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The invention relates to a holding plate for a vacuum cleaner filter bag, in particular for arranging the vacuum cleaner filter bag in a vacuum cleaner housing.

Such holding plates are known in many forms. Many known holding plates also have closure devices, so that the passage opening can be closed in the bag after use of the bag to prevent accidental leakage of the suction material. Different solutions have been proposed for the closure mechanism, for example slide solutions as in EP 0 758 209, flap solutions as in DE 10 2011 105 384 or membrane solutions as in FR 2 721 188.

In solutions with so-called closure flaps, spring elements are often used that push or pull the closure flaps after use in the closed position. For example, leaf springs as in EP 2 123 206, cambered leaf springs as in EP 1 137 360 or helical steel springs as in DE 10 2012 012 999 are used. Further spring elements are known from DE 20 2013 100 862, DE 10 2008 046 200 and DE 10 2006 037 456.

Frequently, the spring elements are arranged in the filter bag, as in DE 10 2011 008 117 or DE 20 2015 101 218, but can also be arranged outside the filter bag as in EP 1 480 545.

Documents DE 10 2010 060 175 A1 and DE 20 2011 052 208 U1 disclose generic holding plates.

The solutions with automatic closing mechanism have proven to be prone to failure, especially if these are in the dust chamber, i.e. within the filter bag. The closing function is not always guaranteed during operation. Often the closure flap remains partially open.

It is therefore the object of the invention to provide a holding plate, which has a functionally reliable solution for closing the passage opening, which is inexpensive to realize even in mass production.

This object is achieved by a holding plate according to claim 1. Particularly advantageous developments can be found in the dependent claims.

The inventors of the present application have recognized that problems with regard to the closure function in known holding plates are often attributable to the fact that dust or other foreign bodies are deposited in the area of the spring elements, so that they can only insufficiently apply the necessary spring force to the closure flap. The present invention prevents or reduces the deposition of such disturbing elements in that the elastic element is at least partially covered by the cover element and thus shielded from the environment. In operation, therefore, no or less contaminants enter areas of the spring where such contaminants could adversely affect the function of the elastic element. The functional reliability of the closing mechanism is thereby

improved. The solution is also easy to put into practice, so that it can be implemented cost-effectively in mass production.

5 The closure flap is biased in the closed position via the elastic element. This means that a force must be used to open the closure flap. This force can be exerted by a nozzle of the vacuum cleaner and/or the air flow flowing into the bag. When the closure flap is in the open position, it is acted upon by the elastic element in the closing direction with a force. After eliminating the force acting in the opening direction, this force causes the closure flap to return to the closed position.

10 The closure flap can be connected via a joint, in particular a film hinge, to parts of the holding plate, in particular the base plate. The closure flap may have a shape which corresponds to the shape of the passage opening.

15 "Covering" means here shielding from the environment. In other words, the cover element separates the elastic element partially or completely from the environment. In other words, the cover element overlaps the elastic element at least partially in plan view of the holding plate on the side on which the elastic element is arranged. Hence, by the cover element one side of the elastic element is covered, which points away from the part of the holding plate on which the elastic element is arranged.

20 The cover element may be spaced from the elastic element. In this case, the cover element overlaps the elastic element without touching it. However, it is also possible that the cover element contacts the elastic element, at least in portions and/or in parts of the opening and/or closing movement of the closure flap.

By means of the cover element, in connection with the base plate and/or the closure flap, a volume can be defined within which the elastic element is arranged partially or completely. Thus, a cavity for receiving the elastic element can be formed by the cover element.

25 The cover element can be arranged such that it does not overlap or cover the portions of the passage opening released by the closure flap when the closure flap is open (seen in the direction of flow). In other words, the cover element can be arranged so that it overlaps or covers the passage opening only in portions where they are also overlapped or covered by the closure flap.

30 The maximum distance between the elastic element and a surface of the cover element facing the elastic element may be smaller than the diameter of the closure flap, in particular smaller than half the diameter of the closure flap. If the flap does not have a constant diameter, the average diameter can be used as the diameter.

The elastic element may be any spring element, for example a helical spring, a leg spring, a leaf spring or a cambered leaf spring.

5 The holding plate can be attached to a holding device in a vacuum cleaner housing. Alternatively, the vacuum cleaner filter bag can be pushed with the help of the holding plate via a connection nozzle at the vacuum cleaner side.

