Apr. 10, 1923. 1,451,603

H. C. P. WEBER

STILL

Filed Aug. 5, 1919

Fig. 1.

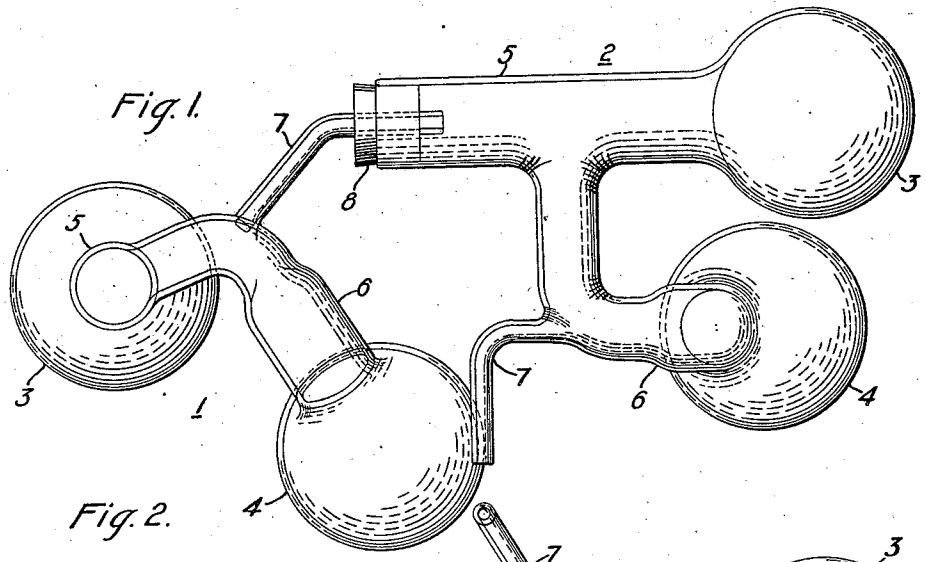
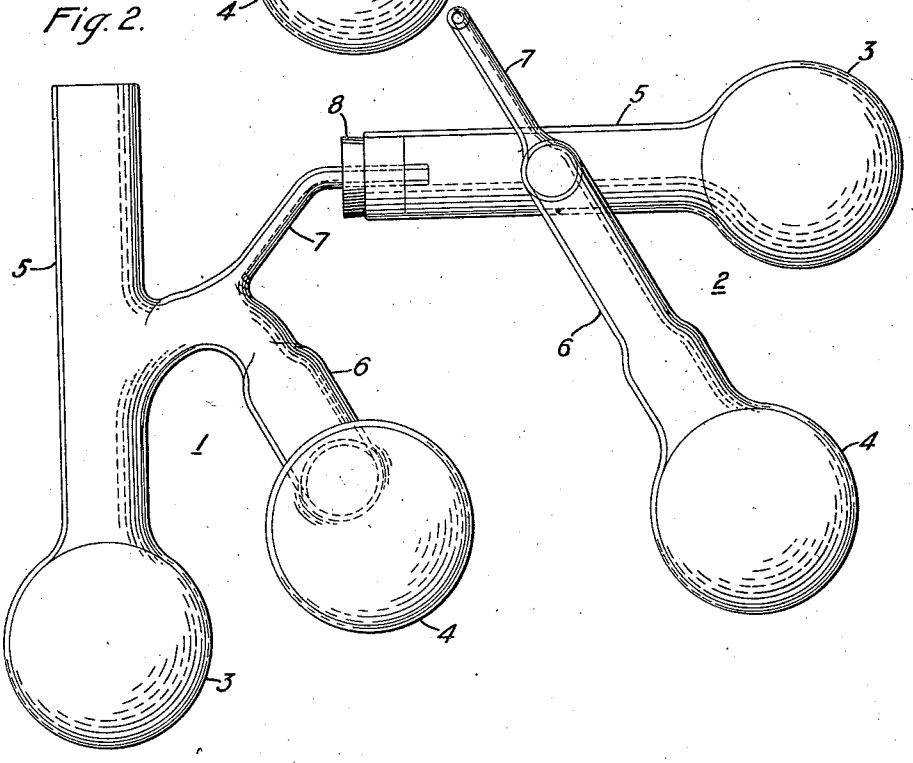


Fig. 2.



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UNITED STATES PATENT OFFICE.

HENRY C. P. WEBER, OF EDGEWOOD PARK, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

STILL.

Application filed August 5, 1919. Serial No. 315,503.

To all whom it may concern:

Be it known that I, HENRY C. P. WEBER, a citizen of the United States, and a resident of Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Stills, of which the following is a specification.

My invention relates to stills, and more particularly to stills for use in chemical laboratories, and it has, for its primary object, the provision of an apparatus of the above specified character which may be conveniently manipulated and which shall be efficient in use, particularly in connection with vacuum distillation.

