R. W. GEARHART.

SELECTIVE SALES CABINET.

APPLICATION FILED MAR. 30, 1922.

1,432,285. Patented Oct. 17, 1922.

2 SHEETS—SHEET 1.

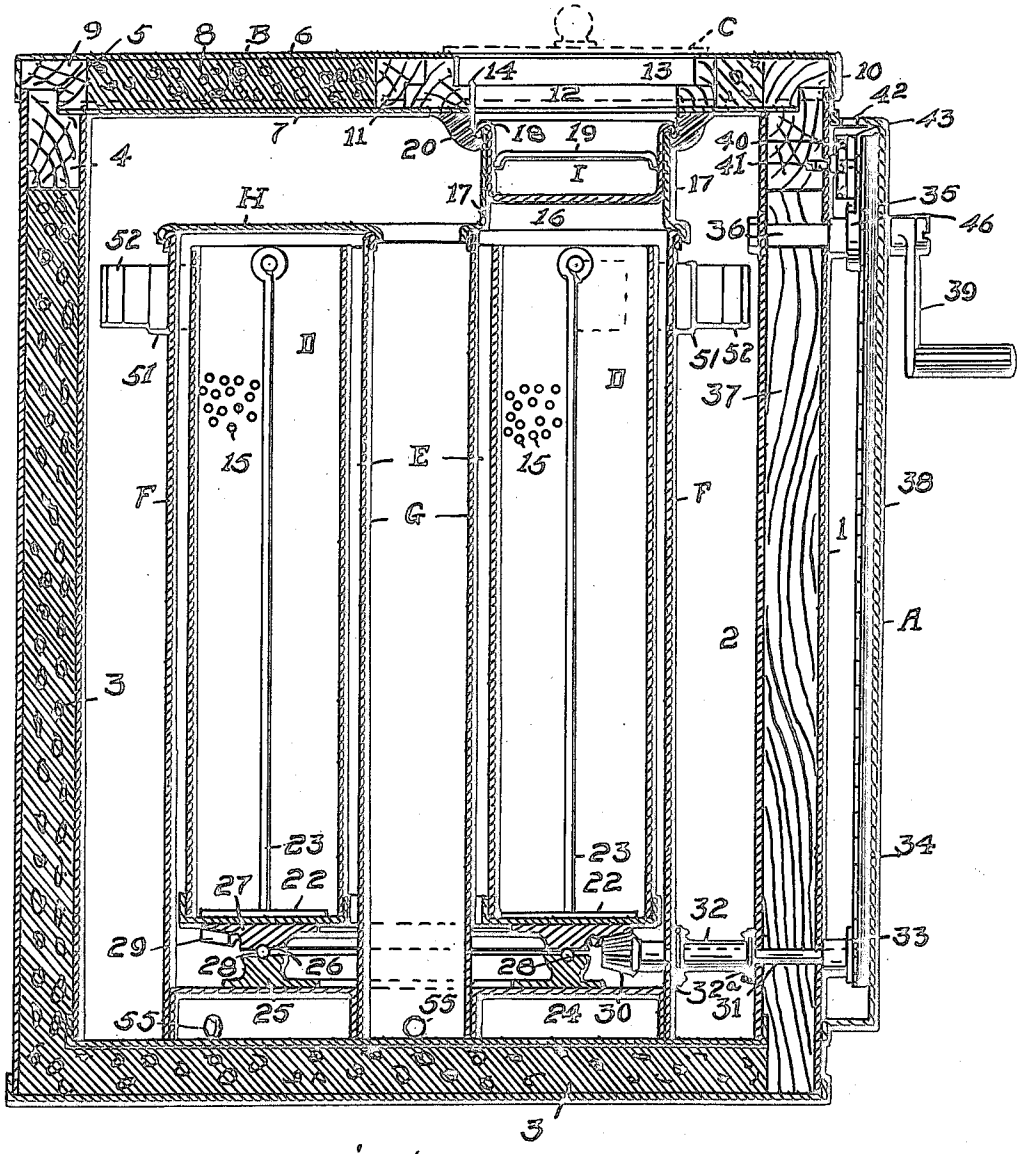


Fig. 1

WITNESS
R F Dilworth

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2 SHEETS—SHEET 2.

