Dec. 27, 1927.

1,654,040

J. S. DUNCAN

PRINTING DEVICE

Filed March 27, 1926

Fig 1

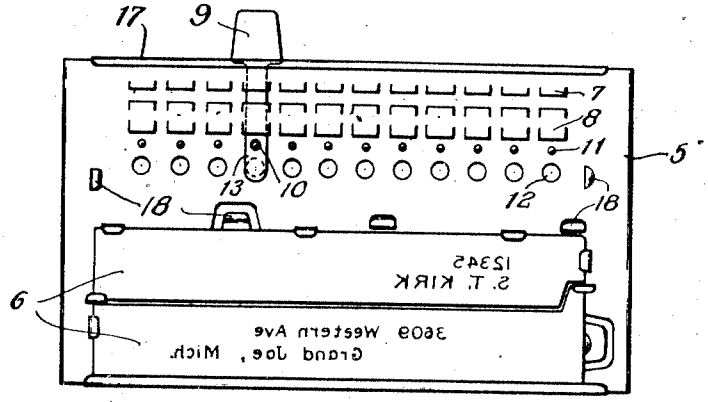


Fig. 2

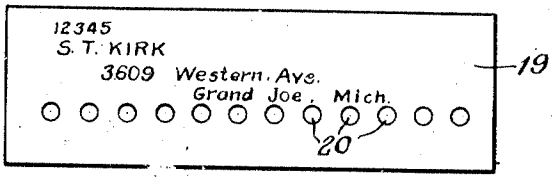


Fig. 3

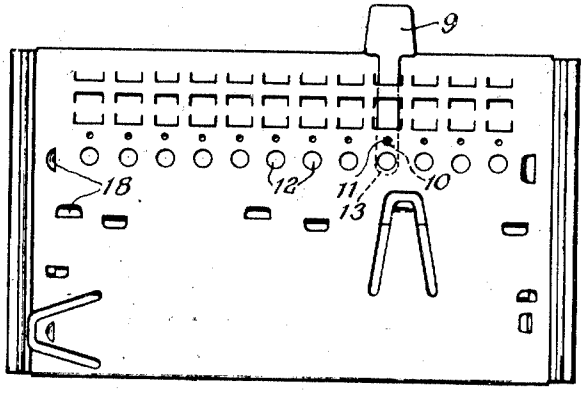
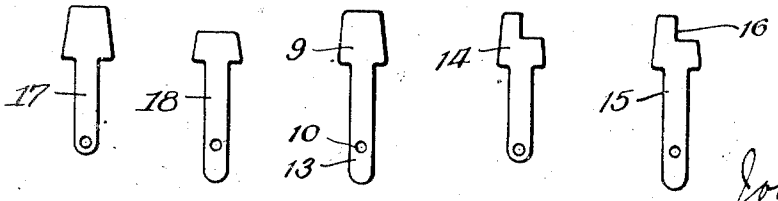


Fig. 4



Inventor:
Joseph S. Duncan
By: Wm. O. Bell
Atty.

Patented Dec. 27, 1927. 1,654,040

UNITED STATES PATENT OFFICE.

JOSEPH S. DUNCAN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ADDRESSOGRAPH COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE.

PRINTING DEVICE.

Application filed March 27, 1926. Serial No. 97,829.

In my patents No. 1,082,505 and No. 1,082,506, patented December 30, 1913, I have described the use of index tabs adapted to be detachably engaged with printing devices for controlling the printing operations of a printing machine, and I have disclosed several tab constructions to provide for a variety of classifications. My present invention has for its object to provide another means of classification for printing devices to be used independently of or in conjunction with any or all of the means disclosed in my patents aforesaid, whereby a greater number of classifications may be obtained, if desired.

And a further object of the invention is to provide a simple form of classification means which can be easily set and which is not likely to become disarranged or inoperative.

In the accompanying drawings I have illustrated the invention in a printing frame form of printing device, but it is equally well adapted to the one-piece plate form of printing device illustrated in my patents, as will be readily understood.

Referring to the drawings

Fig. 1 is a front view of the printing device;

Fig. 2 is a plan view of the card;

Fig. 3 is a back view of the printing device, and

Fig. 4 illustrates several forms of tabs that may be used.

Referring to the drawings, 5 designates a frame which is provided with suitable devices for receiving and holding the plates 6 which bear the printing characters in relief thereon. The device is provided with a plurality of slots to form keepers 7, 8 which are arranged in a series or row across the frame adjacent the top thereof. The stem of a tab 9 is adapted to be engaged with any pair of keepers and it is provided with an opening 10 adjacent its end to engage a protuberance 11 in alignment with the keepers.

I provide the frame of the printing device with one or more series or rows of openings 12 extending in a line across the frame parallel with the keepers and with an opening arranged in alignment with each keeper. These openings may be of any desired size suitable for the purpose and any number of series or rows may be provided that the frame will conveniently accommodate. The tab 9 has an elongated stem 13 which is adapted to cover the opening below the keeper in which the tab is held, and for this purpose and with the construction shown the stem projects below the opening 10 therein. Shorter tabs 14 like those disclosed in my patents aforesaid may be used in the same frames, with the classification they provide, or long tabs 15 may be notched at 16 or otherwise constructed as shown in said patents if such extended classification is required or short tabs and long tabs may be made as indicated at 17, 18.

