(No Model.)

W. B. MORGAN.

HORSE SPREADER.

No. 540,069. Patented May 28, 1895.

Fig. 1.

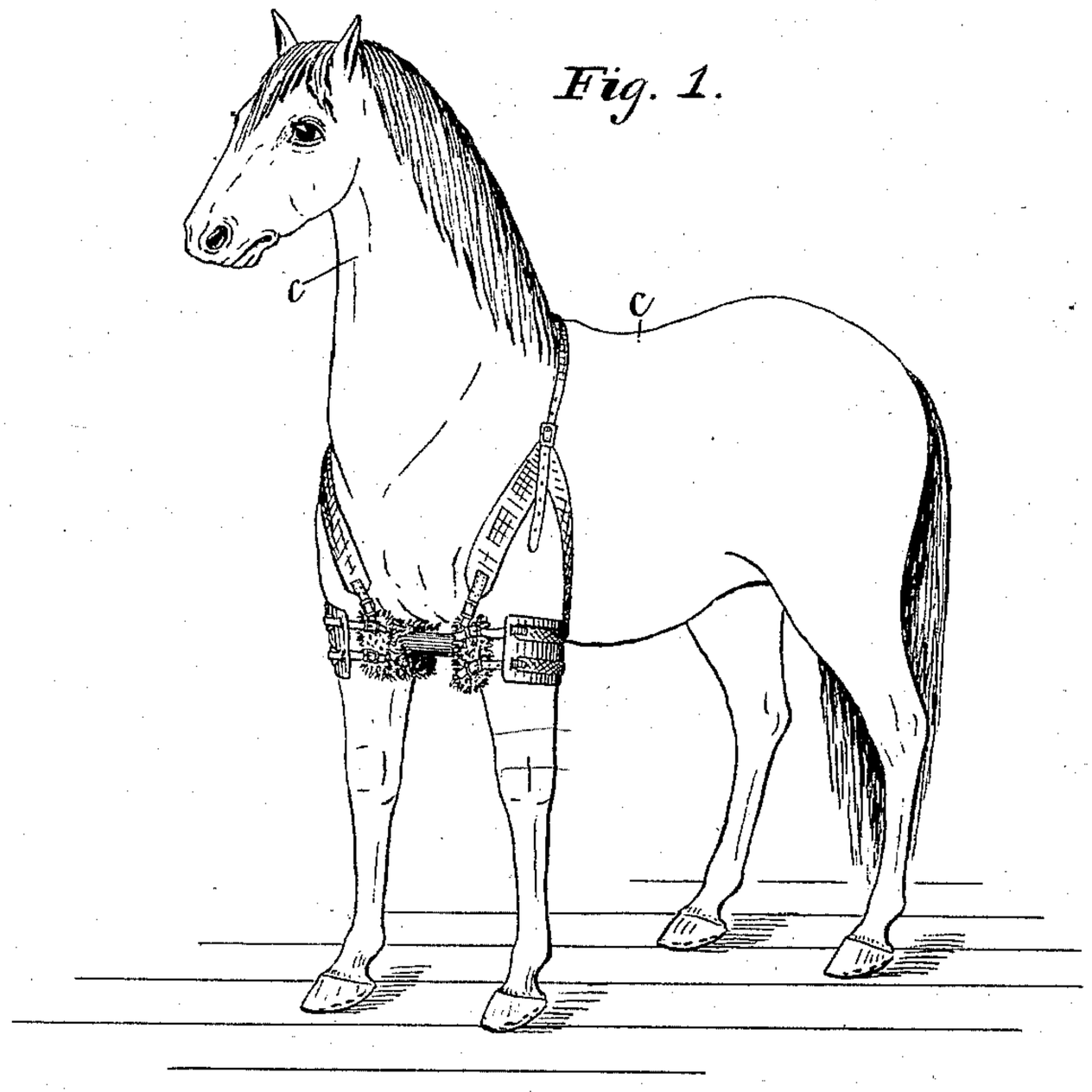


Fig. 2.

