

Aug. 15, 1950

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2,518,535

PRINTING PLATE AND SUPPORTING SHEET

Filed Dec. 4, 1945

2 Sheets-Sheet 1

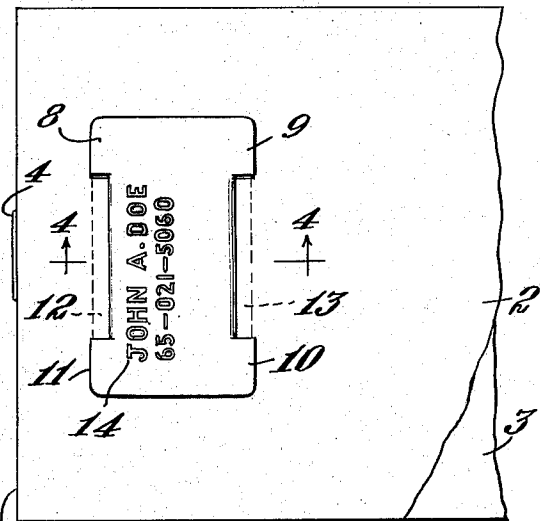


Fig. 1

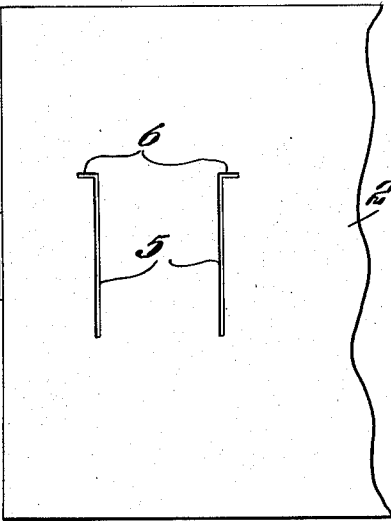


Fig. 2

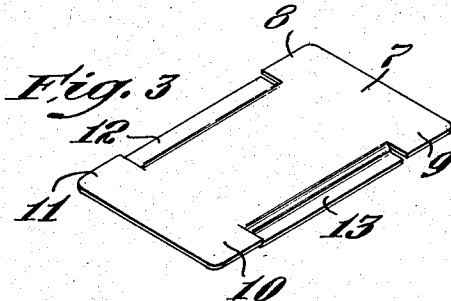


Fig. 3



Fig. 4

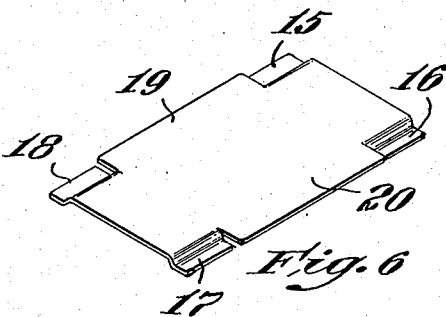


Fig. 6

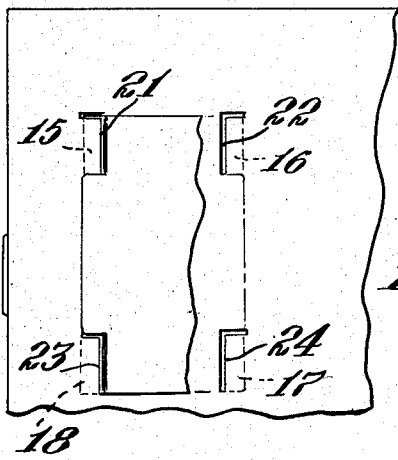


Fig. 5

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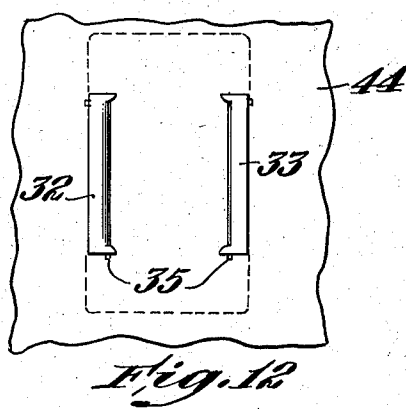
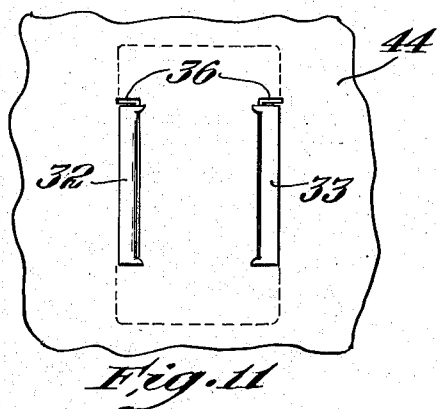
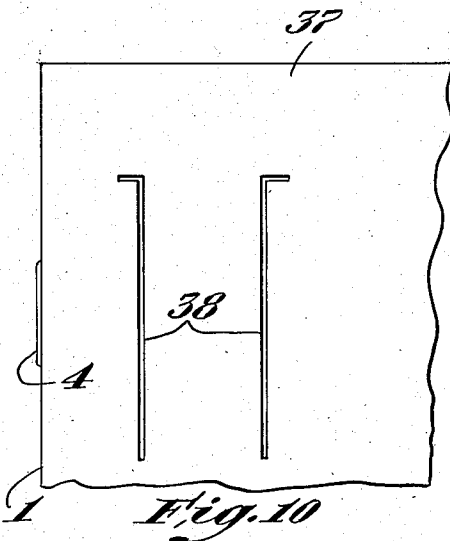
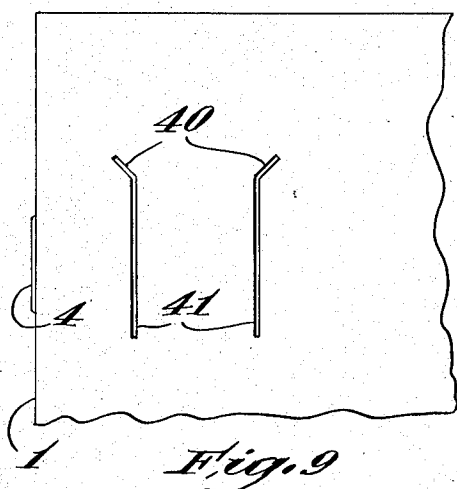
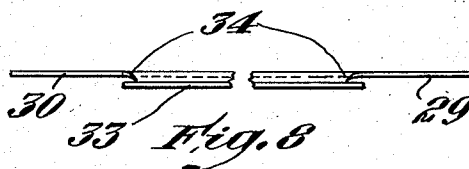
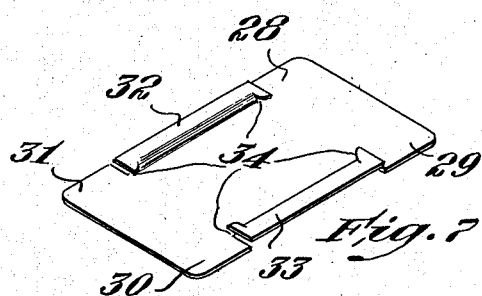
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UNITED STATES PATENT OFFICE

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PRINTING PLATE AND SUPPORTING SHEET

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5 Claims. (Cl. 101-369)

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In the art of printing plates of the type comprising a thin metallic plate which may be readily carried in the pocket or in a purse, the plate being embossed to provide printing type comprising a name and address or other suitable indicia, it is often desirable detachably to mount the plate on a card or other sheet material. One example is the case of an unemployment insurance commission which issues to each insured person both a printing plate carrying his name and address and also an insurance book including appropriate data and places for stamps to be cancelled by writing the employer's number across the face of the stamps. Inasmuch as the book and plate are presented together it is desirable to have the parts detachably interconnected so that they may be kept and carried as a unit and so that they may be conveniently detached from each other when renewal books are issued or when the printing plate is separated from the book and attached to a file card in the insurance office while the individual is receiving benefits.

