

Any cheaper odor may be used, such as Almond, Orange Flower or Synthetic Rose.

Hand lotions should have emollient properties, be thick yet easily absorbed or dried on the hands, with a pleasing odor and appearance. Here is a formula which I have found to give great satisfaction:

Powdered Tragacanth	1½ ounces
Alcohol	16 ounces
Glycerine	8 ounces
Benzaldehyde60 minims
Oil of Lavender flowers	20 minims

Mix thoroughly, and add quickly water enough to make one gallon."

PROF. LASCOFF:—"The essential qualities of a good cold cream are to use pure ingredients, which have a pleasant odor and are bland. The following formula was given to me about fifteen years ago and I have been very successful in its use, receiving quite a demand for the product.

Cold Cream.

White Wax	12 and a half ounces
Paraffin Oil48 ounces
Distilled Water	24 ounces
Borax	6 drachms
Oil of Rose	q. s.

"For dispensing purposes however the formula of the Pharmacopœia should be used and nothing else. For a good hand-lotion, Glycerine and Rose Water, with Tincture of Benzoin is the best. A good formula was suggested by Dr. Apple, of Philadelphia, printed in the Proceedings of the A. Ph. A."

PROF. RAUBENHEIMER:—"The official formula for Ointment of Rose Water can be modified into a Theatrical Cold Cream by using Paraffin Oil in place of the oil of almonds. The cold cream produced by use of this process has the great advantage of keeping perfectly without change. There is consequently a large demand for such a preparation."

MR. FERTÉ:—"I would ask another question in reply to this query,—Is any Cold Cream particularly good? The one that sells is good. There are so many 'good' formulas available that I think it not necessary to discuss them. 'A good all-around hand and face lotion is thin quince mucilage with a small amount of glycerin, alcohol, benzoin, menthol and some antiseptic and perfume.'"

MR. NITARDY:—"The whole secret of the keeping quality of cold cream is in the proper balance of the ingredients of which it is prepared. A small amount of stearin is of advantage I have found."

MR. OSSEWARD:—"The jars in which the cold cream is placed should be warmed before they are filled, to about the same temperature as the cream, to prevent its contraction from the sides of the receptacle. If this is done this trouble will be avoided."

PROF. RAUBENHEIMER:—"It is also absolutely necessary that the oil and the water should be of like temperature before they are incorporated."

Question 11:—What argument have you in favor of the retail druggist making his own tinctures, syrups, elixirs and other simple pharmaceuticals? Have you any arguments against this practice?

SHOULD THE RETAIL DRUGGIST MAKE HIS OWN PREPARATIONS?

HOMER C. WASHBURN, PH. C.

To what extent the retail druggist should engage in the manufacture of his own preparations, such as tinctures, syrups, elixirs and other simple pharmaceuticals, is a question that has been much discussed, *pro* and *con*, but which, I believe, is still a live and debatable one.

In considering a subject of this kind, it may be well to note the changes in economic and sociological conditions, which must be held responsible, to a large extent, for much of the business and commercial "status quo" of the present time.

Going back in the history of pharmacy, we find that the druggist, or apothecary, originally made all the preparations and medicines he supplied for the cure or

alleviation of man's ills, and that the drug- and chemical-manufacturing plants, which are such important factors in the world's business of to-day, were not only unknown and un-thought-of, but probably not needed. When we think of all this change that has come within a few generations, and note the concentration of the drug-manufacturing business within a comparatively few commercial centers, we are prone to consider pharmacy as a lost art.

However we view the subject, only a casual observation will convince us that the changed condition is not peculiar to pharmacy, but is just as true in all lines of manufacture and in most of the arts as it is in pharmacy. In short, the change is merely the progress or regress of certain evolutionary conditions that are affecting, alike, nearly all lines of human activity.

Only one-hundred years ago, and in many localities, a great deal less, each family was concerned in the production of nearly all the necessities of life. Not only were the food products grown or gathered by each family for its own needs, but even the wool and the flax that was to constitute its clothing, was raised, spun and weaved, and manufactured into garments by each family for its own use. Not only this, but if a man wanted a wagon or a sled, he made it by the toil of his own hands.

Such illustrations might be enumerated *ad infinitum*, being limited only by the number of articles of family use, but the foregoing will amply illustrate my point. Only I might have added, that most of the herbs used in the household remedies, which were so popular in those days, were also collected by the family for its own use.

But times have changed, and whether we view this kaleidoscopic, evolutionary change as of benefit or of harm, we must bow, to a certain extent, to the tendencies of the times.

To-day it is not uncommon to find our young people, and especially those among the city bred, who, while wearing the finest of raiment and traveling in conveyances that are the best product of the skilled mechanic's art, find their most serious employment in idleness and in attending places of amusement, little knowing, and caring less, where the clothes came from that they wear, or by whose toil they are permitted to enjoy the ever-changing variety of modern society.

