M. K. BARRON.

BOLT CLIPPER.

APPLICATION FILED SEPT. 14, 1910.

1,024,432. Patented Apr. 23, 1912.

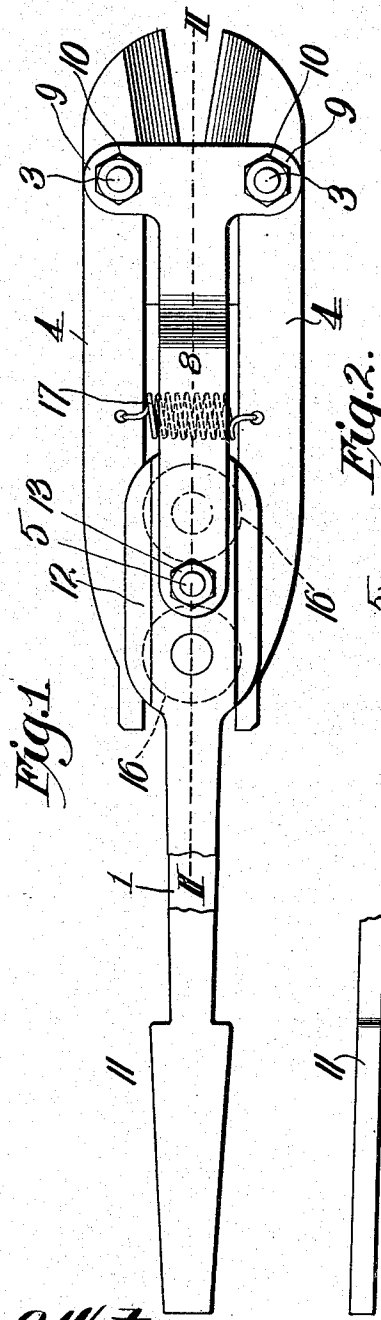

Fig. 1.

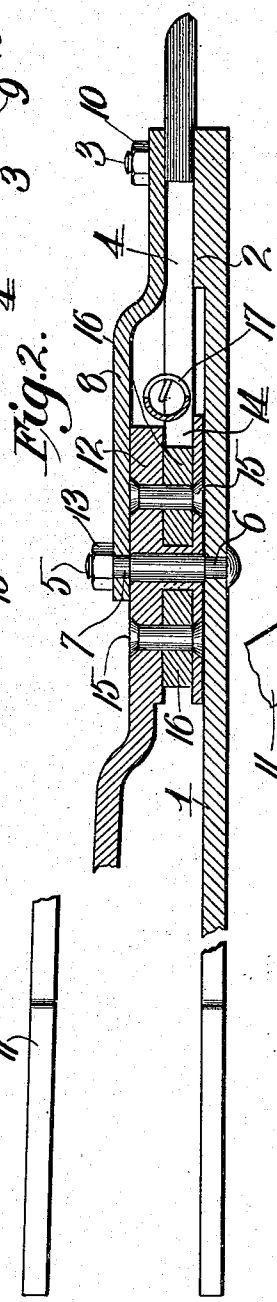

Fig. 2.

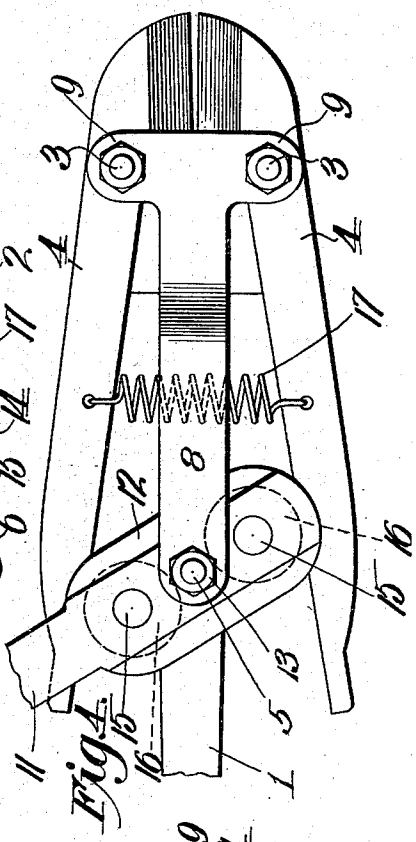

Fig. 4.

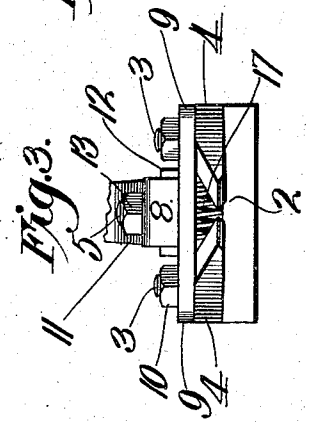

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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BOLT-CLIPPER.

1,024,432. Specification of Letters Patent. Patented Apr. 23, 1912.

Application filed September 14, 1910. Serial No. 582,070.

To all whom it may concern:

Be it known that I, MILES K. BARRON, a citizen of the United States, residing at Coffeyville, in the county of Montgomery and State of Kansas, have invented certain new and useful Improvements in Bolt-Clippers, of which the following is a specification.

