

J. Naught.
Trimming Edges of Paper.
Nº 21710. Patented Oct. 5. 1858.

Fig. 1.

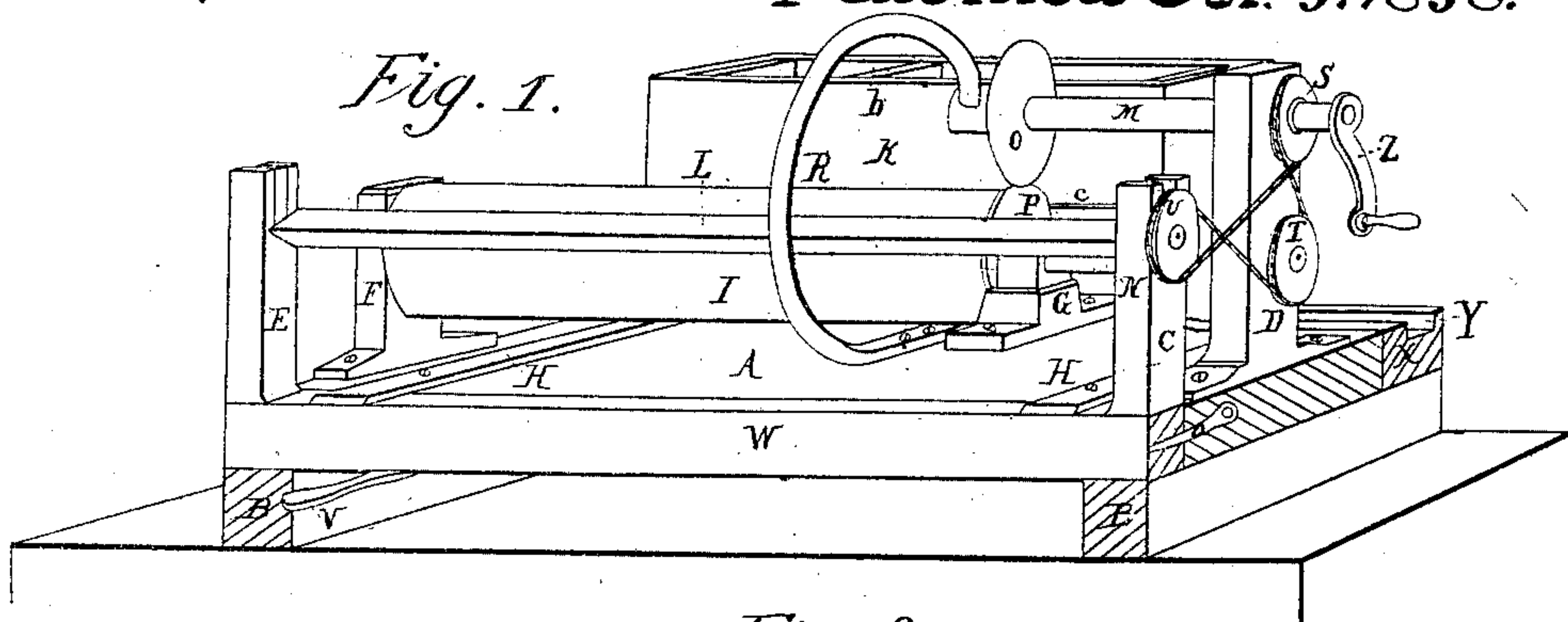


Fig. 2.

