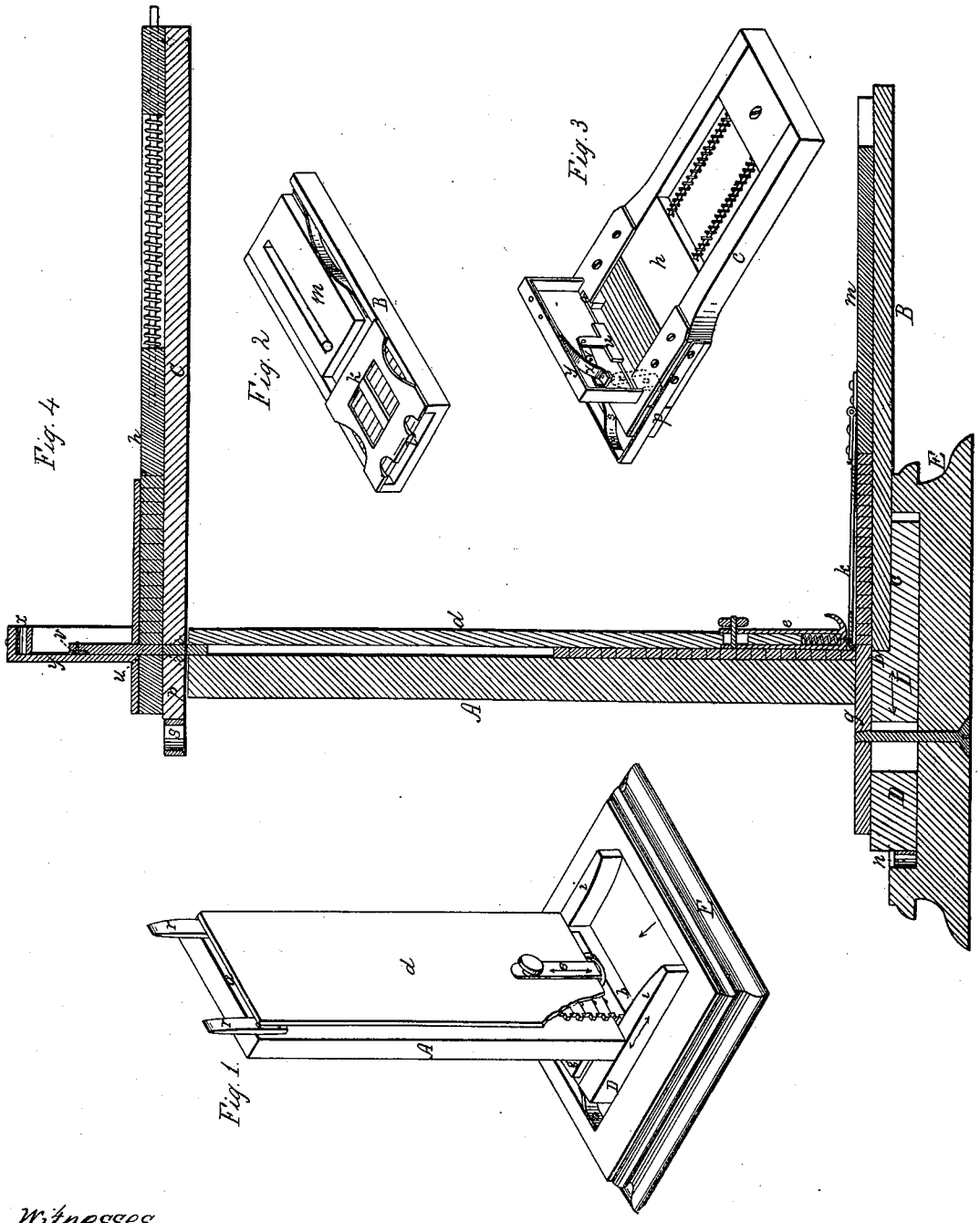
J. B GILMER.

TYPE SETTING AND DISTRIBUTING MACHINE.

No. 26,149. Patented Nov. 15, 1859.



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JOHN B. GILMER, OF CHARLOTTESVILLE, VIRGINIA; THOMAS W. GILMER ADMINISTRATOR OF SAID JOHN B. GILMER, DECEASED.

IMPROVEMENT IN TYPE SETTERS AND DISTRIBUTERS.

Specification forming part of Letters Patent No. **26,149**, dated November 15, 1859.

To all whom it may concern:

Be it known that I, JOHN B. GILMER, of Charlottesville, county of Albemarle, State of Virginia, have invented certain new and useful Improvements in Type-Setters and Distributers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a perspective view of the type-case. Fig. 2 represents a perspective view of the composing-stick. Fig. 3 represents a perspective view of the distributing-stick. Fig. 4 represents a sectional elevation of the type-case, the composing and distributing sticks, the composing-stick being in position to take the type from the case and the distributing-stick in position to replace the type in the case.

The machines heretofore constructed to facilitate the operation of setting and distributing type are complicated in their mechanism, expensive in their construction, liable to derangement, and a constant source of expense to keep in repair and working order. These disadvantages more than overbalance the increased rapidity with which they perform their work. On this account they are of little practical value as a labor-saving machine and have not within my knowledge been introduced into use to any extent.

The object of my improvements is to simplify these machines, diminish their cost and liability to derangement, render them more certain and rapid in their operations, and thus make them an effective labor-saving machine.

By reference to the accompanying drawings those skilled in the art will readily understand the construction, arrangement, and operation of my improvements.

This machine consists of three distinct parts—a case A for holding the type, a composing-stick B for withdrawing the type from the type-case and setting them in line, and a distributing-stick C for transferring the type from the line to the type-cases.

