E. A. SKJONHAUG.

WIRE REELING DEVICE FOR WAGONS.

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1,205,803.

Patented Nov. 21, 1916.

2 SHEETS—SHEET 1.

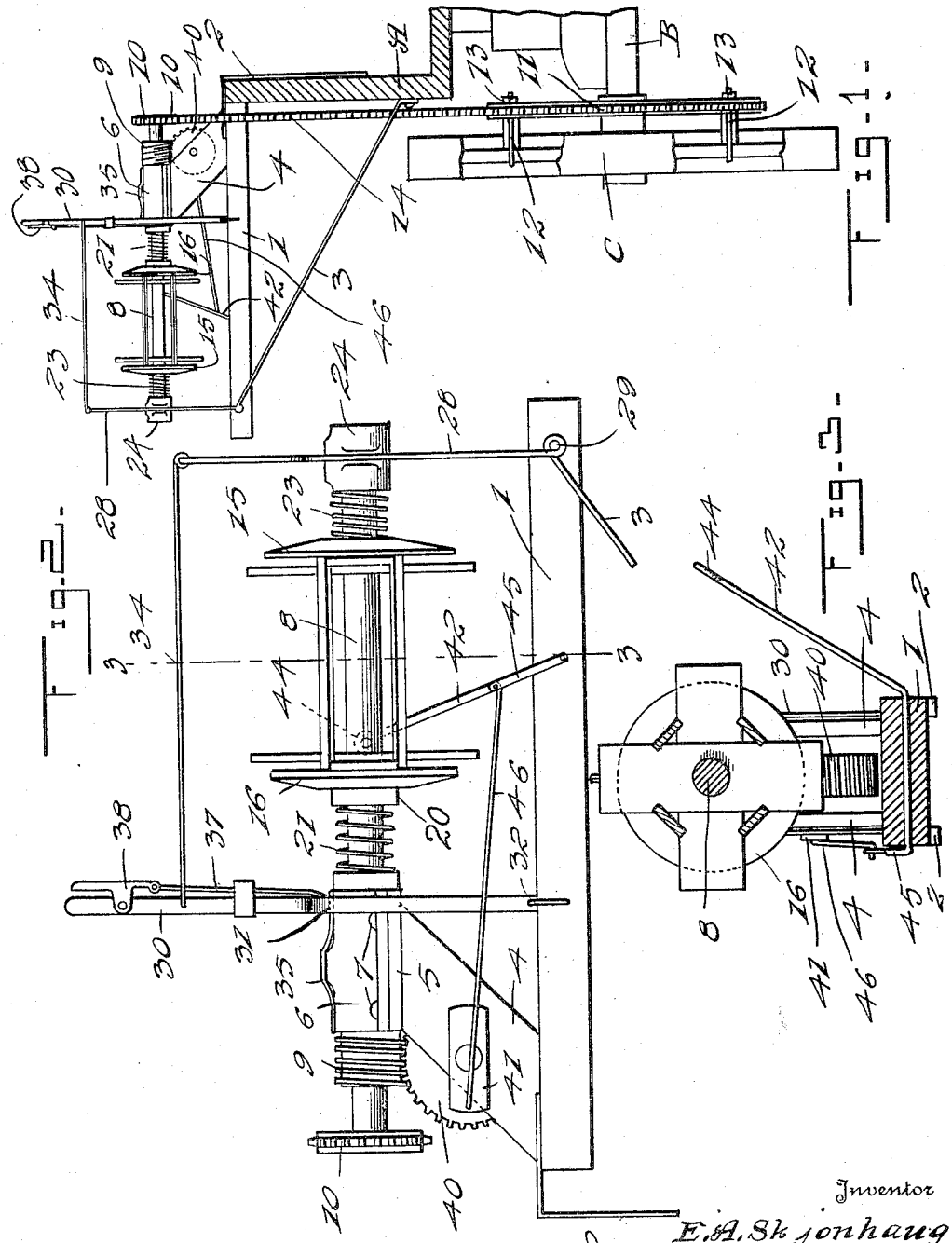


Fig. 1.

Fig. 2.

Fig. 3.

