Oct. 25, 1960 G. M. BEARDSLEE 2,957,644

DISPENSER REEL RACK

Filed April 12, 1957

FIG-1

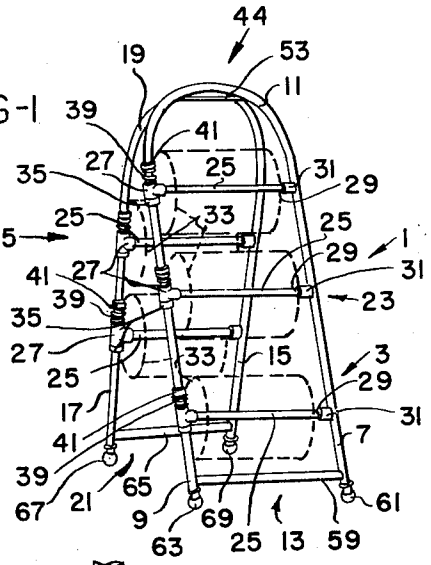


FIG-2

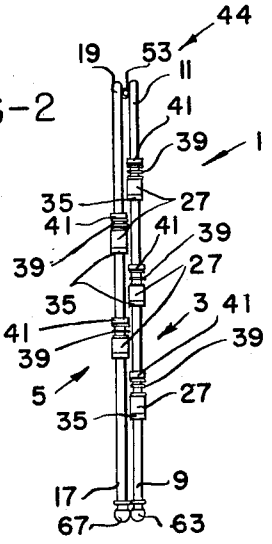


FIG-5

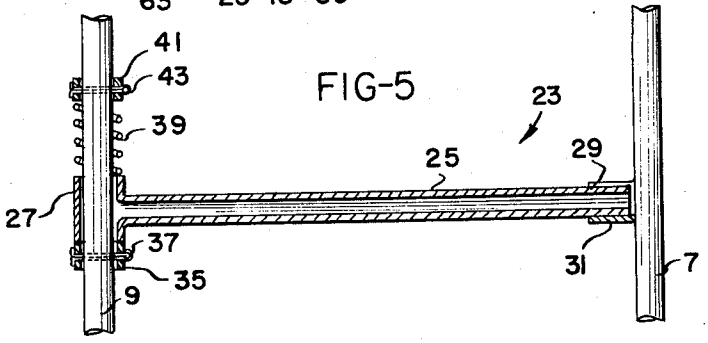


FIG-6

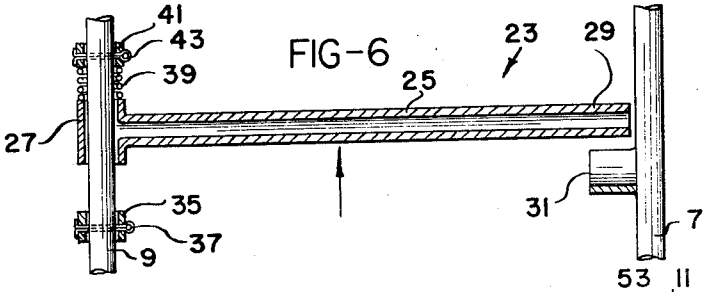


FIG-4

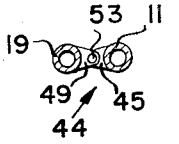
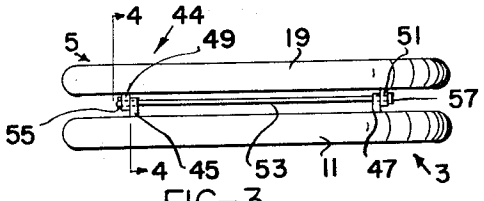


FIG-3



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DISPENSER REEL RACK

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2 Claims. (Cl. 242—139)

My present invention relates to a dispenser rack which is particularly suited for the dispensing of materials, such as wire, from reels.

A primary object of the invention is to provide a rack having utility in the electrical industry as a dispenser, as the rack readily retains a plurality of spools of wire, is itself conveniently transported and is suitably arranged with manually operable latching mechanism to permit of mounting and demounting of spools of heavy material.

