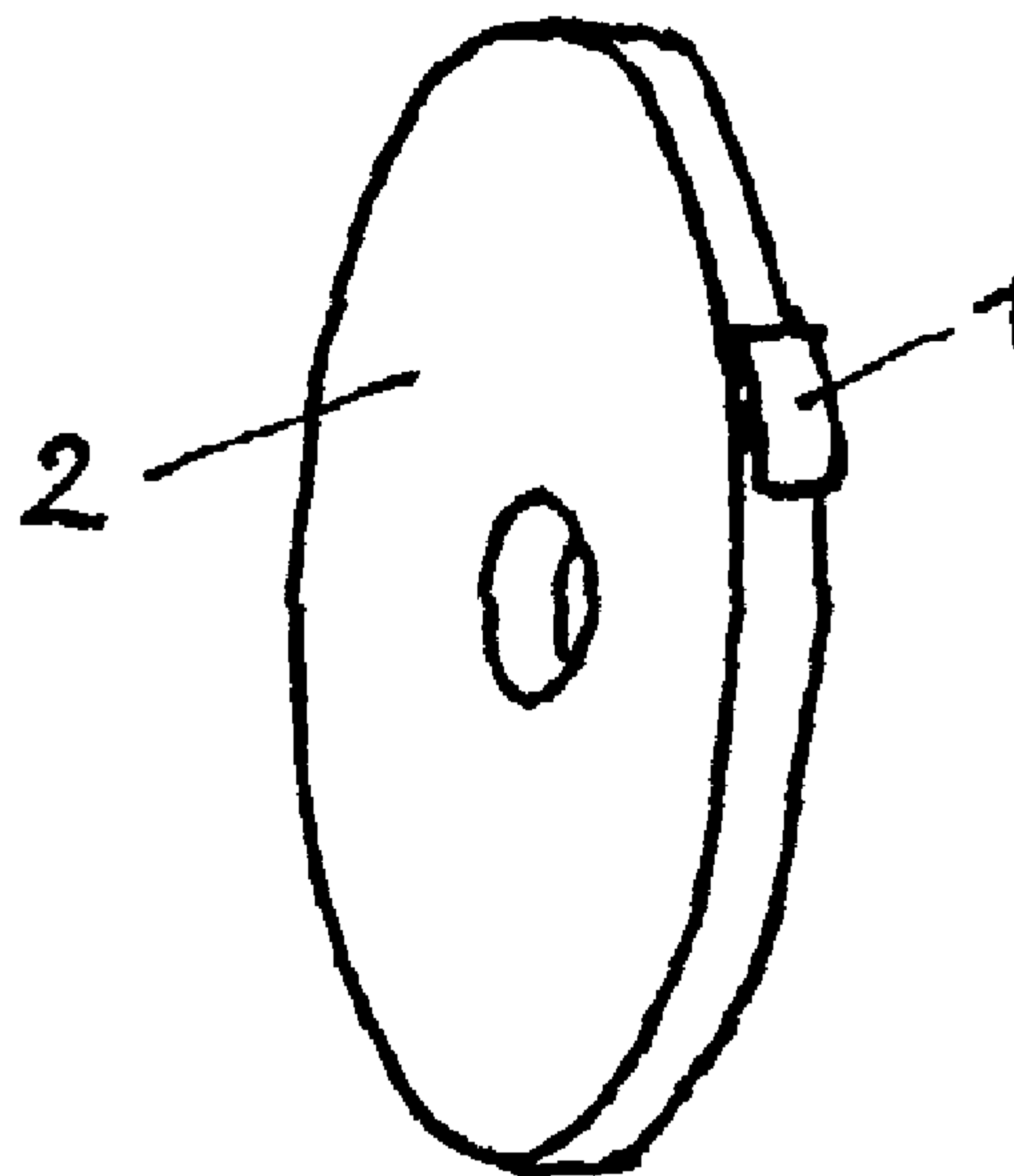




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(54) Titre : GARNITURE FINALE DE BOBINE
(54) Title: CLOSING BANDING



