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(54) **PROTECTIVE HOOD ADAPTER DEVICE
AND MACHINE TOOL SYSTEM
COMPRISING THE PROTECTIVE HOOD
ADAPTER DEVICE**

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(57) **ABSTRACT**

A protective hood adapter device for mounting on a machine tool, in particular a hand-held machine tool, is disclosed. The protective hood adapter device includes at least one attachment part for attaching to a protective hood of the machine tool. The protective hood adapter device further includes at least one fastening part which is mounted on the attachment part so as to be movable in at least one movement plane. The fastening part is provided to clamp the attachment part on the protective hood by way of a force oriented at least substantially perpendicularly to the movement plane.

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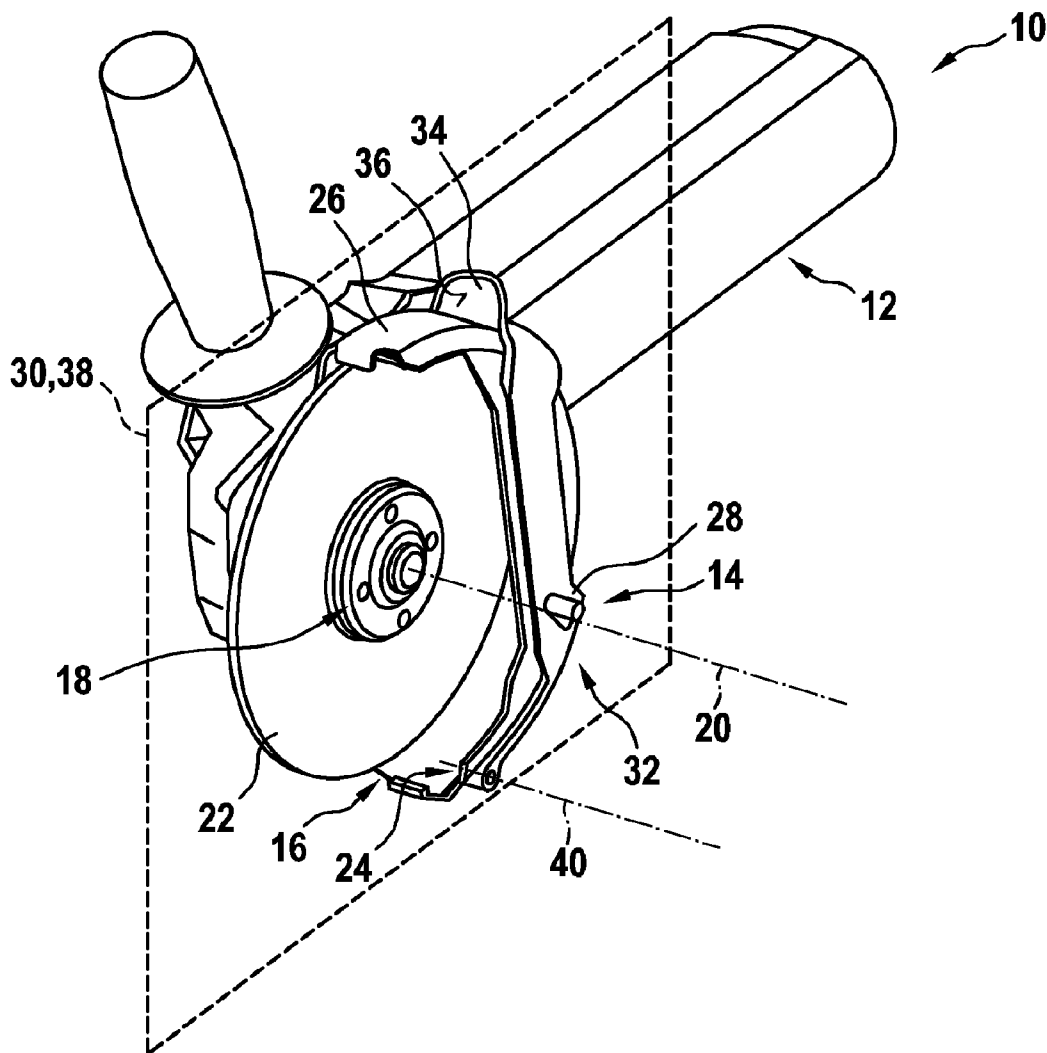
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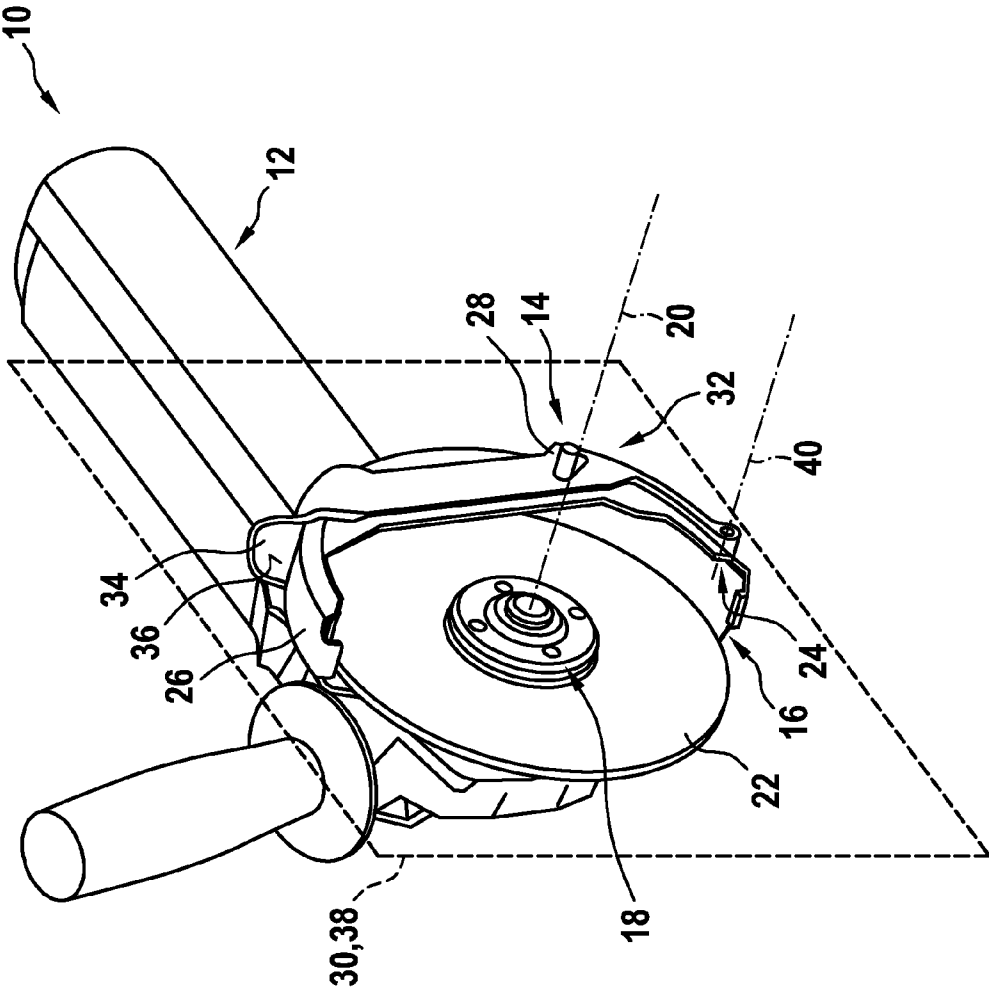


Fig. 1

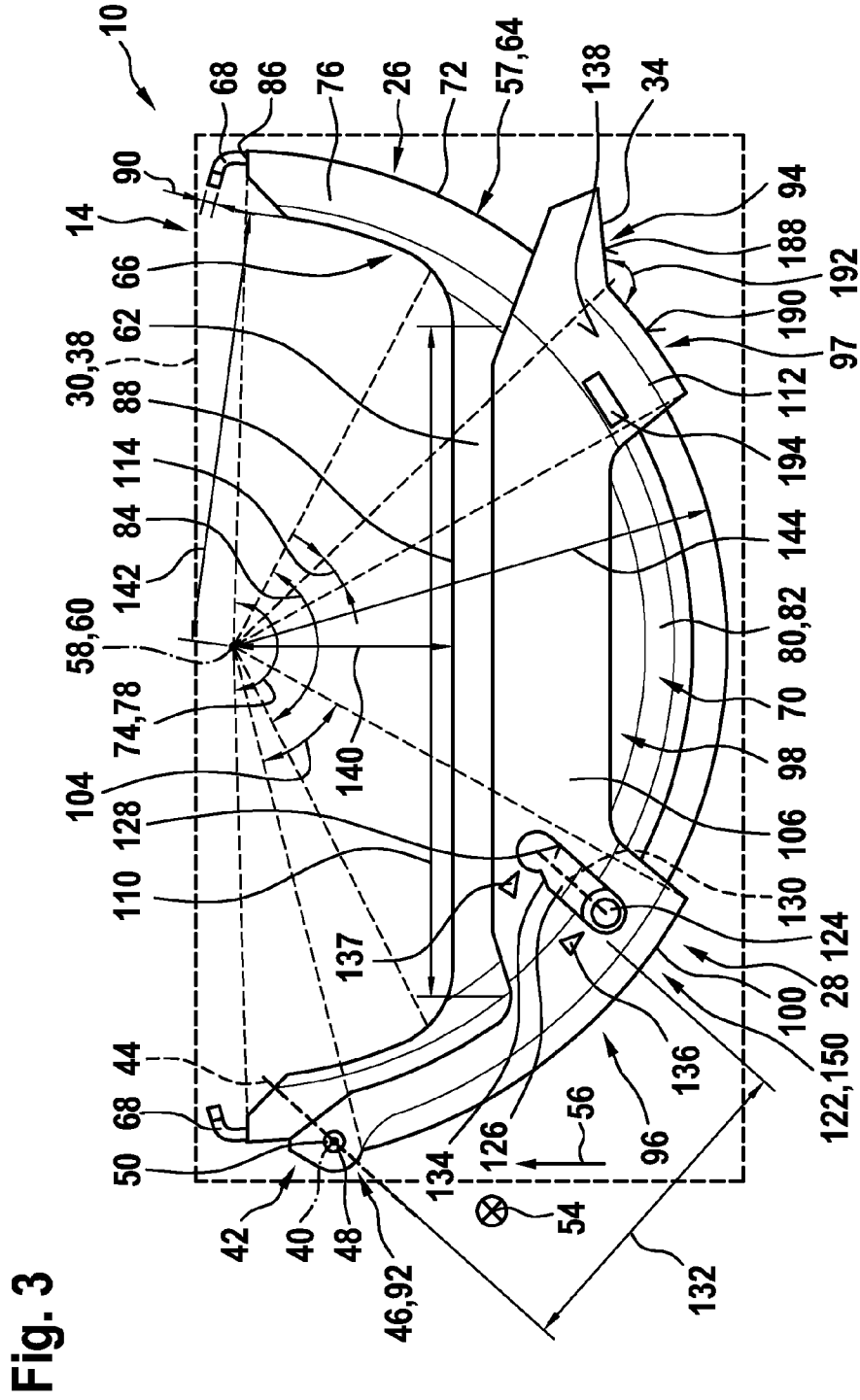
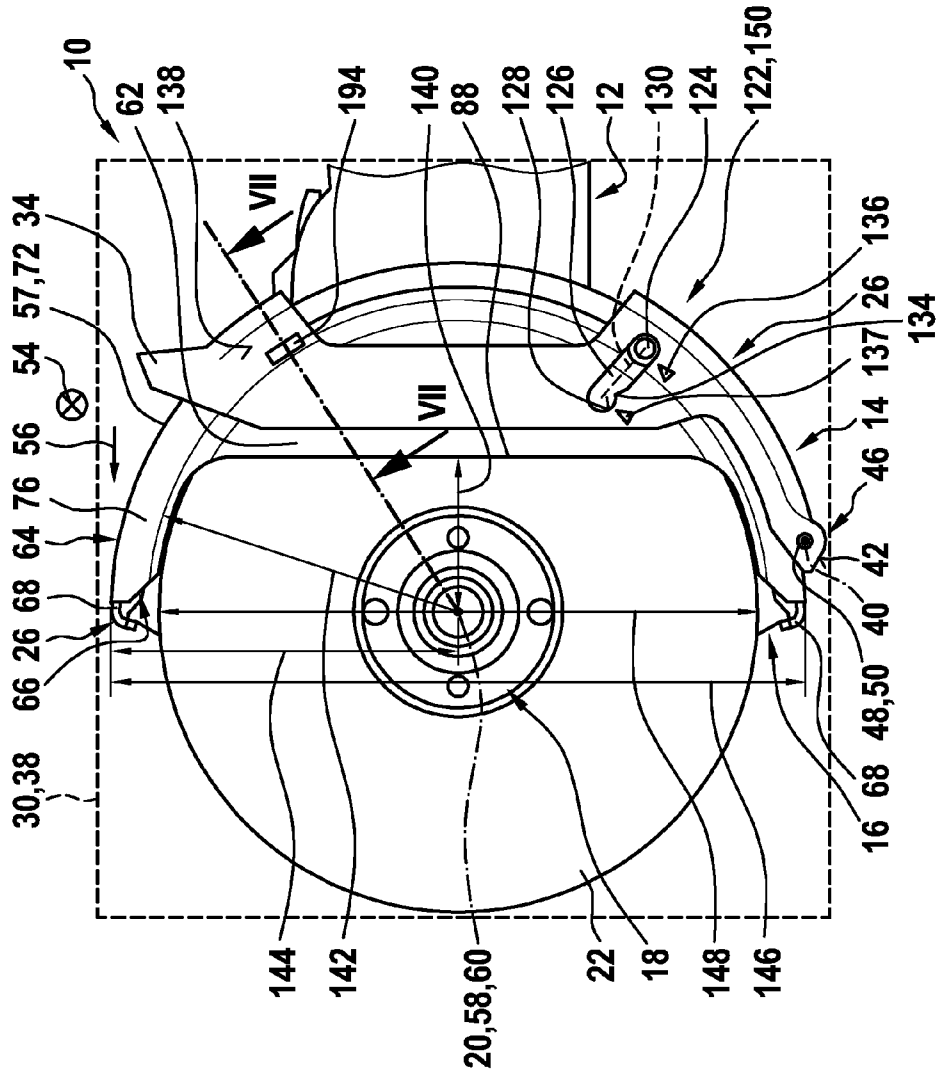