Another object of the invention is the provision of a dispenser rack of simple and improved construction, which is composed of few but simply readily assembled parts also constructed and arranged as to preclude derangement of the same; the major components of which rack are pivotally mounted for movement from an open to a closed position for transportation of the rack.

These and other allied objects and advantages of the invention will be apparent from the following detailed description and accompanying drawings wherein:

Figure 1 is a perspective view of the rack of the invention in open position indicating in dotted line the arrangement of the spools on the rack;

Figure 2 is a side elevational view of the rack of Figure 1 in closed position and with the spools removed;

Figure 3 is a somewhat enlarged top plan view of the structure of Figure 2;

Figure 4 is a sectional view taken on line 4—4 of Figure 3;

Figure 5 is a fragmentary view partially in section illustrating the latching mechanism of the dispenser rack in latched position; and

Figure 6 is a view similar to that of Figure 5 but illustrating the latching mechanism in a raised position for being opened to receive a spool of material.

Referring to the drawings in detail, the dispenser rack is shown in Figure 1 in open position and is designated generally by the numeral 1. The rack comprises a first frame 3, a second frame 5, each of which as shown in Figure 1 is substantially planar, U-shaped and vertically extending. Frame 3 comprises opposed tubular cylindrical legs 7, 9 and has a closed upper end 11 and a lower open end indicated generally at 13. Frame 5 comprises opposed tubular cylindrical legs 15, 17, a closed upper end 19 and a lower open end indicated generally at 21. Suitably each frame, as thus far described, is formed of a single integral tubular portion of steel, aluminum or other metal.

Identical latching mechanisms indicated generally at 23 and shown in detail in Figures 5 and 6 are carried on each frame (Figure 1). Only one latching mechanism will be described in detail since all are similar.

Referring to Figures 1, 5 and 6 the latching mechanism includes tubular pivotally mounted cross bar 25 which extends transversely and horizontally between the vertically extending legs. The cross bar 25 has integral therewith a tubular head 27 which is mounted for sliding rotational movement on the legs of the frame.

The cross bar at opposed end 29 is free for movement, but is arranged to be received in a socket in the form of a half cup 31 carried by the frame leg, and which half cup serves as a keeper of the latching mechanism. The half cups 31 may be secured to the frame legs in any convenient manner as by being welded thereto or formed integral therewith.

Cross bars 25, as shown in Figure 1, are in closed latched position and carry the reels shown in dotted line and indicated by the numeral 33. Mounted below the head 27 of each cross bar is a collar stop 35 which is secured to the frame leg against sliding and rotational movement by a cotter pin 37 passed through the collar and leg. Collar stop 35 abuts the lower end of head 27 and restricts downward movement of the head and cross bar on the frame, and in conjunction with the half cup 31 serves to maintain the cross bar in closed position. A spring 39 abuts the upper end of the head 27 and biases the head and cross bar to the closed position shown in Figure 1. Upper stop collar 41 abuts the upper end of the spring 39 and is itself provided with a cotter pin 43 passed therethrough and through the frame leg to prevent rotative and sliding movement of the collar 41.

It is to be here noted that the positioning of the spring 39 on the same leg as the head 27 rather than against the free end of the cross bar has been found to be more suitable as it tends to prevent binding.

To swing the cross bar in the closed position of Figure 5 to the open position of Figure 6, it is merely necessary to manually slide the cross bar on the head 27 against the action of the spring 39, thereby compressing the spring; this raises the cross bar and the free end 29 thereof and permits the free end to be swung away from the half cup 31. The head 27 provides for rotational as well as sliding movement of the cross bar.

Referring now to Figure 2, the rack is shown therein in closed position with the spools removed for convenient transportation of the rack. For this purpose, as will be seen from Figure 3, the rack is provided with pivot means designated generally at 44.

