March 28, 1939. H. E. BAKER 2,151,677

ROTARY RUG RACK

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Fig. 1.

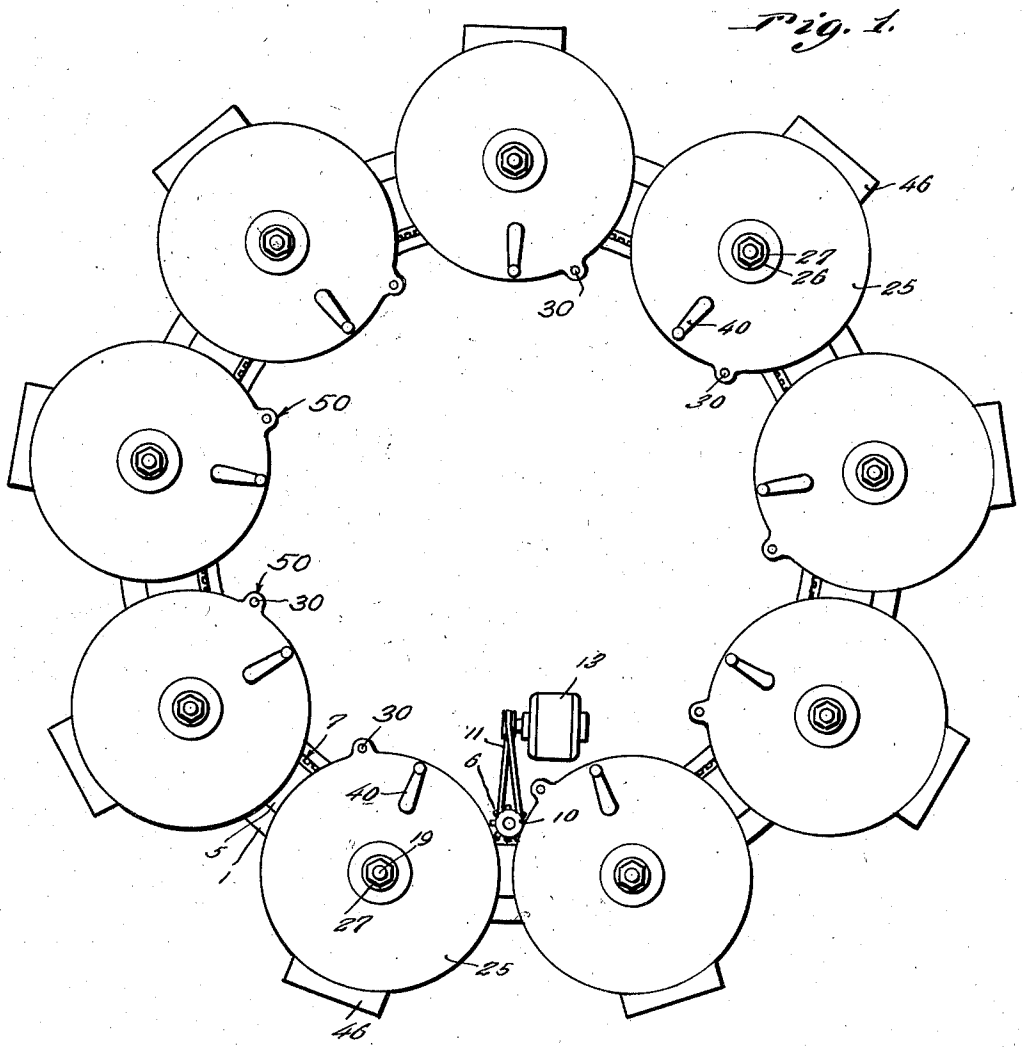
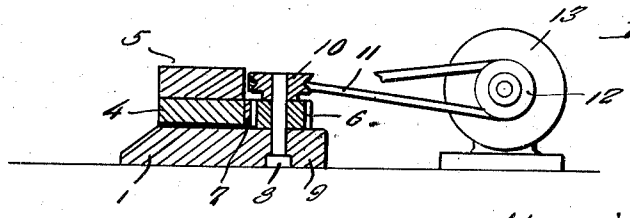


Fig. 10.



