

(No Model.)

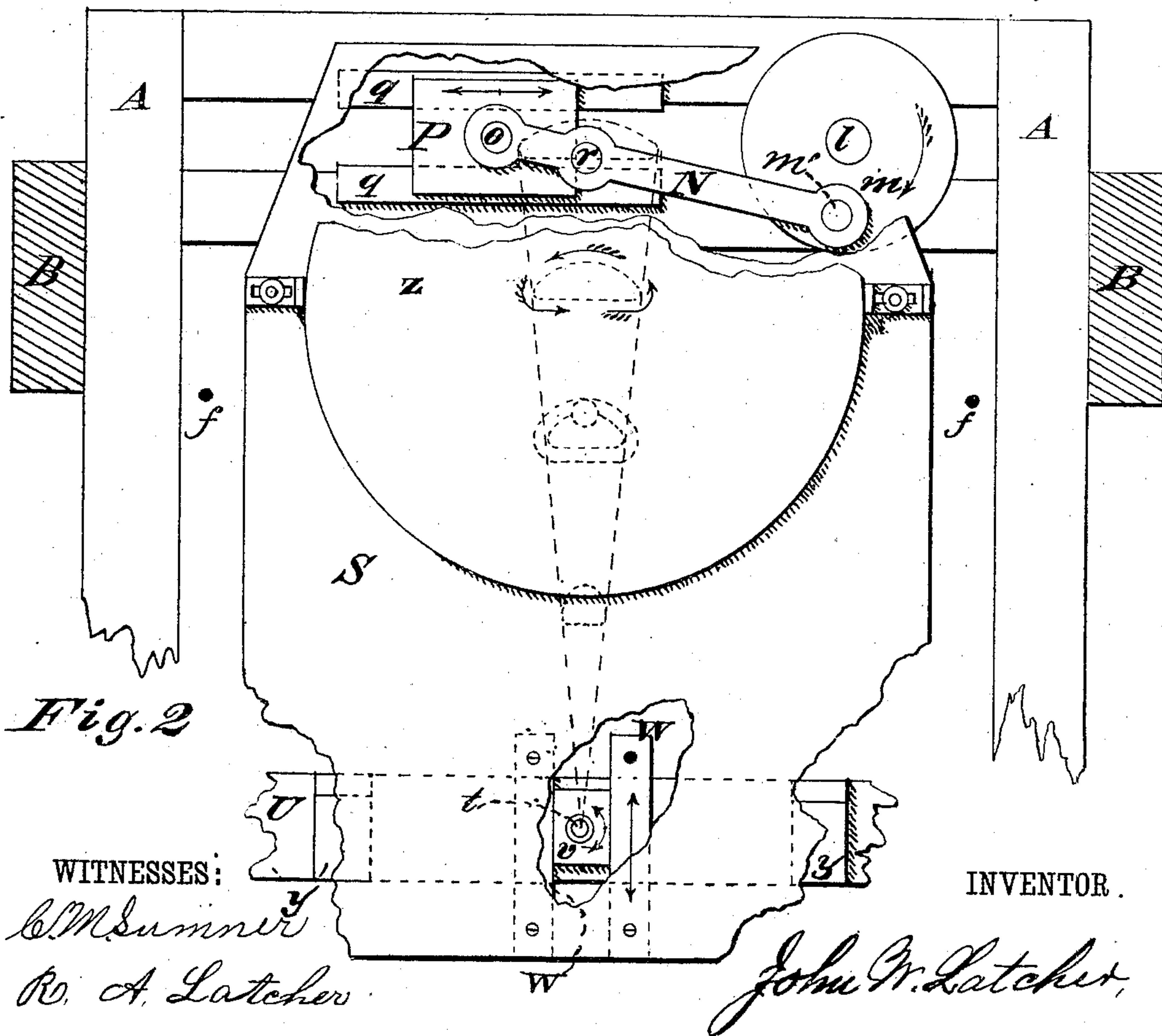
