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(54) **TOOL FOR REMOVING A GRINDING OR POLISHING PLATE**

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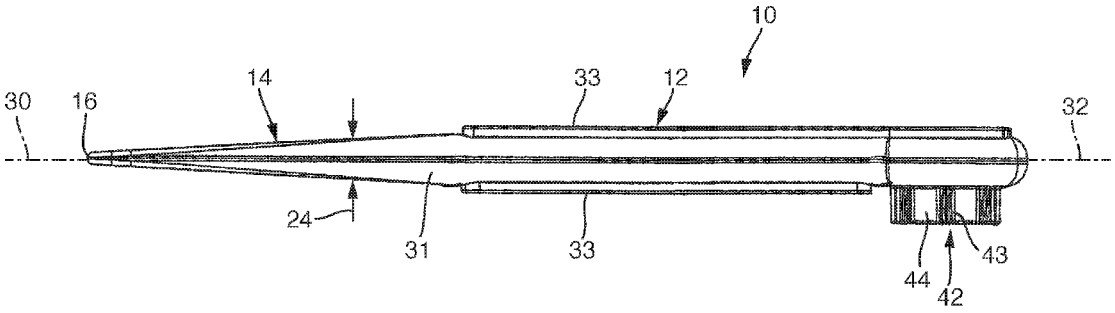
(57) **ABSTRACT**

The present invention relates to a tool (**10**) for releasing a connection between a grinding or polishing plate and a support plate of a grinding or polishing device, which connection is based on a hook-and-loop fabric.



