M. D. WILKINS. 2 Sheets—Sheet 1

AUTOMATIC RECEIVING-TABLES FOR PRINTING-PRESSES.

No. 195,427. Patented Sept. 18, 1877.

Fig. 1.

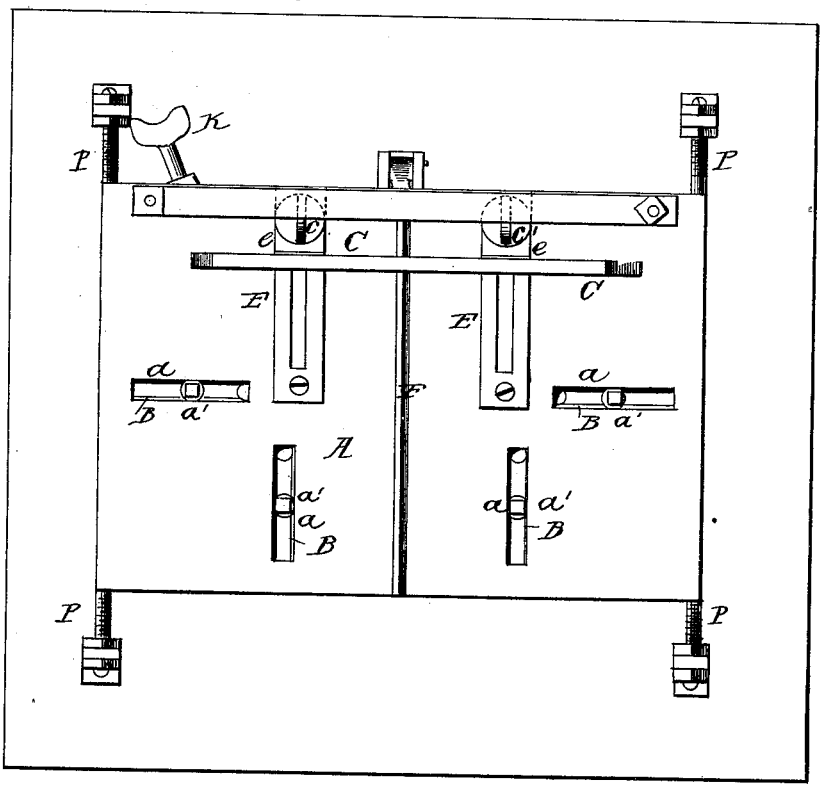

Fig. 2.

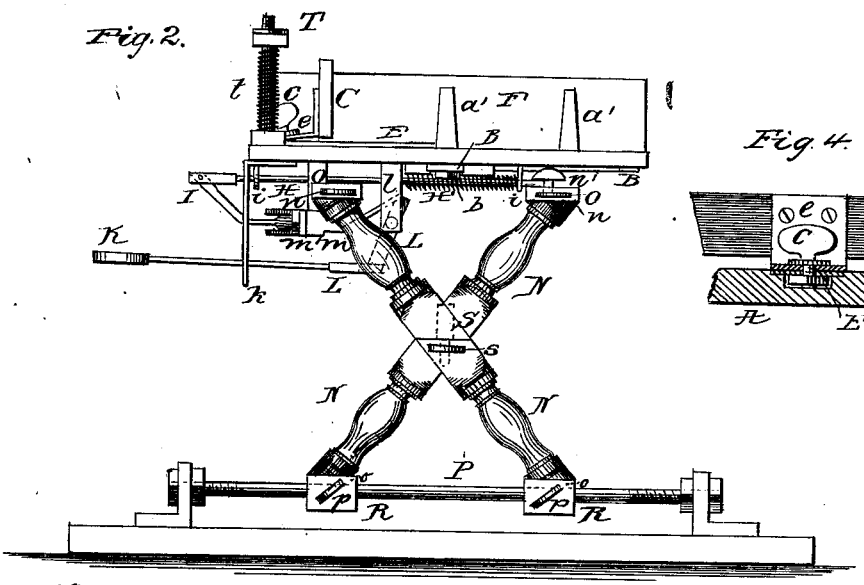

Fig. 4.