(57) **Abrégé/Abstract:**

The invention relates to a closing banding (1) for a reel (2), particularly for a reel (2) of cigarette paper. Said closing banding comprises: a) a paper support (3), whose underside (4) is coated with a self-adhesive compound (6) in the area of the upper transversal edge (5), and; b) a non-adhesive holder (8) in the area of the lower transversal edge (7) located opposite the upper transversal edge (5). The closing banding is characterized by: c) an adhesive tape (9), which is adhesive on both sides and located on the underside (4) of the paper support (3) between the self-adhesive compound (6) and the holder (8), whereby; d) the adhesive tape (9) that is adhesive on both sides has a paper support (10), which can be split and which is coated on both sides with self-adhesive compound (11).



Abstract

A closing banding (1) for a bobbin (2), in particular for a bobbin (2) of cigarette paper, comprising

- a) a paper carrier (3) which is coated with a self-adhesive compound (6) on its underside (4) in the region of the upper transverse edge (5), and
- b) has a non-adhesive tab (8) in the region of the lower transverse edge (7), opposite the upper transverse edge (5),

characterized by

- c) a double-sided adhesive tape (9) which is arranged on the underside (4) of the paper carrier (3), between the self-adhesive compound (6) and the tab (8),
- d) the double-sided adhesive tape (9) having a cleavable paper carrier (10) which is coated on both sides with self-adhesive compound (11).

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Description

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Closing banding

The invention relates to a closing banding for a bobbin, in particular for one of cigarette paper.

10

Widespread use is made of bobbins, thin material, in particular paper, wound into narrow rolls. For example, narrow rolls of cigarette paper are processed to a great extent, as a rule as cigarette paper rolls of 26.5 mm width. These are already produced in the paper mill and equipped with attachment adhesive tapes, in order to secure the uppermost layer and permit trouble-free transport and subsequent use. These attachment adhesive tapes are referred to as "closers" in specialist circles and consist of adhesive labels about 180 mm long and 26.5 mm wide with a paper carrier and a tab, at which the label can be gripped, in particular also by a machine, in order to tear it off from the second layer and to insert the bobbin into a machine, in particular a cigarette machine.

Robots of this type run extremely quickly and need appropriate reserves. Thus, as a rule it is necessary to insert a new cigarette paper roll every 5 minutes, and the trouble-free fixing and holding of the uppermost layer of such a roll is needed correspondingly often until said roll has to be released again quickly and without difficulty.

It is precisely in the case of sensitive, lightweight papers, such as is the case in cigarette paper with a grammage of about 13 g/m², that care has to be taken that when the bobbins are opened, that is to say when the label is pulled off, the tearing force which

develops does not lead to the paper layer lifting and possibly tearing. For this purpose, it is normal to cover the uppermost layer with a packaging paper, which is bonded adhesively to the cigarette paper and, before
5 actual use in the cigarette machine, has to be torn off and disposed of.

It is equally necessary to fix and to hold this uppermost layer - this is where the present invention
10 begins.

This is because delicate movement of the seam is necessary in order to handle the sensitive material - the cigarette paper - in a suitable way, since the
15 bobbins, depending on the external conditions, are subject to changes and, so to speak, "work", for example given a different moisture content of the surroundings, in the event of temperature fluctuations, etc., so that the label used to secure them must also
20 withstand these loadings.

In addition, it is desirable for the separation of the securing means or the label to be carried out easily and without material damage, but without detrimental
25 effect on the functioning of a fixing of the uppermost layer. It is also desirable that, following the separation and insertion into the cigarette machine or the like, no adhesive regions disrupt and lead to problems. Finally, it is also desirable that all the
30 components are "pure", that is they consist of paper or materials which, together with paper, are not disruptive, that is to say they are possibly water-soluble or can be recycled together with paper.