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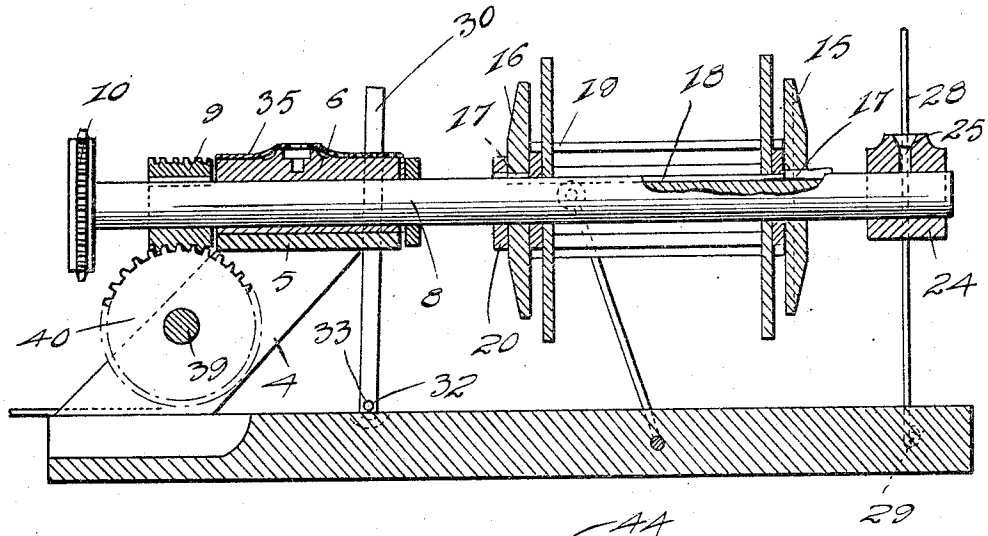
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2 SHEETS—SHEET 2.

Fig. 4.



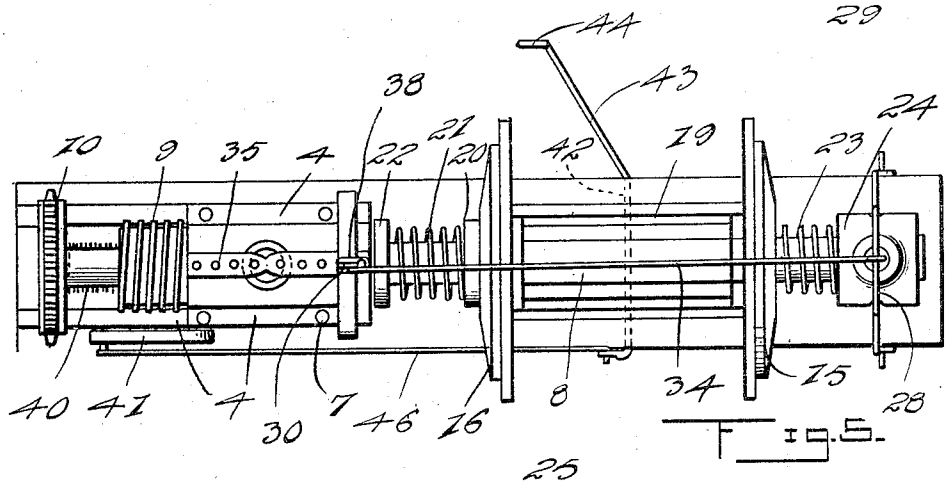


Fig. 5.

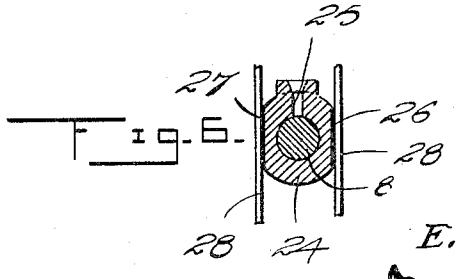


Fig. 6.

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WIRE-REELING DEVICE FOR WAGONS.

1,205,803. Specification of Letters Patent. Patented Nov. 21, 1916.

Application filed October 27, 1915. Serial No. 58,189.

To all whom it may concern:

Be it known that I, EDWARD A. SKJONHAUG, citizen of the United States, residing at Buffalo, in the county of Harding and State of South Dakota, have invented certain new and useful Improvements in Wire-Reeling Devices for Wagons; 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.

This invention relates to a device for reeling wire, and similar materials, and is adapted to be mounted on the body of a wagon, so that the wire can be reeled or unreeled during travel of the wagon, and the primary object of the invention is to admit of the reel, when filled with wire, or when the wire has been unwound therefrom, to be conveniently and expeditiously removed and a new reel substituted therefor.

Another object of the invention is to admit of the reel being held stationary during the travel of the wagon or to revolve during the travel of the wagon, as desired.