The sociologist and the psychologist have very concrete notions as to the effects of such idleness, upon the moral and spiritual tendencies of our time, and I quite agree with them, but I fully believe that it is only one phase of modern, industrial tendencies and that we should do whatever is possible to correct the evils of this tendency. However, we will be able to accomplish more real and lasting good by methods that are evolutionary and not revolutionary—by working among our own people in our own chosen profession and doing whatever we can in a quiet, but no less positive way, to encourage habits of industry and usefulness among those, who being our apprentices to-day, will be our successors to-morrow.

Personally, I do not believe that many of our modern, economic and sociologic tendencies make for the betterment of the race. Centralization of production, along each of the various lines of business, undoubtedly results in the production of articles at a lower cost, but it also results in the enforced idleness of others,

and to my mind, idleness is the most dangerous tendency of our time. I believe that this talk about the concentration and minimization of labor, in order to allow more time for intellectual and spiritual development is nonsensical. On the other hand, I do believe that hard work and even hardships, such as our forefathers had to endure, made for better intellectual and spiritual growth than the present-day, easy mode of life. In support of this contention, I would merely point to the names of Jefferson, Webster and Clay, or to Whittier, Emerson and Lowell—products all of the days when hard work and a struggle for existence was the rule. According to President Eliot's definition of education, Abraham Lincoln was the best educated man of his time, and the story of the struggles and hardships of his life are well known to all.

So, coming specifically to the point under consideration, I believe that the more a druggist plies the fundamental warp and woof of his profession, the more nearly will he deserve being called a professional man. The idea that has gained ground in later years, that the druggist is merely a store-keeper or business man is only the logical and inevitable outcome of his tendency to handle the products of other's labor, allowing the skill and the science of his predecessors to gradually slip away.

I am not advocating that the retail druggist should attempt to prepare all his preparations. Many of them would involve too large an outlay of apparatus for the amounts he would use; others that require standardization, and especially those that can only be standardized physiologically, require a degree of expert knowledge and *technique* that we can not logically expect the retail druggist to acquire, but in the average run of preparations, such as most of the tinctures, syrups, elixirs, etc., for which only a reasonable amount of expert knowledge is required, I believe that the benefit derived would justify the effort involved. And, in this connection, let me say, that the benefits gained can not all be reckoned in dollars or cents. There should be some pecuniary saving, to be sure, in such articles as are used in fairly large amounts, because the same shelf-bottle or container will serve its purpose indefinitely, while with every purchase of such article, from the manufacturer or jobber, a different bottle, label and stopper are used. Also the average retail druggist, or his clerks, could find time to make many of these preparations during moments that are not otherwise employed, and no one will contend that, in buying these preparations ready-made, we are not paying for the time, labor and expert knowledge of the individual who does manufacture them. Add to this the freight and cartage. These savings are mere trifles to be sure, but the drug business is made up of trifles, and in the aggregate they amount to considerable.

Even though the expense involved were as much as the article would cost, there are still, at least, two things to be considered—the psychological effect upon the druggist himself, and that upon the customer. The druggist who clings to at least a portion of the professional and technical phases of his calling, is benefited psychologically, at least. He takes more pride in his work, feels a greater confidence in *himself* and develops a higher sense of responsibility, all of which undoubtedly increase his usefulness to the community. These make him indeed a better man and a better druggist.

From the view-point of the customer, it is scarcely necessary to say that the

druggist who is known to manufacture a part of the preparations he handles, inspires confidence. The layman is usually a practical sort of an individual, and generally views the druggist as a professional, or just a plain business man, in about the ratio he deserves.

Just what preparations should be made by the retail druggist, is largely a matter of local conditions, and each individual is best qualified to answer the question for himself. But he can only do so, with any degree of intelligence, after a careful study of the matter. I would not advise any druggist who has not been in the habit of making his preparations, or one who is just starting in, to plunge into the matter blindly and attempt to make any considerable number at the start, but rather to begin gradually, increasing the number from time to time as seems best. Under such a plan, I believe an active interest will soon develop in any man deserving of the name of druggist, and that with an average degree of business acumen, it can soon be determined what preparations can be made to the best advantage.

To the list of official pharmaceuticals, I would strongly urge the manufacture of such preparations as cold creams, toilet lotions, etc. Formulæ, from which preparations of this type may be made, are easily accessible, and the confidence-inspiring influence their use gives the customer, is certainly worth while.

In the foregoing arguments, I have purposely endeavored to treat the subject academically, laying special stress on the sociological and psychological phases. Indeed, I believe that any business with the psychology of that business left out, is comparable to a boat simply drifting with the current and without the directing influence of a guiding helm.

DISCUSSION.

