

A. WASHBURN.
Paper-Folding Machines.

No. 141,742.

Patented August 12, 1873.

Fig. 1.

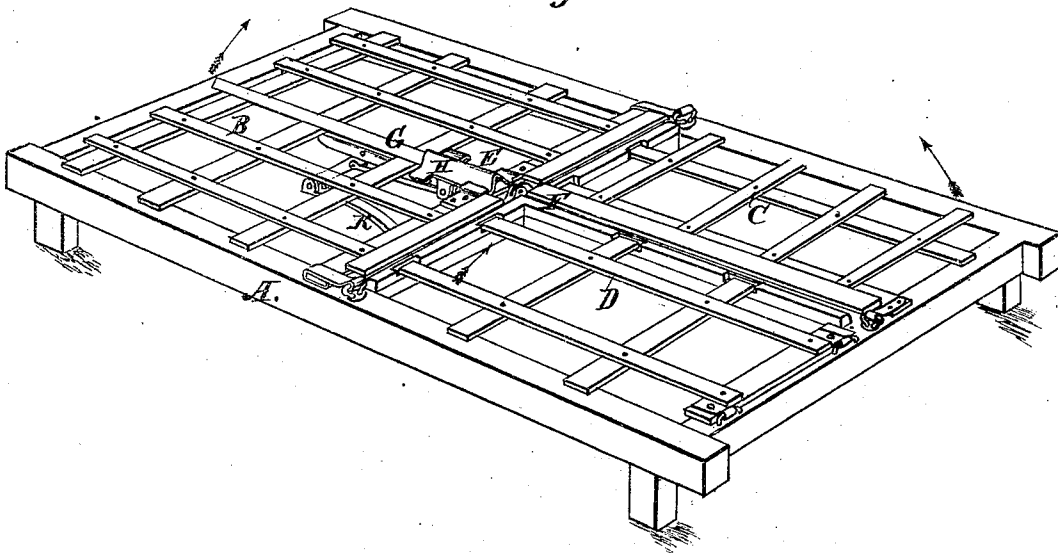


Fig. 2.

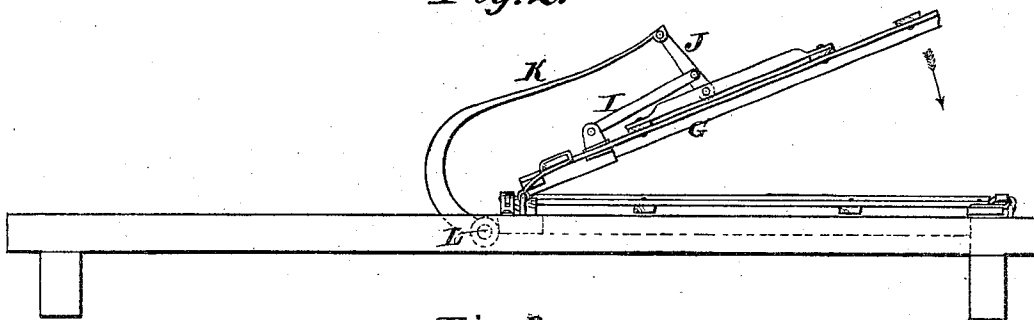
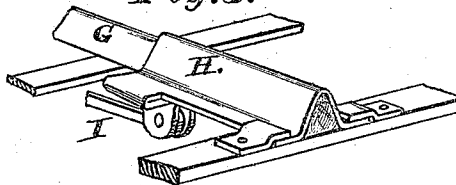


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

ALVAH WASHBURN, OF MEDINA, OHIO.

IMPROVEMENT IN PAPER-FOLDING MACHINES.

Specification forming part of Letters Patent No. **141,742**, dated August 12, 1873; application filed May 1, 1873.

To all whom it may concern:

Be it known that I, ALVAH WASHBURN, of Medina, in the county of Medina and State of Ohio, have invented certain new and useful Improvements in Paper-Folding Machine, of which the following is a specification:

This invention has for its object to improve that class of machines for folding paper in which hinged frames or flies are employed for performing the folding operation; and it relates more especially to improvements upon the machine forming the subject-matter of Letters Patent granted to me November 26, 1872, and numbered 133,393. The first feature of the invention consists in the provision of a sliding or extension creasing-blade, applied, in the present instance, to the delivery or main frame of the machine, and operating to crease the paper at the point where the hinge of the second folding-fly is located, thus obviating the formation of an imperfect crease at the end of the sheet, as in machines heretofore constructed.

In the drawings, Figure 1 is a perspective view of the folding-frames of a paper-folding machine with my invention applied thereto; Fig. 2, a side view of the same; and Fig. 3, a detached view of the sliding creaser and stationary creasing-rib.

The construction of the folding frames or flies and the mechanism for operating the same differs in no respect from my previous patent, except that I have, in the present instance, shown a less number of frames; but this is not essential, as the number of frames may be varied so as to make any number of folds desired, as from folio to the highest number ever used.

In order, however, to obtain a full understanding of the improvements made upon my former machine, reference is made to the drawing, in which—

A represents the frame or table supporting the entire operating mechanism; B, the primary or creasing frame, which receives the sheet of paper from the printing-press, and folds it onto the secondary folding-frame C, which turns at right angles to the frame B, and folds the paper upon the frame D, the latter frame discharging the paper in a folded state at the side or end of the machine.

Said frames are operated in a successive order by the mechanism, the same as shown

in my previous patent, and it is therefore not deemed necessary to show the same in the present instance.

In previous machines provided with folding-flies, the hinge E, upon which the secondary folding-frame turns, is located at the end of the channel or groove F, which operates in connection with the rib G on the primary or delivery frame to form the crease or first fold in the sheet of paper; but such an arrangement of parts possesses the disadvantage of not perfectly creasing the sheet at the end contiguous to the hinge, as the creasing-rib, in order to clear said rib, is cut away at that point.

To overcome these defects, I employ an extensible or sliding creasing-blade, H, which is formed so as to embrace the creasing-rib G, and connected through the medium of a link or rod, I, to a lever, J, having its fulcrum in a flanged plate applied to the under side of the fly B. Said lever is connected, through the medium of an arm, K, to a rock-shaft, L, which is actuated in the manner shown in my previous patent for operating the fly B. When the latter is turned onto the other frames of the machine, the creasing-blade will, in its passage over the hinge E, be moved to a sufficient extent on the rib G, so as not to interfere with the hinge, and will then be forced backward so as to crease the end of the sheet, as will be apparent. The arm K, connecting the rock-shaft L to the frame B and to the sliding creasing-blade, is made tapering or elastic, so that when the frame is folded upon the paper it will spring or yield, thus dispensing with the separate connecting springs shown in my previous patent.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The sliding creasing-blade H, combined with the stationary creasing-rib and folding fly or flies of a paper-folding machine, as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of April, 1873.

ALVAH WASHBURN.

Witnesses:

C. F. SPENCER,
E. W. GODDARD.