(No Model.)

R. H. SMITH & W. F. TRIPP.

HAND PRINTING DEVICE.

No. 518,515. Patented Apr. 17, 1894.

Fig. 1.

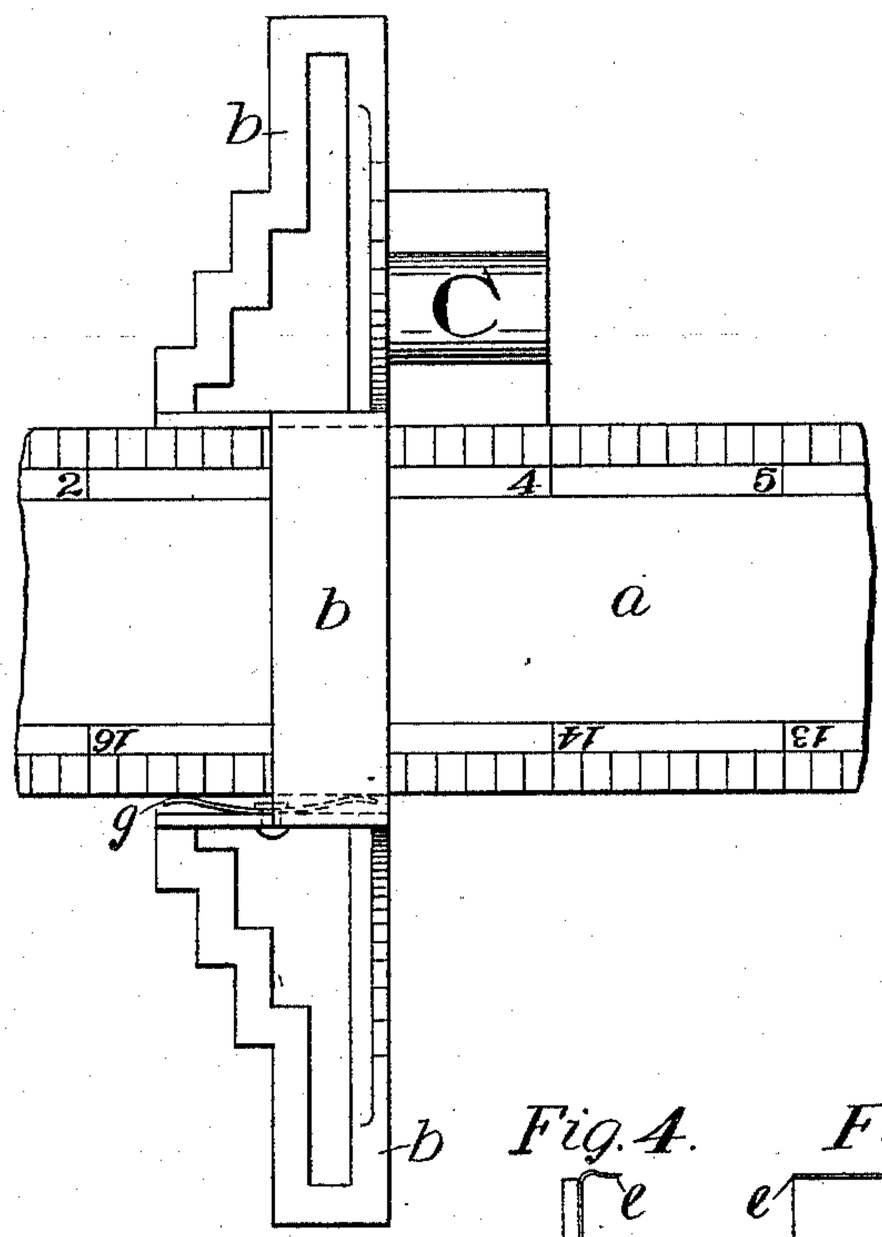

Fig. 2.

