CLOTH BOLT DISPLAY RACK

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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CLOTH BOLT DISPLAY RACK
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Application May 20, 1946, Serial No. 670,979

4 Claims. (Cl. 211—44)

1. This invention relates generally to racks and supports and more particularly to racks suitable for the display of cloth or similar web material in wound or bolt form.

Such materials have, in the past, been stacked upon shelves with their ends in view or stacked in a horizontal row with their thinnest long edge exposed.

It is among the objects of the present invention to provide structure of the class described wherein the cloth bolts are arranged in rows presenting a maximum of their area to the viewer or customer and yet by virtue of a tiered arrangement a large number of individual bolts may be stored and displayed in a minimum of space.

Another object herein lies in the provision of structure of the class described which may be easily collapsed and reassembled so that the same may occupy a minimum of space when stored and may be conveniently transported from manufacturer to user or between different locations where it is used.

Another object herein lies in the provision of a cloth bolt display rack which may be assembled and disassembled with a minimum amount of skill and tools.

Another object herein lies in the provision of a cloth bolt display rack wherein the cloth bolt support elements may be shifted in position with respect to each other whereby full bolts may be put in place and removed without deleteriously affecting neighboring bolts and whereby even the highest tier of bolts may be removed or replaced by a relatively short person. A feature of the adjustability of the position of the cloth bolt support elements enables the bolts to be conveniently engaged and disengaged, particularly with respect to the insertion of the cloth bolt engaging members into the open ends of the bolts.

Another object herein lies in the provision of a display rack of the present character wherein storage space is provided for bolts which may replace those which have become consumed. The storage space moreover may be provided for carrying additional shades or qualities of the material on display in the upper portion of the device.

Another object herein lies in the provision of a device of the class described wherein protection is obtained from some of the dust which might normally fall upon the bolts of cloth.

A feature of the invention lies in the provision of illumination means in conjunction with a canopy which provides protection and serves as a reflector for the illumination means.

2. Another object herein lies in the provision of a rack of the character described having storage space with dividers for maintaining the bolts of cloth in predetermined position.

These objects and other incidental ends and advantages will more fully appear in the progress of this disclosure and be pointed out in the appended claims.

In the drawings in which similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a view in perspective of an embodiment of the invention.

Figure 2 is an enlarged vertical sectional view as seen from the plane 2—2 on Figure 1.

Figure 3 is an enlarged fragmentary oblique sectional view as seen from the plane 3—3 on Figure 1.

Figure 4 is an enlarged fragmentary vertical sectional view as seen from the plane 4—4 on Figure 1.

In accordance with the invention the rack includes broadly, end elements 11 and 12, base members 8 and 13, a plurality of divider elements 14, 15 and 16, a plurality of cloth bolt support elements 17—22 inclusive, an upper longitudinal brace and stop 23, a top longitudinal canopy support element 24, and a canopy 25.

The end elements 11 and 12 are substantially identical so that a description of one will suffice for both; the portions of the end element 12 being given the same reference characters as the end element 11 with the addition of a prefix "1."

Thus, the element 11 includes a central upright portion 26, downwardly diverging portions 27 and 28, substantially vertical portions 29 and 30, and legs 31 and 32. Joining the portions 29 and 30 are a pair of horizontally disposed end members 33 and 34. Extending between the end members 33 and 34 are a plurality of end divider members 35—37 inclusive. The downwardly diverging portions 27 and 28 are preferably integral with the upright portion 26 and similarly the members 35—37 are preferably integral with the members 33 and 34 which at their ends are preferably integral with the vertical portions 28 and 30.

This integration may be accomplished in any suitable manner, as for example, by welding.

The base members 8 and 13, as well as the brace 23 and the canopy support 24 are substantially identical, being preferably in the form of elongated hollow members having means in the ends thereof for their detachable engagement with the end elements 11 and 12 as will more fully appear.

The divider elements 14, 15 and 16 each include
upper and lower horizontal members 38 and 39, 40 and 41, and 42 and 43, respectively. Furthermore, the divider elements 14, 15 and 16 each include a plurality of divider members 45, 46 and 47 respectively. The divider members preferably integrate the upper and lower horizontal members 38 and are connected thereto in any suitable manner as for example by welding. The ends of the upper and lower horizontal members 38—43 are provided with detachable attaching means similar to that shown in Figures 3 and 4.

The cloth bolt support elements 17—22 inclusive include longitudinal support members 48—53, and cloth bolt engaging members 54—59 respectively. Each of the ends of the longitudinal members 48—53 is provided with detachable engaging means such as that shown in Figures 3 and 4. The cloth bolt engaging members 54—59 are preferably of sufficient length so that they may penetrate the cloth bolts a distance sufficient to avoid accidental removal or dropping of said bolts from said engaging members. The width of the members 54—59, that is to say longitudinally of the members 48—53 is likewise such as will obtain adequate frictional engagement between the bolt engaging member and the walls of the opening in the core of the bolt of web material.

