

L. Skiff,

Mortising Machine.

No. 100,813.

Patented Mar. 15. 1870.

Fig. 1.

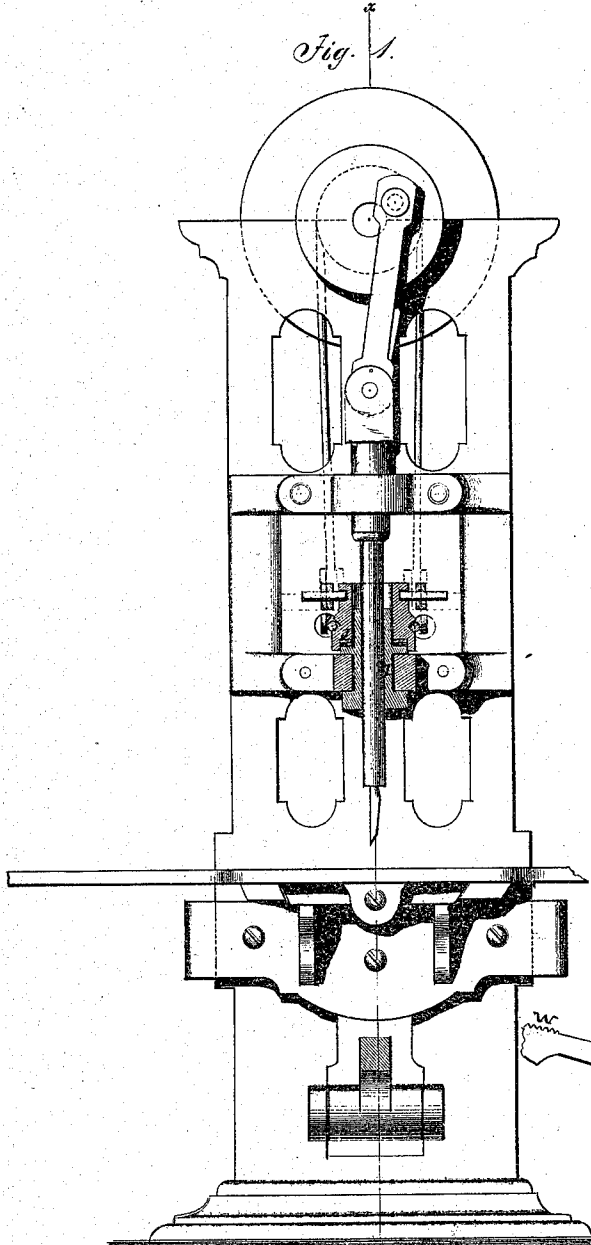
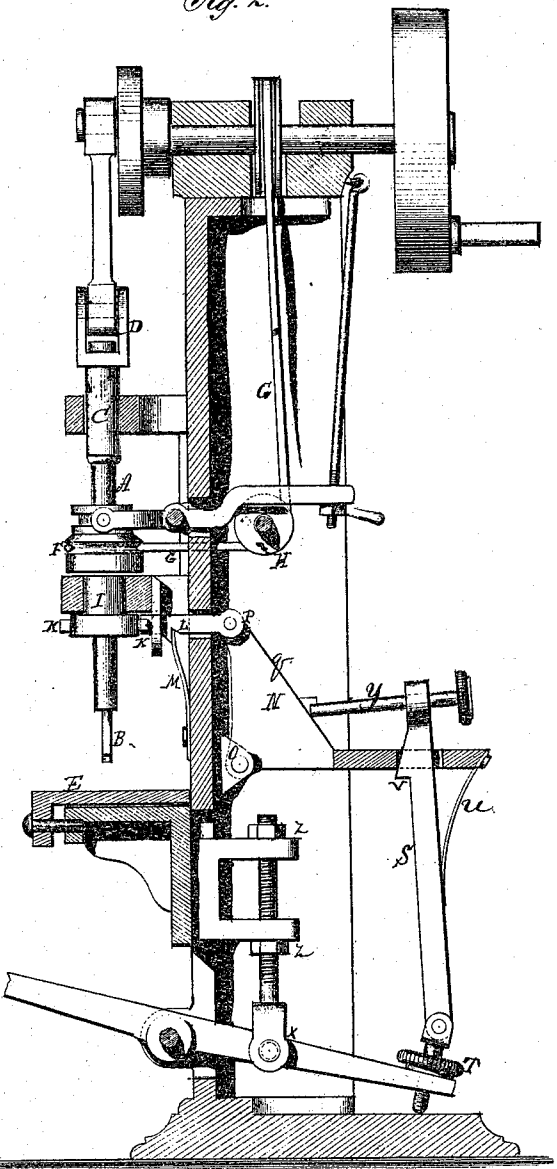


Fig. 2.



