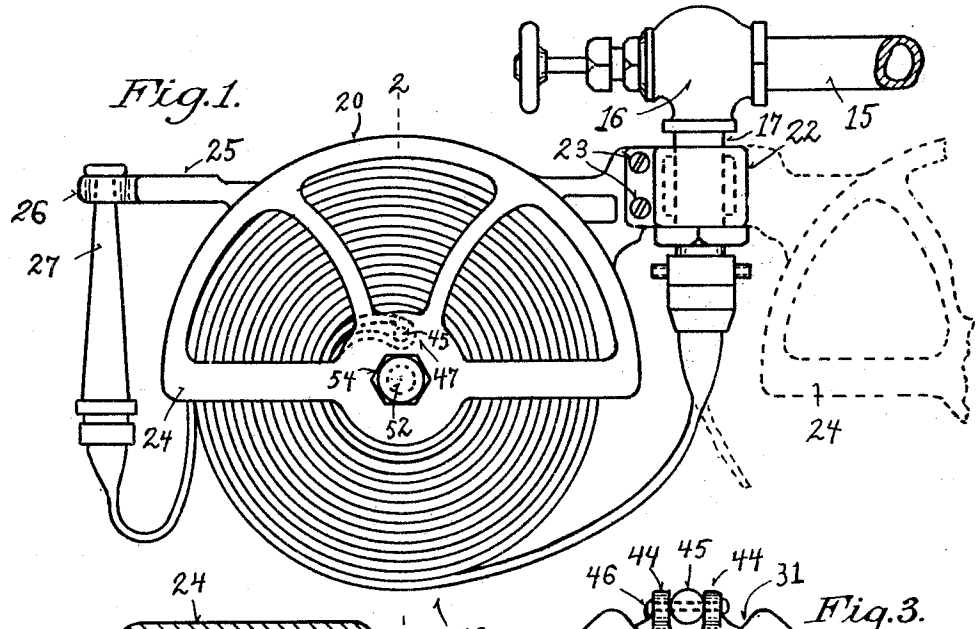
Dec. 13, 1932. C. NUHRING 1,890,823

HOSE REEL

Filed Sept. 17, 1930

Fig. 1.



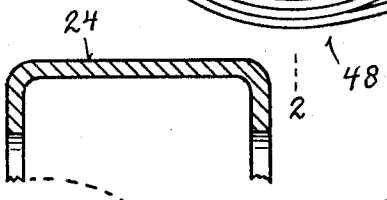


Fig. 2.

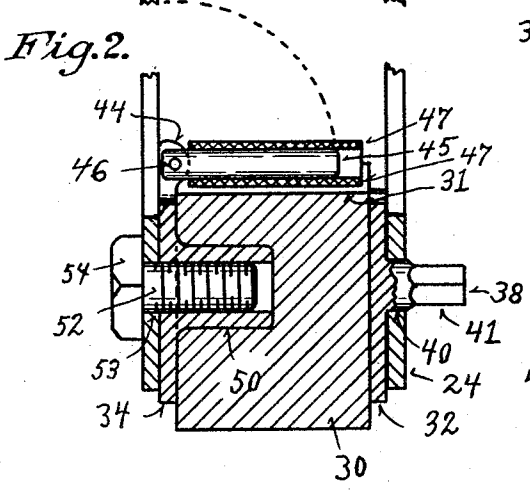


Fig. 3.

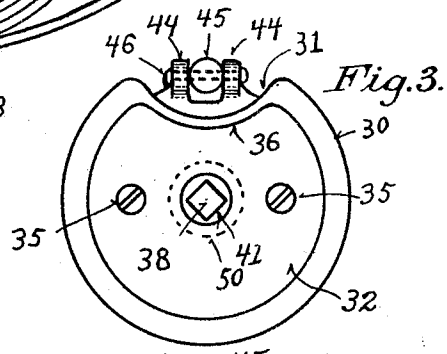
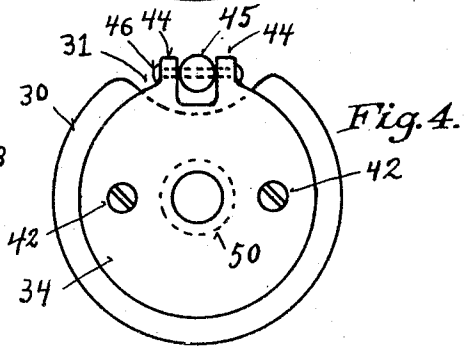


Fig. 4.



