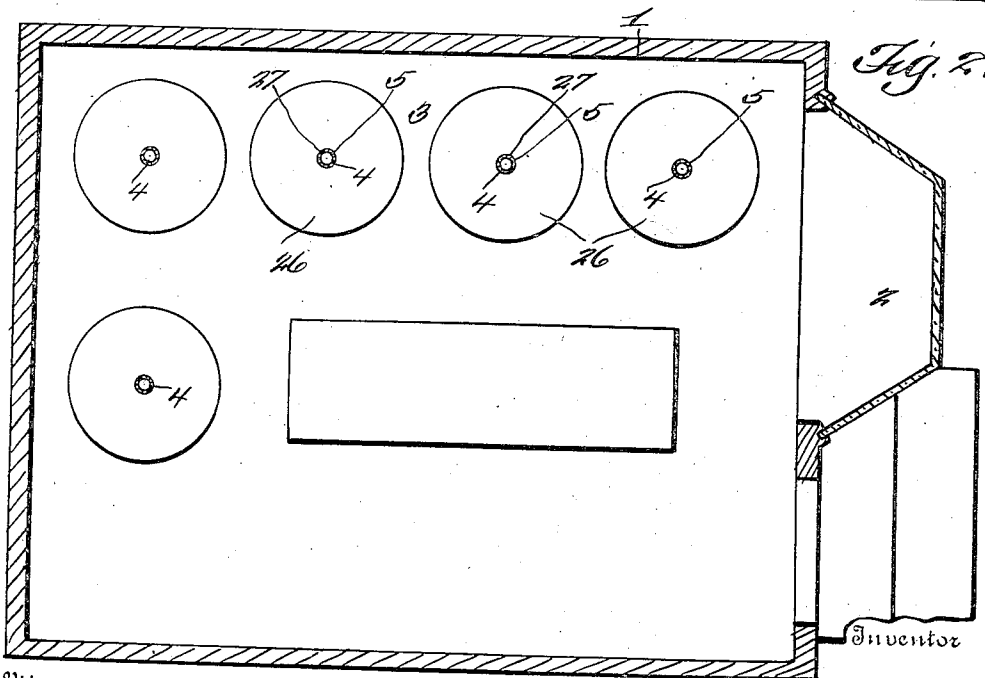
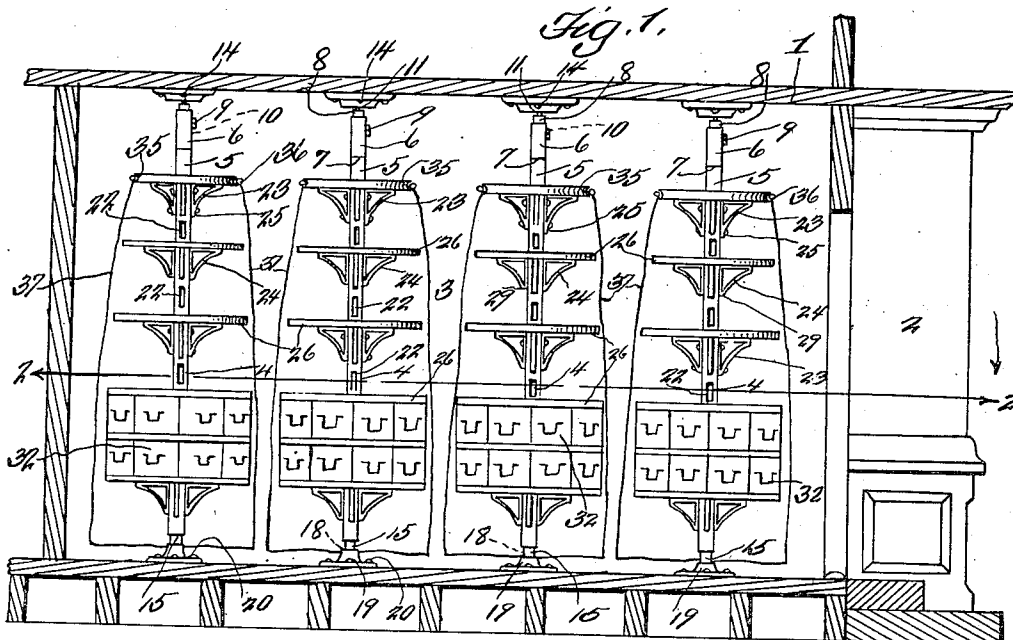


