

(No Model.)

3 Sheets—Sheet 1.

H. M. MYERS.
MACHINE FOR SPLITTING THE TANGS AND FORMING THE SOCKETS
OF SHOVEL BLANKS.

No. 348,037.

Patented Aug. 24, 1886.

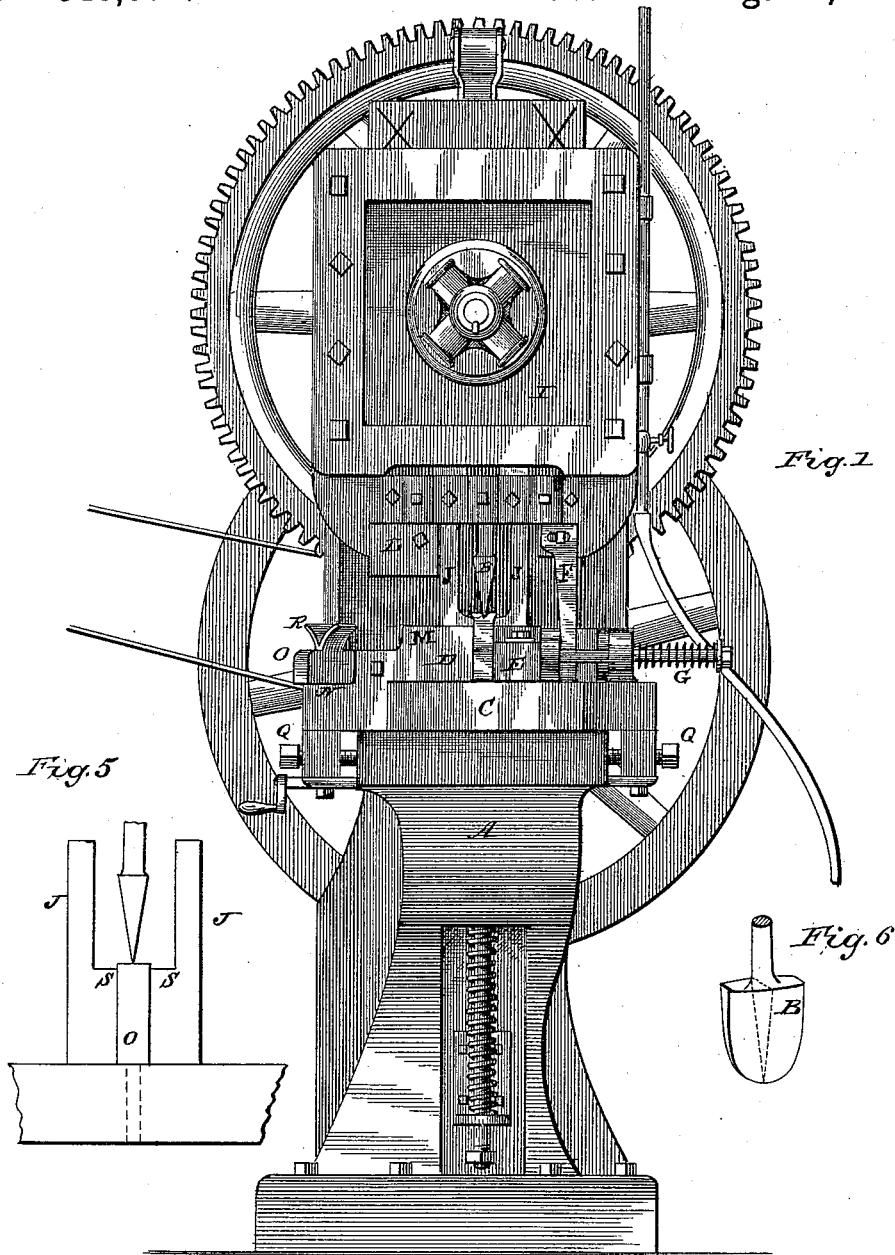


Fig. 5

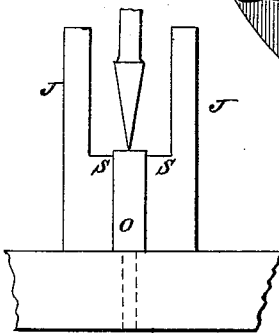


Fig. 6

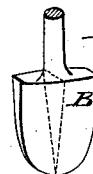
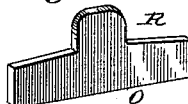


