No. 698,583. Patented Apr. 29, 1902.

E. TERRELL & F. A. RAY.

PRINTING DEVICE.

(Application filed Feb. 4, 1901.)

(No Model.)

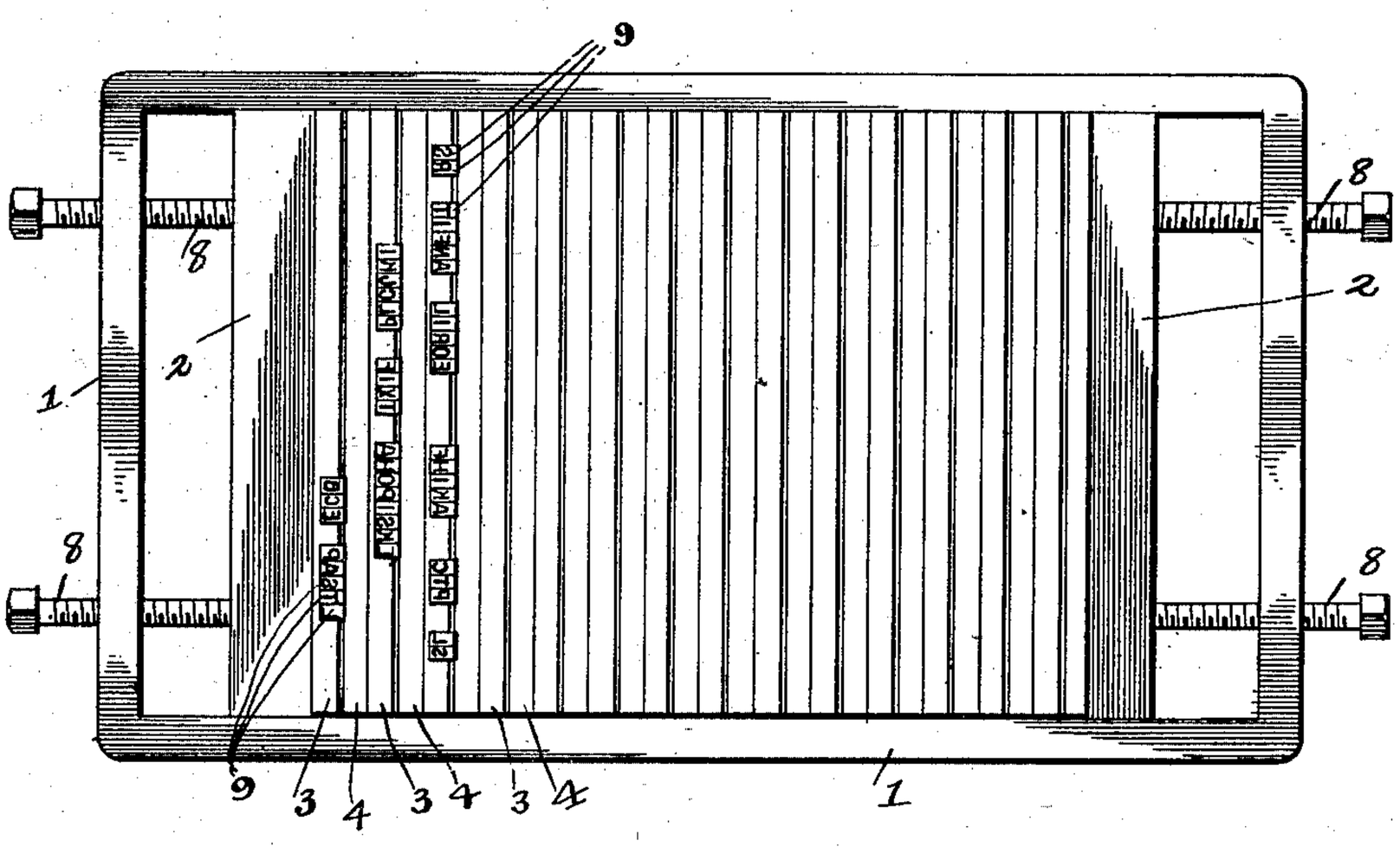

Fig. 1.

