(No Model.) 2 Sheets—Sheet 1.

J. H. MILTIMORE & H. M. UNDERWOOD.

MACHINE FOR TRIMMING WALL PAPER.

No. 346,307. Patented July 27, 1886.

Fig. 1.

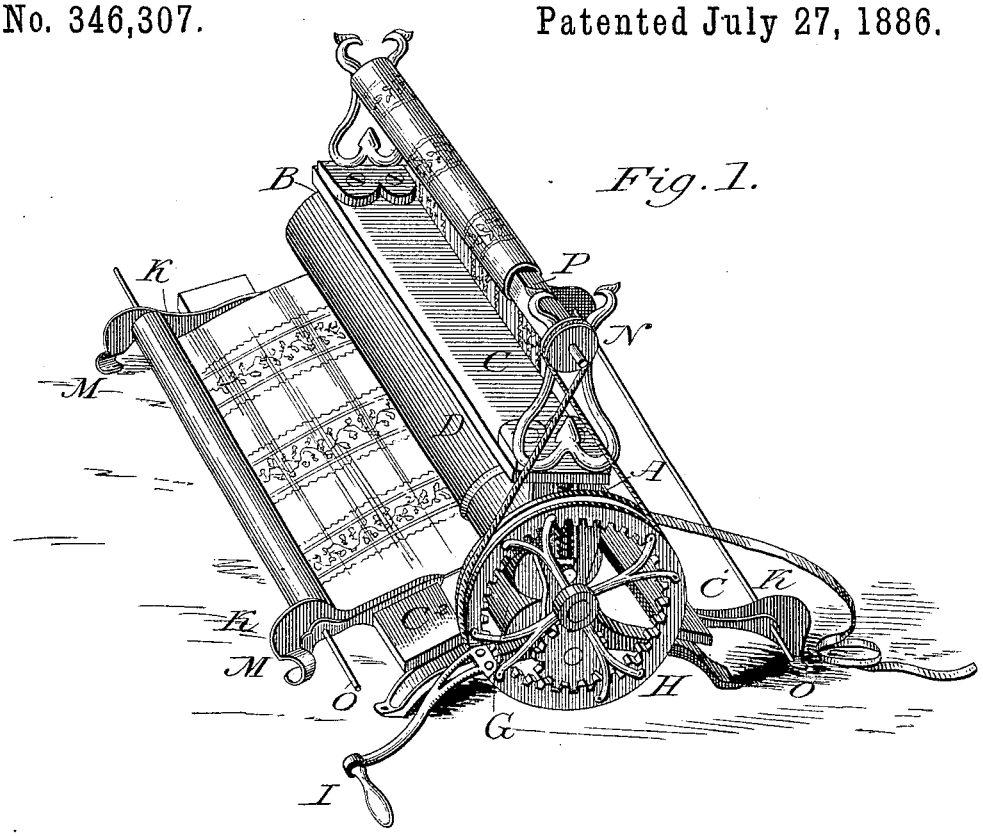
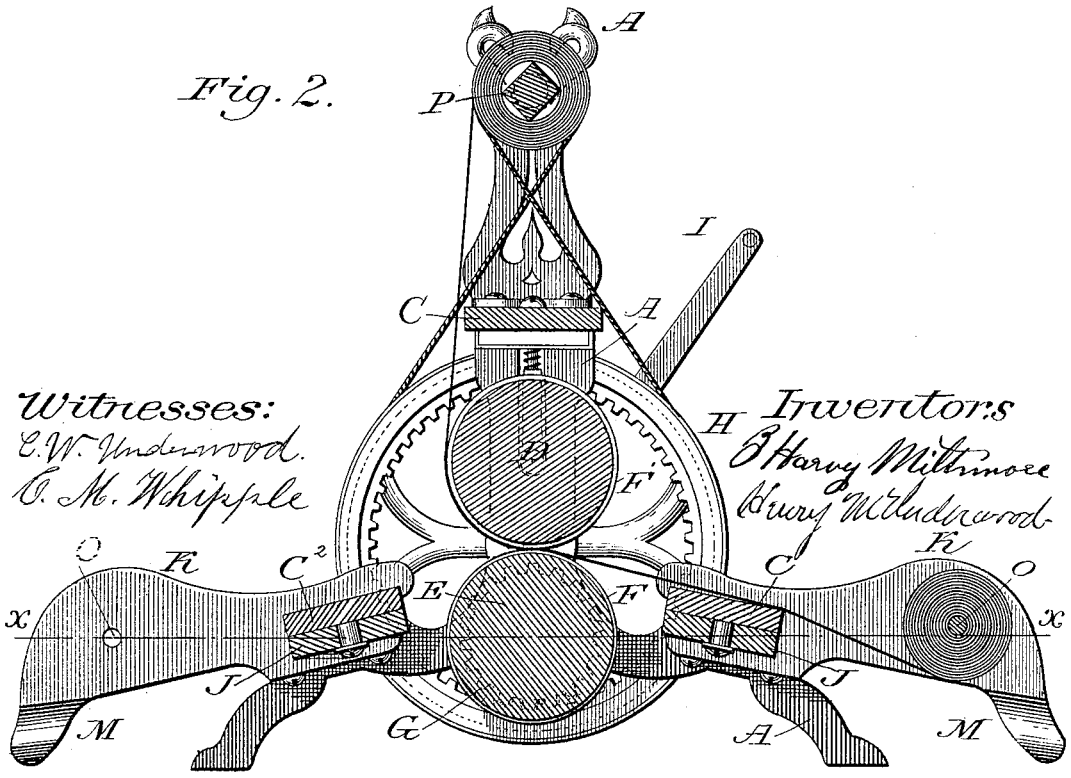


