May 1, 1956 G. FARMER 2,743,883

WIRE DISPENSING REEL FOR SERVICE TRUCKS

Filed March 29, 1955

2 Sheets-Sheet 1

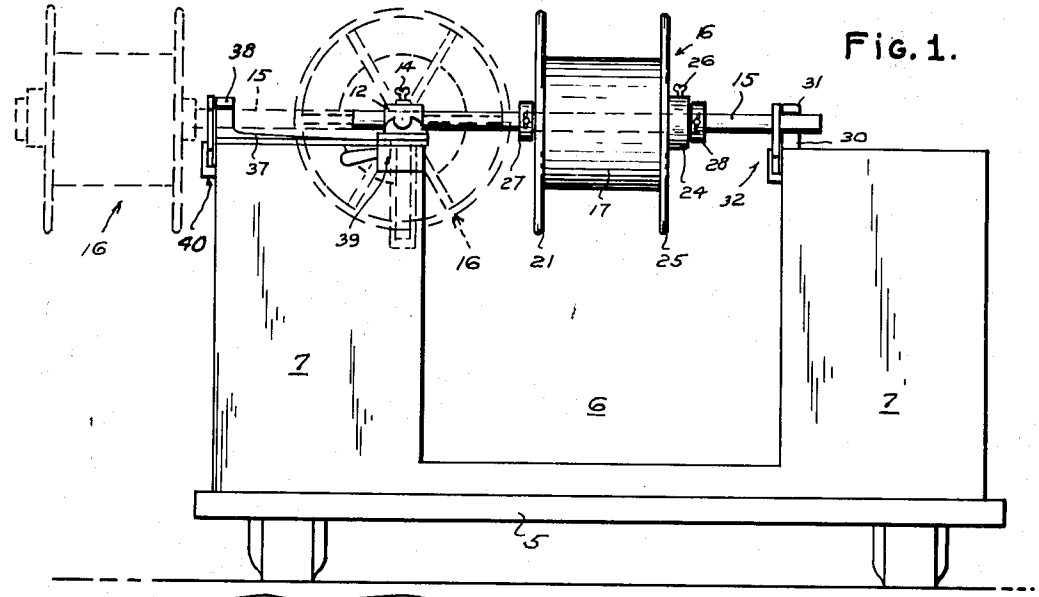


Fig. 1.

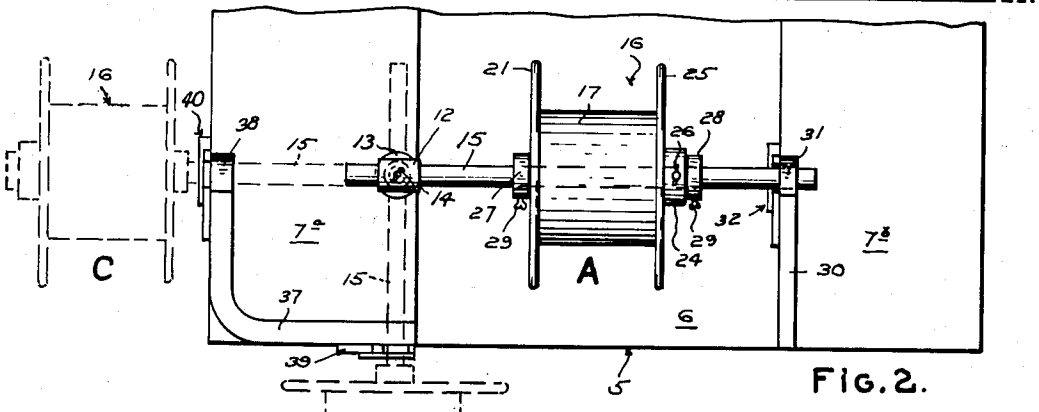


Fig. 2.