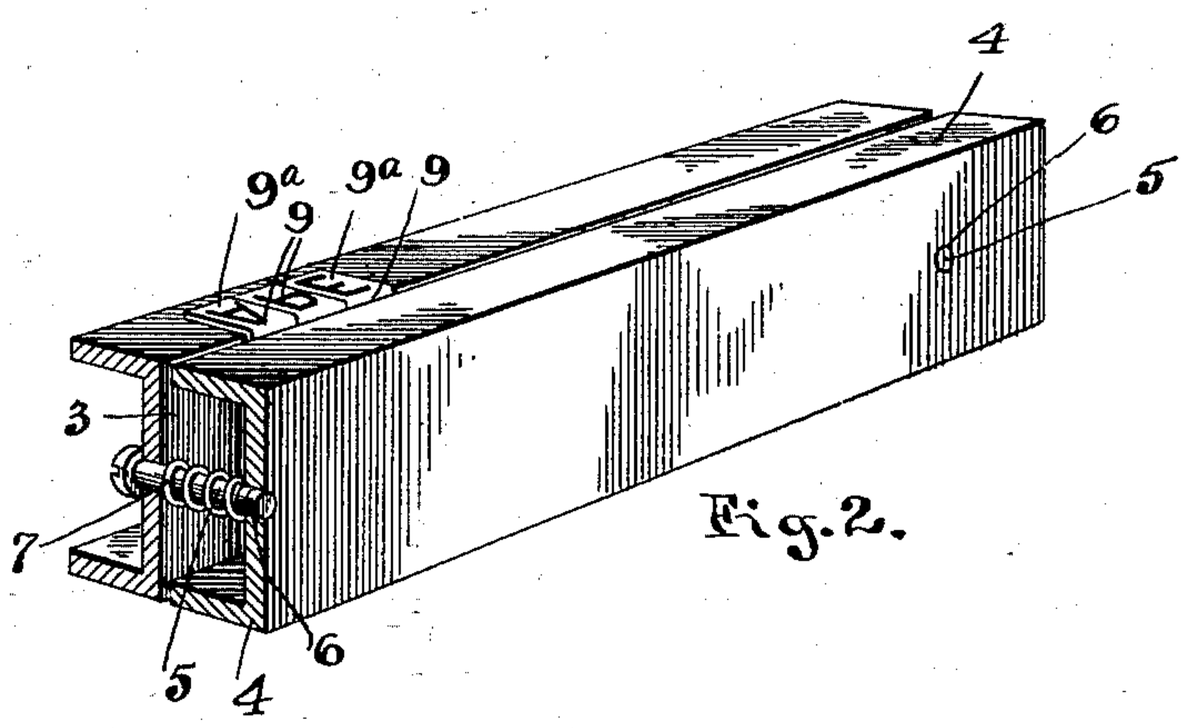

Fig. 2.

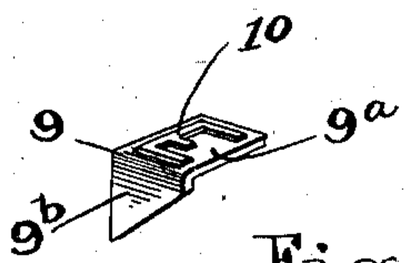

Fig. 3.

WITNESSES:

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ELAH TERRELL AND FRANK A. RAY, OF COLUMBUS, OHIO.

PRINTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 698,583, dated April 29, 1902.

Application filed February 4, 1901. Serial No. 45,823. (No model.)

To all whom it may concern:

Be it known that we, ELAH TERRELL and FRANK A. RAY, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Printing Devices, of which the following is a specification.

Our invention relates to the improvement of printing devices, and has particular relation to the improvement of printers' "forms" and type therefor.

The objects of our invention are to provide a novel construction of printer's form and to produce for use in conjunction therewith an improved construction of type. These objects we accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a face view of our improved printing device. Fig. 2 is a detail view in perspective of portions of two of the type-holding bars, and Fig. 3 is a similar view of one of the type which we employ.

Similar numerals refer to similar parts throughout the several views.

In carrying out our invention we employ an oblong form or chase 1, between the side arms of which are arranged to slide transverse clamping-bars or followers 2. Between these followers we arrange the desired number of pairs of transverse type clamping and holding channel-bars, of which 3 and 4 indicate, respectively, the bars forming each pair. Each of the channel-bars 3 has extending loosely through pin-holes in its vertical wall the unthreaded shank portions of bar-uniting bolts or screws 5. The threaded outer ends of said screws are adapted, as indicated more clearly in Fig. 2 of the drawings, to engage threaded openings 6 in the outer or vertical wall of the adjoining bar 4, the upper and lower flanges of the bar 4 being adapted to close against the upper and lower portions of the vertical wall of the bar 3. These bars 3 and 4 are normally held slightly apart, however, through the medium of coiled springs 7, which surround the screws 5 between the bars.

In the above-described manner the type-holding bars of each pair are adjustably connected, and it is obvious that the desired number of pairs of said bars may be employed between the clamping-bars or followers 2. The pairs of type-holding bars are adapted to be clamped together, as indicated in the drawings, within the chase or form 1 through the medium of set-screws 8, which pass through threaded openings in the ends of said chase.

In order to utilize our improved printing-form for the purpose of firmly holding type in a printing position therein, we employ type of the character indicated in the drawings, each of these type-bodies being in the form of a short angular plate 9, the upper horizontal portion 9^a of which has embossed or otherwise raised thereon the desired type-letter 10. The downturned portion of the type-body 9, which is indicated at 9^b, is, as indicated in the drawings, of a pointed or tooth form, this point being preferably produced by the beveling or inclination of one side of the downturned or tongue portions 9^b of the type.

By a suitable mechanism, which will be made the subject of another application for patent, the type above described are adapted to have their downwardly-extending pointed portions 9^b inserted vertically between the clamping-bars 3 and 4, the horizontal portions 9^a of said type bearing, as shown, upon the upper sides of the bars 3. The desired number of lines of type being thus set in the form, the type are properly distributed with reference to their positions in the transverse spaces between the holding-bars, after which the screws 8 are tightened until through pressure of the followers 2 the pairs of bars 3 and 4 are firmly united and the type are bound rigidly in their positions between said bars. This being accomplished, it is obvious that the printing-form produced is ready for the operation of inking the type and producing a printed impression on paper therefrom. While the form herein described may be employed in connection with power-presses, it is obvious that it will be particularly adapted for use in connection with hand-presses in the production of multiple copies of circulars, reports, statements, &c., such as are ordinarily required in railway or other offices.

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

In a printing device, the combination with a chase or frame 1, clamping-bars or followers

2 arranged to slide between the side arms of said chase and set-screws working in threaded openings in the end of the chase, of type-clamping bars arranged in pairs between said followers, each pair comprising adjustably-connected bars 3 and 4 and angular type-bodies adapted to have their vertical arms clamped between said bars and their upper horizontal arms bearing on said bars 3, substantially as specified.

ELAH TERRELL.
FRANK A. RAY.

In presence of—
EDWARD M. TAYLOR,
A. L. PHELPS.