Fig. 2.



Witnesses:
C. W. Underwood.
C. M. Whipple

Inventors
H. Harvey Miltimore
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(No Model.) 2 Sheets—Sheet 2.

J. H. MILTIMORE & H. M. UNDERWOOD.

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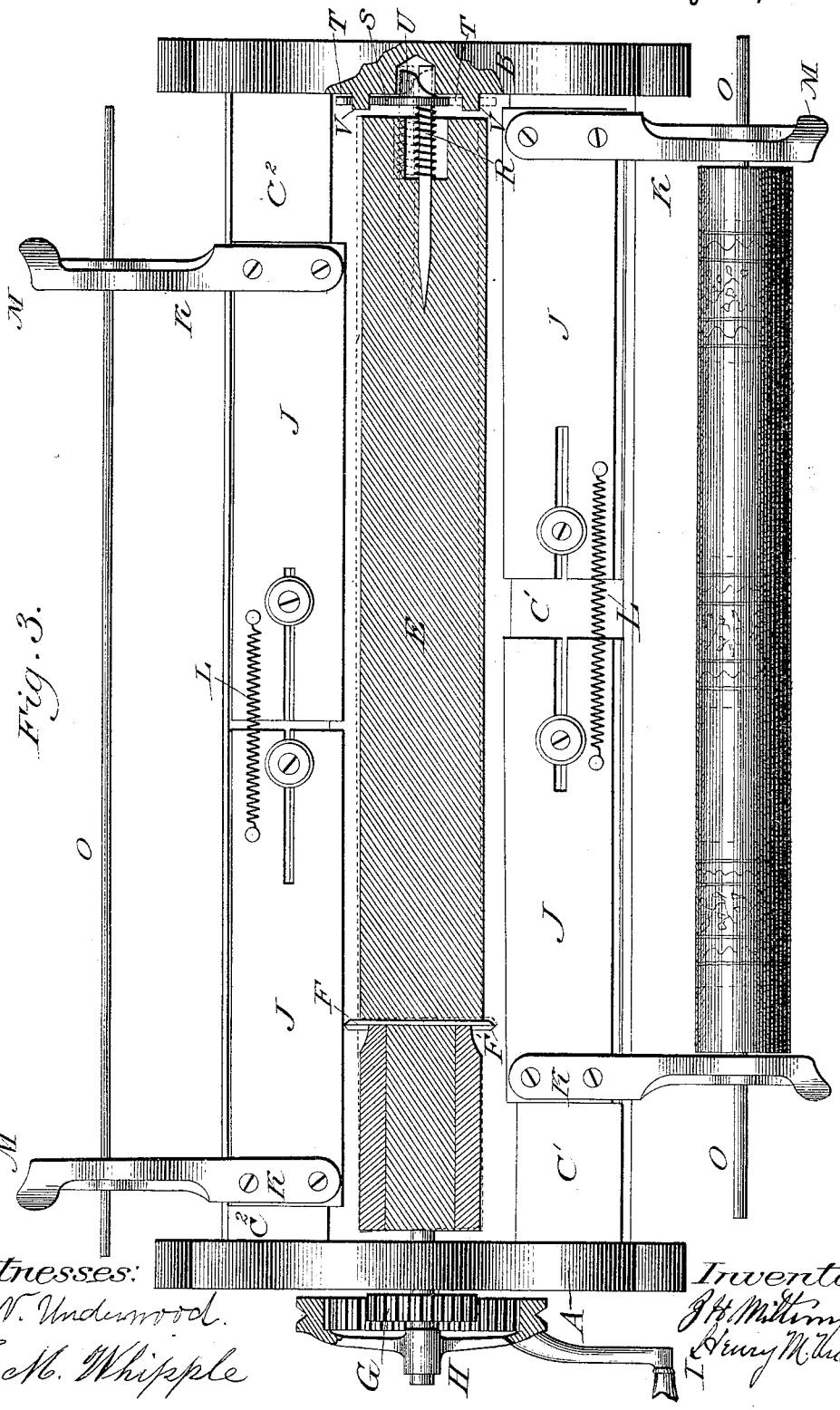