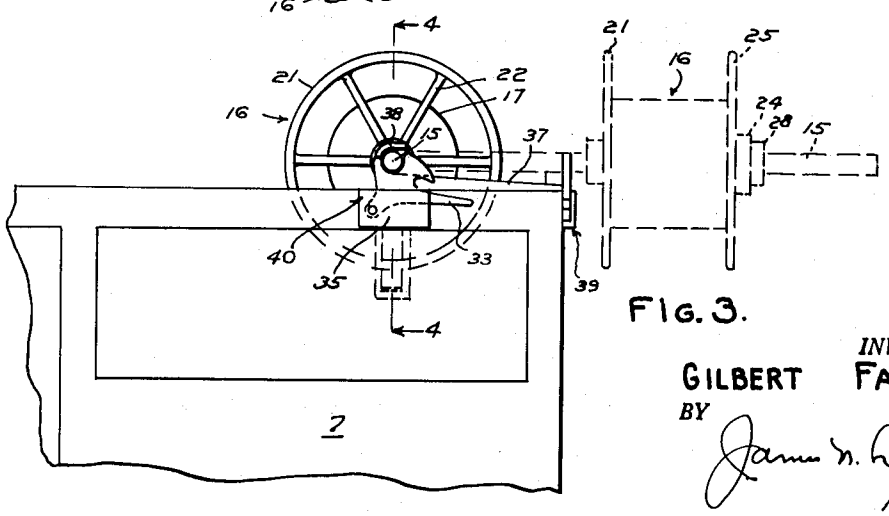


Fig. 3.

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2 Sheets-Sheet 2

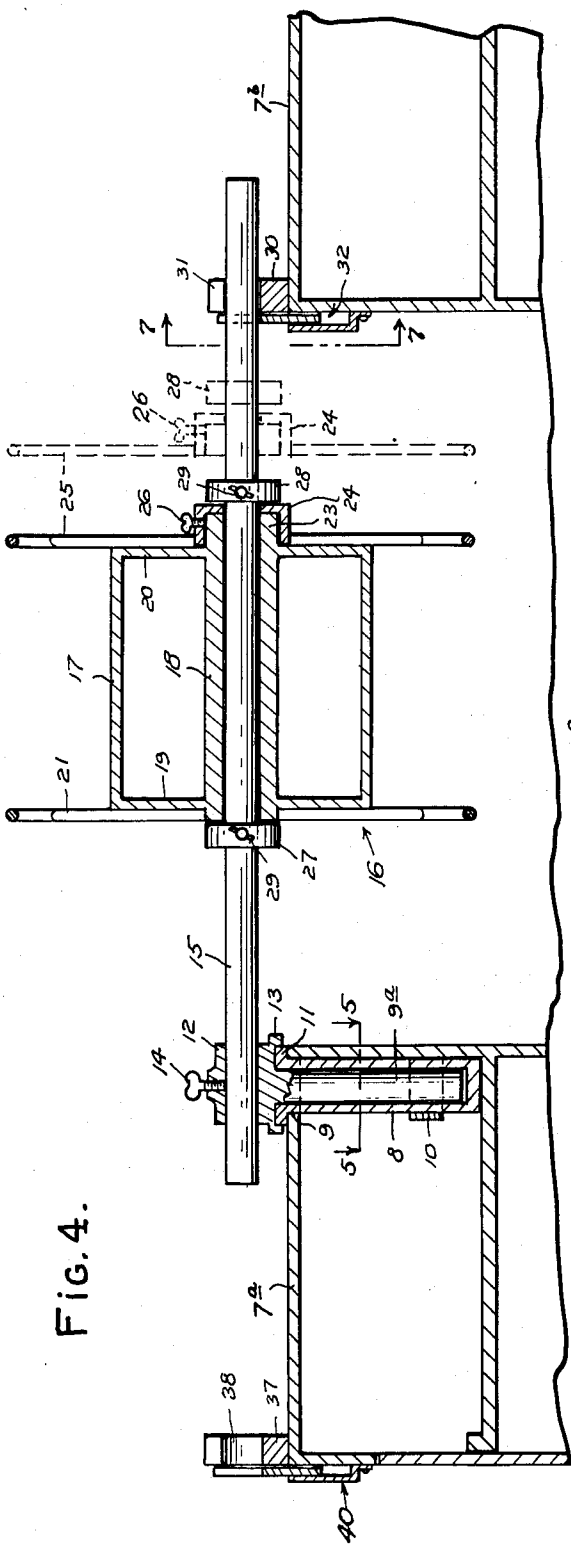


Fig. 4.

