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Description

The invention relates to a multi-layered saddle blanket with a layer of spacer fabric. Saddle blankets are known with a wide variety of designs.

- 5 Various forms are described in the following printed publications.
DE7805018U, EP882669, DE202005011857U, DE9312410U, DE 202010011046U,
DE19505126, DE20122479U, DE29518764U, DE29705827U,
DE102010025974, DE202008017455U, DE202013100284U, DE20304480U,
DE29518764U, DE102010035616, DE202014007698U, DE2428852
10 DE202006002470U.

- DE7805018U describes a multi-layered saddle blanket, in which are provided a sweat-absorbing layer, a sweat-impermeable layer and a fabric with a pile. The pile fabric is intended to be arranged on the skin side/side facing the horse, the sweat-impermeable layer on the side
15 facing the saddle. The pile fabric is intended to remain dry when the horse sweats. This concept is only realistic insofar as the sweat-absorbing layer is able to cope with the accumulation of sweat. This is excluded, at least when the capacity limit for the sweat-uptake is reached. All the known sweat-absorbing materials for saddle blankets are
20 not up to the task for a substantial accumulation of sweat. After several rides these layers are so wet that they do not dry overnight.

- DE9312410U likewise describes a multi-layered saddle blanket with an upper layer of material, an under layer of material and an
25 intermediate layer. The upper layer of material means the material on the saddle side and the under layer material means the material on the skin side/side facing the horse.

The upper material should consist of leather or the like or of velvet or velvet weave.

- 30 The under layer material should be a roughened or velvet fabric or a hide or the like.

The intermediate layer should be a foam material or a loden felt or needle felt or a non-woven material. An intermediate layer made of an uncut pile fabric is

illustrated and described in the drawing. Pile fabrics consist of two layers of fabric that are connected to one another by threads. The velvet fabrics result by cutting the pile fabric between the layers of fabric. In this way two textile webs result. Each web consists of a fabric and threads that are retained in the fabric and protrude away from the fabric as the pile,

The achievement of the desired impermeability of the saddle blanket is described as a key feature of the saddle blanket. It is therefore concluded that no absorbed moisture should escape out of the saddle blanket again.

- 10 Other previously cited publications also treat the problem of sweating under the saddle. This applies for example to DE202006002470U, DE102005011857U and EP882669.

These publications plan to produce one or more layers of a saddle blanket from a spacer fabric. The spacer fabric is extremely air permeable and moisture permeable, such that evaporating sweat can easily escape. However, DE 15 102005011857U also states that moisture/sweat collects in the saddle blanket, namely in the layer of the spacer fabric.

According to DE 02006002470U and EP882669 a layer of spacer fabric should also be arranged on the skin side/horse side.

- 20 In practice the saddle blanket of spacer fabric is provided with a covering fabric made of textile fabric (cover fabric) because the spacer fabric unpleasantly scratches - at least at the cut edge. Up to now the cover fabric has a maximum thickness of 3mm.

Normally, the sweating of the horse affords an optimal equilibration of its temperature. In a working horse about 75% of the energy input from the organism must be evacuated as heat. This occurs primarily through the skin by evaporation of the water/sweat. In the case of considerable efforts, body coverings with a large surface area may impede the evaporation. Consequently, a partial covering of the back by saddle blankets (saddle underlays) may be very detrimental to the performance of the horse.

Nonetheless, the usual saddle blankets show little consideration for the problem of sweating. In the main these saddle blankets consist of a more or less impermeable foamed plastic/plastic.

Saddle blankets with a spacer fabric are comparatively very rare.

The invention takes account of the fact that the horse sweat is not ideally absorbed by the spacer fabric that is in direct contact with the horse's skin. This also applies to

5 the use of a usual covering fabric.

Accordingly, the invention is based on the object of improving the uptake of horse sweat into the saddle blanket. According to the invention this is achieved in that the saddle blanket, made of one or more layers of spacer fabric, is additionally provided

10 on the skin side with a layer made of woven velvet.

In velvet fabrics woven loops are initially produced and then a number of woven loops are cut up on one side of the fabric, such that the cut ends of the loops are lined up as the pile. Woven velvet is typically used as a cover fabric in upholstery. In this

15 regard, the woven velvet ensures a high degree of seating comfort. The absorbance of moisture/sweat is not part of the role of the cover fabric for upholstery.

The application in saddle blankets with the role of absorbing moisture affords a very advantageous result: The moisture is increasingly removed from the horse's skin by

20 the woven velvet and supplied to the spacer fabric. The moisture evaporates therein and the resulting water vapour can escape very easily.