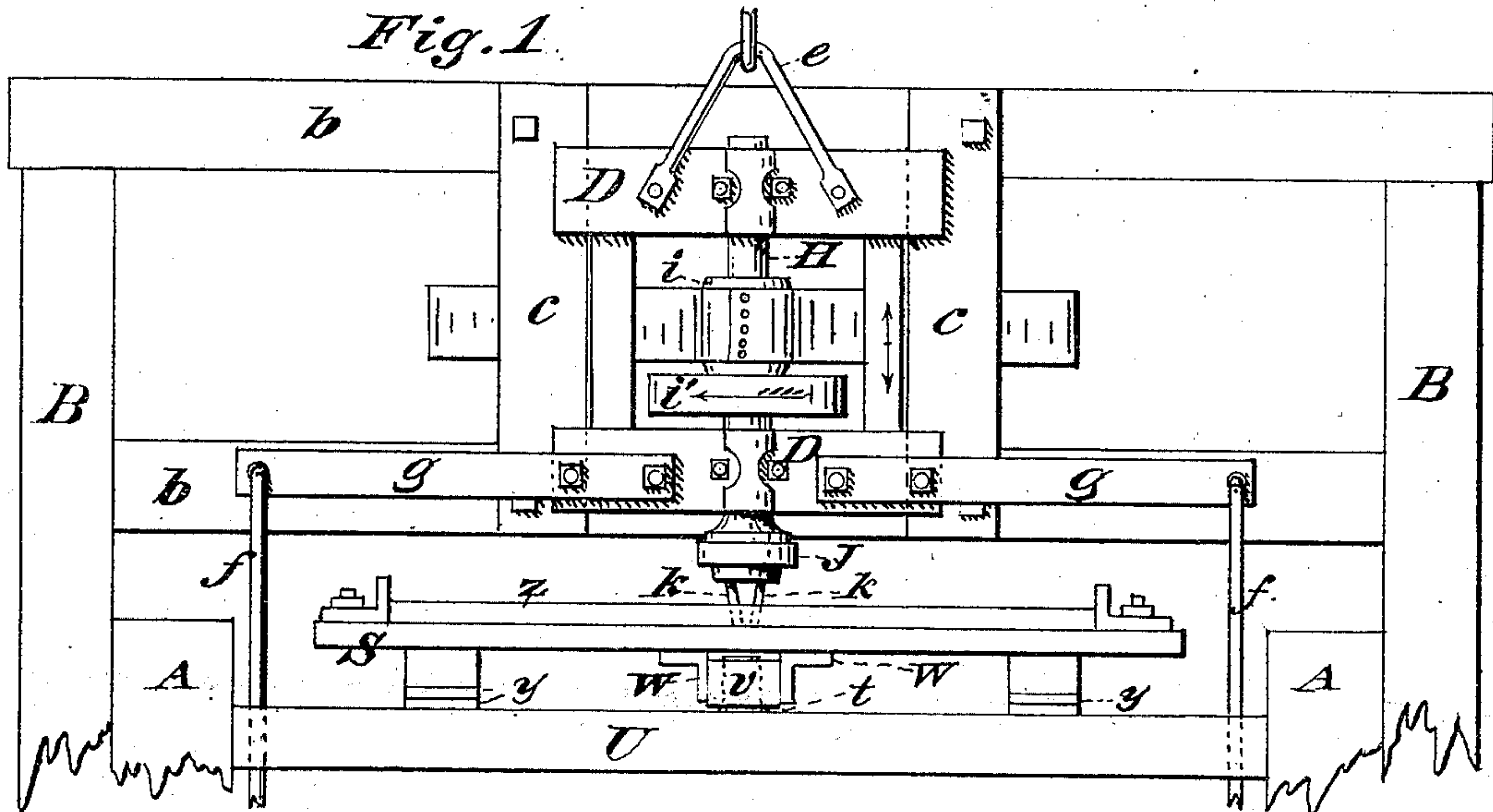
2 Sheets—Sheet 1.