Fig. 3

Fig. 4



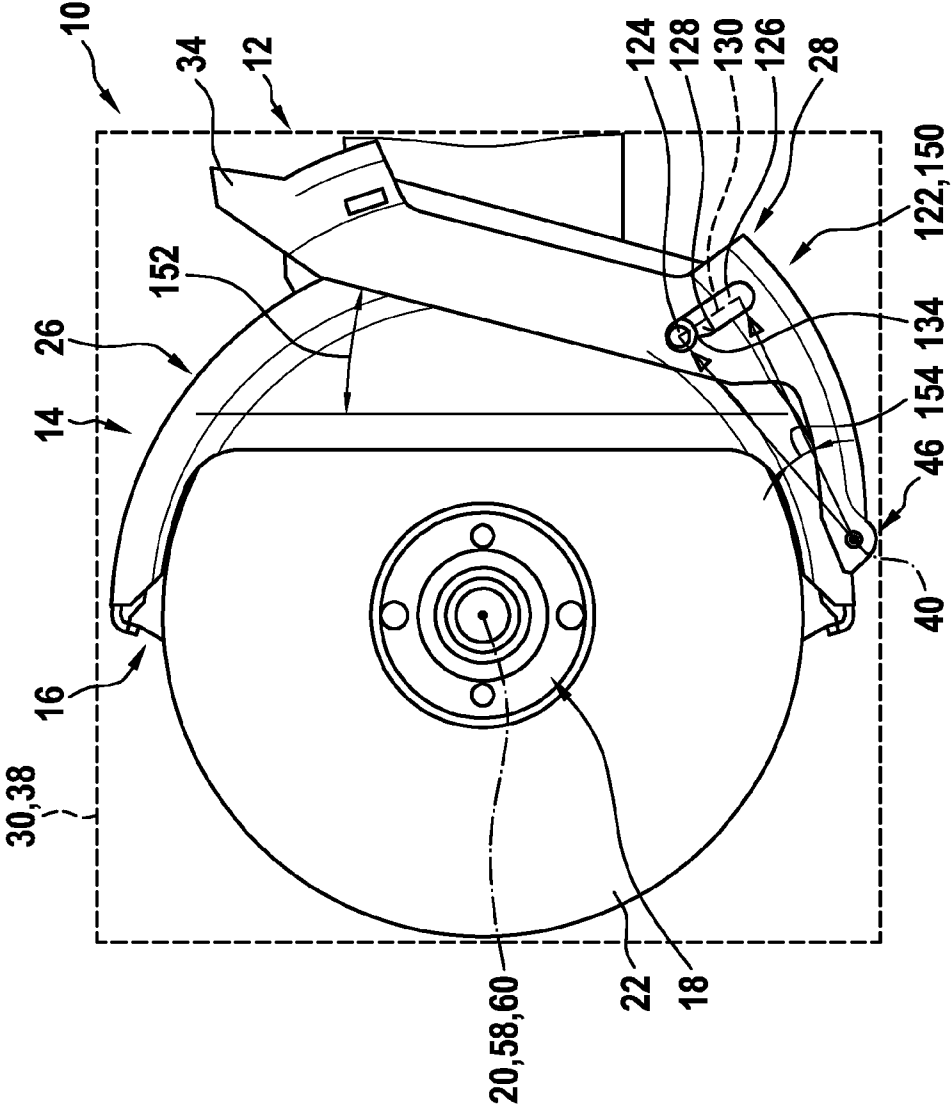
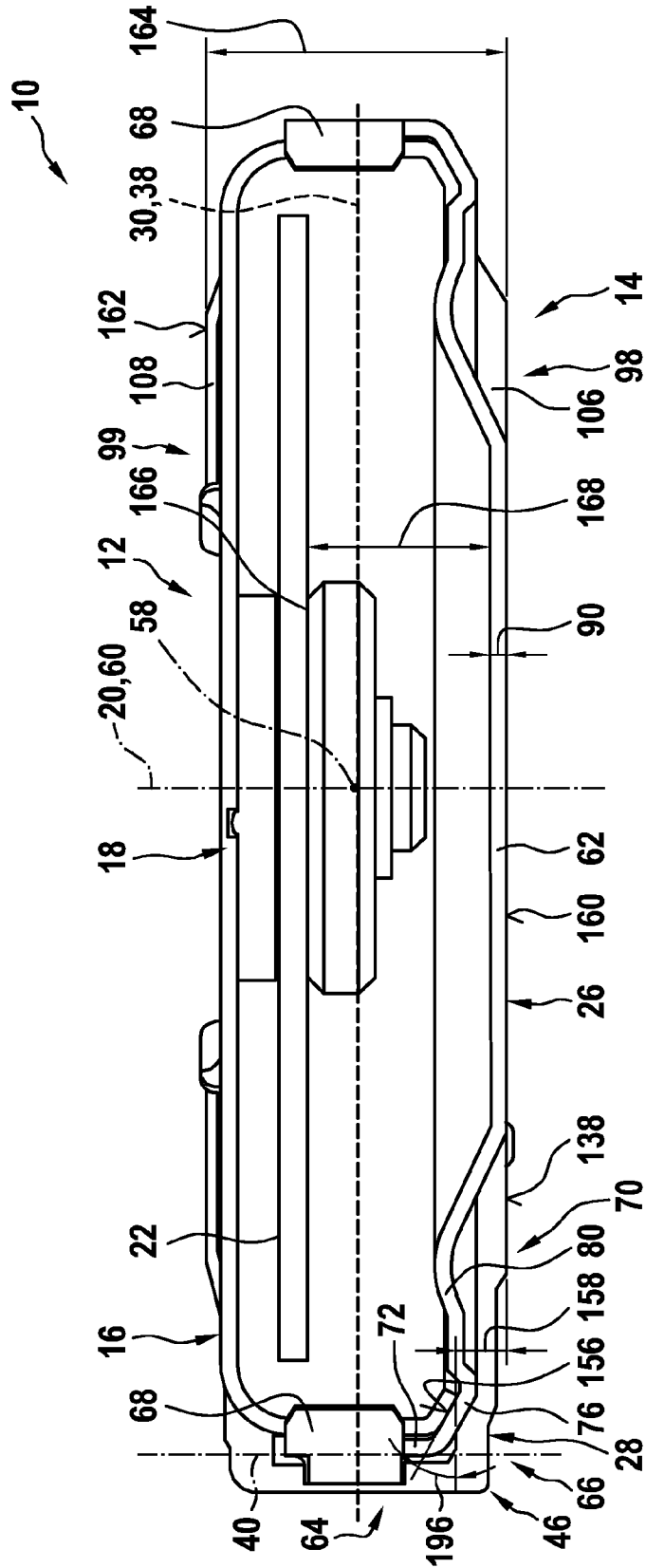


Fig. 5

Fig. 6



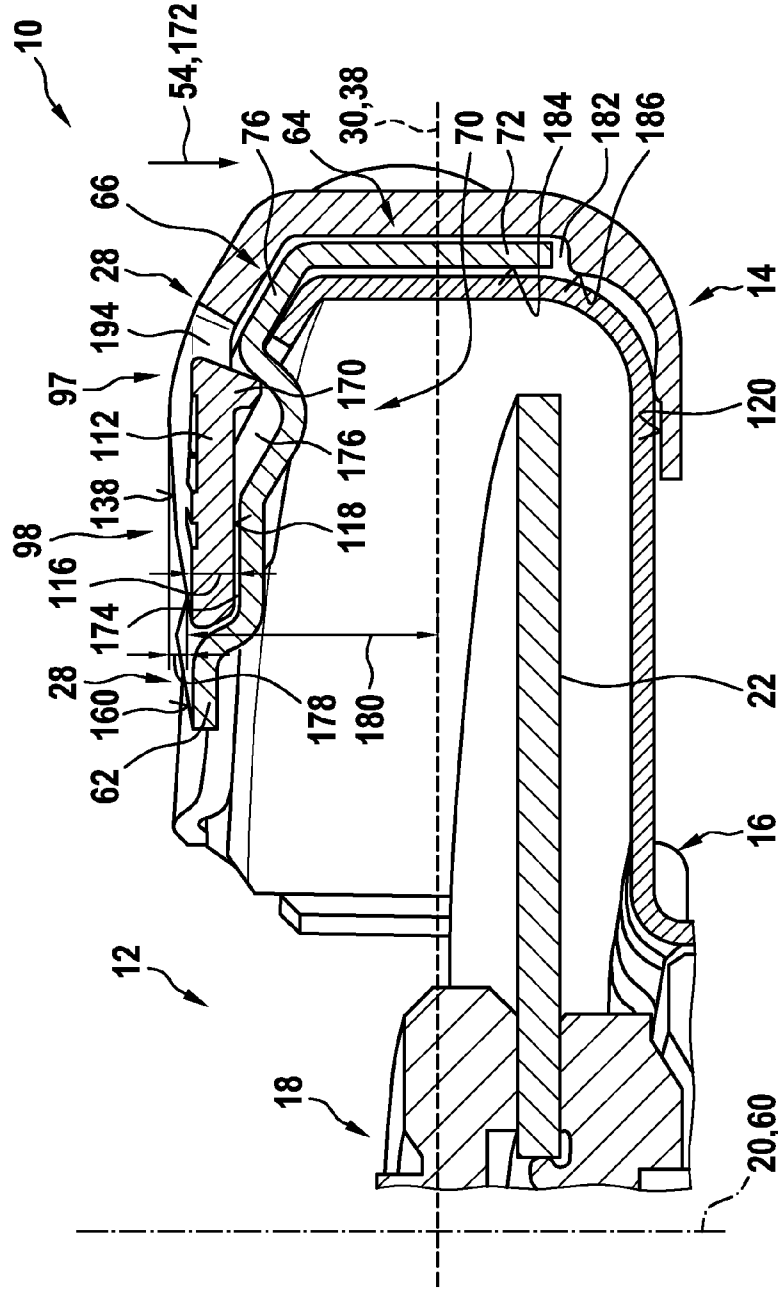


Fig. 7
VII - VII

**PROTECTIVE HOOD ADAPTER DEVICE
AND MACHINE TOOL SYSTEM
COMPRISING THE PROTECTIVE HOOD
ADAPTER DEVICE**

PRIOR ART

[0001] A protective hood adapter device for assembly on a machine tool, said protective hood adapter device having at least one attachment part for attaching to a protective hood of the machine tool and having at least one fastening part which is mounted on the attachment part so as to be movable in at least one movement plane, has already been proposed.