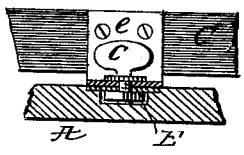

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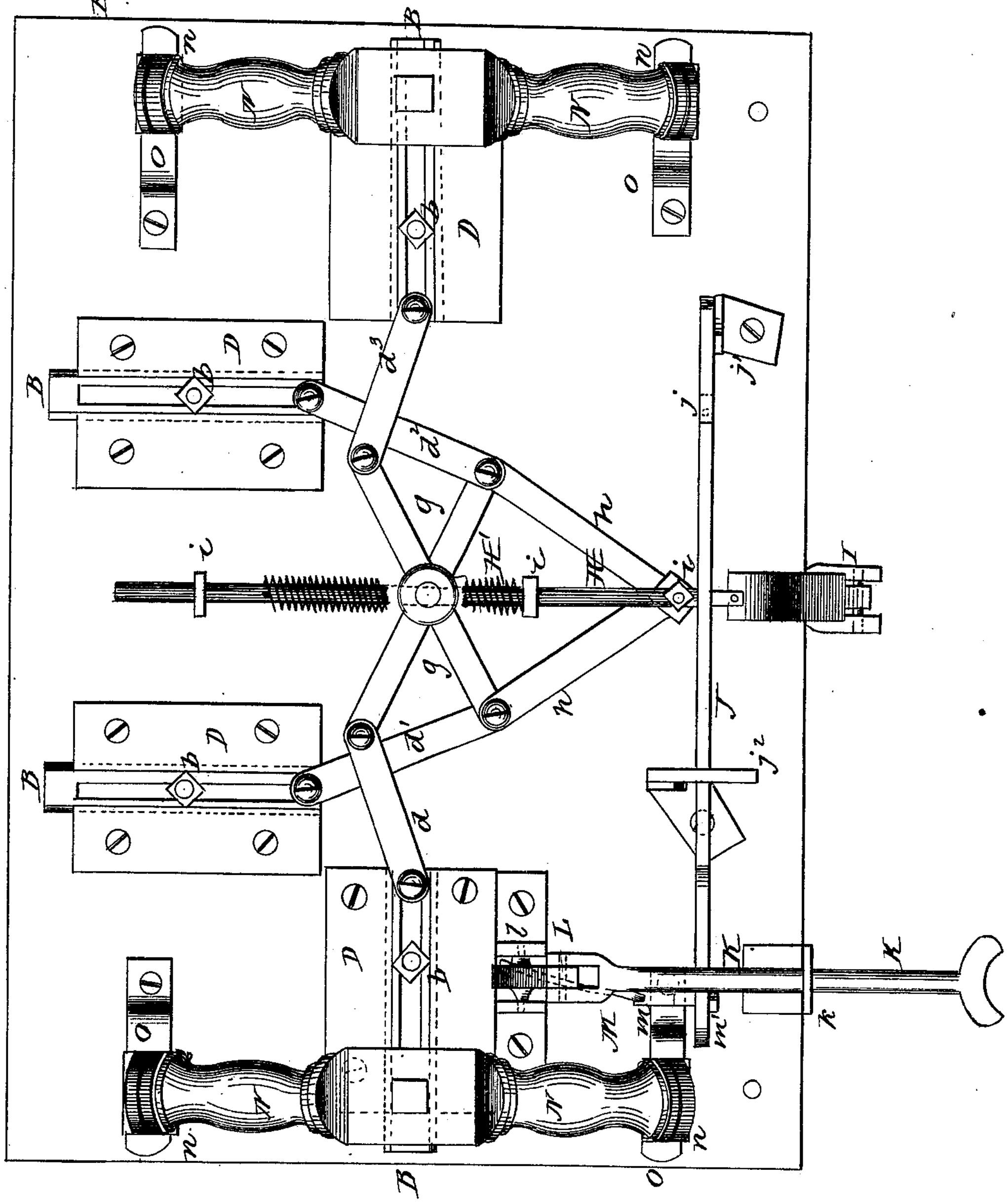
Fig. 3



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UNITED STATES PATENT OFFICE.

