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(71) Applicant:
Tomoda Giken Industry Co., Ltd.
Osaka 547-0004 (JP)

(72) Inventor:
Tomoda, Hideyuki,
c/o Tomoda Giken Ind. Co., Ltd.
Hirano-ku, Osaka, 547-0004 (JP)

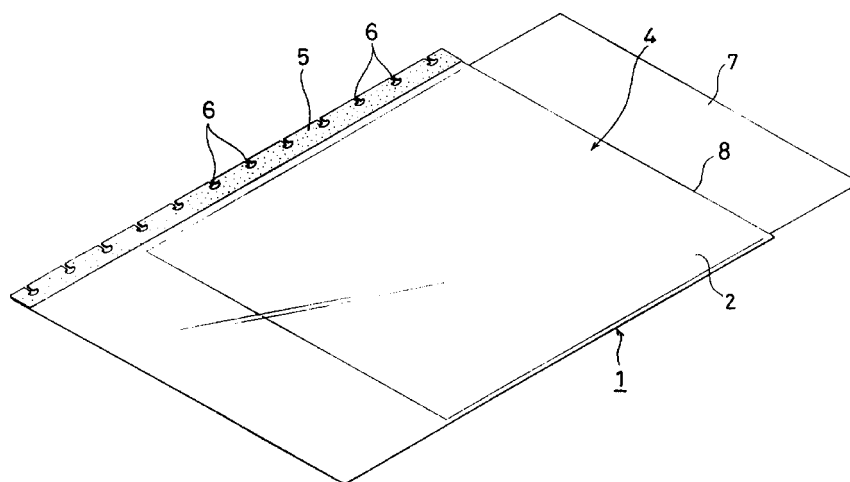
(74) Representative: **Kupecz, Arpad**
Octrooibureau Los en Stigter B.V.
Postbox 20052
1000 HB Amsterdam (NL)

(54) **Document folder**

(57) A document folder 1 for holding a document 7 is provided, which comprises a document holding portion 4 having a rectangular shape in plan, a reinforcement portion 5 provided adjacent the document holding portion 4 along one edge of the document holding portion 4 and reinforced by a multiplicity of fusion-bonded spots formed therein, and binder engagement means including a plurality of engagement portions 6 formed in the reinforcement portion 5 in a properly spaced relation along the one edge of the document holding portion 4 for engagement with a document binder, the document

holding portion 4 and the reinforcement portion 5 being integrally composed of a synthetic resin sheet 2, 3, the document holding portion 4 having an opening 8 formed along at least one of the other three edges of the document holding portion 4 through which opening the document 7 is inserted into and taken out of the document holding portion 4. The present invention ensures easy reinforcement of the portion formed with the binder engagement means for cost reduction.

FIG. 1



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Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates to a document folder for holding a document, a business card and the like.

PRIOR ART

[0002] Document holders heretofore known typically have a rectangular shape in plan, and include a document holding portion defined by a pair of synthetic resin sheets, a reinforcement portion provided adjacent the document holding portion along one edge thereof and reinforced by a synthetic resin tape held between the pair of synthetic resin sheets, and binder engagement means including a plurality of generally T-shaped cutaway portions formed in the reinforcement portion in a properly spaced relation along the edge of the document holding portion for engagement with a document binder. The document holding portion has an opening on a top edge thereof, as viewed when the document folder is postured vertically, through which opening a document is inserted into and taken out of the document holding portion.

[0003] For reinforcement of the binder engagement means, the synthetic resin reinforcement tape is held between the pair of synthetic resin sheets as extending along the one edge of the document holding portion. Therefore, production of the document folder requires the steps of preparing the synthetic resin reinforcement tape and fixing the tape between the synthetic resin sheets. This leads to an increase in costs.

SUMMARY OF THE INVENTION

[0004] To solve the aforesaid drawback, it is an object of the present invention to ensure easy reinforcement of binder engagement means of a document folder for cost reduction.

[0005] For achievement of the object, the present invention has the following features.

