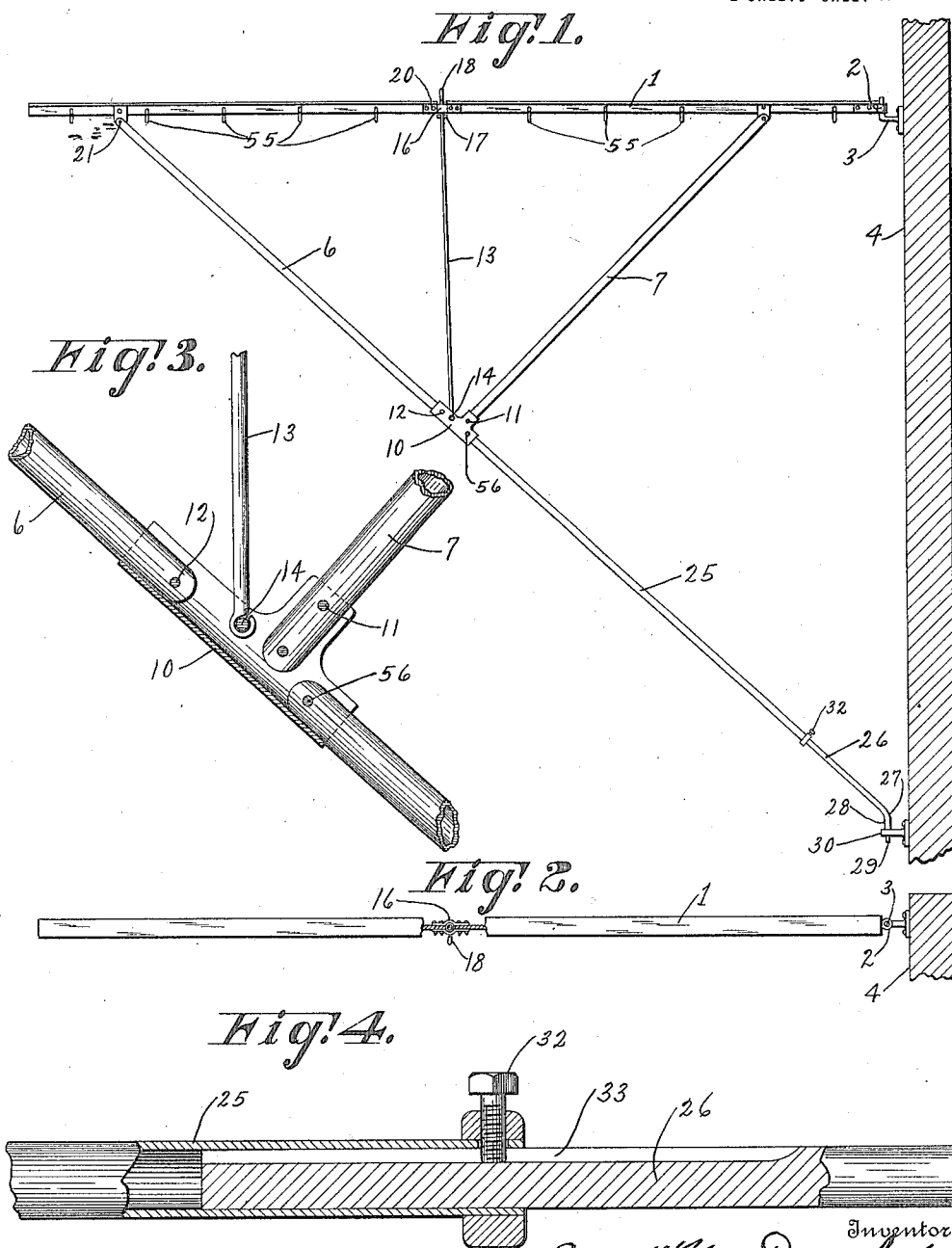


E. M. DOUGHERTY.
RUG DISPLAY AND HANDLING APPARATUS.
APPLICATION FILED JAN. 5, 1914.

1,180,480.

Patented Apr. 25, 1916.

