

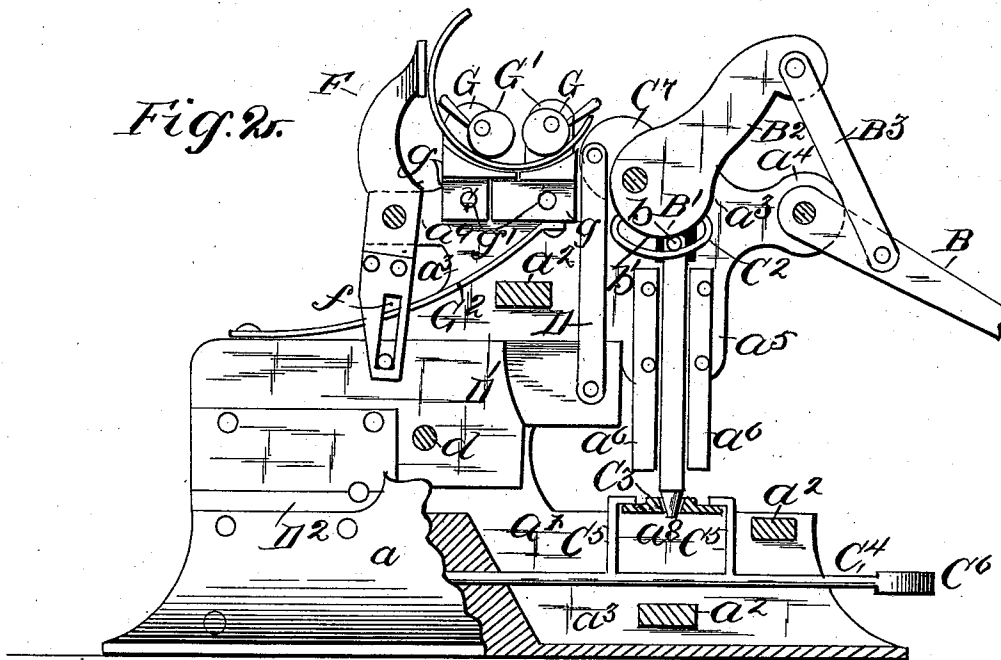
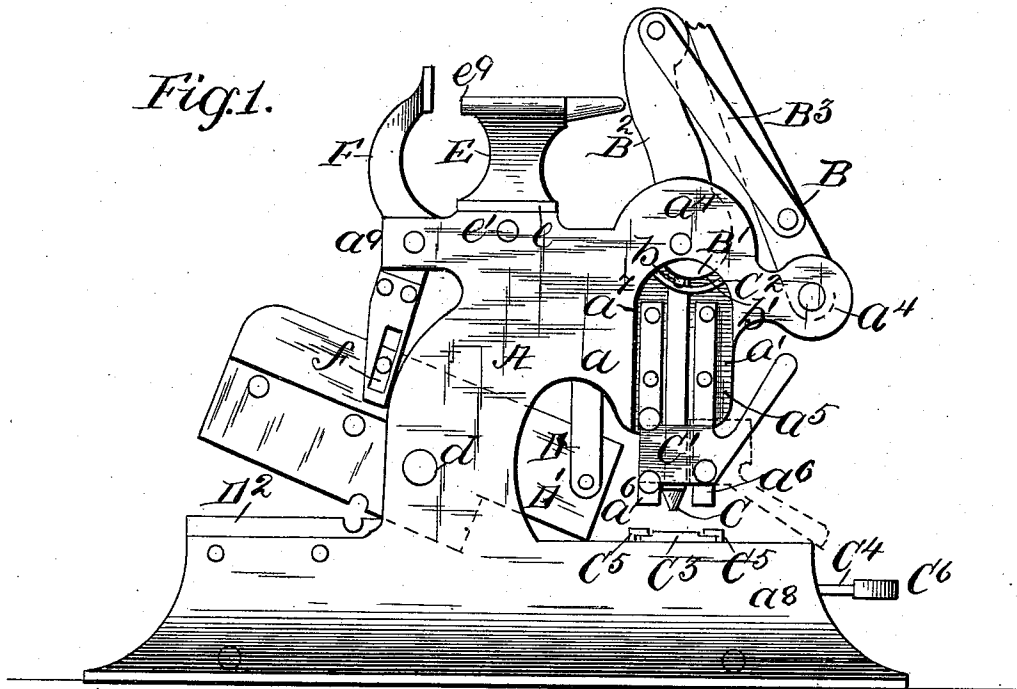
(No Model.)

H. B. SEVEY.

COMBINED METAL WORKING MACHINE.

No. 429,324.

Patented June 3, 1890.



Witnesses

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UNITED STATES PATENT OFFICE.

HIRAM BEMENT SEVEY, OF VIENNA, MAINE.

COMBINED METAL-WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 429,324, dated June 3, 1890.

Application filed March 1, 1890. Serial No. 342,185. (No model.)

To all whom it may concern:

Be it known that I, HIRAM BEMENT SEVEY, a citizen of the United States, residing at Vienna, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Means for Working Metal; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in means for working metal; and it consists in providing on a single frame a variety of tools, each adapted to accomplish its proper function, and in providing means whereby the tools may be driven by a single source of power.

