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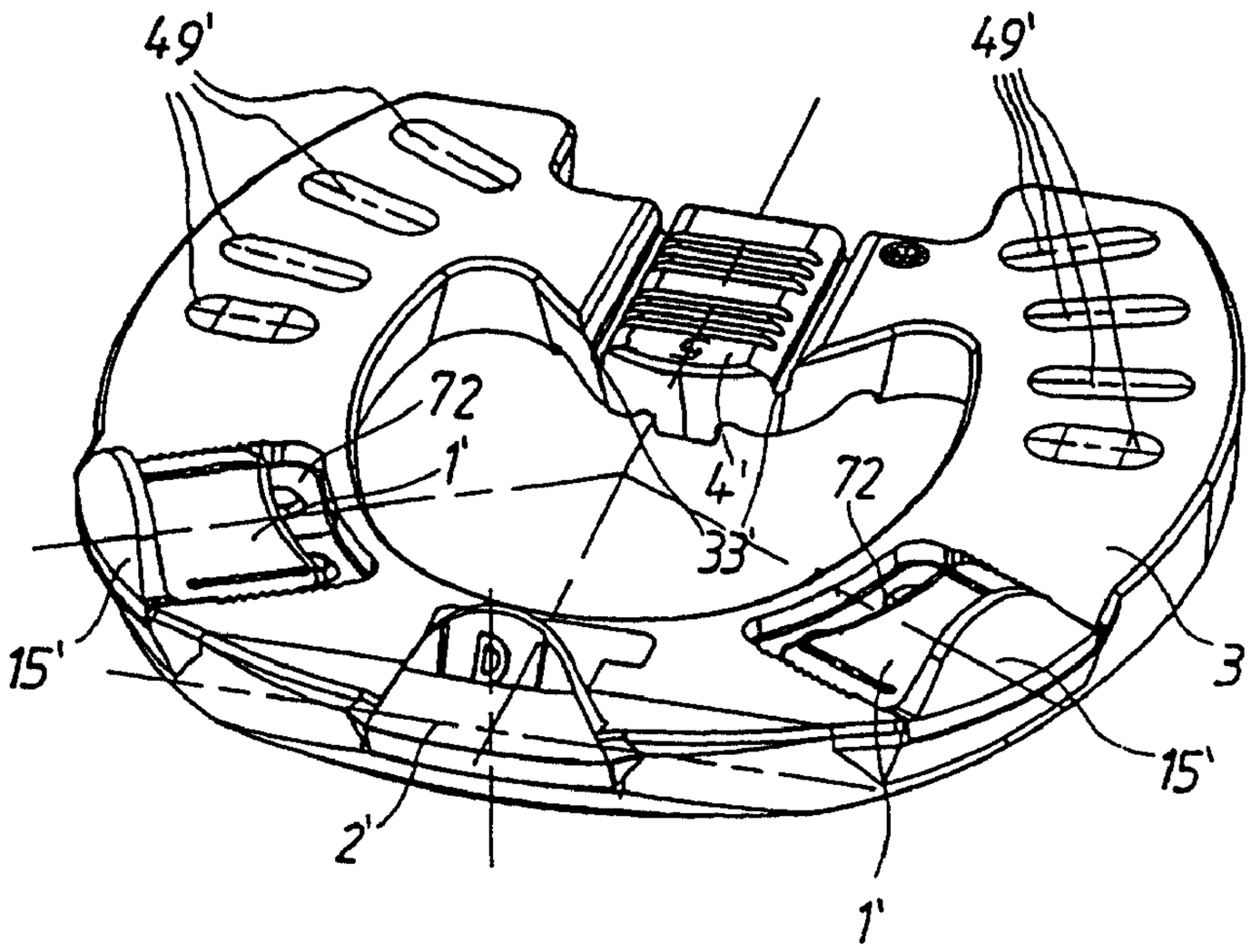
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(54) **PROTECTION POUR SABOTS D'ANIMAUX DE SELLE**
(54) **HOOF PROTECTOR**



(57) Protection pour sabots d'animaux de selle, en particulier de chevaux, comprenant un corps de base, en forme générale de fer à cheval, de préférence en matière plastique, présentant une face de marche et une face support du sabot, ainsi qu'au moins un élément de bridage fixe, avant - en considérant sa position de mise en place -, caractérisée en ce qu'elle comprend au moins deux éléments de bridage réglables en position (1, 15, 10, 100).

(57) A hoof protector for hoofs of riding animals, in particular horses, has a horseshoe-shaped base body, preferably made of plastic, having a running side and a hoof-supporting side, and at least one fixed front setting element - seen in the position of use. The hoof protector also has at least two setting elements with an adjustable position (1, 15, 10, 100).

PCT

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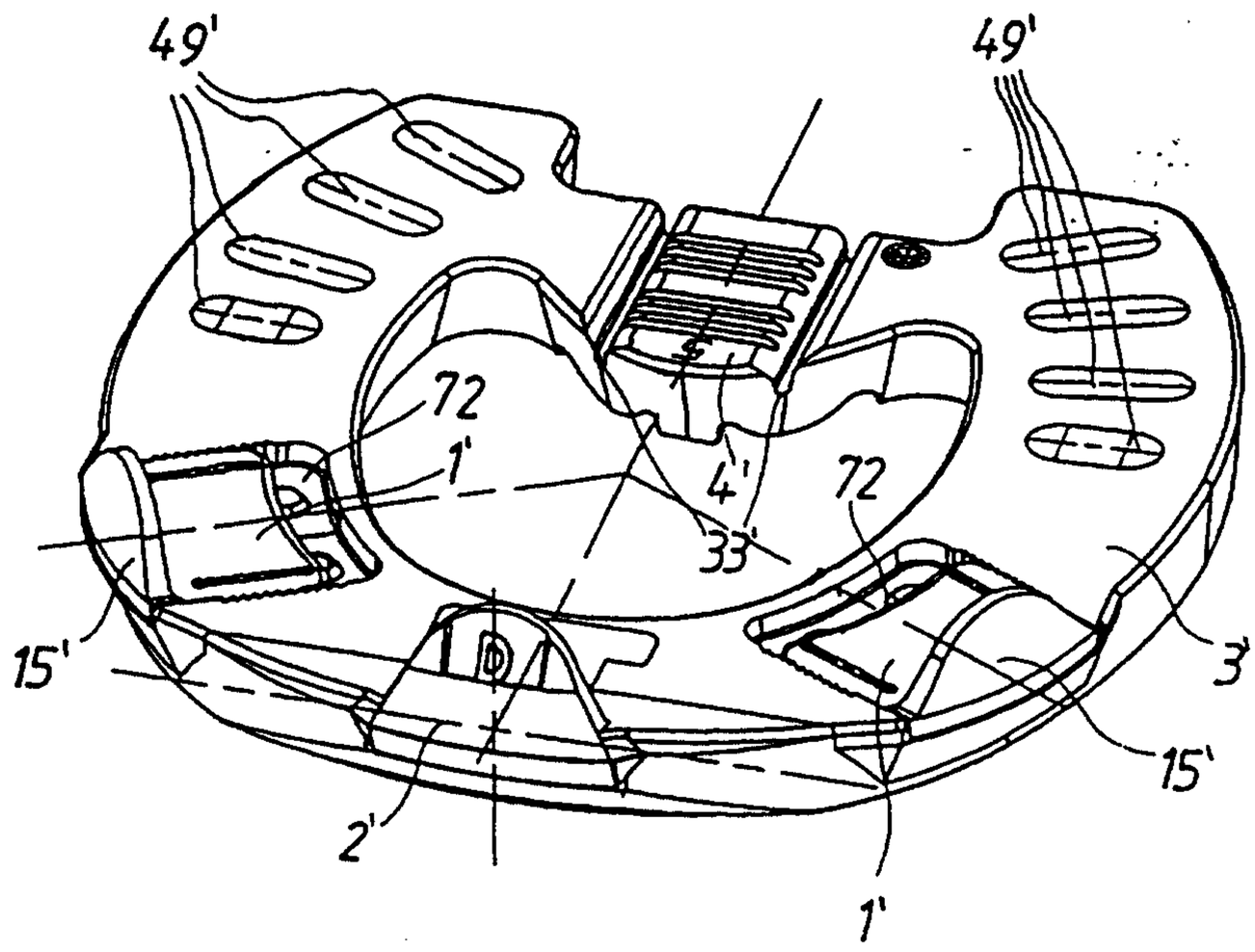
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(54) Title: HOOF PROTECTOR

(54) Bezeichnung: HUFSCHUTZ



(57) Abstract

A hoof protector for hoofs of riding animals, in particular horses, has a horseshoe–shaped base body, preferably made of plastic, having a running side and a hoof–supporting side, and at least one fixed front setting element – seen in the position of use. The hoof protector also has at least two setting elements with an adjustable position (1, 15, 10, 100).

Hoof Protector

The invention pertains to a hoof protector for the hoofs of riding animals, in particular, horse hoofs, with a horseshoe-shaped base body exhibiting a running side and a hoof-supporting side, as well as at least one fixed, front – seen in the position of use – setting element, whereby the hoof protector includes at least two setting elements which are movable in or on the base, and the setting elements can be adjusted in their position and fixed in place with respect to the base body between – seen relative to the center of the hoof protector – a radial outer position and a radial inner position, each of which setting elements is formed from a contact part which – seen in the position of use – stands up from the supporting side, and a moving part which runs at a right angle to that and which is guided in movable fashion parallel to the supporting area of the base body.

Previously known hoof protection devices are prefabricated for specific hoof sizes and therefore do not fit every riding animal. What suffers most in this regard is the stepping security of the riding animal in question during riding, since, because of the lack of correspondence with the particular hoof geometry present, a permanent and solid connection between hoof and hoof protector is also not possible. As a result, there is always repeated loosening of the hoof protector from the hoof and the fitting has to be carried out again.

A further disadvantage of the known hoof protection devices consists in the lack of ability to damp or reduce the impact loads of the riding animal brought about by the hard ground.

A hoof protector of the type mentioned at the beginning exhibits, with regard to a frontal setting element such as is known from the state of the art, at least two adjustable setting elements which provide the required lateral stability for the hoof. As a result of the adjustable setting elements, the hoof protector can be mounted or clamped on the hoof in a play-free manner so that transverse and shear forces arising during movement can be better mastered. As a result of the lateral fixing in place, it becomes possible not only to nail the hoof protector to the hoof, but to glue it to the hoof as well.

What is meant in this connection by radial direction is the direction towards or away from the center of the hoof protector, which is located within the leg regions, whereby, as a result of the adjustability in this direction, it is always ensured that the clamping forces exerted by the placing of the adjustable setting elements on the hoof can always take full effect. The setting elements can be freely adjusted between the two previously mentioned positions, and both can thus always be brought into a position against the lateral hoof regions so that the hoof protector can be mounted or clamped on the hoof in a give-free manner.

The contact part of the adjustable setting elements forms the contact area which stands up and which is characteristic of a hoof protector setting element, and by means of which a shifting of the hoof protection due to the sheer forces exerted on the hoof protector during the movement of the riding animal is prevented.

