

(No Model.)

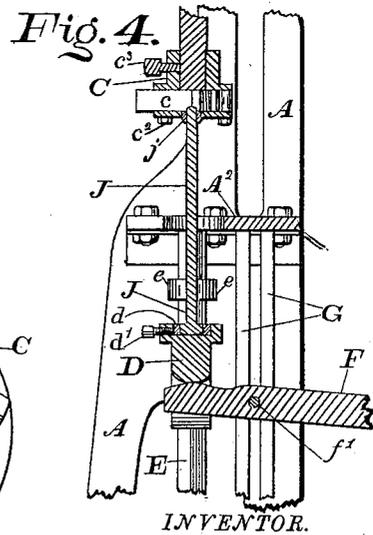
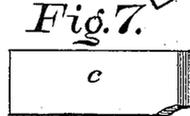
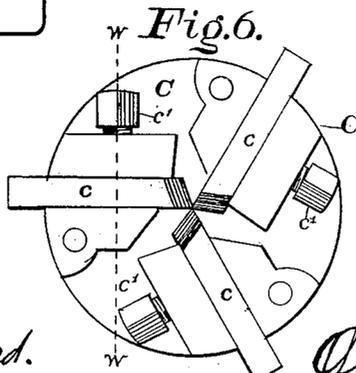
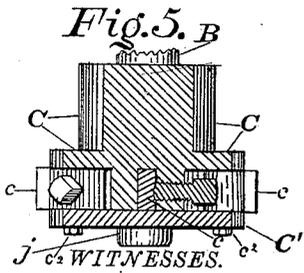
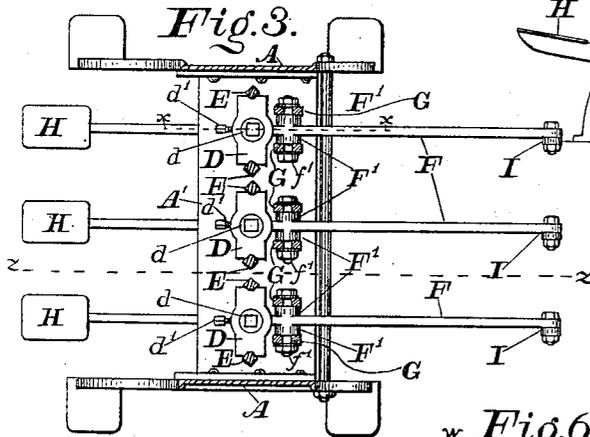
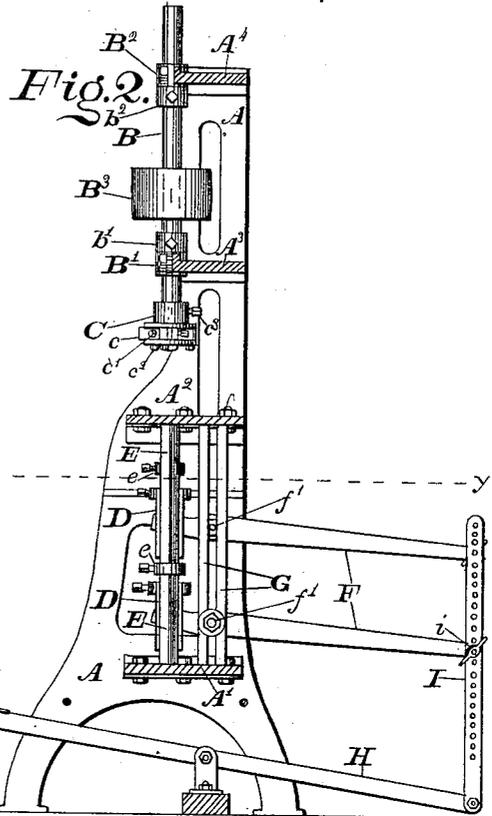
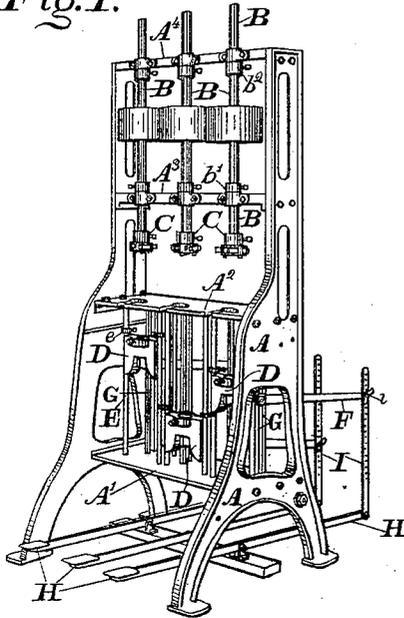
O. R. OLSEN.