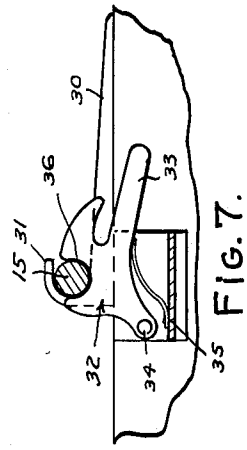


Fig. 7.

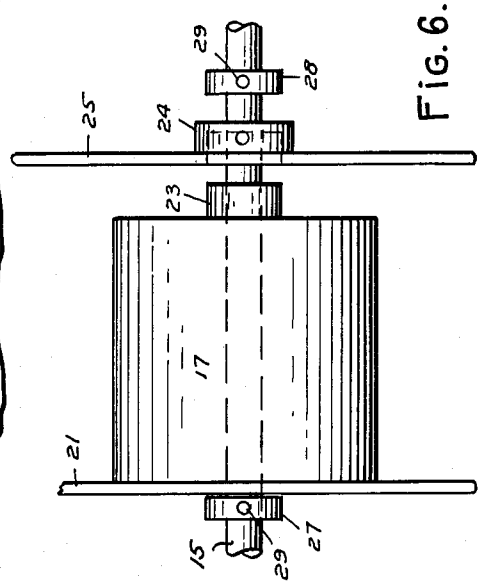


Fig. 6.

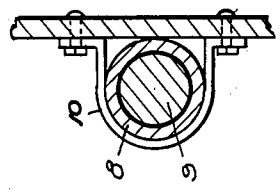


Fig. 5.

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WIRE DISPENSING REEL FOR SERVICE TRUCKS

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4 Claims. (Cl. 242—90)

This invention relates to improvements in reel devices and has particular reference to a wire dispensing reel primarily for use upon service trucks.

The invention contemplates a novel reel construction so mounted with respect to the truck whereby the reel and its supporting mechanism may be shifted in a horizontal arcuate path for disposing the reel in a plurality of positions whereby the wire supported thereon may be fed outwardly in the direction of use.

The invention further contemplates novel supporting means for the reel whereby the reel and its supporting mechanism is accurately latched in a positinon of adjustment against accidental swinging movement.

A further object of the invention resides in a novel reel construction having means whereby one side of the reel may be disengaged and wholly removed to facilitate the engagement of a coil of wire thereover in a manner that avoids a difficult handling of the coil of wire and with the reel being supported at an elevation whereby to facilitate the installation of a coil of wire thereon from a conventional loading dock.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a rear end elevation of a service truck showing the invention applied thereto,

Figure 2 is a fragmentary top plan view of the rear portion of the truck showing the device in use,

Figure 3 is a fragmentary side elevation of the rear end of the truck showing the device in use,

Figure 4 is an enlarged vertical sectional view through the reel construction and its mounting assembly with respect to the truck, taken on line 4—4 of Figure 3,

Figure 5 is a fragmentary horizontal section taken on line 5—5 of Figure 4,

Figure 6 is a side elevation of the reel illustrating a removable end portion, and

Figure 7 is a sectional view taken on line 7—7 of Figure 4.

Referring specifically to the drawings, the numeral 5 designates a conventional service truck having a central well portion 6 and side housings 7, and with the side housings being of well known construction and embodying the usual storage compartments.