DISCLOSURE OF THE INVENTION

[0002] The invention proceeds from a protective hood adapter device for assembly on an, in particular hand-held, machine tool, said protective hood adapter device having at least one attachment part for attaching to a protective hood of the machine tool and having at least one fastening part which is mounted on the attachment part so as to be movable in at least one movement plane.

[0003] It is proposed that the fastening part is provided for bracing the attachment part on the protective hood by way of a force that is oriented so as to be at least substantially perpendicular to the movement plane.

[0004] The term “provided” is intended to be understood as meaning, in particular, specially programmed, specially conceived and/or specially equipped. The fact that an object is provided for a particular function is intended to be understood as meaning, in particular, that the object performs and/or carries out this particular function in at least one application and/or operating state. The term “substantially perpendicular” is in particular to be understood to mean an orientation of a direction of a straight line or a plane, in particular a direction of the force, relative to a reference direction, another straight line or another plane, in particular the movement plane, wherein the direction, the straight line or the plane and the reference direction, the other straight line or the other plane, in particular when viewed in a projection plane, enclose an angle of 90° and the angle has a maximum deviation of in particular less than 8°, advantageously less than 5°, and particularly advantageously less than 2°. The attachment part and the fastening part in a mutual relative movement preferably move in particular at least partially within the movement plane. When viewed along the movement plane, the fastening part, in particular conjointly with the protective hood, at least partially preferably encloses the attachment part. The fastening part preferably encloses the attachment part in a peripheral region of the attachment part. The attachment part is in particular provided to be attached to the machine tool, in particular to the protective hood, by way of a direction that is oriented so as to be at least substantially perpendicular to the movement plane. The fastening part is preferably provided to impinge the attachment part with at least one force that is oriented so as to be at least substantially perpendicular to the movement plane and in particular faces the protective hood. The fastening part, for bracing the attachment part with the protective hood, is particularly preferably provided for being at least partially pushed onto the protective hood, wherein the fastening part in particular at least partially encompasses the attachment part. When viewed along the movement plane, the fastening part, con-

jointly with the attachment part, is in particular provided for at least partially enclosing the protective hood. The fastening part in a braced state preferably bears, at least partially, in particular in a planar manner, on the attachment part, wherein the attachment part is in particular braced with the protective hood by means of the fastening part.

[0005] The protective hood adapter device, by way of assembly on a protective hood, configured as a protective grinding hood, of a machine tool configured as an angle grinder, conjointly with the protective hood, is preferably provided for forming a protective grinding disk hood, in particular a protective grinding disk hood of type C according to standard EN 62841-2-3. The protective hood adapter device, in a grinding procedure using the machine tool configured as an angle grinder, is in particular configured to protect a user from sparks and/or severed projectiles. However, it is also conceivable for the protective hood adapter device to be provided for use with machine tools other than an angle grinder. The protective hood adapter device preferably comprises at least one bearing unit for movably mounting the fastening part on the attachment part. The bearing unit preferably has at least two bearing elements, wherein one bearing element is in particular disposed on the fastening part and another bearing element is disposed on the attachment part. The bearing element is preferably configured so as to be integral with the fastening part. The other bearing element is in particular configured so as to be integral with the attachment part. The term “integral” is in particular to be understood to mean connected in a materially integral manner such as, for example, by a welding process and/or an adhesive-bonding process, etc., and particularly advantageously integrally molded such as by being produced from one casting and/or being produced in a single-component or multi-component injection-molding method.

[0006] The fastening part preferably has at least one activation element which is provided to be activated by a user in order for the fastening part and/or the attachment part to be released from the protective hood. The activation element preferably has at least one activation face which is oriented so as to be at least substantially perpendicular to the movement plane. The activation element is in particular disposed on a side of the fastening part that faces away from the bearing element.

[0007] The machine tool, in particular a tool receptacle of the machine tool, preferably has a rotation axis about which one tool is in particular able to be driven by means of the machine tool. The protective hood preferably at least partially encloses the rotation axis and/or the tool receptacle. In particular, the protective hood adapter device in a state fastened to the machine tool, or to the protective hood, is disposed at least partially about the rotation axis and/or the tool receptacle, in particular in a plane that extends so as to be at least substantially perpendicular to the rotation axis. The movement plane is preferably disposed so as to be at least substantially perpendicular to the rotation axis. The attachment part and/or the fastening part preferably have/has at least one plane of primary extent, which are/is oriented so as to be at least substantially parallel to the movement plane and/or at least substantially perpendicular to the rotation axis. The term “a plane of primary extent” of a component, in particular of the fastening part and/or of the attachment part, is intended to be understood as meaning in particular a plane which is parallel to a largest lateral face of a smallest

imaginary cuboid which just completely encloses the component and in particular runs through the center of the cuboid. The term “substantially parallel” is intended to be understood as meaning in particular an alignment of a straight line, of a plane or of a direction, in particular of the plane of primary extent, relative to another straight line, another plane or a reference direction, in particular the movement plane, wherein the straight line, the plane or the direction, in particular when viewed in a projection plane, in relation to the other straight line, the other plane or the reference direction has a deviation of in particular less than 8°, advantageously less than 5°, and particularly advantageously less than 2°. The protective hood adapter device is preferably provided to be fastened to the machine tool, in particular the protective hood, in a direction that is oriented so as to be at least substantially perpendicular to the rotation axis, or at least substantially parallel to the movement plane. The fastening part is preferably provided for fastening the attachment part and the protective hood to one another, or to press the attachment part and the protective hood against one another, by way of at least one bracing force, wherein the bracing force is in particular oriented so as to be at least substantially perpendicular to the movement plane.

[0008] Advantageously simple and rapid assembling on the machine tool, in particular the protective hood, can be made possible as a result of the design embodiment according to the invention of the protective hood adapter device. Assembling of the protective hood adapter device for forming a protective grinding disk hood for the machine tool can advantageously be made possible independently of disassembling the machine tool or the protective hood, in particular because the protective hood adapter device can be assembled directly on the protective hood of the machine tool.

[0009] It is furthermore proposed that the fastening part is mounted on the attachment part so as to be rotatable or pivotable about a pivot axis which is in particular oriented so as to be at least substantially perpendicular to the movement plane. Advantageously simple and rapid fastening of the attachment part can be achieved. Canting of the fastening part in the event of a movement of the fastening part relative to the attachment part can advantageously be prevented, in particular in comparison to a transversal mounting of the fastening part on the attachment part. An advantageously high degree of user comfort can be made possible. The fastening part, for fastening the attachment part to the protective hood, is preferably provided to be moved relative to the attachment part about the pivot axis. For example, the bearing element or the other bearing element of the bearing unit is configured as a pin, as a bolt and/or as an appendage, wherein the other bearing element, or the bearing element, is configured as a clearance, as a feedthrough, or the like. The pivot axis is particularly preferably disposed on an end region of the fastening part. The end region of the fastening part, from a plane which is oriented so as to be at least substantially perpendicular to the movement plane and which comprises the pivot axis, preferably extends in a direction facing away from the plane, wherein at most 10%, preferably at most 8%, and particularly preferably at most 5%, of an entire volume, in particular mass volume, of the fastening part is disposed on a side of the plane predefined by the direction. The pivot axis is preferably disposed so as to be at least substantially parallel to the rotation axis. In

particular, the pivot axis when viewed along the rotation axis is disposed so as to be spaced apart from the protective hood, or from the tool receptacle.

[0010] It is moreover proposed that the fastening part comprises at least two bracing faces which are disposed on two mutually facing internal sides of the fastening part. Advantageously secure fastening of the attachment part to the protective hood can be achieved. An advantageously simple and cost-effective design embodiment of the protective hood adapter device can be made possible. The bracing faces are preferably oriented so as to be oblique or at least substantially parallel to the movement plane. The bracing faces are in each case preferably disposed on a side of the fastening part that faces the attachment part. One bracing face of the two bracing faces, for fastening the protective hood adapter device, in particular the attachment part, is in particular provided to be attached to the attachment part. Another bracing face of the bracing faces, for fastening the protective hood adapter device, in particular the attachment part, is preferably provided to be attached to the protective hood. The bracing faces are preferably disposed on sides of the fastening part that face the movement plane. The bracing face is in particular disposed on a side of the fastening part that faces a motor, or a main body of the machine tool. The other bracing face is preferably disposed on a side of the fastening part which at least largely faces away from the motor, or the main body of the machine tool.

[0011] It is furthermore proposed that the protective hood adapter device comprises at least one latching element which, for fixing the fastening part to the attachment part, proceeding from the fastening part or the attachment part, extends in a direction that is oriented so as to be at least substantially perpendicular to the movement plane. Advantageously secure fastening of the attachment part to the protective hood can be achieved. The latching element or the latching elements is/are in particular disposed on the fastening part and/or the attachment part. The latching element disposed on the fastening part is preferably disposed within or on the bracing face of the fastening part. In particular, the latching element disposed on the fastening part delimits at least partially the bracing face. The latching element disposed on the attachment part is preferably disposed on a side of the attachment part that faces the fastening part. The latching element disposed on the attachment part is preferably disposed on a side of the attachment part that faces away from the machine tool, in particular the protective hood. For example, the latching element or the latching elements, in at least one section plane aligned so as to be at least substantially perpendicular to the movement plane, has/have a wedge-shaped basic shape. The latching element or the latching elements particularly preferably extends/extend at least substantially perpendicular to the movement plane or, when viewed along the pivot axis, along a curved or straight distance on the fastening part, or on the attachment part. The latching element or the latching elements, for fastening the attachment part by means of the fastening part, preferably engage/engages on a clearance and/or a face of the attachment part or of the fastening part. It is conceivable that the latching element disposed on the fastening part, for fastening the attachment part by means of the fastening part, interacts with the latching element disposed on the attachment part, wherein the latching elements engage in particular on one another. The latching element or the latching elements is/are preferably disposed so as to be spaced apart

from the pivot axis. The latching element or the latching elements is/are particularly preferably disposed on a further end region of the fastening part that faces away from the end region of the fastening part. The latching element or the latching elements on the fastening part, or the attachment part, preferably extends/extend at least partially along a circumferential direction about the rotation axis. The latching element or the latching elements is/are particularly preferably configured so as to be integral with the fastening part, or the attachment part.

[0012] It is moreover proposed that the protective hood adapter device comprises at least one guide unit which is disposed so as to be spaced apart from the pivot axis and is provided for guiding the fastening part on the attachment part in a movement relative to the attachment part. An advantageously rapid and faultless movement of the fastening part relative to the attachment part can be achieved, in particular independently of any canting of the fastening part. An advantageously high level of robustness and durability of the protective hood adapter device can be made possible, in particular because twisting of the fastening part relative to the attachment part can advantageously be prevented. The guide unit preferably comprises at least one guide element which is disposed on the fastening part or the attachment part, in particular is configured so as to be integral with the fastening part or the attachment part. The guide unit comprises in particular at least one guide clearance which is in particular delimited by the attachment part, or the fastening part. For example, the guide unit is configured as a guide slot. The guide element is in particular configured as an appendage, as a bolt, as a pin, or the like. The guide unit is preferably provided for guiding the fastening part in a movement along a guide section on the attachment part. The guide section is particularly preferably oriented so as to be at least substantially parallel to the movement plane and/or at least substantially perpendicular to the pivot axis. The guide section is in particular at least partially, in particular at least largely, configured so as to be curved or rectilinear. A minimum spacing of the pivot axis and the guide unit, in particular of the guide element and/or of the guide clearance, is preferably in particular at least 20 mm, preferably at least 30 mm, preferably at least 40 mm, and particularly preferably at least 45 mm, wherein the minimum spacing of the pivot axis and the guide unit, in particular of the guide element and/or of the guide clearance, is in particular oriented so as to be at least substantially parallel to the movement plane and/or at least substantially perpendicular to the pivot axis. The bearing clearance particularly preferably extends across an entire thickness of the fastening part, in particular from an internal side of the fastening part that faces the attachment part to an external side of the fastening part that faces away from the attachment part. The guide element is preferably disposed within the guide clearance. In at least one operating state, the guide element preferably bears at least partially on a guide face of the attachment part, or of the fastening part, that delimits the guide clearance.

