A. M. MELCHER.

CLOTHES REEL.

APPLICATION FILED AUG. 25, 1913.

1,122,527.

Patented Dec. 29, 1914.

3 SHEETS—SHEET 1.

Fig. 1.

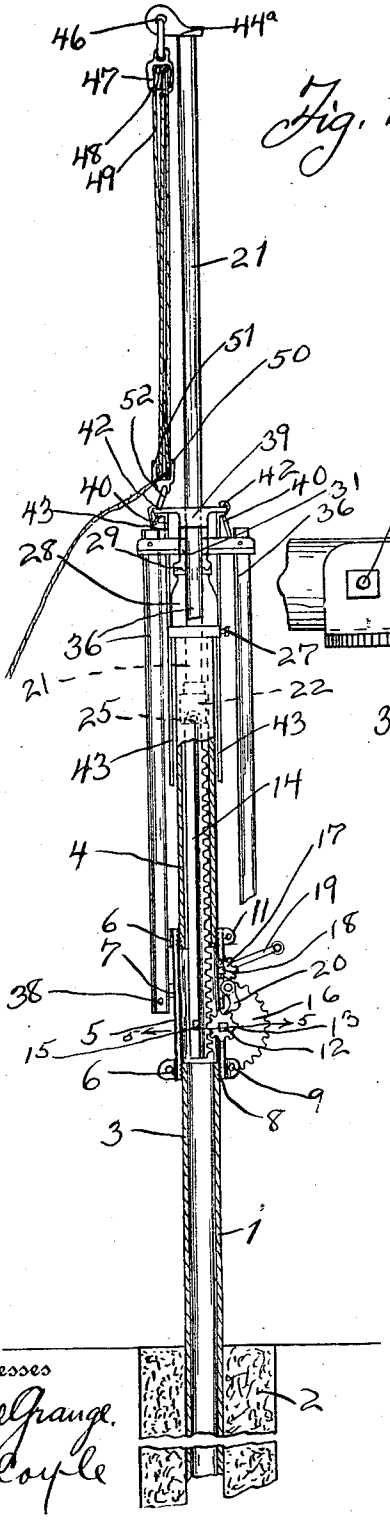
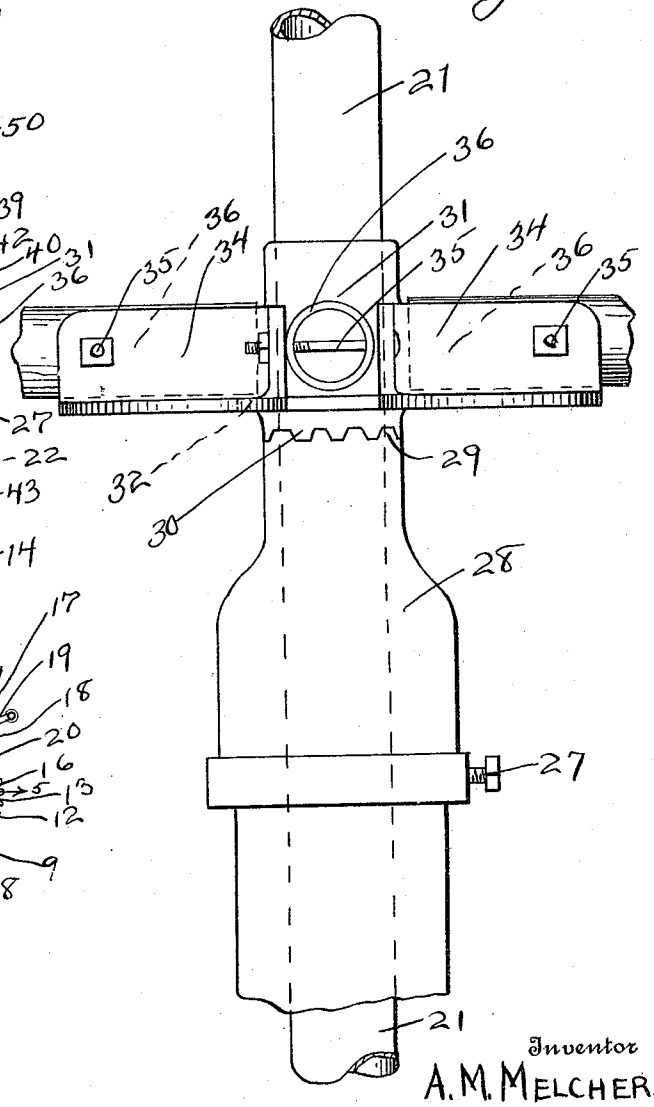


Fig. 3.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 2.