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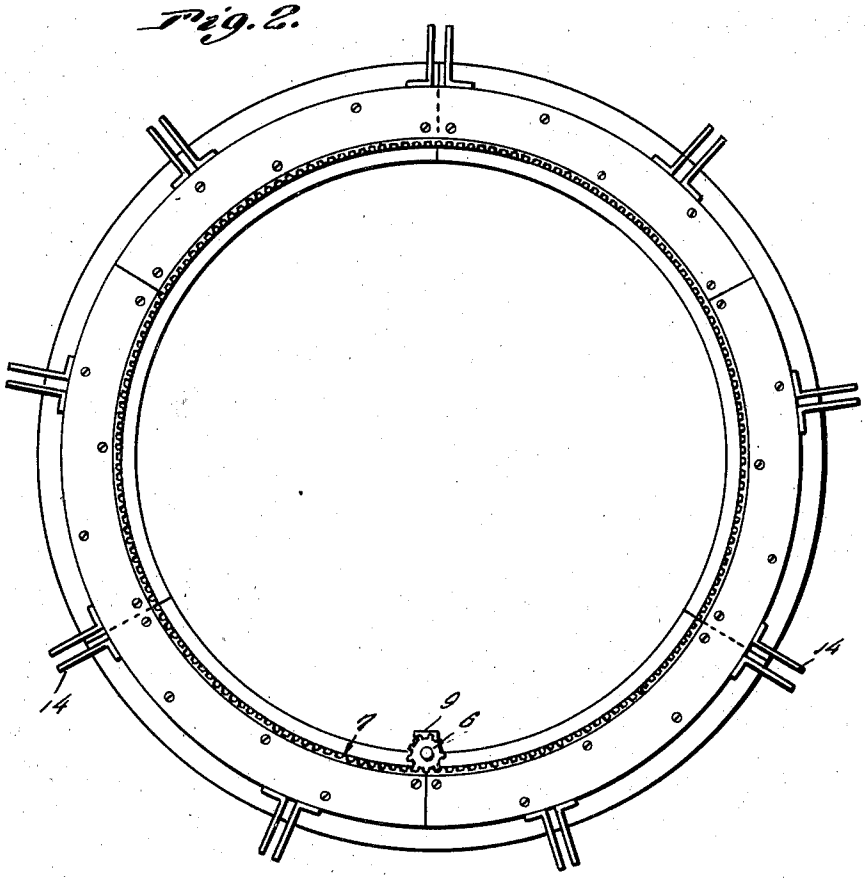
Attorney

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ROTARY RUG RACK

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Fig. 2.



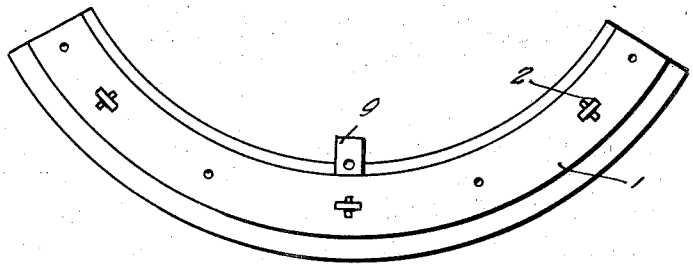


Fig. 3.