MORRIS D. WILKINS, OF BLOOMINGTON, ILLINOIS.

IMPROVEMENT IN AUTOMATIC RECEIVING-TABLES FOR PRINTING-PRESSES.

Specification forming part of Letters Patent No. **195,427**, dated September 18, 1877; application filed August 20, 1877.

To all whom it may concern:

Be it known that I, MORRIS D. WILKINS, of Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Automatic Receiving-Tables for Printing-Presses, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a top view; Fig. 2, an end view; Fig. 3, an enlarged bottom view. Fig. 4 is a detail view.

This invention relates to improvements in automatic tables for receiving and straightening sheets of paper as they come from printing-presses, paper-mills, book-binding machines, ruling-machines, &c.; and the invention consists in the several combinations of parts, as will be hereinafter fully described.

In the drawings, A represents the paper-receiving table, slotted at *a a a a*, through which pass the vertical paper-guides *a'*, for straightening the paper as it is thrown on the table from the fly of the printing-press. These guides *a'* are adjustably secured to the automatic slides B by nuts or set-screws *b*, as desired, whereby said guides can be adjusted to receive different-sized sheets of paper. D are metallic guides attached to the under side of the table A, and within which the slides B work. C represents a back guide for the paper to rest against on the table A, and said guide C is adjustably secured at any desired position in the metallic guides E (set in the table so as to be flush with the top thereof) by means of the thumb-screws *c*, washers *c'*, and slides *e*, as clearly shown in Figs. 1 and 4. F represents a removable side guide, to be used only when the paper is cut by the press, for laying two sheets of paper at once.

The inner ends of the four slides B are connected to the ends of the pivoted cross-rods *g g* by connecting-rods d d^1 d^2 d^3, and the connecting-rods d^1 d^2, with one end of each of the cross-rods *g g*, are pivoted to the rods *h h*, which are secured to the reciprocating bar H, working in the guides *i i i*. The reciprocating rod H communicates a reciprocating movement to the guide-slides B through the medium of the connecting and pivoted cross-rods. J is a bar arranged at right angles to the bar H, and which is pivoted to the right-angled bar *j* secured to the standard j^1, and said bar J is supported in the slotted standard or guide j^2, as clearly shown in Figs. 2 and 3, and is also connected with the bar H by the pivoted bar I, as shown in Fig. 2. This pivoted bar J, which communicates motion to the bar H in one direction, or moves said bar backward, is operated through the medium of the arm K, resting in guide *k*, and pivoted to one end of the lever L, centrally pivoted in the standards *l*, and having its other end connected with the adjustable guide *m*, secured in the slot *m'* of the pivoted bar J, by means of the crank-rod *m*. A spring, H', upon the bar H, produces the recoil or return movement of said bar to its original position.

The table A is supported by the cross-legs N, having guides *n o* on their feet, which are adjustably secured to the transverse bars or slides O, secured to the under side of said table by set-screws *n'*, and to the longitudinal rods P, secured to the supporting-base R by set-screws *p*, whereby the table is adapted to be adjusted lengthwise and sidewise to accommodate it to the different positions of the machine from which it receives its paper. The legs N, where they cross each other, are secured together by the vertical bar S and set-screw *s*, by which means the table is also adapted to have a vertical adjustment.

T is a bar, supported by springs *t*, for easing off the fly when throwing paper on the table from the press, and also for the fly to rest on after the paper is delivered upon the table.

