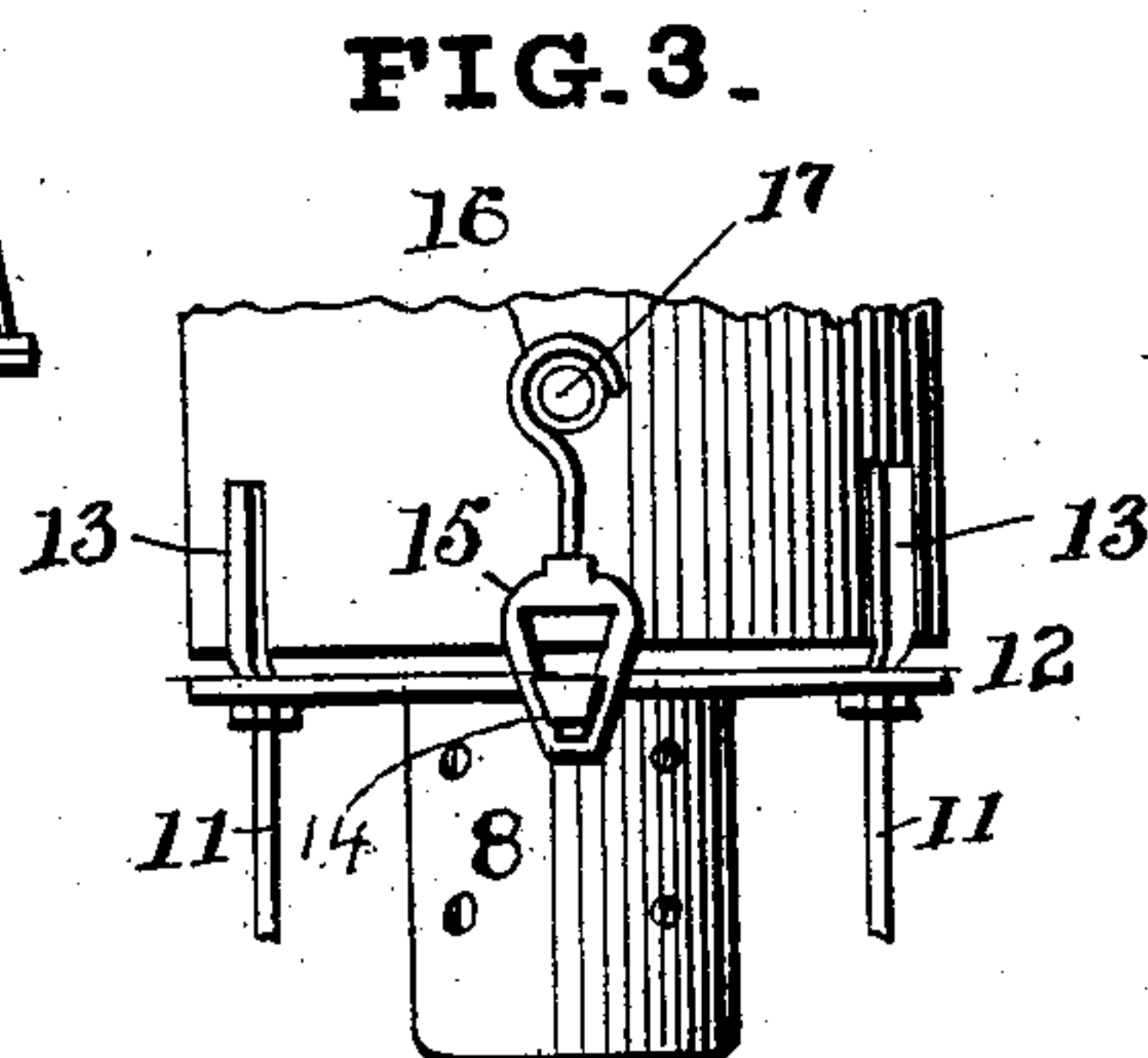
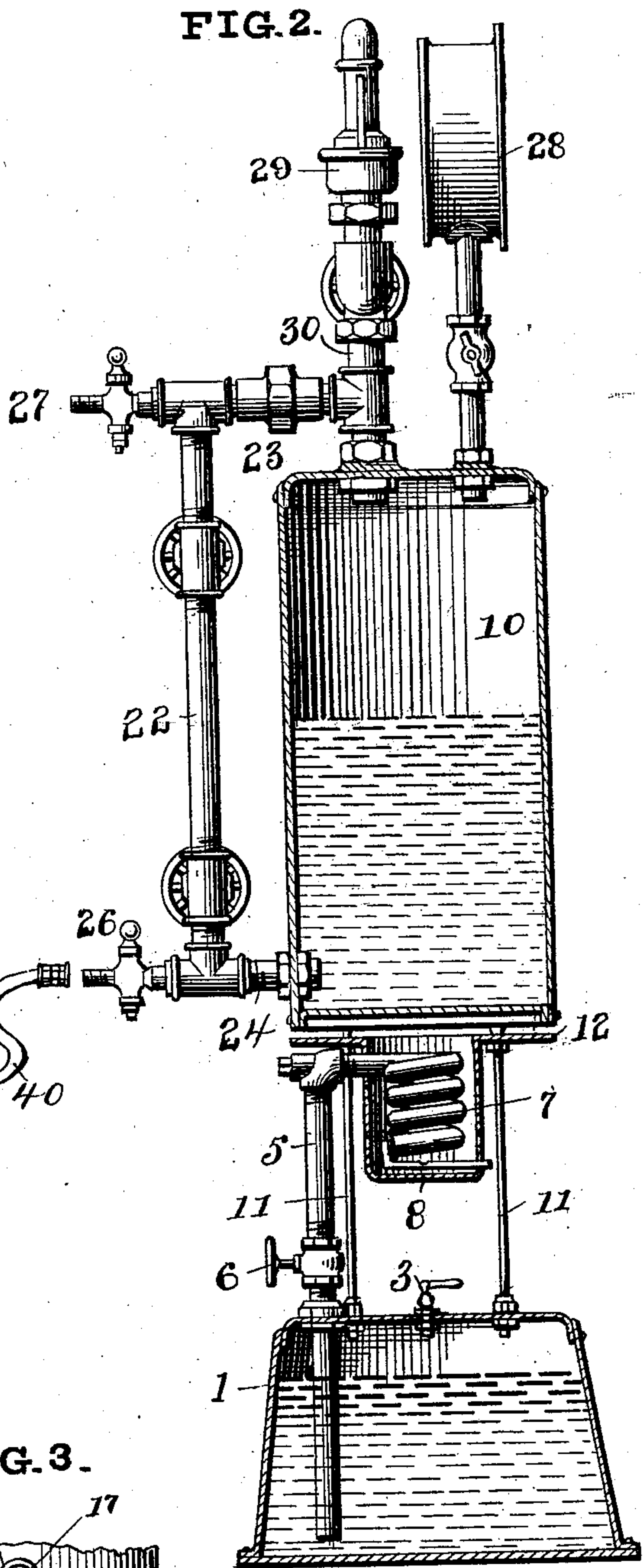
