

R. A. CONNELL.
Paper-Folding Machines.

No. 196,075.

Patented Oct. 16, 1877.

Fig. 1

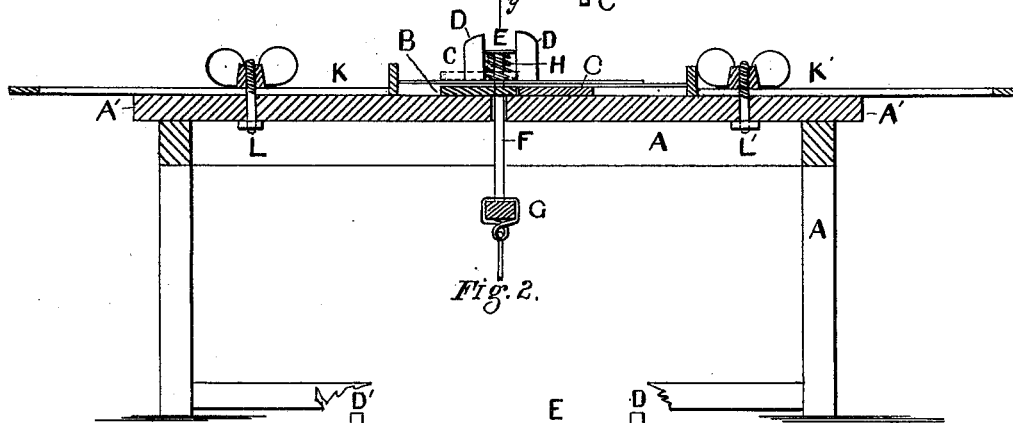
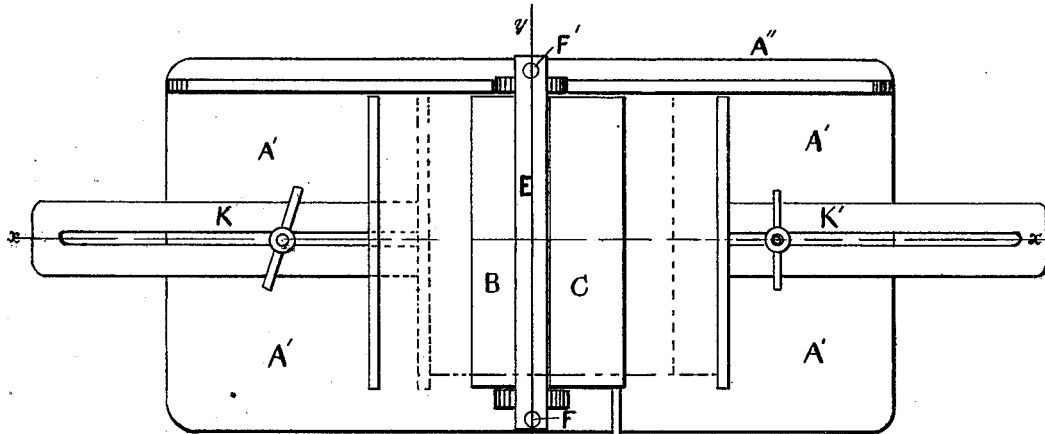


Fig. 2.

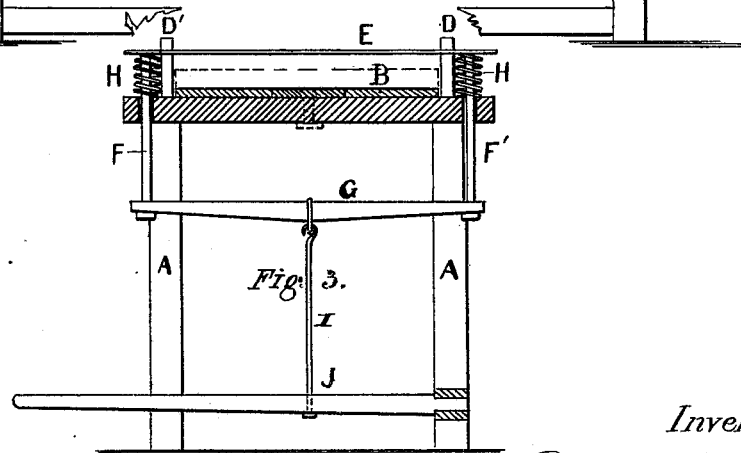


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT A. CONNELL, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN PAPER-FOLDING MACHINES.

Specification forming part of Letters Patent No. **196,075**, dated October 16, 1877; application filed August 6, 1877.

