C. H. RAYMOND.

Grooving Machine for Sheet Metal.

No. 99,592. Patented Feb. 8, 1870.

Fig. 2

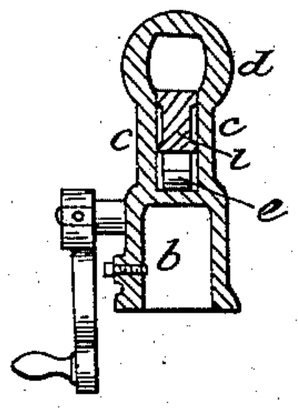
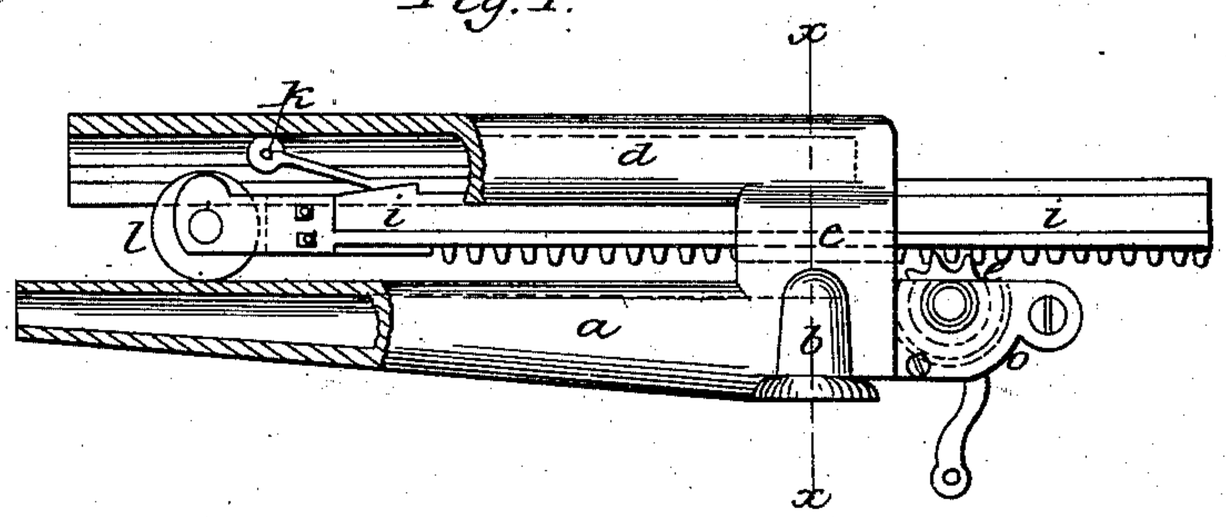


Fig. 1.



Witnesses:

Chas. H. Smith

Geo. D. Walker

Inventor

Charles H. Raymond

per Lemuel W. Serrell atty

United States Patent Office.

CHARLES H. RAYMOND, OF SOUTHINGTON, CONNECTICUT.

Letters Patent No. 99,592, *dated February* 8, 1870.

IMPROVEMENT IN GROOVING-MACHINES FOR SHEET-METAL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHARLES H. RAYMOND, of Southington, in the county of Hartford, and State of Connecticut, have invented and made a new and useful Improvement in Grooving-Machines for Sheet-Metal Workers; and the following is hereby declared to be a full, clear and exact description thereof.

The grooving-machines that have heretofore been made for tinmen and sheet-metal workers have had a lower and upper jaw, united together by side plates and bolts. Between those, there is a rack-bar, carrying a roller for pressing the folded sheet-metal together at the joint or seam.

In machines of this kind, the parts are very heavy and costly, in consequence of the jaws being made solid, and of separate pieces bolted together, and any looseness in the bolts allows the jaws to separate at the outer end, and the action of the machine is imperfect.

My invention relates to a hollow cast-iron bed-jaw, formed in one piece with the upper jaw, that is recessed or U-shaped, to receive the sliding rack, and a socket is cast in the lower jaw, to receive the supporting-pin, and the pinion, that acts upon the sliding rack, is received within a recess in an extension of the under jaw.

By this construction, the jaws are lessened in weight, rendered less costly, and the liability of the parts springing or working loose is prevented.

In the drawing—

Figure 1 is a side view of the machine, with part of the jaws broken open, and

Figure 2 is a cross-section of the line *x x*.

The lower jaw *a*, socket *b*, side pieces *c*, upper jaw *d*, and bearing *o*, for the pinion *e*, are all cast together.

The lower jaw *a* is hollow, forming a tapering tube, that opens into the socket *b*.

The upper jaw *d* is recessed upon the under side, so as to be of a ∩-form, to receive the upper part of the rack-slide *i* and roller *k*, that is set upon a spring, as usual.

The roller *l* is sustained in a jaw at the end of the rack-slide *i*, and the pinion *e* occupies a recess in the bearing *o*.

When the pinion *e* and its shaft are made in one piece, it will be necessary to have one side of the bearing *o* removable, and attached by screws, as shown.

I claim, as my invention—

The grooving-machine, consisting of the tubular tapering jaw *a*, socket *b*, side pieces *c*, and ∩-shaped upper jaw *d*, slide-rack *i*, pinion *e*, and roller *l*, constructed and arranged relatively to each other, as described.

Signed, this 16th day of December, A. D. 1869.

C. H. RAYMOND.

Witnesses:

RICHARD DANA,

S. E. MUNGER.