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ROTARY RUG RACK

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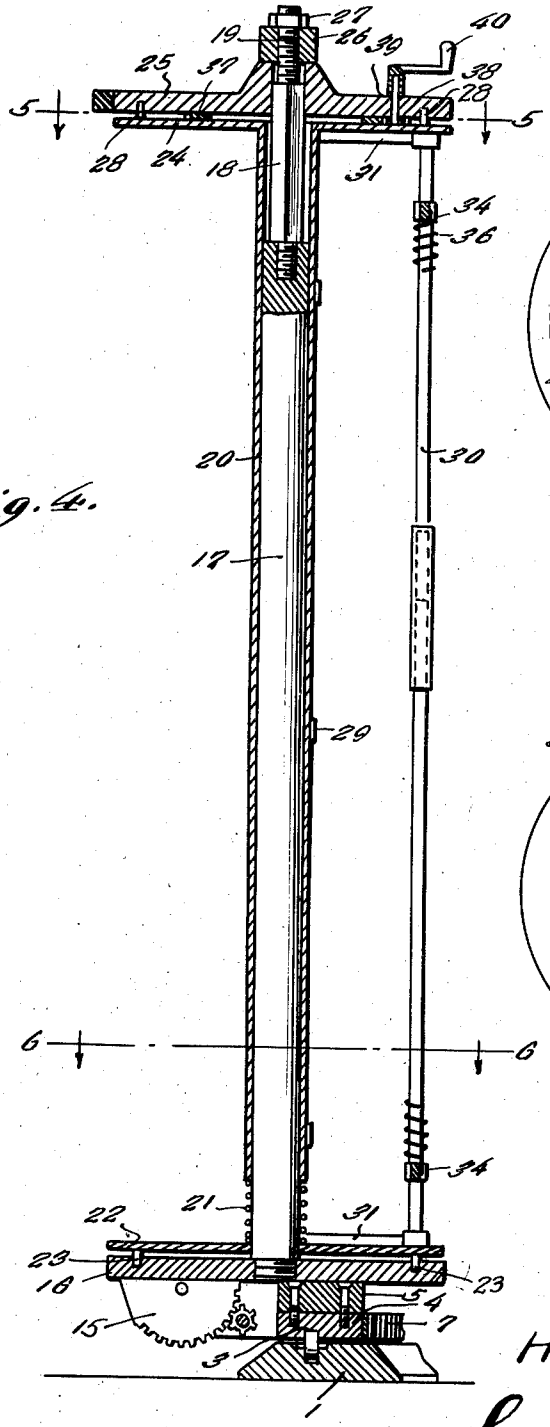
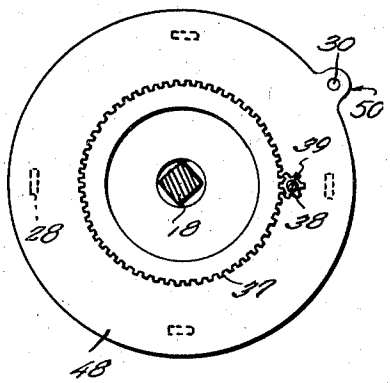


Fig. 4.

Fig. 5.



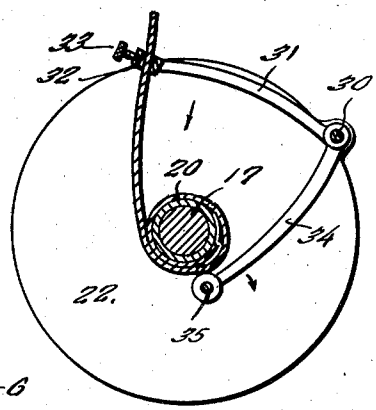


Fig. 6.