35 Furthermore, it is desirable that the bobbins with auxiliary materials or materials to be used other than paper, such as the aluminum foil used in cigarette production, packaging film, for example of PP, board

and the like, can be finished secured and can be opened in the same way.

For this purpose, self-adhesive labels or self-adhesive
5 tapes which can be "opened" easily are known, by a tab
provided being pulled and the adhesive being separated
via point-like adhesive points, as is known, for
example, with reversibly adhesive notelets equipped
with point-like adhesive points. In this case, both the
10 end of the uppermost layer and the second layer located
underneath are bonded over. The separation of the
bonding is, however, either carried out in all too easy
a manner, so that undesired separation can take place,
or with excessive difficulty, depending on the material
15 and adhesive force. In addition, adhesive regions of
the separated layers are disruptive during the further
sequence.

Adhesive tapes with cleavable paper carriers are also
20 known, and are used for a reel change, in particular a
flying reel change, in order not to have to stop the
machine when a web runs out. An example is the use of
a cleavable paper carrier cleaving and covering the
bonding points in a non-adhesive manner with its
25 residues. Such tapes are double-sided adhesive tapes
which are bonded under or over the end of the uppermost
layer and, at the same time, to the second layer lying
underneath, cf. US 5,702,555, DE 196 28 317 A1, DE 196
32 689 A1, DE 198 30 673 A1, DE 198 30 674 A1, DE 199
30 02 179 A1.

The double-sided adhesive tapes described in these
documents are only to a certain extent suitable for
securing the bobbins mentioned here, particularly since
35 these are not intended to be used for a flying reel
change but instead for fixing the uppermost layer for
transport, etc., and for the easy but not undesired and
trouble-free opening - the attachment to a web that is
running out or the insertion into a processing machine

is only carried out subsequently and is not the subject of the technical problem treated here.

It was therefore an object of the invention, for fixing
5 and holding the uppermost layer of a bobbin and for the subsequent easy and trouble-free separation of this holding means, to find a solution which circumvents or reduces the difficulties which have occurred hitherto.

10 Accordingly, the invention relates to a closing banding as characterized in more detail in the claims.

In this case, according to the invention, a single-sided adhesive product is proposed, not a double-sided
15 adhesive one, as is known, for example, for the flying reel change.

In order to avoid unnecessary repetitions, reference is also expressly made to the subclaims.

20

According to the invention, the fixing of the uppermost layer of a bobbin of cigarette paper succeeds securely and permanently, temperature and humidity fluctuations are tolerated well and also the subsequent separation
25 for insertion into the cigarette machine succeeds without difficulty, without undesired opening or separation of the adhesive bond occurring. Disruptive adhesive regions are not produced, disposal is carried out without problems, single-grade operation is
30 ensured.

Diverse cleavable paper systems are suitable as cleavable paper carriers, such as

- Duplex papers (papers laminated together in a
35 defined manner, the cleavage operation proceeds extremely homogeneously and no stress peaks are produced, for example as a result of inhomogeneous compaction. These papers are used for the production of wall coverings and filters.

- Easily cleavable paper systems
- Highly compacted papers glued together in a defined manner (\Rightarrow paper with a high cleavage strength). The glueing can be carried out, for example, with starch, starch-containing derivatives, wallcovering adhesives based on methylcellulose (Methylan[®], Henkel KGaA, Düsseldorf) but also based on polyvinyl alcohol derivatives.

10

All typical contact adhesive compounds are suitable as the self-adhesive compound, in particular

- acrylates (water-soluble and water-insoluble)
- natural rubber compounds, synthetic rubber compounds

15

The drawings show schematic representations of closing bandings according to the invention in cross section and are intended to explain the invention by way of example. The designations are explained in the claims.

20

Figure 1 shows a schematic side view of a bobbin with closing banding.

Figure 2 shows an oblique view of a bobbin according to figure 1.