Fig 2

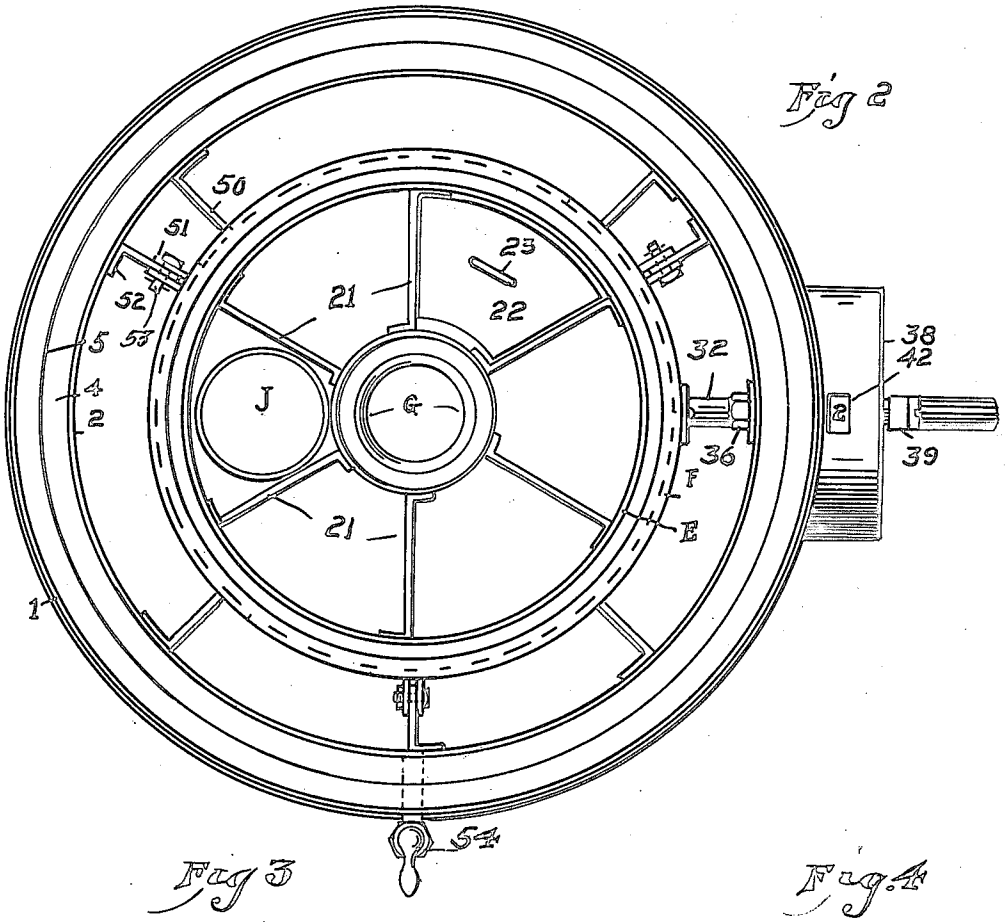


Fig 3

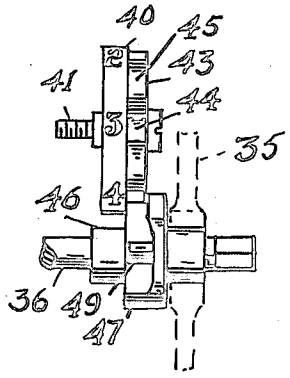
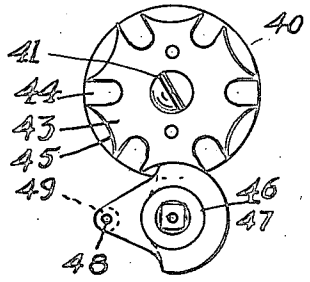


Fig 4



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Patented Oct. 17, 1922.