The invention attributes the enhanced action of the woven velvet to the pile that with an adequate density develops a capillary effect. The term density means that the

25 distance between the individual cut ends is on the one hand sufficiently low and on the other hand wide enough to cause moisture to creep along these ends. Such a distance exists in the usual velvet upholstery fabrics.

Measurements have demonstrated that the moisture absorbance in such a woven velvet is 6 times greater in comparison to the known saddle blankets with skin-facing

30 spacer fabrics.

Tests when riding over a long distance showed that the skin under the saddle blanket according to the invention was dry and outside the saddle blanket was wet with sweat. Formerly all riders had other experiences – namely more sweat under the saddle blanket than outside the saddle blanket.

Moreover, velvet is very soft.

The resilience is essential for a saddle support in order to avoid bruises to the horse. Many riders thus rely on lambskin.

5 Lambskin is highly resilient.

However, it does not depend solely on the resilience. To avoid bruises a certain strength is advantageous. With a balanced ratio of resilience to strength, the latter enables an advantageous support or enlargement of the supporting surface. This is synonymous with a relief of pressure.

10 Such a ratio is found with typical woven velvets used for upholstery.

Lambskin has a hair length that is much too long to keep the distance between the hairs open. Moreover, lambskin has a leather skin that is very detrimental to moisture transport.

The thickness of the woven velvet is usually more than 3 mm, preferably a
15 thickness greater than/equal to 3.5 mm, even more preferably greater than/equal to 4 mm and most preferably greater than/equal to 4.5 mm. Preferably the thickness of the woven velvet is not more than 9 mm, even more preferably not more than 7.5 mm and most preferably not more than 6 mm. Thus, the invention recognises that the supporting forces of the woven velvet are greater, the less the length of the
20 upright standing loop ends that form the pile.

Preferably, woven velvets made of polyester or polyacrylics are used. These velvets are extremely hard-wearing.

The spacer fabrics are very advantageously complemented with the woven velvet or conversely, the woven velvet with the spacer fabric. An air flow can be formed in the
25 spacer fabric. This can be promoted when, after saddling the horse, the saddle blanket end that faces downward and the end that is turned toward the instep are very air-permeable. The air permeability is preferably achieved by hemming the saddle blanket with a coarse fabric. It is also advantageous if the saddle blanket is composed of two pre-cuts that are exactly pushed together/conjoined at the instep of
30 the horse. The pre-cuts may then be bonded to one another by a coarse fabric. At this point the air laden with evaporated sweat can easily escape because saddles usually curve inwards in the area of the instep so as not to strain the instep.

A less air-permeable border of the saddle blanket is preferably provided at the remaining/lateral ends of the saddle blanket. A correspondingly fine mesh and thickly woven border is also provided. Preferably, the mesh size of the border is laterally at least 25 % less, even more preferably at least 50 % and most preferably at least 75 % less than the mesh size at the upper and lower ends of the saddle blanket. Optionally, air impermeability is also provided on the lateral ends of the saddle blanket.

The airflow within the saddle blanket is also enhanced if the layer of the spacer fabric in the saddle blanket undergoes a deformation as the horse works. The deformation is particularly intensive when the horse trots and gallops. The spacer fabric is thus deformed, mainly due to the constantly changing load of the rider. This causes a pumping and suction effect. This means that as the spacer fabric is compressed the enclosed air is pressed out of the saddle blanket at the open ends. When the load drops due to a counter-movement of the rider the spacer fabric recovers its shape and external air is sucked into the saddle blanket. The degree of compression not only depends on the movement of the rider, but also on his or her weight. Furthermore, the saddle blanket must not be too resilient, such that the seat on the horse is perceived to be too soft.

More resistant spacer fabrics are obtained by choosing other/thicker threads/filaments for the spacer fabrics. Likewise, the resistance of the spacer fabric can be increased up to a point by incorporating a greater number of threads/filaments per surface area. Preferably, different saddle blankets for the various rider weights are produced by varying the thread/filament thickness and/or the thread/filament count.

The resilience of the saddle blanket according to the invention which is advantageous for the pumping process according to the invention is preferably optimised by an increase in the resilience of the saddle blanket. The saddle blanket is adapted to the curvature of the horse's body. The spacer fabric possesses two outer, stable fabric layers that are joined together with threads/filaments. In the arrangement of the saddle blanket on the horse these threads run at least approximately radially to the curvature. The strain from riding leads not only to forces that run exactly

parallel to these threads/filaments, but also generates forces that run crosswise to the threads/filaments. The reinforcement according to the invention is provided in the circumferential direction of the saddle blanket on the horse's body. The reinforcement is also advantageous for show jumping.

