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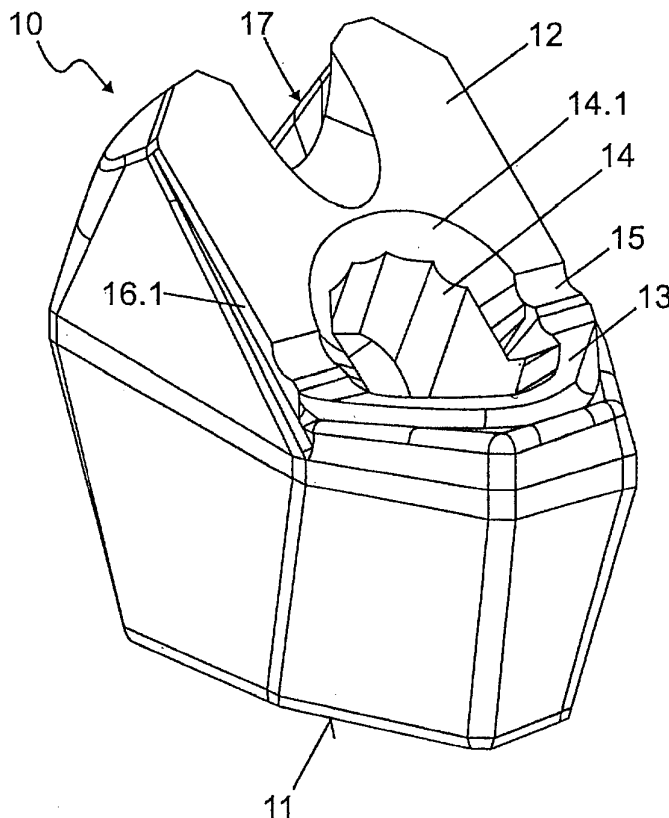
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[Fortsetzung auf der nächsten Seite]

(54) Title: CHISEL HOLDER SYSTEM

(54) Bezeichnung: MEIßELHALTERSYSTEM



(57) Abstract: The invention relates to a chisel holder system which comprises a base part (10) and a chisel holder (20). The base part (10) comprises a socket (14) wherein the chisel holder (20) comprising a plug-in insert (21) is introduced. Said chisel holder (20) which comprises a bearing surface (27) is supported on a supporting surface (12) of the base part (10), and the base part (10) comprises a shoulder (13) which is connected to the supporting surface (12). A replacement chamber is formed between the shoulder (13) and a facing end surface (28.1) of the chisel holder (20). According to the invention, the supporting surface (12) is placed in the transition region in relation to the shoulder (13) by means of at least one recess (15) of the shoulder (13) such that the flat-shaped connection between the supporting surface and the shoulder (13), in the region of the recess (15), is interrupted in order to optimise the resistance to wear and tear of the base part (10).

(57) Zusammenfassung: Die Erfindung betrifft ein Meißelhaltersystem mit einem Basisteil (10) und einem Meißelhalter (20), wobei das Basisteil (10) eine Steckaufnahme (14) aufweist, in die der Meißelhalter (20) mit einem Steckansatz (21) eingesetzt ist, wobei der Meißelhalter (20) mit einer Anlagefläche (27) an einer Stützfläche (12) des Basisteils (10) abgestützt ist, wobei das Basisteil (10) an die Stützfläche (12), anschließend einen Absatz (13) aufweist, und wobei zwischen dem

Absatz (13) und einer zugekehrten Abschlussfläche (28.1) des Meißelhalters (20) ein Nachsetzraum gebildet ist. Zur Optimierung der Verschleißigenschaften des Basisteils (10) ist es erfindungsgemäß

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Zur Erklärung der Zweibuchstaben-Codes und der anderen Ab-
kürzungen wird auf die Erklärungen ("Guidance Notes on Co-
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PCT-Gazette verwiesen.

CHISEL HOLDER SYSTEM

The invention relates to a chisel holder system with a base element and a chisel holder, wherein the base element
5 has a plug-in receptacle into which the chisel holder is inserted with a plug-in neck, wherein the chisel holder is supported by means of a contact face on a support surface of the base element, wherein the base element has a
10 shoulder adjoining the support surface and wherein a seating-adjustment space is formed between the shoulder and a facing end face of the chisel holder.

