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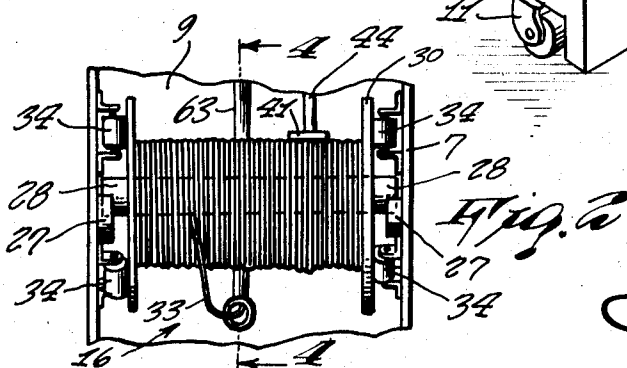
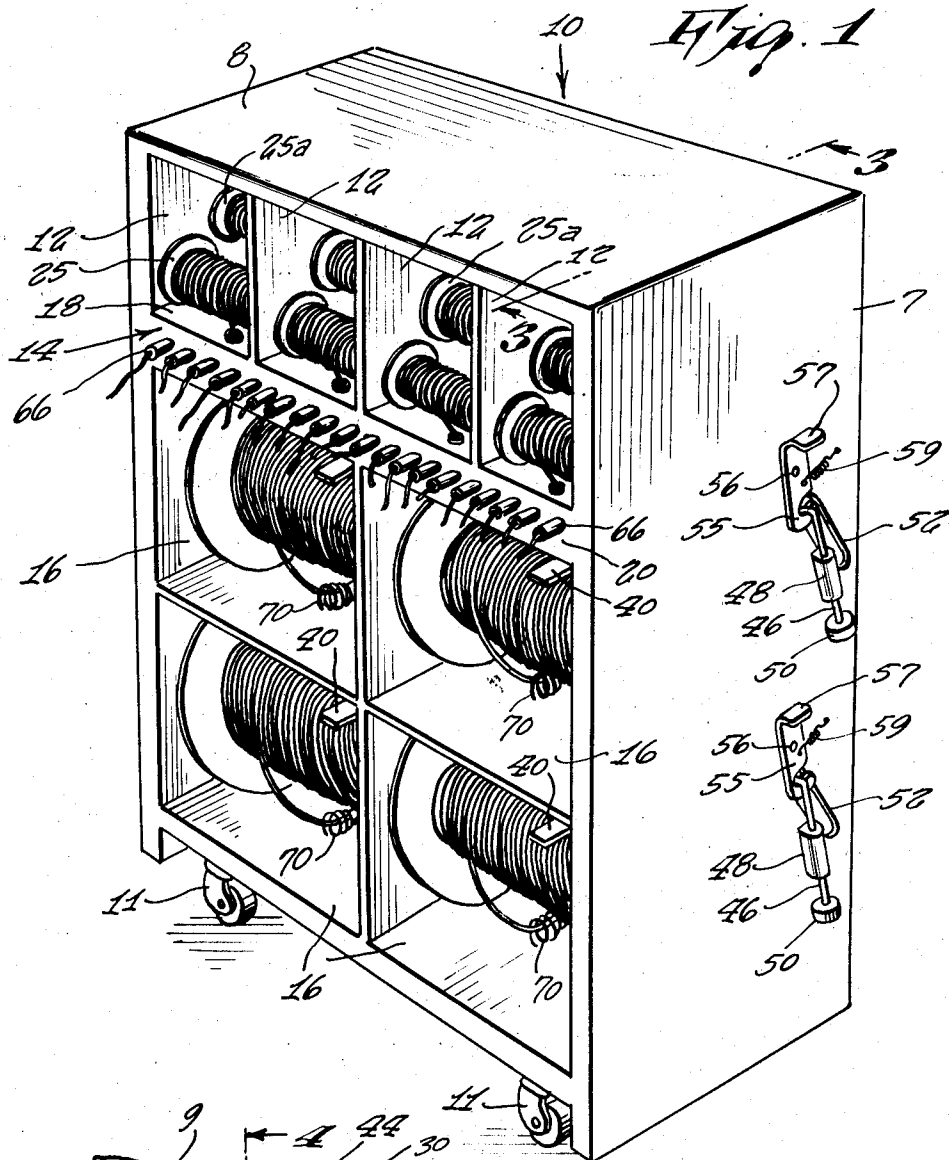
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STORAGE RACK AND WIRE DISPENSER

