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DISPENSING REEL FOR TIE WIRES

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Fig. 1

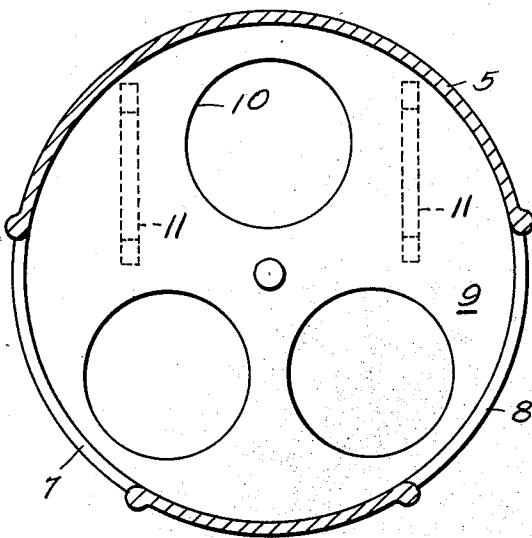


Fig. 2

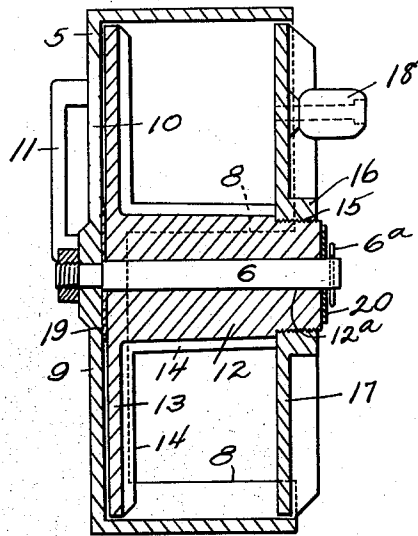


Fig. 3

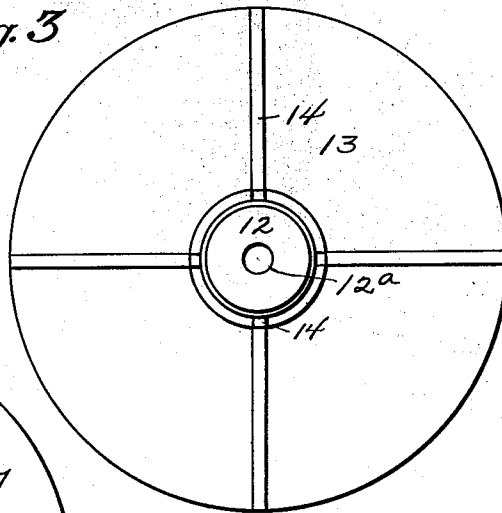
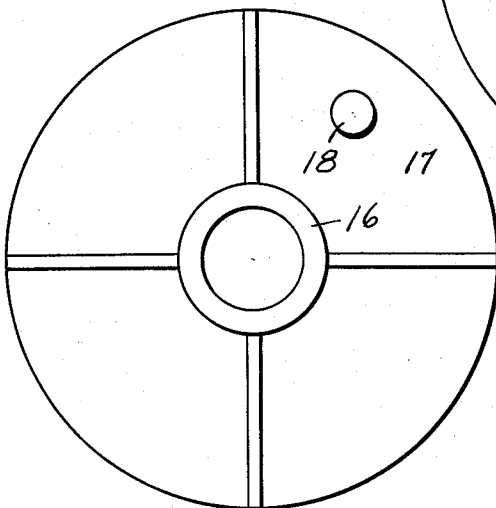


Fig. 4



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DISPENSING REEL FOR TIE WIRES

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2 Claims. (Cl. 242-100)

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This invention relates to reels for dispensing tie wires and it has for its object to provide an improved type of reel adapted for use by either right or left handed persons and from which short sections of tie wire may be dispensed, for the use of workmen employed in fastening together the elongated steel rods or other shapes used as reinforcing for concrete buildings, bridges or other structures.

It is common practice for such workers to withdraw and cut off, short sections or pieces of tie wire from a coil of such wire and to mount such coils of tie wire on a reel contained within a casing. These casings have been provided with belt receiving loops by which the casings have been mounted upon the belts of the workmen, and the wire to be cut off has been withdrawn from the wire coils by pulling it out of the casing through an opening formed in the wall of the casing. The improvement embodied in the present invention resides in providing a reel upon which the wire coil may be mounted with either side thereof facing inwardly and in providing openings upon each side of the casing, so that the wire may be pulled out of the casing in either direction. The reel then rotates in the proper direction to permit the proper withdrawal of the wire according to whether the reel is supported upon the right or the left side of the workman. A right handed workman will wear the reel on his left side and vice versa. The invention will be best understood by reference to the accompanying drawing, wherein;

Fig. 1 is an inside front view of the casing of the reel;

Fig. 2 is a vertical sectional view through the complete reel including its casing;

Fig. 3 is a front elevation of the inner member of the reel; and

Fig. 4 is an outside face view of the outer member or face plate of the reel.

Like numerals designate corresponding parts in all of the figures of the drawing.