Fig. 7



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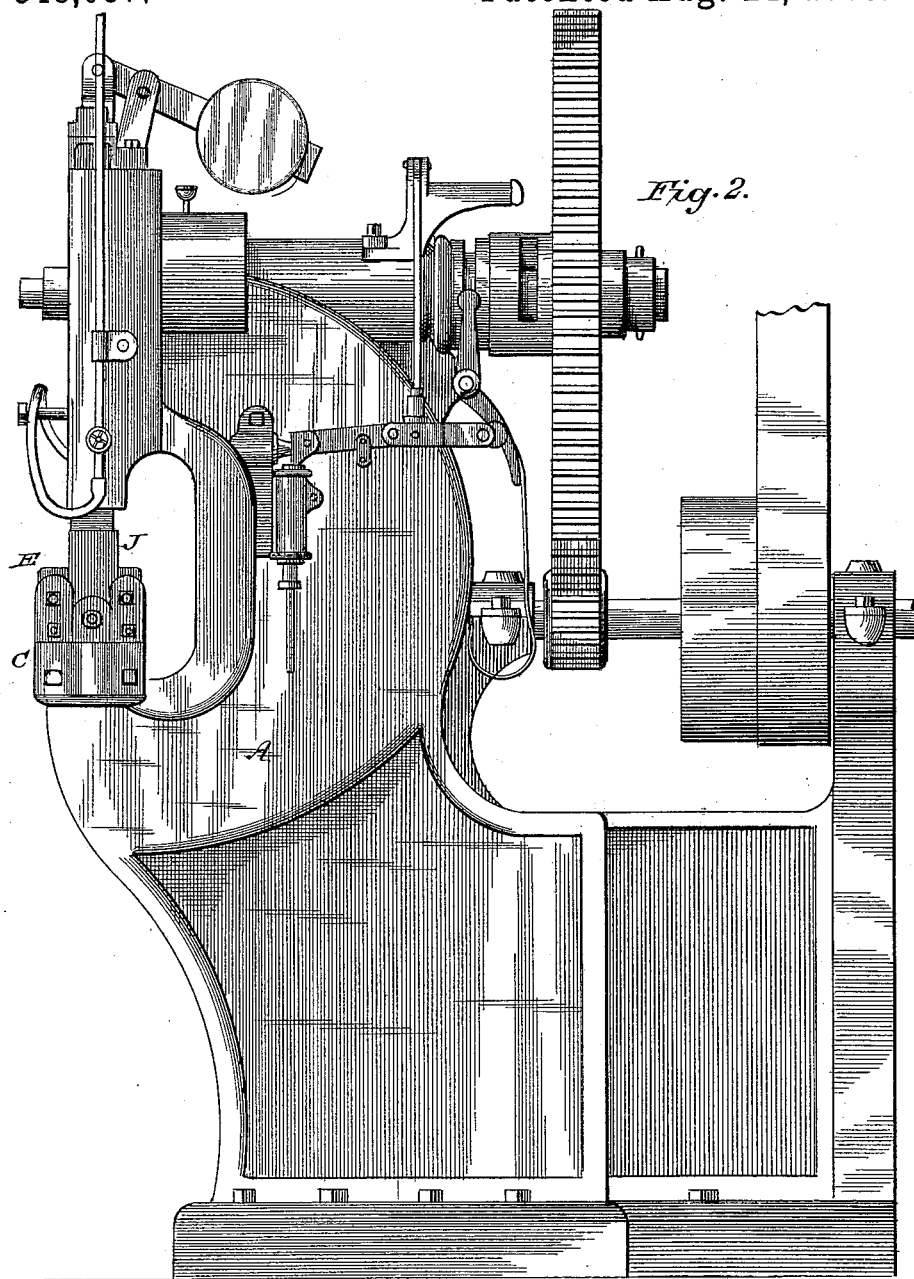
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(No Model.)

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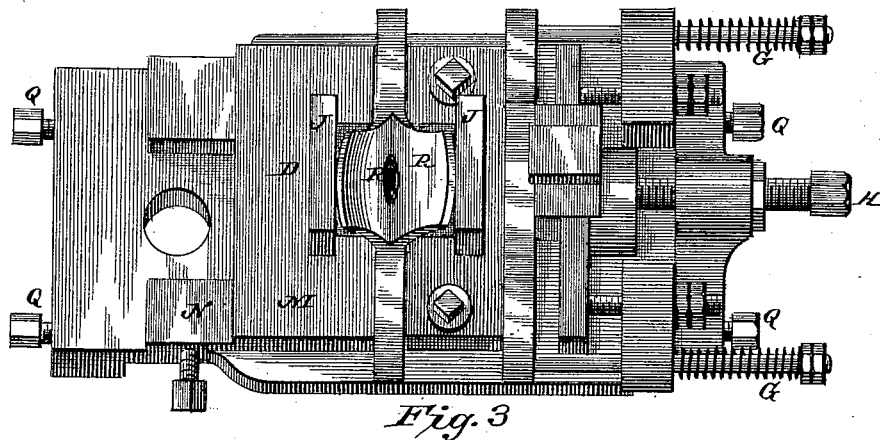


