(No Model.)

T. A. SWANN.

FITTING FOR KITCHEN OR STAND BOILERS.

No. 426,150. Patented Apr. 22, 1890.

Fig. 1.

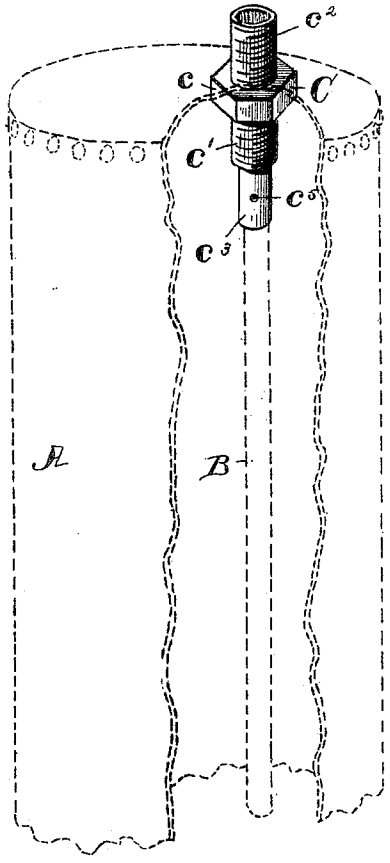


Fig. 2.

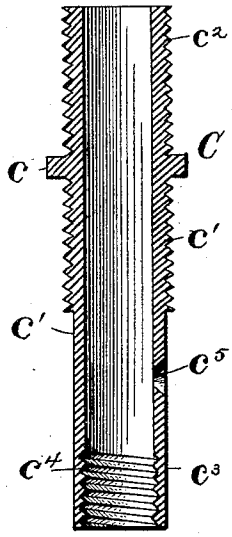
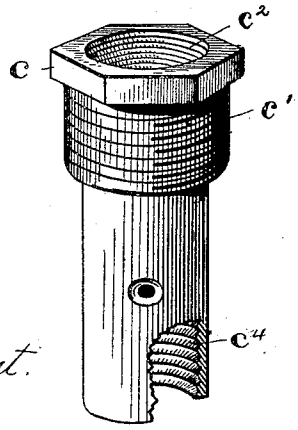


Fig. 3.



Witnesses:
J. B. McGirr
Edw. K. Sturtevant.

Inventor:
Thos. A. Swann,
by Smith & Low
attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS A. SWANN, OF BALTIMORE, MARYLAND.

FITTING FOR KITCHEN OR STAND BOILERS.

SPECIFICATION forming part of Letters Patent No. 426,150, dated April 22, 1890.

Application filed October 4, 1889. Serial No. 325,972. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. SWANN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Fittings for Kitchen or Stand Boilers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is designed to materially reduce the cost of the constructive parts of kitchen or stand boilers and the expense of the plumber's time in combining such parts and setting up the device ready for use.

It is further designed to insure that the induction or cold-water tube shall be provided by the workman with the proper vent-aperture to prevent the siphoning of the water from the boiler, so that a careless mechanic cannot leave the boiler in an apparently proper but really defective condition, which, when discovered by using the apparatus, can only be repaired at much inconvenience and expense. I accomplish these objects by providing a fitting of special construction, hereinafter particularly set forth, which is adapted to be placed upon the market, purchased by the plumber, and used in connection with any kitchen-boiler.

In modern plumbing construction lead has to a considerable extent been superseded by iron piping, and by my invention the boiler is adapted to be readily connected with the latter system of piping, thus saving the expensive spuds and the couplings which have heretofore been generally used in connecting stand-boilers with the water supply and discharge pipes.

In order to make my invention more clearly understood, I have shown in the accompanying drawings means for carrying the same into practical effect without, however, limiting it to the exact details of construction, which, for the sake of illustration, I have set forth.

In said drawings, Figure 1 is a perspective view of a kitchen-boiler fitting embodying my invention. Fig. 2 is a sectional view of the same. Fig. 3 is a perspective view of a fitting also embodying the invention, but of a larger size and slightly-modified form.

