

No. 822,843.

PATENTED JUNE 5, 1906.

S. E. HOPPER.
COMBINED BOILER STAND AND COUPLING.
APPLICATION FILED MAR. 14, 1905.

Fig. 1.

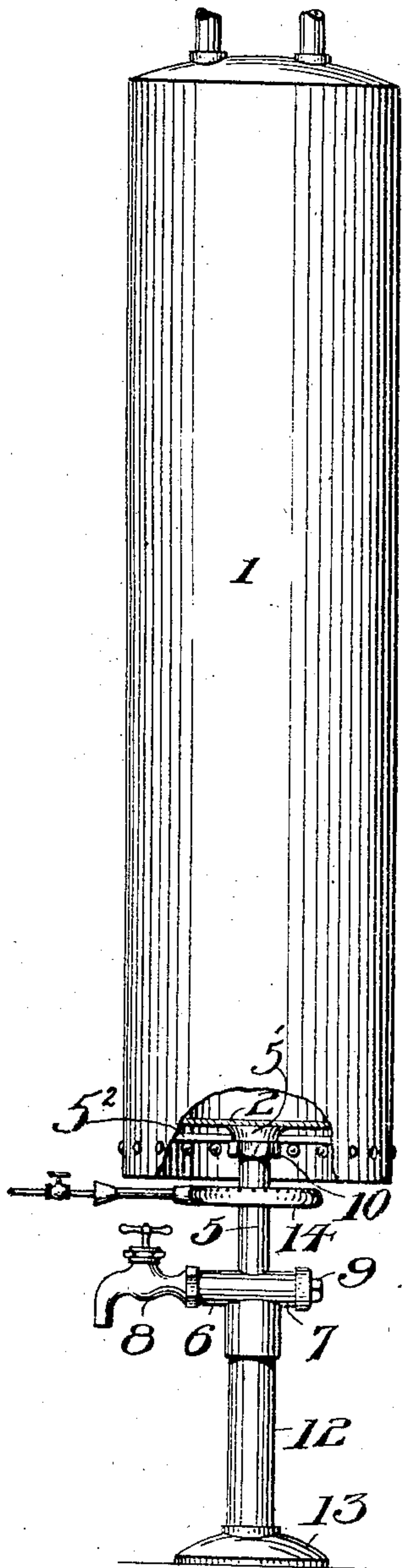
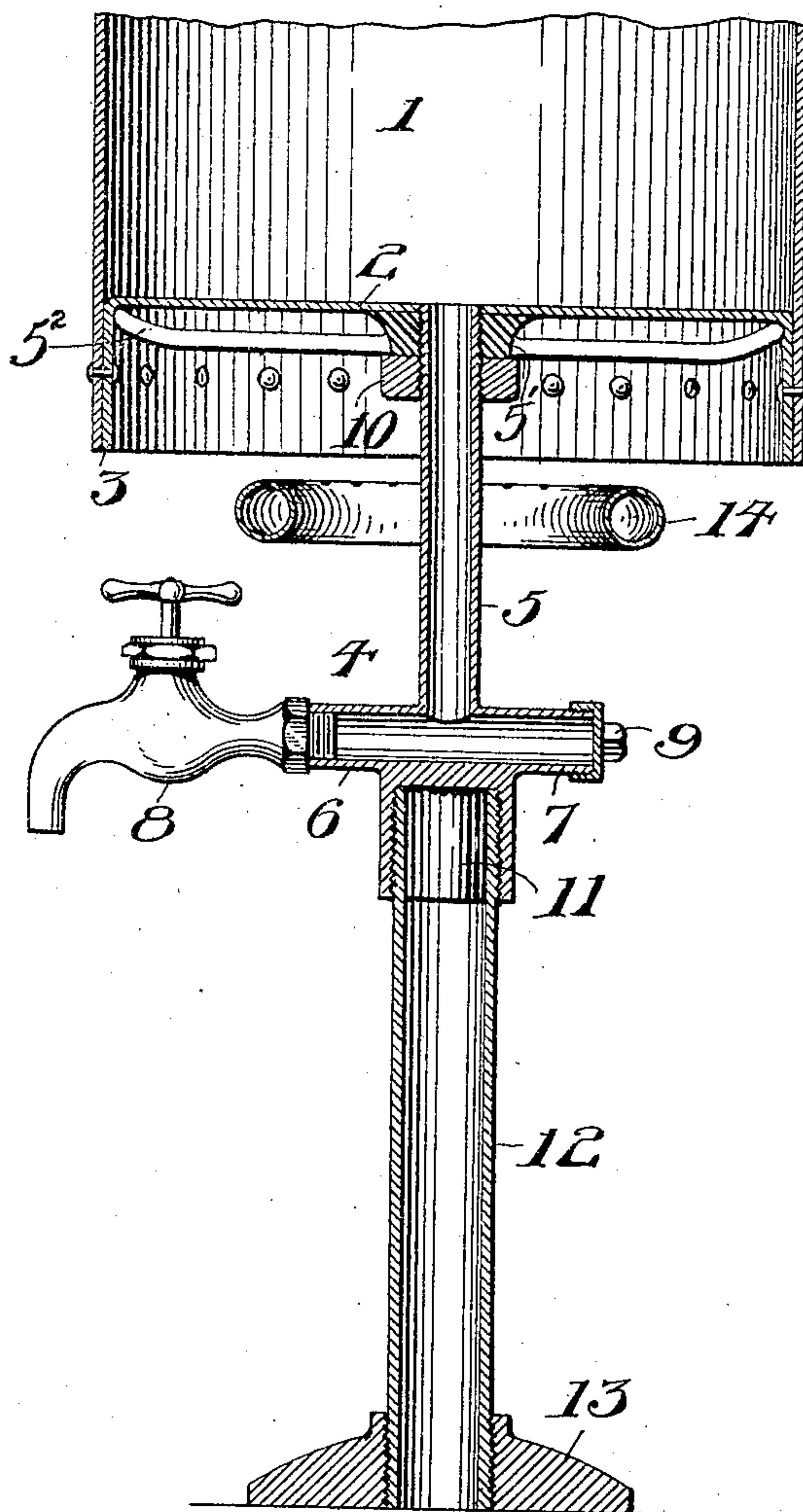


Fig. 2.