Fig. 3

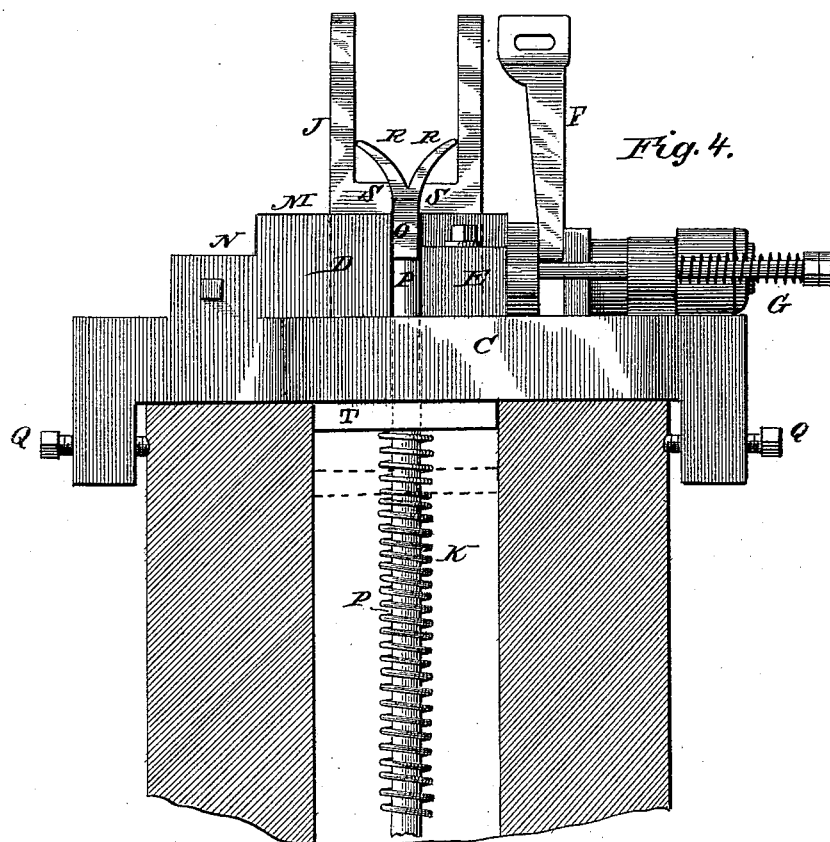


Fig. 4.

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HENRY M. MYERS, OF BEAVER FALLS, PENNSYLVANIA.

MACHINE FOR SPLITTING THE TANGS AND FORMING THE SOCKETS OF SHOVEL-BLANKS.

SPECIFICATION forming part of Letters Patent No. 348,037, dated August 24, 1886.

Application filed March 27, 1885. Serial No. 160,941. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. MYERS, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Splitting and Forming Sockets in Blanks for Shovels, Spades, and Scoops; 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 an improvement in machines for splitting the tang for the handle-straps and forming the socket in blanks for making shovels, spades, and scoops; and it consists in the combination of a blank-holder having a movable jaw, tang-supporters, cutter, and operating mechanism, as will hereinafter more fully and at large appear.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of this specification, Figure 1 is a front elevation of my improvement in machines for splitting the tang and forming the socket in blanks for making shovels, spades, and scoops. Fig. 2 is a side elevation of the same. Figs. 3, 4, 5, 6, and 7 are detail views.

Reference being had to the accompanying drawings, A represents the ordinary punching-machine having what is known as a "stop-motion," in which machine, in place of the punch, I insert a cutter, such as shown at B in Fig. 1, the construction of which is clearly shown in Fig. 6.

To the saddle C of the machine I attach a fixed jaw, D, and a movable jaw, E, which is operated through the medium of a wedge, F, and spiral springs G. The extent of the outward movement of the jaw E is regulated through the medium of a set-screw, H. The wedge F is attached to the movable head I of the machine. The office of the wedge is to close the jaw E against the blank, and that of the springs G to retract the jaw E as the wedge F is drawn up by the movable head I. In recesses in the jaws D E are arranged tang-supporters J, which move down in the jaws and through the saddle C, by the lower part of

the movable head acting upon their upper ends, and as the head is drawn back the spring K, acting upon the plate or follower T, forces the tang-supporters up into about the position shown in Fig. 1, and also causes the rod P to force up from between the jaws the blank O. To the movable head I is attached a hammer, L, and a part of the upper face of the jaw D serves as an anvil, M, and a recess, N, is formed in said jaw for the reception of the blank O. The saddle C is held in position on the machine through the medium of set-screws Q.

