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DESCRIPTION

The present invention relates to a walkway support for the walkway in an animal stable.

From DE 10 2017 117 099 A1 and DE 10 2012 209972 A1, walkways are known for an animal stable with a walkway base constructed with concrete material. In a central region of the walkway, a discharge trough is formed for discharging animal excrement. On both sides of the discharge trough, the walkway base provides a walkway region with a first walkway region side edge region adjacent to the discharge trough and a second walkway region side edge region adjacent to an animal accommodation region provided laterally next to the walkway. In the two walkway regions, mat-like walkway supports are provided in succession in the longitudinal direction of the walkway, in accordance with the generic term of claim 1, which provide animal stepping surfaces inclined in the direction of the discharge trough. Animal excrement accumulating on the walkway supports in the region of the walkway can be removed by a scraper blade movable in the longitudinal direction of the walkway. In particular, liquid animal excrement can collect in the discharge trough due to the inclination of the animal stepping surfaces of the walkway supports and be drained off via this channel. The walkway supports are constructed of elastically deformable material and have, on a support side facing the walkway base, a structure of first and second support webs which provide a support surface, are substantially orthogonal to one another and extend substantially diagonally across the walkway supports. It is the object of the present invention to provide a stably constructed walkway support for a walkway in an animal stable, which provides a high level of comfort for animals.

According to the present invention, this task is solved by a walkway support for a walkway in an animal stable according to claim 1, wherein the walkway has a walkway base with at least one walkway region extending in a longitudinal direction of the walkway with a first walkway region side edge region adjacent to a discharge trough region and a second walkway region side edge region preferably adjacent to an animal accommodation region, wherein the walkway support has a support body with a first support body side edge region extending substantially in a support body transverse direction and a second support body side edge region extending substantially in the support body transverse direction as well as support

body longitudinal edge regions extending substantially in a support body longitudinal direction between the support body side edge regions, wherein the support body has an animal stepping surface on an animal stepping side and a support formation with a support surface for support on a walkway region is provided on a support side of the support body facing away from the animal stepping side, wherein a distance of the support surface from the animal stepping surface increases from the first support body side edge region to the second support body side edge region, wherein the support formation comprises a plurality of first support webs extending at a distance from one another, wherein a portion of the support surface is provided on at least one portion of the first support webs, preferably on each first support web, wherein a plurality of second support webs extending transversely to the first support webs are provided in intermediate spaces formed between adjacent first support webs, wherein second support webs provided in adjacent intermediate spaces are offset from each other in a direction of extension of the first support webs.

The structure of first and second support webs provided on the support side ensures a stable, even support on the walkway base, but gives the walkway support sufficient stability that it can give way when loaded by animals, but not to such an extent that this can lead to damage to the walkway support or to an unsafe step for the animals. Due to the increasing distance between the support side and the animal stepping surface, a slope is integrated into the walkway support transverse to the longitudinal direction of the walkway support and thus also the longitudinal direction of the walkway of a walkway equipped with such a walkway support. When positioning such a walkway support on a walkway surface that essentially does not provide a slope, such a slope is created by the walkway support itself, so that animal excrement, in particular liquid animal excrement, accumulating on the animal stepping surface will increasingly move in the direction of the slope and thus towards the discharge trough.

To achieve a homogeneous compliance of the walkway support, it is preferred that a majority of the, particularly preferably more than half of the, more preferably substantially all or all, first support webs extend substantially parallel to each other. In particular, it is provided in accordance with the invention that a plurality of the, particularly preferably more than half of the, more preferably substantially all or all, first support webs extend between the support

body longitudinal edge regions. In order to contribute more to the homogeneity of the compliance of the walkway support, each first support web of the plurality, more preferably more than half, of first support webs, more preferably each first support web, connects the support body longitudinal edge regions to each other, preferably each as a continuous web which may extend substantially along a straight line.

To distribute the support interaction with the walkway base even more evenly over the entire region covered by a respective walkway support, part of the support surface is provided on at least some of the second support webs, preferably each second support web. In principle, however, some of the second support webs or parts of individual second support webs could also be shaped in such a way that they do not touch the walkway base or only when loaded by an animal.

Furthermore, a uniform support interaction is supported by the second support webs extending substantially orthogonally to the first support webs, or/and by the first support webs extending substantially in one direction of support body transverse direction and support body longitudinal direction, preferably substantially in the support body transverse direction, and the second support webs extending substantially in the other direction of support body transverse direction and support body longitudinal direction, preferably substantially in the support body longitudinal direction.

An arrangement in which second support webs arranged in adjacent intermediate spaces are at the same distance from second support webs adjacent in the direction in which the first support webs extend also leads to a uniformly distributed support interaction between a respective walkway support and the walkway basis.

Furthermore, it may be provided that substantially all second support webs have the same distance from second support webs adjacent in the direction of extension of the first support webs, or/and that second support webs arranged in adjacent intermediate spaces are offset from one another by half the distance between second support webs adjacent in the direction of extension of the first support webs, and/or in that second support webs arranged in each second intermediate space lie in a direction of extension of the second support webs

transverse to the direction of extension of the first support webs substantially on support web lines extending in a straight line and extend in the direction of the support web lines. If one of the rectilinearly extending support web lines passes through two adjacent intermediate spaces, then preferably only in one of these two adjacent intermediate spaces one of the second support webs lies on this one of the rectilinearly extending support web lines and in the other of the two 'adjacent intermediate spaces no second support web lies on this one of the rectilinearly extending support web lines. Preferably, this arrangement of second support webs in adjacent interspaces relative to a support web line passing through said adjacent interspaces is found in a plurality, preferably more than half, of said adjacent interspaces, more preferably in substantially all or in all of said adjacent interspaces. This arrangement may be present when considering one of, preferably a plurality of, particularly preferably more than half of, more preferably substantially all or all of, the support web lines passing through adjacent interspaces. All these measures individually and in combination contribute to the fact that the walkway support constructed according to the invention, irrespective of the thickness variation thereof, is substantially uniformly supported over the entire surface with respect to the walkway base and ensures a stable footing for animals.