1. A document folder for holding a document is provided, which comprises: a document holding portion having a rectangular shape in plan; a reinforcement portion provided adjacent the document holding portion along one edge of the document holding portion and reinforced by a multiplicity of fusion-bonded spots formed therein; and binder engagement means including a plurality of engagement portions formed in the reinforcement portion in a properly spaced relation along the one edge of the document holding portion for engagement with a document binder, the document holding portion and the reinforcement portion being integrally composed of a synthetic resin sheet, the document

holding portion having an opening formed along at least one edge of the other three edges of the document holding portion through which opening the document is inserted into and taken out of the document holding portion.

2. The reinforcement portion has a multi-layer structure which includes not less than three layers formed by folding one or both edge portions of the synthetic resin sheet and spot-fusion-bonded to each other.

3. The fusion-bonded spots have a total area accounting for 30% to 75% of an area of the reinforcement portion.

4. The fusion-bonded spots are spots formed by at least one method selected from an ultrasonic spot fusion method and a thermal spot fusion method.

5. The engagement portions of the binder engagement means are generally T-shaped cutaway portions.

6. The engagement portions of the binder engagement means are holes.

[0006] With these features, the reinforcement portion provided adjacent the document holding portion along the one edge thereof is reinforced by the multiplicity of fusion-bonded spots for reinforcement of the binder engagement means. Therefore, the reinforcement of the reinforcement portion can more easily be achieved than in the conventional case where the reinforcement is achieved by the provision of the synthetic resin tape between the synthetic resin sheets. Thus, the costs can be reduced.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007]

FIG. 1 is a perspective view illustrating a document folder according to one embodiment of the present invention as viewed from one side thereof;

FIG. 2 is an enlarged plan view illustrating major portions of the document folder;

FIG. 3 is an enlarged sectional view taken along a line X-X in FIG. 2;

FIG. 4 is a perspective view illustrating the document folder bound in a document binder; and

FIG. 5 is a perspective view illustrating a document folder according to a second embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0008] FIGS. 1 to 4 illustrate a first embodiment of the present invention.

[0009] In FIGS. 1 to 4, there is shown a document folder 1 having a rectangular shape in plan. Referring to FIG. 1, the document folder 1 has a document holding

portion 4 defined by a pair of synthetic resin sheets 2 and 3, and a reinforcement portion 5 provided adjacent the document holding portion 4 along one edge thereof and reinforced by a multiplicity of ultrasonically fusion-bonded spots. More specifically, the reinforcement portion 5 has a multi-layer structure, as shown in FIG. 3, which includes a plurality of layers (e.g., three or four layers) formed by folding at least one of the edge portions of the synthetic resin sheet 2, 3 and ultrasonically spot-fusion-bonded to each other. As shown in FIGS. 1 and 2, a plurality of generally T-shaped cutaway engagement portions 6 are formed as binder engagement means in the reinforcement portion 5 in a properly spaced relation along the one edge of the document holding portion 4. The document folder 1 has an opening formed along a top edge of the document holding portion 4, as viewed when the document folder 1 is postured vertically, through which opening a document 7 is inserted into and taken out of the document holding portion 4.

[0010] As shown in FIG. 4, a document binder typically has a plurality of openable binding rings 10 each comprised of a pair of binding hooks 9, and a pair of covers 11. The T-shaped cutaway engagement portions 6 as the binder engagement means are brought into engagement with the binding rings 10. Thus, a plurality of document folders having the aforesaid construction can be bound in the document binder.

[0011] Since the engagement portions 6 are engaged with the binding hooks 9 of the binding rings 10 as described above, the reinforcement portion 5 formed with the engagement portions 6 is required to have a sufficient hardness and stiffness for prevention of disengagement of the engagement portions 6 from the binder rings 10. This is why the engagement portions 6 are formed in the reinforcement portion 5 which is reinforced by the ultrasonically fusion-bonded spots. The size of each of the fusion-bonded spots is properly selected depending on the size of the document folder 1, the type of the synthetic resin sheet to be used for formation of the document folder 1, and the like. In order to impart the reinforcement portion 5 with a sufficient hardness and stiffness, the total area of the fusion-bonded spots should account for 30% to 75% of the area of the reinforcement portion 5. If the total area of the fusion-bonded spots is less than 30% of the area of the reinforcement portion 5, the hardness and stiffness of the reinforcement portion 5 are not satisfactory. If the total area of the fusion-bonded spots is greater than 70%, the reinforcement portion 5 will have an excessively high hardness and may be impaired due to deterioration of the synthetic resin sheet. In this embodiment, the synthetic resin sheet for the document folder 1 is made of polypropylene.

