

Dec. 21, 1943.

R. A. HUNTLEY

2,337,200

CONVEYER

Filed Dec. 28, 1940

2 Sheets-Sheet 1

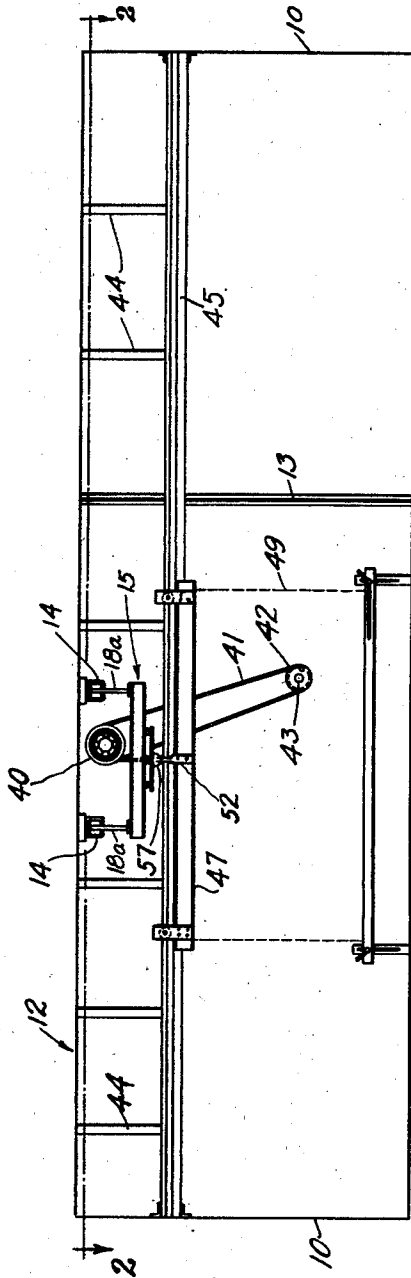


Fig. 1

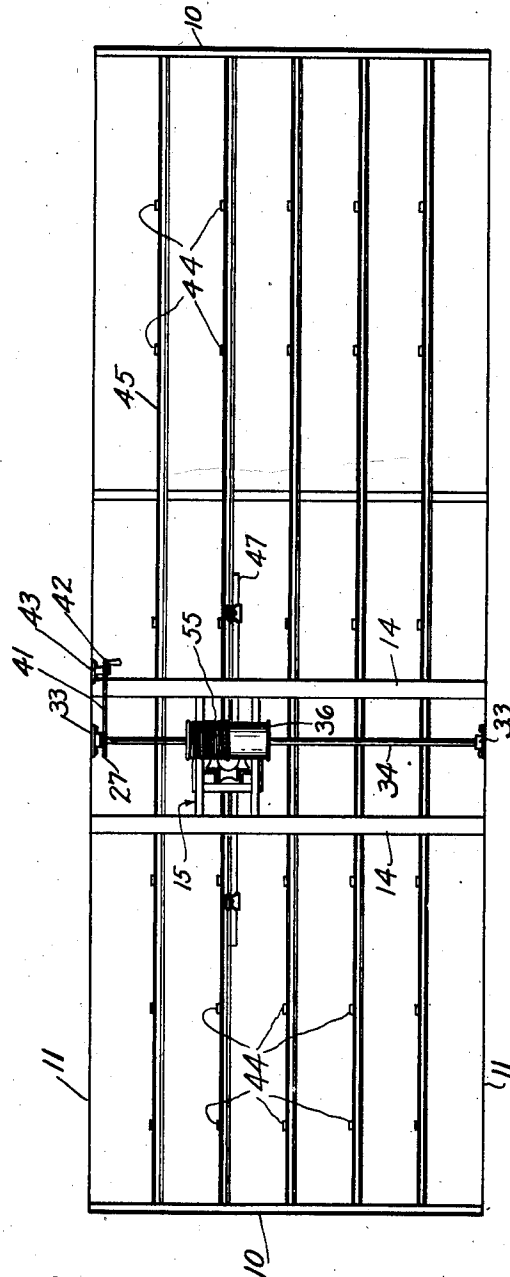


Fig. 2

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2 Sheets-Sheet 2

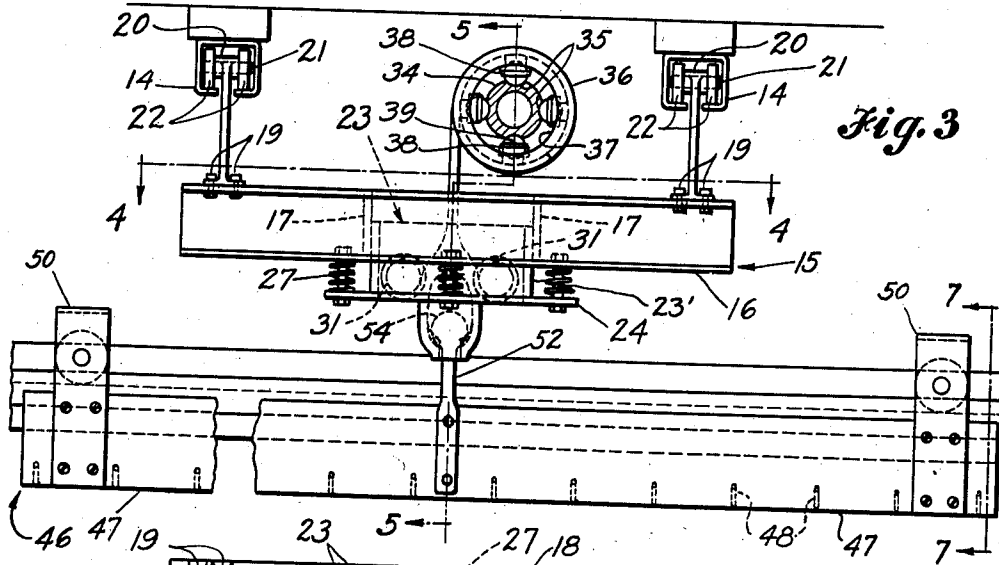


Fig. 3

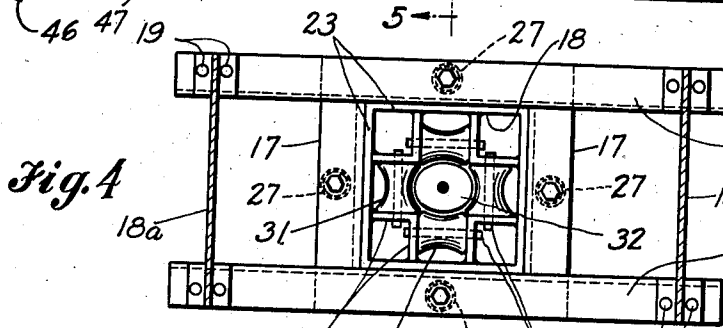


Fig. 4



Fig. 9

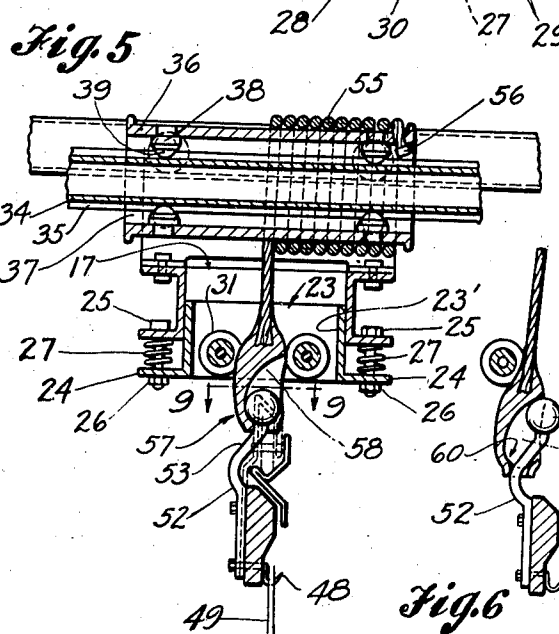


Fig. 5

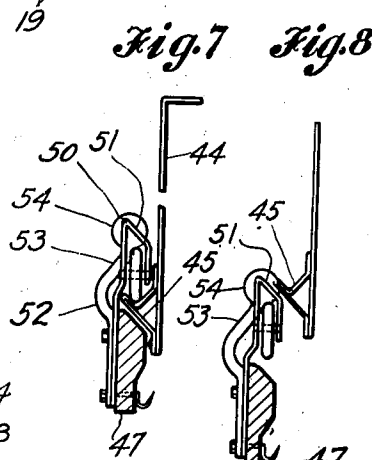


Fig. 7 Fig. 8

Fig. 6

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2,337,200

CONVEYER

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Application December 28, 1940, Serial No. 372,083

2 Claims. (Cl. 212-11)

My invention relates to rug hanging devices, conveying machines, one of the objects being to provide means for lifting a rug or a load from its place of rest and conveying the same automatically to a predetermined point where it is automatically discharged and positioned, the carriage then being returned to its point of departure and positioned to receive another load.

This carriage is designed to move laterally to either side as desired, and also can be moved to any one of a plurality of tracks or if desired a plurality of carriages may be used on said tracks simultaneously.

