B. W. COVE.

WAGON RUNNING GEAR.

APPLICATION FILED NOV. 8, 1912.

1,223,152.

Patented Apr. 17, 1917.

3 SHEETS—SHEET 1.

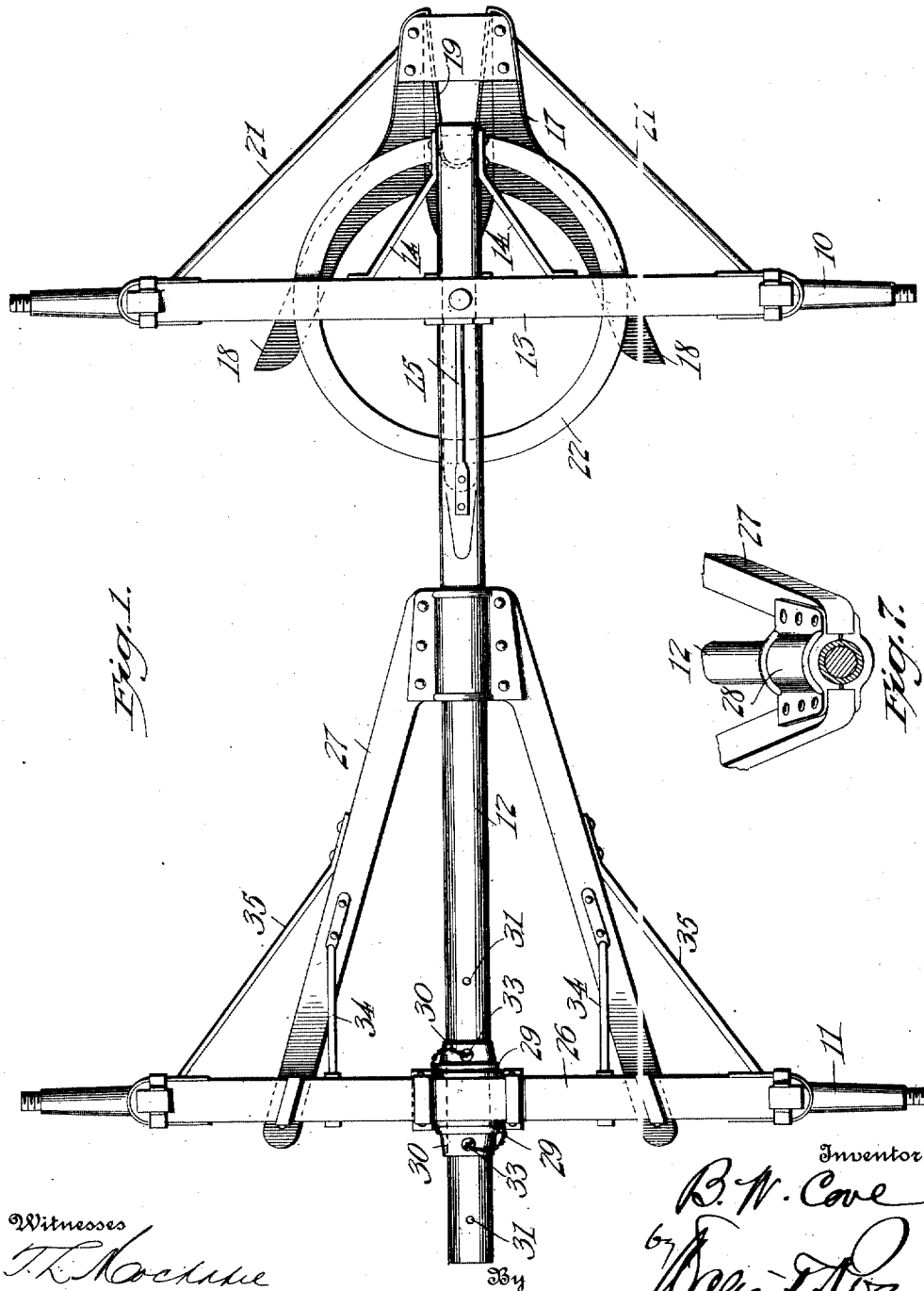


Fig. 1.

