

J. W. STAKE.
HARNESS HANGER.
APPLICATION FILED SEPT. 28, 1908.

955,710.

Patented Apr. 19, 1910.

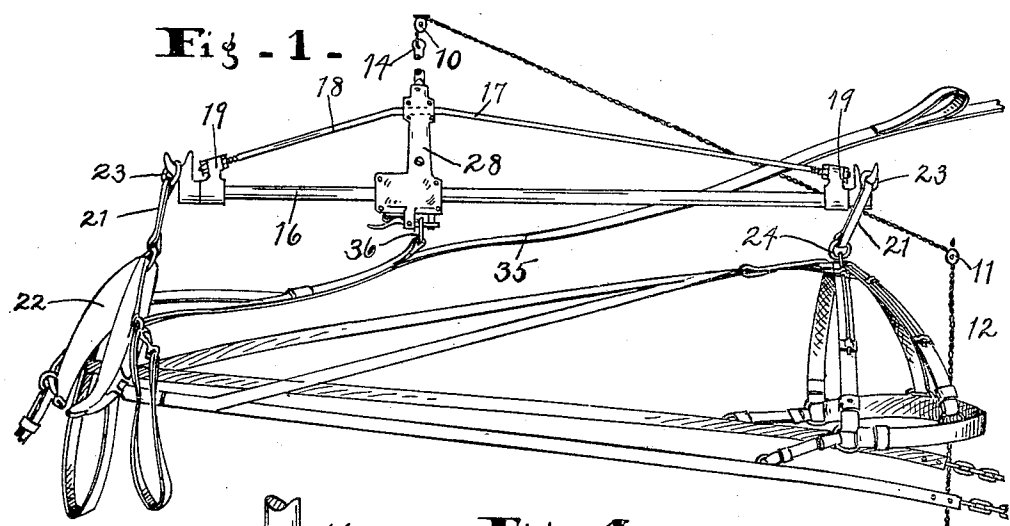


Fig. 2.

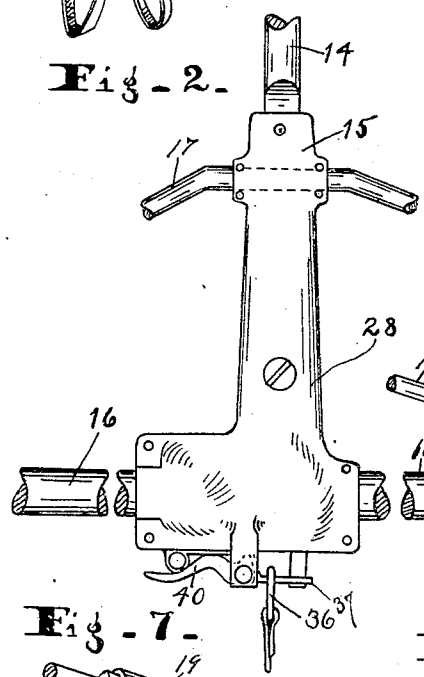


Fig. 4.

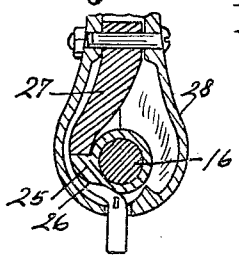


Fig. 3.

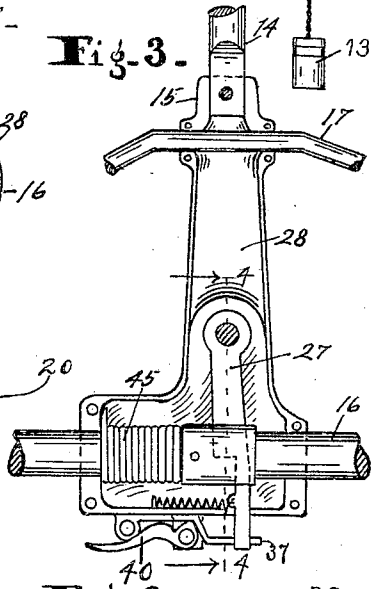


Fig. 7.

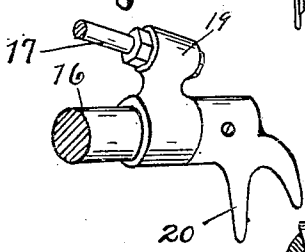


Fig. 5.