[0012] In the first embodiment, the generally T-shaped cutaway engagement portions 6 are formed as the binder engagement means in the reinforcement portion 5. Alternatively, a plurality of round holes 12 may be

employed for the binder engagement means as in a second embodiment shown in FIG. 5. The round holes 12 are also adapted to be engaged with the openable binding rings 10 of the document binder.

[0013] In the embodiments described above, the document folder 1 is adapted to hold a document therein, but may be designed so as to hold business cards, photographs and the like.

[0014] Further, the position of the opening through which a document or the like is inserted into and taken out of the document folder is not limited to that depicted in FIG. 1, but may be determined depending on the kind of an article to be held in the document folder 1.

[0015] The fusion-bonded spots in the reinforcement portion 5 are formed by the ultrasonic spot fusion method in the embodiments described above, but may be formed by a thermal spot fusion method. Further, the ultrasonic spot fusion method and the thermal spot fusion method may be used in combination for the formation of the fusion-bonded spots. Where the formation of the fusion-bonded spots is achieved by the ultrasonic spot fusion method, a frequency of 15KHz to 50KHz may be employed to apply 15,000 to 50,000 impacts per second to the folded edge portions of the synthetic resin sheet (which is formed into the reinforcement portion). By adjusting the frequency, the fusion speed can be controlled as desired. Where the formation of the fusion-bonded spots is achieved by the thermal spot fusion method, a roll having a multiplicity of needles provided on its circumferential surface is heated up to a temperature at which the synthetic resin sheet is melted to some extent but not perfectly, and the folded edge portions of the synthetic resin sheet are passed between the roll and a counter roll.

[0016] In the embodiments described above, the reinforcement portion 5 provided along the one edge of the document folder 1 has the multi-layer structure which includes three or four layers formed by folding at least one of the edge portions of the synthetic resin sheet 2, 3 and spot-fusion-bonded to each other. Alternatively, the reinforcement portion 5 may have a two-layer structure which is formed simply by spot-fusion-bonding the edge portions of the synthetic resin sheet 2, 3 to each other. Further, the reinforcement portion 5 may have a multi-layer structure having five or more layers which are spot-fusion-bonded to each other.

[0017] In accordance with the present invention, the reinforcement portion 5 provided along the one edge of the document folder 1 is reinforced by the formation of the multiplicity of fusion-bonded spots, and the binder engagement means including the plurality of engagement portions (generally T-shaped cutaway engagement portions or round holes) 6 are formed in the reinforcement portion 5. Therefore, the reinforcement of the binder engagement means can more easily be achieved than in the conventional case where the reinforcement is achieved by the provision of the synthetic resin tape. Thus, the costs can be reduced.