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ROTARY RUG RACK

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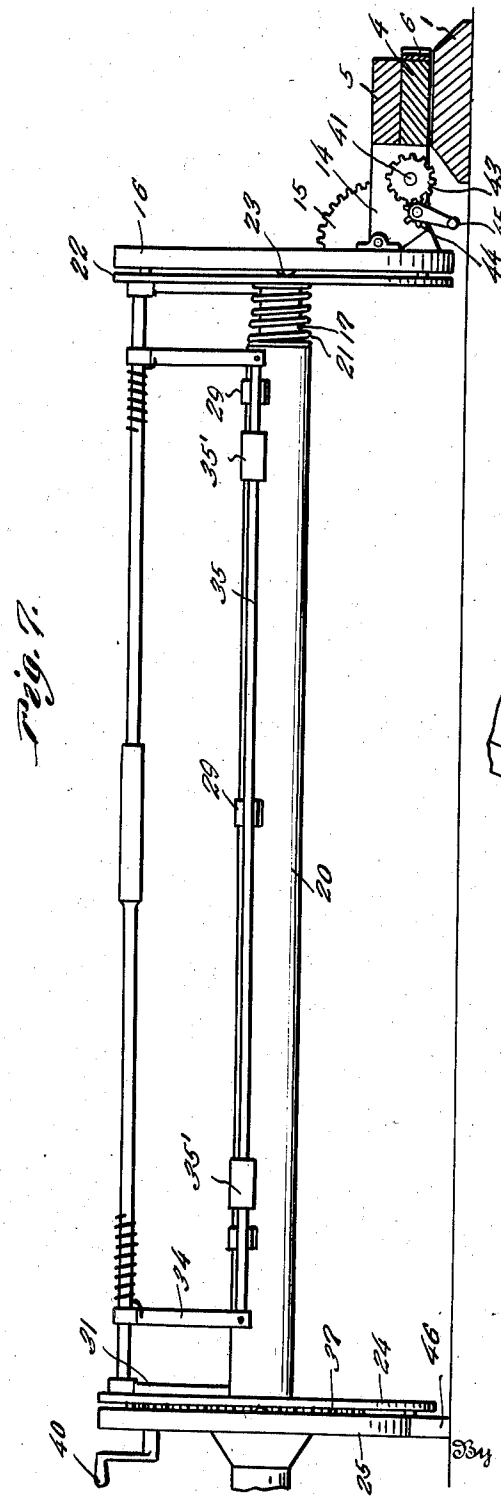


Fig. 7.

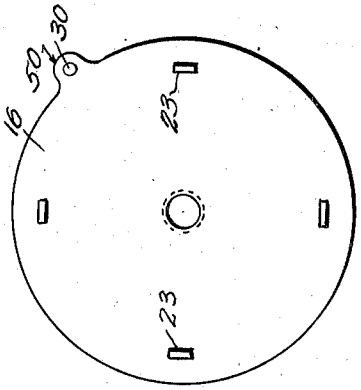


Fig. 9.

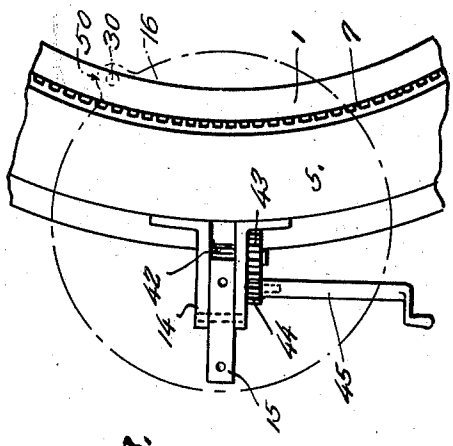


Fig. 8.

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ROTARY RUG RACK

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Fig. 11.

