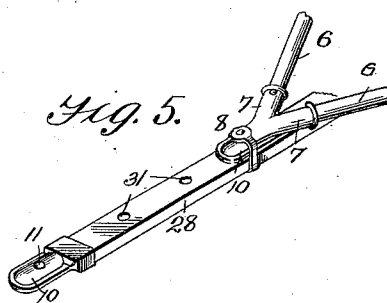
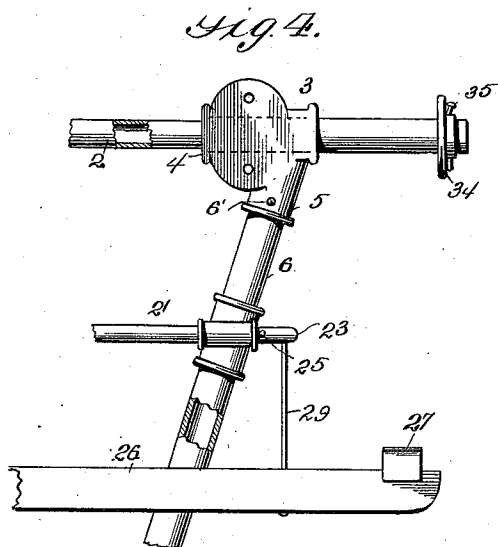
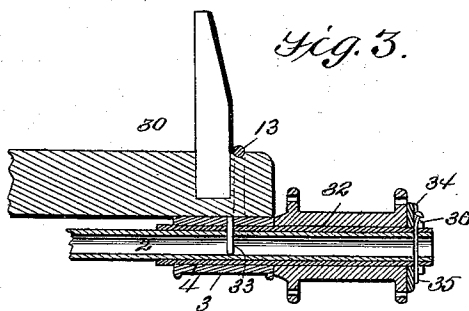
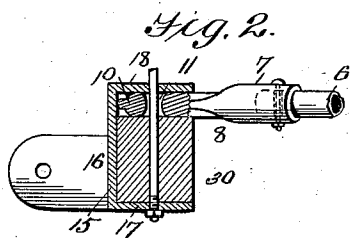
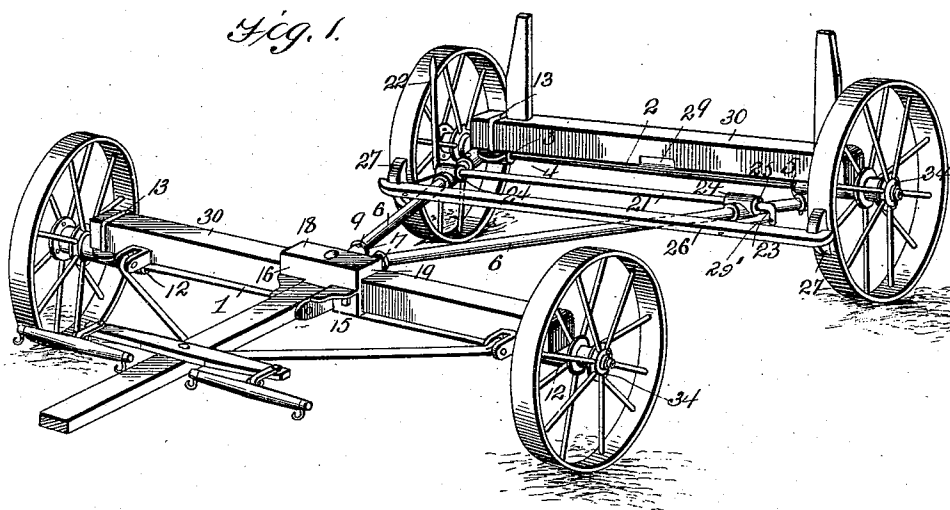


(No Model.)

H. L. BENNETT & R. B. ADAMS.
WAGON.

No. 542,324.

Patented July 9, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

HARWELL L. BENNETT AND RUSSELL B. ADAMS, OF WESTERVILLE, OHIO.

WAGON.

SPECIFICATION forming part of Letters Patent No. 542,324, dated July 9, 1895.

Application filed March 22, 1895. Serial No. 542,767. (No model.)

To all whom it may concern:

Be it known that we, HARWELL L. BENNETT and RUSSELL B. ADAMS, citizens of the United States, residing at Westerville, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Wagons; and we 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.

The object of our invention is to provide an improved construction of wagons especially adapted for use on farms.

The features of novelty are described in the following description and claims.

In the accompanying drawings, Figure 1 is a perspective view of the entire structure, the bolster on the front axle being omitted. Fig. 2 is a vertical sectional view of the clevis to which the tongue is attached. Fig. 3 is a vertical sectional view through one of the wheels and axle. Fig. 4 is a top plan view of the casting or box to receive the axle and rear end of a reach, a part of the reach and the brake being also shown. Fig. 5 is a perspective view of devices for lengthening the wagon.

Like characters of reference in the different figures designate corresponding parts.

1 and 2 designate the front and rear axles, respectively, which are shown to be pipes or tubular bars, preferably of steel.

3 3 designate the castings or boxes for the rear axles, which are provided with an orifice 4 for the axle and with sockets 5 to receive the rear ends of the reaches 6 6. These reaches are also preferably of tubular metal, and their rear ends are secured in the sockets 5 by means of removable bolts or spring-pins 6'.

