

June 8, 1943.

G. F. WADSWORTH  
LOCKING RING DISPLAY DEVICE

2,321,339

Filed April 22, 1941

2 Sheets-Sheet 1

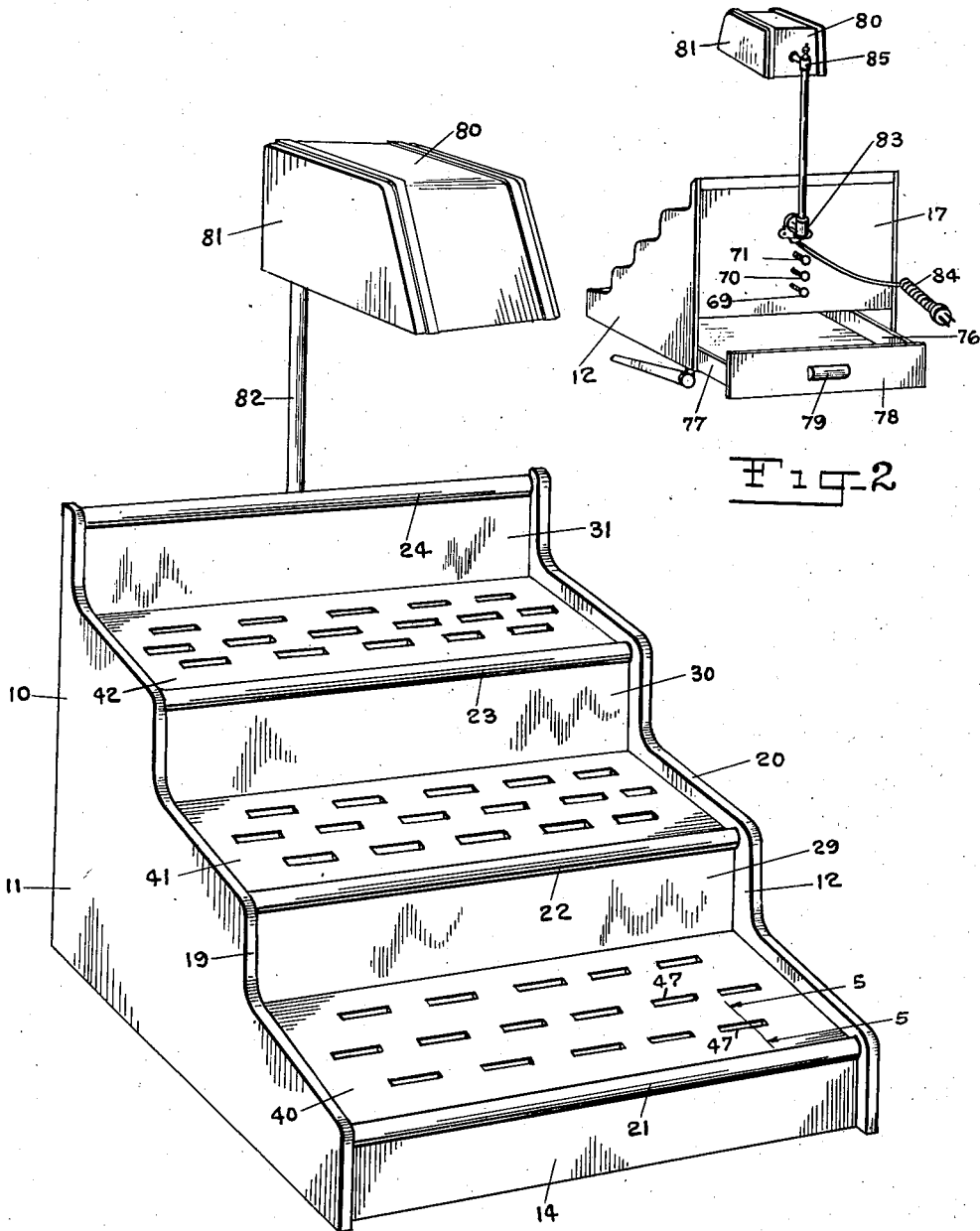


Fig-2

Fig-1

INVENTOR.  
GEORGE F. WADSWORTH  
BY *Richard S. Jenks*  
ATTORNEY

June 8, 1943.

