

(Model.)

2 Sheets—Sheet 1.

A. M. CUTLER.

MACHINE FOR SLITTING CANVAS AND FOLDING THE EDGES THEREOF.

No. 316,337.

Patented Apr. 21, 1885.

Fig. 1.

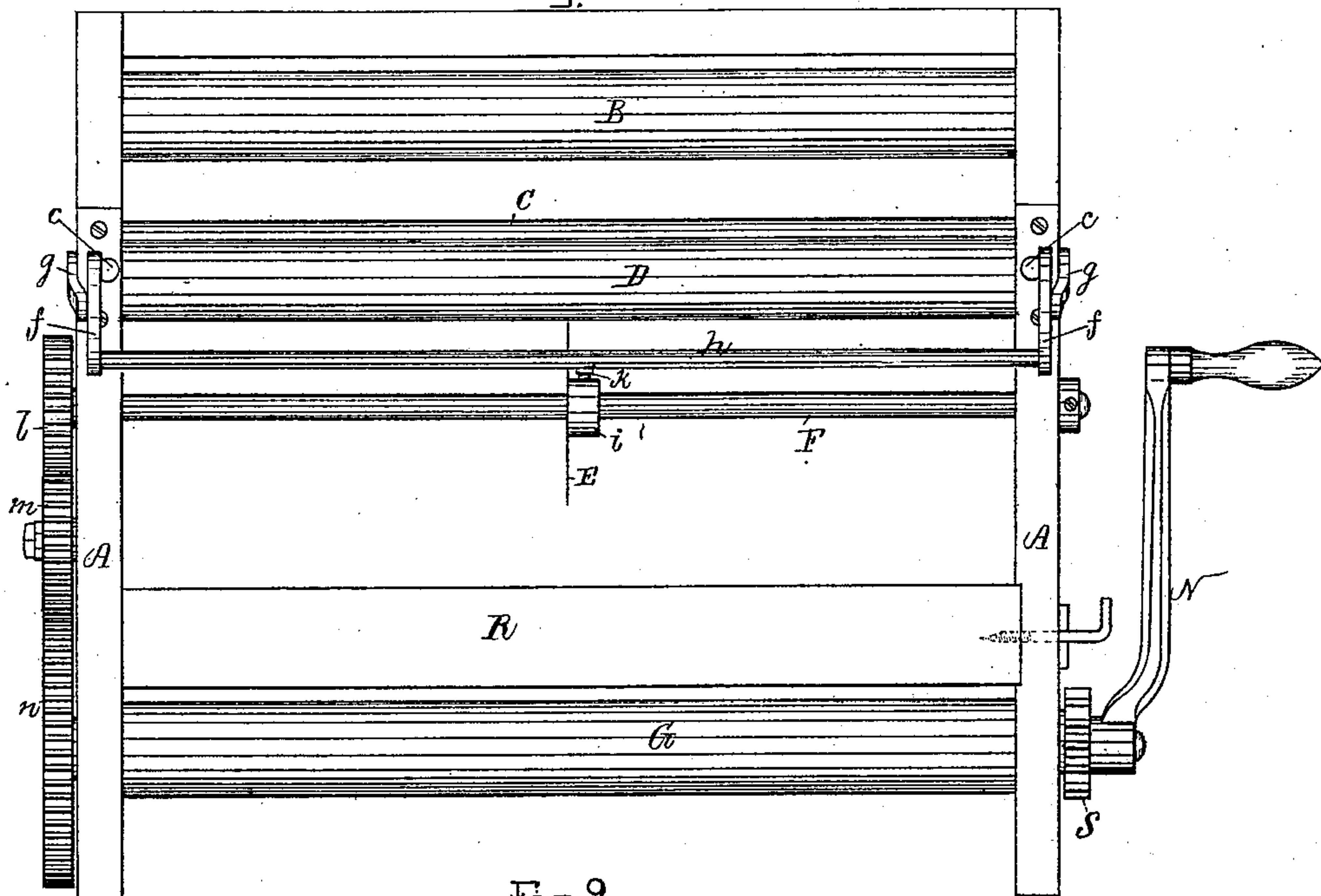
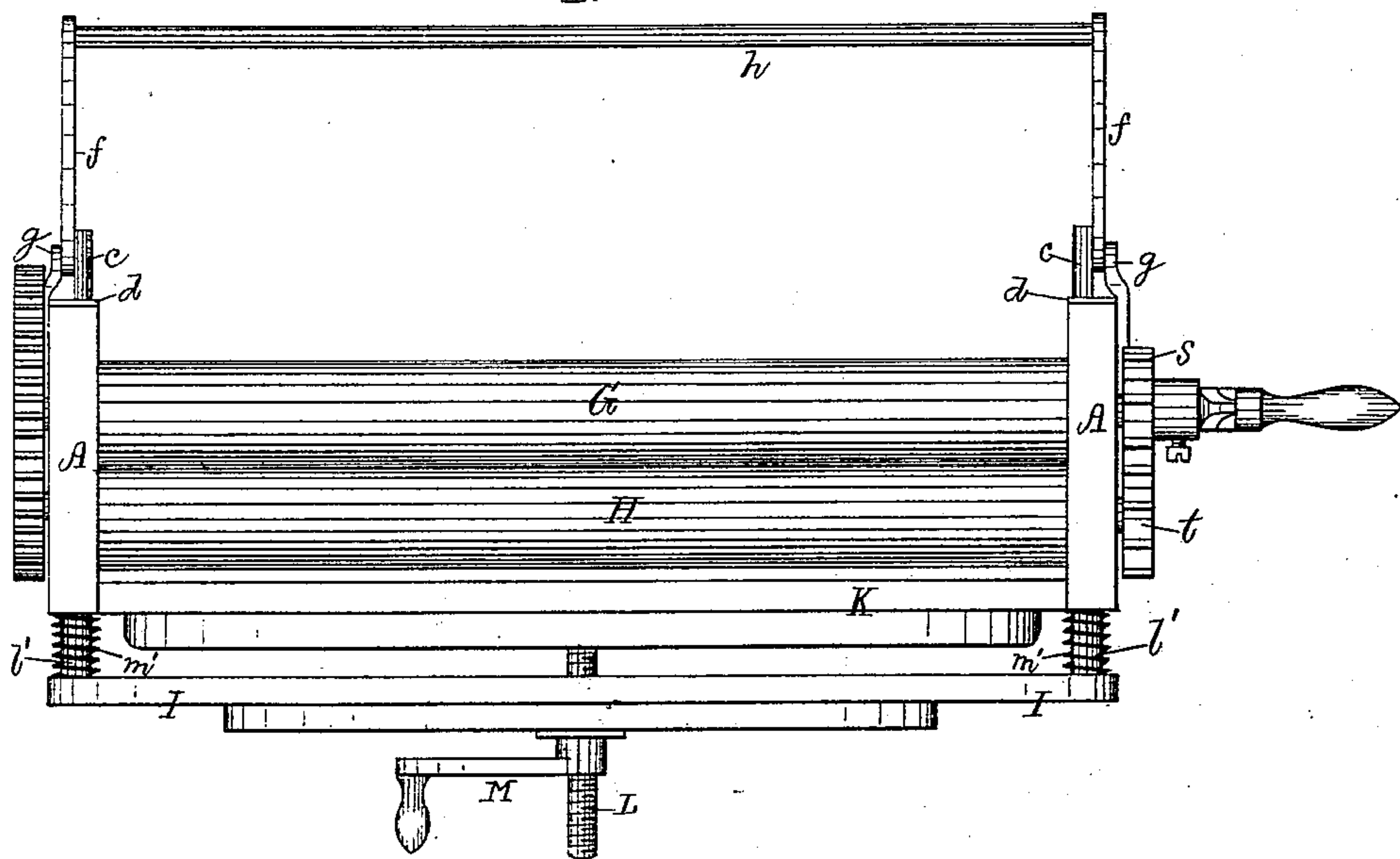


