H. KOREN.

DISPLAY APPARATUS.

APPLICATION FILED NOV. 19, 1910. RENEWED FEB. 14, 1916.

1,226,676. Patented May 22, 1917.

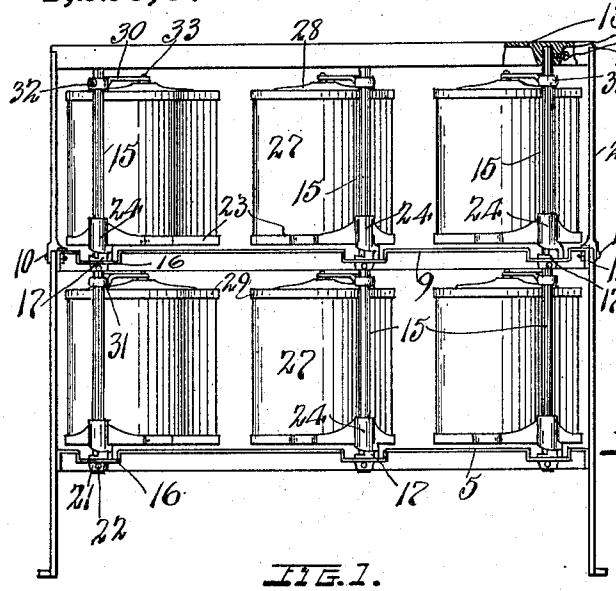


FIG. 1.

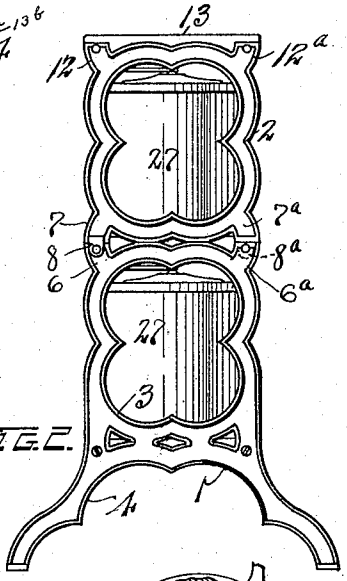


FIG. 2.

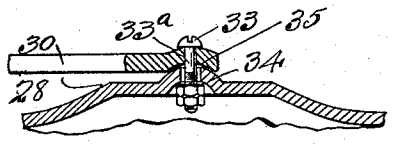


FIG. 6.

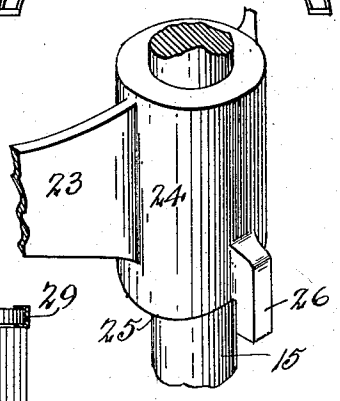


FIG. 4.

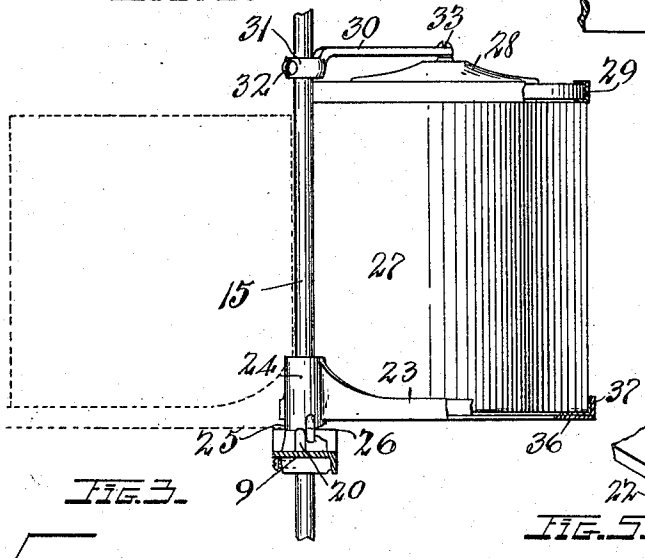


FIG. 3.