If the contact part does not lie completely against the hoof, as can be the case with rigid setting systems, when the hoof protector does not fit properly on the hoof in question the sheer forces act entirely on the fastening nails, which are actually intended only to provide a solid connection of the bottom of the hoof with the supporting side of the hoof protector, which results in a loosening of this connection and thus makes a new fitting of the riding animal necessary. The moving part of the setting elements makes possible a free movement between the inner and outer positions and a subsequent fixing of same to the base body in that position in which the hoof is brought exactly to a stop against the contact parts.

Described in GB J16 773 is a horseshoe which can be fastened to the hoof of a riding animal with no nails, whereby this nailless fastening can be achieved in one of three ways: According to Fig. 1, limit stops which run approximately at a right angle to the plane of the horseshoe are welded onto the horseshoe. According to Figs. 2, 3, these limit stops *a* are formed as L-shaped components separate from the horseshoe and screwed solidly to the horseshoe. As shown in Figs. 4, 5, the limit stops are L-shaped components separate from the horseshoe. Worked into the horseshoe are slots which run in the direction parallel to the horseshoe plane and into which the first leg of the L-shaped limit stops can be brought. The L-shaped limit stops are driven into said slots, whereby these limits stops can be adapted "to any horse."

GB L20 544 also pertains to a horseshoe which can be fastened to the hoof without nails. It exhibits limit stops which stand up from the plane of the horseshoe at approximately a right angle and which are expressly, page 1, lines 18, 19, made of a soft material and can be applied to the hoof through bending by means of hammer blows. Although one of these limit stops is indeed executed in movable fashion with respect to the horseshoe, it cannot be affixed to it. While said movable limit stop can be moved in the direction of the hoof by means of a screw, a fixing in place of this limit stop, however, is carried out through contact with the hoof.

The task of the invention is to suggest a hoof protector of the type mentioned at the beginning, with which a precise adaptation of the hoof protector to the hoof is possible through an adjustment of the setting elements, whereby quick adjustability and fixability of these setting elements is to be provided.

An additional task of the invention is to create a hoof protector with which an effective impact damping can be achieved for the riding animal.

An additional task is to create a hoof protector which does not hinder the hoof mechanics in either the horizontal or vertical direction, but does damp them.

In accordance with the invention, this is achieved through the fact that the sides of the moving part can be separably fixed on the opposite sides of the base body by means of locking teeth. As a result, a very effective locking of the adjustable setting elements to the base body can be realized.

In an additional development of the invention, it can be provided that at least the adjustable setting elements can be molded from plastic.

In this regard, it can be further provided that the adjustable setting elements be molded from a reflective or fluorescent plastic.

In this way, the hoofs of the riding animal stand out visually from the background at twilight or in darkness, and thus increase the visibility of the riding animal and the safety of the rider.

In accordance with an especially preferred embodiment of the invention, it can be provided that the base body is molded from plastic.

It has proven to be especially beneficial that the area of the moving part which lies opposite the contact part and in those regions of the base body in which these moving part areas lie have placed on them locking teeth which engage with each other.

In accordance with an additional embodiment of the invention, each of the adjustable setting elements can be placed shifted at an apex angle, preferably approximately 45°, relative to the center line of the base body.

This way, the front region of the hoof comes to lie against the front setting element, while the two diagonal, adjustable side setting elements at the edges of the hoof can be pushed up to the limit stop on the latter. An individually adjustable clamping effect can be achieved in this way.

In an additional configuration of the invention, it can be provided that the hoof protector includes two additional setting elements which can be adjusted in their positions.

With the total of four adjustable setting elements and the one front setting element, an exact centering of the hoof geometry can be carried out, in that the hoof in question is firmly clamped between the adjustable setting elements, regardless of its shape. In this way, the hoof can also be glued to the hoof protector with no possibility of the hoof protector slipping while the adhesive is hardening. The adjustable setting elements can also be configured on the hoof protector according to the invention in another quantity, even an uneven number.

Further, it can be provided that a springable locking lug can be configured on each side of the moving part, with the locking teeth formed onto the outside.

Such a locking lug makes it possible to move and lock into place the adjustable setting elements and thus makes possible a very quick positioning of the hoof protector in accordance with the invention on the hoof of the riding animal.

In an advantageous way, it can be provided in this regard that the springable locking lug is configured by means of a recess in the moving part, a recess which is open at the edge and which runs partially parallel to the sides of the moving part. This way, the moving part can be executed as an injection–molded part for which the locking lugs can be co-produced in a single manufacturing step.

The hoof nails are to be driven in only into the so-called white line. In accordance with an additional variant of the invention, in the base body it can therefore be provided that nail openings are made, the side

walls of which run in the radial direction and exhibit parallel lamellae which run essentially normal to the running side of the base body.

These nail openings make it possible to look through accurately to the white line and to nail the hoof protector precisely, as well as to use orthopedic corrective measures. The perpendicular lamellae ensure a secured grip of the nail heads, in that they surround the nails after they have been driven in, and prevent the nails from working back out.

In a further configuration of the invention, the open ends of the legs of the horseshoe–shaped base body can be joined together by means of a transverse web.

The elastic connecting web, e.g., made of soft plastic, thus provided in the region of the ray, makes possible an especially good adaptation to the hoof dynamics which result during movement, since the open ends of the legs can move away from each other proportionally to the load, and the loading movement is thereby supported.

An especially good extensibility of the transverse web is achieved if, in accordance with another embodiment of the invention, the transverse web – seen in cross section – exhibits material weakenings in the direction at a right angle to the center line. In this way, the open ends of the legs of the base body can move away from each other under load well beyond the extensibility of the soft components.

In order to stop snowball formation on the hoof protector, in accordance with another variant of the invention it can be provided that a groove-like indentation is configured, at about half the height of the inner side of the base body, into which an elastic plastic band with a bead can be drawn.

The setting element in accordance with the invention for a hoof protector for riding animals, in particular, for horses hoofs, including a moving part and a contact part which runs at a right angle to the moving part, includes locking teeth configured onto the sides of the moving part.

In accordance with a preferred embodiment, it can be provided that configured at each side of the moving part is a springable locking lug onto the outside of which locking teeth are formed.

It can further be provided that each springable locking lug is configured by means of a recess in the moving part, a recess which is opened at the edge and which runs partially parallel to the sides of the moving part.

Finally, in the case of a setting element in accordance with the invention, locking teeth can be placed on the area of the moving part opposite the contact part.

To achieve an impact-damping covering on the underside of the base body, in the case of a hoof protector for the hoofs of riding animals, horses' hoofs in particular, with a horseshoe–shaped base body which exhibits a running side and a hoof-supporting side, as well as at least one stationary front – in the position of use – setting element, whereby the hoof protector includes at least two setting elements which are movable in or on the base body, and the setting elements can be adjusted in their position and fixed in

place with respect to the base body between a – relative to the center of the hoof protector – radial outer position and a radial inner position, each of which setting element is formed from a contact part which – as seen in the position of use – stands up from the supporting side, and a moving part which runs at a right angle to that and which is guided in movable fashion parallel to the supporting area of the base body, it can be provided in accordance with the invention that on the running side of the horseshoe–shaped base body, indentations are provided which exhibit at a distance from one another openings to the supporting side, and which are filled with a filling compound made from a soft constituent, whereby the filling compound protrudes beyond the supporting side of the base body.

As a result of that, the soft filling compound can be brought into contact with the hard base body by means of an injection molding process. When placed under load, the soft elastic filling compound is compressed, so that following the compression, the hard base body rests against the ground. The impact energy which is converted into elastic energy thereby is thus deployed only to a damped extent as a load on the riding animal. When the hoof protector is lifted from the ground, the soft elastic filling compound can expand again. Along with the impact-absorbing effect, the elastic movement also prevents a buildup of snow bridges on the underside of the hoof, whereby trouble–free riding is also made possible on snow-covered ground.

In the following, the invention is explained in detail with the aid of embodiments shown in the drawings. The following are shown:

Fig. 1, a horizontal projection of an embodiment of the hoof protector in accordance with the invention;

Fig. 2, a vertical projection of the hoof protector of Fig. 1;

Fig. 3, a partial cross section through the hoof protector according to Fig. 1;

Fig. 4, another embodiment of the hoof protector in accordance with the invention;

Fig. 5, a cross section through the hoof protector according to Fig. 1 and Fig. 4;

Fig. 6, a top view of a setting element of the embodiment according to Fig. 1 and Fig. 4;

Fig. 7, a partial horizontal projection of the embodiment according to Fig. 1;

Fig. 8, a cross section through a setting element of the embodiment according to Fig. 7;

Fig. 9, a cross section through the embodiment of the hoof protector in accordance with the invention according to Fig. 7;

Figs. 10 and 11, a top view and a side view of a small supporting plate for a setting element;

Fig. 12, a horizontal projection of a setting element according to Fig. 7;

Fig. 13, a section through the drawing in Fig. 12;

Fig. 14, a partial section through a setting element according to Fig. 7;

Fig. 15, a bottom view of the hoof protector according to Fig. 1;

Figs. 16, 17, 18 and 19, a partial section through different variants of a profiling according to Fig. 15;

Fig. 20, a section through the drawing in Fig. 15;

Fig. 21, a horizontal projection of an additional embodiment of the hoof protector in accordance with the invention;

Fig. 22, a diagonal projection of the hoof protector according to Fig. 1;

Fig. 23, a horizontal projection of a setting element of the hoof projector according to Fig. 22;

Fig. 24, a side projection of the hoof protector according to Fig. 21, and

Fig. 25, a bottom view of the hoof protector according to Fig. 21.

The hoof protector shown in Fig. 1 is intended for a hoof of a riding animal, in particular, a horse's hoof, and is made up of a horseshoe – shaped base body 3 having a running side and a hoof – supporting side, as well as a fixed front – as seen in the position of use – setting element 2.

Provided on the underside of the fixed front setting element 2 is a profiling 29 (Fig. 5) which aids the stability of the riding animal on soft terrain or ascending or descending land.

In order to make possible better adaptability of the hoof protector to the shape of the individual hoof, in accordance with the invention it is provided that the hoof protector includes at least two setting elements 1, 15 with an adjustable position. The latter are placed symmetrically around the center line M, each shifted at an apex angle, preferably approximately 45°, relative to this center line M of the base body 3.

Each of the adjustable setting elements 1, 15 can be moved – seen relative to the center of the hoof protector – between a radial outer position and a radial inner position, and fixed in place with respect to the base body 3.

Drawn in the left half of Fig. 1 is the setting element 1, 15 in its inner position in which it is fully retracted, while in the right half of Fig. 1 the setting element 1, 15 is shown in its radial outer position, i.e., fully extended. The radial outer position thus even allows enough room for hoofs which are a great deal larger, while the hoof size diminishes continuously towards the inner position.

To further improve the bordering of the hoof, it is provided that hoof protector includes two side setting elements 10, 100 with an adjustable position. These setting elements 10, 100 which are placed in a symmetrical position with respect to the center line are shown in Fig. 1 in retracted position at the left and in extended position at the right. Like the setting elements 1, 15, they are also designed to be moved between a radial outer position and a radial inner position.

Within the framework of the invention, any desired number of adjustable setting elements can be provided for clasping the hoof. The variant reproduced in Fig. 1 with four adjustable setting elements makes it possible for the hoof to be clasped and fixed in place as if in a collet chuck. It is thus also possible to glue the hoof to the hoof protector by means of a suitable bonding agent. The latter form of joining makes possible a very stable fixing of the hoof protector to the hoof, and the saving of the nailing operation which is very stressful and time – intensive for both man and animal.

