

well or too elegantly done and that, in the student's practical work in this subject while in college, too much emphasis cannot be placed upon either the thoroughness of the work or the beauty and elegance of the finished product.

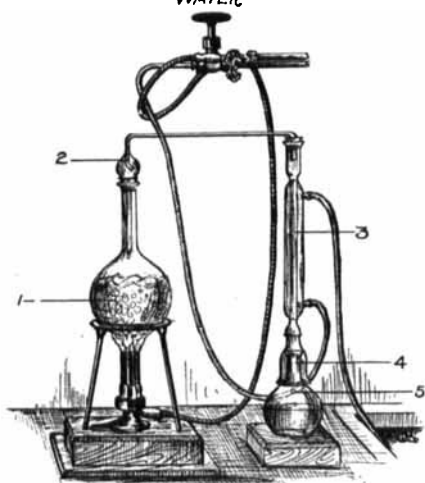
The graduates of colleges of pharmacy should never meet in any drug store better or more elegant dispensing than they have been taught and required to do in college; they should be accustomed to the use of the best materials, utensils, containers, in short the best of everything. They should be masters of the highest class of compounding and dispensing and trained in no other kind, for it is to these college-trained men that pharmacy must look for its ideals and its uplift in the years to come.

REDISTILLED WATER VERSUS STERILIZED DISTILLED WATER.*

WM. GRAY.

Pharmacists should be cautioned against using boiled distilled water as a substitute for redistilled water. Distilled water, as ordinarily handled, not only contains traces of metal and ammonia, but bacteria as well. Boiling such a specimen does not remove any bacteria that may be present, but killing them

APPARATUS FOR PREPARING REDISTILLED WATER



1-Distilling of Jena Glass. 2-Kjeldahl Tube of Jena Glass. 3-Vertical Condenser. 4-Hood (for protection against dust and microorganisms. 5-Receiving flask of Non-Sol Glass

produces a suspension of them, which, when administered intravenously, acts like a vaccine. Chills, temperature and other complications often result from using water of this kind. This is neither desirable nor necessary, as the difficulty is easily overcome by redistilling the water in hard glass, such as Jena or Non-Sol. The water should be *aseptically* cared for, and used within an hour

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after redistilling. For this reason the aqua distillata sterilisata of the next pharmacopœia is open to the same criticism, since unless the freshly distilled water is *collected aseptically*, the subsequent boiling to sterilize it will as likely produce a vaccine as when made from an older distilled water, only in a lesser degree.

Here we have an apparatus that is inexpensive and does the work. Pharmacists should get busy if they want to meet the demands of up-to-date practitioners, who require *freshly distilled* water for preparing or having the pharmacist prepare salvarsan, physiological salt and other solutions for intravenous use.

If one cares to put up ampoules wherein such water is always used as a solvent, I think it will pay to do so—if not directly, then indirectly, in added prestige with physicians who direct their prescriptions towards your establishment. Examples of such ampoules are sodium cacodylate, a substance which has almost superseded Fowler's and Pearson's solutions in chorea and anemia—iron and arsenic are used particularly in pernicious anemia. Emetine hydrochloride in amebic dysentery and pyorrhea has brought wonderful results, and as a consequence, the price of ipecac is soaring. There are too many substances used in ampoule form to mention all—I simply call attention to the above medicaments because the demand for them is increasing.

The technique necessary for this work is to use sterile utensils. Ampoules must be of hard glass, either Jeno or Non-Sol. *Hard glass is very essential*, soft glass being more or less soluble, especially when sodium chloride is used to make the solution isotonic, the powerful sodium and chlorine ions acting on soft glass. Solutions must be neutral. Ampoules may be filled by using a burette with rubber connection with glass tube drawn to a fine point or with a hypodermic syringe. The filled ampoules should be heated to the boiling point before sealing in the flame, so that they may be placed in boiling water for thirty minutes each day, for three successive days.

A METHOD FOR THE DETERMINATION OF CARBON DIOXIDE IN BAKING POWDER AND CARBONATES.*

II. W. BRUBAKER.

The following is the result of an attempt to devise a method for the determination of the available carbon dioxide in baking powders, which is simple in principle, requires an apparatus easy to construct, and manipulate, consumes little time and gives reasonably accurate results. The method was devised for the use of a class of girls in household chemistry. It is adapted not only to the determination of carbon dioxide in baking powder but also in carbonates, bicarbonates and minerals such as limestone and dolomite.

The principle of the method, in brief, is the liberation of the carbon dioxide,

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