E. M. WHEELOCK.

GUIDE WHEEL FOR PLOW MOTORS.

APPLICATION FILED JUNE 20, 1910.

986,615.

Patented Mar. 14, 1911.

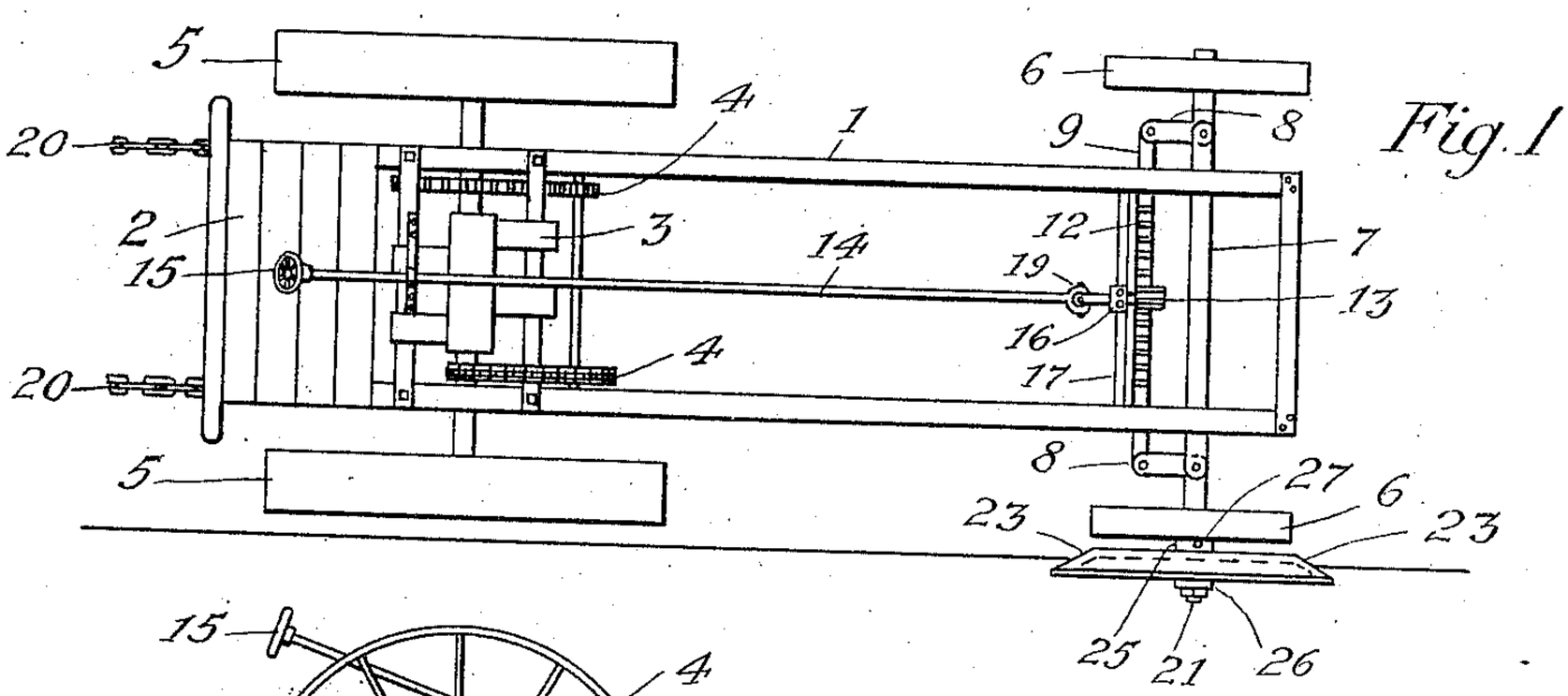


Fig. 1

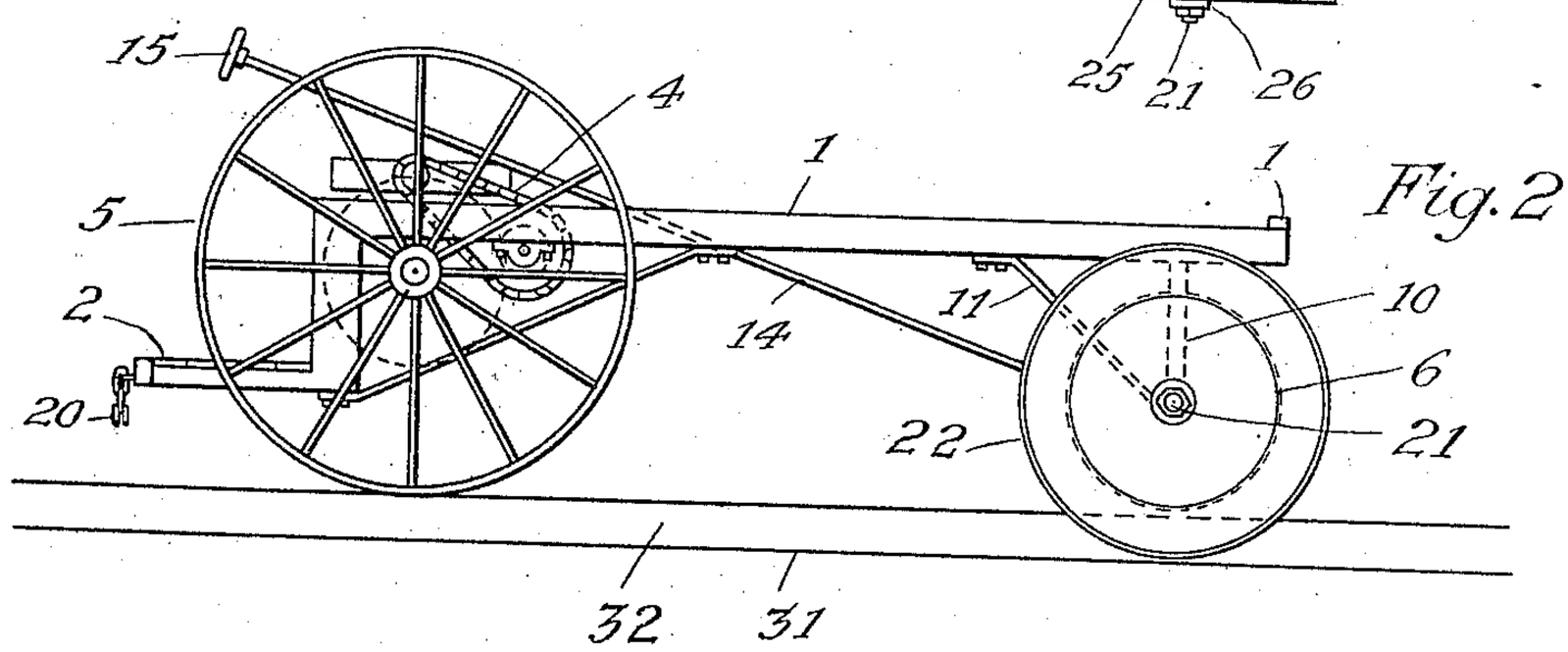


Fig. 2

Fig. 5

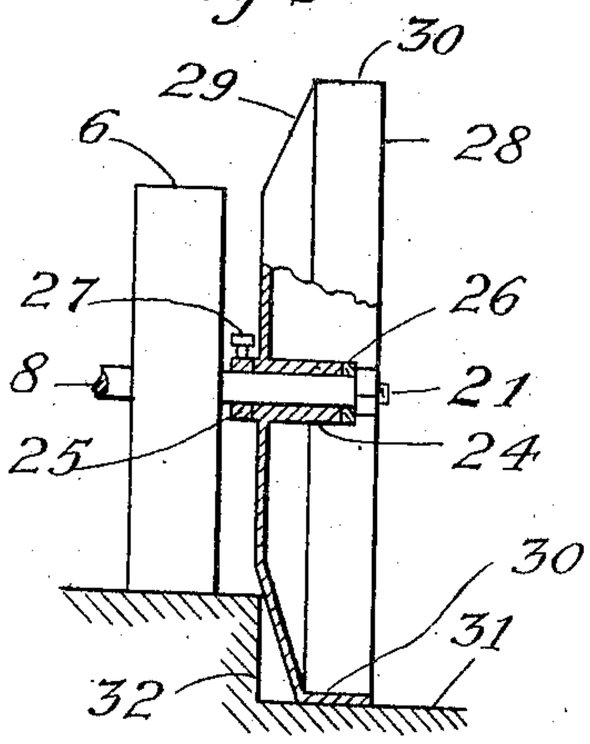
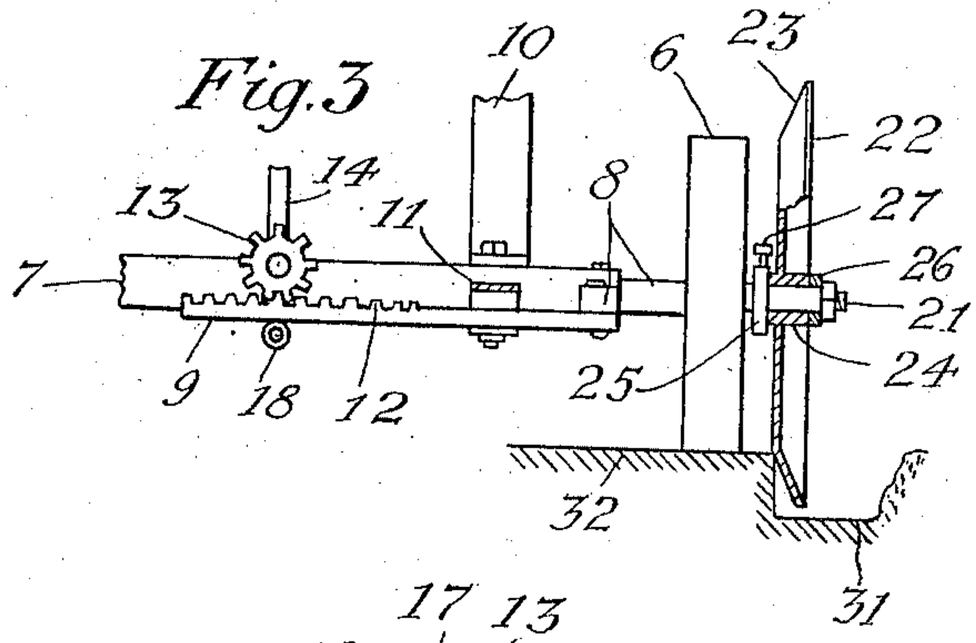


Fig. 3



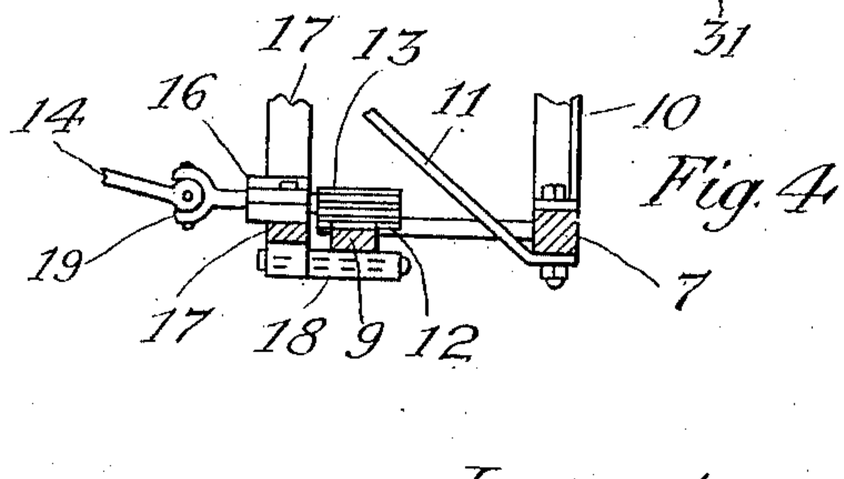


Fig. 4

Witnesses
Theo. Lagaard.
H. A. Bowman.

Inventor:
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UNITED STATES PATENT OFFICE.

EDWIN M. WHEELOCK, OF WINONA, MINNESOTA.

GUIDE-WHEEL FOR PLOW-MOTORS.

986,615. Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed June 20, 1910. Serial No. 567,804.

To all whom it may concern:

Be it known that I, EDWIN M. WHEELOCK, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Guide-Wheels for Plow-Motors, of which the following is a specification.

My invention relates to guide wheels used in connection with the steering wheels of plow motors, and its object is to provide novel means for guiding the motor wheels to cause them to travel at a proper distance from and along the side of a previously formed furrow. This object I accomplish by extending the spindle of one of the steering wheels and mounting thereon a beveled or convexed disk or wheel adapted to contact with the unplowed side of the furrow.

My improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a plan view and Fig. 2 a side elevation of an engine or motor embodying my improvements; Figs. 3 and 4 are enlarged detail views of portions of the steering devices connected to the front axle; and Fig. 5 shows a slight modification in which a wide rimmed wheel is substituted for the disk shown in the preceding views.

I have selected for the purpose of illustration, and have shown in the drawings in somewhat diagrammatic form, an explosive-engine motor, which is the type of motor I prefer to use for plowing, but my improvements are adapted to be used in connection with motors of other types.

In the drawings 1 designates the main frame of the motor, 2 the platform for the operator, 3 the explosive engine, 4 the driving-gear, 5 the rear wheels, 6 the front wheels, 7 the divided front axle, 8 the arms pivoted thereon, and 9 the equalizer for the pivoted members of the front axle, all of which parts may be of any usual or suitable construction.

The axle 7 is preferably suspended from the frame 1 by hangers 10, which are stayed by braces 11. The bar 9 is arranged to be reciprocated transversely to the frame 1, and it is provided with cogs 12, constituting a rack, which is engaged by a pinion 13 that is operated by a steering-rod 14 that extends rearward and is provided with a hand-wheel 15 in position to be turned by an operator on the platform 2. The axis of the pinion is journaled in a box 16 supported from the frame by a hanger 17; and a roller-bearing 18 for the bar 9 is supported by the hanger 17 below the pinion 13. The rod 14 is connected to the pinion axis by a universal joint 19. It will be apparent that by means of the devices described an operator can reciprocate the bar 9 by turning the rod 14 so as to adjust the inclination of the front wheels and thus steer the machine. A gang of plows (not shown) may be connected to the motor frame in the customary way by chains 20, or rods, or other suitable means, to enable the motor to draw the gang for plowing.

To relieve the operator of the strain and labor of giving constant attention to the steering devices while plowing to cause the motor and plows to move in proper direction with relation to the previously plowed ground, I provide one of the steering wheels with an extended spindle 21 and on the spindle extension mount, independently of the wheel 6, preferably a disk 22 having a beveled or convexed inner face 23. The hub or boss 24 of the disk may be revolubly mounted between a pair of collars 25 and 26 on the spindle 21 and the collars may be held in place by set-screws 27, or otherwise, so that the position of the disk on the spindle can be adjusted as desired, and so that the disk can be readily removed. The beveled or convexed side of the disk is adapted to bear against the land-side of the furrow to prevent the edge of the disk from cutting into the land-side, and also to prevent the motor from moving away from the furrow; and the operator can, by setting the steering-gear in position to give the motor a slight tendency to move in that direction, obviate any tendency of the motor to move in the opposite direction, or toward the plowed ground. The diameter of the disk 22 must obviously be enough greater than that of the wheel 6 to enable the disk to properly perform its function, but whether the disk extends to the bottom of the furrow or not is immaterial.

In the modification shown in Fig. 5 a wheel 28, having a beveled face or flange 29 at the side toward the steering-wheel, is substituted for the disk 22. The wheel 28 may have a relatively wide tread 30 adapted to run in the furrow 31, while its beveled inner side 29 contacts with the land-side 32 of the furrow. Preferably this wheel is so secured as to be readily removed. This modified form of the device, as will be obvious, will

serve to perform the same function as the disk 22. In use such disk or beveled wheel is not only an aid to the operator in steering the machine, but in effect is made to serve as a positive and practically automatic guide for the machine while plowing along the side of a previously formed furrow.

Having described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination with a steering wheel of a plow motor having a projecting spindle, of a guide disk or wheel of greater diameter than the steering wheel and rotatably mounted on such spindle extension and having its inner side beveled or convexed and adapted to bear against the land-side of a furrow, substantially as set forth.

2. The combination with a steering wheel of a plow motor having a projecting spindle, of a guide disk or wheel of greater diameter than the steering wheel and rotatably mounted on such spindle extension and having its inner side beveled or convexed and adapted to bear against the land-side of a furrow, and means for adjusting the guide disk or wheel on or removing it from the spindle, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses this 3d day of June, 1910.

EDWIN M. WHEELOCK.

Witnesses:
E. F. WHEELOCK,
B. A. MAN.