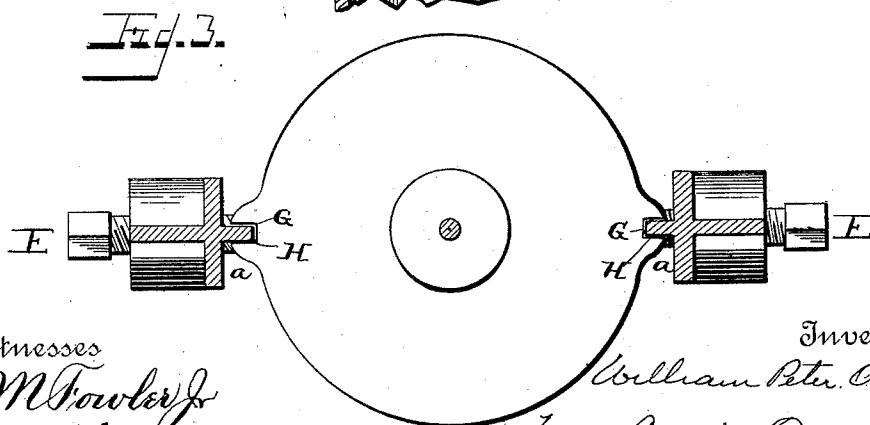
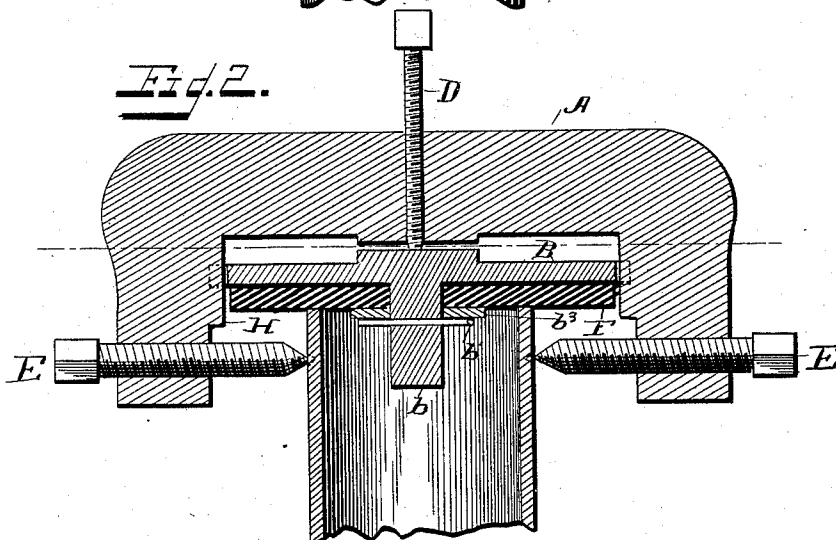
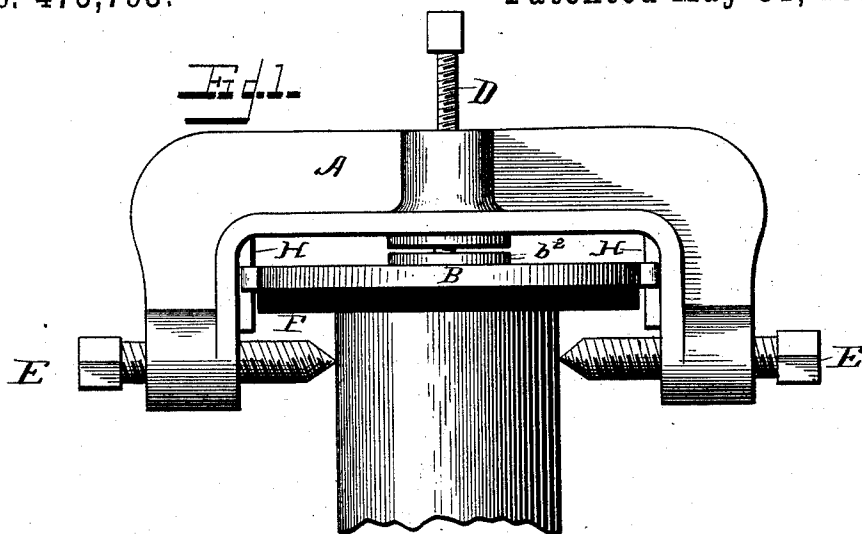


(No Model.)

