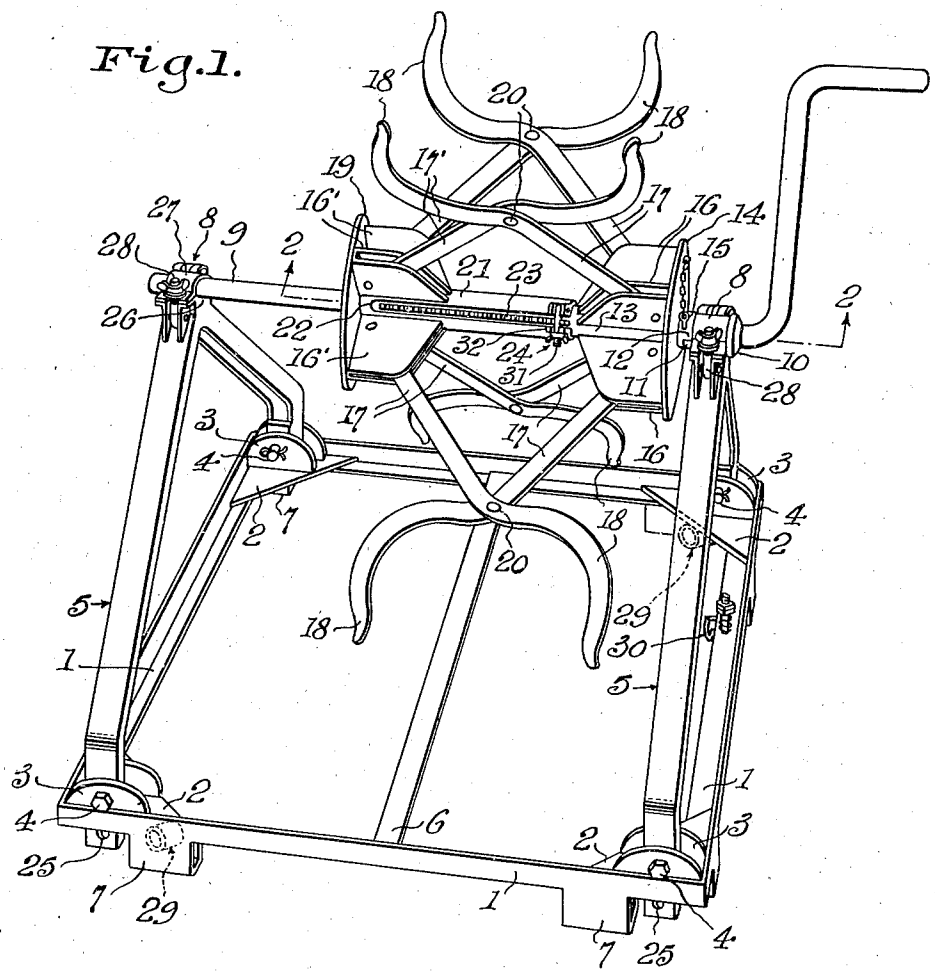
Aug. 21, 1945. R. R. BERMAN 2,382,968

ADJUSTABLE REEL AND COLLAPSIBLE SUPPORT THEREFOR

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Fig.1.



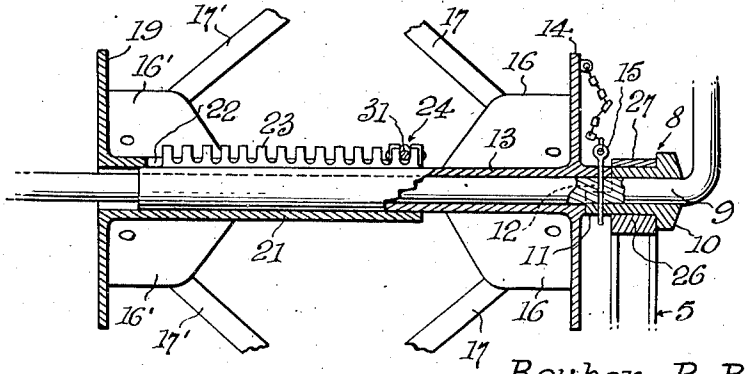


Fig.2.

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Fig. 3.

