(No Model.)

J. F. TINER.

SPRING DRAFT ATTACHMENT.

No. 479,681. Patented July 26, 1892.

Fig: 1.

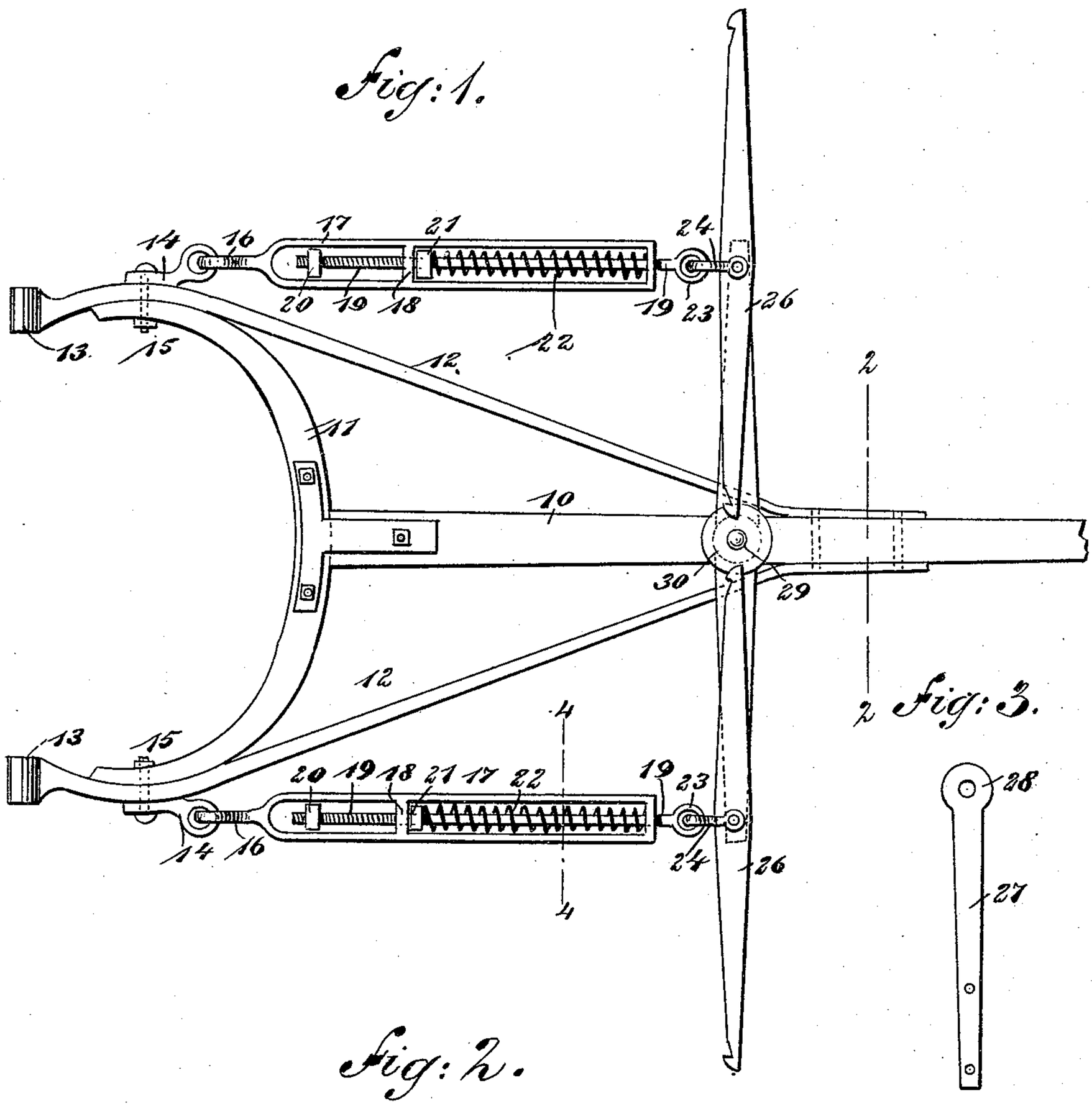


Fig: 3.