Claims

1. A document fold 1 for holding a document 7, comprising: a document holding portion 4 having a rectangular shape in plan; a reinforcement portion 5 provided adjacent the document holding portion 4 along one edge of the document holding portion and reinforced by a multiplicity of fusion-bonded spots formed therein; and binder engagement means including a plurality of engagement portions 6 formed in the reinforcement portion 5 in a properly spaced relation along the one edge of the document holding portion 4 for engagement with a document binder, the document holding portion 4 and the reinforcement portion 5 being integrally composed of a synthetic resin sheet 2, 3, the document holding portion 4 having an opening 8 formed along at least one of the other three edges of the document holding portion 4 through which opening the document 7 is inserted into and taken out of the document holding portion 4. 5 10 15 20
2. A document folder 1 as set forth in claim 1, wherein the reinforcement portion 5 has a multi-layer structure which includes not less than three layers formed by folding one or both edge portions of the synthetic resin sheet and spot-fusion-bonded to each other. 25
3. A document folder 1 as set forth in claim 1, wherein the fusion-bonded spots have a total area accounting for 30% to 75% of an area of the reinforcement portion 5. 30
4. A document folder 1 as set forth in claim 2, wherein the fusion-bonded spots have a total area accounting for 30% to 75% of an area of the reinforcement portion 5. 35
5. A document folder 1 as set forth in any of claims 1 to 4, wherein the fusion-bonded spots are ultrasonically fusion-bonded spots. 40
6. A document folder 1 as set forth in any of claims 1 to 4, wherein the fusion-bonded spots are thermally fusion-bonded spots. 45
7. A document folder 1 as set forth in any of claims 1 to 4, wherein the fusion-bonded spots are spots formed by employing an ultrasonic spot fusion method and a thermal spot fusion method in combination. 50
8. A document folder 1 as set forth in any of claims 1 to 4, wherein the engagement portions 6 of the binder engagement means are generally T-shaped cutaway engagement portions 6. 55
9. A document folder 1 as set forth in claim 5, wherein the engagement portions 6 of the binder engagement means are generally T-shaped cutaway engagement portions 6.
10. A document folder 1 as set forth in claim 6, wherein the engagement portions 6 of the binder engagement means are generally T-shaped cutaway engagement portions 6.
11. A document folder 1 as set forth in claim 7, wherein the engagement portions 6 of the binder engagement means are generally T-shaped cutaway engagement portions 6.
12. A document folder 1 as set forth in any of claims 1 to 4, wherein the engagement portions 6 of the binder engagement means are holes 12.
13. A document folder 1 as set forth in claim 5, wherein the engagement portions 6 of the binder engagement means are holes 12.
14. A document folder 1 as set forth in claim 6, wherein the engagement portions 6 of the binder engagement means are holes 12.
15. A document folder 1 as set forth in claim 7, wherein the engagement portions 6 of the binder engagement means are holes 12.