The canopy includes a top wall 60, end walls 61 and 62 and longitudinal walls 63 and 64. The inner surfaces of the canopy are preferably treated with a highly reflective substance such as metallic plating or white paint (not shown) so as to cause the rays of light emitted from the light sources 65 and 66 to be downwardly directed upon the bolts 54—59.

Each of the longitudinal support members 48—53 is axially rotatable to a limited amount as for example through substantially ninety degrees. This is accomplished by structure illustrated in detail in Figures 3 and 4, it being understood that each of the ends of the members 48—53 is similarly constructed. As shown in Figure 3 the end of the longitudinal support member 50 is provided internally with a nut 67 which is in turn provided with a locknut 68. The nut 67 is maintained within the ends of the member 50 in any suitable manner as for example by welding and the locknut 68 may be similarly connected. The portion 126 is provided with a pair of aligned orifices 169 and 170 which are penetrated by a long screw 171 which therewith engages the nut 67 and the locknut 68. The rim 72 or end edge of the support member 50 is indented to form the detents 73 and 74 which are adapted to coact with the projection 75. The projection 75 may be a pin or a screw (as shown) therewith engaged the diverging portion 126. The tension obtained by tightening of the screw 171 shown and the screw at the opposite end of the member 50 is adjusted so that the member 50 may be rotated accompanied by some friction. In the uppermost position of the engaging members 54—59 they take the positions indicated by the full lines in Figures 1 and 2 or the dash-single-dot lines in Figure 4. In the lowered position thereof they take the position indicated by the dash-double-dot lines on Figure 2 and Figure 4.

The assembly of the entire device is a convenient matter. The end elements 11 and 12 are connected by means of screws 76—176, 77—177, 78—178. The canopy is secured by means of the end walls 61 and 62 and the ears 179 and 179 which are penetrated by the screws 80—180 and 81—181. Next, the divider elements 14, 15 and 16 are put in place being maintained by the screws 82 and 182. The longitudinal support members 48—53 are maintained in place by the screws 111 and 111 in a manner as heretofore described.

The end elements 11 and 12 may be provided with wall closures 83, only one of which is shown (in Figure 2). Extending between the base members 9 and 13 a floor 84 may be provided to prevent dust and dirt from the surface upon which the device 10 is resting from reaching the bolts which are stored below the upper horizontal members 38, 40 and 42.

In use any one of the elements 17—22 may be partially rotated so as to place the engaging members thereon in a convenient position whereupon a bolt of cloth such as the bolts 54—59 inclusive may be placed thereupon or removed. The use of the bolt as a handle or one of the engaging members permits the support elements 17—22 to be returned to their upper positions where they lie generally below the canopy to receive protection and illumination therefrom. From a perusal of Figure 2 it will be seen that the upper tiers of bolts 98 and 99 rest against the longitudinal brace 23. The lower tiers 96 and 97 rest upon the tiers 98 and 99, and the lowermost tiers 94 and 95 rest upon the bolts 96 and 97. This arrangement and coaction of the parts of the device and the bolts with which it is used take some of the strain off the stops 75 so that these may coact. This permits the detent structure generally to be of lighter character.

It may thus be seen that I have provided a novel and useful bolt rack display construction which may support and display a large number of bolts in a rapid and convenient manner, may maintain an additional storage supply of bolts, and which may be easily assembled and disassembled.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described for obvious modifications will occur to a person skilled in the art.

I claim:

1. A cloth bolt display rack comprising: first and second end elements; means connecting said end elements and maintaining the same in spaced position; a cloth bolt support element connected to and extending between said end elements, said cloth bolt support element including a longitudinally arranged support member and a plurality of bolt engaging members extending at an angle with respect thereto; said support member being rotatable about its own longitudinal axis.

2. A cloth bolt display rack comprising: first and second end elements; means connecting said end elements and maintaining the same in spaced position; a cloth bolt support element connected to and extending between said end elements, said cloth bolt support element including a longitudinally arranged support member and a plurality of bolt engaging members extending at an angle with respect thereto; said support member being rotatable about its own longitudinal axis; and means to limit the rotation of the longitudinally arranged support member.

3. A cloth bolt display rack comprising: first and second end elements; and a cloth bolt support element connected to and extending between said end elements, said cloth bolt support element including a substantially horizontally arranged support member and a plurality of bolt engaging
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members thereon, said support member being rotatable about its own longitudinal axis.

4. A cloth bolt display rack comprising: first and second end elements; and a cloth bolt support element connected to and extending between said end elements, said cloth support element including a substantially horizontally arranged support member and a plurality of bolt engaging members thereon, said support member being rotatable about its own longitudinal axis; and means to limit the rotation of the horizontally arranged support member.

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