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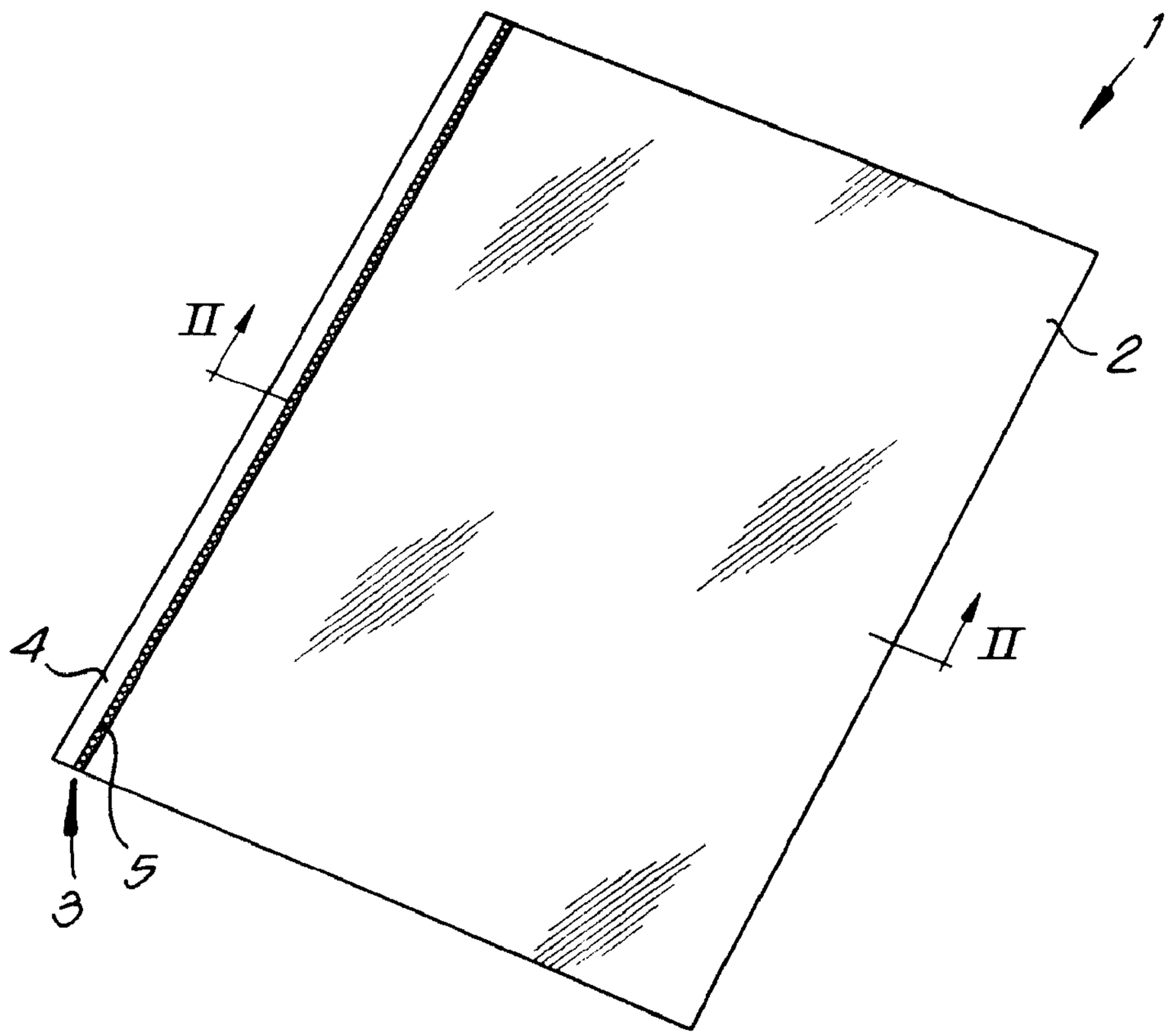
(54) Titre : FEUILLE DE GARDE, ET ELEMENT DE LIAGE CONTENANT UNE TELLE FEUILLE DE GARDE
(54) Title: END LEAF AND BINDING ELEMENT CONTAINING SUCH AN END LEAF



(57) Abrégé/Abstract:
End leaf of the type which is meant to be used in combination with binding means with which a bundle of loose leaves (6) can be bound, characterized in that the end leaf (1) at least consists of a leaf (2) made of synthetic material and a strip-shaped part (4) firmly attached to an edge (3) of said leaf (2) which is suppler than the above-mentioned leaf (2).

ABSTRACT

End leaf of the type which is meant to be used in combination with binding means with which a bundle of loose leaves (6) can be bound, characterized in that the end leaf (1) at least consists of a leaf (2) made of synthetic material and a strip-shaped part (4) firmly attached to an edge (3) of said leaf (2) which is suppler than the above-mentioned leaf (2).

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End leaf and binding element containing such an end leaf.

The present invention concerns an end leaf, as well as a binding element containing such an end leaf.

In particular, the invention concerns an end leaf of the type which is meant to be used in combination with binding means with which a bundle of loose leaves can be bound.

It is known that when binding a bundle of loose leaves on the front side and/or back side of this bundle, a relatively rigid end leaf made of cardboard or synthetic material can be provided. When such a conventional end leaf is used in combination with binding means which keep the bound bundle of leaves fixed near the bound-in edge, there is a disadvantage in that it is difficult to open such an end leaf due to its rigidity. Such binding means may for example consist of binding elements with a rigid, U-shaped back section, whereby the bundles of loose leaves can be attached in this back section by means of heat-sensitive glue; of binding elements containing two sections or such, in between which the bundle, together with the end leaves, is fixed at one edge; and in the simplest embodiment also of staples which are provided through the bundle at one edge.

In the case of cardboard end leaves, the above-mentioned problem was already solved by locally breaking the fibers of the cardboard, so that a folding line is created.

However, for end leaves which are mainly formed of synthetic material, in particular of a relatively rigid type of plastic, there is no good solution at hand yet.

Providing a cold folding line in synthetic material, as is the case with cardboard, is little efficient and will rather rapidly cause a crack. Providing a hot folding line often implies an improvement thanks to the local bonding of the material, but the technique is very unstable, as the dilution has to be carried out with much precision, which entails a level of difficulty which is too high to be able to do this with the required precision in a mass production process. Moreover, the problem still remains that the synthetic material will easily crack after said dilution.