Filed July 5, 1956

2 Sheets-Sheet 1



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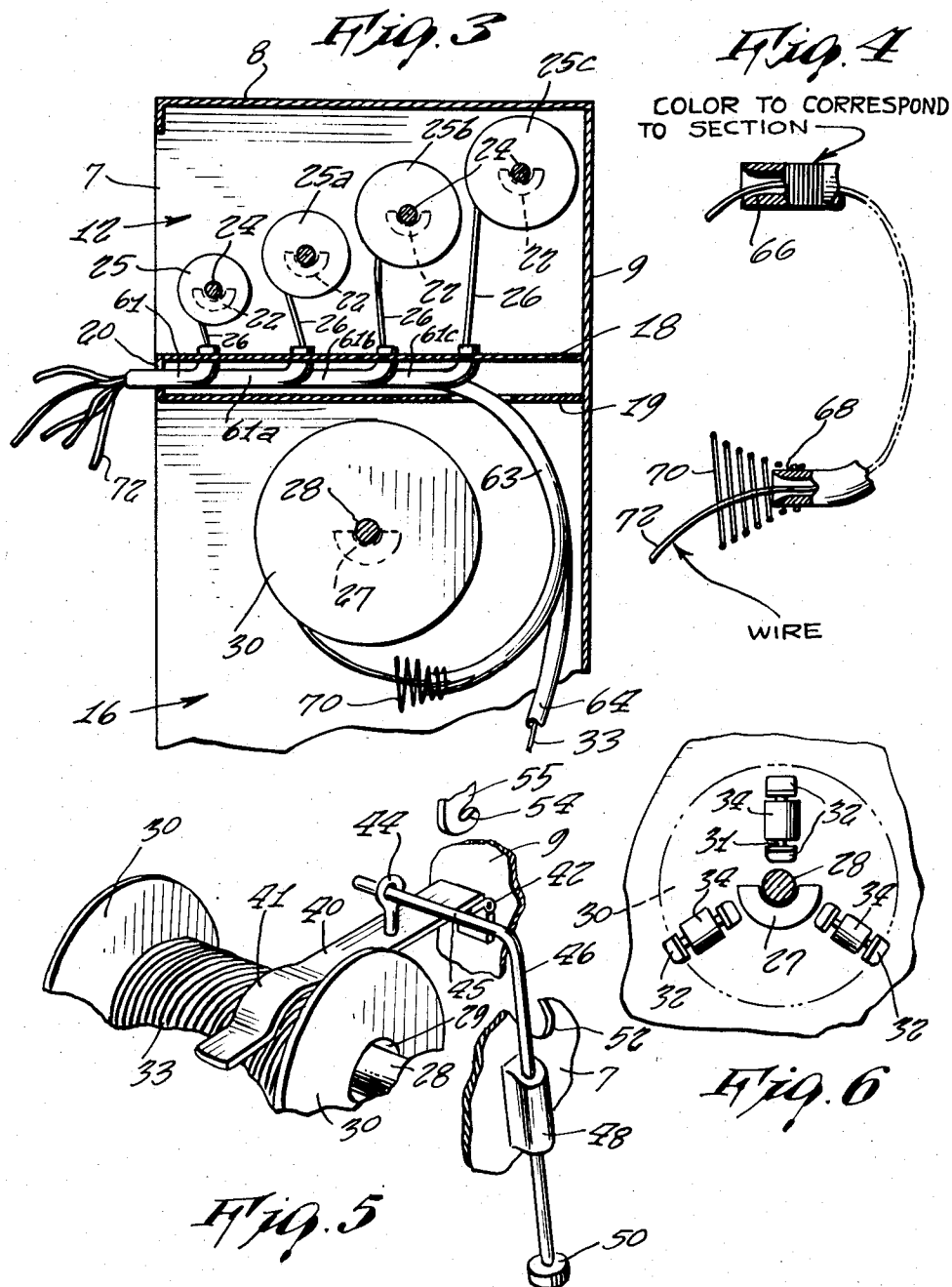
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STORAGE RACK AND WIRE DISPENSER

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3 Claims. (Cl. 242—137.1)

This invention relates to storage and dispenser racks and, more particularly, to dispensers for various sizes of wire.

