(No Model.)

J. JACOBS.

APPARATUS FOR SHAPING AND HOLDING METAL WHILE BEING TEMPERED.

No. 256,898. Patented Apr. 25, 1882.

Fig. 1

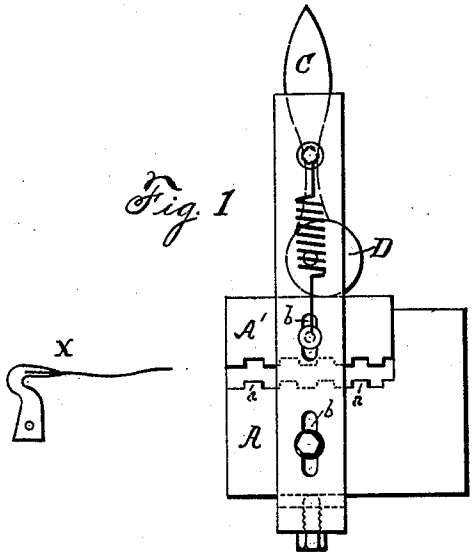


Fig. 2.

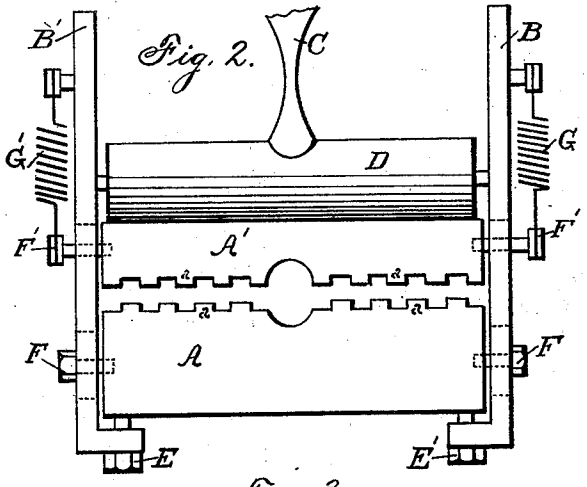
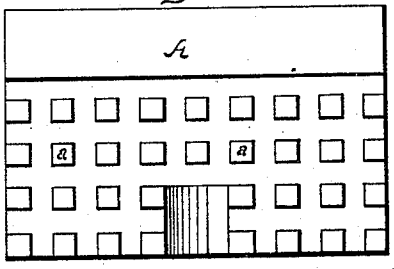


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN JACOBS, OF SANDUSKY, OHIO, ASSIGNOR OF ONE-HALF TO HENRY JACOBS, OF SAME PLACE.

APPARATUS FOR SHAPING AND HOLDING METAL WHILE BEING TEMPERED.

SPECIFICATION forming part of Letters Patent No. 256,898, dated April 25, 1882.

Application filed December 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN JACOBS, of Sandusky, county of Erie, State of Ohio, have invented a new and useful Improvement in Apparatus for Shaping Metal and Holding it while being Tempered; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists of the combinations of devices and appliances hereinafter described, and more particularly pointed out in the claims.

It is the object of my invention to produce a device for shaping metallic plates or blades—such as hoe-blades, &c.—while they are hot, and for holding them in their properly-shaped condition while they are undergoing the process of tempering or hardening in oil or other liquid used for that purpose.

In the accompanying drawings, Figure 1 is a view in side elevation of an apparatus embodying my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a separate view of the inner surface of one of the jaws.

In the drawings, A A′ represent the jaws or press-plates, having their inner surfaces grooved, serrated, or nodulated, thereby forming a series of outstanding lands, *a*, constituting their opposing surfaces, so arranged that when the parts are clamped together the lands upon one jaw preferably come opposite the recesses or grooves on the other jaw and allow the free passage of the oil or other tempering-liquid over the surface, both upper and under, of the blade or plate that is being shaped and tempered.

B B′ are side straps for holding the parts in position, and having slots *b*, which allow a free movement of the clamp A′.

C is an eccentric clamping-lever for exerting pressure upon the jaws by means of the shaft D.

E E′ are gage-screws to regulate the adjustment of the jaws to plates or blades of varying thickness. The jaw A is secured firmly to the side straps by the bolts F on each side, and the jaw A′ is movably secured by the bolts F′ passing through the slots *b*.

G G′ are ordinary coil-springs, which act to open the jaws of the press when the lever C is released.

The operation of the device will now be understood. The blade or plate to be tempered, X, is heated to the required temperature, then clamped between the jaws, which impart the desired shape to it. The apparatus, with the plate between its jaws, is then plunged into a vat of oil or other liquid used for tempering, and the ridges or nodules on the jaws, as aforesaid, are in such order that the oil is allowed to come in contact with the parts of the blade to be tempered. In practice I prefer to make these raised portions in the form of squares, though the form is not essential to the invention; and I also prefer to make them about one-quarter of an inch wide, and also raised about one-quarter of an inch above the surface of the jaw; but circumstances may vary these conditions.

The device is fixed upon an iron or other metallic frame provided with a hinge or joint of the usual construction, so arranged as to render the operation of dipping it into the vat of oil or other liquid an easy one.

I would have it understood that I do not limit myself to a device for simply straightening or flattening steel or other metal, for it is apparent that the jaws or clamps could be curved or dished, and thus give this latter shape or any other desired shape to the metal plate or blade.

I am aware that it is not new to construct a metal-shaping apparatus with dies for permitting access of a liquid to both sides of a heated plate under pressure between said dies, and I do not claim such an apparatus, broadly.

What I claim is—

1. The combination, with the adjustable stationary nodulated die A, of the movable nodulated upper die, A′, the eccentric roller D, provided with a handle and arranged to force said upper die toward the lower die, and the springs arranged to retract said upper die, substantially as described.

2. The combination of the upper and lower nodulated dies, the straps or standards B B′, provided with the slots *b* and inwardly-projecting lower ends, the bolts F, securing the lower die, the screws E E′ for supporting and adjusting the same, the bolts F′, moving loosely in the upper slots and secured to the upper die, the eccentric roller D, bearing upon the upper die and provided with means for operating the same, and the springs G G′ for retracting said upper die, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN JACOBS.

Witnesses:

ARTHUR PHINNEY,

F. A. POMEROY.