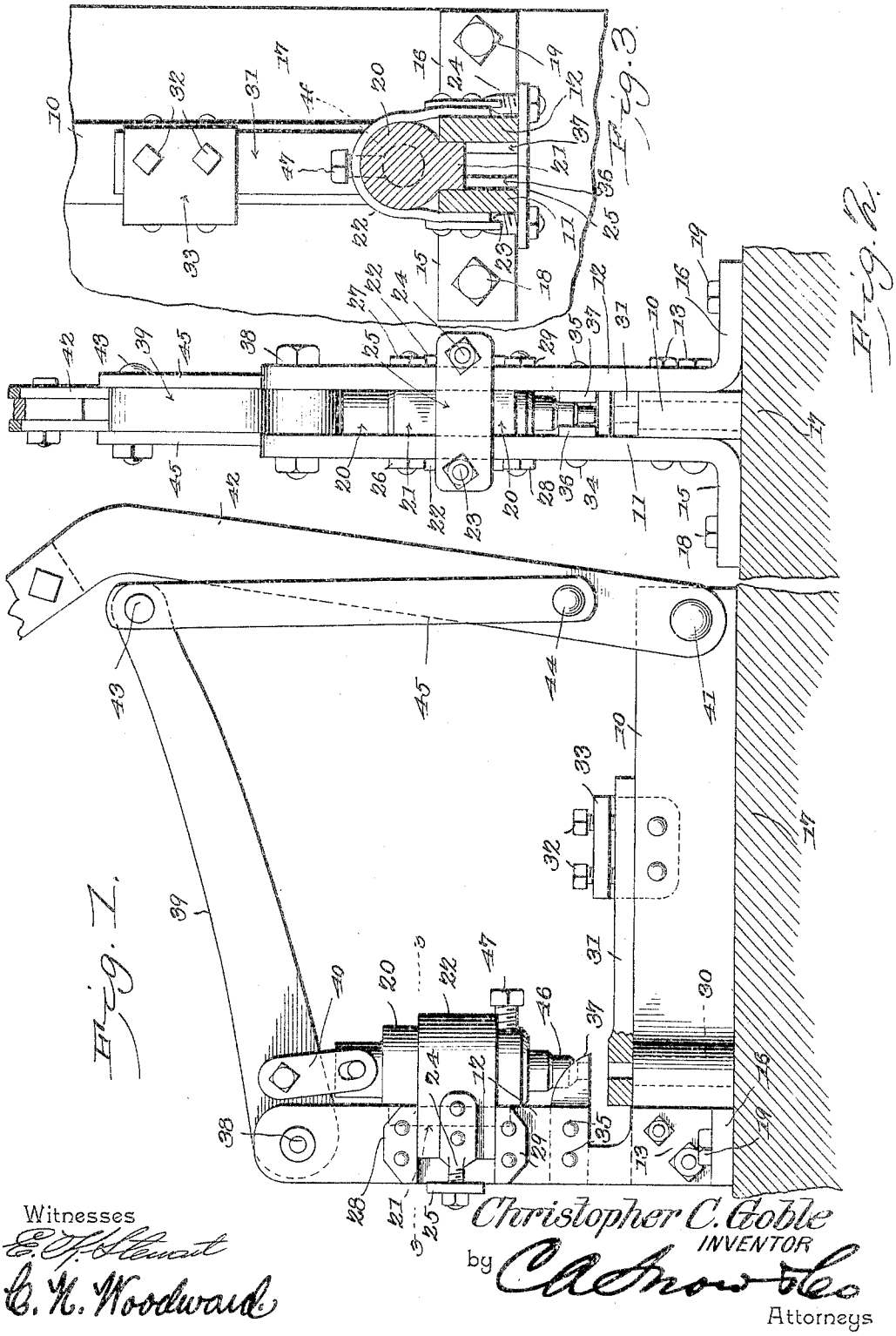
No. 794,095. PATENTED JULY 4, 1905.

C. C. GOBLE.

PUNCH.

APPLICATION FILED NOV. 7, 1904.



Witnesses

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No. 794,095. Patented July 4, 1905.

UNITED STATES PATENT OFFICE.

CHRISTOPHER C. GOBLE, OF BYRON, NEBRASKA.

PUNCH.

SPECIFICATION forming part of Letters Patent No. 794,095, dated July 4, 1905.

Application filed November 7, 1904. Serial No. 231,823.

To all whom it may concern:

Be it known that I, CHRISTOPHER C. GOBLE, a citizen of the United States, residing at Byron, in the county of Thayer and State of Nebraska, have invented a new and useful Punch, of which the following is a specification.

This invention relates to metal-punching machines, and has for its object to improve and simplify the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings thus employed, Figure 1 is a front elevation. Fig. 2 is an end elevation. Fig. 3 is a transverse section, enlarged, on the line 3 3 of Fig. 1.