My still is primarily intended for use in fractional-distillation operations and, for this reason, another object of my invention resides in constructing a still provided with a plurality of liquid containers so disposed and communicating in such manner that the liquid may be initially introduced into one container and various fractions thereof may be distilled off from this container to the various other containers by properly disposing the still and by subjecting the various containers to baths of suitable cooling fluids, if desired.

Another object which I have in view is to construct a still in such manner that the contents of any container may be poured from the still independently of the contents of the other containers and so that the contents of any container may be poured into any other selected container.

With these and other objects in view, my invention will be more fully described, illustrated in the drawings, in the several views of which corresponding numerals indicate like parts, and then particularly pointed out in the claims.

In the drawings, Fig. 1 is a plan view of my still, and Fig. 2 is a side elevation thereof.

My still preferably comprises two corelative still-units 1 and 2, which may be employed separately but which are preferably and, in most instances, joined to provide a compound-still structure. The units may be identical in construction and are substantially so shown in the drawings.

Each unit or section may comprise a pair of glass flasks 3 and 4, having elongated necks 5 and 6, respectively, which are disposed at an angle of substantially 45° to each other, but so that no common plane may be passed through both of them, the end of the latter neck being fused into the intermediate portion of the former neck to communicate therewith. The end portion of the neck 6 may be slightly reduced and be bent, or curved, at an angle of from 60° to 90° to the remaining portion, as desired, and be joined to the neck 5 at an angle of 60° to 90°, being inclined, if at all, in the direction of the flash 3.

A relatively small tube 7 communicates with the curved portion of the neck 6 of each unit, extending outwardly and radially therefrom and having its free end bent to extend away from, and substantially at right angles to, the neck 5 of the same unit. In use, when the two units are to be employed as a compound still, a stopper 8, or equivalent means, may be utilized to detachably connect the free end of the branch tube 7 of one unit with the open end of the neck 5 of the other unit.

It will be obvious that the manner of connecting the units is such that either unit may be turned with respect to the other so that the flasks or containers of one unit may be disposed in various relative positions, not only with respect to each other but also with respect to the flasks or containers of the other units. Because of this, it is possible to distill fractions of a liquid contained in one flask to various selected flasks by successive adjustments of the parts without necessitating any pouring of the liquid from one flask to another.

Furthermore, this relative adjustability of the units permits, if desired, pouring of the liquid from many flasks to any selected flask.

Although I have illustrated my invention as comprising two connected and cooperating units, it will be appreciated that either unit may be separately employed and will function as a complete still for certain purposes. Furthermore, additional units of like character may be added, if required, for more complex distillations. For these reasons, and also because the necks of the flasks and the branch tubes leading therefrom may be disposed at somewhat different angles than those illustrated and described, it will be appreciated that no limitations are to be imposed upon my invention other than those set forth in the appended claims.

I claim as my invention:—

1. A still comprising a pair of flasks having the neck of one communicating with that of the other and integral therewith.

2. A still comprising a pair of flasks having the end of the neck of one communicating with an intermediate portion of the neck of the other and at an angle thereto.

3. A still comprising a pair of flasks having their necks disposed at an acute angle to each other and the neck of one communicating with that of the other.

4. A still comprising a pair of flasks having their necks disposed at an acute angle to each other, the free end of the neck of one being bent and communicating with an intermediate portion of the neck of the other, and a branch tube leading from the bent portion of the said neck.

5. A still comprising a plurality of units each including a pair of flasks having the neck of one communicating with an intermediate portion of the neck of the other, and a communicative connection between the units.

6. A still comprising a plurality of units each including a pair of flasks having the neck of one communicating with an intermediate portion of the neck of the other, and a communicative connection between the units, the connection permitting adjustment of the units relatively to each other.

7. A still comprising a pair of flasks having the neck portion of one flask bent and communicating with an intermediate portion of the neck of the other flask, a branch tube leading from the curved portion of the first neck, a second unit corresponding to the first, and means for detachably connecting the branch tube of one unit with the unbent neck of the other unit.

8. A still comprising a plurality of flasks, the neck of each flask having communication with the neck of another flask, and an adjustable connection between certain of the flasks.

9. A still comprising a plurality of flasks having inter-communicating necks, additional flasks having inter-communicating necks, and adjustable means for communicatively connecting the first flasks to the latter flasks.

10. A still comprising a pair of flasks having the neck of one bent and communicating with the intermediate portion of the neck of the other and a branch tube leading from the bent portion of the first neck, the necks being so disposed relative to each other as to permit pouring from either flask without pouring from the other.

In testimony whereof, I have hereunto subscribed my name this 21st day of July, 1919.

HENRY C. P. WEBER.