

(No Model.)

J. W. WILBRAHAM.
STUFFING BOX FOR JOURNALS.

No. 272,819.

Patented Feb. 20, 1883.

FIG. 1.

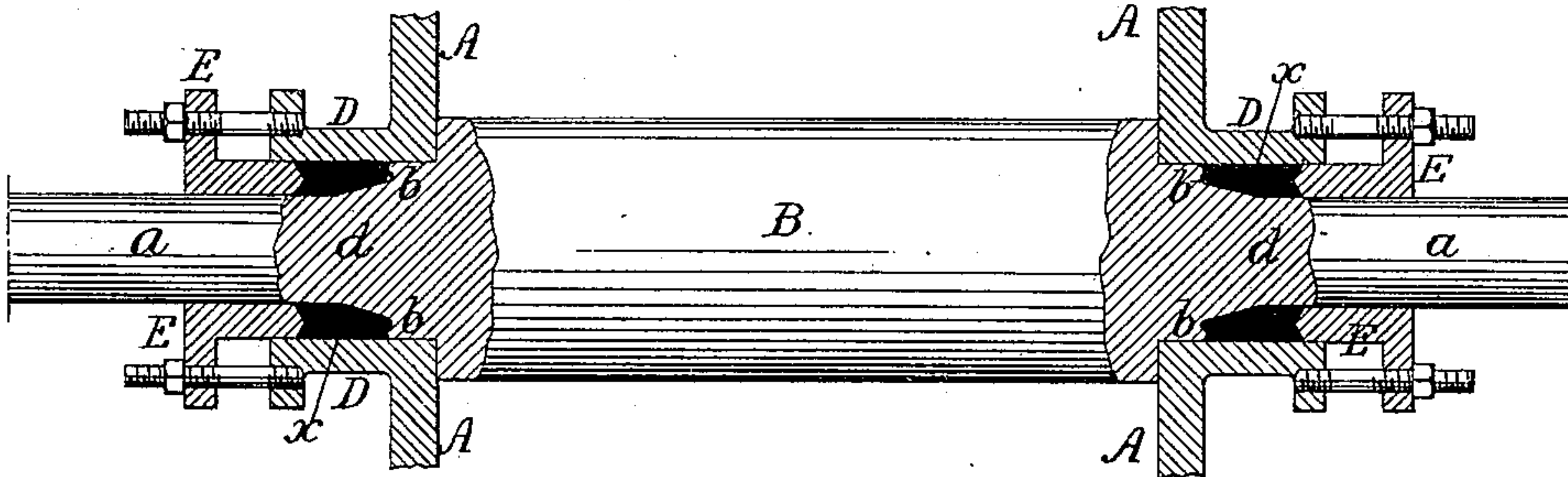


FIG. 2.