PROF. LASCOFF:—"If a man desires to call himself a pharmacist, he must, of necessity and desire, make all of the preparations named, to be at all worthy of that name. Not only that, but it is cheaper and his preparations are better and fresher."

MR. GRAY:—"In my opinion a druggist should make all of his elixirs, syrups, emulsions and in fact everything he uses in the way of preparations, excepting fluid extracts, tinctures, pills and tablets. With these exceptions it pays to do so."

MR. SHULZE:—"The arguments are all in favor of the druggist manufacturing his preparations. There is not one good argument against this practice. First and foremost, he knows just what they contain. Second, they are properly made and third, he can save from twenty to forty per cent. Some may consider the last item of the first importance."

MR. FERTÉ:—"It does not pay to make tinctures, because of the loss of the alcohol remaining in the marc. The same is true of fluid extracts. But it does pay to make elixirs, syrups, ointments and many other preparations. There is no argument against this practice."

PROF. RAUBENHEIMER:—"The retail druggist who aspires to the name of pharmacist, should most certainly make his pharmaceuticals. This practice should not be restricted to simple preparations, such as mentioned in the query, but he should also make the more complex preparations, those which require pharmaceutical skill, which every pharmacist should have acquired in his college course and also in his daily practice, if he has made use of the opportunities presented to him."

Question 12:—How much of the trouble encountered by pharmacists in making the official preparations is due to the use of crude materials of improper quality, and the subsequent improper keeping of the finished product?

DISCUSSION.

MR. NITARDY:—"In my opinion most of the trouble is caused by the use of improper crude materials rather than to improper keeping of the finished product."

PROF. RAUBENHEIMER:—"I think that the much talked-of poor quality of crude materials, of our drugs and chemicals is entirely unwarranted. The pharmacist who is willing to pay

the price for them can always obtain drugs which are of U. S. P. quality. Another important factor in the situation is that the average pharmacist seldom examines or tests the drugs he buys. As soon as he commences to do so and the wholesale druggist becomes acquainted with the fact, then the pharmacist, upon the payment of a fair price will be supplied with drugs and chemicals of U. S. P. quality."

MR. FERTÉ:—"Not much of the trouble is due to drugs of poor quality. It is caused in the majority of cases by ignorance of the *modus operandi*, I believe."

PROF. LASCOFF:—"In the manufacture of official preparations it must be understood that the materials must be of A-1 quality, and if the preparation is not a stable one, it should not be made in large quantities, and should be preserved in well-corked amber bottles and at a medium temperature. If care is not taken in the preservation of such preparations, there is always trouble."

Question 13:—Did you find it necessary to have your Pharmacopœia re-bound before it was subjected to much wear? Is the binding as substantial as it should be or does it compare favorably with the bindings of other books intended for constant use?

DISCUSSION.

PROF. LASCOFF:—"This question was brought up at a meeting recently held in the New York College of Pharmacy and Professor Reimington stated that the binding of the U. S. P. (IX) would be far superior to any other binding of the previous volumes. My personal experience is that I have had mine re-bound twice, and then had to buy a new book with a flexible cover."

MR. SCHULZE:—"I think the binding of the Pharmacopœia compared favorably with that of other books, although we used it a great deal more."

MR. FERTÉ:—"We have not been obliged to have our Pharmacopœia re-bound, probably because I covered it with heavy wrapping-paper as soon as I received it. At practically no cost this covering will last two or three years and then can be renewed."

PROF. RAUBENHEIMER:—"Unlucky '13 and unlucky binding of the Pharmacopœia were united. After the short use of one year, the poor binding of our good Pharmacopœia gave way and its leaves were scattered in the many corners of my store. An interleaved and leather-bound copy was then procured at the advanced price, but its fate was the same. Of course, I admit that I make frequent daily use of the volume and could hardly expect that one copy should last ten years. But its binding can be, and undoubtedly will be, greatly improved upon. By the way, the United State Pharmacopœia is not the only one which has a poor binding. The French Codex is bound equally bad if not worse."

DR. WILBERT:—"I am informed that the Board of Trustees has made proper arrangements for a most substantial binding for the new Pharmacopœia."

MR. WHITE:—"The practice of making notes in the Pharmacopœia is not a good one. It increases the use of the volume and therefore tends to its deterioration. I use a card-index for such purposes. These cards can be renewed at any time at but very little expense, and their use saves the use of the Pharmacopœia."

Question 14:—Has the average pharmacist such reference books as he should have? Would \$50.00 or \$100.00, expended on books of value to pharmacists be a paying investment from a commercial stand-point? What books would you include in a five-foot shelf of reference books for the country pharmacist; for the city pharmacist?

DISCUSSION.

