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(56) Documents Cited
GB 0325966 A
US 5529418 A
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US 0940345 A

(58) Field of Search
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(54) Abstract Title
Binder with slots in cover for binding elements

(57) A binder with openings (2, fig 1) in the cover to let the rings or arches or discs (3, fig 4) that hold the paper 6 pass through, so that the width of the folder will not be limited to the height of the binding element no matter how full the file. The spine 4 of the folder may be flexible, elasticated, made of many parts or concertina to allow the width to vary. The opening may be of elongated slots (2, fig 1) aligned to let the binding element pass freely through. The opening(s) may be in one or both sides 1, 5 of the cover. The folder may also have an extension 20 in the form of a flap 19 attached to one of the sides of the cover to close the file which could be closed by a press stud 18.

Fig. 2

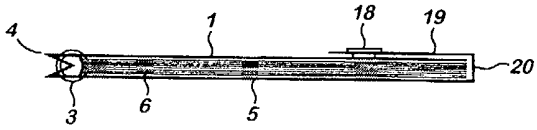

Fig. 3

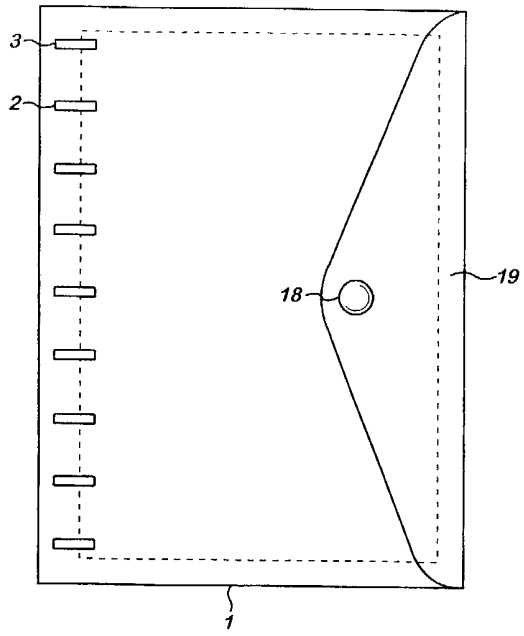

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Fig. 1

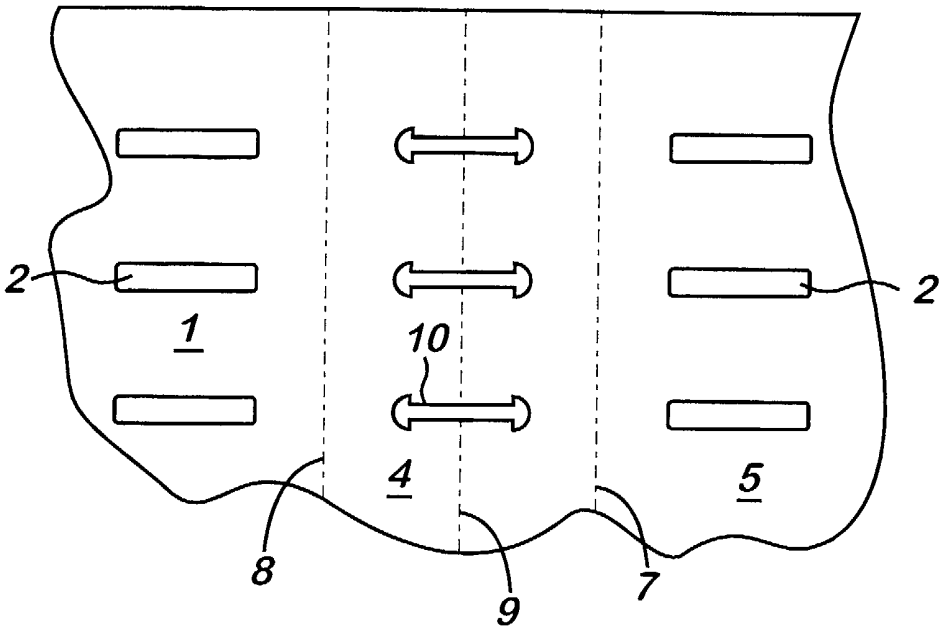


Fig. 4

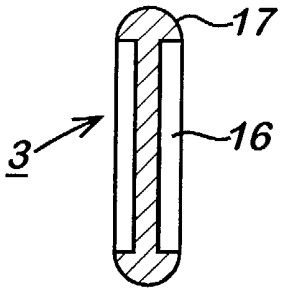


Fig. 5

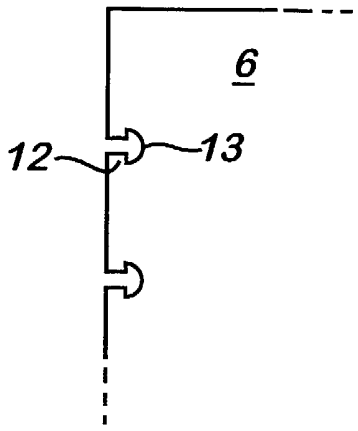


Fig. 2

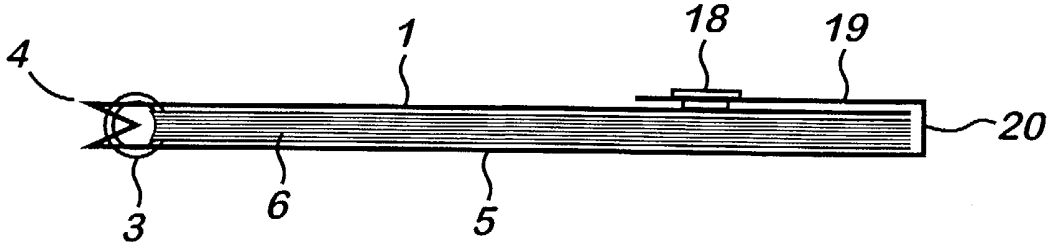
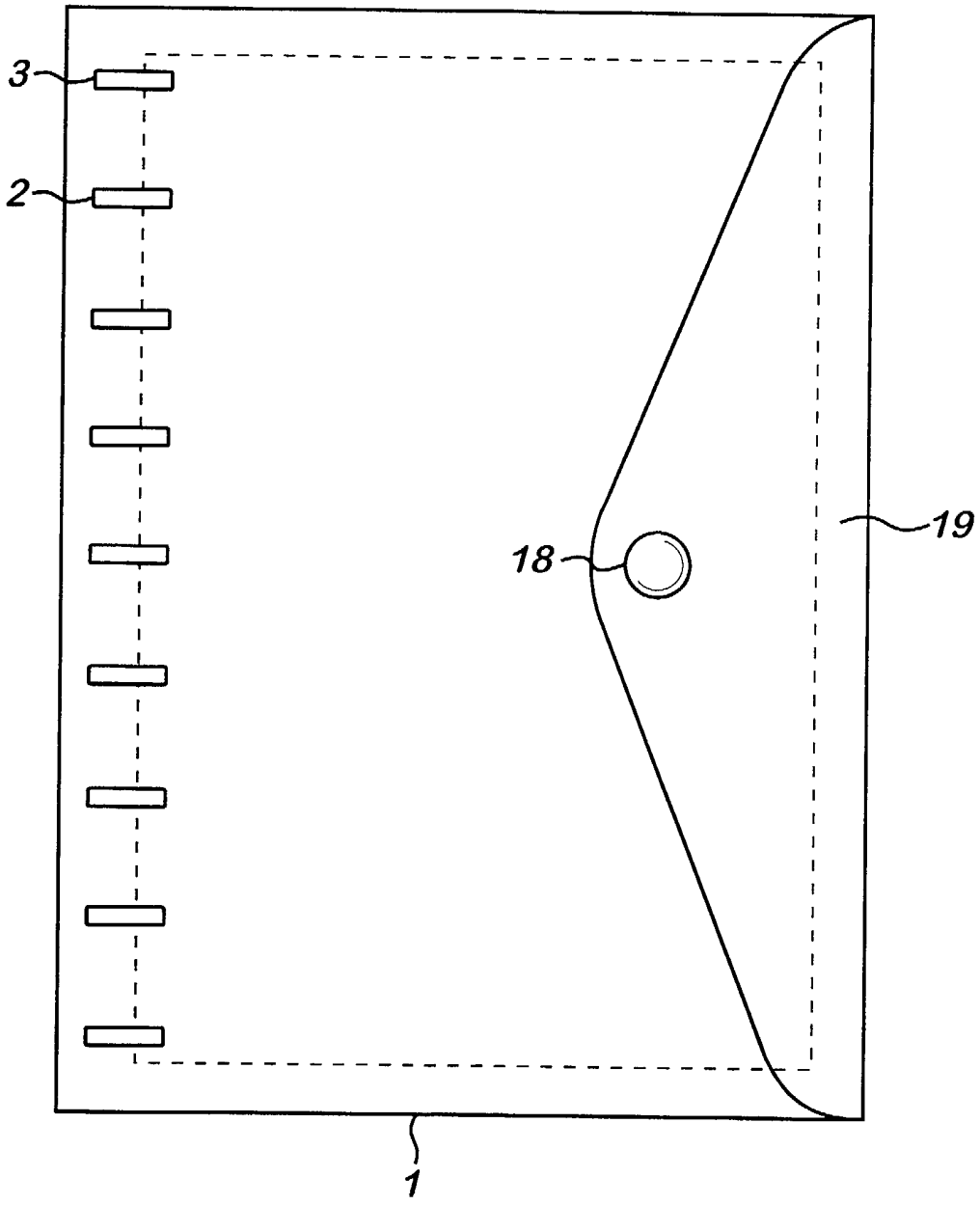