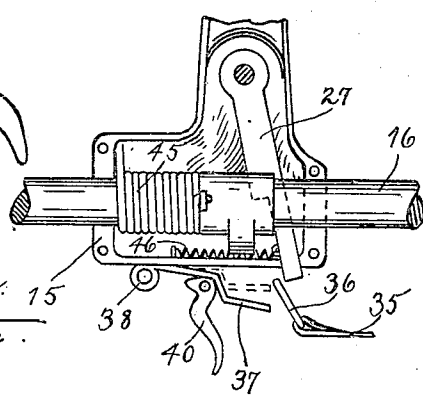
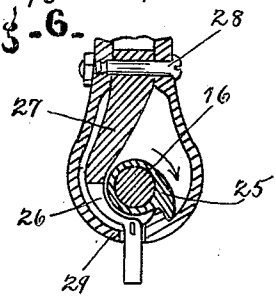


Fig. 6.



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HARNESSE-HANGER.

955,710.

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To all whom it may concern:

Be it known that I, JOHN W. STAKE, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Harness-Hanger; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

The object of this invention is to provide an improved means for supporting harness whereby the same may be readily dislodged from the hanger by the driver of the vehicle or other person pulling the rein forming a part of the harness. Said harness hanger has been invented for use particularly in fire engine houses, where quick and convenient dislodging of the harness is desirable.

The full nature of this invention will be understood from the accompanying drawings and the following description and claims.

In the drawings Figure 1 is a side elevation of harness and said harness hanger mounted in connection therewith. Fig. 2 is a side elevation of the central bearing frame of the harness hanger, with parts broken away and showing the parts in normal position for supporting the harness. Fig. 3 is a central vertical longitudinal section through what is shown in Fig. 2. Fig. 4 is a transverse vertical section on the line 4-4 of Fig. 3. Fig. 5 shows the lower part of what appears in Fig. 3 with the parts in the position occupied by them when the ring from the rein is being put in place after the harness has been mounted on the hanger. Fig. 6 is the same as Fig. 4 with the parts, however, changed to their positions as the harness is dislodging from the hanger. Fig. 7 is a perspective view of the right hand end of what appears in Fig. 2 with the harness supporting hook turned down for dislodging the harness.

To the ceiling of a room a pulley 10 is mounted and to some other part of the room a pulley 11 is secured over which a rope or cable 12 passes that carries the hanger. The weight of the hanger and harness is slightly counterbalanced by a weight 13 secured to one end of the cable. The other end of the cable is connected with the upper end of a vertical rod 14 which at its lower end is rigidly secured to a bearing frame 15 with which the harness supporting means is

mounted. So far as function is concerned, the parts 14 and 15 are one element but they are made of separate pieces as described. A horizontally disposed rod 16 extends through the lower part of the bearing frame 15 and is oscillatable therein. Braces 17 and 18 extend from the upper part of the bearing 15 in one direction and at their outer ends carry bearings 19 for the ends of the oscillatory rod 16. These parts constitute substantially the hanger frame.

On the ends of the oscillatory rod 16 harness supporting hooks 20 are secured, so that said hooks will extend in the same direction from the rod 16, that is, both upwardly when the rod 16 is locked and downwardly when released. A strap 21 is connected with the collar 22 at the forward end of the harness and has a ring 23 adapted to be caught over the forward hook 20. A corresponding strap 21 is connected with the breeching 24 and has the ring 23 on it to catch on the rear hook 20. The rod 16 is nearly the same length as the harness so that the harness will be supported thereby when extended lengthwise and the harness as a whole can be maintained in an elevated position so that the horse can be backed under and into the harness.

The oscillatory rod 16 has a pawl 25 secured to it and adapted to catch under the shoulder 26 on the latch bar 27 that is fulcrumed on the rod 28 at its upper end. Said rod 28 is mounted in the central bearing 15, as shown in Fig. 6. The latch 27 is bent around the rod 16 and its upper end projects through a slot 29 in the lower end of the bearing 15 and in a vertical plane with the axis of the rod 16. The shoulder 26 is substantially in a horizontal plane through the axis of the rod 16. When the latch 27 is in its normal and vertical position, as shown in Fig. 3, the shoulder 26 will engage the pawl 25, as shown in Fig. 4, and hold the harness bearing rod 16 in the position shown in Fig. 1, that is, in the normal position for supporting the harness for maintaining the harness hooks 20 in almost a vertical position. But when the latch 27 is drawn longitudinally of the rod 16, to the position shown in Fig. 5, its shoulder will be moved out of engagement with the pawl 25, whereupon the rod 16 will oscillate from the position shown in Fig. 2 to that shown in Fig. 7. This oscillation of the rod 16 is caused by the weight of the harness on the

hooks 20 and by the fact that said hooks in their normal harness supporting position, as shown in Figs. 1 and 2, are not truly vertical but inclined somewhat from a vertical line.