[0013] It is furthermore proposed that the fastening part and/or the attachment part has at least one retaining element which is provided for retaining the fastening part by means of a retaining force in precisely one non-braced position relative to the attachment part. Abrasion resistance between the fastening part and the attachment part in a non-braced state of the attachment part can advantageously be achieved, in particular because a relative movement between the

attachment part and the fastening part can advantageously be prevented. An advantageously high level of user comfort can be made possible, in particular because an irritating noise as a result of an impact of the fastening part, or of the attachment part, in movements of the fastening part relative to the attachment part, for example during transport or for changing the protective hood adapter device, can advantageously be prevented. Locking a position of the fastening part relative to the attachment part can advantageously be made possible, in particular in an open, or non-braced, and a closed, or braced, position. The retaining force is preferably oriented so as to be at least partially along the guide section of the guide unit. The retaining element is in particular disposed on the fastening part or the attachment part, in particular configured so as to be integral with the fastening part or the attachment part. The retaining element is preferably configured so as to be integral with the guide unit, in particular the guide element or the guide clearance. However, it is also conceivable for the retaining element to be disposed so as to be spaced apart from the guide unit. In an exemplary design embodiment, the retaining element, in a movement of the fastening part out of the non-braced position, is provided for generating the retaining force by way of an interaction between the guide element and the guide clearance. For example, the retaining element is configured as an appendage which is disposed on the fastening part, is in particular configured so as to be integral with the fastening part and delimits the guide clearance, wherein the guide element in a movement of the fastening part out of the non-braced position is in particular impinged with the retaining force by way of the retaining element. The retaining element along the guide section preferably configures a taper of the guide clearance.

[0014] It is furthermore proposed that the protective hood adapter device comprises at least one delimiting unit which is provided for delimiting a mutual relative movement of the attachment part and of the fastening part about the pivot axis to a maximum angle of at most 60°, preferably at most 40°, preferably at most 30°, and particularly preferably at most 15°. An advantageously compact design embodiment can be achieved, in particular because an advantageously minor maximum volume that is delimited by the fastening part and the attachment part can be made possible. An advantageously rapid assembly of the protective hood adapter device can be made possible, in particular because an advantageously minor maximum distance of the fastening part relative to the attachment part, which has to be covered, for bracing the attachment part and the protective hood can be achieved. The delimiting unit is preferably configured so as to be integral with the guide unit. The guide clearance, by interacting with the guide element, is preferably provided for delimiting the mutual relative movement of the attachment part and of the fastening part about the pivot axis. The guide section about the pivot axis preferably defines a maximum angular range of in particular at most 60°, preferably at most 40°, preferably at most 30°, and particularly preferably at most 15°, and of in particular at least 7°, preferably at least 10°, and particularly preferably at least 14°. The guide element, for delimiting the mutual relative maximum angle of the attachment part and of the fastening part about the pivot axis, bears in particular in a form-fitting manner on the guide face of the fastening part, or of the attachment part, that delimits the guide clearance. The fastening part is preferably provided for bracing the attach-

ment part with the protective hood, or for fastening said attachment part to the machine tool, in particular the protective hood, at an angle of 0° relative to the attachment part. The fastening part, by means of the retaining element, is preferably provided to be held in the precisely one non-braced position relative to the attachment part at an angle of at most 60° , preferably at most 40° , preferably at most 30° , and particularly preferably at most 15° , relative to the attachment part. In particular, the angle of the fastening part relative to the attachment part in the precisely one non-braced position is in particular at least 7° , preferably at least 10° , and particularly preferably at least 14° .

[0015] It is furthermore proposed that the attachment part has at least one attachment face for attaching to the protective hood, in particular when bracing or fastening the attachment part with or to the protective hood, wherein a maximum spacing of the attachment face, oriented so as to be at least substantially perpendicular to the movement plane, from an external face of the attachment part and/or of the fastening part, oriented so as to be at least substantially parallel to the movement plane, is at most 7 mm, preferably at most 6 mm, and particularly preferably at most 5 mm. An advantageously compact protective hood adapter device can be made possible. An advantageously compact protective grinding disk hood of the machine tool can be made possible. An advantageously minor volumetric increase of the machine tool when fastening the protective hood adapter device can be achieved. In particular, the maximum spacing of the attachment face, oriented so as to be at least substantially perpendicular to the movement plane, and the external face of the attachment part and/or of the fastening part, oriented so as to be at least substantially parallel to the movement plane, is at least 2 mm, preferably at least 3 mm, and particularly preferably at least 4 mm. The attachment face is preferably oriented so as to be oblique or at least substantially parallel to the movement plane. The attachment face is preferably disposed on a side of the attachment part and/or of the fastening part that faces the machine tool, in particular the tool receptacle. The attachment face is particularly preferably provided to be attached to an end of the protective hood that faces the attachment part and is oriented so as to be at least substantially parallel to the rotation axis, or to the central axis. In particular, the maximum spacing of the attachment face and of the external face of the attachment part and/or of the fastening part, oriented so as to be at least substantially parallel to the movement plane, is oriented so as to be at least substantially parallel to the pivot axis. The external face of the attachment part and/or of the fastening part, by way of at least one face of the attachment part and/or of the fastening part that faces the machine tool, particularly preferably defines a maximum height of the protective hood adapter device, said height being in particular oriented so as to be at least substantially perpendicular to the movement plane and/or at least substantially parallel to the pivot axis and/or the rotation axis.

[0016] It is moreover proposed that the attachment part has at least one external contour which, when viewed at least substantially perpendicularly to the movement plane, is configured so as to be arcuate about an imaginary center, wherein the attachment part, when viewed at least substantially perpendicularly to the movement plane, is disposed so as to be spaced apart from the center. An advantageously compact design embodiment can be made possible. Change-over of the tool can advantageously take place indepen-

dently of an assembled state of the protective hood adapter device. An advantageously high degree of flexibility for a use of the machine tool, in particular of the tool, conjointly with the assembled protective hood adapter device, can be guaranteed. The attachment part preferably has a central axis which runs through the imaginary center and is oriented so as to be at least substantially parallel to the pivot axis and/or to the rotation axis. The central axis preferably comprises the rotation axis. The fastening part, in a braced state of the attachment part, by way of the protective hood preferably bears at least partially on the external contour of the attachment part. A minimum spacing of the attachment part from the imaginary center, or from the central axis, when viewed at least substantially perpendicularly to the movement plane, is preferably in particular more than 10 mm, preferably more than 20 mm, preferably more than 30 mm. The minimum spacing of the attachment part from the imaginary center, or from the central axis, is in particular oriented so as to be at least substantially parallel to the movement plane. The attachment part preferably comprises at least one external wall which, when viewed at least substantially perpendicularly to the movement plane and/or along the central axis and/or the pivot axis, is configured in the shape of a circular segment. The external wall preferably extends so as to be at least substantially parallel to the movement plane. The external wall, in particular when viewed at least substantially perpendicularly to the movement plane and/or along the central axis and/or the pivot axis, is preferably delimited by the external contour of the attachment part. The minimum spacing of the attachment part from the imaginary center, or from the central axis, particularly preferably extends from the external wall, in particular one side of the external wall, to the imaginary center, or the central axis. The guide section, an axis of main extent of the latching element/latching elements, and/or the movement plane are/is in particular oriented so as to be at least substantially perpendicular to the central axis. The term "an axis of main extent" of a component, in particular of the latching element/latching elements, is here in particular to be understood to mean an axis which runs parallel to a longest edge of a smallest geometric cuboid which just completely encloses the component.

[0017] It is furthermore proposed that the attachment part has at least one attachment face, in particular the aforementioned attachment face, for attaching to the protective hood, and at least one receptacle clearance for protecting the fastening part during an operation of the machine tool, wherein the receptacle clearance is disposed on an external side of the attachment part that faces away from the attachment face. Abrasion on and/or damage to the fastening part during an operation of the machine tool can advantageously be prevented, in particular if the fastening part is configured from a material that is softer than that of the attachment part. An advantageously high degree of stability and robustness can be made possible. An advantageously high level of protection of a fastening mechanism of the protective hood adapter device can be achieved, in particular because the fastening part can be protected against deformation and/or distortion. The receptacle clearance is preferably delimited by the external wall of the attachment part. It is conceivable that the latching element disposed on the attachment part at least partially delimits the receptacle clearance. The fastening part particularly preferably has an external face which is in particular disposed on a side of the fastening part that

faces away from the receptacle clearance. A minimum spacing of the external face of the fastening part and the external face of the attachment part, said spacing being oriented so as to be at least substantially parallel to the pivot axis and/or to the central axis, is particularly preferably in particular at most 2 mm, preferably at most 1 mm, and particularly preferably at most 0.5 mm, wherein the external face of the attachment part in particular has a larger minimum spacing from the movement plane and/or the machine tool, in particular the tool receptacle, than the external face of the fastening part. The external face of the fastening part and the external face of the attachment part particularly preferably extend at least largely within a common plane which is preferably oriented so as to be at least substantially parallel to the movement plane.

[0018] It is furthermore proposed that at least the attachment part is at least largely, in particular at least substantially completely, configured from a metal. An advantageously high level of stability and robustness can be made possible. Damage to the protective hood adapter device by sparks and/or severed projectiles can advantageously be prevented. An advantageously high level of heat resistance of the protective hood adapter device can be achieved, in particular in comparison to a protective hood adapter device, in particular an attachment part, made of a plastics material or the like. The term “substantially completely” is in particular intended to be understood to mean a statement of a proportion of a component, in particular of the attachment part, which has a specific property, in particular that of being configured from the metal, wherein in particular at least 90%, preferably at least 95%, and particularly preferably at least 98%, of an entire volume and/or of an entire mass of the component has the property. The fastening part is preferably at least largely configured from a plastics material, in particular a duroplastic material. It is conceivable that the fastening part in a region of the bearing unit and/or of the guide unit is at least partially configured from a material other than a plastics material, in particular from a metal.

[0019] Moreover proposed is a machine tool system having at least one machine tool which has at least one protective hood, and having at least one protective hood adapter device according to the invention. The attachment part, in particular when viewed at least substantially perpendicularly to the movement plane and/or along the rotation axis or the pivot axis, at least largely preferably encloses the protective hood. The attachment part preferably has at least one attachment element which is provided for being attached to the protective hood and for securing the attachment part against rotation about the central axis or the rotation axis relative to the protective hood. The attachment part particularly preferably has exactly two attachment elements which along a circumferential direction about the rotation axis, or the central axis, are disposed on two ends of the attachment part. The two attachment elements preferably at least partially encompass the protective hood, in particular in a direction that is oriented so as to be at least substantially perpendicular to the rotation axis or to the central axis.

[0020] Advantageously simple and rapid assembling of the machine tool system, in particular of the protective hood adapter device, can be made possible by the design embodiment according to the invention of the machine tool system. Assembling the protective hood adapter device for forming a protective grinding disk hood for the machine tool can advantageously be made possible independently of disas-

sembling the machine tool, or the protective hood, in particular because the protective hood adapter device can be assembled directly on the protective hood of the machine tool.

[0021] The protective hood adapter device according to the invention and/or the machine tool system according to the invention here are/is not to be limited to the application and embodiment described above. In particular, the protective hood adapter device according to the invention and/or the machine tool system according to the invention for meeting a functional mode described herein may have a number of individual elements, components and units differing from a number mentioned herein. In addition, in the ranges of values indicated in this disclosure, values lying within the limits mentioned are also intended to be considered to be disclosed and usable as desired.

