

B. M. PERDUE.  
BUGGY SHAFT SUPPORT.  
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903,764.

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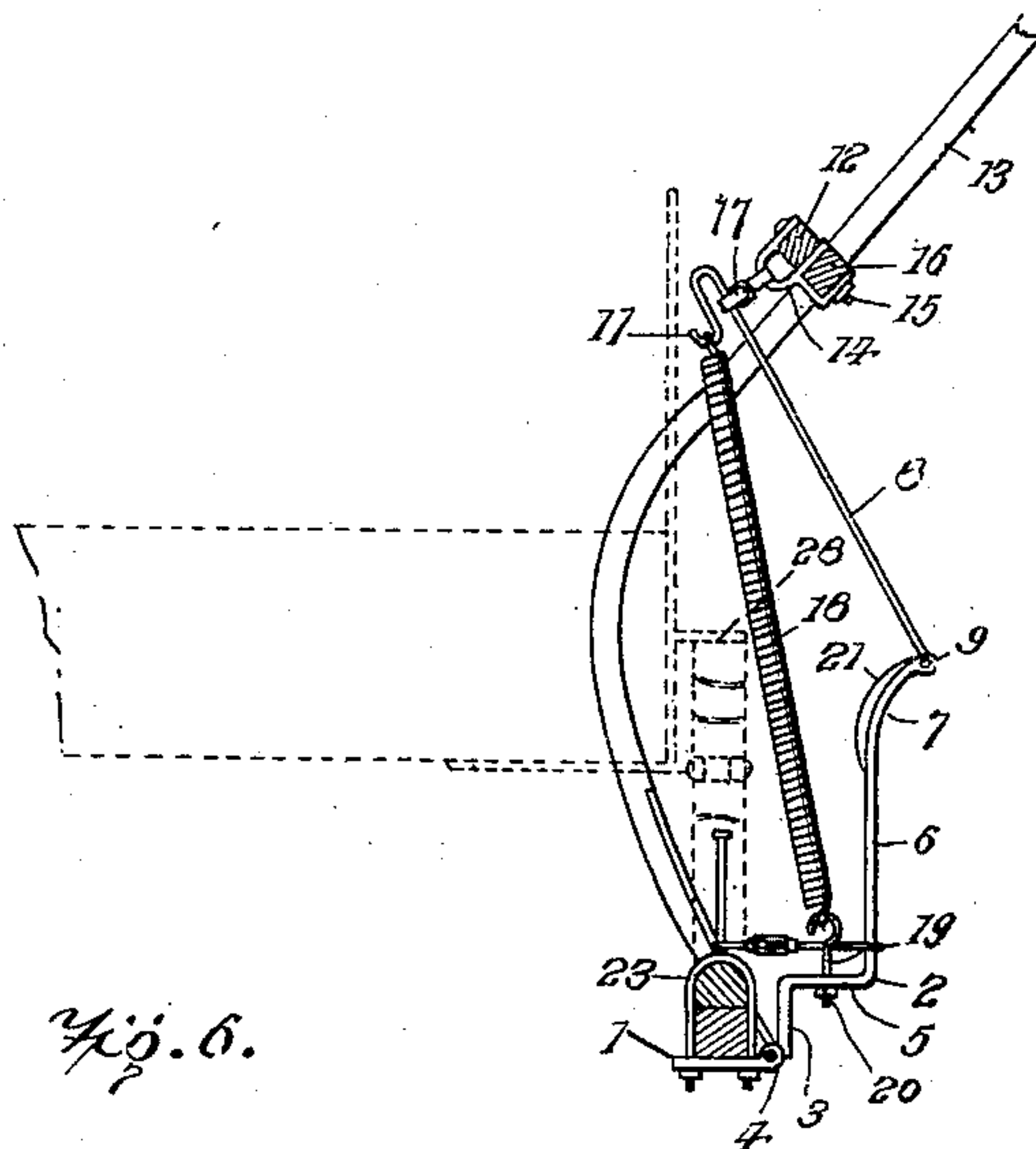


Fig. 1.

