(No Model.) 2 Sheets—Sheet 1.

F. H. MILLER.

PAPER HANGING MACHINE.

No. 421,596. Patented Feb. 18, 1890.

Fig. 1.

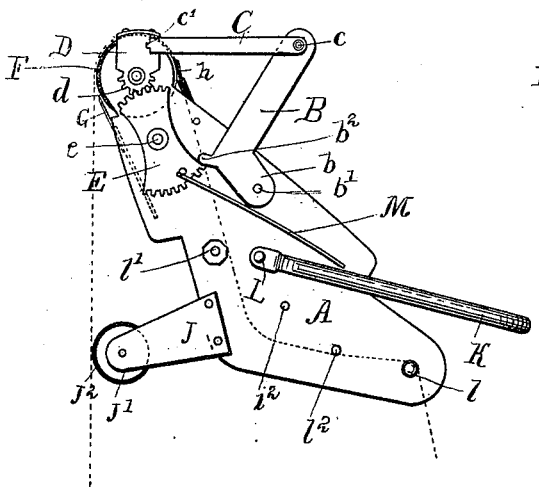


Fig. 2.

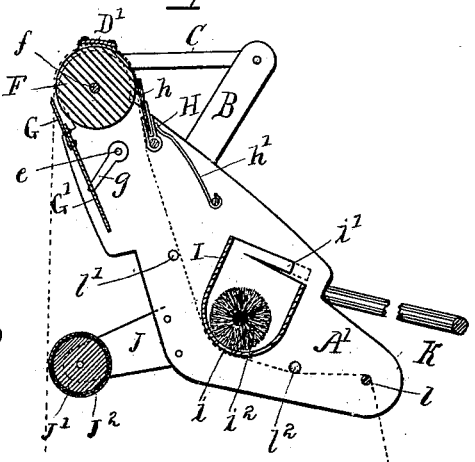


Fig. 3.

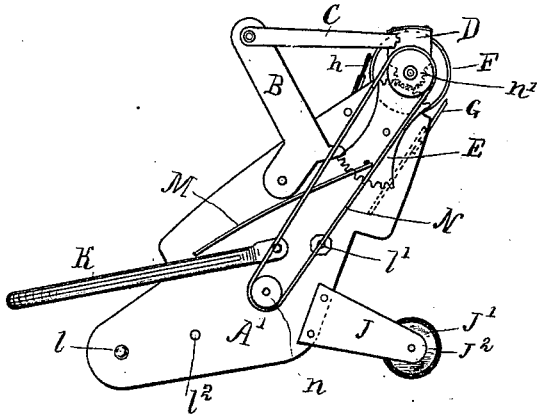
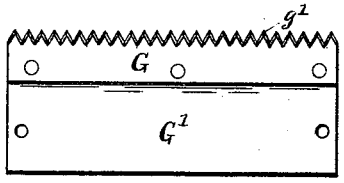


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

F. H. MILLER.

PAPER HANGING MACHINE.

No. 421,596. Patented Feb. 18, 1890.

Fig. 5.

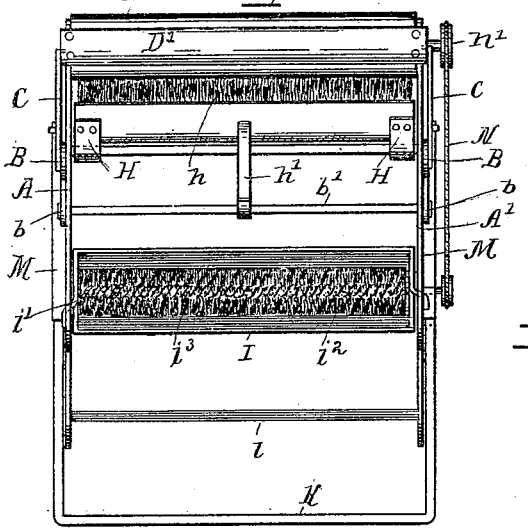

Fig. 6.

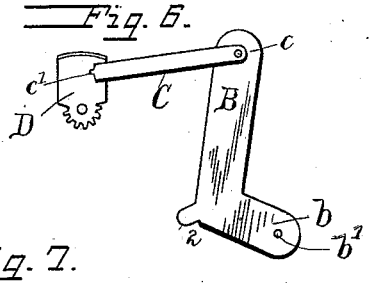

Fig. 7.

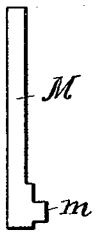

Fig. 8.

Fig. 9.

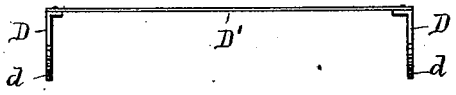

Fig. 10.

