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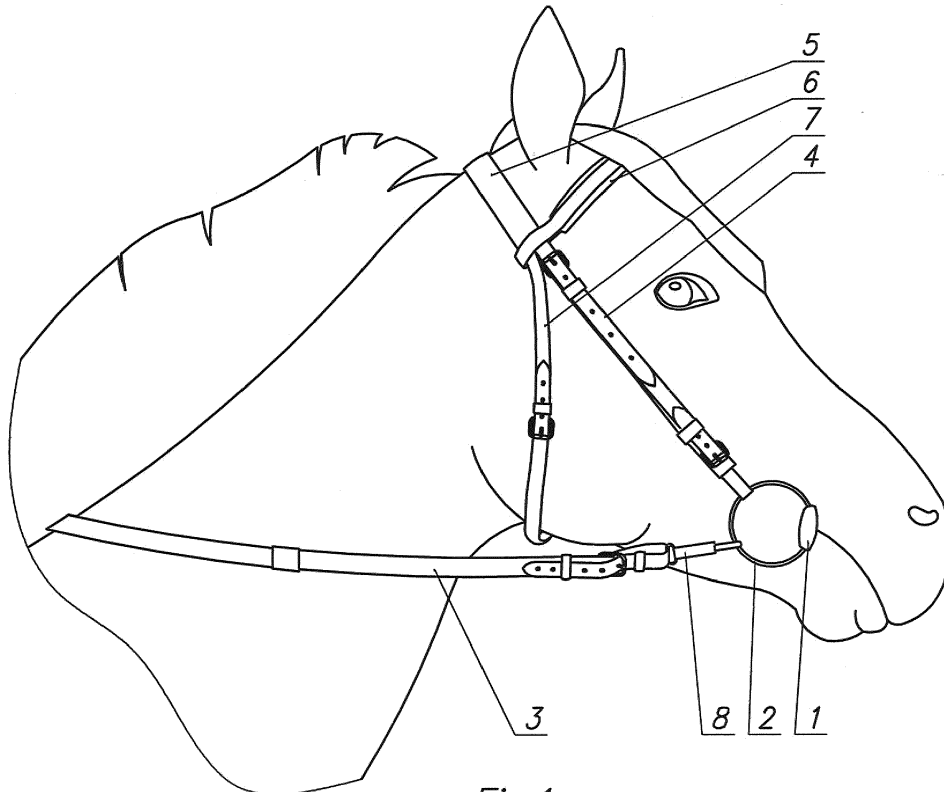
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(54) **HORSE BRIDLE**

(57) Horse bridle used in horse riding in all sports disciplines and recreation by professional riders and amateurs formed from a bit (1) with bit ring (2), to which reins (3) and cheek straps (4) are attached, connected in the upper part with pendant (5), to which there are affixed: headband (6) and throatlatch (7), characterised in that

the reins (3) are equipped with shock absorbers (8) extending their lateral sections while increasing the tension force of the reins (3) where the first shock absorber (8) is inserted in the left and the other in the right section of the reins (3) between the holding region of the reins (3) and the bit ring (2).



*Fig.1*

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## Description

**[0001]** The subject of the invention is a horse bridle intended for use in horsemanship in all sports disciplines and recreation by professional riders as well as amateurs. The bridle according to the invention is also applicable in the training of athletes as well as children seeking pleasure and adventure in horse riding.

**[0002]** In the history of domestication and use of the horse, all the bridles served and serve to inflict pain, which for a horse is an order to act or abstain from acting. Untrained hand causes information noise in communication with the horse. The communication is disturbed by the noise of information and irritates the horse. The additional difficulty in the communication with a horse is the fact that the human senses are much slower than the senses of a horse, and therefore the man is not able to react as fast as a horse. The rider sitting in the saddle and holding the reins has no chance to act directly when the horse reacts. The rule is that the rider is less skilled, poorly balanced and coordinated, the more information clutter in the human-animal communication. A horse-riding school teaches the harmony of a man-horse pair, which is fulfilled when human actions precisely end up in the germ of a horse's reaction. It is worth paying attention to the fact that horses learn very quickly to identify negative stimuli. In many cases, horses remember negative experiences for the rest of their lives. This is accompanied by selective perception, increased avoidance and emotional arousal. It should also be emphasised that in horses the expectation of a negative stimulus is more stressful than the stimulus itself. Horses concentrate on the signals preceding the stressful event, and this takes place at the expense of focusing on the rider's commands. Horses, by displaying such reactions, strive to reduce the strength of the stressful stimuli that occur, and this makes it difficult, and sometimes even impossible, to train. The most effective way to deal with these situations is to eliminate the causes of such behaviours, not to combat their effects. As part of improving communication with the horse, attempts are made to prevent the occurrence of negative experiences during training and stressful situations. Sensitivity of the horse's mouth makes the rider's hand become the most stressful factor, and its accidental action disturbs mutual communication. Feeling uncomfortable, the horse becomes defensive in response to the actions of the rider, therefore it learns more slowly, reacts with the escape from the control of the rider, e.g. ignores the commands, starts to muzzle, tears out the reins, waves its head. All this forces the theoreticians and equestrian practitioners to look for better and better solutions - including equipment solutions - in horse training.

**[0003]** Summing up the above, it is concluded that the most harm in the process of horse training and starts is brought by the improperly operating rider's hand, its sharp action inconsistent with the horse's reactions, making it difficult for the animal to correctly read the trans-

mitted signals.

**[0004]** We commonly use bridles formed by a mouthpiece in the form of a bit on both sides ending with bit rings, to which the reins are fastened and cheek straps, usually connected in the upper part with a pendant to which the headband and throatlatch are mounted. Usually in such constructions the reins are made of two straps of leather or other unstretchable material, often fastened with a buckle, one of which is on one side of the horse's head and is attached to the associated bit ring placed in the bit in horse's mouth. Every time, intentioned or not, too strong or too violent jerk of the reins causes the bit to bite into the horse's mouth, causing pain. A similar event occurs when, with a rider holding the reins firmly, the horse makes a sudden head movement. Repetitive repetition of such events makes it difficult or even impossible to communicate with the horse, and often also leads to permanent damage to the horse's mouth. Such events occur on a daily basis among less experienced riders, with similar situations being common among professional riders.

