(No Model.)

A. D. GOODELL.

SCROLL SAWING MACHINE.

No. 332,391. Patented Dec. 15, 1885.

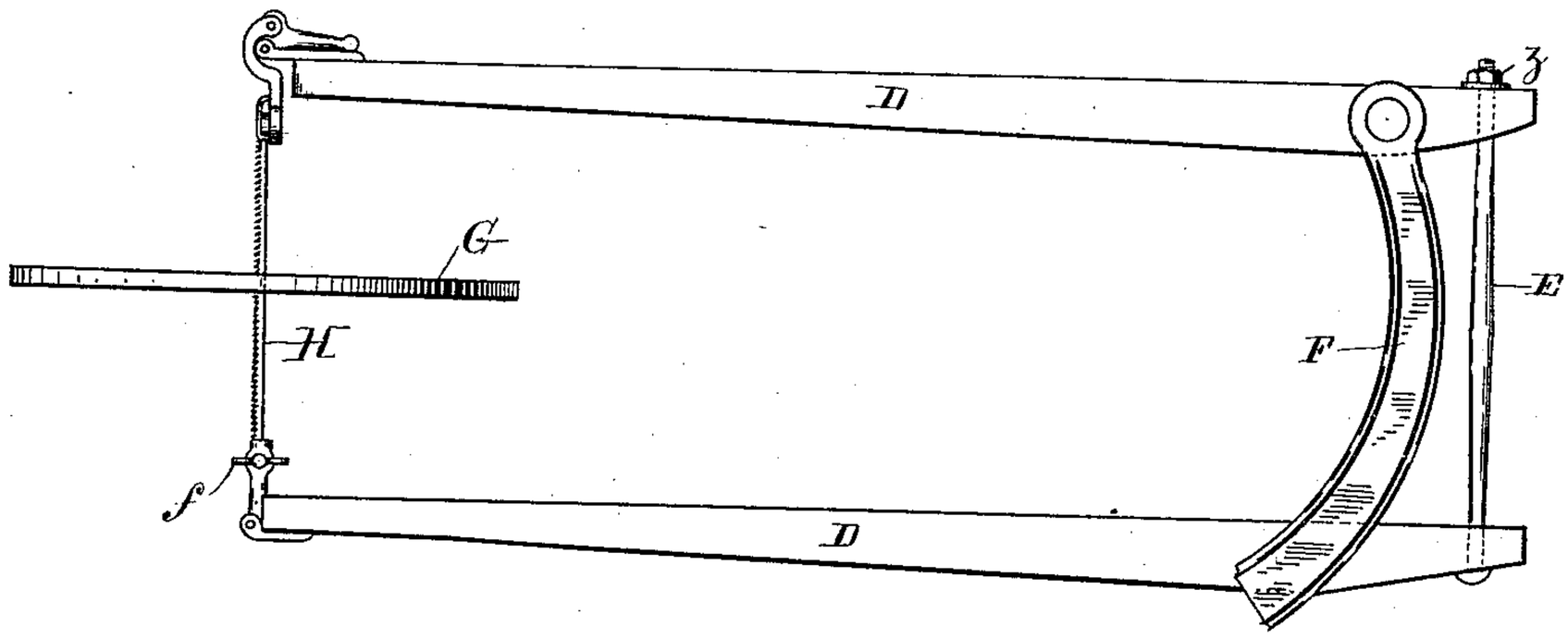

Fig. 1.