Fig. 3



BINDER

The present invention relates to binders, including files, display books, booklets and the like, that comprise a front and back cover and contain a number of pages. The pages may be sheets of paper or other material, or may include one or more pockets for containing items.

Various forms of binder are known. In general, these include a binding component attached to the spine or back portion of the cover, with the pages being held in place by the binding component. In some binders, the binding component may be opened to allow the removal of one or more of the pages. In this way, additional pages may be added, or the pages re-ordered. Such binders include ring-binders, where rings comprising two arms pivoted together to form a ring that passes through a hole in the pages to hold the pages are mounted on the spine, and lever-arch files, where two arms forming an arch are mounted on the back cover to give a U-shaped bar that passes through holes in pages in a similar way to ring-binders. With lever arch files, it is known to include restricted openings in the front cover through which the top of the U-shaped arch can pass to lock the front cover in a closed position.

Another binding system uses a plurality of discs, each having a rounded annular flange. In this case, the pages include a number of generally T-shaped slots arranged along one edge. The discs are located within the slots on the edge of the pages, with the annular flange of the discs being received within the cross-member of the slot, and the central disc portion being received within the stem of the slot. In this case, it is known to provide separate front and back covers with slots similar to those provided along the edge of the pages, or to provide an integral cover in which the discs are connected to the spine.

With known binders, the size of the binder is dependent upon the size of the binding component. For example, with a lever arch file or ring-binder, the thickness of the binder will be the same irrespective of the number of pages contained in the binder, since the rings or arches are of a fixed size that determines the extent to which the binder can close.

According to the present invention, a binder comprises a cover comprising a front portion, a rear portion and a spine, and binding component connected to the cover, the binding component being arranged to hold one or more pages, and an opening provided in the cover in alignment with the binding component to allow the binding component to pass freely through the opening. With this arrangement, when the cover is closed, part of the binding component will pass through the opening in the cover. Therefore, the overall thickness of the binder will not be limited by the size of the binding component. Instead, the thickness will be limited by the thickness of the pages in the binder. If there are only few pages in the binder, a large portion of the binding component will pass through the opening, with the cover laying on the pages. If there are a larger number of pages in the binder, less of the binding component will pass through the opening. However, the cover will still lie on the pages.

Preferably the spine of the binder is of variable width. This ensures that the spine does not limit the thickness of the file. This may be achieved by forming the spine of a flexible or elasticated material, by forming the spine in a number of pieces which can move with respect to each other, or by providing hinges on the spine allowing this to concertina.

Advantageously, where the binding component comprises a number of spaced elements, a plurality of openings are provided, each aligned with one element of the binding component to allow that element to pass through. This is beneficial over the provision of a single, larger opening in that it retains

the integrity of the cover of the binder. Where a plurality of openings are provided, these are each preferably in the form of elongate slots.

The opening or openings may be provided on one or other of the front and rear portions of the cover. However, it is preferred that openings are provided on both the front and rear portions of the cover.