**[0005]** The solution of a bridle with structural features as in the above description, for example, is disclosed in US patent application US4953345. In the presented solution, a mouthpiece bit is a weymouth bit. The technical problem solved by this application is not convergent with the problem of the solution in question. The essence of this solution is that the individual elements of the bridle like cheek straps, headband, or throatlatch are connected with each other by buckles, which means that in the event of damage to one of these elements, only that element must be replaced and not the entire bridle. A solution concurrent with the above construction was also covered by application EP0353726.

**[0006]** There is also a solution under application GB2514811 that reveals a bridle whose straps bypass the sensitive cheek and periocular part of the horse. The bridle according to this construction is made of a bit on both sides ended with bit rings, to which the reins are attached, along with noseband with noseband chin and a belt bypassing the cheek and periocular area, overlapping the horse's neck connected to the belt under the horse's lower jaw.

**[0007]** There is also a solution under the patent application JPH0951993, which discloses the construction of the bridle limiting the pain of the horse's mouth caused by the bit while riding. The bridle according to this solution is created, similarly as in the above solution, with a bit on both sides ending with bit rings, to which the reins are attached, along with noseband, cheek straps connected with the pendant, and headband and throatlatch connected to cheek straps. The reins belts, when fastened to the bit rings, are equipped with weights that tighten the bit to the bottom. The aim of such a solution is to keep a constant, relatively slight tension of the bit while riding and holding the reins loosely, which in turn eliminates vibrations of the bit.

**[0008]** There is also a solution under the German pat-

ent application DE2851073 solving the problem of the present application in the most immediate way. The construction of the bridle according to this solution contains a pelham, to the upper rings of which chick straps connected to the pendant are attached, to which the headband is attached together with throatlatch and noseband. In this solution, the reins are attached to the rings of the pelham's shanks. And the same reins, at a distance of several dozen centimetres from the mouthpiece towards the rider's hand, has three regulatory attachments for the elastic rope. On one side this elastic rope is attached to rein, and on the other side to the pelham's bit rings. The solution according to the invention reduces the pain of the horse's mouth while riding it. Pulling the reins in the first place strains the elastic rope that gently acts on the pelham's bit, and only after the elastic rope reaches the length of the loosely hanging part of the reins, the shanks act, i.e. the stronger action of pelham is activated through the chain placed under the horse's lower jaw pulled by the shanks. The presented solution is dedicated to a specific type of mouthpiece - pelham. This mouthpiece combines the functions of a weymouth bit and a classic bit. It differs from the weymouth bit in that instead of a snuffler, a jointed bit is placed in horse's mouth. And a pelham, contrary to a bit, has shanks (levers). Pulling the reins to pull the shanks causes the chain under horse's lower jaw to be pulled, which results in severe pain. Pelham is used for so-called difficult horses. Due to the severity of the action, it is not suitable for young horses and novice riders. Pelham was distributed by dressage athletes who previously used two mouthpieces: a bit and a weymouth bit. A pair of reins was needed for each of them, because they had different functions. A bit served for horizontal deflections, i.e. lateral twisting of the horse's head and weymouth bit was used for forcing the head position vertically, low or high. Weymouth bit was additionally a powerful brake. Pelham combines these two functions. Due to the sharpness of the pelham operation, the proposed solution has a very limited range of application. In principle, only professionals can use it and only those who have the so-called light hand. This solution is also not suitable for use with classic bits, because both the reins and the elastic ropes would have to be attached to the same bit ring. Hanging and swaying fragment of reins - part from the bit ring to the place where a flexible rope is inserted - would introduce noises in horse-human communication. And the horse needs simple, unambiguous signals. Another disadvantage of this solution is that, paradoxically, although it was designed specifically for pelham, which combines in its design the functions of a bit and a weymouth bit, the proposed form completely destroys the function due to the fact that the elastic rope acts as a bit reins, reaching full tension, immediately starts the reins attached to the shank rings, which momentarily, like levers, clamp the chain under the lower jaw of the horse. The horse learns that after a gentle action on the bit, the action of the shank will occur, which will force it to make vertical movements of the head. Al-

ways vertical. And that's not what pelham was designed for.

**[0009]** The object of the invention is a solution that improves the interaction of the rider's hand with the horse's mouth.

**[0010]** The object of the invention is a solution that eliminates the unintentional pain inflicted by the bit on the horse while riding or reduces this pain during proper communication with the horse, i.e. when the horse correctly follows the commands issued by a less experienced rider.

**[0011]** A horse bridle formed by a bit connected to bit rings, to which the reins are cheek straps are attached, usually connected in the upper part with a pendant, to which a headband and throatlatch are connected, according to the invention is characterised by the fact that the reins are equipped with shock absorbers extending upon increased tension of the reins, up to a few centimetres, the first of which is attached to the left and the second to the right rein between the gripping part of the rein and the bit ring.

**[0012]** Preferably, on the left and right part of rein, the shock absorber is attached to the bit ring with one end and to the left or right end of the rein belt on the same side.

**[0013]** Advantageously, on the left and right sections of the reins the shock absorber is built into the associated rein belt, which is attached to the bit rings on both sides.

**[0014]** The aim of the solution according to the invention is, by extending the reins through extending the built-in shock absorbers, to dump/scatter the force causing pain in the horse's mouth, created by the tension of the reins caused by too rapid movement of the horse's head or frequently occurring, especially among less experienced riders, violent unintentional movements of hand, or too violent commanding. The solution eliminates hand mistakes made while riding and allows the horses to understand the action of the reins and avoid the pain caused by the bit. The solution allows horses and riders to communicate with each other smoothly but effectively. The solution eliminates the rider's jerks harmful to the training process, affects the rider's hand and horse's face, increases the effectiveness of animal training and helps to eliminate the rider's accidental, stressful activities while maintaining the ability to act decisively in critical situations. The solution according to the invention greatly reduces the risk of bite injuries in the horse's mouth.

**[0015]** The subject of the invention is shown in the drawing, in which fig. 1 is a side view of the bridle on a horse head in first example prepared according to the invention, fig. 2 bridle in an axonometric view in first example prepared according to the invention, fig. 3 shock absorber in first example prepared partly in cross-section, fig. 4 is a side view of the bridle on a horse head in second example prepared according to the invention, fig. 5 bridle in an axonometric view in second example prepared according to the invention, fig. 6 shock absorber in second example prepared partly in cross-section, fig. 7 shock absorber in third version prepared partly in cross-

section, fig. 8 shock absorber in fourth version in an axonometric view, fig. 9 shock absorber from fig. 8 partly in cross-section.