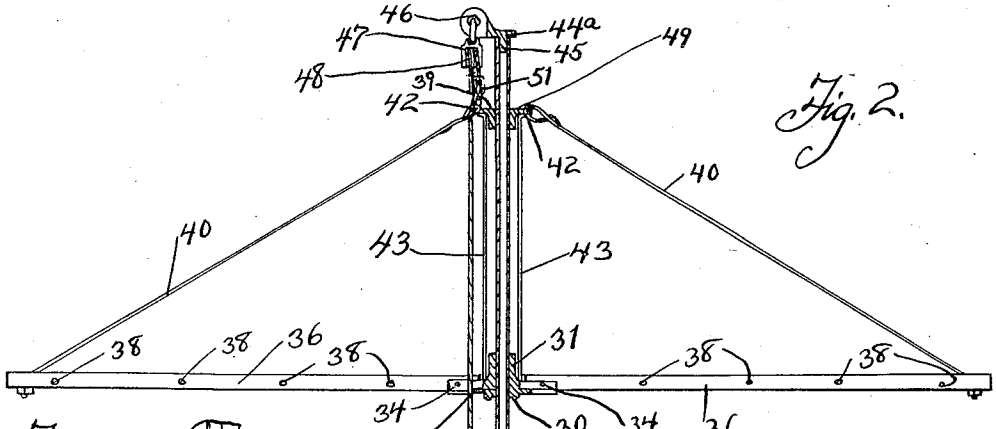
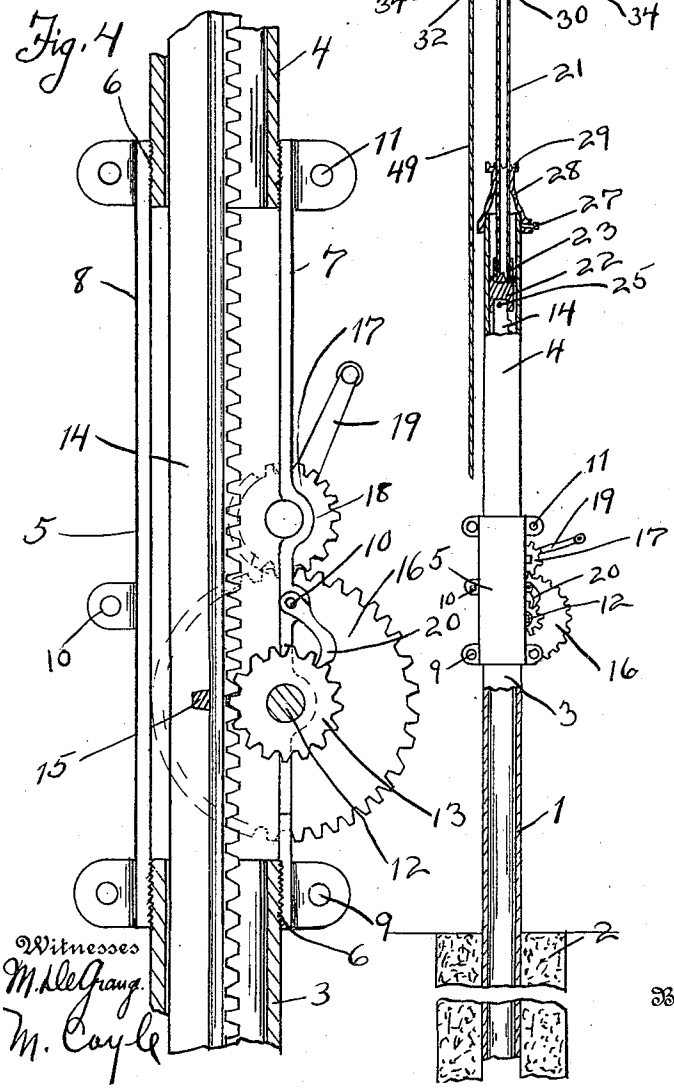


Fig. 4



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3 SHEETS—SHEET 3.

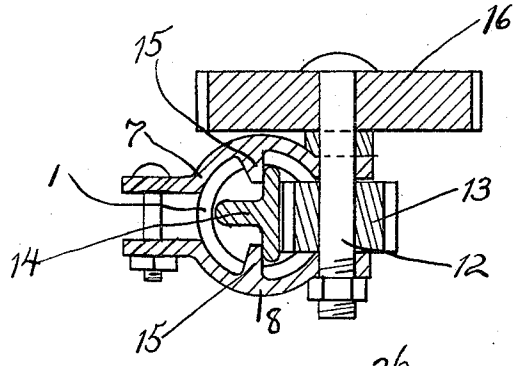


Fig. 5.