This invention relates to bolt clippers, and my object is to produce a device of this character which will operate efficiently and reliably and which can be caused to clip bolts accessible only through a relatively small opening.

A further object is to provide a bolt clipper having handles of relatively great length to give sufficient leverage on the cutting jaws to sever hard material, a still further object being to produce a device of this character of simple, strong, durable and cheap construction.

With these objects in view, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that the invention may be fully understood reference is to be had to the accompanying drawing, in which—

Figure 1, is a plan view of a bolt clipper embodying my invention. Fig. 2, is a vertical section on the line II—II of Fig. 1. Fig. 3, is a front view of the clipper. Fig. 4, is a plan view with the jaws closed.

In the said drawing, 1 indicates a handle of substantially T-shape in plan view, the head of the same being preferably of increased thickness as shown at 2, and fitting upon and pivoted to opposite ends of the head end thereof at 3, is a pair of cutting jaws 4, the cutting ends thereof projecting beyond the head of the handle. 5 is a bolt secured in and projecting upward from the said handle between and near the rear ends of jaws 4, the bolt being diametrically reduced at 6, where it extends up through the handle, for a purpose hereinafter explained. The bolt is also diametrically reduced at 7, at a point above the plane of the jaws to receive the rear end of a longitudinally extending metal strap 8, which bends downward at a suitable distance from its front end to the plane of the upper side of the jaws 4 and at its front end said strap is provided with laterally projecting lugs 9, overlying the jaws, the bolts 3 extending through said lugs and receiving retaining nuts 10, at their upper ends.

11 is a handle provided at its front end with an enlargement or head 12, arranged between the jaws 4 and handle 1 and strap 8, said handle being pivoted upon the non-reduced portion of pivot bolt 5, it being noted in this connection that the diametric reduction of the bolt 5 provides downwardly and upwardly disposed shoulders for engagement respectively with handle 1 and strap 8, so that when the retaining nut 13 is screwed home on said bolt the enlarged portion thereof will receive the pressure and thus leave the handle 11 free to operate pivotally without frictional engagement with handle 1, and said strap.

In the plane of the jaws 4, the head 12 of handle 11, is grooved as at 14, to receive the jaws and thus tend to prevent the same pressing upward or downward when forced apart at their rear ends by the operation of the handles as hereinafter explained. Forward and rearward of the bolt the head 12 is provided with rivets or pins 15, and journaled thereon and occupying the groove 14 is a pair of antifriction rollers 16 of such diameter as to both engage the inner edges of the jaws when the latter are open at their front or cutting ends, a retractile spring 17 arranged horizontally between handle 1 and strap 8 forward of the head of handle 11, being attached to the jaws for the purpose of holding them open at their cutting ends.

When the cutting ends of the jaws are open or separated, the handle 11 lies vertically above handle 1, as shown in Fig. 1, and with the parts thus arranged the clipper is disposed in operative relation to the bolt to be cut, that is to say is moved forward until the cutting edges of the jaws are at opposite sides of the bolt. The operator then pulls in opposite directions on the handles 1 and 11, the result being the handle 11 operates pivotally on bolt 5 and the rollers 16 moving in opposite directions force the rear end jaws apart and their cutting edges together, this action being performed without widely separating the rear ends of the jaws, as will be seen by reference to Fig. 4. After the bolt is clipped, pressure is applied upon the handles to restore them to their original relation and the spring 17 which was tensioned by the operation of the

jaws, restores the latter to their original positions.

From the above description it will be apparent that the clipper can be used on the inner ends of bolts projecting into the relatively narrow space between the spokes of a wheel, as the jaws in the cutting operation have but a slight pivotal swing or movement. As the handles rearward of the jaws need not enter the opening their range of movement is immaterial, it being obvious that for cutting bolts and other metal it is necessary that the handles be of considerable length to enable the operator to obtain sufficient leverage to perform the cutting operation.

I wish it to be understood that I do not desire to be restricted to the exact details of construction and organization shown and described as obvious modifications will suggest themselves to one skilled in the art.

I claim:—

A bolt clipper comprising a T-shaped handle of which the inner face of the head lies inward of the corresponding side of the stem, a pivot bolt 5 secured to the stem of the handle bolts 3 secured to and near the ends of the said head; a T-shaped strap 8, of which the head is secured to bolts 3 and the stem on said pivot bolt; said stem being bent to provide a wider space between it and the stem of the handle than exists between said heads, a handle 11 provided with a head 12, fitting snugly between the stem of the first-named handle and strap and pivoted on the pivot bolt and provided with a groove surrounding the pivot bolt and occupying the plane of the space between the heads of the first-named handle and the strap, anti-friction rollers carried by head 12 within said groove forward and rearward of the pivot bolt and of such diameter that the head projects beyond the peripheries of the rollers at all points, a pair of cutting jaws pivoted on bolts 3 between the heads of the first-named handle and the strap and also fitting in the groove of head 12 at opposite sides of the pivot bolt and adapted to engage opposite sides of both rollers simultaneously when the jaws are open and adapted to engage different rollers when the jaws are closed, and a retractile spring connecting the jaws rearward of their pivotal points and tending to hold their cutting ends apart, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses.

MILES K. BARRON.

Witnesses:
E. H. PEARCE,
L. E. HOOD.