**[0016]** Horse bridle in first example prepared according to the invention comprises of a bit 1 on both ending with bit rings 2: the left and the right, and attached to them: the reins 3 and cheek straps 4, connected in the upper part with a pendant 5 to which the headband 6 is and throatlatch 7 are attached. The reins 3 are equipped with two shock absorbers 8 attached to them, one of which on one side and the other on the other side of the horse's head extends the lateral sections of the reins 3 while increasing their tension. The reins 3 extend by increasing the length/stretching the shock absorbers 8 built-in in their lateral sections. The reins 3 are in the form of two leather belts joined by a buckle. One shock absorber 8 is fixed on the left and the other shock absorber 8 on the right section of the rein 3, between its gripping area and the bit ring 2 assigned to it, located on its side. On the left section of the reins 3 the shock absorber 8 is attached to the bit ring 2 with one end, and the other end is attached to the end of left reins belt on its side 3. In the same way, on the right section of the reins 3 the shock absorber 8 is attached to the bit ring 2 with one end, and the other end is attached to the end of left reins belt on its side 3. Each of the shock absorbers 8 is formed from a tubular housing 8a, at one end of which is a ring hook 8b. In the housing 8a there is a rod 8c terminated with a head 8c, on which the compression spring 8e is located with one end resting on the head 8c and the other end on the inner ring of the housing 8a, through which rod 8d is led outside of the housing 8a. The end of the rod 8d is combined with the snap ring 8f. In the construction, the rod 8d, extending from the housing 8a, increasing the length of the shock absorber 8, compresses the spring 8e which is rested on it. Each shock absorber 8 is connected via the snap ring 8f to the bit ring 2 and through the snap hook 8b with its assigned reins belt 3. A part of the rein 3, which occupies a place over the withers of a horse, is its holding area, and the parts that occupy the place on both sides of the horse's head and neck are lateral sections. In the solution according to the invention, a shock absorber with a rod stroke in the range of 0.4 cm to a few centimetres is used, for example 0.5 cm, 1 cm, 2 cm or 5 cm. The spring is selected so that the stroke is realised by a force of 0.5 to 20 N. Trainer or rider adapts the parameters of the shock absorber 8 to the temperament and sensitivity of the horse. The use of shock absorbers 8 as in the solution allows the horse to operate in three ranges of applied force, to which the horse adjusts learns them, namely at the level of very light contact, reaching only the limit value needed to deflect the spring 8e, operation with force within the bending of the spring 8e and operation after exceeding the possibility of deflection of the spring 8e. The above is an educational value for the rider and horse.

**[0017]** The horse bridle in the second example according to the invention is formed as in the first example,

but the belt located on the left and right section of reins 3 consists of two parts connected by a shock absorber 8. The reins ends 3 are attached to the bit rings 2. The difference is also that the shock absorber 8 on both sides is terminated with eye plates 8b.

**[0018]** Any other shock absorber 8 that fulfils the above-described function can be used in the solution according to the invention, as in example shown in fig. 7 or fig. 8 and fig. 9 and others. Shock absorber 8 illustrated in fig. 7 comprises of eye plate 8b of the tubular housing 8a at one end of which the hook 8i is fastened that catches the spring 8e, whose other end is fastened at the holder 8h. Holder 8h is joined with the rod 8d led from the housing 8a, at the end of which there is a snap hook 8f. Extending the rod 8d from the housing 8a stretches the spring 8e located in the housing. Shock absorber 8 illustrated in fig. 8 and fig. 9 has a similar construction as the shock absorber 8 illustrated in fig. 3, except that the snap hook 8f has a more complex structure.

**[0019]** Consultations with riders testing the described type of bridle show that riding with it calms the horses. Applying them, however, requires some correction in the previously used way of commanding horses, because the traditional way delays the stimulus directed to the horse. In addition, it was noted that the solution over time ceases to be respected by horses trained in traditional methods, and consequently they begin to react in a sluggish manner. Riders with greater experience quickly know the situation and solve the problem by reaching for a variant with a short range of extension/amplitude of the rod. However, those experienced riders who decide to apply the invention consistently, quickly accept it, and after a while, their experienced horses do the same. The flexible action of the bit makes transmitted signals not stress the horse. The horse follows them naturally. Therefore, the rider has the ability to better see the relationship between the action of the stimulus being sent and its reduction in the beginning of the desired response. The tests also showed that young horses immediately adopt this type of bridle and immediately conclude that it is not worth to tighten the shock absorbing device too much, because after more and more resistance, it blocks, which means that the bit strikes the toothless edge of lower jaw. The novice riders also quickly learn to use this bridle. Naturally, they allow the bridle's shock absorbers to work. In a word - young riders and young horses instantly understand the bridle's operation according to the invention.

## Claims

1. Horse bridle formed from a bit with bit ring, to which reins and cheek straps are attached, connected in the upper part with pendant, to which there are affixed: headband and throatlatch, **characterised in that** the reins (3) are equipped with shock absorbers (8) extending their lateral sections while increasing

the tension force of the reins (3) where the first shock absorber (8) is inserted in the left and the other in the right section of the reins (3) between the holding region of the reins (3) and the bit ring (2).

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2. The bridle according to claim 1 is **characterised in that** the left section of the reins (3) the shock absorber (8) is attached to the bit ring (2) with one end, and the other end is attached to the left or right belt of the reins located on its side.

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(3).

3. The bridle according to claim 1 is **characterised in that** on the left and right sections of the reins (3) the shock absorber (8) is built into the associated rein belt (3), which is attached to the bit rings (2) on both sides.