The invention aims an end leaf which is mainly formed of synthetic material, offering an efficient solution to the above-mentioned problem.

According to the present invention, there is provided an end leaf of a type to be used in combination with binding means, for binding loose leaves in a bundle, the end leaf comprising a leaf made of synthetic material and a flat strip-shaped part firmly attached to an edge of said leaf and being suppler than the above-mentioned leaf, characterized in that said end leaf comprises means for stiffening the strip-shaped part, said means being situated at a distance from said edge of the leaf, such that, between the leaf and said means a non-stiffened part remains.

Thus, the end leaf with the strip-shaped part can be situated along the edge to be bound of the bundle of documents to be bound, so that, after the binding operation has been carried out, the end leaf can be easily opened thanks to the presence of the suppler strip-shaped part.

The strip-shaped part may consist of any material whatsoever, but preferably it is also made of synthetic material.

Another interesting possibility is that it is made of paper.

According to a preferred embodiment, the end leaf is provided with means which stiffen the strip-shaped part,

whereby these means are situated at a distance from the above-mentioned edge of the leaf, such that, between the leaf and the above-mentioned means, there will remain a non-stiffened, supple part. These means preferably consist of a strip of material which is attached onto the strip-shaped part, for example made of paper, cardboard or such.

The use of these means, in particular of such a reinforcing strip of material, offers the advantage that a relatively stable edge is obtained, although a supple and flexible part remains present in the end leaf. Such a stable edge is particularly advantageous when such an end leaf is used in combination with a binding element having a U-shaped back section. Indeed, such a reinforced edge can be more easily pushed in the U-shaped form of said back section, together with a bundle of loose leaves, than in the case where no reinforcement is provided.

The invention also concerns binding elements provided with such an end leaf, in particular binding elements whereby such an end leaf is a fixed part thereof.

In order to better explain the characteristics of the invention, the following preferred embodiments are described as an example only without being limitative in any way, with reference to the accompanying drawings, in which:

figure 1 represents an end leaf according to the invention in perspective;

figure 2 represents a section according to linen II-II in figure 1 to a larger scale;

figure 3 represents a bundle of leaves bound by means of a U-shaped binding element which is provided with end leaves from figure 1;

figure 4 represents a view analogous to that in figure 2 of a variant of an end leaf according to the invention;

figure 5 represents an application in which end leaves according to figure 4 are used;

figures 6 and 7 represent two more variants of the invention;

figure 8 represents a binding element according to the invention;

figure 9 represents a view in perspective of a variant of an end leaf according to the invention;

figure 10 represents an application in which end leaves according to figure 9 are used.

As represented in figures 1 and 2, an end leaf 1 according to the invention mainly consists of a leaf 2 made of synthetic material and of a strip-shaped part 4 fixed to an edge 3 of this leaf 2 which is suppler than the leaf 2.

The strip-shaped part 4 is fixed to the leaf 2 by means of a joint 5, consisting of a laser joint or a glued joint. Naturally, variants with other joints are possible.

Also the strip-shaped part 4 preferably consists of synthetic material, but in conformity with the invention, it is made suppler than the leaf 2, as this strip-shaped part 4 is made of a thinner layer of material than the leaf 2, and/or as another, suppler sort of plastic is used. By making the leaf 2 as well as the part 4 out of synthetic material, it is easy to provide a welded joint by leading the leaf 2 and the strip-shaped part 4 for example between two heated press-on rollers. In a production process, this can already take place before the strip-shaped part 4 and the leaf 2 are cut to the required length.

In particular, the leaf 2 and the strip-shaped part 4 will be both transparent, especially as use is made to this end of for example transparent PVC foil.

Figure 3 represents an application in which a bundle of loose leaves 6, provided with an end leaf 1 on the front side and the back side, is bound in a binding element 7, consisting of a U-shaped section 8, for example made of metal, in which is situated an amount of heat-sensitive glue 9. When using conventional, relatively stiff end leaves, the lateral parts 10-11 of the section 8 would make it difficult to open such end leaves. As end leaves 1 according to the invention are used now, the strip-shaped part 4 makes it possible for the end leaf 1, as represented by means of a dot and dash line, to be opened more easily.

Figure 4 represents a variant in which the end leaf 1 is provided with means, in this case a strip of material 12 provided on the strip-shaped part 4, which stiffen the strip-shaped part 4, whereby these means are situated at a distance D from the above-mentioned edge 3 of the leaf 2, such that between the leaf 2 and the above-mentioned means, there will remain a non-stiffened part 13.

The strip of material 12 preferably consists of paper, cardboard or such, and it is glued for example onto the strip-shaped part 4.

The application of such means, in particular of such reinforcement by means of a strip of material 12, offers the advantage that the free edge 14 of the end leaf 1 remains stable, in spite of the use of the preferably relatively supple strip-shaped part 4. As is schematically represented in figure 5, this is particularly advantageous when a bundle of loose leaves 6 must be provided in a U-

shaped section 8 as mentioned above, together with one or two end leaves 1. The edges which are reinforced by means of the strip of material 12 allow for a better positioning of the bundle in the section 8.

Figure 6 represents a variant in which the strip-shaped part 4 is transparent, whereas the above-mentioned strip of material 12 consists of a layer of paper 15 and a decorative layer 16 provided on it, for example made of thin, colored, synthetic foil, whereby the strip of material 12 is situated against the strip-shaped part 4 together with said decorative layer 16.

The decorative layer 16 must not necessarily consist of a separate layer of material, but it may also consist of a print or such.

It is clear that thus is obtained that, when looking at the end leaf 1, one side will be automatically regarded as the outer side or decorative side, while the other sides will be regarded as the inner sides. Indeed, when the user looks at the side 17 of the end leaf 1, he will observe the decorative layer 16 through the transparent strip-shaped part 4, whereas, when he looks at the end leaf 1 on the side 18, he will notice the matte, preferably colorless paper 15. Also, when applying end leaves 1 around a bundle of loose leaves 6, the user will position these end leaves 1 such that they are turned with their sides 17 to the inside. Thus is automatically obtained that the smooth outer side 19 of the strip-shaped part 4 is directed outward, such that the strip of material 12 cannot cause any hindrance when said bundle 6 is to be pushed in a binding element 7.