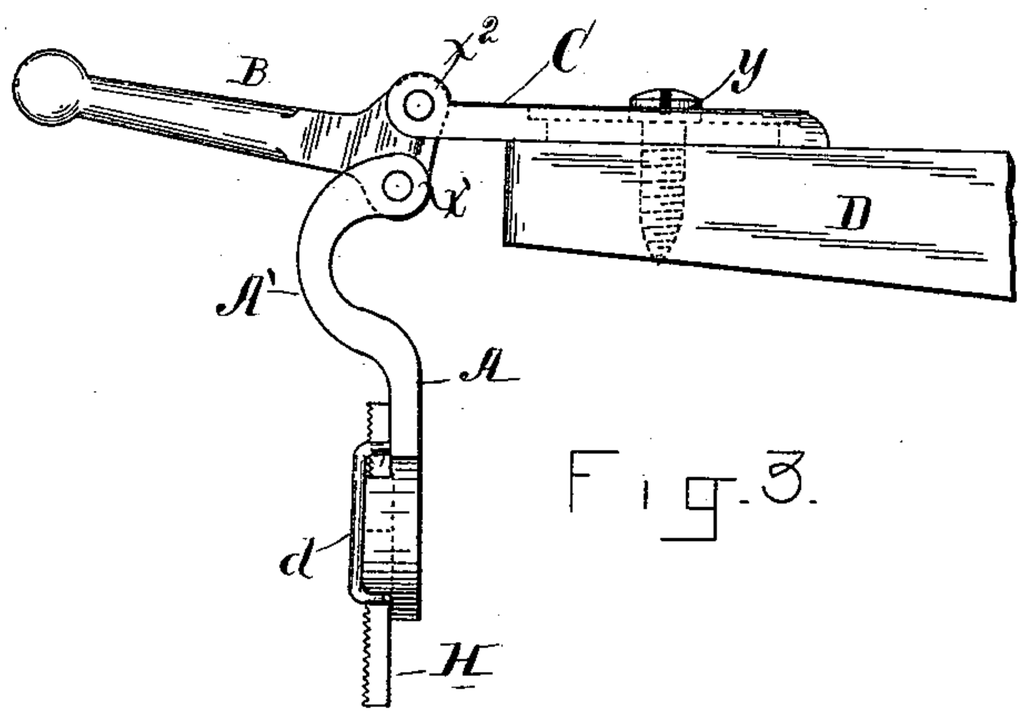

Fig. 3.

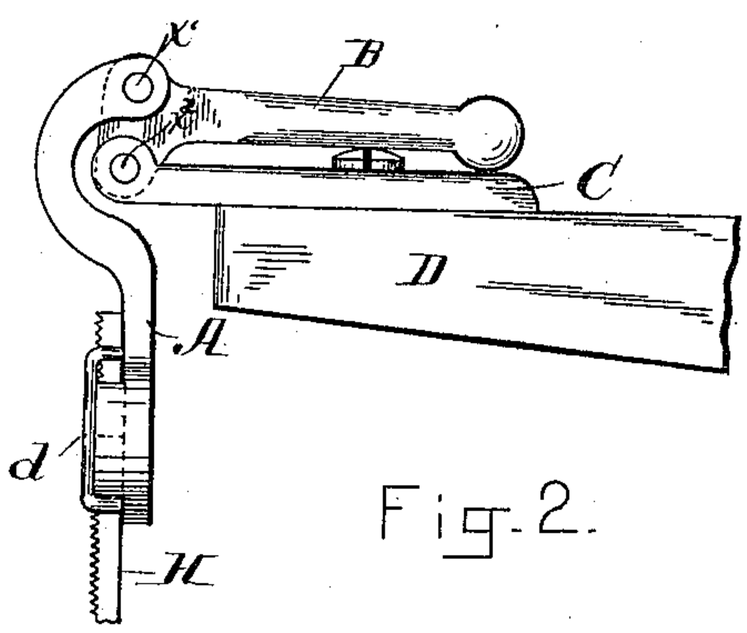

Fig. 2.

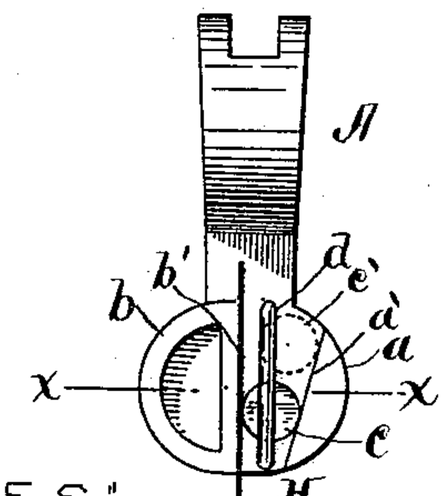

Fig. 4.

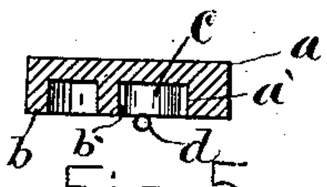

Fig. 5.

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UNITED STATES PATENT OFFICE.

ALBERT D. GOODELL, OF MILLER'S FALLS, MASSACHUSETTS, ASSIGNOR TO THE MILLER'S FALLS COMPANY, OF SAME PLACE.

SCROLL-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 332,391, dated December 15, 1885.

Application filed July 27, 1885. Serial No. 172,756. (No model.)