Witnesses:

Truslav Ditterich
Alex. F. Roberts

Inventor:

L. Skiff

PER

Merritt

Attorneys.

United States Patent Office.

JAMES SKIPP, OF NEWARK, NEW JERSEY.

Letters Patent No. 100,813, dated March 15, 1870.

IMPROVEMENT IN MORTISING-MACHINES.

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, JAMES SKIPP, of Newark, in the county of Essex, and State of New Jersey, have invented a new and useful Improvement in Mortising-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to mortising-machines, and consists in certain improvements thereon which will be specified hereinafter.

In the accompanying drawing—

Figure 1 represents a sectional elevation of the machine.

Figure 2 is a vertical section of fig. 1, through the line *x z*.

Similar letters of reference indicate corresponding parts.

A is the plunger.

B is the chisel.

C is a sleeve, which is connected with the head D, forming a swivel-joint for the reversal of the plunger.

E represents the mortising-table.

F is a pulley, which is constantly revolved when the machine is in operation by means of the band G, which passes round the adjustable pulley H.

I is a sleeve, through which the plunger passes with a feather-connection, so that the plunger with the chisel works through it, but revolves as the chisel is reversed.

On the upper collar of this sleeve I, and on the under side of the pulley F, disks of leather or of other suitable material are fastened, as seen at J, fig. 1.

The surfaces of these disks are constantly in contact with each other, and it is by the friction produced by such contact that the chisel is reversed.

The friction being constant is sufficient to reverse the chisel, or turn it one-half of a revolution whenever the sleeve I is released or set at liberty.

K K represent lugs or pins on opposite sides of the lower collar of the sleeve I.

L is a stop-bar, which slides horizontally toward the sleeve, and is forced in that direction with a constant pressure by means of the spring M.

The end of this stop-bar intercepts or prevents the reversal of the chisel while it is thus pressed forward, as the lugs K come in contact with it.

N is a bell-crank-shaped lever, whose joint or fulcrum is at O.

The bar L is attached to this lever, as seen at P.

The back side of the upper arm of the bell-crank is an inclined plane, Q.

R is a rod, which connects with the treadle or

foot-lever S by an adjustable connection, as seen at T.

The upper end of this rod S passes through a slot in the lower arm of the bell-crank or lever N.

U is a spring, which is attached to this arm, which bears against the rod S with a constant pressure.

V is a hook on the rod, which catches over the lower arm of the bell-crank N when the rod is raised, by the pressure of the foot on the treadles at the point W.

The table E is connected with the treadle at the point X, and its weight is sustained thereby, and serves to depress the back end of the treadle, and throw it into the position seen in the drawing, whenever the pressure of the foot is removed.

Y is an adjustable screw in the top end of the rod S, the end of which works in contact with the inclined plane *g*.

The spring U constantly presses the rod S and screw Y toward the inclined plane.

When the machine is in operation, the rod S is raised by the pressure of the foot on the treadle, so that the hook V is passed up above the slot in the arm of the bell-crank.

This does not alter the position of the stop-bar L, which holds the chisel in position while the pressure of the foot continues.

When it is necessary to reverse the chisel the pressure is removed, the weight of the table forces down the back end of the treadle, which draws down the rod S.

As this rod descends, the hook V will catch (for an instant) on the arm of the bell-crank, and depress that arm sufficiently to withdraw the stop-bar L far enough to allow the sleeve I (and consequently the chisel) to be affected by the friction produced by the contact of the two disks at J, the upper one of which, it will be remembered, is constantly revolving.

As the rod S drops, the hook V is thrown (by the end of the screw Y, which descends in contact with the inclined plane Q) back into the slot, so that the slide L is acted upon but an instant, but still the chisel is allowed to make half of a revolution or be reversed.

The lug *k* on the opposite side catches the end of the bar L, and holds the chisel until it is necessary to reverse it again, when the same operation is repeated.

The bed E is made adjustable in height, to suit the depth of the cut of chisel, by means of the nuts Z Z on the connecting-rod, as seen in the drawing.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination of a constantly-revolving pul-

ley, F, with friction-disks J J and sleeve I, to give a semi-rotation to the tool-stock, and reverse the chisel at the times and in the manner specified.

2. The combination of a slotted bell-crank lever, N, having inclined surface *q* thereon, with notched and pivoted spring bar S *u v* and pin *y*, to operate the spring slide L M in the manner described.

3. The combination of the adjustable connection T,

pivoted to the bar S with the treadle W, to adjust the throw of bar S, as set forth.

The above specification of my invention signed by me this 13th day of December, 1869.

JAMES SKIPP.

Witnesses:

GEO. W. MABEE,

ALEX. F. ROBERTS.