Figure 8 represents a binding element 20 according to the invention whereby two end leaves 1 as mentioned above are firmly fixed to a U-shaped back part 21. The end leaves 1 are hereby fixed to the lateral parts 22-23 of the back part 21 by means of their strip-shaped part 4, such by means of glued joints 24-25. Further, a glue 26 which melts when heated is provided in the U-shaped back part 21.

It is clear that, according to a variant, such a binding element 20 can also be realized with only one end leaf 1.

Figure 9 represents a variant in which the strip-shaped part 4 is provided with binding perforations 27.

End leaves 1 according to figure 9 are for example useful when a bundle of loose leaves 6, together with one or several of such end leaves 1, is bound by means of a binding element 28 as represented in figure 10, in particular a binding element 28 of the type whereby the bundle 6 is fixed between two sections 29 and 30 at one edge, whereby also connecting parts 31 stick through the perforations 27 as well as through the perforations provided in the leaves.

It should be noted that, in the figures, the different layers of material, such as the leaf 2 and the strip-shaped part 4, are represented proportionally thicker for clarity's sake. In reality, these are thin layers. Thus, for example, the leaf 2 will in reality have a thickness in the order of magnitude of 0.15 mm, whereas the strip-shaped part 4 has a thickness in the order of magnitude of 0.05 mm.

The invention is by no means limited to the above-described embodiments represented in the accompanying drawings; on

the contrary, such a leaf as well as the accompanying binding elements can be made in all shapes and dimensions while still remaining within the scope of the invention.

WHAT IS CLAIMED IS:

1. End leaf of a type to be used in combination with binding means, for binding loose leaves (6) in a bundle, the end leaf (1) comprising a leaf (2) made of synthetic material and a flat strip-shaped part (4) firmly attached to an edge (3) of said leaf (2) and being suppler than the above-mentioned leaf (2), characterized in that said end leaf comprises means for stiffening the strip-shaped part (4), said means being situated at a distance (D) from said edge (3) of the leaf (2), such that, between the leaf (2) and said means a non-stiffened part (13) remains.

2. End leaf according to claim 1, characterized in that the strip-shaped part (4) is glued or welded onto the leaf (2).

3. End leaf according to claim 1 or 2, characterized in that the strip-shaped part (4) consists of synthetic material or paper.

4. End leaf according to any one of claims 1 to 3, characterized in that said leaf (2) is transparent.

5. End leaf according to any one of claims 1 to 3, characterized in that said strip-shaped part (4) is transparent.

6. End leaf according to claim 1, characterized in that the above-mentioned means consist of a strip of material (12) which is fixed on the strip-shaped part (4).

7. End leaf according to claim 6, characterized in that the above-mentioned strip of material (12) is glued onto the strip-shaped part (4).

8. End leaf according to claim 6 or 7, characterized in that the above-mentioned strip of material (12) mainly consists of paper or cardboard.

9. End leaf according to claim 6 or 7, characterized in that the above-mentioned strip of material (12) at least consists of a layer of paper (15) and a decorative layer (16) provided upon it, in that the strip-shaped part (4) is transparent and in that the above-mentioned strip of material (12) is provided against the strip-shaped part (4) together with the decorative layer (16).

10. End leaf according to any one of claims 1 to 9, characterized in that the strip-shaped part (4) is provided with binding perforations (27).

11. End leaf according to any one of claims 1 to 10, characterized in that it is made as a loose leaf, whereby one longitudinal edge of this end leaf (1) is formed of an edge of the above-mentioned leaf (2) made of synthetic material, whereas the opposite edge (14) of this end leaf (1) is formed of the free edge of the strip-shaped part (4).

12. Binding element which is provided with an end leaf according to any one of claims 1 to 11, characterized in that the binding element (20) contains a U-shaped back part (21) and in that the end leaf (1) is fixed against the inner wall of a lateral part (22-23) of the U-shaped back part (21) together with the strip-shaped part (4).

13. Binding element according to claim 12, characterized in that the binding element (20) contains two of such end leaves (1), forming a first page and a last page, whereby these end leaves (1) are fixed against either of the inner walls respectively of the lateral parts (22-23) of the U-shaped back part (21) by means of their strip-shaped part (4).