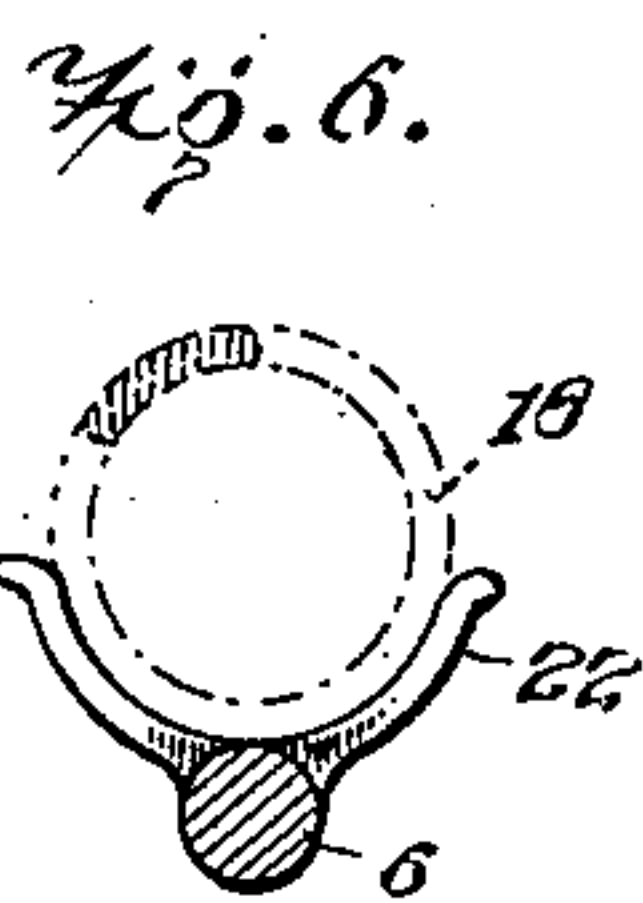


Fig. 6.