J. W. LATCHER.

MACHINE FOR CUTTING IRREGULAR SHAPED OPENINGS.

No. 368,723.

Patented Aug. 23, 1887.



(No Model.)

2 Sheets—Sheet 2.

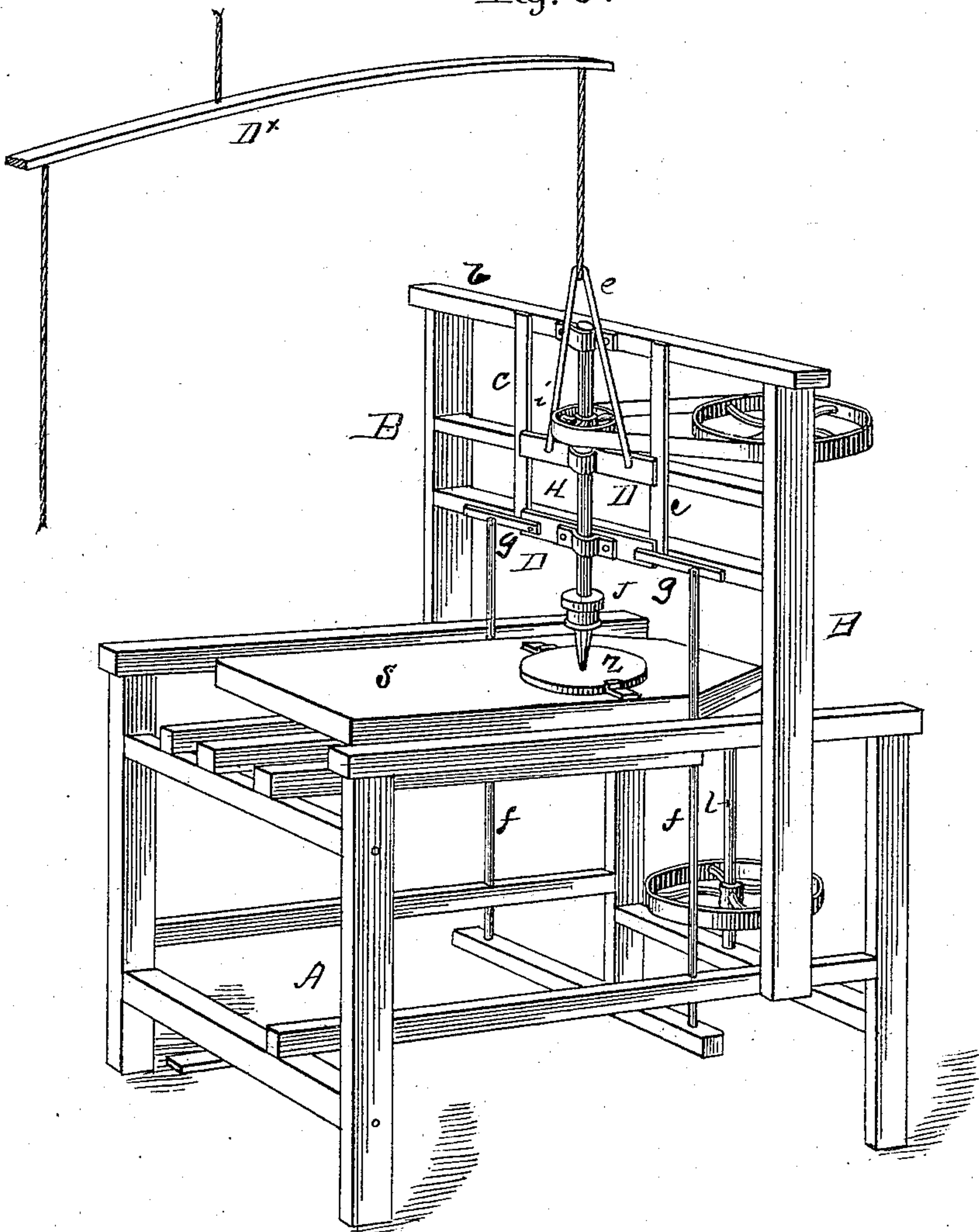
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Fig. 3.



Witnesses.

A. G. Bakerman.

E. V. Chandler.

Inventor

J. W. Latcher

By atty J. N. Kalk

UNITED STATES PATENT OFFICE.

JOHN W. LATCHER, OF EDINBURG, NEW YORK.

MACHINE FOR CUTTING IRREGULAR-SHAPED OPENINGS.