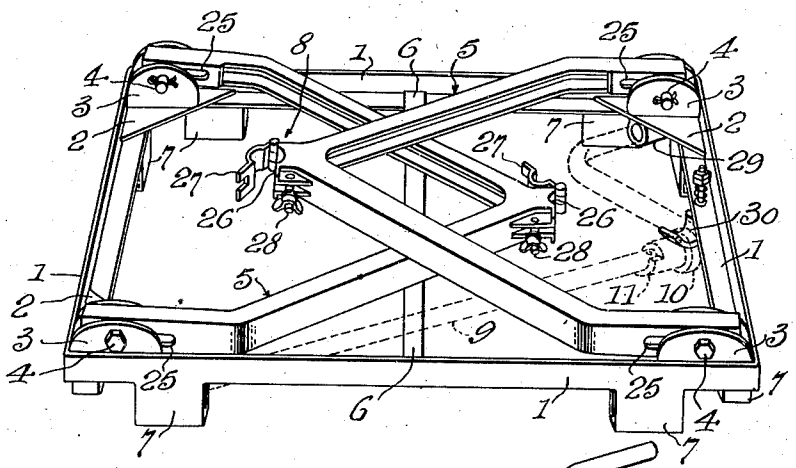
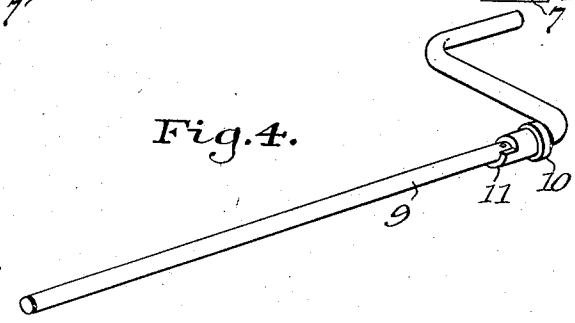


Fig. 4.



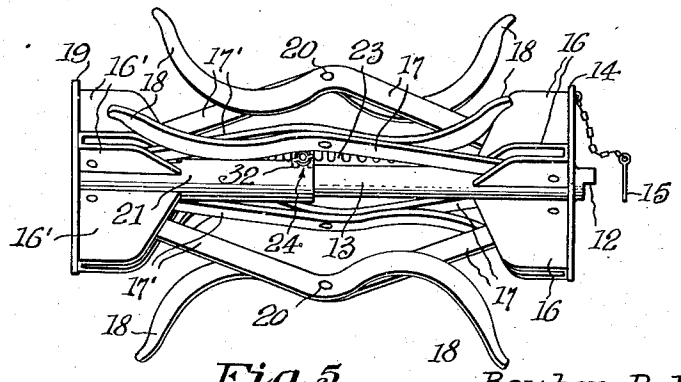


Fig. 5.

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UNITED STATES PATENT OFFICE

2,382,968

ADJUSTABLE REEL AND COLLAPSIBLE SUPPORT THEREFOR

Reuben R. Berman, Washington, D. C.

Application December 6, 1944, Serial No. 566,932

5 Claims. (Cl. 242—115)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to an adjustable reel and collapsible support therefor.

An object of this invention is to provide a collapsible reel operably supported by a collapsible support.

A further object of this invention is to provide a cable dispensing and reel device having an adjustable reel member disposed on a collapsible support member in operable condition and easily and readily separated into component parts for transporting and storing.

A still further object of this invention is to provide a device of the class herein described which will be economical and simple in construction, rapidly assembled, and efficient and durable in use.

The foregoing and other objects will be more apparent from reading the specification in conjunction with the drawings forming a part thereof, wherein:

Fig. 1 is a perspective view of the reel and support in operable condition;

Fig. 2 is a detailed section taken along line 2—2 of Fig. 1, parts shown in elevation;

Fig. 3 is a perspective view of the support member in collapsed condition for transporting;

Fig. 4 is a perspective view of the crank member, and

Fig. 5 is an elevation of the adjustable reel member.

In the drawings wherein like members are given the same reference numeral, a collapsible support consists of a rectangular base composed of angle members 1 welded together. Each corner of the base is reinforced with a triangular plate 2 which supports a channel member 3 so disposed that it forms aligned and parallel channels respectively with the two adjacent channel members. Two substantially V-shaped supporting members 5 have the free ends thereof bent inwardly to align with adjacent aligned channel members 3 and are pivotally connected thereto. The aforementioned triangular plate members 2 are provided with rectangular slots adapted to receive the end members of the substantially V-shaped supporting members 5 when said support members are pivoted into a vertical position. The ends of the supporting members 5 are provided with slots 25 through which the pins 4 extend and the members 5 are thus adapted for longitudinal movement on the pins 4. The base has a cross beam 6 for additional support and rigidity and is mounted on legs if desired.

Welded to the apex of each V-shaped member 5 is a hinged bearing clamp 8 adapted to clamp over a crank 9 inserted therein. If desired, a lower bearing surface 26 may be ground in the apex of the supporting member 5 and a hinged bearing plate 27 attached thereto which is adapted to pass over the top of the crank 9. A clamping bolt 28 is pivotally secured to said supporting member 5 and is adapted to engage operably and releasably the top bearing plate 27. The crank 9 is of conventional L-shaped design with a handle formed by bending the short leg outwardly.

A collar 10 is fitted onto the crank 9 and adapted to rotate therewith. An extending arcuate lug 11 is provided on the collar 10 and is adapted to engage a similar lug 12 provided on a sleeve 13 having a driving disc 14 positioned thereon. This sleeve 13 is removably attached to the crank 9 by a pin 15 inserted through aligned apertures provided in the sleeve 13, the crank 9 and the collar 10.