Such a chisel holder system is known from DE 43 22 401 A1. This chisel holder system has a base element which can be
15 welded, for example, to the shell face of a milling roller pipe of a road milling machine. It has a plug-in receiver, into which a shaft-like plug-in neck of a chisel holder can be inserted. The base element has a shoulder around the plug-in receiver. The chisel holder is
20 arranged spaced apart from the shoulder for forming a seating-adjustment space. In this case, for transmitting the forces during the operation, the chisel holder is solely supported on the support surface of the base element. The chisel holder constitutes a wear element of
25 the chisel holder system and must be exchanged when it reaches the wear limit.

In contract to this, the base element must be protected as much as possible from the effects of wear, because it is
30 the expensive part of the chisel holder system, which can only be replaced with a large mounting effort.

It would be advantageous if the present invention would provide a chisel holder system of the type mentioned at
35 the outset, by means of which a long service life can be realised.

The present invention provides in a first aspect a chisel holder in which, in the transition area to the shoulder, the support surface is offset from the shoulder by means of at least one depression in such a way that the flat
5 connection between the support surface and the shoulder is interrupted in the area of the depression.

In an embodiment the support surface is delimited by the depression and a definite support area is created. If
10 wear of portions of the chisel holder system should occur in the course of their operation, the depression prevents the formation of a seam on the base element, because the chisel holder extends with its contact face past the support surface at the depression, and the contact face
15 cannot work itself into the support surface there. Therefore the support surface typically maintains its shape and position. As soon as the chisel holder has been worn out, it can be exchanged for a fresh one, which can again be definitely supported on the support surface.

20 It is provided in accordance with a preferred embodiment of the invention that the depression is embodied in the shape of a groove and forms an offset extending in a vertical direction in respect of the support surface.

25 The depression can be simply made. In the interior bottom the depression is preferably rounded, so that the notch tensions introduced into the base element are minimised.

30 It is provided that the contact face of the chisel holder projects past the support surface of the base element in the area of the depression and terminate there, it is assured that the contact face of the chisel holder always projects past the support surface in the area of the
35 depression. In this way a formation of a seam on the base element is dependably prevented in a simple manner.

In a further development of this step it can be provided that the contact face of the chisel holder projects past the support surface of the base element on all sides. In this way the contour of the contact face of the base
5 element is shifted inward in respect to the contact face of the chisel holder. If wear should occur, the support surface typically will work itself into the support surface of the chisel holder and it itself remains unchanged. This embodiment furthermore protects the
10 support surface from removed material flowing off the chisel. In this way wash-outs on the support surface are prevented in a simple manner.

A preferred embodiment of the invention is of such a type
15 that the support surface of the base element is formed by a shoulder, whose cross-sectional dimensions extending parallel with the support surface are less than or equal to the contact face, at least in the area adjoining the support surface, so that on the outside the contact face
20 projects past the shoulder in this area. In this way the shoulder constitutes a wear area, inside of which this the support surface can be worn off, but can always support the chisel holder to assure its correct function. It is possible in this way to maintain the service life of the
25 base element for a long time.

If the plug-in receptacle of the base element for the plug-in neck of the chisel holder extends as far as into the area of the support surface, it can be provided that
30 on its end facing the chisel holder the plug-in receptacle terminates in a cross-sectional widening, that the depression terminates in the area of this cross-sectional widening and that the chisel holder engages the cross-sectional widening with a transition section, wherein the
35 transition section guides the plug-in neck into the contact face. In this way the transition area between the depression and the cross-sectional widening typically is

optimally matched to the dimensioning of the measurements of the contact face in the area of the plug-in neck.

The present invention provides in a second aspect a chisel holder system with a base element and a chisel holder,

5 wherein the base element has a plug-in receptacle into which the chisel holder is inserted with a plug-in neck, wherein the chisel holder is supported by means of a contact face on a support surface of the base element, wherein the base element has a shoulder adjoining the
10 support surface and wherein a seating-adjustment space is formed between the shoulder and a facing end face of the chisel holder,

characterised in that,

in the transition area to the shoulder, the support
15 surface is offset from the should by means of at least one depression, that is embodied in the shape of a groove and forms an offset extending in a vertical direction in respect to the support surface, in such a way that the flat connection between the support surface and the
20 shoulder is interrupted in the area of the depression. Further optimisation of the service life may be achieved if it has been provided that the chisel holder is of a lesser hardness in the area of the contact face than the support surface of the base element.