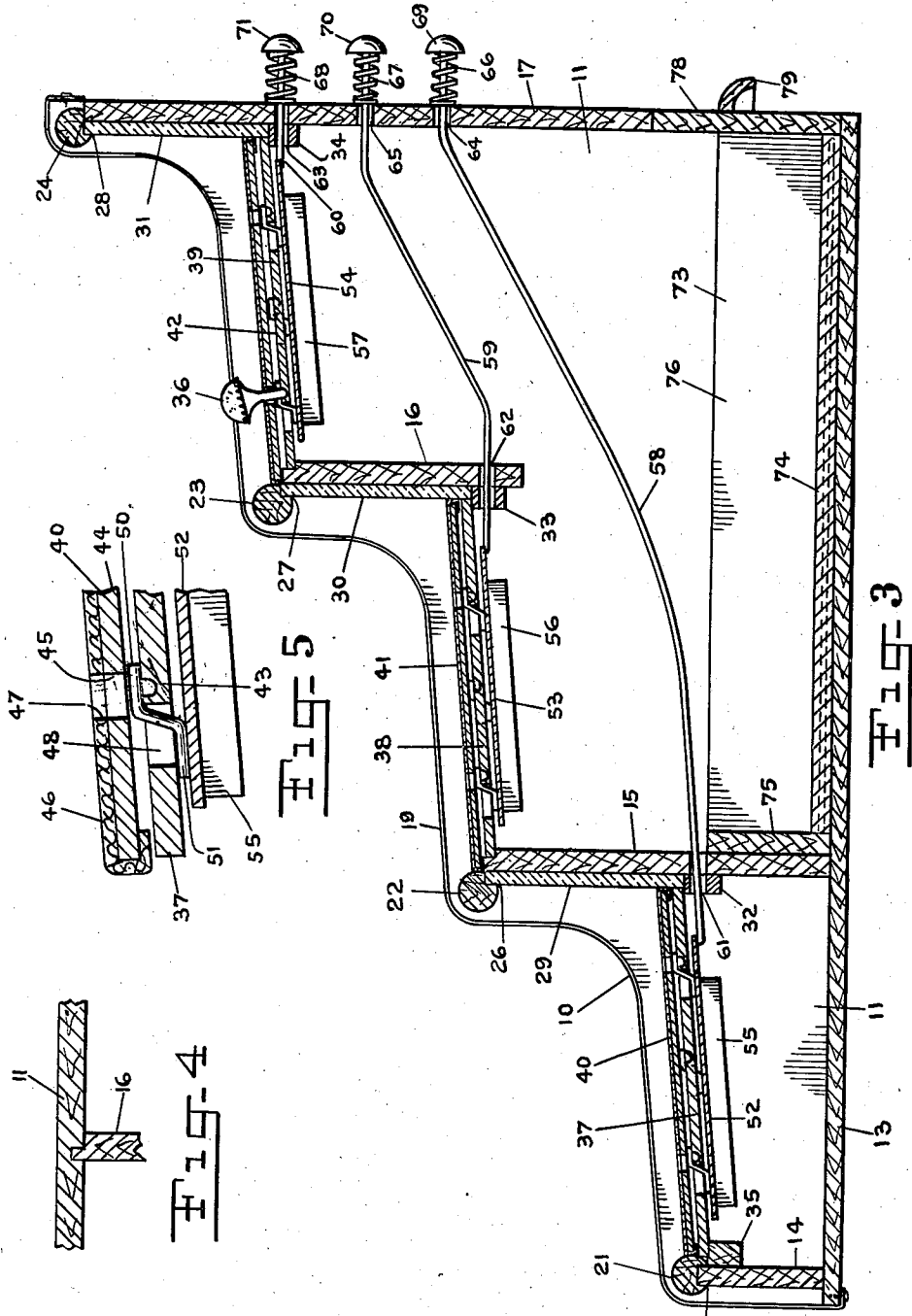
G. F. WADSWORTH

2,321,339

LOCKING RING DISPLAY DEVICE

Filed April 22, 1941

2 Sheets-Sheet 2



INVENTOR.  
GEORGE F. WADSWORTH  
BY *Richard S. Temko*  
ATTORNEY

# UNITED STATES PATENT OFFICE

2,321,339

## LOCKING RING DISPLAY DEVICE

George F. Wadsworth, Marion, Ohio, assignor to  
National Ring Corporation, Detroit, Mich., a  
corporation

Application April 22, 1941, Serial No. 389,781

5 Claims. (Cl. 206—76)

This invention relates generally to the field of merchandising and display, and more particularly to devices for the display of rings and similar articles of jewelry, in which the display device is provided with means for locking the rings in place.

In the sale of relatively low priced jewelry, the price structure is affected by the ability of the vendor to sell a large quantity of rings. This requires the favorable display of the rings in the midst of large points of traffic within the store so that the rings are presented to the prospective customer under relatively strong illumination and in close proximity to him.

In accordance with the present invention, a plurality of groups of rings are displayed to the prospective customer upon stepped elevated tiers. A convenient and adjustable source of illumination is associated with the display device and storage facilities are incorporated for replenishing the supply of rings as they are sold from the display surfaces.

The present display device is particularly adapted for use upon a counter and when so disposed, raises the rings thereon to positions where they readily meet the eyes of the customers. While raising the rings to this elevated position and brightly illuminating them increases their attractiveness, it also increases their liability to theft, especially where the display device is used at points of heavy customer traffic in the store.

It is, therefore, one of the principal objects of the present invention to provide a locking ring display structure in which the rings on display are absolutely locked against surreptitious or unauthorized removal.