The design of the adjustable setting element 1, 15 can be seen in Fig. 6. It is made up of a contact part 15 which – seen in the position of use – stands up from the supporting side of the base body 3, as well as a moving part 1 which runs normal to that and which is guided in a movable fashion parallel to the supporting area of the base body 3.

As can be seen from Fig. 6, for the locking anchoring there is configured at each side of the moving part 1 of the adjustable setting element a springable locking lug 52, which is realized by means of a recess

53 in the moving part 1, which recess is open at the edge and runs partially parallel to the sides of the moving part.

Formed onto the outer side of the springable locking lugs 52 are locking teeth 54 which are used for engaging in diametrically opposed locking teeth 55 configured in the base body 3. In this way, the moving part 1 of the setting element can be slipped with the contact part 15 onto the appropriate part of the hoof so that it makes contact in clamping fashion. The locking teeth 54 yield to a movement directed towards the center of the hood protector, and, in the contacting position of the contact part 15, prevent any slipping back by the setting element in question, since they lock into the diametrically opposed locking teeth 55 and block any movement directed towards the outside.

The same kind of teeth are provided in Fig. 12 for the additional setting elements 10, 100, consisting of a moving part 10 and a contact part 100 which stands away from the supporting area, but it can also be replaced by an equivalent mechanical means. A small supporting plate 300 provides an evenly distributed pressure area for the fixing of the setting element 10, 100 relative to the base body 3 (Figs. 10, 11). The small supporting plate 300 exhibits at its ends strips 301 which are pressed into the recesses 24 of the moving part 10 (Fig. 12) and thus prevent the locking lugs from receding.

The diametrically opposed locking teeth 55 and 28 are formed into guide indentations for the particular moving parts 1 and 10 which are cut into in the base body 3. As can be seen in Fig. 9, protruding in a central position in the guide indentation for the moving part 10 is a peg 97 with a snap bead into which the small supporting plate 300 can be snapped in using its central opening 302. Provided for this purpose in moving part 10 is a recess 13, which is shaped like an elongated hole, so that adequate space remains for the small supporting plate 300 to be snapped in completely in accordance with the particular position of the setting element 10, 100. In its snapped – in position, the small supporting plate 300 thus prevents a receding of the locking lugs 27, and thus holds the setting element 10, 100 securely in its position (Figs. 7, 9). However, a fixing in place could also be realized in exactly the same way by means of a screw connection.

The hoof protector in accordance with the invention, as it is shown in Figs. 4 and 15, for example, makes possible a faultless fitting of the hoof protector to the horse, since cut into the base body 3 are nail openings 26 which run in the radial direction and by means of which it is possible to look through to the so – called white line and thus nail very accurately.

A further improvement with respect to conventional hoof protection devices can be achieved through the fitting of a transverse web 4 (Fig. 4), which links the open ends of the legs of the horseshoe – shaped base body 3 and which is made of a soft constituent, e.g., a soft plastic. As a result of the elasticity of the soft transverse web 4, the open ends of the legs of the base body can deflect outward under load and thus respond to the hoof dynamics which, when they arise, naturally bring with them a spreading out of the hoof loading.

In order to support this transverse extension of the transverse web 4 as much as possible and increase it beyond the extensibility of the material, it is provided that the soft elastic transverse web 4 – when seen in cross section – exhibits material weakenings 33 which run normal to the center line M and which can be seen in Fig. 3. The transverse web 4 spreads from the ends of the legs to the center line M in the direction of the hoof protector center, as a result of which a substantial adaptation to the shape of the hoof is provided.

On the side with the running area, the elastic transverse web 4 is protected by a supporting region 30, which is oriented in the direction of the front, fixed setting element 2, is made of a hard constituent, e.g., a hard thermoplastic, and is set into the transverse web 4. This can be carried out through appropriate extrusion coating of the hard plastic part 30. For that purpose, it is provided with a suitably configured profile as shown in Fig. 3. In the same way, an anchoring profile of the transverse web in base body 3 is provided for extrusion coating. If necessary, the transverse web 4 can also be removed mechanically, in that it is simply cut from the hard plastic base body.

In addition to transverse web 4, a further soft constituent, e.g., a soft thermoplastic compound, is integrated into the hoof protector in accordance with the invention, in order to avoid impact loads which can cause negative wear phenomena in hoofed animals.

To do this, provided in the horseshoe – shaped base body 3 are indentations which exhibit openings to the supporting side which are at locations which are at a distance from each other. The indentations are filled with a filling compound 40, 49 made from a soft constituent, e.g., a soft thermoplastic, and [it] is secured in the openings so it does do not fall out. The filling compound 40 can exhibit a profiling like the sole of a shoe, approximately as shown in Fig. 9. In order to provide an impact – damping effect, the filling compound 40 protrudes beyond the running side of the base body 3 (Fig. 9, Fig. 20).

Overall, the indentations filled with the filling compound 40 extend in the front region approximately between the two adjustable setting elements 1, 15 along the periphery of the hoof protector, as can best be seen in Fig. 15.

For a preliminary fixing of the hoof protector to the hoof, mounting points 47 are configured on the supporting side in accordance with the embodiment of Fig. 4. The hoof protector can be pressed onto the mounting points 47 in its correct position before the fixed clamping of the adjustable setting elements 1, 15 and 10, 100 so that it is secured against slipping, after which a positioning and final affixing can be carried out.

The base body 3 of the hoof protector in accordance with the invention is made of a hard constituent, e.g., a hard thermoplastic which preferably exhibits a hardness of 10 to 100 Shore D, while the range of hardness of the soft part, the filling compound 40 and the transverse web 4, preferably lies in a range between 50 and 100 Shore A. In this regard, the hard constituent can exhibit reinforcing elements, such as glass fibers, for example, which preferably amount to 20 vol – %. However, in many cases this proportion

can comprise as much as 60 vol – %. By varying the properties, the volumetric content, the dimensions and the orientation of the reinforcing elements, anisotropic properties can be set, within certain limits, over the hoof protector. Thus, the mechanical properties relative to the modulus of elasticity, tensile strength and flexural strength of the hard plastic regions can be modified and optimized according to the requirements.

The connection between the hard and soft regions of the hoof protector in accordance with the invention is preferably positive and non – positive, so that the testing of the widest possible variety of material combinations is possible. For example, what can be involved in this regard is the connecting of two thermoplastic elastomers based on polyurethane (TPE – U). Polyamide 12 (PA12) and thermoplastic elastomers based on polyetheramide (TPE – A) are an alternative to that.

However, the materials mentioned above do not limit the object of the invention in any way, rather, the materials can be chosen freely.

The setting elements, the adjustable setting elements in particular, can be made of a reflective or fluorescent plastic, which thus ensure continued visual detection of the riding animal even during darkness.

Shown in Fig. 15 on the running side of the hoof protector are profile regions 85, in which various kinds of profiles can be impressed, of which the embodiments 93, 90, 91, 92 are shown in Figs. 16 through 19. The function of this special profiling consists in bringing about at the legs of the hoof protector a load – dependent, quasi – synchronous spreading out with the loadings of the horse's hoof. In this regard, the transverse web 4 can move apart proportionally to the load. This prevents the hoof from digging into the ground when weight is put on it. In this regard, the profiling regions 85 support the transverse moving apart of the hoof legs.

In addition, configured at approximately half height on the inner side of the base body 3, is one more groove – like indentation 57 (Fig. 5), into which an elastic plastic band with a bead can be drawn. Such a band remedies the problem of snowball formation on the hoof protector.

Figs. 21 through 25 show a further embodiment of the hoof protector in accordance with the invention, with a base body 3' and a fixed front setting element 2'.

Provided on the hoof – supporting side shown in Fig. 21 are two setting elements 1', 15' with an adjustable position, which are placed at an angle symmetrically to the center line and each of which is guided in an indentation 72 of the hoof – supporting side of the base body 3'. In that regard, the setting elements 1', 15' can be moved between a radial outer position and a radial inner position with respect to the base body 3'.

Shown in detail in Fig. 23 is one of the setting elements 1', 15'. Once again, locking lugs 52' are provided which are springable on both sides and the movability of which is implemented through parallel recesses 53'. The locking lugs 52' are configured closed on their ends towards the edge side in order to thus

make possible increased stability against breaking off. The locking teeth 54' are intended for engagement in the diametrically opposed locking teeth 55' of the base body 3', so that the moving part 1' of the setting element in question is slipped with the contact part 15' onto the hoof so that the contact part 15' lies in clamping fashion against the hoof.

The transverse web 4' which links the ends of the legs of the horseshoe – shaped base body 3' is made of the same hard plastic as the base body 3', and exhibits material weakenings 33' which make possible an outward deflection when the hoof protector is loaded.

The indentations and openings provided in the base body 3' are filled with a filling compound 40', 49' made of a soft plastic and have an impact – damping effect. For this purpose, the soft filling compound 40' protrudes beyond the running side of the base body 3' (Fig. 25). Cut into the running side of the base body 3' are nail openings 26', the side walls of which run in the radial direction and exhibit parallel lamellae 71 which run essentially normal to the running side of the base body 3'. They surround the nail heads after they have been driven in, and prevent them from working back out.

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PATENT CLAIMS

1. Hoof protector for the hoofs of riding animals, in particular, horse hoofs, with a horseshoe–shaped base body exhibiting a running side and a hoof-supporting side, as well as at least one fixed, front – when seen in its position of use – setting element, whereby the hoof protector includes at least two setting elements (1, 15, 10, 100, 1', 15') which are movable in or on the base, and the setting elements (1, 15, 10, 100, 1', 15') can be adjusted in their position and fixed in place with respect to the base body (3, 3') between – seen relative to the center of the hoof protector – a radial outer position and a radial inner position, each of which setting elements (1, 15, 10, 100, 1', 15') is formed from a contact part (15, 100, 15') which – as seen in the position of use – stands up from the supporting side, and a moving part (1, 10, 1') which runs at a right angle to that and which is guided in movable fashion parallel to the supporting area of the base body (3, 3'), **characterized in that** the sides of the moving part (1, 10) can be detachably fixed to the opposite sides of the base body by means of locking teeth (54, 27, 54'; 28, 55, 55').

2. Hoof protector according to claim 1, **characterized in that** at least the adjustable setting elements (1, 15, 10, 100, 1', 15') are molded from a plastic.

3. Hoof protector according to claim 2, **characterized in that** the adjustable setting elements (1, 15, 10, 100, 1', 15') are molded from a reflective or fluorescent plastic.

4. Hoof protector according to claim 1, 2 or 3, **characterized in that** the base body (3, 3') is made of plastic.

5. Hoof protector according to one of the claims 1 through 4, **characterized in that** locking teeth which engage with each other are arranged on the area of the moving part (1, 10, 1') which is opposite the contact part (15, 100, 15') and in those regions of the base body (3) in which these moving part areas lie.

6. Hoof protector according to one of the claims 1 through 5, **characterized in that** each of the adjustable setting elements (1, 15, 1', 15') is placed shifted at an apex angle, preferably approximately 45°, relative to the center line of the base body.

7. Hoof protector according to one of the claims 1 through 6, **characterized in that** the hoof protector includes two additional setting elements (10, 100) which can be adjusted in their position.