For this purpose, it can also be provided that essentially all first support webs have essentially the same distance to neighbouring first support webs.

To increase the surefootedness for animals while still allowing deformability of the walkway support, it is proposed that two adjacent first support webs and two adjacent second support webs each define deformation fields which are open towards the support side and which each have a substantially rectangular circumferential contour. The rectangular circumferential contour is preferably not square-shaped and/or it has two adjacent sides of different lengths arranged substantially at 90°. When increasing the deformability of the walkway support, the deformation fields or the surface regions of the sections of the animal stepping surface covering the respective deformation fields are usually increased, whereby these sections of the animal stepping surface are hereinafter referred to as deformation sections. Particularly in the case of deformation regions with a square circumferential contour, animals can sink into the animal stepping surface with their entire hoof in the inner region of the individual deformation region above a certain size of the deformation section, which reduces the

animal's surefootedness. If a rectangular, and preferably not square, circumferential contour of the deformation field is selected with a constant surface region of the deformation section, the animal is significantly more likely to step on at least one, preferably at least two, of the first or/and second support webs, which enables the animal to position its hoof in a stable manner when stepping on and thus increases its surefootedness. The regions of the animal stepping surface which are not directly supported by underlying first and/or second support webs, i.e. preferably the deformation sections, provide the stepping animal with a soft stepping surface which simulates natural ground conditions, which contributes to animal welfare. The provision of deformation fields with a substantially rectangular circumferential contour as described above, which is preferably not square-shaped and/or which has adjacent sides of different lengths arranged substantially at 90°, is particularly advantageous in the case of use of the walkway support by cloven-hoofed animals such as cattle or pigs, since their hooves have two toes, both of which are more likely to be directly supported by a first and/or second support web when stepping on.

To be able to further increase the stability of the walkway support while still allowing it to be deformable, it is proposed that in each case two mutually adjacent first support webs and two mutually adjacent second support webs delimit deformation fields open towards the support side, and that in at least some of the deformation fields, preferably the majority of the deformation fields, most preferably each deformation field, a stiffening structure is provided, preferably with at least one stiffening web.

To avoid excessive push-through in a respective deformation field when loaded by an animal, the stiffening structure may comprise at least one first stiffening web extending between the two second support webs delimiting an associated deformation field, preferably adjoining the latter, or/and the stiffening structure may comprise at least one, preferably two second stiffening webs extending between the two first support webs delimiting an/associated deformation field, preferably adjoining the latter. In a preferred embodiment with improved homogeneity of the deformability of the walkway support, the at least one stiffening web, or/and the at least one second stiffening web, preferably the at least two second stiffening webs, can subdivide the associated deformation field into sections of substantially equal size, which preferably each have a square peripheral contour.

In this case, the at least one first stiffening web can extend essentially parallel to the first support webs delimiting the associated deformation field, or/and the at least one second stiffening web can extend essentially parallel to the second support webs delimiting the associated deformation field.

In order not to unduly impair the deformability of the walkway support by the stiffening structure, it is proposed that no part of the support surface is formed on at least one stiffening web of the stiffening structure, preferably on each stiffening web. This means that such a stiffening web that does not form part of the support surface is designed to be shorter on the support side in the direction of the walkway base, i.e. it protrudes less than the support webs that form part of the support surface.

For a stable cohesion of walkway supports arranged consecutively in the longitudinal direction of the walkway, a preferably dovetail-like engagement profile can be provided on each support body longitudinal edge region for engagement with an engagement profile of a walkway support to be arranged directly adjacent.

To increase the safety and comfort of animals moving or standing on a support body according to the invention, it is suggested that at least the support body is elastically deformable. Thus, in particular where the support body is loaded by an animal on its contact surface, the load region can sink in slightly, similar to the case of animals standing on a meadow or similar soft ground in hilly terrain. For this purpose, for example, the support body and/or the support formation can be constructed with rubber material preferably obtained by recycling. Such construction material is also characterised by its high resistance to animal excrement and its excellent durability. In order to increase the stepping resistance, adhesion-improving particles, preferably corundum material, can be embedded in the support material of the support body in an region of the support body that provides the animal stepping surface.

For stability reasons, it is suggested that the support body is formed in one piece with the support formation. In an alternative design that is particularly advantageous regarding variability in the structure, it can be provided that the support formation is provided on a

support formation body that is formed separately from the support body. To provide the slope, the support formation body can be formed essentially in a wedge-like manner in the longitudinal direction of the support body.

The present invention further relates to a walkway for an animal stable, comprising a walkway base having at least one walkway region extending in a walkway longitudinal direction with a first walkway region side edge region adjacent to a discharge trough region and a second walkway region side edge region preferably adjacent to an animal housing region, wherein on at least one walkway region at least one walkway support designed according to the invention is positioned in such a way that the first support body side edge region is positioned above the first walkway region side edge region and the second support body side edge region is positioned above the second walkway region side edge region.

The present invention is described in detail below with reference to the accompanying figures. It shows:

Fig.1 a walkway equipped with a walkway support for an animal stable;

Fig. 2 a frontal view of the walkway shown in Fig. 1;

Fig. 3 a perspective view of a walkway support, viewed from its animal stepping side;

Fig. 4 a perspective view of a walkway support, viewed from its support side;

Fig. 5 a top view of a walkway support, viewed from its support side;

Fig.6 a detailed perspective view of the walkway support, viewed from its support side;

Fig.7 a perspective view of an alternatively equipped walkway support.