1,432,285

UNITED STATES PATENT OFFICE.

RALPH W. GEARHART, OF JOHNSTOWN, PENNSYLVANIA

SELECTIVE SALES CABINET.

Application filed March 30, 1922. Serial No. 548,163.

To all whom it may concern:

Be it known that I, RALPH W. GEARHART, a citizen of the United States, and residing in the city of Johnstown, in the county of Cambria and State of Pennsylvania, have invented or discovered the new, useful, and Improved Selective Sales Cabinet, of which the following is a specification.

My invention consists in a new and improved selective sales cabinet for package goods, and it is intended more especially for ice cream and other substances requiring refrigeration.

The present practice in retailing ice cream is to store the packages, containing various flavors or combinations of flavors, together in a lidded metal can which is packed in a tub with broken ice and salt. When a customer asks for a package of a certain character of ice cream, the clerk scrapes the refrigerant off the lid and removes the latter. He then reaches down into the can and removes the packages, one by one, and examines their labels, until he happens upon a package of the desired character. The other packages are then replaced in the can, its lid put back on, and the refrigerant scraped back over the lid.

Owing to the necessarily frequent removal of the lid, and the fact that it remains off until the desired package is found and the other packages are returned to the can, quantities of warm air are admitted to the can, impairing the condition of the goods, while the handling of the packages by the warm, moist hands of the clerk eventually reduces the contents of the packages to a partially melted, and consequently unsalable condition, and the exterior of the packages become soiled and unattractive.

Where bulk ice cream is sold from a lidded can packed in a tub, the same wasteful and objectionable conditions prevail.

The object which I have in view is the provision of a practical and convenient selective sales cabinet wherein a package of the exact character ordered by the customer may be removed from the cabinet without handling any of the other packages and without exposing them to the heated air.

For this purpose, I have devised a new and improved cabinet, comprising an outer casing or tub, preferably having heat-insulated walls, and within which is rotatably mounted a container for the packaged goods, said container being divided by vertical partitions into compartments to receive the various kinds of goods. The container is closed at its bottom and sides, and preferably rotates within an annular partition vertically disposed within the casing, and which partition thus forms with the walls of the casing a space for storing refrigerant surrounding the container. A cover fits tightly down over the top of the partition to cover the container chamber, and the top of said partition is sufficiently lower than the top of the casing that the refrigerant may be piled up over said cover to further refrigerate the container chamber.

The cover is provided with a lidded opening through which access may be had to the container from above, the container being rotated to bring any one of its compartments in registration with said opening, so that packages of any particular character may be loaded into or removed from their assigned compartment.

Convenient and novel means are provided for raising the packages from the bottom of a compartment, when the latter is becoming empty, so that they are in easy reach of the clerk's hand when inserted down through said opening.

The outer casing is also provided with a top closure, and said closure is also provided with a lidded opening vertically alined with the opening in the cover of the container chamber, and the walls of the opening in said cover are preferably extended upwardly toward said top closure to prevent refrigerant falling down into the container chamber when access is had thereto. I also prefer to provide packing for the joint between the upwardly extended walls of the opening in said cover and the top closure, to prevent the entrance of heated air into the interior of the casing where the refrigerant is stored.

I prefer to make the container of annular form, providing a second annular partition within and concentric with the first named annular partition, and which forms the axis upon which the container rotates. In such case the cover for the container chamber is of annular form, inclosing the annular container chamber formed between the two concentric partitions, and the space within the inner annular partition is open at the top so that the refrigerant may also be filled down in the same, thus chilling the annular container

from within. I prefer to perforate the walls of the container to increase the chilling effect of the refrigerant which, as is apparent, completely surrounds the same.