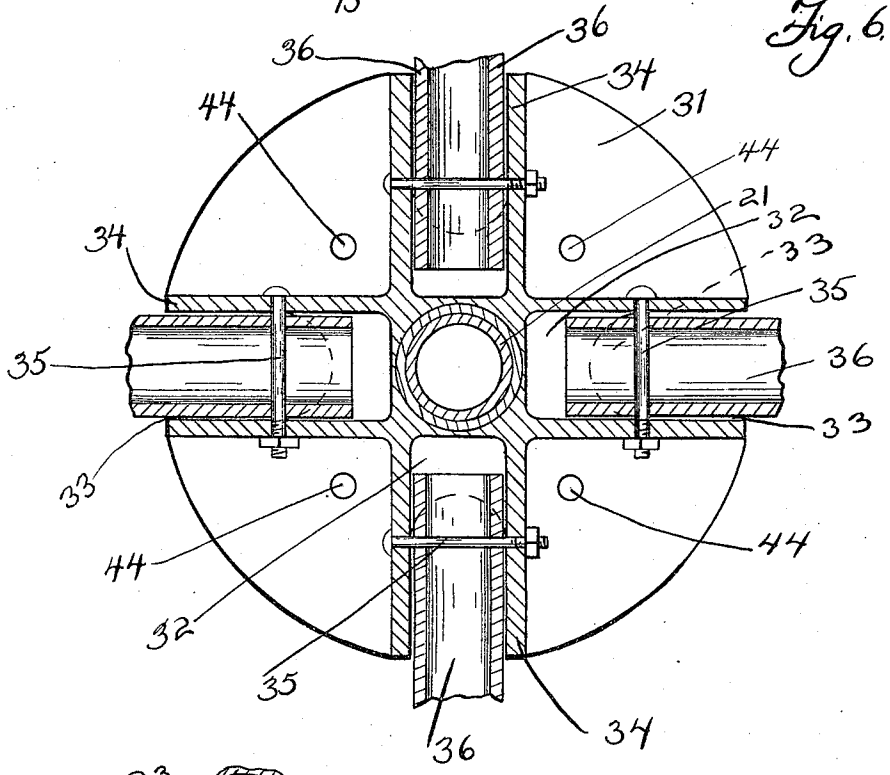


Fig. 6.

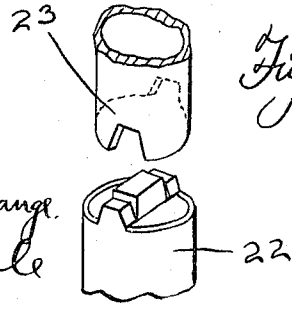


Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

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CLOTHES-REEL.

1,122,527. Specification of Letters Patent. Patented Dec. 29, 1914.

Application filed August 25, 1913. Serial No. 786,602.

To all whom it may concern:

Be it known that I, ALPHONSO M. MELCHER, a citizen of the United States, residing at Weyauwega, in the county of Waupaca and State of Wisconsin, have invented a new and useful Clothes-Reel; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new and useful clothes reel.

An object of the invention is to provide a combined extensible and collapsible clothes reel, for instance, of such a structure that the reel may be easily extended, after the clothes have been suspended thereon, and after the clothes have thoroughly dried, the reel may be lowered, the clothes removed, and the laterally extending tubular arm collapsed. The reel when lowered is held in locked position so as to prevent the reel from being turned by the wind blowing against the clothes, as the clothes are being removed. However, the reel may be supported just above a locked position, so that the reel may be partially turned, in order that a person may remove the clothes without walking around the reel.

One of the features of the invention is the provision of the main standard, comprising two sections coupled together, which coupled connection is provided with a mechanism coöperating with a rack, for extending the same, to which rack the supplemental standard is connected.

In practical fields the details of construction may necessitate alterations, to which the patentee is entitled, provided the alterations fall within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a view in elevation, showing the reel lowered and the tubular arms thereof collapsed, parts being shown in section. Fig. 2 is a vertical sectional view, showing the reel extended, and the tubular arms disposed laterally. Fig. 3 is an enlarged detail view of a portion of the upper part of the main standard, showing the lower-hub of the reel in coupled connection therewith. Fig. 4 is an enlarged vertical sectional view of the coupled connections between the two sections of the main standard. Fig. 5 is a transverse sectional view on line 5—5 of Fig. 4. Fig. 6 is a sectional plan view of Fig. 3, showing the construction of the lower hub of the reel. Fig. 7 is an enlarged detail view.

Referring more particularly to the drawings, 1 designates the main tubular standard, which is embedded in a cement foundation 2. This standard 1 comprises two sections 3 and 4, the adjacent ends of which are threaded into the opposite ends of the union 5, as shown at 6. The union 5 comprises two clamping plates 7 and 8, bolted together by the bolts 9, 10 and 11. Mounted in bearings of the union 5 is a shaft 12, to which is keyed a pinion 13, the teeth of which mesh with the teeth of the rack 14, which is designed to move vertically in the sections 3 and 4 of the standard 1. This rack 14 is T-shaped, and is guided by the lug 15, which engage the flanges of the rack. Also mounted upon the shaft 12 is a spur gear 16, which meshes with a pinion 17, which is keyed to rotate with the stub shaft 18. This stub shaft 18 is provided with a crank handle 19, whereby the pinion 17 may be rotated, which in turn rotates the spur gear 16, and owing to the gear 16 and pinion 13 rotating with the shaft 12, motion is imparted to the rack 14. Pivoted upon the bolt 10 is a pawl 20, the free end of which is so shaped as to engage the teeth of the pinion 13, in order to hold the shaft 12 and the rack 14, owing to the gear connection between the rack and the shaft 12 in adjusted positions.

