

J. J. McGUICKIN.
BUSHING REMOVER.
APPLICATION FILED APR. 22, 1916.

1,201,064.

Patented Oct. 10, 1916.

Fig. 1

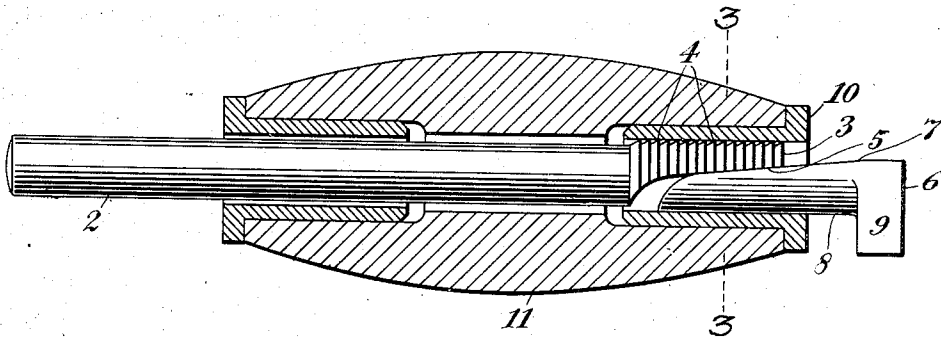


Fig. 2

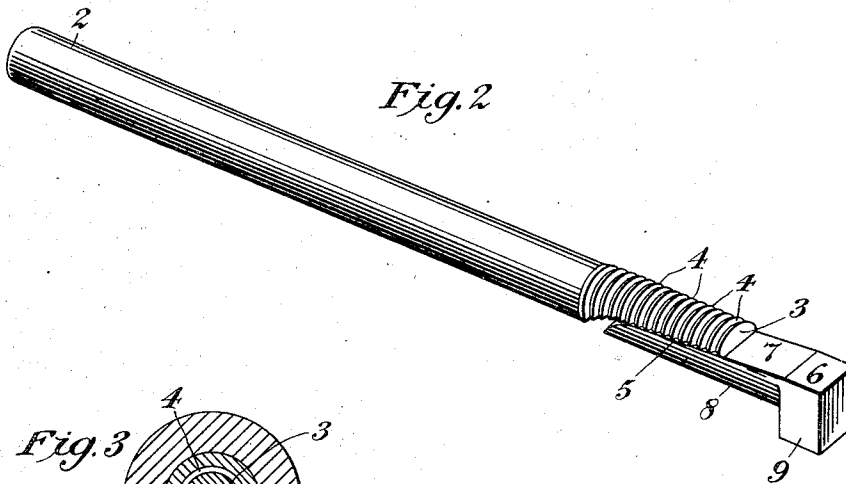
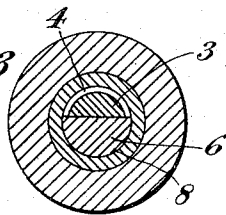


Fig. 3



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UNITED STATES PATENT OFFICE.

JOHN J. MCGUCKIN, OF NEW YORK, N. Y., ASSIGNOR TO LOUIS SCHWAB, OF EAST ORANGE, NEW JERSEY, AS SURVIVING PARTNER OF THE FIRM OF STEVENS & CO., OF NEW YORK, N. Y.

BUSHING-REMOVER.

1,201,064.

Specification of Letters Patent.

Patented Oct. 10, 1916.

Application filed April 22, 1916. Serial No. 92,939.

To all whom it may concern:

Be it known that I, JOHN J. MCGUCKIN, a citizen of the United States, residing at No. 633 Fifty-fourth street, borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Bushing-Removers, of which the following is a specification.

My invention relates to a tool which is adapted to be used in forcing out bushings from their places in sleeves or hubs; and my improvements are particularly directed to means for simply and effectually establishing a gripping connection between the tool and the bushing, whereby the latter may be dislodged from its seat by force applied to the tool, the particulars of my invention being hereinafter pointed out and claimed.

