(No Model.)

L. CHESLEY.

SHEARING AND PUNCHING MACHINE.

No. 263,483. Patented Aug. 29, 1882.

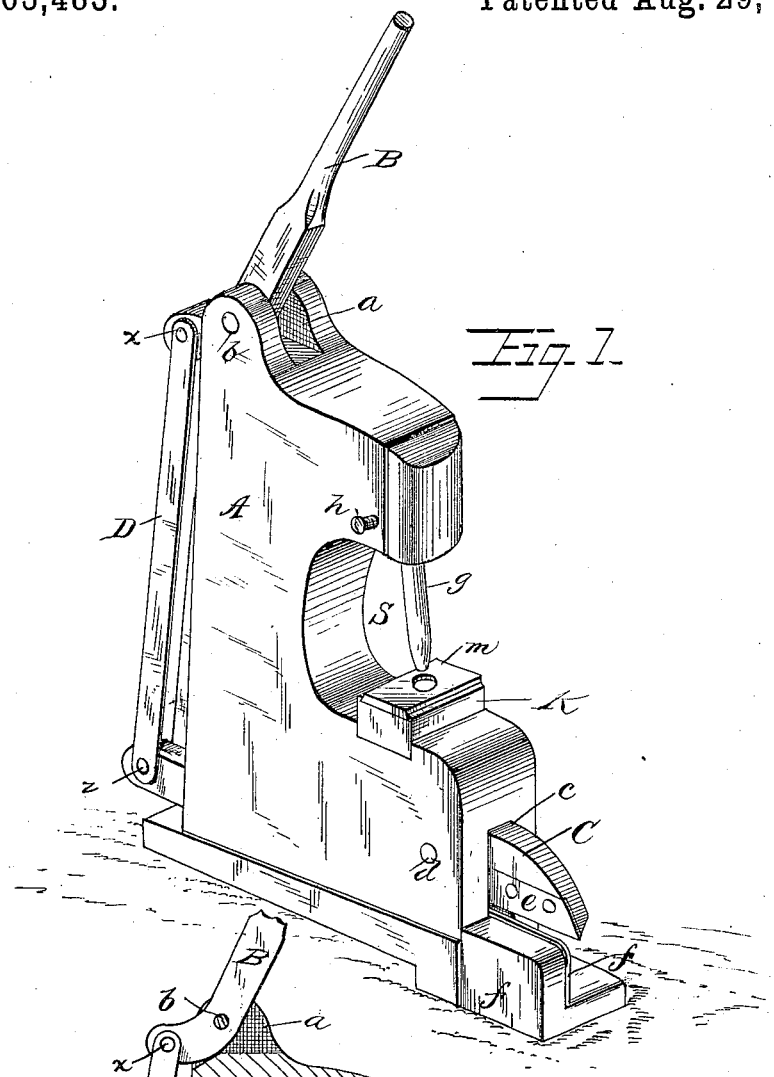

Fig. 1.

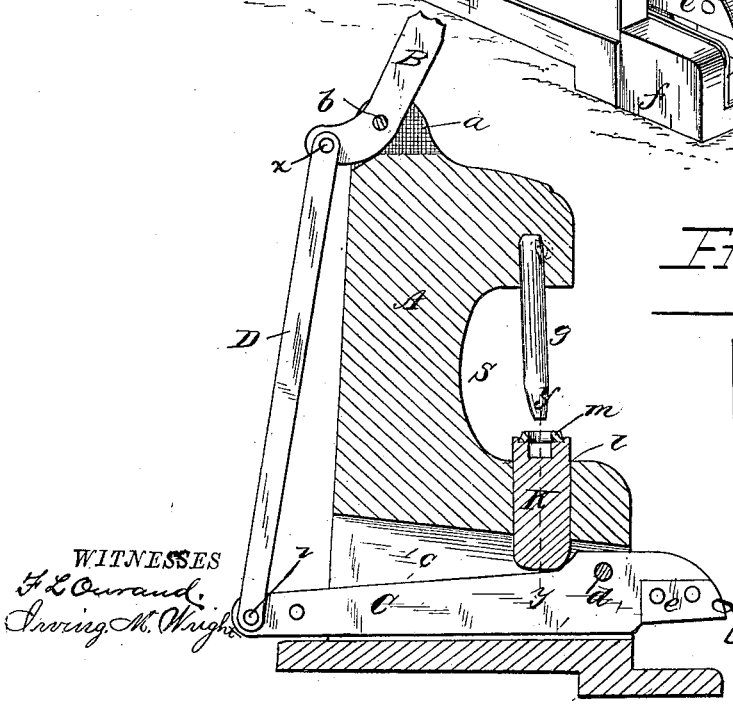

Fig. 2.

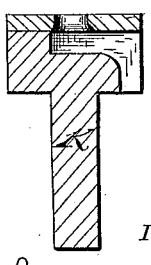

Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

LORENZO CHESLEY, OF MOUNT VERNON, MAINE.

