April 10, 1934. C. A. MEISEL 1,954,423

MULTIPLEX FORM

Filed Jan. 19, 1933

Fig. 1.

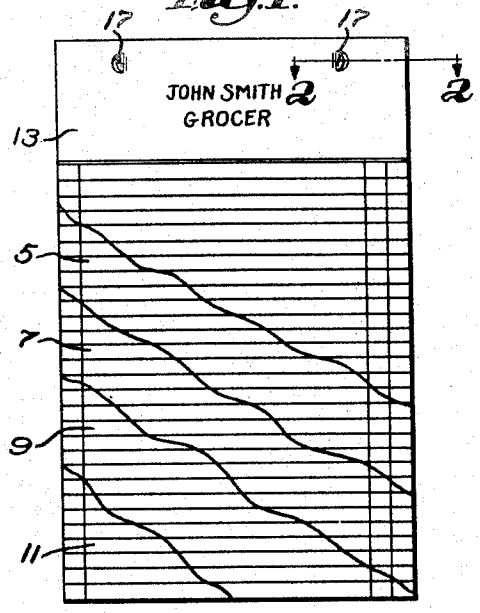


Fig. 2.

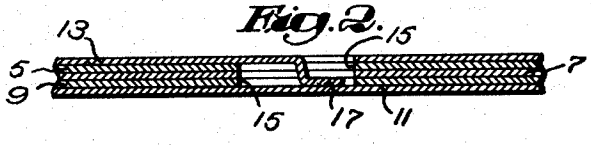
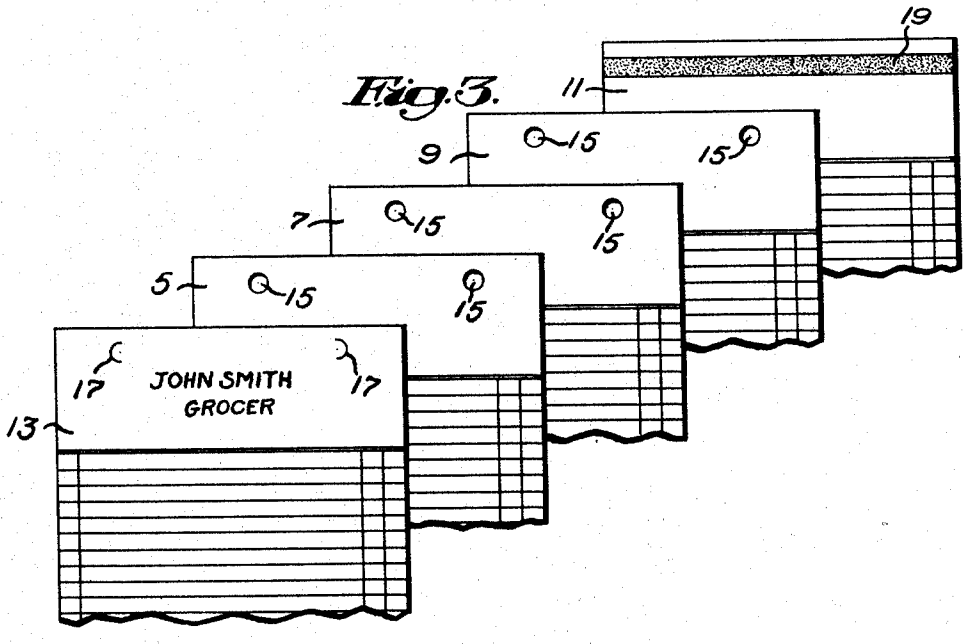


Fig. 3.



Inventor:
Charles A. Meisel,
by Emery, Booth, Varney & Townsend
Attys

Patented Apr. 10, 1934 1,954,423

UNITED STATES PATENT OFFICE

1,954,423

MULTIPLEX FORM

Charles A. Meisel, Milton, Mass., assignor to Meisel Press Manufacturing Company, Boston, Mass., a corporation of Massachusetts

Application January 19, 1933, Serial No. 652,479

4 Claims. (Cl. 281—21)

Business forms are in common use which embody sheets, usually with identical or complementary printing thereon and either with or without permanently associated carbon sheets between them, in which the sheets are fastened together along an edge forming a book-like pad. Such fastening is effected by adhesive, wire stitching or other means. Wire stitching has obvious disadvantages, and especially when the number of sheets increases, securing them together by means of adhesive has hitherto entailed the multiplication of expensive mechanisms in manufacture and objectionable bulkiness at the joint. My invention provides for the production of a multiplex form or pad obviating such criticisms.

