

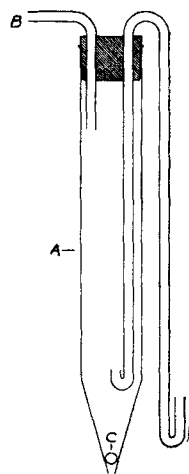
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AN AUTOMATIC "NONBREAKING" SYPHON.

BY E. O. EATON.*

An apparatus in a single unit is needed which will start a syphon without the use of mechanical suction and which will not "break" as the level of the short arm is reached. Such an apparatus would prove particularly useful in syphoning acids, alkalis, and other corrosive and poisonous liquids from bottles, carboys, etc., and also in obtaining a certain maximum volume while maintaining a constant level, as is necessary in certain types of percolations, filtrations, etc. The accompanying drawing shows such an apparatus.

The process is started by immersing the short jacket "A" to about one-third of its depth in the liquid to be syphoned. By gentle suction at "B" the jacket is partially filled. Pressure at "B" then closes the outlet with the glass bead "C" and forces the liquid through the syphon, thereby filling it. The syphon is kept from "breaking" by the turned-up ends of the syphon arms.



THE PREPARATION OF HERBARIUM MATERIAL AND ITS RELATION TO PHARMACY.**

BY CHARLES E. SMYTHE.¹

As over 70 per cent of our medicinal agents are of vegetable origin, it can readily be understood that botany should play an important part in the study of pharmacy. The preparation of herbarium material by students is an essential part

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** Scientific Section and Northwestern Branch A. PH. A. Parts of a paper presented at a recent meeting of Minnesota Pharmaceutical Association.

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in our curriculum at the College of Pharmacy, University of Minnesota. In the first quarter of the junior year, we assign to every student the preparation of an herbarium of about seventy specimens. These specimens consist mainly of medicinal plants which they identify, mount and label, materials being provided for that purpose. The object, of course, is that students may learn to know medicinal plants as they grow in nature; to know the leaf, the flower, root and stem—in fact, to know the plant as a whole, and not merely one of its parts, such as root, or leaf, or whatever part happens to be used in medicine.

There is an art in the preparation of an herbarium.¹ To make a good herbarium, the leaves or flowers should, generally, be collected in the summer, when they are at maturity. In the fall they are apt to be old, and will not press as well, or show such good color. There are some exceptions to this rule, of course, such as *Phytolacca* (Poke) or varieties of *Rhus*, which show more beautiful coloration in the fall.

Specimens should not be collected on a rainy day, nor when the dew is still on the plant, for the great amount of moisture will make drying difficult, and mould easily develops. After collecting, the specimens are to be spread immediately on blotters or newspapers and flattened out carefully, taking care especially of the margins of the leaves; weights for pressure should be applied evenly. For the first three or four days, the blotters should be changed daily for dry ones, taking care each time that the specimens are perfectly flat. This is the secret of a good herbarium, and there is no other way that yields such uniform results.

After the first week, it will usually suffice to change blotters only twice a week until thoroughly dry. The specimens are then mounted on standard herbarium paper by means of glue or strips of gummed material. Labels are placed on the lower right-hand corner of the sheet, with such information as: Botanical name of Plant; Common Name; Family; Habitat; When Collected; Where and by Whom, and any other information which might be useful.

Within ten miles of the Twin Cities we have collected something over forty medicinal plants yielding U. S. P. or N. F. Drugs. Their names follow:

Senega, leptandra, cypripedium, cicuta, iris versicolor, angelica, actæa, aralia racemosa, aralia nudicaulis, caulophyllum, trillium, arisæma, asarum, geranium, sanguinaria, aquilegia, typha, erigeron, eupatorium purpurea, eupatorium perfoliatum, prunus serotina, valeriana edulis, rumex, polygonatum, heuchera, menispermum, achillea, sarracenia, osmunda, adiantum, smilacina, senecio, melilotus, allium, calamus, celastrus, apocynum, penstamon, caltha, xanthoxyllum.

In almost any locality there may be found some medicinal plants growing in their native habitat. Here is an opportunity, especially for the country pharmacist, to place himself on a professional standing with the public. The pharmacist should be the botanical enthusiast of his locality. It would be interesting and instructive for the pharmacist to make up a collection of the medicinal plants of his neighborhood and exhibit them in his store. In case of doubt as to the identity of plants, the Botany Department, or the College of Pharmacy, University of Minnesota, are always glad to be of assistance. A great many medicinal plants are grown in the Medicinal Plant Garden, and seeing them aids in the identification of others.

¹ Herbarium specimens, made under ideal conditions, were exhibited—these retained the natural colors of flowers, leaves, etc.

Collections of herbarium specimens are of value in many directions. Primarily, they are of use in aiding the identification of unknown plants or economic vegetable products, such as drugs. The pharmacist should know especially the poisonous plants of his locality, their poisonous properties and antidotes, so as to be able to give prompt aid in the absence of a physician in emergency cases. This alone will compensate him for any trouble he may take to familiarize himself with these plants, and will enhance his reputation in the community. Every year in Minnesota there are deaths among children, resulting from eating the very poisonous tubers of *Cicuta maculata*. Every pharmacist should know this plant at a glance. The logical man to give information of this kind is the pharmacist, and he cannot be too well informed on these points.

The acquirement of knowledge for its own sake is a worthy object. Acquirement of knowledge for pecuniary advantage is often necessary; but the acquirement of knowledge for the service of others is the noblest object of all, and will repay a thousand-fold. There is more in life than money. There is more in pharmacy than the dollar. It is only by unselfish service that pharmacy again will assert itself as an ancient and honorable profession.