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The reinforcement results from additionally incorporated threads/filaments that run in the direction of the additional forces. These threads/filaments preferably run at an acute angle to the saddle blanket in the supporting plane of the saddle blanket. In this way the additional threads/filaments link the stable, outer fabric layers.

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The acute angle is preferably 30 degrees plus/minus 15 degrees, even more preferably plus/minus 10 degrees and most preferably plus/minus 5 degrees. Diagonally running threads/filaments in fabric layers are known per se from DE102004056056 in mattresses with spacer fabrics. However, this deployment is not at all comparable with the pumping process in a saddle blanket laying on the back of a horse.

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The diagonally running threads/filaments are preferably arranged in the saddle blanket, such that, starting from the fabric layer that faces the skin or the woven velvet, they run on the horse's back downward and outward to the outer fabric layer. This requires that the diagonally running threads/filaments run differently on each side of the horse. Advantageously, when the saddle blanket is made of two parts the same starting material can be used for this purpose on both sides of the horse, wherein one part is intended for one side of the horse and the other part is for the other side of the horse, and both sides are joined together as described above at the instep of the horse.

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Advantageously, the diagonally running threads/filaments may also be used on saddle blankets that do not have a layer of velvet.

In fact, the spacer fabric corresponds for example to the description in

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DE200062470U. The thickness of the layer is preferably 5 to 30mm, even more preferably 10 to 25mm and most preferably 15 to 20mm.

On the saddle side the saddle blanket is likewise preferably provided with a covering layer. Preferably, other textile layers that are easily differentiated from the woven

velvet may be used as the covering layer, such that the user can easily distinguish the layers. This avoids an incorrect positioning of the saddle blanket.

The textile layer on the saddle side may be, for example, a simple woven fabric or a fleece.

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All the layers are preferably firmly attached together. In this regard a stitched connection is preferably provided between the woven velvet and the spacer fabric so as to ensure maximum moisture permeability. The layer on the saddle side may also be glued to the spacer fabric or laminated in another way to the spacer

10 fabric. Preferably, both layers are only joined together by dot-coating lamination, such that the lamination does not interfere with the moisture permeability.

Various embodiments of the invention are illustrated in the Figure.

Fig.1 shows a sectional view of a saddle blanket according to the invention.

15 The layer thicknesses are not shown to scale.

The saddle blanket according to the invention possesses a core 12 from a 15mm thick spacer fabric. A covering layer 11 made of a 2mm thick fleece is laminated on the side of the core 12 facing the saddle.

A woven velvet 13 is provided on the lower side/skin side facing the horse. The
20 woven velvet 13 is joined to the other layers by stitched seams. The woven velvet 13 consists of a tissue 14. On the tissue 14 are slit loops that are on the exterior, i.e. on the side facing away from the core 12, such that the ends of the loops stand up vertically as a pile 15 to the tissue.

In the embodiment the woven velvet is made of polyester with a thickness of 4mm
25 and a grammage of 950 grams per running metre, based on the starting material with a width of 156cm. Textiles are usually defined by the grammage.

Fig.2 shows a section of another saddle blanket according to the invention without a covering layer facing the saddle of a horse's back. The illustrated curvature of the
30 horse's back runs differently from the illustration.

In Fig.2 is a layer of woven velvet, depicted with 1, which absorbs the sweat from the horse's back. The direction of the movement of the moisture from the horse to the woven velvet is designated with 3. The absorbed sweat is transferred to the layer 2 of

the spacer fabric. The sweat evaporates there and is borne away by the air that flows through the saddle blanket.

The air flow is supported by the repeated stress of the saddle blanket when riding. This stress is shown with the arrows 4.

Patentkrav

1. Flerlagssadeldækken til heste med en kerne (2, 12) af afstandsstrikk, hvori
 - a) afstandsstrikket har en tykkelse fra 5 til 30 mm, fortrinsvis 10 til 25 mm og
5 endnu mere foretrukket 15 til 20 mm, og
 - b) der i afstandsstrikket er muliggjort en luftstrøm,
kendetegnet ved, at der på den mod hesten vendende side er tilvejebragt et lag vævet velour (1, 13), hvis luv er egnet til at optage hestens sved på berøringsfladen med hesten og lede den videre til afstandsstrikket, idet
 - 10 c) den vævede velour (1, 13) har en tykkelse på mere end 3 mm, fortrinsvis en tykkelse større end eller lig med 3,5 mm, endnu mere foretrukket en tykkelse større end eller lig med 4 mm og mest foretrukket en tykkelse større end eller lig med 4,5 mm, og
 - d) den vævede velour ikke er tykkere end 9 mm, fortrinsvis ikke er tykkere end
15 7,5 mm og endnu mere foretrukket ikke er tykkere end 6 mm
2. Sadeldækken ifølge krav 1 omfattende en vævet velour af polyacryl eller polyester.
- 20 3. Sadeldækken ifølge krav 1 eller 2, hvori den vævede velour (1, 13) er forbundet med kernen (2, 12) af afstandsstrikk ved stikninger.
4. Sadeldækken ifølge et af kravene 1 til 3 omfattende et dæklag (11) på kernen (2, 12) på den bort fra den vævede velour (1, 13) vendende side, der adskiller sig
25 tydeligt fra den vævede velour (1, 13).
5. Sadeldækken ifølge krav 4 omfattende et dæklag (11) af vævet vare eller filt.
6. Sadeldækken ifølge krav 4 eller 5, hvori dæklaget (11) er lamineret, fortrinsvis
30 klæbet på kernen (2, 12).