2 SHEETS—SHEET 1.



Witnesses
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Inventor
E. M. Dougherty
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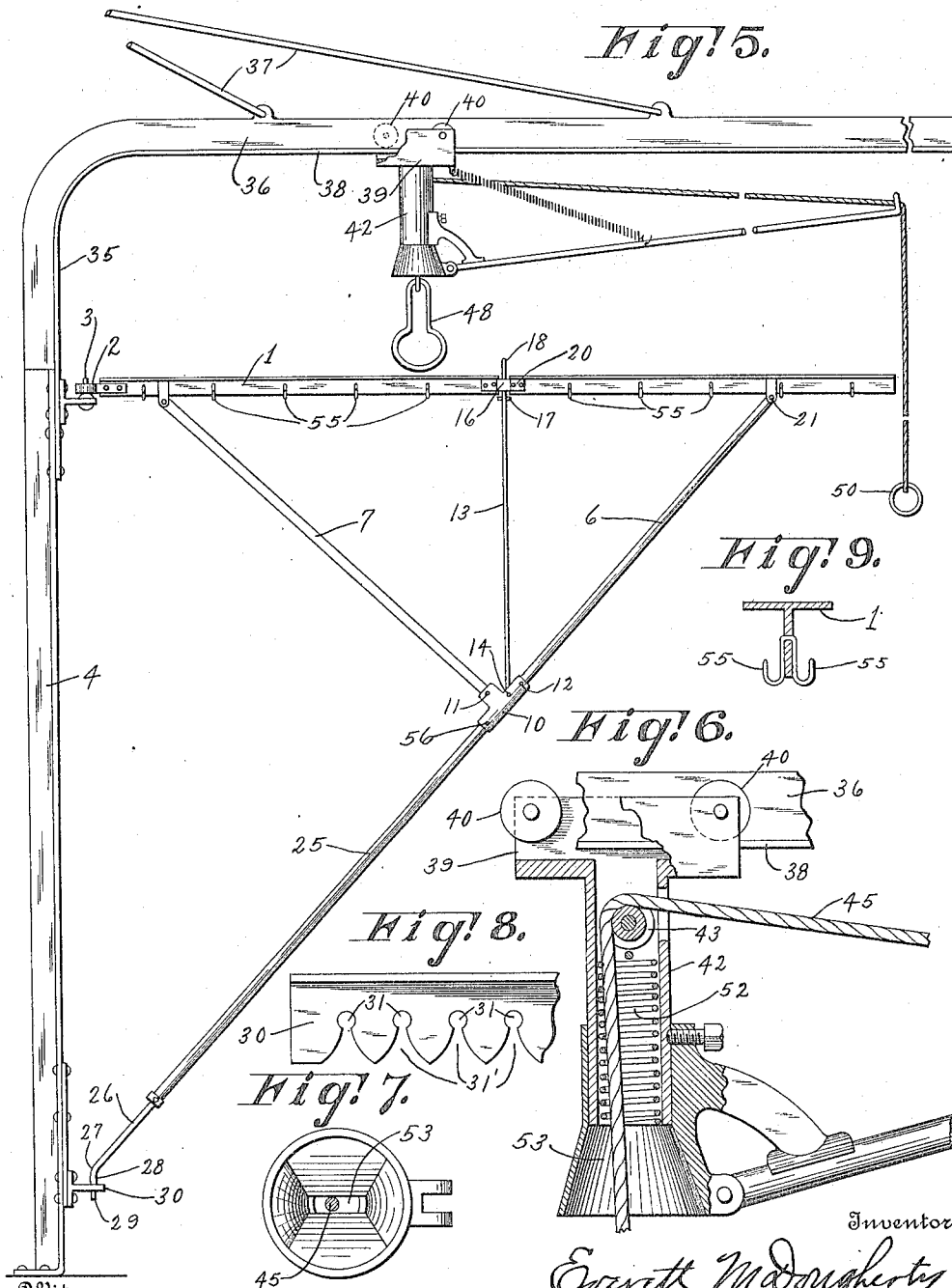
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Witnesses
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UNITED STATES PATENT OFFICE.

EVERETT M. DOUGHERTY, OF MILWAUKEE, WISCONSIN.

RUG DISPLAY AND HANDLING APPARATUS.

1,180,480.

Specification of Letters Patent.

Patented Apr. 25, 1916.

Application filed January 5, 1914. Serial No. 810,274.

To all whom it may concern:

Be it known that I, EVERETT M. DOUGHERTY, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Rug Display and Handling Apparatus, of which the following is a specification.

My invention relates to improvements in rug display and handling apparatus.

