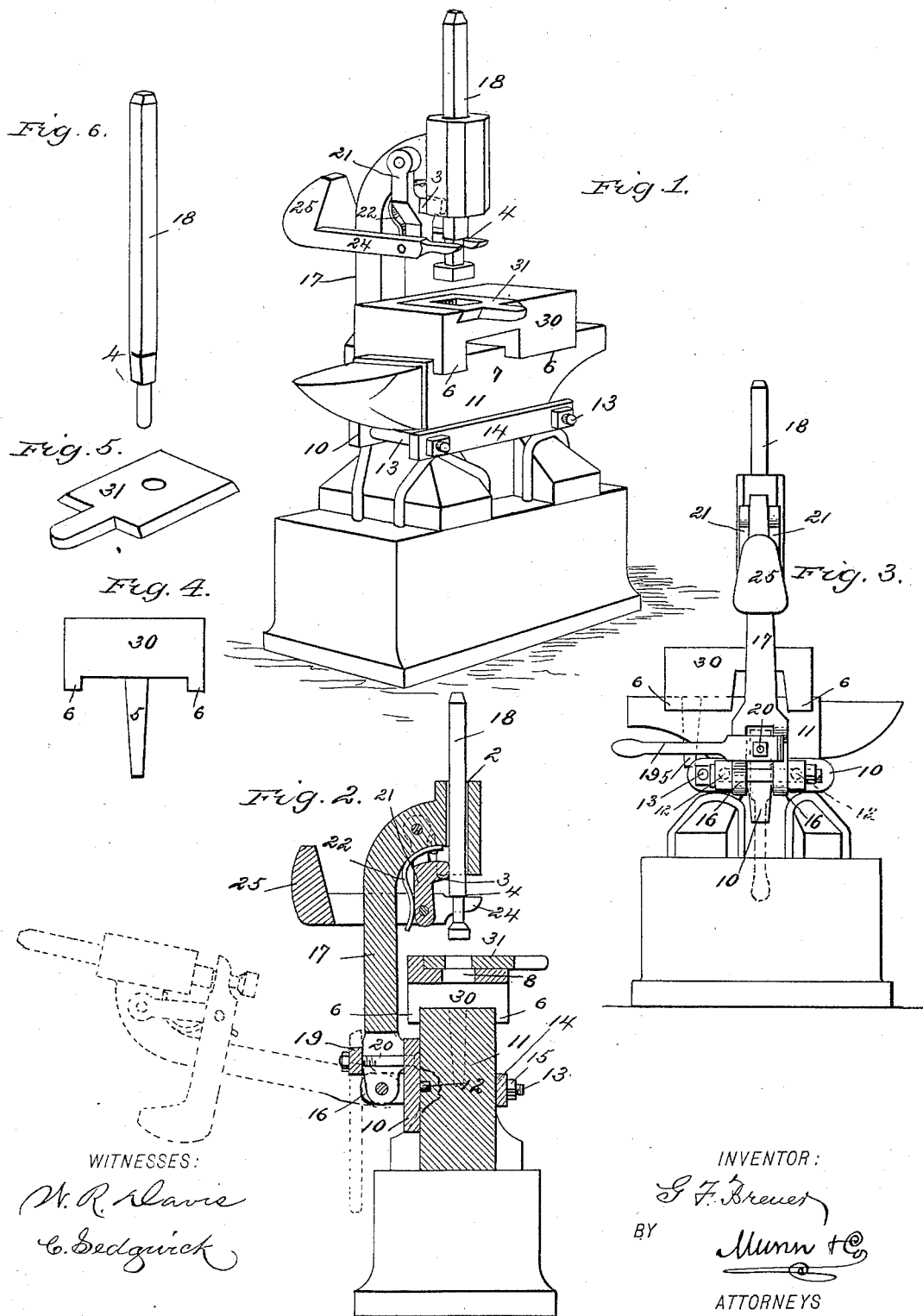


(No Model.)

G. F. BREUER.
PUNCHING MACHINE.

No. 423,119.

Patented Mar. 11, 1890.



UNITED STATES PATENT OFFICE.

GEORGE FREDRICK BREUER, OF HUMESTON, IOWA.

PUNCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 423,119, dated March 11, 1890.

Application filed November 26, 1889. Serial No. 331,663. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FREDRICK BREUER, of Humeston, in the county of Wayne and State of Iowa, have invented a new and Improved Punching-Machine, of which the following is a full, clear, and exact description.

This invention relates to punching-machines, the object of the invention being to provide an attachment which may be readily connected to the ordinary form of blacksmith's anvil, the machine being designed for use in connection with hot or cold iron, and being so arranged that it may be adjusted so that the parts will not interfere with the use of the anvil for ordinary purposes.