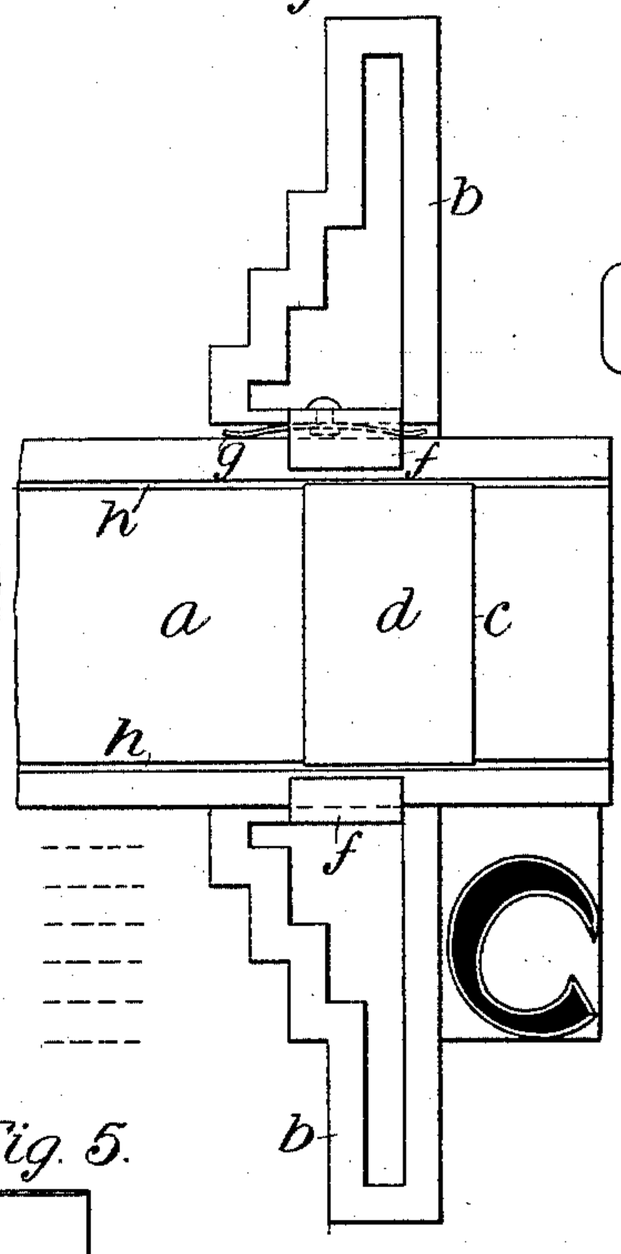

Fig. 3.

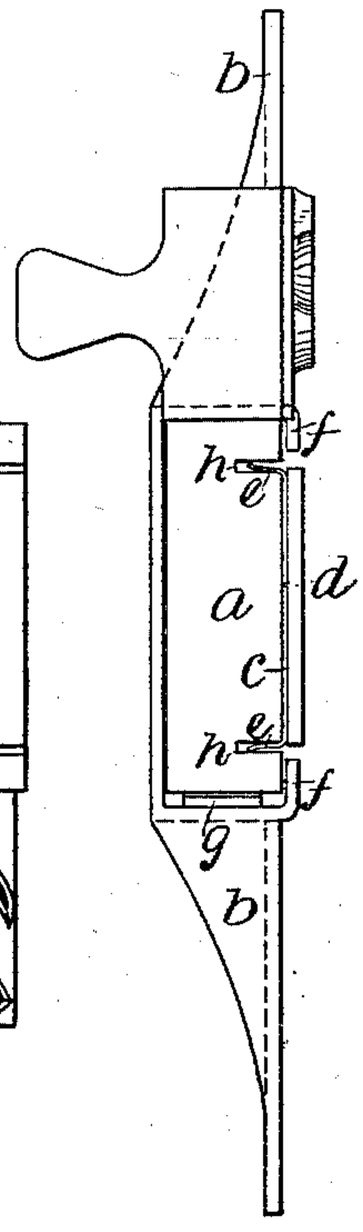

Fig. 4.

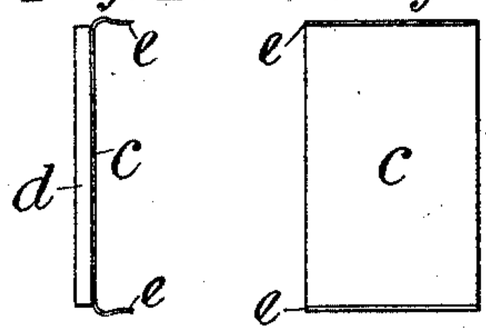

Fig. 5.

Fig. 6.