A further object of the invention is to provide a novel form of operating means for the reel by means of which the reel can be held stationary or made to revolve during the travel of the wagon.

Other objects will appear and be better understood from that embodiment of my invention of which the following is a specification, reference being had to the accompanying drawings forming a part thereof in which:—

Figure 1 is a fragmentary sectional detail view through one of the rear corners of a wagon body, showing the reeling device applied to the side of the body, Fig. 2 is a side elevation of the reeling device removed from the wagon body, Fig. 3 is a vertical sectional view, taken on the line 3—3 of Fig. 2, Fig. 4 is a longitudinal sectional view taken through Fig. 2, Fig. 5 is a top plan view of the reeling device, Fig. 6 is a sectional detail view through one end of the shaft for the reel.

Referring to the drawings, the letter A designates one side of a wagon body, B the rear axle and C one of the rear wheels of the wagon.

The invention consists of a rectangular shaped platform 1 adapted to be positioned to one side of a wagon body, and has one end provided with spaced angular irons 2, each of the irons having one of its sides depending downwardly and engaging over the upper edge of the adjacent side of the wagon body, as shown in Fig. 1, and the opposite end of the platform has connected thereto the upper ends of diagonal brace rods 3—3, the lower ends of which have connection with the side of the wagon body, as shown in Fig. 1.

Mounted upon the platform 1 is a pair of spaced diagonally extending uprights 4—4, the upper ends of which are spaced and extend parallel with each other and with the platform. Mounted upon the upper ends of the uprights 4—4 is the bottom plate 5 of a bearing, the top or companion plate of the bearing being curved in transverse section, and designated by the numeral 6, and is connected to the bottom plate 5 by means of bolts 7 which extend through the flanges carried by the top plate and through the lower plate and engage in the adjacent ends of the uprights. The plates 5 and 6 of the bearing are adapted to rotatably receive therebetween one end of a horizontally disposed shaft 8, the said end of the shaft 8 being extended outwardly beyond the bearing and has keyed thereto, and in spaced relation to each other, a worm wheel 9 and a sprocket wheel 10.

Encircling the hub of the wheel C is a sprocket 11. This sprocket wheel 11 is larger than the sprocket wheel 10, and has connection with certain spokes of the wheel C by means of U-shaped clips 12 which straddle the spokes and extend through the sprockets at opposite points, the terminals of the sides of these clips having studs 13 threaded thereon, so as to prevent the accidental withdrawal of the clips from operative positions.

A sprocket chain 14 operatively connects the sprockets 10 and 11 together, so that during the travel of the wagon, rotary movement will be imparted to the shaft 8.

Rotatably and slidable on the shaft 8 is a pair of companion clutch disks 15 and 16. Each of the disks has a lug 17 thereon, slidably received by a longitudinal groove 18 formed in the shaft 8. These disks are adapted to be forced against the opposite ends of a reel 19, which is loosely mounted on the shaft and positioned between the disks so as to lock the reel to the shaft so that the same can rotate with the shaft,

when the latter is operated. The outer side of the disk 16 has a collar 20, against which engages one end of a coil spring 21, which spring encircles the shaft 8 and has its opposite end engaging against a collar 22 mounted on the shaft 8, and located between the spring 21 and the bearing for the shaft. A coil spring 23 encircles the other end of the shaft 8 and has one end engaging against the outer face of the disk 15, and its opposite end engaging against the slidable collar 24 mounted on the outer end of the shaft 8. The collar 24 is adapted to be held stationary during rotation of the shaft 8, and has an opening 25 therein for the reception of lubricant, and the said collar has its opposite sides provided with vertical grooves 26 and 27, which are adapted to receive the sides of a yoke 28, the free ends of which are pivoted to the opposite sides of the platform 1, as shown at 29.

Located above the bearing, for the shaft 8, is an operating lever 30. This operating lever has its lower end connected to the cross bar of an inverted substantially U-shaped member 31, which straddles the bearing for the shaft 8, and has the free end of its side loosely mounted on a transverse rod 32, which extends through openings 33 in the free ends of the sides of the U-shaped member 31, and has its opposite ends bent downwardly and secured in any suitable manner to the opposite longitudinal edges of the platform 1.

The operating lever 30 and the yoke 28 are connected to each other by means of a connecting rod 34. The rod 34 has an eye formed in one end thereof which loosely receives the connecting bar for the sides of the yoke member 28 and has its opposite end bent laterally and inserted within an opening in the operating lever 30 and secured therein in any suitable manner.