Fig: 2.

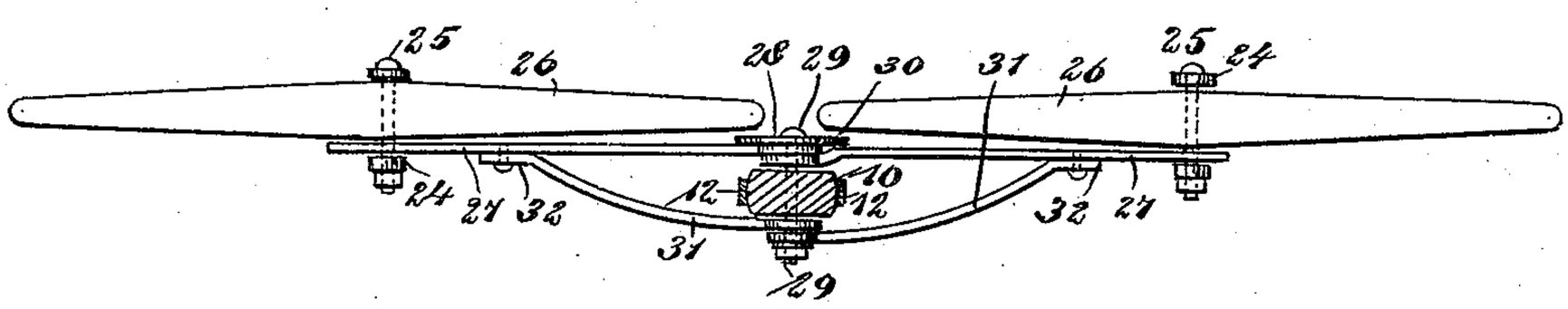
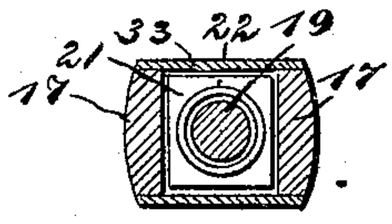


Fig: 4.



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SPRING DRAFT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 479,681, dated July 26, 1892.

Application filed February 9, 1892. Serial No. 420,823. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. TINER, of Lavernia, in the county of Wilson and State of Texas, have invented a new and Improved Spring Drawing Attachment for Vehicles, of which the following is a full, clear, and exact description.

My invention relates to improvements in drawing attachments for vehicles; and its object is to do away with the ordinary double-tree and provide a simple spring attachment, which may be secured to any vehicle, which may be used for a one-horse vehicle, but which is especially adapted for a two-horse vehicle, which when used on the latter vehicle prevents the horses from pulling against one another, prevents the pole from swaying sidewise, enables the vehicle to run easily and without jerks, and which is also very much easier for the horses, as the springs used in connection with the attachment absorb the sudden shocks and vibrations.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the attachments embodying my invention, showing them applied to a vehicle-pole. Fig. 2 is a cross-section on the line 2 2 in Fig. 1, showing the attachment in front elevation. Fig. 3 is a detail plan of one of the swinging side arms, which are secured to the pole; and Fig. 4 is a cross-section through the spring-frame on the line 4 4 in Fig. 1, but with the draw-bar and its spring cased in.

The pole 10 is of the usual construction, terminating at its rear end in a bow 11, which is provided with the braces 12, which are secured to the ends of the bow and to the pole, the braces terminating at their rear ends in the coupling-knuckles 13, which are adapted to be secured in the axle-clips in the ordinary way. Near the ends of the bow and secured to the sides thereof and to the braces 12 are perforated lugs 14, which are held in place by bolts 15, extending through the bow and braces, and these lugs are pivotally coupled to the terminal eyes 16 at the rear ends of the draw-bar frames 17. These frames 17 are open on top and bottom and are elongated, as shown in the drawings, the frames having near the center the cross-pieces 18, which form abutments for the collars and nuts of the draw-bars, as described below.