To all whom it may concern:

Be it known that I, ALBERT D. GOODELL, of Miller's Falls, in the county of Franklin, in the State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Tension Devices for Sawing-Machines, of which the following is a full, clear, and exact description, reference being had to the drawings accompanying the same, in which similar letters of reference indicate corresponding parts.

Figure 1 is a side elevation of the device attached to the arms of a jig sawing machine. Fig. 2 is a side elevation of the machine or device in detail. Fig. 3 is a side elevation with the lever thrown forward. Fig. 4 is a front elevation of the tension-clutching device. Fig. 5 is a sectional view of the tension-clutch on the line *x x* of Fig. 4.

This invention relates particularly to sawing-machines, and is especially applicable to the styles called "jig-saws," and is intended to overcome the present method of securing the saw-blades in the machine and bringing them to a suitable tension for work.

My invention naturally divides itself into two parts, the first consisting more particularly of a cam-lever and its connections, and the second to a friction-clutch for retaining the saw in the same.

Referring to the drawings, in Fig. 1 I show the two arms D D by which the saw is operated, being attached to the actuating-lever F.

G represents the saw-table through which the saw-blade H passes, and is secured at either end by suitable means, and then drawn taut by the action of the rod E and the tension-nut *z*, which, being tightened, of course produces a tension upon the saw-blade. This is the usual manner of constructing this class of machines and holding the saws.

Referring to Figs. 2 and 3, B is a lever, to which is jointed the upright bar A and the plate C. The latter is secured to the upper arm, D, by the bolt or screw *y*. The upright bar A is bent forward, as shown at A′, in order that when the cam-lever B is thrown over, as shown in Fig. 2, the bar can hang upright or substantially perpendicular. At the same time this construction allows of a little lateral motion. It will be observed that the upright bar A is pivoted to the lever B at *x′*, and the plate C is also pivoted to the lever B at x^2. When the lever is thrown up, as shown in Fig. 2, the top of the upright bar A is carried beyond the perpendicular line of the joint *x′*, and therefore cannot be drawn down and the lever thrown forward by the operation of the saw or any strain upon it.

The second part of my invention referred to is shown more particularly in Figs. 4 and 5, A representing the lower part of the upright bar, to which is attached the parts *a* and *b*. These parts are formed with a slot, as shown, one side of which has a perpendicular side, *b′*, against which the blade of the saw rests, the back of the blade resting upon the bar A. Upon the side adjacent to *b′* is a beveled side, (represented by *a′*.) Moving on this slot and upon this bevel is the roller or pulley *c*, and this is held in place by the brace or rod *d*. This pulley or roller is free to move up and down in the slot. The position when raised is shown in *c′*. The blade of the saw H being inserted between the perpendicular side *b′* and the roller *c*, it is obvious that the friction thereby induced will hold the blade securely.

It will be observed that the saw can be inserted more or less, as desired, thus giving more or less tension to the saw when the cam-lever is thrown back. The bottom of the saw-blade is easily held by a thumb-screw, *f*, or a simple hook, and previous to my invention it has been usual to fasten both ends of the saw in a similar manner.

It will be seen that by my device the saw-blade can be instantly and securely secured between the arms, and that the same can be drawn taut by simply raising the lever B and throwing the same back.

I am aware that a common solid cam-lever has been employed to draw a saw-blade taut; but that is not my construction. I provide, in connection with my tightening mechanism, an arrangement for the oscillation of the blade and connecting parts. This is of importance, and specially tends to prevent the breaking or kinking of the blade.

It is not necessary to use the rod E and the nut *z* or similar means to draw the saw-blade taut or to regulate the tension; but the saw

can be more easily and quickly adjusted by the tension device herein described.

All parts of the device are preferably formed of metal, which may be cast with small expense.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a sawing-machine, the within-described tension device, consisting of the lever B, pivoted at one end to the plate C and to the bar A, to which the saw-blade is attached by suitable mechanism, substantially as and for the purposes set forth.

2. In a tension device to a sawing-machine, the cam-lever B, pivotally supported upon the plate C, in combination with the curved bar A, pivotally connected to said cam-lever within the vertical line of the pivotal connection of said cam-lever and said plate and adapted to permit of a lateral movement of said bar when suitably secured to a saw-blade, substantially as and for the purposes set forth.

3. In a tension device to a sawing-machine, the bar A, provided at one end with a V-shaped slot, one side of which is perpendicular, and containing the loose roller *c*, said roller being held in place by the rod *d*, and adapted for holding the end of a saw-blade, substantially as and for the purposes set forth.

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