J. F. HINES.
 ROTARY DISPLAY SHELVING.
 APPLICATION FILED SEPT. 3, 1913.

1,101,849.

Patented June 30, 1914.

3 SHEETS—SHEET 1.



Inventor

Witnesses

Markel Grange. Fig. 1.

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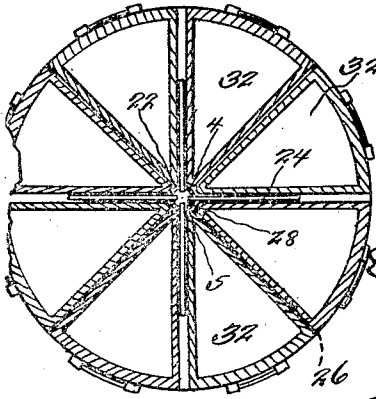


Fig. 5.

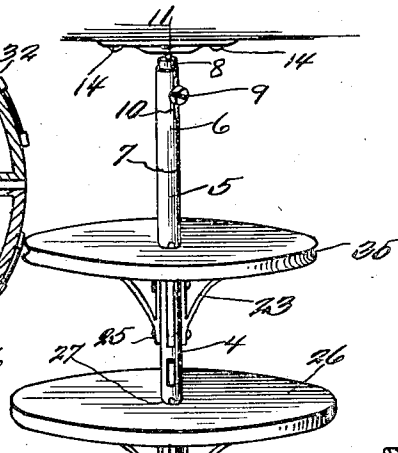


Fig. 3.

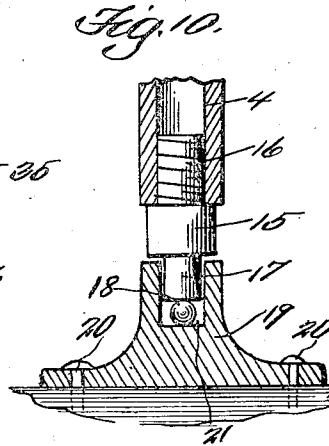


Fig. 10.

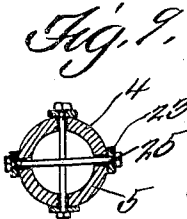


Fig. 9.

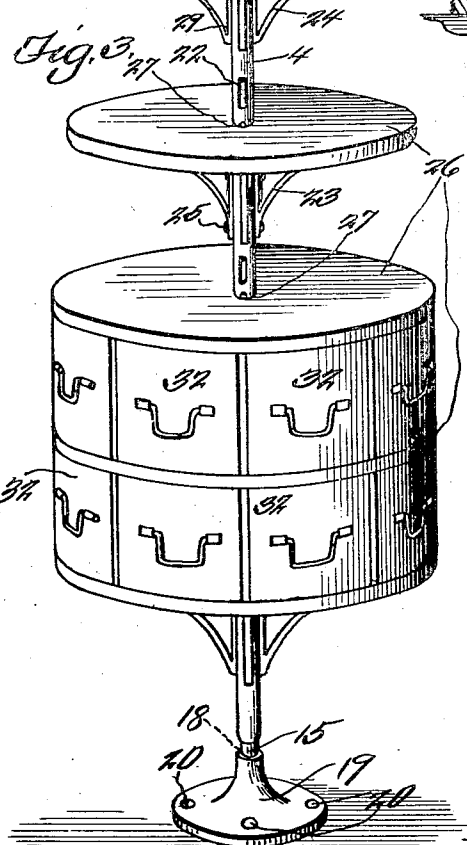
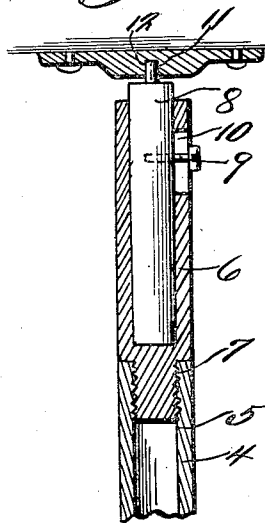


