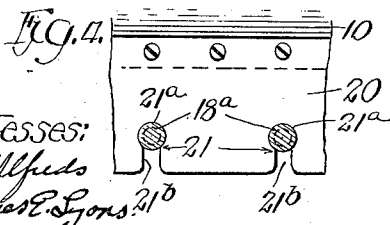
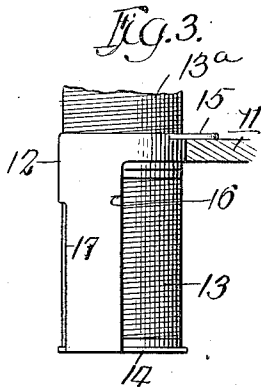


APPLICATION FILED OCT. 1, 1913.

Patented Mar. 24, 1914.



Witnesses:
T. H. Alfords
James E. Lyon

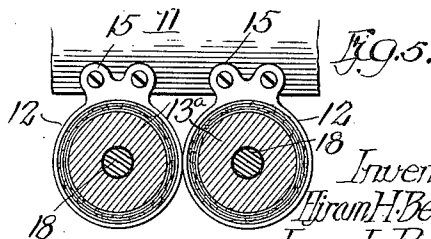
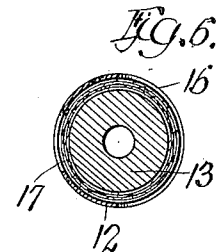
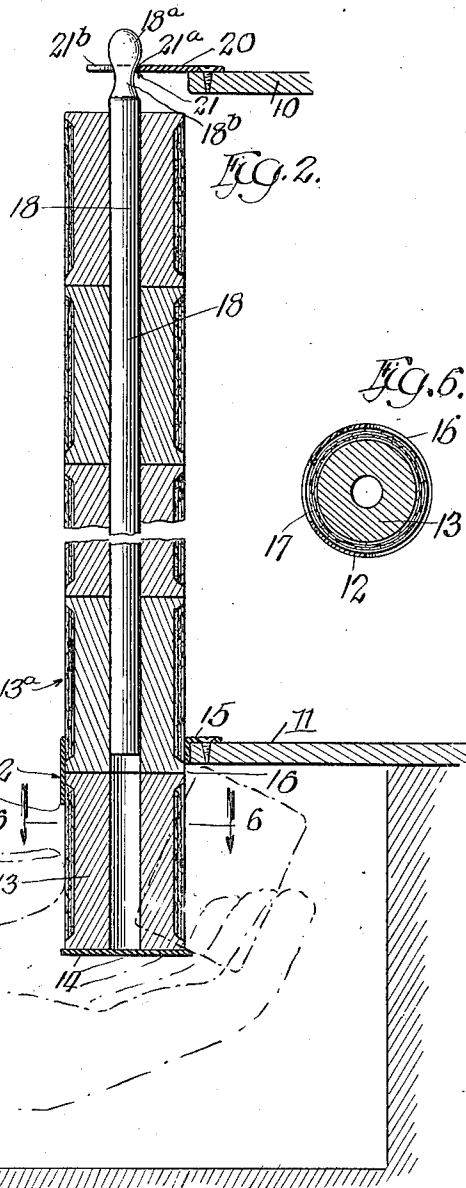


Fig. 5.

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UNITED STATES PATENT OFFICE.

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DISPLAY-RACK FOR SPOOLS, &c.

1,090,831.

Specification of Letters Patent.

Patented Mar. 24, 1914.

Application filed October 1, 1913. Serial No. 792,711.

To all whom it may concern:

Be it known that we, HIRAM H. BELDING and LEON L. PEARCE, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Display-Racks for Spools, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in magazine display racks for spools and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The object of our invention is to provide a magazine display rack for spools arranged in stacks and so constructed that a spool at one end of the stacks may be removed and another spool automatically moved up to take its place in the stack after its removal. The advantages of our invention will appear as we proceed with our specification.

In the drawings:—Figure 1 is a fragmentary view in front elevation of a spool display rack made in accordance with our invention. Fig. 2 is a vertical sectional view through the same on an enlarged scale, said section being taken in a plane indicated by the line 2—2 of Fig. 1. Fig. 3 is a detail sectional view in a plane indicated by the line 3—3 of Fig. 1. Figs. 4 and 5 are detail plan sectional views in planes indicated by the lines 4—4 of Fig. 1. Fig. 6 is a detail sectional view in a plane indicated by the line 6—6 of Fig. 2.

In general, our invention consists of main stack supporting members forming a part of a rack or cabinet; of a plurality of discharge cups or barrels, one for each stack of spools, carried by one of the supporting members from which a spool may be discharged; and of alining members, one for each stack, for keeping the spools in axial alinement with the discharge cups or barrels.