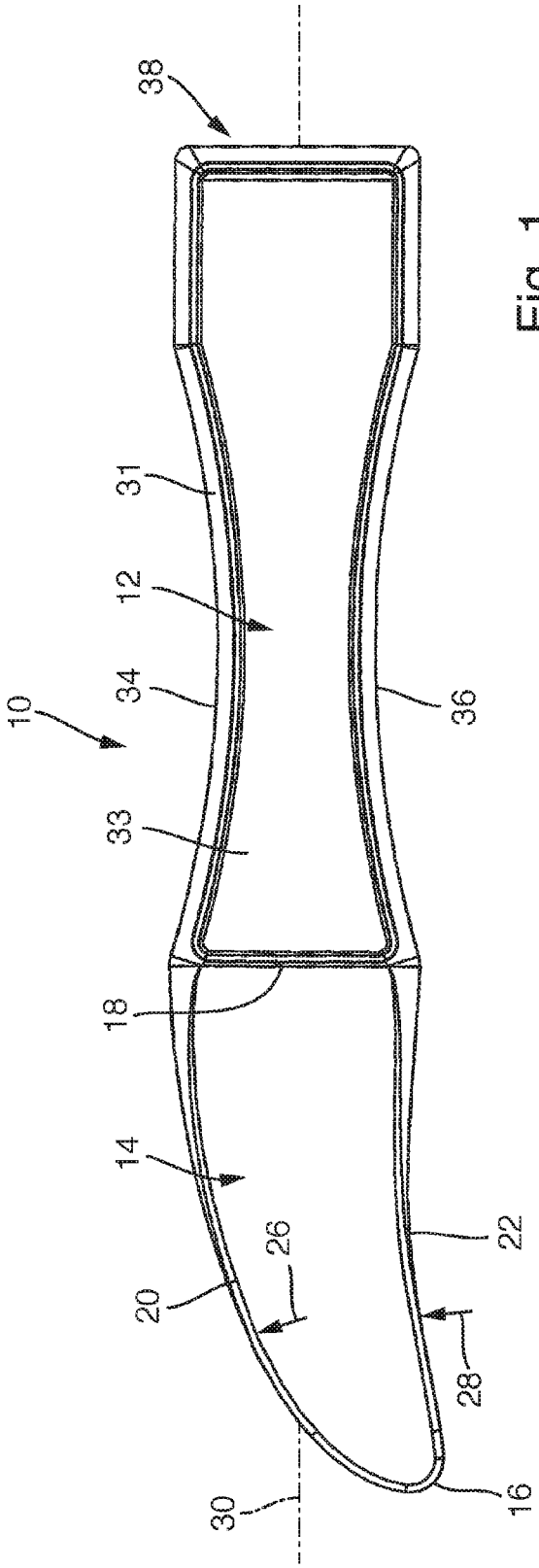


Fig. 1

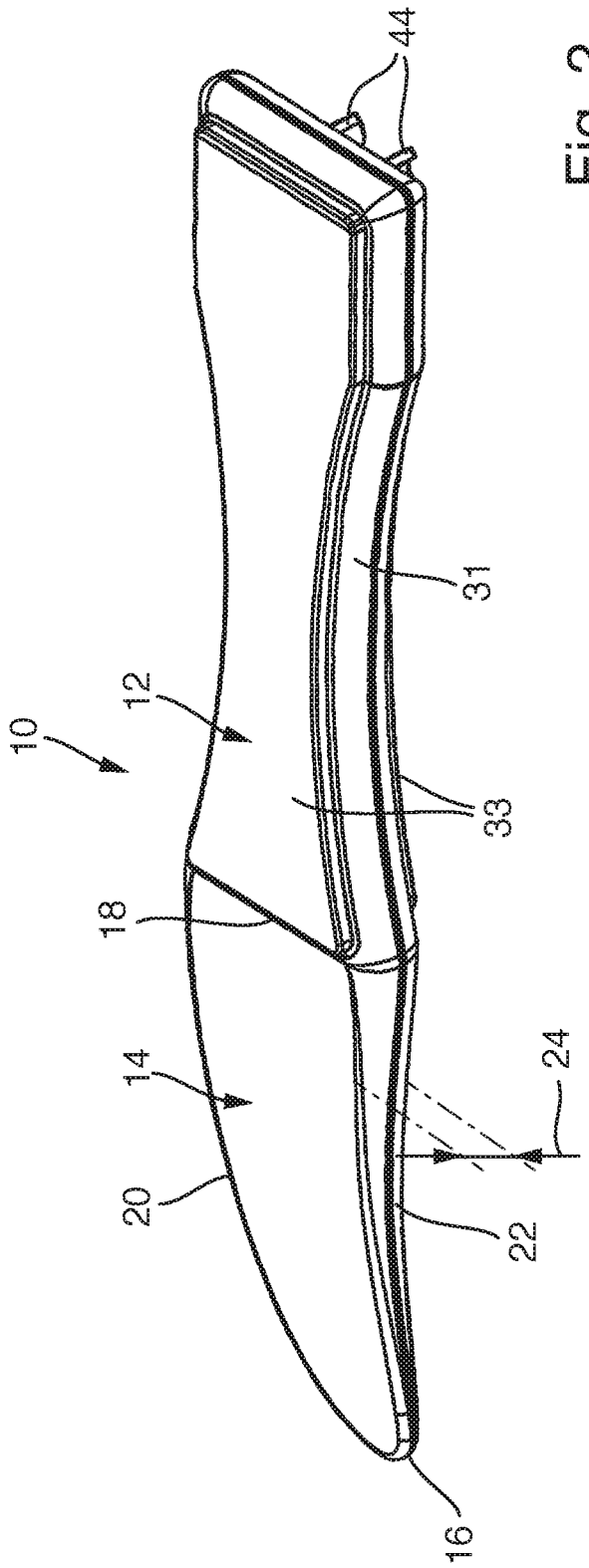


Fig. 2

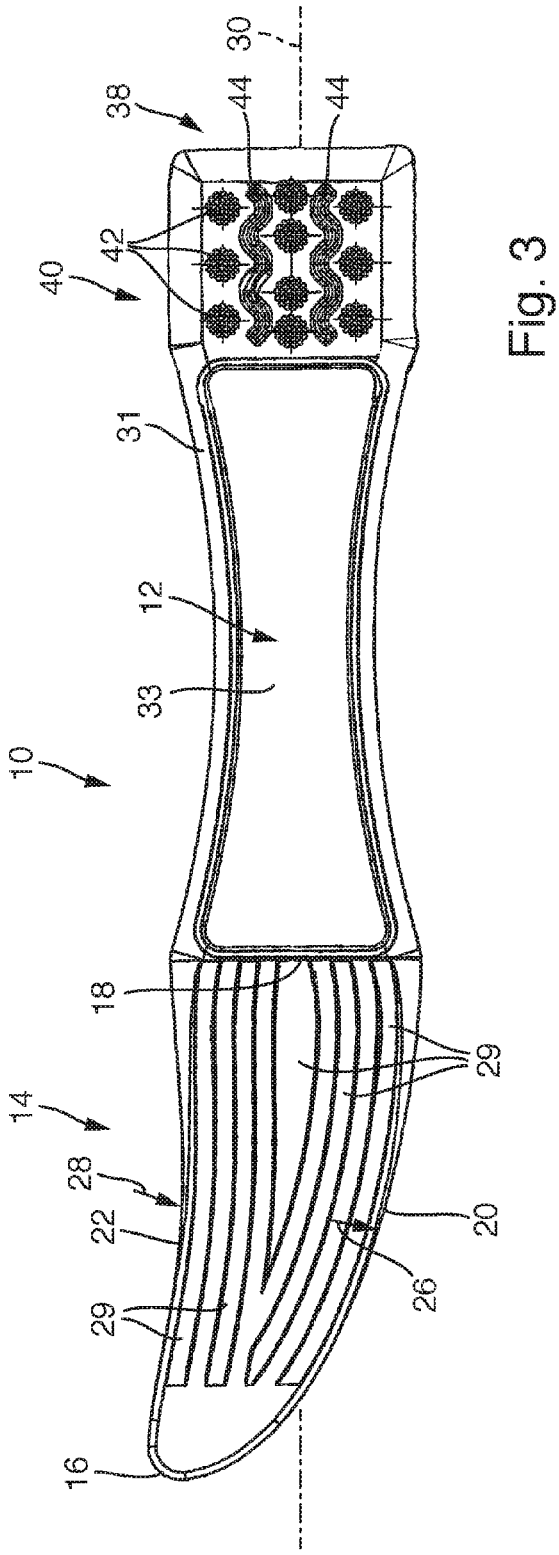


Fig. 3

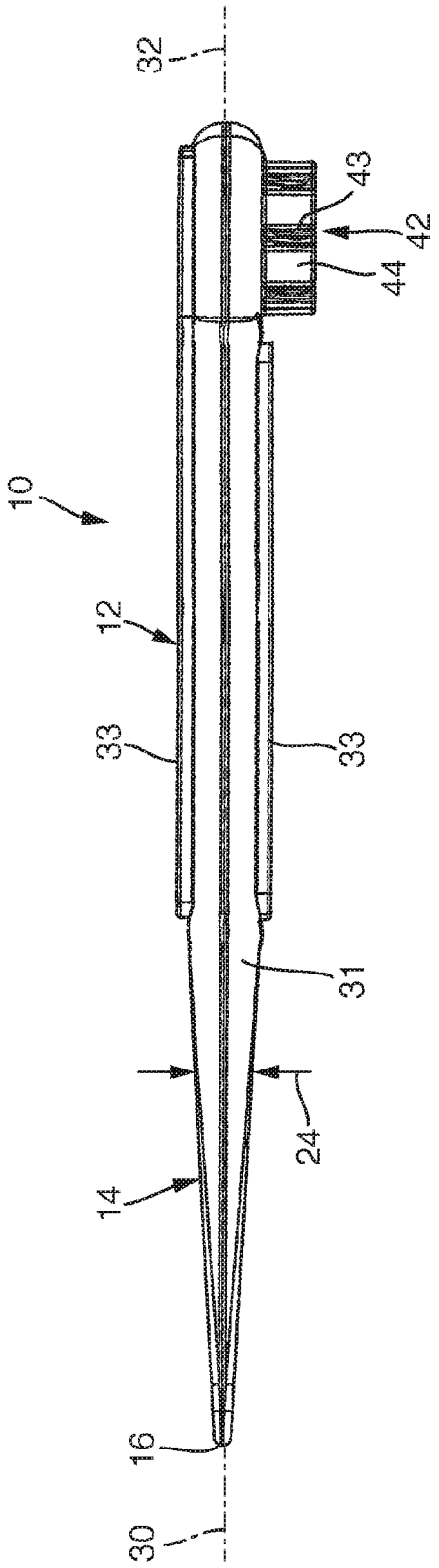


Fig. 4

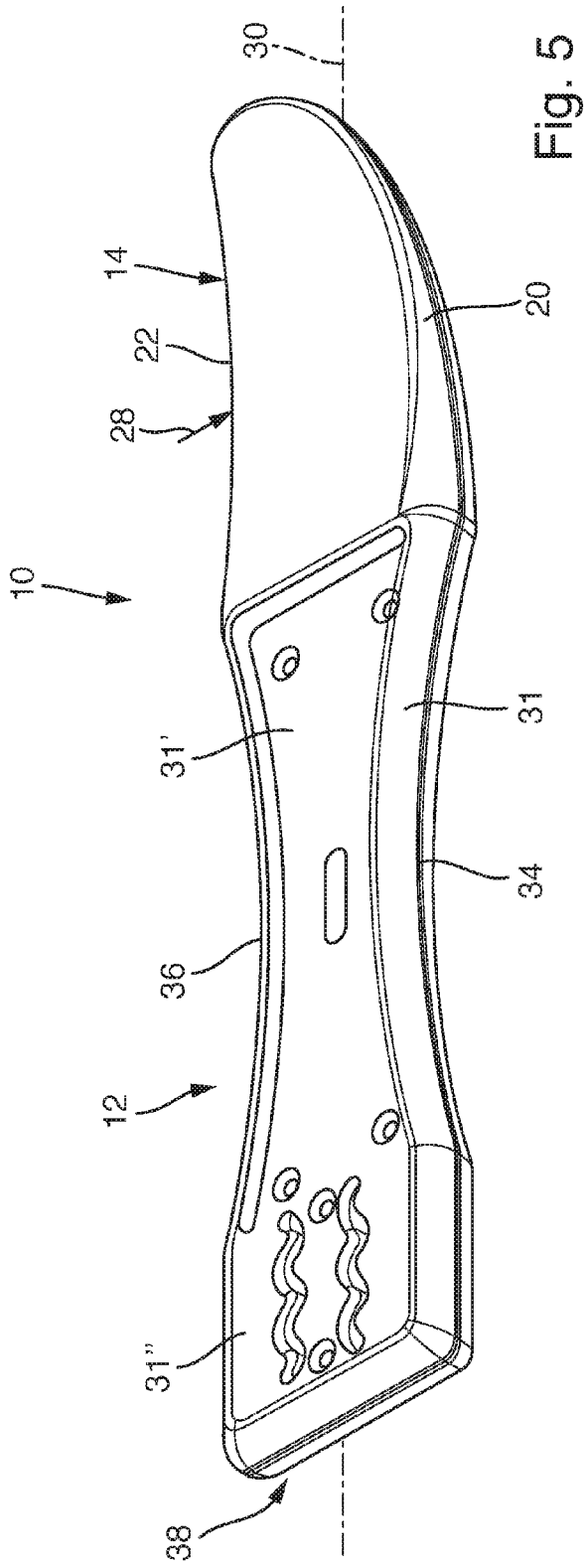


Fig. 5

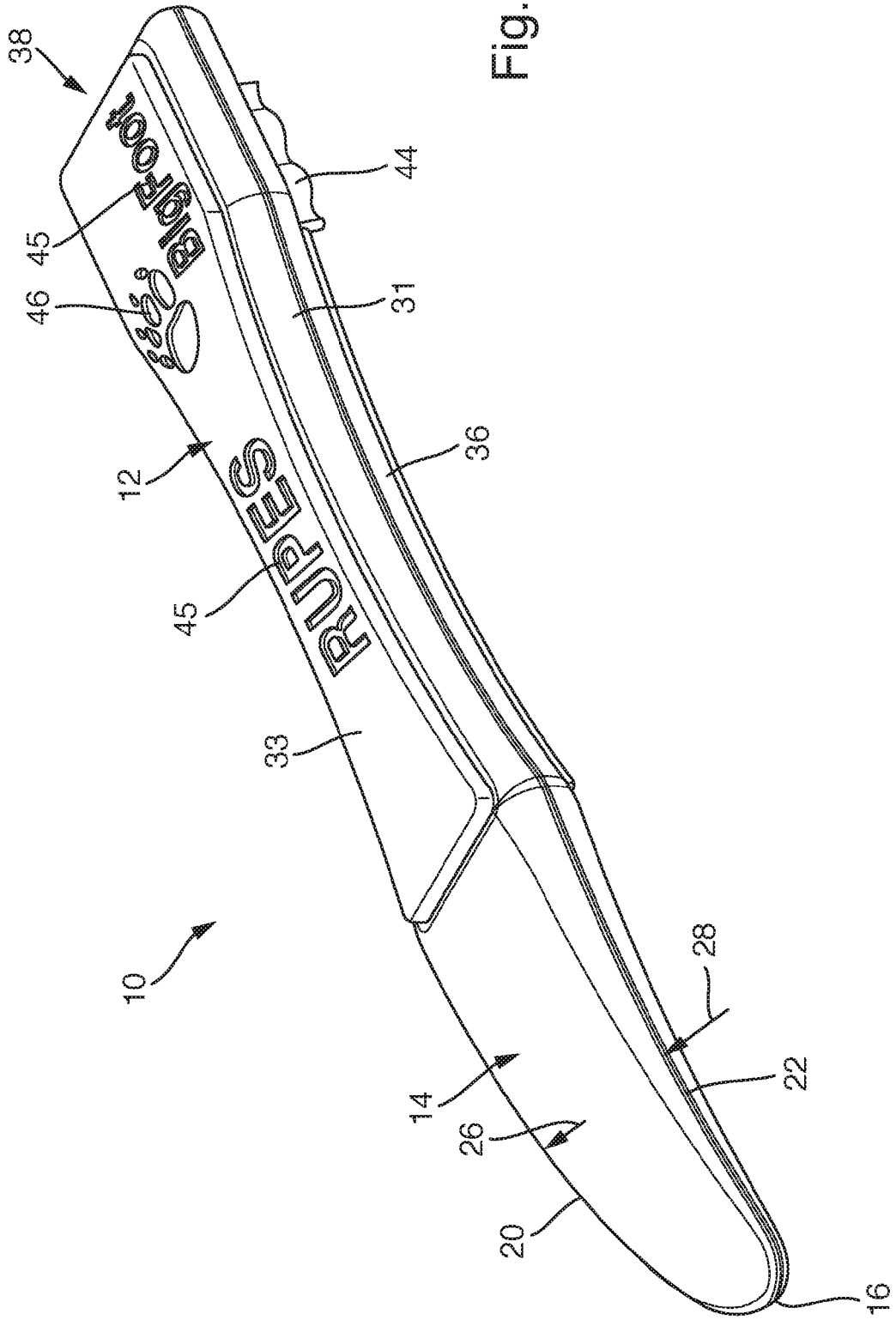


Fig. 6

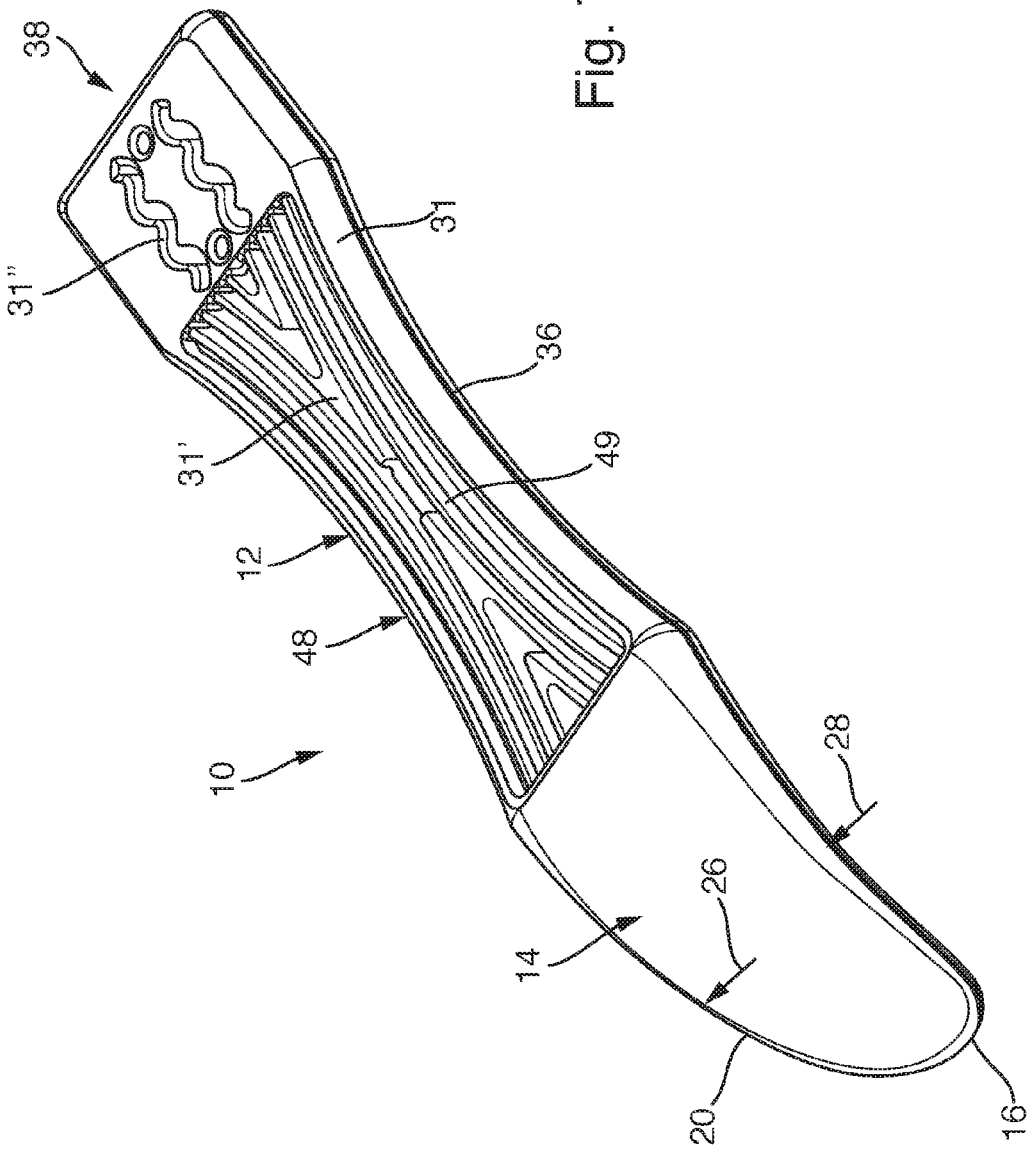


Fig. 7

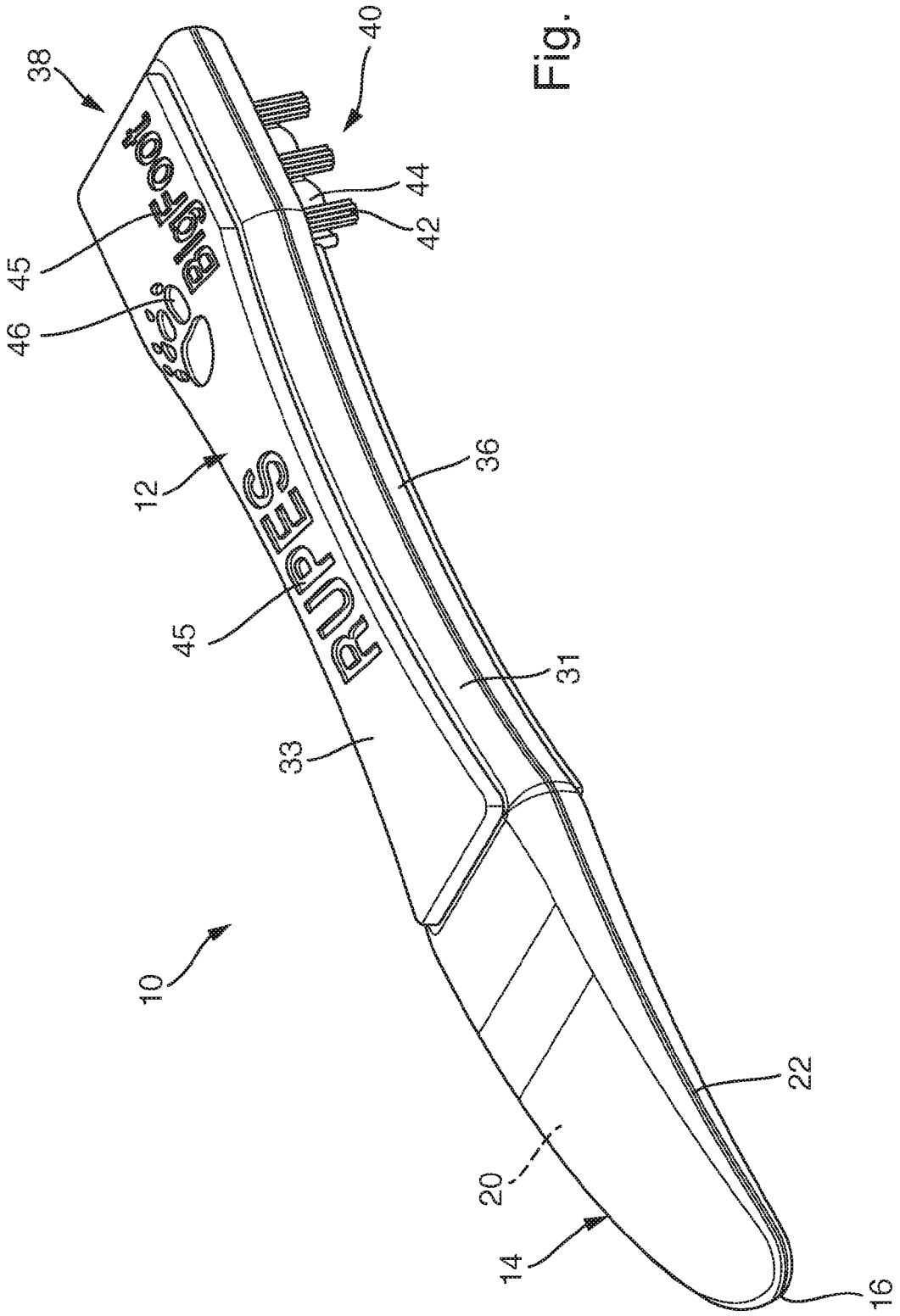


Fig. 8

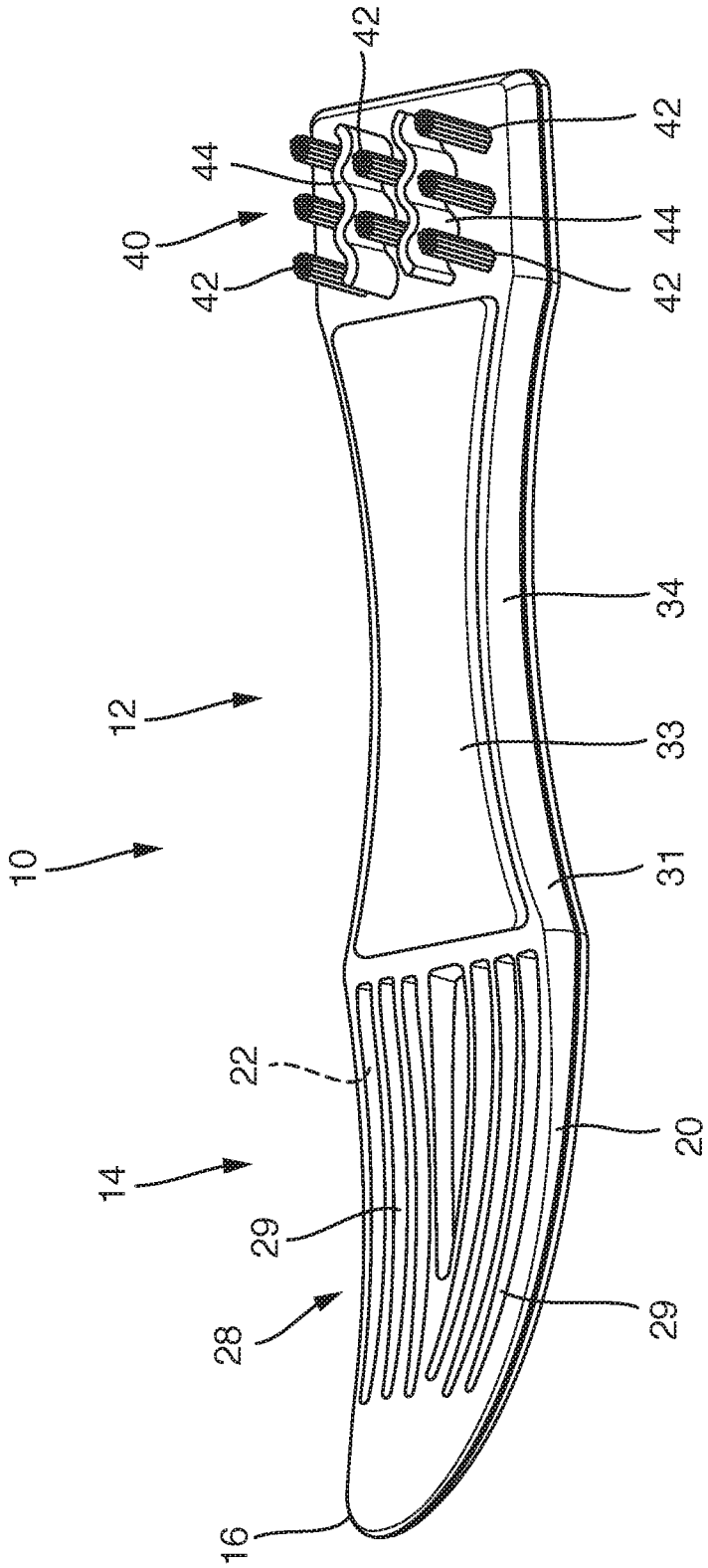


Fig. 9

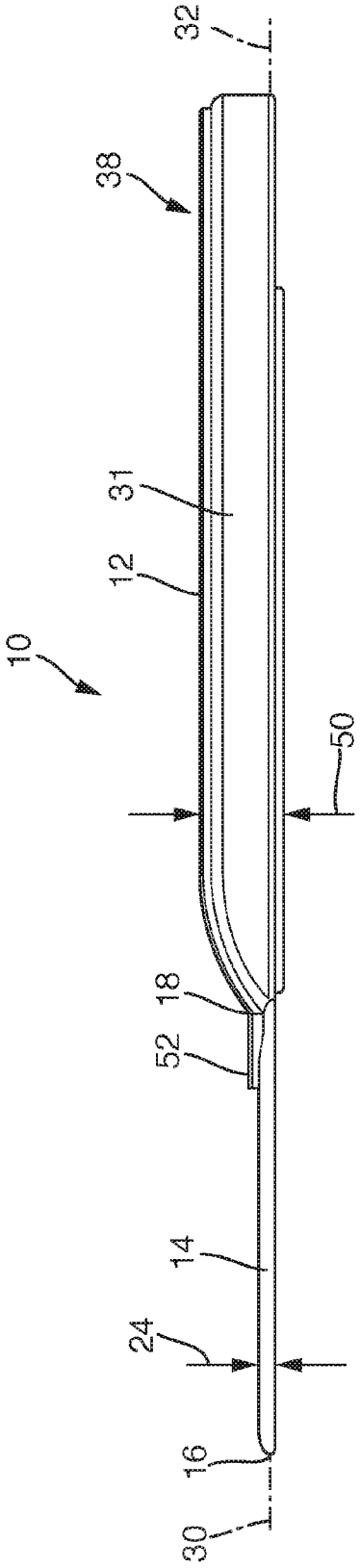


Fig. 10

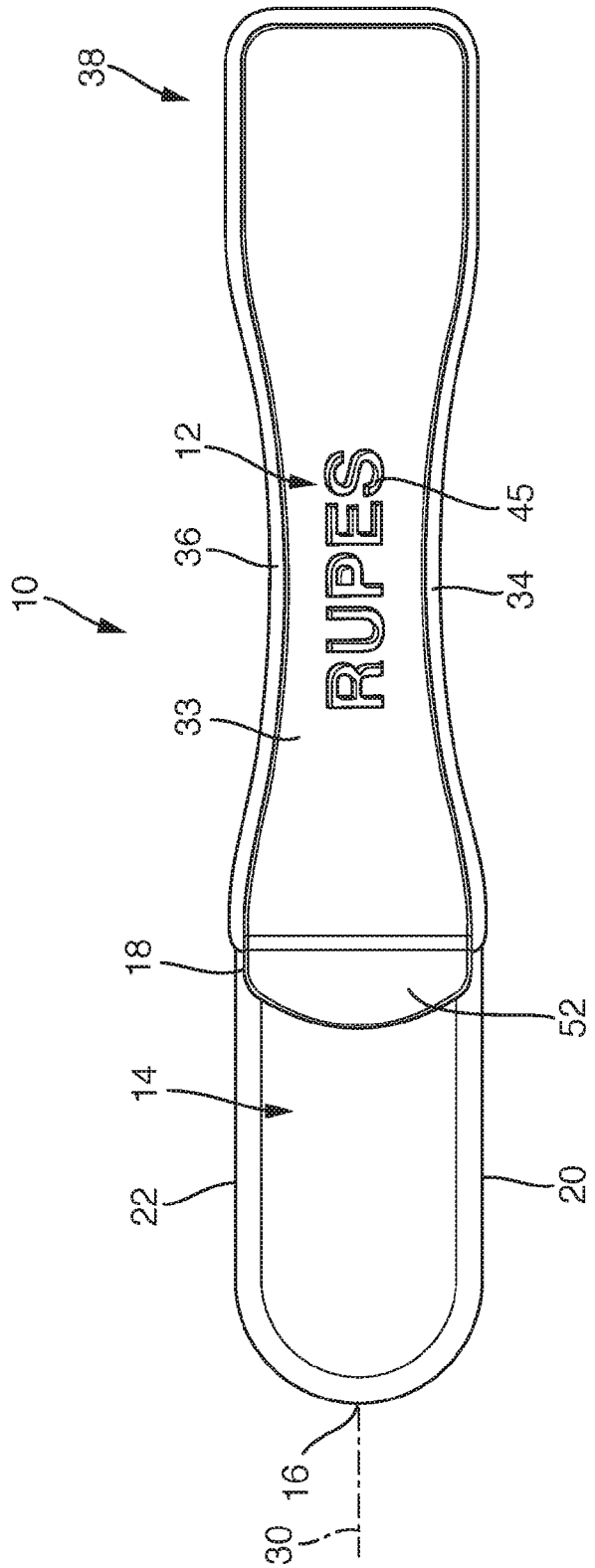


Fig. 11

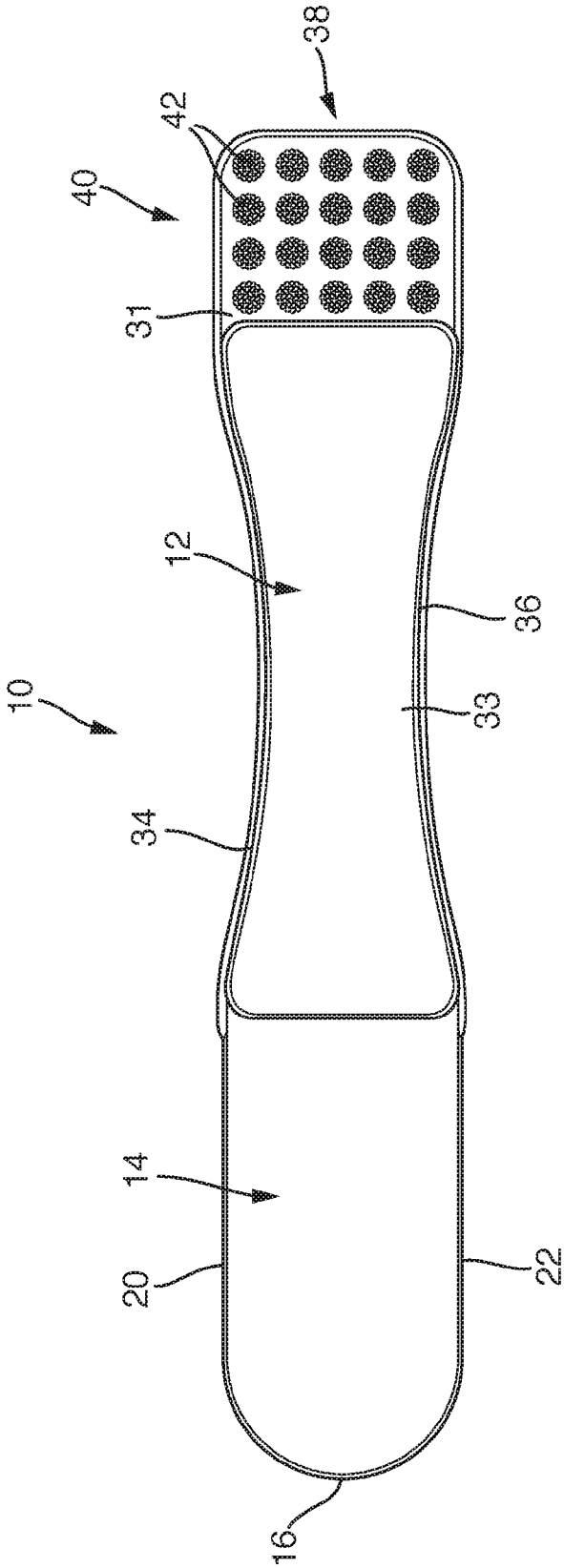


Fig. 12

TOOL FOR REMOVING A GRINDING OR POLISHING PLATE

[0001] The invention relates to a tool for releasing a connection between a grinding or polishing plate and a support plate of a grinding or polishing device, which connection is based on a hook-and-loop fabric. The grinding or polishing plate is preferably flexible and is, for example, in the form of abrasive or emery paper, abrasive or emery fabric, a sheep's or lamb's wool bonnet, a sheep's or lamb's wool disc, a microfiber disc, a felt disc or a disc made of any other material suitable for polishing. The tool comprises a grip portion, by means of which the tool can be manually gripped by a user, and a separation portion which is designed to be inserted between the tool plate and the support plate when said tool plate is being removed from said support plate. In rotary grinders or eccentric