Ordinarily, the storage and dispensing of wire, such as covered and plain electrical wires, requires substantial space and handling. Whenever a large variety of such wire is assembled for sale or for use in shops and factories, there is always the tendency that certain spools will unwind, become difficult to locate, and otherwise bothersome to use. An object of this invention, therefore, is to provide an enclosed storage rack for dispensing various types and sizes of wire and the like that is simple in construction, efficient in operation, and which will overcome the aforementioned difficulties.

Another object of this invention is to provide a storage cabinet for wire dispenser units that is divided into a plurality of various sized compartments and which is readily adapted to support a plurality of various sizes of spools and reels therein and having means for effecting the dispensing of wires contained thereon.

Another object of this invention is to provide automatic and retractable brake means for use in connection with spools supported within a dispensing rack.

A still further object of this invention is to provide novel bearing support means for reels, spools, and the like.

All of the foregoing and still further objects and advantages of this invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing, wherein:

Figure 1 is a perspective view of a device made in accordance with this invention;

Figure 2 is a fragmentary front view of one of the compartments of the device shown in Figure 1;

Figure 3 is a cross-sectional view taken along line 3—3 of Figure 1;

Figure 4 is a cross-sectional view taken along line 4—4 of Figure 2;

Figure 5 shows a brake mechanism made in accordance with this invention; and

Figure 6 is a view showing the support rollers associated with the reels carried within the cabinet shown in Figure 1.

Referring now to Figure 1 of the drawing, a cabinet 10 made in accordance with this invention is shown to include a pair of spaced vertical sides 7, connected along their top edges by a top 8 and being enclosed towards its rear end by a rear wall or back 9. The cabinet is supported for movement by means of a plurality of casters 11 so that the device is easily moved from one location to another. The interior of the cabinet 10 is divided into small compartments 12 and large compartments 16 by various vertical and horizontal partitions, the large compartments being separated from the small compartments by a horizontal divider 14 having an upper floor section 18 and a spaced lower floor section 19, connected at the front of the cabinet by a front panel 20.

As more clearly shown in Figures 3 and 6, each of the

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small compartments 12 are provided with vertically and horizontally spaced pairs of semi-circular bearings 22 opening upwardly toward the top of the compartment, each pair of which are adapted to support a horizontal shaft 24 that is rotatably received within the longitudinally disposed opening of the various sized spools 25a, b, c, each having vertically flanged sides between which a quantity of wire 26 is adapted to be wound. Referring now to Figures 2 and 3, each of the large compartments 16 is provided with a single pair of spaced semi-circular, upwardly opening bearings 27 that are adapted to support a shaft 28 extending through the large spools 29 having vertically flanged sides 30 between which a quantity of wire 33 is adapted to be wound. As more clearly shown in Figures 2 and 6, equally spaced pairs of journals 32 having a transversely extending shaft 31 rotatably carrying a roller 34 are disposed around the center of each pair of bearings 27 and are adapted to rollably engage the adjacent surface of each reel flange 30 so as to center the reel and maintain it out of engagement or interference with the partitions or sides of the cabinet.