The binding component may be in the form of a ring-binder or lever-arch binder. In either case, the or each opening is arranged to allow the arms forming the ring or arch to pass freely through. However, it is preferred that the binding component is in the form of a number of discs, each with an annular flange, each being received within a generally T-shaped slot in the side of each page to be held within the binder. In this case, the discs are also connected to the spine of the binder. This may be achieved by the provision of an elongate web extending along the inside of the spine and including a number of T-shaped slots, each for receiving an associated disc. Preferably, however, the spine is formed with a plurality of elongate, transverse slots each having an enlarged opening at each end, and each slot arranged in alignment with a disc for receiving the disc, the spine being deformable inwardly of the binder.

The binder preferably includes a closure to keep the front and rear portions of the cover together. This closure may include an extension on one of the front and rear portions that wraps around the side of the binder and is connected to the other of the front and rear portions of the cover, for example by a press-stud.

An example of the present invention will be described with respect to the accompanying drawings, in which:

Figure 1 shows part of a cover of a binder according to the present invention when opened;

Figure 2 shows an end view of a binder when closed;

Figure 3 shows a front view of the binder of Figure 2;

Figure 4 shows a cross-section through a binding disc; and,

Figure 5 shows part of a page.

As shown in Figure 1, which shows the cover without the binding components or pages, the cover for the binder is formed from a single piece of plastics such as polypropylene or other material, such as cardboard or PVC coated cardboard composite. The cover has a front portion 1 and a rear portion 5 with an intermediate spine 4. The spine 4 is hinged to the front portion 1 of the cover along a thinned or weakened line 8, and to the rear portion 5 by a similar thinned or weakened line 7. A further thinned or weakened line 9 between the lines 7,8 allows the spine 4 to fold inwardly, as can be seen in the end view of Figure 2. This allows the spine 4 to expand or contract as needed to accommodate the pages 6 in the binder.

The front and rear portions 1,5 of the cover include a number of elongate slots 2. The slots 2 are aligned with binding components 3 that hold the pages within the cover, such that the binding components 3 can pass through the slots 2 as described below.

The binding components 3 are shown in cross-section in Figure 4. Each binding component 3 includes a central disc 16 with an annular flange 17 extending around the outer circumference of the disc 16. The annular flange 17 has a rounded outer edge.

The spine 4 of the cover includes a number of slits 10 having a semi-circular opening at each end. In use, the outer flange 17 of each binding component 3 is received within the openings at the end of the slits, and the central disc 16 is received within the elongate central section of the slit 10 when the spine is bent inwardly as shown in Figure 2.

As shown in Figure 5, each of the pages 6 to be included in the binder has a number of generally T-shaped slits 12 arranged along one edge with the same spacing as the slits 10 in the spine of the cover. Each binding component is received within one of the slits 12 of each of the pages 6 of the binder, thereby holding the pages within the binder. With this arrangement, it is relatively simple for the pages to be individually removed from the binding components, and either removed or replaced at a different location as required.

The rear portion 5 of the cover includes an extension 20 including a flap 19. When the binder is closed, the extension 20 can be wrapped around the side of the binder and the flap 19 lies over the front cover 1. A connector, such as a snap-fastener or press-stud 18 is provided to connect the flap 19 and the front cover 1, thereby maintaining the closed condition of the binder. The extension 20 is preferably flexible, so that this does not limit the thickness of the binder.

In use, a binding component 3 is provided in each of the slots 10 in the spine 4 of the cover, and a desired number of pages 6 are connected to the binding components 3 as described above. The binder is then closed by bringing the front cover 1 over the rear cover 5 and the pages 6 in the binder. The extension 20 may also be wrapped around the side of the binder and the flap 19 connected to the front cover 1. As seen in Figures 2 and 3, the top and bottom edges of the binding discs 3 protrude through the slots 2 in the

front and rear covers 1, 5 respectively. The amount that the discs 3 will protrude through the slots 2 is dependent on the number and thickness of the pages 6 in the binder. If there are very few pages in the binder, the spine 4 will bend inwardly such that the spine is thinner, and a larger proportion of the discs 3 will protrude through the slots 2, giving the binder a reduced thickness. If a greater number of pages 6 are included, the spine 4 will open out, and less of the discs 3 will protrude through the slots 2, making the binder thicker. Accordingly, the thickness of the binder is not determined by the binding components, but is dependent on the thickness of the contents of the binder.