SHEARING AND PUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 263,483, dated August 29, 1882.

Application filed November 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, LORENZO CHESLEY, residing in Mount Vernon, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Mechanical Devices for Cutting and Punching Iron; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The nature of my invention has reference to certain new and useful improvements in mechanical apparatus for shearing and punching metallic plates and bars.

The object of my said invention is to furnish a combined device especially designed for the manipulation of metallic bars of light weights and thicknesses, such a one as will prove to be a simple, cheap, and convenient bench-tool for the use of carriage-ironers in cutting off and puncturing tires, &c., and also will be of great practical value to blacksmiths and other classes of mechanics when doing light iron-work.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

Figure 1 shows a perspective view of my invention. Fig. 2 is a vertical section. Fig. 3 is a vertical central section of the die-post on line *y y* of Fig. 2.

Similar letters of reference indicate corresponding parts.

In the drawings which form a part of this specification, the letter A represents the main supporting-stand, of such suitable dimensions and strength that all the different operating parts may be securely attached thereto. This stand is designed to be secured to a bench or block in any convenient manner. The top of A is cut out or slotted, as shown at *a*. Passing between the two sides of the slot *a* is a pivot-pin, *b*, to which is pivoted a hand-lever, B. The stand A is further cut out or slotted near the bottom, as indicated by *c*. Located in this slot is a shearing-lever, C, which is pivoted at the point *d*.

e is a beveled cutting-blade rigidly attached to C. *f* is another beveled cutting-blade attached to the base of the supporting-stand. The two blades *e* and *f* fit together and work by each other like the blades of ordinary shears.

The hand-lever B and shearing-lever C are joined together by the connecting-rods D D, pivoted to B at the point *x*, and to C at the point *z*. By this method of connection the shearing-lever C can be turned on its pivot-pin *d* by raising and lowering the hand-lever B, and any article placed between the beveled cutting-edges of *e* and *f* will be sheared or cut off.

The drawings further show that the supporting-stand has a recess cut in one edge. Let the letter S represent this recess. There is a perforation or hole in the top side of S, into which fits a punch, *g*.

h is a thumb-screw passing into the side of A and pressing against the shank of the punch to hold it firmly in place.

At the bottom of the recess is seen the die-post *k*.

l is a slot cut from the recess S down through the supporting-stand to the slot *c*. This slot is designed to carry the die-post *k*, the lower part of which rests on the shearing-lever C. Thus as the shearing-lever is turned on its pivot-pin *d* the die-post will be raised and lowered. The top end or head of *k* is grooved to receive a perforated die-plate, *m*. When the die-plate is properly placed the perforation comes directly under the punch *g*.

The operation of my invention will be readily understood. When a bar of iron is to be cut off the hand-lever B is raised, as indicated by the dotted outlining. As the rear of the bar is raised the forward end is depressed, and the connecting-rods D D will force the rear end of C downward. As the shearing-lever C is pivoted at *d*, it follows that the end beyond where the cutting-blade *e* is attached will be lifted up and away from the cutting-blade *f*. The bar of iron is then inserted between the separated cutting-blades. If the hand-lever B is now pressed downward, the several connected parts will be restored to their original positions, and the metallic bar placed between *e* and *f* will be sheared off. To use the device as a punch, exactly the same operations take place. The lifting of the hand-lever lowers the shearing-bar C and the die-post *k* drops down with it. The metallic bar to be punctured is then placed flatwise upon the die-plate *m*.

Downward pressure being applied to the hand-lever B, the shearing-bar is raised, and the die-post *k* is consequently lifted up, pressing the metallic bar against the end of the punch *g* with sufficient force to drive the punch through the bar.

By the above method of construction and operation it will be perceived that my said invention furnishes a mechanical device or bench-tool for use in the shops well designed to become a highly popular article for common use among mechanics, because of its simple construction, easy operation, and inexpensive price.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a device organized as and for the purposes described, the combination of the following elements, namely: the main stand A, having slots *a* and *c*, located as described, the lever B in the slot *a* and pivoting on the pin *b*, the bars D D, connecting the end of said lever B with the end of the shearing-lever C, said lever C located in the slot *c* and pivoting on the pin *d*, the cutting-blade *e*, attached to the lever C, and the cutting-blade *f*, rigidly attached to the base part of said supporting-stand A, the whole combination arranged for the operation of cutting off a metal bar, substantially as described.

2. In combination with the main supporting-stand A, slotted at *a* and *c* and *l*, the pivoted lever B, connecting-rods D D, shearing-lever C, die-post *k*, provided with the perforated plate *m*, and punch *g*, substantially as and for the purposes herein set forth.

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

LORENZO CHESLEY.

Witnesses:

MARIANNE THING,

FRED. H. SHATTUCK.