Fixed with respect to one housing 7 is a tubular socket 8. The socket 8 is engaged through a preformed opening 9 formed within the top of one housing 7 and extending downwardly a predetermined distance to form an elongated and vertically disposed socket for the rotatable reception of a pin 9*a*. As a means to prevent lateral shifting of the socket 8, there has been provided a U-shaped bracket 10 that is anchored to one side wall of

the housing 7. The upper end of the socket 8 is flanged, as at 11, and with the flange overlying the top portion 7ª of the housing 7. The pin 9 carries preferably integral bearing sleeve 12 and with the sleeve 12 carrying a circumferential flange 13 that is rotatable upon and overlies the flange 11 as a means to prevent the entry of water or other foreign matter to the socket 8. The pin 9 and its associated sleeve 12 are rotatable in a horizontal plane in use. A preferably winged set screw 14 serves to adjustably clamp a cylindrical shaft 15 within the sleeve 12. The shaft 15 is therefore adjustable through the sleeve 12 and serves as the supporting means whereby the shaft 15 may be swung in a horizontal plane, for a purpose to be presently described. The shaft 15 has a length capable of extending entirely across the well 6, as clearly illustrated.

Rotatably supported upon the shaft 15 is a reel device, illustrated as a whole by the numeral 16. The reel 16 embodies a cylindrical drum 17 having a centrally disposed bearing sleeve 18. The drum 17 is preferably closed at its opposite ends by end walls 19 and 20, and the end walls 19 and 20 are preferably permanently connected with the sleeve 18. Fixedly connected with the end wall 19 and concentric with the drum 17 is an open reel end 21 having spokes 22. While the real end is shown and described as being open, it will be clearly apparent that the end may be formed solid. As clearly shown, the end 21 extends a predetermined distance outwardly beyond the circumference of the drum. The sleeve 18 has been extended beyond the end wall 20, as at 23, to form a hub for the mounting engagement of a tubular sleeve 24 carried by a reel end 25. The reel end 25 is removable from the hub 23 at such times as a coil of service wire is to be installed upon the drum 17. A preferably winged set screw 26 serves to lock the sleeve 24 in position upon the hub 23 with the reel end 25 in abutting engagement with the drum 17. In other respects, the reel end 25 is substantially identical to the reel end 21. Shiftable collars 27 and 28 having winged set screws 29 serve to position the drum at a desired point of operation upon the shaft 15.

The shaft 15 and its supported drum 17 and associated elements are thus rotatable in a horizontal plane through the medium of the pin 9 and the bearing collar 12, and the reel is bodily shiftable along the shaft 15 to any desirable point by first releasing the collars 27 and 28. The means for supporting the free end of the shaft 15 comprises a ramp 30, fixed in any desirable manner upon the top portion 7ᵇ of the opposite housing 7. The ramp 30 supports the weight of the shaft and its mounted reel during such times as the reel and its shaft is swung in a horizontal plane to overlie the top 7ᵇ and serves as a trackway to support the free end of the shaft and its supported load as the shaft is swung to the full line position overlying the well 6. The ramp 30 is provided with a socket stop 31 whereby to limit the inward swinging movement of the shaft and a suitable latch device 32, illustrated more clearly in Figure 7, is employed to retain the shaft in seating engagement within the stop 31, in which position the shaft is in a true horizontal position and substantially parallel with the rear end of the truck. The latch device 32, illustrated more clearly in Figure 7, embodies a lever 33, pivoted at 34 within a suitable bracket housing 35 and is spring biased in an upward direction. The lever 33 is provided with an open socket 36 for latching engagement with the shaft 15 as the shaft 15 is shifted over the ramp 30 to contact the stop 31.

It is contemplated that the reel and its supported coil of wire shall be positioned at three different points with respect to the truck, the first being in the position just described, the second being a position extending directly

rearwardly of the truck and the third position disposing the reel to one outer side of the truck, all as clearly shown in dotted lines. There has been provided a continuous ramp **37** upon the top **7a**, whereby to slidably support the shaft during its horizontal arcuate movement. The ramp **37** at the maximum point of swinging of the shaft **15** is provided with a socket stop **38**. In the intermediate position or where the reel is disposed in a position rearwardly of the truck, there is provided a latch device **39**, similar to the latch **32**, and at the maximum point of swinging movement of the shaft **15** and adjacent the stop **38** there is provided a third latch **40**, also similar to the latch illustrated in Figure 7. Thus in either position of adjustment, the shaft and its supported reel is fixedly positioned against swinging movement as the wire is fed from the reel.