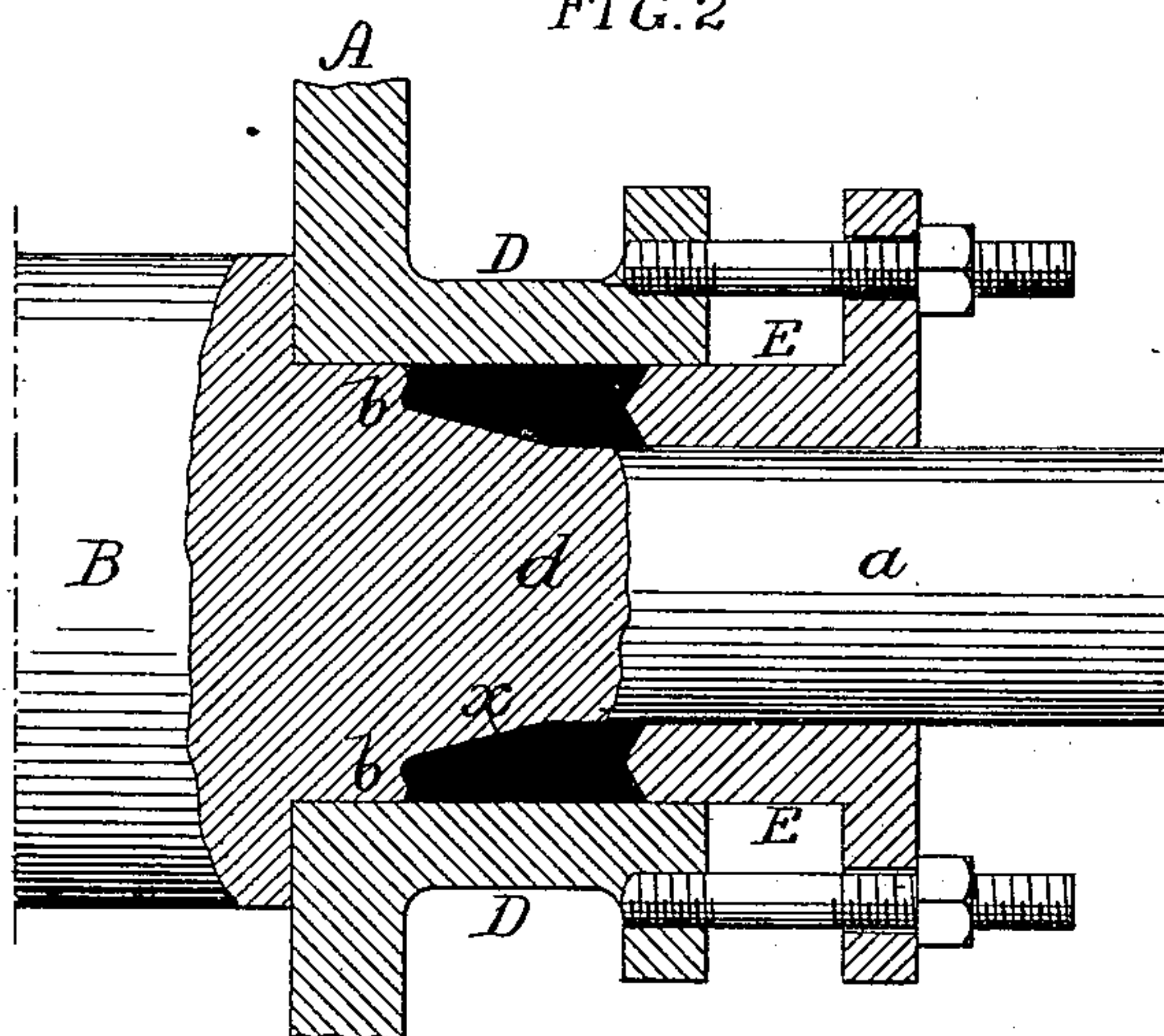


FIG. 3.