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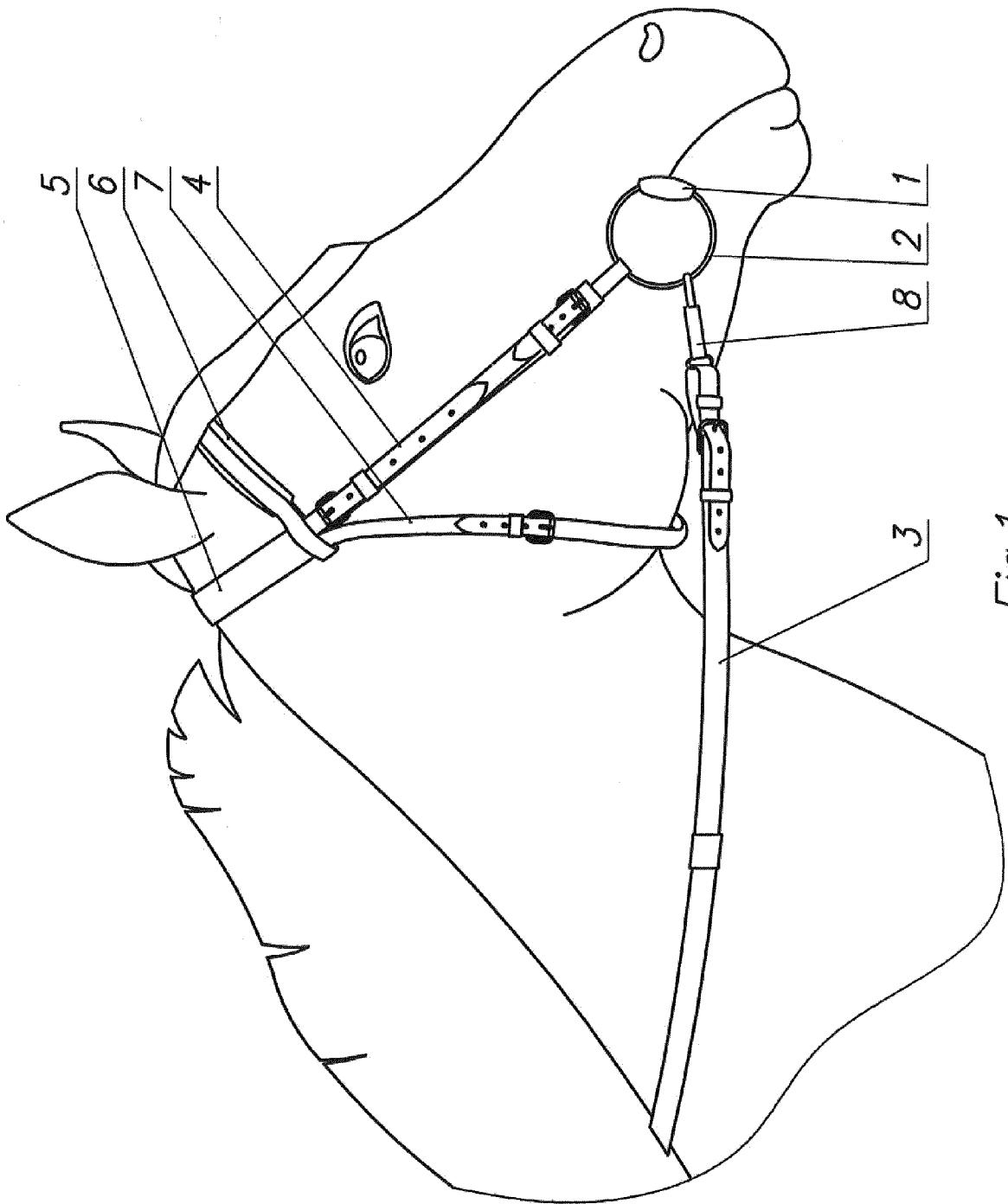