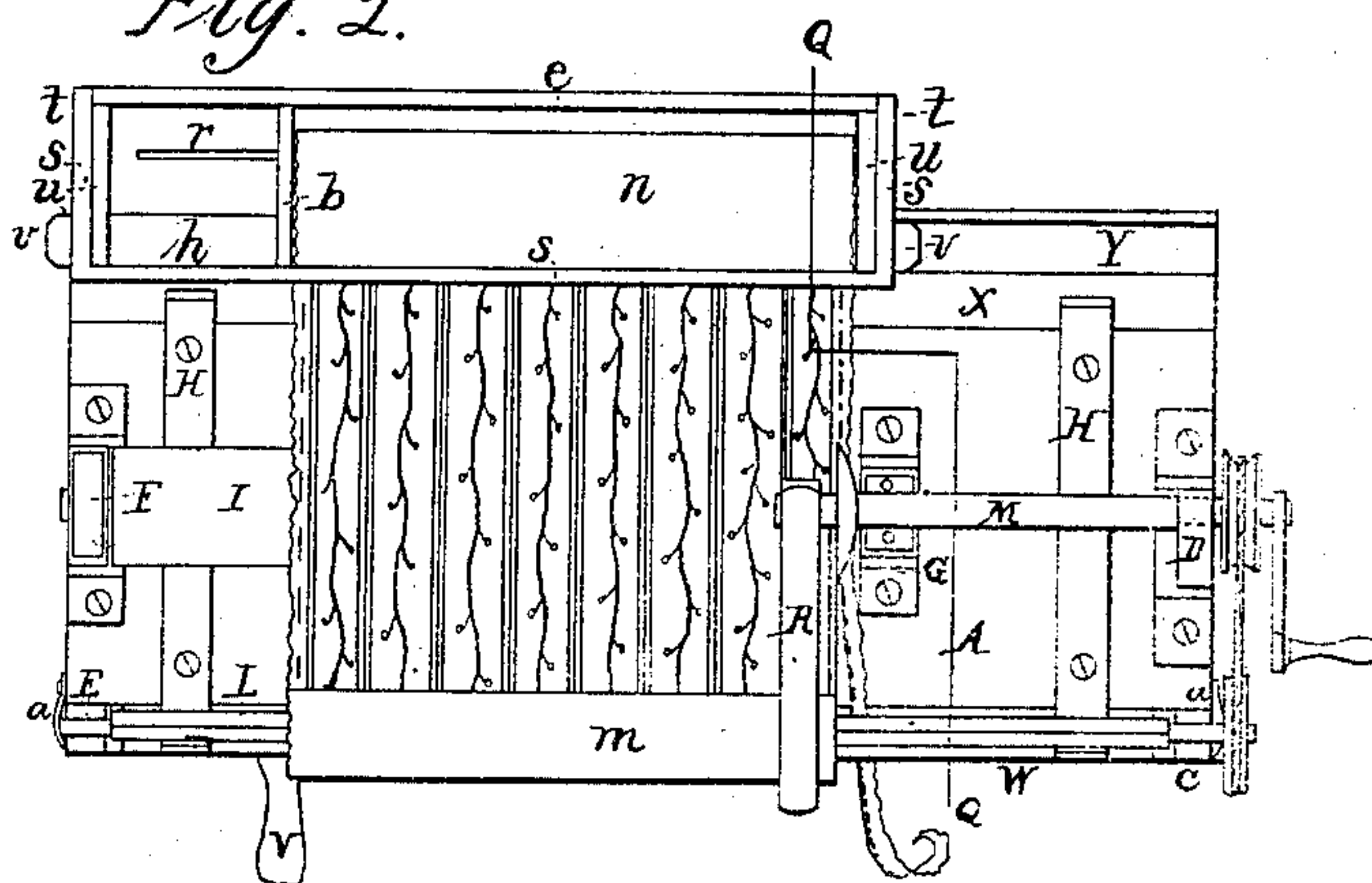


Fig. 3.