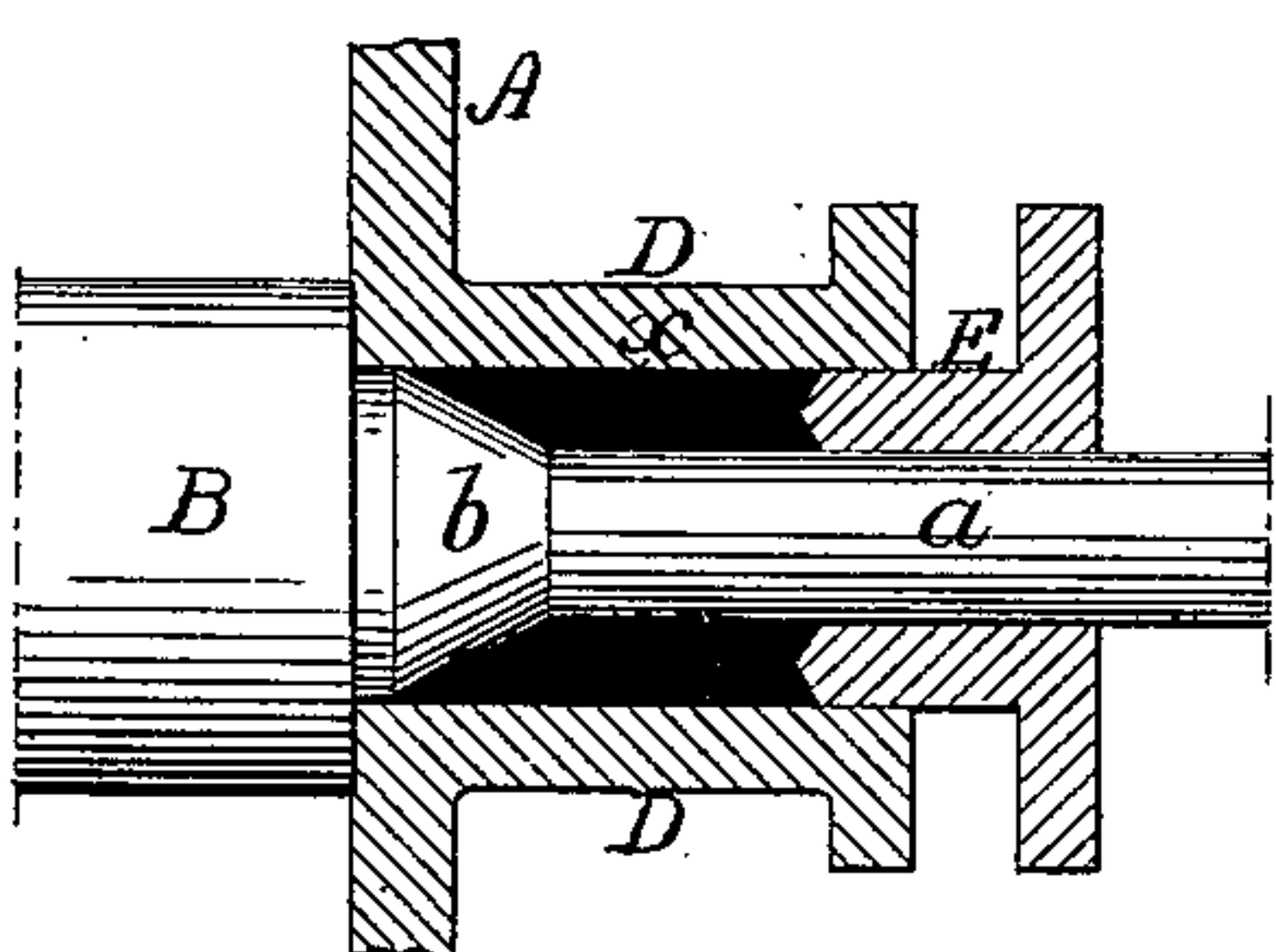


FIG. 4.