Another object herein lies in the provision of a device of the class described wherein the presence of the sales person is necessary to actuate the locking mechanisms into the unlocked positions thereof.

Another object herein lies in the provision of a locking ring display device wherein rings within certain zones or on certain display surfaces may be unlocked independently of rings upon other display surfaces.

In the sale of high priced rings which receive individual care and attention and the clientele is very limited, the device may still have utility by reason of its convenience and its attractive display properties, but my device finds its greatest usefulness in the lower priced ring field. By reason of the low price at which the rings are sold, it is imperative that the whole device, while possessing a high degree of attractiveness and utility,

be durable and of low cost, and it is a further object of this invention to provide such a device in which the fabrication may be made in accordance with large scale production methods with a consequent reduction in cost and increase in distribution.

While the various parts are relatively light weight, thus reducing transportation costs, by reason of the novel construction, integration and organization of the various parts, strength is not sacrificed by reason of light weight.

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

Figure 1 is a view in perspective showing an embodiment of the invention with the rings removed from the ring receiving slots for the purpose of clarity.

Figure 2 is a view in perspective, reduced in scale, taken from the rear of Figure 1 showing the supply drawer partly pulled out of the device.

Figure 3 is an enlarged longitudinal vertical central sectional view of the device shown in Figure 1.

Figure 4 is a fragmentary horizontal sectional view showing the manner of connection between the transverse frame members and the side walls.

Figure 5 is an enlarged fragmentary vertical sectional view as might be seen from the plane 5—5 on Figure 1.