Referring to the drawings, A indicates in dotted lines a portion of a kitchen-boiler, and B the induction or cold-water pipe of the same, which is situated within and extends downward from the top toward the bottom of the boiler for the purpose of causing the incoming cold water to be delivered to the lower end of the boiler and the hot water to be forced upward and to be drawn from the upper end of the same.

C indicates the fitting which embodies my improvements. It consists of a cylindrical tubular piece of metal—such as brass—preferably provided with an external hexagonal or eight-sided flange *c*, by which it is adapted to be turned in securing it in place. Immediately below said flange is cut a screw-thread *c'*, adapted to engage a corresponding thread cut in the top of a boiler A, and above the flange *c* the fitting is provided with another screw-thread c^2, by means of which the proper connection with the water-supply pipe may be made. This thread c^2 is not of that character employed in brass spuds and couplings, but is cut to fit the threads of iron piping, thus adapting the fitting to modern plumbing construction.

At c^3 the lower end of the fitting is reduced in external diameter and adapted to be readily passed down and into the boiler through the screw-threaded aperture, which is subsequently engaged by the thread *c'*. At its lower end the portion c^3 is provided with an internal screw-thread c^4, extending for about three-fourths of an inch upward into the fiting, and which is adapted to be engaged by a corresponding thread upon the upper end of the pipe B.

At a point just above the thread c^4 the fitting is provided with a vent-perforation c^5, which may be cast therein in the process of manufacture, by which the interior of the fitting is placed in direct communication with the upper part of the boiler, thereby preventing the siphoning out of the water by suction at the lower end of pipe B. Where it is left to the plumber in setting up the boiler to provide the pipe B with a suitable vent-orifice it is often carelessly omitted (or this often occurs for the want of a suitable drill) and the apparatus left in a defective condition. It has even been of not uncommon occurrence

with the fittings heretofore employed that the insertion of pipe B into the boiler has been entirely omitted; but with my improved fitting, which is adapted to all boilers and is provided with the standard threads used in iron piping, these omissions will not occur, but the apparatus will be readily set up in a perfect condition at less expense of material and time than has heretofore been the case.

The fitting C will be provided in different sizes, according to the capacities of the different boilers commonly used. When the fitting is of one of the larger sizes, it is preferable to form the screw-thread c^2 within the fitting, as shown in Fig. 3, thus enabling the iron induction-pipe to be screwed directly into the fitting. In this construction a further economy of material may be effected by doing away with any projection of the tube above the flange c, the internal screw-thread c^2 being cut below said flange and opposite to the thread c'.

In using my improved fitting it is simply necessary to cut a thread in the top plate of the boiler to correspond with thread c' and to form upon the upper part of the pipe B a thread to correspond with the thread c^1. The pipe B is then screwed into the lower end of the fitting and is passed down into the boiler, the lower end of the screw-thread c' coming into contact with the outer surface of the top plate of the latter. By means of the nut-shaped flange c the fitting is screwed down into place until said flange is brought tightly against said top plate. The iron piping may then be connected directly with the upper end of the fitting by means of the screw-thread c^2.

Having thus described my invention, what I claim is—

1. A kitchen-boiler fitting having an external screw-thread adapted to engage the boiler, having at its upper end a second screw-thread adapted for the connection of the water-supply piping, provided at its lower end with a screw-thread adapted for the connection and support of the internal induction-pipe, and provided above the latter screw-thread with a vent-orifice adapted to place the interior of said fitting in direct communication with the interior of the boiler, substantially as set forth.

2. A kitchen-boiler fitting consisting of a tube provided at its upper end with a flange, having below said flange an external screw-thread, having also at its upper end an internal screw-thread, and having below said external thread a reduced portion provided with a screw-thread for the connection of the internal induction-pipe of the boiler, and provided above the latter thread with a vent-aperture, substantially as set forth.

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

THOMAS A. SWANN.

Witnesses:
FELIX R. SULLIVAN,
JOHN F. CROPSEY.