8. Hoof protector according to one of the claims 1 through 7, **characterized in that** configured onto each side of the moving part (1, 10, 1') is a springable locking lug (25, 52, 52'), onto which the locking teeth (54, 27, 54') are formed on the outside.

9. Hoof protector according to claim 8, **characterized in that** each of the springable locking lugs (25, 52, 52') is configured by means of a recess (53, 24) in the moving part (1, 10), which recess is open at the edge and runs partially parallel to the sides of the moving part.

10. Hoof protector according to one of the preceding claims, **characterized in that** in the base body (3, 3'), nail openings (26, 26') are cut out, the side walls of which run in the radial direction and exhibit parallel lamellae (71) which run essentially at a right angle to the running side of the base body (3').

11. Hoof protector according to one of the preceding claims, **characterized in that** the open ends of the legs of the horseshoe–shaped base body (3, 3') are connected by means of a transverse web (4, 4').

12. Hoof protector according to claim 11, **characterized in that** the transverse web (4) – seen in cross section – exhibits material weakenings (33) in the direction at a right angle to the center line (M).

13. Hoof protector according to one of the preceding claims, **characterized in that** a groove–like indentation (57) is configured, at about half the height of the inner side of the base body (3), into which an elastic plastic band with a bead can be drawn.

14. Setting element (1, 10, 15, 100, 1', 15') for a hoof protector for the hoofs of riding animals, in particular, horses' hoofs, including an moving part (1, 10, 1') and a contact part (15, 100, 15') which runs at a right angle to the moving part (1, 10, 1'), **characterized in that** locking teeth (54, 54') are configured onto the sides of the moving part (1, 10, 1').

15. Setting element (1, 10, 15, 100, 1', 15') according to claim 14, **characterized in that** configured onto each side of the moving part (1, 10) is a springable locking lug (25, 52), formed onto the outside of which are the locking teeth (54, 27).

16. Setting element (1, 10, 15, 100, 1', 15') according to claim 14, **characterized in that** each of the springable locking lugs (25, 52, 52') is configured by means of a recess (53, 24) in the moving part (1, 10), which recess is open at the edge and runs partially parallel to the sides of the moving part.

17. Setting element (1, 10, 15, 100, 1', 15') according to one of the claims 14 through 16, **characterized by** locking teeth placed on the area of the moving part (1, 10, 1') opposite the contact part (15, 100, 15').

18. Hoof protector for the hoofs of riding animals, in particular, horse hoofs, with a horseshoe–shaped base body exhibiting a running side and a hoof–supporting side, as well as at least one fixed, front – when seen in its position of use – setting element, whereby the hoof protector includes at least two setting elements (1, 15, 10, 100, 1', 15') which are movable in or on the base, and the setting elements (1, 15, 10, 100, 1', 15') can be adjusted in their position and fixed in place with respect to the base body (3, 3') between – seen relative to the center of the hoof protector – a radial outer position and a radial (15, 100, 15') which – as seen in the position of use – stands up from the supporting side, and a moving part (1, 10, 1') which runs at a right angle to that and which is guided in movable fashion parallel to the supporting area of the base body (3, 3'), **characterized in that** on the running side of the horseshoe-shaped base body (3, 3'), indentations are provided which exhibit at a distance from one another openings to the supporting side, and which are filled with a filling compound (40, 49, 40', 49') made from a soft constituent, whereby the filling compound (40, 40') protrudes beyond the running side of the base body (3).