The improved device comprises a base member 10, having spaced standards 11 12 connected thereto at one end, as by bolts 13, and the standards provided with oppositely-extended feet 15 16, by which the device is secured to a work-bench or other support, as by bolts 18 19. Mounted for vertical movement and bearing against the inner edges of the standard members 11 12 is a stock or plunger 20, having a longitudinal rib 21, extending between the standard members and guided thereby. The plunger is further supported by a U-shaped clip 22, embracing the same and extending transversely of the standard members and secured in place by threaded arms 23 24 and transverse clip-bar 25, the clip being further supported by spaced stops 26 27 28 29, riveted to the standard members. By this means the plunger is supported for vertical movement upon the standard and is provided with a longitudinal cavity in which the punch 46 is detachably supported by a set-screw 47.

The base-frame 10 is provided with an aperture 30 in alinement with the punch to receive the punchings, and attached adjustably to the base-frame is a die member 31, supported in position by set-screws 32, operating through a bracket 33 on the base-frame. The bracket is open on one side to provide for the ready insertion and removal of the die, which may be thus readily changed to correspond to the punch when the latter is changed. Attached to the standard members 11 12, as by rivets 34 35, are stop-lugs 36 37, spaced from the upper face of the die a distance equal to the thickness of the heaviest metal which the punch is to operate on to form a stop to the same when the punch is withdrawn after its action.

Pivoted at 38 between the upper ends of the standard members is a lever-arm 39, connected by links 40 to the plunger 20. Pivoted at 41 to the base 10 is an operating-lever 42, the latter connected in turn, respectively, at 43 44 to the lever-arm 39 by links 45. By this arrangement of levers it is obvious that the downward movement of the power-lever 42 will impart a very strong downward movement upon the plunger and cause the punch to perforate whatever metal may be placed beneath it upon the die member, and then at the return stroke the punch will be withdrawn and the punched material stripped therefrom by the resistance offered by the stop members 36 37.

The plunger 20 being firmly supported and guided by the standard members and straps 22, coacting with the guiding-rib 21, together with the supporting-stops 26, 27, 28, and 29, combine to produce a very simple, strong, and durable coupling means, which not only supports and guides the plunger, but likewise provides for the requisite adjustments between the parts.

The device may be adapted to any size of punch, but is more particularly designed for

the smaller sizes for use in small shops or upon the farm.

Having thus described the invention, what is claimed is—

1. In a punching-machine, a base member having a die adjustably connected thereto, a standard comprising a pair of spaced members connected to said base at one end and provided with laterally-extending guide-cleats, a plunger movable longitudinally of said standard and having a rib projecting between said spaced members and carrying a punch for operation in said die, a strap having an intermediate portion thereof embracing said standard and plunger, and its opposite ends engaging the guiding-cleats and terminating in threaded arms, a clamping-bar bearing against the rear of the standard and provided with perforations for the reception of the terminal arms, nuts engaging the threads on said arms, and means for operating said plunger and the punch carried thereby.

2. In a punching-machine, a base member having a die adjustably connected thereto, a standard comprising a pair of spaced members secured to the base and having their ends bent to form laterally-extending supporting-feet, a plunger movable longitudinally of said standard and having a rib projecting between said spaced members and carrying a punch for operation in said die, a pair of spaced laterally-extending stop-lugs carried by the standard for engagement with material to be operated upon, means for guiding the plunger, and means for operating said plunger and the punch carried thereby.

3. In a punching-machine, a base having an aperture extending entirely through the same for the reception of the punchings, a bracket secured to the base and having its free end extended over said base and spaced from the same, a removable die disposed above the opening in the base, set-screws carried by the bracket and adapted to engage the die for securing the latter in position, a standard secured to the base, a plunger movable longitudinally of the standard and carrying a punch for operating in said die, a pair of spaced laterally-extending stop-lugs secured to the standard for engagement with the material to be operated upon, and means for operating the plunger and punch carried thereby.

4. In a punching-machine, a base having an aperture extending entirely through the same for the reception of the punchings, a bracket secured to the base and having its free end extended over said base and spaced from the same, a removable die disposed above the opening in the base, set-screws carried by the bracket and adapted to engage the die for securing the latter in position, a standard secured to the base, a plunger movable longitudinally of the standard and carrying a punch for operating in said die, a pair of spaced laterally-extending stop-lugs secured to the standard for engagement with the material to be operated upon, and means for operating the plunger and punch carried thereby.

5. In a punching-machine, a base member having a die adjustably connected thereto, a standard comprising a pair of spaced members connected to the base at one end and provided with laterally-extending guide-cleats, a plunger movable longitudinally of said standard and having a rib projecting between said spaced members and carrying a punch for operation in said die, a strap having an intermediate portion thereof embracing said spaced members and plunger and its opposite ends engaging the guiding-cleats and terminating in threaded arms, a clamp-bar bearing against the rear of the standard, and provided with perforations for the reception of the terminal arms, nuts engaging the threads on said arms, a pair of spaced laterally-extending stop-lugs carried by the standard for engagement with the material to be operated upon, an arm having one end thereof pivoted between the spaced members and coupled by spaced straps to said plunger, an operating-lever pivoted to the base, and spaced links forming a pivotal connection between said arm and operating-lever.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHRISTOPHER C. GOBLE.

Witnesses:
A. A. MILLER,
D. WHITSON.