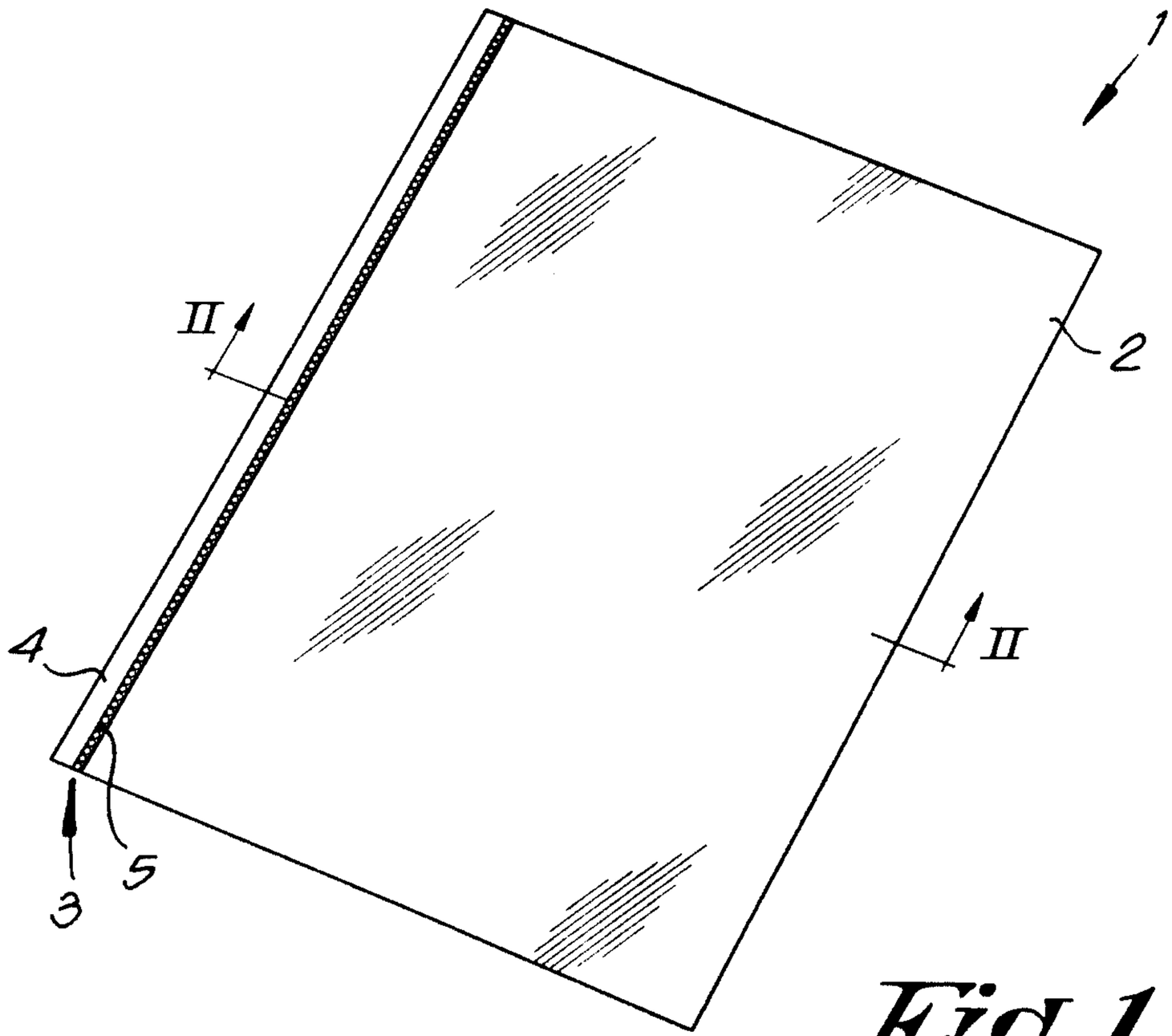


Fig. 1

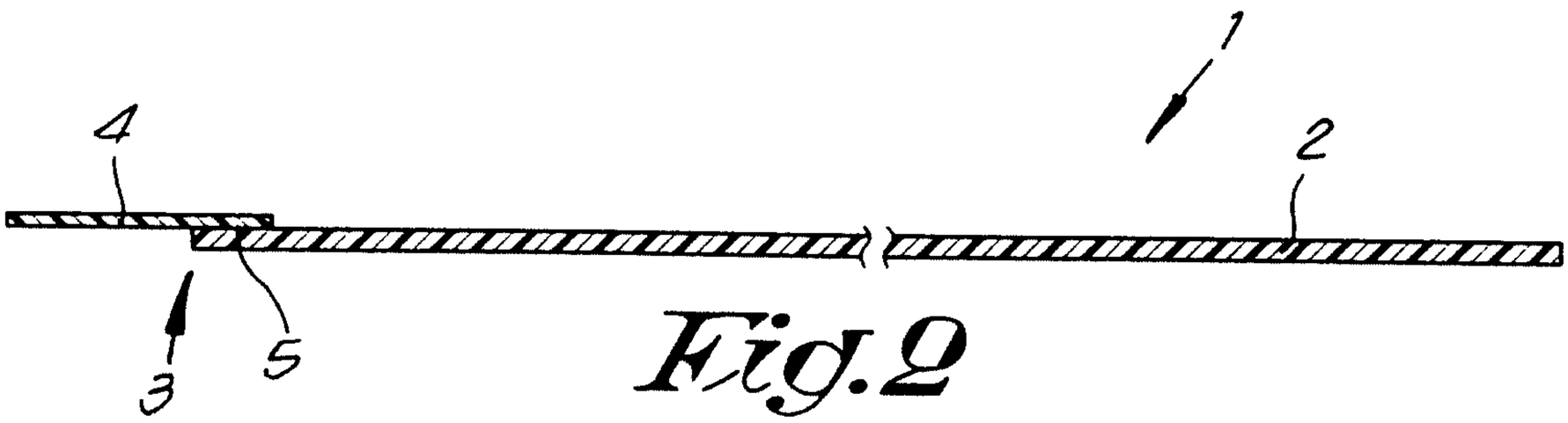


Fig. 2

