

Improvement in Bolt-Cutters.

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IMPROVEMENT IN BOLT-CUTTERS.

Specification forming part of Letters Patent No. 130,880, dated August 27, 1872.

Specification describing a new and Improved Bolt-Cutter, invented by WILLIAM F. STRONG, of Charleston, in the county of Charleston and State of South Carolina.

My invention consists of a peculiar arrangement of the stock, scroll-plate, and cap of a chuck for holding and adjusting screw-cutting dies or tap-holding jaws, whereby provision is made for the application of a scale, adjustable stop-bolt, and a stud-pin for arresting the dies as they close upon the bolt at any predetermined point, for bolts of any sizes. My invention also consists of a combination, with the said stock, scroll-plate, and cap, arranged as above stated, of the said adjustable stop-bolt, stud-pin, and scale, all as hereinafter described.

Figure 1 is a partial side elevation of the cutter. Fig. 2 is a face view of the scroll-plate, part of the stock, and the dies. Fig. 3 is a section through the complete instrument on the line *xx* of Fig. 2; and Fig. 4 is a perspective view of a die such as will be substituted for the screw-cutting dies shown in Figs. 2 and 3 when the instrument is to be used for holding taps, for which it is also applicable.

Similar letters of reference indicate corresponding parts.

A represents the stock, which fits upon the mandrel of the lathe in the ordinary way of applying chucks. B is the shifting scroll-plate for moving the dies C out and in, which said dies engage the scroll of the said plate, which is shown clearly in Fig. 2, in the same manner that the dies of ordinary scroll-chucks do. The stocks of the said dies work in under-cut radial grooves in the part A¹ of the stock shown in Fig. 2. D is the cap inclosing the dies and confining the scroll-plate B on the stock, being bolted to said stock, as shown at F. This part A¹ of the stock is considerably smaller than the part A, and the scroll-plate fits on it, as shown at G, with the side against the face A² of said stock; and a flange, H, of the said scroll-plate overlaps the periphery of the stock and extends far enough to the rear of the cap to provide room for the holes I, by which to introduce a lever, K, for turning it. The face of this flange, which is flush with the face of

the cap, is provided with a scale-of-length measure, as shown at L, Fig. 1, whereby the distance it is necessary to move the scroll-plate backward to open the dies enough to discharge the finished bolt may be readily determined by the adjustable stop-stud, by which the movement of the said disk is arrested at the right point in closing the dies. M is this adjustable stop-stud. It is attached to the face of the stock A by a bolt, *a*, and a nut, *b*, the latter being fitted in an under-cut groove, N, in the face of the stock, and adapted to be secured at any point by screwing the nut up against the under-cut walls of the groove, and to be shifted along the groove either way when loosened by unscrewing the bolt. P is a stud-pin projecting from the scroll-plate across the path of the stop-stud M, so as to come against it and arrest the closing of the dies when they have closed sufficiently for the bolt to be cut.

The dies are first closed sufficiently for cutting the bolts in hand. Then the said stop-bolt M is adjusted around against the stud-pin P, so that the scroll-plate will be stopped at the same point every time when the dies are closed after being opened to release the finished bolts, thus securing exact uniformity of size; and in opening the dies the scale will indicate how much the scroll-plate must be turned back of the stop-stud to open far enough to release the finished bolts.

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

1. The stock A, scroll-plate B, and cap D, constructed, arranged, and combined together substantially as specified.

2. The combination of the adjustable stop-stud M and stud-pin P with the stock A and scroll-plate B, the stock having an under-cut groove, N, for the said stop-stud, all substantially as specified.

3. The combination of the scale with the scroll-disk and the stop-stud M, substantially as specified.

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Witnesses:

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