Objects of the present invention are to provide a printing plate of the type above referred to which is simple and economical in construction, which is compact and convenient in use, which can readily be attached to a card or other sheet without weakening or causing the card or other sheet to be susceptible to inadvertent bending or distortion, which while attached to the card or other sheet is firmly supported thereon, which does not require any lock or detent to hold it in place on the card or other sheet, which does not become detached accidentally and which is durable and reliable in use.

According to the present invention the sheet to which the printing plate is to be detachably connected is provided with slots and the printing plate has flanges along its margins for engagement with the sheet, certain of the flanges extending along one side of the sheet approximately in the plane of the plate and other of the flanges extending through the aforesaid slots and thence along the other side of the sheet. In the preferred embodiment the flanges are divided into two sets, one set comprising end flanges adjacent the ends of the aforesaid margins and the other set comprising intermediate flanges, the flanges of one set extending along one side of the sheet approximately in the plane of the plate and the flanges of the other set extending through the slots and thence along the other side of the sheet. Preferably it is the flanges of the end set which extend along the same side of the sheet as the

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plate approximately in the plane of the plate and it is the flanges of the intermediate set which extend through the slots and thence along the other side of the sheet. By having all of the flanges extending outwardly, instead of being folded inwardly behind the printing portion of the plate, the danger of distorting the flanges while printing is avoided.