In the drawing, 5 designates the cup-like shell constituting the casing of the reel. A fixed shaft 6 is secured centrally within this shell, said shaft being pierced at its free end for the passage of a cotter key 6a. Shell 5 has openings 7 and 8 formed in its opposed sides through which the tie wire is withdrawn from the conventional pre-formed coil of wire (not shown). The rear wall 9 of the shell is pierced by a plurality of sizable openings 10. The formation of these openings considerably reduces the weight of the shell. Spaced belt loops 11 upon the rear face of the shell, serve, when the wearer's belt is passed therethrough, to support the reel as a whole upon

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the person of the user and upon either the left or the right side of such person. The openings 7 and 8 are formed in the lower portion of the side walls of the casing, thus lowering the point at which the wire will be withdrawn from the casing. This is more comfortable for the workman than if these openings were higher. Further this results in causing the whole top of the casing to present a closed protecting wall over the wire to be dispensed, which prevents cement, plaster or other extraneous matter from falling into the reel as the workman moves among structures under erection or repair.

The rotative element of the reel comprises a tapered hub 12, an internal bore 12a of which is dimensioned to receive the shaft 6 and an integral inner web or plate 13. Ribs 14, which lie radially of the plate 13 and also extend along the outer face of hub 12, space the wire coil from the plate and hub a sufficient distance to accommodate transverse wire loops which usually bind the coiled wire, to be dispensed, against unwinding until it is properly positioned upon the reel. A reduced portion of the hub is threaded, as at 15 for the reception of the hub 16 of a face plate 17 which constitutes the outer side of the reel. A knob 18 carried by plate 17 provides means by which the reel may be rotated to wind unused and previously withdrawn, portions of the wire, back into the casing. An inner washer 19 provides proper clearance between the inner side of the reel and the rear wall of its casing. An outer washer 20 is disposed between the outer end of the hub and a cotter pin 6a, the latter passing through the outer end of shaft 6.

I am aware of the fact that it is common practice to mount reel casings upon the belts of workmen, as described, said casings carrying rotative reels which receive conventional coils of tie wire. Such an assembly arranged to dispense wire to a right handed person is shown in Fig. 1 of the patent to Sato, No. 1,990,135 of February 5, 1935. My device may be used with equal facility by either right or left handed persons because the casing is provided with openings on each side for the withdrawal of the tie wire and because the tapered hub receives the coils of wire to be dispensed, with either side of the coil disposed inwardly. Thus the coil may be unwound in the proper direction, irrespective of whether the wire is being pulled out of opening 7 or out of opening 8. It will be observed that the belt loops are located above the horizontal center of the casing and are materially spaced from each other upon opposite sides of the casing. The openings 7 and 8 lie almost entirely in the lower half of the casing

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and their lower end portions extend almost to the bottom of the casing. The wire to be dispensed is withdrawn from the lower side of the roll of wire and consequently from a point within the casing which lies well below the casing center. The weight of the roll of wire is considerable and combined with the weight of the casing itself tends to cause the lower part of the casing to swing from the point of suspension provided by the belt loops, toward and against the body of the user. This braces the casing to resist the pull of the wire either to the right or to the left.

The invention is not limited to the precise manner of assembly shown, but includes within its purview whatever changes fairly fall within either the terms or the spirit of the appended claims.

Having described my invention what I claim is:

1. A tie wire dispensing device constructed to be suspended and supported from the belt of a workman, comprising a cup-like casing consisting of a relatively flat and perpendicular rear wall and an outwardly and forwardly projecting circular wall portion, a supporting shaft affixed to the rear wall and projecting forwardly from said rear wall axially through said casing, a reel mounted to rotate freely upon said shaft in either direction, constructed to receive and support small preformed coils of tie wire with either side of the coils disposed outwardly so that the wire may be pulled therefrom in either direction, said reel comprising a rear plate and a hub by which said plate is carried, and a removable face plate, a pair of vertical belt engaging loops mounted upon the rear face of the perpendicular rear wall substantially above the horizontal center of the casing and materially spaced from each other equidistantly upon opposite sides of the vertical center of the casing, there being an opening formed through each side of the circular wall to permit the withdrawal of the wire from the casing in either direction by right or left handed persons respectively, said openings terminating close to the bottom of the casing, the location of the belt loops above the horizontal center of the casing suspending said casing from a wearer's belt to cause its lower portion to swing toward the body of the user and the equidistant spacing of the loops resisting the tendency of the casing to move with the pull of the wire, to an equal degree, in both directions.

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2. A tie wire dispensing device constructed to be suspended and supported from a belt extending substantially horizontally around the body of a workman, said device comprising a cup-like casing consisting of a relatively flat and perpendicular rear wall and an outwardly and forwardly projecting circular wall portion, a supporting shaft affixed to the rear wall and projecting forwardly from said rear wall axially through said casing, a reel mounted to rotate freely upon said shaft in either direction constructed to receive and support small preformed coils of tie wire with either side of the coil disposed outwardly so that the wire may be pulled therefrom in either direction, said reel comprising a vertical rear plate and a hub by which said rear plate is carried and a removable face plate, belt engaging members mounted upon the rear face of the rear wall of the casing substantially above the horizontal center of the casing said members being spaced materially from each other and lying upon opposite sides of the vertical center of the casing, said members being constructed to engage a belt extending horizontally around the body of a workman, said casing having an opening formed through each side of its circular wall to permit the withdrawal of the wire from the casing in either direction by right or left handed persons respectively, said openings terminating near the bottom of the casing, the location of the belt engaging members above the horizontal center of the casing suspending the casing from the belt and leaving its lower portion spaced below said belt, and the material spacing of the belt engaging members upon opposite sides of the vertical center of the casing resisting the tendency of the casing to swing with the pull of the wire, in either direction.

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