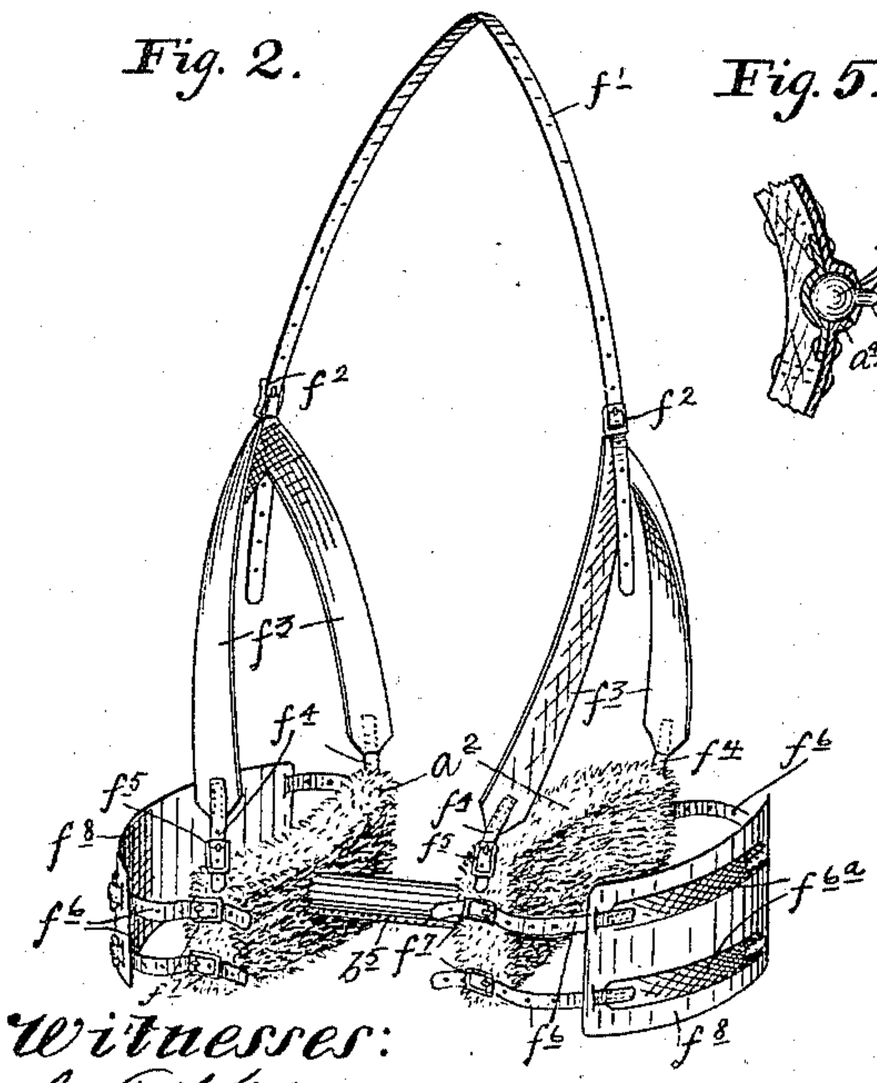


Fig. 5.

Fig. 4.

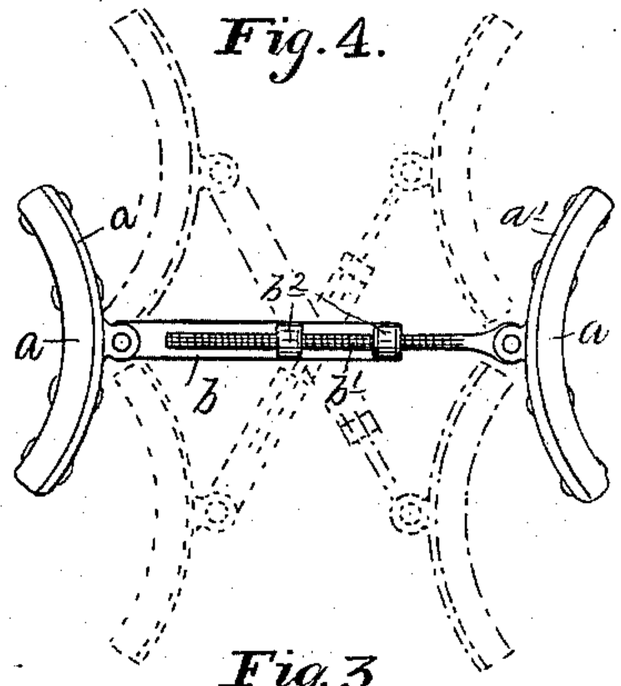
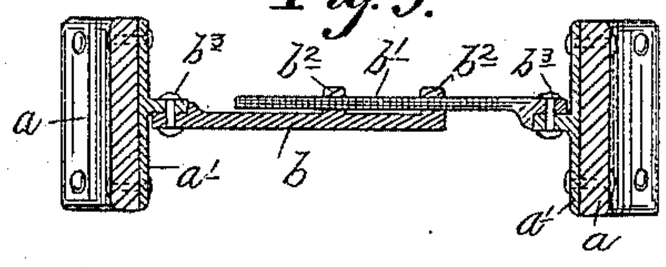


