

(No Model.)

2 Sheets—Sheet 1.

H. W. SHEPARD.
SPUT FOR BOILERS.

No. 351,660.

Patented Oct. 26, 1886.

Fig. 1.

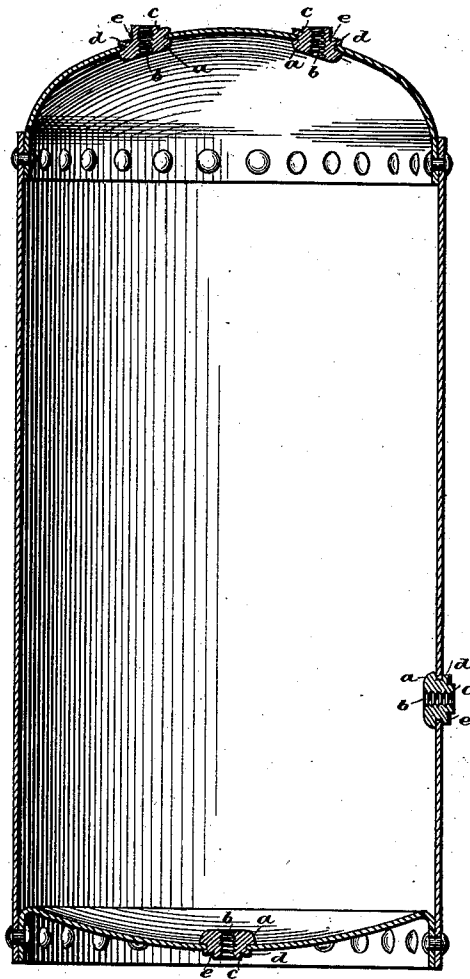
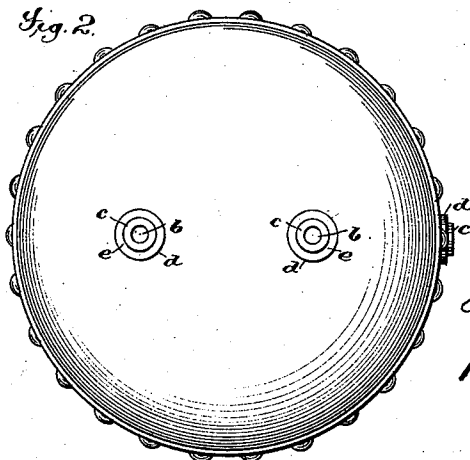


Fig. 2.



Witnesses:
Geo. H. Bots.
Edw. H. Kinner

Inventor:

Henry W. Shepard
By *Ernest C. Webb*

Atty:

(No Model.)

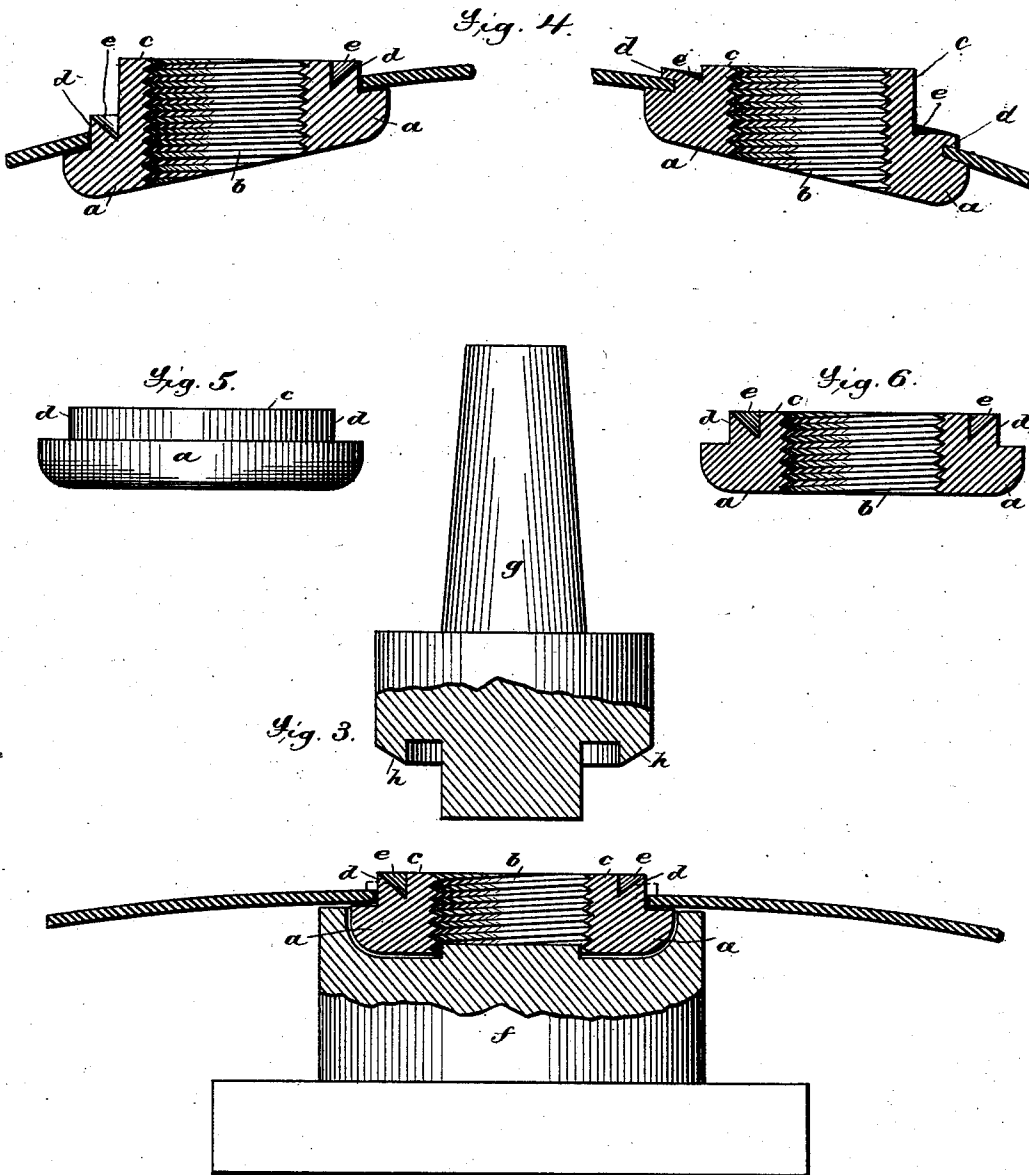
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UNITED STATES PATENT OFFICE.