10 The elastic element can be arranged, viewed in the closing direction, in front of the closure flap. In the opening direction, the elastic element is then arranged behind the closure flap. In other words, the elastic element can be arranged on the side of the holding plate which is provided for connection to the bag wall of the vacuum cleaner filter bag. If the holding plate is connected to a vacuum cleaner filter bag, the elastic element is thus in the dust chamber, i.e. inside the vacuum cleaner filter bag. There, the risk that the function of the elastic element is affected by impurities is particularly high. Thus, the use of the cover element according to the invention is particularly advantageous here.

15 When the cover element completely covers the elastic element, the elastic element can be completely separated from the dust chamber.

20 If the cover element covers the elastic element only partially, in particular areas of the elastic element can be covered, in which impurities could lead to a reduction of the spring force in the closing direction. Such effective areas may in particular be areas of the elastic element which exert a spring force on the closure flap or areas which directly adjoin fastening devices of the elastic element on parts of the holding plate. In these bearing areas, contaminants can cause the distance between the elastic element and the closure flap to increase in the closed position. As a result, the elastic element can no longer provide the full spring force.

25 Alternatively or additionally, areas of the elastic element may be covered, in which the elastic element cooperates with holding elements which hold the elastic element in the open and/or closed position of the closure flap in a predetermined position.

30 The cover element may comprise a film, a nonwoven fabric and/or a paper. The film may in particular be an elastic film, which comprises, for example, a thermoplastic elastomer or consists of such an elastomer. It is also conceivable that the cover element comprises a laminate of different materials, for example comprising a nonwoven fabric and a film or a paper and a film. It has been found that with such cover elements, the movement of the flap and of the elastic element during opening and closing of the closure flap is not significantly impaired.

The cover element may be formed as a separate component which is connected detachably or not without damage detachably to a part of the base plate, the closure flap and/or the elastic element.

5 The cover element can be glued or welded to a part of the holding plate, in particular to a part of the base plate. For welding, in particular an ultrasonic welding can be used. However, it is also possible that the cover element is injection-molded onto a part of the holding plate, in particular a part of the base plate. Advantageously, this is possible via a two-component injection molding process, in particular if the cover element contains or consists of an elastomer. Also, a positive connection, for example in the form of a "snap fit", or a non-positive connection is conceivable.

10 It is also possible for the cover element to be connected only to the elastic element, in particular adhesively bonded thereto, positively connected and/or non-positively connected.

15 The cover element rests in a surface portion of the base plate and / or closure flap on the base plate and / or closure flap, which surface portion surrounds the elastic element completely or at least on two sides. As a result, it can be at least partially prevented that suction material reaches the elastic element laterally.

The cover element may have an embossment, which is particularly adapted to the shape of the elastic element. It can thereby be achieved that the elastic element is even less restricted in its movement during the opening of the closure flap.

20 For this purpose, alternatively or additionally, the cover element may also be pleated or creped. For example, the cover element may be formed in the form of a bellows. It is possible that the bellows surrounds the elastic element only partially radially, for example, only in the half-space, which points away from the base plate and/or closure flap.

25 The embossment can be produced by hot or cold stamping or by forming, for example deep drawing or vacuum drawing. Particularly preferred is the embossing by means of ultrasonic embossing. This procedure is particularly fast.

The cover element may also be an injection-molded part or a deep-drawn part. This can in turn be materially, non-positively or positively connected to parts of the holding plate.

The cover element may also be formed in several pieces. This can be advantageous if the material used for the cover element is relatively stiff.

Parts of the multi-piece cover element may be positively or materially connected to each other, for example by welding, gluing or a "snap-fit" connection. But it is also possible that the parts of the multi-piece cover element are not connected to each other.

5 The cover element may also include a pivot axis about which a part of the cover element is pivotable, in particular wherein the pivot axis is formed by a film hinge. Also by this measure, the strength of the cover element can be taken into account.

The elastic element may comprise an elastomer or consist of an elastomer. The inventors of the present application have found that, in particular when helical springs are used, suction material can also be deposited between the windings of the spring, which impairs the action of the spring.
10 If the elastic element comprises an elastomer or consists of an elastomer, this negative influence on the spring effect can be reduced or avoided.

