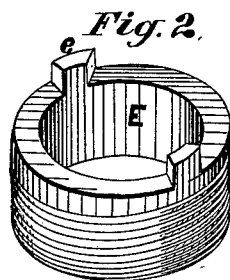
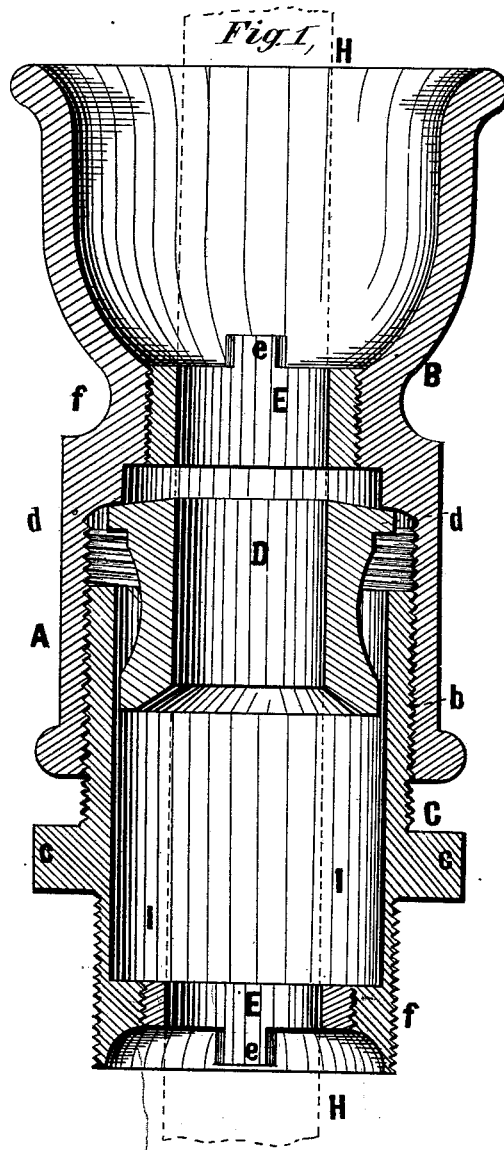


K. CHICKERING.
Stuffing-Box.

No. 217,989.

Patented July 29, 1879



Witnesses,
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UNITED STATES PATENT OFFICE.

KENTON CHICKERING, OF OIL CITY, PENNSYLVANIA.

IMPROVEMENT IN STUFFING-BOXES.

Specification forming part of Letters Patent No. 217,989, dated July 29, 1879; application filed October 25, 1878.

To all whom it may concern:

Be it known that I, KENTON CHICKERING, of Oil City, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Stuffing-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a vertical section of my improved stuffing-box. Fig. 2 is a perspective view of one of the bushings removed.

The object of my invention is to produce a cheap and durable stuffing-box, and so arranged that the wearing parts can be replaced at very slight cost. For renewing the working parts I employ bushings, located at the extremes of the box. Each box is provided with several sets of bushings, with the external diameters of the same dimensions. The internal diameters are of different sizes to accommodate the piston, polished rods, or plungers adapted to work in said bushings. Each stuffing-box is also provided with several followers having the bores of the same dimensions as the bushings.

A represents a stuffing-box with the exterior made in the ordinary manner, provided with a cap, B, and nipple C. Said nipple has a screw-thread on both ends, the longest end of which enters a sleeve, *b*, in the lower part of cap B. The interior of the nipple I is intended for packing, which surrounds the rod H, and is forced down and packed around said rod by means of the follower D, forced down by cap B and nipple C. Said follower is provided with a flange, *d*, which forms a seat on end of nipple C when forced far enough into sleeve B.

The stuffing-box has screw-threads *f f* in B and C for the reception of screw-bushings E E, which are placed in position by a wrench or bar clutching ears *e e*, though the ears can be dispensed with, and slots can be substi-

tuted and operate in the same manner. Each set of bushings has the bores of the same diameter, and corresponding to the bore in follower D.

The internal diameters of bushings E E are made of various sizes in the different sets which accompany a stuffing-box, and adapted for various sizes of piston or polished rods.

The followers (represented by D) are also made of various sizes to correspond to the bushings, several being supplied with each box. The outside diameters, which have a screw-thread cut thereon, are all of the same dimensions in the various sets. By this means old bushings can be renewed and various sizes used in the same box, thus avoiding the unnecessary expense of buying a new box when worn out.

With my improvement a box can be cheaply made of malleable iron. The bushings can be made of any suitable material.

In fitting my improved stuffing-box I place the packing around rod H, (represented in dotted lines,) and force the same down by means of the follower through the medium of cap B and nipple C, operating the latter by means of nut *c*.

When it is necessary to use a different-sized polished rod, I remove the bushings E E and follower D and insert others to correspond to the size rod intended to be used.

The bushings can be of any desired length, and can also be placed in the follower, if necessary.

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

1. A stuffing-box formed of a nipple and cap, each having screw-threaded internal openings larger than the diameter of the polished rod, and each provided with a bushing at its outer end capable of being interchanged, removed, and replaced by others of different internal diameter, substantially as and for the purpose described.

2. In combination with the nipple and cap of a stuffing-box, the interchangeable bushings E, screwed at each end of the device, and

the internal independent follower D, capable of being advanced by the cap, substantially as and for the purpose set forth.

3. The combination of the nipple C, provided with a bushing, E, screwed thereto at one end, the cap B, also provided with a similarly-screwed bushing, the nipple screwed into the sleeve *b* of the cap, and an independent

follower, D, contained in and abutting against the interior of the cap to compress the packing, substantially as and for the purpose described.

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