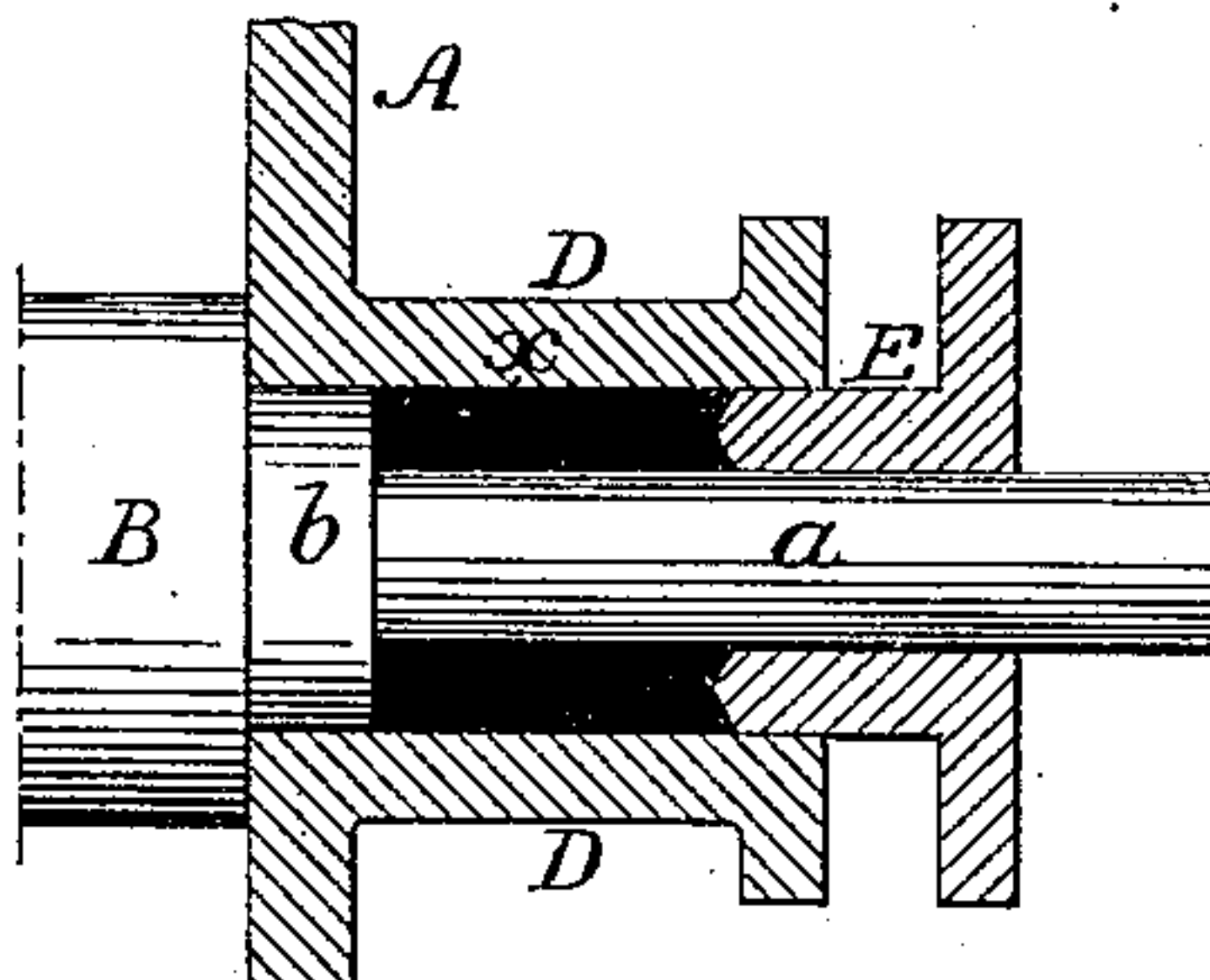
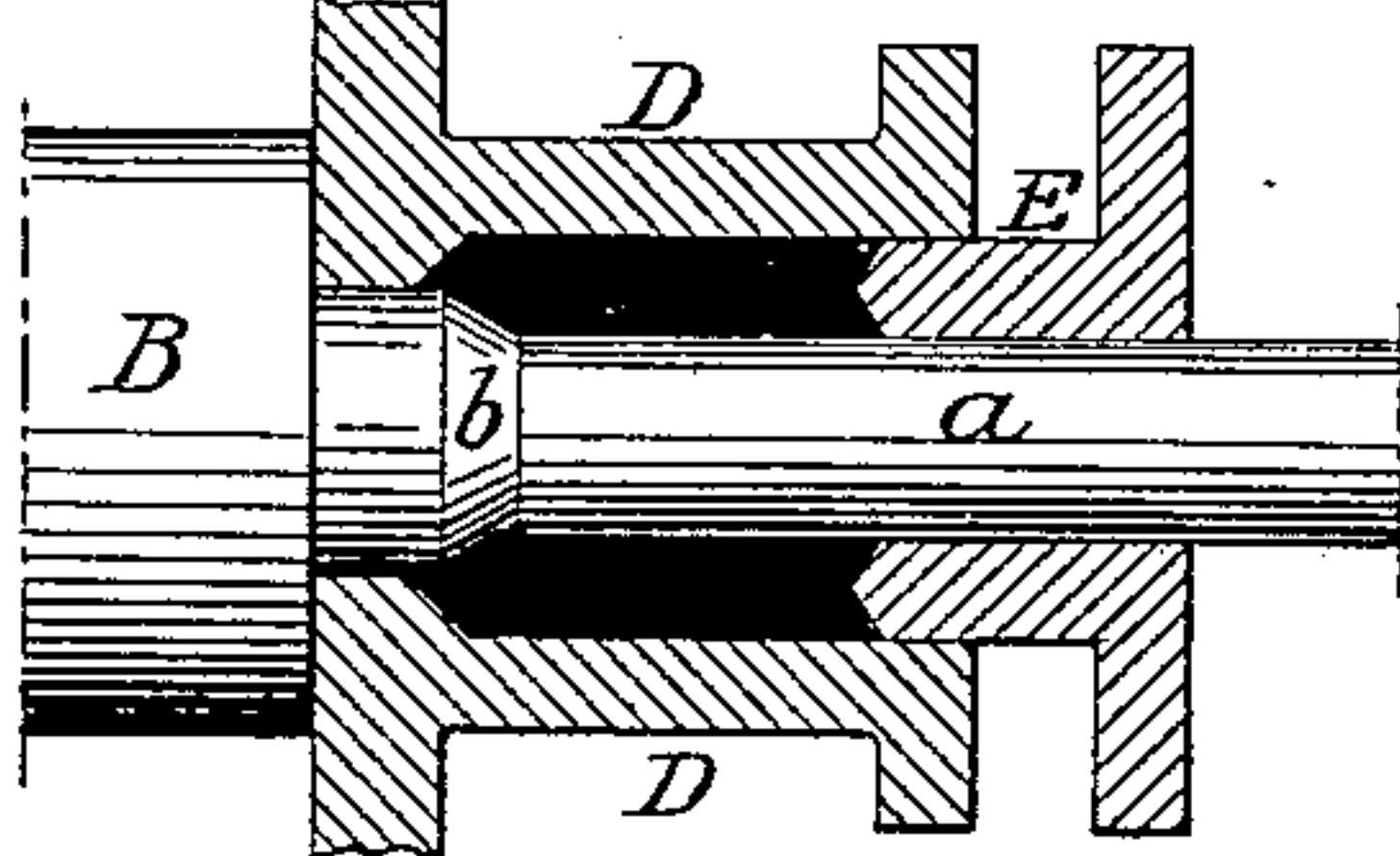