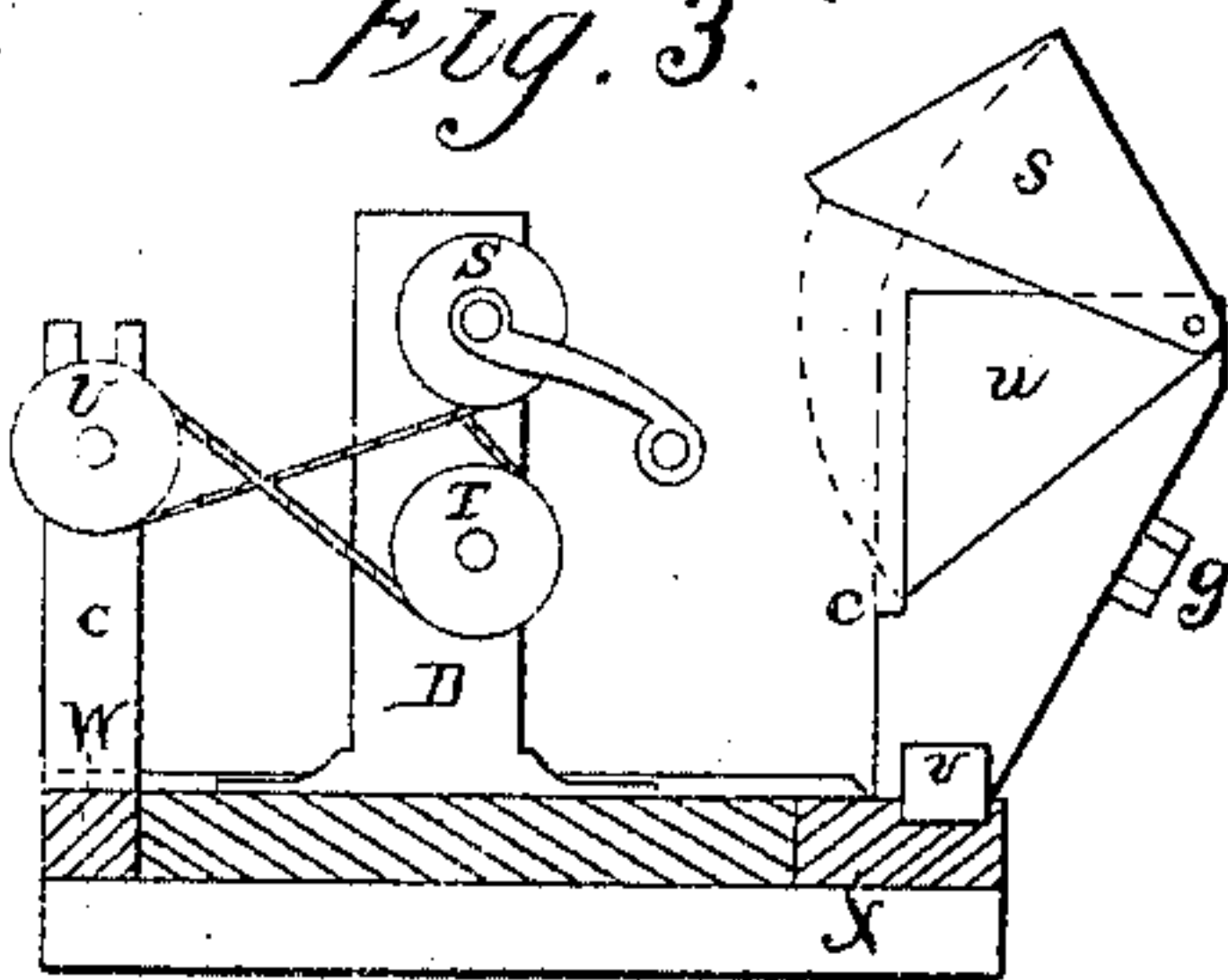


Fig. 4.