rotary grinders or polishing devices, a grinding or polishing plate is usually removably fastened to the support plate by means of a connection which is based on a hook-and-loop fabric (in the manner of a hook-and-pile fastener or Velcro®). The connection which is based on a hook-and-loop fabric is similar to a hook-and-pile fastener connection. In this case, a layer of fabric comprising a plurality of hooks is, for example, attached to the grinding or polishing plate, whereas a layer of fabric comprising a plurality of loops is arranged on the support plate of the grinding or polishing device. Pushing the grinding or polishing plate onto the support plate causes the hooks to connect to the loops in the respective layers of fabric, as a result of which the grinding or polishing plate and the support plate are connected in a rigid manner, but also such that the connection can be released by peeling the plates apart.

[0002] Changing the grinding or polishing plate, which is a frequent process during the operation of the grinding or polishing device, requires that the grinding or polishing plate be removed from the support plate. Conventionally, the grinding or polishing plate is manually taken off by the user of the grinding or polishing device, or tools which are provided, per se, for different purposes, such as a screwdriver, are instead used for this purpose. Manually taking off the grinding or polishing plate is often a laborious and difficult process. Using a screwdriver, for example, is disadvantageous in that the support plate and/or the layer of fabric on the support plate is at risk of getting damaged. On the one hand, this makes it more difficult to connect a new grinding or polishing plate to the support plate or the strength of a connection of this kind is thereby reduced. On the other hand, using a screwdriver, for example, to take off the grinding or polishing plate poses the risk of part of the support plate being broken or pulled away therefrom. Given that the grinding or polishing devices being discussed here operate by means of rotation of the support plate, damage of this kind to the support plate poses a risk to the operation of the polishing device. The pulled-out part of the support plate creates an imbalance and it can no longer be ensured that the grinding or polishing device is operationally safe.

[0003] The aim of the present invention is therefore to provide a tool of the above-mentioned type by means of which the grinding or polishing plate can be safely taken off the support plate of the grinding or polishing device, without this posing the risk of the support plate getting damaged. This object is achieved by a tool according to claim **1**. The tool according to the invention is characterized in that the separation portion has a rounded tip. This rounded tip makes it possible for the separation portion to be inserted between the tool plate and the support plate when said tool plate is being removed from said support plate, such that the support plate is prevented from getting damaged in an effective manner, since the tip of the separation portion is rounded and does not have any sharp edges.

[0004] In an advantageous development of the invention, the separation portion is rounded off. What is meant by this is that the regions which could be the edges of the separation portion are, in any case, rounded such that there are no sharp edges on the separation portion. In other words, "rounded off" is in this case understood to mean that the separation portion does not have any sharp edges, such as two straight surfaces which meet at an angle. In the tool according to this embodiment, all of the edges of this kind are rounded, the rounding being such that it is not possible for one of the aforementioned edges to damage the support plate. This is advantageous in that, after the tool has been inserted, it is also possible for said tool to safely rotate between the grinding or polishing plate and the support plate, without the support plate getting damaged. Therefore, it is not just the tip that is rounded, but rather all of the edges of the separation portion of the tool. Preferably, the edges of the separation portion are rounded such that the radii of the rounded regions of the separation portion are greater than 0.5 mm, in particular greater than 1 mm, more particularly greater than 1.5 mm.