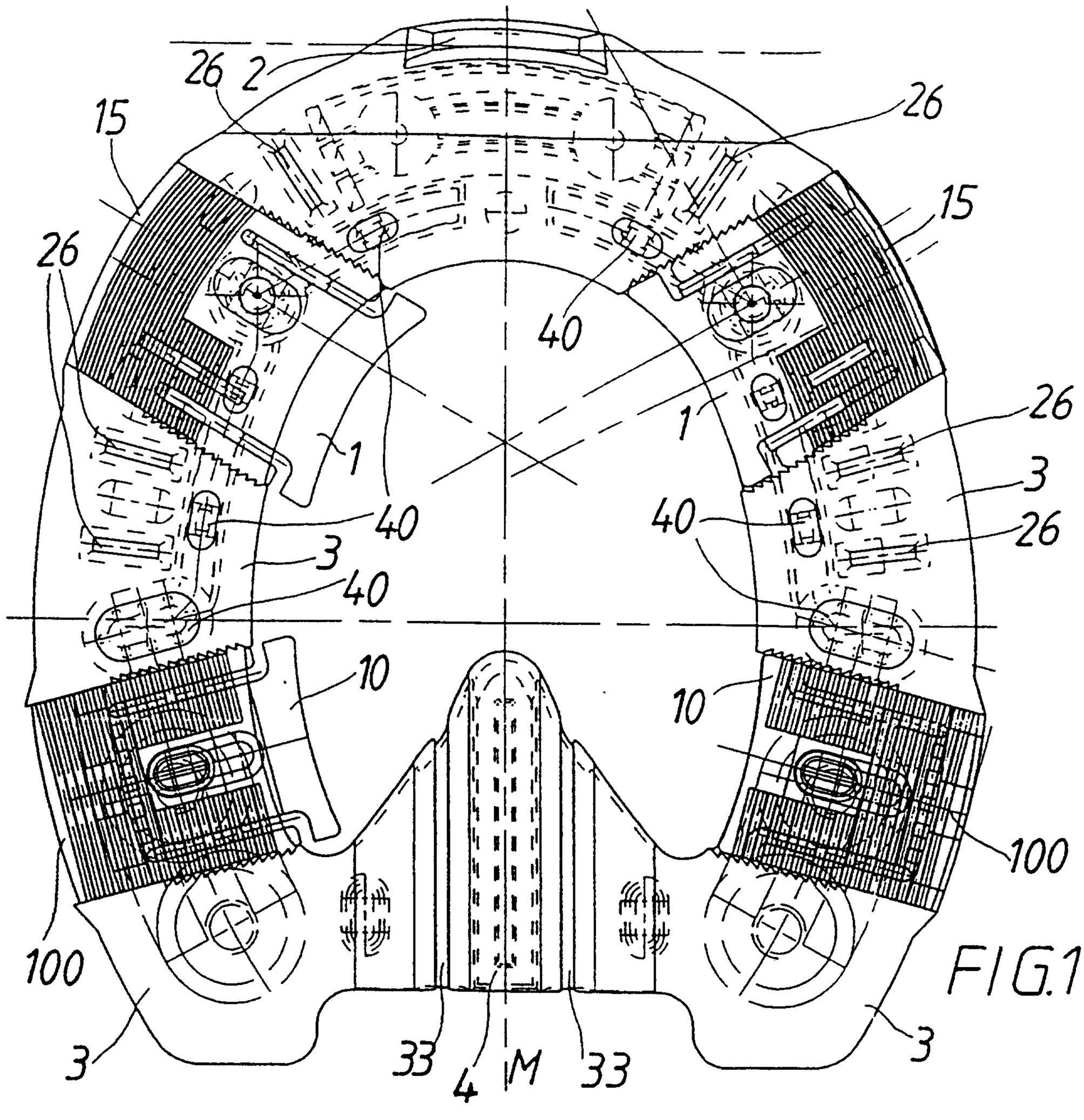


FIG.1

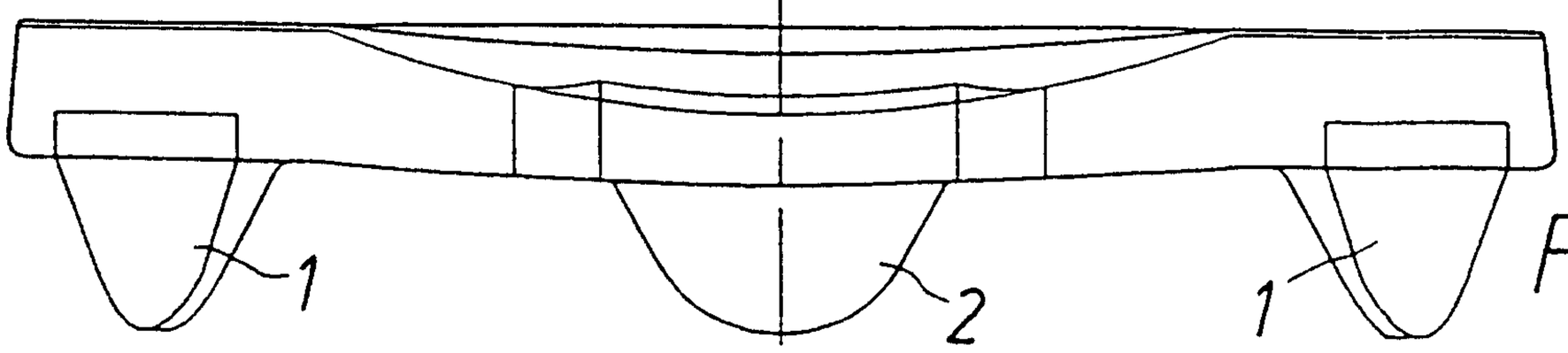


FIG.2

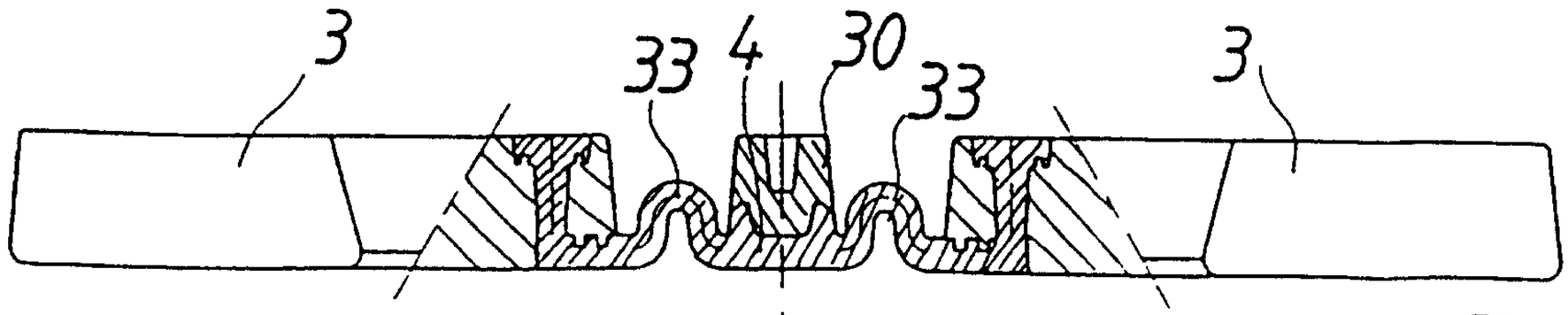


FIG.3

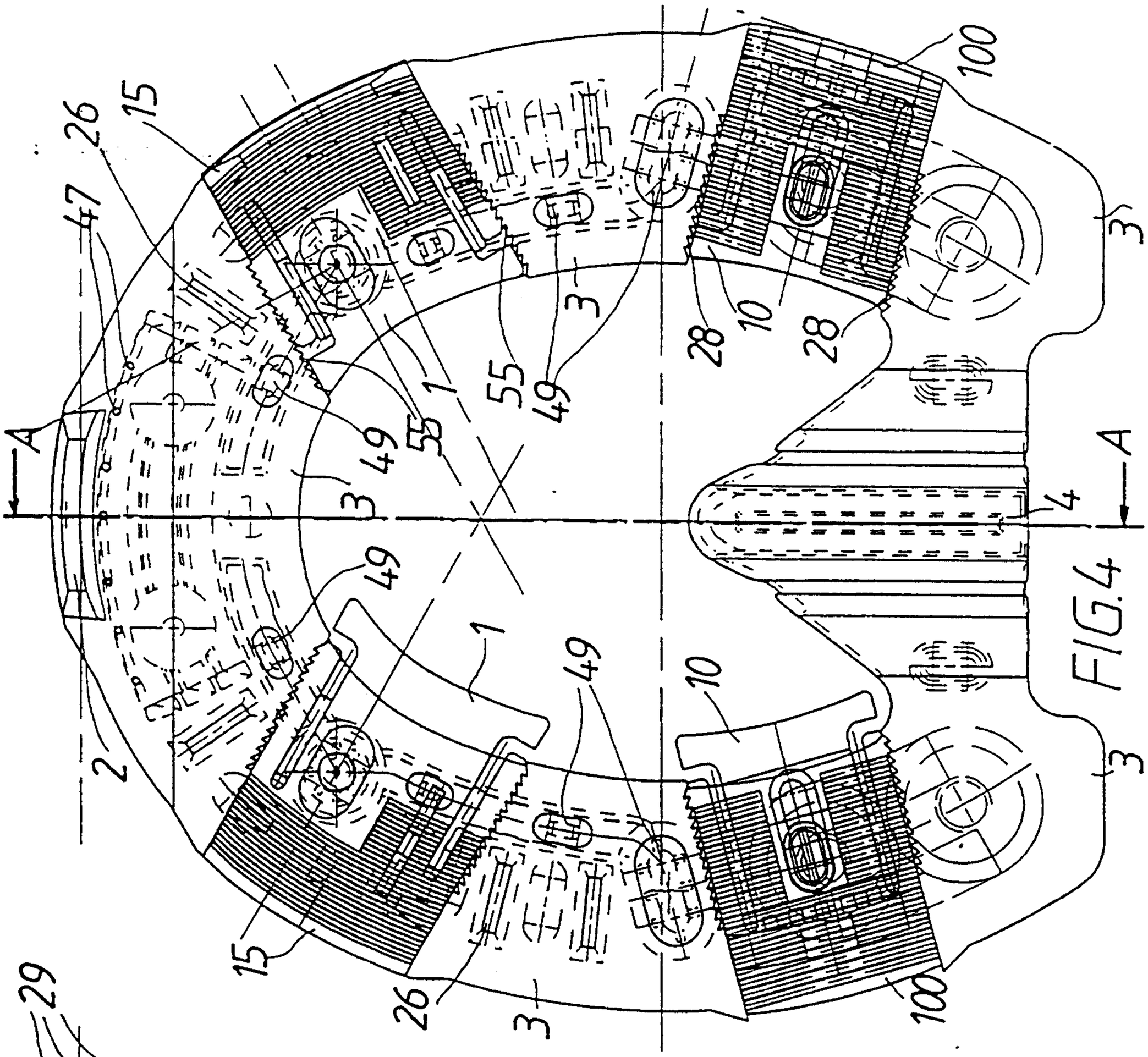


FIG.4

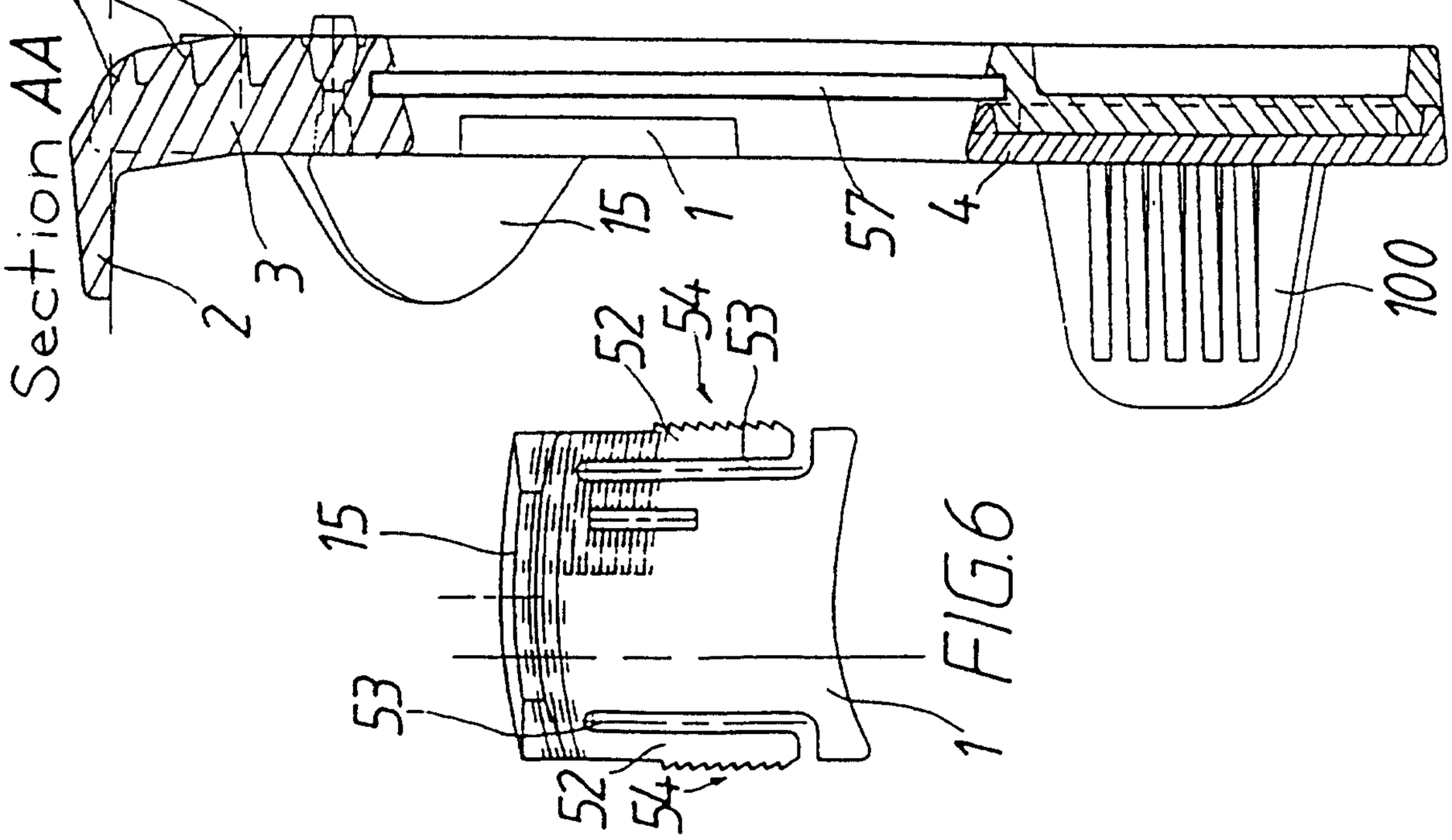


FIG.5

FIG.6

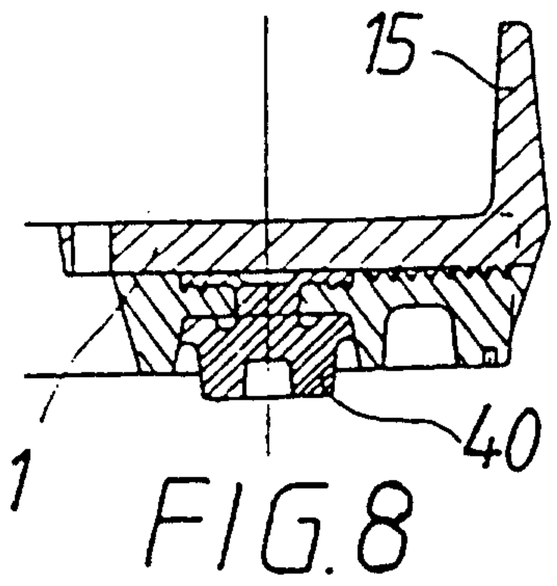