In the drawings Figure 1 is a longitudinal sectional view of a hub provided with bushings, and shows my improved tool locked in place within one of the bushings; Fig. 2 is a perspective view of the tool; and Fig. 3 is a cross-sectional view taken on the line 3-3 of Fig. 1, looking to the left.

Corresponding parts are designated by similar reference numerals in all the figures.

The tool consists essentially of a stock 2, which is provided at one end with a slightly expanded gripping portion 3, provided with a series of flanges 4, 4, 4, having abrupt forward faces and rearwardly sloped edges, as shown in the drawings. The end of the tool is beveled off on one side as at 5, and a locking key 6 is provided, which has a beveled side 7, complementary to the beveled side 5 of the stock, and a semi-cylindrical side 8, corresponding substantially to the interior curve of the bushing. The key 6 is also provided with a head 9 which affords suitable means for driving the key into place and for withdrawing it when desired.

In use, the shank 2 is slipped into position within a bushing, as 10, of a hub or housing, as 11; and the key 6 is then driven in between the end of the shank and the bushing, as illustrated in Fig. 1, so as to cause the flanges 4, 4 to bite into the metal of the bushing, thereby giving the tool a firm grip on the bushing. If now force is applied to the other end of the shank, as, for instance, by striking it with a hammer, it will be caused to bite still more effectually

into the bushing, because the shank will be driven down against the wedge, and the flanges 4, 4 will be forced very positively against the bushing, toward which, because of their configuration, they present biting edges. Consequently, such a firm grip will be established between the tool and the bushing that the latter may be readily driven out of its socket, carrying with it the tool, which, because of the shape of its shank, may pass entirely through the hub or housing and be withdrawn therefrom with the bushing. The tool may afterward be separated from the bushing by knocking out the key 6, or by inserting a suitable instrument above the key and against the end of the shank and driving the latter backward off of the key and out of the bushing.

By means of my improvements I obtain a tool which is strong, simple and efficient in operation, easily secured to and detached from the bushing, and which tightens its hold on the bushing during the process of driving the latter out of its socket.

Having thus described my invention what I claim and desire to secure by Letters Patent of the United States is:—

1. The combination, in a bushing remover, of a shank provided at one end with a beveled side and with a series of biting flanges, and a locking key having a beveled side adapted to operate against the beveled side of the shank.

2. The combination, in a bushing remover, of a cylindrical shank provided at one end with a beveled side and with a series of biting flanges having substantially vertical forward faces and backwardly sloping rearward faces, and a locking key having a beveled side adapted to operate against the beveled side of the shank.

3. The combination, in a bushing remover, of a shank provided at one end with a beveled side and with a series of biting flanges, and a locking key having a beveled side adapted to operate against the beveled side of the shank and a semi-cylindrical side adapted to bear against the interior curve of a bushing.

4. The combination, in a bushing remover, of a cylindrical shank provided at one end with a beveled side and with a series of biting flanges having substantially vertical forward faces and backwardly sloping rear-

ward faces, and a locking key having a beveled side adapted to operate against the beveled side of the shank, a semi-cylindrical side adapted to bear against the interior curve of a bushing, and a laterally extended head.

5. The combination, in a bushing remover, of a cylindrical shank having a bevel at one side terminating with an outward curve, and on the other side a series of biting flanges, and a locking key having a beveled side adapted to operate against the beveled side of the shank.

6. The combination, in a bushing remover, of a shank provided at one end with a beveled side and with a series of biting

flanges, and a locking key having a beveled side terminating with a curve adapted to operate against the beveled side of the shank.

7. The combination, in a bushing remover, of a body provided with a beveled side and with a series of biting fingers, and a locking element having a beveled side adapted to operate against the beveled side of the body, and means for applying force longitudinally to the body.

JOHN J. MCGUCKIN.

Witnesses:

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WESLEY L. SMITH.