In the use of the device, the truck is backed to a position adjacent the loading dock and the shaft and its supported reel is swung from the position "A" to the position "B." The collar **28** and the reel end **25** are then fully removed from the shaft **15**, after which a full coil of wire is rolled into position and shifted upon the drum **17**. As before pointed out, the dock is of such height that the shaft **15** and the drum **17** are disposed thereover in a position whereby the reel of wire may be easily engaged therewith without difficulty. With the wire in position, the end **25** is replaced and fixed in position by the winged screw **26** after which the collar **28** is engaged and fixed against the sleeve **24** with sufficient clearance as to permit the free rotation of the drum. Now, when the wire is to be fed in line rearwardly of the truck, the reel is retained in the position shown at "A," where it is held against shifting by the latch **32**. Where it is not possible for the truck to be positioned with respect to the point of installation of the wire, the reel may be shifted to the point "B" by releasing the latch **32** and swinging the shaft and the reel to a horizontal plane to a point of latching engagement with the latch **39**. With the reel in the position "B," the wire may be fed transversely from the truck to be extended to the point of use, or to permit a predetermined footage of the wire to be drawn outwardly in a manner that will not interfere with traffic or pedestrians. It should be here pointed out that the operator first determines the amount of footage necessary for a given service line, and then must pull the wire directly outwardly from the reel the required distance prior to cutting, and it has been found that with the reel in the position "A," should the truck be parked parallel with the curbing, the operator must of necessity pull the wire in a straight line outwardly from the rear of the truck, and in many cases blocking driveways and the like. With the reel in the position "B," the truck may be parked directly in front of the property to be serviced and the wire pulled in a straight line direction toward such property without in any way interfering with other driveways or avoiding possible damage or injury to the operator. The parking of the truck in a suitable position in many instances is highly difficult and frequently endangers not only the lives of the linemen, but also the possibility of a vehicle running over the wire and so damaging it as to make it useless. Thus, in certain instances, the truck can only be parked in a position where it becomes necessary to feed the wire outwardly in a straight line position parallel with the side of the truck. In such cases, the reel is positioned at the point "C" and latched in position by the latch device **40**, where it is effectively held against accidental swinging movement. Wire reels heretofore used with service trucks are customarily arranged within the well **6** at all times requiring that the operator pull the wire outwardly from the rear of the truck to the desired distance, and during such movement subjects himself to the danger of being struck by a vehicle or endangering the wire itself by a vehicle running thereover. This is particularly true where the wire is stretched across a driveway or across a street intersection.

It will be apparent from the foregoing that there has been provided a very desirable form of reel device that is applicable to the major number of service trucks. The device is fully operative in either of the positions illustrated and serves to speed the installation of service lines, since the wire will be fed outwardly from the reel in a manner that avoids kinking and enables the operator to get better and quicker measurements. The positioning of the reel is quickly and easily accomplished and eliminates the pulling of the wire across highways, driveways and parkways, thus avoiding a hazardous condition, especially in congested areas. Aside from the hazardous conditions, the multiple cable now employed is subject to breakdown when and if it should be run over by the wheels of a vehicle. It is thus most important that the reel be positioned in a manner to permit the wire to be fed outwardly in a line of movement calculated to avoid such hazardous conditions. The mounting of the device upon the truck is simple and comparatively easy of installation and offers no obstruction to a full vision by the driver in all conditions of use. The adjustable mounting of the reel upon the shaft **15** permits the reel and its supported shaft to be shifted toward the side of the housing **7**, whereby to permit the end **25** of the reel to be removed for installing another reel of wire carried within the well **6**, it being customary on service calls to carry two or more extra reels of wire for emergency use. It is conceivable that the reel may be so dimensioned as to permit the assembly of two reels upon the shaft **15**. However, this is optional and in all other respects the operation of the device would be identical. The entire reel assembly and its supporting pivot pin **9** may be bodily removed from the truck in a minimum of time without affecting the socket **8** and the several ramps and their associated latches. When the reel is to be used in either of the positions "B" or "C," it will be obvious that the reel and the shaft will be shifted inwardly through the bearing sleeve **12**, whereby to dispose the reel and its relatively heavy coil of wire in a manner to balance the weight at those points where the shaft has a bearing upon the ramp. The use of the winged screws further serves to facilitate the various adjustments requiring no tools and may be quickly released or tightened by the fingers of the operator. The parts are few and simple, and strong, durable, cheap to manufacture and are highly effective for the purposes hereinbefore described.

