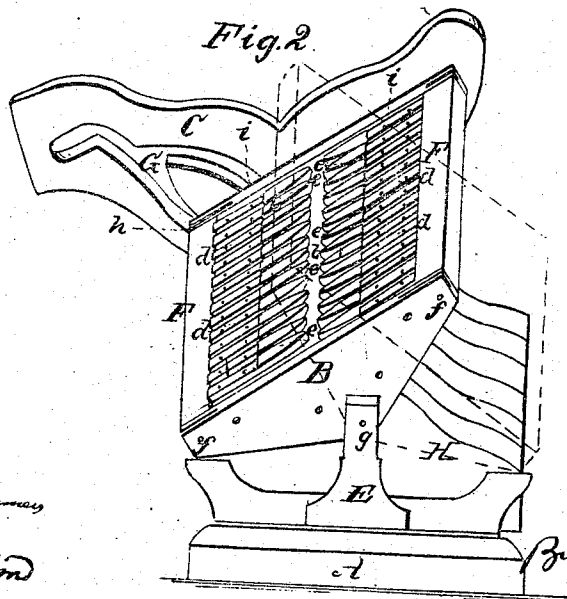
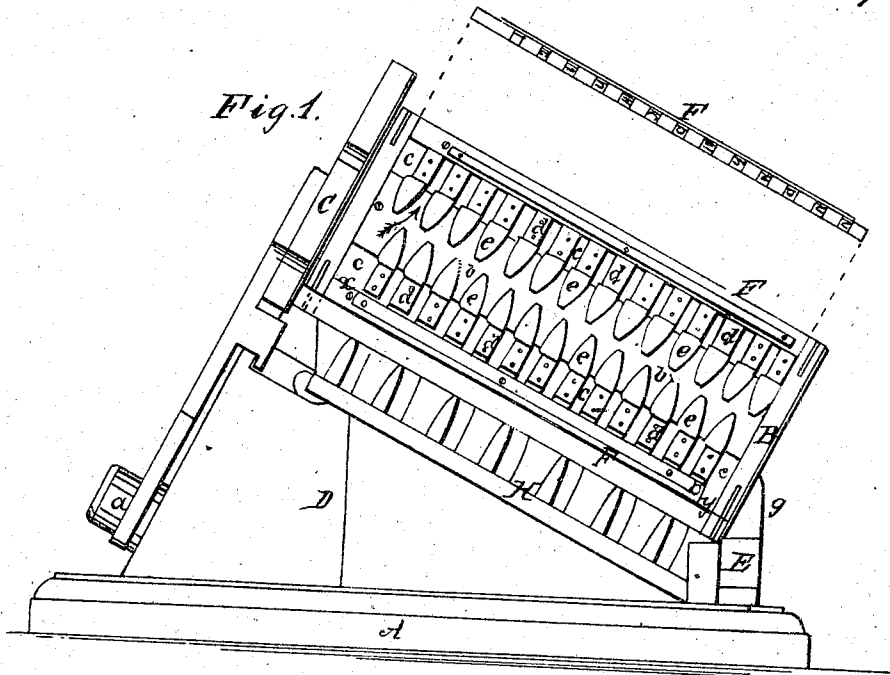


C. S. Westcott & A. K. Ryder
Type Distrib'g Mach.
N^o 104236. Patented Jun. 14. 1870.



Witnesses
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Letters Patent No. 104,236, dated June 14, 1870; antedated May 9, 1870.

IMPROVEMENT IN TYPE-DISTRIBUTING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, CHARLES S. WESTCOTT, of the city of Elizabeth, in the county of Union and State of New Jersey, and ALEXANDER K. RIDER, of the city, county, and State of New York, have invented a new and improved Machine for Distributing Type; and we do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of our improved machine.

Figure 2 is an end view.

Similar letters of reference indicate like parts in the drawing.

The principle upon which our machine operates is that of picking out or distributing type by the difference existing in the form of the various letters upon their faces; and the means used to effect this consists of a series of matrices of the type-faces, in connection with a series of zig-zag grooves on the upper surface of an inclined rocking table, whereby each type is presented singly to each matrix till the proper one is found, when the type, in consequence of dropping further into its own matrix than any other, slips off the central fixed plate on the vibrating table into its receptacle below.

To this end, therefore, our invention consists in a novel construction, combination, and arrangement of parts, whereby we are enabled to make a simple and effective working machine for distributing printers' type, as will be fully set forth hereafter.