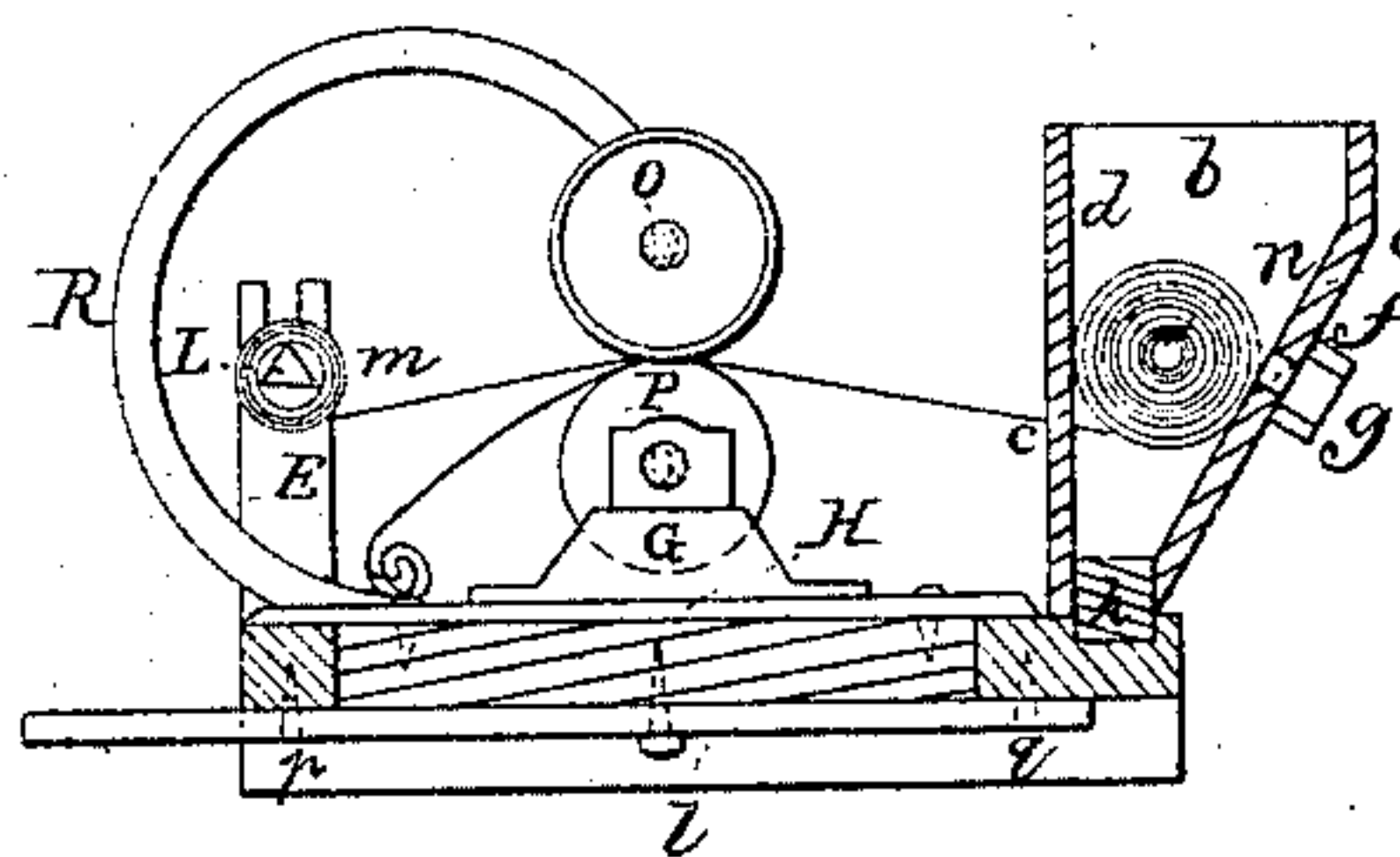


Fig. 5.