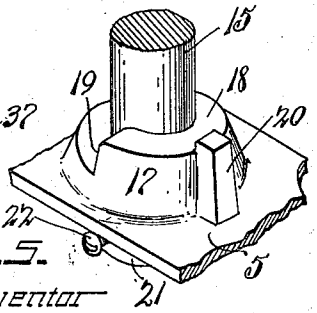


FIG. 5.

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DISPLAY APPARATUS.

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To all whom it may concern:

Be it known that I, HARALD KOREN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Display Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to devices for displaying and movably supporting goods, and particularly goods which are carried in large jars, such as bulk goods in their own juices or brine. It is the purpose of the invention to provide a construction whereby the goods may be kept in a hygienic condition when it is not desirable or necessary to have access to the contents of the jars and which may be conveniently moved from beneath their covers and exposed for inspection and removal of contents when occasion may require. A further object of the invention is to provide a device of this kind which is comparatively simple of production, but is efficient in operation and possessing the requisites of strength and durability. Still further and generally speaking, the invention may be defined as consisting of the combinations of elements embodied in the claims hereto annexed and illustrated in the drawings forming part hereof, wherein Figure 1 represents a front view of a multiple section displaying and supporting apparatus constructed in accordance with my invention; Fig. 2 a side elevation of the apparatus shown in Fig. 1; Fig. 3 a detail, partly in section and partly in elevation, of one of the supporting rods or uprights showing the manner in which a receptacle is carried therefrom toward and away from the cover which is mounted on said rod; Fig. 4 is a detail in perspective of the pivoted end of one of the sleeves, Fig. 5 a similar view of the supporting base or collar for such shelf; and Fig. 6 a sectional detail illustrating the connection between the cover and its support.

Describing the parts by reference characters, 1 denotes a lower and 2 an upper sectional frame. The lower frame comprises a pair of brackets 3 having supporting legs 4 connected by a plate 5. These brackets are of open work construction and are provided each, at the upper end thereof, with a pair of upwardly projecting arms 6, 6^a. On top of these arms there rest the side members of the upper section 2, said section being provided with downwardly projecting arms 7, 7^a, adapted to rest on top of the arms 6 and 6^a. One of the arms, as 7, will be provided with a downwardly projecting lip 8 adapted to bear on the outer surface of one of the arms 6 while the other arm, 7^a, will be provided with a similar downwardly projecting lip 8^a adapted to bear against the inner face of the arm 6^a. A plate 9, similar to the plate 5, connects the upper ends of the brackets 3 and the lower ends of the brackets of the section 2, being conveniently secured thereto by means of bolts 10 extending through the lips 8, the arms 6, 6^a and the downturned end flanges 11 of the plate 9. This plate, owing to its location, forms in effect a bottom plate for the upper frame section 2. This frame section is provided with a pair of upwardly projecting arms 12, 12^a, similar to the arms 6, 6^a. If desired, a sectional frame similar to the frame 2 may be applied to the top of the arms 12, 12^a, and a plate similar to the plate 9 be employed with the upper ends of the front arms 12. For purposes of illustration, however, I have shown a frame composed of two vertical sections only and, for the upper section, a cover 13 is provided having outwardly projecting end flanges 14 resting on top of the sectional frame 2.

15 denotes cylindrical uprights, shown as rods, which are supported by the plates 5 and 9, and have their upper ends inserted into bosses 13^a on the cover 13. Three such uprights are shown. The plates 5 and 9 are shown as angle plates, and each is provided with a suitable number of downwardly deflected portions 16 constituting seats for collars 17 on the rods 15. Each of these collars constitutes a seat for a sleeve mounted on the upright 15, to be described hereinafter. The upper surface of the collar is provided with a cam or spiral seat 18 at its upper end, the lowest part of said cam or seat being connected by a vertical shoulder 19 to the highest part. The collar 17 is provided with a projection 20, for a purpose to be described. Beneath the depression or recess 16, a boss 21 is provided, cast with or otherwise rigidly carried by

the angle plate and is provided with a set screw 22, whereby rotation of the upright 15 is prevented. Each boss 13[a] is provided with a similar set screw 13[b], for the same purpose.