Referring now to Figure 5 of the drawing, a releasable brake assembly for the larger reels 29, is shown to include a substantially horizontally disposed lever 40 having one end terminating in an arcuate friction surface 41, the other end of which is hingedly secured to the back wall 9 of the cabinet by a hinge pin 42. An apertured bar 44 is supported along the upper surface of the lever between the hinge pin and the friction surface 41, the aperture being adapted to slidably receive one leg 45 of an L-shaped actuator member. The other leg 46 of the actuator is slidably received within a bearing guide 48 carried by the side 7 of the cabinet and terminates in a knob 50. The horizontal leg 45 of the actuator is adapted to extend through a diagonally extended slot 52 in the respective side 7 of the cabinet so as to be displaceable therein. A hook catch 55 is disposed adjacent to the upper extremity of the slot 52 and has a hook-shaped slot 54 at its lower end for removable engagement with the horizontal leg of the actuator. The catch 55 is pivotally secured to the side 7 and is adapted to be rotated out of engagement with the horizontal leg 45 by means of an operator flange 57 which may be manually moved against the action of a return spring 59 secured to the catch and the side of the cabinet.

Each of the smaller reels 25a, b, c, in the respective smaller compartments 12 is provided with a feed guide tube 61 immediately adjacent thereto, for receiving the free end of the wire carried by each of the respective spools or reels. Similarly, the upper and lower large compartments 16 are each provided with a feed guide tube 63, 64, respectively, for receiving and directing the free end of the wire carried by each spool outwardly from the interior of the cabinet to a central distributing point. As shown in Figure 1, the distributing point is along the horizontal front panel 20 of the main divider 14. As is clearly shown in Figure 3, each of the respective feed guide tubes extend into the space between the upper and lower floor sections 18, 19, and outwardly through the front panel 20 into alignment along the outer edge thereof. The outer extremity of each of the feed guide tubes is provided with an internally tapered bushing 66 through which the free end of the wire is extended. The interior end of the tube is also internally tapered such as at 68, as shown in Figure 4. The inner end of the feed guide tubes adjacent to the larger spools 29 are provided with conically shaped springs that are adapted to yield under the pressure exerted by the wire being fed from various parts of the spool. In order to facilitate identification of each of the wires being fed from the guide tubes, the bushing 66 of each tube is painted the same color as the color of the compartment with which it communicates,

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each compartment being painted a color different from each of the others.

While this invention has been described with particular reference to the specific form shown in the drawing, it is to be understood that such is not to be construed as imparting limitations upon the invention, which is best defined by the claims appended hereto.

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

1. A storage rack and wire dispenser comprising, in combination, a cabinet, a plurality of spaced partitions dividing said cabinet into a plurality of separate compartments, each of said compartments having means for rotatably supporting at least one reel adapted to be wound with wire, guide means associated with each of said reels directing wire carried by each of said reels to a predetermined location, certain ones of said compartments being adapted to rotatably support a plurality of reels of different sizes in horizontal and vertically spaced relationship, said rotatable support means comprising transversely spaced and upwardly open semi-circular bearing members carried by transversely spaced compartment defining partitions, a plurality of roller bearings substantially equally spaced about the axis of rotation of said reel and said bearing members carried by said respective partitions, releasable brake means carried by said cabinet in association with certain ones of said reels for continuously retarding rotation thereof, said guide means associated with said certain reels comprising tubular ducts terminating at one end in outwardly flared and inwardly tapered conical coil spring fittings lying substantially along a tangent of said reels, and said guide means associated with the other of said reels having one end directed

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substantially perpendicularly to the axis of rotation of the associated reel, the opposite extremities of all of said ducts terminating at said predetermined location.

2. A device as set forth in claim 1, wherein said brake means comprises a lever having one end pivotally carried by one of said partitions for rotation about an axis substantially parallel to the axis of rotation of said reel and having an arcuate reel engaging portion at the other end thereof, said arcuate portion normally being urged into engagement with said reel by gravity, lever means for disengaging said lever from said engagement with said reel comprising a substantially vertical actuating shaft carried by said cabinet and having a horizontal leg extending through said cabinet into vertical reciprocating engagement with said lever, and releasable means for maintaining said leg and lever in a vertically displaced position relative to said reel.

3. A device as set forth in claim 2, wherein each of said compartments are of a predetermined color, and the terminal portions of each of said tubular ducts emanating from each of said compartments are of the same color as said respective compartments from which they emanate.

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