Figs. 1 and 2 show a walkway for an animal stable, for example for cattle, generally designated 10. The walkway 10 is elongated in a longitudinal walkway direction L_L and has a walkway base

12 constructed, for example, with concrete material. A discharge trough 14 is formed in a central region of the walkway base 12, in which in particular liquid animal excrement can collect and be directed via this to collection points provided for example in respective end regions of the walkway 10.

The walkway base 12 provides walkway regions 16, 18 on both sides of the discharge trough region 14, each walkway region 16, 18 having a first walkway region side edge region 20, 22 adjacent to the discharge trough region 14 or a discharge trough region encompassing the latter, at its second walkway side edge region 24, 26 remote from the discharge trough region 14 and for example adjacent to an animal accommodation region, such as cubicles or the like. In the transition to such an animal accommodation region, such as cubicles or the like, in the respective second walkway side edge regions 24, 26 the walkway base 12 may rise in a step-like manner to prevent animal excrement from entering a respective animal accommodation region from the walkway 10. In the walkway regions 16, 18 the walkway base 12 is formed with a substantially horizontal surface which is substantially not inclined to the discharge trough region 14.

In each of the walkway regions 16, 18, one or a plurality of walkway supports 28 are positioned on the walkway base 12. The walkway supports 28, described in more detail below with reference to Figures 3 to 6, are each formed with a support body 30 having a first support body side edge region 32 positioned over the first walkway region side edge region 20 or 22 and a second support body side edge region 34 positioned over the respective second walkway side edge region 24 or 26. The two support body side edge regions 32, 34 extend essentially in a support body transverse direction A_Q which, when such a walkway support 28 is positioned in the walkway 10, essentially corresponds to the walkway longitudinal direction L_L.

Between the two support body side edge regions 32, 34, support body longitudinal edge regions 36, 38 extend in a support body longitudinal direction A_L substantially orthogonal to the support body transverse direction A_Q. Such a walkway support 28 or its support body 34 thus has a substantially rectangular circumferential contour, whereby the extension length in

the support body longitudinal direction A_L is or can be greater than the extension length in the support body transverse direction A_Q.

In Fig. 3 it can be clearly seen that in each of the longitudinal edge regions 36, 38 of the support body, the walkway support 28 is formed with mutually complementary engagement profiles 40, 42, which can, for example, provide a dovetail profile, so that the engagement profile 40 provided in a respective longitudinal edge region 36 of the support body can engage or be brought into engagement with the engagement profile 40 provided on the support body. The engagement profile 42 provided on the longitudinal edge region 38 of the support body of a directly adjacent walkway support 28 can thus be brought into engagement with the engagement profile 42 provided on the longitudinal edge region 38 of the support body. A form-fitting cohesion of the walkway supports 28 positioned next to each other in a respective walkway region 16, 18 is thus achieved in the longitudinal direction of the walkway L_L. For a firm connection to the walkway base 12, the walkway supports 28 can be connected to the walkway base 12, for example, by bolt or screw-like fastening elements.

It can be clearly seen in the figures that the walkway supports 28 are formed in the support body longitudinal direction A_L with varying thickness D, i.e. varying distance between an animal stepping surface 46 formed on an animal stepping side 44 and a support surface 50 formed on a support side 48 in the manner described below, which increases in the direction from the first support body side edge region 32 to the second support body side edge region 34. For example, the thickness D or distance at/between the animal stepping surface 46 and the support surface 50 may increase substantially continuously and constantly so that the walkway support 28 has a generally wedge-like structure. With the surface of the walkway base 12 receiving the walkway supports 28 positioned substantially horizontally, a slope is thus integrated into each of the walkway regions 16, 18 by the walkway supports 28 having, for example, a wedge-like shape, so that, in particular, liquid animal excrement is directed in the direction of the discharge trough region 14 and thus also in the direction away from the animal accommodation regions.

A support formation generally designated 52 is provided on the support side 48 of the walkway support 28 or the support body 30 thereof, which also substantially provides the

support surface 50. The support formation 52 comprises a plurality of first support webs 54 extending in the support body transverse direction A_Q. Interspaces 56 are formed between each two first support webs 54 which follow one another in the support body longitudinal direction A_L and extend in the support body transverse direction A_Q. Since the directly adjacent first support webs 54 preferably have a substantially equal spacing from one another over their entire length in the transverse direction A_Q of the support body, the intermediate spaces 56 also have an approximately constant width in the transverse direction A_Q of the support body.

It should be noted that when the present invention refers to the direction in which the webs extend, this refers to the direction in which the webs extend substantially parallel to the animal stepping surface 46 or the support surface 50. Nevertheless, such webs also extend on the support body 30 in the direction of the support side 48. In this direction of extension, the various webs can, for example, have a width which decreases in the direction of the support side 48, whereby, on the one hand, the deformation behaviour can be influenced and, on the other hand, a deformation slope which is advantageous for the manufacturing process of such walkway supports 28 is formed.

Second support webs 58 extending transversely, preferably substantially orthogonally to the first support webs 54 are provided in the spaces 56 between the first support webs 54 extending substantially parallel to each other between the two support body longitudinal edge regions 36, 38. Some of the, preferably all, first support webs 54 can connect the two support body longitudinal edge regions 36, 38 to each other as continuous webs along a straight line. The second support webs 58 arranged in a respective intermediate space 56 have equal distances to adjacent second support webs 58 arranged in the same intermediate space 56, so that respective deformation fields 60 open towards the support side 48 are delimited by the first support webs 54 delimiting a respective intermediate space 56 and the second support webs 58 provided in such an intermediate space 56. The deformation fields 60 have a substantially rectangular circumferential contour, which is preferably not square, and are completely enclosed in the circumferential direction due to the fact that preferably the second support webs 58 adjoin the adjacent first support webs 54 or are completely enclosed in each case by two first support webs 54 and two second support webs 58.