My invention may be well understood by reference to the following description taken in connection with the accompanying drawing, wherein:—

Fig. 1 is a plan of a pad with parts successively broken away;

Fig. 2 is a section on the line 2—2 of Fig. 1 on an enlarged scale; and

Fig. 3 is a plan showing the successive elements of the pad relatively displaced.

As an example of my invention I will herein illustrate and describe a pad or form consisting of five parts and have indicated all these parts as printed sheets. It will be understood, however, that the sheets may differ in quality, color, legends printed thereon and even in size.

Referring now to the drawing, the pad there shown comprises three pages 5, 7 and 9 and a back member or sheet 11, herein a similar page, to which the pages 5, 7 and 9 are held beneath a front sheet 13, again in the example shown a page similar to the pages 5, 7 and 9 and of like area, and a separate piece from the rear sheet 11 although this is not necessary. Pages 5, 7 and 9 may be provided along an edge thereof with openings 15, preferably circular openings which, besides providing for the securing together of the various parts in pad form as hereinafter described, may serve as filing openings for filing the different forms. When the sheets 5, 7 and 9 are jogged up or superposed with the openings 15 in alignment as indicated in Fig. 7, the openings overlie an unbroken portion of the back sheet 11.

The front sheet 13 is provided with tongues 17 so located as to permit them to be bent down through the superposed openings 15. Preferably these tongues are half-round as shown, their bases being equal to the diameters of the openings 15 while coinciding with the parallel vertical diameters of the openings when the parts are assembled in jogged-up relation. The tongues, as best seen in Fig. 1, preferably face in opposite directions for purposes which will appear. Referring now to Fig. 2, it will be seen that the tongues 17 may be deflected through the openings 15 in pages 5, 7 and 9 and secured to the back sheet 11. Herein (see Fig. 3) I have shown the back sheet 11 as provided with a stripe 19 of adhesive at the location of the holes by which the ends of the tongues are secured and which also directly secures together the back sheet 11 and the immediately overlying page 9.

By the means described the various parts of the pad are firmly secured together and the pages 5, 7 and 9 hung on the deflected tongues which join together the front sheet 13 and the backing sheet 11. The tongues are easily bent and there is no drawing strain on the top or bottom sheet which might tend to pull any of the parts out of shape or cause disalignment of the printing forms. This is particularly advantageous in case the pads are manufactured by uniting long webs along one of their edges and subsequently dividing them transversely to form the individual pads as shown in the figure as the drawing strain and disalignment might in such case be cumulative. In the preferred form of the invention embodying a half-round tongue and round holes the tongue is easily passed through the round hole. The portion adjacent the base which passes through the hole is of substantially the maximum diameter. Thus if one of the pages 5, 7 and 9, referring to Fig. 2, should tend to shift to the left in that figure, then, referring to the right hand opening and the tongue therein, the tendency of this movement is to force a relatively short chord of the circular opening over a portion of the tongue of substantially full diameter and shifting movement is thus resisted. Since the two tongues face in opposite directions, movement in either direction is prevented. The sections are firmly joined with no opportunity for undesirable shifting and by simple and inexpensive means not causing undue thickness at the joint.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive; reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim

1. A pad comprising a plurality of pages having openings therethrough, a back sheet having por-

tions underlying said openings and a top sheet having tongues deflected through said openings and adhesively secured to the face of such portions of the back sheet.

2. A pad comprising a plurality of pages having openings therethrough, which openings have a maximum dimension, a back sheet having portions underlying the openings, a top sheet having corresponding tongues cut therefrom, the bases of which are of a width substantially equal to said maximum dimension of the corresponding opening and coincide with the same, the tongues being deflected through said openings and adhesively secured to the face of such portions of the back sheet.

3. A pad comprising a plurality of pages having circular openings therethrough, a back sheet having portions underlying the openings and a top sheet having tongues, the bases of which correspond in dimension and position to parallel diameters of the openings and the bodies of which extend in opposite directions, said tongues being deflected through the openings and adhesively secured to the face of such portions of the back sheet.

4. A pad comprising a plurality of pages having circular openings therethrough, a back sheet having portions underlying the openings and a top sheet having half-round tongues, the bases of which correspond in dimension and position to parallel diameters of the openings and the bodies of which extend in opposite directions, said tongues being deflected through the openings and adhesively secured to the face of such portions of the back sheet.

CHARLES A. MEISEL.