DRAWINGS

[0022] Further advantages are derived from the following description of the drawings. An exemplary embodiment of the invention is illustrated in the drawings. The drawings, the description and the claims contain numerous features in combination. The person skilled in the art will expediently consider the features also individually and combine said features so as to form expedient further combinations.

[0023] In the drawings:

[0024] FIG. 1 shows a perspective view of a machine tool system according to the invention having a protective hood adapter device according to the invention in an assembled state;

[0025] FIG. 2 shows a perspective view of the machine tool system according to the invention having the protective hood adapter device according to the invention in a disassembled state;

[0026] FIG. 3 shows a plan view of the protective hood adapter device according to the invention;

[0027] FIG. 4 shows a plan view of the machine tool system according to the invention in a region of the protective hood adapter device according to the invention in the assembled state;

[0028] FIG. 5 shows a plan view of the machine tool system according to the invention in the region of the protective hood adapter device according to the invention, having a fastening part of the protective hood adapter device in a non-braced position;

[0029] FIG. 6 shows a lateral view of the machine tool system according to the invention in a region of the protective hood adapter device according to the invention; and

[0030] FIG. 7 shows a lateral sectional view of the machine tool system according to the invention in a connection region of the protective hood adapter device according to the invention having a protective hood of a machine tool of the machine tool system.

DESCRIPTION OF THE EXEMPLARY EMBODIMENT

[0031] Shown in FIG. 1 is a machine tool system **10** which comprises a machine tool **12** and a protective hood adapter device **14**. The machine tool **12** is configured as a hand-held machine tool. The machine tool **12** is configured as an angle grinder. However, other design embodiments of the machine tool system **10** and/or of the machine tool **12** are also conceivable. The machine tool **12** comprises a protective

hood 16 which is at least partially disposed about a tool receptacle 18 of the machine tool 12. The machine tool 12 comprises a rotation axis 20 about which a tool 22 is able to be driven by way of the tool receptacle 18 of the machine tool 12. The tool 22 in the exemplary embodiment shown is configured as a grinding and cutting disk. However, other design embodiments of the tool 22 are also conceivable. The protective hood 16 is fastened to the tool receptacle 18 and, when viewed along the rotation axis 20, at least partially encloses the tool receptacle 18 and the tool 22. The protective hood 16 has a peripheral region 24 which extends so as to be at least substantially parallel to the rotation axis 20. The protective hood 16, in particular the peripheral region 24, when viewed at least substantially perpendicularly to the rotation axis 20, extends across an entire height of the tool 22 and of the tool receptacle 18, said height being oriented so as to be in particular at least substantially parallel to the rotation axis 20.

[0032] The protective hood adapter device 14 is provided for assembling on the machine tool 12. The protective hood adapter device 14 in FIG. 1 is shown in a state assembled on the machine tool 12, in particular the protective hood 16. The protective hood adapter device 14 is provided for being fastened to the machine tool 12, in particular the protective hood 16. The protective hood adapter device 14 comprises an attachment part 26 for attaching to a protective hood 16 of the machine tool 12, and a fastening part 28 which is mounted on the attachment part 26 so as to be movable in at least one movement plane 30. The fastening part 28, by way of a force oriented so as to be at least substantially perpendicular to the movement plane 30, is provided for bracing the attachment part 26 on the protective hood 16. The fastening part 28, in particular in the assembled state, at least partially encloses the attachment part 26 in a peripheral region 32 of the attachment part 26. The fastening part 28 is provided for impinging the attachment part 26 with at least one force that is oriented so as to be at least substantially perpendicular to the movement plane 30 and in particular faces the protective hood 16. The fastening part 28, for bracing the attachment part 26 with the protective hood 16, is provided to be at least partially pushed onto the protective hood 16, wherein the fastening part 28 in particular at least partially encompasses the attachment part 26. The fastening part 28, when viewed along the movement plane 30, conjointly with the attachment part 26, is provided for at least partially enclosing the protective hood 16. The fastening part 28 in a braced state, wherein the attachment part 26 is in particular braced with the protective hood 16 by means of the fastening part 28, bears at least partially, in particular in a planar manner, on the attachment part 26.

[0033] The protective hood 16 of the machine tool 12 is configured as a protective grinding hood, in particular as a protective grinding hood of the type B according to standard EN 62841-2-3. The protective hood adapter device 14, by assembling on the protective hood 16 configured as a protective grinding hood conjointly with the protective hood 16 is provided to form a protective grinding disk hood, in particular a protective grinding disk hood of the type C according to standard EN 62841-2-3. The protective hood adapter device 14, in a cutting procedure of the machine tool 12, is provided for protecting a user from sparks and/or from severed projectiles. The fastening part 28 has an activation element 34 which is provided to be activated by a user in order for the fastening part 28 and the attachment part 26 to

be released from the protective hood 16. The activation element 34 is in particular provided for moving the fastening part 28 relative to the attachment part 26 from the braced state to a non-braced state (see also FIG. 2). The activation element 34 has an activation face 36 that is oriented so as to be at least substantially perpendicular to the movement plane 30. The activation element 34, by way of a force action by a user on the activation face 36, is provided for moving the fastening part 28 relative to the attachment part 26 within the movement plane 30. The activation face 36 is at least partially configured as a curved face which extends so as to be at least partially at least substantially perpendicular to the movement plane 30.

[0034] The protective hood 16 at least partially encloses the rotation axis 20 and/or the tool receptacle 18. The protective hood adapter device 14 in a state fastened to the machine tool 12, or to the protective hood 16, which is shown in particular in FIG. 1, is at least partially disposed about the rotation axis 20 and/or the tool receptacle 18, in particular when viewed in a plane, in particular the movement plane 30, that extends so as to be at least substantially perpendicular to the rotation axis 20. The movement plane 30 is disposed so as to be at least substantially perpendicular to the rotation axis 20. The attachment part 26 and the fastening part 28 have in each case at least one plane of primary extent 38, the latter being oriented so as to be at least substantially parallel to the movement plane 30 and at least substantially perpendicular to the rotation axis 20. The fastening part 28, by way of at least one bracing force, is provided for fastening the attachment part 26 and the protective hood 16 to one another, or pressing said attachment part 26 and said protective hood 16 against one another, wherein the bracing force is in particular oriented so as to be at least substantially perpendicular to the movement plane 30. The attachment part 26 is at least substantially completely configured from a metal. The fastening part 28 is at least substantially completely configured from a plastics material, in particular from a duroplastic material. However, other design embodiments of the attachment part 26 and/or of the fastening part 28 are also conceivable. For example, it is conceivable that the attachment part 26 comprises at least one damping element which is provided for damping noise generated when machining a workpiece by means of the tool 22, wherein the damping element is in particular configured from a material other than a metal. The damping element is in particular not shown in the figures. It is conceivable that the protective hood 16 is disposed so as to be adjustable on the machine tool 12, wherein the one position of the protective hood 16 about the rotation axis 20 can in particular be varied. The protective hood adapter device 14 in the assembled state is preferably movable conjointly with the protective hood 16. The protective hood adapter device 14, by means of the fastening part 28, is in particular provided to be fastened to the machine tool 12 only by way of the protective hood 16.

[0035] The machine tool system 10 in FIG. 2 is shown in a disassembled state, wherein the protective hood adapter device 14 is disposed so as to be spaced apart from the machine tool 12, in particular from the protective hood 16. The fastening part 28 is shown in a non-braced state. The fastening part 28 is mounted on the attachment part 26 so as to be rotatable or pivotable about a pivot axis 40 that is oriented so as to be at least substantially perpendicular to the movement plane 30. The pivot axis 40 is disposed on an end

region 42 of the fastening part 28, said end region 42 from a plane 44, which is oriented so as to be at least substantially perpendicular to the movement plane 30 and comprises the pivot axis 40, extends in a direction that faces away from the plane 44, wherein at most 10%, preferably at most 8%, and particularly preferably at most 5%, of an entire volume, in particular mass volume, of the fastening part 28 is disposed on a side of the plane 44 that is predefined by the direction. The pivot axis 40 is disposed so as to be at least substantially parallel to the rotation axis 20. The pivot axis 40, when viewed along the rotation axis 20, is disposed so as to be spaced apart from the protective hood 16, or from the tool receptacle 18. The protective hood adapter device 14 comprises a bearing unit 46 for mounting the fastening part 28 so as to be movable on the attachment part 26. The bearing unit 46 has two bearing elements 48, 50 which are of a mutually corresponding configuration. One bearing element 48 of the two bearing elements 48, 50 is configured as a pin which is disposed on the attachment part 26 so as to be at least substantially perpendicular to the movement plane 30, or at least substantially parallel to the pivot axis 40 and/or to the rotation axis 20. Another bearing element 50 of the two bearing elements 48, 50 is configured as a round bearing clearance which is delimited by the fastening part 28. The fastening part 28, by way of the other bearing element 50 that is configured as a bearing clearance, is mounted on the attachment part 26 so as to be rotatable or pivotable about the pivot axis 40 on the bearing pin. The bearing element 48 in a region of the other bearing element 50 is connected in a form-fitting and/or materially integral manner, in particular press-fitted, to the fastening part 28. The bearing element 48 is rotatably mounted within a clearance 52 of the attachment part 26. The bearing element 48, in a movement of the fastening part 28 relative to the attachment part 26 about the pivot axis 40 within the clearance 52, is provided to be moved conjointly with the fastening part 28. The bearing element 48 from the attachment part 26 extends in two diverging directions, the latter being in particular oriented so as to be at least substantially perpendicular to the movement plane 30, and in both directions is connected to the fastening part 28. In particular, when viewed along the movement plane 30, the fastening part 28 encompasses the attachment part 26 in a region of the bearing unit 46, in particular of the bearing elements 48, 50. The bearing unit 46 is preferably provided for delimiting, or at least substantially preventing, a movement of the fastening part 28 relative to the attachment part 26 along the pivot axis 40. The activation element 34 is disposed on a side of the fastening part 28 that faces away from the bearing element 48, or from the end region 42 that delimits the bearing unit. The bearing element 48 is preferably configured from a plastics material, in particular a duroplastic material. However, other design embodiments of the bearing unit 46, in particular of the bearing elements 48, 50, are also conceivable.

[0036] The protective hood adapter device 14, in particular the attachment part 26, by way of an assembly direction 54 that is oriented so as to be at least substantially perpendicular to the movement plane 30, is provided for being attached to the machine tool 12, in particular the protective hood 16. Upon attaching the attachment part 26 to the protective hood 16, the fastening part 28, for bracing the attachment part 26 on the protective hood 16, is provided to be moved about the pivot axis 40 toward the attachment part

26, in a fastening direction 56 that is oriented so as to be at least substantially parallel to the movement plane 30.

[0037] The attachment part 26 has an external contour 57 which, when viewed at least substantially perpendicularly to the movement plane 30, is configured so as to be arcuate about an imaginary center 58, or a central axis 60 of the attachment part 26 (see FIG. 3), wherein the attachment part 26, when viewed at least substantially perpendicularly to the movement plane 30, is disposed so as to be spaced apart from the center 58, or from the central axis 60. The central axis 60 preferably runs through the imaginary center 58 and is oriented so as to be at least substantially parallel to the pivot axis 40 and/or to the rotation axis 20. The central axis 60 preferably comprises the rotation axis 20. The central axis 60 is oriented so as to be at least substantially perpendicular to the movement plane 30. The fastening part 28, in a state in which the attachment part 26 is braced with the protective hood 16, at least partially bears on the external contour 57 of the attachment part 26. The attachment part 26 comprises an external wall 62 which, when viewed at least substantially perpendicularly to the movement plane 30 and/or along the central axis 60 and/or the pivot axis 40, is configured in the shape of a circular segment. The external wall 62 extends so as to be at least substantially parallel to the movement plane 30. The external wall 62, in particular when viewed at least substantially perpendicularly to the movement plane 30 and/or along the central axis 60 and/or the pivot axis 40, is delimited by the external contour 57 of the attachment part 26.