To provide a substantially uniform support effect over the entire support side 48, both the first support webs 54 and the second support webs 58 provide a substantial part of the entire support surface 50 with their respective apex regions facing the support side 48. A very uniform support effect when loaded by animals and thus also deformation of the walkway support 28 is further supported by the fact that the second support webs 58 arranged in directly adjacent intermediate spaces 56 are offset from one another in the direction in which the first support webs 54 extend, i.e. in the illustrated design example in the transverse direction A_Q of the support body. The offset may correspond to half the distance, for example measured at the centre of the width of respective apex regions of the second support webs 58, between adjacent second support webs 58 in a respective intermediate space 56, so that the second support webs 58 arranged in each second intermediate space define support web lines which extend substantially rectilinearly in the support body longitudinal direction A_L. Due to the offset of the second support webs 58 in immediately adjacent intermediate spaces 56, a set of support web lines N is thus defined whose mutual spacing in the support body transverse direction corresponds to half the spacing of adjacent second support webs 58 in a respective intermediate space 56. This means that a very dense, yet uniformly distributed structure of support regions defined by respective second support webs 58 is achieved with respect to the walkway base 12. This ensures a very uniform deformation behaviour of the walkway support 28, also taking into account the fact that the walkway support 28 has a varying thickness D in the longitudinal direction A_L of the support body, which is also substantially achieved by the fact that the projection height of the first and second support webs 54, 58 increases from the first support body side edge region 32 towards the second support body side edge region 34. A substantially plate-like section 68 of the support body 34 providing the animal stepping surface 46 can thereby have an approximately constant thickness in the support body longitudinal direction A_L and also in the support body transverse direction A_Q.

To also provide increased stability in the individual deformation fields 60 of the walkway support 28, a stiffening structure 62, clearly recognisable in Fig. 6 based on the deformation field 60 shown there, can be provided in at least some of the deformation fields. The stiffening structure 62 comprises a first stiffening web 64 running essentially parallel to the first support

webs 54 and, for example, centrally between them, and two second stiffening webs 66 running essentially parallel to the two second support webs 58. These can be positioned between the two second support webs 58, for example, in such a way that the two second stiffening webs 66 have approximately the same distance from one another and from the respective directly adjacent second support web 58. The first stiffening web 64 and the two second stiffening webs 66 divide the deformation field 60 of Figure 6 into six, preferably essentially equal, sections, each of which can have a square peripheral contour.

As can be clearly seen in Fig, 6, the projection height of the first and second stiffening webs 64, 66 or of the stiffening structure 62 over the plate-like region 68 of the support body 30 is less than the projection height of the first and second support webs 54, 58. For example, it may be provided that, in the support body longitudinal direction A_L, the stiffening structure 62 has a substantially constant projection height from the plate-like region 68 towards the support side 48, whereas, as previously described, to provide the wedge-like structure of the walkway support 28, the projection height of the first and second support webs 54, 58 decreases towards the first support body side edge region 32. This can lead, for example, to the fact that, as can be seen in Fig. 5, no stiffening structure is provided in one or more intermediate spaces 56 close to the second support body side edge region 32, in one or more of these intermediate spaces 56 or in the deformation fields formed therein. or the deformation fields 60 formed therein, the first and second support webs 54, 58 bordering them already have a comparatively low projection height from the plate-like section 68 of the support body 30 and thus there would be a risk that the stiffening webs possibly then provided in such a deformation field 60 would also stand up on the walkway base 12, at least with already low loading by an animal, and would thus lead to excessive stiffening. However, a stiffening structure 62 is provided in a majority of the deformation fields 60, i. e. more than half or more than three quarters of the deformation fields 60. By omitting the stiffening structures in such deformation fields 60, it is ensured that substantially the entire support surface 50 is provided by the first and second support webs 54, 58 and an edge web structure 70 bounding the entire walkway support 58 along the support body side edge regions 32, 34 and the support body longitudinal edge regions 36, 38.

In the embodiment of the walkway support 28 described above with reference to Figs. 3 to 6, the support body 30 with the support formation 52 provided thereon and in particular also the stiffening structures 62 is provided as an integral body, for example of rubber material or the like. In the alternative embodiment shown in Fig. 7, such a walkway support 28 can essentially be provided with two layers. One of the layers is provided by the support body 30, which is for example plate-like and of substantially constant thickness, and which also provides the animal stepping surface 46 on the animal stepping side 44. The other of the layers is provided by a support formation body 72, on which the support body 30 rests and which can provide the various support webs and stiffening structures provided in at least part of the deformation fields defined by these, as well as the edge web structure 70. Such a support formation body 72 can also have a plate-like section on which the support body 30 rests and which supports the various support webs and stiffening webs on the side facing the walkway base 72. Both the support body 30 and the support formation body 72 can be made of elastic, deformable material, for example rubber material.

