No. 615,032. Patented Nov. 29, 1898.

J. MANDEL.

REVOLVING DISPLAY CASE.

(Application filed Oct. 2, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 3.

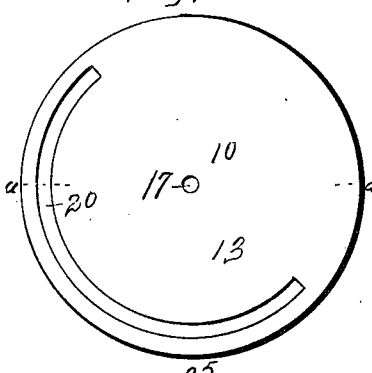


Fig. 4.

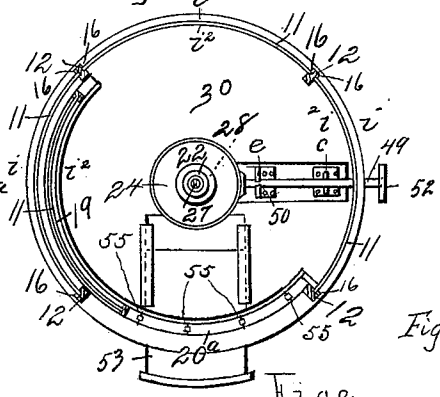


Fig. 5.

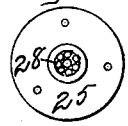


Fig. 5a

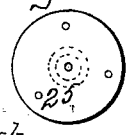


Fig. 5b



Fig. 1.

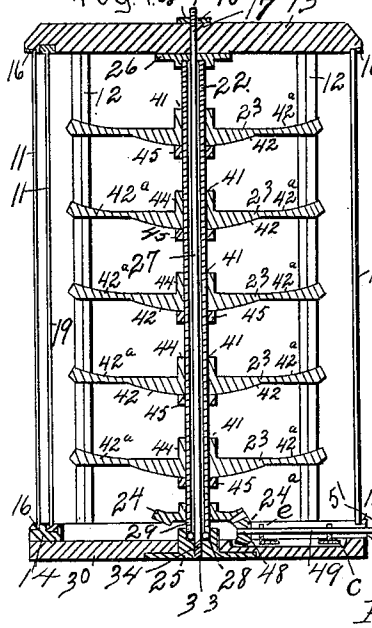


Fig. 2.

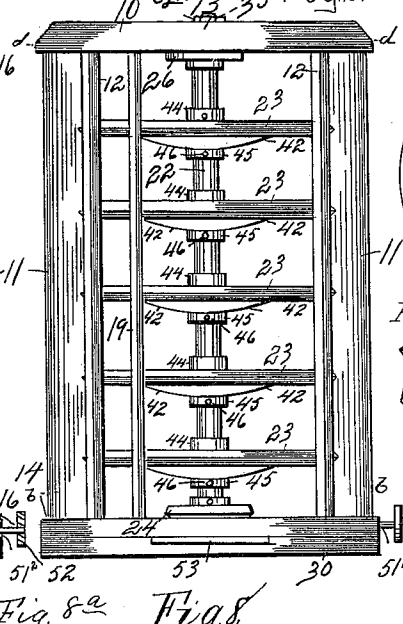


Fig. 7.

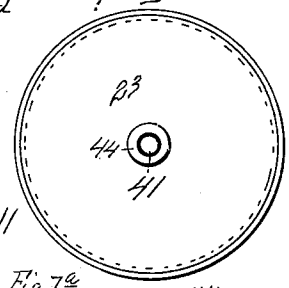


Fig. 7a

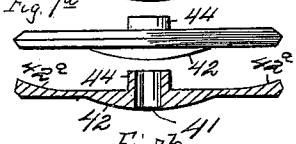


Fig. 7b

Fig. 8a

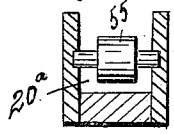


Fig. 8.

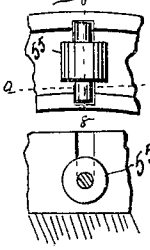
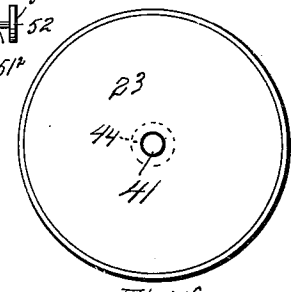


Fig. 8b

Fig. 7c



WITNESSES:

David F. Harvey

Daisy B. Gordon

INVENTOR

Joseph Mandel

BY

Byron B. Gordon

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 615,032. Patented Nov. 29, 1898.