[0038] The attachment part 26 is formed from a casing region 64, a transition region 66, two attachment elements 68, the external wall 62 and a clearance region 70. The casing region 64 comprises a wall 72 which is configured so as to be arcuate about the imaginary center 58, or the central axis 60. The wall 72 of the casing region 64 extends across an angular range 74 (see FIG. 3) of in particular at least 90°, preferably at least 120°, preferably at least 180°, and particularly preferably at least 180°, about the imaginary center 58, or the central axis 60. The wall 72 of the casing region 64 extends across an angular range 74 of in particular at most 220°, preferably at most 200°, and particularly preferably at most 180°, about the imaginary center 58, or the central axis 60. The wall 72 of the casing region 64 particularly preferably extends across an angular range 74 of at least substantially 180° about the imaginary center 58, or the central axis 60. The transition region 66 delimits the casing region 64 on an edge of the wall 72 of the casing region 64 that is oriented so as to be at least substantially perpendicular to the central axis 60 or the rotation axis 20 and/or at least substantially parallel to the movement plane 30, and is in particular disposed on a side of the casing region 64 that faces away from the machine tool 12, in particular the protective hood 16. The transition region 66 comprises a wall 76 which is curved by at least substantially 90° and in particular extends about the imaginary center 58, or the central axis 60, by an entire angular range 78 (see FIG. 3) within which the wall 72 of the casing region 64 is configured. The clearance region 70 delimits the transition region 66 and is in particular disposed so as to be spaced apart from the casing region 64. The clearance region 70 comprises a wall 80 which delimits a clearance 82, the latter being configured in particular so as to be at least substantially perpendicular to the movement plane 30. The clearance region 70, in particular the wall 80 of the clearance region

70, and/or the clearance 82, extend/extends across an angular range 84 (see FIG. 3) of in particular at least 60°, preferably at least 90°, preferably at least 110°, and particularly preferably at least 115°, about the imaginary center 58, or the central axis 60, in particular along a periphery of the transition region 66. The clearance region 70, in particular the wall 80 of the clearance region 70, and/or the clearance 82, extend/extends across an angular range 84 of in particular at most 180°, preferably at most 150°, and particularly preferably at most 120°, about the imaginary center 58, or the central axis 60, in particular along a periphery of the transition region 66. The clearance region 70, in particular the wall 80 of the clearance region 70 and/or the clearance 82 particularly preferably extend/extends across an angular range 84 of at least substantially 120° about the imaginary center 58 or the central axis 60. The two attachment elements 68 are configured as appendages and disposed on the wall 72 of the casing region 64. The two attachment elements 68 are in each case disposed on an edge 86 of the wall 72 of the casing region 64 that is configured so as to be at least substantially perpendicular to the movement plane 30, in particular—when viewed along a circumferential direction about the central axis 60 or the rotation axis 20—disposed on two ends of the wall 72 of the casing region 64. The two attachment elements 68, in particular when viewed at least substantially perpendicularly to the movement plane 30 (see FIG. 3), have a shape which is in particular curved by at least 60°, preferably at least 80°, and particularly preferably at least 90°. The two attachment elements 68, in a state in which the attachment part 26 is assembled on the protective hood 16, are provided to secure said attachment part 26 against a movement relative to the protective hood 16 about the rotation axis 20, or the central axis 60. The two attachment elements 68 are at least largely, in particular at least substantially completely, configured across an entire height of the wall 72 of the casing region 64, said height extending in particular at least substantially perpendicularly to the movement plane 30. The external wall 62 is disposed on the clearance region 70 in a direction that faces the imaginary center 58 or the central axis 60. The external wall 62 delimits the clearance region 70. The external wall 62 is preferably oriented so as to be at least substantially perpendicular to the wall 72 of the casing region 64. The external wall 62 is preferably configured so as to be in the shape of a circular segment toward the external contour 57 of the attachment part 26, or toward the wall 72 of the casing region 64. The external wall 62 comprises an edge 88 that delimits the attachment part 26 in the direction of the imaginary center 58, or of the central axis 60. The edge 88 of the external wall 62 is at least substantially parallel to an imaginary straight line through the edges 86 of the wall 72 of the casing region 64 that are configured so as to be at least substantially perpendicular to the movement plane 30, in particular those at two ends of the wall 72 of the casing region 64 that, when viewed, are configured along a circumferential direction about the central axis 60 or the rotation axis 20. The attachment part 26, in particular the wall 72 of the casing region 64, the wall 76 of the transition region 66, the two attachment elements 68, the external wall 62 and/or the wall 80 of the clearance region 70, have/has a maximum wall thickness 90 of in particular at least 0.5 mm, preferably at least 1 mm, preferably at least 1.5 mm, and particularly preferably at least 2 mm. The attachment part 26, in particular the wall 72 of the casing region 64, the wall

76 of the transition region 66, the two attachment elements 68, the external wall 62 and/or the wall 80 of the clearance region 70, have/has a maximum wall thickness 90 of in particular at most 5 mm, preferably at most 4 mm, and in particular preferably at most 3 mm. The casing region 64, when viewed from the rotation axis 20 and/or the central axis 60, is provided to be placed about the protective hood 16. The casing region 64 is in particular provided for securing the attachment part 26 on the protective hood against a movement at least substantially perpendicular to the rotation axis 20 and/or to the central axis 60. The clearance region 70 is provided for holding the fastening part 28 on the attachment part 26, in particular by bracing.

[0039] The fastening part 28 is formed from a bearing region 92, an activation region 94, two attachment regions 96, 97 and two bracing regions 98, 99. The fastening part 28, when viewed along the movement plane 30, at least largely encompasses the attachment part 26 within the bearing region 92 (see also FIG. 3). The pivot axis 40 runs through the bearing region 92. The bearing unit 46, in particular the other bearing element 50 configured as the bearing clearance, is at least partially disposed within the bearing region 92. The fastening part 28 is attached to the attachment part 26, in particular the casing region 64, by way of the two attachment regions 96, 97. One attachment region 96 of the two attachment regions 96, 97 delimits the bearing region 92, in particular when viewed along a circumferential direction about the central axis 60, or the rotation axis 20. The attachment region 96 comprises a wall 100 which, in an assembled state or in a braced state, is provided to be at least partially attached to the attachment part 26, in particular the wall 72 of the casing region 64, the wall 76 of the transition region 66, and a wall 102 of the protective hood 16. The wall 102 of the protective hood 16 to which the wall 100 of the attachment region 96 is attached is preferably disposed on a side of the protective hood 16 that faces away from the attachment part 26, in particular from the transition region 66. The attachment region 96, in particular the wall 100 of the attachment region 96, is configured about the central axis 60, or the imaginary center 58, across an angular range 104 (see FIG. 3) of in particular at least 30°, preferably at least 40°, and particularly preferably at least 50°. The attachment region 96, in particular the wall 100 of the attachment region 96, is configured about the central axis 60 or the rotation axis 20 across an angular range 104 of in particular at most 90°, preferably at most 70°, and particularly preferably at most 60°. The attachment region 96, in particular the wall 100 of the attachment region 96, is particularly preferably configured about the central axis 60 or the imaginary center 58 across an angular range 104 of at least substantially 47°. The two bracing regions 98, 99 on the attachment region 96 are disposed on a side of the attachment region 96 that faces away from the bearing region 92. The two bracing regions 98, 99 are disposed so as to be mutually spaced apart and connected to one another by way of the two attachment regions 96, 97. The two bracing regions 98, 99 comprise in each case one wall 106, 108, the latter being oriented so as to be at least substantially parallel to the movement plane 30. The two bracing regions 98, 99, in particular the walls 106, 108 of the two bracing regions 98, 99, are oriented or disposed so as to be at least substantially mutually parallel, wherein the attachment part 26 in a braced state is in particular disposed between the two bracing regions 98, 99, in particular the walls 106, 108 of the two bracing regions

98, 99. The two bracing regions 98, 99, in particular the walls 106, 108 of the bracing regions 98, 99, are provided for bracing the attachment part 26 in an assembled state or a braced state on the protective hood 16. One bracing region 98 of the two bracing regions 98, 99, in particular the wall 106 of the bracing region 98, is provided for being attached to the attachment part 26, in particular the external wall 62 or the clearance region 70. Another bracing region 99 of the two bracing regions 98, 99, in particular the wall 108 of the other bracing region 99, is provided for being attached to a wall 102, in particular the afore-mentioned wall 102, of the protective hood 16. In particular, the other bracing region 99 in FIG. 3 is obscured by the attachment part 26, or by the bracing region 98, and is not shown. The two bracing regions 98, 99, in particular the walls 106, 108 of the two bracing regions 98, 99, when viewed at least substantially perpendicularly to the movement plane 30 are disposed so as to be spaced apart from the external contour 57 of the attachment part 26, from the transition region 66, from the casing region 64 and/or from the clearance region 70 (see FIG. 3). The two bracing regions 98, 99, in particular the walls 106, 108 of the two bracing regions 98, 99, at least in a manner substantially parallel to the movement plane 30, have a maximum length 110 (see FIG. 3) of in particular at least 80 mm, preferably at least 100 mm, and particularly preferably at least 120 mm. The two bracing regions 98, 99, in particular the walls 106, 108 of the two bracing regions 98, 99, at least in a manner substantially parallel to the movement plane 30, have a maximum length 110 of in particular at most 300 mm, preferably at most 250 mm, and particularly preferably at most 200 mm. The two bracing regions 98, 99, in particular the walls 106, 108 of the two bracing regions 98, 99, at least in a manner substantially parallel to the movement plane 30, particularly preferably have a maximum length 110 of at least substantially 103 mm. The walls 106, 108 of the two bracing regions 98, 99, when viewed at least substantially perpendicularly to the movement plane 30, in a region of the external wall 62 of the attachment part 26 have an at least substantially rectangular basic shape. A further attachment region 97 of the two attachment regions 96, 97 is disposed on the two bracing regions 98, 99, in particular in each case on an end that faces away from the attachment region 96. The further attachment region 97 is disposed so as to be spaced apart from the attachment region 96 and is in particular connected to the attachment region 96 by way of the two bracing regions 98, 99. The further attachment region 97 comprises a wall 112 which, in an assembled state or a braced state, is provided to be at least partially attached to the attachment part 26, in particular the wall 72 of the casing region 64, the wall 76 of the transition region 66 and the wall 100 of the protective hood 16. The further attachment region 97, in particular the wall 112 of the further attachment region 97, is configured about the central axis 60 or the imaginary center 58 across a maximum angular range 114 (see FIG. 3) of in particular at least 10°, preferably at least 15°, and particularly preferably at least 20°. The further attachment region 97, in particular the wall 112 of the further attachment region 97, is configured about the central axis 60 or the rotation axis 20 across a maximum angular range 114 of in particular at most 90°, preferably at most 60°, and particularly preferably at most 30°. The further attachment region 97, in particular the wall 112 of the further attachment region 97, is particularly preferably configured about the central axis 60 or the

imaginary center 58 across a maximum angular range 114 of at least substantially 18°. The activation region 94 is disposed on an end of the further attachment region 97, or of the fastening part 28, that faces away from the attachment region 96 and/or the bearing region 92. The activation region 94 preferably delimits the further attachment region 97 at one end of the fastening part 28 (see FIG. 3). The activation element 34 is disposed within the activation region 94. The activation region 94 is preferably formed by the activation element 34. The activation face 36 and/or an external face 188 of the activation element 34, in a transition from the other attachment region 97 to the activation region 94, relative to an external face 190 of the wall 112 of the other attachment region 97, have/has an angle 192 of at least substantially 135° (see FIG. 3). The fastening part 28, in particular the bearing region 92, the activation region 94, in particular the activation element 34, the walls 100, 112 of the two attachment regions 96, 97, and/or the walls 106, 108 of the two bracing regions 98, 99, have/has a maximum wall thickness 116 of in particular at least 0.5 mm, preferably at least 1 mm, preferably at least 1.5 mm, and particularly preferably at least 2 mm. The fastening part 28, in particular the bearing region 92, the activation region 94, in particular the activation element 34, the walls 100, 112 of the two attachment regions 96, 97, and/or the walls 106, 108 of the two bracing regions 98, 99, have/has a maximum wall thickness 116 of in particular at most 5 mm, preferably at most 4 mm, and in particular preferably at most 3 mm. The fastening part 28 is disposed on the attachment part 26 within the bearing region 92, in particular independently of a position of the fastening part 28 relative to the attachment part 26 about the pivot axis 40. The activation region 94 is provided for the user to engage with when moving the fastening part 28. The fastening part 28, in the state in which the attachment part 26 is braced, or in a state in which the latter is fastened to the protective hood, bears on the attachment part 26 by way of the attachment regions 96, 97. The fastening part 28 by way of the bracing regions 98, 99 braces the attachment part 26 with the protective hood 16 in a direction that is oriented so as to be at least substantially perpendicular to the movement plane 30.

