

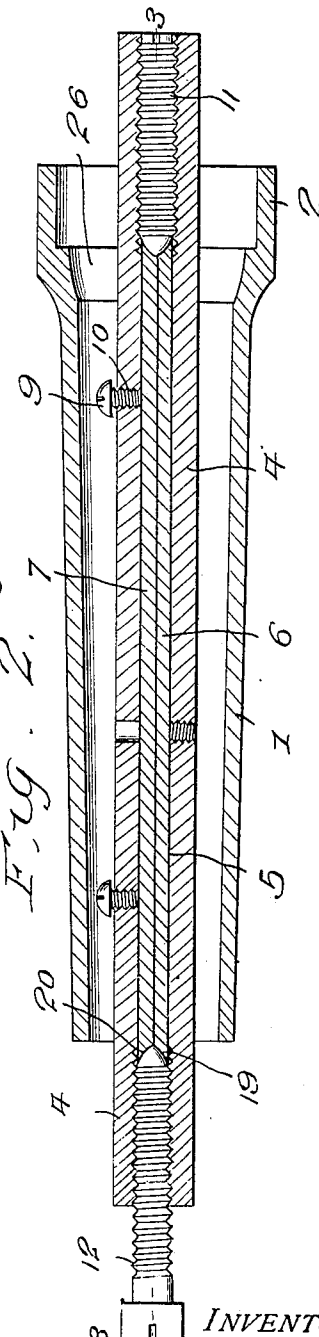
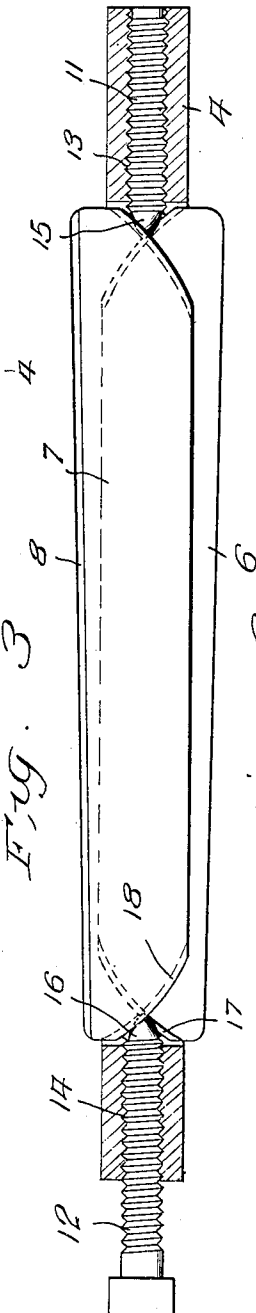
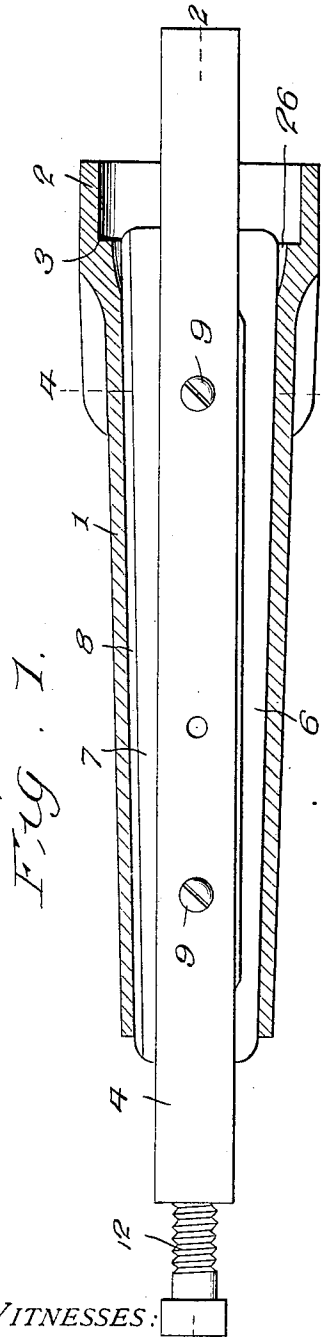
C. E. JACKSON.

REAMER.

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906,432.

Patented Dec. 8, 1908.



WITNESSES:

Thos. R. L. [Signature]
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UNITED STATES PATENT OFFICE.

CHARLES ELMER JACKSON, OF BUSHNELL, ILLINOIS.

REAMER.

No. 906,432.

Specification of Letters Patent.

Patented Dec. 8, 1908.

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To all whom it may concern:

Be it known that I, CHARLES E. JACKSON, a citizen of the United States, residing at Bushnell, in the county of McDonough and State of Illinois, have invented certain new and useful Improvements in Reamers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in reamers and more particularly to that class adapted to be employed in connection with vehicle wheel boxings and my object is to provide a device of this class, whereby the interior of the boxing may be readily increased in diameter to fit a larger axle.

A further object is to provide means for readily adjusting the cutting parts of the reamer and force the same into engagement with the inner face of the boxing and a still further object is to provide interchangeable cutting devices for the reamer.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claim.