The table is first placed in position to receive the paper thrown from the press or other machine it is to be connected with. The back guide is then adjusted up to within one inch of the paper to be laid on the table. The arm K is then pushed in as far as it will go, and the guides adjusted and secured in the slides up to the edge of the paper, after which said arm K is released, so as to throw the guides back in proper position to receive the paper between them and the back guide.

The arm K, through the medium of which the guides are operated, will be operated by the shoe connected with the bed of the printing-press, and as the bed moves toward the receiving-table the shoe strikes the said arm K and pushes it forward. This movement of the arm operates the guides through the medium of the intermediate mechanism before described, which straighten and force the sheets of paper thrown upon the table by the fly of the press up against the back guide C, and when the shoe is released from contact with said arm K the spring on bar or rod H returns the guides and other mechanism to their original position.

To avoid the fly of the press striking against the guides, the table can be adjusted sidewise in either direction to prevent it, and the table can be moved forward and backward on the rods P to lengthen or shorten the stroke of the arm K.

The table can also be adjusted vertically, to accommodate itself to the height of different presses.

On job-presses the table is disconnected from the legs, and used the same as ordinary feed-boards by connecting the arm K to the platen as it comes back to be fed.

On ruling-machines the spring-bar T is to be dispensed with, and the table to be used in the same manner as the common tables used for that purpose, with the exception of connecting the arm K with the machine for operating the guides.

I do not desire to limit myself to the shoe-and-arm connection for operating the mechanism that moves the guides, as the connection may be made with the fly by means of a rod and hinge, so that when the rod to which the fly is attached turns the same it will move the rod backward and forward, thereby operating the guides' mechanism. A board can also be used to connect the automatic guides on each side, so that all parts of the sides of the sheets may be pressed into place, instead of only at the point of contact with the guides, which may be found necessary when laying and straightening thin paper.

My improved table can be used, in connection with any cylinder-press, for laying and straightening paper as it comes therefrom, and either one or two sheets at a time, by removing or attaching the side guide F. It can be easily adjusted, and keeps the paper clean and straight for the cutter, (if to be cut or trimmed,) or puts the paper in condition to be bundled or packed, as every sheet is laid so as to come out in the ream as it was before going to the press. On book-work of two or more impression jobs it saves the labor of straightening the paper by hand before going to the cutter, and lessens the work of the binder in trimming it off. The adjustable slides admit of the table being used on all sizes of paper from "crown" to the largest size that can be used on a cylinder-press; and it will lay paper from the thinnest tissue to the heaviest card-board. It is easily adapted to be used in connection with other forms of printing-presses; and also in paper-mills for laying and straightening all sizes of paper in first-class order, thereby dispensing with extra help employed for that purpose. It is also useful for laying papers in their proper order for book-binding; and also in receiving paper from ruling-machines, and also for all other analogous machines.

I claim as my invention—

1. The combination, with the paper-receiving table A, of the automatically-reciprocating and adjustable guides *a'* and adjustable guide C, substantially as and for the purpose specified.

2. The combination, with the slotted table A, having guide C, of the guides *a'*, slides B, arm K, and intermediate mechanism, substantially as and for the purpose specified.

3. The combination, with the guides *a'* and back guide C, of the removable guide F, substantially as and for the purpose specified.

4. The combination of the table with legs N, having guides *o*, and supporting-base having the rods P, substantially as and for the purpose specified.

5. The combination, with the table having the slides O, and the supporting-base having the rods P, of the legs N, having the guides *n o*, substantially as and for the purposes specified.

6. The combination, with the receiving-table, of the spring-bar T, substantially as and for the purpose specified.

7. The combination, with the slides B, having the guides *a'*, connecting and cross-rods of the bar H, and spring H', substantially as and for the purpose specified.

In testimony whereof and that I claim the foregoing I have hereto set my hand this 9th day of August, 1877.

MORRIS D. WILKINS.

Witnesses:
THOS. SLADE,
R. A. PIKE.