To the ends above named the invention consists of certain novel constructions, arrangements, and combinations of elements, which will be hereinafter fully explained, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of an anvil representing the same as it appears when provided with my improvement. Fig. 2 is a central cross-sectional view of the same. Fig. 3 is a rear view thereof. Fig. 4 is an end view of the bed-plate. Fig. 5 is a perspective view of one of the dies, and Fig. 6 is a perspective view of one of the punches.

In the drawings, 10 represents the back plate, which is formed with a broad surface adapted to fit against the back of an anvil 11, this plate being provided with two forwardly-extending projections 12, which fit in corresponding recesses formed in the anvil. Near the ends of the plate there are apertures adapted to receive clamping-bolts 13, which bolts pass through a bar 14 and are engaged by nuts 15, the arrangement being such that by turning home the nuts the plate 10 will be securely clamped to the anvil. The plate 10 is also formed with two rearwardly-projecting lugs or ears 16, between which lugs or ears there is pivotally mounted a standard 17, the upper end of said standard being formed with an aperture 2, adapted to receive the shank of a punch 18.

In order that the standard 17 may be locked

in the position in which it is shown in full lines in Figs. 1, 2, and 3, I provide a locking-lever 19, which is supported by a bolt 20, that extends outward from the plate 10 through a slot or opening formed at the lower end of the standard 17, the arrangement being such that by turning the locking-lever to a horizontal position, as represented in Fig. 3, the standard will be locked to place; but if the lever be turned to a vertical position, as represented in dotted lines in Figs. 2 and 3, the standard and the parts carried thereby may be folded back to the position indicated by dotted lines in Fig. 2, so as to be out of the way and permit the anvil after the bed-plate has been removed to be used for the ordinary purposes. The standard 17 supports a link 21, such link being pivotally connected to the standard and normally held in the position shown in Fig. 2 by a spring 22, the arrangement being such that a forwardly-extending projection 3, that is formed upon the link, will bear against the punch-shank and act to hold such shank in any position to which it may be adjusted.

To the lower end of the link 22, I pivotally connect arms 24, that carry a head 25, such arms extending forward to bear against the under side of an offset 4, that is formed upon the punch, the arrangement being such that by tapping the head 25 with a hammer or other proper implement the forward ends of the arms 24 will be raised and the punch moved upward.

Upon the anvil 11, I place a bed-plate 30, which bed-plate is formed with a downwardly-extending projection 5, adapted to fit within the square aperture of the anvil, and with flanges 6, adapted to fit against the side faces of the anvil, the arrangement being such that when the bed-plate is adjusted, as represented in Fig. 1, it will be held in the desired position. The central portion of the bed-plate is cut away, as shown at 7, and directly above this cut-away portion I form an undercut recess that is adapted to receive a die 31, there being an aperture 8 in the bed-plate directly beneath the die-aperture.

In the first three figures of the drawings I illustrate a construction wherein the punch-head is of greater diameter than the punch-shank, and in this case it would be understood that the punch could only be inserted

by moving the standard back to the position in which it is shown in dotted lines in Fig. 2. In Figs. 5 and 6, however, I show a punch and die wherein the punch-head is smaller than the punch-shank. With this construction it will of course be understood that the punch could be slipped in through the standard-aperture 2 when the parts were in the position in which they are shown in Fig. 1.

In use the material to be operated upon is placed upon the die and the operator taps the punch with his hammer. The punch is freed from the work by tapping the head 25.

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

1. An attachment for anvils, comprising a pivoted standard provided with an aperture to receive a punch, a clamping device for securing the standard to an anvil, and a bed-plate adapted to fit upon the anvil, substantially as described.

2. The combination, with a pivoted punch-carrying standard and a clamping device for securing the standard to an anvil, of a locking-lever pivoted to the said clamping device and engaging the said pivoted standard, substantially as herein shown and described.

3. The combination, with a standard arranged for connection with an anvil and apertured to receive a punch-shank, of a link pivotally connected to the standard and formed with a forwardly-extending projection, a spring arranged in connection with the link, head-carrying arms pivotally connected to said link, said arms being arranged to engage an offset formed upon the punch-shank, a bed-plate, and a die carried thereby, said bed-plate being arranged in connection with an anvil, substantially as described.

4. The combination, with a plate 10, arranged for connection with an anvil, of a standard pivotally connected to the plate, a locking-lever, a punch carried by the standard, a link pivotally connected to the standard, arms pivotally connected to the link and arranged to engage an offset formed upon the punch, a head carried by the arms, a bed-plate, and a die carried thereby, said bed-plate being arranged for connection with an anvil, substantially as described.

GEORGE FREDRICK BREUER.

Witnesses:

C. H. BREUER,
M. L. BREUER.