Fig. 3.

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UNITED STATES PATENT OFFICE.

J. HARVEY MILTIMORE AND HENRY M. UNDERWOOD, OF WAUKEGAN, ILLINOIS; SAID MILTIMORE ASSIGNOR TO SAID UNDERWOOD.

MACHINE FOR TRIMMING WALL-PAPER.

SPECIFICATION forming part of Letters Patent No. 346,307, dated July 27, 1886.

Application filed June 12, 1885. Serial No. 168,535. (No model.)

To all whom it may concern:

Be it known that we, J. HARVEY MILTIMORE and HENRY M. UNDERWOOD, both of the city of Waukegan, county of Lake, and State of Illinois, have invented certain new and useful Improvements in Machines for Trimming Wall-Paper, Preparatory to its being Placed upon the Wall; and we hereby make such full, clear, and exact description of our invention as will enable others skilled in the art to which it pertains to make and use it, reference being had to the drawings which accompany and form part of this specification.

For the protection of the edges of wall-paper during its transportation and handling, and for other purposes, it is customary for the manufacturers to leave a margin along both edges, one of which margins, at least, must be trimmed off, in order to allow the paper to be placed upon a wall in such manner that the ornamental design may match from one strip to the next and together form an unbroken figure. Further, it is desirable that the edge of the paper shall be so cleanly cut as to leave no fuzz, which during the operation of pasting the back of the paper would retain sufficient paste to soil the adjacent strip of paper, leaving a blemish upon the finished work; and, again, it is desirable that for some purposes only one margin of the paper shall be trimmed off; and, again, only the opposite margin; and, still again, that both margins shall be trimmed off.

The object of our invention is to furnish a machine for the use of paper-hangers and retail dealers in wall-paper that shall expeditiously do the work of trimming wall-paper in the manner and form as above described as desirable, and which shall be cheap to manufacture, perfect in its operation, and durable in the hands of inexperienced operators.

To describe and fully show the construction and operation of our improved machine we refer to the accompanying drawings, in which similar letters refer to like parts in the different views.

Figure 1 is a perspective view of our machine. Fig. 2 is a sectional elevation of the same. Fig. 3 is an inverted sectional view on the line X X of Fig. 2.

A and B represent two metallic standards, which are secured together and at suitable distance apart by the three equally-proportioned strips C, C′, and C^2, by which means a frame is provided to sustain the rollers D and E by their journals or gudgeons. Near to one end each of these rollers is provided with a circular cutter, F and F′, each sufficiently large to slightly overlap each other, in the manner of shears, when the rollers are placed in position, the one in contact with the other. The surface of the roller D is brought into yielding contact with the roller E by means of springs in the standards A and B bearing upon the gudgeons of said roller D, so that when the roller E is revolved the friction causes roller D also to revolve in a way to draw paper through between them, while the rotating cutters F and F′ shear a strip from the edge of the paper.

In order that the cutter F shall bear closely against the side of the cutter F′, the roller E has in one end and about its gudgeon a spiral spring, R, as shown, and the end motion of the roller D is limited by the standard A. Motion is communicated to the roller E through a pinion, G, driven by the internal gear of the pulley H, to which is attached the handle I, used by the operator.

Upon the under side of the strips C′ and C^2, on either side of the machine, are provided, in pairs, other shorter strips, J, so attached as to be free to slide endwise to and from each other, on the farther ends of which are rigidly attached ears K, which ears loosely surround the strips C′ and C^2. The ears K are provided with large surfaces having a hole through near the center, through which a wire or rod, O, is passed, upon which a roll of paper is suspended in such manner that, the rod passing through the center of the roll from end to end, the ears K are brought to bear against each end of the roll, and by means of a contracting-spring, L, attaching and drawing the two sprips J, the one toward the other with more or less force, the ears K operate as a brake to prevent the paper from unrolling more rapidly than is desired. By this arrangement we are enabled to dispense with the loosely-shifting table, common to other machines of this class, and by slightly pressing in either direction upon any one of the thumb-pieces M of

the ears K we are enabled to guide the paper into the machine direct from the roll and to determine the extent of the margin to be trimmed off, as desired.