Fig. 9.



Witnesses.

S. N. Piper

CC Pratt

Inventor

Alexander Munroe Cutler.

by R. H. Edgely atty.

(Model.)

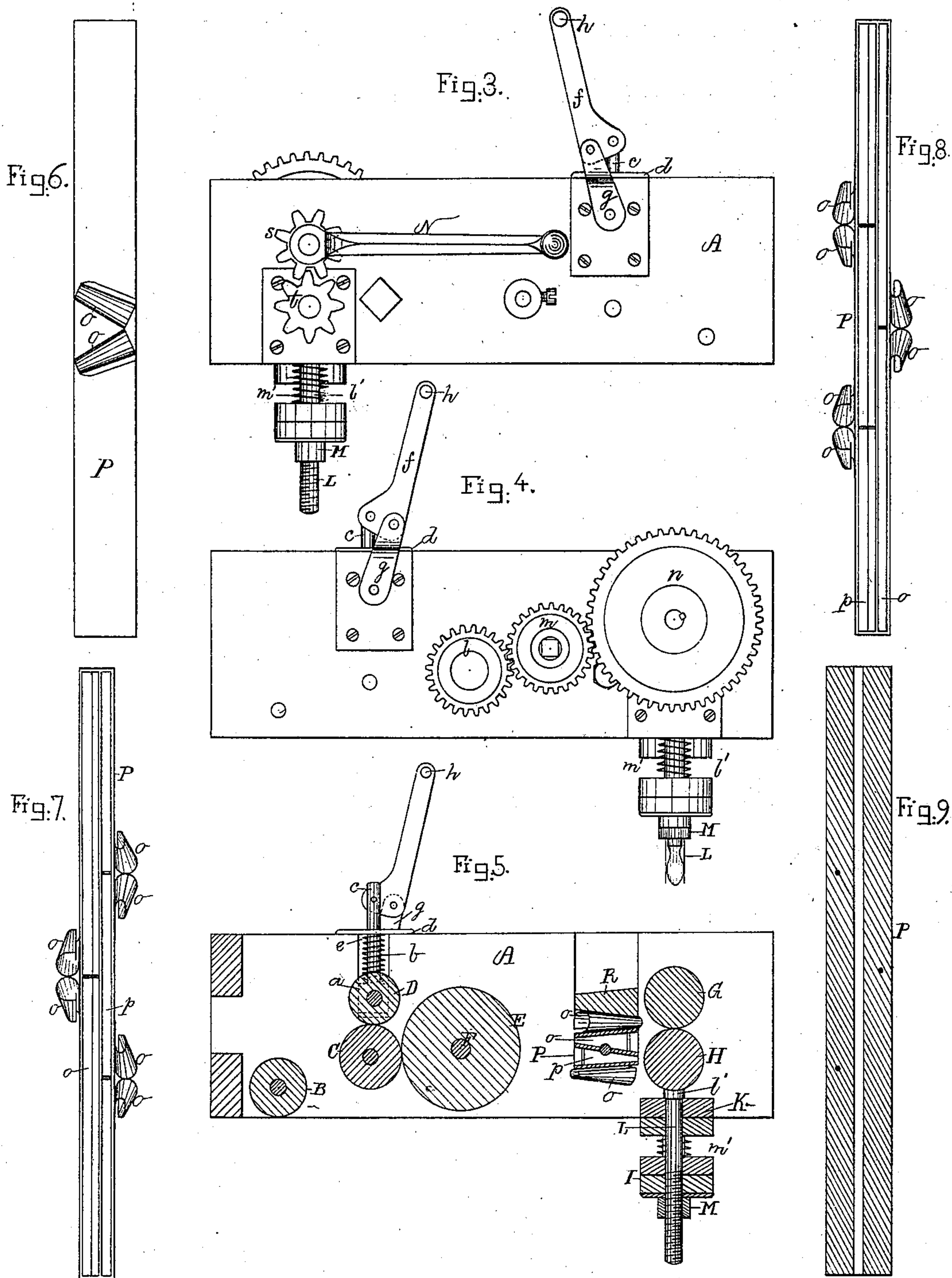
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UNITED STATES PATENT OFFICE.

ALEXANDER MUNROE CUTLER, OF BATH, MAINE.

MACHINE FOR SLITTING CANVAS AND FOLDING THE EDGES THEREOF.

SPECIFICATION forming part of Letters Patent No. 316,337, dated April 21, 1885.

Application filed July 7, 1884. (Model.)

To all whom it may concern:

Be it known that I, ALEXANDER MUNROE CUTLER, of Bath, in the county of Sagadahoc, of the State of Maine, have invented a new and useful Improvement in Machinery for Slitting Canvas and Folding the Edges thereof; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, in which—

Figure 1 is a top view, Fig. 2 a front elevation, Figs. 3 and 4 opposite end views, and Fig. 5 a transverse and median section, of a machine embodying my invention, the nature of which is defined in the claims hereinafter presented. Fig. 6 is a top view, Fig. 7 a rear view, Fig. 8 a front view, and Fig. 9 a longitudinal section, of the reversible carrier of the edge-turners.

The machine is designed for slitting canvas into strips and folding each at its edge for use by sail-makers in manufacturing or re-enforcing of sails for navigable vessels, or in the making of tents or awnings, or other matters wherein such strips as folded may be of use.