[0040] The fastening part 28 comprises two bracing faces 118, 120 which are disposed on two mutually facing internal sides of the fastening part 28. The bracing faces 118, 120 are in each case disposed on an internal side of the walls 106, 108 of the two bracing regions 98, 99, said internal side facing in particular the movement plane 30 (see FIG. 7). Each of the walls 106, 108 of the two bracing regions 98, 99 comprises in each case one of the two bracing faces 118, 120. The two bracing faces 118, 120 are oriented so as to be at least substantially parallel to the movement plane 30. The two bracing faces 118, 120, in particular in a braced state, are in each case disposed on a side of the fastening part 28 that faces the attachment part 26. One bracing face 118 of the two bracing faces 118, 120, for fastening the protective hood adapter device 14, in particular the attachment part 26, is provided for being attached to the attachment part 26. Another bracing face 120 of the two bracing faces 118, 120, for fastening the protective hood adapter device 14, in particular the attachment part 26, is provided for being attached to the protective hood 16, in particular the wall 102 of the protective hood 16. The bracing face 118 is disposed on a side of the fastening part 28 that faces a motor or a main body of the machine tool 12. The other bracing face 120 is

disposed on a side of the fastening part 28 that at least largely faces away from the motor or the main body of the machine tool 12.

[0041] The protective hood adapter device 14 is shown individually in a plan view, in particular so as to be at least substantially perpendicular to the movement plane 30, in FIG. 3. The fastening part 28, in particular in a state shown in FIG. 3, in a braced position, is disposed on the attachment part 26. The protective hood adapter device 14 comprises a guide unit 122 which is disposed so as to be spaced apart from the pivot axis 40 and, in a movement relative to the attachment part 26, is provided for guiding the fastening part 28 on the attachment part 26. The guide unit 122 comprises a guide element 124 which is configured so as to be integral with the attachment part 26. The guide unit 122 comprises a guide clearance 126 which is delimited by the fastening part 28. The guide unit 122 is configured as a guide slot. However, other design embodiments of the guide unit 122 are also conceivable. The guide element 124 is configured as an appendage which, from an external side of the attachment part 26 that faces away from the movement plane 30, extends in a direction that is oriented so as to be at least substantially perpendicular to the movement plane 30. The guide element 124 has a round cross-sectional area, the latter in particular being in the shape of a circular area. The guide clearance 126 is delimited by a guide face 128 of the fastening part 28. The guide face 128, when viewed at least substantially perpendicularly to the movement plane 30, has a contour which is configured so as to be at least substantially in the shape of a racecourse. The guide unit 122, in a movement along a guide section 130, is provided for guiding the fastening part 28 on the attachment part 26. The guide section 130 is oriented so as to be at least substantially parallel to the movement plane 30 and/or at least substantially perpendicular to the pivot axis 40. The guide section 130 is configured so as to be at least largely rectilinear. A minimum spacing 132 of the pivot axis 40 and the guide unit 122, in particular of the guide element 124 and/or the guide clearance 126, is in particular at least 20 mm, preferably at least 30 mm, preferably at least 40 mm, and particularly preferably at least 45 mm, wherein the minimum spacing 132 of the pivot axis 40 and the guide unit 122, in particular of the guide element 124 and/or the guide clearance 126, is in particular oriented so as to be at least substantially parallel to the movement plane 30 and/or at least substantially perpendicular to the pivot axis 40. The guide clearance 126 extends across an entire thickness of the fastening part 28, in particular from an internal side of the fastening part 28 that faces the attachment part 26 to an external side of the fastening part 28 that faces away from the attachment part 26. The guide element 124 is disposed within the guide clearance 126. The guide element 124 extends across an entire thickness of the guide clearance 126. In particular, the guide element 124, in particular an end of the guide element 124 that is oriented so as to be at least substantially parallel to the movement plane 30, is configured so as to be flush with an external side of the fastening part 28. The guide element 124, in at least one operating state, in particular in the state shown in FIG. 3 and in a non-braced state shown in FIG. 2, at least partially bears on the guide face 128 of the attachment part 26, or of the fastening part 28, that delimits the guide clearance 126. The guide section 130 is oriented so as to be at least substantially perpendicular to the central axis 60.

[0042] The fastening part 28 has a retaining element 134 which, by means of a retaining force, is provided for retaining the fastening part 28 in precisely one non-braced position relative to the attachment part 26. The retaining force is preferably at least partially oriented along the guide section 130 of the guide unit 122. The retaining element 134 is configured so as to be integral with the fastening part 28. The retaining element 134 is configured so as to be integral with the guide unit 122, in particular the guide clearance 126. The retaining element 134 is configured as an appendage within the guide clearance 126, said appendage being in particular formed by the guide face 128 of the fastening part 28. However, other design embodiments of the retaining element 134 are also conceivable, wherein the retaining element 134 is in particular disposed so as to be separate from the guide unit 122 or spaced apart therefrom. The retaining element 134, in a movement of the fastening part 28 out of the non-braced position (see FIG. 2), is provided for generating the retaining force by way of an interaction between the guide element 124 and the guide clearance 126. The guide element 124, in a movement of the fastening part 28 out of the non-braced position, is impinged with the retaining force by way of the retaining element 134. The retaining element 134 along the guide section 130 preferably configures a taper of the guide clearance 126.

[0043] The fastening part 28 has two markings 136, 137 which are disposed on the guide unit. The markings 136, 137 are configured as arrows so as to display a position of the fastening part 28 relative to the attachment part 26. The markings 136, 137 point in each case to a position of the guide element 124, configured integrally with the attachment part 26, within the guide clearance 126. However, other design embodiments of the markings 136, 137 are also conceivable, in particular having a shape other than that of an arrow. One marking 136 of the markings 136, 137 indicates a position of the fastening part 28 which is braced with the attachment part 26 and is shown in particular in FIG. 3, wherein the fastening part 28 is pushed onto the attachment part 26 in particular up to a detent, and wherein the guide element 124 bears in particular on one end of the guide clearance 126. Another marking 137 of the markings 136, 137 shows the fastening part 28 in the non-braced position (see FIG. 2 or FIG. 5), wherein the fastening part 28 is in particular impinged with the retaining force by way of the retaining element 134, and wherein the guide element 124 bears in particular on another end of the guide clearance 126. The fastening part 28 moreover comprises an external face 138 which is disposed on a side of the fastening part 28 that faces away from the machine tool 12.

[0044] The machine tool system 10 in FIG. 4 is shown in an assembled state, when viewed along the rotation axis 20 or the central axis 60. The protective hood adapter device 14, in particular the fastening part 28, is shown in a braced state. A minimum spacing 140 of the attachment part 26 from the imaginary center 58, or from the central axis 60, when viewed at least substantially perpendicular to the movement plane 30, is in particular more than 10 mm, preferably more than 20 mm, preferably more than 30 mm. The minimum spacing 140 of the attachment part 26 from the imaginary center 58, or from the central axis 60, is particularly preferably at least substantially 33 mm. The minimum spacing 140 of the attachment part 26 from the imaginary center 58, or from the central axis 60, is oriented so as to be at least substantially parallel to the movement plane 30. The mini-

imum spacing 140 of the attachment part 26 from the imaginary center 58, or from the central axis 60, extends from the external wall 62, in particular a side of the external wall 62 that is oriented so as to be at least substantially perpendicular to the movement plane 30, in particular from the edge 88 of the external wall 62, to the imaginary center 58 or the central axis 60. A minimum spacing 142 of the transition region 66 of the attachment part 26, in particular of the wall 76 of the transition region 66, from the central axis 60, or from the rotation axis 20, is in particular at least 50 mm, preferably at least 60 mm, and in particular preferably at least 63 mm. The minimum spacing 142 of the transition region 66 of the attachment part 26, in particular of the wall 76 of the transition region 66, from the central axis 60, or from the rotation axis 20, is in particular at most 120 mm, preferably at most 100 mm, and particularly preferably at most 80 mm. The minimum spacing 142 of the transition region 66 of the attachment part 26, in particular of the wall 76 of the transition region 66, from the central axis 60, or from the rotation axis 20, particularly preferably is at least substantially 63.5 mm.

[0045] A maximum spacing 144 of the attachment part 26, in particular of the external contour 57 or of the wall 72 of the casing region 64, and of the imaginary center 58, or of the central axis 60, is in particular at least 50 mm, preferably at least 60 mm, and in particular preferably at least 70 mm. The maximum spacing 144 of the attachment part 26, in particular of the external contour 57 or of the wall 72 of the casing region 64, and of the imaginary center 58, or of the central axis 60, is particularly preferably at least substantially 72.5 mm. A maximum external diameter 146 of the attachment part 26, in particular of the external contour 57 or of the wall 72 of the casing region 64, is in particular at least substantially 145 mm.

[0046] The machine tool 12, in particular the tool 22, shown in the figures is configured having a grinding disk diameter 148 of 125 mm. However, other design embodiments of the machine tool 12, in particular of the tool 22, are also conceivable, in particular having a grinding disk diameter 148 other than 125 mm. The protective hood adapter device 14 shown in the figures is preferably provided for assembly on a machine tool 12 having a grinding disk diameter 148 of 125 mm. Other design embodiments of the protective hood adapter device 14 are also conceivable, in particular for assembly on a machine tool 12 having a grinding disk diameter 148 other than 125 mm.

[0047] The machine tool system 10 in FIG. 5 is shown in an assembled state, when viewed along the rotation axis 20 or the central axis 60. The protective hood adapter device 14, in particular the fastening part 28, is shown in a non-braced state. The fastening part 28 in the non-braced state, by means of the guide element 124 via the retaining element 134, is held in the precisely one non-braced position relative to the attachment part 26 by the retaining force. The protective hood adapter device 14 comprises a delimiting unit 150 which is provided for delimiting a movement of the attachment part 26 and of the fastening part 28 relative to one another about the pivot axis 40 to a maximum angle 152 of at most 60°, preferably at most 40°, preferably at most 30°, and particularly preferably at most 15°. The delimiting unit 150 is configured so as to be integral with the guide unit 122. The guide clearance 126, by way of interacting with the guide element 124, is provided for delimiting the movement of the attachment part 26 and of the fastening part 28 relative

to one another about the pivot axis 40. The guide section 130 about the pivot axis 40 defines a maximum angular range 154 of in particular at most 60°, preferably at most 40°, preferably at most 30°, and particularly preferably at most 15°, and of in particular at least 7°, preferably at least 10°, and particularly preferably at least 14°. The guide section 130 about the pivot axis 40 particularly preferably defines a maximum angular range 154 of at least substantially 15°. The guide element 124 for delimiting the maximum angle 152 of the attachment part 26 and of the fastening part 28 relative to one another about the pivot axis 40 bears in a form-fitting manner on the guide face 128 of the fastening part 28 that delimits the guide clearance 126. The fastening part 28 is provided for bracing the attachment part 26 with the protective hood 16, or for fastening said attachment part 26 to the machine tool 12, in particular the protective hood 16 (see FIG. 4), at an angle of 0° relative to the attachment part 26. The fastening part 28, by means of the retaining element 134, is provided to be held in the precisely one non-braced position relative to the attachment part 26 at an angle 152 of at most 60°, preferably at most 40°, preferably at most 30°, and particularly preferably at least 15°, and most particularly preferably at least substantially 15°, relative to the attachment part 26. The angle 152 of the fastening part 28 in the non-braced state relative to a position of the fastening part 28 in the braced state, shown in particular in FIG. 4, is at least substantially 15°. However, other design embodiments of the delimiting unit 150 are also conceivable, in particular separate from the guide unit 122.

