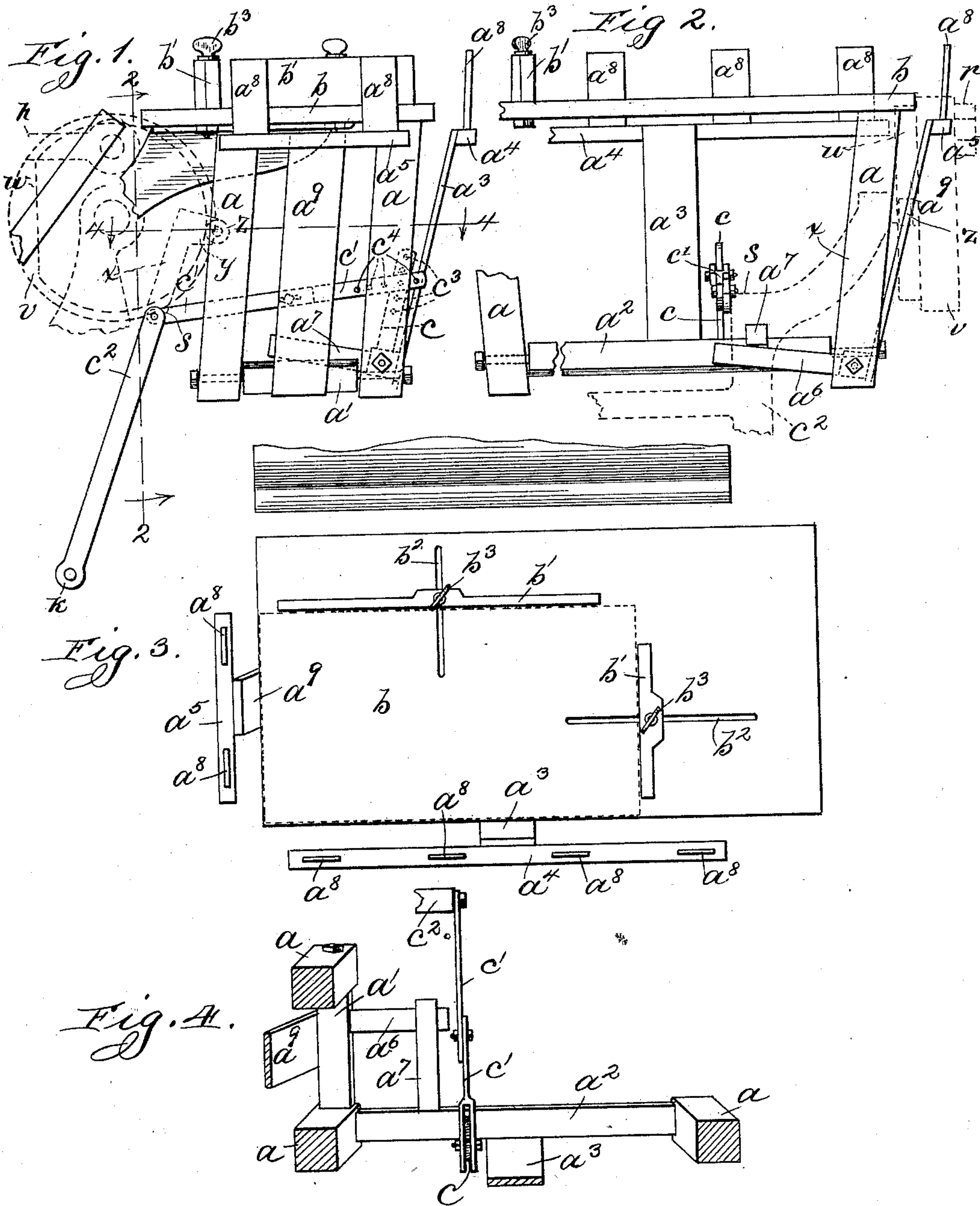


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SHEET ALINER FOR PRINTING PRESSES.

(Application filed May 6, 1899.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

OLIVER S. BOWMAN, OF CHICAGO, ILLINOIS.

## SHEET-ALINER FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 705,198, dated July 22, 1902.

Application filed May 6, 1899. Serial No. 715,782. (No model.)

*To all whom it may concern:*

Be it known that I, OLIVER S. BOWMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Sheet-Aliners for Printing-Presses, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a sheet-aliner for platen printing-presses, my object being to provide improved means whereby the sheets from the press when delivered upon an adjacent table may be straightened into regular piles and kept thus.