MR. SCHULZE:—"Every pharmacist should possess a Pharmacopœia and a National Formulary. In addition to these, he should have at hand a first-class treatise on pharmacy, and also one on chemistry. He should subscribe to at least one good drug-journal. All of these will not cost \$50.00 and they will answer all practical purposes. These books, with the publications which the membership in the A. Ph. A. will bring him to keep in touch with the advance of pharmacy, are sufficient for the ordinary pharmacist."

MR. FERTÉ:—"The average pharmacist is not equipped with books as he should be. There is no need of expending more than fifty dollars for a working-library. That much, however, I consider a good investment for him."

MR. GRAY:—"I do not think the average pharmacist has as many reference books as he should have; and believe that fifty dollars for books is a good paying investment. I would recommend the following books for a five-foot library shelf: U. S. Pharmacopœia, U. S.

Dispensatory, *Materia Medica* and Pharmacology (Culbreth), National Formulary, Manual in Chemistry (Luff and Candy), Squire's Companion to the British Pharmacopœia, Latin Dictionary, Chemical Dictionary, Merck's Index.

PROF. RAUBENHEIMER:—"I have thoroughly investigated this question, being somewhat of a 'book-worm' myself. The conclusion I have reached is that the average library of the average pharmacist of the United States is a disgrace to the profession. Is it not sad that, even in the Empire State of New York, which pretends to be a leader in things pharmaceutical, a provision had to be made in the Pharmacy Law requiring every pharmacist to have in his pharmacy copies of the Pharmacopœia and the National Formulary? The pharmacist who invests fifty or one hundred dollars in books pertaining to pharmacy, chemistry, botany, pharmacognosy and toxicology will receive an abundant return within a very short time. I have had in mind the preparation of a list of books which should be possessed by every pharmacist, both in city and in country and hope soon to furnish such a list as is called for by the query."

PROF. LASCOFF:—"Very few pharmacists have a complete library, or even the most necessary books of reference. In my opinion, fifty dollars to one hundred dollars expended on books of value to pharmacists would be a paying investment from a commercial standpoint, as without books of reference I do not think any reputable pharmacist could get along. I would suggest the following list of books as desirable for a library. For city pharmacist: U. S. Pharmacopœia; National Formulary; U. S. Dispensatory; Hager (3 volumes); Squire's Companion to British Pharmacopœia; Text Books, (Arny's, Remington's, Caspari's); Volumetric Analysis (Coblentz & Vorisek or Schimpf); Latin Grammar; Incompatibilities in Prescriptions (Ruddiman); Weights and Measures; Outlines of Physiology; Botany and Pharmacognosy (Kraemer); Polyglotta (Rosseau); Proceedings of A. Ph. A.; Manuals of Toxicology and Microscopy; Journal American Chemical Society; Purdy's Practical Uranalysis; Journal Am. Ass. Advancement of Science; Five Pharmaceutical Journals (to be bound); Pharmacology and Therapeutics (Cushny); *Materia Medica* (Rusby). For country pharmacists: U. S. Pharmacopœia; National Formulary; U. S. Dispensatory; Hager (3 volumes); Incompatibilities in Prescriptions (Ruddiman); Proceedings of A. Ph. A.; Two Pharmaceutical Journals (to be bound.)"

DR. WILBERT:—"The Pharmacopœia was not much in evidence in New York State before its possession was made compulsory. Some two years ago I took it upon myself to make an investigation into this matter. I found some pharmacopœias, but they were not like those of which Mr. Jones and Prof. Raubenheimer have spoken. Those I found were in a most excellent state of preservation and they had a thick layer of dust on top of them."

MR. OSSEWARD:—"It seems strange to me that any pharmacist can get along without a pharmacopœia. We have constant use not only for the pharmacopœia of this country but also for those of Britain, France, Germany, Holland and Scandinavia." In addition to the books mentioned I would suggest one entitled "Modern *Materia Medica*."

MR. NITARDY:—"I have found a book entitled 'Elementary Chemistry,' by Dr. Gordeen, a very good book for a retail pharmacist to have."

PROF. RAUBENHEIMER:—"The most thorough book of which I have knowledge is Von Schmidt's *Pharmaceutical Chemistry*. It is printed in German and, so far as I know it has not been translated. The author of the book is an honorary member of our association."

Mr. Richardson read the following paper in reply to this query:—

DRUG-STORE LIBRARIES.

FRANK RICHARDSON, PH. G.

The average pharmacist has not the reference-books that he should have. The average drug-store library in this section is composed of the books required by the law, viz.: The United States Pharmacopœia, The National Formulary, and one of the Dispensatories, and the pharmacist without a good working-library, is like a mechanic trying to work without suitable tools.

The pharmacist in most rural communities, is looked upon as a man able to answer all sorts of questions and nothing he can do will add more to his prestige than his willingness and ability to answer satisfactorily the many questions asked by his customers, and to do this he must have the tools to work with.