The elastomer may in particular comprise or be vulcanized silicone elastomer. In particular, cross-linked liquid silicone (liquid silicone rubber, LSR) or cross-linked solid silicone (high-consistency rubber, HCR) come into question.

15 The elastic element may in particular be designed as an elastomeric cord or elastomeric band. The cross section of the elastomeric cord or the elastomeric band can be round, rectangular or square. However, other cross sections are also conceivable. It is also conceivable that the elastic element is designed in the form of a hollow cylinder, i.e., it is hollow along its longitudinal axis. Material savings are thereby possible.

20 If the elastic element comprises an elastomer or consists of an elastomer, it may also be injection-molded onto a part of the holding plate, in particular a part of the base plate.

Alternatively, it is possible that the elastic element is a helical spring, wherein the helical spring is at least partially surrounded by a sheath. In other words, the cover element can thus be designed in the form of a sheath. In this case, in particular the interstices of the helical spring are protected
25 from further contamination.

In this context, a sheath is understood to mean a cover element which surrounds the elastic element, in particular in the form of a helical spring, radially in full circumference. Along the longitudinal axis of the elastic element, the sheath may extend completely or only in portions over the entire extent of the elastic element.

30 A helical spring is understood herein to mean a spring in which the spring wire is wound in helical form. Along the longitudinal axis, the shape of the spring can be cylindrical but also conical (cone spring). Also, springs that include a helical spring, for example, leg springs are to be regarded as

a helical spring. Helical springs are to be distinguished insofar from spiral springs, in which a metal strip is wound in a plane, curved in helical line.

The sheath may comprise a plastic, a nonwoven fabric and/or paper.

5 The term nonwoven fabric ("nonwoven") is used as defined by ISO standard ISO9092:1988 or CEM standard EN29092. In particular, the terms fibrous web or nonwoven and nonwoven fabric in the field of the production of nonwoven fabrics are delimited from one another as follows and are also to be understood in the sense of the present invention in this way. To produce a nonwoven fabric, fibers and/or filaments are used. The loose and still unbound fibers and/or filaments are referred to as nonwoven or fibrous web. By a so-called nonwoven binding step a
10 nonwoven fabric is formed from such a fibrous web, which has sufficient strength to be for instance wound into rolls. In other words, a nonwoven fabric is made self-supporting by solidification. (Details on the use of the definitions and/or methods described herein can also be found in the standard work "Vliesstoffe" ["Nonwoven Fabrics"], W. Albrecht, H. Fuchs, W. Kittelmann, Wiley-VCH, 2000.)

15 The sheath may consist of two films, in particular plastic films, between which the helical spring is arranged, wherein the region in which the spring is arranged is surrounded by a circumferential weld seam.

The cover element described above can also serve for fastening the elastic element to the holding plate. In particular, the elastic element can rest loosely on the base plate and be limited by the
20 cover element in its position to a predetermined range. For example, the elastic element can be restricted in its movement by the cover element so that it can only assume positions in which it is possible to act on the closure flap with the spring force. It is also conceivable that the elastic element is fixed by the cover element in its position. Fixed in its position means in this context that the elastic element in the closed position of the closure flap cannot be moved relative to the
25 holding plate.

The holding plate described above may be formed in one piece or in several pieces. For example, the holding plate may comprise a holding device and a separate closing device comprising the closure flap. The closing device can be connected or is connectable directly or indirectly, for example via the bag wall of the vacuum cleaner filter bag and/or via a sealing membrane, to the
30 holding device.

In the case of a multi-piece holding plate, the base plate may also be formed in several pieces. For example, one part of the base plate may be part of the holding device and another part may be a part of the closing device.

The invention also provides a vacuum cleaner filter bag comprising a bag wall and a holding plate connected thereto as described above.

The holding plate may thus have one or more of the above features.

5 The bag wall of the vacuum cleaner filter bag may comprise one or more filter material layers, in particular one or more nonwoven fabric layers. Vacuum cleaner filter bags with such a bag wall of a plurality of filter material layers are known, for example, from EP 2 011 556 or EP 0 960 645. As a material for the nonwoven fabric layers, a wide variety of plastics can be used, for example polypropylene and/or polyester. In particular, the layer of the bag wall to be connected to the holding plate may be a nonwoven fabric layer.