25

Figure 3 shows a cross-section through a closing banding according to the invention.

Figure 4 shows a schematic cross-section through part of a bobbin according to figure 1.

Figure 5 shows a bobbin according to figure 4 torn open, and

30

Figure 6 shows a further configuration of a closing banding according to the invention in cross section.

35

In detail, figures 1 - 6 show a bobbin 2 with a closing banding 1, the latter in turn with a paper carrier 3, on whose underside 4 there is a self-adhesive compound 6 in the region of the upper transverse edge 5 (on the

left in figure 3), while there is a non-adhesive tab 8 in the region of the lower transverse edge 7. Likewise in this region of the lower transverse edge, but separated from the latter by the tab 8, there is a double-sided adhesive tape 9 with a cleavable paper carrier 10 which is coated on both sides with self-adhesive compound 11. The self-adhesive compound 6 is also configured in the form of a double-sided adhesive tape 12, with tear-resistant paper carrier 13 and self-adhesive compound 14, 15 on both sides. In a further embodiment, not shown, the self-adhesive compound 6 is provided in the form of a "pure" self-adhesive compound, that is to say as a uniform strip of a self-adhesive compound, with no carrier and pure adhesive. Products of this type are on the market, for example as tesa fix 51916 (tesa AG). A suitable thickness of this carrier-less self-adhesive compound is 60 μm . The tab is 15 mm long, the overall closing banding is 180 mm long, the adhesive tape 12 is 25 mm wide, the adhesive tape 9 is 25 mm wide. The cleavage strength of the paper carrier 10 is 33 - 44 c/N/cm. (Duplex filter paper, grammage 51 g/m², thickness 90 μm). The paper carrier 3 consists of coating body paper with a grammage of 95 g/m², as does the paper carrier 13.

Patent claims

1. A closing banding (1) for a bobbin (2), in particular for a bobbin (2) of cigarette paper, comprising
- 5
- a) a paper carrier (3) which is coated with a self-adhesive compound (6) on its underside (4) in the region of the upper transverse edge (5), and
- b) has a non-adhesive tab (8) in the region of the lower transverse edge (7), opposite the upper transverse edge (5),
- 10
- characterized by
- c) a double-sided adhesive tape (9) which is arranged on the underside (4) of the paper carrier (3), between the self-adhesive compound (6) and the tab (8),
- 15
- d) the double-sided adhesive tape (9) having a cleavable paper carrier (10) which is coated on both sides with self-adhesive compound (11).
- 20
2. The closing banding as claimed in claim 1, characterized in that the self-adhesive compound (6) is one for permanent (irreversible) bonding.
- 25
3. The closing banding as claimed in claim 1, characterized in that the self-adhesive compound (6) comprises a double-sided adhesive tape (12) laminated on, in particular one with tear-resistant paper carrier (13) and highly adhesive self-adhesive compound (14, 15) on both sides, or the self-adhesive compound (6) consists of a carrier-less self-adhesive compound.
- 30
4. The closing banding as claimed in claim 1, characterized in that the self-adhesive compounds (6, 11, 14, 15) are contact adhesive compounds based on acrylates or rubber, in particular are water-soluble.
- 35
5. The closing banding as claimed in claim 1, characterized in that the length of the tab (8) is

10 - 25 mm, in particular 12 - 18 mm, measured from the lower transverse edge (7)).

6. The closing banding as claimed in claim 1, characterized in that this is present in the form of an adhesive tape, possibly wound up into a roll, in particular with a width of 20 - 2000 mm, in particular 22 - 1500 mm, which is preferably aligned with the width of the parent reel to be secured before the latter is cut up into bobbins (2).

7. The closing banding as claimed in claim 1, characterized in that the width of the self-adhesive compound (6) (measured from a transverse edge 5,7)) is 20 - 100 mm, in particular 25 - 60 mm, and the width of the double-sided adhesive tape (9) (measured from a transverse edge (5,7)) is 10 - 100 mm, in particular - 50 mm.