My device is especially convenient and effective in the handling of rugs in process of cleaning or before or after the cleaning process, and in the handling of fabrics of all kinds, new or old. It is well known that fabrics and weaves, especially when wet or damp, are subject to distortion in shape, figure and design and to wrinkling. The use of my device overcomes these difficulties.

It is not my desire to be limited, however, to conveyance of rugs and the like. My device is suitable and adaptable to carrying other burdens with like facility, economy and convenience.

Other objects of my invention will appear from the drawings and accompanying specifications:

Referring now particularly to the drawings:

Fig. 1 is a side elevation of my device.

Fig. 2 is a plan view taken upon the line 2-2 of Fig. 1.

Fig. 3 is an enlarged side elevation of the lifting mechanism.

Fig. 4 is a section upon line 4-4 of Fig. 3.

Fig. 5 is a section upon line 5-5 of Fig. 3.

Fig. 6 is a sectional detail of the lifting hook, showing a method of disengaging.

Fig. 7 is a section upon the line 7-7 of Fig. 3.

Fig. 8 is a similar section showing my holder being lifted in place.

Fig. 9 is horizontal section of the lifting hook, taken upon the line 9-9 of Fig. 5.

In the drawings reference numerals 13-11 and 12 represent the end walls, sidewalls and ceiling, respectively, of the room in which my device is installed. 13 is a partition between the cleaning room and drying room, provided with any suitable type of doors.

Supported by the ceiling are tracks 14, preferably of the section shown in Fig. 3 from which is suspended a traveling carriage represented in its entirety by reference numeral 15. The two sides of the carriage are formed preferably by channels 16-16, connected by channels 17-17, near the center as shown in Figs. 3-4-5, forming the opening 18. The ends of the channels 16 are connected by vertical brackets 18, secured to the side channels 16 by means of rivets 19 to the top of

brackets 18 and bosses 20 through which are passed pins 21, to the ends of which are rotatably mounted rollers 22 adapted to roll in the tracks 14 (Fig. 3).

In the opening 18 is slidably mounted a form of box, represented in its entirety by reference numeral 23 and consisting of four sides 23', provided with out-turned flange 24. The box 23 is suspended in the opening 18 by means of bolts 25 passing through the flanges of the channels 16-17 of the carriage 15 and the out-turned flange 24 of the box 23. The bolts 25 are provided with nuts 26. Disposed between the flanges of the carriage and that of the box are springs 27 (see Figs. 3-4-5). The inside corners of the box are provided with support pins 29, upon which are rotatably mounted the concave rollers 30-31. The rollers are of such contour and are so placed as to form an oval opening 32 (Fig. 4). Secured to the side walls 11 are bearings 33 in which is rotatably mounted a shaft 34, provided with rounded key ways 35. Slidably mounted upon shaft 34 is a lifting drum 36, bored out longitudinally as at 37 (Figs. 3-5).

Mounted in the bore 37 are housings 38, containing balls 39, which co-act with the key ways 35 of the shaft. These balls will cause the drums to rotate with the shaft 34 and still permit it to slide thereon; to one end of the shaft 34 is keyed a sprocket 40; passing over this sprocket is a sprocket chain 41. This chain also passes over sprocket 42 mounted on a stub shaft 43 secured to the wall 11 (see Figs. 1-2).

It is evident that by turning sprocket 42, shaft 34 and drum 36 will in turn be rotated.

Suspended from ceiling 12 by means of hangers 44 and supported by the end walls 10 by V tracks 45, clearly shown in section (Figs. 7-8) upon rails 45 is detachably mounted another carriage, represented in its entirety by reference numeral 46. This carriage consists of a long rigid bar 47, the lower edge of which is provided with hooks 48 from which a rug may be suspended. Near the ends of the bar 47 are secured hangers 49 provided with a beveled face 51 (Figs. 7-8).

In the center of the bar 47 is secured a bracket 52, having oblique side 53 and provided with a ball 54 at the top (Figs. 3-5-6-7-8). Wrapped around the drum 36 is a cable 55, one end of which is secured to the drum as at 55 in Fig. 5. The other end of this cable drops through the oval opening 32 (Fig. 4) and is provided with a hook, represented in its entirety by reference numeral 57.

This hook is in the form of a solid, having an oval horizontal section (Fig. 9), and hollowed out at one side as at 59, and open at its bottom as at 59, forming a pocket 60, which is adapted to

receive the ball 54 of the bracket 52 (Figs. 5 to 8).