To enable others skilled in the art to make and use our invention, we will describe the construction and operation of the same.

The base-plate A and standards D E constitute the frame that supports the several working parts of the machine.

The upper ends of the standards form the bearings for the pivots *g* of the vibrating table B.

The surface of the vibrating table is composed of a fixed plate *b*, provided with curved guides *e*, and two hinged plates *c c*, to which the guides *d* are secured, both guides so arranged as to form a series of zig-zag grooves across the vibrating table, intersecting each other in the center, but closed by the matrices at the ends.

The rocking motion of the vibrating table is produced, and the proper movements of the hinged plates *c c* are effected, by the oscillating plate C, pivoted at *α*, and furnished with a cam-groove, G.

A stud, provided with a roller, is secured to the end-plate *j* of the vibrating table at *h*, and two similar ones are secured to the hinged plates at *i i*, and work through vertical slots in the end-plate *j*.

The plates F F, containing the matrices, are secured upon the hinged plates of the vibrating table, just back of the guide *d*. One of these plates F is shown in fig. 1 detached from the machine.

They are constructed to be detached at pleasure from the vibrating table, and the matrices upon their faces are made to conform to the size of type to be distributed.

A series of boxes, H, is placed beneath the vibrating table to receive the distributed type, and may be so inclined and connected with spouts or tubes as to allow the type to pass into proper receptacles placed at a distance from the machine.

The machine will operate as follows:

The oscillating motion given to the plate C produces a rocking motion of the table B upon its pivots *g*, so that each side of the table is alternately elevated and depressed.

The hinged plates *c*, pivoted at *f*, are also operated to drop below the level of the fixed plate *b*, at proper intervals, in order to allow the type held between the guides *d* to slide through the space between the edges of the plates into the receiving boxes.

The pi, or matter to be distributed, is introduced into the machine at *x*, as that side of the vibrating table is raised into the position represented by the red lines in the drawing, so that a type drops into the space between the guides, in the direction of the arrow, each time the side *x* of the vibrating table is elevated. The type thus conducted falls with its face against the edge of the plate F, containing the matrices. It is thrown alternately from one side of the table to the other at each vibration, and falls successively into each space between the guides on the hinged plates *c*, until it arrives at the space containing the matrix corresponding to the letter upon its face. The letter then drops into the matrix a sufficient distance to allow the bottom of the type to drop from the edge of the fixed plate *b*, upon which it rests, onto the hinged plate *c*; and as that side of the vibrating table is raised the hinged plate is caused to drop below the level of the plate *b*, to allow the type to slide from the plate into its receptacle beneath.

The hinged plates *c* being made of a width less than the length of the type by the depth of the latter on its face, its end is prevented from dropping off the edge of the plate *b* until the letter upon its face enters the proper matrix.

As the type may be introduced into the machine in four different positions, provision is made for its proper distribution in each case, two spaces on each side of the table being allotted to each letter; for instance, the lowest space on the elevated side of the vibrating table, figs. 1 and 2, is arranged for the letter *h*, in

right position, and the first space on the opposite side for *h* in a reversed position; the second space on the elevated side for the letter in a reversed position, and the second space on the opposite side for it in right position; and so on for each letter.

All matter not distributed in passing through the machine, such as type of different fonts, &c., is discharged at *y*.

It is obvious that other mechanism than that herein described and represented for giving motion to the vibrating table may be employed; and we do not wish to be understood as limiting ourselves to the mechanism described, but claim the right to modify it in any way to obtain the proper vibration of the table.

Having thus fully described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. The inclined vibrating table, combined, arranged, and operating substantially as described, and for the purpose specified.

2. The combination, with the inclined vibrating table of the hinged plates *c c*, constructed, arranged, and operating substantially as described and specified.

3. The combination, with the vibrating table and hinged plates *c c*, of the matrix-plates *F F*, constructed substantially as described and for the purpose specified.

4. The construction, form, and arrangement of the guides *d e*, for automatically feeding the type forward, substantially as described and specified.

5. The combination, with the inclined vibrating table, of the inclined receivers *H*, for receiving and delivering the distributed type, substantially as described and specified.

6. Distributing type by means of matrices arranged to receive the corresponding letters, figures, and characters as they are mechanically presented to the matrices, substantially as described and specified.

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Witnesses for WESTCOTT:

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Witnesses for RIDER:

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