Means are provided for rotating the container from without the casing. Thus I have shown the container mounted on a circular, and preferably anti-frictional, bearing in the bottom of the container chamber, and provided with a concentric bevelled gear meshing with a bevelled pinion mounted on the inner end of a shaft journaled in the wall of the casing and extending into the bottom of the container chamber. The outer end of said shaft is provided with means for rotating the same. Thus, I have shown said shaft provided with a sprocket wheel connected by a chain with a second sprocket mounted on the casing near the top of the latter and rotated by a hand crank, a suitable shield or cover being provided for the sprockets and chain. I also provide a novel form of indicating device operatively connected to the drive mechanism, whereby the clerk can tell when the compartment from which he desires to remove a package, or into which he desires to introduce a fresh supply of packages, has been turned into registration with the openings in the cover and top closure.

Other novel features of construction and arrangement of parts will appear from the following description.

In the accompanying drawings, wherein is illustrated a convenient form of selective sales cabinet embodying the principles of my present invention, Fig. 1 is a diametric, vertical section of the same; Fig. 2 is a plan view with the top closure and container chamber cover both removed to better show the construction; Fig. 3 is an enlarged detail in side elevation showing the indicating mechanism, and Fig. 4 is another view of the same looking from the right in Fig. 3.

The following is a detailed description of the drawing.

A represents the outer casing or tub which is preferably provided with heat-insulated walls. Thus, I have shown said casing comprised of two nested together metal cans, 1 and 2, spaced apart and provided with an interlining 3 of cork or other insulation. The upper ends of said cans are spaced apart and held together by the interposed, wooden filler ring 4. The wall of the outer can is preferably slightly higher than that of the inner can, and the ring 4 is shouldered as shown at 5. B is the top closure, likewise formed of spaced apart metal walls 6 and 7 between which is the interlining of insulating material 8. The perimeter of said closure is defined by a wooden ring 9 which is shouldered to fit down on the ring 4, and the top wall of the cover is turned down to form an annular flange 10 which fits over the top portion of the casing as shown. The top closure may also be provided with one or more wooden cross struts 11 to further stiffen the same.

At one side of its center the closure B is provided with an access opening 12 which is walled by the wooden ring 13, internally shouldered, as shown at 14, and into which fits the lid C.

Rotatably mounted within the casing A is the container D. This container is preferably of annular form, and is preferably mounted in an annular container chamber E formed between two concentric and spaced apart annular partitions F and G rising vertically from the bottom of the casing, but of less height than the wall of the casing. The outer partition F is spaced inwardly from the casing wall, thus forming a space for refrigerant, preferably broken ice and salt, and the space within the inner partition G is preferably used for a like purpose.

The walls of the container D are preferably perforated as at 15 for the better circulation of the cold air.

The container chamber is closed by means of a cover H which, where the chamber is of the annular form shown, fits down on the tops of the two annular partitions. Said cover is provided with an access opening 16 which is directly below the opening 12 in the top closure, and the walls of said opening 16 are preferably extended upwardly, as at 17, toward and almost in contact with the top closure, thus preventing refrigerant piled on top of the cover H from falling down into the container chamber when the opening 16 is unclosed. The opening 16 is closed by means of a lid I having a perimetral, annular hook flange 18 which fits down over the top of the upwardly extending opening wall 17. 19 is a diametric handle for said lid. The walled opening 16 is of sufficient less size than the opening in the top closure to permit the lid I to be inserted down into place conveniently.

To prevent warm air entering the interior of the casing around the top of the wall 17 when the lid C is off, I prefer to provide the top closure B with a skirt gasket 20 of rubber or other compressible material which will resiliently engage about the wall 17 but leave space for the application of the lid I.