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UNITED STATES PATENT OFFICE.

FRANK H. MILLER, OF STANWOOD, IOWA.

PAPER-HANGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 421,596, dated February 18, 1890.

Application filed June 28, 1889. Serial No. 315,861. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. MILLER, a citizen of the United States, residing at Stanwood, in the county of Cedar and State of Iowa, have invented certain new and useful Improvements in Paper-Hanging Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to machines for papering the walls of houses; and its objects are, first, to effect this object mechanically; second, to obviate manual interposition entirely other than that required to hold the device; third, to feed the paper automatically; fourth, to apply the paste automatically and in a uniform layer; fifth, to press the paper against the wall by the same device; sixth, to cut the paper at any required altitude, and, seventh, to accomplish these ends with structural simplicity and economy. I accomplish these aims by the device shown in the accompanying drawings, in which—

Figure 1 represents a side elevation of a hand device embodying the essential features of my invention. Fig. 2 is a central longitudinal section thereof. Fig. 3 is a side elevation reverse to that of Fig. 1. Fig. 4 is a detail view of the cutter. Fig. 5 is a plan view of the device. Fig. 6 is a detail of the toggle-arms, by which the paper is cut. Fig. 7 shows a spring whose retractile force is exerted to normally restore the toggle-arms. Fig. 8 shows the bearing of the shaft whereon the segmental gear is mounted. Fig. 9 represents the oscillating cutting-frame, and Fig. 10 illustrates the adjustable paste-receptacle.

The same designations indicate corresponding parts in the several views.

In the art of decorating habitations with wall-papers, which originated in A. D. 1555 by the substitution of paper for the silk hangings theretofore used, a variety of delicate operations are required in order to produce a uniformly superior effect. The ornamentation of such paper was the subject of a patent as early as 1634, in the time of Charles the First. Numerous patents have since been granted in various countries for the ornamentation of such paper, for its production in continuous sheets having a superficial area of sixty feet, for the even distribution of an adhesive agent, for pressing such paper against the walls, for the cutting of such paper, and for tools incident to such operations. To provide a mechanism that will successively perform all these needful steps in proper gradation will supply a long-felt want, and correspondingly diminish the labor connected therewith. This is the aim to which my invention is addressed.

Between the side frames A A′ the paste-compartment I is removably adjusted by lugs i', that fit corresponding recesses in the frame. The slot i at the base thereof serves to feed the paste automatically, while the removability of the receptacle tends to keep the paste in good condition. The paper can either be in a loose roll or can be wound on the stationary bar l, which otherwise serves as a guide over which it passes to a passage under the guide-rod l^2, between which and the roller l' a coating of paste is applied by the rotary brush i^2, (to which motion is imparted by band N from the driving-pulley n' to the pulley n, terminally mounted on the brush-shaft i^3,) which is evenly distributed by the brush h, having the frame H, which is held in constant contact with the paper by the spring-pawl h', attached to the arm b. The paper thereafter passes over the roller F, whose shaft f serves also as a pivotal center for the oscillating frame D′, a toothed segment d of the arm D of which meshes with a broken gear-wheel E against the force of the springs M, that fit into the sides A A′ by reason of a projection m, and whose other ends rest against pins projecting from the wheels E. After passing the roller F the paper is then in condition for application to the wall, which is begun from the base-board upwardly, all creases being smoothed by the roller J′, having a layer of soft material J^2 circumferentially attached thereto, and mounted in the bearings J, projecting from the frame. Between the sides A A′ forwardly is also secured a plate G′, (constituting also an attachment for the pawls

g,) to which a knife G, having dentated serrations g', is secured. Whenever the papering operation is completed to the ceiling, the force of contact with said ceiling will depress the toggle-arms B, whose smaller arm b is pivotally attached to the frame by pin b', and a projection b^2 thereon serves to limit the motion of the segmental gear-wheel E, and to the terminus of whose larger arm the rod C is held by pin c, the other terminus whereof is provided with a lug c', that fits a corresponding recess in the frame D, and thus imparts motion thereto, serving thus to press the paper forcibly against the teeth g', thereby cutting it.

K is the handle by which the manipulations of the device are effected, secured to the frame by bolts L.

It will be understood that this device is likewise serviceable for papering ceilings.

Having thus fully described my invention, what I claim is—

In a paper-hanging machine, the combination of the oscillating frame D′, having toothed arms D, the segmental gear-wheel E, meshing therewith, the spring M, engaging wheel E to restore the frame to its normal position, the toggle-arm B, having projection b^2, limiting the motion of said wheel, and an attached arm C, transmitting motion to frame D D′, and the stationary cutter-plate G G′, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

FRANK H. MILLER.

Witnesses:
J. N. BOLING,
T. E. MCGOWAN.