Fig. 8.



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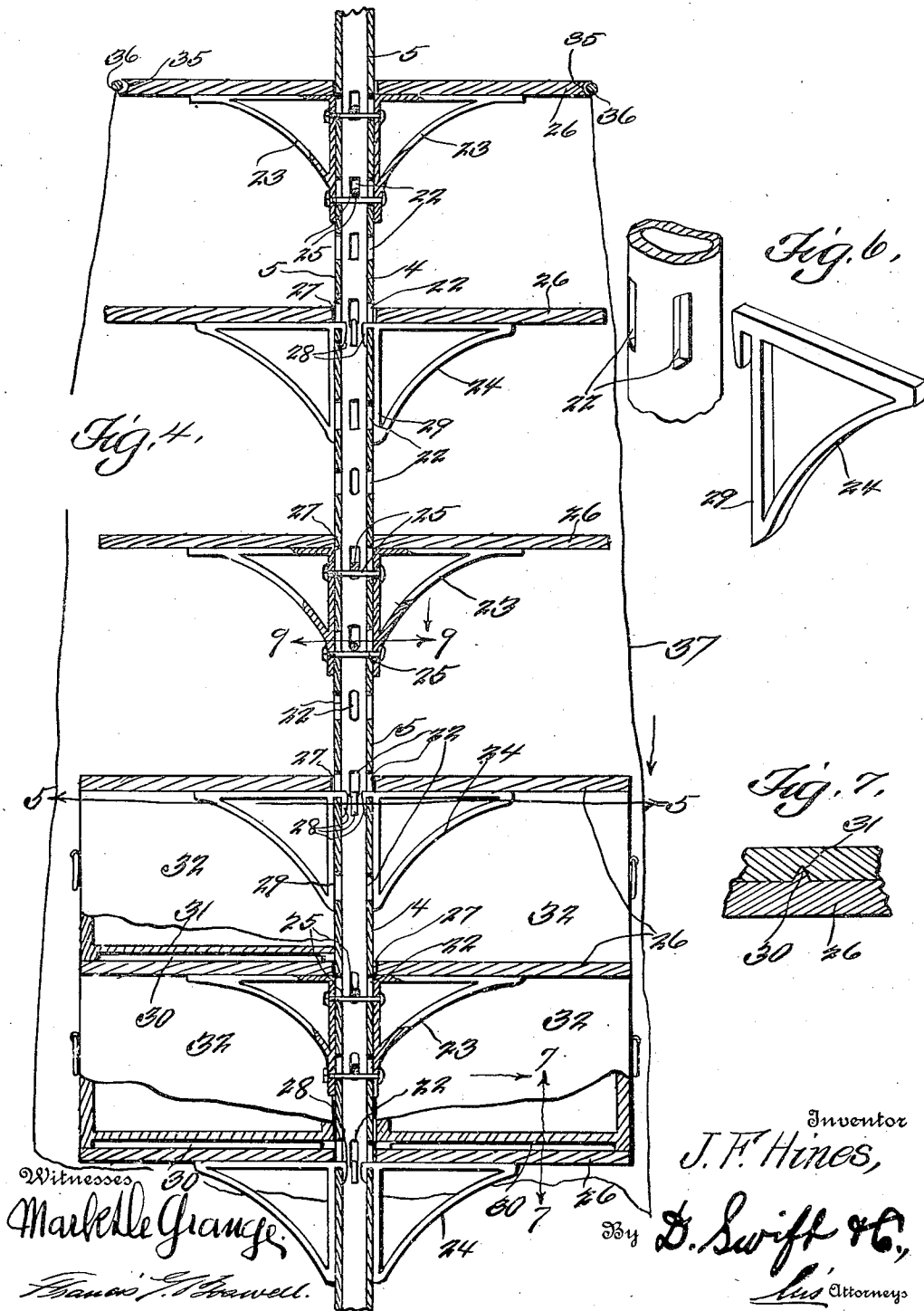
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