Mounted in notched standards attached to each end of the strip C is a squared and tapered spindle, P, having a journal at the small end and at the other end a journal and a pulley, N, which is connected by a crossed belt from the pulley H, as shown.

In practice it has been found that it is almost impossible to obtain a cut straight, clean, and free from fuzz, where the axes of both such rollers, as D and E, lie in the same plane, and where, as a consequence, the cutters F and F′ bear against each other with equal pressure at the two extremes of their lap.

As we desire the machine to be capable of working in either direction, for reasons herein explained, we are unable to permanently throw either roller out of line with the other without totally destroying its usefulness for one side or the other. We therefore provide a thin washer, S, having an arm, T, projecting from one edge, and a crescent-shaped projection, U, on one side partially surrounding the hole in the washer, which hole is slightly larger than the gudgeon of the roller E.

In the standard B we provide a circular opening, as shown in Fig. 3, sufficiently large to admit the gudgeon of the roller E and the crescent shaped projection U of the washer S when placed in position, as shown. A straight line drawn through the centers of this circular opening in standard B and the corresponding opening in standard A would lie in the same plane as the axis of the roller D.

Pressing against the washer S is the spiral spring R in the end of the roller E, which by frictional contact with the face of the washer S causes it to partially revolve in either direction as the roller E revolves, until its further revolution is limited by its arm T coming in contact with the projecting pins V of the standard B. We thus have a self-acting eccentric-like bearing for the gudgeon of the roller E, which operates to throw that end of the roller toward that side of the machine into which the paper is fed, and as a consequence the cutters F and F′ are caused to meet more closely on that side of the machine, producing a more perfect cut of the paper passing through from that side. Upon reversing the motion of the machine and feeding paper from the other side the washer turns over until its motion is limited by the other pin, V, of the standard B, and the machine is at once in proper condition to do its work in all respects as well as in the first instance and for like cause.

As a matter of choice we show and use our eccentric-like bearing on the gudgeon of the lower roller, E, of our machine; but it is evident that the same or like device can be applied to either gudgeon of either of the two rollers D or E and like results be obtained.

In use of the machine the roll of wall-paper to be trimmed is placed upon the rod O and suspended between the ears K and K at one side of the machine, as shown. The end of the paper is passed directly between the rollers and up on the other side to the spindle P, about which it is wound. Continued revolution of the pulley H by means of the crank I draws the entire length of the paper through the machine and winds it about the spindle P, during which operation the margin of the paper is trimmed off to the extent desired by the operator, who has control by means of the thumb-piece M. The spindle P being raised at one end from its open-top bearing, the roll of paper is readily removed therefrom. Should it be desired to trim off the other margin instead, it would only be necessary to place the paper in similar position on the other side of the machine and to turn the crank in the contrary direction. To trim both edges the roll of paper is taken from the spindle P and passed through the machine a second time.

We do not claim as our improvement the use of any special form or construction of rollers or cutters for such a machine, being aware that such as are shown in our drawings are old and in general use.

We do not claim the construction of such a machine with the lines of the axes of the two rollers permanently fixed in different planes, as we believe such construction has heretofore been made, and in our machine such construction would not serve our purpose.

We do not claim any part or parts of the machine shown in our drawings, except as expressly stated below, and

Such improvements we desire to secure by Letters Patent, viz:

1. In a paper-trimming machine, the ears K, rigidly attached to sliding strips J and connected together in pairs by the contracting-spring L, in combination with the immovable strips C′ or C², upon which such pair is mounted, substantially as described and shown, and for the purpose specified.

2. In a paper-trimming machine, an eccentric shifting device for one end of the roller E, consisting of the gudgeon of said roller E, the spring R, and the washer S, in combination with the standard B, all constructed substantially as described and shown, and for the purpose set forth.

3. In a paper-trimming machine, the rollers D and E, provided with the cutters F and F′, in combination with a shifting device for one end of one roller, consisting of the gudgeon of the roller E, the spring R, the washer S, and the standard B, constructed substantially as described and shown, and for the purpose specified.

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HENRY M. UNDERWOOD.

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