PATENTKRAV

1. Gangbrostøtte til en gangbro i en dyrestald, hvorved løbegangen (10) omfatter en gangbrobasis (12) med mindst et gangbroområde (16, 18), der strækker sig i en gangbro-længderetning (L_L), med et første gangbroområde-sidekantområde (20, 22), som støder op til et udledningsrendeområde (14), og et andet gangbroområde-sidekantområde (24, 26), der fortrinsvis støder op til et dyreopholdsområde, hvorved gangbrostøtten (28) omfatter et støttelegeme (30) med et første støttelegeme-sidekantområde (32), som strækker sig i det væsentlige i en støttelegeme-tværretning (A_Q), og et andet støttelegeme-sidekantområde (34), der strækker sig i det væsentlige i støttelegemets tværretning (A_Q), samt støttelegeme-længdekantområder (36, 38), som strækker sig mellem støttelegeme-sidekantområder (32, 34), i det væsentlige i en støttelegeme-længderetning (A_L), hvorved støttelegemet (30) omfatter en dyregangflade (46) på en dyregangtrædeside (44) og en støttedannelse (52) med en støtteflade (50) på en støtteside (48) af støttelegemet (36), der vender bort fra dyregangtrædesiden (44) med henblik på understøtning på et gangbroområde (16, 18), hvorved en afstand mellem støttefladen (50) og dyregangfladen (46) vokser fra det første støttelegeme-kantområde (32) til det andet støttelegeme-kantområde (34), hvorved støttedannelsen (52) omfatter en flerhed af støttebaner (54), hvorved et afsnit af støttefladen (50) er tilvejebragt på mindst et afsnit af de første støttebaner (54), hvorved en flerhed af de første støttebaner (54) strækker sig mellem støttelegeme-længdekantområderne (36, 38) og forbinder disse med hinanden, hvorved en flerhed af anden støttebaner (58), som strækker sig på tværs af de første støttebaner (54), er tilvejebragt i rum (56), der er dannet mellem til hinanden grænsende, første støttebaner (54), og et afsnit af støttefladen (50) er tilvejebragt på mindst et afsnit af de anden støttebaner (50), **kendetegnet ved, at** de første støttebaner (54) strækker sig i det væsentlige i støttelegeme-tværretningen (A_Q), **ved, at** de anden støttebaner (58) strækker sig i det væsentlige i støttelegeme-længderetningen (A_L), og **ved, at** anden støttebaner (58), der er tilvejebragt i indbyrdes tilgrænsende, mellemliggende rum

(56) er forskudt for hinanden i en retning, i hvilken de første støttebaner (54) strækker sig.

2. Gangbrostøtte ifølge krav 1,
kendetegnet ved, at en del af støttefladen (50) er tilvejebragt på hver første støttebane (54) eller/og **ved, at** en del af støttefladen (50) er tilvejebragt på hver anden støttebane (58).

3. Gangbrostøtte ifølge krav 1 eller 2,
kendetegnet ved, at de anden støttebaner (58) strækker sig i det væsentlige ortogonalt med de første støttebaner (54).

4. Gangbrostøtte ifølge et af de foregående krav,
kendetegnet ved, at anden støttebaner (58), som er arrangeret i indbyrdes tilgrænsende, mellemliggende rum (56), har samme afstand til anden støttebaner (58), der grænser op til hinanden i udstrækningsretningen for de første støttebaner (54).

5. Gangbrostøtte ifølge krav 4,
kendetegnet ved, at i det væsentlige alle støttebaner (58) har samme afstand til anden støttebaner (58), der grænser op til hinanden i udstrækningsretningen for de første støttebaner (54), eller/og **ved, at** anden støttebaner (58), som er arrangeret i indbyrdes tilgrænsende, mellemliggende rum (56), er forskudt i forhold til hinanden med halvdelen af standen mellem anden støttebaner (58), der grænser op til hinanden i udstrækningsretningen for de første støttebaner (54) eller/og **ved, at** anden støttebaner (58), som er arrangeret i hver andet mellemliggende rum (56), ligger i en udstrækningsretning for de anden støttebaner (58) på tværs af udstrækningsretningen for de første støttebaner (54), i det væsentlige på støttebanelinjen (N), strækker sig i retningen for støttebanelinjerne (N) på en sådan måde, at kun i det ene af de to tilgrænsende, mellemliggende rum (56), som gennemløbes af en af de retlinjet udstrakte støttebanelinjer (N), en af de anden støttebaner (58) ligger på den ene af de retlinjet udstrakte støttebanelinjer (N).

6. Gangbrostøtte ifølge et af de foregående krav,
kendetegnet ved, at i det væsentlige alle første støttebaner (54) i det væsentlige har samme afstand til første støttebaner (54), som grænser op dertil.

7. Gangbrostøtte ifølge et af de foregående krav,
kendetegnet ved, at respektive to til hinanden grænsende første støttebaner (54) og to til hinanden grænsende anden støttebaner (58) definerer deformationsfelter (60), som er åbne mod støttesiden (48) og fortrinsvis er rektangulære, og navnlig fortrinsvis er **kendetegnet ved, at,** i mindst en del af deformationsfelterne (60), fortrinsvis hovedparten af deformationsfelterne (60), navnlig hvert deformationsfelt (60), der er tilvejebragt en afstivningsstruktur (62), fortrinsvis med mindst en afstivningsbane (64, 66).

8. Gangbrostøtte ifølge krav 7,
kendetegnet ved, at afstivningsstrukturen (62) omfatter mindst én første afstivningsbane (64), som strækker sig mellem de to støttebaner (58), der afgrænser et tilknyttet deformationsfelt (60), som fortrinsvis slutter sig til sidstnævnte, eller/og **ved, at** afstivningsstrukturen (62) omfatter mindst én, fortrinsvis to, afstivningsbaner (66), der strækker sig mellem de to første støttebaner (54), afgrænsende et tilknyttet deformationsfelt (60), fortrinsvis slutter sig til dette.

9. Gangbrostøtte ifølge krav 8,
kendetegnet ved, at den mindst ene afstivningsbane (64) strækker sig i det væsentlige parallelt med de første støttebaner (54), som afgrænser det tilknyttede deformationsfelt (60), eller/og **ved, at** den mindst ene anden afstivningsbane (66) strækker sig i det væsentlige parallelt med de anden støttebaner (58), der afgrænser det tilknyttede deformationsfelt (60).

10. Gangbrostøtte ifølge et af kravene 7 til 9,
kendetegnet ved, at ingen del af støttefladen (50) er dannet på mindst én afstivningsbane (64, 66) i afstivningsstrukturen (62), fortrinsvis på hver afstivningsbane (64, 66).

11. Gangbrostøtte ifølge et af de foregående krav,
kendetegnet ved, at en fortrinsvis svalehalelignende indgrebsprofil (40, 42) er tilvejebragt på hvert støttelegemes langsgående kantområde (36, 38) med henblik på indgreb med et indgrebsprofil (42, 40) i en gangbrostøtte (28), som skal arrangeres umiddelbart grænsende op dertil.