WITNESSES:

J. C. Appleman,
M. A. Bushman

INVENTOR

S. E. Hopper,

by
Pierce Barber,

his ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL E. HOPPER, OF CRAFTON, PENNSYLVANIA.

COMBINED BOILER STAND AND COUPLING.

No. 822,843.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed March 14, 1905. Serial No. 250,018.

To all whom it may concern:

Be it known that I, SAMUEL E. HOPPER, a citizen of the United States, residing at Crafton, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in a Combined Boiler Stand and Coupling, of which the following is a specification.

My invention relates to boiler stands and couplings, and more particularly to upright boilers for the heating or storage of hot water for domestic purposes. Such boilers are usually placed in cellars and supported on stands of fixed or standard lengths. When the cellars are high, the stands sit on the cellar floor or on blocks, and when the cellars are low the stands are buried more or less deep in the cellar-bottoms.

The ordinary stand has a horizontal ring, on which the vertical bottom flange of the boiler sits, the ring extending inwardly at some considerable distance forming an annular pocket or dead space, bounded above by the bottom of the boiler, outwardly by the flange thereon, and below by the flange of the stand. This dead space becomes filled with gases passing off from the burner beneath the boiler and becomes foul and ill-smelling. This space not having a supply of air prevents the gas from the burner from becoming entirely consumed, whereby a quantity of unburned gas is given off in the cellar. The imperfect combustion of the gas due to the said foul-air space or pocket causes a large quantity of carbon and other materials to be deposited on the bottom of the boiler, thereby preventing a large part of the heat of the burner from being transmitted to the metal of the boiler-bottom.

My invention aims to improve boiler-stands so that they may be adapted to cellars of any height without providing a base therefor above or below the cellar-bottom, and so that the combustion beneath the boiler may be more complete and the aforesaid annular pocket eliminated.

My invention also aims at cheapness of construction, even where the burner is not applied directly to the boiler-bottom.

Referring to the drawings, which form a part of this specification, Figure 1 is an elevation with a portion broken away, and Fig. 2, a section of the lower part of a boiler and of my improvement.

On the drawings, 1 designates a vertical

cylindrical boiler, having the bottom 2 and the usual annular flange 3 extending below the said bottom. It is this flange 3 that usually sits on the ring of the common stand, the space between the bottom 2, the flange 3, and the ring forming the dead space hereinbefore mentioned. I do away entirely with such a stand and dead space, and mount the boiler in the manner now to be described. I screw into the center of the bottom 2 the fitting 4, which is preferably composed of the vertical tube 5 and the two horizontal branch tubes 6 and 7 communicated with the tube 5 at the bottom of the latter. I prefer to secure to one of the branches, as 6, the drainage-cock 8, and in the other I provide a plug 9, which may be removed in order to connect the branch 7 by a pipe leading to a coil-heater or other device. (Not shown.) On the tube 5 I place a collar 5' having an expanded upper portion fitting the bottom of the boiler in order to provide an enlarged seat or support for the boiler. The nut 10 may be used on the tube 5 to screw up against the collar to hold it in place and relieve the screw-threads above it. On the fitting 4, below the branches 6 and 7, I provide a solid projection or lug 11, threaded interiorly to receive the supporting rod or tube or connection 12, whose lower end is screwed or otherwise removably secured in the base-block 13 or other base or foundation. Connections of different lengths may be kept on hand or they may be made as wanted.

14 represents a ring gas-burner surrounding the tube 5 and arranged to direct the heat therefrom against the bottom of the boiler.

It will be seen that I do not have any pocket within the flange 3 to prevent complete combustion and cause the emanation of ill-smelling and noxious gases and to increase the non-conductive coating on the boiler-bottom. My invention is comparatively cheap and is durable and strong.

If desired, spider arms 5² may be added to the collar, the ends of the arms engaging the bottom of the boiler to aid in supporting it.

Having described my invention, I claim—

1. In combination, a boiler, a burner beneath the boiler, an outflow-pipe secured in the bottom of the boiler, a collar sleeved on said pipe and seated against the said bottom, spider-arms on said sleeve extending outwardly and into engagement with the bottom, whereby the boiler is supported and the

heat from the burner given access to the bottom, and a removable connection secured to the pipe and arranged to support the boiler.

2. In combination, a boiler, a burner beneath the boiler, an outflow-pipe secured in the bottom of the boiler, a collar sleeved on said pipe and seated against the said bottom, spider arms on said sleeve extending outwardly and into engagement with the bottom, whereby the boiler is supported and the heat from the burner given access to the bot-

tom, a nut on said pipe and screwed against said collar, and a removable connection secured to the pipe and arranged to support the boiler.

Signed at Crafton, Pennsylvania, this 10th day of March, A. D. 1905.

15

SAMUEL E. HOPPER.

Witnesses:

J. W. TAYLOR,
R. G. SCHLICKER.