Charles Nuhring,

INVENTOR

BY C. W. Miles,

ATTORNEY

Patented Dec. 13, 1932

1,890,823

UNITED STATES PATENT OFFICE

CHARLES NUHRING, OF CINCINNATI, OHIO

HOSE REEL

Application filed September 17, 1930. Serial No. 482,538.

My invention relates to improvements in hose reel for fire extinguisher purposes. One of its objects is to provide improved means to reel up and store hose for fire extinguisher purposes in condition to be reliably available when required, and not liable to become unwound through unauthorized tampering therewith. Another object is to provide improved means to detachably attach the hose to the spool or hub of the reel for the purpose of winding the hose thereon, and at the same time insure the hose being readily detached from the reel and available for fire purposes when required. Another object is to provide an improved hose reel and means for locking it against rotation until required for use, and which is readily unlocked and rendered available for use by grasping the hose and unwinding it from its reel. My invention also comprises certain details of form, and arrangement, and combination of components, all of which will be fully set forth in the description of the accompanying drawing, in which;

Fig. 1 is a side elevation of a reel with the fire hose wound thereon ready for use.

Fig. 2 is an enlarged sectional view, taken on line 2—2 of Fig. 1.

Fig. 3 is a side elevation of the hub of the reel detached.

Fig. 4 is a side elevation of the hub of the reel detached, from the opposite side to that shown in Fig. 3.

In the provision of and use of hose and hose reels for fire extinguisher purposes, it is important to so wind the hose upon the reel as to make certain that when required the hose may be grasped and entirely unwound and detached from the reel so as to be available for fire extinguishing purposes, and its object would be defeated if the hose became entangled with the reel and failed to become entirely separated therefrom when required for use. It frequently happens that unauthorized persons through curiosity or nervousness, or like causes tamper with the hose and hose reel so as to partly unwind the hose therefrom, and it is desirable to lock the hose and reel in place with sufficient rigidity or resistance to such unauthorized tampering therewith as to resist normal attempts to tamper therewith, and at the same time leave the hose and reel in condition to be readily released and unwound by a vigorous pull upon the hose when required for fire purposes. My improved apparatus attains these and other desirable results.

The accompanying drawing illustrates one embodiment of my invention, in which 15 represents a metal water supply pipe, and 16 a valve to control the water flow therefrom. A pipe section 17 leading from the valve serves as a means for attaching one end of the hose to the water supply pipe, and also provides a convenient means for pivotally mounting the hose reel 20 with reference to the pipe 15 and to the building in which the pipe 15 is located. If preferred the hose reel 20 may be pivotally mounted relative to the wall of the building in which the pipe 15 is located, but independently of the pipe 15, by means of an independent hose reel supporting bracket attached to the wall of the building adjacent to the valve 16. As shown, the hose reel is provided with a split sleeve 22 which is assembled and held in place by screws 23 to encircle the pipe section 17 and form a pivotal joint or journal for the hose reel to rotate about the axis of the pipe section 17.

The hose reel comprises a skeleton metal frame 24 pivotally attached to the pipe section 17, or to the wall, and having a projecting bracket 25 with yielding spring fingers 26 between which the hose nozzle 27 is adapted to be forced to support the hose nozzle in place when not in use, and in a position to be readily grasped and released when required for use, and also a hose reel hub 30, which is rotatably supported with reference to the metal frame 24. As shown the hub comprises a substantially cylindrical hub member of wood fiber, or similar material having a recess or depression 31 in the face thereof, and metal end plates 32 and 34 attached to opposite ends of said hub member 30.

The end plate 32 is attached to one end of the hub member 30 by means of screws 35 for instance, and is provided with a depression 36 in its edge to correspond with the recess

