

J. S. DUNCAN.
PRINTING DEVICE.
APPLICATION FILED OCT. 24, 1910.

1,026,251.

Patented May 14, 1912.

Fig. 1.

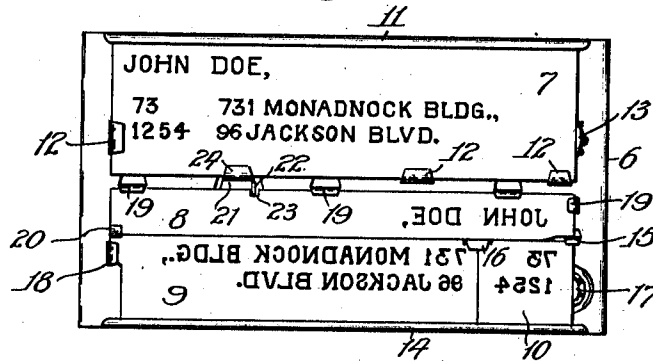


Fig. 2.

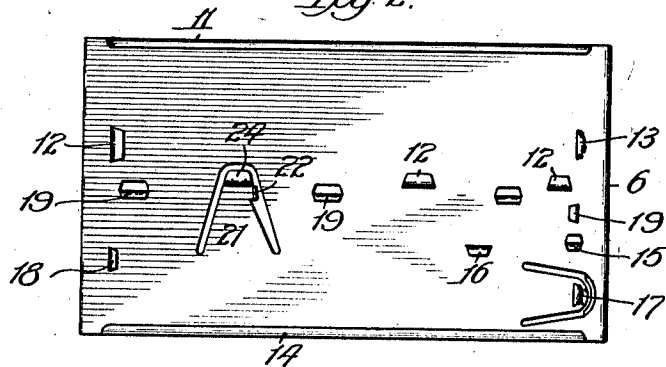


Fig. 3.

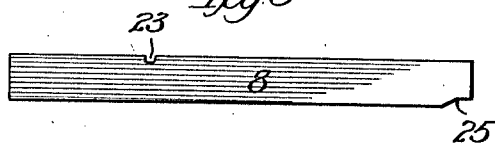


Fig. 4.

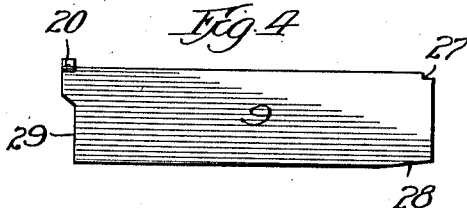


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PRINTING DEVICE.

1,026,251.

Specification of Letters Patent.

Patented May 14, 1912.

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To all whom it may concern:

Be it known that I, JOSEPH S. DUNCAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Printing Devices, of which the following is a specification.

This invention relates to that class of printing devices comprising a frame carrying a printing form and adapted to be stored in accordance with a card index system and run through an addressing or other printing machine to take an impression therefrom. These devices are used principally for printing addresses and are generally employed by those who send out many bills, circulars or other printed matter regularly to the same customers, such as gas companies, electric light companies, telephone companies, and publishers, as well as bankers, brokers, insurance agents, manufacturers and retailers.

The object of the invention is to reduce the expense of maintaining a system of printing devices of this general character by providing for the renewal of so much only of the printing device as is necessary when changes occur in the address. And a further object of the invention is to provide a sectional printing plate for a printing device of this character with means for securing the sections in the frame so that any section may be renewed without requiring the renewal of the entire plate or form.

In the accompanying drawings illustrating the invention Figure 1 is a front view of a printing device embodying the invention. Fig. 2 is a front view of the frame with the printing plate sections and card removed. Figs. 3, 4 and 5 are detail front views of the three sections of the printing plate.