Referring now to that embodiment of our invention illustrated in the drawings, 10 and 11 indicate respectively upper and lower supporting members forming a part of a display cabinet or rack. The edges of the supporting members are preferably in

the same vertical plane and to the edge of the lower supporting member 11 is secured a plurality of discharge cups or barrels 12, one for each stack of spools. Each cup or barrel 12 is a sectional cylindric shell adapted to contain and support the bottom spool 13 of a stack of spools 13^a. The said cup has a bottom wall 14 forming the support for the bottom spool which in turn supports the other spools in the stack 13^a. At the upper end of the cup is formed a horizontal flange 15 by means of which the said cup is fixed to and suspended from the lower supporting member 11. The shell forming the cup 12 has a discharge opening 16 at the rear through which the spool contained by it may be removed. We prefer to make this opening of a height somewhat greater than the height of the spool, and we have illustrated said opening as extending from the bottom wall 14 of the cup to the plane of the bottom side of the supporting member 11. Diametrically opposite the opening 16 in the cup 12 is located a smaller, vertically elongated opening 17 for the insertion of the thumb of the person to assist in removing the spool 13 from the barrel. Said opening 17 also acts as a sight opening so that the color of the spool may be distinguished should the rack be made in such a manner as to hide the other spools 13^a from sight.

To keep the spools in alinement and undisturbed when a spool is being removed, we provide the following: 18 indicates a plurality of vertical spindles, one for each stack of spools, each removably secured to the upper support 10 in axial alinement with an associated cup or barrel 12. Said spindles are threaded through the spool apertures as shown in the drawings. Each spindle has a head 18^a which may be grasped when it is desirable to remove it, and has a neck portion 18^b of a smaller diameter connecting the head 18^a to the main body of the spindle 18. 20 indicates a plate of metal or of any other suitable material fastened by means of screws to the upper support 10 and projecting outwardly therefrom. In said plate 20 are provided a plurality of key-hole shaped notches 21, there being one notch for each stack of spools. Each notch 21 has a circularly shaped part 21^a located a short distance from the edge of the plate 20, with its center in vertical aline-

ment with the central vertical axis of the cup 12 and has a restricted part 21^b opening through the edge of the plate and providing an entry way to the part 21^a. Preferably the part 21^a is smaller in diameter than the diameter of the spindle 18 and the vertical part 21^b is a trifle greater in width than the diameter of the neck portion 18^b of said spindle so as to permit the passage of the neck portion 18^b therethrough. The head 18^a of the spindle 18 being of a diameter larger than that of the part 21^a cannot pass downwardly through the notch and will bear upon the plate 20 so as to support the spindle. The spindles 18 terminate short of the respective discharge cups at the bottoms of their stacks so as not to interfere with the removal of the spools contained therein.

The rack is filled with spools as follows: A spool is inserted into the discharge cup 12 through the top. The associated spindle 18 is then removed from its support and grasped by its head 18^a and held in a reverse position and the desired number of spools threaded upon it. The last spool placed upon the spindle is then inserted into the upper end of the discharge cup and brought to rest on the spool previously placed therein. The neck 18^b of the spindle is then pushed into its key-hole notch 21. Each stack of spools is put in position in the same way. To withdraw a spool from any stack the hand is placed under the discharge cup with the palm upward. The thumb is then inserted through the front opening 15 of the cup and the spool pushed out through the rear opening therein into the open palm of the hand as illustrated in dotted lines in Fig. 2. As the thumb is withdrawn the spool above the one withdrawn will drop to the bottom of the discharge cup and is in position ready to be removed in like manner when wanted.

A device made in accordance with the construction described may be quickly filled with spools, is simple to operate, is cheap to manufacture, and has no moving parts to get out of order.

We claim as our invention:

1. A magazine rack, comprising spaced supporting members, one or more discharge cups fixed to one of said supporting members, and one or more spindles detachably carried by the other supporting member, each spindle being in axial alinement with the central axis of an associated discharge cup.

2. A magazine display rack, comprising upper and lower supporting members, a plurality of discharge cups fixed to the bottom supporting member, and a plurality of spindles detachably carried by the upper supporting member, each spindle being in vertical alinement with the central vertical axis of an associated discharge cup.

3. A magazine display rack, comprising upper and lower supporting members, a plurality of discharge cups fixed to the bottom supporting member, each display cup consisting of a cylindric shell open at the top, closed at the bottom and having a front sight opening and a rear discharge opening and a plurality of spindles detachably carried by the upper supporting member, each spindle being in vertical alinement with the central vertical axis of an associated discharge cup and depending into the upper end thereof.

In testimony that we claim the foregoing as our invention we affix our signatures in the presence of two witnesses, this 26th day of September A. D. 1813.

HIRAM H. BELDING.
LEON L. PEARCE.

Witnesses:

LEE H. FLEMING,
THOMAS J. NOLAN.