No. 739,347. PATENTED SEPT. 22, 1903.

S. W. ROWELL.

VEHICLE.

APPLICATION FILED MAR. 12, 1903.

NO MODEL.

Fig. 1.

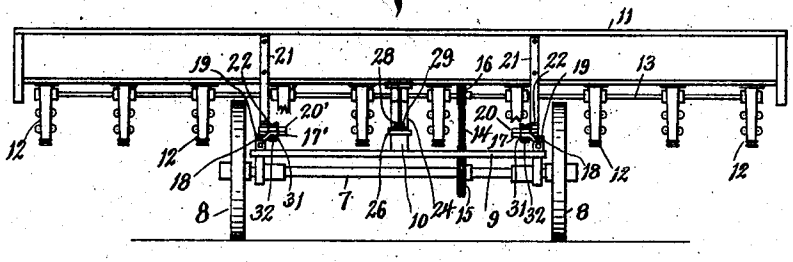


Fig. 2.

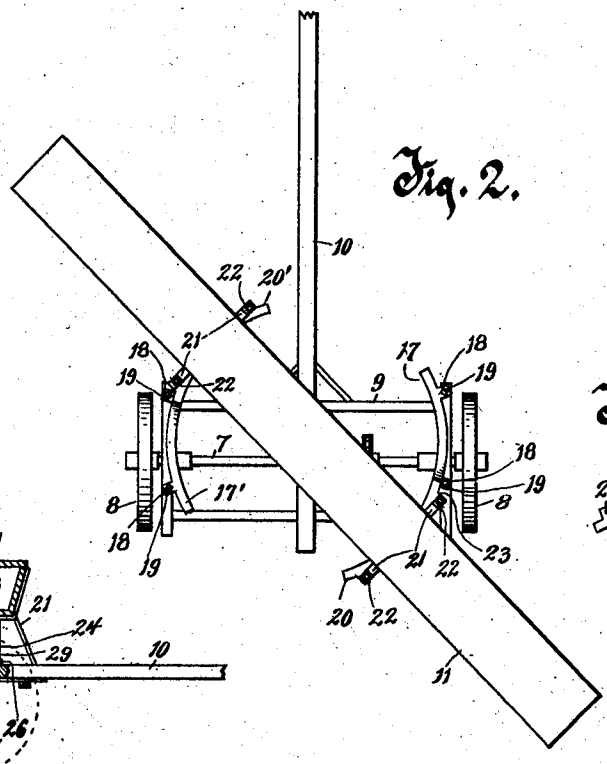


Fig. 3.

Fig. 5.

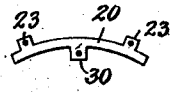


Fig. 6.

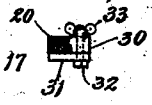
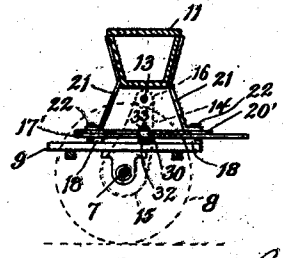


Fig. 4.



Witnesses.

C. N. Keeney.

Almas Klug.

Inventor.

Samuel W. Rowell.

By Benedict, Morsell & Green

Attorneys.

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

No. 739,347. Patented September 22, 1903.

UNITED STATES PATENT OFFICE.

SAMUEL W. ROWELL, OF BEAVER DAM, WISCONSIN.

VEHICLE.

SPECIFICATION forming part of Letters Patent No. 739,347, dated September 22, 1903.

Application filed March 12, 1903. Serial No. 147,377. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. ROWELL, residing at Beaver Dam, in the county of Dodge and State of Wisconsin, have invented a new and useful Improvement in Vehicles, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in vehicles of a class wherein the portion supported by the gearing is longer than the distance from one wheel of an axle to the other wheel of said axle.

The object of the invention is to provide in vehicles of the class referred to a means for swinging the supported upper portion of the vehicle from its normal transverse position to an oblique position, whereby the vehicle when the body portion is so swung to the oblique position referred to is capable of passing through a narrow gateway or opening in a fence or other barrier.

With the above primary object and other incidental objects in view the invention consists of the devices and parts or their equivalents, as hereinafter more fully set forth.