FIG. 1

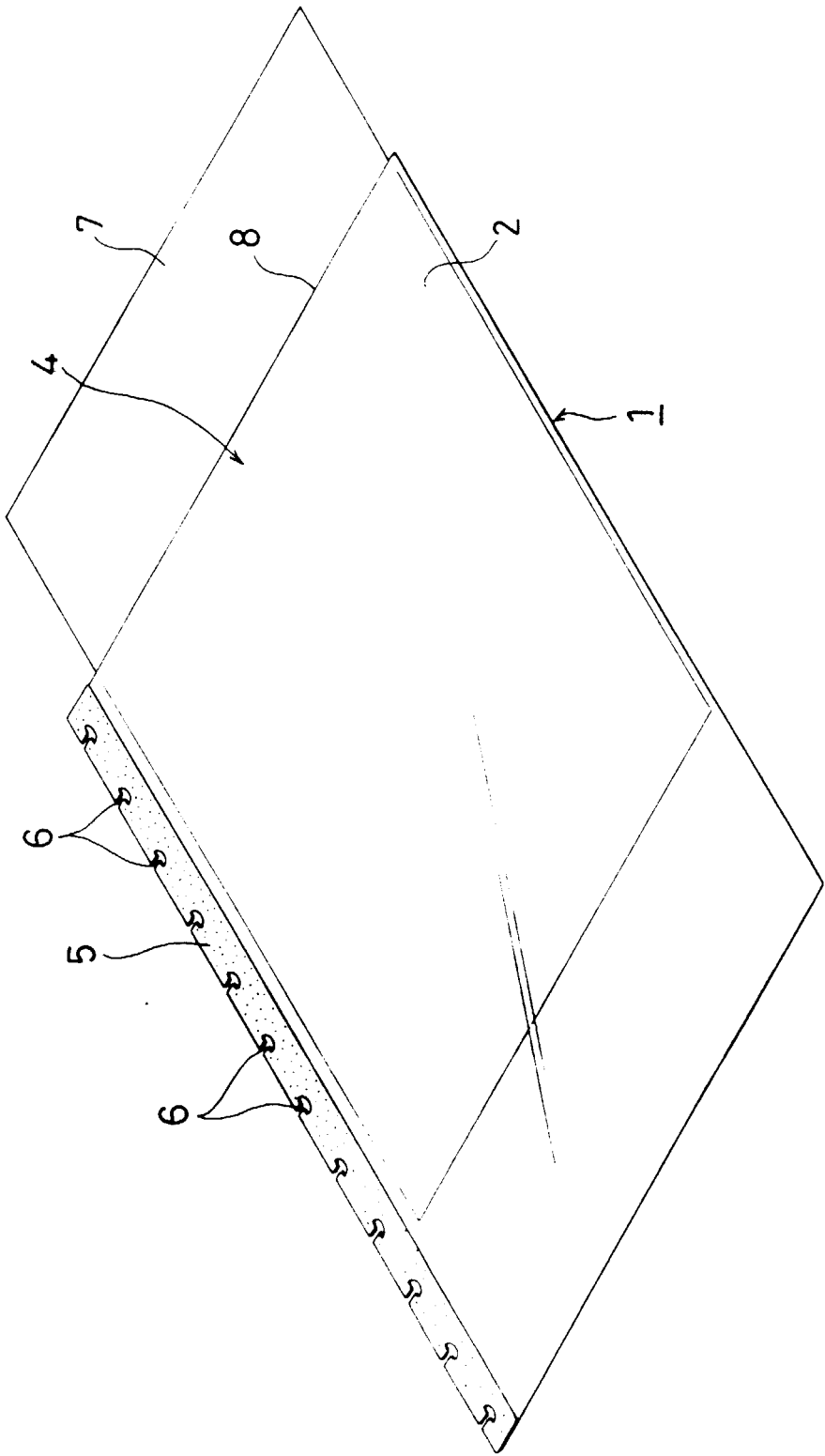


FIG .2

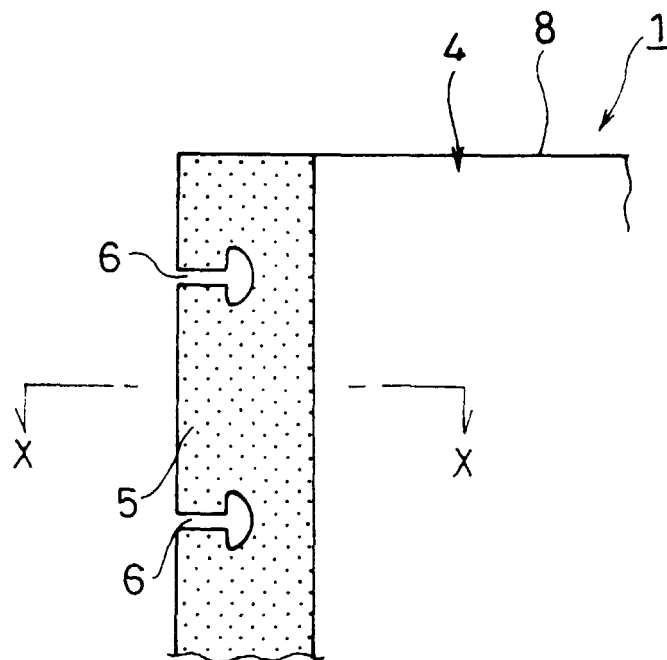


