

Sept. 16, 1924.

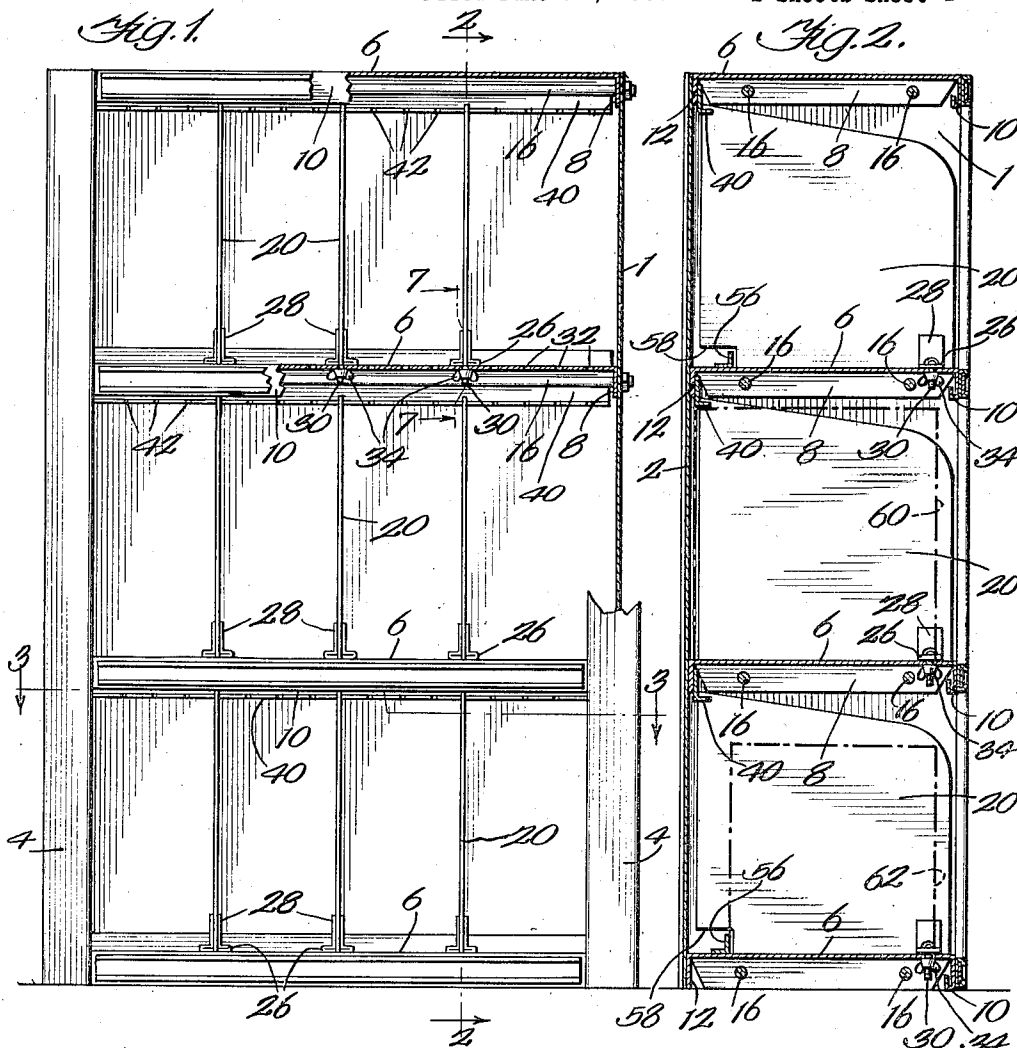
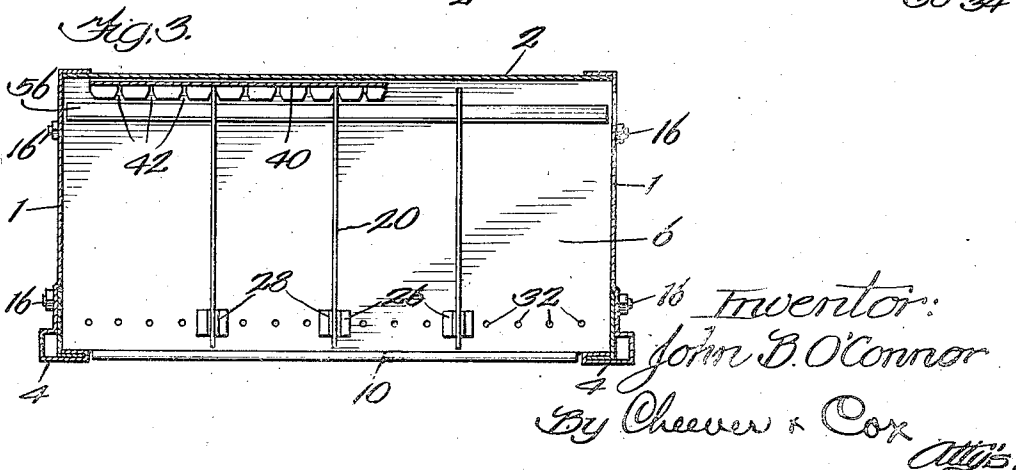
1,508,610