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM B. MORGAN, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO IRA WADLEIGH, OF SAME PLACE.

HORSE-SPREADER.

SPECIFICATION forming part of Letters Patent No. 540,069, dated May 28, 1895.

Application filed March 14, 1895. Serial No. 541,673. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MORGAN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Horse-Spreaders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to spreaders, for use on horses, to prevent interference and cure the habit of the same, or for establishing in the horse what horsemen call a "square action."

To these ends, my invention consists of the novel features of construction hereinafter described and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts—

Figure 1 is a perspective view showing the invention as applied in working position on a horse. Fig. 2 is a perspective view of the spreader detached. Fig. 3 is a sectional view through the buffer-heads and the cross-brace or reach of the spreader detached, with some of the parts removed. Fig. 4 is a plan view of the parts shown in Fig. 3 in full lines in the standing position of the horse and in dotted lines in the positions taken under the action of the horse, and Fig. 5 is a detail in section showing a modification in the connection between the buffer-heads and the cross-brace or reach which connects the same.

a a' a^2 represent the parts constituting the buffer-heads; of which parts, a represents a concave piece of wood or other suitable comparatively rigid material, a' a metallic backing to which the part a is riveted, or otherwise secured, and a^2 a padding of sheep-skin or other suitable material made fast to the rigid parts of the buffer in any suitable way. The said parts a and a' are of concave form on their bearing surfaces, and of convex form on their backs, as is best shown in Fig. 4. Two of the said buffer-heads are employed and are connected by a cross-brace b b' with freedom for universal pivotal motion. As shown, the section b of the said cross-brace is provided with nut-lugs b^2, and the section b' works through the said nut-lugs b^2 and has screw-threaded engagement therewith, as is best shown in Figs. 3 and 4. In the principal views, the said brace or reach sections b b' are shown as pivotally connected by rivet bolts b^3 with hinge-lugs a^3 formed on the backs of the metallic parts a' of the buffer-heads. The pivot-bolts b^3 have their axes in the vertical plane; and hence, the buffer-heads are hinged to the brace-sections with freedom for pivotal motion on the sections in the horizontal plane; and the connection between the two sections b b' of the said cross-brace or reach permits rotary or pivotal motion of the buffer-heads and the sections of the reach, in respect to each other, in the vertical plane. Otherwise stated, with the connections shown in Figs. 1, 2, 3 and 4, a universal pivotal motion is permitted to the buffer-heads, in respect to each other.

In Fig. 5 is shown another means of securing this universal motion of the buffer-heads, in respect to each other, by means of ball and socket connections between the cross brace or reach and the buffer heads. In the said modification, shown in Fig. 5, the brace sections b b' are provided with ball ends b^4, which engage socket bearings a^4 a^5 on the buffer-heads. The half socket a^5 is removably secured to the half bearing a^4; and the half bearing a^4 is cut away, as shown at a^6, to permit the necessary angular movement of the stem portion of the reach section.

With either of the two means shown, for connecting the reach sections to the buffer-heads, the buffer-heads are held apart by the cross-brace or reach to any desired extent of spread, and are free for universal motion in respect to each other, as is desirable when in working position on the horse c.

When constructed and applied to the front pair of the horse's legs, the spreader will appear, as shown in Fig. 1. From an inspection of this view, it will appear that the buffer-heads bear against the inner surfaces of the pair of legs to which they are applied, with the concave surfaces working against the legs near to the body of the horse. The said

buffer-heads and their cross-brace or coupling reach are held up in working position by suitable flexible connections applied to the body and the legs of the horse.

