

L. P. SUMMERS.

MACHINE FOR COUNTERSINKING THE HOLES IN BUTT HINGES.

No. 109,851

Patented Dec. 6, 1870.

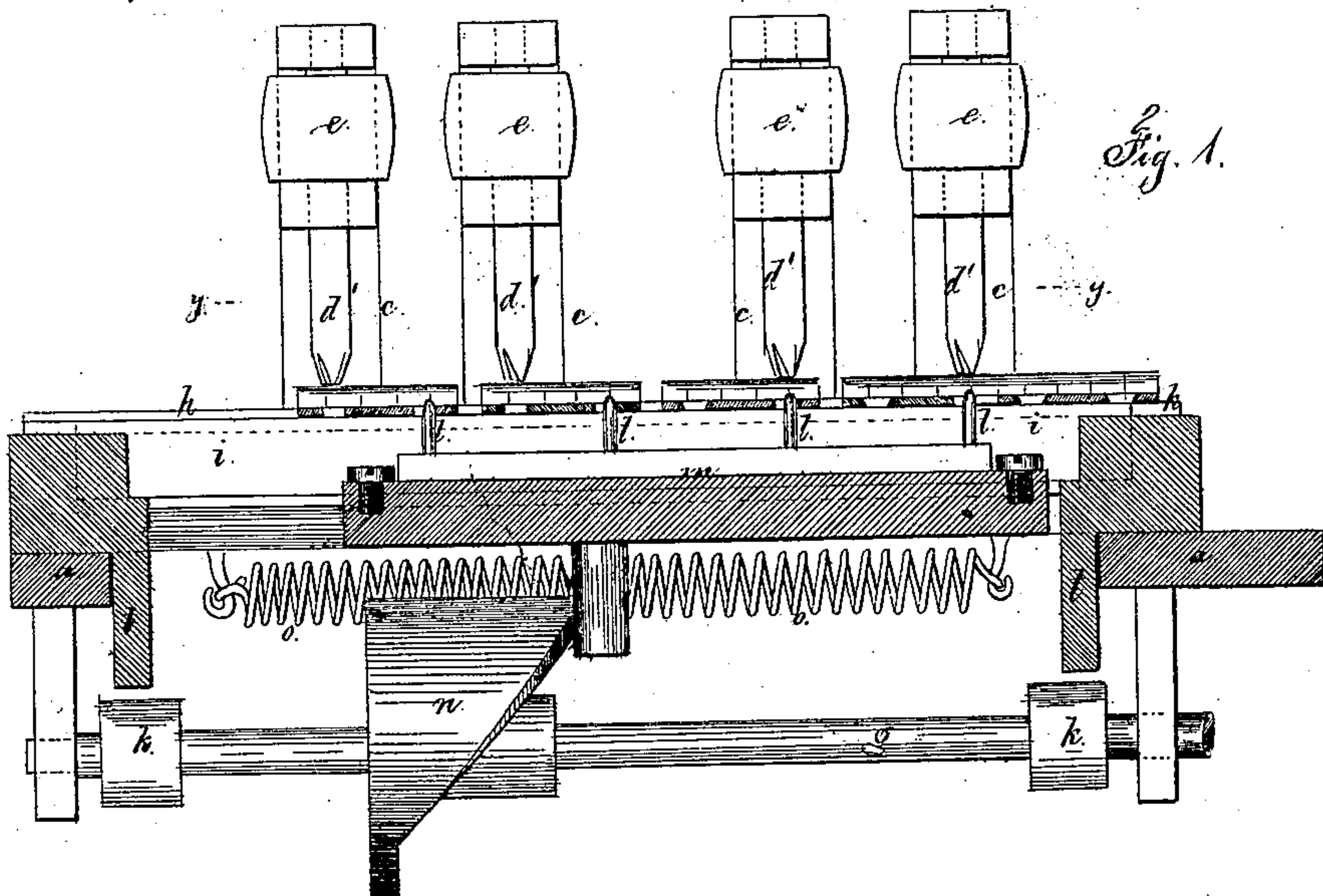


Fig. 1.