J. B. O'CONNOR

SHELVING

Filed June 12, 1922

2 Sheets-Sheet 1



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Sept. 16, 1924.

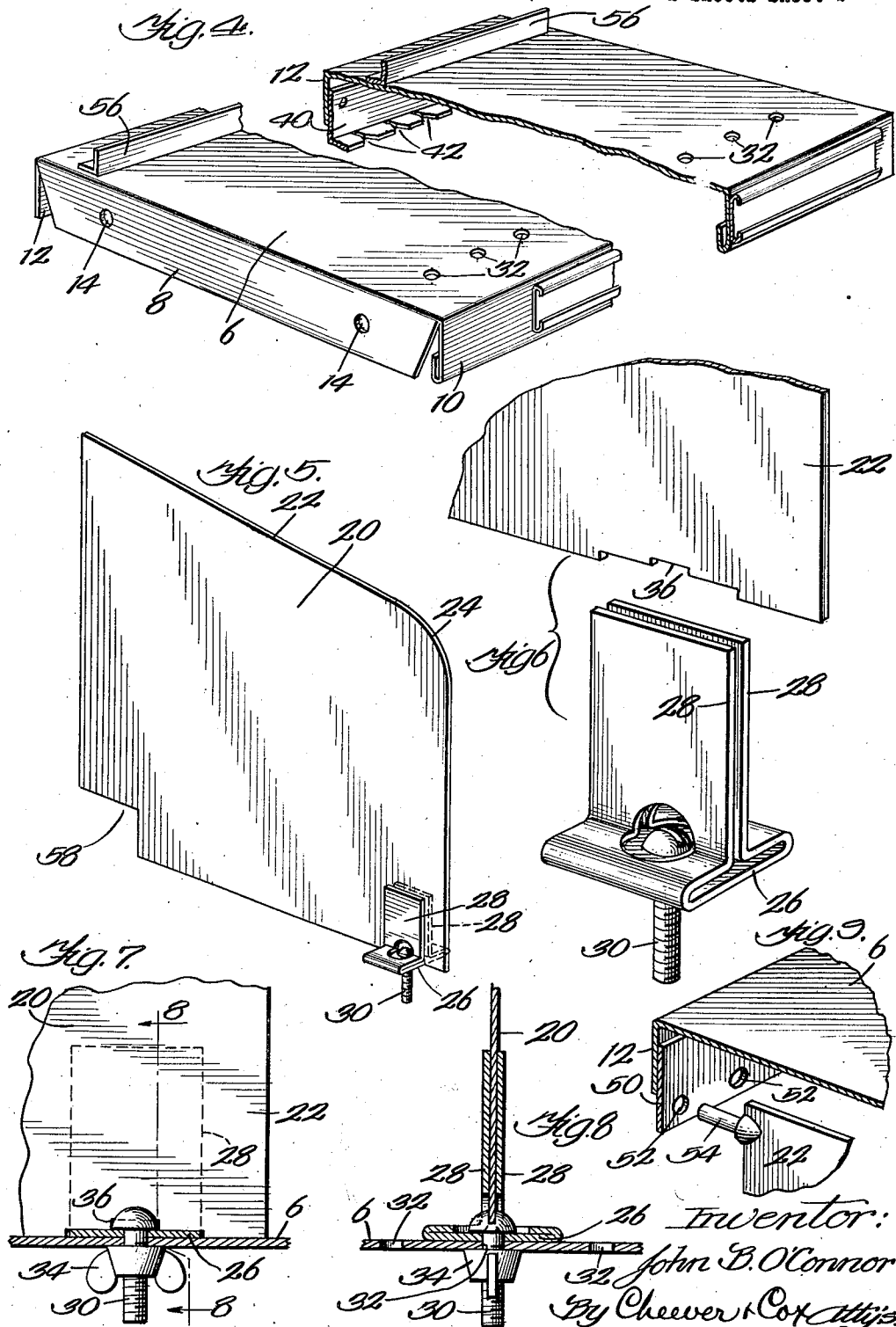
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2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE.