Fig. 7.

Witnesses

T. L. Mockbee

D. P. Winston

By

Inventor

B. W. Cove

by Walter F. Dyer

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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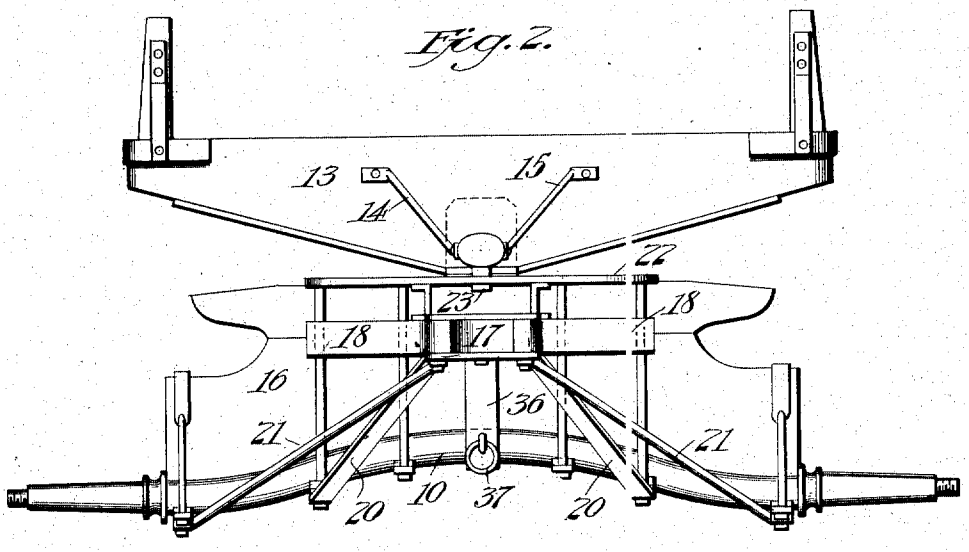
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3 SHEETS—SHEET 2.

Fig. 2.



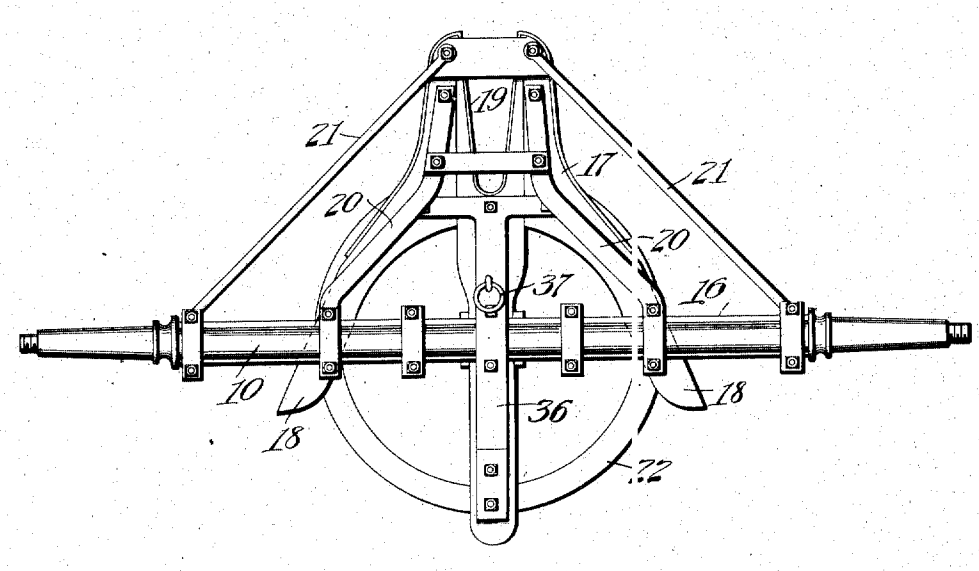


Fig. 3.

Witnesses

T. L. Mochrie

D. P. Winston

Inventor

B. W. Cove

By

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

B. W. COVE.

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3 SHEETS—SHEET 3.

Fig. 4.