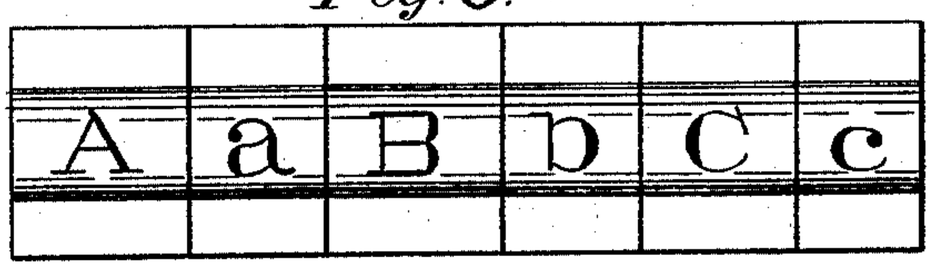

Fig. 7.

AaBbCc

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RICHARD H. SMITH AND WILLARD F. TRIPP, OF SPRINGFIELD, MASSACHUSETTS.

HAND PRINTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 518,515, dated April 17, 1894.

Application filed June 15, 1893. Serial No. 477,679. (No model.)

To all whom it may concern:

Be it known that we, RICHARD HALE SMITH and WILLARD F. TRIPP, citizens of the United States of America, and residents of Springfield, Hampden county, Massachusetts, have jointly invented new and useful Improvements in Hand Printing Devices, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon.

Our invention relates to that class of hand printing devices adapted to printing merchants' window and counter signs, price and announcement cards, marking shipping addresses upon cases, &c., wherein the letters are imprinted one at a time, and our object is to provide apparatus by which this printing may be executed with a more uniform density of color, more perfect alignment and more correct spacing of the letters, words, sentences, lines, borders, ornaments, &c., than has been before attained, and we accomplish the object of our invention by the construction as herein shown.

In the accompanying drawings in which like letters of reference indicate like parts, Figure 1 is a plan view of a section of our device, showing a type in position to print. Fig. 2 is a similar view of the device inverted. Fig. 3 is an end view showing a type in position to print. Fig. 4 is an edge view of one of the movable presser feet. Fig. 5 is a plan view of the same. Fig. 6 is a plan view of a series of type blocks adapted to be used with the device, and Fig. 7 is an imprint of six printing faces to correspond with said blocks.

In detail *a* indicates the beam or line former, *b* a right angle type guide mounted to slide thereon, *c* a movable presser foot, *d* a cushion or face thereon, *e* engaging clips or wings on the presser foot, *f* the gibs or overhanging parts of the type guide, *g* a retaining or tension spring, and *h h* grooves in the beam.

In the first figure of the drawings we show a section of a square straight edge or beam with the type guide *b* so mounted as to slide thereon and with a type block in position for printing having the rubber letter "c" on its face, and the small indicator "c" upon the top end of the block, the upper surface of the beam or straight edge *a* being suitably marked in graduating lines upon each edge and figured in reverse direction. The type guide *b* consists of a frame a portion of which passes over the top of the beam, and having wings which project therefrom on the plane of the lower surface of the bar, and having one vertical face rising the full width of the bar as shown, and provided also with inturned lugs or gibs *f* which engage the lower face of the beam and while permitting a sliding movement of the guide upon the beam from end to end it is restrained from all lateral movement therein. To permit the sliding movement of the guide on the beam with requisite freedom, and at the same time maintain it with sufficient rigidity in the desired position, we interpose a tension spring *g* one portion of which bears against the inner vertical side face of the slide and another portion of which bears against the side face of the beam. Now as the front face of the guide is at right angles to the adjacent face of the bar, and as the printing types are mounted upon blocks whose sides are at right angles with each other, it will be seen that whenever a type block be placed in the angle formed by the vertical beam face and the vertical face of one of the wings, the type may be pressed down upon the paper in accurate and correct position and that if the first imprint made from said type is not sufficiently black, or is in any part defective, it may be reinked and again pressed down in exact register with the first imprint taken. When a satisfactory print of the first letter has been obtained the guide may be moved into position for the next with the left hand, while maintaining the beam in fixed position by a slight downward pressure, leaving the right hand free to manipulate the type. The wings of the guide are preferably constructed with that portion adjacent to the beam exactly one inch wide but reducing to half an inch at the outer end by three steps or shoul-