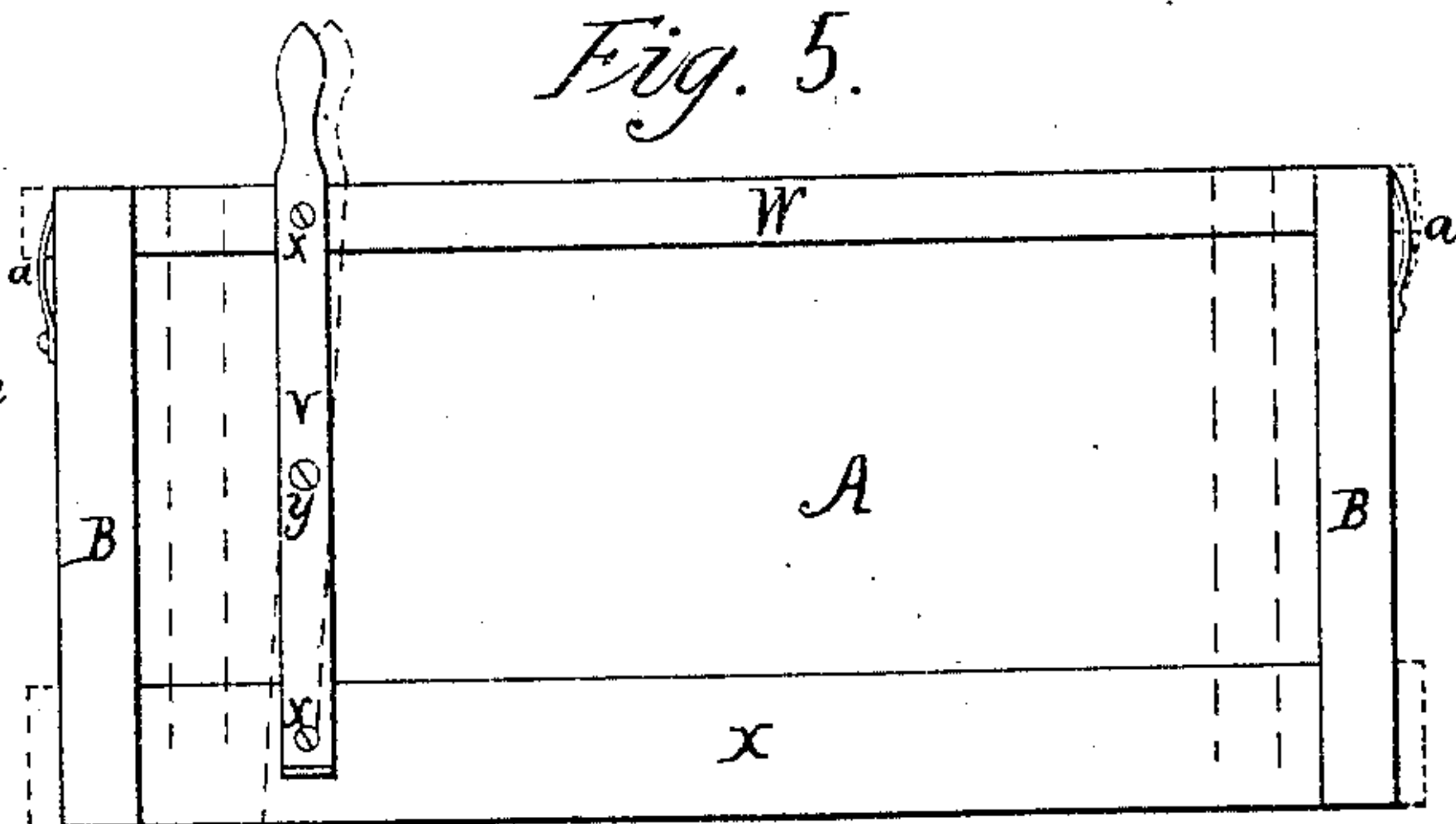


Fig. 7.