FIG.3

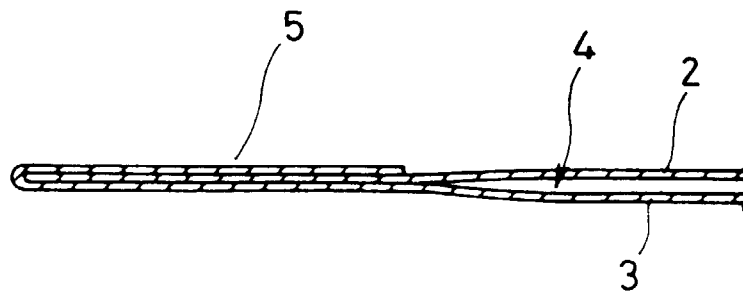


FIG.4

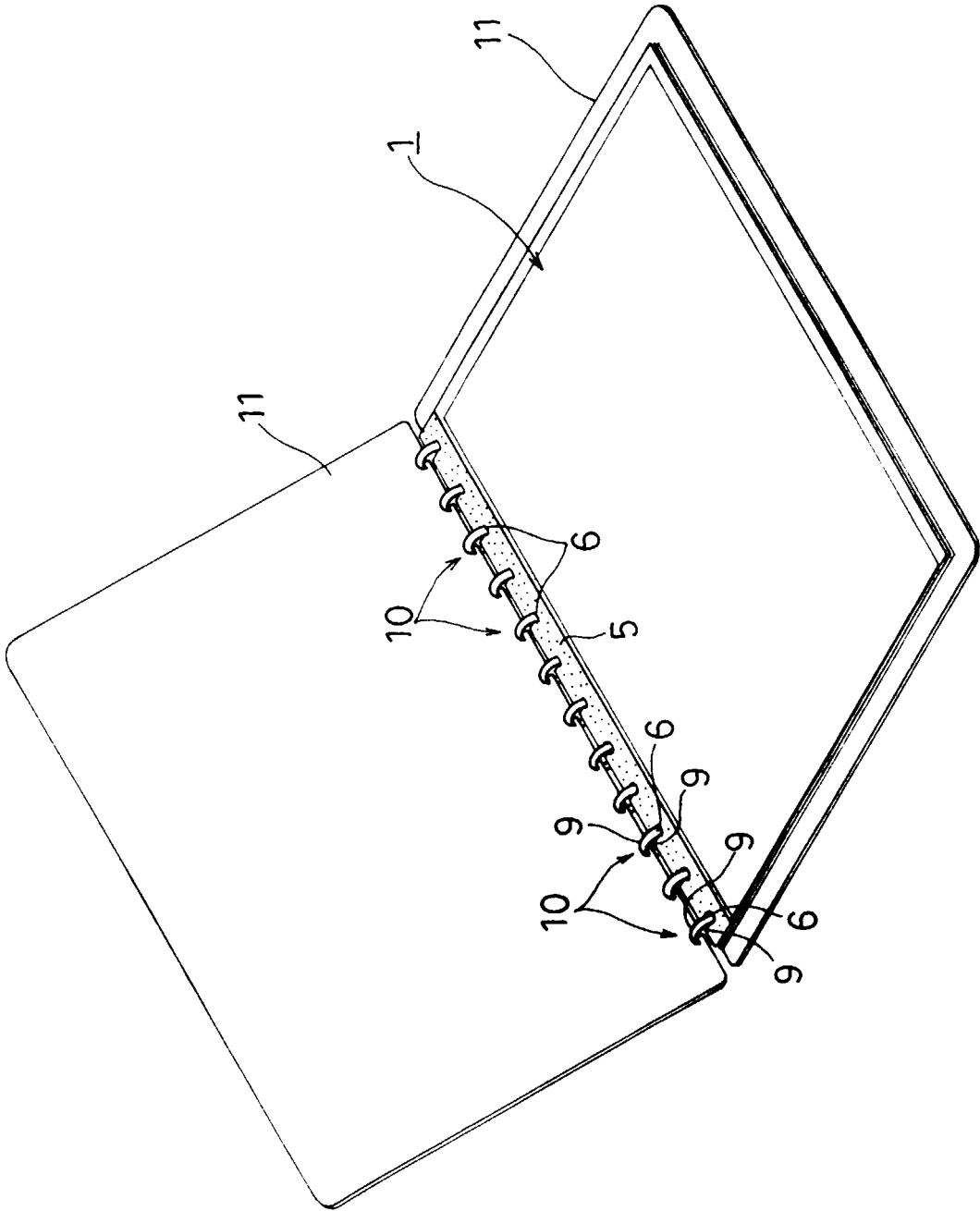


FIG. 5