J. MANDEL.

REVOLVING DISPLAY CASE.

(Application filed Oct. 2, 1897.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 10.

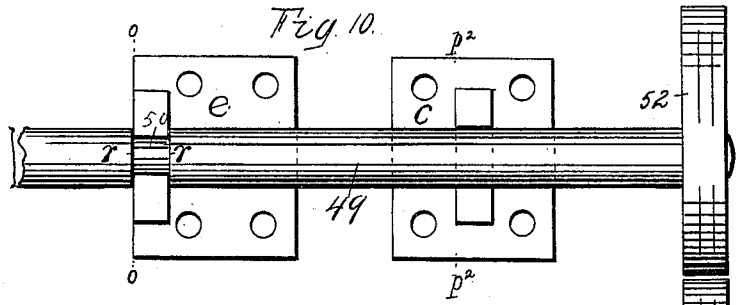


Fig. 11

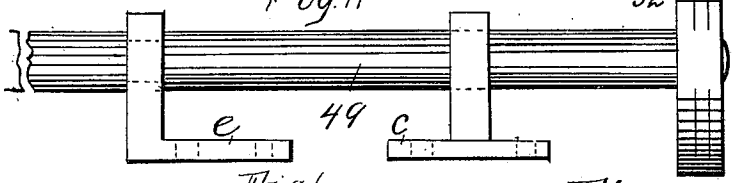


Fig. 12.

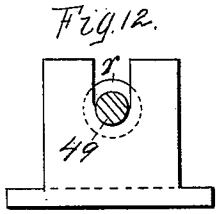


Fig. 13.

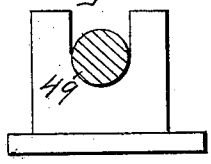


Fig. 6.

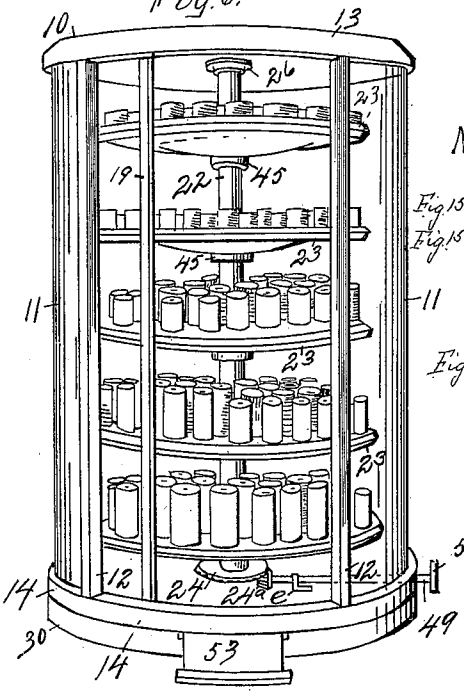


Fig. 15.

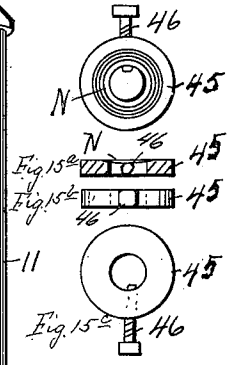


Fig. 14.

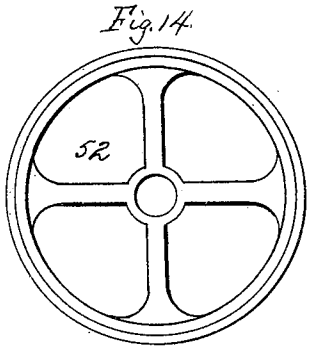


Fig. 9.

Fig. 9a

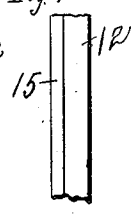
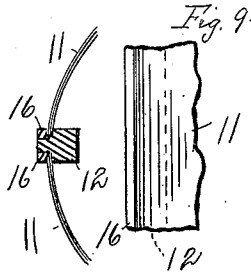


Fig. 9b



WITNESSES.

David F. Hervey

Daisy B. Gordon.

INVENTOR

Joseph Mandel

BY

Byron B. Gordon

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH MANDEL, OF LOGANSPORT, INDIANA.