12. Gangbrostøtte ifølge et af de foregående krav,
kendetegnet ved, at i det mindste støttelegemet (30) er elastisk deformerbart, eller/og ved, at støttelegemet (30) eller/og støttedannelsen (52) er opbygget med gummimateriale, som fortrinsvis er opnået ved recirkulering, eller/og **ved, at** adhæsion-forbedrende partikler, fortrinsvis korund-materiale, er indlejret i konstruktionsmaterialet for støttelegemet (30) i et område af støttelegemet (30), der tilvejebringer dyregangoverfladen (44).

13. Gangbrostøtte ifølge et af de foregående krav,
kendetegnet ved, at mere end halvdelen af de første støttebaner (54) strækker sig mellem støttelegeme-langsgående kantområder (36, 38).

14. Gangbrostøtte ifølge et af kravene 1-12,
kendetegnet ved, at støttedannelser (52) er tilvejebragt på mindst et støttedannelseslegeme (72), som er dannet separat i forhold til støttelegemet (30), fortrinsvis hvorved støttedannelseslegemet (72) er kileformet i det væsentlige ortogonalt i støttelegemets længderetning (A_L) eller **ved, at** støttelegemet (30) er dannet integreret med støttedannelsen (52).

15. Gangbro for en dyrestald, omfattende en gangbrobasis (12) med mindst ét gangbroområde (16, 18), som strækker sig i en gangbro-længderetning (L_L) med et første gangbroområde-sidekantområde (20, 22), der grænser op til et afløbstrugområde (14), og et andet gangbroområde-sidekantområde (24, 26), der fortrinsvis grænser op til et dyreopholdsområde, hvorved der på mindst eet gangbroområde (16, 18) mindst én gangbrostøtte (28) ifølge et af de foregående krav er positioneret således, at det første støttelegeme-sidekantområde (32)

er positioneret oven over det første støttelegeme-sidekantområde (32) er positioneret oven over det første gangbroområde-sidekantområde (20, 22), og det andet støttelegeme-sidekantområde (34) er positioneret oven over det andet gangbroområde-sidekantområde (24, 26).