As shown, the body connections comprise a back strap f' f^2 f^3 and f^4; of which parts, the strap f' overreaches the back of the horse and is buckled to the shoulder or side straps f^3, which in turn are connected to the buckle straps f^4, which are connected to buckles f^5, secured to the ends of the buffer-heads. The leg connections comprise a pair of straps f^6 secured at one end to the rear ends of the respective buffer-heads and connecting with buckles f^7 secured to the said buffer-heads at their forward ends. The said leg-straps f^6 are preferably provided with elastic sections f^{6a}; and the said straps f^6 work through an expanded chafing band or pad f^8, which is thus carried by the said straps and is adapted to bear against the outer surfaces of the horse's legs. The said body and leg connections, above described, afford a means for supporting the active parts of the spreader in working position, in any desired adjustment, with freedom for the necessary motions, under the action of the horse.

The cross-brace or coupling reach b b', which connects the buffer-heads is preferably covered or padded by a sleeve b^5 of leather, or other suitable material.

It is obvious that the spreader above described, may be fitted to any animal; and that when in proper working position, the horse or other animal may be made to take any desired spread in his stride. When under the motion imparted by the horse, the buffer-heads will take approximately the positions shown in dotted lines in Fig. 4. Otherwise stated, the respective buffer-heads will follow the movements of the respective legs to which they are applied under the motion of the animal, and will serve to hold the legs apart to any desired spread required for avoiding interference or cultivating the desired action in the animal.

The spreader has been shown as of the construction required for application to the forward pair of the animal's legs; but it will be understood, of course, that with slight changes in shape, the spreader would be applicable equally well to the rearward pair of the animal's legs.

By actual experience with this device applied on horses, I have demonstrated the efficiency of the same for the purposes had in view. I have found that by using this spreader, for a short time, the horse will acquire an established habit of moving his legs with the required spread, to avoid interference. Hence, when this habit is once formed, the spreader may be discarded and the horse will move without interference. In this point of view, or for establishing this habit, it is desirable to employ a spreader of this kind, when breaking the young colts or animals to the desired gait. In a word, this spreader has a wide range of application for establishing in a horse or other animal what the horsemen call a "square action."

In practice, I preferably use aluminum for the metallic parts of the device, in order to secure the greatest possible lightness, together with the requisite rigidity.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A spreader, for horses or other animals, comprising a pair of buffer heads pivotally connected by a cross brace or coupling reach, which parts are supportable between the front or rear pair of the animal's legs and cooperate to insure the proper spread in the leg action, substantially as described.

2. In a spreader, for horses, or other animals, the combination with a pair of buffer-heads and a cross-brace or coupling reach pivotally connecting the same, of supporting connections securable to the horse for holding said buffer heads and cross-brace in working position with said buffer-heads bearing against the opposing inner faces of one pair of the horse's legs, substantially as and for the purposes set forth.

3. A spreader, for horses or other animals, comprising a pair of buffer heads and a cross-brace or reach coupling together said buffer-heads with freedom for universal pivotal motion in respect to each other, which parts are supportable between a pair of the animal's legs and cooperate to insure the proper spread in the leg action, substantially as described.

4. In a spreader, the combination with a pair of buffer-heads adapted to bear against the inner opposing surfaces of a pair of the animal's legs, of an adjustable cross-brace or coupling reach pivotally connecting said heads for adapting the spreader to different animals or amounts of spread, substantially as described.

5. In a spreader, for horses or other animals, the combination with a pair of buffer-heads adapted to bear against the inner faces of a pair of the animal's legs, of an adjustable rigid cross-brace or reach, coupling together said buffer-heads with freedom for universal pivotal motion in respect to each other, substantially as described.

6. The combination with the buffer-heads and cross-brace or coupling reach pivotally connecting the same, of body and leg straps or other flexible connections for holding said buffer-heads in working position between the legs and adjacent to the body of the animal, substantially as described.

7. The combination with the buffer-heads and the coupling reach or cross-brace, of body and leg straps or other flexible connections

having elastic sections for yieldingly supporting said parts in working position on the animal, substantially as described.

8. The combination with the padded buffer-heads, of the cross-brace or reach, coupling said heads together with freedom for universal motion, the adjustable body and leg straps or other flexible connections for supporting said parts in working position and the outside chafing bands or pads carried by the leg straps, all arranged and operating substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM B. MORGAN.

Witnesses:

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E. F. ELMORE.