For the purpose of illustration typical embodiments of the invention are shown in the accompanying drawings in which:

Fig. 1 is a front view of a plate mounted on the front cover of a booklet;

Fig. 2 is a similar view with the plate removed;

Fig. 3 is a perspective view of the plate before the indicia is embossed thereon;

Fig. 4 is a section of line 4-4 of Fig. 1;

Fig. 5 is a view similar to Fig. 1 showing a modification, with a part of the plate broken away and showing the plate before it has been embossed;

Fig. 6 is a perspective view of the plate shown in Fig. 5;

Fig. 7 is a perspective view of a modified plate;

Fig. 8 is an edge view of the plate shown in Fig. 7;

Figs. 9 and 10 are views like Fig. 2 showing two modifications;

Figs. 11 and 12 are views like Fig. 1, except they are from the inside of the front cover of the book instead of from the outside, showing the way the modified plate of Figs. 7 and 8 is applied to the cover, Fig. 11 showing the plate in an intermediate position which it occupies while being mounted on the cover and Fig. 12 showing the plate in final position.

The particular embodiment of the invention illustrated in Figs. 1 to 4 comprises a booklet which has a cover folded at 1 to form a front 2 and a back 3 with intermediate sheets held in place by a staple 4. As shown in Fig. 2 the front cover 2 is provided with two slots 5 each having an offset portion 6 at the upper end, the offset portions extending away from each other. The printing plate 7 has end flanges 8, 9, 10 and 11 which are disposed in the same plane as the plate itself and intermediate flanges 12 and 13 which are offset from the plane of the plate a distance approximately equal to the thickness of the front cover 2. While the characters 14 which are embossed on the face of the printing plate may be in reversed order for printing through an ink ribbon or carbon paper they are preferably in non-reversed order as described and claimed in U. S. Patent 1,801,593 for engagement with the

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sheet to be printed from the side opposite to the carbon paper or ink ribbon so that the plate is not soiled.

To mount the plate on the cover 2 the flanges 12 and 13 are slipped through the offset portion 6 of the slots 5 from the top until the lower ends of the flanges 13 seat against the bottom of the slots 5. By making the length of the flanges 12 and 13 approximately equal to that of the slots 5 the upper ends of the flanges 12 and 13 about the upper ends of the slots 5 when the plate has been fully inserted. After the flanges 12 and 13 have been inserted in this manner the flanges 8, 9, 10 and 11 extend approximately in the plane of and outwardly away from the plate and along the outer surface of the cover 2 transversely of and across the line of the slots 5 and the flanges 12 and 13 extend through said slots and thence outwardly away from the plate and slots along the opposite side of the sheet thereby firmly to support the plate on the sheet and to reduce the tendency of the sheet to bend along the lines of said slots. With the flanges seating against both sides of the cover 2 in this way there is substantially no danger of the plate becoming detached accidentally. However, by flexing the cover 2 at the offset portion 6, the plate may be slipped out of the slots without difficulty.

The modification shown in Figs. 5 and 6 is similar to the preferred embodiment shown in Figs. 1 to 4 except in that the end flanges 15, 16, 17 and 18 are offset instead of being straight and the intermediate flanges 19 and 20 are straight instead of being offset. As shown in Fig. 5 the book for use with this modified plate has four slots 21, 22, 23 and 24 instead of two, the slots being equal in length to the length of the end flanges 15, 16, 17 and 18, and each of the slots having an offset portion at the upper end as in the first embodiment. Of course it will be understood that in each embodiment the offset portions of the slots could be at the lower ends of the slots instead of the upper ends. However accidental displacement of the plates is minimized by placing them at the upper ends of the slots.

The plate shown in Figs. 7 and 8 is like that shown in Figs. 1 to 4 in that it has end flanges 28, 29, 30 and 31 in the plane of the plate and intermediate offset flanges 32 and 33. However unlike the first embodiment the modified plate has undercuts 34 at each end of the offset portion of each of the flanges 32 and 33. To mount this plate on a card 44 having slots 35 with offset portions 36 (Figs. 11 and 12) the plate is first inserted downwardly to the position shown in Fig. 11 after which it is raised to the position shown in Fig. 12 where the upper ends of the flanges 32 and 33 overlap the side of the card 34 opposite the side of the end flanges 28 to 31 above the offset slots 36. Thus the plate is securely locked to the card without danger of being displaced accidentally. With undercuts at the bottom as well as the top of the flanges 32 and 33, the slots need not be quite so long as the flanges. It will be understood of course that the undercuts could be omitted at the bottom in which case the slots 35 must be at least as long as the flanges 32 and 33.

