

# UNITED STATES PATENT OFFICE.

STEPHEN WILCOX, JR., OF WESTERLY, RHODE ISLAND.

## PRINTING-PRESS.

Specification of Letters Patent No. 18,618, dated November 10, 1857.

*To all whom it may concern:*

Be it known that I, STEPHEN WILCOX, JR., of Westerly, Washington county, State of Rhode Island, have invented certain new and useful Improvements in Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is an end elevation. Fig. 3 is an end view of the platen and fly, and similar letters indicate similar parts throughout.

My invention consists, firstly, in the method of giving the impression; secondly, in the method of flying the sheets.

The construction and operation is as follows:

The frame is of any convenient form, and has on its top the level bed A. Above the bed is the platen B, which is rolled over the bed to give the impression. Through the top of the platen passes shaft *e*. Radius bars C, C, are fixed at their lower ends to shaft *d* so as to turn with it, their upper ends receiving the ends of shaft *e*. The main drawing shaft *a* has cranks *a'* (one only shown) at each end. Upon the crank pins are rollers playing in slots *b*. By turning the crank handle *a''*, the action of the crank-pin rollers upon the sides of the slots, will cause radius bars C, C, to vibrate, and platen B, to roll back and forth over the bed. The upper ends of the radius bars will describe arcs of circles which approach the bed when moving toward the extremes of motion, and recede from it when moving toward the central point of its motion; consequently if the face of B, was turned upon centers corresponding with the center of shaft *e*, it would only touch the bed at the extremes of motion and be lifted from it at the center. To prevent this the platen is turned on centers nearer its bearing face, so as to give it such a degree of eccentricity as will exactly compensate for the rising and falling of shaft *e* and cause the face of B, to bear equally upon the bed at all points. The radius bars answer the double purpose of communicating motion to the platen and holding it down while giving the impression.

*n, n,* are the ink rollers, connected by link *o*, with the radius bars, so that as the bars vibrate they roll over cylinder *t*, to re-

ceive a supply of ink, and then over the form on bed A, to distribute it.

Attached to the ink roller shafts and carried by them is table *j*. To this table is fixed a pair of grippers *z*. The sheets to be printed are laid on table *i*, and fed down to its edge. Upon the forward motion of the machine, grippers *z*, grasp the sheet and draw it off table *i*, onto table *j*, and carry it forward until the platen assumes the position shown in Fig. 2, when the sheet is delivered to grippers *z'* attached to segment B, which close upon it, grippers *z*, at the same time opening to release it, and then return for a fresh sheet. Table *m*, is for receiving the printed sheets. It has a raised edge on three sides, the end pieces tapering down thin next the platen that it may run under and catch the lower edge of the sheets. This table is also connected to the radius bars, (by link *o'*) and moves with them, sliding out on brackets *p, p*, to clear the platen as it rolls forward and running in to receive the sheet as it rolls back.

The fly *f, f*, is made of two elastic strips of steel attached to the platen at one end and connected by a cross piece at the other. As the platen rolls forward the fly is bent around it until the cross piece comes over the grippers or catches on shaft *h*, when toe 2 strikes stud 3, and trips the grippers so that they catch the fly and hold it fast. Grippers *z*, are connected with *h*, and close at the same time. As the bed rolls back the sheet is printed and wound upon B. When the printing is completed toe 4, comes in contact with the bed and through connection 5, opens both grippers *z'* and *h*, and the elasticity of fly *f*, straightens it out and lays the sheet on table *m*, while the fly rests upon the inclined ends of the table, so as not to drag the sheet out as the table runs forward.

The bed is raised and lowered by mechanism not shown in the drawings.

Fig. 3, shows the fly partly bent around the platen.

