T. E. MURRAY.

CLOSURE FOR OPENINGS IN BOILER HEADERS.

APPLICATION FILED DEC. 16, 1919.

1,363,153.

Patented Dec. 21, 1920.

Fig: 1.

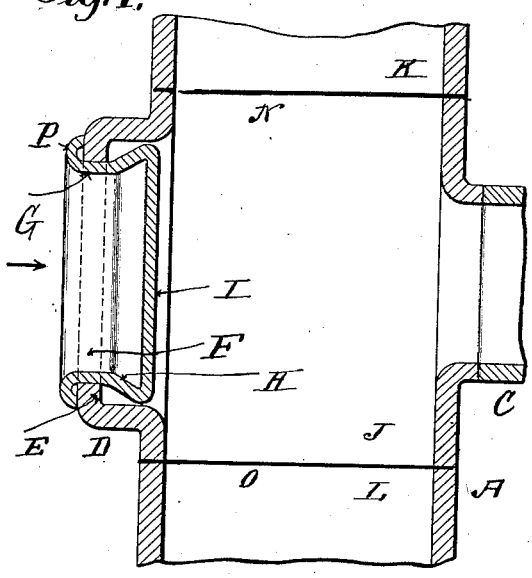


Fig: 2.

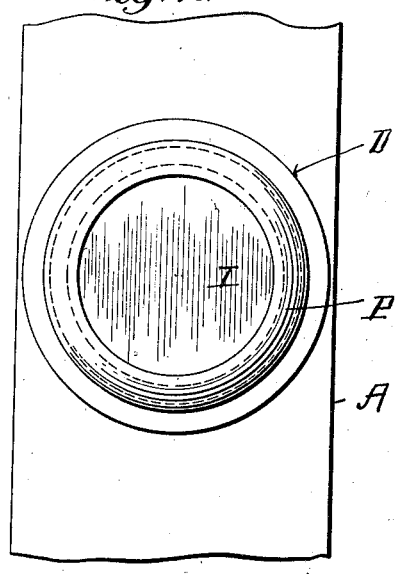


Fig: 3.

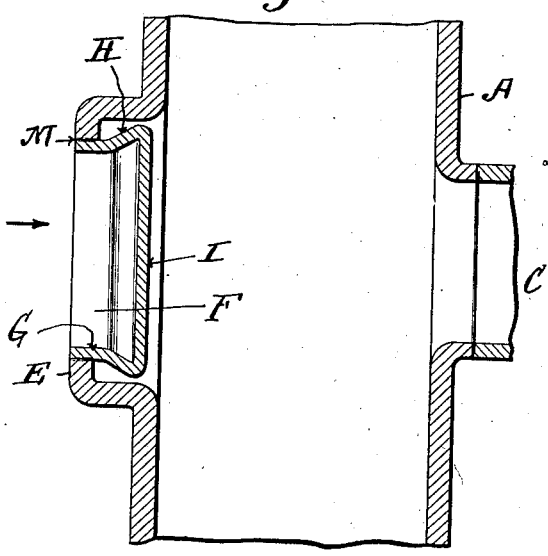
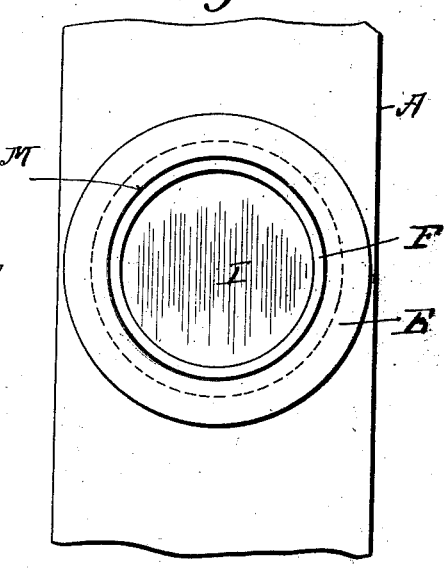


Fig: 4.



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CLOSURE FOR OPENINGS IN BOILER-HEADERS.

1,363,153. Specification of Letters Patent. Patented Dec. 21, 1920.

Application filed December 16, 1919. Serial No. 345,170.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Closures for Openings in Boiler-Headers, of which the following is a specification.

The invention is a closure for openings in a boiler header, which can be made from sheet metal, easily applied and easily removed when access is desired to the interior of the header. The invention consists in the construction more particularly set forth in the claims.

In the accompanying drawing—

Figure 1 is a longitudinal section of a boiler header, showing my closure in place. Fig. 2 is a front elevation taken in the direction of the arrow in Fig 1. Fig. 3 is a longitudinal section of a modified form of the invention, and Fig. 4 is a front elevation thereof taken in the direction of the arrow in Fig. 3.

Similar letters of reference indicate like parts.

A is a tubular header for a water tube boiler, to which one of the circulation tubes C is here shown butt-welded. On the front side of the header is integrally formed a tubular projection D having on its outer edge an inwardly turned flange E. To close the opening surrounded by said flange, I provide a cup-shaped plug F, preferably stamped or pressed from sheet metal, having a straight cylindrical portion G and an outwardly flared portion H between said portion G and the bottom I, which is of larger diameter than said opening. The plug is inserted in the header before the ends thereof are closed; or into a header section, as J, when the header is built up of a series of said sections, as K, J, L, welded together in succession at joints indicated at N, O.

It will be obvious that the internal pressure in the header will force the plug outwardly, so that its flared portion H will jam tightly in the opening surrounded by flange E. In the form shown in Fig. 3, I seal the joint between plug F and flange E by carrying an arc welding pencil around the outer edge of said joint at M to fuse the metal. In the form shown in Fig. 1, I expand over the outer edge of the plug, as shown at P, so as to make contact with projection D. In this case, the plug is tightly held against either outward or inward movement, and the sealing may be omitted, if desired.

I claim:

1. A header for steam boilers having on its exposed side a tubular projection with an inwardly turned flange thereon, and a cup-shaped plug having a straight cylindrical portion fitting in the opening surrounded by said flange and a flared inner portion of greater diameter than said opening, and disposed within said tubular projection.

2. A header for steam boilers, as set forth in claim 1, the outer edge of said plug being bent over to bear against the outer surface of said projection.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,

MAY T. MCGARRY.