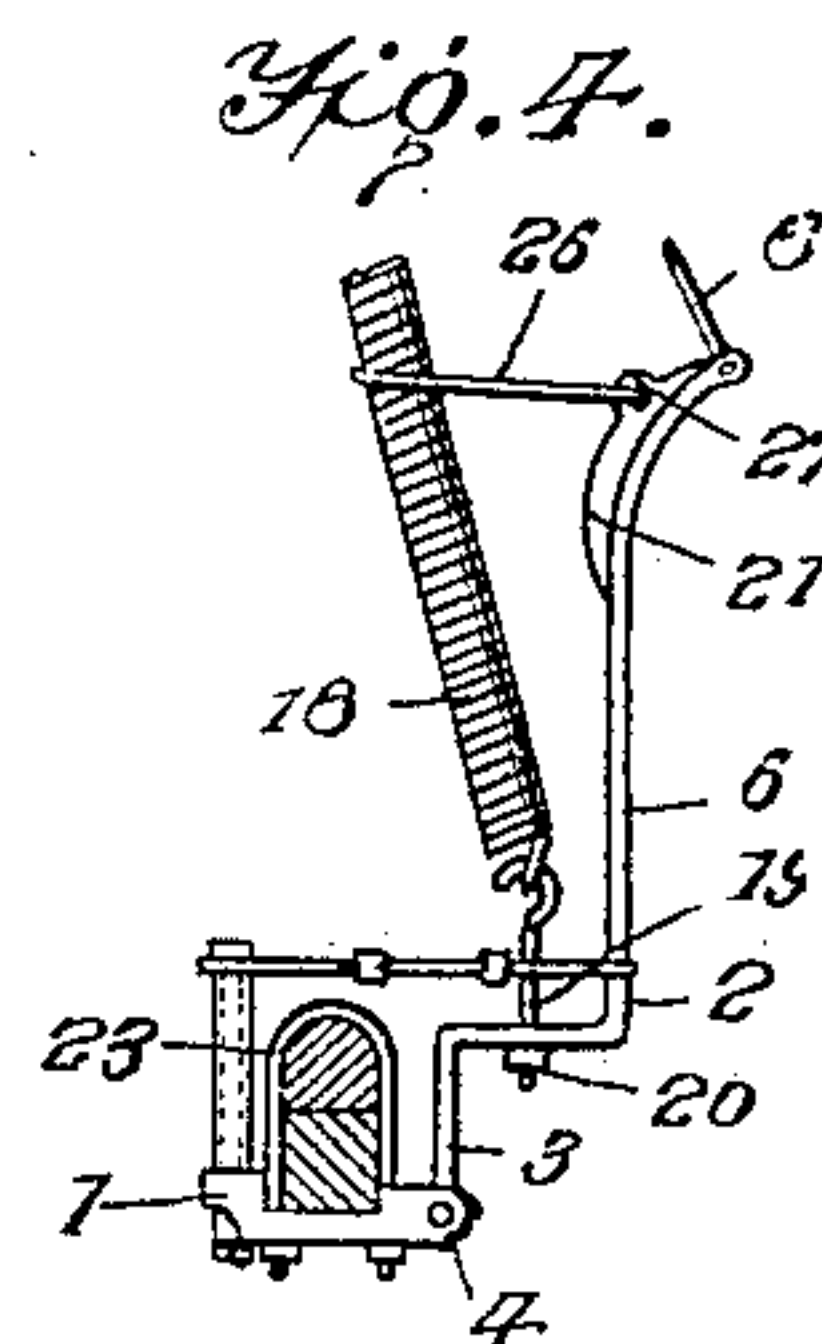


Fig. 4.