In accordance with my invention I provide a table having two free edges and fitted with two adjustable blocks at the opposite edges, placed at right angles to each other for the purpose of stopping the movement of the printed sheets. I provide two sets of moving or oscillating fingers at the free edges for the purpose of moving the sheets and alining them. These alining-fingers are connected with mechanism of the press which partakes of a movement during each cycle of operation of the press, whereby the alining-fingers are caused to operate each time the press performs a cycle in its operation.

I have illustrated my invention in the accompanying drawings, in which—

Figures 1 and 2 are side elevations of the table, showing the relative position of the sets of fingers and the method of moving them. Fig. 3 is a plan view of the table. Fig. 4 is a cross-section on the line 4 4, Fig. 1.

Like letters refer to like parts in the several figures.

The bed *b* of the receiving-table has depending from it the uprights *a a*. At two edges of the bed *b*, on the upper side thereof, are placed two movable blocks or cleats *b' b'*, adapted to slide along the slots *b<sup>2</sup>* to accord with the size of the paper and being secured in position by the set-nuts *b<sup>3</sup>*.

Between the lower extremities of the uprights *a a* and pivotally connected thereto are the cross-bars *a' a<sup>2</sup>*, upon which, extending upward, are fastened the pieces *a<sup>3</sup> a<sup>9</sup>*, which support the cross-bars *a<sup>5</sup>*. Upon these cross-bars are placed the alining-fingers *a<sup>8</sup>*. At-

tached to the bar *a<sup>2</sup>* is the short bar *c*, which is fastened, according to the length of stroke desired, by any combination of the holes *c<sup>3</sup> c<sup>4</sup>* to the link-bar *c'*. This link-bar *c'* connects at its other end with the shoulder *s* of the rocking frame *c<sup>2</sup>*, which is pivoted at *k*, as shown in Fig. 1. This frame is provided with the dotted extension *x*, which carries upon the rearwardly-projecting lug *y* a cam-roller *z*, coöperating with the cam *w*, formed on the inner face of the crank-disk *v*. During the operation of the machine the shaft carrying the crank-disk and which is mounted in the framework of the machine is rotated by suitable means, and the said disk through the medium of the connecting-rod *r*, which is partially shown, operates the platen. The movement of the cam *w* is so timed that by connecting the alining-fingers, as described, they are moved toward the free edges of the bed *b* immediately after a sheet is deposited thereon. Fastened to the bar *a<sup>2</sup>*, extending inward, is the cross-piece *a<sup>7</sup>*, which rests upon a similar cross-piece *a<sup>6</sup>*, attached to the bar *a'*. When the piece *a<sup>3</sup>* is moved by the motion of the cam *w*, the cross-bar *a<sup>7</sup>* is thereby moved downward, carrying with it the cross-bar *a<sup>6</sup>*, which actuates the piece *a<sup>9</sup>* and its alining-fingers *a<sup>8</sup>*.

In action as the printed sheet is thrown upon the bed *b* by a vibrating fly or other means the shaft *k*, moving at the same time, actuates, through the mechanism described, the alining-fingers *a<sup>8</sup>*, which act to push the sheets up against the blocks *b'*, and thus as each sheet is thrown on form a regular pile.

Having described my invention, what I claim as new, and desire to have covered by Letters Patent, is—

1. In a sheet-aliner for platen printing-presses, the combination with a table upon which the sheets are delivered and having two free edges, of moving alining-fingers arranged opposite said free edges, the rocking frame *c<sup>2</sup>*, and adjustable connecting means between said frame *c<sup>2</sup>* and said alining-fingers whereby the alining-fingers are moved in unison with the rocking rod *d* and the amounts of movement of the fingers may be varied, substantially as described.

2. In a sheet-aliner for platen printing-presses, the combination with the feeding-ta-

ble  $b$  having two free edges, of the adjustable plates at the remaining edges thereof, the moving or oscillating fingers arranged opposite the free edges of said table, the rocking frame  $c^2$ , and connecting means between said rocking frame  $c^2$  and said oscillating alining-fingers, whereby the alining-fingers are moved in unison with said rocking frame, substantially as described.

10 3. In a sheet-aliner for platen printing-presses, the combination with a table upon which the sheets are adapted to be delivered, said table having two free edges, of moving or oscillating fingers arranged opposite and en-  
15 tirely outside the said free edges, a horizontal shaft or bar for the fingers at each said edge

of the table, and upon which they are supported; an arm upon one such shaft or bar engaging a like arm upon the other shaft or bar, and a connection from a movable part of the printing-press to one of said shafts or bars, to rock it, whereby both sets of alining-fingers are operated, substantially as described.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

OLIVER S. BOWMAN.

Witnesses:

W. CLYDE JONES,  
PERCY C. GILL.