JOHN B. O'CONNOR, OF AURORA, ILLINOIS, ASSIGNOR TO LYON METALLIC MANUFACTURING COMPANY, OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS.

SHELVING.

Application filed June 12, 1922. Serial No. 567,526.

To all whom it may concern:

Be it known that I, JOHN B. O'CONNOR, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented a certain new and useful Improvement in Shelving, of which the following is a specification.

My invention relates to shelving and is intended particularly for the storage of articles of which phonograph disc records are a typical example. This shelving is meant primarily for dealers, and the object of the invention is to make it possible to vary the size of the stalls or compartments at will as to width and to make other adjustments, which will adapt the compartments to records of different sizes. Taking the case of disc records, the most common diameters are 10 and 12 inches. It is customary to store such records in square envelopes and to place them on edge, that is, in a vertical plane with the upper front corner readily accessible so that the identifying marks may be readily inspected. In connection with the general object, it is my purpose to provide a construction by which the partitions may be shifted with great ease and yet be held readily and securely when in position. Another object is to simplify the construction of the shelving so that results may be accomplished as cheaply and simply as possible.

I accomplish my objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a section of shelving showing the invention. A portion of the shelving is shown in section on a vertical plane in back of but parallel to the plane of the front of the shelving.

Figure 2 is a sectional elevation on the line 2—2 Fig. 1.

Figure 3 is a plan section on the broken line 3—3 Fig. 1.

Figure 4 is a perspective view showing a shelf equipped with a stop which forms one of the characteristic elements of the invention, and also equipped with a socket member into which the partitions fit. The central portion of this shelf is broken away to more clearly reveal the parts beneath.

Figure 5 is a perspective view of one of the partitions.

Figure 6 is a perspective view of one of the clips used for securing the partition at

one point. This figure also shows a fragment of one of the partitions illustrating how the same is constructed at the point where it cooperates with the clip.

Figure 7 is a sectional view on the line 7—7 Fig. 1.

Figure 8 is a sectional view on the line 8—8 Fig. 7.

Figure 9 is a perspective view showing a modified form of connection between the partition and back of the shelving.

Like numerals denote like parts throughout the several views.

The general form of the shelving is not particularly important. In the present case there is illustrated a main structure consisting of end walls 1 and a back wall 2. It is desirable to form facing strips 4 at the front of the end walls for imparting a finished appearance and rigidifying the structure. These parts are shown to be of sheet metal. The shelves also may be varied as to details. In the present case there is illustrated a shelf 6 having depending end flanges 8 which make surface engagement with the insides of the end walls. There are similar flanges 10 and 12 at the front and back of the shelves respectively as best shown in Figure 4. The shelves also are preferably of sheet metal. The end flanges have apertures 14 for accommodating tie rods 16 by which the parts are held assembled. The parts thus far described constitute a design now known and no claim is made for it per se.

Referring now more particularly to the novel characteristics of the invention, the partitions 20 are, according to the illustrated design, simply flat sheets, which are approximately rectangular in general outline although for convenience the upper edge 22 may slant downward toward the front to a rounded corner 24 as best shown in Figures 2 and 5. The lower front corner is secured by a clip or foot which rests on the shelf near the forward edge thereof. In the form illustrated this consists of a strip of metal bent into the general form of an inverted T and having a base 26 which rests upon the shelf and two parallel upstanding ends 28 spaced far enough apart to snugly receive the partition between them. The clip is shown separately in perspective in Figure 6, and in this form may be regarded as a keeper into which the partition may

be lowered or into which it may be inserted by a straight-in push. It is held in place by a threaded stud 30 which passes down through a hole in the base and through one of the orifices 32 formed in the shelf. These orifices are spaced at frequent intervals so that the size of the compartments may be varied to suit the circumstances. The clips may be rigidly fixed in position by wing nuts 34 shown on a large scale in Figures 7 and 8. These may be screwed up so as to engage the bottom of the shelf and hold the clip rigid. In order that the partition may seat closely upon the shelf it is desirable to cut notches 36 in the lower edge to accommodate the base of the clip and head of the stud. Such notches are best shown in Figure 6.