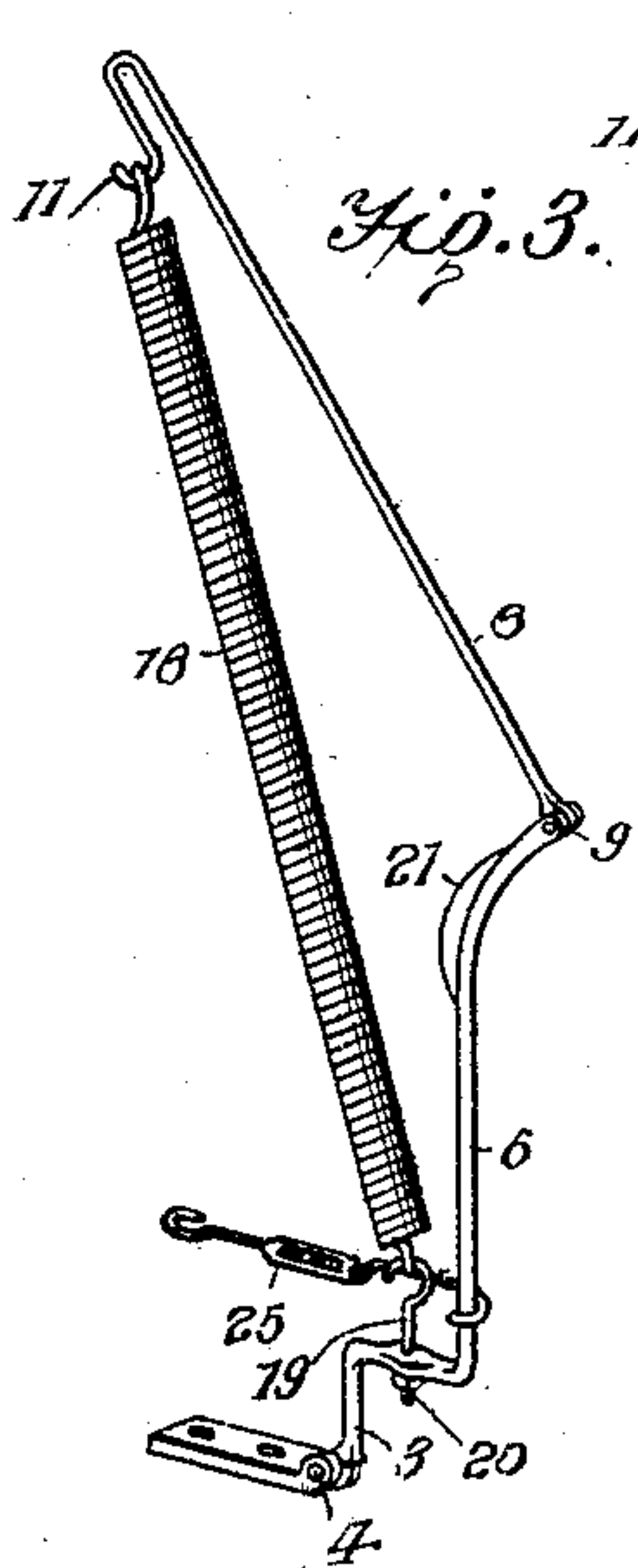


Fig. 3.

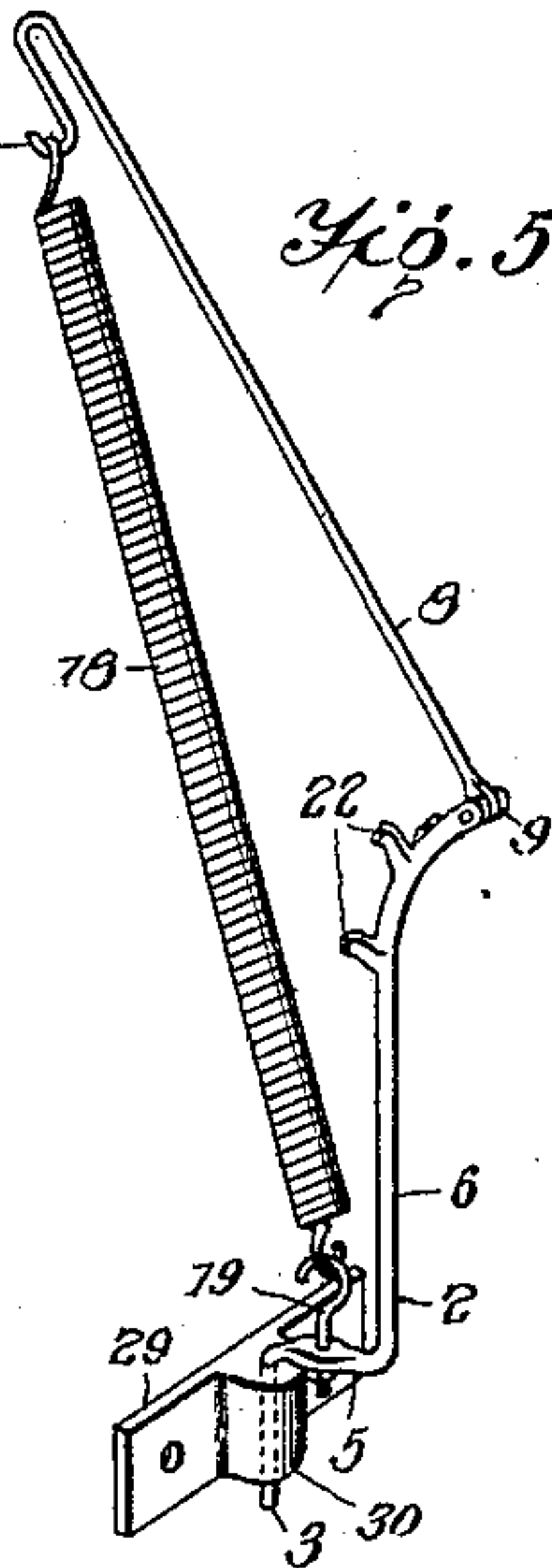


Fig. 5.