In accordance with the invention, the device, generally indicated by numeral 10, takes the form of a stepped or tiered cabinet including side walls 11 and 12, a bottom 13 and transverse frame members 14, 15, 16 and 17. The transverse frame member 17 forms the rear wall of the device. The frame members 14 and 15 preferably extend upwardly from the bottom 13, while the frame members 16 and 17 have the lower edges thereof positioned above the bottom 13 as best seen in Figure 3. Each of the frame members 14 to 17 inclusive has the outer vertical edges thereof mortised into the inner surfaces of the side walls 11 and 12. Taking transverse frame member 16 as an example, the manner in which one of its side edges is mortised into the side wall 11 is shown in Figure 4. For the purpose of reducing weight and yet maintaining a strong frame, I have found that a cabinet when made of one-quarter inch ply wood in which the outer ply is of a decorative wood, satisfies the neces-

sary requirements of beauty and strength. For the purpose of enhancing the appearance of the device, the upper and forward edges of the side walls 11 and 12 have secured thereto flexible thin metal strips 19 and 20, as for example, one-quarter inch wide thin brass strips, chromium plated. The strips along the principal body thereof are preferably secured to the edges of the side walls 11 and 12 by cementing the same thereto, while the ends of the strips are turned and tacked as best seen in Figure 3. The side edges of the bottom 13 are secured preferably by a mortised joint to the lower edges of the side walls 11 and 12.

Disposed between the inner opposed surfaces of the side walls 11 and 12 and secured at the ends thereof to said inner surfaces, are a plurality of spaced and parallel frame elements 21, 22, 23 and 24. The frame elements 21 to 24 inclusive are preferably in the form of dowels having longitudinally disposed rabbets 25, 26, 27 and 28 respectively. The rabbet 25 in the frame element 21 engages the upper edge of the frame member 14 and fixes the same in position. The rabbets 26, 27 and 28 in the frame elements 22, 23 and 24 engage the upper edges of the mirror panels 29, 30 and 31. The mirror panels 29 to 31 inclusive are of rectangular configuration and have the side edges thereof abutting the inner surfaces of the side walls 11 and 12. The lower edges of the mirror panels 29 to 31 inclusive are maintained in position by means of transverse cleats 32, 33 and 34, the latter extending between the side walls 11 and 12 and being secured to the forward surfaces of the transverse frame members 15, 16 and 17 respectively. Disposed rearwardly and adjacent the upper edge of the transverse frame member 14 is a transverse cleat 35.

The rings, generally indicated by numeral 36, each have the finger encircling portion thereof, when carried by the device 10, engaged by ring support members 37, 38 and 39. The ring support members 37-39 are preferably composed of wood and each has a plurality of transversely extending grooves in the upper surface thereof. In the present embodiment of the invention, the rings are arranged on each of the display panels 40-42 inclusive, in three transverse rows and the grooves, generally indicated by numeral 43, in the ring support members are of a depth preferably slightly greater than the diameter of the ring encircling portion (not the diameter of the orifice in the ring encircling portion). The forward edge of the ring support member 37 may be supported upon the cleat 35 while the rear edge thereof may be supported upon the cleat 32. The side edges of the ring support member 37 may, if desired, be mortised into the inner surfaces of the opposed side walls 11 and 12. The forward edge of the ring support member 38 may be supported upon the upper rabbeted edge of the transverse frame member 15 while the rear edge thereof may be supported upon the cleat 33. The side edges of the ring support member 38 may, if desired, be mortised into the inner surfaces of the opposed side walls 11 and 12. The forward edge of the ring support member 39 may be supported upon the upper rabbeted edge of the transverse frame member 16 while the rear edge thereof may be supported upon the cleat 24. The side edges of the ring support member 39 may, if desired, be mortised into the inner surfaces of the opposed side walls 11 and 12.

The display panels 40 to 42 inclusive are identical so that a description of one will suffice for all. The display panel 40, for example, is preferably composed of a backing 44 which may be made of a thin sheet of cardboard or metal with a plurality of oblong orifices 45, the backing 44 being covered with a decorative layer 46 having orifices 47 corresponding to the orifices 45. The decorative layer 46 may, for example, be a sheet of velvet, which may be secured to the backing 44 in any suitable manner, as for example, by gluing the same thereon.