HENRY W. SHEPARD, OF BROOKLYN, NEW YORK.

SPUT FOR BOILERS.

SPECIFICATION forming part of Letters Patent No. 351,660, dated October 26, 1886.

Application filed November 19, 1885. Serial No. 183,305. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. SHEPARD, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sputs for Boilers, of which the following is a full, clear, and exact description.

This invention relates to sputs for use more particularly in connection with kitchen-range boilers; and the object of the invention is to provide means for securing sputs in such boilers in an expeditious manner, and so that there shall be no leakage at the joint, and to do away with soldering or brazing.

The invention consists in a sput preferably composed of a single piece of metal, threaded, as usual, to receive the pipe-coupling, and provided with a base-flange, which engages one side of the wall or heads of the boiler, and a lip projecting from said flange and adapted to be turned down over the other side of said wall or heads to firmly secure the sput in place, as I will now proceed to more particularly set forth and claim.

In the accompanying drawings, in the several figures of which like parts are designated by similar letters of reference, Figure 1 is a vertical section of a boiler provided with my improved sputs. Fig. 2 is a top plan view thereof. Fig. 3 is a sectional elevation of a die and punch and sput arranged therein to illustrate one manner of applying my sput to a boiler. Fig. 4 is an enlarged sectional detail of my sputs applied to a dome-shaped head of a boiler, the head being shown broken away at about the center. Fig. 5 is a side elevation, and Fig. 6 a vertical cross-section, of my sput detached.

This sput consists, preferably, of a malleable casting having a base-flange, *a*, a central opening, *b*, which may be screw-threaded to receive a pipe-coupling, a wall, *c*, next adjacent to the threaded opening *b*, and next to the said wall and parallel with it a lip, *d*, projecting at about right angles from the base-flange, and separated from the wall *c* by a rectangular or sort of half-V space, *e*, so that the lip *d* is thickest next to the flange, and tapers thence to its upper edge.

My sput so constructed is applied to the boiler or other vessel as follows: An opening is made in the boiler where it is desired to apply the sput, of a diameter about equal to the diameter of the lip *d* on the plane of the flange, so that the sput may be applied by inserting its lipped end through said hole until the flange comes flush against the inside of the boiler. The sput is secured in place by a suitable punch and die—for example, such as shown in Fig. 3, in which *f* is the die, shaped to receive the lower end of the sput, and *g* is a punch provided with a lip, *h*, shaped to enter the recess *e* and bear against the inclined side of the lip *d* of the sput, and in the descent of the punch to turn over said lip *d* upon the boiler, and to spread or expand the metal of the sput and thereby effect a perfectly-tight union of the sput with the boiler.

Sputs designed for boilers having dome-shaped heads will preferably have one half of the wall *c* higher than the other, in order that the sput may be put into the head with its opening *b* in a vertical line. (See more particularly Fig. 4.)

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A sput consisting of a malleable casting having a base-flange, *a*, a wall, *c*, a threaded opening, *b*, in said base and wall, and a lip, *d*, projecting from the base and standing off from the wall, substantially as described.

2. A sput having a base-flange, a central opening, and an adjacent lip, *d*, projecting from the flange at about right angles thereto, and beveled or inclined on one side, substantially as described.

3. A sput consisting of a malleable casting having a base-flange, *a*, a wall, *c*, a threaded opening, *b*, in said base and wall, and a lip, *d*, projecting from the base and standing off from the wall, combined with a boiler, substantially as described.

In testimony whereof I have hereunto set my hand this 14th day of November, A. D. 1885.

HENRY W. SHEPARD.

Witnesses:

ARTHUR C. WEBB;
DAVID D. OTIS.