Each upright is shown as provided with a pair of shelves 23, each having a sleeve 24 journaled on the upright 15, the sleeves being provided each with a rounded depending projection 25 adapted to ride upon the inclined track 18 and also having a downwardly extending lug 26 adapted to engage the projection 20 and limit the inwardly swinging movement of the shelf, as shown in Fig. 3. The shelves 23 provide each a revoluble support for a receptacle 27, said receptacle being preferably a cylindrical glass jar, the open upper end of which is adapted to be closed by a cover 28. This cover is preferably made of glass having at its edge a rubber gasket 29 adapted to bear against the top of the jar and form a tight closure therewith. The cover 28 is rotatably supported at the end of an arm 30 having a collar 31 secured to the upright 15 by means of a set screw 32. The cover may be conveniently supported from the inner end of the arm 30 by means of a bolt having a head 33 supporting the cover from the arm. As it is practically impossible to manufacture on a commercial scale large glass jars which are mathematical duplicates of each other, it is necessary to support the cover so that it may automatically adjust itself to the rim of the jar therebeneath to allow for inequalities. I accomplish this by rounding the upwardly projecting center of the cover, as shown at 34, and correspondingly concaving the under surface of the outer end of the arm 30, as shown at 35, and by making the bolt aperture through the cover of materially greater diameter than the bolt 33[a].

In operation, any of the shelves 23 may be swung outwardly by merely rotating the shelf on its upright. As the shelf is swung out to bring the receptacle out with it, the rounded projection of the sleeve 25 rides down the inclined track 18, permitting the receptacle to be moved away from the cover. The projection 25 will be so arranged as to engage the vertical shoulder 19 and limit the outward swinging of the shelf 33 and the receptacle supported thereupon. The dotted lies in Fig. 3 show the jar and shelf in outward or lowered position. When it is desired to return the receptacle to its place, the shelf is rotated in the reverse direction, the projection 25 riding up the inclined track 18 and, when the lug 26 and stop projection 20 are in contact, the projection 25 will be at the highest point on the track and the top of the receptacle will be tightly closed by the cover 28. The capability of vertical, rotary, and angular adjustment of the cover, provided by the universal joint connection with the arm 30 and the adjustability of the collar 31 on the upright, accommodates the shelf to all ordinary variations that may occur in the heights and dimensions of jars as ordinarily manufactured and to such irregularities as may exist in the rims of such jars. In order to protect the bases of the jars from breakage, a rubber pad 36 having an upwardly projecting lip 37 is applied to each shelf. The location of the projection on the sleeve and of the inclined track on the collar places these working parts where the liability to become corroded by the action of acids and brines, spilling from the jars, is reduced to a minimum.

Having thus described my invention, what I claim is:

1. The combination, with a frame, of an upright in operative relation to said frame, an arm supported by said upright and adapted to project into the frame, said arm being adjustable in a horizontal plane, a cover carried by said arm, a shelf rotatably supported by said upright and arranged to be swung into the frame to a position beneath the cover and outside of the frame, and means whereby the shelf will be automatically moved in a vertical direction as it is swung on the upright.

2. The combination of a cover support, a cover carried by said support, a rotatably supported shelf arranged to be swung to a position beneath and away from the cover, and means whereby the shelf will be automatically moved in a vertical direction as it is swung on its support.

3. The combination, with a frame, of an upright supported in operative relation to said frame, a cover supported by said upright within said frame, a shelf rotatably supported on said upright, and means cooperating with the shelf support, whereby the shelf is automatically elevated when swinging into the frame and beneath the cover and is automatically lowered when swinging away from its position beneath the cover and away from the frame.

4. The combination, with an upright, of a cover support, a shelf having a sleeve mounted on the upright, and a collar carried by the upright and forming a bearing for the sleeve, the collar being provided with an inclined bearing surface and the sleeve having a rounded portion adapted to engage such bearing surface, whereby the shelf will be raised and lowered by its rotation on the upright.

5. The combination, with an upright, of a cover support, a cover carried thereby, a revoluble shelf having a sleeve mounted on said upright, the lower surface of the sleeve being provided with a downwardly extending rounded projection, a collar carried by said upright and having on its upper surface an inclined track, a rounded projection

carried by the sleeve and adapted to engage said track, stops carried by the collar, and a depending projection carried by the sleeve and adapted to be engaged by one of the stops.

