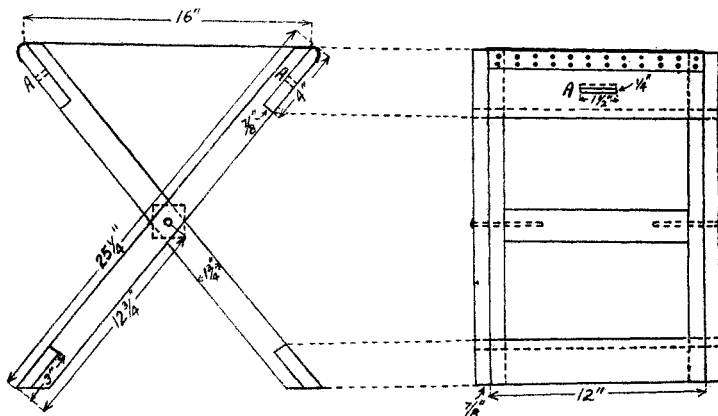


NOTES.

A Laboratory Stool.—The laboratory stool pictured herewith is an ordinary camp stool of strong construction, so made as to serve as a device for locking the drawers and doors of the student's compartment. For a laboratory table 33 inches high the dimensions shown on the sketch will be found convenient.

Two holes, A, A, are so placed as to fall together when the stool is closed. A large staple is attached to the wooden strip that separates the drawer from the locker-doors of the ordinary laboratory table. At the end of the laboratory period the student closes his stool, hangs it under the edge of his table, the staple being passed through the holes A, A, in the stool, and snaps a padlock on the outside. It is then impossible to open the locker, since both drawers and locker-doors are blocked by the stool. A single padlock is thus made to do service for from two to four locks.



The stool can easily be carried about the laboratory to suit the convenience of the student, or may even be taken into another room, but must be returned to its place beneath the edge of the laboratory desk before its owner will be able to lock his compartment. If each stool be numbered on both sides with a number corresponding to the locker to which it belongs, there will be little temptation for the lazy student to take his neighbor's stool when he is ready to lock his desk and leave the laboratory.

If one end of the laboratory be provided with a blackboard, and the nearest desk raised six inches above the level of the others, it will be possible for the students in a fairly large laboratory to get near enough to permit lectures being given there, if movable stools of this kind be provided. Of course if this be done it will be necessary to dispense with the shelving and other superstructure commonly found on laboratory tables, in order that the view may not be obstructed. As a matter of fact the student's reagent-bottles should not be kept on shelves, but in a small tray that may

be put inside his desk; for in this way the reagents are kept cleaner, and the work of the janitor is made much easier.

HORACE GROVE DEMING.

Los Baños, P. I.

Note on a New Analytical Suction Filter.—The description of the following apparatus which I have invented is not of particular interest simply because it contains certain new features, or even old features combined in a new way, but because it is an apparatus whose value can be measured by its usefulness.

Probably every chemist at some time in his course of study has done a certain amount of quantitative analysis, and in the analysis of more complicated substances, such as dolomite or talc, has felt a desire that he might use a Gooch crucible and a suction filter, in one of the first stages of analysis, owing perhaps to the quickness of the filtration and the simplification by eliminating the necessity of burning the filter paper and many other details which tend to lengthen and make tedious some of these analyses. But the style of the present suction filter makes its use at this stage practically prohibitive, because the next stage of analysis could not be carried on in this vessel, nor could the contents be readily taken out, owing to the awkwardness of its shape.

It is often necessary to operate with very small quantities of liquid and it is important in such cases to avoid possible loss of liquid through adherence to the surface of the receptacles employed in making the analysis. At the same time it is desirable to avoid the necessity of carrying in stock various sizes of filter apparatus. It is also necessary to employ for filtering purposes an apparatus which can be easily and conveniently handled and cleansed. It is exceedingly desirable to employ apparatus so constructed as to utilize suction action in effecting the filtering.

So it is the purpose of my filter to provide an apparatus which accomplishes these various desirable results. A description of the apparatus is as follows:

The apparatus is very simple and consists of three parts. The main body of the apparatus somewhat resembles Witts filter, and consists of a cylindrical glass jar, $6\frac{1}{2}$ inches deep and $5\frac{1}{2}$ inches in diameter, with a suction outlet near the top fitted with a ground glass stopcock. The top rim has a pouring lip in the side opposite the suction outlet and the entire upper surface is ground. Half way up from the bottom on the inside surface are three glass protrusions at equal distances apart for supporting a perforated shelf, which is the second part. The third part is the cover having a ground glass rim to fit the upper surface of the jar and having an extra large stopper opening of one and three-quarter inches in diameter.

Now, where small quantities are to be filtered, the shelf is inserted and