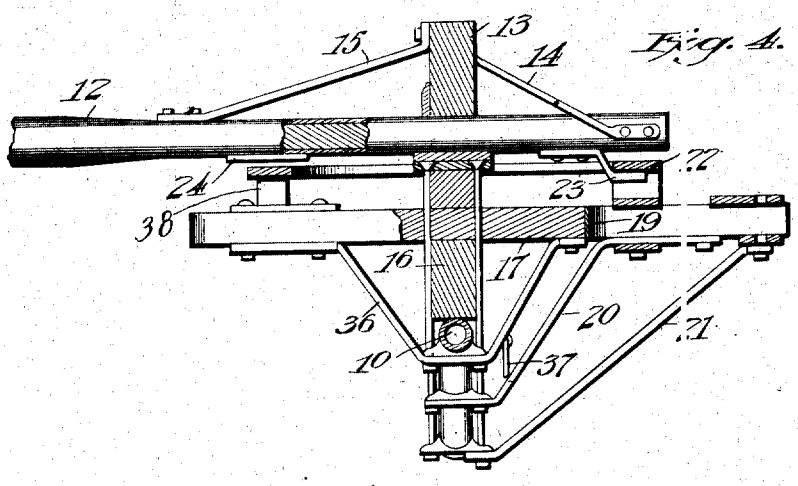


Fig. 5.

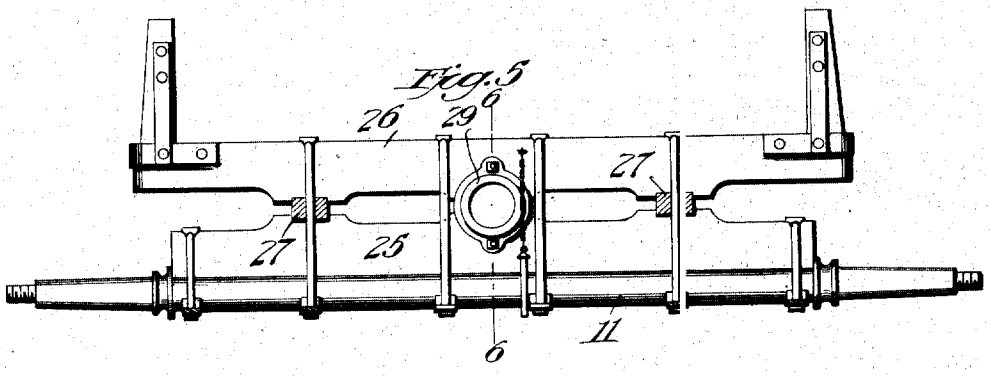
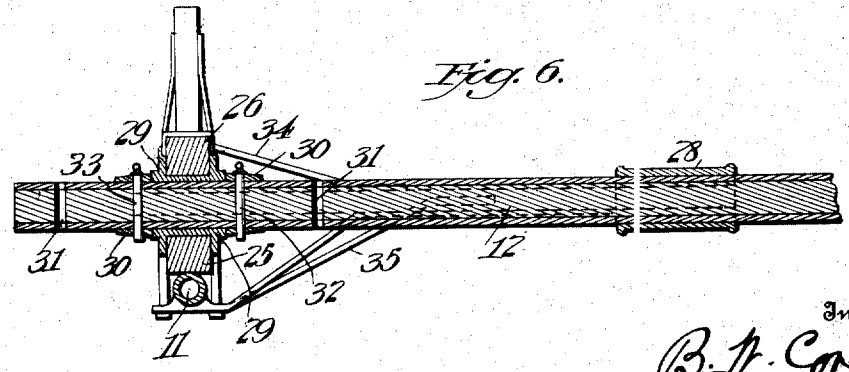


Fig. 6.



Witnesses

T. L. Mockabee

D. P. Winston

Inventor

B. W. Cove

By

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

BENJAMIN W. COVE, OF HENDERSON, KENTUCKY, ASSIGNOR TO HENDERSON WAGON WORKS, OF HENDERSON, KENTUCKY, A CORPORATION OF KENTUCKY.

WAGON RUNNING-GEAR.

1,223,152. Specification of Letters Patent. Patented Apr. 17, 1917.