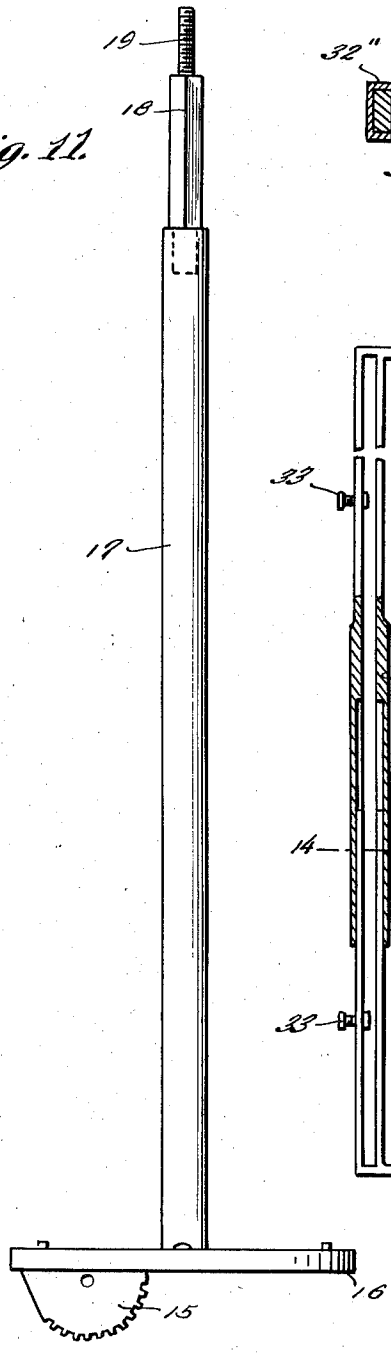


Fig. 14.

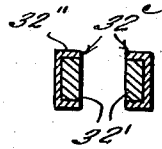
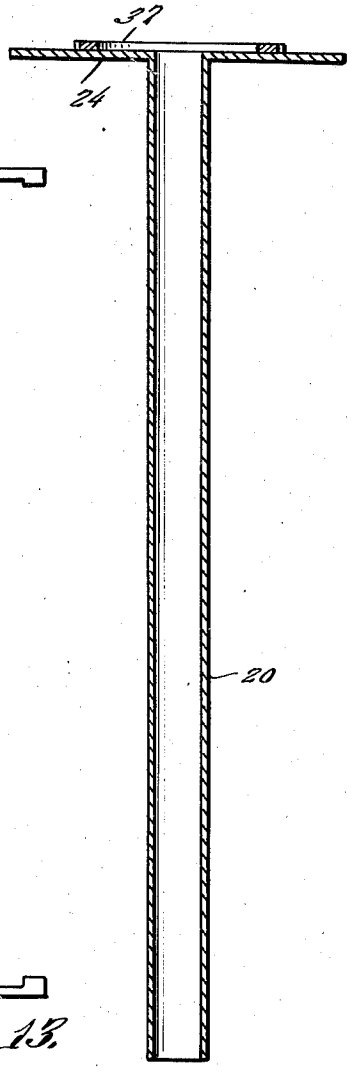


Fig. 12.



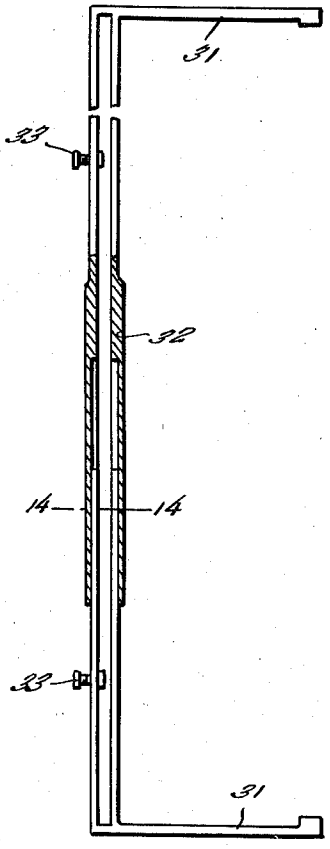


Fig. 13.

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Patented Mar. 28, 1939 2,151,677

UNITED STATES PATENT OFFICE

2,151,677

ROTARY RUG RACK

Harvie E. Baker, Tulsa, Okla., assignor of one-third to Tom P. Ingle and one-third to Charles E. Lander, both of Dawson, Okla.

Application July 28, 1937, Serial No. 156,199

3 Claims. (Cl. 242—55.3)

This invention relates to a rack for rugs and the like, the general object of the invention being to provide means for holding a plurality of rugs or the like, with means for turning them to bring any desired one at the front and with means for rolling each rug on a supporting member or unrolling it from said member.

Another object of the invention is to provide means whereby each supporting member can be turned to a horizontal position or a vertical position, as desired, and to provide yielding means for causing the rug to wind on the supporting member smoothly and tightly.

This invention also consists in certain other features of construction in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Fig. 1 is a top plan view of the invention.