In Figures 3 and 4, I have shown one type of means for holding the partitions, and in Figure 9, I have shown another. Referring to the type shown in the first four figures of the drawings, a strip 40 is riveted, spot welded or otherwise fastened to the back flange 12 of a shelf. At the bottom this has a horizontal inwardly projecting flange in which are formed notches or sockets 42. These are in alignment with the clips and are of a width sufficient to make a sliding fit with the partitions except at the mouths where they flare so that the partitions may be more readily inserted. It will be evident that this forms what may be termed a socket connection, and all that is necessary in assembling the parts is to hold the partition in vertical position, and slide it backward until its rear upper edge enters into one of the sockets, after which the partition will be held against lateral movement. As the partition is notched to fit over the base of the clip, it is, when lowered, prevented from moving forward as well as sideways and hence there is no appreciable danger of its being accidentally dislodged.

The design shown in Figure 9 is similar in the sense that sockets are formed in the shelves for receiving a portion of the partition, that is, a holding device is provided into which the partition is insertible by a straight-in push. In this modified type, however, the rear flange of the shelf has a strip 50 having apertures 52 arranged at frequent intervals for the reception of studs 54, which are permanently fastened to and extend rearward from the partitions. Consequently this also may be regarded as a socket connection between the partition and the shelf.

As previously stated, standard phonograph disc records are usually either 10 or 12 inches in diameter; consequently when it is to be used for this purpose the shelving is of a depth of slightly more than 12 inches and the shelves are spaced one above another at a distance slightly more than 12 inches.

This enables the compartments naturally to accommodate 12 inch discs. When it is desired to store 10 inch discs stops 56 are fastened to the top of the shelf about 2 inches from the rear edge thereof as best shown in Figures 2, 3 and 4. A convenient form of stop is an angle iron having an upstanding flange arranged parallel to the back of the shelf. In order that the partitions may accommodate such stops they are formed with a notch 58 at the rear lower corner as shown on a large scale in Figure 5. It is obvious that with the partitions notched in this manner the stops 56 may be present or absent without affecting the assembly so far as the partitions themselves are concerned. The dot and dash lines 60 in the middle section of Fig. 2 indicate the position which the 12" discs will occupy and the dot and dash lines 62 in the lower section of Figure 2 indicate the position which the 10" discs will occupy.

I have already explained the manner in which the partitions may be inserted and it will be evident that they may be removed or positioned without the aid of any tools. All that is necessary is to raise the lower forward edge so that the partition may ride up over the base of the clip, after which the partition may be simply slid forward or may be lifted up out of the corner and then moved forward. In other words, no tools are required for placing or removing a partition in case the clips are in the desired position. If the clips must be shifted, as is necessary if the size of the compartment is to be changed, the wing nut 34 will be backed off, thus enabling the clip and its stud to be lifted out of the aperture beneath and shifted to another one. The manner of assembly in the case of the design shown in Figure 9 is to all intents and purposes the same. The rear portion of the partition instead of entering into a socketed flange simply has its stud 54 enter into the appropriate socket or aperture 52. In either case the partition may be withdrawn by simply pulling it forward after being lifted slightly to disengage the clip at the front, and in either case the socket connection forms an abutment for limiting the rearward movement of the partition. It will be evident that, according to the designs shown, when assembled, the partition will be held at the upper rear corner and the forward lower corner, and in view of the manner in which the interfitting parts cooperate, no additional holding means will be necessary. It will be evident that no great lateral strain is generated when discs are stored and the result is that this holding of the partition at two diagonally opposite points is quite sufficient for the purpose.

If ten inch records are to be stored, the stops 56 will be employed, which will hold

the envelopes far enough forward so that their front edges will occupy the same relation with respect to the rest of the shelving as the twelve inch records will with the stops absent.

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

1. A storage rack having shelves and upright removable partitions, the shelves having upstanding clips open top and front for holding the partitions against lateral movement and permitting them to be inserted or removed by a substantially straight-in push or straight-out pull; and socket connections at the rear of the rack in position to engage the upper rear edge of the partitions, said

socket connections forming abutments for limiting the rearward movement of the partitions.

2. A storage rack having shelves and upright removable partitions, the shelves having upstanding clips open top and front, and a stationary member at the back of the rack forming an abutment for limiting the rearward movement of the partitions, said stationary member having notches open at the front for receiving the rear edge of the partitions and preventing lateral movement thereof.

In witness whereof, I have hereunto subscribed my name.

JOHN B. O'CONNOR