When the operating lever 30 is moved in the direction of the worm 9, the yoke 28 will move the collar 24 on the shaft 8 and cause the spring 23 to force the disk 15 into tight frictional engagement with the adjacent end of the reel 19, and cause the opposite end of the reel to move into tight engagement with the disk 16, and lock the reel to the shaft 8 so as to cause the reel to rotate with the shaft. When the operating lever is released or moved in the opposite direction, the collar 24 will move toward the adjacent end of the shaft 8 and release the pressure on the disk 15, resulting in the releasing of the disks 15 and 16 from the ends of the reel, so as to permit the shaft to rotate relative to the reel.

Mounted upon the upper side of the bearings 6—6 is a plate 35, having a series of openings 36 therein. The operating lever 30 carries a vertical sliding locking member 37, having its upper end pivoted to the lower end of a pivoted handle 38 carried by the upper end of the operating lever 30, and the lower end of the locking member 37 is adapted to be interchangeably received by the opening 36 in the plate 35, so as to hold the locking lever in different adjusted positions.

Extending transversely between the uprights 4—4, is a shaft 39, which has its opposite ends journaled in the uprights and the said shaft has mounted thereon a gear wheel 40 which meshes with the worm 9 on the shaft 8. One end of the shaft 39 extends beyond the adjacent upright 4 and has mounted thereon a rectangular shaped member 41 which is adapted to rotate with the shaft 39. Associated with the platform 1 is a guide 42. This guide is formed of an elongated rod having one end bent upon itself to provide a vertical rod 43, which has its upper end terminating in an eye 44 disposed adjacent the reel 19, and the opposite end of the rod is loosely extended through a transverse passage in the platform and has its terminal extending beyond the platform and bent upwardly, as at 45, and connected to one end of a horizontally reciprocating rod 46, the opposite end of the rod 46 having connection with one end of the rectangular member 41 carried by the shaft 39.

In use, when it is desired to wind wire on the reel, one end of the wire is wrapped once or twice around the reel, so as to give the initial winding to the wire, or the said end can be secured to the reel in any other suitable manner. The wagon is then moved in the direction of the wire, which is adapted to be wound on the reel, and the operating lever moved in the direction of the spring, resulting in the locking of the reel to the shaft 8, so as to cause the reel to rotate with the shaft and wind the wire thereon. After the reel has been filled with wire, the connecting rod 34 is disconnected from the operating lever 30 and the yoke 28 moved in the direction of the adjacent end of the shaft 8, the movement of the yoke being continued until the collar 24 is withdrawn from the shaft 8, after which operation the spring 23 and disk 15 are removed from the shaft so as to admit of the reel being removed and a new one substituted therefor.

Having thus described my invention, what I claim as new is:—

1. In a wire reeling device for wagons, the combination of a platform carried by the wagon, a shaft journaled on the platform, clutch disks slidable on the shaft and adapted to rotate therewith, one of the disks being detachable from the shaft, a reel loosely mounted on the shaft and positioned between the clutch disks, a collar slidable on the shaft and positioned at one end thereof and in spaced relation to the detachable disks, a helical spring mounted on the shaft and having one end engaging the collar and the

other end engaging the detachable disk, an operating lever, means pivoted on the platform and engaging the collar and having connection with the operating lever, whereby to slide the collar in the direction of the detachable disk, when the operating lever is operated, so as to compress the spring and slide the detachable disk into engagement with the reel.

2. In a reeling device, the combination with a platform, uprights carried by the platform and arranged in spaced relation, a bearing carried by the upper ends of the uprights, a shaft journaled in the bearing, a reel loosely mounted on one end of the shaft, a worm mounted on the other end of the shaft, a second shaft journaled in the uprights and having a gear thereon arranged in meshing engagement with the worm on the first mentioned shaft, a rectangular shaped member secured to the second mentioned shaft, a movable guide, means connecting the guide to the rectangular member, so as to operate the guide when the second shaft is operated, means slidable on the first-mentioned shaft and adapted to rotate therewith and adapted when slid in one direction to engage the reel and lock the same to the shaft so as to effect rotation of the reel, a collar slidably and removably mounted on the first-mentioned shaft, a spring carried by the shaft and interposed between the collar and the sliding means, an operating lever, and means connecting the operating lever to the collar so as to effect sliding movement of the collar when the lever is moved in one direction so as to cause the sliding means to be moved into engagement with the reel and lock the reel to the shaft.

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

EDWARD A. SKJONHAUG.

Witnesses:

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