The driving disc 14 has a plurality of equiangular spaced radial channel members 16 secured thereto. Inserted in and pivotally connected to each of these channels 16 is an arm 17 terminating in a curved finger 18. Slidably mounted on the sleeve 13 is a sleeve 21 having attached thereto a similarly constructed driven disc 19 having channels 16' and arms 17' substantially aligned with respective channel members 16 and arms 17 on the driving disc 14 and disposed in opposite directions whereby the respective arms extending from each disc may be pivotally connected at the joinder of the finger members 18, by the pins 20.

The outer telescoping sleeve 21 has a longitudinal slot or groove 22 adapted to receive a toothed rack 23 which is welded on the sleeve 13. The toothed rack 23 protrudes through the slot 22 formed in the sleeve 21. A hinged bolt clamp 24 is provided on the sleeve 21 and adapted to engage the depressions of the toothed rack 23. The hinged bolt clamp 24 consists essentially of a clamp bolt 31 pivotally secured to the outer telescopic sleeve 21 adjacent one side of the longitudinal slot 22, and a bifurcated member 32 provided adjacent to the other side of the slot 23 and adapted to receive the aforesaid pivoted clamping bolt.

When the reel and support are in storage or transportation the reel is extended its full length

and the support collapsed, see Figs. 3 and 5, respectively. The ends of the crank 9 are inserted in tubes 29 provided on the under surface of the support base 1 and held against movement by a spring suspended cradle 30.

In operation, the crank 9 is inserted through the telescoping sleeves 13 and 21, the supporting members 5 pivoted to a vertical position and dropped into the slots provided in the triangular plates 2. The crank 9 is positoned in the bearing clamps 8 provided on said support members 5. The arcuate lugs 11 and 12 are engaged and secured in said engaging relationship with the pin 15. The hinged bearing clamps 8 are then fastened around the crank 9 providing a rigid reel operably supported. The hinged bolt clamp 24 is released to provide longitudinal movement of the driven disc 19 with respect to the driving disc 14, and when the predetermined spaced relationship therebetween has been accomplished the hinged bolt clamp 24 is refastened across a depression of the rack teeth thus locking the members together. It is thus seen that the crank operably rotates the adjustable reel by the engagement of the arcuate lug 11 on the crank collar 10 engaging the arcuate lug 12 provided on the sleeve 13 secured to the driving disc 14; and, the collapsible support is disposed in a rigid state when the reel is disposed in an operable position.

The arrangement of the component parts of this invention as herein specifically described may be modified without departing from the scope of the invention set forth in the appended claims.

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

1. In combination, an adjustable reel comprising two telescoping sleeves, a plate secured to each sleeve, pairs of arms pivotally connected and one of each pivotally secured to each of said plates, a toothed rack secured to one of said sleeves, and a hinged bolt clamp secured to said other sleeve and adapted to selectively engage said toothed rack; a crank inserted through said telescoping sleeves and adapted to rotate at least one of said sleeves; and, a collapsible support comprising a rigid base, supporting members pivotally connected to said base, means disposing said supporting members in a relatively rigid vertical position, and means clamping said supporting members to said crank.

2. In combination, an adjustable reel comprising two telescoping sleeves, a toothed rack secured to the inner of said sleeves, a longitudinal slot provided in the outer sleeve and adapted to receive said toothed rack, a bolt pivotally secured adjacent one side of said slot, a bifurcated member secured adjacent the other side of said slot and adapted to receive said bolt, a plurality of arms pivotally connected in opposed pairs, and a plate secured to each aforementioned sleeve and pivotally supporting said arms; a crank removably adapted to extend through said sleeves and operably engage one of said sleeves; and, a collapsible support comprising a base, supporting members pivotally secured to said base and adapted to move longitudinally around said pivot point, apertures adapted to receive the ends of said supporting members when vertically disposed, and means clamping said supporting members to said crank.

3. In combination, an adjustable reel comprising telescoping sleeves, means selectively locking said sleeves in predetermined relationship, pivotally connected arms pivotally associated with said sleeves; a crank adapted to rotate said sleeves; and, a collapsible support comprising a base, supporting members having slotted end members secured to said base by a pin inserted through said slotted end members, apertures adapted to receive said slotted end members when the supporting members are vertically disposed, and means clamping said supporting members to said crank.

4. In combination, an adjustable reel comprising telescoping sleeves, means selectively locking said sleeves in predetermined relationship, pivotally connected arms pivotally associated with said sleeves, a crank adapted to rotate said sleeves; and a collapsible support comprising a rigid base, supporting members pivotally connected to said base, means disposing said supporting members in a relatively rigid vertical position, and means clamping said supporting members to said crank.

5. In combination, an adjustable reel comprising sleeves, means selectively locking said sleeves in predetermined spaced relationship, pivotally connected arms pivotally associated with said sleeves, a crank adapted to rotate said sleeves; and a collapsible support comprising a rigid base, supporting members pivotally connected to said base, means disposing said supporting members in a relatively rigid vertical position, and means clamping said supporting members to said crank.

REUBEN R. BERMAN.