25

The invention will be explained in greater detail in what follows by means of an exemplary embodiment represented in the drawings. Shown are in:

30 Fig. 1, a base element of the chisel holder system in a lateral view,

Fig. 2, the example in acc. With Fig.1 in a perspective front view,

35

Fig. 3, a chisel holder of the chisel holder system in a lateral view,

Fig. 4, the chisel holder in accordance with Fig. 3 in a perspective plan view from the rear,

Fig. 5, an assembled view of the components represented in Figs. 1 to 4, and

Fig. 6, the course of a section line identified by VI- VI in Fig. 5,

Figs. 1 and 2 show a base element 10, which can be fastened by means of a curved connection face 11 to the exterior of a milling roller pipe of, for example a road milling machine. The base element 10 has a support surface 12, to which a shoulder 13 is connected at an angle. A plug-in receptacle 14 has been cut in the form of a recess into the base element 10 in the transition area between the shoulder 13 and the support surface 10. The plug-in receptacle make a transition by means of a cross-sectional widening 14.1 into the support surface 12, or into the shoulder 13.

The support surface 12 is supported by a shoulder 16.1. In this case the shoulder 16.1 has the same cross-sectional dimension vertically in a direction in respect to the support surface 12 as the support surface 12. In the transition area between the support surface 12 and the shoulder 13, the support surface 12 is closed off by means of a depression 15. The depression 15 arranged in the form of a groove on both sides of the plug-in receptacle 14 and creates a spatial connection between the cross-sectional widening 14.1 and the shoulder 16.1. In this case the groove depth has been selected to be such that, as a wear marking, it allows the wear of the support surface 12 to be detected.

Figs. 3 and 4 show a chisel holder 20 having a base body 22. The base body 22 has a downward-directed contact face 27. An apron 28 adjoins the base body 22 at the front. A plug-in neck 21, whose cross section has been matched to that of the plug-in receptacle 14 of the base element 10, protrudes in the transition area between the base body 22 and the apron 28.

As can be seen in Fig. 4, by means of a transition section 21.2 the plug-in neck 21 makes a transition into the contact face 27 of the base body 22 and into an end face 28.1 of the apron 28.

A neck 23, which has a cylindrical end section 24, has been formed, facing away from the plug-in neck 21, on the base body 22. The end section 24 terminates in a ring-shaped support surface 25, into the center of which a chisel receptacle 26 has been drilled.

To detect wear, the end section 24 has been provided with circumferential groove-like depressions 24.1. for stabilizing the neck 23, and for the improved flow-off of removed material, the neck 23 is connected with the apron 28 via a strip-like chip breaker 29.

As Fig. 4 shows, the plug-in neck 21 is provided with a pressure plate 21.1.

Figs. 5 and 6 show the base element 10 and the chisel holder 20 in the assembled position. In this case the plug-in neck 21 has been inserted into the plug-in receptacle 14. The chisel holder 20 can be fixed in place on the base element 10 by means of a fastening screw, not represented in the drawings,

which acts on the pressure plate 21.1 of the plug-in neck 21 and has been screwed into the screw receptacle 17 of the base element 10. in the course of this the contact face 27 is supported on the support surface 12. The end face 26.1 is spaced apart from the shoulder 13 for forming a seating-adjustment space.

As can be clearly seen in Fig. 6, the contact face 27 of the chisel holder 20 protrudes all around past the support surface 12. In particular, the contact face 27 terminates in the area above the depression 15.

It is to be understood that, if any prior art publication is referred to herein, such reference does not constitute an admission that the publication forms a part of the common general knowledge in the art, in Australia or any other country.

Claims

1. A chisel holder system with a base element and a chisel holder, wherein the base element has a plug-in receptacle into which the chisel holder is inserted with a plug-in neck, wherein the chisel holder is supported by means of a contact face on a support surface of the base element, wherein the base element has a shoulder adjoining the support surface and wherein a seating-adjustment space is formed between the shoulder and a facing end face of the chisel holder,
- characterised in that,
- in the transition area to the shoulder, the support surface is offset from the shoulder by means of at least one depression, that is embodied in the shape of a groove and forms an offset extending in a vertical direction in respect to the support surface, in such a way that the flat connection between the support surface and the shoulder is interrupted in the area of the depression.
2. The chisel holder system in accordance with claim 1,
- characterised in that,
- the contact face of the chisel holder projects past the support surface of the base element in the area of the depression and terminates there.
3. The chisel holder system in accordance with claim 1 or 2,
- characterized in that,
- the contact face of the chisel holder projects past the support surface of the base element on all sides.
4. The chisel holder system in accordance with any

one of claims 1 to 3,

characterised in that,

the support surface of the base element is formed
by a shoulder, whose cross-sectional dimensions
5 extending parallel with the support surface are less
than or equal to the contact face, at least in the
area adjoining the support surface, so that on the
outside the contact face projects past the shoulder
in this area.