Fig.1

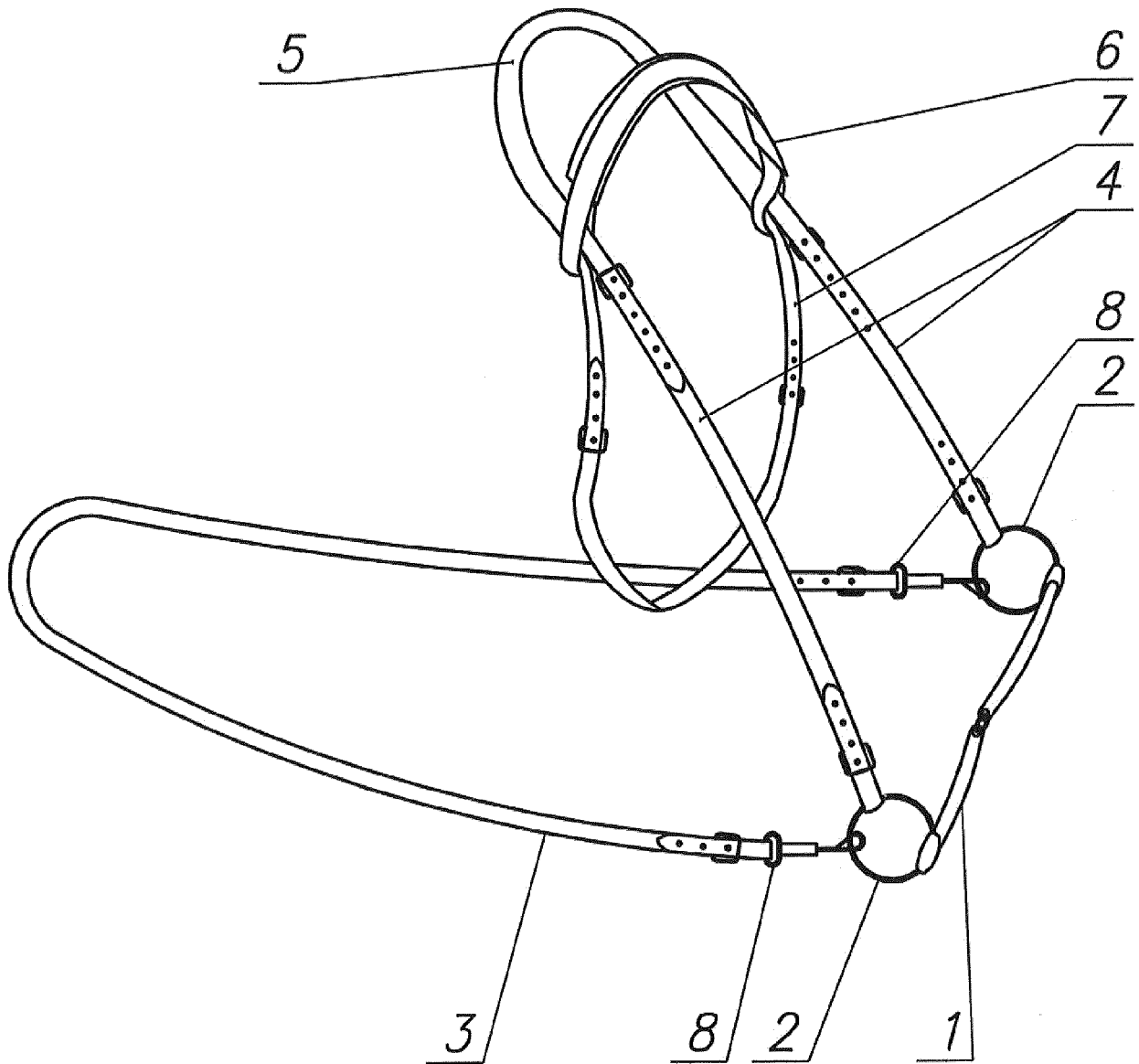


Fig.2

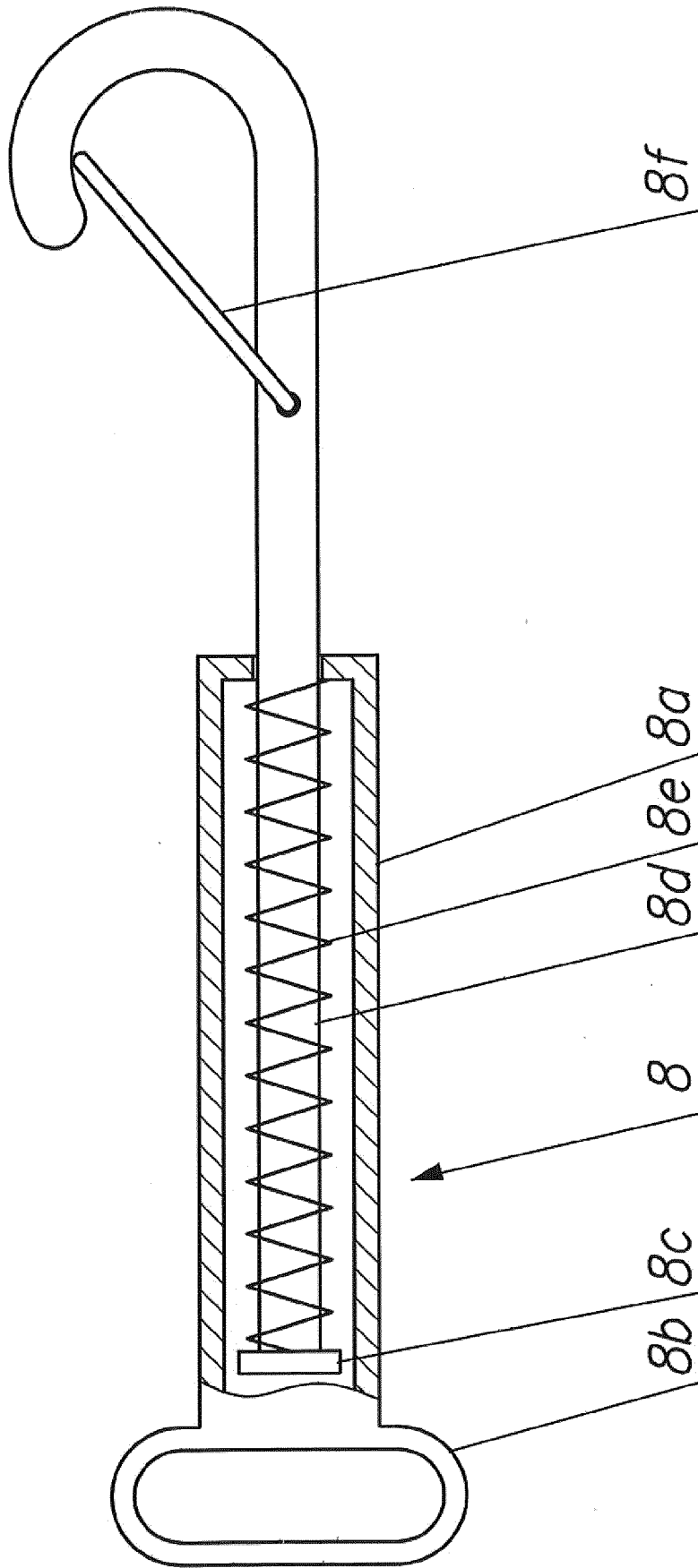


Fig. 3

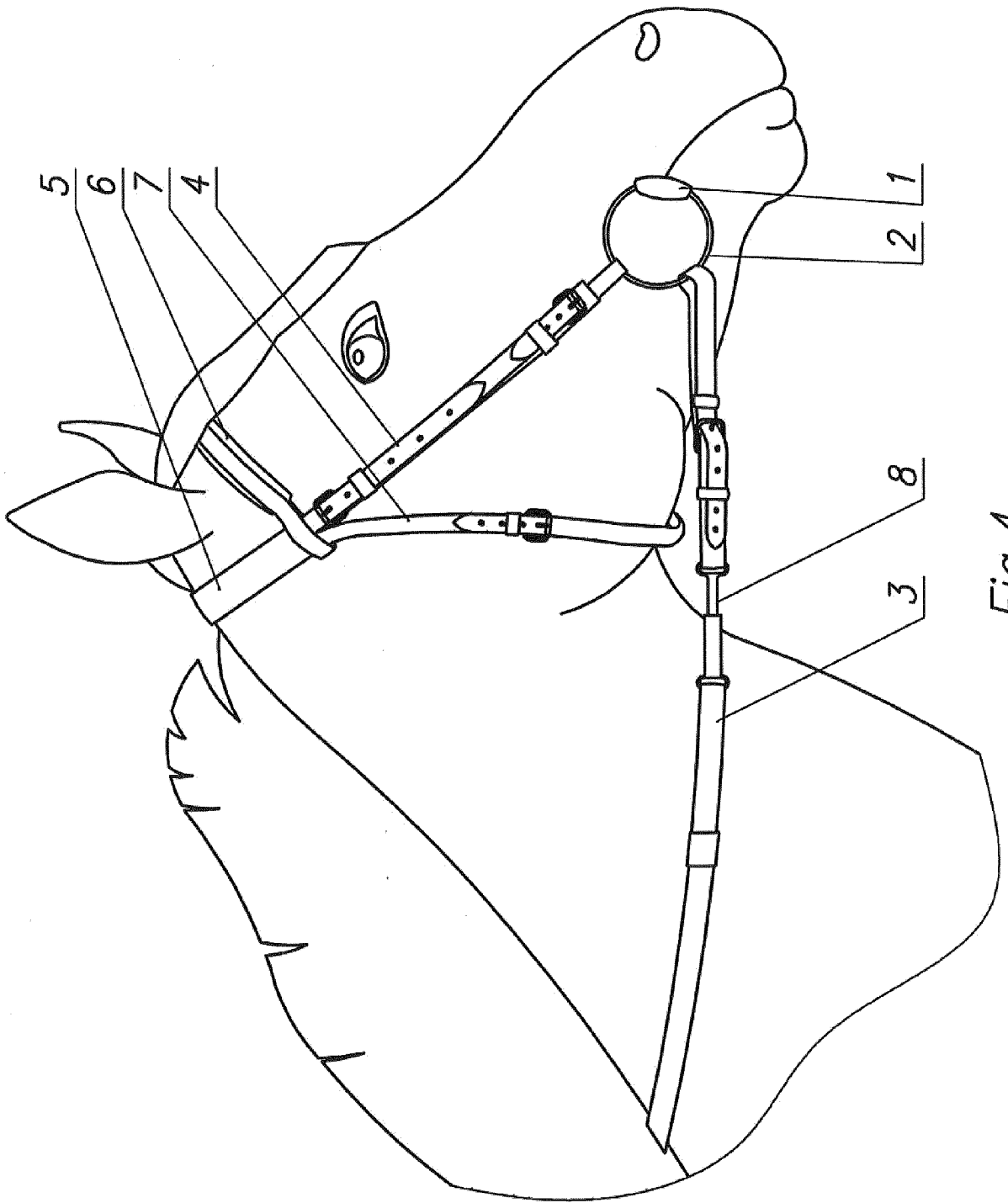


Fig. 4

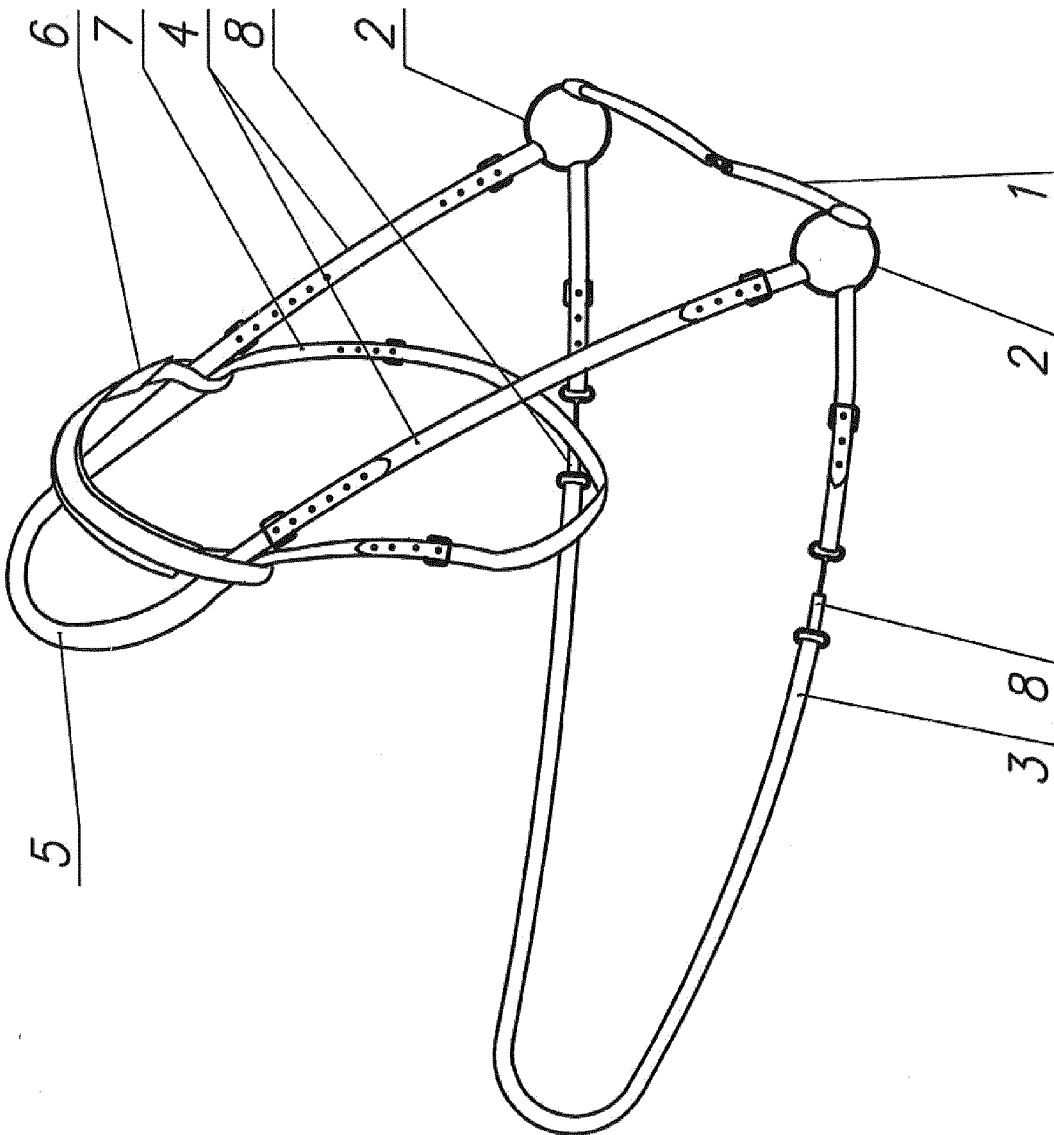


Fig.5

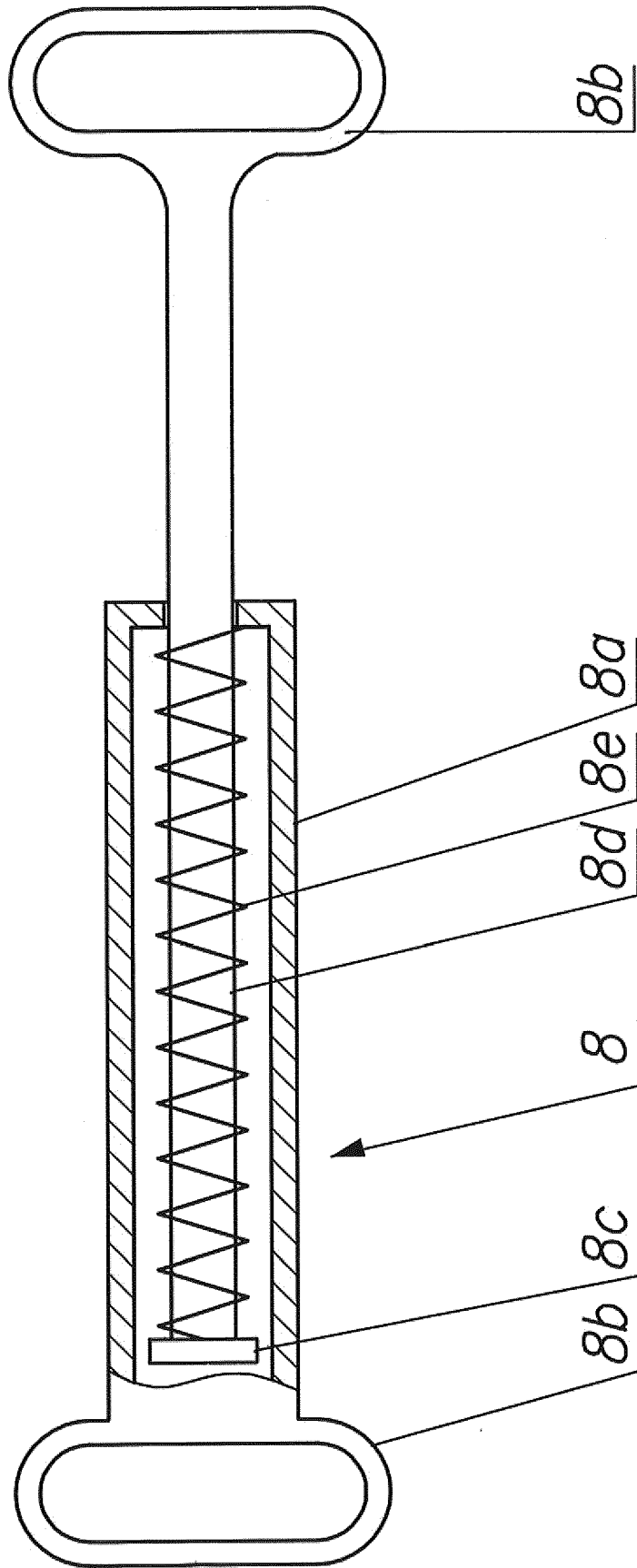


Fig.6

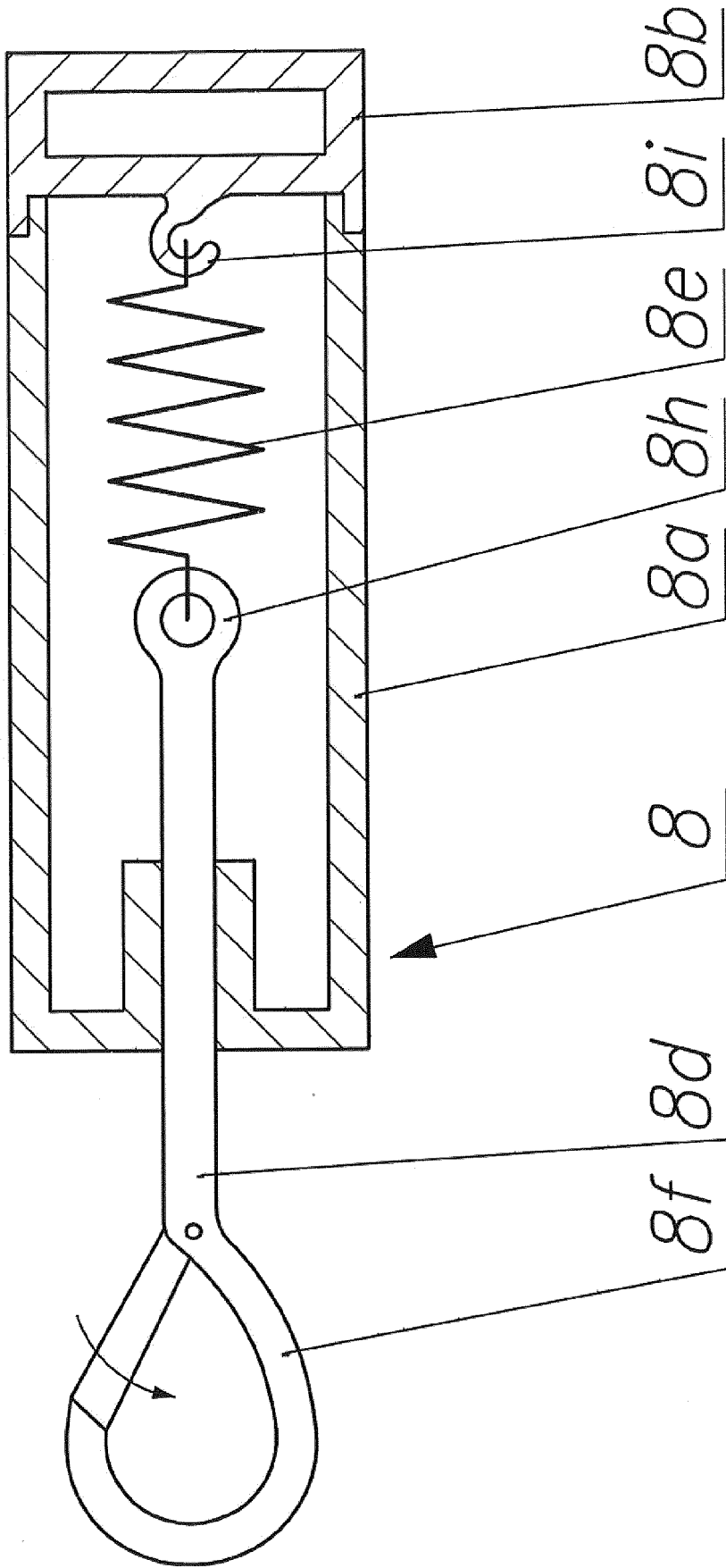