FIG. 5.



WITNESSES:

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INVENTOR:

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Howe and How

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JOHN W. WILBRAHAM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, AND THOMAS WILBRAHAM AND JAMES WILBRAHAM, BOTH OF SAME PLACE.

STUFFING-BOX FOR JOURNALS.

SPECIFICATION forming part of Letters Patent No. 272,819, dated February 20, 1883.

Application filed December 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. WILBRAHAM, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Stuffing-Boxes for Journals, of which the following is a specification,

The object of my invention is to so construct a stuffing-box for rotating shafts that a tight joint can be secured with less pressure on the follower than in a stuffing-box constructed in the ordinary manner, waste of packing being also prevented.

In the accompanying drawings, Figure 1 is a longitudinal section of parts of the ends of a cylinder or drum containing a shaft, the journals of which have to be packed; Fig. 2, an enlarged section of one of the journals, and Figs. 3, 4, and 5 views illustrating modifications of my invention.

A A represent parts of the ends of a cylinder or drum, and B a shaft intended to rotate therein, the journals *a* of this shaft being adapted to stuffing-boxes comprising the usual glands, D, followers E, and bolts for setting up the latter. Ordinarily the packing *x* is confined between the inner end of the follower and an internal shoulder in the gland D, the packing being compressed longitudinally between the shoulder and the follower, and expanded radially so as to bind on the journal of the shaft. I find that the journals of shafts which have only a rotating movement can be packed more effectively by discarding this plan and forming a shoulder on the journal itself, against which shoulder the packing is forced by the follower. Thus, in Figs. 1 and 2 I have shown a gland, D, having a uniform bore throughout, the outer portion of the journal being adapted to the opening in the follower E, but its inner end having a shoulder, *b*, so as to fit snugly to the bore of the gland. When pressure is exerted upon the packing *x* by the follower, said packing is forced against the shoulder *b*, and a tight joint is insured with much less pressure on the follower than in an ordinary stuffing-box. The face of the shoulder *b* is preferably recessed, so as to increase the surface of the same and present an indirect course for leakage, and that portion *d* of the journal adjacent to the shoulder *b* is tapered,

so as to present a still more extended surface against which the packing is pressed when the follower is forced into the gland. In some cases the shoulder may consist wholly of such a tapered portion of the journal, as shown in Fig. 3, or a plain shoulder on a cylindrical journal may be used, as shown in Fig. 4, the only thing essential to the invention being a shoulder on the journal, against which the packing is pressed by the follower.

In carrying out my invention I have in some case combined a shouldered journal with a gland having an internal shoulder—such, for instance, as that shown in Fig. 5; but while this construction attains in some measure the advantages due to my invention, it is inferior to the plans shown in Figs. 1 to 4, in which the shoulder is formed wholly on the journal, and the latter construction is preferred.

Although I have referred to rotating shafts, my invention is equally applicable to shafts having a movement of partial rotation.

Besides securing a tight joint with a light pressure on the follower, I am enabled to save packing, as there is less wear on the latter than in an ordinary box, and the follower can be set up until all of the packing is exhausted, the usual waste being prevented.

I claim as my invention—

1. The combination of the gland and follower of a stuffing-box with a journal having a shoulder against which the packing is forced by the follower.

2. The combination of the gland and follower of a stuffing-box with a journal having a recessed shoulder, against which the packing is forced by the follower.

3. The combination of the gland and follower of a stuffing-box with a journal having a shoulder, *b*, and a tapered portion, *d*, adjacent thereto, against which the packing is forced by the follower.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. WILBRAHAM.

Witnesses:

HARRY DRURY,
HARRY SMITH.