10 5. The chisel holder system in accordance with any
one of claims 1 to 4,

characterised in that,

on its end facing the chisel holder the plug-in
15 receptacle terminates in a cross-sectional widening,
the depression terminates in the area of this cross-
sectional widening, and

the chisel holder engages the cross-sectional
widening with a transition section, wherein the
20 transition section guides the plug-in neck into the
contact face.

6. The chisel holder system in accordance with any
one of claims 1 to 5,

25 characterised in that,

the chisel holder is of a lesser hardness in the
area of the contact face than the support surface of
the base element.

30 7. A chisel holder system substantially as herein
described with reference to the drawings.

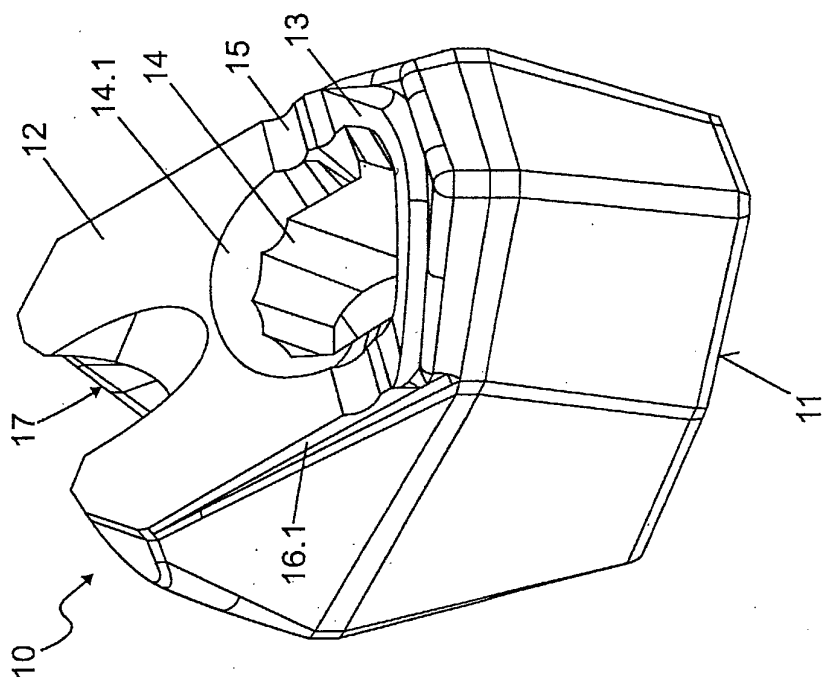


Fig. 2

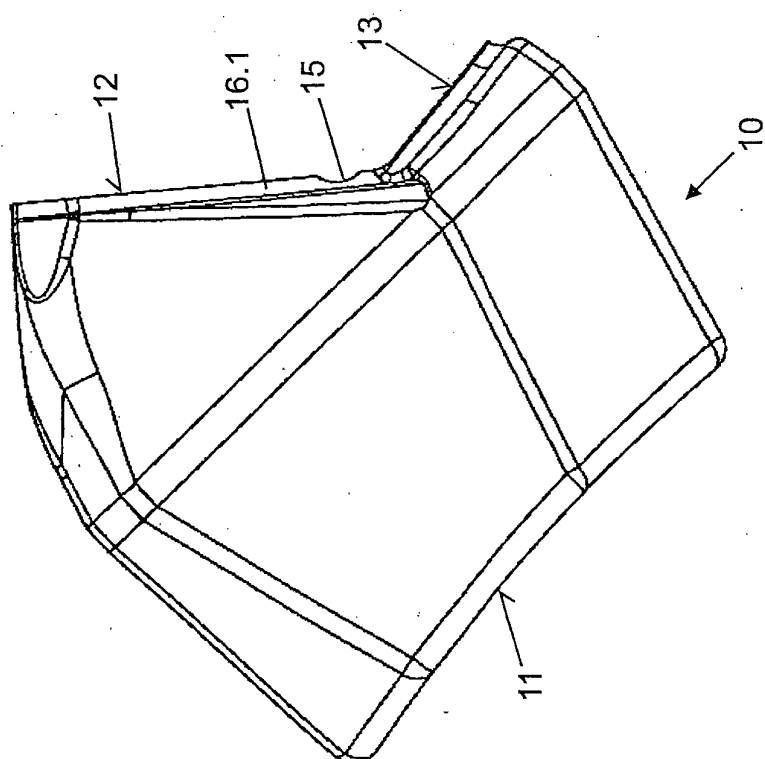


Fig. 1

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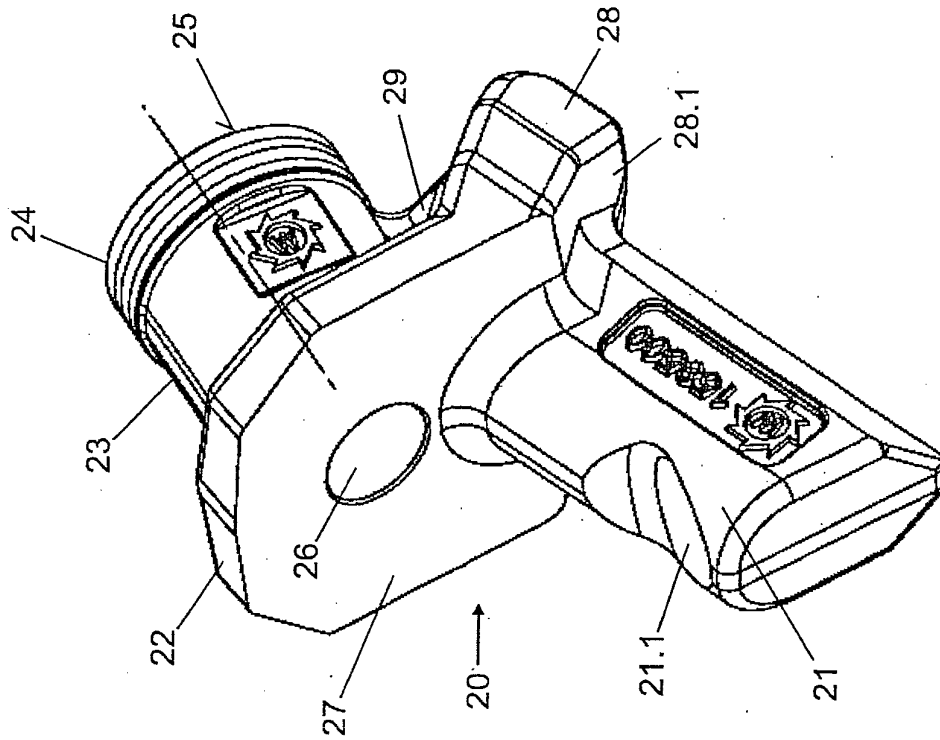


