Dec. 17, 1940. J. A. OLESEN 2,225,180

COIL MAKING APPARATUS

Filed April 1, 1940

Fig. 1.

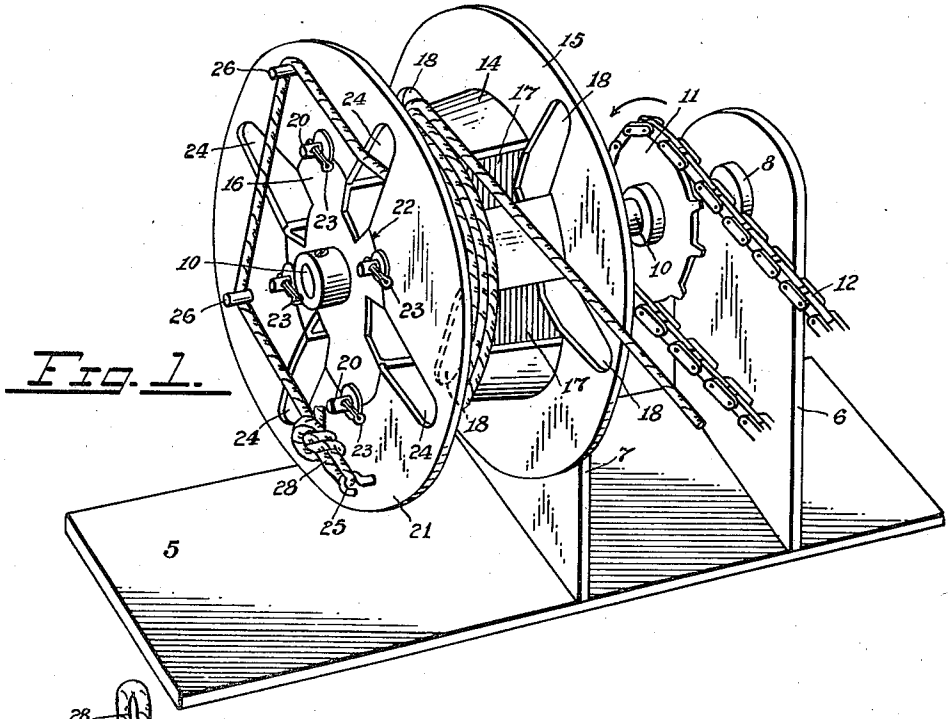
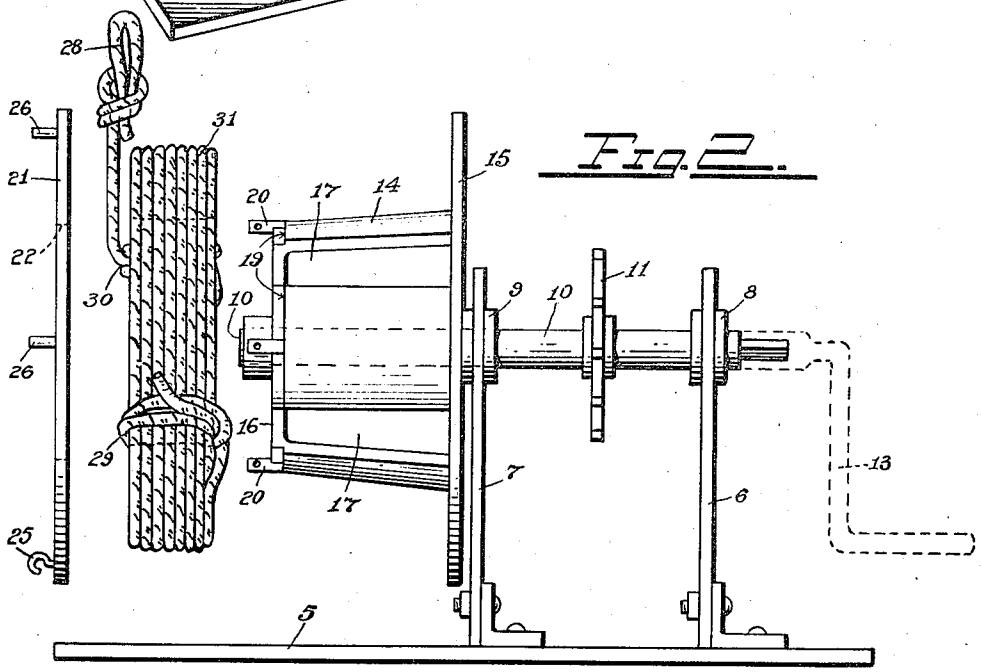


Fig. 2.



