

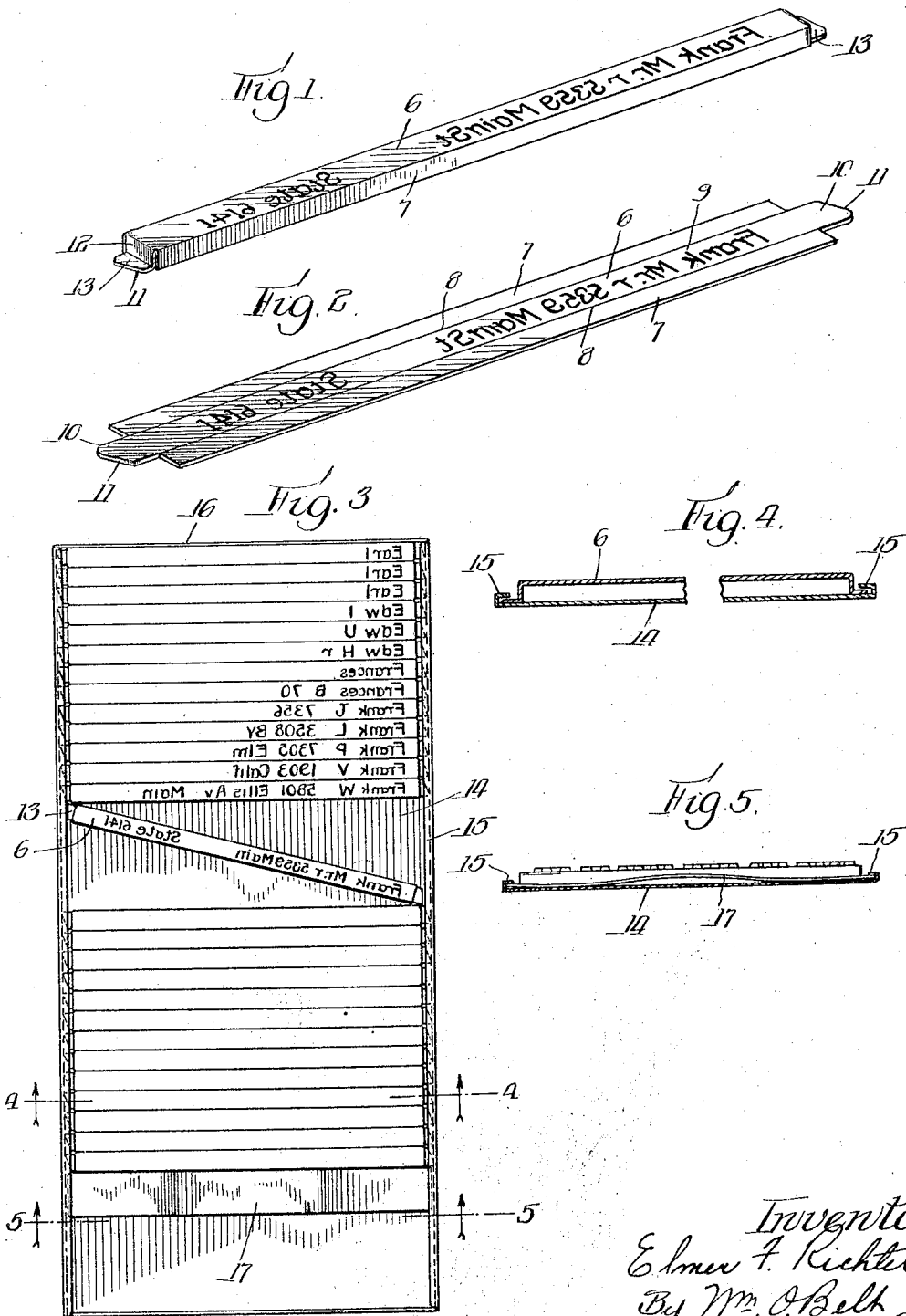
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E. F. RICHTER

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PRINTING DEVICE

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Inventor
 Elmer F. Richter
 By Wm. O. Belk atty.

UNITED STATES PATENT OFFICE

ELMER F. RICHTER, OF PARK RIDGE, ILLINOIS, ASSIGNOR TO ADDRESSOGRAPH COMPANY, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE

PRINTING DEVICE

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This invention relates to printing devices and to means whereby they may be assembled in a holder for classification or other purposes and in a manner which will permit changes to be made by removal of some devices or by adding additional devices or by changing the arrangement of devices and still maintain a compact assembly of the printing devices in the holder to permit impressions to be made therefrom in regular line spacing.

My invention is particularly useful to telephone companies who have to keep classified lists of subscribers up to date to be able to promptly respond to calls for subscribers whose names have not yet appeared in the directory or whose telephone numbers have been changed for any reason. My invention provides a compact printing form of a plurality of lines, each line bearing printing characters for a telephone subscriber's name, address and telephone number, according to usual directory practice, provision being made for readily and quickly making changes in the single line forms so that the complete telephone classification can be constantly maintained current. Impressions from these forms are distributed to operators and to different departments at regular intervals thereby assisting the company to render prompt service to the public and also assisting the company in keeping its records up to date.

