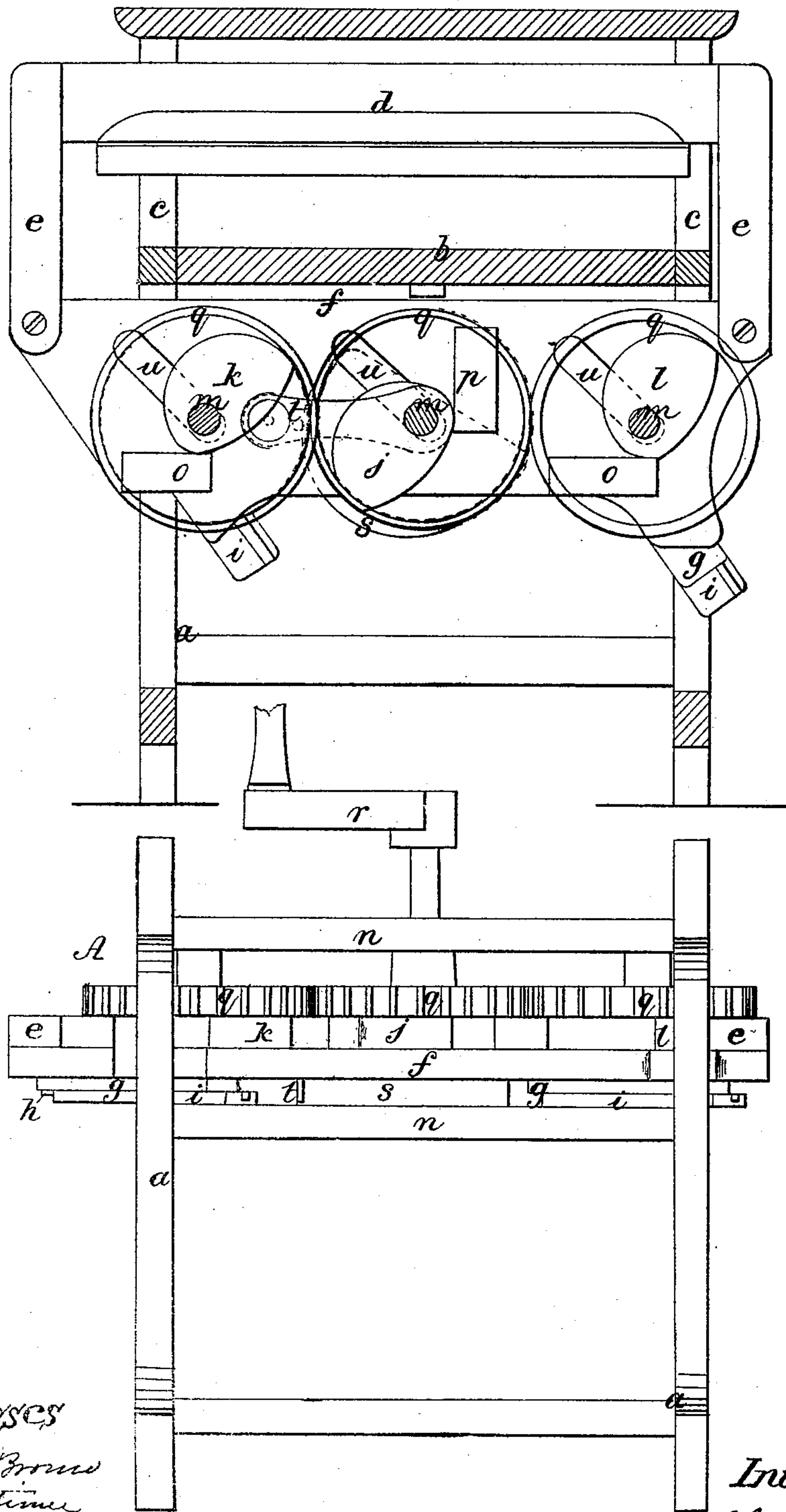


F. L. Walker
Paper Cutting
N^o 97,140. Patented Nov. 23, 1869.
B



Witnesses
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F. L. WALKER, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 97,140, dated November 23, 1869.

IMPROVEMENT IN PAPER-CUTTING 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, F. L. WALKER, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improved Machine for Cutting Leather, Paper, &c.; and I do hereby declare that the following, taken in connection with the drawings, which accompany and form part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practise it.

My invention relates to the details of construction and arrangement of mechanism for actuating the cutter in that class of machines designed particularly for cutting paper, though applicable to cutting up leather stock and other flexible material, which can be laid flatwise upon a bed and severed by a guillotine-knife.

My improvement consists in mounting the knife upon a vertically-moving slide or carriage, which is supported and slides diagonally upon inclined rails, the slide being moved downward and forward by a series of peripheral cams, acting in their rotation upon corresponding studs projecting from the carriage, and being lifted by another cam or wiper, acting upon a pin projecting from the slide.

The drawings represent a machine embodying my improvement.

A shows a reversed plan of the machine.

B, a vertical section of the machine, taken near the plane of one side of the cutter-bar.

a denotes the frame of the machine.

b, a table, for receiving the stock to be cut.

Near one end of this table are vertical ways *c*, between and through which extend the two ends of a cutter-bar, *d*.

From the opposite ends of this bar depend two arms *e*, the lower ends of which are fastened to the opposite ends of a slide, *f*, extending through the frame under the table, as seen at B.

On the back of the slide, strips or bars *g* are fixed, each having an inclined tongue, *h*, which fits and slides in a groove formed in a rail, *i*, fastened upon the main frame. The slide, and the cutter mounted thereupon, are supported upon these rails, and as the slide is moved downward, the inclination of the grooves

and the tongues *h* causes the cutter to be carried forward as well as downward, so that it cuts with a drawing stroke, and severs the stock more easily and readily than were the cutter to move only in a downward direction to effect the cut.

To effect the compound downward and forward movement of the cutter-carrying slide, I employ a mechanism as follows:

On one side of the slide are cam-wheels, (there being preferably a centre cam-wheel, *j*, and two side or end cam-wheels *k* *l*;) each formed with a peripheral cam, as seen at B, each cam-wheel being mounted on a pin or shaft, *m*, supported in beams *n*, extending across the main frame.

The downward movement of the cutter-slide is effected by the end cams, which act, as they rotate, upon horizontal studs *o*, extending from the slide, and the forward movement of the slide is effected by the centre cam acting in its rotation upon a vertical stud, *p*, projecting from the slide.

To impart simultaneous movement to the three cams, each pin or shaft may carry a gear, *q*, (denoted by the red lines,) the three gears meshing together, so that all will be driven by power applied to a crank, *r*, on either shaft.

The cutter may be raised by a lifter or wiper, *s*, on the centre shaft, acting upon a pin, *t*, projecting from the slide.

Diagonal slots *u* enable the slide to move freely upon the shafts *m*.

It will readily be seen, that by this organization of the machine, the movement of the cutter is rendered very effective, and the arrangement of the mechanism is simple, not liable to get out of order, and is enduring.

I claim the combination and arrangement of mechanism for effecting the downward and forward movement of the cutter, substantially as described.

F. L. WALKER.

Witnesses:

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