The frame 6 may be made in any suitable form and it is provided with suitable means for securing the card 7 and the sections 8, 9 and 10 of the plate thereon. In the embodiment of the invention illustrated in the drawings the card 7 is detachably secured in place on the frame beneath a bead 11 and lips 12 by the end stop 13; the section 10 of the printing plate is detachably held in place on the frame beneath the bead 14 and the lips 15 and 16 by the spring-locking device 17; the section 9 of the printing plate is detachably held in place on the frame beneath the bead 14 and the lips 16 and 18 by

the section 8 of the printing plate which is itself detachably secured in place on the frame beneath the lips 19 on the frame and the projection 20 on the section 9 by the spring locking device 21 on the frame. All of the lips and the two spring locking devices are struck up from the frame and the locking device 21 is provided with a projection 22 which engages a notch 23 in the section 8 of the printing plate to lock that section in the frame. The locking device 21 is also bent to form a lip 24 which engages the card 7. The section 8 is preferably cut away at 25 to clear the lip 15 and the sections 9 and 10 are cut away or recessed at their upper adjacent corners to permit the adjacent edges of said sections to enter beneath the lip 16 into engagement with each other and also to provide shoulders 26 and 27 to engage said lip. Thus the sections 9 and 10 will be held against longitudinal movement by the lip 18, the locking device 17 and by engagement with each other and with the lip 16 while the section 8 is held against longitudinal movement in one direction by the end lip 19 and by the engagement of the locking device projection 22 with the notch 23 in said section. The projection 20 on the section 9 constitutes a lip which engages the section 8 and coöperates with the lips 19 to hold said section 8 flat against the frame while the lips 15, 16 and 18 and the bead 14 operate in the same manner to hold the sections 9 and 10 flat against the frame.

In practice the section 10 will be inserted in the frame or removed therefrom without affecting the other sections. The section 9, however, must be inserted before the section 8 is inserted and it can only be removed after the section 8 has been first removed. In inserting the section 9 it is arranged on the frame in an inclined or tilted position and moved endwise to the right with its lower edge engaging beneath the bead 14 until its right-hand end engages the section 10, if the latter has been previously inserted, or, if not, until the shoulder 27 engages the lip 16, and then the elevated left-hand end of the section 9 is slid down until it is engaged beneath the lip 18 and the lower end of said section is engaged beneath the bead 14. To facilitate this operation I prefer to cut away the section 9 at 28 and 29. The cut-away portion 28 enables the section 9 to be moved

longitudinally into engagement with the section 10 and lip 16 without sticking beneath the bead and the cut-away portion 29 enables the section when thus partly inserted to clear the lip 18 with which it does not engage until the section is finally arranged in place, as shown in Fig. 1. The section 8 is slid into place lengthwise from left to right beneath the lips 20 and 19; depressing the locking device 21 while it is sliding over the projection 22 and until it has reached its final position with said projection engaging the notch 23. The section 8 holds the section 9 in place beneath the lips 16 and 18 and bead 14.

In the embodiment of the invention illustrated in the drawings the type characters are stamped in relief on the plate sections, and the section 8 bears the form for the name, the section 9 bears the form for the address and the section 10 bears the form for such other information as may be desired, such as the ledger and page number where the account appears. This printing device is adapted for use by a gas company for addressing bills for example. In this case the address is permanent but the name may be changed from time to time and the ledger reference will, of course, be changed as required. By making the printing plate in sections, as herein described, the section bearing the name can be changed as often as required at much less expense than the whole plate could be changed, and thus the cost of maintaining the system is greatly reduced.

It is desirable to make the section 8 as long as possible in order to accommodate firm names, corporate names and long individual names, and for this purpose I prefer the construction illustrated in the drawings in which the section 8 extends across the frame above the two sections 9 and 10 but I may make this device in the form illustrated in another application filed concurrently herewith under the broad claims of this application.

I use the term "printing plate" herein broadly to include not only the plate with characters stamped therein as shown, but any kind of printing form suitable for the work, such as a form of separate type or logotype set up in suitable holders adapted to be secured in place on the frame in the manner described.

The card is intended to receive an impression from the printing form and any other desired information for reference.