[0005] It is particularly preferable for the separation portion to be flat. What is meant by this is that the extension of the separation portion in one plane is substantially greater than the extension thereof in a direction orthogonal to this plane. As a result, the separation portion can be inserted between the grinding or polishing plate and the support plate, as a result of which the grinding or polishing plate and the support plate are separated from one another in an extensive manner merely as a result of the separation portion being inserted, without said separation portion having to be moved along the support plate.

[0006] It is also advantageous for the separation portion to have a thickness that is smaller than the thickness of the grip portion. In this embodiment, it is preferable for the separation portion to be of substantially the same thickness over the entire extension thereof and for it to be thinner than the grip portion. However, it is not compulsory for the separation portion to be of substantially the same thickness over the entire extension thereof. In this embodiment, the separation portion has virtually no thickness and is virtually completely planar, and can therefore advantageously be inserted between the grinding or polishing plate and the support plate, without causing any damage thereto, and the grinding or polishing plate can be pried off the support plate.

[0007] It is also advantageous for the separation portion to have a thickness which decreases from the end of the separation portion that is on the grip portion side towards the tip of the separation portion. In this case, it is preferable for the entire separation portion to generally taper towards the tip thereof in the manner of a wedge. In this embodiment, the separation portion effectively tapers off when viewed from the grip portion towards the tip. In other words, the separation portion has its lowest thickness at the tip, as a result of which it can easily be inserted, tip-first, between the grinding or polishing pate and the support plate. The separation portion increases in thickness towards the grip portion, as a result of which, when the separation portion is

pushed between the grinding or polishing plate and the support plate, the grinding or polishing plate is automatically lifted off the support plate as a result of the increasing thickness of the separation portion along the longitudinal extension thereof. In the process, it is not strictly necessary for the grinding or polishing plate to be pried off by a lever movement supported at the edge of the support plate. Prying can however make it easier to remove the grinding or polishing plate, the rounded tip and, if applicable, the additional rounded regions of the separation portion effectively preventing the support plate and the polishing or grinding plate from getting damaged during the prying process.

[0008] Advantageously, the separation portion has a first narrow side and a second narrow side, the first narrow side extending such that it is outwardly curved and the second narrow side extending such that it is inwardly curved. In this example, the separation portion is thus designed in the manner of a bent blade of a sword or dagger. The outwardly curved narrow side advantageously makes it possible to cause the grinding or polishing plate to be detached by pivoting the separation portion (moving the tool in parallel with the main direction of extension of the flat separation portion) between the support plate and the grinding or polishing plate, whereas the inwardly curved second narrow side allows the tool to be produced in a cost effective manner because it means that material can be saved and it is simpler to remove said tool from the mold.

[0009] It is also advantageous for the first narrow side to have a smaller thickness than the second narrow side. As a result, the detachment of the grinding or polishing plate by pivoting the sword or dagger-like separation portion is further improved, since the separation portion can be pivoted between the grinding or polishing plate and the support plate after having been inserted between the grinding or polishing plate and the support plate by its thin first narrow side first, and this results in the grinding or polishing plate being detached from the support plate in a particularly efficient and extensive manner.

[0010] It is also advantageous for the tip of the separation portion to be arranged so as to be laterally offset from a longitudinal axis of the tool. This asymmetrical design of the separation portion results in an advantageous separation effect when the polishing or grinding disc is being removed from the support plate, in particular by means of the above-mentioned curved narrow sides. The separation portion effectively operates in the manner of a sword, except that it does not cut but rather merely forces open and releases the connection between the polishing or grinding disc and the support plate, which connection is based on a hook-and-loop fabric. Owing to its asymmetrical design, the separation portion can be inserted and pulled through between the grinding or polishing plate and the support plate in a particularly efficient manner, and the connection between said grinding or polishing plate and said support plate can be released in a particularly smooth manner.

[0011] In an advantageous embodiment of the tool according to the invention, an insert element which is detachably or irremovably connected to the tool is arranged in the region of the grip portion. As a result, surface properties of the grip portion can be set by accordingly selecting the material of the element which is detachably or irremovably connected to the tool, whereas a main part of the tool can effectively be produced from another material which may be cheaper.

[0012] An advantageous variant of the tool is characterized in that the element which is detachably or irremovably connected to the tool comprises a debossed symbol, in particular a trademark of a manufacturer of the grinding or polishing device. As a result, the main part of the tool can be universally produced and the element which is detachably or irremovably connected to the tool can be subsequently attached thereto and, when the logo to be applied changes, it is only necessary to adapt the production of the element which is detachably or irremovably connected to the tool. This means that the production of the tool can be adapted to customer requirements in a flexible manner and on an individual basis.

[0013] Another advantageous variant of the tool is characterized in that a subregion of a surface of the grip portion, in particular an element which is arranged in the region of the grip portion and is detachably or irremovably connected to the tool, is made of a polymeric material, preferably rubber, the surface in said subregion having a higher coefficient of static friction, with respect to a glove material or a human hand, than a surface of the separation portion. As a result, the grip portion is particularly slip-proof and can be gripped in a particularly secure manner. This increases the safety when the tool is being used.

[0014] It is also advantageous for the separation portion to comprise at least one recess. A recess of this kind simplifies the production of the tool, since a tool having a corresponding recess can be removed from an injection mold, for example, in a simpler manner. Furthermore, the material thickness of the tool is not too high, and therefore the tool can cure in a quick and dimensionally stable manner following injection molding, without a high degree of material shrinkage. Furthermore, the recess improves the separation performance of the tool because said tool can be pushed between the polishing or grinding disc and the support plate in a simpler manner.

[0015] In this case, it is preferable for the recess to be channel-like and to generally extend from the grip portion towards the tip of the separation portion. As a result, the tool can be pushed, tip-first, between the polishing or grinding disc and the support plate in a particularly simple manner.

[0016] It is also preferable for the recess to have an extension in the direction of the longitudinal axis of the tool that corresponds to at least 50%, in particular at least 60%, of the extension of the separation portion along the longitudinal axis. This ensures that the advantages provided by the recess, in particular when the tool is being removed from the injection mold, are offered over the most part of the separation portion.

[0017] Preferably, the grip portion has an ergonomic shape and is in particular flat. As a result, the tool can be produced in a manner in which material is saved and can be held and transported by a user in a particularly simple manner.

[0018] It is also advantageous for the grip portion to have an hourglass-shaped cross section in the plane of its flat extension parallel to a longitudinal axis of the tool. As a result, the grip portion can be gripped in a secure manner and it is virtually impossible for the tool to slip out of the user's hand.

[0019] It is also particularly preferable for a cleaning portion to be arranged on an end of the grip portion that is

remote from the separation portion, at least one cleaning blade and/or bristles of a cleaning brush being arranged in the cleaning portion. If dirty, the grinding or polishing disc can be cleaned by means of the cleaning brushes and the cleaning blades, and therefore does not need to be replaced as regularly. In particular, the cleaning portion is used to remove dust residues, dirt residues, residues of an abrasive or polishing agent, or other residues from the grinding or polishing disc. During use of the grinding or polishing disc, owing in particular to high temperatures and pressure, material (e.g. abraded particles from grinding, residues of grinding or polishing pastes, dust, moisture, etc.) can accumulate on the grinding or polishing plate and clump together thereon and stick thereto. The cleaning portion can be used to remove this material quickly and effectively. In this case, the combination of the tool for removing the grinding or polishing plate and for cleaning the grinding or polishing plate is particularly advantageous in that the user of the grinding or polishing device only has to carry a single tool with them in order to perform both tasks. A combination of the cleaning brush and the cleaning blades results in particularly efficient cleaning. This combination means that different types of soiling, including in particular soiling that is particularly tenacious, can be removed in a single cleaning step.

[0020] The bristles of the cleaning brushes advantageously consist of polyamide or horse hair. This makes the bristles robust, durable and efficient in terms of their cleaning effect.

