphide. According to its approximate molecular weight, 354.23 gm. of sulphurated potassa contains 169.21 gm. K_2S_3 and 185.02 gm. $K_2S_2O_3$. In the preparation of Lotio Alba the following change takes place.

$$\underset{285.41}{ZnSO_4.7H_2O} + \underset{169.61}{K_2S_3} = ZnS + S_2 + K_2SO_4 + 7H_2O$$

From this chemical equation it can readily be seen that in Lotio Alba, containing equal parts of the chemicals, all of the sulphuret is decomposed, in fact that there is an excess of zinc sulphate. This accounts for the fact that there is no odor of hydrogen sulphide in the finished lotion if properly prepared. The precipitated sulphur is, of course, in a finely divided state, just what is desired by the dermatologist.

As explained above sulphurated potassa is very unstable. What is the average pharmacist going to do when he receives an occasional prescription for Lotio Alba? There are two ways to overcome this difficulty.

I. Preparing small quantities of sulphurated potassa by the pharmacist himself. Although this might seem an odoriferous manipulation, it can easily be accomplished, especially under a flue or in the open air, and the writer himself has done so on numerous occasions with but very little trouble.

II. The preparation of a solution of fresh sulphurated potassa in water. Strange to say, *the solution* of this unstable chemical *is very stable* and the writer takes pleasure in exhibiting specimens which are one and two years old respectively. The chemical is almost completely soluble in two parts of water, but for convenience the author is in the habit of keeping in stock a solution four volumes of which represents one part of potassa sulphurata. The preparation and keeping of such a stock solution for the quick and proper preparation of Lotio Alba has been kept quite a secret, a so-called professional secret, by the pharmacists who are favored with the prescriptions of dermatologists. The writer, who believes in the motto, "To give and take pharmaceutical knowledge," takes pleasure in herewith presenting this "secret" method for the benefit of his brother pharmacists.

DISCUSSION.

In reply to a question by Mr. Fennell, as to whether, in these dark preparations, the zinc sulphate contained any iron, Mr. Raubenheimer replied that the black color was probably due to the presence of ferrous sulphide. The sulphurated potassa contained iron due to the fact that the manufacturer made it on a large and cheap scale. He merely melted his potassium carbonate and sulphur together and poured it out into an iron tray, and it would be noticed in one of the samples passed around that it was yellow on one side, and on the other side was black. Without filtering the solution, a gray precipitate would be had. He had filtered it, with the result as shown.

H. A. B. Dunning, of Baltimore, said that in his establishment they used much the same method as Mr. Raubenheimer had outlined for preparing solution of sulphurated potash. To insure the strength of the sulphide solution, they selected that portion of the sulphide which was yellow. He had found it necessary to keep the substance tightly stoppered, otherwise there was more or less change in the condition of the sulphide. It seemed remarkable that there were in the United States, in any of the cities from which these samples came, concerns that would send out such products as were to be seen on the table before the members. He thought it was not expressing it in language too strong to say that it was a disgrace that this should be true.

Mr. Raubenheimer stated that these samples came from all parts of the country, some from New York, some from Brooklyn, and some from Philadelphia; but none had come from Baltimore, nor had any come from Cincinnati.

A PRESCRIPTION AND A QUERY.

A. W. BENDER, DETROIT.

The following prescription was compounded by a local pharmacist:

℞ Atropinae sulphat ..... .004
Argenti nitrat 1
Bismuth subnitrat ..... 5.
Magnesii oxid ..... 5.
M. et div. in pulv. No. XV.
Sig.—One powder after meals and one an hour later.

During the first day six powders were taken according to directions and no ill effects were experienced. On the second day after having taken two powders in the morning, the patient began to feel dizzy and noticed that the pupils of his eyes were greatly dilated. An overdose of atropine was suspected and he stopped