

J. M. SPIEGLE.

Improvement in Plugs for Leaky Boiler Tubes.

No. 125,764.

Patented April 16, 1872.

Fig. 1.

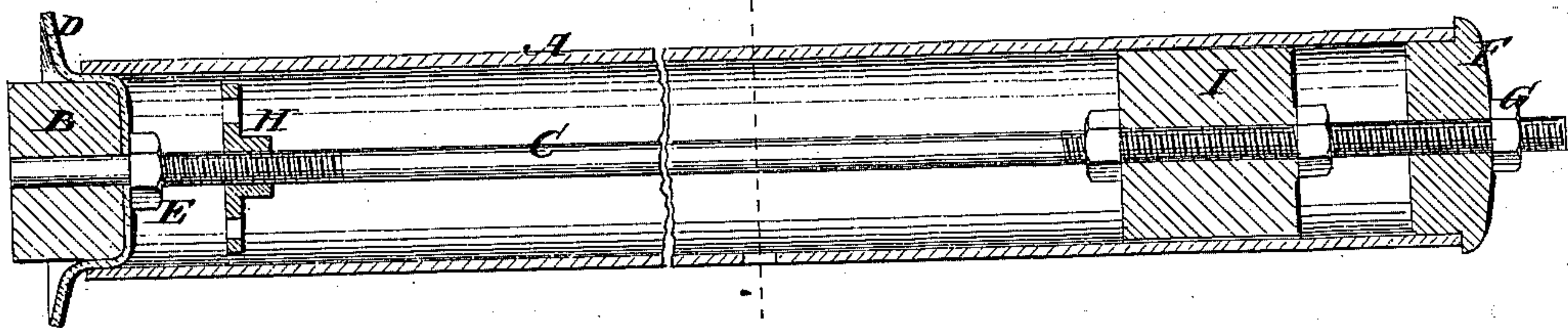
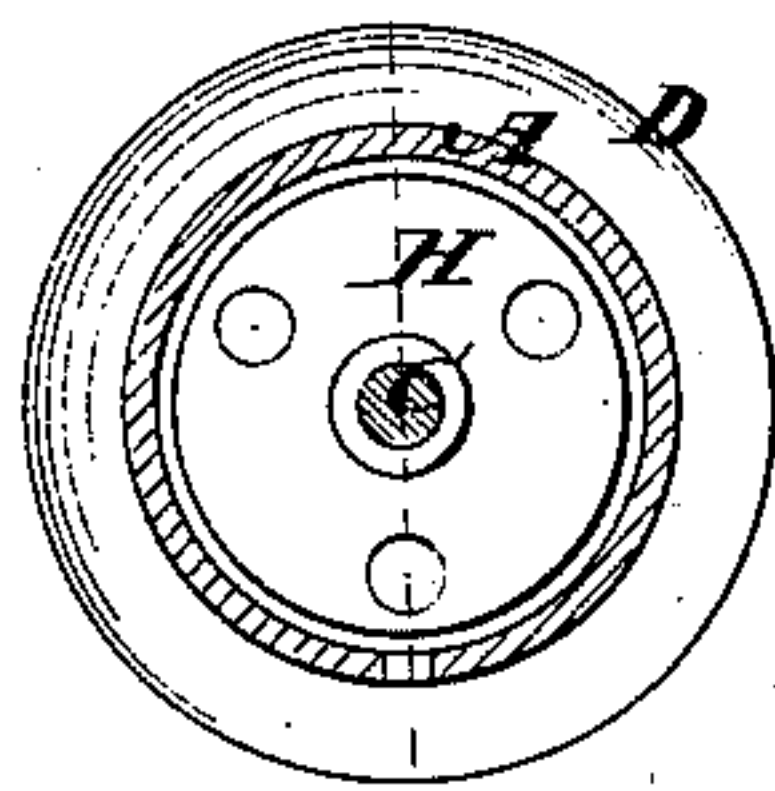


Fig. 2.



Witnesses:

E. Woff.
Geo. W. Mabee

Inventor:

J. M. Spiegle

PER

Munn & Co.
Attorneys.

Delmiche

125,764

UNITED STATES PATENT OFFICE.

JOHN M. SPIEGLE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PLUGS FOR LEAKY BOILER-TUBES.

Specification forming part of Letters Patent No. 125,764, dated April 16, 1872.

Specification describing a new and Improved Plug for Boiler-Tubes, invented by JOHN M. SPIEGLE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania.

My invention consists of a long rod with a plug on one end small enough to allow of being pushed through the tube to the rear end; and at the inner end of said plug is a leather or other flexible disk, which follows the plug through the tube and there expands, so that, being pressed against the end of the tube by the plug being pulled forward, the plug and leather disk will stop the end of the tube tight, and the other end of the tube is packed by a cap forced against it by the nut and rod, which draws the packing of both ends against the tube; and another wood plug or a metal disk is applied to the rod near each end to fit snugly in the tube, to center the binding-rod, all as hereinafter described.

Figure 1 is a longitudinal section of the tube to be plugged and the aforesaid plugs, and Fig. 2 is a transverse section.

Similar letters of reference indicate corresponding parts.

A is the tube to be plugged. B is the plug of wood or other substance, fastened to one end of the long rod C, and made enough smaller than the bore of the tube to be shoved from the front end through the tube and out at the other end. D is a disk of leather or other flexible packing, considerably larger

than the bore of the tube, and fastened to the inner end of plug B by a nut, E; or in any other suitable way, so that when the plug is being shoved through it will not obstruct its passage, being folded or collapsed down over the nut and the rod; but after passing out of the tube it will expand, so that by drawing the plug back to the tube the said packing will come against the tube and pack the end steam-tight when sufficient pressure is applied to the rod, which is done by the cap F and nut G at the other end, said cap also packing the front end steam-tight. H is a disk applied to the rod near plug B, to keep the rod centered after the plug passes through. It is also employed for preventing the packing from folding so much as to fail of expanding properly after escaping from the tube. I is another centering device for the rod, near the other end, which may be used or not, as preferred.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the plug B, packing D, rod C, cap F, nut G, and one or more centering disks or blocks with a boiler-tube, substantially in the manner described.

JOHN M. SPIEGLE.

Witnesses:

ABRAHAM A. DAME,
EDMUND B. VANNEVAR.