[0021] It is advantageous for the at least one cleaning blade to have a meander-shaped cross section in the plane of a flat extension of the grip portion or to generally extend in parallel with the longitudinal axis of the tool. As a result, the cleaning blade cleans in a particularly efficient manner. The cleaning blade extending in parallel with the longitudinal axis allows there to effectively be a wiping movement when the cleaning portion is being used transversely to the longitudinal extension of the blades, without the user having to grip onto the tool.

[0022] In a preferred variant, the at least one cleaning blade is formed in one piece with the insert element which is detachably or irremovably connected to the tool. This makes it possible to produce the tool in a cost-effective manner. It is preferable for the cleaning blade and the element which is irremovably connected to the tool to be injection molded onto the main part of the tool in one working step. It is also advantageous for the cleaning blade and the element which is detachably connected to the tool to be produced in one piece in one working step in the injection molding process, and subsequently attached, preferably clipped or glued, to the main body of the tool in a further working step.

[0023] The main part of the tool is preferably produced from a thermoplastic polymer. In this case, preferred polymers for producing the main part are polypropylene and polyamide.

[0024] Advantageously, the insert elements which are detachably or irremovably connected to the tool are produced using a thermoplastic elastomer. Urethane-based thermoplastic elastomers are preferred. Preferred urethane-based thermoplastic elastomers are Elastollan (from BASF), Desmopan, Texin and Utechllan (from Bayer). Alternatively, the use of styrenic block copolymers is also preferred, in particular the use of Kraton (from Kraton Polymers), Septon (from Kuraray), Styroflex (from BASF), Thermolast (from Kraiburg TPE) or Saxomer (from Polyplast Compound Werk, PCW). As already mentioned, it is advantageous for the cleaning blade(s) to be produced in one piece with an insert element which is detachably or irremovably connected to the tool, the use of the aforementioned plastic materials, in particular the production of the unit consisting of the cleaning blade(s) and the insert element in an injection molding process using said plastics materials, being advantageous.

[0025] Additional features, possible uses and advantages of the invention can be found in the following description of an embodiment of the invention which is explained with reference to the drawings, it being possible for the features to be essential to the invention when taken in isolation and in combination, without this explicitly being mentioned every time. In the drawings:

[0026] FIG. **1** is a plan view of a first side of a first embodiment of the tool according to the invention;

[0027] FIG. **2** is a perspective view of the tool from FIG. **1**;

[0028] FIG. **3** is a plan view of a second side of the tool from FIG. **1**;

[0029] FIG. **4** is a side view of the tool from FIG. **1**;

[0030] FIG. **5** is a perspective view of the tool from FIG. **1** in which detachable elements have been detached;

[0031] FIG. **6** is a perspective view corresponding to FIG. **2** of an alternative embodiment of the tool;

[0032] FIG. **7** shows the tool from FIG. **6**, detachable elements having been detached;

[0033] FIG. **8** is a perspective plan view of the tool according to the invention according to FIG. **1** to **7**;

[0034] FIG. **9** is a perspective view from below of the tool according to the invention according to FIG. **1** to FIG. **7**;

[0035] FIG. **10** is a side view of a further embodiment of the tool according to the invention;

[0036] FIG. **11** is a plan view of the top of the tool from FIG. **10**; and

[0037] FIG. **12** is a plan view of the bottom of the tool from FIGS. **10** and **11**.

[0038] In FIG. **1**, a tool according to the invention is provided, in general, with reference numeral **10**. The tool comprises a grip portion **12** and a separation portion **14**. The separation portion **14** comprises a tip **16** and an end **18** that is on the grip portion side. The tip **16** of the separation portion **14** is rounded. The separation portion **14** and the grip portion **12** are both flat. The tip **16** of the separation portion **14** is both rounded in a plane **32** of the flat extension and orthogonal to said plane **32**. The plane **32** of the flat extension is provided with a corresponding reference numeral in FIG. **4**.

[0039] The separation portion **14** has a first narrow side **20** and a second narrow side **22**. The first narrow side **20** transitions into the second narrow side **22** in the tip **16**. The two narrow sides **20** and **22** are rounded off. In this case, the rounded regions are such that they have a radius of at least 0.5 mm. What is meant by this is that none of the edges in the region of the separation portion **14** are sharp-edged, but rather all of the regions in which an edge could be seen have at least one rounded region having a radius of at least 0.5 mm.

[0040] FIG. **2** is a perspective view of the tool **10** from FIG. **1**. It can be seen from the perspective view that a

thickness **24** of the separation portion **14** decreases from the end **18** of the separation portion **14** that is on the grip portion side towards the tip **16**.

[0041] The first narrow side **20** and the second narrow side **22** generally extend substantially orthogonally to a plane **32** of the flat extension of the separation portion **14**. In FIG. **4**, the plane **32** of the flat extension of the separation portion **14** is indicated by a reference numeral. The first narrow side **20** extends such that it is outwardly curved, i.e. the first narrow side **20** extends, at a radius **26**, such that it is curved around a center of curvature which, when viewed from the narrow side **20**, is located on the side of the separation portion **14**. Conversely, the second narrow side **22** extends, at a radius **28**, such that it is curved around a center of curvature which, when viewed from the narrow side **22**, is opposite the separation portion **14**. Both the radius **26** of the first narrow side **20** and the radius **28** of the narrow side **22** vary along the extension of the narrow side **20**, **22**, respectively. However, the center of curvature of the narrow sides **20**, **22** remains on the same one of the narrow sides **20**, **22** over the curve thereof until said sides transition into the tip **16** of the separation portion **14**. The second narrow side **22** is therefore inwardly curved, whereas the first narrow side **20** is outwardly curved.

[0042] As can be seen in FIG. **3**, channel-like recesses **29** are arranged on one side of the separation portion **14**. The recesses **29** are mutually spaced and substantially follow the curve of the narrow side **20**, **22** that is closest thereto in each case. The recesses **29** generally extend from the grip portion **12** towards the tip **16** of the separation portion **14**. The recesses **29** each have an extension in the direction of a longitudinal axis **30** of the tool **10** that corresponds to at least 60% of the extension of the separation portion **14** along the longitudinal axis **30**. The recesses **29** each have an extension which is orthogonal to the longitudinal axis **30** of the tool **10** and which corresponds to at most 40% of an extension of the separation portion **14** orthogonal to the longitudinal axis **30**, this comparison between the extension of the separation portion **14** orthogonal to the longitudinal axis **30** of the tool **10** and the extension of the recesses **29** orthogonal to said longitudinal axis being made locally and orthogonally to the longitudinal axis **30** in each case.

[0043] The tip **16** is arranged so as to be laterally offset from the longitudinal axis **30** of the tool **10**. In other words, the tip **16** is offset to one side with respect to the longitudinal axis **30** of the tool **10**. What is meant by this is that in the plane **32** of the flat extension of the tool **10**, which corresponds to the position of the tool **10** in FIG. **1**, the tip **16** is offset to one side with respect to the longitudinal axis **30** of the tool **10** within this plane **32**.

[0044] FIG. **4** shows the tool **10** when viewed in the plane **32** of the flat extension of the separation portion **14** and of the grip portion **12**.

[0045] The grip portion **12** has, in regions, a surface which is made of rubber, i.e. a polymeric material. The tool **10** preferably comprises a main part **31**, which in turn comprises detachable elements **33** on two opposite sides of the grip portion **12**, which detachable elements can be clipped to the tool **10** or the main part **31** in a simple manner. It is particularly preferable for the two sides of the grip portion **12** to have recesses **31'**, **31"** in which the elements **33** can be introduced and fastened at least in part. Alternatively, the detachable elements **33** can also be designed as elements **33** that are irremovably connected to the tool **10**; the elements **33** can in particular be cast or injection molded onto the tool **10** in the region of the two sides of the grip portion **12** during the injection molding process for producing the elements **33**. The elements **33** can however also be irremovably glued to the tool **10**. Preferred materials for the elements **33** are mentioned in the introductory part of the description.

[0046] As already mentioned above, the grip portion **12** is also flat. The grip portion **12** has an hourglass-shaped cross section. What is meant by this is that a first narrow side **34** of the grip portion **12** and a second narrow side **36** of the grip portion **12** both curve inwardly such that they are each curved around a center of curvature which, when viewed from the relevant narrow side **34**, **36**, is not located on the side of the grip portion **12**, but rather on the opposite side.