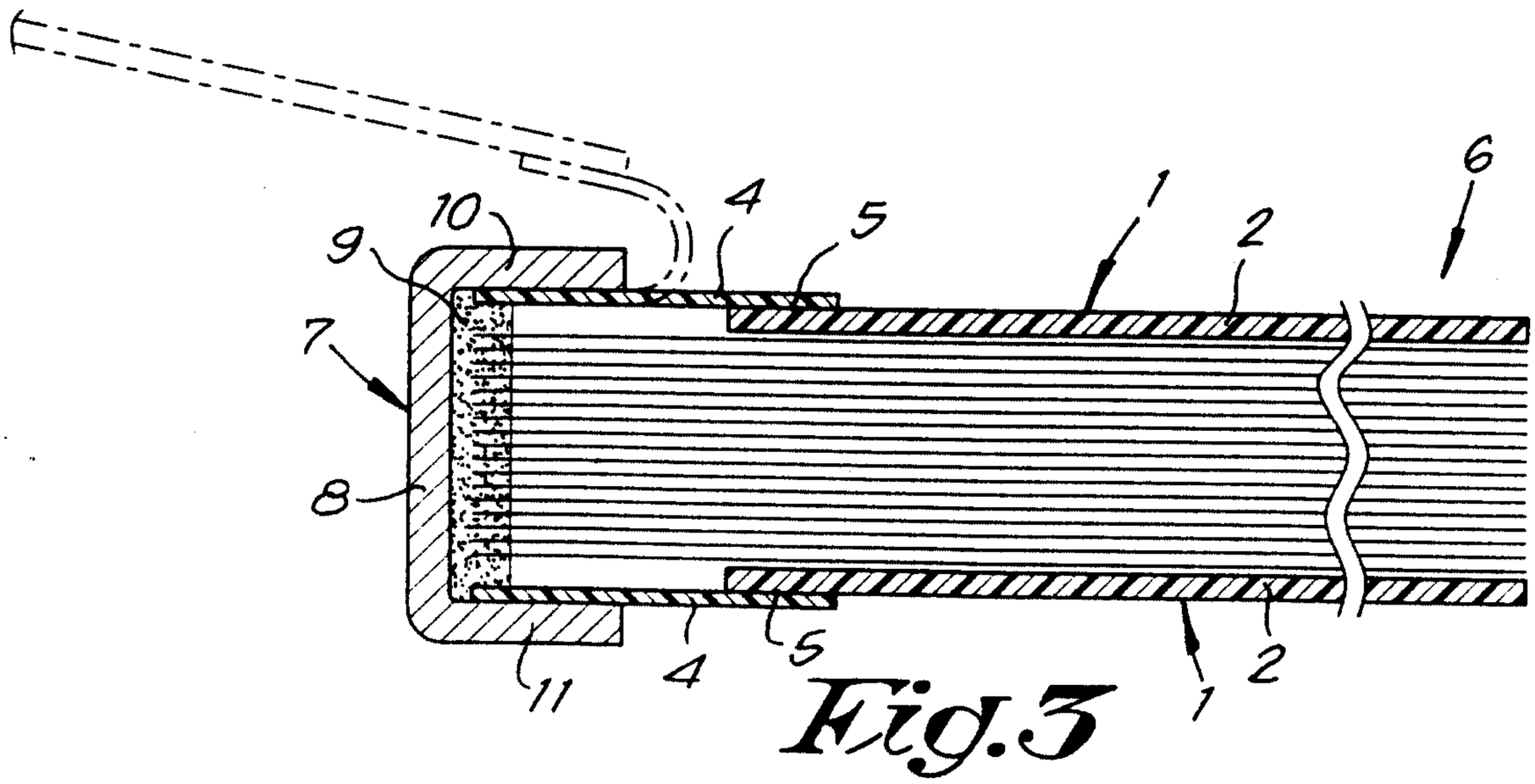


Fig. 3

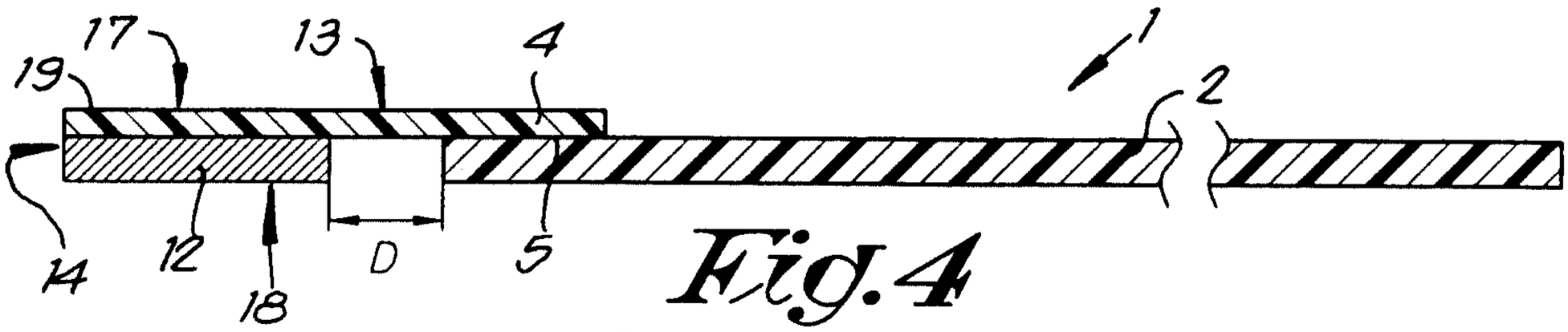


Fig.4

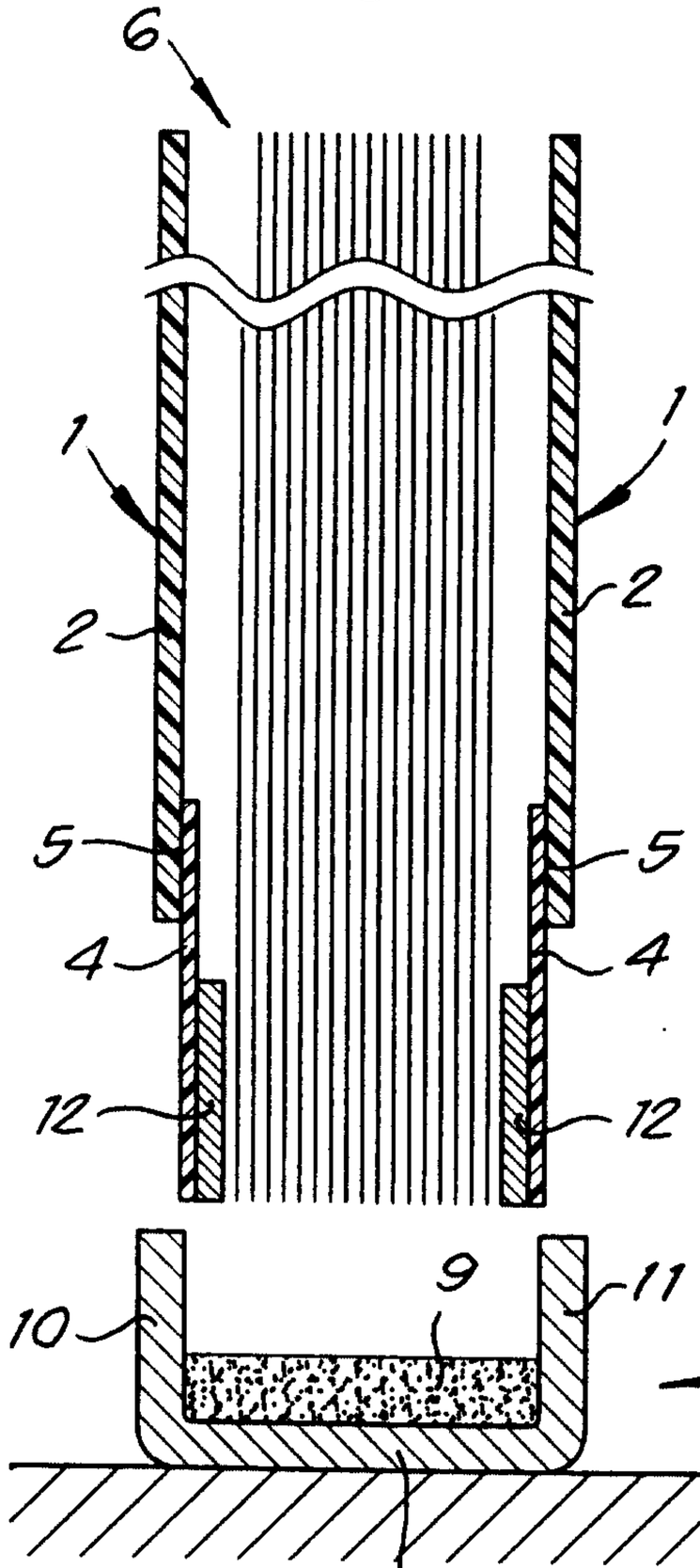


