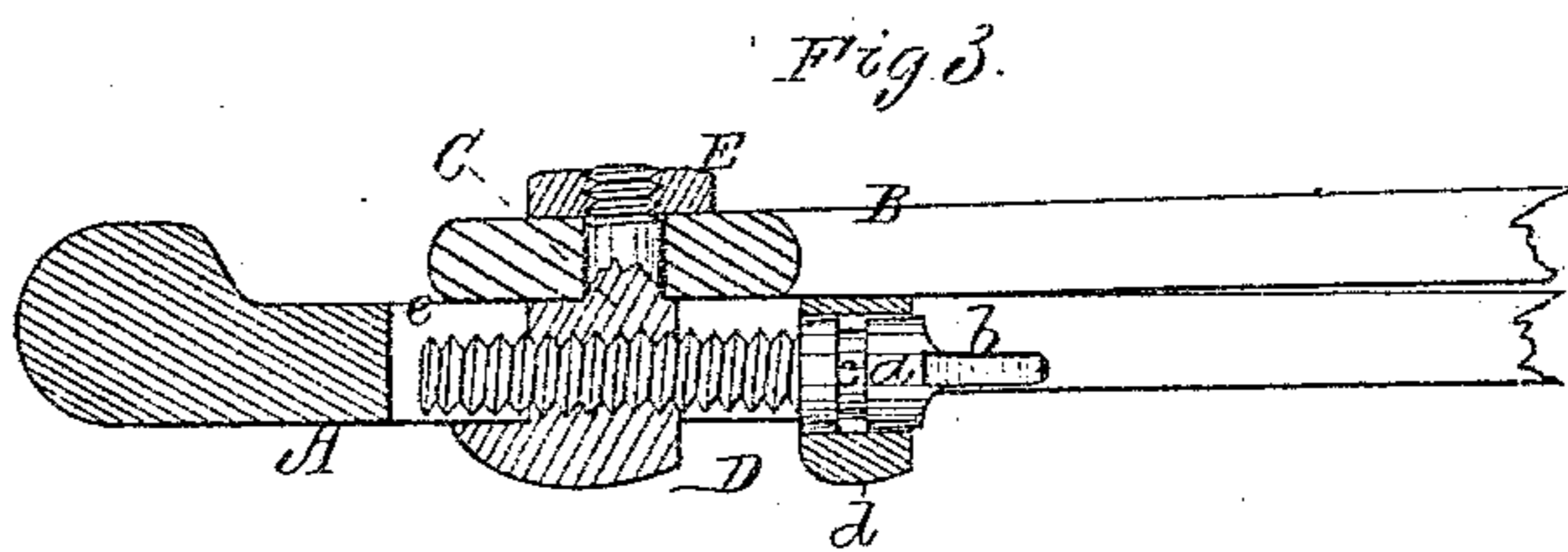
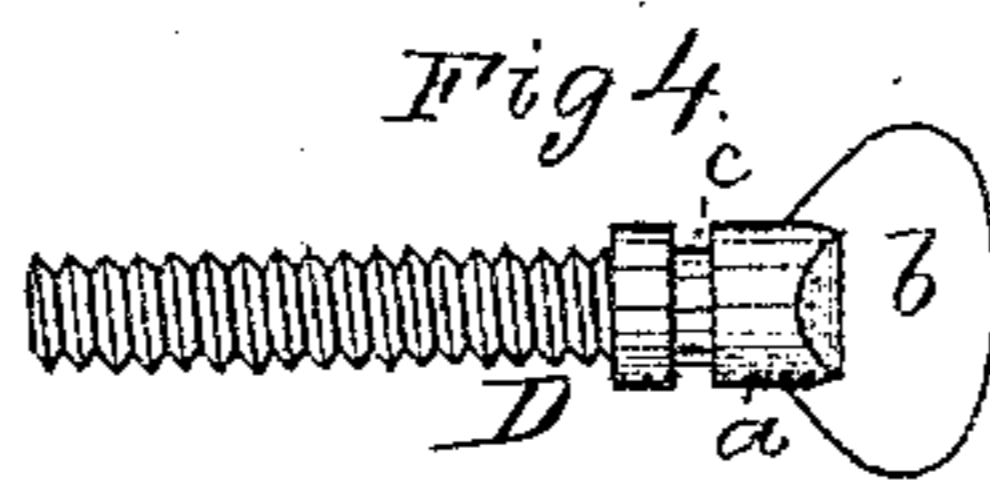