It also consists in providing certain new constructions of the said tools and in their combination with each other, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which similar parts are designated by similar letters, Figure 1 is a side elevation of my invention, showing the anvil in position and the handle raised. Fig. 2 is an elevation thereof, one of the plates of the frame being removed and the handle depressed, while the tire-upsetter is shown in place of the anvil.

The frame A consists of two plates a a' —one upon each side thereof—which, being separated by the blocks a^2 , form a central recess a^3 . The plates a a' have on the rear part of their upper ends projections a^4 , between the extreme ends of which the handle B is pivoted. A cam B' , having an upwardly-extending arm B^2 , is also pivoted in the central recess a^3 between the projections a^4 of the plates and behind the pivotal point of the handle, which is connected to the end of the arm B^2 by the links B^3 . One of the plates a' has an extension a^5 formed upon the lower side of the projection a^4 thereon to serve as a support for the punch C, which lies on the inner side thereof between guides a^6 , while the other plate a has a recess a^7 in the projection a^4 thereon, whereby the punch is en-

tirely exposed on one side. In order to retain the punch in place between the guides a^6 , a pivoted latch C' is provided, which covers the lower part thereof when it is closed, but which has, when open, the position shown in dotted lines in Fig. 1, in order that the punch may be removed, if desired. A lifter C^2 , formed of a loop of metal, the ends of which are secured to the cam B' , extends below and concentrically about the eccentric surface thereof, while a pin b , formed upon the upper end of the punch, is engaged by the upper surface of the said loop, the head of the punch bearing upon the eccentric lower surface b' of the cam B' . By comparing Figs. 1 and 2 it will thus be seen that on depressing the handle B the punch will be forced downward by the eccentric surface b' of the cam, while on elevating the handle the loop C^2 will engage the pin b and lift the punch. A die-plate C^3 rests upon a projection a^8 of the plates a a' on their rear lower sides under the punch, and in order to facilitate the change of dies a spring C^4 , having jaws C^5 on its upper side, is secured within the base of the central recess a^3 . The jaws C^5 engage the die, and being drawn downward by the spring C^4 , to which they are attached, hold it firmly upon the upper surfaces of the projections a^8 . By lifting the spring C^4 by means of its projecting end C^6 the claws C^5 may be disengaged from the die-plate, and the latter be removed and a new one substituted.

An arm C^7 is formed on the forward face of the cam B' , and is connected by the links D with the rear end of the movable jaw D' , which is also contained within the central recess, the forward end of the jaw projecting beyond the front of the plates a a' , between which the jaw is pivoted at d . A fixed cutting-edge D^2 is attached to the base of the plates and projects forward under the forward end of the jaw D' , forming a pair of shears, the motion of which is imparted from the cam B' through the arm C^7 and links D.

An anvil E may be mounted upon the top of the plates a a' , its base e resting in the central recess a^3 , in which it may be held by pins e' . A vise F is pivoted between projections a^9 , formed on the upper forward face of the

plates $a a'$, the lower end of the vise being slotted, as at f , engaging a pin on the jaw D' , the upper end of the vise standing opposite the calk e^3 of the anvil, and by imparting an up-and-down motion to the jaw D' the vise may be given an oscillating motion, causing it to recede from or approach the calk of the anvil, and in the former position to grasp anything that may be placed between them.

10 A tire-upsetter may be substituted for the anvil, and in this case two bed-pieces G , having arc-shaped tops and cam-clips G' , are secured upon the upper surfaces of the plates $a a'$, their bases g resting within the central

15 recess a^3 , where they are held in position by pins g' , while a spring G^2 extends from the base of one of the pieces to the upper surface of the forward end of the jaw D' , to which it is attached. The spring is of such a length

20 as to tend to force the forward end of the jaw downward, and if a tire is now placed in the tire-upsetter, as shown, and the handle B raised, the forward end of the jaw D' will also be raised, compressing the spring G^2 . If, now,

25 the handle be released, the spring will force the forward end of the jaw downward, causing the upper end of the vise F to give a sharp quick blow to the tire.

Having thus described my invention, what

30 I claim is—

1. The combination, with a suitable frame,

of a punch, a cam bearing on the head of the said punch and having an arm thereon, a movable jaw pivoted to the said frame, and a link connecting the movable jaw with the said arm, as described. 35

2. The combination, with a cam, of guides and a punch working in the said guides and bearing upon the cam, as described.

3. The combination, with a punch, of a die, a support on which the die rests, claws engaging the said die, and a spring attached to the said claws and holding the die upon its supports, as described. 40

4. The combination, with a pivoted jaw, of a tire-upsetter, a vise pivoted at or near its center, the lower part of which engages the said jaw, and a spring tending to force the jaw downward, together with means for raising the said jaw, as described. 50

5. A frame consisting of two plates separated by blocks, in combination with a punch, a pivoted jaw, a vise, and means for imparting motion to the said punch, pivoted jaw, and vise, as described. 55

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

HIRAM BEMENT SEVEY.

Witnesses:

CHARLES DOLLOFF,
JOHN T. ROGERS.