Application filed November 8, 1912. Serial No. 730,192.

To all whom it may concern:

Be it known that I, BENJAMIN W. COVE, a citizen of the United States, residing at Henderson, in the county of Henderson and State of Kentucky, have invented certain new and useful Improvements in Wagon Running-Gears; 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 the running gear of wagons, and especially to the running gear of wagons intended for hauling cane from the fields. Its object is to provide a readily adjustable running gear which shall at once have great strength and adaptability, prevent the front axle from scraping off the tops of ridges, permit a short turning of the wagon without changing the level of the front gear and obviate the constant breaking of wagon poles by taking the draft of the lead team from a ring under the front hound.

To this end it comprises the combination of parts recited in the claims appended hereto.

In the drawings,—

Figure 1 is a plan view;

Fig. 2 is a front view;

Fig. 3 is a bottom plan view of the front gear;

Fig. 4 is a central vertical section through the front running gear;

Fig. 5 is a view of the rear axle, axle-bed and bolster;

Fig. 6 is a section through the line 6—6 of Fig. 5; and

Fig. 7 is a detail.

10 represents the front axle which is a distinctive feature of my running gear, being made of tubular steel and arched in the center so as to adapt it to clear the ground and top of the ridges on which cane is planted and prevent the front axle from scraping off the top of the ridges.

11 represents the rear axle and 12 the reach which is of iron and hollow. In my invention the reach, instead of passing between the axle and sandboard, passes through the front bolster 13, being secured thereto by braces 14. At 130, as indicated, is the king bolt which, in the customary manner, connects the bolster 13 and the front truck. The reach is also braced by a strap in the rear at 15, and is preferably flattened at the front end to make a proper surface for the attachment of the braces 14 and for the attachment of the strap or brace 15 at the rear of the bolster. To additionally strengthen the reach I drive in through the front a flattened hickory pole, the length of the flattened or obloid portion of the reach, and a round hickory pole at the rear the length of the round portion of the reach. The obloid form at the front end of the reach minimizes the size of the opening in the front bolster through which the reach passes and prevents the front end of the reach from bending or buckling. The round end at the rear is likewise prevented from bending or buckling by the wooden filling and its form is best adapted for the strain surface at that end.

16 represents the axle-bed on the front axle, being secured thereto by clips, as indicated. 17 represents a pole-block or in other terms, the front hounds. For convenience these will be designated as the pole-block. It has a central recess to receive the pole, the outer end projecting through the axle-bed which also receives the branching arms 18 on each side of the pole-block. 19 represents an iron sheath for the pole-block which runs along the inner and outer sides of the block as illustrated especially in Figs. 1 and 3. 20 represents a strap securing the pole-block in place and 21 are additional brace-rods running from the pole-block to the securing point on the outer clips of the axle-bed. 22 represents the fifth wheel, which, in this construction, is brought into relation with the reach 12 by means of a lock 23 which is a piece of bent metal secured to the bottom of the front of the reach and having one of its arms passing beneath the surface of the fifth wheel. The fifth wheel has the customary wear-plate 24 operating upon the plate at the rear of the reach. This arrangement of the lock serves to hold the front gear level. That is, it enables the front gear to maintain a level position when the wagon is turned short. The lock 23 is strongly secured to the front end of the reach and the projecting end of the lock working beneath the fifth wheel follows the end of the reach, of course, as the wagon is turned out of the direct line. The fifth wheel is also securely fastened to take the

upward strain incident to the tendency of the gear to tilt when the front gear is turned at an angle which the slider bar on the usual front gear would cause in pressing upward against the reach. In my construction that strain is entirely on the fifth wheel, which, as I have stated, is securely fastened to the front axle and bolster and is shown as so firmly placed as to be able to withstand this strain and prevent the front gear from rising or tilting in any case.

The reach and the lock attached to it work the more certainly because the reach passes through the front bolster. It is this arrangement which enables me to secure the full advantage of the relative arrangement of the reach, lock and fifth wheel. The lock has thus a firm relation to the reach and the front bolster, and the combination of parts serves to govern the action of the front gear.

