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(71) Applicant(s)
Ping-Fan Yuen
Room 5 31/f Hong Pak Court,
Shu Pak House Lam Tin, Kowloon, Hong Kong

(72) Inventor(s)
Ping-Fan Yuen

(74) Agent and/or Address for Service
Marks & Clerk
57-60 Lincoln's Inn Fields, LONDON, WC2A 3LS,
United Kingdom

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B6E ECEC

(56) Documents Cited
GB 2268909 A **GB 1222730 A**

(58) Field of Search
UK CL (Edition P) **B6E ECEC**
INT CL⁶ **B42F 13/12 13/14**

(54) Abstract Title
Rectangular flat strip document binder

(57) A document binder for sheets of paper is formed from a rectangular flat strip 10 of semi-rigid plastics foldable along grooves 11 into a U-shape. Rods 12,15 snap-fit apertures 13 or pins 16 respectively.

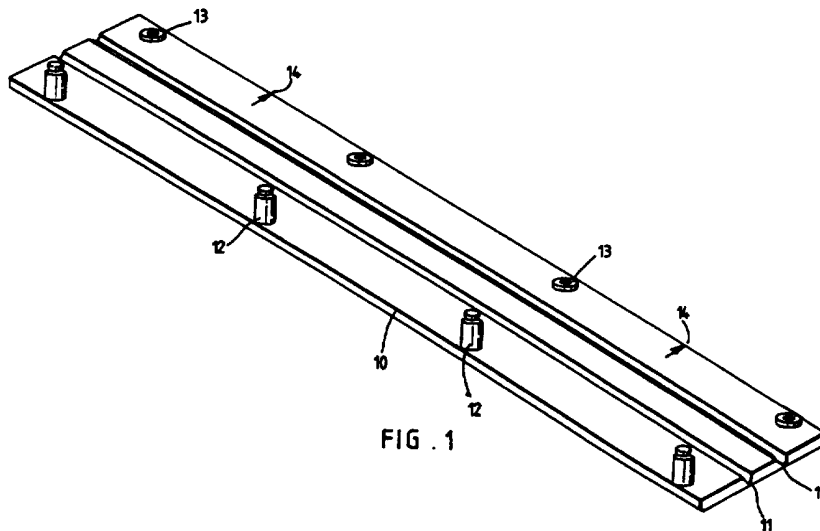


FIG . 1

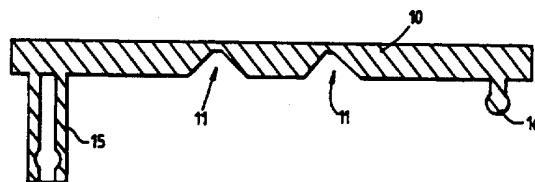


FIG . 4

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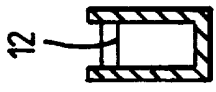
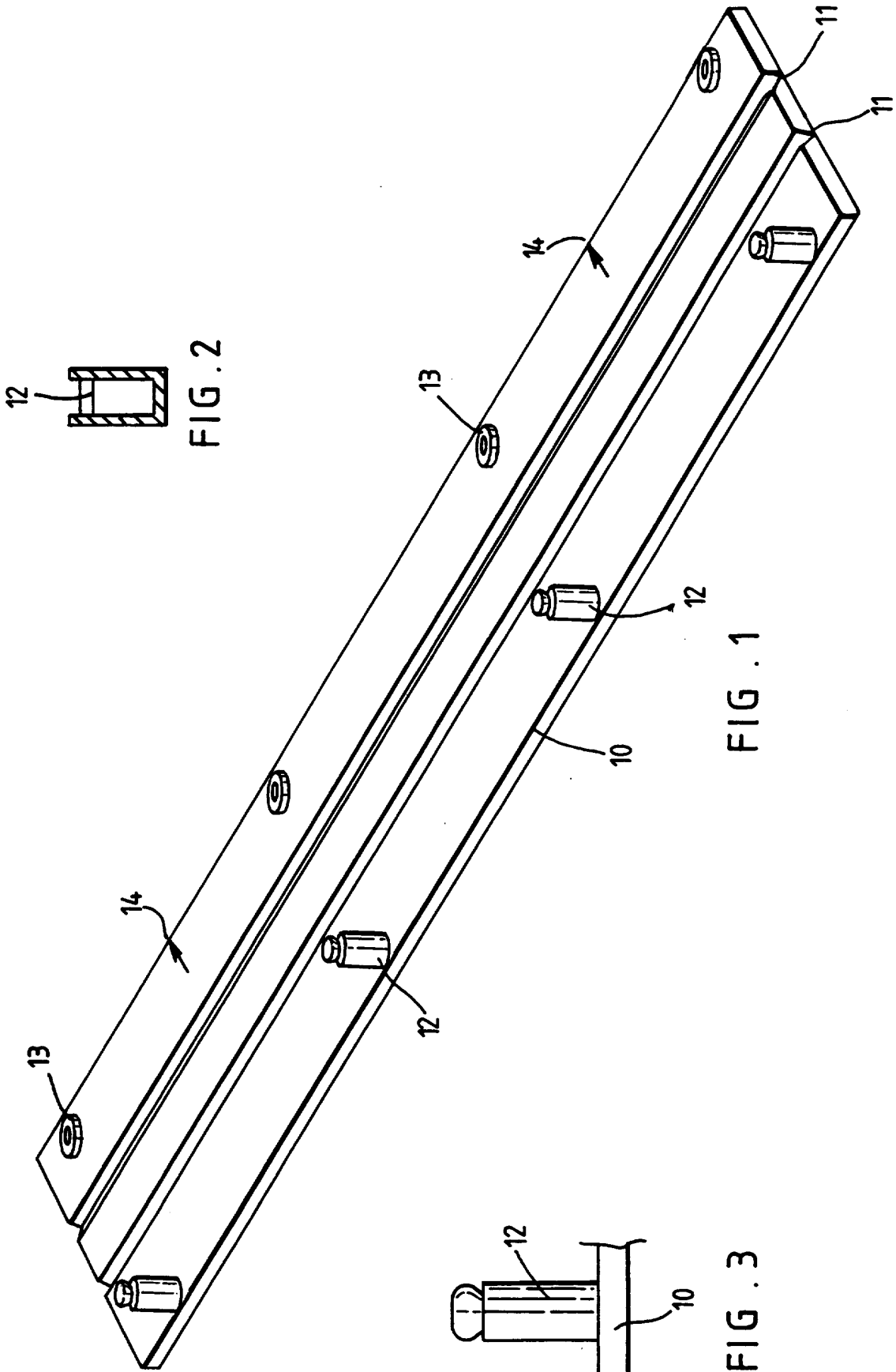