Fig. 2 is a top plan view of the rotary supporting ring and its base.

Fig. 3 is a plan view of a section of the base.

Fig. 4 is a vertical sectional view through one of the supporting members and through the base and ring.

Fig. 5 is a section on line 5—5 of Fig. 4.

Fig. 6 is a section through line 6—6 of Fig. 4.

Fig. 7 is an elevation with parts in section, showing a supporting member moved to horizontal position.

Fig. 8 is a fragmentary view in plan showing how the segmental gear of a supporting member is supported and actuated.

Fig. 9 is a view of the bottom disk of a supporting member.

Fig. 10 is a sectional view showing how the motor drives the pinion which engages the ring gear.

Fig. 11 is an elevation of the hinged part of a supporting member.

Fig. 12 is a view in section of the other part of said member.

Fig. 13 is a view, partly in section, of the slotted member.

Fig. 14 is a section on line 14—14 of Fig. 13.

In these drawings, the numeral 1 indicates a sectional ring-shaped base which carries the rollers 2 operating in recesses in the top face of the base, said rollers engaging an annular groove 3 formed in the bottom part of a sectional ring gear 4 rotatably arranged on the base and having a sectional ring 5 bolted to its upper face. A toothed wheel 6 engages the internal teeth 7 of the ring gear and is located on a shaft 8 carried by a projection 9 on the base, a pulley 10 being connected with the wheel, and said pulley is connected by a belt 11 to a pulley 12 on a shaft of a motor 13 (see Fig. 10). Thus the ring gear is rotated by the motor.

A plurality of pairs of ears 14 project outwardly from the unit composed of the ring gear and the ring 5, and a segmental gear 15 is pivoted between each pair of ears and is attached to an outer portion of the under face of a base-forming disk 16 having its central part connected to the lower end of a shaft 17, which has a shaft 18 of square shape in cross section threaded to its upper end. The upper end of the shaft 18 has a reduced circular threaded part 19 thereon. The lower end of the shaft 17 is threaded to the disk 16, as shown in Fig. 4, and a sleeve 20 fits over the shaft 17 and has its lower end engaging a coiled spring 21 surrounding the lower part of the shaft 17 and resting against a disk 22 which is rotatably supported on the disk 16 by the rollers 23 carried by said disk 16. A disk 24 is connected to the upper end of the sleeve 20, and a stationary disk 25 has a square, central bore fitting over the square shaft 18, and said disk 25 is adjustably held in place by means of the washer 26 and the nut 27 on the threaded part 19 of the shaft 18. Thus by adjusting the nut 27, the disk 25 can be adjusted vertically on the shaft 18 to regulate the space between the disks 24 and 22, for it will be seen that by screwing the nut downwardly, the disk 25 will move downwardly, thus causing the rollers 28 carried by said disk 25 to press upon the disk 24, which will cause downward movement of the sleeve 20 on the shaft 17, which will compress the spring 21. Of course, said spring tends to force the parts upwardly.

Spring clips 29 are carried by the sleeve 20 and are adapted to detachably fasten the end of a rug to the sleeve, as shown in Fig. 6. A small shaft 30 extends between the disks 16 and 25 and is connected to said disks by the ends of the shaft engaging small projections 50 extending from the disks, as clearly shown in Figs. 1, 5, 8 and 9. An arm 31 is attached to each end of the shaft and a telescopic slotted member 32 is connected to the outer ends of the arms. This member is shown in detail in Figs. 13 and 14, with the two lower parts formed by the slot and indicated at 32', sliding in the channel parts 32'' of the upper part. A portion of the rug is adapt-

ed to pass through the slot, as shown in Fig. 6, and set screws **33** are adapted to be adjusted to frictionally engage that part of the rug passing through the slot, or to tightly engage said part.

Arms **34** are pivoted to the shaft **30**, carry a rod **35** at their free ends, on which are rollers **35'** which are yieldably pressed against the rug on the sleeve by the springs **36** carried by the shaft **30** and engaging the arms **34**.