Fig.5

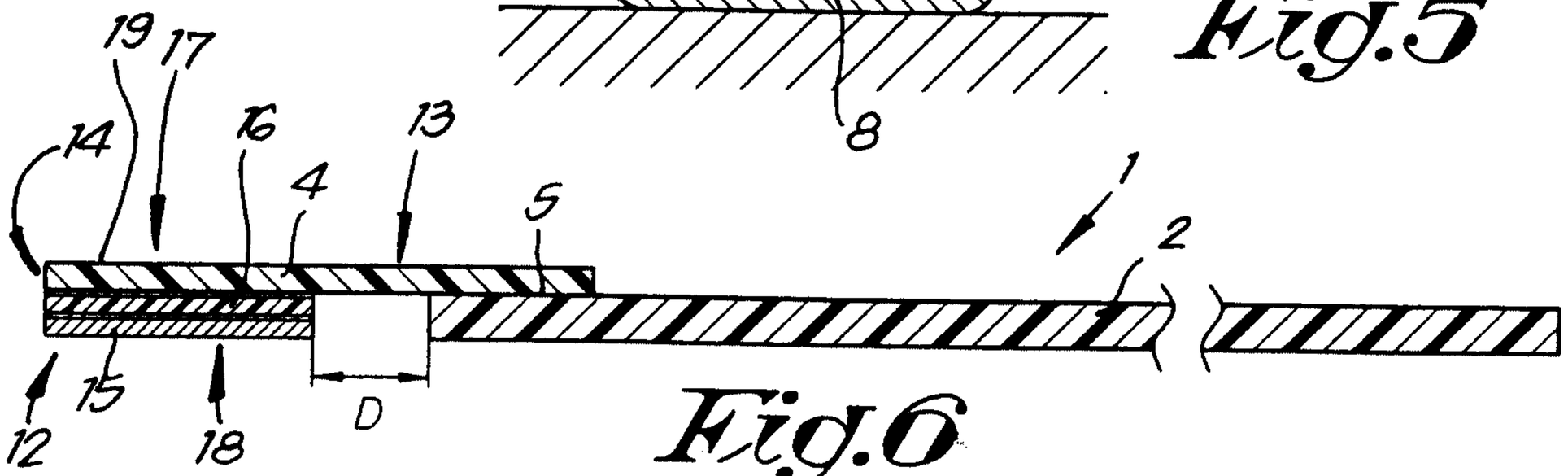


Fig.6

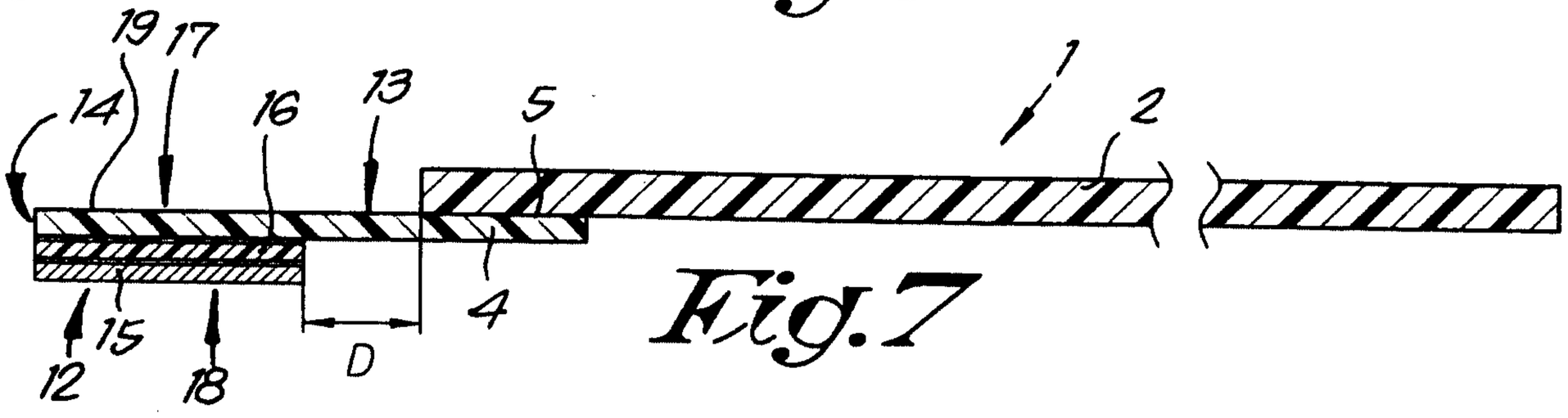


Fig.7