Each of the ring support members 37-39, forwardly of the grooves 43 and of the orifices 45, 47, wherever they may be located, is provided with a plurality of locking element orifices, 48.

The locking elements, generally indicated by numeral 50, are preferably formed of stiff wire and the configuration thereof is best seen in Figure 5. Each of the locking elements 50 includes a base portion 51 which is secured to the upper surface of the plate which supports it. The locking element support plates 52, 53 and 54 are preferably of uniform construction and may be composed of thin rectangular plates of sheet steel. The length of the plates 52-54 is preferably slightly less than the space between the inner surfaces of the opposed side walls 11 and 12. The plates 52-54 are adapted for independent slidable movement longitudinally of the device 10 and are mounted between opposed pairs of guide members 55, 56 and 57, which are secured on the inner surfaces of the walls 11 and 12, only the guide members which are secured to the wall 11 being shown in the drawings. Thus in the embodiment of the invention shown, each of the display panels 40-42 has place for sixteen rings and, therefore, each of the plates 52-54 supports sixteen locking elements. The locking elements are secured to the upper surface of the plates 52-54 in any suitable manner, as for example, by soldering or welding. Each of the locking members 50 thus projects upwardly through the orifices corresponding to the orifices 48 in Figure 5, and the upper portion of the locking member is positioned between the display panel lying directly thereabove and the upper surface of the ring support member through which it has passed. The plates 52-54, with the locking elements thereon, are reciprocated by means of actuating rods 58, 59 and 60. The forward ends of the rods 58-60 are secured in any suitable manner to the rear portions of the plates 52-54 respectively, as for example, by soldering or spot welding. The cleat 32 and the transverse frame member 15 are provided with an orifice 61 through which the forward end of the actuating rod 58 passes. Similarly, the cleat 33 and frame member 16 are provided with an orifice 62 through which the forward portion of the actuating rod 59 passes, while the cleat 34 and frame member 17 are provided with an orifice 63 through which the forward portion of the actuating rod 60 passes. The rear portions of the actuating rods 58 and 59 pass through orifices 64 and 65 in the rear wall 17. Each of the actuating rods 58 to 60 inclusive penetrates an expansive coil spring 66, 67 and 68 respectively, and has attached to the outer end thereof an actuating knob 69, 70 and 71 respectively. The action of the springs 66-68 is such as to maintain the plates 52-54 in their rearmost, retracted or locking position. The actuating rods 58 and 59 are preferably of a resilient nature so

that the openings through which they pass may be disaligned with relation to each other for the purpose of placing the operating knobs in a convenient position and said rods may be bent in the manner shown in Figure 3 to accomplish this purpose. It is also desirable that the orifices through which the actuating rods pass be oversized so that no binding will occur at these points.

The reciprocal movement of the plates 52—54 in the rearmost position thereof is preferably controlled by the upwardly extending portions of the locking elements 50 abutting the rear portion of the orifices corresponding to the orifices 48 through which they pass, while the forward motion of said plates 52—54 may be limited either by the forward edges of the plates striking the rear surfaces of the frame members 14—16, or by locking elements 50 striking the forward edges of the orifices 48.

The lower rear space within the cabinet of the device 10 is utilized for storage purposes by means of a drawer 73 including a bottom wall 74, a front wall 75, side walls 76 and 77, and a rear wall 78. The rear wall 78 may be provided with a suitable handle 79. As shown in Figure 3, the lower portion of the frame member 15 may act as a stop for forward motion of the drawer 73, while the side walls 76 and 77 of the drawer are guided by the inner surfaces of the side walls 11 and 12 respectively. This drawer may be provided with suitable ring racks or retaining means for keeping a supply of rings to replenish the supply on the display panels 40—42 as the rings thereon are sold.