The method of operating my device is as follows: A rug placed upon the floor is fastened to or engaged by the carriage 47, which carriage is then hooked to the traveling hoist. It is then raised as shown, using any desired motive power. The rug carrier 47 is controlled in its transit by guide means and may be turned as at reference numeral 52 where it may come to a full stop slightly above the V rail 45 where the traveler is susceptible of being swung to the side of said V rail and continuing this latter movement, can be released or disengaged. Upon lowering the hoist hook or means, the carrier 47 is placed with friction decreasing means, such as rollers, upon the support rail 45 in complementary relation to the traveling transverse rug hoist, which is supported from the room ceiling. The means as shown employed herein consist of a combination of guide means of automatic action, a slidable spring tension box, bearings mounted within same to form an opening to receive the hoist carriage and co-act therewith on the underside thereof. Sliding rug rack means composed of a plurality of V rails in connection with support V rail 52, carriage 47, as shown in Fig. 1 at line 2-2 are atop the hoist hook and connected with and supported by end walls 10. Secured to the same are angle bar means suspended from ceiling of frame by hangers 44 in connection with V rail 45. Here is shown one form of my slidable transverse rug rack, hoist and conveyer in front elevation. In Fig. 2 is shown a plan view of same and its continuing operation in connection with rug carrier 47 positioned on V rail 45 as when the same is conveyed transversely of the desired destination on the track rail where it can be disengaged automatically by releasing hoist 42 to co-act with spring tension in roller box with the top of hoist means, from which it then is released by co-action with the spring tension and the rug carrier is moved to either side as desired, laterally by the operator and then returned to any desired point, by the same means in reversed operation.

It is obvious from the foregoing drawings and the accompanying specification that I have a conveyer for rugs and like articles which will with the fewest manual operations lift from the floor a rug or the like, without undue stretching of the article or distortion of its individual or particular pattern or design or dimensions, and bring it to a position to be operated upon by an automatic conveyer, by means of which the article so carried will be supported, automatically tripped into a conveying channel and deposited at the will of the operator at its destination, such as a drying room, delivery room or the like, as the convenience of the operator may dictate.

The means of doing these things which I claim as my invention, while individually old in the art of conveyers, are nevertheless new in the combination in which I present them in my disclosure. There is now no such complete machine which will accomplish what I have in my invention achieved.

I call particular attention to the method of engaging and disengaging the cargo carried in my conveyer and its automatic features, due to the

reciprocal action of the ball within the contour of my socket and the trip which, after elevation, runs the load along the carriage to the desired destination thereof.

While I have shown but one embodiment of my invention, I am aware that other means will occur to those skilled in the art, which do not depart from the spirit and scope of my invention and, therefore, I do not wish to be limited to the particular device shown.

I claim:

1. A rug hanging mechanism, adapted to fit into a room, consisting of a plurality of V shaped tracks, in spaced relation and all in substantially the same horizontal plane, means for suspending said tracks from the ceiling of said room, means for firmly affixing said tracks to the side walls of said room, tracks transverse of and above said V shaped tracks, a carriage moveable upon said transverse tracks, sprocket wheels mounted respectively above and below said carriage, a sprocket chain passing over said sprocket wheels, a lifting drum positioned above said carriage, an opening in said carriage, a cable wound about said lifting drum and passing through the opening in said carriage, a hollow block, to which the lower end of said cable is affixed, a second carriage, adapted to travel along said V shaped tracks, means for attaching said second carriage to the hollow block at the end of said cable, in detachable relation thereto, whereby said second carriage may be by rotation of said drum, raised and lowered, means upon the bottom of said carriage adapted to engage a rug and means whereby the rug may be lifted from the floor to the level of the V shaped tracks and placed upon any of a said plurality of V shaped tracks along which the carriage of the rug may be moved to any point desired.

2. A rug hanging mechanism adapted to fit into a room, consisting of a plurality of V shaped tracks, in spaced relation and all in substantially the same horizontal plane, hangers, attached to the room ceiling and to said V shaped tracks, a second set of tracks, transverse of said V shaped tracks, hangers supporting said transverse tracks from the room ceiling, a carriage, moveable upon said transverse tracks, sprocket wheels, one of which is mounted above, and the other below said carriage, a sprocket chain passing over said sprocket wheels, a lifting drum, mounted above said carriage, an opening in said carriage, a cable wound about said lifting drum and depending therefrom through the opening in said carriage, a hollow block, to which the lower end of said cable is attached, a second carriage, consisting of a solid bar, a shank affixed to said bar near its center, a ball at the upper end of said shank, adapted to fit into and act in moveable relation to said hollow block, one side of said shank being oblique, the other indented to conform to the contour of said V shaped tracks and move thereon, hooks at the bottom of said bar whereby a rug may be hooked on to the bar, means for elevating and lowering said bar by the rotation of said lifting drum to the level of the said V shaped tracks and a means for depositing said carriage upon any one of the several V shaped tracks and carrying the same thereon.

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