10 The bag wall may have a passage opening, in particular wherein the passage opening of the bag wall is arranged in alignment with the passage opening of the base plate. Through the passage opening in the base plate and the passage opening in the bag wall, an inflow opening can be formed, through which the air to be cleaned can flow into the interior of the vacuum cleaner filter bag.

15 The invention also provides a method for producing a holding plate according to claim 15.

The provision of the base plate and the closure flap can in particular comprise a production of the base plate and the closure flap by injection molding. It is also possible to form the base plate by deep drawing. In this case, the closure flap can be formed by injection molding as a separate element, and then directly or indirectly connected to the deep-drawn base plate.

20 The arrangement of the elastic element on the base plate and/or the closure flap may comprise a connection of the elastic element to the base plate and/or the closure flap, in particular by ultrasonic welding, gluing, or by a non-positive or positive connection. Alternatively, the elastic element can be placed loosely on the base plate and/or the closure flap.

25 The joining of the cover element with a part of the holding plate can be done, as stated above, by gluing, welding or injection molding in an injection molding process. The cover element can be connected to the base plate, the closure flap and/or the elastic element.

The method may further include providing a separate cover element and then connecting the cover element to a part of the holding plate.

Further features and advantages will be described below with reference to the exemplary figures.

30 Figure 1 schematically shows the structure of an exemplary vacuum cleaner filter bag;

Figure 2 shows the schematic structure of an exemplary holding plate in a plan view;

Figure 3 shows a cross section through an exemplary holding plate;

Figures 4A and 4B show a plan view of further exemplary holding plates; and

Figure 5 shows a perspective view of an exemplary cover element.

- 5 Figure 1 shows the schematic structure of an exemplary vacuum cleaner filter bag. The filter bag comprises a bag wall 1, a holding plate 2, and an inflow opening, through which the air to be filtered flows into the filter bag. The inflow opening is formed here by a passage opening 3 in the base plate of the holding plate 2 and a passage opening arranged in alignment therewith in the bag wall 1. The holding plate 2 serves to fix the vacuum cleaner filter bag in a corresponding
10 holding device in a housing of a vacuum cleaner.

The bag wall 1 comprises at least one nonwoven fabric layer, for example of a melt-spun fine fiber spunbonded nonwoven fabric (meltblown nonwoven fabric) or a filament spunbonded nonwoven fabric (spunbond).

The holding plate 2 comprises a base plate of a plastic material, for example polypropylene.

- 15 A plan view of an exemplary holding plate that may be used in conjunction with a filter bag as shown in Fig. 1 is shown in Fig. 2. The holding plate 2 with the passage opening 3 can be seen therein. The base plate of the holding plate 2 is here schematically shown to be rectangular, but may have any shapes that may correspond in particular with the corresponding holding device in the vacuum cleaner housing.

- 20 In Fig. 2, a sealing lip 4 surrounding the passage opening 3 is also shown. The sealing lip 4 may comprise a thermoplastic elastomer, for example based on polypropylene, or consist thereof. The sealing lip 4 is intended to prevent or limit the escape of dust from the vacuum cleaner filter bag by sealing the area between the inner edge of the passage opening 3 and the outside of a connection nozzle of the vacuum cleaner. However, the sealing lip shown here is only optional. It
25 is also conceivable that the bag material of the vacuum cleaner filter bag itself is used as a sealing ring, as disclosed for example in DE 102 03 460. The use of a sealing membrane between the holding plate 2 and the bag wall 1, as disclosed in EP 2 044 874, is also possible. It is also possible to provide no seal.

- Fig. 2 also shows a closure flap 5, which is pivotable about a hinge 6. The hinge 6 may in particular
30 be a film hinge. The closure flap 5 serves to close the passage opening 3 when the vacuum cleaner is not in operation, in particular when the filter bag is removed from the vacuum cleaner.

The closure flap 5 is biased by an elastic element 7 in the closed position. The elastic element 7 is connected in the region of a bearing 8 to the base plate of the holding plate 2. In this example, the elastic element 7 is arranged, viewed in the closing direction, in front of the closure flap 5. The plan view of Fig. 2 is thus on the side of the holding plate 2 that is to be connected to the bag wall 1. The elastic element 7 is therefore located after the connection of the holding plate 2 with the vacuum cleaner filter bag in the dust chamber, i.e. in the interior of the filter bag.