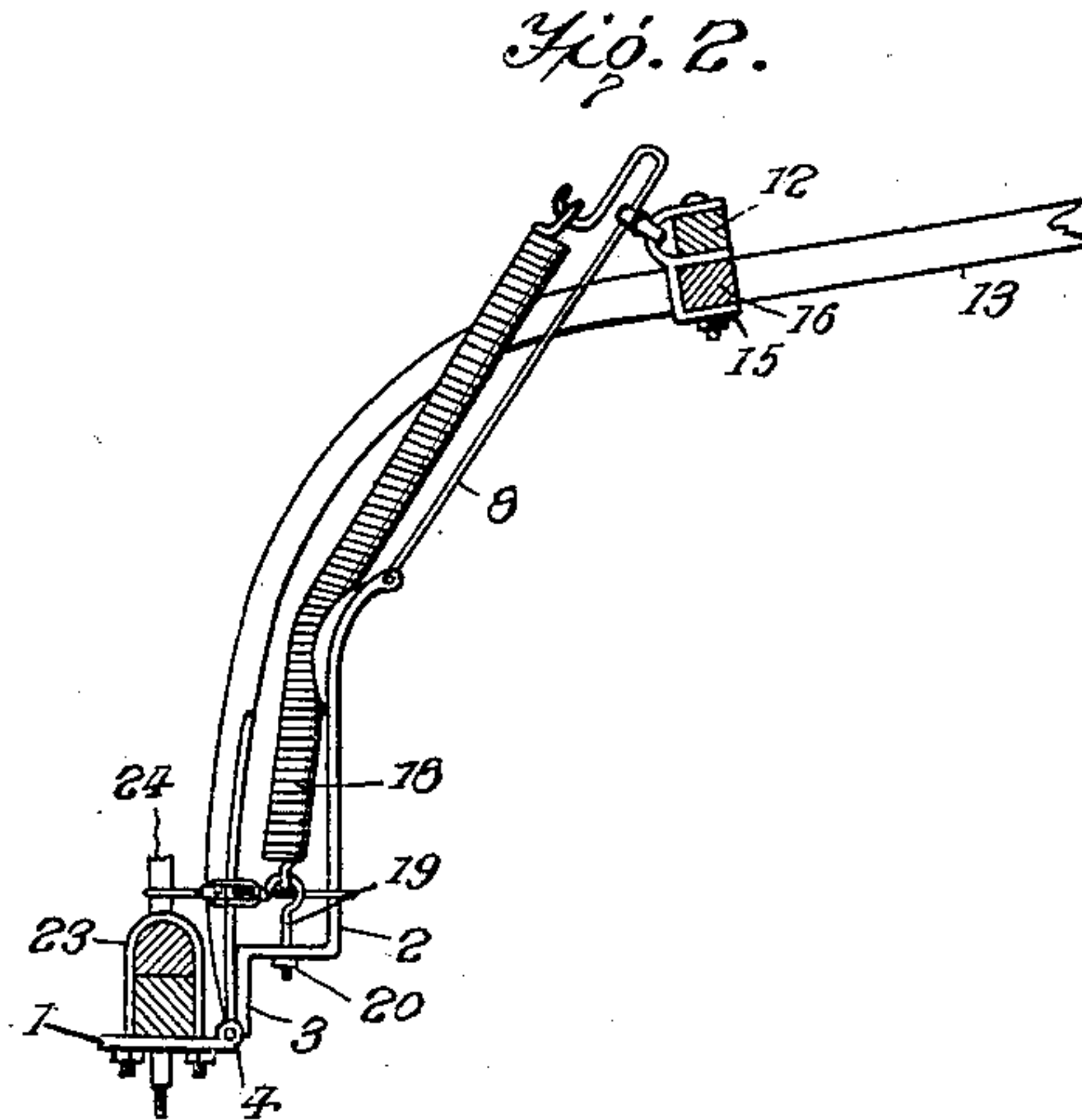


Fig. 2.

WITNESSES

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# UNITED STATES PATENT OFFICE.

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## BUGGY-SHAFT SUPPORT.

No. 903,764.

Specification of Letters Patent.

Patented Nov. 10, 1908.