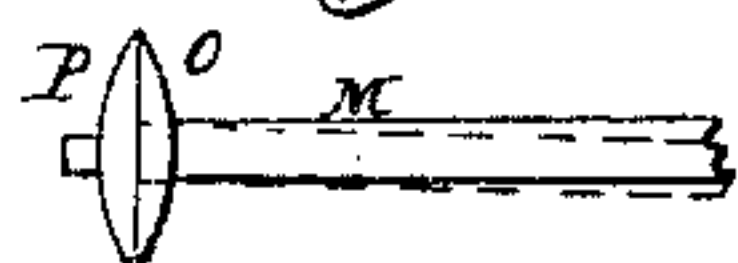
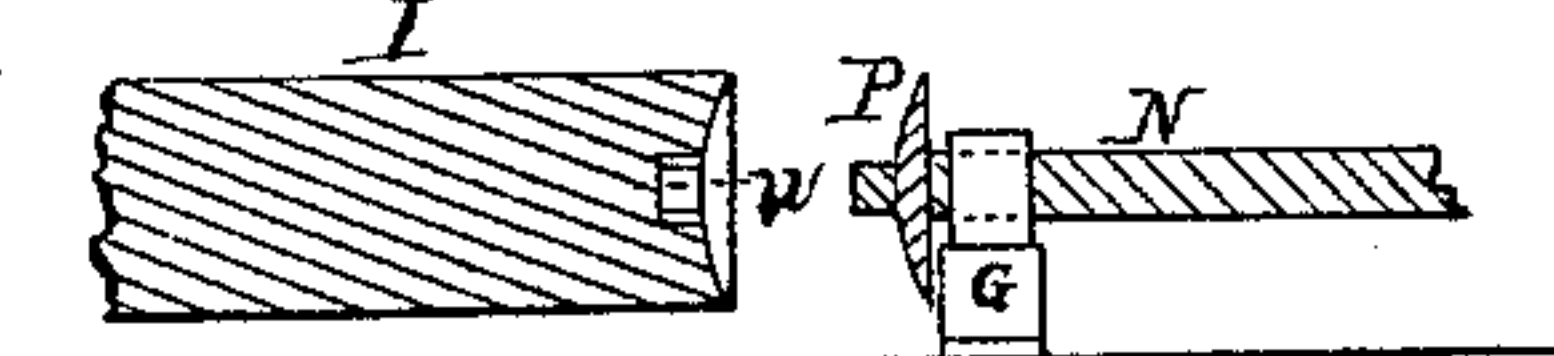


Fig. 6.



UNITED STATES PATENT OFFICE.

JOHN WAUGH, OF ELMIRA, NEW YORK.

MACHINE FOR TRIMMING THE EDGES OF PAPER-HANGINGS.

Specification of Letters Patent No. 21,710, dated October 5, 1858.

To all whom it may concern:

Be it known that I, JOHN WAUGH, of Elmira, in the county of Chemung and State of New York, have invented a new and Improved Machine for Trimming the Edges and Slitting Paper-Hangings or other Roll-Paper; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference thereon.

Figure 1 is a perspective view of the whole machine; A bed board; B, B, sills; W, X, sliding ways; E, C, wood pillars to receive a spindle; L iron triangular spindle; U pulley fixed to same; I, cylindrical wooden roller; F wood pillar to receive the iron gudgeon of roller; K hopper or trough; D wood pillar to receive knife shafts; O, upper knife; M shafts; S pulley fixed to same; Z crank handle; R a curved iron arm to support end of shaft; P lower knife; N shaft; T pulley fixed to same; G head block and metal box; Y a rabbet to receive the bottom of hopper; H H two cleats which keep the ways W X on sills B; *a, a*, steel springs against the ends of the way W; *b*, adjustable partition.

Fig. 2, horizontal plan exhibiting the interior of hopper containing part of a roll of untrimmed paper, the other portion of roll, trimmed and reeled on spindle, and the knives in the act of cutting the paper.

Fig. 3, elevation of end, showing crank handle pulleys and hopper with front raised up.

Fig. 4, is a sectional view on the line Q, Q.

Fig. 5, plan of the under side of bed board and ways showing the lever V, which communicates motion to ways W, X; B sills; A bed board; X, W sliding ways; V hand lever; *y* its center of motion; *x x* screws which connect lever and ways.

Fig. 6, section of lower knife-shaft, and that part of wood roller, which connects with same.

Fig. 7, view of knives as they come in contact to cut.

The nature of my invention, consists in providing paper hangers and others, with a machine to trim the edges, or slit roll paper, either in a right or waved line, as circumstances may require; with expedition and accuracy.

To enable others skilled in the art to make

and use my invention I will proceed to describe its construction and use.