The elastic element 7 may be, for example, a leaf spring, in particular a cambered leaf spring, a helical spring or an elastomeric element. When the closure flap 5 is pivoted about the hinge 6 into an opened position, the elastic element 7 is compressed and/or deflected in such a way that a restoring spring force is caused, with which the closure flap 5 is acted upon. For example, when the vacuum cleaner filter bag is removed from the vacuum cleaner housing, the force opening the closure flap 5 is eliminated and the closure flap 5 is returned again into the closed position via the elastic element 7.

However, it has been found that in known holding plates, the closure function is not always ensured, since foreign bodies, in particular suction material, accumulate in the region of the elastic element 7 and hinder its function.

Therefore, the holding plate of Fig. 2 also includes a cover element 9, which is connected to the base plate of the holding plate 2 and the closure flap 5 and covers the elastic element 7 toward the dust chamber, i.e. away from the base plate of the holding plate 2. By this cover element 9, the elastic element 7 is thus separated from the dust chamber or shielded from it. As a result, no or less suction material passes into the region of the elastic element, in particular into the region which directly adjoins the bearing 8, so that its function is not or less impaired.

It would also be conceivable that the cover element 9 is connected only to the base plate, and rests loosely on the closure flap 5. Also, a connection with the elastic element 7 is alternatively or additionally possible.

The cover element may comprise a film, in particular an elastic film, for example of a thermoplastic elastomer. The film may have a thickness of less than 1 mm, in particular less than 0.5 mm, in particular less than 0.1 mm. It is also possible that the cover element 9 comprises or consists of a nonwoven fabric, a paper, or a fabric tape. A laminate of different materials, such as nonwoven fabric and film or paper and film is conceivable.

The cover element 9 may be connected detachably or not without damage detachably to the base plate and/or the closure flap. For example, the cover element 9 may be glued or welded to the desired area of the base plate and/or the closure flap. For the connection, the cover element 9

may also have a self-adhesive area. A non-positive or positive connection is also possible, for example, a "snap-fit" connection (click connection).

Finally, the cover element 9 can also be connected via an injection molding process to the base plate and/or the closure flap 5. In this case, the cover element 9 can be injection-molded simultaneously with an optionally existing sealing lip 4 to the holding plate 2. In this case, the cover element 9 may in particular consist of the same material as the sealing lip 4, in particular of a thermoplastic elastomer. Such a two-component injection molding process eliminates the additional workload of gluing or welding the cover element 9.

In particular, when the cover element 9 comprises a film or a nonwoven fabric, the film or the nonwoven fabric may be embossed. Thereby, the cover element 9 can be given a shape which is adapted to the shape of the elastic element 7, so that the elastic element 7 is not limited or limited to a small extent in its movement during the opening of the closure flap 5. Alternatively or additionally, the cover element 9 may also be pleated or creped. For example, the cover element 9 may be formed in the form of a bellows. In this case, the folds of the pleated or creped cover element 9 can in particular run perpendicular to the direction of movement of the closure flap and/or of the elastic element.

The embossing of the cover element 9 may be done by hot or cold stamping or by deep drawing or vacuum deep drawing.

The cover element 9 may alternatively consist of an injection-molded part or a deep-drawn part, which is materially, positively or non-positively connected to the base plate, the closure flap and/or the elastic element 7, in particular by gluing or welding.

If the cover element 9 has a rigidity which would oppose the mobility of the elastic element 7, the cover element 9 can also have a film hinge around which a part of the cover element 9 can be pivoted. Alternatively or additionally, the cover element 9 can be made in two or more pieces, wherein the parts of the multi-piece cover element are positively or materially connected to each other, in particular via welding, gluing or clicking (snap-fit).

Fig. 3 shows a cross section through the exemplary holding plate 2 of Fig. 2. It can be seen that the elastic element 7 is completely shielded by the cover element 9 against the dust chamber, i.e. the environment that lies after the connection of the holding plate 2 with a filter bag in the interior of the filter bag.

The elastic element 7 may be a helical spring. In this case, alternatively or in addition to the cover element 9 of Figs. 2 and 3, a cover element may be provided in the form of a sheath. The helical

spring may for example be arranged at least partially in a plastic film tube. The sheath can be easily formed by two plastic films which are circumferentially welded together, with the helical spring being located between the two films. Also, a one-piece plastic tube can be pulled over the helical spring.