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*To all whom it may concern:*

Be it known that I, BRADIE M. PERDUE, a citizen of the United States, and a resident of Franklin, in the county of Simpson and State of Kentucky, have made certain new and useful Improvements in Buggy-Shaft Supports, of which the following is a specification.

My invention is an improvement in buggy shaft supports and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawing forming a part hereof—Figure 1 is a side view of the improvement applied to a vehicle, the shafts being shown lifted and parts of the vehicle being in section. Fig. 2 is a similar view showing the shafts in the position occupied when the horse is hitched to the vehicle. Fig. 3 is a perspective view of the improvement. Fig. 4 is a side view of a part of the improvement showing a modification. Fig. 5 is a perspective view of another modification, and Fig. 6 is a section through the spring and adjustable arm.

The present embodiment of my invention, comprises a plate 1, which may be secured to the axle in any preferred manner, and at approximately the center thereof. To the front end of the plate is hinged an adjustable arm 2, the said arm comprising a vertical portion 3 hinged as at 4 to the plate, a horizontal portion 5, and another vertical portion 6, having the upper end curved forwardly as at 7. A second arm 8 is hinged to the free end of the arm 2 as at 9, the upper end of the arm 8 being bent backward upon itself, and formed into a hook 11, for a purpose to be presently described. The arm 8 is slidably connected with the cross bar 16 of the shafts 13, by means of a strap 17 connected to the clip 14 secured to the bolt 15, which connects the swingletree 12 with the cross bar 16 of the shaft, the strap 17 forming a loop through which the arm slides.

A spring 18 is connected at one end with the hook 11 before mentioned, and at the other end with a tension device comprising an eye-bolt 19, having the threaded end thereof passing through an opening in the horizontal portion 5 of the arm 2, a nut 20 being arranged upon the threaded portion whereby the eye-bolt may be adjusted to properly tension the spring.

A rest 21 is arranged on the curved portion of the arm 2, for receiving the spring

when the shafts are in the position shown in Fig. 2, and the said rest may be of any desired construction. In Figs. 1, 2, 3, and 4 the rest is shown as comprising spaced flanges or ribs arranged longitudinally of the arm, and adapted to receive the spring therebetween. In Figs. 5 and 6, the rest as shown comprises spaced pairs of lugs 22, which act in the same manner as the ribs.

In Figs. 1 and 2, the plate 1 is arranged at the center of the axle, and is connected to the axle by a clip 23, through which and the plate passes the king-bolt 24 of the vehicle, and a turn-buckle 25 is arranged between the king-bolt and the adjustable arm 2, whereby to vary the angle of said arm with the perpendicular. The turn-buckle may be of any desired construction, and may be arranged in any desired manner between the arm and the vehicle.

When the improvement is applied to buggies not provided with end springs, a support 26 is connected with ears 27 on the ribs forming the spring rest 21, the said support comprising a loop through which the spring passes, the support being adapted to engage the rear of the spring when the shafts are elevated, thus acting instead of the spring bar 28 shown in Fig. 1 as a rest.

In some forms of vehicles, it is desirable to secure the adjustable arm to the vehicle by means of the plate 29 shown in Fig. 5, the said plate being bolted to the front of the axle, and provided with a central vertical bearing 30, in which the vertical portion 3 of the arm 2 is journaled.

When the animal is unhitched from the vehicle, the shafts take the position shown in Fig. 1, being lifted out of contact with the ground, so that there is no liability of breakage. When it is desired to hitch to the buggy, the animal may be led under the shafts and they may be brought into approximately the position shown in Fig. 2. In this position, the spring is under tension, since the arms 2 and 8 are more nearly in alinement with each other than when in the position shown in Fig. 1. After the animal is hitched to the vehicle, the tension of the spring keeps the weight of the shafts off the horse's back, and immediately returns them to their elevated position when the animal is unhitched.

It will be evident from the description, that the arm connected with the axle, is horizontally offset adjacent to the axle, and



that the tension adjusting device for the spring is connected with the horizontal portion.