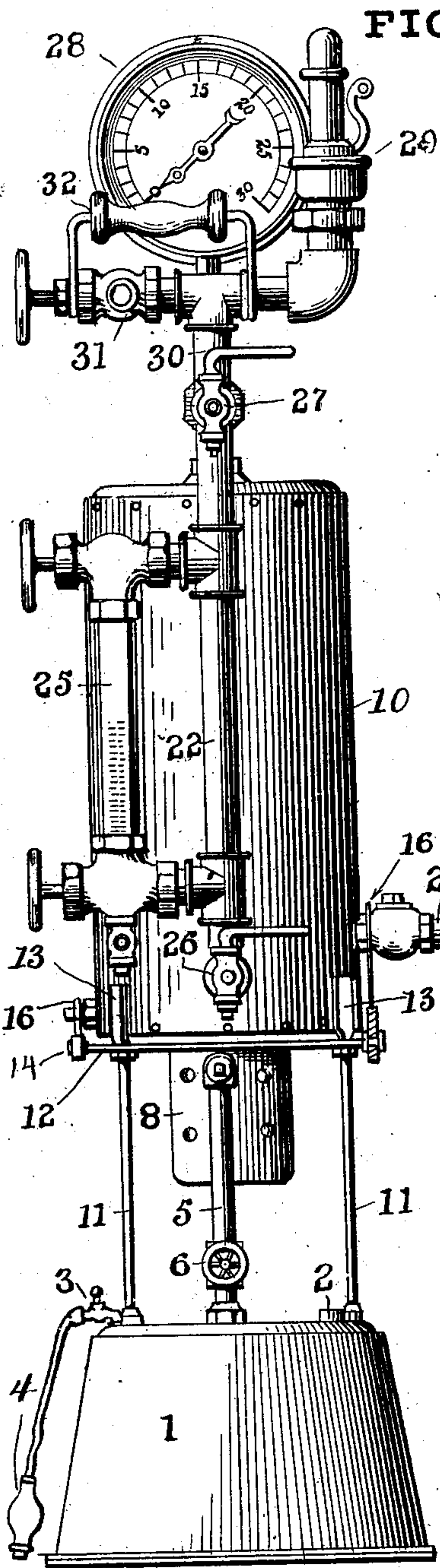