Fig. 4

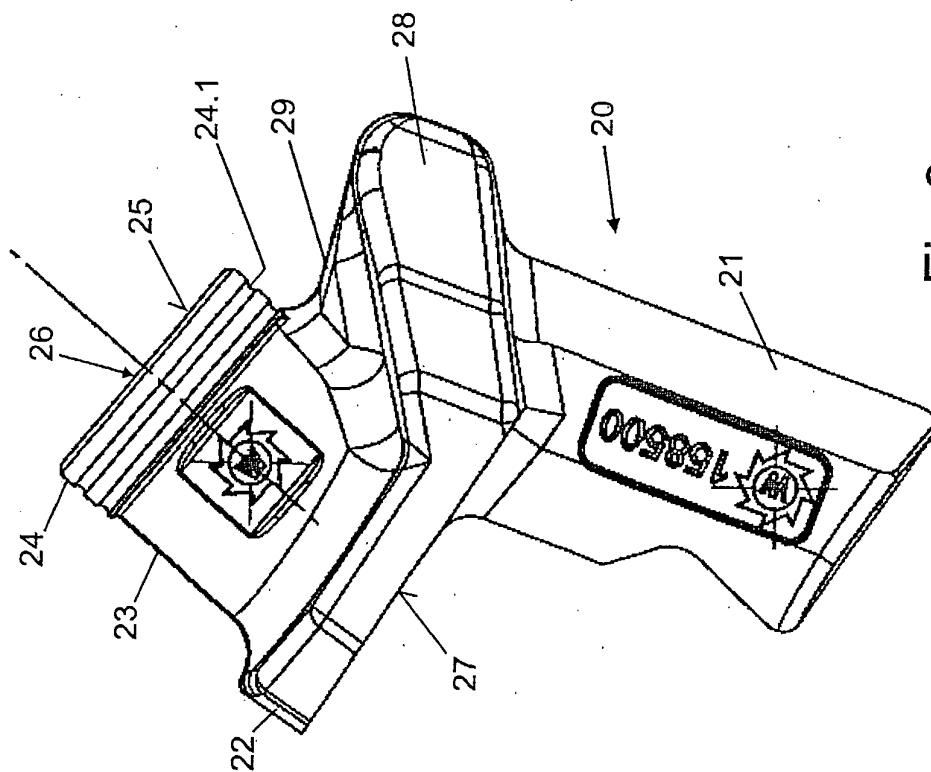


Fig. 3

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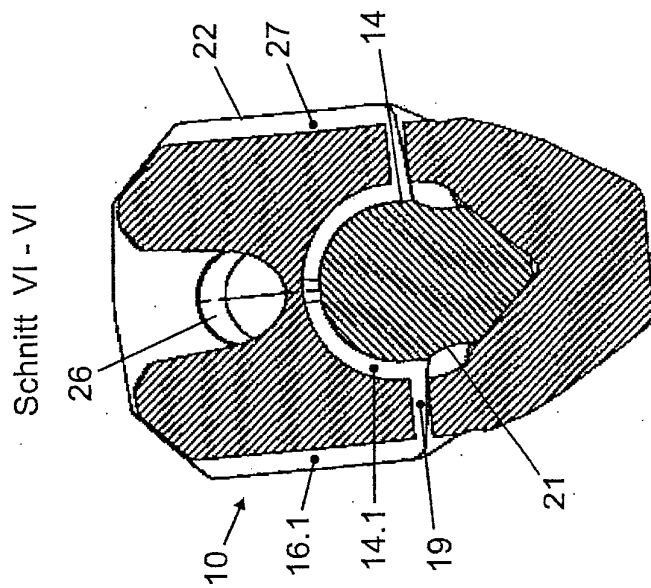


Fig. 6

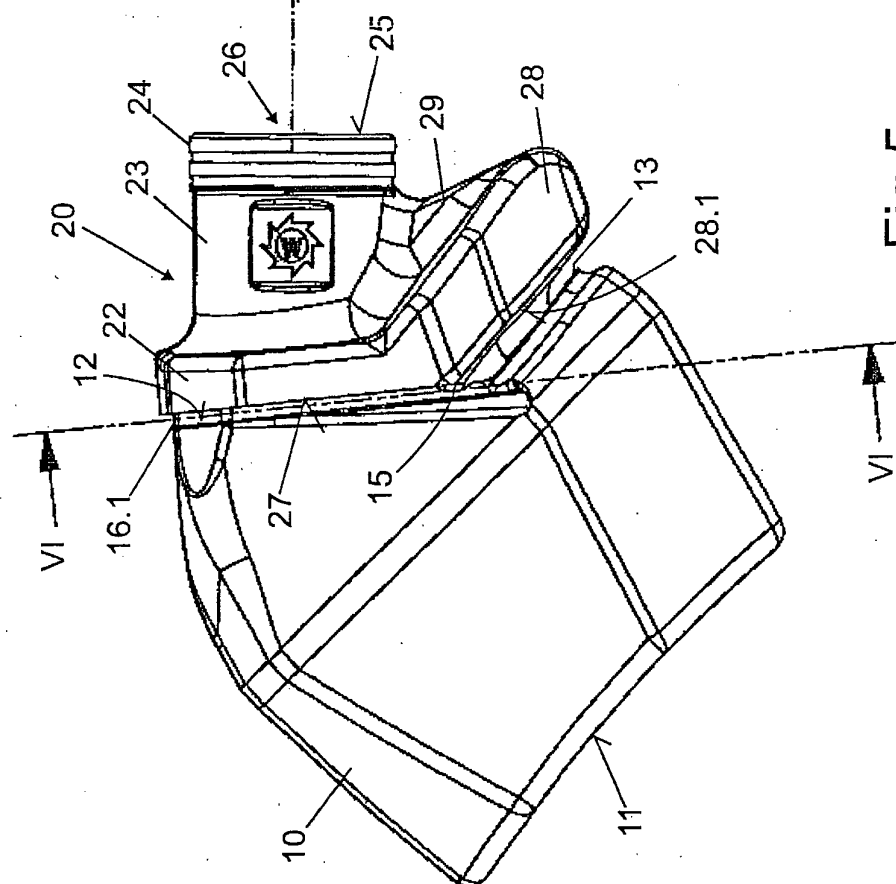


Fig. 5