To all whom it may concern:

Be it known that I, ROBERT A. CONNELL, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Machines for Folding Paper and other Substances; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 is a plan view of my improved machine, showing the upper surface of the table, the adjustable stops or guides for the sheets to be folded, the side guide for keeping them in position, the raised platform upon which the sheets rest while being folded, the swinging folder, and the cross-bar for pressing them down upon the raised platform. Fig. 2 is a sectional elevation on line *xx* of Fig. 1, showing the position of the adjustable stops or gages, and the sheets to be folded, the raised platform, the swinging folder, both in its normal position and in the position to which it is brought in folding the sheets, the cross-bar for holding the sheets in position, the rods extending downward therefrom, and the springs for returning the bar to its highest position. Fig. 3 is a transverse section on line *yy* of Fig. 1, showing a portion of the frame-work, the cross-bar, and the mechanism for operating the same.

This invention relates to a machine for folding sheets of paper in such a manner as to leave, when folded, one narrow leaf and one wide one, alternating with each other, when bound into a book; and it consists in the construction of such a machine as hereinafter described for that purpose set forth.

In constructing machines of this character, I make a frame, A, of wood or metal, and of any desired dimensions, and place upon the top thereof a table or cover, A', upon one edge of which there is placed a side guide, A'', against which the sheets of paper are placed when put in position for folding, in order that the point at which the fold is made may be at a right angle to the edges or line of greatest length. Upon the table or cover

there is placed a raised platform, B, upon which the sheets of paper to be folded are to be placed, as shown in Fig. 2 of the drawings. This platform is placed at or near the center of the table A', and has by its side a swinging folder, C, which may be hinged to its edge, or it may be pivoted to the jaws which guide the cross-bar, soon to be described. This swinging folder is shown in two positions in Fig. 2—the one in which it is represented as being alongside of the raised platform being the one in which it is placed when the sheets of paper are placed upon it, the other, in which it is shown as folded over the raised platform, being the one to which it is brought in the act of folding the sheets. The movements of this folder may be effected in various ways, the most obvious one being by the use of a pin or handle, C', inserted in one of its ends.

For holding the sheets of paper in position while being folded, there are placed upon the table and firmly secured thereto stands or jaws D D', they being far enough apart to admit of there being placed between them, in a direction transverse to the greatest length of the table, a cross-bar, E, the outer ends of which are secured to vertical rods F F', which pass down through the table A', and are secured to a bar, G, which extends across the machine, from one to the other. Upon the upper ends of the rods F F' springs H H are placed, their lower ends resting upon the table, while their upper ends press against the under side of the cross-bar E. Extending downward from bar G is a rod, I, the lower end of which is secured to a treadle, J, one end of which is made to pass into a mortise formed in the frame A, while its other end is left free to move up and down, so that as the sheets of paper are placed upon the raised platform B and the swinging folder C, the bar E may be brought down by placing the foot upon the treadle J, and thus said sheets be held in position while being folded.

In order that the sheets folded upon this machine may have one leaf wider than another, as is required in folding sheets of paper for invoice-books, scrap and some other books, there is placed upon the upper surface of table A' two adjustable stops or guides, K K', which may be of the form shown in Figs. 1 and 2, or

any other suitable form that will permit the ends of the sheets of paper to rest against them when ready to be folded, and will determine the positions of such sheets in such a manner that when folded each sheet shall present one wide and one narrow leaf, so that when bound into a book for preserving invoices or for other purposes, the wide leaf may be used for securing the bill or invoice thereto, and the narrow one for keeping the account, or for any remarks that may be required, and will also compensate for the thickness of the sheet pasted on the wide leaf. It is necessary that books of this character should have varying width of leaves, and hence the stops or guides K K' are made adjustable, so that they may be varied as to their distances from the folding-point; and in order that they may be held in their adjusted positions, bolts L L' are secured to the table A', and pass up through a slot in the adjustable stops, and have nuts upon their projecting ends, which hold the stops when screwed down upon them.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. In a machine for folding paper, the combination of the table A', the raised platform B, swinging platform C, and the vertically-moving cross-bar E and its operating mechanism, substantially as and for the purpose set forth.

2. In a machine for folding sheets of paper, the combination of the swinging folder C, the vertically-moving cross-bar E, the adjustable stops or guides K K', and the side guide A'', whereby sheets of paper may be held in position and folded in such a manner that one of their leaves will be wider or longer than the other, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ROBERT A. CONNELL.

Witnesses:

FRANK MILLER,
A. D. STIDHAM.