In the drawings, A denotes the frame for supporting the main operative parts of the machine. Within and extending across such frame is a guide-roller, B, and in advance thereof another such roller, C, directly over which is a pressure-roller, D. The boxes of the journals of the latter roller are movable vertically within guide-grooves in the frame, and are provided with springs for depressing them, and also with mechanism for raising them simultaneously. One of such boxes is shown in dotted lines at *a* in Fig. 5, its depressing-spring being represented at *b*. From each box a rod, *c*, extends upward through the spring and a cap-piece, *d*, fastened across the top of the guide-groove *e*, in which the box rests. The rod *c* is pivoted to the shorter arm of a lever, *f*, such lever being fulcrumed to a link, *g*, pivoted to the frame, and arranged as shown. The two levers have their longer arms connected by a rod, *h*. On taking hold of such rod at its middle and pressing it downward, the pressure-roller D may be raised relatively to the roller C.

In front of the two rollers last mentioned is the revoluble slitting-knife E, which is shown as circular and fixed on a shaft, F. In the

place of this knife I sometimes use a stationary knife fixed in a carrier or clamp applied to and adjustable in a bar extending across the frame. The knife E has in its hub *i* a set-screw, *k*, for fastening it to the shaft, such hub with the knife being movable on the shaft lengthwise thereof. A train of gears, *l m n*, connects the shaft F with one of the journals of the upper of two draft-rollers, G and H, arranged and connected by gears *s t*, as represented. The boxes of the journals of the lever of the said rollers G and H are joined to a bar, I, by rods *l'*, provided with spiral springs *m'*, for forcing the bar downward, such bar being beneath a cross-bar, K, of the frame. From the middle of the latter bar a screw, L, projects downward through the bar I, and a crank, M, screwed upon such screw. By turning the crank one way the roller H will be forced upward toward the roller G, having on its other journal a crank, N.

Between the slitting-knife and the two draft-rollers G and H is the mechanism for turning or folding the separated pieces of canvas near one edge of each. These edge-turners are shown at O, there being two of them on the top and four of them on the bottom of their reversible carrier P, which may be said to be a flat bar having a slot or two slots, *o p*, going through it lengthwise, and terminating near each end of it. Each edge-turner is a plate bent around in a scroll, and tapering or decreasing in width from its rear to its front end, the whole being to cause a strip of canvas while passing at its edge through it (the said turner) to be turned and lapped or folded a short distance on itself near such edge, the part so turned and folded being pressed down on the rest of the strip by the draft-rollers while it may be passing or drawn forward between and by them.

The carrier P at its ends is to be applied to the frame, so as to be capable of being used with either range of its edge-turners upward.

A bar, R, extended across the frame and into grooves arranged in its sides, serves to cap or cover the carrier P, and to keep it from accidentally turning when it may be pivoted at its ends to the frame.

The canvas or cloth in going into the machine passes over the roller B; thence between the rollers C and D, which serve to prevent

wrinkling of it; thence to the slitting-knife E, and after having been slit lengthwise thereby sufficiently each of the separated portions is to be introduced into and forced through one of the edge-turners, and thence introduced between the draft-rollers. The crank of the upper draft-roller, on being revolved in the proper direction, will cause the strip of canvas to be drawn forward by the said rollers. The knife will be revolved and will slit or cut the strip, the separated parts thereof being drawn through the edge-turners, and thereby folded at the edges, the folded parts being pressed down upon the rest by the two draft-rollers while the strips may be passing between them.

When it may be desirable to use the machine without folding the edges of the detached parts of the canvas, such parts may be run through the carrier and thence between the draft-rollers without going through the edge-turners.

There is to be a set or pair of the edge-turners to each slitting-knife when more than one such knife is used on the shaft F, the number of such knives depending on the number of slits to be made at once in the cloth.

The guide-roller B may be dispensed with, though it is a useful auxiliary to the rollers C and D. The above-described machine can be employed to advantage by riggers in stripping canvas for covering ropes or rigging.

I claim.—

1. The combination of the pressure and guide rollers C and D, the slitting-knife E, the pair or set of edge-turners O O, and the draft-rollers G and H, arranged in the frame A, and to operate substantially as set forth.

2. The combination of the pressure and guide rollers C and D, the slitting-knife E, the slotted carrier P, the edge-turners O O thereof, and the draft-rollers G and H, arranged in the frame A, and to operate substantially as represented.

3. The combination of the reversible carrier P, provided with sets of edge-turners applied to opposite sides of it, as set forth, with the pressure and guide rollers C and D, slitting-knife E, and the draft-rollers G and H, all being substantially as set forth.

ALEXANDER MUNROE CUTLER.

Witnesses:

FRANK BENTLEY,
HARRY S. LORD.