The object of my invention is to provide means whereby rugs may be collectively stored in a suspended position, and individually transported and manipulated for display purposes either rotatively or by swinging them bodily about a supporting axis adjacent to one margin, and whereby they may also be mechanically lowered and placed upon the floor at any convenient point without detaching them.

A secondary object is to provide such apparatus with means whereby the same may be compactly folded for storage purposes.

In the drawings—Figure 1 is a side elevation of a display rack embodying one portion of my invention. Fig. 2 is a plan view of the upper bar. Fig. 3 is a detail view on an enlarged scale, showing the means for connecting the various brace members. Fig. 4 is a detail view of the telescoping joint formed by the diagonal brace members. Fig. 5 is a side elevation showing the traveling crane and track for lifting and lowering the display racks with the rugs thereon. Fig. 6 is a detail sectional view of the traveling member of the crane. Fig. 7 is a view of the same as seen from the lower end. Fig. 8 is a fragmentary plan view of the pivot bracket 30. Fig. 9 is a cross sectional view of the boom arm 1.

Like parts are identified by the same reference characters throughout the several views.

The display racks proper each comprise a horizontal arm 1 provided with an eye-piece 2 at its inner end adapted to engage a vertical pin or post 3 connected with a wall or other support 4 and offset therefrom as shown. The arm 1 is truss braced by brace rods 6 and 7 pivotally connected with the arm 1 near its outer and inner ends respectively, the lower ends of said brace bars 6 and 7 being pivoted to a coupling member 10 at 12 and 11 respectively. The arm 1 is further braced by a vertical post 13 pivoted to the coupling member 10 at 14 and pro-

jecting loosely through an eye-piece 16 on the arm 1, with a cross pin 17 immediately below the eye-piece and a hook 18 above the eye-piece, said hook projecting at right angles to the arm 1. The arm 1 is jointed at 20 so that the outer section may be folded upon the inner one. Coupling member 6 may be disconnected from the outer member 1 by removing the pivot pin 21, whereupon the brace 6 may be folded into a position parallel with the brace 7 and both of these braces may then be folded upon the inner section of the arm 1, the vertical post 13 having first been disengaged from the arm 1 and also folded parallel with the brace rods 6 and 7. Another brace rod 25 is pivoted to the coupling member 10 and is provided with a lower extensible section 26, having a half elbow 27 near its lower end and a vertically extending portion 28, shouldered and provided with a pin 29 adapted to socket in a bracket 30 on the support 4. This bracket is provided with a plurality of pivot sockets 31 for the reception of the braces of adjacent display racks. Tapered guide slots 31' lead to these sockets or apertures 31 from the front margins of the brackets, facilitating the insertion of the pins in their sockets. The section 25 of this brace rod is preferably tubular and the section 26 telescopes therein, and is adjusted in any desired position by a set screw 32 fitting a channel 33. In this manner the boom arms 1 may be all adjusted exactly in a horizontal or parallel position. By disengaging this brace rod 25 from the bracket 30, it may be folded upon the arm 7 by swinging it upon its pivotal connection 56 with coupling member 10.

The support 4 is provided with a central post 35 having an arm 36 which projects outwardly into the room or apartment where the rugs are stored. This arm may be supported in any desired manner, preferably by stays 37. The lower margin of the arm 36 is provided with track flanges 38, upon which a carrier 39 is adapted to move, said carrier having rollers 40 bearing upon the track flanges 38 on each side of the arm 36. The carrier 39 is provided with a tubular hanger 42, in which a pulley 43 is mounted. A rope 45 passes over the pulley 43 and in the tubular hanger 42, its lower end being provided with a link 48 adapted to engage the hook 18 when brought in registry therewith. The other end of the rope is provided

with a hand ring 50. When the link 48 is in engagement with the hook 18, the operator pulls upon the rope 45 to lift a display rack proper until the link 48 strikes a cushion spring 52 mounted in said tubular member 42, the link being partially received in the slot 53 at the lower end of said hanger 42. The walls of the slot 53 prevent the link and rack from swinging. The object of the spring 52 is to force the link 48 out of the tubular member when the tension upon the rope is relieved, thus permitting a rotation of the rug when desired. The spring also tends to hold the link in the normally depressed position in which it is illustrated in Fig. 4, so that it may be readily brought into engagement with a hook 18. The display rack proper will now be in a raised position and released from the post 3 and bracket 30. It may now be moved outwardly on the track arm 36 to any desired position in the room or apartment where the rugs are stored or shipped or displayed, whereupon the rack may then be lowered and spread upon the floor, or the rack and the vertically supported rug thereon may be revolved to expose the same to light from any direction.