MACHINE FOR POINTING BOLTS.

No. 266,638.

Patented Oct. 31, 1882.

Fig. 1.



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MACHINE FOR POINTING BOLTS.

SPECIFICATION forming part of Letters Patent No. 266,633, dated October 31, 1882.

Application filed February 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, OLAF R. OLSEN, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Machines for Pointing Bolts, &c., of which the following is a specification.

The object of my said invention is to produce a machine for pointing bolts, log-screws, and such like articles, which shall be substantially automatic in its action after the article to be pointed has been inserted. This object is accomplished by providing one or more shafts in an appropriate frame-work, (three are shown in the drawings,) mounting upon the lower end of each of said shafts a head containing cutters for shaping the bolts, mounting in slides beneath each head a suitably-formed block for carrying a bolt, and combining therewith means for maintaining a pressure while the machine is in operation and means for adjusting the position of these sustaining-heads, all as will hereinafter be more particularly described.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a machine embodying my said invention; Fig. 2, a vertical section of the same on an enlarged scale on the dotted line $z z$; Fig. 3, a horizontal section on the dotted line $y y$; Fig. 4, a vertical section of the parts which operate immediately on the bolt, and of the bolt itself in position to be operated upon, on a still further enlarged scale, on the dotted line $x x$; Fig. 5, a still further enlarged detail view of the cutter-head, partly sectioned, on the dotted line $w w$; Fig. 6, a still further enlarged under side plan of said head, the bottom plate thereof being removed, bringing the cutters into view; and Fig. 7, a side view of one of said cutters.

In said drawings, the portions marked $A A'$, &c., represent the frame-work of the machine; B , the vertical shafts; C , the cutter-heads; D , the blocks for carrying the bolts; E , the slides in which they are mounted; F , levers, upon one end of which the blocks D rest, and whereby they are operated to move vertically; G , slides, wherein are mounted bearings F' for said levers; H , treadles whereby said levers are operated, and I connecting rods or links between said treadles and said levers.

The frame-work consists of two side pieces, $A A$, and four cross-bars or bridge-trees, $A' A^2 A^3 A^4$, to the two former of which the slides E for the blocks D and the slides G for the lever-bearings F' are attached, and on the two latter of which are bearings for the vertical shafts B .

The shafts B are mounted in and supported by suitable bearings, $B' B^2$, in the cross-bars $A^3 A^4$ of the frame, and are driven by belts upon the pulleys B^3 . Collars $b' b^2$ are secured to the shafts, next the bearings, to hold said shafts in place and prevent them from a vertical movement.

The cutter-heads are composed of a casting C , several cutters, $c c c$, (preferably three,) a plate, C' , underneath the cutters, and set-screws $c' c^2$, by which said cutters are held in place. The cutters c are adjusted to fit the size of bolt that is being operated upon by loosening the set-screws c' and moving said cutters out or in to the desired point and tightening up said screws again, thereby holding them firmly in position. The cutting-edges of the cutters, being formed at an angle, trim off the end of the bolt to a point, which renders it easily insertible into the hole formed for its reception. The complete heads are secured to the lower ends of the shafts B by means of holes in the casting C , which fit onto the ends of said shafts, and set-screws c^3 , whereby they are fastened in position.