The upper end of the rack 14 is coupled to the supplemental tubular standard 21, by means of the member 22 and the sleeve 23. The rack 14 extends into the member 22, and is secured therein by means of the pin or bolt 25. The sleeve 23 is shrunk on the lower end of the supplemental standard 21.

Secured to the upper end of the section 4 of the standard 1 by means of a set screw 27 is a sleeve coupling 28, which not only guides the supplemental standard 21, but is provided with clutch teeth 29 to be engaged by the clutch teeth 30 of the lower hub 31 of the clothes reel, that is, when the clothes reel is lowered, to prevent the reel from rotating. This hub 31 is constructed with an annular flange 32, which is provided with

bifurcations 33. Between the flange 32 and the hub, webs 34 are constructed for reinforcing the flange 32 relative to the hub. Pivoted upon the bolts 35 and arranged between each pair of webs are tubular arms 36. The bolts 35 are mounted in the webs 34. As shown in Fig. 1 in full lines the tubular arms 36 may be collapsed, and when collapsed, the portions thereof adjacent the bolts 35, are received in the bifurcations 33. Horizontally arranged guy wires connect the ends of the tubular arms 36, these guy wires being designated by the numeral 38. Also connecting the ends of the tubular arms 36 and the upper hub member 39 are guy wires 40. The upper hub member 39 slides upon the supplemental standard section 21, and secured at 42 to the flange of the hub member 39 are strap irons or rods 43, which pass through openings 44 of the flange of the lower hub member 31, so as to guide the upper hub member when lowered. Said hub member 39 when lowered allows the tubular arms 36 to collapse, as shown in Fig. 1. A cap plate 44^a is arranged upon the upper end of the supplemental standard section 21, there being a lug 45 extending into the section 21. This cap plate 44^a is constructed with an eye 46, which is engaged by the tackle block 47 having the usual pulleys 48. Passing over the pulleys 48 in the usual manner is a rope or cable 49, which also passes in the usual manner over the pulleys 50 of the tackle block 51, which is in turn connected at 52 to the flange of the upper hub 39. When it is desired to throw the arms 36 to horizontal positions the rope or cable 49 may be pulled thereby causing the upper hub member 39 to raise, until the guy wires 40 are taut, and then by a further pulling action on the cable 49, the entire reel may be raised, thereby disengaging the clutch teeth of the hub member 31 and the coupling sleeve 28. In raising the arms 36 until the guy wires 30 are taut, it will be seen that the butt ends of the arms will contact with the flange 32 of the hub member 31, as at 53. After the reel has been hoisted to its limit upon the standard sections 21, the same may be further hoisted by operating the crank 19 of the stub shaft 18, which will operate the rack 14. As the rack 14 is raised, the standard section 21 together with the reel is further extended or hoisted. Prior to hoisting the reel by the cable 49, clothes may be suspended upon the arms 36.

The invention having been set forth, what is claimed as new and useful is:—

1. In combination with a clothes reel, a standard therefor comprising a main tubular standard and a supplemental tubular standard section telescoping the main standard, a sleeve on the upper end of the main standard acting as a guide for the supplemental tubular standard section, and clutch connections between the sleeve and the reel, and means for raising the reel independently of the supplemental tubular standard section.

2. In combination with a clothes reel, a standard therefor comprising a main tubular standard and a supplemental tubular standard section telescoping the main standard, a sleeve on the upper end of the main standard acting as a guide for the supplemental tubular standard section, and clutch connections between the sleeve and the reel, and means for raising the reel independently of the supplemental tubular standard section, and a mechanism for raising and lowering the supplemental tubular standard section, said reel being carried by the supplemental tubular standard section.

3. In combination with a standard comprising a main standard section and a supplemental tubular extensible standard section telescopically united, of a reel telescoping the supplemental tubular standard section, said reel comprising an upper and lower hub, the lower hub having an annular flange, reinforcement webs for the flange, said flange having bifurcations between every two webs, radially extending arms pivoted between the webs and adapted to enter the bifurcations when collapsed, means for guiding the upper hub when lowered toward the lower hub when the arms are being collapsed, connections between the upper hub and outer end of said arm, and means for raising the upper hub to throw the arms in radial position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALPHONSO M. MELCHER.

Witnesses:
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R. L. BARBER.

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