It is to be understood that the invention is not limited to the precise arrangement shown, but that changes are contemplated as readily fall within the spirit of the invention as determined by the scope of the subjoined claims.

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

1. In combination with a truck body having a generally rectangular body well and laterally spaced storage housings, a cable supporting and dispensing reel adjustably supported upon the truck, a shaft for rotatably supporting the reel, means carried by one housing whereby to pivotally support the shaft in a manner to swing in a horizontal arc with its supported reel, means for limiting the swinging movement of the shaft and the reel whereby to dispose the reel in overlying relation to the well, means to limit the swinging movement of the shaft and the reel whereby the reel is disposed in a position parallel to one outer side of the truck, and means to limit the swinging movement of the shaft and the reel whereby the reel is disposed parallel to the rear end of the truck, a latch device carried by each of the limit means for retaining the shaft in each of the positions of adjustment whereby to dispense the cable either directly from the rear of the truck, to dispense the cable forwardly along the side of the truck or for dispensing the cable laterally across the rear of the truck, the reel being provided with one re-

movable end whereby to install a coil of cable upon the reel, and stop collars disposed upon the shaft whereby to adjustably hold the reel against sliding upon the shaft.

2. The structure according to claim 1, wherein the pivotal means for the shaft embodies a vertically disposed cylindrical socket that projects downwardly through an opening formed in the top of one storage housing, the socket having an upper flange that overlies the top of the storage housing, a cylindrical pivot pin that is rotatable in the socket and that is provided at its upper end with a horizontally arranged cylindrical bearing sleeve for the reception of the shaft and whereby the shaft may be slidably adjusted therethrough, a set screw for holding the shaft against sliding movement, the said pivot pin and the sleeve having a flange that rotatably overlies the flange of the socket whereby to weather the socket, the said shaft being of a length to extend across the well for resting overlying arrangement to the opposite housing, the said limit means constituting stop devices that are fixed upon the housings and in the path of horizontal swinging movement of the shaft and whereby to accurately dispose the shaft and its supported reel in the several positions of use.

3. The structure according to claim 1, wherein the shaft and the supported reel has riding and guiding support upon ramp devices fixed upon the upper surfaces of the storage housings, the said ramp devices each being provided with an upstanding stop whereby to accurately dispose the shaft and its supported reel in the various degrees of adjustment through the horizontal arc, certain of the stops embodying sockets that partially embrace the shaft to prevent shifting of the shaft in a vertical plane, the said latch devices each being operative in conjunction with the stops whereby the shaft in the adjusted position is held against accidental swinging movement in a horizontal plane.

4. The structure according to claim 1, wherein the reel comprises a cylindrical drum having a centrally disposed and concentric bearing sleeve that is rotatable upon the shaft, the drum being provided with one fixed reel end, the said removable end being provided with a concentric tubular sleeve that is detachably engaged with an extended end of the bearing sleeve, a set screw carried by the tubular sleeve whereby to lock the removable end upon the extended sleeve and with the removable end in abutting engagement with the adjacent end of the drum, the said collars being slidably disposed upon the shaft at opposite ends of the reel for maintaining the reel in a fixed position of rotation upon the shaft, each of the collars being provided with set screws whereby to fix the collars in adjusted position upon the shaft.

References Cited in the file of this patent

UNITED STATES PATENTS

782,015	Ernst	Feb. 7, 1905
1,895,217	Van Vorst	Jan. 24, 1933
2,337,790	Williams	Dec. 28, 1943
2,355,441	Jacob	Aug. 8, 1944