What I claim and desire to secure by Letters Patent is:

1. A printing device of the character described comprising a frame plate provided with printing-plate retaining means struck up therefrom, a plurality of detachable printing plate sections lying flat against the

frame plate and engaged with the retaining means, one of the printing plate sections being held against movement in three directions by the retaining means and held against movement in a fourth direction by the other printing plate section, said other printing plate section being free to move in one direction out of engagement with the retaining means, and the frame plate being provided with a spring lock to engage said other printing plate section and hold it against disengagement from the plate retaining means.

2. A printing device of the character described comprising a frame having a space to receive a card and means for retaining a card in place thereon, and a space to receive a printing plate and means struck up from the frame for retaining the plate in place thereon, said plate consisting of a plurality of sections adapted to be slidably engaged with said retaining means with one section engaged with an edge of another section to maintain said other section in place on the frame.

3. A printing device of the character described comprising a frame, means struck up from the frame for retaining a printing plate flat upon the frame, and a printing plate consisting of a plurality of detachable sections adapted to be engaged with said retaining means, two of said sections being located end to end lengthwise of the frame with one edge of each adjacent the same edge of the frame and the other section extending lengthwise of the frame with one longitudinal edge engaging an edge of each of the other sections.

4. A printing device of the character described comprising a frame, a printing plate consisting of a plurality of detachable sections arranged flat upon the frame, means for securing one of said sections on the frame and for preventing movement of a second section in any of three directions, and means for securing a third section on the frame in position to prevent movement of the second section in a fourth direction, all of said means being integral with the frame and projecting from the plane thereof.

5. A printing device of the character described comprising a frame plate, a pair of printing plate sections cut away at adjacent corners, a retaining device struck up from the frame plate and projecting from the plane thereof to be engaged by said sections at said corners, and means struck up from the frame plate for locking the sections on the frame.

6. A printing device of the character described comprising a frame, a printing plate section having a shoulder at one corner extending in the plane of the printing plate, a retaining lip struck up from the frame

adapted to embrace said shoulder, and means for securing the section flat upon the frame.

7. A printing device of the character described comprising a frame, a retaining device integral with the frame and projecting from the plane thereof, a pair of sections arranged end to end flat upon the frame and adapted to engage said retaining device at adjacent corners, and means integral with the frame at the outer ends of said sections for preventing longitudinal movement thereof.

8. A printing device of the character described comprising a frame plate, a sectional printing plate, and means struck up from the plate and engaging edges of the sectional printing plate for detachably securing the printing plate flat upon the frame with an edge of one of the sections disposed adjacent to an edge of another section, one of said sections having an offset projection stamped therein to overlap the other section.

9. A printing device of the character described comprising a frame, a sectional printing plate, and means for detachably securing the plate flat upon the frame with an edge of one section disposed contiguous to an edge of another section, one of said sections having a projection to overlap the other section and said securing means comprising a spring locking device adapted to engage a notch in one of said sections.

10. A printing device of the character described comprising a frame plate, lips struck up from the frame plate for retaining a card thereon, other lips struck up from the frame plate for retaining a printing plate thereon, and a spring retaining-device struck up from the frame plate and provided with a

part to engage a card and another part to engage a printing plate.

11. A printing device of the character described comprising a frame plate, lips struck up from the frame plate for retaining a card thereon, other lips struck up from the frame plate for retaining a printing plate thereon, and a spring retaining-device struck up from the frame plate and located between the card-retaining lips and the printing plate retaining lips, said device having a part to engage a card and another part to engage a printing plate.

12. A printing device of the character described comprising a frame having means for retaining a card and a printing plate in place thereon, said means comprising a spring device integral with the frame to lock the plate on the frame and having a lip to engage the card.

13. A printing device of the character described having integral means projecting from the plane thereof for detachably securing a card and a metal printing plate thereon, said plate consisting of a plurality of sections having a complete address stamped in relief thereon, one of said sections extending across the frame and bearing a name, a second section located below the first section and bearing the address, and a third section located alongside the second section and below the first section and bearing other matter, all of said sections being arranged flat upon the frame with their edges contiguous.

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Witnesses:

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