6. The combination, with a frame comprising a plurality of vertically arranged sections, each section comprising a pair of side members, a plate connecting the lower ends of the side members near the front thereof, an upright common to all of said sections and arranged in proximity to said plates, a shelf revolubly supported on said upright adjacent to and above each plate, a receptacle supported on each shelf, and a cover for each of said receptacles carried by said upright and projecting into the appropriate section.

7. The combination, with a frame comprising a plurality of vertically arranged sections, each section comprising a pair of side members, plates connecting said side members near the fronts thereof, said plates having vertically alined depressions, an upright extending through said plates and through the depressions thereof, a collar in each depression surrounding said upright, revoluble shelves on said upright, each shelf having a sleeve adapted to rest on a collar, and a cover complementary to each shelf and carried by said upright and projecting into the interior of the appropriate section.

8. The combination, with a frame comprising a plurality of vertically arranged sections, each section comprising a pair of side members, plates connecting said side members near the fronts thereof, said plates having vertically alined bosses, an upright extending through said plates and through the boses thereof and secured to said bosses, a collar above each plate surrounding said upright, revoluble shelves on said upright, each shelf having a sleeve adapted to rest on a collar, and a cover complementary to each shelf and carried by said upright and projecting into the interior of the appropriate section.

9. The combination, with a revoluble shelf, of a cover beneath which said shelf is adapted to be moved, said cover having its central portion rounded and projected upwardly, a support for said cover, said support having a concaved portion complementary to the rounded central projection of the cover, and means adjustably connecting the central portion of the cover with the concaved portion of the support.

10. The combination of a shelf, means revolubly supporting said shelf, an arm having a concavity in its lower surface, a cover having its central portion projected upwardly and convexed complementarily to the concavity in the support, and a bolt extending through apertures provided in the central portion of the cover and in the concaved portion of the arm, the aperture in the cover being of materially greater diameter than the bolt.

11. The combination, with a closure and supporting means therefor, of a receptacle, means pivotally supporting said receptacle to provide for swinging it to and from a position underneath said closure, and means to automatically lift said receptacle when the same is swung underneath said closure.

12. The combination, with a tiltable closure and supporting means therefor, of a receptacle, means pivotally supporting said receptacle to provide for swinging it to and from a position underneath said closure, and means to automatically lift said receptacle when the same is swung underneath said closure.

13. In combination, a frame, an upright rod supported thereby, a swinging support pivotally mounted on said rod, an open-topped receptacle carried by said support, a lid adapted to cover said receptacle when the latter is swung to the normal position, and a cam fixed to said rod to cause said receptacle to drop away from said lid at the beginning of its movement from normal position.

14. The combination, with the upright rod, swinging support, and receptacle mounted on said support; of an apertured lid, the wall of said lid being swelled or bent laterally out around said aperture, and supporting means for said lid, said supporting means including clamping means of less diameter than said aperture extending therethrough to provide for adjusting the inclination of said lid.

15. In combination, a frame, an upright rod supported thereby, a swinging support comprising the cam element 24 pivotally mounted on said rod, a receptacle carried by said support, a lid adapted to cover said receptacle when the latter is swung to the normal position, and the cam 18 fixed to said rod to coöperate with said cam element 24 to cause said receptacle to drop away from said lid at the beginning of its movement from normal position and to move up against said lid during the final part of its movement to normal position.

16. The combination of a cover support, a cover carried thereby, a receptacle support beneath the cover support and movable to a position beneath the cover support and to a position away from beneath the cover support, a receptacle on the receptacle support, and means whereby the movement of the receptacle support to a position beneath the cover support will raise the receptacle support to bring the top of the receptacle into substantial engagement with the cover.

17. The combination of a cover support, a cover tiltably supported thereby, a receptacle support beneath the cover support and mov-

able to a position beneath the cover support and to a position away from beneath the cover support, a receptacle on the receptacle support, and means whereby the movement of the receptacle support to a position beneath the cover support will raise the receptacle support to bring the top of the receptacle into substantial engagement with the cover.

18. The combination of a cover, a cover support, a receptacle support beneath the cover support, a receptacle carried by the latter support, said receptacle being movable laterally into and out of vertical alinement with the cover, and means whereby the movement of said receptacle to a position beneath the cover will elevate said receptacle into substantial engagement with the cover.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

HARALD KOREN.

Witnesses:
J. B. HULL,
HUGH B. MCGILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."