

surface of the liquid to be siphoned. Second: after putting in the siphon, cover the neck of the bottle tightly with the hand, and blow forcibly with one sharp puff through a space left between the thumb and forefinger.

Among the various means, aside from those just noted, and which are employed for the separation of liquids from solids, may be mentioned straining through filtering bag, flannel, muslin, or other cloth. Clarification by white of egg; filtering through paper with its attendant glass funnels, ribbed and plain, plaited paper, wire supports, etc., capillary filtration, filtration under pressure, upward filtration—these all have their merits in certain ways. I will make further mention of only one, and that with a desirable addition, that of the white felt filtering bag, with the addition of filtering paper, so disintegrated as to form a homogeneous mass or pulp. My first lesson in making paper pulp was acquired when a boy, in visiting a large paper factory. Boiling water maceration and churning about with a knife-like instrument is all that is necessary. It then can be thrown on cheese cloth, the water pressed out, and the pulp broken up and allowed to dry, when it is ready for future use. When wanted, it can be placed directly in the liquid to be filtered, but in nearly all liquids the best and most satisfactory way is to first place the dry pulp in some pure water, which soon breaks it up, then the water may be separated as before. The moist pulp can then be placed in the whole amount of liquid if the total amount of liquid is small, but if the amount is large, then only that amount which, when poured into the bag, fills it, the supposition being that the proper sized filter or bag is being used. The object in doing this will readily be seen. As the liquid flows through, the pulp is left as a coating on the filter. The first portion running through must be returned until it begins to run clear. This combination filter makes, for rapidity of action, for time saving, and for results desirable, it has proven with me, one of the most efficient.

The preparation of syrups may be considered a matter of extreme simplicity, and, in fact, with very few exceptions, so far as Pharmacopœia Syrups are concerned, this is, no doubt, correct, very little, either of art or science, being required, in most cases, to furnish presentable articles.

The first matter for consideration is the source of the sweetness—sugar. The Pharmacopœia is quite explicit in regard to it, rightly designating cane sugar. Beet root sugar I have not found satisfactory, as it contains glucose to a greater or less extent, and to glucose are attributed many of the undesirable changes which chemical syrups undergo. Much of the sugar on the market is faced with ultramarine or other blue coloring matter, this coloring being used to neutralize the last shade of yellow color which remains in the sugar. Two syrups only will be noted

here, syrup iodide of iron and syrup hypophosphites U.S.P. The Pharmacopœia directs the introduction of the water, iron wire, and all of the iodine at once, checking heat involved by application of cold water. In a pharmacist's busy career he is liable to overlook the reaction that is more or less violent, and consequent loss of iodine, which is sure to take place unless it is watched, and the temperature kept low. Iodine added in small portions at a time will avoid high temperature, and consequent worry. It also directs filtering the iodide of iron solution into cold syrup. I think there are advantages in using syrup at the boiling point, as the iron solution mixes more readily. The syrup is clarified to a certain extent, and at the same time sterilized, which is of great value in preserving syrups, or other non-alcoholic liquids. The addition of from one-quarter to one-half grain citric acid to the ounce of solution is an effective and, I may say, innocent preservative.

The word "elixir" to-day stands for a class of preparations flavored, sweetened, weak in alcohol, in which medicinal substances of various kinds are exhibited in palatable form, and their number has in recent times grown so large and varied that it is almost impossible for the pharmacist to keep a stock sufficient to meet the demands of his business. In making the base for nearly all elixirs the flavoring ingredients should be pure and fresh, for in their purity, to a great extent, lies the success or failure in this class of preparations. The essential oils used in making this base, being oxygenated as soon as exposed to the air in a loosely-stopped bottle, begin at once to deteriorate. Five to ten per cent. of spirits added to them will preserve them to a great degree. Elixirs containing chemicals require care in their making. Scale iron: salts should be thoroughly powdered and dissolved in warm water, the iron being added and dissolved in small portions at a time. Quinine requires heat and a small amount of citric acid for solution, and is to be dissolved directly in the plain elixir. Neutralization for either alkali or acid should be very gradual until the neutral point is reached. The overlooking of this point is to my observation one of the greatest stumbling-blocks to success of the average pharmacist in this line of work, the neutralizing agent for acids being ammonia water. Test its purity by neutralizing it with dilute sulphuric acid. If it be a coal-tar product, its odor will make itself known, and is to be rejected for use here. In making solution of citrate of bismuth and ammonia, the solution remains turbid, due to the insoluble citrate of bismuth. To render complete solution, ammonia water or hydrate is added drop by drop at short intervals, until complete solution is obtained. Tasteless tincture chloride of iron, if used in making elixir gentian and iron, makes an elixir that is all that can be desired. But how can we avoid carrying a ready-made stock sufficient to

meet all demands of our business, and keep our shelves clear of stock in this line seldom called for? Can it be done? I believe it can, and the answer is a simple one: By keeping concentrated solutions, like pepsin, iron, bismuth, calisaya, etc., of a known strength of your own make, and when you have an order from your physician or other source, for an ounce of something in this class, the formula of which you know, instead of being compelled to buy a pound and depositing the unused fifteen ounces on your shelf to worry you as to the likelihood of your being able to turn it into cash at some time in the near future, make the required amount out of your own concentrations and have the satisfaction of knowing that in place of having your hard-earned money invested in stock that is gathering fly-specks in the summer and dust and dirt in the winter, you can deposit it where you can view it occasionally as ready cash. It should be the ambition of every pharmacist to be able to manufacture his own preparations, if for no other purpose than to be able to determine as to the genuineness and quality of those he purchases of the wholesale manufacturing chemist. In connection with the subject of the art of pharmacy let us for a moment consider some of the aids and helps that will tend to place our calling on a professional footing, which, I believe, is the desire of every true pharmacist. There is so much to be said in regard to this that its magnitude makes one feel his entire incapability of treating the subject as it should be.

I have seen and heard this subject discussed *pro* and *con*, in print and by individual persons, and much in other ways, and, from the evidence already in, I am constrained to think, and am almost convinced, that, as it is practised to-day by the rank and file of our pharmacists and druggists, we have not the slightest claim on the medical and other professions, or the public in general, to be recognized as such. There seems to be a prevailing idea among us that pharmacist and druggist are synonymous terms—that they mean the same thing. To my mind they are distinct, a pharmacist being one who manufactures and dispenses drugs, while a druggist simply handles them, and a handler of drugs is no more entitled to professional recognition than he who handles the yard-stick in measuring the cloth for your summer suit. Therefore, there is a gulf between the two that can only be spanned by a thorough conception of a pharmacist's calling; a thorough preparation—a preparation that cannot be found at the soda fountain, at the cigar case, or selling patents of whatever kinds,—a preparation instigated by other motives than the dollars and cents it may bring—a choice of this calling as a life-work. A thorough training in a pharmaceutical school is for various reasons greatly to be desired if used only as a foundation for future work. Much of the after-work will depend on the firmness and stability of this foundation. No col-