In the accompanying drawings which are made a part of this application, Figure 1 is a longitudinal sectional view through a boxing, showing my improved reamer applied thereto. Fig. 2 is a sectional view as seen on line 2—2, Fig. 1. Fig. 3 is a sectional view as seen on line 3—3, Fig. 2, with the boxing removed.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a boxing, which may be constructed in the usual or any preferred manner, and is provided at one end with the usual form of band 2, which is greater in diameter than the boxing 1 and forms a shoulder 3 at the intersection of the band with the body of the boxing.

It frequently happens, especially in the smaller towns that the blacksmiths are not supplied with boxings of various sizes, and, to this end, I have provided my invention so that a boxing of a smaller size, even if considerably worn, may be made to fit an axle of a larger size and to readily accomplish this result, I provide a bar 4, at the center of which is provided a longitudinal slot 5, said

slot being adapted to receive cutting blades 6 and 7.

The cutting blades 6 and 7 are adapted to rest one above the other and extend from opposite edges of the slot 5, the projecting edges of which blades are oppositely beveled, as shown at 8, whereby said blades will be caused to engage and remove portions of the boxing and in order to hold the blades in their laterally adjusted positions, binding screws 9 are introduced through threaded openings 10 in one wall of the bar 4, the inner ends of said screws engaging the upper blade and clamping the two blades against the lower wall, thereby securely holding the blades in the slot.

The blades 6 and 7 are preferably wider at one end than at the other to conform to the taper in the boxing and are adjusted laterally and extended a uniform distance from each edge of the slot by means of adjusting screws 11 and 12, which screws enter threaded bores 13 and 14, respectively, through the opposite ends of the bar 4, said bores intersecting the slot 5 at its ends, the inner ends of the adjusting screws having substantially conical terminals 15 and 16, respectively, which terminals are adapted to engage the ends of the blades 6 and 7 and cause said blades to move laterally when the adjusting screws are turned inwardly.

The ends of the blades are oppositely curved, as shown at 17 and 18, respectively, in Fig. 3, the meeting faces of the curved portions being also beveled, as shown at 19 and 20, said bevels being of a contour to fit the peripheral surfaces of the conical terminals 15 and 16, by which construction the curved ends of the blades are caused to overhang said terminal.

The blades 6 and 7 are adapted to be used for increasing the size of the opening in the body of the boxing, but when the opening in the band is to be increased in size, I use that form of blades shown in Figs. 5 and 6, and, in this instance, the blades 6^a and 7^a are much shorter than the blades 6 and 7 and are preferably located adjacent one end of the slot and are pivotally mounted in the slot by introducing a pivot bolt 21 through the walls of the bar 4 and through the ends of the blades 6^a and 7^a, the opposite ends of said blades having angular extensions 22 and 23 thereon, the outer and forward edges of which are beveled as shown at 24 and 25 to

engage, respectively, the inner face of the band 2 and the shoulder 3, the loose ends of the blades 6^a and 7^a being curved and beveled similar to the blades 6 and 7, to receive the end 16 of the adjusting screw 12 and by which means the angular extensions are moved outwardly and into engagement with the parts of the boxing.

In some instances, it is desired to form a curved recess 26 at the inner end of the boxing 1 and, to this end, I provide that form of cutting blades shown in Fig. 7 of the drawing, said blades being indicated as 6^b and 7^b, the angular extensions 22^a and 23^a thereon having curved cutting edges 27 and also beveled similar to the cutting edges on the other blades, said blades 6^b and 7^b being secured to the bar 1, similar to the blades 6^a and 7^a.

In applying my improved reamer to use, the blades 6 and 7 are moved laterally through the medium of the adjusting screws 11 and 12 to increase the opening in the boxing 1 to the proper size, after which the binding screws 9 are turned downwardly onto the cutting blades and said blades firmly clamped in the slot when that end of the bar having the adjusting screw 12, is introduced into the boxing and any suitable form of operating device employed for rotating the bar 4 and simultaneously moving the same lengthwise, this operation removing the inner wall of the boxing and increasing the size thereof to the proper dimension and if the size of the opening in the band 2 is to be

increased, the blades 6 and 7 are removed from the slot 5 and the blades 6^a and 7^a substituted therefor, or if the recess 26 is to be formed, the blades 6^b and 7^b are secured in the slot.

It will thus be seen that I have provided a very cheap and efficient form of reaming device and one that may be applied for various uses and it will further be seen that the cutting parts of the reamer may be readily adjusted to fit openings of different sizes and that the tool may be readily applied to use.

What I claim is:

In a reamer, the combination of a bar having a longitudinal slot therein, and having openings in the ends thereof communicating with the slot, cutting blades within the slot arranged one over-lapping the other, said blades having their ends beveled, adjacent ends of the blades being oppositely beveled one with relation to the other, screws threaded through the openings in the ends of the bar, the inner ends of the screws being conical to fit between the beveled ends of the blades and a screw threaded through the bar at right angles to the blades for clamping the blades against displacement.

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

CHARLES ELMER JACKSON.

Witnesses:

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IRA M. BALL.