The blocks D are formed to receive the heads of the bolts and support said bolts while being operated upon. Each is preferably provided with a recessed removable disk, d , which receives the heads of the bolts to be operated upon. These disks are secured in place by set-screws, d' , and are replaced by others when different-sized bolts are to be pointed. These blocks are held in position laterally and guided in their movements by the slides E .

The slides E are simply straight bars, whereby the blocks D are guided and held in place. They are preferably set with their corners toward grooves in said blocks, which corners enter said grooves in the manner shown in Fig. 3.

The levers F are used to operate the blocks D vertically. For the slight distance which said blocks are required to move in the ordinary use, after being adjusted to operate upon bolts of a given length, the operation of the treadle H and connecting-rod I is sufficient.

When it is desired to change the position of these blocks so as to admit bolts of a different length the position of these levers is changed by loosening the bolts *f'* and moving the bearings of said levers up or down in the slides G, and, when they are properly placed, securing them in position by again tightening the bolts *f'*. The point of attachment between said levers and the connecting-rods I can be adjusted by the use of the removable thumb-bolts *i*, by which said parts are connected.

The slides G are plain straight bars, between which bearings for the levers F are secured, and on which they are pivoted, the bolts *f'* serving as the pivots.

The treadles H operate, in the usual manner of treadles, to move the levers F and the blocks D thereon.

The bars I are simply a means of connecting the treadles H and levers F. They are provided with numerous holes, so that the relative positions of the levers thereto can be easily varied and adjusted by removing and reinserting the bolts *i* which connect them.

The operation of my said invention may be recapitulated as follows: A bolt, J, is placed in the machine in the position shown in Fig. 4, the head resting in the disk *d*, which holds it from turning. In order to admit it to this position the treadle is pressed upon, which lowers the block D. The bolt being in position, the pressure on the treadle is removed, which allows the parts to return to about their former position, forcing the point of the bolt up inside the guide *j* in the plate C' against the cutters *c*. These cutters, being revoluble; are put in motion by the shafts B, on which they are mounted, and cut the point of the bolt to such form as is provided for by the shape of the cutting-edges of said cutters. A uniform length of the finished bolts may be secured by adjusting the collars *e* on the slides E, so that the blocks will come in contact therewith at the proper time, and thereby be stopped from any further upward movement, which of course stops the operation of the cutters upon the bolt.

Weights may be suspended on the levers F to increase the pressure of the bolts against the cutters, and the position of said weights may be varied, or others of greater or less size substituted, as it is desired to increase or diminish the amount of such pressure. Cams on shafts may be arranged to operate the sliding blocks D, if desired, instead of the levers F, without changing the character of my invention; but I prefer the form shown. The machines may also be placed horizontal instead of vertical by a few obvious changes in the form of the levers, &c., without changing their essential features.

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

1. The combination, with revoluble cutter-heads and blocks for sustaining bolts to be operated upon, of levers F, connecting-rods I, and treadles H, said several parts being arranged as shown, whereby the weight of the same and such additional weight as may be mounted thereon will operate automatically to force said blocks in the direction of said cutters, substantially as set forth.

2. The combination, in a machine for pointing bolts, &c., with the vertically-moving blocks or carriers for sustaining said bolts and forcing them against the cutters, of levers F, pivoted on bolts *f'*, said bolts being a part of vertically-adjustable bearings for said levers, whereby the positions of said levers and said blocks are vertically adjusted, substantially as set forth.

3. The combination, in a machine for pointing bolts, &c., of the blocks D, slides E, levers F, slides G, treadles H, and rods I, substantially as described, and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 16th day of February, A. D. 1882.

OLAF R. OLSEN. [L. s.]

In presence of—

C. BRADFORD,
CHAS. L. THURBER.