I claim—

5 1. A vehicle shaft support, comprising a plate for attachment to the axle at approximately the center thereof, a substantially vertical arm hinged to the plate, said arm being horizontally offset adjacent to the  
10 plate and having a forwardly curved portion at the free end thereof, a turn-buckle for connecting the axle with the arm above the horizontal portion, whereby to adjust said arm toward and from the vehicle, a  
15 second arm hinged to the free end of the first-named arm, and having a slidable connection with the shafts, the free end of said second arm being provided with a hook, an eye-bolt adjustably connected with the hori-  
20 zontal portion of the first-named arm, a spring connecting the hook with the eye-bolt, said first-named arm being provided with a rest on the curved portion thereof for receiving the spring, and a loop connected  
25 with the rest and encircling the spring for supporting the opposite side thereof.

2. A vehicle shaft support, comprising a plate for attachment to the axle, a substantially vertical arm hinged to the plate, said  
30 arm being horizontally offset adjacent to the plate and having a forwardly curved portion at the free end thereof, means for adjusting the arm toward and from the vehicle, a second arm hinged to the free end of the  
35 first-named arm and having a slidable connection with the shafts, the free end of said second arm being provided with a hook, an eye-bolt adjustably connected with the horizontal portion of the first-named arm, and a  
40 spring connecting the hook with the eye-bolt, said first-named arm being provided with a rest on the curved portion thereof for receiving the spring.

3. A vehicle shaft support, comprising a  
45 plate for connection with the axle, an arm hinged to the plate and provided with a forwardly curved portion at the free end thereof, means for adjusting the arm toward and from the vehicle, a second arm hinged to the  
50 free end of the first arm and provided at its free end with a hook, means for slidably connecting the arm with the shafts, and a spring connecting the hook with the first-named arm adjacent to the plate, the curved portion of  
55 said arm having a rest for receiving the spring.

4. A vehicle shaft support comprising an arm for connection with the axle, and provided with a forwardly curved portion at the  
60 free end thereof, means for adjusting said arm toward and from the vehicle, a second

arm hinged to the free end of the first-named arm, means for slidably connecting said last-named arm with the shafts, and a spring arranged between the free end of the last- 65 named arm and the first-named arm.

5. A vehicle shaft support, comprising a pair of arms hinged together, means for connecting one of said arms to the axle, means for slidably connecting the other of said 70 arms with the shafts, means for adjusting said first-named arm toward and from the vehicle, and a spring connecting the free end of the last-named arm with the first-named arm. 75

6. A vehicle shaft support comprising a pair of arms hinged together, means for adjustably connecting one of said arms with the axle, means for slidably connecting the other of said arms with the shafts, a spring 80 connecting the ends of the arms remote from the hinged connection, and means for adjusting the tension of the spring.

7. A vehicle shaft support, comprising a pair of arms hinged together, means for con- 85 necting one of said arms to the vehicle, means for slidably connecting the other of said arms with the shafts, and a spring connecting the free end of the last named arm with the first named arm, and means for adjusting the 90 tension of the spring.

8. The combination of the shafts having a loop or eye, the axle, and an arm connected at its lower end to the axle, a rod pivoted at its lower end to said arm, and extending 95 through the loop or eye on the shafts, the said loop or eye being slidable along the rod and the said rod being provided above the loop or eye with a return portion having a hook at its lower end, a coil spring connected 100 at its upper end with the hook, and means securing the lower end of the spring.

9. The combination with the axle and the shafts, of a loop or eye on the shafts, a slide rod extending through said loop or eye, the 105 lower end of said rod having a pivotal connection with the axle and a spring connected with the upper end of the slide rod.

10. The combination with the axle, and the shafts having a loop or eye, of an arm 110 pivoted at its lower end to the axle and having an upward extending portion, a rod pivoted at its lower end to the upper end of said arm and extending through the loop or eye of the shafts, a spring connecting the upper 115 end of the said rod with the arm, and means for adjusting the arm toward and from the axle.

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Witnesses:

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