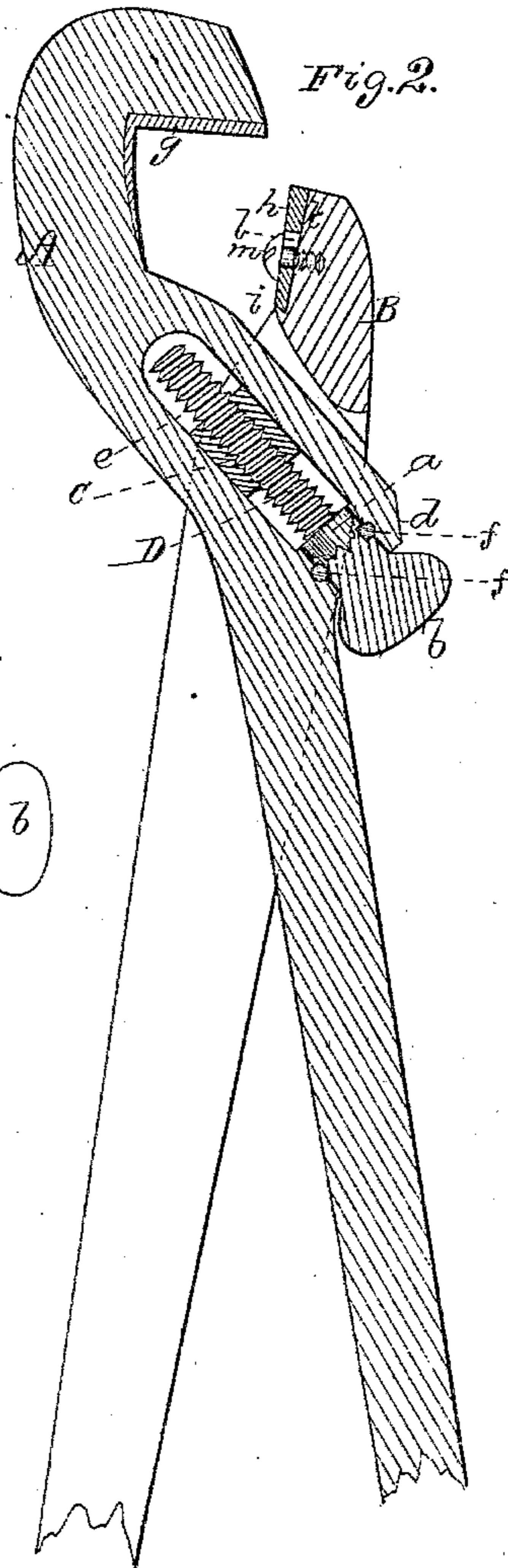
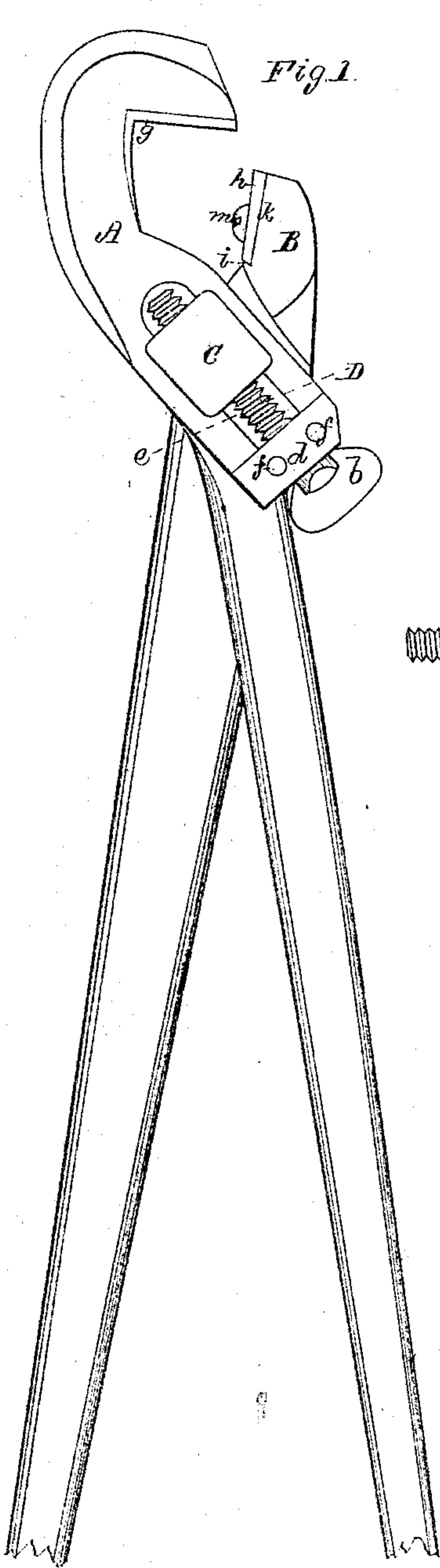