[0047] A cleaning portion **40** is arranged on the grip portion **12** on an end **38** of the grip portion **12** that is opposite the separation portion **14**. The cleaning portion **40** comprises cleaning brushes **42**, only three of which are provided with a reference numeral in FIG. **3**. It can then be seen from FIG. **4** that each of the cleaning brushes **42** has a plurality of bristles **43**. The cleaning portion **40** further comprises two cleaning blades **44**. The blades **44** may end such that they are flush with the cleaning brushes **42** (cf. FIG. **4**). Advantageously, however, the cleaning brushes **42** or the bristles **43** thereof extend beyond the outer distal edge of the blades **44** (cf. FIGS. **8** and **9**). The cleaning blades **44** generally extend along the longitudinal axis **30** of the tool **10**. The course thereof is however meander-shaped, i.e. wave-like, around the direction of the longitudinal axis **30**. The cleaning blades **44** are made of a soft polymeric material. The cleaning blades **44** are in this case formed in one piece with one of the detachable elements **33**. FIG. **5** is a perspective view of the tool from FIG. **1** to **4** in which the detachable elements **33** have been detached and in which there are no cleaning brushes **42** or cleaning blades **44**. FIG. **5** therefore only shows the main part **31**.

[0048] FIG. **6** is a view corresponding to FIG. **2** of an alternative embodiment, writing **45** and a logo **46** being debossed in the detachable element **33**.

[0049] FIG. **7** shows the tool from FIG. **6**, the detachable element **33** having been detached. A rib structure **48**, which can be arranged in the main part **31** and comprises a plurality of ribs **49** which preferably extend in parallel with the outside of the first narrow side **34** or the second narrow side **36**, can be seen in the region in which the detachable element **33** is normally attached to the main part **31**. The rib structure **48** allows the main part **31** to be produced in a simpler manner and makes it possible for the element **33** to be fastened in an improved manner and to be provided with a rest and support over a large surface area.

[0050] FIGS. **8** and **9** are perspective views of the embodiment of a tool **10** according to the invention according to FIG. **1** to **7**; however, in these figures, the cleaning brushes **42** of the cleaning portion **40** are shown.

[0051] FIG. **10** to **12** show an alternative embodiment of the tool **10** according to the invention. FIG. **10** is a side view of said tool **10**, whereas FIGS. **11** and **12** are plan views of the tool from opposite sides. The grip portion **12** of the embodiment in FIG. **10** to **12** is similar to the grip portion **12** of the embodiment in FIG. **1** to **9**. However, the separation portion **14** of this embodiment has a different design. The separation portion **14** of the embodiment according to FIG. **10** to **12** has a constant thickness **24** over the entire longitudinal extension thereof that is smaller than the thick-

ness **50** of the grip portion **14**. The thickness **24** only decreases in the region of the narrow sides **20**, **22** and the tip **16** of the separation portion **14** so as to make this region rounded. On the end **18** of the separation portion **14** that is on the grip portion side, a reinforcement portion **52** makes the thickness **24** slightly larger.

[0052] In the embodiment according to FIG. **10** to **12**, the tip **16** is not offset to one of the sides of the tool **10** with respect to the longitudinal axis **30**. Instead, the tip **16** is symmetrically rounded with respect to the longitudinal axis **30**, and defines a semi-circle of which the central point is on the axis **30**. The narrow sides **20**, **22** extend in parallel with one another. The tool **10** according to the embodiment of FIG. **10** to **12** also has a cleaning portion **40** on the end **38** thereof that is opposite the separation portion **14** (cf. FIG. **12**). A plurality of cleaning brushes **42** (not shown in FIG. **10**) are arranged on the cleaning portion **40**, only two of which brushes are provided with a corresponding reference numeral in FIG. **12**. The embodiment of FIG. **10** to **12** does not have any cleaning blades **44**.

[0053] When using the tool **10**, the separation portion **14** is inserted between a grinding or polishing plate and a support plate of a grinding or polishing device. By inserting the entire separation portion **14** and moving the separation portion **14** along the connection between the support plate and the grinding or polishing plate, a connection which is based on a hook-and-loop fabric (based on a hook-and-pile fastener) is released. The rounded-off design of the narrow sides **20**, **22** and the rounded tip **16** of the separation portion **14** of the tool **10** make it possible to prevent the support plate and/or the grinding or polishing plate from getting damaged.

[0054] By means of the grip portion **12**, the tool **10** can be manually gripped by a user of a grinding or polishing device in a simple and secure manner and can be used in a simple manner. The cleaning brushes **42** and the cleaning blades **44** can be used to clean the grinding or polishing plate in the assembled state. By cleaning the grinding or polishing plate, the operational life thereof is increased, and therefore the grinding or polishing plate does not need to be changed as frequently.

[0055] Combining the cleaning brushes **42** and cleaning blades **44** with the separation portion **14** in a single tool **10** is advantageous in that a user of the grinding or polishing device only needs to carry this one tool **10** with them in order to clean the grinding or polishing plate and remove said plate from the support plate. As a result, the effort involved in handling the grinding or polishing device is reduced and fewer accessories need to be carried with said device.

The Scope of the Invention

[0056] It should be understood that, unless stated otherwise herein, any of the features, characteristics, alternatives or modifications described regarding a particular embodiment herein may also be applied, used, or incorporated with any other embodiment described herein. Also, the drawings herein are not drawn to scale.

[0057] Although the invention has been described and illustrated with respect to exemplary embodiments thereof, the foregoing and various other additions and omissions may be made therein and thereto without departing from the spirit and scope of the present invention.

1. Tool for releasing a connection between a grinding or polishing plate and a support plate of a grinding or polishing device, which connection is based on a hook-and-loop fabric, comprising a grip portion by means of which the tool can be manually gripped by a user, and a separation portion which is designed to be inserted between the grinding or polishing plate and the support plate in order to remove said plates from one another, wherein the separation portion has a rounded tip.

2. Tool according to claim **1**, wherein the separation portion is rounded off.

3. Tool according to claim **1**, wherein the separation portion is flat.

4. Tool according to claim **1**, wherein the separation portion has a thickness which is smaller than the thickness of the grip portion.

5. Tool according to claim **1**, wherein the separation portion has a thickness which decreases from the end of the separation portion that is on the grip portion side towards the tip of the separation portion.

6. Tool according to claim **1**, wherein the separation portion has a first narrow side and a second narrow side, the first narrow side extending such that it is outwardly curved and the second narrow side extending such that it is inwardly curved.

7. Tool according to claim **6**, wherein the first narrow side has a smaller thickness than the second narrow side.

8. Tool according to claim **1**, wherein that the tip of the separation portion is arranged so as to be laterally offset from a longitudinal axis of the tool.

9. Tool according to claim **1**, wherein an element which is detachably or irremovably connected to the tool is arranged in the region of the grip portion.

10. Tool according to claim **9**, wherein that the element which is detachably or irremovably connected to the tool comprises a debossed symbol, in particular a trademark of a manufacturer of the grinding or polishing device.

11. Tool according to claim **1**, wherein a subregion of a surface of the grip portion, in particular an element which is arranged in the region of the grip portion and is detachably or irremovably connected to the tool is made of a polymeric material, preferably rubber, the surface in said subregion having a higher coefficient of static friction, with respect to a glove material or a human hand, than a surface of the separation portion.

12. Tool according to claim **1**, wherein the grip portion has an ergonomic shape, in particular is flat.

13. Tool according to claim **12**, wherein the grip portion has an hourglass-shaped cross section, in particular in the plane of the flat extension thereof parallel to a longitudinal axis of the tool.

14. Tool according to claim **1**, wherein a cleaning portion is arranged on an end of the grip portion that is remote from the separation portion, at least one cleaning blade and/or bristles of a cleaning brush being arranged in the cleaning portion.

15. Tool according to claim **14**, wherein the at least one cleaning blade has a meander-shaped cross section in the plane of a flat extension of the grip portion and preferably generally extends in parallel with the longitudinal axis of the tool.

16. Tool according to claims **9** and **14**, wherein the cleaning blade is formed in one piece with the element which is detachably or irremovably connected to the tool.

17. Tool according to claim **9**, wherein a cleaning blade is formed in one piece with the element which is detachably or irremovably connected to the tool.

18. Tool according to claim **15**, wherein the at least one cleaning blade is formed in one piece with the element which is detachably or irremovably connected to the tool.

19. Tool according to claim **2**, wherein the separation portion is flat.

20. Tool according to claim **2**, wherein the separation portion has a thickness which is smaller than the thickness of the grip portion.

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