The container is divided radially by the vertical partitions 21 into a plurality of compartments shown as six in number, each intended for a particular character of goods. It is evident that by turning the container into position wherein any one of its compartments is in registration with the access openings in the cover and top closure, said compartment may be loaded with a supply of goods or a package may be removed from

said compartment. To enable the clerk to conveniently reach a package when a compartment is almost emptied, I prefer to provide such compartments with a false floor 22 to which is secured a vertically disposed rod 23 having a ring on its upper end. Thus in filling the compartment, the false floor is first put in place and the packages filled into the compartment. When the supply of packages becomes so reduced that the clerk cannot conveniently reach down to grasp a package, the clerk simply grasps the ring on the top of the rod 23 and lifts the false floor 22 until the packages come within his easy reach. He then lowers the false floor, before replacing the lids.

I prefer to perforate the walls of the container, as shown at 15 to aid in the circulation of the cold air through the compartments.

I provide novel means for rotating the container from without the casing. Thus 24 is an annular box or base in the bottom of the container chamber, and upon which is secured the annular ball bearing raceway 25 which coacts with the similar raceway 26 of the casting 27 secured to the bottom of the container, the balls 28 being seated between said raceways. The casting 27 is also provided with an integral annular bevelled gear 29 which meshes with a bevelled pinion 30 mounted on the inner end of a shaft 31 which extends through the outer partition F and the casing A, and is journaled in a bushing 32 spanning the space between the partition F and the wall of the container A. The ends of said bushing are provided with flanges formed to fit the walls and the same may be bolted in place with interposed gaskets 32^a, forming a tight joint to prevent the escape of liquid or entrance of warm air along the shaft.

The outer end of the shaft 31 is provided with a sprocket wheel 33 which is connected by means of the chain 34 with a second sprocket wheel 35, preferably larger, which is rotatably mounted on a stud shaft 36 extending from the casing A. To strengthen the casing and better support said shafts 31 and 36, I prefer to provide between the outer walls 1 and 2 of the casing A a vertically disposed wooden post 37 extending to the bottom of the casing and attached at its upper end to the wooden ring 4. The chain and sprockets are preferably covered by a metal shield 38 attached to the casing at its top and bottom, as shown in Figs. 1 and 2.

The outer hub of the sprocket 35 is squared to receive the hand crank 39.

Within the shield 38 a smooth perimeter wheel 40 is rotatably mounted on a stud shaft 41 extending from the case, and said wheel has marked on its perimeter a series of numbers consecutive from "1" corresponding to the number of separate compartments of the container D, as shown in Fig. 3. To permit the operator to observe the number displayed at the top of the wheel 40, the shield is apertured at the top, as at 42.

Integral with or attached to the front face of the wheel 40 is a disk 43 whose perimeter is provided with radial slots 44 and arcuate depressions 45. Mounted on the inner hub of the sprocket 35 is a driving member 46 provided on one side with an arcuate perimeter 47 of the same curvature as that of the depressions 45 and adapted to mate therewith, and at its opposite side with a pin 48 on which is mounted the roller 49 adapted to engage the radial slots 44. It is evident that the rotation of the driving member 46 with the sprocket 35 will result in intermittent rotation of the indicating wheel 40, thus in turn bringing the numbers on the perimeter of said wheel into the visible position under the sight aperture 42.

The parts are so assembled that when a compartment of the container has been brought into registration with the access openings in the cover and top closure, the number assigned to identify said compartment is brought into view at the aperture 42.

The outer annular partition F may be braced in any convenient manner. Thus Z-braces 50 may be interposed and welded in place, or the pairs of spaced apart plates 51 may be secured to the partition F, and the angle plates 52 secured to the casing A, the plates interlacing and secured together by bolts 53 extending through registering holes in said plates.

At one side at the bottom the casing A is provided with a drain cock 54 for the discharge of the water from the melting ice. To drain the water from the refrigerant chamber inclosed by the annular partition G, holes 55 may be provided in the bottom of the partitions F and G in the vertical walls of the box 24. The walls of said box should make a tight joint with the partitions F and G, as by welding, to prevent the water rising in the container chamber and reaching the goods in the container.