25 represents the rear axle-bed to which is secured, in the usual manner, a bolster 26. 27 are rear hounds projecting from the bolster and secured between the bolster and axle-bed and joined at the outer end by means of two castings which form, when brought together, a hollow hound-plate casting 28 through which passes the reach 12, the end of the reach passing through a sleeve-casting lying between the rear bolster and the axle-bed 26 and secured by an integral collar 29 on each side. The reach carries, when in place, two metal collars 30, one to be applied to the rear end of the reach and the other to the reach on the front side of the rear bolster. These collars are perforated to correspond with the perforations 31 in the reach. Pins 32 and 33 on opposite sides are provided to pass through the perforations in the collars and the reach and thus enable the reach to be adjustably secured in place and provide that the running gear may be lengthened or shortened. The arrangement of the adjusting means for the reach so that the gearing may be coupled to suit the load enables one man to change the coupling at will and with ease. The pin 33 also takes the strain of the draft of the load as applied to the reach. 34 and 35 represent ordinary braces for the rear hounds.

36 represents a bent strap to which is secured at one side a draft ring 37. The strap 36 is bolted to the front block or hound 17. The manner in which the fifth wheel is secured to the tongue is indicated at 38.

It will be observed that the front hound or pole-block 17 is composed of three parts instead of two, as is usual, and that the central section combines the feature of regulating the depth to which the pole can enter the hound or block and extends between the axle-bed and bolster beneath the fifth wheel to support the fifth wheel and to carry the strap 36, shown in Fig. 3, and the lead team ring 37, as shown in Figs. 2 and 3. The whole outline of the three piece hound has a continuous metal edge strap from point to point. This construction makes a powerful front gear and draft attachment. In using the ring 37 I provide that the usual ring under the tongue becomes merely a support for the lead team chain instead of taking the strain. I thereby throw all the strain from the lead team on the front gear and prevent the frequent breaking of the wagon tongue.

I have heretofore referred to the operation of the front gear and the lock 23 and to the fact that it prevents the tilting of the gear when turned to an angle at which the gear would otherwise tilt either forward or backward in the absence of the usual sway-bar, (omitted in this construction) so as to permit the necessary short turn of the wagon. It is also apparent that all the strain of the draft is directly on the front and rear axles and not on the hounds and particularly on the rear axle as the ultimate strain is borne by the reach pin 33 back of the rear bolster, the rear hounds acting only as braces to the rear bolster and to the hound-plate 28. The specific construction of the hound-plate casting, of the pins and collars on the reach and of the reach itself not only gives greater strength but also permits a ready adjustment of the parts, as has been heretofore stated.

The arrangement by which the reach passes through and is secured to the front bolster, is braced and guided by the hound-plate and the rear hounds and carries at the end a reach-pin,—produces the desired result in that the front gear revolves under the immediate control of the front part of the reach and the strain and power are directed, not to the hound-plate as usual, but to the rear gear. I thus avoid both the too direct relation between the reach and the front gear and the objection of having the strain of the load applied at a point between the front gear and the rear gear.

I claim:—

1. In a wagon-gear, the combination of front and rear bolsters, and a reach secured to the rear bolster by collars in front of and behind the rear bolster and passing through the front bolster and secured thereto.

2. In a wagon-gear, the combination of rear hounds, a hollow block or casting carried by the inner ends of the rear hounds, a reach passing through the hollow casting or block, the reach also passing through and secured to the front bolster, and a reach pin at the rear of the rear bolster.

3. In a wagon-gear, the combination of a rear bolster and axle-bed, a reach passing between them and having perforations at one end, collars surrounding the reach and having perforations corresponding to those in the reach and pins to pass through the perforations in the collars and reach on opposite sides of the rear bolster.

4. In a wagon-gear, the combination of a bolster, a reach passing through the bolster and secured thereto, an axle-bed, a fifth-wheel located between the axle-bed and the reach and an arm secured to one end of the reach and projecting beneath the surface of the fifth-wheel to serve as a lock for the fifth-wheel.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

BENJAMIN W. COVE.

Witnesses:
E. LYNN,
JAS. E. RANKIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."