W. F. SWATHEL.

Turning Bolt Heads.

No. 107,561. Patented Sept. 20, 1870.

fig. 1.

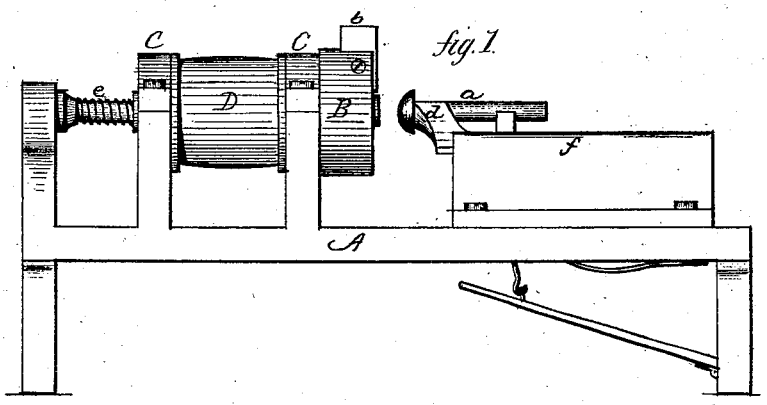


fig. 2.

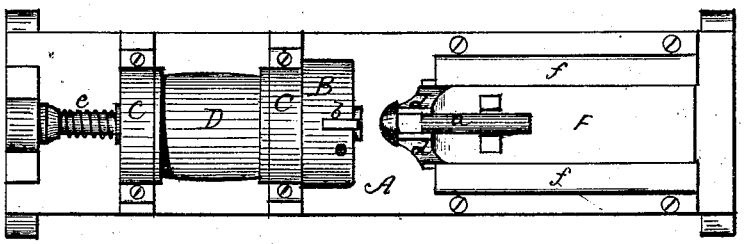
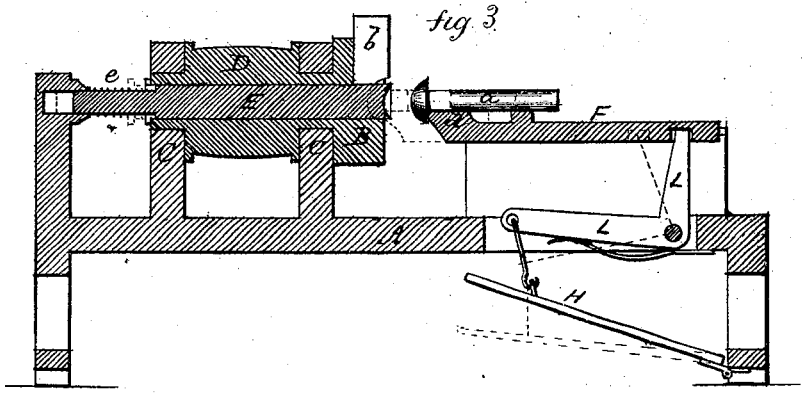


fig. 3.



Witnesses

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WILBUR F. SWATHEL, OF MOUNT CARMEL, CONNECTICUT, ASSIGNOR TO HIMSELF AND WALTER W. WOODRUFF, OF SAME PLACE.

Letters Patent No. 107,561, *dated September* 20, 1870.

IMPROVEMENT IN MACHINES FOR TURNING THE HEADS OF BOLTS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILBUR F. SWATHEL, of Mount Carmel, in the county of New Haven and State of Connecticut, have invented a new Improvement in Machine for Turning Bolt-Heads; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1, a side view;

Figure 2, a top view; and in

Figure 3, a longitudinal central section.

This invention relates to an improvement in machines for turning the heads of oval-headed bolts, particularly that class known as carriage-bolts, the object being to smooth and true the edge, which, by the process of forging, is naturally left more or less irregular; and

The invention consists in a device for holding the bolt, to which a longitudinal movement is given, so as to carry the bolt to the cutter, and the arrangement of a cutter upon a revolving cutter-head, through the center of which a spindle passes to bear against and center the bolt-head, so that the cutter revolving will dress the required portion of the head, and leave all heads of the same class of the same diameter.

A is the bed of the machine.

B, the cutter-head, arranged so as to revolve freely in bearings C C, and caused to revolve by the application of power to the pulley D.

In the cutter-head a cutter, *b*, is arranged, the cutting-edge, as seen in fig. 3, the reverse of that portion of the bolt-head which is to be dressed.

Through the center of the cutter-head a spindle, E, passes, the outer end of which is formed, as seen in fig. 3, to receive the bolt-head, and of less diameter than the bolt-head, so as to leave exposed that portion of the bolt-head which is to be dressed. The spindle is forced forward by the operation of a spring, as seen in the drawing, or otherwise.

F is a slide, arranged in suitable guides, *f*, so as to have a longitudinal movement, which is imparted to it by a treadle, H, operating through a lever, L, as seen in fig. 3, so that, by the depression of the treadle H, the slide F is moved toward the cutter-head.

On the said slide a device, *d*, is arranged for supporting the bolt *a*. For carriage or square-neck bolts it is only necessary that the said device be constructed to receive the square part of the bolt, as seen in the drawing.

The bolt is set into the holding device, as seen in fig. 3, the cutters revolving; the operator moves forward the slide F, carrying the bolt-head against the spindle E, which enters the head, that is, holds it in a central position, the spindle yielding until the head is carried in against the cutter, as denoted in broken lines, fig. 3, the cutter dressing off that portion of the head required to be removed, and, when the operator releases the slide, it is thrown back, removing the bolt from the cutter, the spindle thrown out, ready to receive a second bolt, and so on.

It will be readily seen by those skilled in the art, that the bolt-heading device may be fixed, and a longitudinal movement given to the cutter-head to bring the cutter against the bolt, but, without limiting myself to either of these two arrangements, I prefer the movement of the slide as first described.

I claim as my invention—

In combination with the holding device for supporting the bolt, the revolving cutter-head, provided with the cutter *b* and the spindle E, through its center, all constructed and operating in the manner specified.

W. F. SWATHEL.

Witnesses:

A. J. TIBBITTS,

J. H. SHUMWAY.