To form the pivot means the closed end 11 of frame 3 is provided with a pair of apertured spaced ears designated by the numerals 45, 47. Frame 5 is similarly provided with a pair of spaced apertured ears designated by the numerals 49, 51. The ears 45, 49 abut and overlap laterally, as do the ears 47, 51.

A long cylindrical rod 53 is passed through the mating apertures of the ears to provide the pivot for the frames 3 and 5, as will be apparent from Figure 3. At one end the rod 53 is provided with a cotter pin 55 to inhibit longitudinal rod movement in one direction, and at the other end the rod is suitably peened at 57 to inhibit longitudinal movement relative to the ears in the other direction.

Frame 3 at its lower open end 13 has welded to the leg a strengthening member in the form of a cylindrical cross member 59. Legs 7, 9 are also provided, respectively, with rubber covered feet 61, 63 to inhibit sliding of the frame. Frame 5 is similarly provided with the lower cross member 65 and feet 67, 69.

As will be noted from Figures 1 and 2 the frame 3 carries three substantially uniformly vertically spaced latched members and is adapted to mount three reels for rotation on the cross members 25. The reel 5 carries two latched members spaced apart approximately the same distance as the latching members of frame 3 and accordingly it is adapted to mount two reels. However, as may be most clearly seen from Figures 1 and 2, the latching mechanisms and cross bars on the frames are alternately spaced vertically, that is, the lower cross bar of frame 3 is below the lower cross bar of frame 5,

providing the cross bars of one frame intermediate the cross bars of the other frame; that is, the staggered relationship of the cross bars prevents interference between reels mounted on the cross bars. Also then material on the reels carried by each of the frames may be drawn from the frame simultaneously without interference. This enables the completion of wiring operation in a relatively short time. Wire of type TTF commercially used for electric motor controls is readily dispensable from the rack of invention, utilizing both sides of the rack simultaneously.

The staggered relationship of the cross bars also permits a reel or spool which has been emptied to be replaced without interference with other spools; accordingly no substantial disruption of work occurs when a spool is replaced.

It is also to be noted that the inverted V-shape of the rack may be readily altered to receive spools of various sizes by merely pivoting the U-shaped frames relative to each other, the rubber covered feet being effective to control against slippage in extended position of the frames of the rack.

It will be understood that this invention is susceptible to modification in order to adapt it to different usages and conditions and accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. In a dispenser rack for spools, in combination, a planar frame of U-shape having a pair of substantially parallel, vertically extending tubular legs, a hollow cylindrical spool-supporting cross-bar extending between the legs and having on one end thereof a tubular head received over a first tubular leg of the frame and slidably and rotatably mounted on the first leg, a first collar fixed in the first leg below the head and normally abutting the head to restrict downward motion of the head on the first leg, a second collar fixed on the first leg above the head and spaced therefrom, a coil spring around the leg abutting between the head and second collar and normally biasing the head toward the first collar, the

head being raisable by manual pressure against the action of the spring, the other end of the cross-bar being free, said spool supporting cross-bar being movable in a plane transverse to the plane of the frame, a half cup socket formed on the second leg and positioned to receive therein the free end of the cross-bar, a plurality of similar supporting cross-bars in vertical relation on said planar frame, a second U-shaped planar frame, said frames having upper closed ends, pivot means connecting the upper closed ends of said frames together, and said second frame having supporting cross-bars in staggered vertically spaced relation with the cross-bars of said first mentioned frame.

2. A dispenser rack for reels comprising first and second vertically extending U-shaped planar frames having tubular legs, closed upper ends and open lower ends and rubber covered feet on the tubular legs, pivot means retaining the closed upper frame ends together, reel support means on each of the frames movable between latched and unlatched positions, the reel support means comprising vertically spaced cross-bars and the cross-bars of the first frame being staggered vertically relative to the cross-bars of the second frame, the cross-bars extending substantially between and being supported by the frame legs in the latched position thereof and being swingable outwardly of the rack in the unlatched position thereof transversely to the U-shaped planar frames whereby a reel may be mounted on the cross-bar in the said unlatched position.

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