To permit a slight play of the reaches in the sockets 5, for a purpose hereinafter explained, the hole in the reach through which the pin or bolt passes is made slightly larger than that in the socketed projection.

The forward ends of the reaches 6 are secured in the tubular arms 7 7 of a Y-shaped casting 8 by means of pins 9. The pin-holes in the reaches at their forward ends, as at their latter, are made larger than the diameter of the bolt or pin, so as to permit a slight

movement of the reaches in the sockets. The purpose of this play of the reaches is to permit any one of the wheels in passing over a lump or other elevation in the path of the wheel to rise independently of the others and without lifting the other parts or straining the connections. The stem of the Y-shaped casting is made with longitudinal rounded ridges 10, and the hole 11 to receive the pin for coupling the casting to the front axle is also made rounding to increase the play of the connection.

12 12 designate the boxes which receive the front axle. These are substantially like those for the rear axle, except that sockets 5 are omitted.

Wooden trusses or sills 30 are secured to the boxes 12 12 by means of clips 13, the threaded ends of which are passed through holes in the boxes and secured by nuts. The combination of a wooden sill or truss with a hollow axle affords a cheap and light but strong support for the load. Moreover, the securing of the sills to the boxes throws the weight of the load upon points near the hub, and thus avoids danger of bending or snapping the axle.

15 designates a large clip or casting that is bolted to the front wooden sill. The front side 16 of this casting is formed with ears or brackets to receive pivotally the end of the wagon-tongue. The lower part 17 of the casting extends under the sill, and the upper part 18 has end flanges 19, so that when the casting is placed on the sill there is formed a recess between the sill and the upper wall of the casting, into which the stem of the Y-shaped casting on the forward end of the reaches may be inserted. The upper part 18 of the casting is made with a hole to receive the coupling-pin, which passes through it and the rounded hole in the Y-shaped casting into the wooden sill or truss.

The brake-lever consists of a horizontal part 21, having at one end the upwardly-extending handle 22 and at both ends short downwardly-extending arms 23. The horizontal part of the brake-lever is journaled in bearings 24, which consist essentially of two short tubes cast together to cross each other at angles and one above the other. The upper of these short tubes constitutes the bear-

ing for the horizontal part of the brake-lever, while the lower slips onto the reach. Short pins 25 passed through the brake-lever adjacent the bearings will not only secure it from longitudinal movement but prevent any movement of the bearing on the reaches. The brake-bar 26, having properly-positioned shoes 27, rests upon the reaches and is attached to the lower ends of the downwardly-extending arms 23 of the brake-lever by rods 29'. By pushing the handle 22 forward the brake-bar and shoes are brought into contact with the wheels, as usual.

The wagon may be lengthened by means of a pole 28, having on its forward end a tongue formed like the stem of the Y-shaped casting, heretofore described, and adapted to be coupled to the front axle in the same way as is said stem. The pole should be of such length as to extend back, pass through, and be supported within a recess 29 in the under side of the rear sill 30. The pole is also provided with a series of holes 31, so that the extent to which the wagon may be lengthened may be varied to suit the requirements of circumstances.

The wheels for the wagon may be either low or high. In the accompanying drawings we have shown low wheels with broad tires, which adapts the wagon for use upon the farm. Making the wheels low saves much labor in lifting and placing things upon the wagon.

Short sleeves 32 are placed and secured by means of a removable pin 33 on the ends of the axles to take the wear, which when themselves are worn may be replaced by others, thus saving loss of the entire axle. The pin 33 is held in place by the superposition of the sill, as shown.

The wheels are secured to the axles by means of a washer 34 and linchpin 35, the said pin resting in and engaging a groove 36 across the face of the washer, which prevents the washer from turning with the wheel.

Our wagon can be economically constructed,

and when any of the parts are worn or broken they can be replaced by the farmer himself.

What we claim, and desire to secure by Letters Patent, is—

1. In a wagon, the combination of the rear axle, sockets 5 on said axle, the Y-shaped casting having sockets 7, reaches 6 loosely secured in said sockets 5 and 7, a lengthening pole 28 having a rounded tip and a coupling pin hole, the front axle having a seat for the tip of said pole, substantially as described.

2. In a wagon, the reaches 6 and the Y-shaped casting the stem of which has rounded surfaces and a hole to receive the coupling pin the walls of which are rounded, for the purpose explained.

3. In a wagon substantially as described, the front sill and a casting 15 secured thereto having the front wall 16 and the upper wall 18 having flanges 19 to afford a recess between the sill and the upper wall of the casting, for the purpose explained.

4. In a wagon, the combination with the rear axle, reaches 6 secured to said axle near the wheels and converging at their forward ends, bearings 24 movably attached to said reaches, the brake lever journaled in said bearings, and pins to prevent movement of said lever in its bearings and movement of the bearings on the reaches, substantially as described.

5. In a wagon, a tubular axle, a removable wear sleeve on said axle, a casting or box on said sleeve, a pin passing through the box, sleeve, and axle for securing the same to the axle, and a sill secured to said box and preventing the removal of said pin, substantially as shown.

In testimony whereof we affix our signatures in presence of two witnesses.

HARWELL L. BENNETT.
RUSSELL B. ADAMS.

Witnesses:

H. P. ANDRUS,
H. L. SIBEL.