W. P. O'BRIEN.
ADJUSTABLE PIPE CLOSER.

No. 475,793.

Patented May 31, 1892.



Witnesses

J. M. Fowler Jr.
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UNITED STATES PATENT OFFICE.

WILLIAM PETER O'BRIEN, OF ST. PAUL, MINNESOTA.

ADJUSTABLE PIPE-CLOSER.

SPECIFICATION forming part of Letters Patent No. 475,793, dated May 31, 1892.

Application filed August 3, 1891. Serial No. 401,546. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PETER O'BRIEN, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Adjustable Pipe-Closers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in devices which are employed to close the open ends of pipes, conduits, &c., temporarily or permanently, and particularly to such as may be applied quickly and securely by an ordinary plumber, the object being to provide a more simple and efficient device than those heretofore made and one which shall have a far greater range of application, in that a single size is adapted to fit a number of different sizes of pipe—for instance, from two to five inches in diameter.

The invention consists in certain novel details of construction and combinations and arrangements of parts, to be hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a side elevation of a closer constructed in accordance with my invention, showing its application. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a section at right angles to Fig. 2.

Like letters of reference indicate the same parts in all the figures.

A indicates what may be termed the "bridge," "yoke," or "bail," adapted to be secured to the end of the pipe; B, the cover or cap plate, adapted to fit over the open end of the pipe and be forced to its seat by means of a set-screw D, working through the bridge at the center, said parts being abstractly the equivalents of those used in closers heretofore invented.

In carrying out the present invention each end *a* of the bridge is provided with a set-screw E, having a pointed hardened end adapted when set up to engage the exterior

wall of the pipe to hold the bridge in place, 50 small notches or depressions being formed in said walls, if desired, for additional security. These set-screws are of sufficient length to engage any-sized pipe within the compass of the device, thus permitting the bridge to be 55 applied to pipes of various sizes. The cap-plate B is substantially flat on the under surface, save for a central boss or projection *b*, through which a cotter *b'* passes to hold the wide flat annular packing F in place, a metal 60 washer *b''* being preferably interposed between the cotter and packing. At diametrically-opposite points the cap-plate is provided with depressions or recesses G, which co-operate with ribs or guides H on the inner sides of 65 the bridge ends *a*. On the upper surface the cap-plate is provided with a boss or projection *b''*, which strengthens it and gives a good bearing for the set-screw D. As thus constructed it will be seen that beside the ad- 70 vantages incident to the capabilities of the device in being applied to pipe of various sizes the parts are held together and cannot become separated or lost, the cap-plate being held upon the ribs H by means of the set- 75 screws E and the packing by its cotter *b'*, although the said packing may be easily and quickly turned over to prevent excessive wear on one side.

It is obvious that when desired the cap- 80 plate may have the ordinary test-hole formed therein for the application of an air-pump without departing in the least from the present invention.

Having thus described my invention, what 85 I claim as new is—

1. In a pipe-closer, the combination, with the bridge for fitting over the end of the pipe having the set-screw working through each end thereof and the set-screw at the center, 90 of the cap-plate co-operating with said last-mentioned screw and having the relatively-wide flat under surface with the central projection, the wide annular packing fitting around said projection, and the cotter pass- 95 ing through the projection to hold the packing in place, substantially as described.

2. In a pipe-closer, the combination, with

the bridge having the set-screws working
through the ends thereof and the set-screw at
the center thereof, of the cap-plate co-operat-
ing with said last-mentioned screw and hav-
5 ing the diametrically-opposite recesses or de-
pressions for the inner sides of the ends of
the bridge, whereby the plate is guided and
held in place, substantially as described,

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 10
nesses.

WILLIAM PETER O'BRIEN.

Witnesses:

R. J. CHENEY,
JAS. STARKEY.