- 5 By this plastic sheath, it is possible to prevent dust from getting between the windings of the helical spring, which could entail a reduction in the function of the helical spring.

As an alternative to the helical spring, the elastic element 7 can also be formed by an elastomeric cord or an elastomeric band. In particular, a vulcanized silicone elastomer can be used for the elastic element. This has the advantage that it can be injection-molded onto the holding plate. In
10 particular, cross-linked liquid silicone (liquid silicone rubber, LSR) or cross-linked solid silicone (high-consistency rubber, HCR) come into question. The elastic element made of an elastomer has inherent elasticity. In addition, the elastic element may also have a shape which imparts a further elasticity through its structure.

Fig. 4A shows another example of a holding plate 2 with a closure flap 5. In this case, the elastic
15 element 10 extends transversely to the opening movement of the closure flap 5. The elastic element 10 may in turn be in the form of a helical spring or an elastomeric band. In this example, a cover element 9 is again provided, which is connected in this case to the closure flap 5, but only partially covers the elastic element 10. In particular, the cover element 9 in this example covers the region of the elastic element 10 which interacts with the closure flap 5 via a projection 11, for
20 this area is the functionally operative area for the application of force to the closure flap 5 via the elastic element 10. The projection 11 serves to hold the elastic element 10 in a holding position. If suction material were arranged in this area, the function of the projection 11 would be disturbed and thus the function of the elastic element 10.

Fig. 4B shows a further example of an arrangement of a cover element 9. The cover element 9
25 must be elastic in this case by all means. In the open position of the closure flap 5, the spring element should be covered as much as possible.

Fig. 5 shows an example of a possible covering element 9, which in particular is pleated, that is to say has a plurality of folds in the sense of a bellows. While a bellows is usually formed tubular, the cover element 9 is, however, designed rather dome-shaped. Through the folding, it is possible
30 to provide a relatively strong cover element without significantly disturbing the mobility of the underlying elastic element.

It is understood that features mentioned in the above-described embodiments are not limited to these special combinations and are also possible in any other combinations. Furthermore, it is

understood that in the figures neither the vacuum cleaner filter bag shown nor the elements of the holding plate are reproduced in a realistic dimensioning. In addition, the geometries or the elements shown are not limited to the examples shown.

P a t e n t k r a v

1. Holdeplade (2) til en støvsugerfilterpose, omfattende en grundplade, hvori der er udformet en gennemgangsåbning (3), og en lukkeklap (5) til lukning af gennemgangsåbningen (3),

5 hvor lukkeklappen (5) er forspændt i en lukket stilling via et elastisk element (7; 10),

kendetegnet ved, at

der er tilvejebragt et afdækningselement (9), der er forbundet med grundpladen, lukkeklappen (5) og/eller det elastiske element (7), og som helt eller delvist dækker det elastiske element (7), hvor afdækningselementet (9) i et overfladeområde af lukkeklappen (5) ligger an mod lukkeklappen (5), der i det mindste på to sider omgiver det elastiske element (7; 10).

15 2. Holdeplade (2) ifølge krav 1, hvor det elastiske element (7; 10) set i lukkeretningen er anbragt foran lukkeklappen (5).

3. Holdeplade (2) ifølge krav 1 eller 2, hvor afdækningselementet (9) omfatter en folie, vlies og/eller papir.

20 4. Holdeplade (2) ifølge et af de foregående krav, hvor afdækningselementet (9) er klæbet eller svejset sammen med en del af holdepladen (2), især grundpladen, eller er påsprøjtet på en del af holdepladen (2), især grundpladen.

25 5. Holdeplade (2) ifølge et af de foregående krav, hvor afdækningselementet (9) omfatter en prægning, der især er tilpasset til det elastiske elements (7) form.

6. Holdeplade (2) ifølge et af de foregående krav, hvor afdækningselementet (9) er plisseret eller kreppet.

30 7. Holdeplade (2) ifølge et af de foregående krav, hvor afdækningselementet er udformet i flere stykker.

8. Holdeplade (2) ifølge krav 7, hvor delene af afdækningselementet i flere stykker er forbundet formssluttende eller materialesluttende med hinanden.

5 **9.** Holdeplade (2) ifølge et af de foregående krav, hvor afdækningselementet omfatter en drejeakse, omkring hvilken en del af afdækningselementet kan drejes, især hvor drejeaksen er dannet af et filmhængsel.