J. R. BROWN.
Pipe-Tongs.

No. 144,253.

Patented Nov. 4, 1873.



Witnesses.

S. N. Piper.

J. R. Brown.

James R. Brown.

by his attorney

R. H. Eady

UNITED STATES PATENT OFFICE.

JAMES R. BROWN, OF CAMBRIDGEPORT, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND HAZEN P. HUNTOON, OF SAME PLACE.

IMPROVEMENT IN PIPE-TONGS.

Specification forming part of Letters Patent No. 144,253, dated November 4, 1873; application filed
October 1, 1873.

To all whom it may concern:

Be it known that I, JAMES R. BROWN, of Cambridgeport, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Tongs; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a side elevation, and Fig. 2 a longitudinal section, of my improved pipe-tongs. Fig. 3 is a longitudinal section taken at right angles to that of Fig. 2, and in line of the axis of the adjusting-screw.

The nature of my invention consists in the hooked-jaw lever and adjusting-screw pivoted within and connected with such lever, and screwed into and through the fulcrum-pin, arranged within and applied to the slot of such lever, and to revolve within the toothed-jaw lever, all being as hereinafter described and represented; also, in the tooth-jaw lever, provided with a tooth-seat and bearing-shoulder, and with a separable slotted tooth, arranged therewith, and secured to the lever, as hereinafter explained.

In the pipe-tongs represented in the United States Patent No. 22,157, granted to me November 30, 1858, the adjusting-screw screws directly into a female screw made in the hooked-jaw lever at one end of its slot, and is pivoted in the fulcrum-pin. This construction causes the screw to move lengthwise in the slot with the fulcrum-pin, and, as a consequence, to protrude, at times, so much beyond the hooked-jaw lever as to be liable to be bent, or to be in the way of proper use of the tongs.

In my present improvement the adjusting-screw has no endwise motion, but only a rotary motion relatively to the hooked-jaw lever; and thus its head always maintains one position—close up to the jaw-lever—and, therefore, the liability of bending the screw, and of its head being protruded beyond the lever, so as to be in the way while the tongs may be in use, are materially lessened, if not entirely prevented.

In the drawings, A denotes the hook-jaw lever; B, the toothed-jaw lever; C, the fulcrum-pin; D, the adjusting-screw, and E its nut. The said adjusting-screw screws into and through the fulcrum-pin C, and is provided with a cylindrical pivot or neck, *a*, next to its

head *b*. This neck has a groove, *c*, (see Fig. 4, which is a separate view of the screw,) made in and around it, and the neck fits within a corresponding cylindrical bearing, *d*, made in the hooked-jaw lever, and opening out of the slot *e* thereof, all being as shown. Furthermore, two pins, *f f*, are inserted in or through the hook-jaw lever and the groove *c*; the whole being to so pivot the adjusting-screw in the said lever that said screw may be revolved on its axis therein, but be incapable of any endwise movement independently of the lever.

On revolving the screw the fulcrum-pin will be moved in the slot, and will move the toothed-jaw lever relatively to the hooked-jaw lever.

The hook-jaw may have a permanent steel facing, *g*, arranged as shown; but the tooth-jaw I provide with a separable steel tooth, *h*, and with a shoulder, *i*, and a seat, *k*, for such tooth to rest against, all being arranged as shown. This tooth, on its longitudinal section, is an acute-angled parallelogram, and the shoulder *i* stands at an acute angle with the seat *k*. The tooth is slotted lengthwise, as at *l*, and held to the jaw by a clamp-screw, *m*, which goes through the slot, all being as shown.

By the shoulder-bearing, arranged with the seat at an acute angle, and the tooth being formed to fit into such angle, such tooth becomes supported in two directions by the shoulder, so as to relieve the set-screw from strain or being cut off or broken by the tooth while in action.

In consequence of the tooth being slotted, either angular edge of it may be used upward without strain on the set-screw. When one of such edges may have become dull, the tooth may be turned so as to bring the other edge upward, thus rendering a new tooth unnecessary. When the edges may have become dulled they may be resharpened.

I claim as my improvement in pipe-tongs—

The adjusting-screw D, arranged to screw into or through the fulcrum-pin C, and pivoted in and connected with the hooked-jaw lever A, all substantially as described and represented.

Witnesses:

JAMES R. BROWN.

R. H. EDDY,
J. R. SNOW.