The operation will now be thus: When the machine is in operation, a sheet fed to the lower edge of *i*, is seized by grippers *z*, and drawn over the form on bed A, and delivered to grippers *z'* on platen B. The same movement draws the ink rollers over the form and does the inking, bends up the fly and closes grippers *z'* and *h*. The return

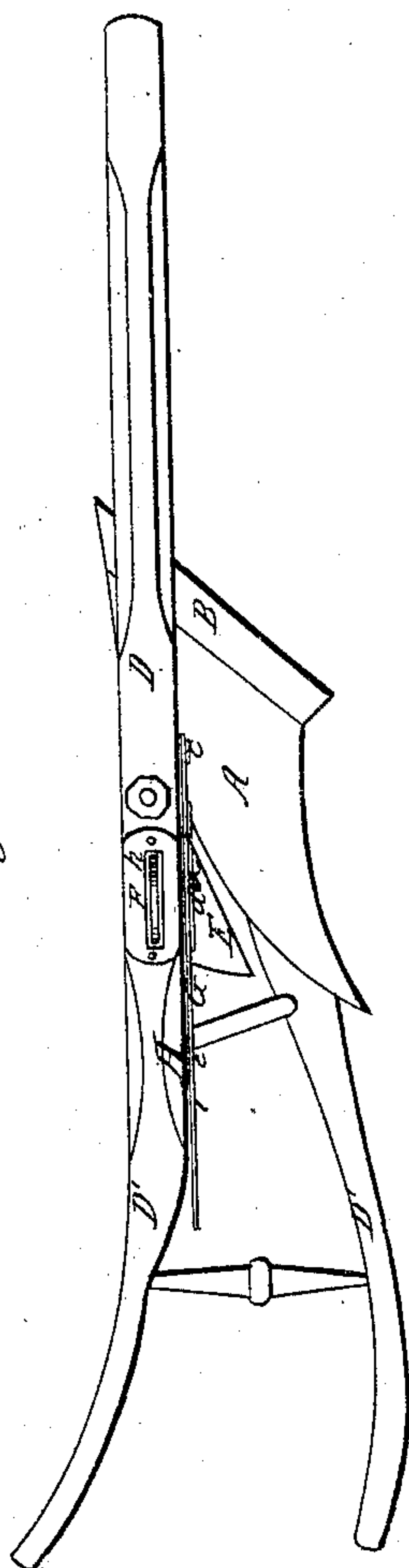
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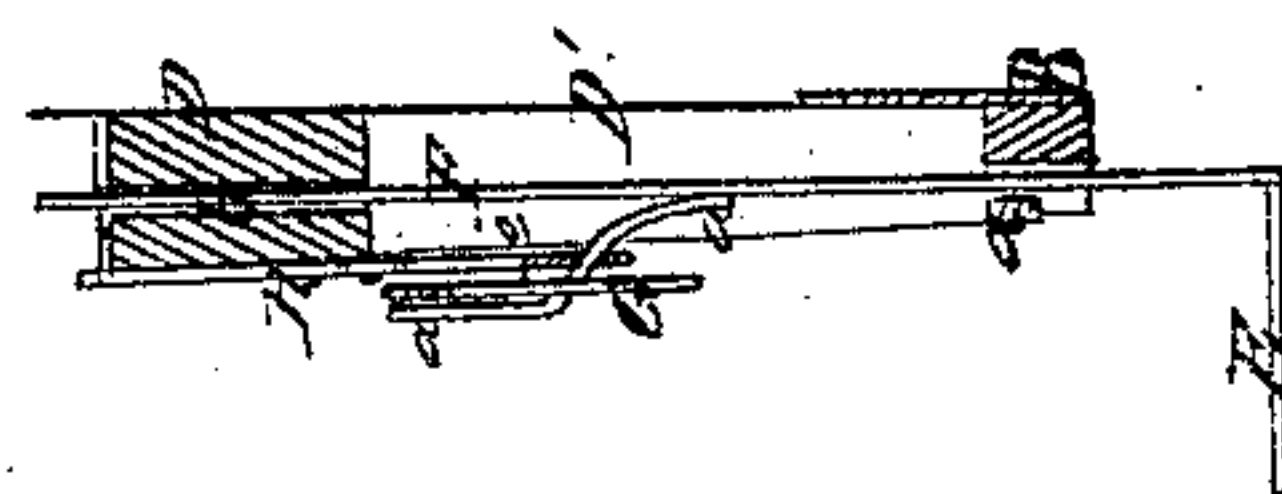
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*Fig. 1.*



*Fig. 3.*



*Fig. 2.*