In each frame 17 is a draw-bar 19, which extends longitudinally through the greater portion of the frame and projects through the front end of the same, and the rear end of the draw-bar is screw-threaded and provided with a nut 20, which by striking the cross-piece 18 limits the forward movement of the draw-bar. The draw-bar has also a collar 21, which is preferably square, as shown in Fig. 4, and this collar is secured to the draw-bar in front of the cross-piece 18, and by striking the cross-piece it limits the backward movement of the draw-bar. It will be noticed that the nut 20 may be adjusted so as to give the draw-bar any necessary or desired movement.

Within each frame 17 and coiled around the draw-bar is a spiral spring 22, one end of which abuts with the front end of the frame and the other end with the collar 21, and the pressure of the spring thus serves to push the draw-bar back into the frame. Each draw-bar 19 terminates at its front end, which projects through the frame 17 in an eye 23, which engages the clevis 24, and the latter is coupled by means of a bolt 25 to the singletree 26 and the supporting-arm 27. The clevis clasps the singletree and arm, as shown in Fig. 2, and the bolt extends downward through it and through the ends of the clevis, thus forming a pivot for the singletree. The singletrees are arranged on each side of the pole and are supported by the arms 27, the inner ends of which are pivoted on the top of the pole, and to facilitate their easy working and attachment the inner ends of the arms are formed into washers 28 which are adapted to overlap one another, as shown in Fig. 2. A fastening-bolt 29 extends downward through the washers 28 and through the pole 10, and a wide washer 30 is placed between the upper of the washers 28 and the head of the bolt 29.

The arms 27 are braced by the curved braces 31, which are pivoted on the bolt 29 on the under side of the pole 10, and the outer ends of the arms are flattened, as shown at 32, and bolted firmly to the arms 27. The braces may thus swing in unison with the arms, and they will afford a secure support for the same. If desired, the top and bottom of the frame 17 may be covered by a plate 33, thus forming a case in which the draw-bar 19 and spring 22 may work.

It will be seen that the arms 27, while affording supports for the singletrees 26, will also serve as guides for the spring-frames 17 and the draw-bars 19, and when the horses are secured to the singletrees it will be seen that each horse will be practically independdent of the other, and that when either horse pulls the effect of the pull will be to draw the vehicle forward without throwing the pole sidewise, and it will also be observed that the horses will be enabled to start without jerking the vehicle or without straining themselves, as the drawing strain will first come on the springs 22, which will be compressed until the nuts 20 strike the cross-pieces 18 of the frame 17, after which the load will be carried in the usual way. It will be seen, too, that the moment a horse stops pulling the spring 22 will retract the draw-bar and the singletree, so as to take the slack out of the traces and prevent them from being accidentally unhooked, and they will also prevent the horses from getting their legs over the traces.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a pole, of arms having their inner ends pivoted to the pole, singletrees pivoted on the outer ends of the arms, and an independent and yielding connection between each arm and the bow portion of the pole, substantially as described.

2. The combination, with the vehicle-pole, of oppositely-extending arms pivoted thereon, singletrees pivoted on the outer ends of the arms, swinging open frames pivoted to a support in the rear of the singletrees, and spring-repressed draw-bars mounted in the frames and connected with the singletrees and arms, substantially as described.

3. The combination, with the vehicle-pole, of swinging arms mounted thereon and extending on opposite sides thereof, curved braces connected with the arms and pivoted to the under side of the pole, singletrees carried by the outer ends of the arms, open frames pivoted to a support in the rear of the arms, spring-repressed draw-bars held to slide in the frames and connected with the singletrees and arms, and stops to limit the movements of the draw-bars, substantially as described.

4. A spring drawing attachment for vehicles, consisting of a frame provided with an eye at one end and with a cross-bar near its center, a draw-bar having one end screw-threaded and provided with an eye at its other end and with a collar at its screw-threaded end, a nut on the draw-bar, and a spring surrounding the draw-bar between one end of the frame and the collar of the draw-ber, substantially as herein shown and described.

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Witnesses:
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