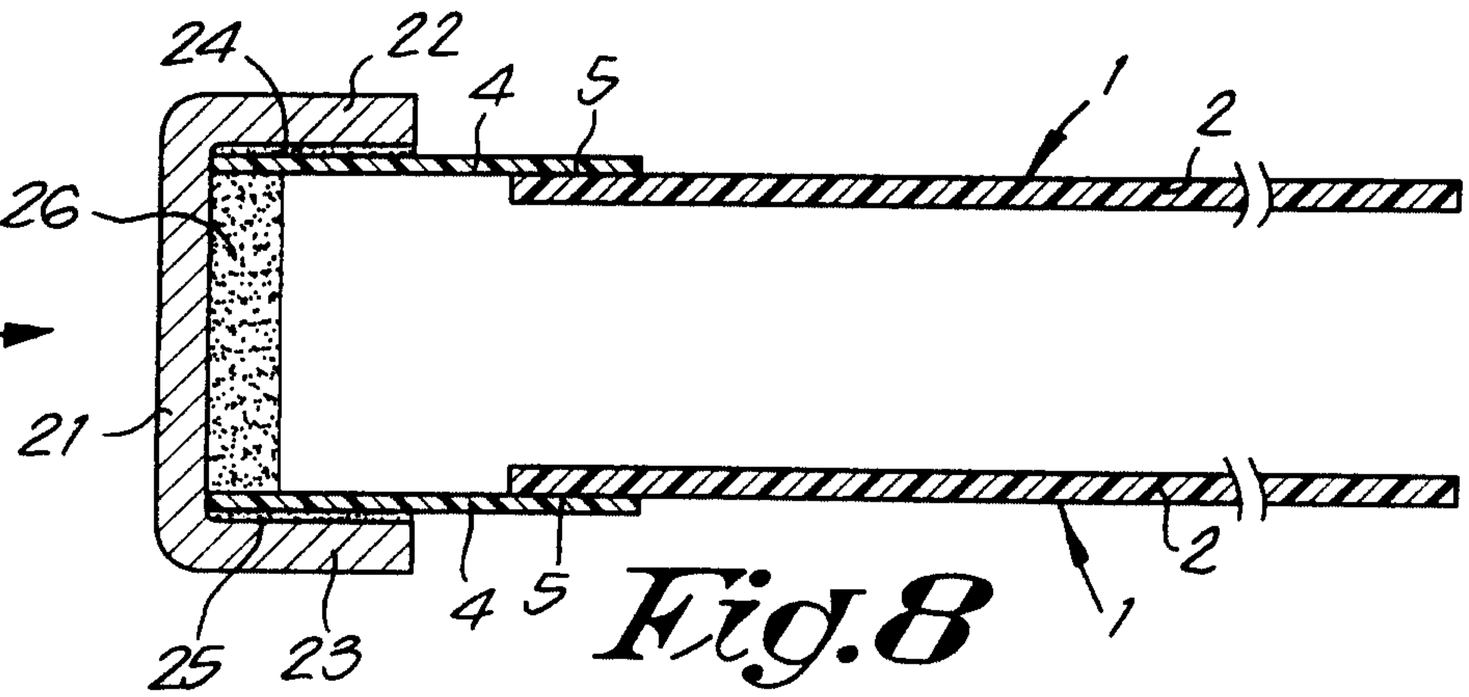


Fig.8

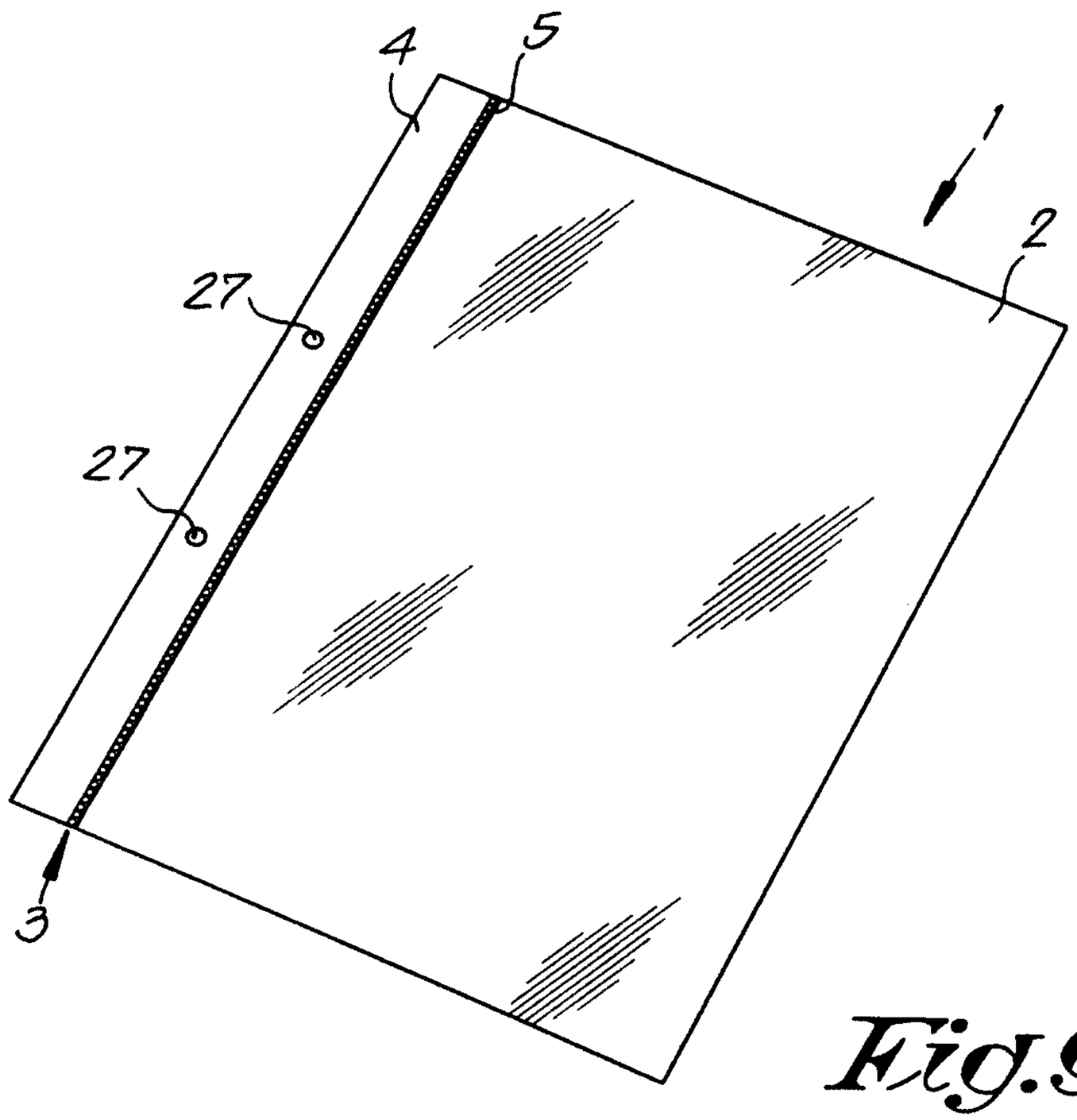


Fig.9

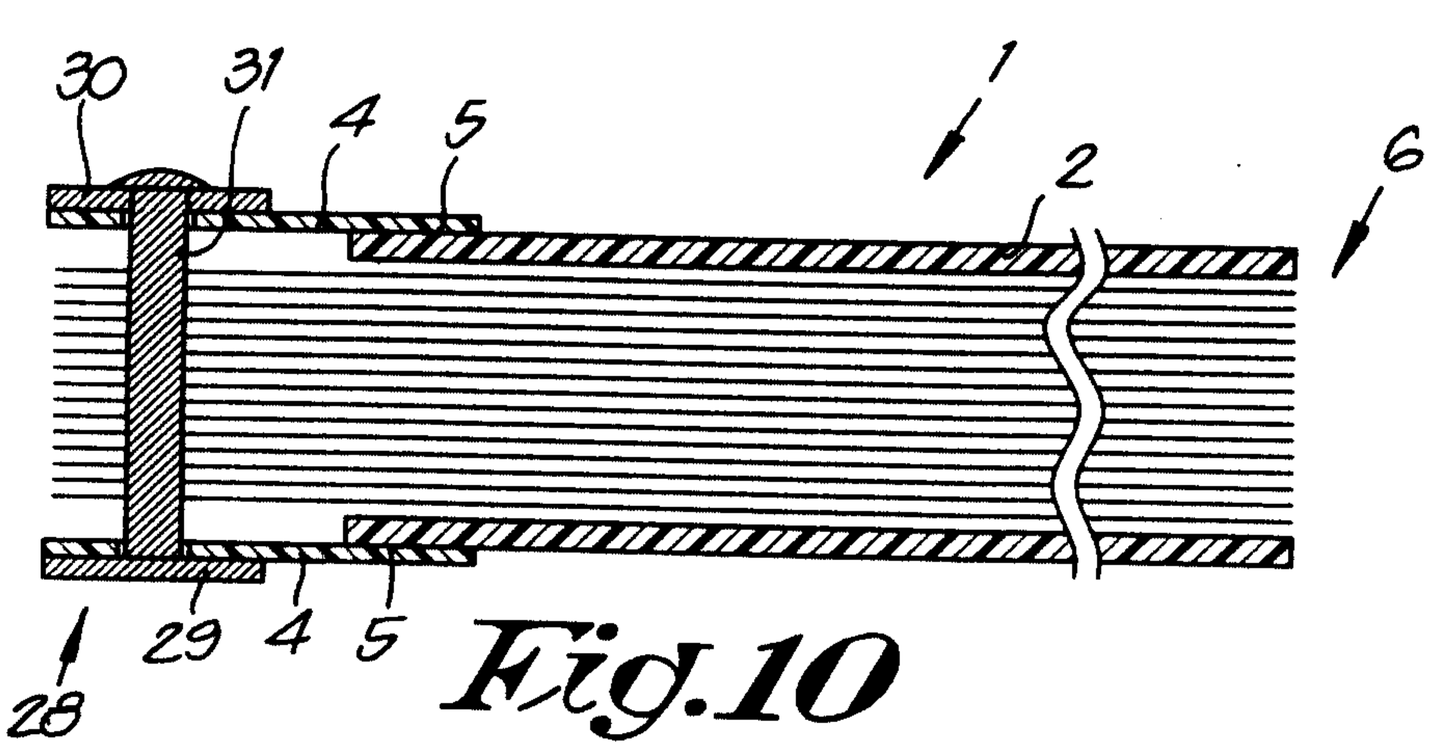