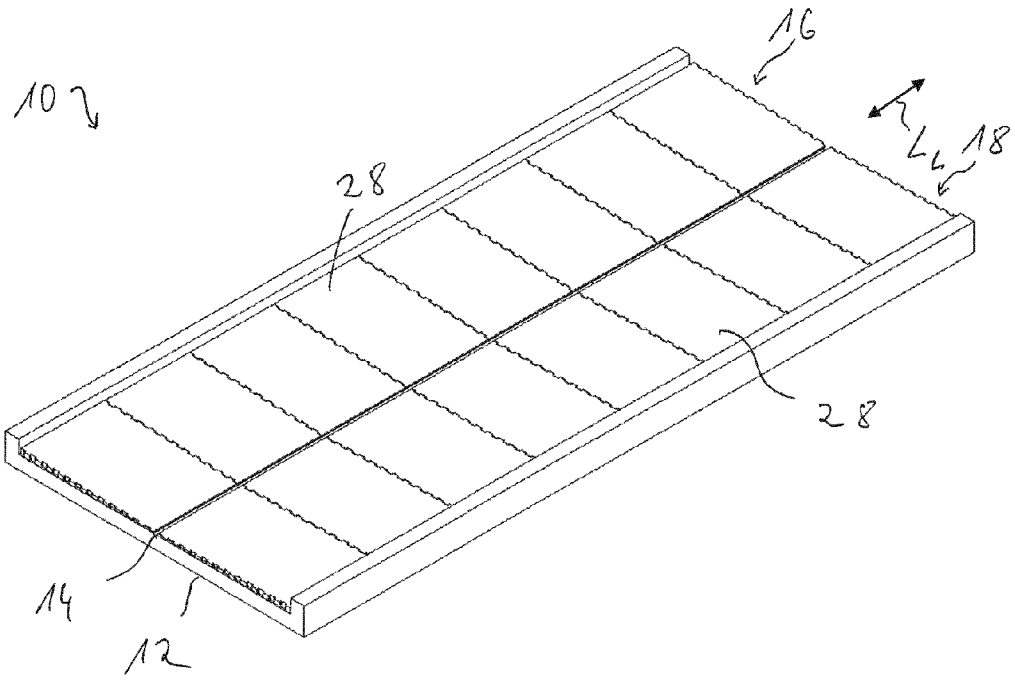


Fig. 1

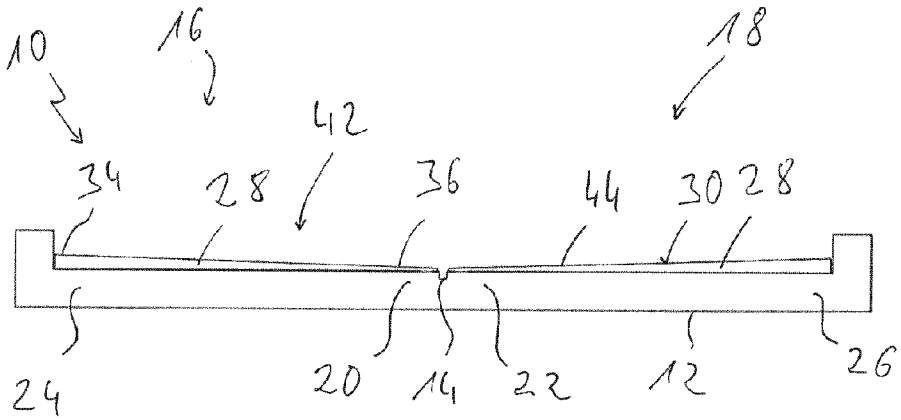
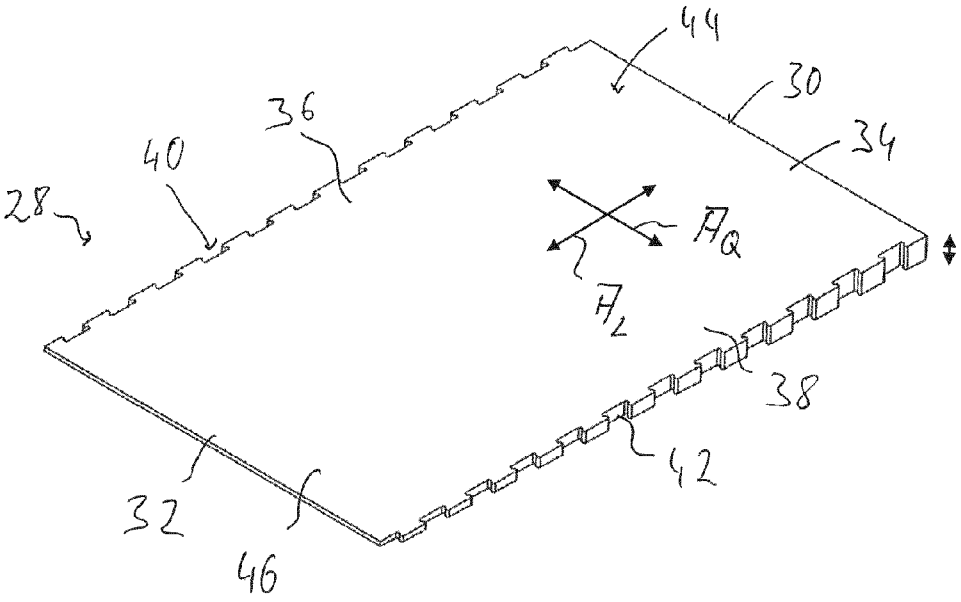


Fig. 2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A_Q
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Fig. 3

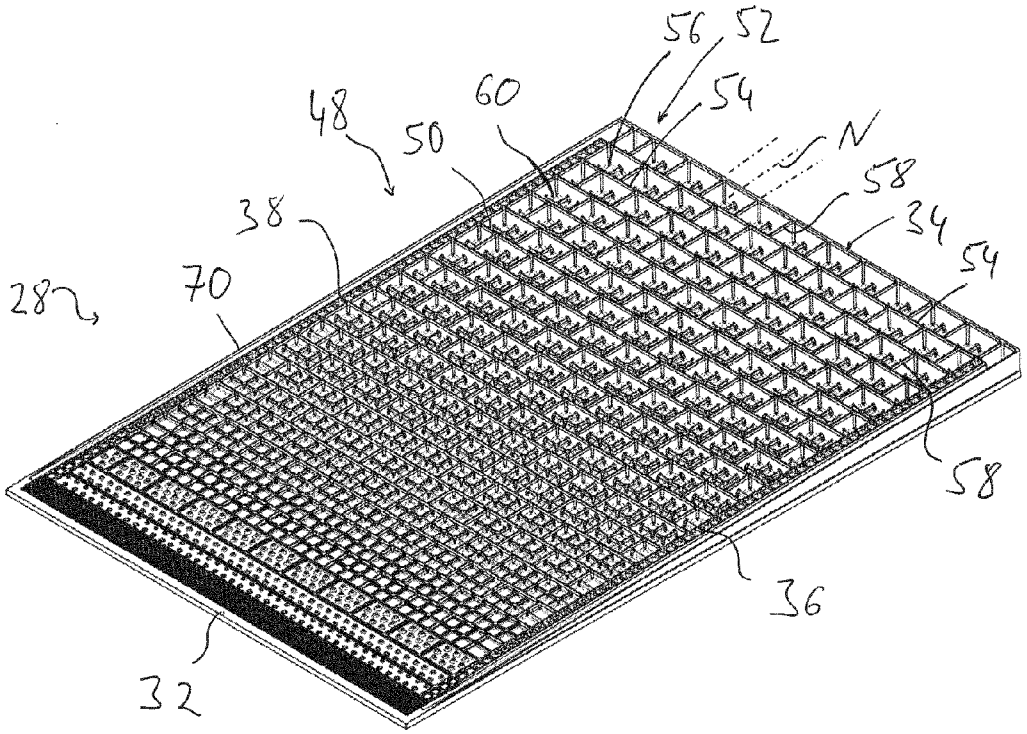
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Fig. 4