31 in the periphery of the hub member 30. The end plate 32 is also provided with an axial projection 38, which preferably has a cylindrical section close to the face of plate 32 to engage and journal the hub in a cylindrical perforation 40 in one side of the frame member 24, and a polygonal section 41 outside of the frame 24 adapted to be engaged by a crank or wrench to rotate the hub 30 with reference to the frame 24 to wind the hose upon the hub 30 and within the frame member 24 as shown in Fig. 1. The hub plate 34 is attached to the hub member 30 for instance by screws 42, and opposite the recess 31 of the hub member 30 is provided with two cam faced projections 44, between which is located one end of a cross-bar 45. The cross-bar 45 is pivotally attached to the projections 44 by means of a pivot pin 46. The cross-bar 45 normally occupies a position shown in full line in Fig. 2, substantially parallel with the face of the recess of hub member 30, in which position the middle portion 47 of the hose is looped over said cross-bar and affords a means by which the hose 48 may be wound upon the hub 30 and within the frame member 24. In this position, the recess 31 provides for housing the cross-bar 45 and the hose loop 47 below the face of the balance of the hub member 30. In its other position the cross-bar 45 is turned upon its pivot pin 46 to a nearly right angle position to the face of the hub member 30, so as to project nearly in a radial position outwardly from the hub member 30, and in this position the cross-bar 45 is adapted to release the hose loop 47 and allow the hose loop 47 to slip freely off the free end of the cross-bar 45, or preparatory to rewinding the hose upon the hub member 30, the cross-bar 45 may be turned to its radial position to insert said cross-bar within the hose loop 47. The end plate 34 is preferably provided with a short inwardly projecting hub 50. The end plate 34 whether provided with a hub 50 or not is perforated and threaded to receive the threaded shank of a bolt or cap-screw 52, which is passed through a perforation 53 in the frame 24 to thereby form one of the journals supporting the hub 30 with reference to the frame 24, and also after the hose 48 has been wound upon the hub 30, to be further tightened by means of a wrench applied to the head 54 of the bolt 52, until the side of frame 24 is clamped and locked against rotation between the inner face of the bolt head 54 and the outer face of the end plate 34 with sufficient tension to prevent unauthorized tampering with the hose and hose reel tending to unwind the same, but not with sufficient tension to prevent the hose being unwound from the hose reel by a vigorous pull upon the hose when required for fire purposes. The direction in which the thread is spiraled upon the bolt 52 is such with reference to the direction of rotation of the hub 30 relative to the frame 24 in the act of unwinding the hose, as will tend to unscrew the bolt 52 from its threaded engagement with the end plate 34 a sufficient amount to release the tension and locking action of the bolt 52 upon the frame 24 when the hose is drawn out or unwound for fire purposes, to immediately unscrew the bolt a fraction of a turn and thereby permit the hub 30 to freely pivot and rotate relative to the frame 24 until the hose is entirely unwound from the hub 30, whereupon the loop 47 is automatically released from the bar 45, and the hose is available for use.

The apparatus herein shown and described is capable of considerable modification within the scope of the claims without departing from the spirit of my invention.

What I claim is:

1. A hose reel comprising a supporting frame, a hub having a member to engage a loop of the hose to wind the hose upon said hub, and provided with a polygonal stud shaft at one end and a threaded socket at its opposite end adapted to receive the shank of a bolt, and a bolt, said stud shaft and said bolt serving to rotatably support and rotate said hub with reference to said frame and to enable the hub to be inserted into and removed from said frame.

2. A hose reel comprising a supporting frame having bearings to rotatably support a hub member, a hub having a member to engage a loop of the hose to wind the hose upon said hub, and provided with a stud shaft at one end and a threaded socket at its opposite end adapted to receive the threaded shank of a bolt, and a bolt, said stud shaft and said bolt engaging the bearings of said frame to rotatably support said hub with reference to said frame, and said bolt being adapted to be tightened to releasably clamp said hub to said frame against unauthorized tampering.

3. A hose reel comprising a supporting frame mounted upon a pivotal support and provided with bearings to rotatably support a hub member, and with a bracket member adapted to releasably support a hose nozzle, a hub having a member to engage a loop of the hose to wind the hose upon said hub, and provided at one end with a stud shaft and at its opposite end with a threaded socket, and a bolt having a threaded shank to engage the threaded socket of said hub, said stud shaft and said bolt engaging the bearings of said frame member to rotatably support said hub with reference to said frame, and said bolt being adapted to be tightened to releasably clamp said hub to said frame against unauthorized tampering.

4. A hose reel comprising a supporting frame mounted upon a pivotal support and provided with bearings to rotatably support a hub member, a hub having a member to

engage a loop of the hose to wind the hose upon said hub, and provided with a stud shaft at one end projecting outside of the bearing of said frame member, and a threaded socket at its opposite end, and a bolt having a threaded shank adapted to engage the threaded socket of said hub and rotatably support the opposite end of said hub with reference to said frame, the projecting end of said stud shaft serving as a means for winding the hose upon said hub and within said frame member.

5. A hose reel comprising a supporting frame mounted upon a pivotal support and provided with bearings to rotatably support a hub member, a hub having a recess in its periphery and a hose loop supporting member pivotally supported at one end in said recess and adapted to support a loop of the hose in one position and to release the hose in its opposite position, a hub supporting journal member at one end of the hub projecting beyond its bearing in said frame member and serving as a means for winding the hose upon said hub, and a threaded socket and bolt engaging said threaded socket serving as a journal support for the opposite end of said hub and as a means for clamping said hub releasably to said frame member against unauthorized tampering.

In testimony whereof I have affixed my signature.

CHARLES NUHRING.