The illumination device 80 may be of any suitable type including a housing 81 and an upright support 82 which is secured to the rear surface of the wall 17 by means of a bracket 83. The device 80 may have the general electrical cord and plug 84. The housing 81 may be vertically adjustable by means of the bracket 85. When the light from the device 80 is cast upon the rings on the display panels 40—42 and the reflections therefrom are picked up by the mirrors 29—31, the brilliance and attractiveness of the rings and the gems in them is enhanced.

The operation of the device is an extremely simple matter so that the average sales person will have no difficulty operating the same. Assuming all the orifices corresponding to the orifices 47 to have a ring therein, when a prospective customer selects a certain ring, let us say the ring 36 in Figure 3, the sales person merely pushes the knob 71 forward, thus causing the locking element engaging the lower portion of said ring to be moved forwardly, thereby permitting the same to be manually removed from the ring support member 39. Release of the knob 71 permits the spring 68 to return the locking member recently displaced to its original position. The locking member thus may either lock the same ring returned or a new ring from the supply in the drawer 73. By reason of the fact that each of the knobs 69—71 inclusive is positioned in correlation with the display panels which it controls, it is a simple matter to actuate the locking elements only on the particular display panel with which the parties are concerned. This division of the device into separate display panels and the independent control of each of them permits a more careful watch by the sales person over the particular panel in question.

It may thus be seen that I have disclosed a construction of a novel and useful device which is

positive and foolproof in action and which may be constructed at low cost, and yet will provide a device having a desirable attractive appearance. The fact that the device is of a locking type is not readily apparent so that there is no imputation of dishonesty to the honest customer.

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 locking ring display device comprising: a pair of spaced side walls; a display panel having a plurality of slots for receiving rings; a ring support member disposed below said display panel and having a plurality of orifices, said ring support member being disposed between said side walls; a locking element support plate disposed below the ring support member; a plurality of locking elements having the upper portions thereof disposed above the ring support member, said locking elements penetrating the said orifices in the ring support member and having the lower portions thereof secured to said locking element support plate.

2. A locking ring display device comprising: a pair of spaced side walls; a display panel having a plurality of slots for receiving rings; a ring support member disposed below said display panel and having a plurality of orifices, said ring support member being disposed between said side walls; a locking element support plate disposed below the ring support member; a plurality of locking elements having the upper portions thereof disposed above the ring support member, said locking elements penetrating the said orifices in the ring support member and having the lower portions thereof secured to said locking element support plate; and means to reciprocate said locking element support plate.

3. A locking ring display device comprising: a pair of spaced side walls; a display panel having a plurality of slots for receiving rings; a ring support member disposed below said display panel and having a plurality of orifices, said ring support member being disposed between said side walls; a locking element support plate disposed below the ring support member; a cleat on each of said side walls slidably supporting said locking element support plate; a plurality of locking elements having the upper portions thereof disposed above the ring support member, said locking elements penetrating the said orifices in the ring support member and having the lower portions thereof secured to said locking element support plate.

4. A locking ring display device comprising: a pair of spaced side walls; a display panel having a plurality of slots for receiving rings; a ring support member disposed below said display panel and having a plurality of orifices, said ring support member being disposed between said side walls; a locking element support plate disposed below the ring support member; a cleat on each of said side walls slidably supporting said locking element support plate; a plurality of locking elements having the upper portions thereof disposed above the ring support member, said locking elements penetrating the said orifices in the ring support member and having the lower portions thereof secured to said locking element support plate; and means to reciprocate said locking element support plate.

5. A locking ring display device comprising: a pair of spaced side walls; a display panel having

a plurality of slots for receiving rings; a ring support member disposed below said display panel and having a plurality of orifices, said ring support member being disposed between said side walls; a locking element support plate disposed below the ring support member; a cleat on each of said side walls slidably supporting said locking element support plate; a plurality of locking elements having the upper portions thereof dis-

posed above the ring support member, said locking element support plate; a plurality of locking ring support member and having the lower portions thereof secured to said locking element support plate; and means to reciprocate said locking element support plate, including a remotely positioned knob.

GEORGE F. WADSWORTH.