FIG.8

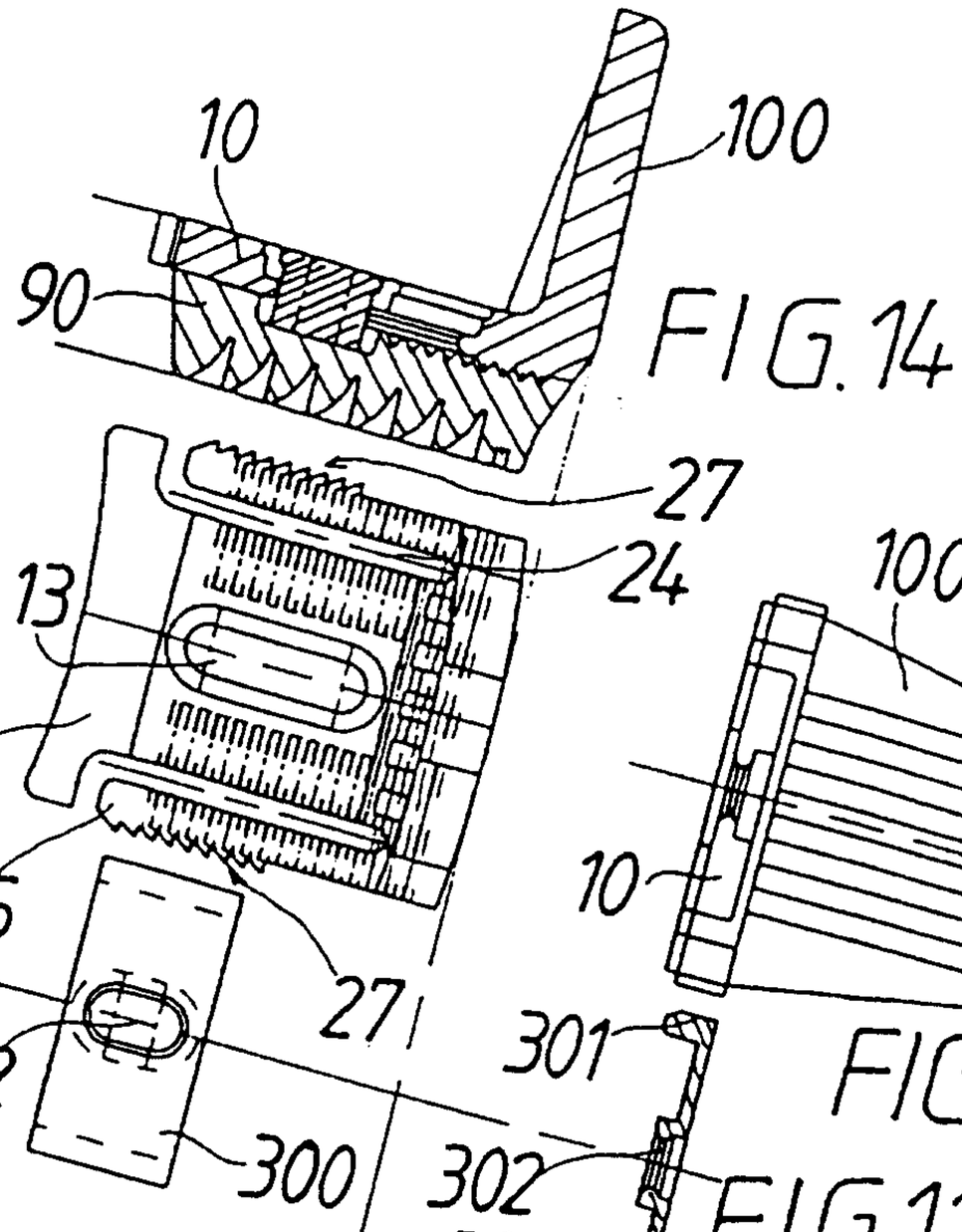


FIG.12

FIG.14

FIG.13



FIG.11

FIG.10

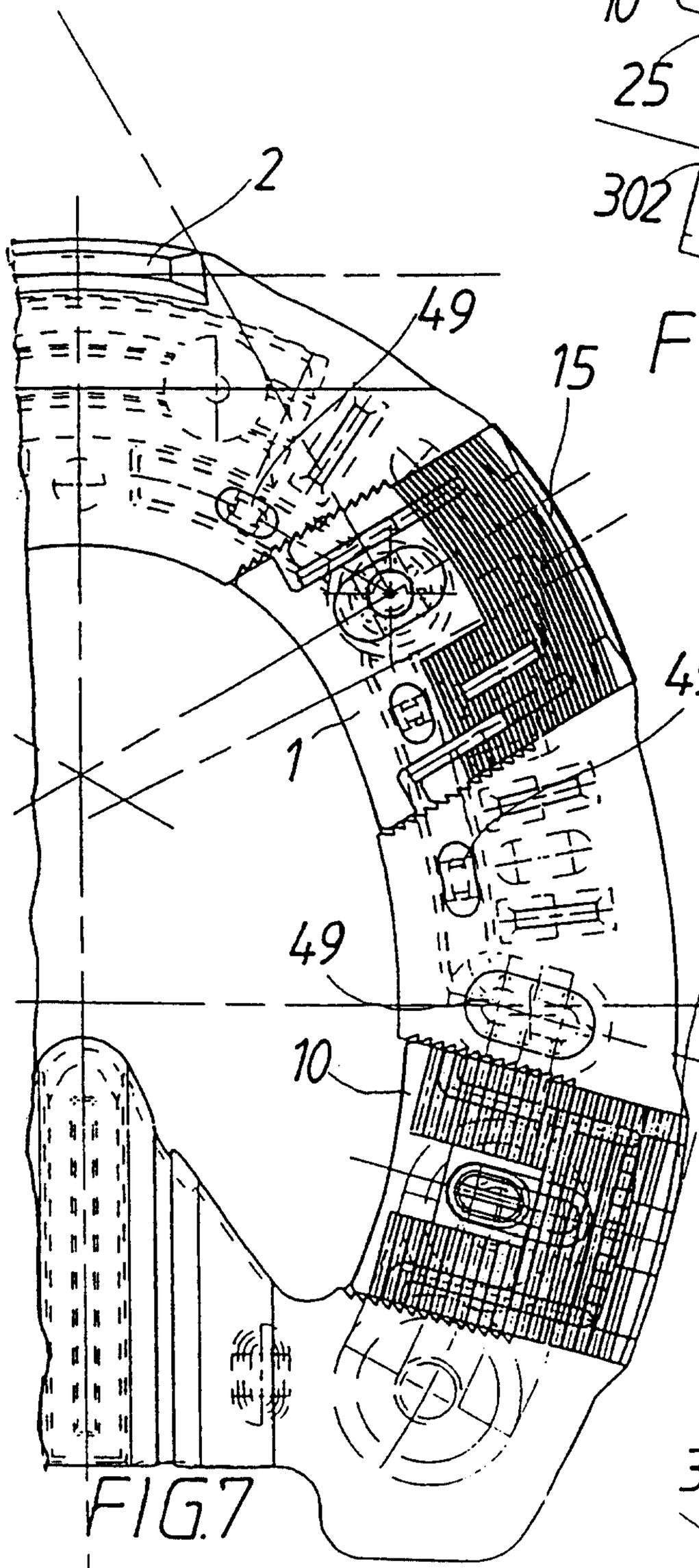


FIG.7

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Section CC

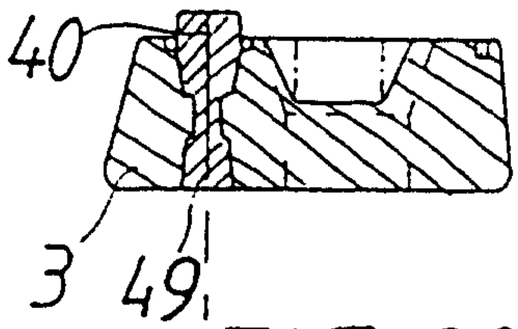


FIG. 20

