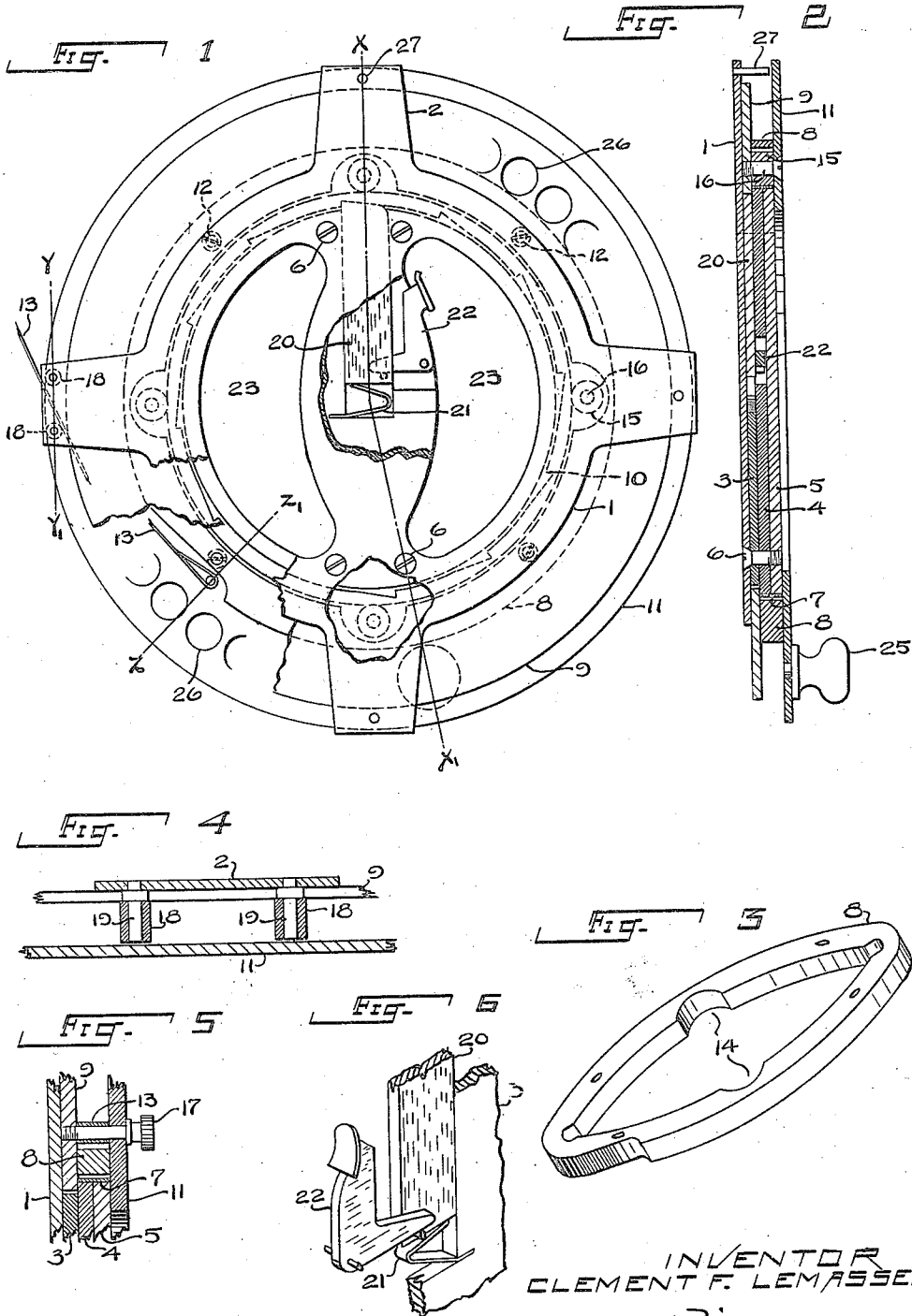


C. F. LEMASSENA.
 REEL FOR TAPE MEASURES.
 APPLICATION FILED MAR. 13, 1917.

1,269,466.

Patented June 11, 1918.
 2 SHEETS—SHEET 1.