FIG. 2

FIG. 1

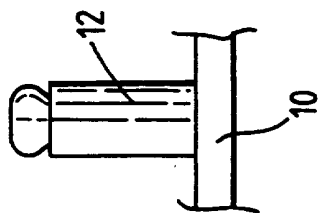


FIG. 3

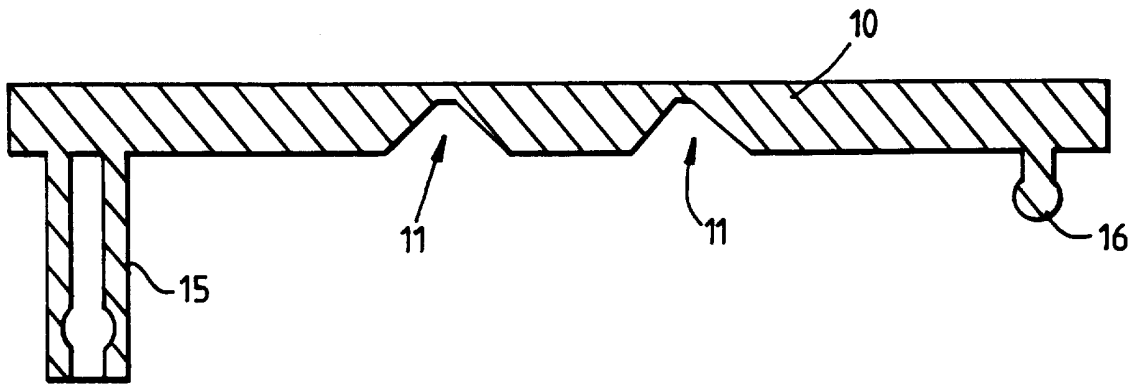


FIG . 4

DOCUMENT BINDER

The invention relates to document binders.

The invention relates more particularly to re-usable or directly manually usable binders especially suitable for binding a number of sheets of paper, say, to form a pamphlet, report binder or the like. Simple binders are already well-known but typically form part of or are used with a hole punching machine. That is to say, the binders are not separately applicable to a bundle and hold together a number of sheets of papers.

According to the invention there is provided a document binder for holding together a bundle of sheets of paper or the like in book-like fashion, the binder being formed by an elongate rectangular flat strip of generally rigid material that is weakened along a pair of lines separated for one another and extending parallel to a longitudinal axis of the strip such that the weakened regions form fold lines and allow the strip to be folded into a U-shape with limbs of the U-shape lying against respective outer sheets of the bundle of sheets.

The strip may be weakened by removing elongate portions of the material from one surface of the strip or otherwise formed with the removed portions.

The removed portions preferably leave a triangular shaped gap in the one surface and the sides of each triangle come together and bear against each other when the strip is formed into the U-shape.

5 Holders may be provided that hold the binder in the U-shaped configuration and to the bundle of sheets and pass through aligned holes in the bundle, the holders being permanently fixed to one limb of the strip.

The remote ends of the holders are preferably formed with
10 ledges that releasable engage in cooperating apertures formed in the other limb of the strip.