A further object of the invention is to provide a single line printing form of strong and substantial structure having printing characters embossed thereon and provided at its ends with means for detachable engagement with a holder adapted to receive a plurality of such devices.

Another object of the invention is to provide a blank metal strip having a panel adapted to have printing characters embossed thereon, and side portions to facilitate the embossing operation and adapted to be bent afterward to form a channel-shaped printing device.

And another object of the invention is to provide the blank with extensions at the ends of the type panel adapted to be bent to assist in supporting the type panel and provide

lips for engaging retaining devices on the holder.

And a further object of the invention is to provide a holder having retaining means for engaging the ends of the single line printing devices so that they may be changed as desired and a compact assembly of the printing devices in the holder may be maintained.

In the accompanying drawing I have illustrated a selected embodiment of the invention and referring thereto,

Fig. 1 illustrates a complete single type line printing device.

Fig. 2 shows the blank with type characters embossed thereon and ready to be formed into the complete printing device of Fig. 1.

Fig. 3 illustrates a holder with a plurality of printing devices therein and one positioned as it would be for insertion or removal.

Fig. 4 is a sectional view on the line 4—4 of Fig. 3.

Fig. 5 is a sectional view on the line 5—5 of Fig. 3.

Referring to the drawing the blank comprises a strip of sheet metal having a central panel 6 and two side panels 7, 7 separated by score lines 8, 8. Type characters 9 are embossed on the central panel in a suitable embossing machine and the side panels 7, 7 enable the strip to be held in the embossing machine during the embossing operation so that the type characters may extend close to the score lines 8, 8 to enable close line spacing of the printing devices. The type panel 6 has extension ends 10 the outer edges 11, 11 of which are reversely inclined. After the blank has been embossed as shown in Fig. 2 the side panels 7, 7 are bent on the score lines 8, 8 to form the sides of the channel-shaped printing device, Fig. 1, and the extensions 10, 10 are bent downward to form the channel ends 12 and projecting lips 13 at the bottoms of the channels. A convenient holder for a plurality of the printing forms comprises a plate 14 having its side edges bent over to form retaining flanges 15 to receive the lips 13. The upper edge of the holder is bent to form a stop 16 and a spring follower 17 is engaged with the retaining flanges to hold the single line printing forms in compact

arrangement. In Fig. 3 the forms have been opened up to permit the insertion or removal of one form which has been moved to a diagonal position so that the inclined edges 11, 11 will clear the flanges. After this form is inserted or removed the follower is moved to restore the line forms to compact arrangement. It is desirable and advantageous to maintain the single line printing forms in compact assembly in the holder, regardless of the number of changes, because the line forms will be held against accidental displacement and in proper relation with each other for printing by engagement one with the other and in compact assembly the printing forms will make a printing impression in proper line spacing without any undesirable gaps and these impressions will be uniform in appearance, compact, comparable with directory printing arrangement and easily read. The blank is adapted to be arranged and supported in proper position in the embossing machine for receiving the embossed type characters on the central panel and this panel may be of such width and the type characters of such height that the characters will closely approach the marginal side edges of the panel. When the side panels are bent into parallel relation perpendicular to the plane of the central panel the type characters will extend close to the side edge of the printing device and this enables the printing devices to be closely assembled so that the line spacing of the printed impression will be close. The width of the central panel 6 may be changed to accommodate type characters of different height or to space the type lines differently. In addition to the utility of the invention to a telephone company in the manner hereinbefore indicated the invention may be used for other purposes and by directory publishers, insurance companies, public service companies, banking institutions, trust companies and corporations, and others for maintaining lists up to date and for many other purposes. Instead of single line forms which would generally be used for directory purposes the forms may carry a plurality of lines of type characters. I have shown and described the invention in a form which gives entire satisfaction for the purposes indicated but it may be desirable to change the construction or arrangement of parts of the invention to suit different conditions, or for other purposes and I reserve the right to make all such changes as fall within the scope of the following claims.

I claim:

1. A printing form blank of oblong shape having oppositely disposed projections at its ends and of less width than the ends, the outer edges of said ends being reversely inclined.
2. A printing form blank having a central panel and two side panels, one of said panels

being extended at its ends beyond the other panels and the outer edges of said extensions being reversely inclined.

3. A printing form comprising a central panel having type characters embossed thereon and side panels connected to the side edges of the central panel and extending perpendicularly thereto and parallel with each other to make a channel-shaped printing form, extensions on the ends of one of said panels bent to substantially close the ends of the channel and having outwardly projecting lips, the outer edges of said lips being reversely inclined.

4. A printing form comprising a central panel having type characters embossed thereon and side panels connected to the side edges of the central panel and extending perpendicularly thereto and parallel with each other to make a channel-shaped printing form, extensions on the ends of the central panel bent perpendicularly to said panels and substantially closing the ends of the channel, and lips on said extensions projecting outwardly therefrom at the bottom of said panels, the outer edges of said lips being reversely inclined.

ELMER F. RICHTER.