10 **10.** Holdeplade (2) ifølge et af de foregående krav, hvor det elastiske element (7; 10) omfatter en elastomer eller består af en elastomer.

11. Holdeplade (2) ifølge krav 10, hvor det elastiske element (7; 10) er påsprøjtet på en del af holdepladen (2), især grundpladen.

15 **12.** Holdeplade (2) ifølge et af kravene 1 - 9, hvor det elastiske element (7; 10) er en skruefjeder, og hvor skruefjederen i det mindste delvist er omgivet af en beklædning.

20 **13.** Holdeplade (2) ifølge et af de foregående krav, hvor det elastiske element (7; 10) ligger løst på grundpladen og i sin position begrænses til et forudbestemt område af afdækningselementet (9).

14. Støvsugerfilterpose omfattende en posevæg (1) og en dermed forbundet holdeplade (2) ifølge et af de foregående krav.

25 **15.** Fremgangsmåde til fremstilling af en holdeplade (2) til en støvsugerfilterpose omfattende trinnene:

at tilvejebringe en grundplade med en gennemgangsåbning (3) og tilvejebringe en lukkeklap (5) til lukning af gennemgangsåbningen (3);

30 at anbringe et elastisk element (7; 10) på grundpladen og/eller lukkeklappen (5); og

at forbinde et afdækningselement (9) med grundpladen, lukkeklappen og/eller det elastiske element (7; 10), således at det elastiske element (7; 10) dækkes helt eller delvist ved hjælp af afdækningselementet (9), hvor afdækningselementet (9) er anbragt således, at det i et overfladeområde af lukkeklappen (5) ligger an mod lukkeklappen (5), der omgiver det elastiske element (7; 10) i det mindste på to sider.