The pharmacist in these days cannot afford to ignore any method whereby his professional standing might be augmented, and it is his duty so to do whenever possible. We suggest here one avenue toward this end.

ABSTRACT OF DISCUSSION.

H. O. Tiegen (Moorhead): This paper speaks for itself, and also the specimens which we have seen; they are the finest specimens I have ever seen and to teach others to do such work is worth while. In our community, frequently, people bring in plants for identification. Unfortunately, I have not had thorough training in botany, but with the aid of a botanist at one of our colleges, the information is usually supplied.

At a Kiwanis meeting in our home town a year ago, a physician spoke on Child Welfare Work and Public Health. In the course of his remarks, he referred to the work of physicians and nurses for the community, without a word relative to what the pharmacists were doing. It set me to thinking. I knew of the activities in which we were taking part and of the information we were giving to our customers.

After the meeting, I told him that he overlooked one very essential point in his discussion; that he had not given pharmacists any credit whatsoever for health work for the dissemination of information relative to the health of the community and the prevention of disease. I told him, that in my opinion pharmacists, in the course of their activities, disseminated more information than the medical and dental professions put together, and I believe the facts will bear me out.

It set me to thinking: "What am I doing in my community for the betterment of the public?" Pardon me for speaking of myself: In our town there is a hospital operated by the Franciscan Sisters. They wanted to know if I would help instruct the girls in their studying *materia medica*. I thought the matter over. At first I was reluctant to take on that extra work. It takes one of my afternoons. After hearing the talk referred to, I thought it was my duty to accept the opportunity. I find it has more than repaid me in the professional standing given me in my community.

There is opportunity for the pharmacists of the United States to take on this kind of work or related work especially in hospitals in the country, where they have no registered pharmacist.

There is also an opportunity to disseminate information relative to the preparations of the U. S. P. and N. F. I have made inquiries among nurses and the girls in training, and find most of them are not familiar with our U. S. P. and N. F. preparations. I asked about thirty nurses why they asked for certain proprietary preparations of the U. S. P. and N. F. The reply of every one of those young women was that they thought the preparations were identical—that these trade names were synonyms. They also objected to the long official names. In my opinion

shorter names should be given official preparations, which could not be copy-righted by manufacturers.

Such publicity work can be enlarged upon according to the inclination of the individual. It need not be confined to instruction in hospitals. We read in the papers of a doctor or a veterinary surgeon or a dentist addressing a mothers' club or a farmers' club on different subjects. In my opinion, there is no field in which there is greater opportunity for romance and interesting stories than in subjects related to the drug business. Considering the materials used in medicine, we have much to draw from, and we can follow lines which interest us most.

I can see possibilities for talks to mothers' clubs on foods, on flavoring extracts, and many other subjects in which the housewife is interested. Pharmacists should take a larger interest in the welfare of the community—it will repay in the professional standing which it will create.

Chairman F. J. Wulling: This is a helpful communication, and I hope the advice given will be followed. It is true the pharmacists of to-day, taken as a whole, are following the direction of least resistance which leads into commercialism, and not developing the opportunities of their calling.

I might say in corroboration of one of the recommendations made, that a number of years ago the University of Minnesota put on "University Weeks," sending lecturers over the country. I was called upon to give such service, and spent two weeks lecturing to people of the smaller towns on matters suggested by Mr. Tiegen. We took up the relation of the pharmacist to the public and showed in how many ways the pharmacist can help the people. The idea grows upon me as I think about it. I want to stimulate the thought Mr. Tiegen has given us on that score. We can do more than we are doing in our respective communities. There are not enough pharmacists on health boards; not enough who are lecturers; not enough who are in the legislature, etc. By virtue of the professional and business training the pharmacists, they should be much more active in their respective communities.

E. L. Newcomb: I should like to add to Mr. Smythe's paper in line with what Mr. Tiegen said. There is unquestionably an opportunity for very greatly extending our efforts along the lines indicated by this particular paper. The minute you begin to talk about publicity work, you can think of all sorts of things to be done to help the pharmacist, and also the public.

This paper suggests publicity work along one or two lines. Since I have been in Minnesota—fourteen years—at least eight children died from eating so-called "poison parsley." An excellent thing that might be done is to prepare a beautifully colored picture of this plant showing the tuberous root, which has a pleasant taste, and post such bulletins in drug stores, possibly with a little statement about the plant which might be published through the coöperation of the local editor with the pharmacists.

There are many deaths due to the eating of poisonous mushrooms. A bulletin illustrating some of the poisonous mushrooms would be a splendid thing to display in drug stores, to call attention to the difference in appearance between poisonous and edible mushrooms, and to inform the public relative to plants of this kind. This, again, is simply in line with the suggestion that the pharmacist should be the informant of the neighborhood on these matters. There are many opportunities for him to increase his prestige and standing in work of this kind.

UNFIT CONTAINERS AND CARELESS LABELING.

BY LEWIS ELLSWORTH JARRETT.

Much has been written and said regarding the mislabeling of drugs; numerous laws have been enacted governing such wrongful acts; yet, some pharmacists seem to be lax enough to allow such procedure in their stores and are themselves among the offenders. Education and experience should impress the importance of care in such matters, which may result in injury and destruction of human life. Failure to place the alcoholic strength on the label of some preparations, or omission of more or less non-essential statements, may be pardoned, but to mislabel a poison, or dispense it in a container whereby life may be endan-