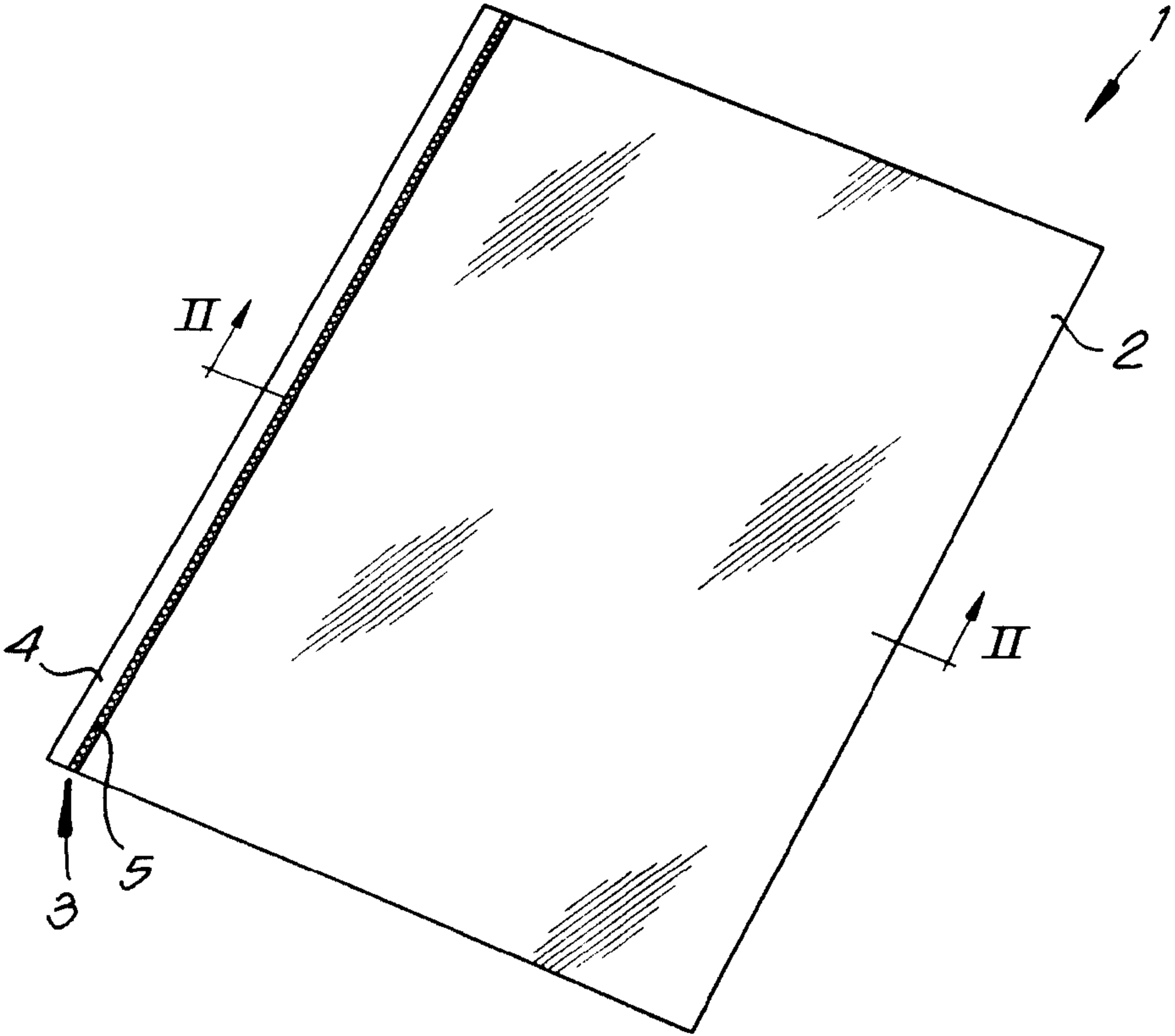


Fig.10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