(No Model.)

J. B. CROWDER.

ROPE REEL.

No. 574,718. Patented Jan. 5, 1897.

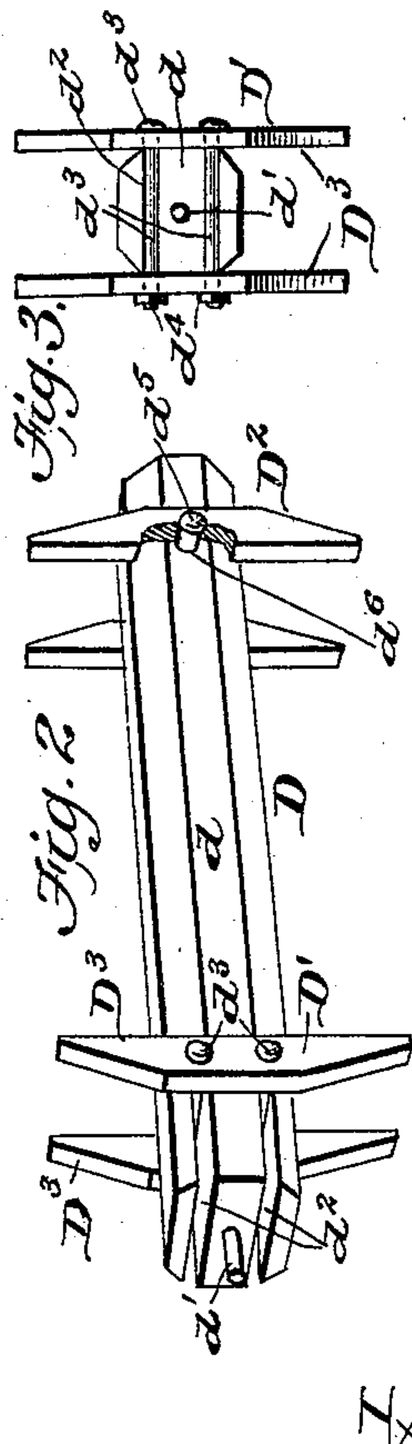

Fig. 3.

Fig. 2.

Fig. 1.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

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ROPE-REEL.

SPECIFICATION forming part of Letters Patent No. 574,718, dated January 5, 1897.

Application filed May 9, 1896. Serial No. 590,897. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CROWDER, a citizen of the United States, residing at Tulucah, in the county of Morgan and State of Alabama, have invented certain new and useful Improvements in Rope-Reels, of which the following specification contains a full, clear, and exact description, reference being had to the accompanying drawings, forming part thereof, in which—

Figure 1 is a perspective view of my improved rope-reel. Fig. 2 is a perspective of one of the supply-reels. Fig. 3 is an end elevation thereof. Fig. 4 is a fragmentary view to show the cutting-table and knife. Fig. 5 is a similar view showing the measuring-wheel, the alarm, and the register-bar. Fig. 6 is a detail view of the register-bar and its support. Fig. 7 is a similar view of the hanking-reel.

My invention relates to that class of reels which are used in stores to contain several sizes of rope.

The objects of my invention are to provide a reel of the above description which shall be simple in its construction and not liable to get out of order, to provide the same with means for automatically measuring the rope and registering the quantity as it is wound on the hanking-reel from the supply-reel, to provide an alarm-indicator which will be sounded at every revolution of the measuring-wheel, to provide a suitable tension device for the rope, and to improve the construction of the supply and hanking reels.

The invention will be hereinafter fully described, and specifically pointed out in the claims.

A is the base, of any suitable material and construction. B B are vertical parallel racks at one end of the base, these racks being each formed of uprights B′ B′, having inclined notches *b b* to receive the reel-trunnions. The upper ends of these uprights are connected by four cross-pieces *b′*, so as to firmly brace them.

C is a horizontal guide-roll journaled in bearings *c c* on the base at the lower ends of the racks B, and C′ are spacing-fingers to separate the several strands of rope passing under the said guide-roll.

The racks B may have as many notches as desired, according to the number of reels to be placed thereon, and there may be one rack only or more, according to the capacity desired.

D are the supply-reels, on which are wound the several sizes of rope kept in stock. The reels D are so constructed that they may be entered into a coil of rope not wound on a reel at the factory, and for this purpose each reel has one head D′ removable and the other head D^2 fixed or permanent. The drum *d* of the reel is provided at its ends with trunnions *d′ d′* to enter the rack-notches, and at one end the drum is provided with parallel slots d^2 d^2 to receive the bolts d^3 d^3, which connect the two apertured sections D^3 D^3 of the removable head D′, the bolts being provided with nuts d^4 d^4, by means of which the sections D^3 may be clamped firmly in place at opposite sides of the drum. The sections of the fixed head D′ are permanently secured in place by bolts d^5, which pass through transverse holes d^6 in the drum.

By loosening the nuts d^4 the head D′ may be slipped off of the drum, so that it may be passed through a coil of rope, and then the head may be passed upon the drum and secured by tightening said nuts. This construction also provides for placing large or small coils of rope on the drums, as the head D′ may be adjusted longitudinally along the drum by means of the slots and bolts.

E is a standard between the ends of the base and provided with a forked or slotted upper end E′, in which slot or fork is mounted the grooved measuring-wheel F, of any predetermined circumference, say one yard. G is a forked tension-arm projecting from standard E below wheel F toward the rack B and provided with a transverse adjusting or set screw G′, by means of which its fork may be set for any thickness of rope.