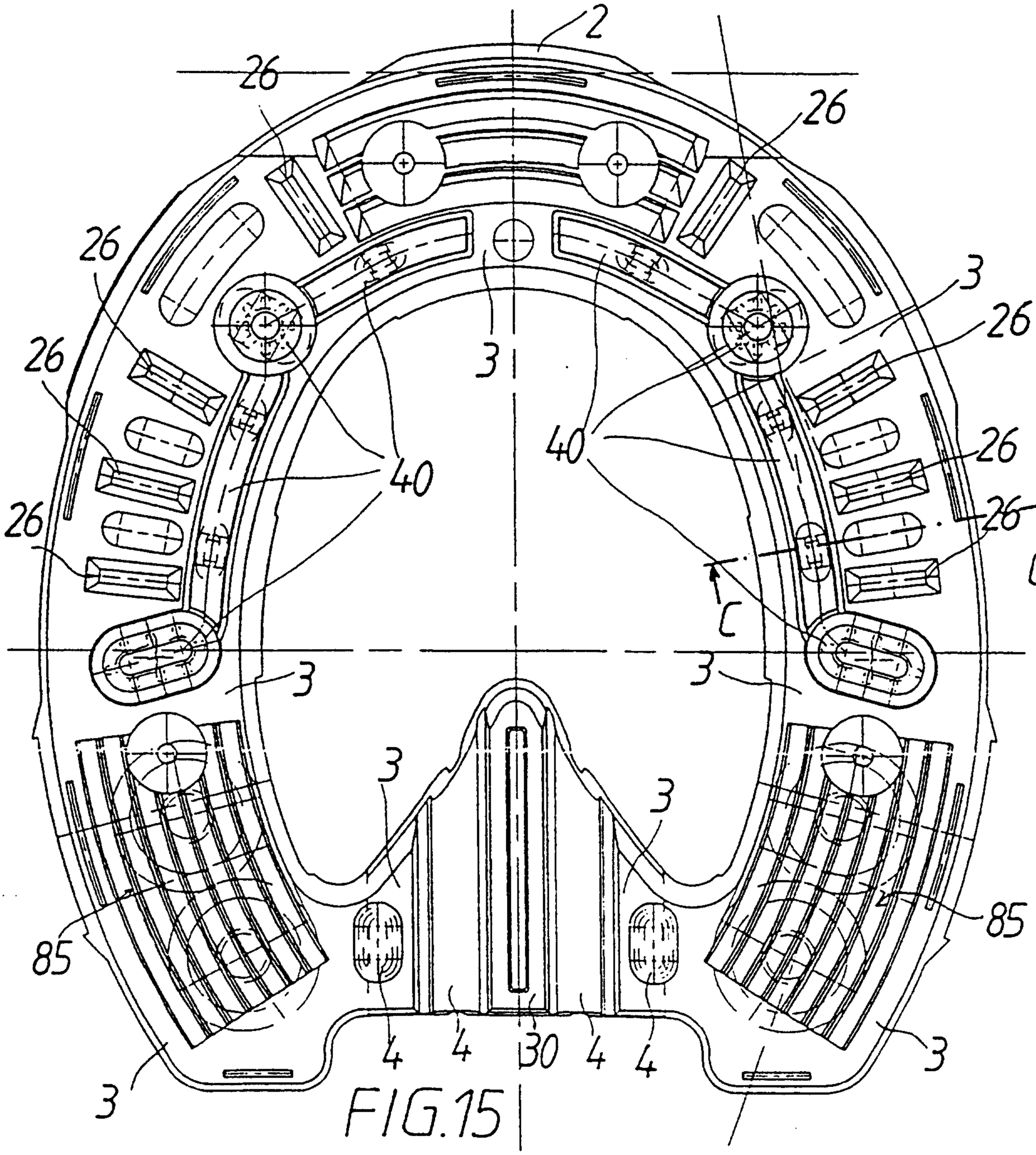


FIG. 15

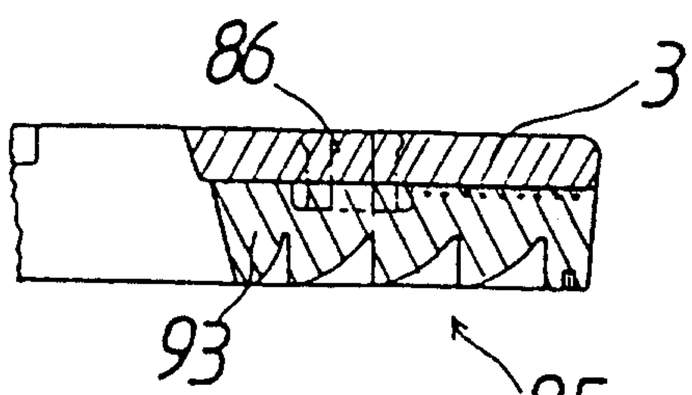


FIG. 16

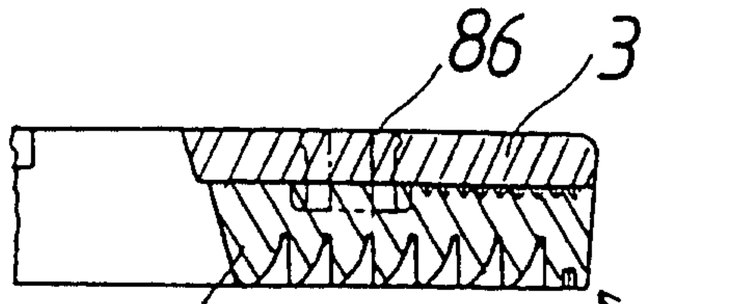


FIG. 17

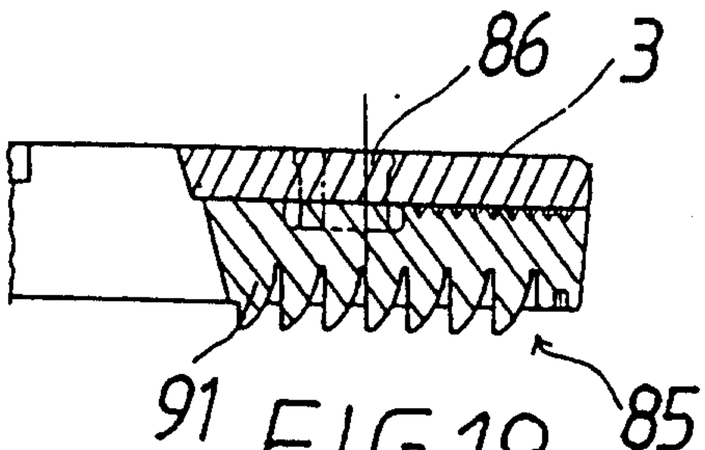


FIG. 18

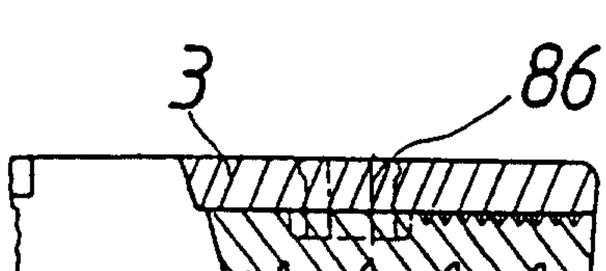


FIG. 19

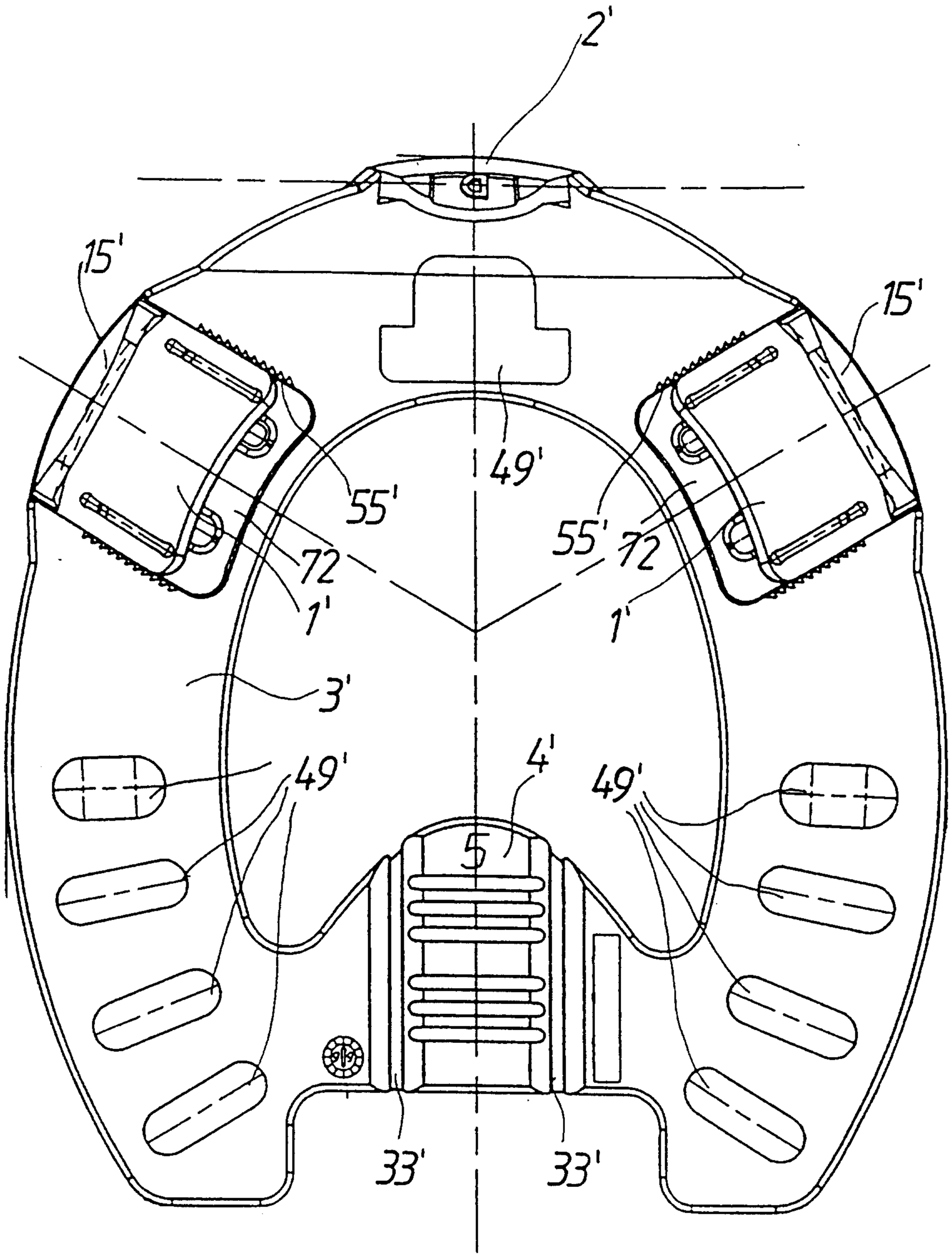


FIG. 21