5 It is obvious that the weight of the harness will turn the hook 20 from the position shown in Fig. 2 to the position shown in Fig. 7 when the rod 16 is released. The rod 16 is released from its harness supporting position by the rein 35 being drawn rearwardly

10 by the driver of the vehicle. To that end the rein has a ring 36 secured between its ends that rests upon the bar 37 which is fulcrumed at 38 on the under side of the central bearing 15, as shown in Fig. 2. The outer or free end of said bar 37 is forked so that it extends astride the lower end of the latch 27 normally and the ring 36 is in the position shown in Fig. 2. When the ring

20 36 is drawn to the right, as shown in Fig. 2, it is obvious that it will throw the latch 27 to the position shown in Fig. 5 and then the harness will be dislodged by gravity. After the harness has been dislodged from said

25 hanger the rod 16 and hooks 20 will be returned immediately to the normal position by the spring 45 so the hooks will be nearly vertical and the backward oscillation of the rod 16 and pawl 25 from the position shown

30 in Fig. 6 will cause the pawl 25 to catch under the shoulder 26 on the latch 27, as shown in Fig. 4, and lock the rod 16 from oscillation. The latch 27 is also returned to its normal position by the spring 46 immediately after the harness has been dislodged.

35 One end of the spring 46 is secured to said latch and the other to a part of the bearing 15. One end of the spring 45 is fastened to the rod 16 and the other end engages a part

40 of the bearing 15. Therefore, immediately after the harness has been dislodged the hooks 20 are returned to their normal position ready to receive the harness again, and when the harness is replaced the ring 36 is

45 put in its place on the bar 37 by first releasing the clamp 40 from the position shown in Fig. 3 to that shown in Fig. 5 and letting the free end of the bar 37 drop down out of the way of the lower end of the latch 27.

50 After the ring 36 is put in place, the clamp 40 is returned to its normal position, as shown in Fig. 2 and then the mechanism is in its normal position for supporting the harness and dislodging the same when occasion requires.

55 With this mechanism the mounting of the harness on the support is a very easy task and the dislodging thereof is altogether in the power of the driver or other person

60 pulling on the rein 35. Furthermore, the

harness and hanger is by this mechanism maintained in a substantially horizontal position regardless of variations in the weight of the harness on the ends of the hanger. This is due to the connection of the cable 65 with the rigid means, parts 14 and 15, mounted in connection with the harness supporting means and extending upwardly therefrom. The longer said rigid means, parts 14 and 15, that is, the farther up they 70 extend, the more nearly horizontal the hanger will maintain itself at all times.

What I claim as my invention and desire to secure by Letters Patent is:

1. A harness hanger including a horizontal rod, a bearing in which it is oscillatably mounted, hooks on the ends of said rod over which the harness may be caught, a pawl secured to said rod within the bearing, a latch pivoted within the bearing with 80 a shoulder adapted to engage said pawl and hold the rod from oscillation, means adapted to be actuated by the rein of the harness for moving said latch out of engagement with the pawl on said rod, and springs for returning said rod and locking means to their 85 normal positions.

2. A harness hanger including a bearing, a rod oscillatably mounted therein, means on the rod on which the harness may be 90 caught, a latch pivoted in said bearing for locking said rod from oscillation and projecting beyond said bearing, a bar adjacent the free end of said latch and extending at a right angle thereto, and a ring on said 95 bar that is adapted to be connected with the rein of the harness so that when said ring is drawn it will actuate said latch for releasing said rod and dislodging the harness.

3. A harness hanger including a bearing, a rod oscillatably mounted therein, means on the rod on which the harness may be caught, a latch pivoted in said bearing for locking said rod from oscillation and projecting beyond said bearing, a bar adjacent 105 the free end of said latch and extending at a right angle thereto, a ring on said bar that is adapted to be connected with the rein of the harness so that when said ring is drawn it will actuate said latch for releasing said 110 rod thereby dislodging the harness, and means for clamping said bar in normal position adjacent said latch.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

JOHN W. STAKE.

Witnesses:

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V. H. LOCKWOOD.