Printing devices of this character are fed one at a time through an addressing or other printing machine, which comprises certain controller devices adapted to be located in a predetermined position to be operated by the index tab control units. Actuation of a controller by a unit sets in operation the printing mechanism to effect an impression from the printing device whose control unit actuated the controller. Obviously no impression will be taken from those printing devices on which the control units are not positioned to engage and actuate a controller, and since the control units are arranged on the printing devices according to a predetermined classification, it will be manifest that as the devices are run through the machine an impression will be taken only from those printing devices in a given classification for which the controller on the machine has been set. For example, there are 12 openings in the series shown on the printing device in the drawings, and let it be assumed that these openings are provided for a monthly classification and that the classification is designed to indicate subscrip-

tion expirations. On each printing device the tab control unit will be arranged in the position indicating the expiration month of the subscription (or in any other desired system) and the elongated stem will cover the opening 12 in alignment with the keeper which holds the tab. In the drawings the tab is arranged in the fourth keeper indicating that the subscription expires in April and all the printing devices bearing tabs in this position will be automatically printed as they are run through the machine, and all of the printing devices bearing tabs in other keepers will be skipped in their travel through the machine.

It will be observed that tab control units such as I have disclosed in my prior patents and as shown at 14 in Fig. 4 may be used in the printing device provided with openings 12, in which case the controller of the printing machine will be set to be operated by the tabs as described in my patents; or elongated tabs 9 or 15 may be used in these printing devices with the controller of the machine set accordingly. With the tabs 9 the heads of the tabs may be used for one set of classifications and the openings for another set of classifications, the controller of the machine being set for one or the other classification, as may be desired. With the tabs 14 a variety of classifications can be obtained as described in my patents, and with the tabs 15 a still greater variety of classifications may be obtained because of the addition of the openings 12. It is customary in printing devices of the kind shown to provide the frame with a bead 17 at the top and with other devices 18 for receiving and holding an information card which is detachably engaged therewith. I have shown these devices in the drawings and it will be readily understood that according to my present invention as herein disclosed a card to be used in the frame as a part of the printing device must be provided with openings corresponding to those in the frame.

In Fig. 2 I have shown a card 19 provided with a series or row of openings 20 to register with the openings 12 in the frame of the printing device. The lower end of the stem of the tab control unit projects over the opening in the frame and under the opening in the card to block both openings. With this invention it is essential that the registered openings of the frame and the card in the classification selected for printing should be blocked so that the controller will be intercepted to effect an operation of the machine, and the arrangement of the lower end of the stem between the frame and the card is due to the keeper construction shown and described. It is obvious that the hole would be blocked if the lower end of the stem were located at the back of the frame or at the front of the card instead of between the frame and the card, and this can be accomplished by reconstructing the keepers.

I have not considered it necessary to show the controller because that forms no part of the present invention and may be varied in construction and operation in many ways. As an illustration of one form of controller which may be used I may mention that it can be in the form of a plurality of fingers positioned in a row to engage the openings in the printing device so that as each printing device is brought into registration with the controller the fingers will enter all of the unobstructed openings, but printing impressions will be taken only from those printing devices of a certain classification determined by the index tab control units to which the machine has been set. The selected index tab control unit obstructs the finger of the controller according to the setting of the machine and this results in a printing impression from that printing device, and from every printing device having an index tab of the same kind and similarly disposed.

By using a tab with a specially shaped head in conjunction with an elongated stem, and the openings 12, 20, and controller means adapted for operation accordingly, a large classification may be provided for.

I am aware that changes in the form, construction and arrangement of the printing device herein shown and described may be made without departing from the spirit or sacrificing the advantages of the invention and I reserve the right to make all such changes as fairly fall within the scope of the following claims.

I claim:

1. A printing device having a series of keepers extending in a row across the device adjacent the upper edge thereof and openings below the keepers and aligned therewith, and an elongated index tab adapted to be detachably engaged with any keeper and to project below the keeper to obstruct the opening aligned therewith.

2. A printing device having a keeper and a protuberance below the keeper and an opening below the protuberance, and an index tab detachably engaged with the keeper and having an opening to engage the protuberance and projecting downward to obstruct the opening below the protuberance.

3. A printing device having a series of keepers extending in a row across the device adjacent the top thereof and a series of openings extending across the device below and parallel with the keepers, said openings being aligned with said keepers, and an elongated index tab adapted to be detachably engaged with any keeper and to project below the keeper to obstruct the opening aligned therewith.

4. A printing device comprising a frame

having a series of keepers extending in a row across the frame adjacent the upper edge thereof and a row of openings below and adjacent the row of keepers and aligned therewith, a card having a row of openings to register with said row of openings in the frame, means for removably holding the card on the frame, and an elongated index tab adapted to be detachably engaged with any keeper and to project below the keeper between the frame and the card to obstruct the openings in the frame and card aligned with the keeper in which the tab is engaged.

JOSEPH S. DUNCAN.