35

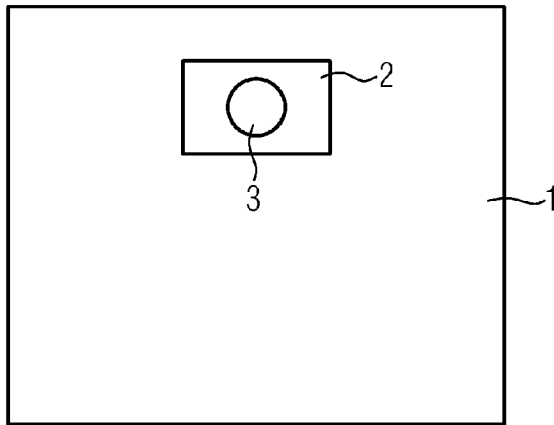


FIG. 1

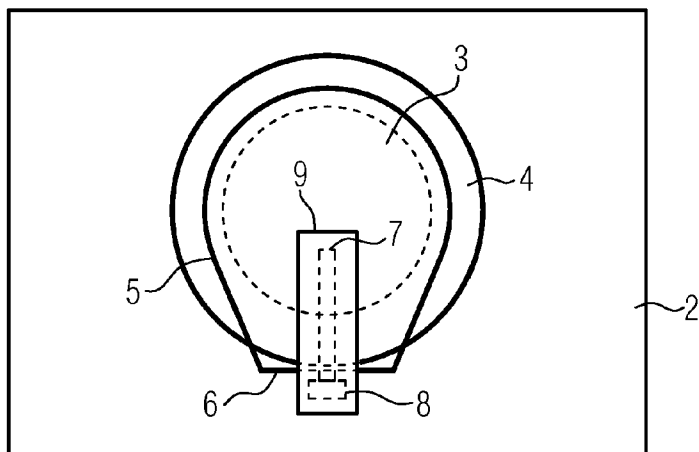


FIG. 2

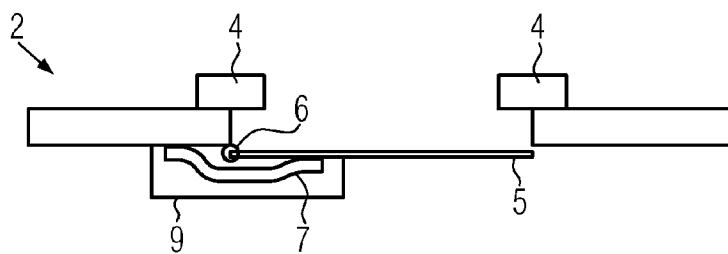


FIG. 3

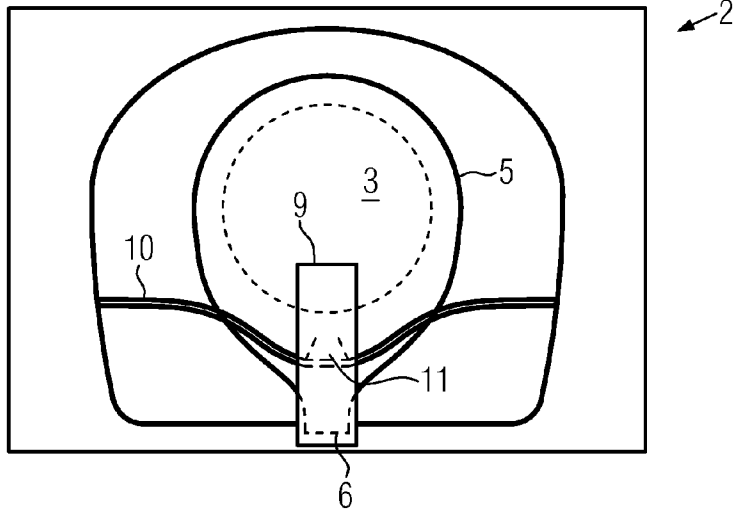


FIG. 4A

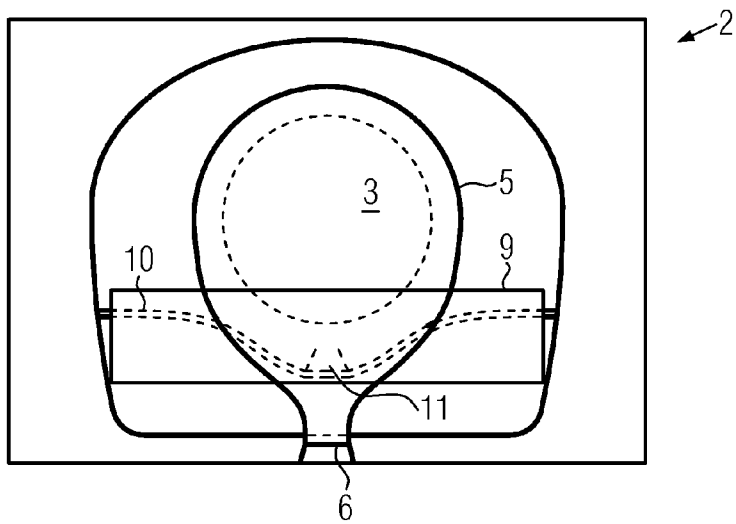


FIG. 4B

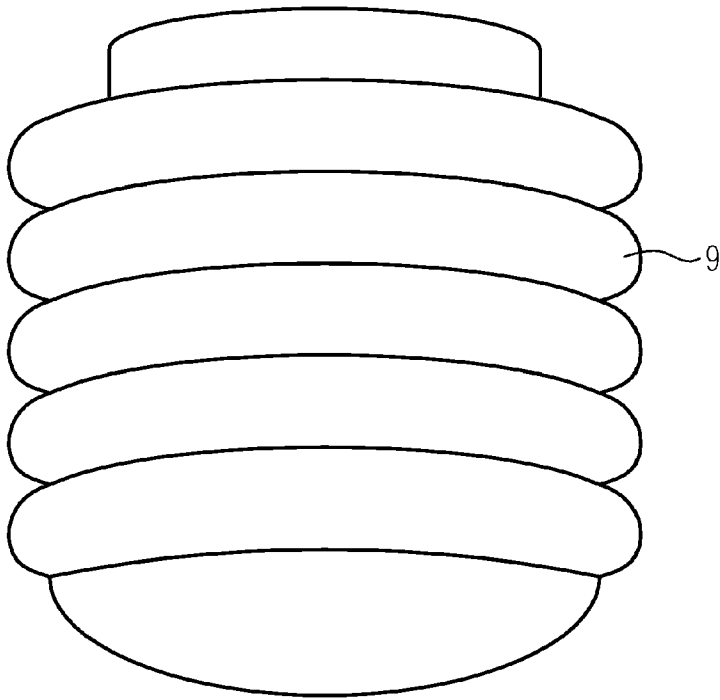


FIG. 5