The preferable application of my invention is in connection with a narrow-track broadcast seeder, although it is clearly applicable to any other class of vehicle, either two-wheeled or four-wheeled, wherein the length of the body portion is greater than the distance between the wheels.

In the accompanying drawings I have shown the invention as applied to a seeder of the description referred to.

In the drawings, Figure 1 is a rear end elevation of a narrow-track broadcast seeder to which my invention is applied. Fig. 2 is a plan view showing the hopper of the seeder swung around to an oblique position. Fig. 3 is a transverse central sectional view. Fig. 4 is a transverse section on a plane to one side of the plane on which Fig. 3 is taken. Fig. 5 is a detail view of one of the upper curved bearing-straps, and Fig. 6 is a cross-section through the upper and lower curved bearing-straps.

Referring to the drawings, the numeral 7 indicates the axle of the seeder, and 8 8 the wheels at opposite ends of said axle. The axle supports a framework 9, and connected to this framework and extending forwardly from the center thereof is the usual tongue 10. Supported above the framework, and preferably with its center slightly in advance of the axle, is a hopper or seedbox 11. The hopper normally occupies the position shown in Fig. 1—that is, with its length in a transverse plane to the frame—and this is the position said hopper occupies when the machine is operating to sow the seed. Projecting from the under side of the hopper are the usual seed-spouts 12, through which passes the shaft 13, carrying within the spouts the usual mechanism for controlling the flow of seed from the hopper to and through the spouts. The shaft is rotated usually by means of a sprocket-chain 14, extending around a sprocket-wheel 15 on the axle 7 and around another sprocket-wheel 16 on the shaft 13.

The invention consists in pivotally supporting a hopper when the improved mechanism is employed in connection with a seeder or in pivotally supporting the body portion of any other form of vehicle or agricultural machine so that the hopper or body portion may be swung from the normal transverse position to an oblique position, as illustrated in Fig. 2. Various means for pivotally mounting the hopper or the supported body portion may be provided. In the accompanying drawings I show the means which I prefer to employ for attaining this object of the invention. Referring to this mechanism, the numerals 17 17′ indicate curved bearing-straps. These straps are secured to the frame in any desirable manner. For the purpose I show lugs 18, projecting from the outer edges of the straps and receiving bolts 19 therethrough, which bolts enter the side pieces of the frame. Curved complementary bearing-straps 20 20′ are secured to the hopper at a distance below the under side of said hopper. The particular means shown in the drawings for so securing these complementary straps consists of bars 21 21, extending downwardly from the hopper and having their lower ends bent at right angles and receiving therethrough bolts 22, which bolts also pass through lugs 23, projecting from the outer edges of the straps 20 20′. Secured to and depending from the under side of the seedbox is a standard 24, the lower end of

said standard terminating in a base-plate 25, which is seated in a recess formed in the upper side of a plate 26, set on top of the tongue 10. The standard is preferably cross-shaped in transverse section, and through the upper portion thereof the shaft 13 passes. The pivot-bolt 27 passes through the tongue 10, plate 26, and base of the standard, the said standard provided with an opening 28 just above its base-plate, so that a nut 29 may be turned onto the upper threaded end of the bolt. The nut, however, is not clamped down onto the base-plate sufficiently hard to prevent the turning of the hopper when it is desired to adjust said hopper from its normal transverse position to an oblique position, or vice versa.

Each of the upper curved bearing-straps (see Figs. 5 and 6) is provided at its inner edge, and preferably at a medial portion of said edge, with a projecting lug 30, which extends down adjacent to the inner edge of the contiguous under curved bearing-strap. A small plate 31 is disposed beneath the under side of each lower curved bearing-strap at a point of location corresponding to the location of the lug 30. Each of these plates projects beyond the inner edge of each lower curved bearing-strap and receives thereagainst the lower end of one of the lugs 30. A bolt 32 passes through each lug 30 and plate 31, and a wing-nut 33 is turned onto one of the ends of each bolt. When the hopper is in the position shown in Fig. 1, the wing-nuts 33 are turned down tightly, so that the hopper will be maintained in said normal position. When, however, it is desired to swing the hopper around to the oblique position shown in Fig. 2, all that is necessary to be done is to loosen the wing-nuts and then apply force to the hopper so as to cause it to turn in the proper direction.