8. The closing banding as claimed in claim 1, characterized in that the cleavage strength of the cleavable paper carrier (10) is 20 - 70 cN/cm, in particular 22 - 60 cN/cm, above all 25 - 50 cN/cm.

9. The closing banding as claimed in claim 1, characterized in that it is present in the form of individual labels which, if appropriate, are arranged on an auxiliary carrier, the label width corresponding to the width of the bobbin to be bonded.

10. Use of a closing banding as claimed in one of claims 1 - 9 on a bobbin, in particular on a bobbin of cigarette paper, the end of the uppermost layer of the bobbin being fixed to the second layer located underneath by the closing banding being bonded to the end of the uppermost layer by means of the self-adhesive compound in the region of the upper transverse edge, in such a way that the closing banding projects beyond this end and, by means of the self-adhesive

compound on the cleavable paper carrier, being bonded to the second layer, in order then to separate the uppermost layer from the second layer by pulling on the projecting tab, by the cleavable paper carrier cleaving
5 and in this way the liberated end being capable of insertion into a machine, in particular a cigarette machine.

Fig. 1

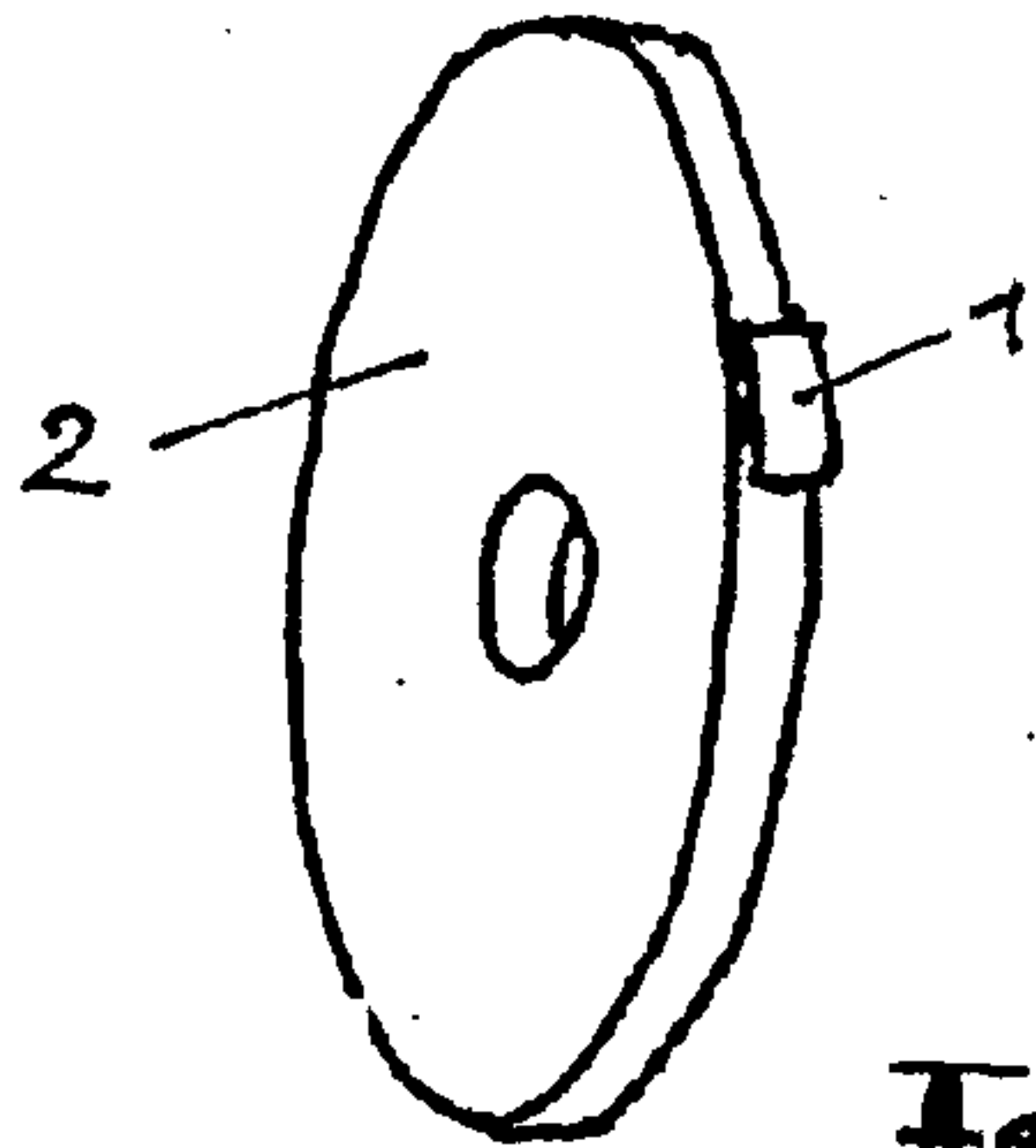
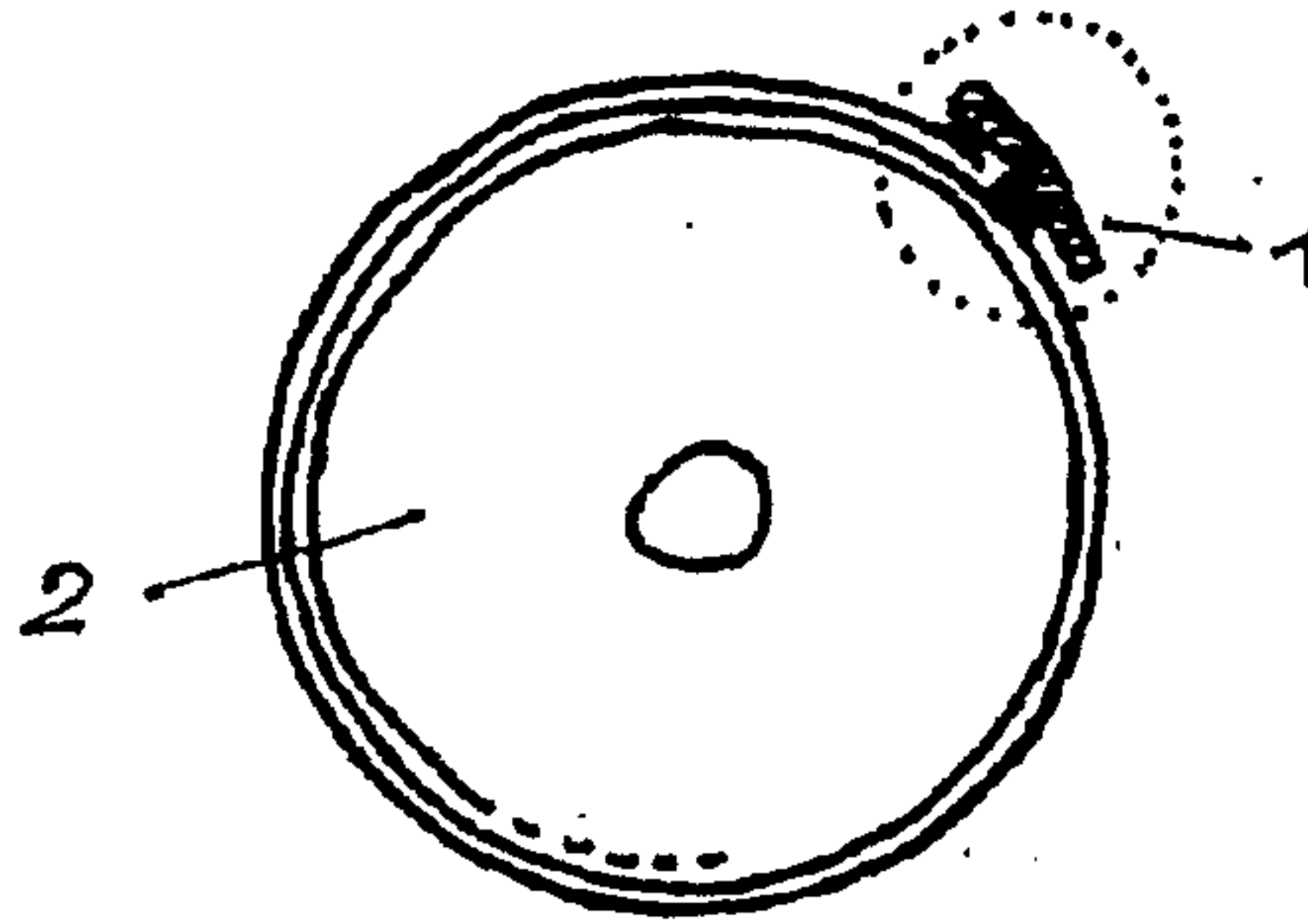