JAMES F. HINES, OF GRAND RIVER, IOWA.

ROTARY DISPLAY-SHELVING.

1,101,849.

Specification of Letters Patent.

Patented June 30, 1914.

Application filed September 3, 1913. Serial No. 787,850.

To all whom it may concern:

Be it known that I, JAMES F. HINES, a citizen of the United States, residing at Grand River, in the county of Decatur and State of Iowa, have invented a new and useful Rotary Display-Shelving; and I do hereby declare the following to be a full, 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.

This invention relates to a system of display shelvings for stores and the like, whereby groceries, hardware, dry goods, racket goods, drugs, shoes, read-made clothing and the like, or all goods that are placed upon shelves, may be arranged on display, not only on display, but conveniently at hand, whereby the clerk in the store, without excessively moving from place to place, may have ready access to each and every article on display.

One of the features of each of the rotary display shelves is the provision of a tubular standard mounted in a thrust bearing of the floor of the room or store, and having its upper end swiveled in a bearing of the ceiling, said tubular standard having a series of oppositely arranged slots, constituting means to receive bolts or hooks of brackets for holding the brackets in place, which in turn support the disk shelvings. It will be observed that these brackets, owing to the provision of the plurality of slots, may be adjusted in different positions, and easily detached.

Another feature of the invention is the fact that two of the lower shelves are provided with radial ribs to be engaged by the grooves of the bins, which are received between the lower shelves, and are adapted to contain different grades of coffee, tea and the like. By this system it will be observed that all goods are kept from contact with the wall of the store, and in this manner, mice, bugs, ants and the like, to a great extent are prevented from contaminating the goods.

In practical fields the various details of construction may necessitate alterations to which the patentee is entitled, provided the alterations fall within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter

set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a vertical sectional view through a store room, showing the usual show display window, and also illustrating the improved display system of shelving, embodying a plurality of rotary spindles or standards, having a plurality of adjustable shelvings. Fig. 2 is a plan view partly in section of the structure shown in Fig. 1. Fig. 3 is a perspective view of one of the rotary display apparatus. Fig. 4 is a vertical sectional view through the apparatus shown in Fig. 3. Fig. 5 is a sectional view on line 5—5 of Fig. 4. Fig. 6 is an enlarged detail view showing the construction of one of the brackets, and how the same connects to the rotary standards. Fig. 7 is a detail sectional view on line 7—7 of Fig. 4. Fig. 8 is an enlarged detail view showing the detail construction of how the standard is detachably connected to the ceiling. Fig. 9 is a detail transverse sectional view on line 9—9 of Fig. 4. Fig. 10 is a sectional detail view of the bearing for the lower end of the standard 4.

Referring more particularly to the drawings, 1 designates the usual construction of store room, having the usual show window 2.