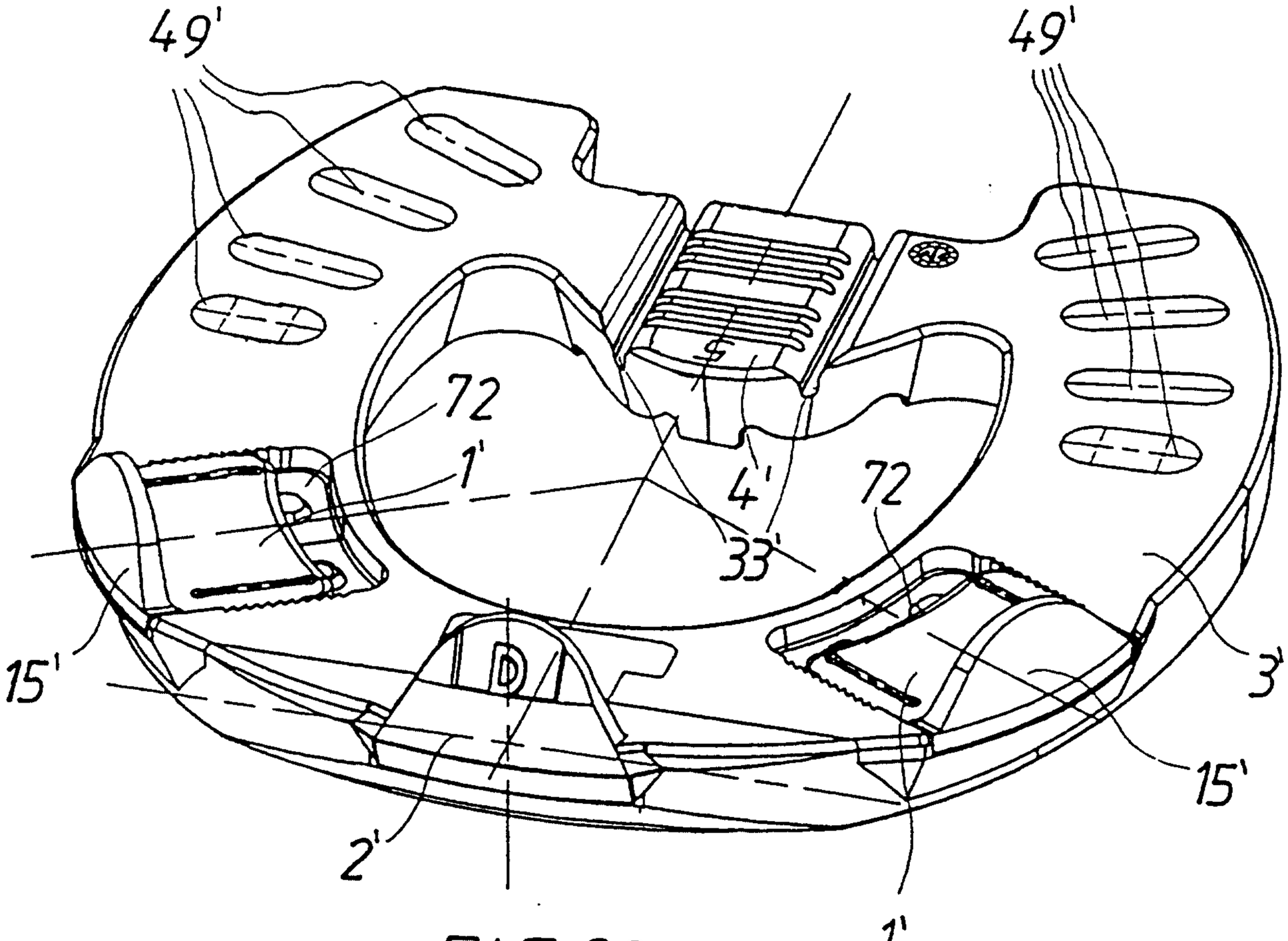


FIG.22

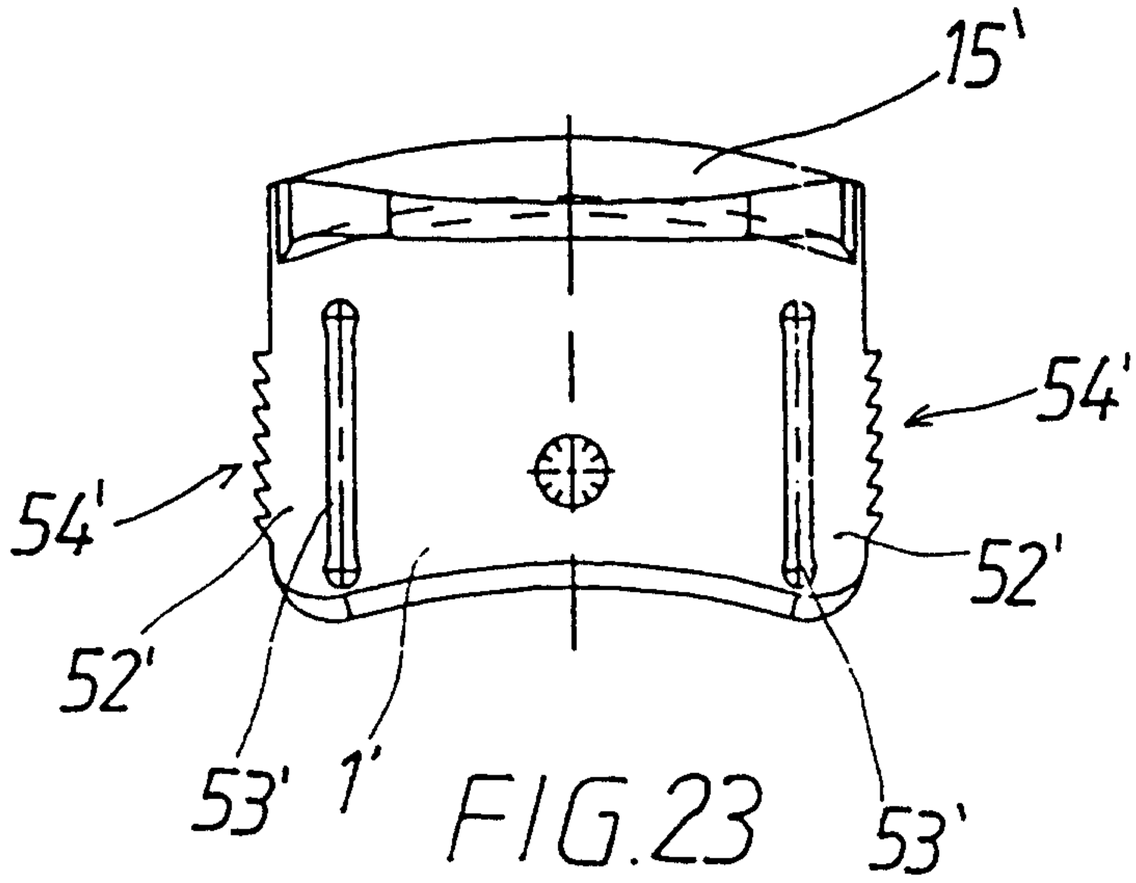


FIG.23

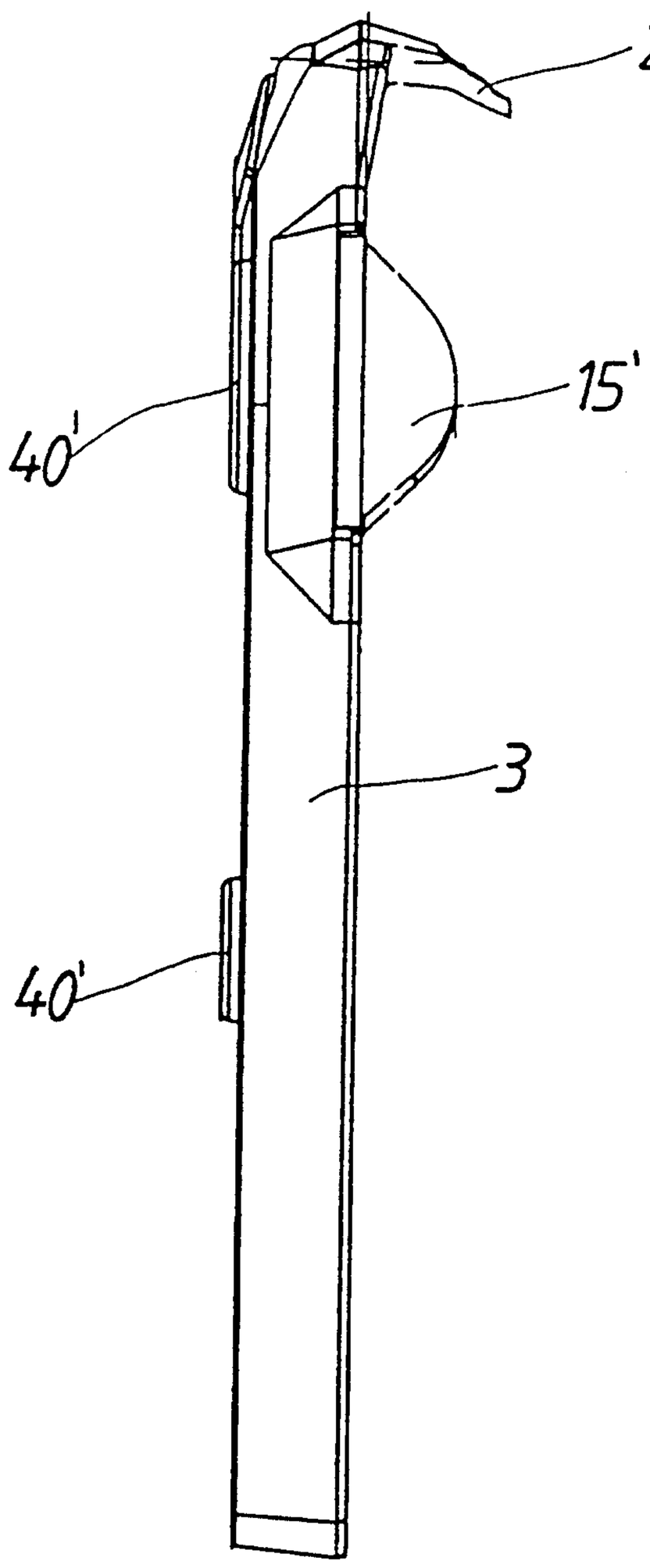


FIG.24

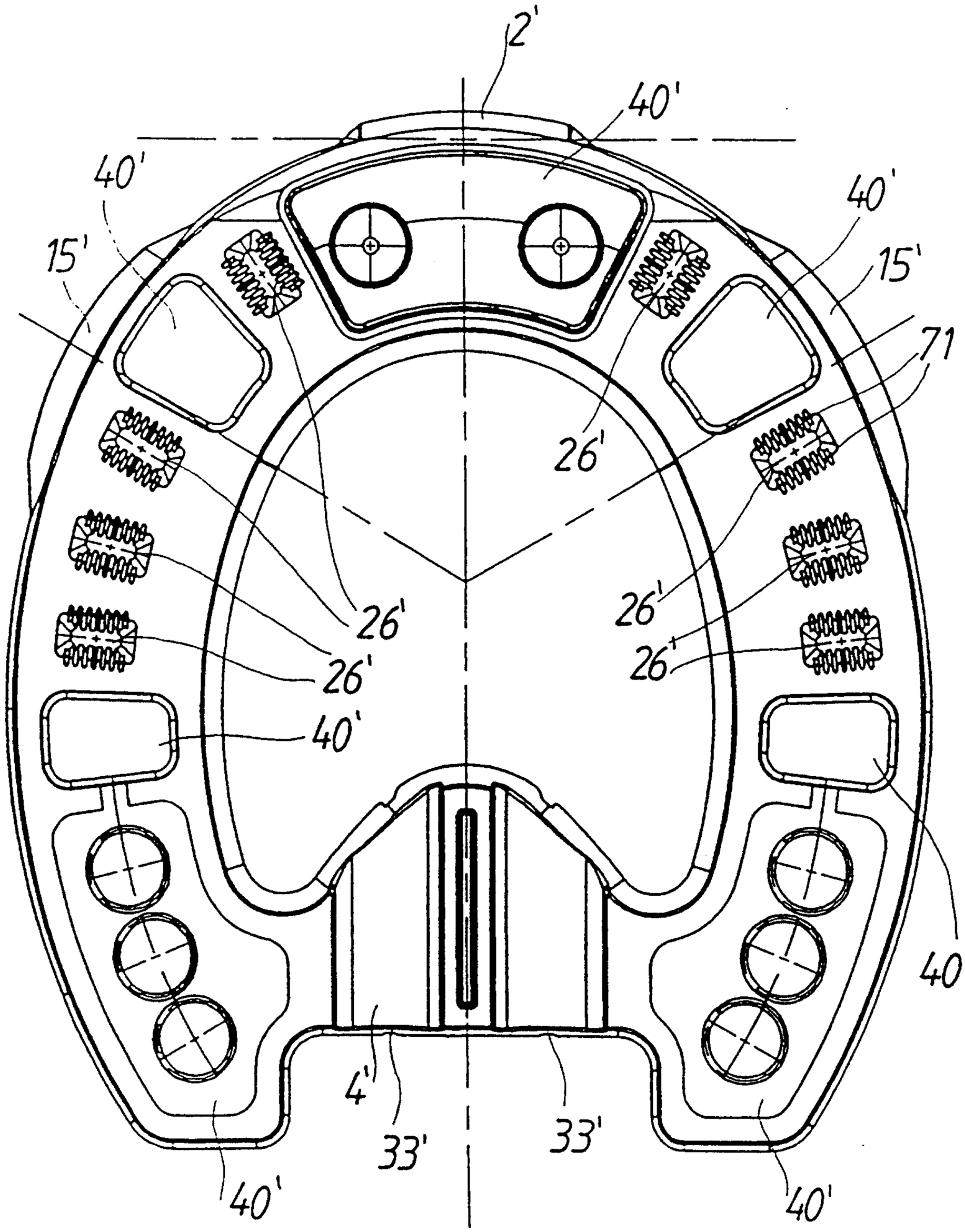
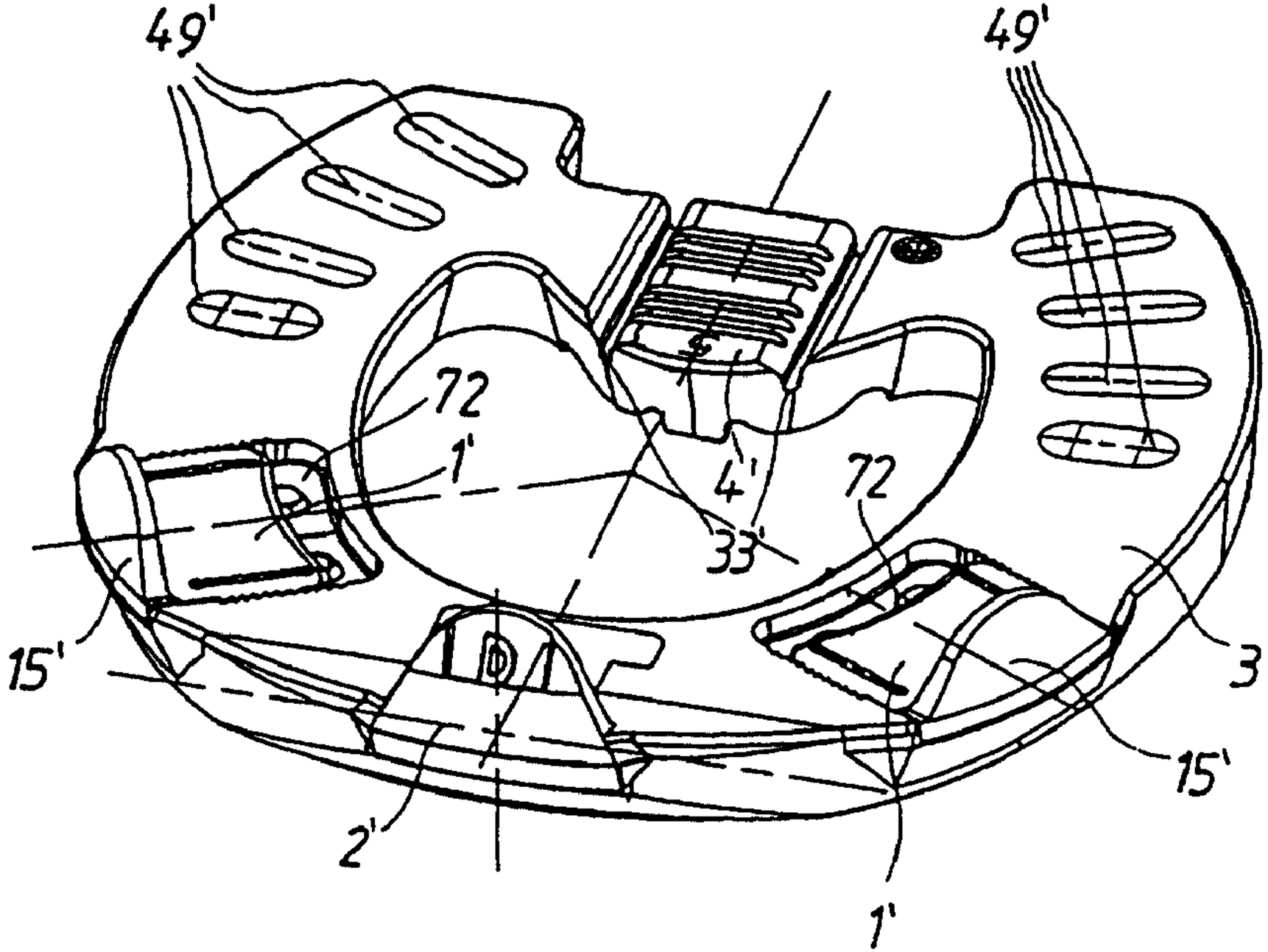


FIG. 25


49'
49'
72
1'
4'
72
33'
15'
3
15'
2'
1'