The type-case A consists of a rectangular box, standing in a vertical position, mounted on a foot D, projecting both at the front and rear and sliding in guides on a bed-plate E, which forms its base. The cavity *a* within the box is of proper length and width to receive the type edgewise in a single row one above the other, the bottom type resting on step *b* in the foot, whose distance above the lower step *c* is equal to the thickness of the bottom of the composing-stick. The front plate *d* of the case descends only as low as the top of the lower type, and this type is held in the case by a sliding spring-dog *e* with a rounded projecting nose in front. A stationary follower *g*, whose breadth and thickness correspond with the length and depth of the type, passes through an opening in the rear of the case, directly opposite the lower type, and in sliding the case backward on its bed passes into the box and projects the lower type, the dog being raised beyond the inner face of the front plate. A spiral or other spring *n*, bearing against the rear of the foot, brings the case forward. Projecting flanges *i*, on either side of the case in front, serve as guides to the composing-stick B when brought up to the mouth of the case to receive the type as they are projected forward by the follower.

The composing-stick B is a metallic box, the breadth and height of which in the interior correspond with the length and breadth of the type, and is of sufficient length to receive a full line. A spring-plate *k* covers the top at the receiving end, and is provided with a lip *l*, to hold the front type and prevent them from turning or falling out, and also to assist in withdrawing the type from the case. A slide *m* sustains the back of the type and is pushed back by each succeeding type as received in the mouth of the stick.

The type-distributing stick in breadth and depth is the same as the composing-stick. The length may be increased, if thought best, so as to receive two or more lines of type, and it is provided with a spring-follower *h*, which acts against the rear end of the line, moves the type forward as the front ones are distributed, and holds the front type in contact with a stationary stop. The bottom of the stick, directly beneath the front type, is made to open by pushing a slide *p* forward, and this slide is operated by means of projecting points *r* on the top of the type-case, which, when the distributing-stick is placed over the mouth of the type-case, enters a bell-mouthed

opening *o*, between the slide and bottom of the stick, forcing the slide a sufficient distance forward to allow the type to pass through the bottom of the stick. A spiral or other spring *s*, acting on the rear of the slide, closes it when removed from the points. A separator and discharger is arranged above the front type, and consists of a follower *u*, pivoted to one end of a lever *v*, which turns on a center pin in a plate *y*, extending across the stick in front of the type. A spring *z*, acting on the outer end of the lever, holds the follower above the type. This follower is also operated by one of the points *r* on the type-case, which, as it enters the stick, raises the outer end of the lever, depresses the follower, which, coming in contact with the type directly beneath it, separates it from the rear type and forces it through the opening in the bottom of the stick into the holder. In the application of this machine to practical use a type-case is required for each letter of the alphabet and for different styles or descriptions of letters, as well as for the stops and blanks. These cases may be arranged in any position accessible by a short and easy movement of the hand and arm.

In setting type the front end of the composing-stick is entered between the guides of the type-case, and striking the spring-dog *e* raises it and frees the front type. The pressure of the stick against the foot of the holder causes it to recede and the follower to pass into the case, forcing the lower type forward into the mouth of the stick, raising the spring-plate and passing beyond the inner edge of the lip. The stick on being withdrawn carries with it the type, which are held by the pressure of the spring-plate and prevented from turning or falling out by the lip overlapping the outer edge. The case, when released from the pressure of the stick, returns to its first position, the type next above slides down and occupies the place of the one removed, and at the same time the dog springs back and prevents it from falling out. In this manner the stick is presented successively to each case containing the letters required to make up a line of words, and as each line is complete it is transferred from the stick to the column and again filled as before.

In distributing the type they are taken from the column, placed in the distributing-stick one or more lines at a time, depending on the length of the stick, and then successively distributed direct to the proper cases in which they belong by the stick being placed successively over the top of each case; and as the prongs on the top enter the bell-mouthed openings *o* in the bottom of the distributer the type are projected into the case in the manner previously described.

I do not confine myself to the form or forms, the arrangement or arrangements of the different parts of the machine as described, as these may be varied and still the type be withdrawn from the case and set, and also distributed, by the direct application of the sticks to the case without the aid of intermediate carrying mechanism, as has heretofore been used in these machines.

The type-case, instead of resting on bed-plates and sliding, may be suspended on trunnions and vibrate the distance required to deliver the type into the distributing-stick.

Having thus described my improvements in type setters and distributers, what I claim therein as new, and desire to secure by Letters Patent, is—

1. Withdrawing the type from the type-cases and setting them in line in the composing-stick without the aid of intermediate carrying mechanism, but by the direct application of the composing-stick to the type-case, substantially as described.

2. Distributing the type to the type-cases by the direct application of the distributing-stick to said cases, substantially as described.

3. In combination with the type-case, the holding-dog or its equivalent arranged and operated substantially as described, so as to retain the type as they descend opposite the mouth of the case, and release the type when the mouth of the composing-stick is in position to receive them.

4. Arranging the type-case, substantially as described, so that by a retrograde movement of the case the type are discharged into the composing-stick, as described.

5. In combination with the composing-stick, the spring mouth-plate to hold the type as they enter the stick.

6. In combination with the spring mouth-plate, the lip *e* or its equivalent, arranged substantially as described, to assist in withdrawing the type from the case and to prevent their turning or falling out of the composing-stick as they are withdrawn from the case.

7. Discharging the type into the case through the bottom of the distributing-stick, substantially as described.

8. In combination with the distributing-stick, a separating and discharging mechanism to the type arranged substantially as described, so as to separate the front type from the rear and force them into the type-cases.

In testimony whereof I have subscribed my name.

JOHN B. GILMER.

Witnesses:
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