When the invention is applied to a seeder, the hopper could not under ordinary conditions be turned from its normal transverse position to an oblique position unless the sprocket-chain 14 were first removed. It will be noticed, however, that the shaft 13, which carries the sprocket-wheel 16, is set slightly in advance of the axle 7, and consequently as the hopper is turned from the position shown in Fig. 1 to the position shown in Fig. 2 the sprocket-wheel 16, which is carried with the shaft 13, and which shaft is connected to the hopper, is brought to a position in vertical alinement with the axle 7, and consequently the sprocket-chain 14 does not act as a restraining influence to the turning of the hopper. The pivot-bolt 27 is also preferably in vertical alinement with the transverse plane of the shaft 13, and as said shaft 13 is directly beneath the center of the hopper the pivot-bolt thereby occupies the most advantageous position for the turning or swinging of the hopper thereon.

Heretofore in vehicles of the class referred to, and particularly in the case of agricultural machines, especially narrow-gage seeders, wherein the body portion in the case of vehicles and the like, or the hopper in the case of seeders, extends transversely beyond the wheels said body portions or hoppers have not usually been adjustable with relation to the line of travel and it has been impossible to draw the machine through the average-size gate-opening or passage in a fence or other obstruction. It is evident that the necessity for this frequently arises, especially in transporting a machine or vehicle from one inclosure to the other. By my invention these objections are successfully overcome in a very simple and expeditious manner.

What I claim as my invention is—

1. In a vehicle, the combination of an axle, wheels thereon, a frame carried by the axle, curved bearing-straps secured to the frame, a pivot extending from the frame, an upper portion the length thereof being greater than the distance between the wheels and being normally disposed on a plane transverse of the vehicle, and mounted on the pivot-pin so as to be capable of being shifted from its normal transverse position to a position at an angle thereto, and curved bearing-straps secured to and at a distance from the under side of the upper portion and bearing against and coöperating with the curved straps carried by the frame.

2. In a vehicle, the combination of an axle, wheels thereon, an upper portion the length thereof being greater than the distance between the wheels and being normally disposed on a plane transverse of the vehicle, a shaft journaled in bearings extending from the under side of the upper portion, said shaft being out of alinement with the axle, a wheel on the shaft, a wheel on the axle, a belt connecting said wheels, and means for supporting said upper portion from the axle so that said upper portion may be shifted from its normal transverse position to a position at an angle thereto and vice versa.

3. In a vehicle, the combination of an axle, wheels thereon, a frame supported by the axle, an upper portion having a greater length than the distance between the wheels and being normally disposed on a plane transverse of the vehicle, a pivot-bolt carried by the frame, a standard depending from the upper portion and pivoted on the pivot-bolt, curved bearing-straps secured to the frame, curved bearing-straps secured to and at a distance from the upper portion and bearing up and coöperating with the curved bearing-straps of the frame.

4. In a vehicle, the combination of an axle, wheels thereon, a frame supported by the axle, an upper portion having a greater length than the distance between the wheels and being normally disposed on a plane transverse of the vehicle, said upper portion being pivoted to the frame, curved bearing-straps on the frame, curved bearing-straps secured to the

upper portion and coöperating with the bearing-straps of the frame, and clamps for adjustably binding the straps together.

5. In a vehicle, the combination of an axle, wheels thereon, a frame supported by the axle, an upper portion having a greater length than the distance between the wheels and being normally disposed on a plane transverse of the vehicle said upper portion being pivoted to the frame, a shaft journaled in bearings and extending lengthwise of the upper portion, said shaft being normally parallel with the axle but in a different vertical plane, and a belt connection between the shaft and axle.

6. In a vehicle, the combination of an axle, wheels thereon, a frame supported by the axle, an upper portion having a greater length than the distance between the wheels and being normally disposed on a plane transverse of the vehicle, said upper portion being pivoted to the frame at about the middle of the upper portion, curved bearing-straps, at each end of the frame, and curved bearing-straps on the upper portion coöperating with the curved bearing-straps of the frame.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL W. ROWELL.

Witnesses:
BUTLER BABCOCK,
M. E. BURKE.