Document binders according to the invention will now be described by way of example with reference to the accompanying drawings, in which:

15 Figure 1 is a top isometric view of one binder;

Figure 2 is an end view of one binder;

Figure 3 is an enlarged top view of a holder for one binder; and

Figure 4 is sectional end elevation of another binder.

20 Referring to the drawings, in Figure 1, the binder

comprises an elongate rectangular strip 10 of plastics material such as polypropylene. Typically the strip is 300 mm long and 3 mm thick. The strip is integrally formed with or shaped to provide a pair of weakened regions 11
5 extending parallel to a longitudinal axis of the strip. The weakened regions are formed by providing or forming grooves 11 but could be formed by rollers flattening or fatiguing the regions 11. In any event, the weakened regions or grooves 11 form fold lines and allow the strip
10 to be folded into a U-shape (see Figure 2). Limbs of the U-shape in practice bear against flat outer surfaces of a bundle of sheets of paper, or the like, making up a book, pamphlet and so forth. The grooves 11 are preferably triangular in shape so that sides of each triangle bear
15 against one another when the binder is in its U-shaped configuration (see Figure 2).

The binder is provided with holders 12 that are formed by short plastic rods with one end of each rod secured to one limb of the strip. Remote ends of the rod (see Figure 3)
20 are formed with ledges that fit into and releasably engage cooperating and suitably formed apertures 13 in the other limb of the strip. The actual shapes of the remote ends of the rods and the cooperating apertures can vary considerably. In each arrangement however, the ends of the
25 rods click or snap fit into position when the binder is fitted to the bundle of sheets, the rods passing through pre-formed aligned holes adjacent the edges of the sheets.

Preferably, the ends of the rods can be "snap" released to allow the binder to be used for different sheets or used on the same bundle of sheets again. However, in some instances, the connection between the remote ends of the rods and the aperture 13 may be made so that it is not possible to release the rods without damaging the binder (and rendering the binder useless thereafter). This arrangement ensures that the document cannot be tampered with after being made up without being noticeable.

The strip has two markers 14 painted on or indented in its surface. The markers are positioned to identify a central position for a standard office paper punch. The punches are normally provided with a central arrow which can be lined up with the markers 14 and so that holes can be easily punched in sheets of paper in the correct position. The standard office punch must be used twice, that is to punch two holes, in usual manner, in the sheets of paper each time, and so that the four punched holes will line up with the respective apertures 13 as required.

In Figure 4, the strip is the same as in Figure 1 except that the holders 12 and apertures 13 are replaced by integrally formed hollow gripping rods 15 and pins 16. An enlarged nose of each pin 16 snap-fits in use into an enlarged cavity formed inside the rods 15.

25

However, the strip may be made of other plastics or

materials other than plastics, including metal, cardboard and wood. The materials must be semi-rigid, that is, the material must be generally rigid enough to hold firm and generally flat the edges of a bundle of papers, but
5 flexible enough to respond when weakened (along fold lines) to bend tidily and without fracturing to enable the strip to be formed into the U-shape configuration as required.

The described document binders are relatively simple to manufacture and cheap to produce. The binders can be
10 readily and manually attached to a bundle of sheets, and also removed easily if necessary. The binders can be supplied and applied as stand alone items and used about a normal office where and as required.

CLAIMS

1. A document binder for holding together a bundle of sheets of paper or the like in book-like fashion, the binder being formed by an elongate rectangular flat strip of generally rigid material that is weakened along a pair of lines separated from one another and extending parallel to a longitudinal axis of the strip such that the weakened regions form fold lines and allow the strip to be folded into a U-shape with limbs of the U-shape lying against respective outer sheets of the bundle of sheets.

2. A document binder according to Claim 1 in which the strip is weakened by removing elongate portions of the material from one surface of the strip or otherwise formed with the removed portions.

3. A document binder according to Claim 2, in which the removed portions leave a triangular shaped gap in the one surface and the sides of each triangle come together and bear against each other when the strip is formed into the U-shape.

4. A document binder according to any of Claims 1 to 3, including holders that hold the binder in the U-shaped configuration and to the bundle of sheets and pass through aligned holes in the bundle, the holders being permanently fixed to one limb of the strip.

5. A document binder according to Claim 4, in which remote ends of the holders are formed with ledges that releasable engage in cooperating apertures formed in the other limb of the strip.

- 5 6. A document binder according to any of Claims 1 to 5, in which the strip is formed of plastics material.

7. A document binder substantially as herein described with reference to the accompanying drawings.



Application No: GB 9704881.3
Claims searched: 1-7

Examiner: Graham Russell
Date of search: 19 August 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK Cl (Ed.P): B6E (ECEC)
Int Cl (Ed.6): B42F 13/12, 13/14
Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2268909A (PROFY) see Fig 7	1-6
X	GB 1222730 (RELIURE) see Fig 14	1-6

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.