On reference to Figs. 1 and 2 it will be observed that this store room is equipped with the improved rotary display system of shelvings 3. This system of shelvings embodies a plurality of rotary display apparatus. Each apparatus comprises a tubular standard 4 constructed in two sections 5 and 6 threaded together as at 7. The section 6 telescopically receives a filling slug 8 into which a thumb bolt 9 is threaded, which first passes through a slot 10 of the section 6, whereby the filling slug 8 may be held in adjusted positions. In other words as the construction of the store settles, the filling slug 8 may be slightly lowered, or otherwise adjusted, so as to prevent binding of the standard when the same is rotated. By removing the thumb bolt 9 and lowering the slug 8, the pintle 11 of the slug may be removed from the socket 12 of the plate, which is secured to the ceiling by means of the screws or bolts 14. The lower end of the section 5 of the standard has an extension 15 threaded therein as at 16. This extension 15 is provided with a

reduced portion 17 which has a thrust bearing 18 in the base plate 19, which is secured to the floor by the bolts 20. This thrust bearing 18 comprises a single ball, 5 constructed from case-hardened steel. Through various experiences a single case-hardened steel ball of this character has been found more practical and desirable, and particularly more serviceable than a 10 plurality of ball bearings, by reason of the fact that there is less frictional surface. For instance, it will be observed that there is only one contact between the ball and the reduced portion 17, and only one contact 15 between the ball and the socket 21 of the base plate, whereas with a plurality of ball bearings, there is a plurality of frictional surfaces.

The section 4 of the standard is provided 20 with a plurality of slots 22, arranged substantially the full length of the section 4, while 23 designates one form of bracket, whereas 24 denotes another form of bracket. These different forms of brackets alternate 25 in arrangement, as will be observed. The brackets 23 are secured in place by bolts 25, which extend through the brackets and through the slots. These brackets are arranged in sets of four, each bracket, in plan 30 view extending radially from the standard. Each bracket is substantially triangular in contour. Each set of brackets supports a disk shelf 26, which is provided with a central opening 27 which receives the standards. 35 The brackets 24 are provided with hooks 28, which pass through the slots 22, and engage on the interior of the tubular standard, while the portion 29 of each bracket 24 bears against the tubular standard to prevent sagging of the bracket. It will be noted that 40 the bolts 25 which secure the brackets 23 in place intersect one another, as shown clearly in Figs. 4 and 5. The two lower annular or circular shelves are provided with radial 45 ribs 30, which engage the grooves 31 of the bins 32, which are adapted to contain various grades of coffee, tea, or the like. These bins are sector-shaped in plan view, and the brackets are arranged between the bins, that 50 is, between every other two bins.

The upper circular or annular shelf is provided with a groove 35, to receive an annular or circular rod 36, on which a curtain 37 is shirred. This curtain is removed, so 55 is the rod, when the store is open, for the

purpose of selling the various goods therein, but when the store is closed, this curtain is suspended from the upper shelf over night, in order to prevent dust from settling upon the goods. It will be observed that there are 60 a number of the slots 22, as will be observed in Fig. 4, there being extra slots between the shelvings, and owing to this plurality of slots the shelves may be adjusted in different 65 position.

From the foregoing it will be observed, there has been devised an exceedingly novel and efficient rotary display apparatus, and when there is a plurality of such apparatus embodied, a very desirable and practical rotary display system of shelvings is attained, 70 especially adapted for small stores and the like.

The invention having been set forth, what is claimed as new and useful is:— 75

1. A display apparatus comprising a revoluble standard mounted in bearings of the floor and ceiling of a room, a plurality of circular shelves, through which the standard is centrally arranged, the shelves being adjustable and arranged at irregular intervals 80 on the standard, drawers being received between two or more of said shelves, the adjustability of said shelves enabling drawers of different heights to be received, and means 85 of connection between the shelves and the drawers to guide the drawers in place.

2. A display apparatus comprising a revoluble standard mounted in bearings of the floor and the ceiling of a room, a plurality 90 of circular shelves through which the standard is centrally arranged, the shelves being adjustable vertically and arranged at irregular intervals on the standards, said shelves being movable annularly independently of 95 the standard, drawers being received between two or more of said shelves, means of connection between the shelves and the drawers to guide the drawers in place, and supporting brackets detachably connected to 100 said standard for supporting said shelves and between which the drawers are received.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES F. HINES.

Witnesses:

W. B. DAY,
B. S. BAKER.