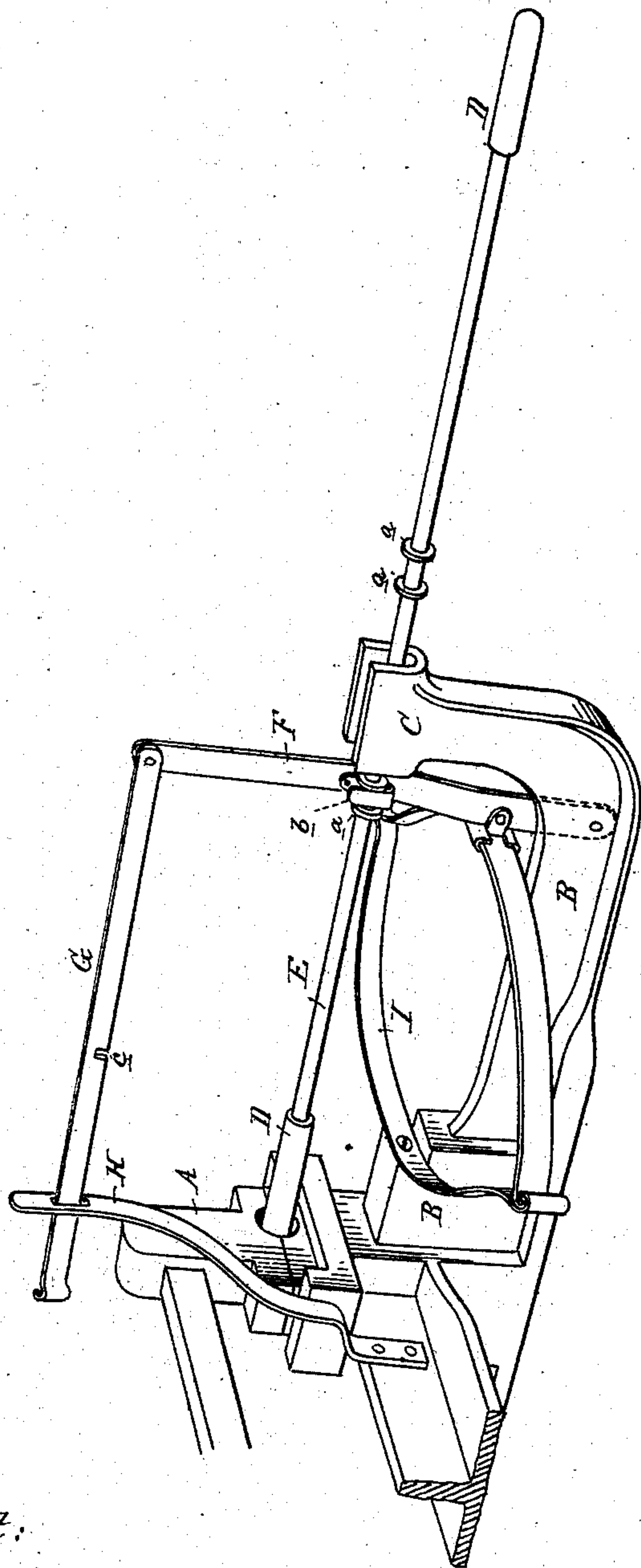


(No Model.)

T. H. ROBERTS.
TUBE WELDING MACHINE.

No. 284,329.

Patented Sept. 4, 1883.



Attest:

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UNITED STATES PATENT OFFICE.

THOMAS H. ROBERTS, OF PORT HURON, MICHIGAN.

TUBE-WELDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 284,329, dated September 4, 1883.

Application filed December 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. ROBERTS, of Port Huron, in the county of St. Clair and State of Michigan, have invented new and useful Improvements in Tube-Welding Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

This invention relates to certain new and useful improvements in tube-welding machines, and is especially designed as an improvement upon the device patented to me in the Patent No. 211,589, dated January 21, 1879.

My invention especially consists in the mandrel attachment to be used in connection with power-hammers for the purpose of welding metallic tubes, by means of which such mandrel is more conveniently operated, as more fully hereinafter described.

In the accompanying drawing, which forms a part of this specification, a perspective view of my improvement is shown in connection with the hammers.

A represents the power-hammer adapted for tube-welding, and made of any of the usual constructions for that purpose. Secured to the bed of such hammer is the projecting arm B, terminating in a vertical arm and guide, C.

D are the mandrels, one of which may be attached to either end of the mandrel-spindle E, and upon this mandrel-spindle are collars *a*, which are placed with relation to each other as shown in the drawing, and between one pair of these collars the finger *b* engages.

This finger is attached to a lever, F, the lower end of which is pivotally secured to the arm B, while the upper end is pivotally secured to

the lever G, which passes through a slot in the guide H, the foot of which is secured to the bed of the hammer. The lever G is provided with a notch, *c*, to engage with the slot in the guide H.

I is a spring, interposed between the bed of the hammer and the lever F, the office of which is to withdraw the mandrel when the notch in the lever G is disengaged from the guide H.

As shown in the drawing, the mandrel-spindle is provided with a mandrel at each end and with two sets of collars, so that such mandrel-spindle may be turned end for end when desired, and rests in the guide upon the top of the arm C.

By this construction the welding-machine described in the aforesaid Letters Patent is rendered much more effective and certain in producing perfect work.

What I claim as my invention is—

1. The combination, with power-hammers and a mandrel for tube-welding, of a spring constructed to retract the mandrel when the latter is released, substantially as described.

2. In combination with power-hammers for welding metallic tubes, the levers F G and guide H, adapted to lock said mandrel in position, substantially as specified.

3. In a machine for welding metal tubes, and in combination with the power-hammers thereof, the arms B C, mandrel D, spindle E, levers F G, guide H, and spring I, the parts being arranged and operating substantially as and for the purposes set forth.

T. H. ROBERTS.

Witnesses:

H. S. SPRAGUE,
E. W. ANDREWS.