7. Sadeldækken ifølge et af kravene 1 til 6 omfattende en meget luftpermeabel kantning af sadeldækkenet ved den øvre og den nedre ende.

8. Sadeldækken ifølge krav 7, hvori sadeldækkenet er mindre luftpermeabelt
5 indfattet på siderne.

9. Sadeldækken ifølge et af kravene 5 til 8, hvori sadeldækkenet består af to tilskæring, der er samlet ved vristen.

10 10. Sadeldækken ifølge et af kravene 1 til 9, hvori afstandsstrikket består af to yderlag, der er forbundet med hinanden ved tråde/filamenter, idet trådene/filamenterne i anbringelsen på hestens krop forløber radialt i forhold til hestekroppens krumning og i det mindste delvis skråt mellem yderlagene.

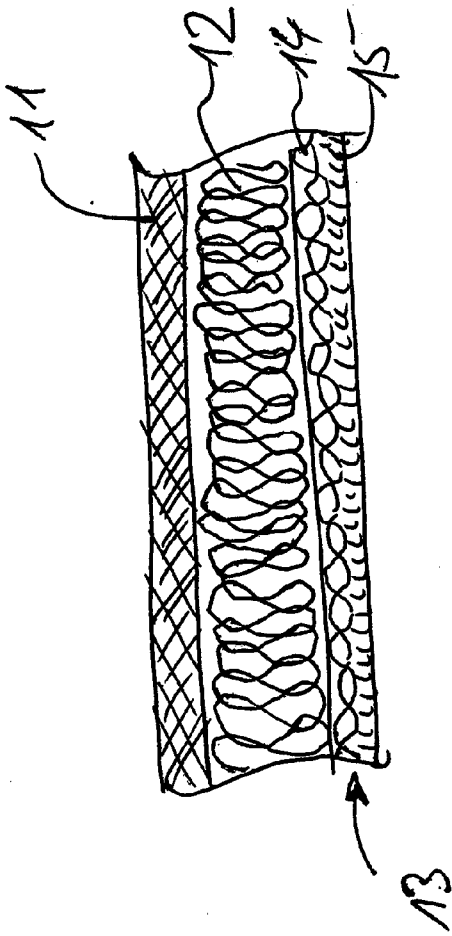
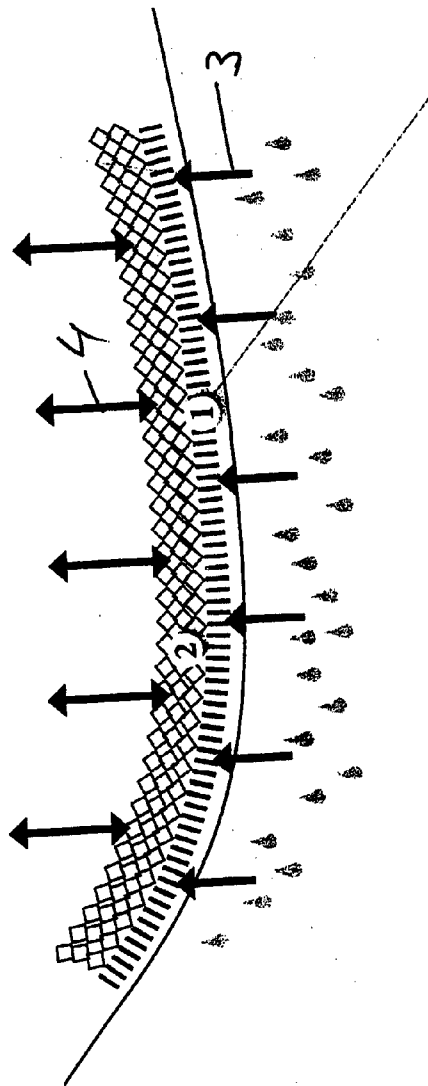


Fig. 1

*Fig. 2*