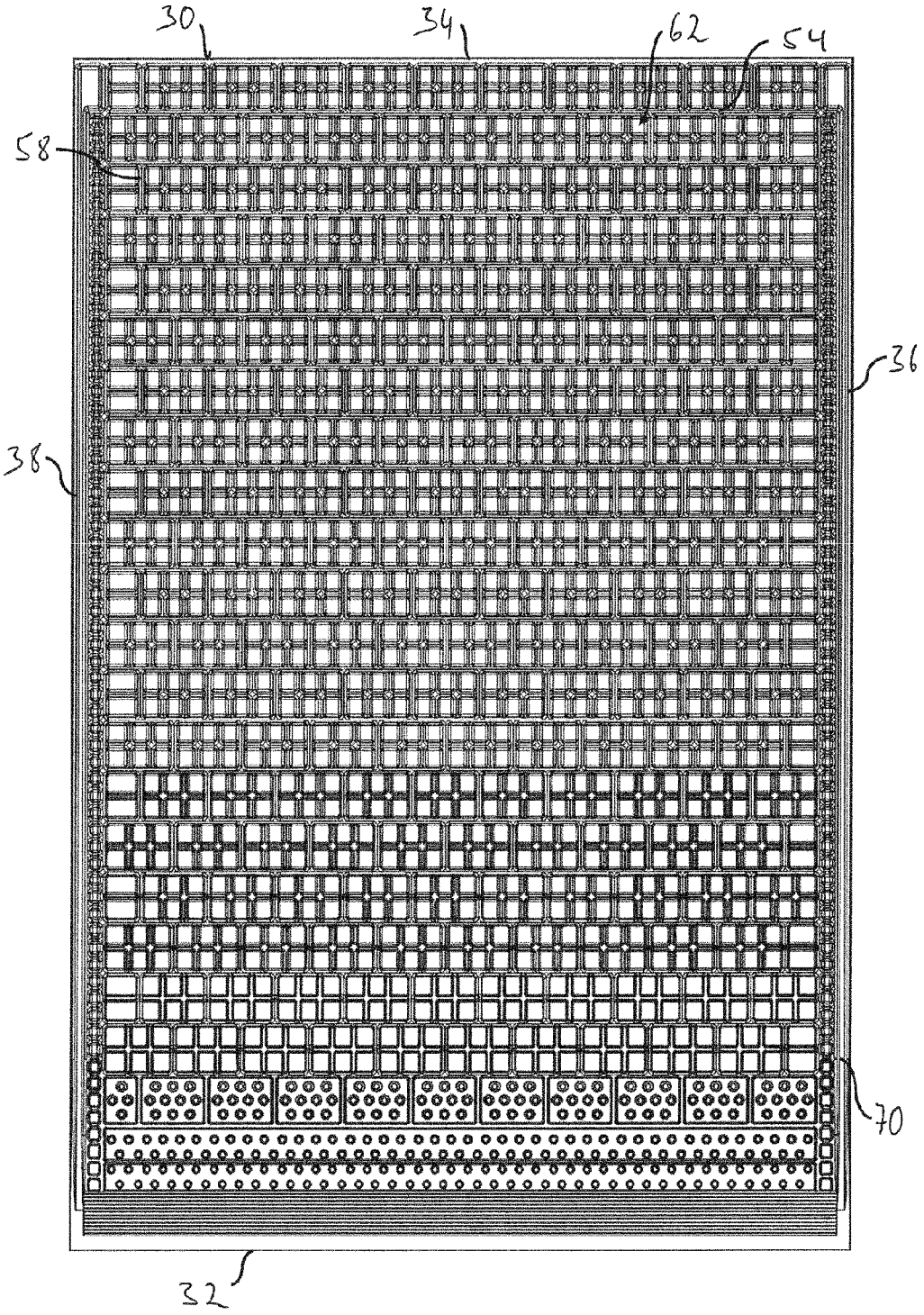

Fig. 5

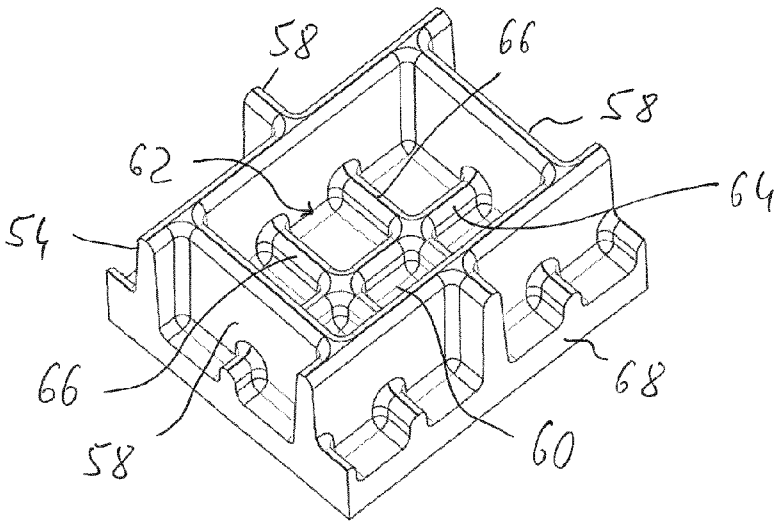

Fig. 6

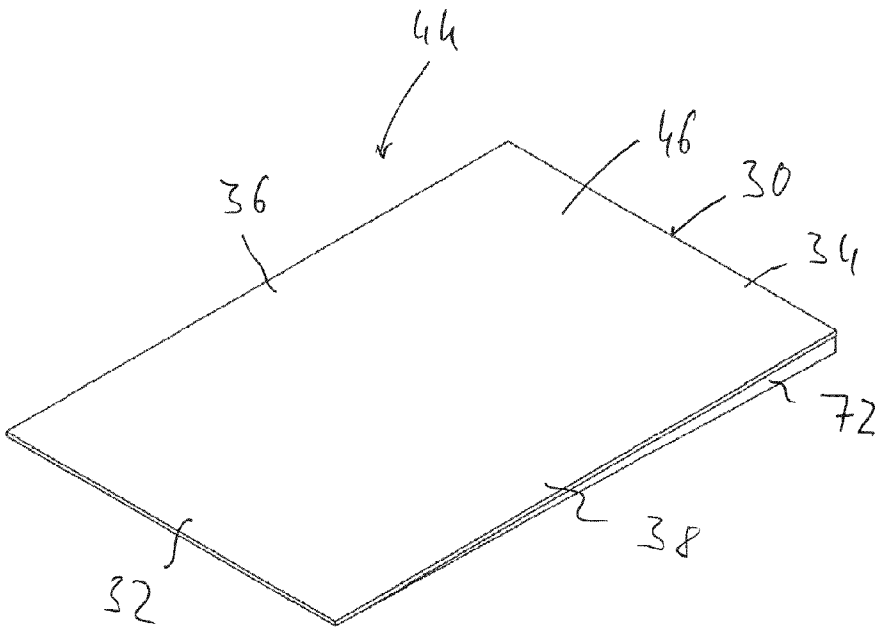

Fig. 7