The downwardly extending flanges of the T-shaped boom 1 are preferably provided with a series of hooks 55 to engage the upper margins of the rugs. These hooks may be formed in pairs, from pieces of heavy wire which pass through the boom flange and are bent into hook form on each side thereof. If desired, therefore, each boom may support two rugs. Their upper margins will be below the boom and will therefore not be worn or damaged by frictional contact.

Assuming that a series of display racks are pivoted side by side to a vertical support, it is obvious that they may be pivotally swung to individualize any one of them and expose a rug suspended thereby. This rack may then be swung until its hook 18 is below the track, whereupon the carrier will be moved until the link 18 engages the hook. The rack and rug may then be lifted by pulling upon the rope and the rug moved outwardly to the light, rotated, or lowered to the floor as desired, and subsequently returned to its original position.

I claim—

1. A display rack for demountable display and handling apparatus for rugs, comprising the combination of a horizontal boom and an angular brace formed in sections, hinged together, and permanently secured to the outer end of the boom, said boom and brace being each provided with means for detachably and pivotally engaging a suitable support, and the lower section of said brace being adapted to swing upon its hinge connection with the upper section when released from said support.

2. A display rack for demountable display

and handling apparatus for rugs, comprising the combination of a horizontal boom and an angular brace formed in sections, hinged together, and permanently secured to the outer end of the boom, said boom and brace being each provided with means for detachably and pivotally engaging a suitable support, and the lower section of said brace being adapted to swing upon its hinge connection with the upper section when released from said support, said upper section being connected with the boom at a plurality of points, and rigidly supported therefrom.

3. A display rack for demountable display and handling apparatus for rugs, comprising the combination with a support of a horizontal boom detachably connected with the support, an angular brace permanently connected with the boom and rigidly supported therefrom at a plurality of points, a supporting track, a carrier operatively connected therewith, and means for detachably connecting the carrier and boom, said boom being normally out of reach of the operator and said brace extending downwardly from the boom and adapted to facilitate manual manipulation of the boom.

4. The combination with an over-head carrier and a vertical support, of a rug display rack normally and detachably pivoted to the support, lifting and lowering mechanism connected with the carrier and adapted to engage the upper portion of said rack, the lower portion of said rack having jointed connection with the upper portion and adapted to automatically fold when detached from the support and lowered into contact with the floor.

5. The combination with an over-head track, a carrier thereon, a pivotally supported rug display rack, suitable tackle carried by the carrier and adapted to engage said rack and lift it from its pivotal support, means for preventing rotation of the rack when lifted to a predetermined elevation and permitting rotation at a different elevation.

6. The combination with an over-head track, a carrier thereon, a pivotally supported rug display rack, suitable tackle carried by the carrier and adapted to engage said rack and lift it from its pivotal support, means for preventing rotation of the rack when lifted to a predetermined elevation and permitting rotation at a different elevation, said track and carrier being adapted to permit a display rack to be individualized and conveyed from among a series of like racks to a suitable display point.

7. The combination with an over-head track, a carrier thereon, a pivotally supported rug display rack, suitable tackle carried by the carrier and adapted to engage

said rack and lift it from its pivotal support, means for preventing rotation of the rack when lifted to a predetermined elevation and permitting rotation at a different elevation, said track and carrier being adapted to permit a display rack to be individualized and conveyed from among a series of like racks to a suitable display point, and said tackle being adapted to lower the individualized rack and rug to a horizontal position on the floor.

8. The combination with an over-head track, a carrier thereon, a pivotally supported rug display rack, suitable tackle carried by the carrier and adapted to engage said rack and lift it from its pivotal support, means for preventing rotation of the rack when lifted to a predetermined elevation

and permitting rotation at a different elevation, said track and carrier being adapted to permit a display rack to be individualized and conveyed from among a series of like racks to a suitable display point, and said tackle being adapted to lower the individualized rack and rug to a horizontal position on the floor, the lower portion of the rack being adapted to automatically fold when in contact with the floor to facilitate spreading the rug thereon.

In testimony whereof I affix my signature in the presence of two witnesses.

EVERETT M. DOUGHERTY.

Witnesses:

JAS. B. ERWIN,
IRMA D. BREMER.

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