

(No Model.)

C. HOOD.
PUNCH.

No. 548,547.

Patented Oct. 22, 1895.

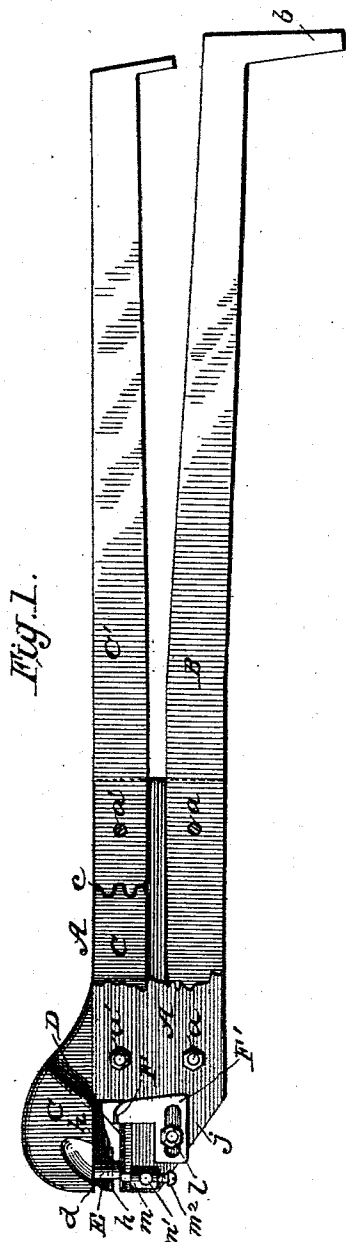


Fig. 3.

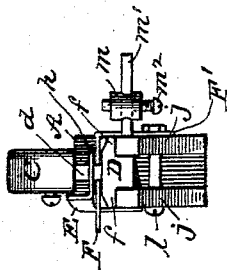
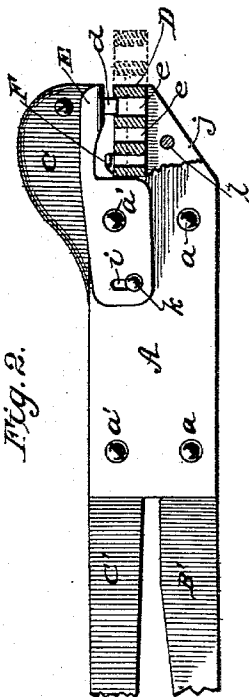


Fig. 2.



WITNESSES:

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CHARLES HOOD, OF PUYALLUP, WASHINGTON.

PUNCH.

SPECIFICATION forming part of Letters Patent No. 548,547, dated October 22, 1895.

Application filed February 18, 1895. Serial No. 533,872. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HOOD, of Puyallup, in the county of Pierce and State of Washington, have invented a new and useful Improvement in Punches, of which the following is a specification.

My invention is in the nature of an improved punch designed chiefly for sheet metal and to be fitted in the bench-plate of a tin-shop after the manner of shears and to be operated by hand.

It consists in the peculiar construction and arrangement of the parts, which I will now proceed to more fully describe with reference to the drawings, in which—

Figure 1 is a side elevation partly in section. Fig. 2 is a partial side view from the opposite side, also partly in section; and Fig. 3 is an end view.

In the drawings, A A represent the main frame of the punch, consisting of two flat plates fastened together by two bolts *a a*, which clamp these plates together upon opposite sides of the lower handle B, which at its end has a downwardly-projecting toe *b*, that fits in a hole in the bench-plate after the manner of shears.

Between the upper front part of the plates A A is pivoted upon a fulcrum-bolt *a'* the punch-lever C, and upon another fulcrum-bolt *a'* the handle-lever C'. The adjacent ends of the levers C C' are geared together by segment-teeth *c*, so that when the handle-lever C' is forced downwardly the toothed end of punch-lever C is raised, and the outer end, carrying the punching-die *d*, is forced downwardly with its die.

D is a female die-plate having several holes *e* of different sizes to receive the punching-die *d*, which is also made in different sizes and detachably fitted in the lever C. This die-plate D is T-shaped in cross-section, as shown in Fig. 3, and its side flanges *f f* overlap the jaws *j j*, formed on the front end of the plates A A. This die-plate is adjusted outwardly, as shown in dotted lines in Fig. 2, to bring any one of its holes beneath the punching-die and is fixed in such position by a clamping-bolt *l* passing through both jaws and binding the die-plate D between them.

E is a clearing-plate designed to force the

sheet metal off the die *d* after it has passed through the metal sheet and punched the hole. This clearing-plate has forked ends *h h*, that lie upon opposite sides of the die *d*, and its body portion lies flat against the side of punch-frame, being hung on the fulcrum-bolt *a'* of lever C, (see Fig. 2,) and having at its rear end a slot *i* and set-screw *k*, by which the position of the clearing-plate in reference to the die may be changed according to the thickness of the sheet metal being punched.

F, Figs. 1 and 2, is a gage consisting of a flat bar lying transversely across the jaws *j j* and above the die-plate D, and intended to limit the distance to which the sheet metal shall be inserted in punching holes in the same. This gage is fixed to a plate F', Fig. 1, which lies against the side of the jaw *j* on the opposite side from the clearing-plate, and is slotted and clamped firmly by the same bolt *l* which clamps the die-plate D. Upon the same side of the jaw *j* with gage-plate F' is a laterally-projecting stem *m'*, upon which is mounted an adjustable gage *m*, held in place on the same by a set-screw *m'*, which gage *m* regulates the distance between the holes as they are punched in the sheet metal.

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

1. A bench punch consisting of two parallel plates A A, and a lever handle B arranged between the plates parallel therewith and between their lower edges and bolted rigidly together, the said plates A A being extended in front to form jaws *j j*, the female die D held thereupon and adjustable longitudinally between said jaws, the punch lever C carrying a die punch at its front end and fulcrumed between the plates, and the handle lever C' also fulcrumed between the said plates, and connected to the punch lever by intermeshing teeth at a point between said plates A A substantially as and for the purpose described.

2. A bench punch consisting of two parallel plates A A, and a lever handle B arranged between the plates parallel therewith and between their lower edges, and bolted rigidly together, the said plates A A being extended in front to form jaws *j j*, the adjustable female die D held thereupon and adjustable longi-

itudinally between *j j*, the gage stem *m'* with
gage *m* projecting laterally from one of the
jaws, the punch lever *C* carrying a die punch
at its front end and fulcrumed between the
5 plates, and the handle lever *C'* also fulcrumed
between said plates and connected to the
punch lever by intermeshing teeth at a point
between said plates *A A* substantially as and
for the purpose described.

- 10 3. The combination of the side plates *A A*
having jaws *j j* longitudinally adjustable die
plate *D* arranged between the jaws the gage
bar arranged transversely across the female
die and having a flat slotted plate *F'* lying
15 against the side of the jaw, and a binding

screw or bolt for holding the same substan-
tially as and for the purpose described.

4. The combination of the side plates *A A*
having jaws *j j* and longitudinally adjustable
female die plate *D* arranged between said 20
jaws the punch lever *C* with punching die,
the clearing plate *E* hung upon the fulcrum
bolt of the punch lever, and having a slot *i*
and set screw *k* for adjusting it substantially
as and for the purpose described.

CHARLES HOOD.

Witnesses:

GEO. H. EDGERTON,
A. G. PROVINE.