ders in the rear edge, of one sixth of an inch or one pica em each, and the central portion of the wing is recessed out leaving only a skeleton rim one pica em wide as shown in the drawings Figs. 1 and 2 by reference to which it will be seen that the one inch width is divided into six equal parts, forming six parallel lines at right angles to the side of the beam, by which to measure the desired space between the character last printed and the one next to be printed; for example, in printing a ten line announcement card, if it is desired to place the letters in the words one pica space apart, the words two, three or four picas apart and the sentences five or six picas apart, the operator can readily accomplish this uniformity by setting the guide after each character is printed, so that the required line of the spacer just clears the imprint. This construction of the spacing guide also provides six shoulders running parallel with the side of the beam for similar use in spacing one line of characters from another. The line may be placed at a true right angle to the edge of card or paper by means of the square and following lines set parallel thereto by the same means. While only one wing to the slide is required for plain work, we prefer to construct it with two wings alike to enable the operator to space off and print in reverse direction, and by this means and in connection with the double graduation upon the beam hereinafter described very beautiful and intricate designs may be executed. The lower face of the beam is provided with movable presser feet, which rest upon the surface of the paper or other material being printed upon, and raise the bar a short distance therefrom thus preventing all danger of blurring because of moving the beam to a position over the imprint before it has dried sufficiently, thus enabling the operator to perform the complete printing operation without delay and serving also to hold the paper or other material in position and preventing danger of the device slipping. The presser feet are preferably constructed with two wings or clips *e* which enter longitudinal grooves *h* in the lower face of the beam and by friction resulting from the wings *e* bearing against the walls of these grooves the feet are held in the position where placed, but can be easily adjusted so as to bear upon the outer margins only, of the card or sheet to be printed upon. We prefer that the wings *e* be made slightly elastic and thus hug the walls of the groove *h* but they may be made to just fill these grooves and the desired friction obtained without constructing them of spring material. The lower face of the presser feet are preferably covered or provided with rubber or other like material to prevent slipping and give a better holding surface. It will be seen that with the guide and presser feet mounted on the beam in the manner shown, either may be slid along to any desired position without interference with the other, and we are thus enabled to move the guide to a position directly over the presser feet while printing so that the whole length of the bar is at all times available; this construction also enables the operator to readily remove the guide from the beam and replace it in reverse position while holding the beam in register upon the paper by a slight pressure. It will also be seen that even if the sliding type guide were omitted altogether the combination of the beam and the adjustably mounted presser feet is a highly useful and operative device, as it enables us more readily to print straight lines upon sheets of varying widths without danger of slipping and to operate with safety over freshly made imprints. The graduations on the beam extend from end to end, one edge being marked to read from the right and one from the left so as to center the work and guide the operator in working both ways from the center with facility.

It will be readily seen that very many modifications may be employed in the construction which will readily suggest themselves to one familiar with the device.

Having, therefore, described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In combination with a suitable beam or line former to use with hand printing type, the combined square, type-guide and spacer, constructed to slide thereon, and adjustable feet substantially as and for the purposes described.

2. In a hand printing device the combination of a beam having one or more grooves in its lower face, with a foot provided with one or more projections to enter and slide in said grooves substantially as shown.

3. The combination in a hand printing device of a beam and a movable guide to slide thereon, the latter being formed of varying widths substantially as and for the purposes stated.

4. The combination in a hand printing device of a beam, a type guide and a movable presser foot, the latter being provided with a yielding lower surface substantially as and for the purposes stated.

5. In a hand printing device, the combination of a beam or line former having a vertical wall, and a type spacing guide constructed with a vertical wall, to move along the vertical wall of the beam at an angle thereto and having its lower surface so raised as not to smear fresh ink prints, substantially as described.

6. In a hand printing device, the combination of a beam or line former, one or more feet with yielding lower surface whereby the beam is raised out of contact with the surface to be printed upon, and a type guide having a vertical wall to move along the vertical wall of the beam at an angle thereto and

having its lower surface so raised as not to smear fresh ink prints, substantially as described.

7. In a hand printing device, the combination of a beam or line former and presser feet secured thereon which raise the beam entirely out of contact with the surface to be printed one at least of said presser feet being movable along said beam, substantially as described.

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Witnesses:
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