REVOLVING DISPLAY-CASE.

SPECIFICATION forming part of Letters Patent No. 615,032, dated November 29, 1898.

Application filed October 2, 1897. Serial No. 653,858. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MANDEL, a citizen of the United States, residing at Logansport, in the county of Cass and State of Indiana, have invented a new and useful Improvement in Revolving Ribbon or Notion Show-Cases; and I do hereby declare the following to be a clear and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in rotary display or show cases, and particularly to that class in which ribbons or small notions are displayed and to that class of cases which are operated by hand.

The object of my invention is to provide a revolving display-case in which ribbons and similar goods may be arranged for exhibition and at the same time be conveniently accessible, as will be hereinafter fully described.

I aim also at improvements in the details of construction, as will be more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical section view taken on the line *a a* of Fig. 3. Fig. 2 is a side elevation. Fig. 3 is a bottom view of the top, taken on the line *d d* of Fig. 2. Fig. 4 is a section view taken on the line *b b* of Fig. 2. Fig. 5 represents a detail view of the ball-bearing box. Fig. 5^a is a bottom plan, and Fig. 5^b a side elevation, of said box. Fig. 6 is a perspective view of the case and revolver. Figs. 7, 7^a, 7^b, and 7^c give several different views of the shelf, Fig. 7 being a top plan, Fig. 7^a a side elevation, Fig. 7^b a central vertical section, and Fig. 7^c a bottom plan, thereof. Fig. 8 is an enlarged detail plan view showing the slot containing the rollers 55 and on which a sliding door may be located. Fig. 8^a is a vertical section on the line 8 8 of Fig. 8, and Fig. 8^b is a vertical section on the line Q Q of Fig. 8. Fig. 9 is an enlarged section view showing how the panes of glass are held to the posts or standards. Fig. 9^a is an elevation of a portion of one of the standards, and Fig. 9^b is a perspective detail of the same. Fig. 10 is an enlarged longitudinal top view of the boxes *c* and *e*, the shaft 49, and the hand-wheel. Fig. 11 is a longitudinal side elevation of the above mechanism. Fig. 12 is a view taken on the line *o o* of Fig. 10 and showing the shaft 49 in section. Fig. 13 is a view taken on the line p^2 p^2 of Fig. 10. Fig. 14 is a plan view. Figs. 15, 15^a, 15^b, and 15^c are detail views of the adjusting-collar, Fig. 15 being a top plan, Fig. 15^a a vertical section, Fig. 15^b an edge view, and Fig. 15^c a bottom plan, thereof.

Similar letters and figures refer to similar parts throughout the several views.

In the drawings, 10 represents the case, which consists of three panes of glass 11, the posts or standards 12, the top piece 13, and the molding 14, which constitute part of the base of the case 10 and the glass door 19.

Now to give a detail description of the casing 10 the said casing is of a cylindrical shape or design. The top piece 13 is supported in its position by the posts or standards 12, the latter being connected in a permanent manner thereto. The panes of glass 11 are convex on the side *i* and concave on the side i^2. A groove 15 is cut along the entire length of the post on standards 12, also along the top piece 13 and base-piece 14 of the case 10, and the glass placed in the groove 15 thus cut. The edge of the glass having been placed in the groove 15, it is held firmly therein by the strip 16, which is fastened in a permanent manner to posts 12. The casing 10 has an aperture at 17, the purpose of which will later on be more fully pointed out.

The case 10 is provided with a glass door 19 and also the slots 20 and 20^a, the said slots being to keep the door in the correct position.

Now, having partly described the construction of the case 10, I desire to explain the construction of the revolver, which is as follows: The principal parts of the revolver are the shaft 22, the shelves 23, the gears 24 and 24^a, the boxes 25 and 26, the rod 27, and the balls 28. The shaft 22 stands in a vertical position and is maintained in the said position by the boxes 25 and 26. The end 29 of the shaft 22 rotates within the box 25 and on the balls 28, which gives a ball-bearing to the shaft. To give permanency and to keep the case 10 centrally located on the base 30, a rod 27 is provided which runs through the hollow of the shaft 22. The end of the rod 27 is threaded and the said end screwed into the box 25, the latter being tapped out at 34 for the reception

of the said end. The rod 27 extends through the shaft 22, the box 26, and the aperture 17 of the top piece 13 of the case 10. The end 35 of the rod 27 is provided with thread for the reception of the nut 38. The nut 38 having been screwed down against the top piece 13, the case 10 is held firmly and centrally on the base-piece 30. At any time, if desired, the mechanism which constitutes the revolver can be removed entirely from within the case 10 in the following manner: The nut 38 is removed from the end 35 of the rod 27 and the case lifted bodily and vertically until the said revolver remains standing alone.