SPECIFICATION forming part of Letters Patent No. 368,723, dated August 23, 1887.

Application filed April 21, 1886. Serial No. 199,616. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. LATCHER, a citizen of the United States, residing at Edinburg, in the county of Saratoga and State of New York, have invented a useful Machine for Cutting Irregular-Shaped Openings, of which the following is a specification.

My invention relates to improvements in machines for cutting or carving holes or recesses—elliptic, semi-elliptic, or oval shape—in barrel-covers, forming handles therein, and for other analogous uses. To accomplish this no patterns are used, nor is the piece to be carved or operated upon moved against the rotary cutters by hand, but is placed upon the elliptically-moving table and the revolving cutter brought downward upon the work, which quickly carves it. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical elevation of the upper portion of the machine, and Fig. 2 a top view of the machine after the removal of the rotary cutter and its appendages, the arrows indicating the direction of motion of the various movable parts of the machine. Fig. 3 is a perspective view of the device complete.

Similar letters refer to like parts throughout the drawings.

The frame A supports movable standards B B, secured to horizontal framing *b b*, to the central portions of which are secured vertical guides or tracks *c c*, to which is fitted the vertically-sliding frame D, attached by the bail *e* to a spring or weight, *D^x*, which tends to pull it up, while a foot-lever carries said frame D downward through the agency of the rods *f f* and bars *g g*, secured to the frame D. A revolving shaft, H, provided with a pulley, *i*, fly-wheel *i'*, and the chuck J, for holding and carrying the cutting-tools *k k*, is fitted to suitable bearings in the frame D.

A vertical shaft, *l*, provided with a crank, *m*, is fitted to revolve in suitable boxes secured to the frame-work A. To the crank-pin *m'* is fitted one end of a pitman or connecting-bar, N. At the other extremity of the connecting-bar N is fitted a pin, *o*, secured in sliding block P, which latter rests or moves in a re-

ciprocating manner on the stationary tracks *q q*. A pin, *r*, is secured to the under side of the table S, and is inserted into or through the connecting-bar N, as shown in Fig. 2. It will also be understood that the table S rests at this point on the pitman N, and is carried by it, as indicated by the dotted semi-ellipse, when the crank *m* is set in motion.

A pin, *t*, is affixed in the cross-beam U, and a block, *v*, is fitted to oscillate on the pin *t*, as indicated by the double-headed arrow shown in the drawings. Lateral guides *w w* are secured to the under side of the table S and parallel with each other, and fitted to slide against the two opposite sides of the block *v*, causing the latter to oscillate when the opposite end of the table S is made to vibrate transversely by the pitman N, as already explained, and will be more fully understood by reference to the dotted lines and arrows in Fig. 2.

The table S rests at the front end of the machine on the two sliding bearings *y y*, and the middle pivot on the pitman N.

The distances of the pivot or pin holes in the pitman may be varied to suit the operator. This will cause the table or carriage to describe any desired curve, as will be readily understood. The setting of the cutter-head from front to rear of the table will also produce a variety of carvings, as shown in Fig. 2.

The crank *m* may revolve from fifty to eighty turns per minute. The cutter-head J should revolve at a high speed, say four to five thousand.

The lumber or material *z* to be operated upon by the cutters *k k* is held in place temporarily against gages on the table S, and the cutters are brought down into the work and carve their way therein in the manner already explained. A spring or weight attached to the bail of the frame D raises the cutters upward, or away from the finished work. The table S is then ready for another piece, and so on.

What I claim is—

1. In a device for cutting openings in wood, a holding-table pivoted in a sliding bearing at one end, in combination with a pitman, to which the table is swiveled at its other end,

said pitman having a sliding bearing at one end and a crank and suitable means for operating it at the other, as set forth.

2. In a device for cutting openings in wood,
5 the combination, with the revoluble cutter and a vertically-sliding carriage therefor, of a holding-table pivoted in a sliding bearing at one end and a pitman to which the table is

swiveled at the opposite end, said pitman having a sliding bearing at one end and a crank at the other, as set forth.

JOHN W. LATCHER.

Witnesses:

C. M. SUMNER,
R. A. LATCHER.