The modification shown in Fig. 9 differs from that shown in Fig. 2 in that the offset portions 40 of the slots 41 extend obliquely upwardly instead of horizontally. This arrangement reduces the danger of the plate becoming dislodged accidentally.

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The modification shown in Fig. 10 is intended for use with a plate such as shown in Fig. 6. Instead of having four short slots as in Fig. 5 the card 37 has two long slots 38. In mounting the plate of Fig. 6 in the card of Fig. 10 the flanges 17 and 18 are first inserted in the slots and then as the plate reaches its lowermost position the flanges 15 and 16 enter the slots. In this case the length of the slots 38 is equal to that of the plate.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims. For example each of the illustrated embodiments may have offset slots which are either horizontal as shown in Figs. 2 and 10 or oblique as shown in Fig. 9, and each of the embodiments may have undercuts as shown at 34 in Figs. 7 and 8 and the undercuts may be at both ends of the flanges or they may be only at the ends adjacent the offset portions of the slots.

I claim:

1. A printing plate opposite margins of which each have flanges, each flange extending throughout only a portion of the length of the margin, at least one of the flanges of each of said margins extending in the plane of and outwardly away from the plate, and at least one other flange of each of said margins being offset from but parallel to the plate and connected to the plate by an intermediate portion inclined at an angle to the plate, the free marginal portion of the offset flange projecting outwardly beyond that portion of the plate which is intermediate said opposite margins.

2. A printing plate opposite margins of which each have at least three flanges, the flanges being of two kinds, the flanges of each kind extending throughout only a portion of the length of the margin, the flange of one kind extending in the plane of and outwardly away from the plate, and the flange of the other kind being offset from but parallel to the plate and connected to the plate by an intermediate portion inclined at an angle to the plate, the free marginal portion of the offset flange projecting outwardly beyond that portion of the plate which is intermediate said opposite margins, the flange of one kind alternating with the flange of the other kind along the length of the margin.

3. An article of the character referred to comprising a flexible sheet and a printing plate detachably attached thereto, the sheet having slots extending along opposite margins of the plate, the opposite margins of the plate each having flanges, each flange extending throughout only a portion of the length of the margins, at least one of the flanges of each of said margins extending in the plane of and outwardly away from the plate and along one side of the sheet transversely of and across the line of the slots which extend along such margins, and at least one other flange of each of said margins being offset from but parallel to the plate and connected to the plate by an intermediate portion inclined at an angle to the plate and extending through the slots, the free marginal portion of the offset flange projecting outwardly beyond that portion of the plate which is intermediate said opposite margins and along the other side of the sheet, thereby firmly to support the plate on the sheet and to reduce the tendency of the sheet to bend along the lines of the slots.

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4. An article of the character referred to comprising a flexible sheet and a printing plate detachably attached thereto, the sheet having slots extending along opposite margins of the plate, the opposite margins of the plate each having at least three flanges, the flanges being of two kinds, the flanges of each kind extending throughout only a portion of the lengths of the margins, the flange of one kind extending in the plane of and outwardly away from the plate and along one side of the sheet transversely of and across the line of the slots which extends along such margins, and the flange of the other kind being offset from but parallel to the plate and connected to the plate by an intermediate portion inclined at an angle to the plate and extending through the slots, the free marginal portion of the offset flange projecting outwardly beyond that portion of the plate which is intermediate said opposite margins and along the other side of the sheet, the flange of one kind alternating with the flange of the other kind along the length of the margin thereby firmly to support the plate on the sheet and to reduce the tendency of the sheet to bend along the lines of the slots.

5. An article of the character referred to comprising a flexible sheet and a printing plate detachably attached thereto, the sheet having slots extending along opposite margins of the plate, the opposite margins of the plate each having flanges, each flange extending throughout only a portion of the length of the margins, at least one of the flanges of each of said margins extending in the plane of and outwardly away

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from the plate and along one side of the sheet transversely of and across the line of the slots which extend along such margins, and at least one other flange of each of said margins being offset from but parallel to the plate and connected to the plate by an intermediate portion inclined at an angle to the plate and extending through the slots, the free marginal portion of the offset flange projecting outwardly beyond that portion of the plate which is intermediate said opposite margins and along the other side of the sheet, thereby firmly to support the plate on the sheet and to reduce the tendency of the sheet to bend along the lines of the slots, the slots having offset portions at one end to receive the offset flanges and the same end of the offset flanges being undercut so that said ends of the opposite flanges may overlap the sheet beyond the offset portions of the slots.

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