Rather than forming the cover from a single piece, the cover may be formed from two or more pieces. For example, the front and rear portions of the cover may be formed from different pieces of material that are joined together to form the spine. In this case, the front and rear portions may have different properties or be formed from different materials. For example, the front cover may be transparent with an opaque rear cover. The rear cover may be of more rigid material than the front cover.

It will be appreciated that the present invention is not limited to the use of binding discs, but is equally applicable to other forms of binding component. For example, if ring-binder components are used, these may be mounted on the rear cover of the binder, and extend through openings provided in the front cover. Alternatively, the ring binder components may be mounted on the spine, and extend through openings in one or both of the front and rear covers.

CLAIMS

1. A binder comprising a cover having a front portion, a rear portion and a spine, and binding component connected to the cover, the binding component being arranged to hold one or more pages, and an opening provided in the cover in alignment with the binding component to allow the binding component to pass freely through the opening.

2. A binder according to Claim 1, in which the spine of the binder is of variable width.

3. A binder according to Claim 2, in which the spine is formed of a flexible or elasticated material.

4. A binder according to Claim 2, in which the spine is formed in a number of pieces which can move with respect to each other.

5. A binder according to Claim 2, in which the spine includes hinges allowing the spine to concertina.

6. A binder according to any one of the preceding claims, in which the binding component comprises a number of spaced elements, and in which a plurality of openings are provided in the cover, each aligned with one element of the binding component to allow that element to pass through.

7. A binder according to any one of the preceding claims, in which the openings are in the form of elongate slots.

8. A binder according to any one of the preceding claims, in which the opening or openings are provided on one or other of the front and rear portions of the cover.

9. A binder according to any one of Claims 1 to 7, in which the openings are provided on both the front and rear portions of the cover.

10. A binder according to any one of the preceding claims, in which the binding component is in the form of a ring-binder or lever-arch binder.

11. A binder according to Claim 10, in which the or each opening is arranged to allow the arms forming the ring or arch to pass freely through.

12. A binder according to any one of Claims 1 to 9, in which the binding component is in the form of a number of discs, each with an annular flange, each being received within a generally T-shaped slot in the side of each page to be held within the binder and to the spine of the binder.

13. A binder according to Claim 12, including an elongate web extending along the inside of the spine and including a number of T-shaped slots, each for receiving an associated disc.

14. A binder according to Claim 12, in which the spine is formed with a plurality of elongate, transverse slots each having an enlarged opening at each end, and each slot arranged in alignment with a disc for receiving the disc, the spine being deformable inwardly of the binder.

15. A binder according to any one of the preceding claims, further including a closure to keep the front and rear portions of the cover together.

16. A binder according to Claim 15, in which the closure includes an extension on one of the front and rear portions that wraps around the side of the binder and is connected to the other of the front and rear portions of the cover, for example by a press-stud.

17. A binder substantially as shown in or as described with respect to the accompanying drawings.

Application No: GB 0121834.6
Claims searched: 1 - 17

Examiner: David P Maskery
Date of search: 16 November 2001

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.S): B6E (EDG)

Int Cl (Ed.7): B42B 5/08, B42F 13/00, 13/38

Other: Online: EPODOC, JAPIO, WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
A	GB 325966	(TURNER) See Figs 1- 5 and page 1 lines 58 - 61	4 and 5
A	US 5749667	(CZUKERBERG & FELDMAN) See figs 1 and 9 and column 4 lines 11 - 27	12,15 and 16
X	US 5529418	(ALOTTA) See Figs 1 - 3 and column 2 lines 22 - 39	1-3, 6, 9, and 15
X	US 4848948	(PITTS) See Fig 6 column 2 lines 60 - column 3 line 2	1, 6-8, 10 and 11
X	US 4219951	(SCHMIDT) See Figs 1 - 3 and column 2 lines 41 - 46	1, 6-8, 10, 11, 15 and 16
X	US 940345	(MOORE) See Figs 1 - 4 and page 2 lines 15 - 31	1-3, 6-8 and 10-11

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