INVENTOR
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 ATTORNEYS

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Fig 7

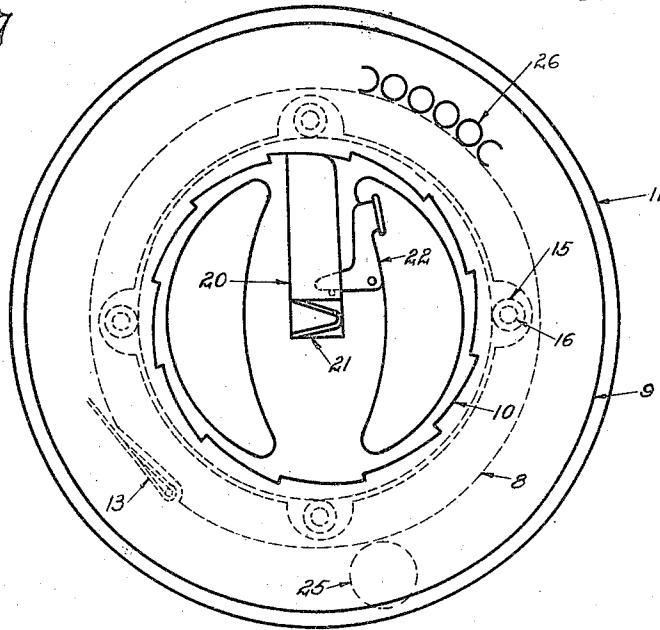
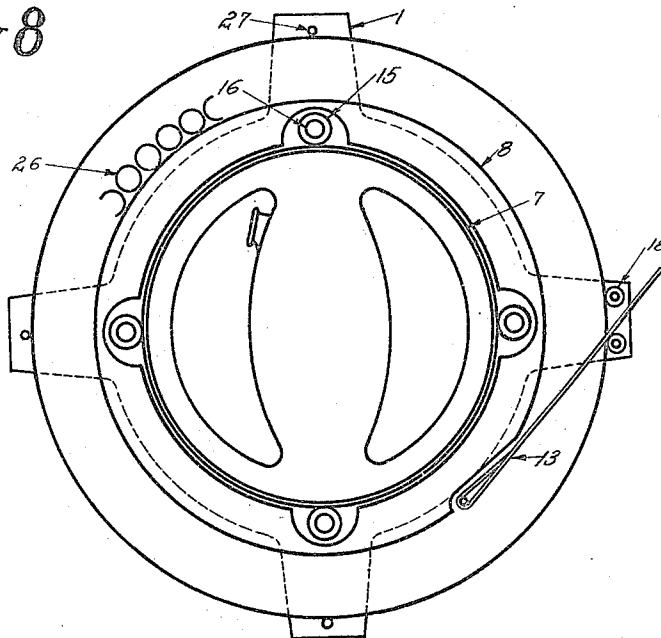


Fig 8



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UNITED STATES PATENT OFFICE.

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REEL FOR TAPE-MEASURES.

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Specification of Letters Patent. Patented June 11, 1918.

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To all whom it may concern:

Be it known that I, CLEMENT F. LEMASSENA, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Reels for Tape-Measures, and do hereby declare the following specification, taken in connection with the drawings forming part of same, to be a full, clear, concise, and exact description of the invention and the best mode contemplated to apply the principle thereof, so as to distinguish it from other inventions and to enable any person skilled in the art to which it appertains or with which it is most nearly connected to make, construct, and use the same.

This invention relates primarily to a reel and more particularly to a surveyor's reel.

The principal object of the invention is to provide a reel which is simple in construction, durable and easy to operate.

Another object is to provide a reel having a means to lock the tape in different positions and readily release the same.

Other objects will be apparent from, and are incorporated in the annexed drawings, and in the following description, which sets forth in detail certain constructions embodying means, constituting, however, but one of the various mechanical forms in which the principle of this invention may be used.

The novelty of this invention will be readily understood from the drawings, which show a construction for practising the invention in its preferred form, and from the following description thereof, and is more specifically pointed out and distinctly claimed in the claims annexed to said description.

In the drawings:—

Figure 1 is a side elevation of the reel partly in section to show the tape locking mechanism and the point of attachment of the tape.

Fig. 2 is a sectional view of Fig. 1 at X X.

Fig. 3 is an isometric view of the tape drum.

Fig. 4 is a sectional view of Fig. 1 at Y Y.

Fig. 5 is a sectional view of Fig. 1 at Z Z.

Fig. 6 is an isometric view of the tape releasing arrangement.

Fig. 7 is a side elevation with the plate 1 removed.

Fig. 8 is a reverse side elevation with the plate 1 removed.

Referring to Fig. 1, the side plate 1 is provided with four arms 2. A disk 3 is arranged adjacent to said plate 1. Plates 4 and 5 are slightly larger than disk 3 to form a trunnion. The side plate 1, disk 3 and trunnion plates 4 and 5 are preferably made of brass and secured to each other by screws 6. A steel band 7 is forced over the trunnion plates 4 and 5 to form a suitable bearing for the tape drum 8, which is arranged as hereinafter described. A ratchet plate 9 which is provided with internal ratchet teeth 10, is arranged in alignment with the disk 3. The drum 8 is arranged between the ratchet plate 9 and a retaining plate 11, the drum 8 and plates 9 and 11 being secured by screws 12 to form the revolving member upon which the tape 13 is wound. Four recesses 14 are provided in said tape drum 8 to accommodate the rollers 15 which are carried by the plates 9 and 11 by means of the screws 16. The rollers 15 rest on the steel band 7 and form a roller bearing for the revolving tape member.