No. 705,247.

Patented July 22, 1902.

C. B. JOHNSON.
BEER PIPE CLEANER.
(Application filed May 1, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

CLARENCE B. JOHNSON, OF NORFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF
TO DAVID R. CREECY, JR., OF NORFOLK, VIRGINIA.

BEER-PIPE CLEANER.

SPECIFICATION forming part of Letters Patent No. 705,247, dated July 22, 1902.

Application filed May 1, 1902. Serial No. 105,428. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE B. JOHNSON, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Beer-Pipe Cleaners, of which the following is a specification.

My invention relates to an apparatus or machine for cleaning beer-pipes, the apparatus involving a hot-water, steam, and chemical cleaner when the latter is desired.

The object of the invention is to produce an apparatus which is easily portable and which may be readily connected with any beer cooling or circulating pipe for the application of steam or hot water, or both, and whereby also a chemical substance may be forced into the pipe; and the invention consists in certain constructions and combinations of mechanism substantially as hereinafter described and claimed.

Figure 1 is a front elevation of the apparatus ready for connection to a beer-pipe. Fig. 2 is a central vertical section on a plane at right angles to Fig. 1. Fig. 3 is a broken detail view of means for coupling the parts of the apparatus together.

The numeral 1 indicates a gasolene-tank of frusto-conical form, having a filling-opening 2, which may be tightly closed, and an air-injector pipe 3, by which air may be forced into the tank, as by a hand-pump 4. Carbureted vapor is forced by the air-pressure in tank 1 up the pipe 5, which is controlled by cock 6. The vapor passes to burner 7, under the steam-boiler, which burner is of usual form and is covered by a perforated casing 8. Vapor is ignited in the chamber formed by casing 8 and heats the boiler 10.

The tank 1 has uprights 11, preferably three in number, and these uprights are provided with a ring 12, above which the boiler is supported. Hooks or brackets 13, connected to uprights 11, support the bottom of the boiler 10. The ring 12 has projecting arms 14, on which yokes 15 are held. These yokes 15 carry hooks 16, which hooks may hook over the pipes projecting from the sides and near the bottom of the boiler. Thus the boiler and its heating device may be connected together, so that the heater can be transported with the boiler,

or they may be disconnected and used separately.

The boiler 10 has a pipe 20 projecting at one side, and by means of a pump 21 water may be forced into the boiler near the bottom. In the same way an alkaline or other chemical solution may be forced into the boiler, and steam will be developed therefrom by the heat of the burner 7. The front of the boiler (which boiler usually contains two to six gallons) has a vertical tube 22 connected to the outside, the upper part of tube 22 being connected to the boiler by pipe 23, above the water-line of the boiler, and the lower end of tube 22 being connected by pipe 24, entering the boiler below the water-line.

A water-gage 25 may be connected, as shown, to the upright tube 22 or may be otherwise connected to the boiler.

The lower pipe 24 has a cock 26, to which a piece of flexible hose may be connected, as is usual, to make hot-water connection from the boiler to the beer-pipe.

A cock 27 affords means for connecting the hose to the steam-boiler above the water-line.

A steam-gage 28 is connected to the boiler in usual manner, and a safety-valve 29 permits the escape of steam when a pressure above that desired is developed.

To the same pipe 30 which connects to the safety-valve a cock 31 is connected, this cock 31 having a larger nozzle than the nozzle to cock 27 for a purpose to be stated.

A handle 32, attached to the body of the cock 30 and to the safety-valve pipe, affords a convenient means for lifting and carrying the steam-boiler or the boiler and heater, should the last be desired.

The device is quite portable, the two-gallon size of boiler and all its attachments being easily carried by a boy.

The apparatus as usually constructed is easily portable by hand. The hand-grasp 32 is so connected that the boiler will be lifted thereby, and when the tank and burner are clasped thereto the whole device may be conveniently carried from room to room and may even be carried along a street, except during high winds.

In operation the device is used as follows: The boiler is charged with water or an alka-

line or other solution, the boiler preferably being filled about two-thirds full, as indicated by the water-gage. Then the burner is ignited and the desired steam-pressure is developed, from fifteen to thirty pounds pressure per square inch being usually employed. The burner can easily be controlled by the cock 6, so as to maintain the desired pressure. When the water is hot in the boiler, connection is made from cock 26 to the beer-coil by a steam-hose 40 or by other suitable connection, and the coil is filled with hot water from the boiler. When the beer coil or pipe is full of hot water or a hot alkaline solution, if such is used in the boiler, the cock 26 is closed and the hose 40, connected to the beer-coil, is also connected to the steam-cock 27. Steam is then admitted to the coil and, if necessary, the steam-pressure may be raised. This will cause the hot water in the coil to be raised to a boiling temperature, especially if a very slight escape be permitted from the other end of the coil. A very few minutes of this treatment by boiling water or a boiling chemical solution effectively removes all impurities from the inside of the coil, and the water and impurities may be blown out by steam-pressure.

When it is inconvenient to get the boiler close to the beer-coil, a larger hose may be

used, which can be connected to cock 31. This will permit a greater volume of steam to be carried through the hose, thus securing sufficient heat for the purpose under all ordinary conditions.

What I claim is—

1. In a cleaner for beer-coils, the combination with an upright steam-boiler, of a fuel-tank having a burner connected thereto and located beneath the boiler, uprights connected to the fuel-tank and having brackets on which the boiler rests, a ring on the uprights having projecting arms, and projections on the boiler removably coupled to said arms on the ring.

2. In a beer-pipe cleaner, the combination of the upright steam-boiler, the heater removably connected thereto, a cock forming a hot-water connection for a flexible hose and communicating with the boiler below the water-line, a similar cock forming steam connection above the water-line, and a second cock of larger size forming a second steam connection.

In testimony whereof I affix my signature in presence of two witnesses.

CLARENCE B. JOHNSON.

Witnesses:

HARRY K. WOLCOTT,
GILMER T. ELLIOTT.