Fig. 7

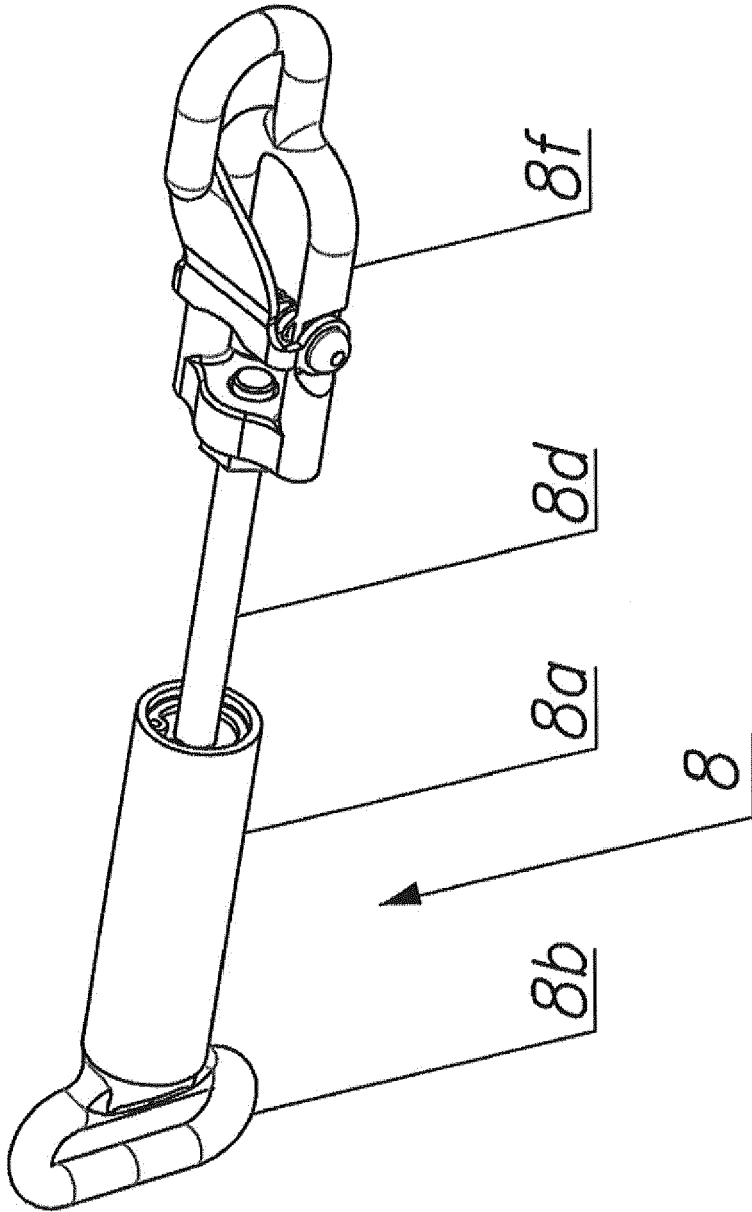


Fig. 8

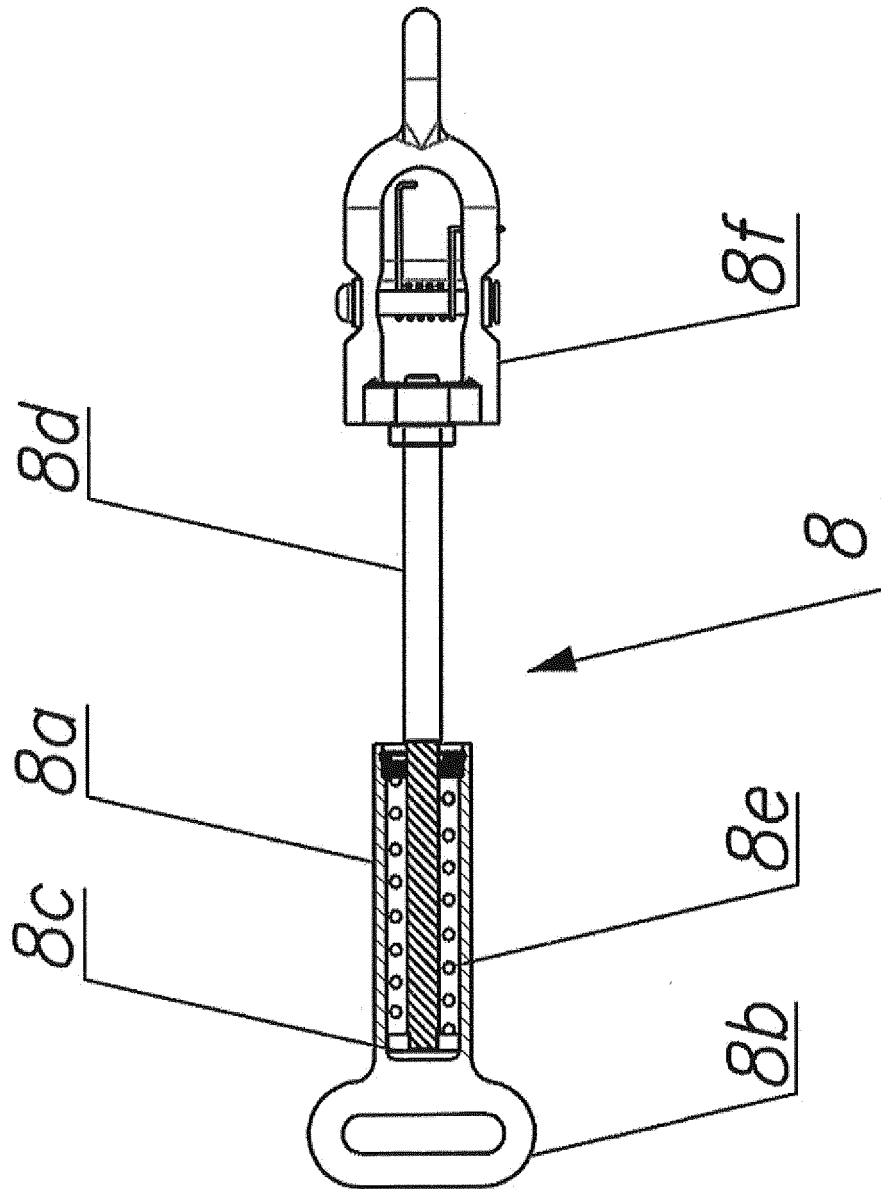


Fig. 9



EUROPEAN SEARCH REPORT

Application Number  
EP 19 46 1511

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 085 500 A (KEPPICK KIM [US]) 11 July 2000 (2000-07-11) * abstract * * column 1, line 44 - column 3, line 30 * * figures 1,2,3a,3b * * claims 1-7 *	1-3	INV. B68B1/04 B68B7/00
X	GB 2 453 101 A (LEON MARC [GB]) 1 April 2009 (2009-04-01) * abstract * * page 2, line 43 - page 16, line 37 * * page 21 * * figures 1A-22H *	1-3	
X	DE 296 08 078 U1 (HARISCH DIETER [DE]) 25 July 1996 (1996-07-25) * page 3 - page 6 * * figures 1,2 *	1-3	
			TECHNICAL FIELDS SEARCHED (IPC)
			B68B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 September 2019	Examiner Espeel, Els
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