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COIL MAKING APPARATUS

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Application April 1, 1940, Serial No. 327,104

1 Claim. (Cl. 242—116)

My invention relates to coil making apparatus and more particularly to an apparatus for making coils of rope, and other material, needed for ready use in logging camps, ship yards, and in all other places where such coils are used. The primary objects of the invention are to provide an apparatus or machine by means of which coils may be mechanically turned out and furnished for use in quantities at a large saving in time, labor and money. Further objects are to provide means whereby the coils may each be quickly formed, tied as a compact unit, and readily removed from the apparatus.

In the drawing:

Figure 1 is a view in perspective of the apparatus; and

Fig. 2 is a view in side elevation of the same showing the front detachable disc plate and a completed coil of rope removed from the drum.

Referring in detail to the drawing wherein like reference numerals indicate like parts in the several views, the numeral 5 designates the base plate of the apparatus which is provided with two spaced apart upstanding plates 6 and 7 that are respectively fixed to the base plate in any desired manner. Aligned bearings 8 and 9 are respectively fixed into the upper portions of the upstanding plates 6 and 7 and a horizontal shaft 10 is journaled through said bearings. A sprocket wheel 11 is keyed or otherwise fixed to said shaft between the upstanding plates. As shown in Fig. 1 of the drawing, a sprocket chain 12 is connected to the sprocket wheel and may lead to an engine, motor or other source of power, not shown, for the purpose of rotating the shaft 10. Or said shaft may be manually rotated by a crank handle 13 installed on its rear end as shown in dotted lines in Fig. 2.

The forward portion of the shaft 10 extends at some length forward of the upstanding plate 7 and a hollow drum 14 is fixed thereon in any desired manner. The enlarged rear end of said drum is fixed to an enlarged rear disc 15. Said drum tapers or converges to a considerable extent from the disc to its forward end 16. Longitudinal openings 17, that are preferably four in number and equally spaced apart, extend through the shell of the drum 14. The enlarged disc 15 is provided with four radial openings, as designated by the numeral 18, which register with the openings 17 of the drum, and it is important to note that said radial openings extend both inside and outside the shell of the drum 14.

The forward end 16 of the drum 14 is provided with a shoulder 19, and a plurality of spaced apart pin lugs 20 extend forward from said shoulder and are provided with holes in their outer ends. A large forward disc plate 21, that is equal in diameter with the disc plate 15, is provided with an annular opening 22 which is sufficient in diameter to receive the forward end 16 of the drum and whereby the shoulder 19 thereof fits snugly against said forward disc in its installed position as shown in Fig. 1, with the pin lugs 20 projecting through semi-annular cuts in the edge of the disc at the opening 22. Cotter pins 23, with small washers interposed, may be inserted into the holes through the pin lugs for retaining the detachable disc plate 21 in place, or any other desired means may be used for this purpose. Four radial openings 24 are provided through the disc plate 21, which openings register with the longitudinal openings 17 of the drum 14 and are aligned with the openings 18 through the rear disc 15. These radial openings are equal to the openings 18 in all respects except that they extend partly into the forward end 16 of the drum 14 and this is made necessary for the important purpose of extending them inside the shell of the drum 14 as well as outside thereof.

The forward detachable disc plate 21 has a hook 25 and several pins 26 connected to its outer face. In the use of the apparatus, the rope 27, which is to be converted into coils, is usually passed from the inside through one of the openings 24 in said disc plate, then around against the pins 26, and a loop 28 which is tied in its end is caught around the hook 25. The drum 14 is then rotated until a coil of the desired size is formed thereon. The rope is then cut off and its cut end portion is passed around one part of the coil and tied, as shown at 29 in Fig. 2. The end portion having the loop 28 is now disengaged and passed through the opening 24 and then around another part of the coil where it is made fast as shown at 30. In passing the ends of the rope around the coil and making them fast thereto, it is obvious that same could not be done without the longitudinal drum openings 17 together with the radial disc openings 18 and 24. These tying operations are made easy by means of the said openings. Although the drum be almost completely filled with rope, its ends may be readily passed around the coil and tied for the purpose of retaining same as one compact unit. After the coil is securely tied, the cotter pins 23 are removed, and the disc plate 21 is detached as shown in Fig. 2. The completed coil, as shown

at 31, may then be readily slipped off of the tapered drum 14 as will be understood.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

A coil making apparatus consisting of a base plate, upstanding bearing plates secured to the base plate, a shaft journaled through said upstanding plates, means for rotating the shaft, a hollow drum fixed on said shaft, said drum tapering from its inner to its outer end and having a plurality of spaced longitudinal openings through its shell, a large disc plate fixed to the inner and larger end of the drum, said disc plate having openings registering with the ends of the longitudinal openings in the drum and extending both inside and outside of said drum, a large disc plate detachably connected to the outer and smaller end of the drum, said large detachable disc plate having openings registering with the openings in the drum and extending both inside and outside of said drum.

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