The tape 13 is secured to and carried by the plates 9 and 11, by the screw 17 and passes between the rollers 18 which are secured to one of the arms 2 of the side plate 1 by the pins 19. The ratchet teeth 10 in said plate 9 are arranged in the depression formed by the disk 3 and plate 4 which prevent lateral movement of the revolving member carrying the tape. A pawl 20 is slidably mounted in said disk 3 to engage the ratchet teeth 10. The pawl 20 is spring pressed by a spring 21 to keep same in engagement with one of the ratchet teeth 10. A lever 22 is pivoted in the side plate 4 and arranged to release the pawl 20 from engagement with the ratchet teeth. The side plate 1, disk 3 and trunnion plates 4 and 5 are provided with two hand openings 23, forming a hand grip 24 for conveniently holding the reel when the tape is wound and unwound, and to readily operate the lever 22. The handle 25 is provided on the revolving member for the purpose of winding the tape. A series of holes 26 are arranged in the side circular and disk plates to permit the egress of water and other foreign matter from the tape and allow the tape to be dried properly. Pins 27 secured in the arms 2 are arranged to confine the tape upon the revolving member.

The operation of the device described is as follows:—

The reel is held by passing the hand through the apertures 23 and gripping the center portion 24 of the plate 1 with the thumb resting on the lever 22. By pressing said lever, the pawl is released from the ratchet and the tape can be unwound. Releasing the pressure on the lever 22, the tape is immediately locked. The tape is rewound by revolving the drum by means of the handle 25 and all pressure being removed from the lever 22.

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

1. In a reel, the combination with a plate member, of a trunnion connected therewith, a tape drum revolubly mounted upon said trunnion, a plurality of ratchet teeth in said drum, a pawl slidably mounted in said member, means comprising a spring to force said pawl into engagement with one of said ratchet teeth, and a lever mounted in said member to disengage said pawl.

2. In a reel, the combination with a plate member, of a hand grip formed in said member, a tape drum revolubly mounted upon said member, a plurality of ratchet teeth therein, a pawl mounted in said hand grip to engage with said ratchet teeth, and a lever mounted in said hand grip operable by the thumb of the hand to disengage said pawl.

3. In a reel, the combination with a plate member, of a trunnion connected therewith, a plate arranged to revolve upon said trunnion, a tape secured thereto, a second plate secured to said first mentioned plate to form a space for said tape, means to revolve said plates, and means to lock same to said member.

4. In a reel, the combination with a plate member, of a trunnion connected therewith, a plate, an annular member connected thereto and revolubly mounted upon said trunnion, a tape secured to said annular member, a second plate secured to said first mentioned plate to form a space for said tape, a plurality of ratchet teeth in said first mentioned plate, and a pawl mounted in said member to engage said ratchet teeth.

5. In a reel, the combination with a plate

member, of a trunnion connected therewith, a plate, an annular member connected thereto, and revolubly mounted upon said trunnion, a tape secured to said annular member, a second plate secured to said first mentioned plate to form a space for said tape, a plurality of rollers carried by said plates to form a roller bearing upon said trunnion, a plurality of ratchet teeth in said first mentioned plate, and a pawl to engage said ratchet teeth.

6. In a reel, the combination with a plate member, of a plate revolubly mounted upon said member, a tape secured to said plate, a second plate connected to said first mentioned plate to form a space for said tape, pins and rollers in said member to confine said tape within the space formed by said plates, means to revolve said plates, and means to lock same.

7. In a reel, the combination with a plate member, of plates forming a trunnion connected therewith one of said plates being smaller in diameter to form a recess, a tape drum revolubly mounted upon said trunnion and within said recess, means to revolve said tape drum, and means to lock same to said member.

8. In a reel, the combination with a plate member, of plates forming a trunnion connected therewith, one of said plates being smaller in diameter to form a recess adjacent to said member, an annular ring about said plates of larger diameter, a tape drum revolubly mounted upon said ring and within said recess, means to revolve said tape drum and means to lock same to said member.

9. In a reel, the combination with a plate member, of a trunnion connected therewith, a recess formed by said trunnion adjacent to said member, a plate within said recess, an annular member connected thereto and revolubly mounted upon said trunnion, a tape secured to said annular member, a second plate secured to said first mentioned plate to form a space for said tape, means to revolve said plates and annular member, and means to lock same to said member.

Signed this 26th day of February, 1917.

CLEMENT F. LEMASSENA.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."