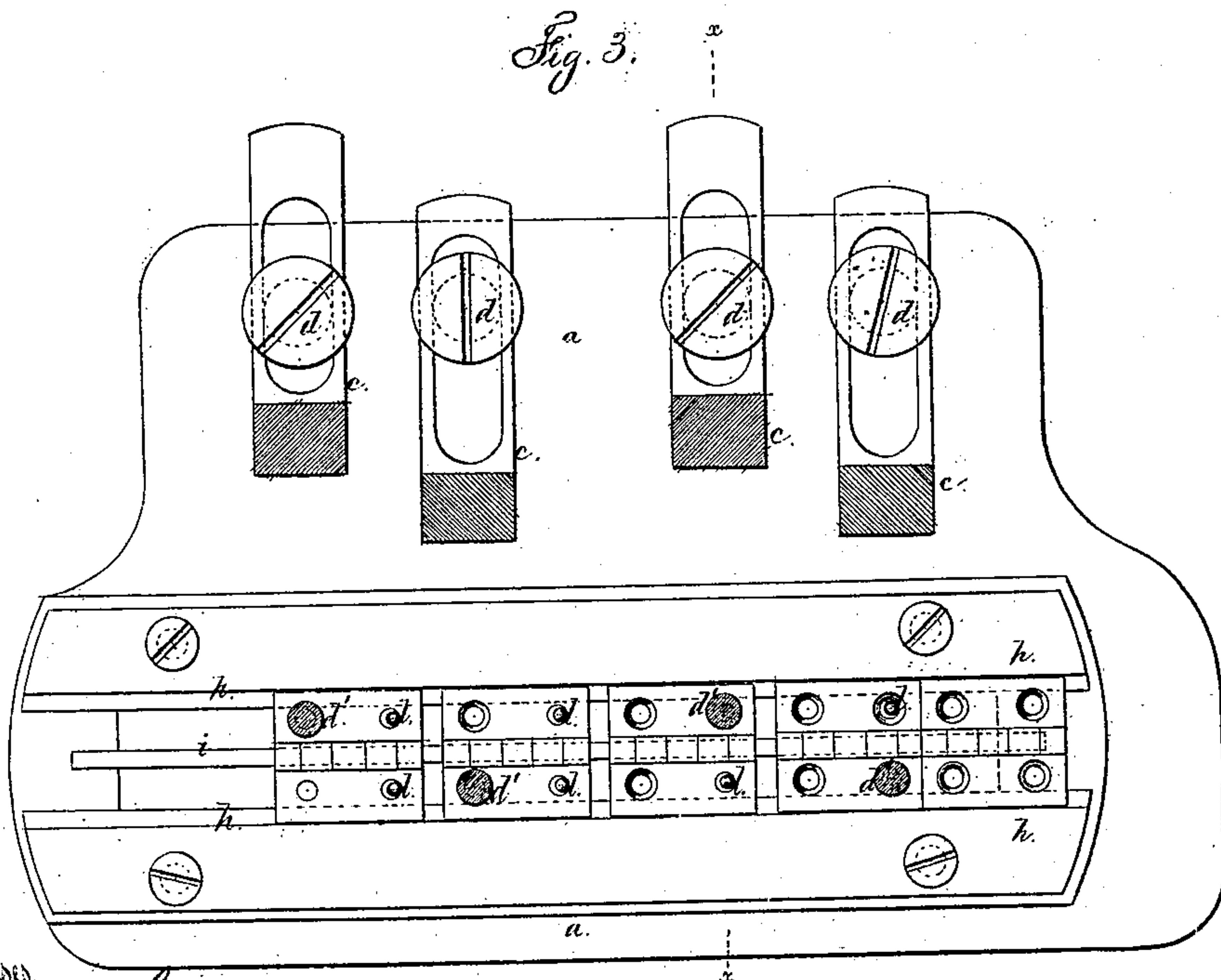


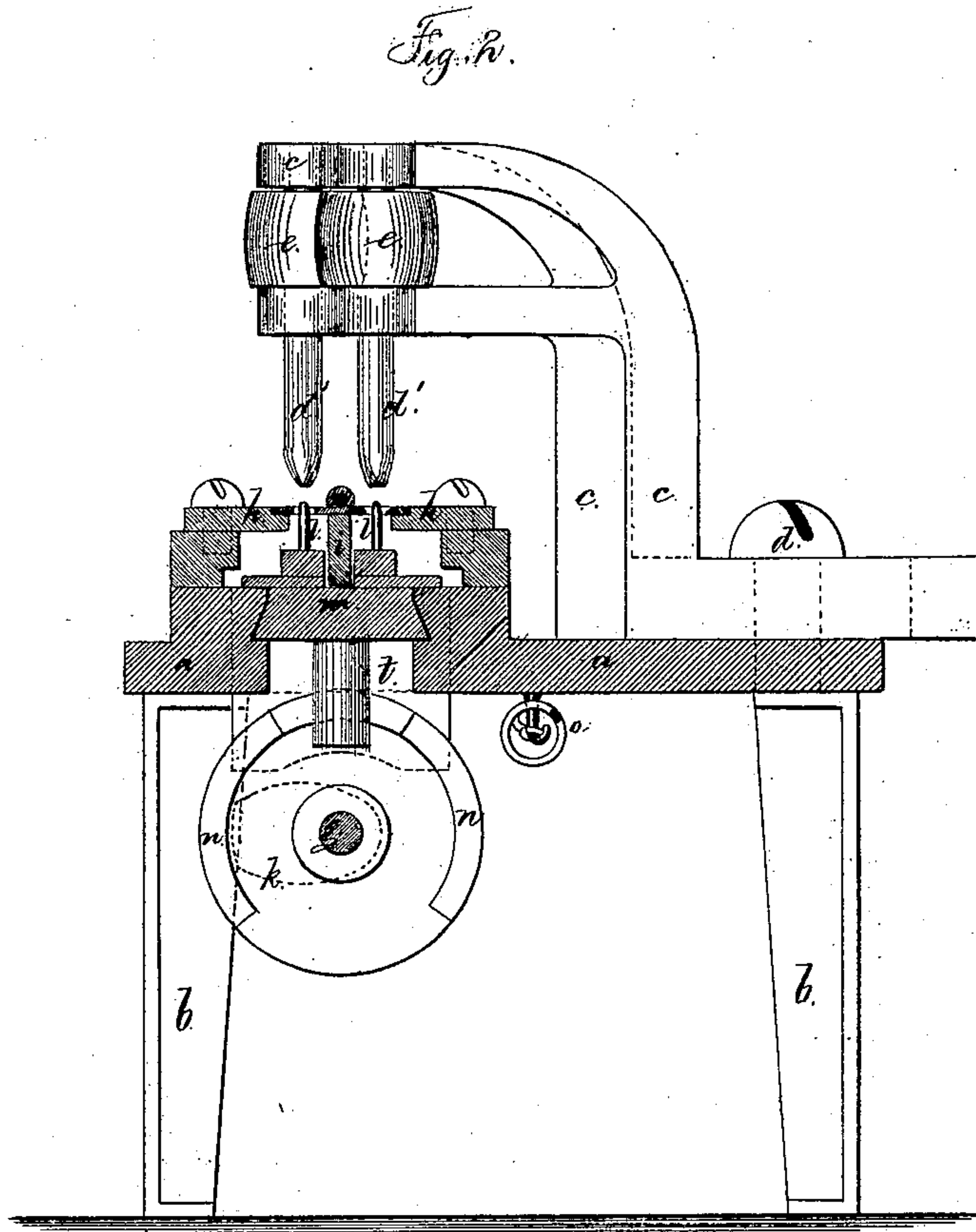
Fig. 3.