A ring gear **37** is carried by the upper face of the upper disk **24** and is engaged by a pinion **38** on a shaft **39** journaled in the disk **25** and adapted to be rotated by a crank handle **40**.

A shaft **41** is journaled in each pair of ears **14** and has a pinion **42** thereon for engaging the segmental gear **15** and the outer end of each shaft **41** has a gear **43** thereon meshing with a pinion **44**, the shaft of which is adapted to be rotated by a crank handle **45**. Thus by rotating the crank handle, the segmental gear **15**, one of which is pivoted between each pair of ears **14**, will be moved to turn the rug carrying assembly to either a vertical position, as shown in Fig. 4, or to a horizontal position, as shown in Fig. 7. A bumper **46** is fastened to an outer part of each disk **25** to engage a surface when the assembly is in horizontal position, as shown in Fig. 7.

From the foregoing, it will be seen that each assembly consisting of the roller carrying disks **16** and **25**, shaft **17**, sleeve **20** and the upper and lower disks **24** and **22**, with the parts attached thereto, form a rug-supporting unit which can be lengthened or shortened to suit different sizes of rugs, and the spring-actuated roller carrying arms will cause the rug to be smoothly and tightly wound on the unit when the crank handle **40** is turned to rotate the sleeve **20** and the disks **22** and **24**, and the slotted member **32** will guide the rug as it is being wound upon the unit. By adjusting the screws **33**, the rug can be held under slight tension to cause it to be properly wound upon the unit, and such means can be tightened to hold the rug against unwinding movement, and such means also facilitate the partial removal of the rug from the unit.

The motor driven means enables any unit to be brought to the front so that the rug thereon can be readily inspected, and any unit can be readily tilted to horizontal position when desired.

It will, of course, be understood that the apparatus can be made in any desired size and of any suitable material.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of parts, provided that such changes fall within the scope of the appended claims.

What is claimed is:

1. An apparatus of the class described comprising a rotary base, a plurality of base members hingedly connected to the rotary base, a shaft connected to each base member, a top member supported for vertical movement on the upper end of the shaft, a sleeve on each shaft, a disk connected to the upper end of the sleeve, rollers between the disk and the top member, a disk at the lower end of each shaft, rollers between the same and the base member, a spring on the shaft between the last mentioned disk and the lower end of the sleeve, a rod connected with each pair of base and top members adjacent a portion of the periphery thereof, spring-pressed roller-bearing arms carried by the rod and having their rollers engaging a member wound on the sleeve, arms carried by the rod, a telescopic slotted member carried by the arms and through which the member is adapted to pass, screws carried by the slotted member, and means whereby the sleeve and the disks can be rotated.

2. In a device of the class described, a base member, a shaft having its lower end connected with the base member, a top member supported for vertical movement on the upper end of the shaft, means for adjusting the top member vertically on the shaft, a sleeve on the shaft, a disk connected with the upper end of the sleeve, a lower disk rotatably supported on the base member, a spring between the lower end of the sleeve and the lower disk, means for rotating the disks and the sleeve, a rod connected with the base and top members adjacent the peripheries thereof, spring pressed roller bearing arms carried by the rod and having their rollers engaging a member wound on the sleeve, a second set of arms carried by the rod, a slotted member carried by the second set of arms and through which said member passes and means carried by the slotted member for applying friction to that part of the member passing through the slot therein.

3. In a device of the class described, a base member, a shaft having its lower end connected with the base member, a top member supported for vertical movement on the upper end of the shaft, means for adjusting the top member vertically on the shaft, a sleeve on the shaft, a disk connected with the upper end of the sleeve, a lower disk rotatably supported on the base member, a spring between the lower end of the sleeve and the lower disk, means for rotating the disks and the sleeve, a rod connected with the disks adjacent the peripheries thereof, spring pressed roller bearing arms carried by the rod and having their rollers engaging a member wound on the sleeve, a second set of arms carried by the rod and a slotted member carried by the second set of arms and through which said member passes.

HARVIE E. BAKER.