

(No Model.)

C. J. PHILLIPS.  
BOILER PATCH.

No. 571,096.

Patented Nov. 10, 1896.

Fig. 1.

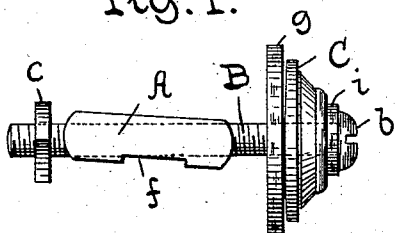


Fig. 2.

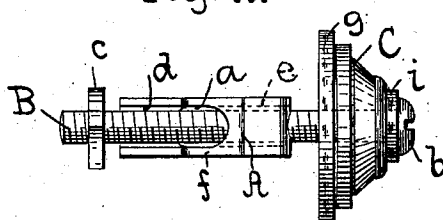


Fig. 6.

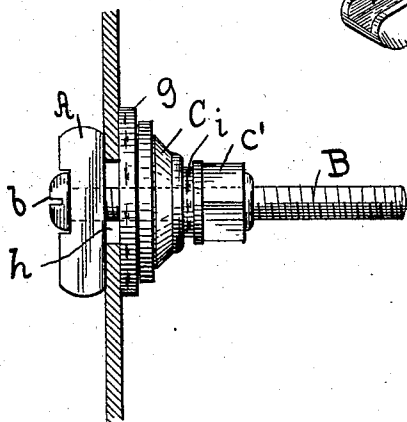


Fig. 4.

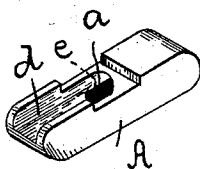


Fig. 3.

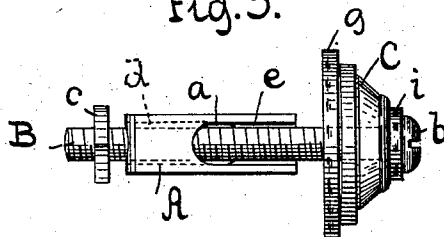
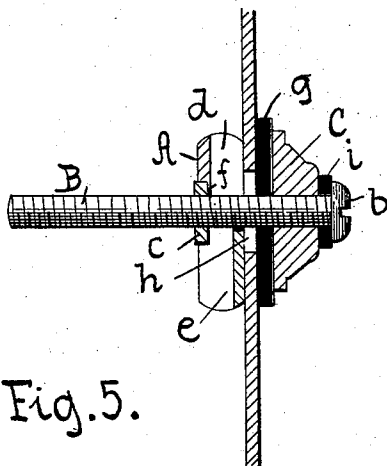


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## BOILER-PATCH.

SPECIFICATION forming part of Letters Patent No. 571,096, dated November 10, 1896.

Application filed February 21, 1896. Serial No. 580,157. (No model.)

### *To all whom it may concern:*

Be it known that I, CORNELIUS J. PHILLIPS, a citizen of the United States of America, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Boiler-Patches, of which the following is a specification.

My invention has reference to a device for stopping leaks in house-boilers, tanks, &c.; and it has for its object to provide a patch which can be readily and quickly applied from the outside of the boiler.

To this end my invention consists, essentially, in a bolt provided with a longitudinally-recessed bridge adapted to swing substantially in the line of the bolt, combined with a compression-disk through which the bolt passes.

The nature of my invention will best be understood when described in connection with the accompanying drawings, in which—

Figure 1 represents a side view of a boiler-patch embodying my invention. Fig. 2 is a view taken from the bottom of Fig. 1. Fig. 3 is a top view of Fig. 1. Fig. 4 is a perspective view of the bridge. Fig. 5 is a sectional elevation showing the patch applied. Fig. 6 is a similar view showing the direction of the bolt reversed.

Similar letters of reference designate corresponding parts throughout the several views of the drawings.

Referring at present to Figs. 1 to 5 of the drawings, the letter B designates a bolt of the usual construction, provided with a suitably-slotted head *b* and with a nut *c*. On said bolt is placed a bridge A of a peculiar construction, which enables the same to be turned to lie close to the bolt, so that the bolt and bridge can be passed through a comparatively small opening. The bridge is formed with a central opening *a*, preferably made somewhat larger in diameter than the bolt, and with two deep longitudinal recesses *d* *e* on its opposite sides. These recesses extend from the ends of the bridge and overlap at the central opening. One side of the bridge is provided with a depressed seat *f* for the nut *c*, which prevents the latter from turning when the bolt is screwed in or out. The longitudinal recesses *d* and *e* are made of such depth that the bridge can be turned to fall almost in line with the bolt, as shown in Fig. 1. The central opening *a* is made some-

what larger than the diameter of the bolt, for the purpose of permitting the bridge to be turned, while at the same time the bridge tends to assume a vertical position after being passed into the interior of the boiler, so as to insure the hole being spanned. Of course, the same result may be accomplished by placing the opening out of the center or by weighting one end of the bridge. This turning of the bridge to a vertical position is of especial value when the patch is applied to cylindrical house-boilers, as the bridge will then have a more solid bearing than when it extends horizontally.

Any suitable patch may be used in conjunction with the bolt and bridge. In the present instance I have shown a compression-disk C, a circular washer *g*, adapted to close the opening *h*, formed in the boiler, Fig. 5, and a second washer *i*, placed between the head of the bolt B and the compression-disk C. In place of the washer *i* a packing of hemp may be wound around the bolt between the compression-disk and the head of the bolt. The compression-disk may be concaved on its compression face, as shown in Figs. 1, 2, and 3, to correspond substantially to the curvature of the boiler.

In Fig. 6 I have shown the same device, but with the bolt B reversed, and a nut *c'* made use of to screw down the compression-plate.

What I claim as new is—

1. The combination with a bolt, of a bridge provided with a central opening for the passage of the bolt and with overlapping longitudinal grooves on opposite sides, substantially as and for the purpose set forth.

2. The combination with a bolt, of a bridge provided with an opening for the passage of the bolt and with longitudinal, overlapping grooves on opposite sides, a compression-disk, and suitable packing, substantially as described.

3. The combination with a bolt, of a bridge provided with an opening for the passage of the bolt and with longitudinal grooves on opposite sides, and a depressed seat, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 7th day of February, 1896.

CORNELIUS J. PHILLIPS.

Witnesses:

A. FABER DU FAUR, Jr.,  
G. W. EISERDRANG.