[0048] A lateral view of the machine tool system 10 in a region of the protective hood 16 and of the protective hood adapter device 14 is shown in FIG. 6. The fastening part 28, in particular the bracing regions 98, 99, when viewed along the movement plane 30, conjointly with the protective hood 16 at least partially encloses/enclose the attachment part 26. The attachment elements 68 encompass the protective hood 16 on ends of the protective hood 16, or of the attachment part 26, which, when viewed, are configured along a circumferential direction about the central axis 60 or the rotation axis 20.

[0049] The attachment part 26 has an attachment face 156 for attaching to the protective hood 16, in particular when bracing or fastening the attachment part 26 with or to the protective hood 16, wherein a maximum spacing 158 of the attachment face 156, oriented so as to be at least substantially perpendicular to the movement plane 30, and an external face 138, 160 of the attachment part 26 and/or of the fastening part 28, oriented so as to be at least substantially parallel to the movement plane 30, is at most 7 mm, preferably at most 6 mm, and particularly preferably at most 5 mm. In particular, the maximum spacing 158 of the attachment face 156, oriented so as to be at least substantially perpendicular to the movement plane 30, and of the external face 138, 160 of the attachment part 26 and/or of the fastening part 28, oriented so as to be at least substantially parallel to the movement plane 30, is at least 2 mm, preferably at least 3 mm, and particularly preferably at least 4 mm. The maximum spacing 158 of the attachment face 156, oriented so as to be at least substantially perpendicular to the movement plane 30, and the external face 138, 160 of the attachment part 26 and/or of the fastening part 28, oriented so as to be at least substantially parallel to the movement plane 30, is particularly preferably at least substantially 5 mm. The external face 160 of the attachment part

26 is disposed on the external wall 62 of the attachment part 26, in particular on a side of the attachment part 26 that faces away from the machine tool 12, in particular the tool 22 and/or the tool receptacle 18. The attachment face 156 of the attachment part 26 is oriented so as to be oblique to the movement plane 30, in particular at an angle 196 of at least substantially 30°. The attachment face 156 is disposed on the attachment part 26 on a side of the attachment part 26 that faces the machine tool 12, in particular the tool receptacle 18. The attachment face 156 is disposed on an internal side of the wall 76 of the transition region 66 and/or of the wall 80 of the clearance region 70 that faces the machine tool 12, in particular the tool receptacle 18, and is delimited in particular by the wall 80 of the clearance region 70. The attachment face 156 is provided for being attached to an end of the protective hood 16 that faces the attachment part 26 and is oriented so as to be at least substantially parallel to the rotation axis 20 or to the central axis 60. The maximum spacing 158 of the attachment face 156 and of the external face 138, 160 of the attachment part 26 and/or of the fastening part 28, oriented so as to be at least substantially parallel to the movement plane 30, is oriented so as to be at least substantially parallel to the pivot axis 40. The external face 138, 160 of the attachment part 26 and/or of the fastening part 28, conjointly with at least one face 162 of the fastening part 28 that faces the machine tool 12, defines a maximum height 164 of the protective hood adapter device 14, said height being in particular oriented so as to be at least substantially perpendicular to the movement plane 30 and/or at least substantially parallel to the pivot axis 40 and/or the rotation axis 20, and/or being disposed in particular on the other bracing region 99, in particular the wall 108 of the other bracing region 99. The maximum height 164 of the protective hood adapter device 14 is in particular at most 50 mm, preferably at most 45 mm, preferably at most 40 mm, and particularly preferably at most 35 mm. The maximum height 164 of the protective hood adapter device 14 particularly preferably is at least substantially 34 mm.

[0050] The external wall 62 of the attachment part 26 in an assembled state, or in a braced state, has a minimum spacing 168 from the tool 22 and/or a receptacle opening 166 of the tool receptacle 18, said minimum spacing 168 being in particular at least 5 mm, preferably at least 10 mm, and particularly preferably at least 15 mm. The minimum spacing 168 of the external wall 62 from the tool 22 and/or the receptacle opening 166 is in particular at most 30 mm, preferably at most 27 mm, and particularly preferably at most 25 mm. The minimum spacing 168 of the external wall 62 from the tool 22 and/or the receptacle opening 166 particularly preferably is at least substantially 20 mm. The minimum spacing 168 of the external wall 62 from the tool 22 and/or the receptacle opening 166 is oriented so as to be at least substantially perpendicular to the movement plane 30 and/or at least substantially parallel to the central axis 60 or to the rotation axis 20. The receptacle opening 166 is preferably provided for receiving the tool 22 on the rotation axis 20.

[0051] Shown in FIG. 7 is a lateral view of a section through the machine tool system 10 in a region of the protective hood 16 and of the protective hood adapter device 14 on one side of the central axis 60 (see FIG. 4). The protective hood adapter device 14 comprises a latching element 170 for fixing the fastening part 28 to the attachment part 26, said latching element from the fastening part 28

extending in a direction 172 that is oriented so as to be at least substantially perpendicular to the movement plane 30. The latching element 170 is disposed on the fastening part 28. The latching element 170 is disposed within the other attachment region 97, in particular on an internal side of the wall 112 of the other attachment region 97 that faces the attachment part 26. The latching element 170 delimits one of the bracing faces 118, or the bracing region 98. The latching element 170, in a section plane that is oriented so as to be at least substantially perpendicular to the movement plane 30 and shown in particular in FIG. 7, has a wedge-shaped basic shape. The latching element 170 at least substantially extends perpendicularly to the movement plane 30, or when viewed along the pivot axis 40, extends along a straight distance on the fastening part 28 (see FIG. 4). The latching element 170, for fastening the attachment part 26, by means of the fastening part 28 engages on the clearance region 70 of the attachment part 26. The latching element 170 is disposed so as to be spaced apart from the pivot axis 40. The latching element 170 is disposed on an end of the fastening part 28 that faces away from the bearing region 92 (see FIG. 4). The latching element 170 is configured so as to be integral with the fastening part 28. The fastening element 28, in a region of the latching element 170, in particular within the other attachment region 97, has in particular a clearance 194 (see FIG. 3) which is provided so as to enable the latching element 170 to be released from the attachment part 26 by a user. The clearance 194 delimited by the fastening part 28 is configured across an entire wall thickness 116 of the fastening part 28. The clearance 194 delimited by the fastening part 28 has a rectangular basic shape. However, other design embodiments of the clearance 194 are also conceivable.

[0052] The attachment part 26 has a receptacle clearance 174 for protecting the fastening part 28 during operation of the machine tool 12, wherein the receptacle clearance 174 is disposed on an external side of the attachment part 26 that faces away from the attachment face 156. The clearance region 70 of the attachment part 26 preferably comprises the receptacle clearance 174. The attachment part 26 delimits a latching clearance 176 which is disposed in the clearance region 70. The wall 80 of the clearance region 70 that delimits the latching clearance 176 has a larger minimum spacing from the central axis 60, or from the rotation axis 20, than the receptacle clearance 174. The latching clearance 176 is in particular configured so as to be integral with the receptacle clearance 174. The receptacle clearance 174, in a direction that faces the central axis 60 or the rotation axis 20, is delimited by the external wall 62 of the attachment part 26. However, other design embodiments of the latching element 170 and/or of the receptacle clearance 174 are also conceivable, in particular having more than one latching element 170 and/or a latching element 170 that is disposed on the attachment part 26.

[0053] The external face 138 of the fastening part 28 is disposed on a side of the fastening part 28 that faces away from the receptacle clearance 174. A minimum spacing 178 of the external face 138 of the fastening part 28 and of the external face 160 of the attachment part 26, oriented so as to be at least substantially parallel to the pivot axis 40 and/or to the central axis 60, is in particular at most 2 mm, preferably at most 1 mm, and particularly preferably at most 0.5 mm, wherein the external face 160 of the attachment part 26 has in particular a smaller minimum spacing 180 from the

movement plane 30 and/or from the machine tool 12, in particular from the tool receptacle 18, than the external face 138 of the fastening part 28. The external face 138 of the fastening part 28 and the external face 160 of the attachment part 26 particularly preferably extend at least largely within a common plane that is preferably oriented so as to be at least substantially parallel to the movement plane 30.

[0054] The fastening part 28, in particular the walls 100, 112 of the two attachment regions 96, 97, on an internal side delimits/delimit an attachment receptacle 182 which, in particular in the braced or assembled state, is provided for at least partially receiving the attachment part 26. The attachment receptacle 182, in particular in FIG. 7, is shown in a region of the other attachment region 97. The fastening part 28, in particular the walls 100, 112 of the two attachment regions 96, 97, is/are configured in such a manner that an internal face 184 of the wall 72 of the casing region 64 of the attachment part 26 is configured so as to be flush with an internal face 186 of the fastening part 28 that is adjacent to the attachment receptacle 182, said internal face 184 conjointly with said internal face 186 being in particular configured in a plane that is oriented so as to be at least substantially perpendicular to the movement plane 30.

1. A protective hood adapter device for assembly on a machine tool, comprising:

- at least one attachment part for attaching configured to attach to a protective hood of the machine tool; and
- at least one fastening part which is mounted on the at least one attachment part so as to be movable in at least one movement plane,

wherein the at least one fastening part is configured to brace the at least one attachment part on the protective hood by way of a force that is oriented so as to be at least substantially perpendicular to the at least one movement plane.

2. The protective hood adapter device as claimed in claim 1, wherein the at least one fastening part is mounted on the at least one attachment part so as to be rotatable or pivotable about a pivot axis that is in particular oriented so as to be at least substantially perpendicular to the at least one movement plane.

3. The protective hood adapter device as claimed in claim 1, wherein the at least one fastening part comprises at least two bracing faces which are disposed on two mutually facing internal sides of the at least one fastening part.

4. The protective hood adapter device as claimed in claim 1, further comprising at least one latching element which, for fixing the at least one fastening part to the at least one attachment part, proceeds from the at least one fastening part or the at least one attachment part, extends in a direction that is oriented so as to be at least substantially perpendicular to the at least one movement plane.

5. The protective hood adapter device as claimed in claim 2, further comprising at least one guide unit which is disposed so as to be spaced apart from the pivot axis and is configured to guide the at least one fastening part on the at least one attachment part in a movement relative to the at least one attachment part.

6. The protective hood adapter device as claimed in claim 1, wherein the at least one fastening part and/or the at least one attachment part has at least one retaining element which, by way of a retaining force, is configured to retain the at least one fastening part in precisely one non-braced position relative to the at least one attachment part.

7. The protective hood adapter device as claimed in claim 2, further comprising at least one delimiting unit which is configured to delimit a mutual relative movement of the at least one attachment part and of the at least one fastening part about the pivot axis to a maximum angle of at most 60°.

8. The protective hood adapter device as claimed in claim 1, wherein:

- the at least one attachment part has at least one attachment face configured to attach to the protective hood, and
- a maximum spacing of the at least one attachment face oriented so as to be at least substantially perpendicular to the at least one movement plane from an external face of the at least one attachment part and/or of the at least one fastening part oriented so as to be at least substantially parallel to the at least one movement plane is at most 7 mm.

9. The protective hood adapter device as claimed in claim 1, wherein:

- the at least one attachment part has at least one external contour which, when viewed at least substantially perpendicularly to the at least one movement plane, is configured so as to be arcuate about an imaginary center, and
- the at least one attachment part, when viewed at least substantially perpendicularly to the at least one movement plane, is disposed so as to be spaced apart from the center.

10. The protective hood adapter device as claimed in claim 1, wherein:

- the at least one attachment part has (i) at least one attachment face configured to attach to the protective hood, and (ii) at least one receptacle clearance for protecting configured to protect the at least one fastening part during operation of the machine tool, and
- the receptacle clearance is disposed on an external side of the at least one attachment part that faces away from the at least one attachment face.

11. The protective hood adapter device as claimed in claim 1, wherein the at least the attachment part is at least largely configured from a metal.

12. A machine tool system, comprising at least one machine tool which has at least one protective hood, and at least one protective hood adapter device as claimed in claim 1.

13. The protective hood adapter device as claimed in claim 1, wherein the machine tool is a hand-held machine tool.

14. The protective hood adapter device as claimed in claim 1, wherein the at least the attachment part is substantially completely configured from a metal.