Directly below the tension-arm G is a guide-roller H, which is mounted in bearings on the base. H′ are spacing-fingers in alinement with the spacing-fingers C′. Converging inclined bars I I are secured at their lower ends to the base A and cross the standard E, to which they are bolted or otherwise secured, the upper ends of said bars serving to support any suitable form of knife or cutter K, past which the rope being measured extends

from the measuring-wheel F; or, if desired, the rope may be cut at this point by a pocket-knife or other portable cutter.

The side of the wheel F is provided with an inclined cam F′, having an abrupt rear end, and this cam engages the spring hammer-arm L, projecting up from standard E, and retracts said arm and suddenly releases it, so that it will fly back and strike the bell or gong L′. Thus the bell will be sounded at every revolution of the wheel F and indicate the number of yards measured off. To register the number of yards measured off, I provide the following mechanism: M is a horizontal support secured to the upper end of standard E and provided with guides *m m′*, through which slides the register bar or slide N, provided on its outer side with a series of numbered pins *n*, adapted to be successively engaged by an arm F^2, projecting from the axle of the wheel F. This arm will strike a pin *n* at every revolution of the wheel and move the register bar or slide the distance of one space to the left, so that the buyer and seller can see at a glance just how many yards have been measured off.

O is the tapering hanking-reel, the shaft O′ of which is mounted on upper end of the standard A′ at the left-hand end of the base and provided with a crank-handle. The smaller end of the hanking-reel is outermost, so that the measured rope wound thereon may be easily pulled off of said reel and tied in a hank for the purchaser. This reel is formed of the larger inner head or disk *o*, the smaller outer head or disk *o′*, and the bars or slats o^2, connecting said heads or disks. P is a spring tongue or clamp secured to one of said bars or slats to clamp thereto the end of the rope being sold.

The operation is as follows: The end of the desired rope is grasped and passed under the rolls C H, thence through the tension device G, thence over the measuring-wheel, and past the cutting-table K to the reel O, where it is secured by the clamp P. The salesman now rotates the reel O and winds thereon the desired number of yards of rope, after which he severs the rope at K and slips the rope from the said hanking-reel. The purchaser will have kept tally by the sounding of the bell and verify the same by the register-bar, and so also with the salesman. Thus errors will be avoided.

The arrangement of the parts is such that the rope will be held down firmly on the measuring-wheel, so that it will not slip thereon, but will always turn the wheel in being drawn thereover.

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

1. The supply-reel comprising a drum having one end longitudinally slotted, and a removable head having a cross-bolt to enter said slot from the end of the drum and provided with a clamping-nut, substantially as set forth.

2. The supply-reel comprising a drum having longitudinal slots in one end, and a removable two-part head having parrallel connecting-bolts to enter said slots from the end of the drum and provided with clamping-nuts, substantially as set forth.

3. The tapering hanking-reel having a spring tongue or clamp attached thereto, said clamp having its free end pointing toward the smaller end of said reel as and for the purpose set forth.

4. The tapering hanking-reel formed of a large and a small disk or head, slats connecting said disks or heads, a shaft for said reel, and a spring tongue or clamp secured to the inside of one of said slats and lying directly in the same plane therewith, the free end of said tongue or clamp being pointed in the direction of said smaller disk or head, as set forth.

5. The tapering hank-reel formed of a large and a small disk or head, converging slats or bars connecting said disks or heads, a shaft for said reel, and a spring tongue or clamp secured to one of said slats or bars having its free end pointing toward said smaller disk or head, substantially as set forth.

6. The supply-reel comprising a slotted drum, an adjustable head adapted to enter said slots and means for binding said head therein, as set forth.

7. A rope-reel comprising a base, vertical parallel racks at one end thereof, a guide-roll mounted in bearings on said base at the lower ends of said racks, spacing-fingers for said roll, a standard located on said base near its opposite end, and provided with a forked upper end, a measuring-wheel mounted in said end, a second guide-roll mounted on said base at the foot of said standard, spacing-fingers adjacent said second roll, in alinement with said former fingers, inclined supporting-bars secured at their lower ends to said base, said bars converging to a point in rear of said standard, a hanking-reel supported by a standard at the end of said base opposite said vertical racks, and a cutter on said bars in rear of said measuring-wheel, as set forth.

8. A rope-reel comprising a base, supply-reel racks at one end of said base, a standard on the end of said base opposite said supply-reel racks having a tapering hanking-reel located thereon, a second standard on said base between said ends, converging inclined supporting-bars secured at their lower ends to said base, and crossing said latter standard, a cutter on the upper converged ends of said bars, a measuring-wheel mounted on said standard in horizontal alinement with said hanking-reel, guide-rolls located on said base, and a forked tension-arm projecting from said standard below said wheel, said arm being provided with a transverse adjusting-screw, substantially as set forth.

9. In a rope-reel, the combination with a base, and a supply-reel rack thereon; of a standard therebeyond, having a measuring-wheel mounted therein, an adjustable tension device projecting from said standard toward said supply-reel rack, horizontally-alined guide-rolls over which the rope passes in its course from said supply-reel rack to said measuring-wheel, a tapering hanking-reel in the rear of said measuring-wheel having a spring-clamp thereon, the free end of said clamp pointing toward the tapered end of said reel, and a cutter located between said hanking-reel and said measuring-wheel, substantially as set forth.

10. In a rope-reel, the combination with a base, a supply-reel rack, a hanking-reel, and a standard on said base between the two; of a grooved measuring-wheel mounted on said standard having an inclined cam on the side thereof, a spring hammer-arm projecting upwardly from said standard arranged to strike a gong by the operation of said cam, a horizontal support secured to said standard having guides thereon, a register-bar provided with spaced pins on its outer side, and adapted to slide in said guides, and an arm projecting from the axle of said measuring-wheel arranged to successively engage said pins when said wheel is turned, as and for the purpose set forth.

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Witnesses:
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