Fig. 2

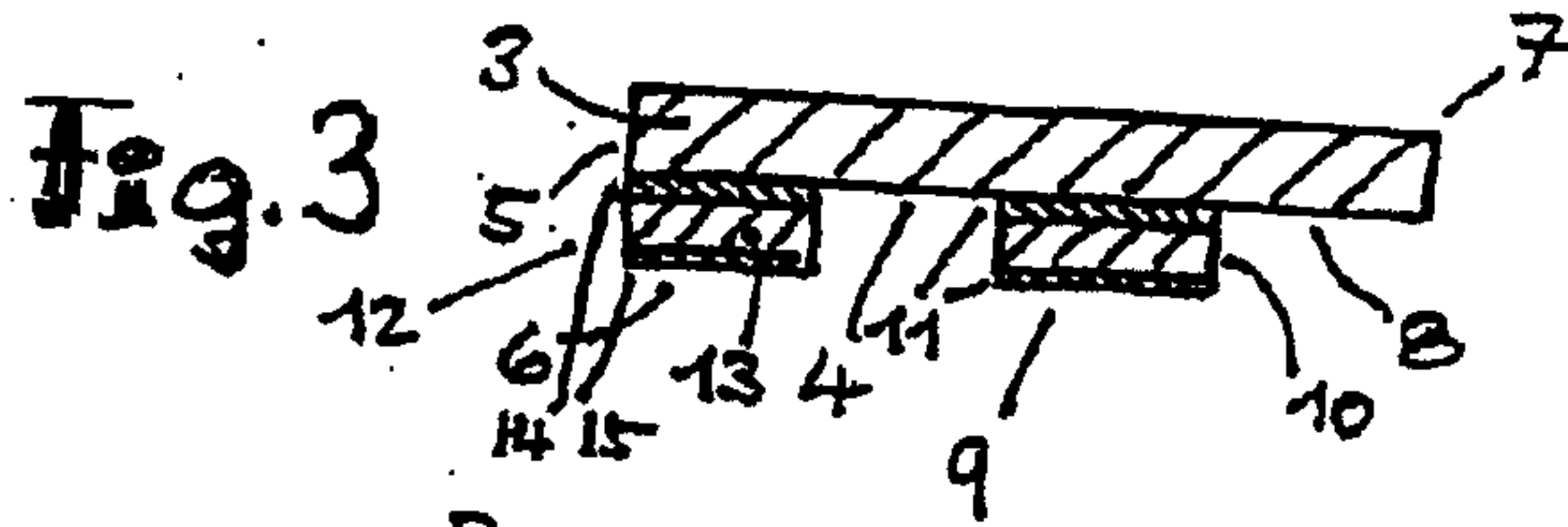


Fig. 4

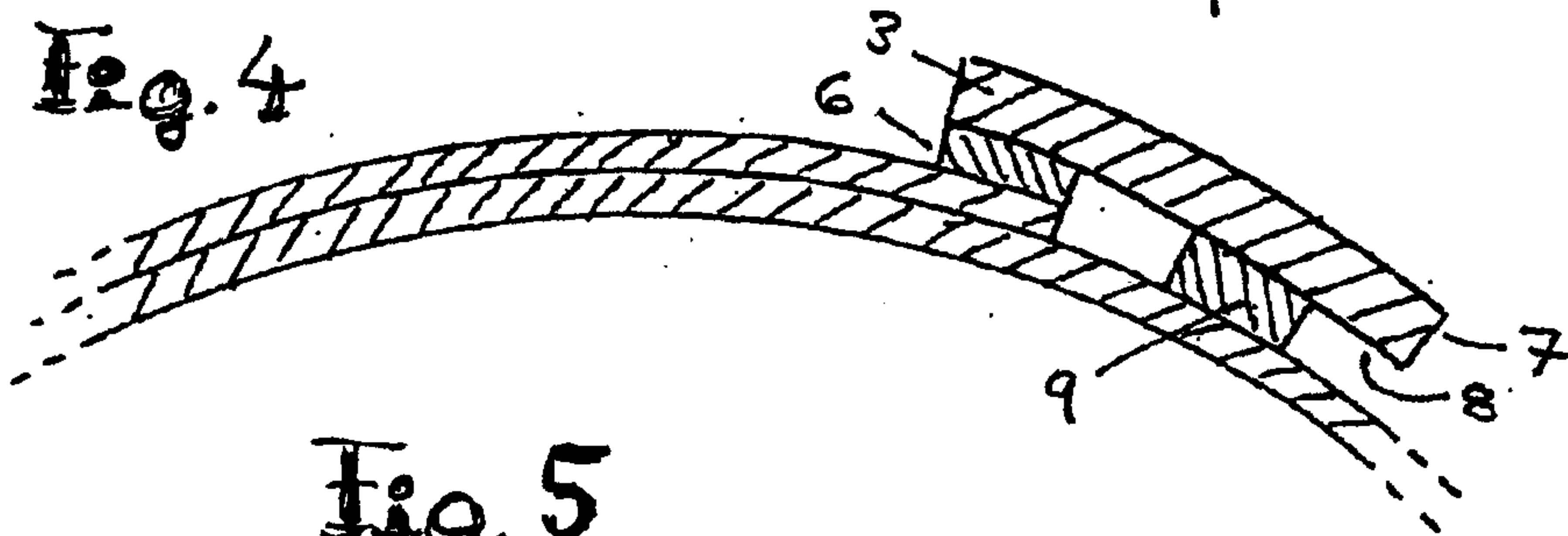


Fig. 5

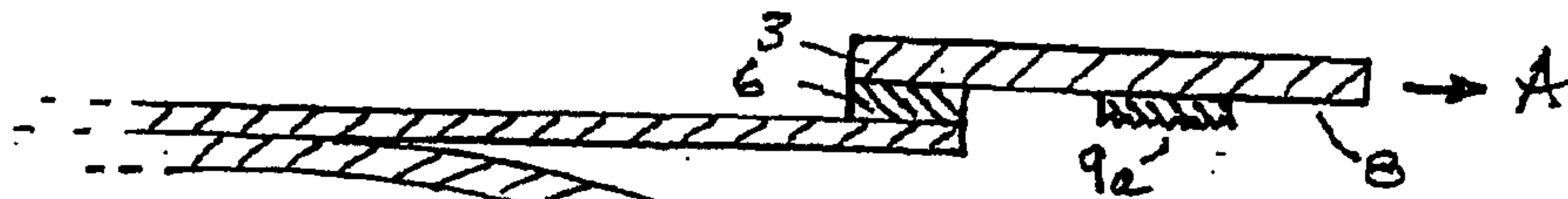


Fig. 6