As previously stated, the box 25 contains balls 28, the purpose of which is to give the end 29 of the shaft 22 a ball-bearing. The balls 28 are located directly under the end 29 of the shaft 22, and the said balls are prevented from working away from under the said end 29 by the rod 27, passing through the center of the box 25. The shaft 22 is provided with a number of circular shelves 23, the purpose of which is to display ribbons or notions thereon. The shelves are circular in design and may be constructed of wood or metal. The manner of construction of the shelves is as follows: The shelves 23 are circular and have apertures at 41, the diameters of which are large enough to permit the shaft 22 to extend through them. The shelves 23 are concave at 42^a and convex at 42. The object of the shelves being concave at 42^a is for the purpose of keeping the ribbons or the goods displayed from a tendency to work off the shelves, or, in other words, to prevent the displayed goods from working to and over the periphery of the shelf 23. The object of the convex 42 is for a twofold purpose—first, to give the shelf 23 a symmetrical appearance, and, second, that the shelf may be of sufficient thickness at the center it is rounded at 42. The shelf 23 thus rounded has a longer bearing on the shaft 22. The said bearing, owing to its length, prevents the shelf 23 from having a vertical motion or one side of the shelf from sagging lower than the other. The bearing of the shelf 23 on the shaft 22 is still further lengthened by the said shelf having a hub 44.

The shelves are loosely pivoted on the shaft 22 and may be moved up or down the said shaft and adjusted at any point thereon by moving the collar 45. The collar 45 is provided with a set-screw 46, the use and purpose of which are apparent. The construction of the collar 45 is more clearly set forth in Fig. 15. The collar 45 has a concave face on the side N, so as to be better adapted to and engage with the convex side 42 of the shelf.

The method of communicating motion to the shaft 22 is as follows: The shaft 22 is provided with a bevel-gear 24, which meshes with the pinion 24^a. The shaft 49 rotates or revolves in the boxes *c* and *e*. The said shaft 49 is provided with a groove 50, the object of which is to maintain the proper clearance between the gears 24 and 24^a and also to prevent the shaft 49 from having unnecessary lateral motion. The groove 50 of shaft 49 is part of the shaft that revolves in the box *e*. The groove 50 revolving in the box *e*, the sides *r* of the groove answer the same purpose of collars or flanges, which maintain the proper clearance for the bevel-gears, as well as prevent too much lateral motion. The shaft 49 extends or passes through the box *c* and through a hole or opening 51^a in the case 10. At 51 and on the shaft 49 a hand-wheel 52 is permanently connected thereto. When the dealer desires to inspect the ribbons more closely or display them in a better light and without removing them from the case, he turns the hand-wheel either to the left or to the right, the direction being immaterial, and through the medium of the above-described mechanism the shelves 23 will rotate, bringing the goods to the desired place and into a better light.

A sliding lid or rest 53 is provided, on which ribbons or notions may be temporarily placed. The revolving show-case is placed in some convenient place and on some table, preferably a round table, the table being provided with a number of small drawers, in which additional stock of goods may be placed.

I am aware that prior to my invention revolving show-cases have been invented, and therefore I do not claim the invention broadly.

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

1. The combination with the shelves, the casing the base-piece and the top, of the boxes secured to the inner faces of said base-piece and top within the casing, the balls within the lower box, the continuous hollow shaft having its ends disposed within said boxes and its lower end resting upon said balls, the rod passed through the hollow shaft and boxes with its lower end threaded into the lower box, and a nut upon the upper end of said rod outside of the top, substantially as shown and described.

2. The combination with the casing the top and base-piece and the boxes upon the inner faces thereof within the casing, of the balls in the lower box, the continuous hollow shaft resting upon said balls and centered within the lower box, the shelves sleeved upon the continuous hollow shaft, the gear fast upon the hollow shaft, a horizontal shaft carrying a gear meshing with the said gear, and means for actuating said shaft, all substantially as shown and described.

JOSEPH MANDEL.

Witnesses:
HUGH SHANAHAN,
F. H. GRAAS.