In the presence of the latter, alkalin permanganate solutions decompose less rapidly than do neutral solutions.

The author desires to express his thanks to Dr. W. F. Hillebrand for valuable suggestions and advice during the course of this investigation.

NOTE.

"*A Safety Siphon.*"—In many laboratories, a need is felt for some efficient means of handling solutions. When poured out of a bottle, they are often spilled, and besides being dangerous to clothing, give the laboratory an untidy appearance. Other solutions, of which small quantities are used at a time, are wasted and spoiled by being transferred to individual burets.

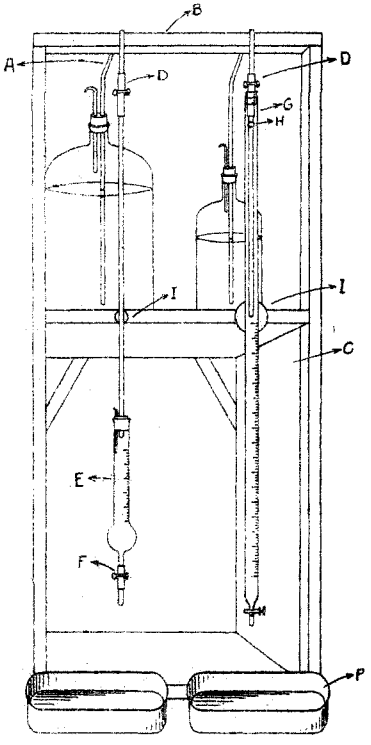

Fig. 1.

The apparatus shown was devised for distributing solutions to the students in the food laboratory.

Fig. 1. An ordinary siphon "A" was constructed, the tube being supported by the rack "B" attached to the box "C" on which the bottles were placed. Rubber connections with pinch-cocks were placed at D, well above the liquid in the bottle. In case an accident happens to the connection, the liquid will not siphon out as it would if the joint were lower down. To the lower end of the siphon tube, a graduated cylinder "E" was placed, it being made from a large calcium chloride tube, or Kjeldahl receiving tube and graduated as desired. To the bottom is attached a rubber connection with pinch-cock.

In order to obtain any of the liquid, the desired amount is first drawn out of the bottle by opening "D." After this pinch-cock is closed, the liquid can be drawn out of the graduated tube by opening "F." Having two pinch-cocks, the danger of leaving the stopcock "D" open is avoided and waste is done away with.

The other siphon is fitted up with an ordinary buret, slipped up over the siphon tube and held at "G" by a rubber connection. A small hole blown at "H," allows air to enter when the liquid is drawn off below. Readings are taken below the inner tube.

In order to keep these tubes from dangling about, a deep groove a little narrower than the glass tube was made in an ordinary cork and the cork nailed to the box at I. The tube can then be pushed into the groove and fits very firmly. If found necessary, small steel springs may be made to fit over the cork, holding the glass connection in place. The following is a cross-section showing the use of the spring:

Instead of the corks, a strip of board, notched similar to a universal shelving may be constructed, similar to the following illustration:

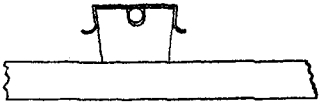

Fig. 2.

Fig. 3.

Enamelled pans were placed beneath the tubes to catch any waste liquid.

The inside of the box may be used for storing a reserved supply of solutions.

The apparatus, after having been tried out, has been found to have the merits of safety, convenience and neatness. We have planned to have a series of bottles similarly constructed for the reagents used in water analysis, and in general analysis of foods and cleansing reagents.

MARY L. FOSSLER.

FOOD AND SANITARY LABORATORY, DEPARTMENT OF CHEMISTRY.
UNIVERSITY OF NEBRASKA.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE UNIVERSITY OF WASHINGTON.]

ACETYLATIONS IN ETHER SOLUTIONS.

BY WILLIAM M. DEHN.

Received July 15, 1912.

Though innumerable reactions of acetyl chloride with organic bases are found in the literature, these reactions usually have been produced by direct contact of the substances and furthermore the end products have usually been decomposition products obtained by the action of water or alkalis. The use of an indifferent solvent as ether[1] or chloroform has rarely been employed, hence the mechanisms of the reactions have not been studied thoroughly. The purpose of this study is to throw light on such mechanisms.

The action of acetyl chloride on the various bases was studied in anhydrous ether solutions. The hydrochlorides formed were precipitated by the ether, while the acetyl derivatives—not containing hydrochloric

[1] Claisen employed ether solutions, containing solid alkalis or alkali carbonates, for certain acylations. *Ber.*, **27**, 3182.