On the two sills B B Figs. 1 and 5 I permanently secure the bed board A, composed of beech or maple one inch thick of sufficient length, and so wide that the ways when placed against its edges, shall be flush with the ends of sills. The way W, is placed on sills at the front of bed board and the way X, having the rabbet is placed at the opposite side, or back part. These ways are kept down on sills B, B, by cleats H H on top, but allowing the ways an easy sliding motion, right or left. On the bed board A Figs. 1 and 2 I erect the pillar D, to receive the shafts having attached to them, cast steel concave circular knives O, P, Figs. 1, 4, 7. The other end of shaft M is sustained by the iron arm R, and that of N is supported in the head block G. Their shaft N, projects beyond the knife P, and enters a metal bushing that is inserted in the end of roller I, for the purpose of supporting the end of roller which is made concave to receive and comes against the convex side of knife P. On the other end of bed board A I construct a wooden pillar F, to receive an iron gudgeon inserted in roller I. On the way W, is fixed two pillars C, E, to receive the triangular iron spindle L. To the knife shafts and spindle are securely fixed wooden pulleys U, T, S. To the shaft is attached a hand crank. Around pulleys is passed a cord or belt so crossed as to rotate them in the direction required.

I construct a hopper of the shape represented by Figs. 2, 3. The front perpendicular to the bed board. The back inclined making the bottom narrower, than top, the front is divided longitudinally a little above the level of board A. The upper part is hung on pivots to the upper points of the ends of back, Fig. 3; the lower part rests in way X; between the upper and lower part of front, a space or slot *c*, Fig. 1 is left of the thickness of paper. The bottom which projects downward beyond back and front is placed in the rabbet and adjusted in it by means of a thumb screw that passes through a slot cut through way X, in center of rabbet.

Within the hopper is a movable partition *b* Fig. 1, 2, adjusted by means of thumb screw that moves in a slot cut through back. Under the bed board A and ways W, X Fig. 1, 2, is placed a lever V which

is acted upon by hand. This lever is attached to bed board A (Fig. 5) by means of screw, *y* and on which as center of motion, the lever moves, this lever is also attached to the ways W, X, by screws *x*, *x*. This lever gives the ways a sliding but reverse motion when it moves on the center, *y*. At both ends of bed board are fixed steel springs, *a a*, Fig. 1, 2, 5, which press against the ends of way W, to keep it in a line with the ends of bed board A, when the lever is not acted upon by operator.

To operate the machine a roll of paper to be trimmed is placed in the hopper K, and the partition *b*, is brought to the end of roll and secured, to keep the paper parallel to front of hopper and at right angles with knives—the end of paper is then passed through slit in front of hopper, and the hopper is then to be adjusted in rabbet Y, to bring edge of paper in line with knives. The knives are set in motion also the spindle. The paper is passed through them and carried over wooden roller I and under spindle L and secured by the hand until it gets attached to spindle. The spindle by rotating, draws the paper between knives and out of hopper—with the same velocity that the knives revolve. In order to trim paper to the line of pattern, (which is often irregular,) the lever *v* is acted upon by the operator's left hand (while the right turns the crank Z) and by being moved on its center *y* as a fulcrum, it causes the ways W,

X to slide (on sills B)—and gives the same motion to hopper and spindle but in contrary directions—one to the right the other to the left, and the reverse. This sliding motion gives the operator control of the paper in its contact with knives, and taking it from them; thereby enabling the operator to cut the paper, either in a direct or waved line also to trim or cut out bordering. When the roll is trimmed it is taken off spindle by raising out of its bearing.

I do not claim as my invention revolving shears or knives—wooden roller—hand lever—or spindle rod—other, than in connection with the sliding ways X, W, and the peculiarly (adjustable) constructed hopper K; but

What I do claim as my invention and desire to secure by Letters Patent, is—

Rotating, concave, self sharpening circular knives, whose shaft do not revolve in the same line, but at an angle to each other—giving the knives a pressure against each other, at the point of contact only—the reverse sliding motion of hopper and reel spindle—in combination with wooden roller I—pulleys U, S, T and band and hand crank Z—in the manner and for the purpose substantially set forth.

JOHN WAUGH.

Witnesses:

E. V. COULTON,
T. J. COULTON.