Witnesses,

Chas. H. Smith
Geo. B. Walker

Lucius P. Summers
Lemuel W. Perrell atty.

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United States Patent Office.

LUCIUS P. SUMMERS, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P.
& F. CORBIN, OF SAME PLACE.

Letters Patent No. 109,851, dated December 6, 1870.

IMPROVEMENT IN MACHINES FOR COUNTERSINKING THE HOLES IN BUTT-HINGES.

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, LUCIUS P. SUMMERS, of New Britain, in the county of Hartford and State of Connecticut, have invented and made a new and useful Improvement in Machinery for Countersinking the Holes in Hinges, &c., and the following is declared to be a correct description thereof.

Difficulty has been experienced in drilling a number of holes close together or countersinking them, because the spindles of the tools require to be sufficiently strong, and of a size adapted to receive pulleys for the driving-belt.

In countersinking the holes of small hinges this difficulty has been especially experienced, and my invention is primarily adapted to countersinking hinge-holes, but may be used with any other articles to which it is available.

I make use of a slide upon a bed adapted to receive the hinges as they are supplied at one end. Beneath this slide are fingers that reciprocate, and the slide and bed have a vertical movement to carry the hinges toward the revolving drills or countersinks that are upon stocks held in movable heads.

While the bed is raised to press the hinges to the tools, the fingers return to their normal position, and the bed, in lowering, brings the hinge-holes upon the pins or fingers, and these, in reciprocating, move the hinges along, delivering a complete hinge and placing another in position, the boring-tools being so positioned or adjusted that they operate successively until all the holes have been operated upon in the progress of the hinge through the machine.

In the drawing—

Figure 1 is a vertical longitudinal section;

Figure 2 is a cross-section at the line *x x*; and

Figure 3 is a plan sectionally below the line *y y*.

The bed of the machine is of suitable size and shape. I have shown the table *a* and legs *b*.

Upon the table *a* I secure the bases of two or more standards, *c c*, that are slotted for clamping-bolts *d d*,

so that they can be turned around upon the bed *a* into any desired position, and there secured.

Each standard *c* carries a drill or countersinking-tool, *d'*, with a pulley, *e*, for the driving-belt.

The slide for the hinges is made with a central bearing-bar, *i*, and rebated bars *h h*, for receiving the edges of the hinges, and these latter bars *h* should be adjustable to suit different sizes of hinges, and the slide *h h i* is upon a frame, with end guide-bars *t* passing through the bed *a*, to near the shaft *g*, where cams *k k* are provided to lift the frame and slides *h h i*, and press the hinges upon the tools *d'*, and then lower the bed, so that the fingers *l l* may move the hinges along to present other holes to be countersunk.

The fingers *l l* are connected adjustably to a bar, *m*, that is reciprocated by the cam *n* to move the hinges along, and it returns while the hinges and slide are elevated, the spring *o* drawing back said fingers; and a stop may be provided to regulate the return movement of the fingers and the consequent extent of feed-motion to the hinges at each reciprocation.

The ends of the fingers *l* being tapering, they easily enter the holes in the hinges, and, in moving them, bring the said holes successively into line with the drills or countersinks, so that one hinge is finished every complete movement of the machine, and another hinge fed in.

I claim as my invention—

A vertically-moving slide, carrying the hinges or other articles to be bored or countersunk, and presenting the same to the revolving tools, in combination with reciprocating fingers that move the articles along progressively, substantially as and for the purposes set forth.

Signed by me this 26th day of September, A. D. 1870.

Witnesses:

CHARLES PECK,
EDWD. L. PRIOR.

L. P. SUMMERS.