By reference to the accompanying drawings and from the foregoing description the skillful mechanic will be enabled to construct my improvement. Therefore I will proceed to describe its operation, which is as follows: The machine being put in operation in the usual manner of the punching-machine having a stop-motion, the operator places the blank—such as shown in Fig. 7—between the jaws D E. The head I in its descending motion first causes the wedge F to move forward the jaw E, so as to clamp the blank O firmly against the stationary jaw D, at which point the cutter B commences its work of splitting the tang R of the blank O, and as the cutter enters the tang, splitting it, the tang-supporters J are moved down at the same rate of speed that the cutter splits the tang, thereby causing the cutter to split the tang evenly—that is to say, that that part of the tang-supporters marked S firmly braces each side of the tang R of the blank O, moving downward a little in advance of the downward movement of the cutter, thereby preventing the heated metal from having any lateral movement that would tend to produce unevenness in the splitting of the tang. The cutter B, after splitting the tang, enters the blank O sufficiently to form the necessary socket therein for the reception of the lower end of the wooden handle in the shovel-blade when said blank is rolled out for forming said blade. The cutter having split the tang R and formed said socket, at this point the movable head I commences moving upward, which will withdraw the wedge F and cutter B, and as said wedge is being withdrawn the springs G move back the jaw E, and the spring K moves up the tang-supporters J, and the rod P forces the blank O

from between the jaws D E. The operator then removes the blank through the medium of a pair of tongs (not shown) or other suitable device, and places it in the recess N in jaw D, and then places a fresh blank between the jaws D E, at which time he places the split tang of the blank O upon the anvil M, and the downward movement of the hammer L will close the split tang; but prior to the closing of the said tang a little cinder should be placed between the split parts of the tang and in the socket to prevent welding in the rolling process, and thus the operation is repeated for the splitting and closing of the tang of each blank, as above set forth.

Having thus described my improvement, what I claim as of my invention is—

1. In a machine for splitting shovel-blanks, a cutter for splitting the tang, in combination with reciprocating jaws for supporting the tang laterally while being split, substantially as described.

2. In a machine for splitting shovel-blanks, a reciprocating head and a cutter secured thereto, in combination with jaws for supporting the tang laterally, said jaws being moved by said head in unison with the cutter as it advances into the tang, substantially as described.

3. In a machine for splitting shovel-blanks, a reciprocating head and a cutter secured thereto, in combination with reciprocating tang-supporting jaws and a yielding follower for holding the jaws and head in operative relation to each other, substantially as described.

4. In a machine for splitting shovel-blanks, a reciprocating cutter, in combination with jaws for supporting the tang laterally and clamping-jaws for holding the blank while being split, substantially as described.

5. In a machine for splitting shovel-blanks, a reciprocating cutter, in combination with reciprocating jaws for supporting the tang laterally and a fixed and a movable jaw for holding the blank while being split, substantially as described.

6. In a machine for splitting shovel-blanks, a reciprocating head, a cutter, and a wedge secured thereto, in combination with tang-supporters, clamping-jaws operated in one direc-

tion by said wedge, and springs for separating them, substantially as described.

7. In a machine for splitting shovel-blanks, a reciprocating cutter for splitting the tang, in combination with jaws for supporting the tang laterally while being split, clamping-jaws for holding the blank, and a rod for raising the blank after it has been split, substantially as described.

8. In a machine for splitting shovel-blanks, a reciprocating cutter, in combination with reciprocating tang-supporting jaws, clamping-jaws to hold the blank, a yielding follower supporting the first-named jaws, a rod, and a spring for operating said follower and rod, substantially as described.

9. In a machine for splitting shovel-blanks, a reciprocating head having a hammer attached thereto and carrying a cutter, in combination with blank-clamping jaws, one of which has an anvil formed thereon in such relation to the hammer on the head that the split tang of one blank may be closed by the same stroke of the head that is splitting another blank, substantially as described.

10. In a machine for splitting shovel-blanks, a reciprocating head having a cutter secured thereto, in combination with blank-clamping jaws, reciprocating tang-supporting jaws operated in one direction by said head, and a spring for returning them to their normal position, substantially as described.

11. In a machine for splitting blanks, a detachable saddle provided with a pair of vertically-reciprocating jaws, a fixed jaw, a horizontally-adjustable jaw, and springs for operating the latter jaw in one direction, substantially as described.

12. In a machine for splitting shovel-blanks, a reciprocating head having a cutter and a wedge attached thereto, in combination with a pair of reciprocating tang-supporting jaws, a fixed and a movable blank-clamping jaw, springs for retracting said movable jaw, and a spring-actuated follower for raising the tang-supporting jaws, substantially as described.

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Witnesses:

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