By thus firmly anchoring the partitions together, the inner partition G is supported also by the outer partition F, which as has been explained, may be anchored at its top to the casing.

When the container is put into use, the cover H is put in place, and broken ice and salt filled in between the partition F and the outer wall of the container A, within the axial chamber surrounded by the partition G, and piled up over the top of the cover H nearly level with the top of the casing A. The top closure B is then put in place.

The lids C and I are now removed, and the compartments of the container D brought in turn into registration with the access openings and the various characters

of packages loaded into the proper compartments. When all of the packages have been thus stored in their proper compartments, the lids I and C are replaced and the cabinet is ready for service.

When a customer calls for a certain character of package, the clerk, who is informed as to the number of the compartment which contains the desired character of packages, turns the crank handle until the indicating wheel 40 displays through the aperture 42 the number of said compartment, thus informing the clerk that he has caused the proper compartment to come into registration with the access openings. The clerk then removes the lids and reaches down into the container and takes out a package. He then immediately closes the lids. Thus he has handled only the single package sold and has not exposed the remaining packages to warm air. When the supply of packages becomes low in any one of the compartments, the clerk raises the false bottom of the compartment, when removing a package, thus elevating the packages into easy reach. When any of the compartments become depleted of their supply of packages, the compartment is brought into registration with the access openings, the lids are removed, the compartment refilled and the lids replaced. Water from the melting ice may be removed, as required, through the stop cock 54, and when the refrigerant requires replenishment, the top closure B is removed and additional ice and salt shovelled in, the vertical wall 17 preventing such refrigerant dropping down into the container D or onto the lid I.

It has been found in the use of my improved cabinet that the frozen goods may be kept almost indefinitely in perfect, salable condition; that when sold the packages are fresh and attractive, and also that great economy in the amount of refrigerant required is effected, as the package container D is surrounded on all sides and over the top with the refrigerant, thus realizing the full value of the latter, and the supply of refrigerant is not exposed to the warm air while sales are being made.

At J in Fig. 2 I have shown a freezer can, supposed to contain ice cream in bulk, inserted down into one of the compartments of the container D. In such case it would of course be necessary to remove the top closure B and the cover I to insert or remove the can J. The storing of the can for bulk sales in this manner is of great advantage, as, when it is desired to make a sale of bulk ice cream, the compartment in which the freezer can is stored would be rotated into registration with the access opening, the lids removed, and the ice cream scooped out of the can J. This is a much more convenient, sanitary and economical method of dispensing bulk ice cream than to have the can packed in an open tub as is now the accepted practice.

My improved cabinet presents a neat and attractive appearance and thus tends to encourage the sale of the goods. As shown, it is intended to sit on the floor, and for that reason the crank handle is near the top of the casing. In case it is intended to rest the cabinet on a table or other elevated support, the crank handle may be attached to the lower sprocket wheel or otherwise placed lower down on the casing than now shown.

What I desire to claim is:—

1. A selective sales cabinet comprising an outer casing, a container rotatably mounted in said casing, said container being divided into a plurality of compartments by vertically disposed partitions, means for rotating said container from without said casing, a stationary cover for said container, said cover being provided with an access opening into registration with which any one of said container compartments may be brought by rotating said container into proper position, a top closure for said casing spaced above said cover and provided with a lidded opening vertically alined with the opening in said cover, and a closed passage connecting said openings.

2. A selective sales cabinet comprising an outer casing, a container rotatably mounted in said casing, said container being divided into a plurality of compartments by vertically disposed partitions, means for rotating said container from without said casing, a stationary cover for said container, said cover being provided with an access opening into registration with which any one of said container compartments may be brought by rotating said container into proper position, a top closure for said casing spaced above said cover, said top closure being provided with a lidded opening vertically alined with the opening in said cover, and the walls of the opening in said cover being extended upwardly toward the opening in said top closure, and packing mounted on said top closure and surrounding said upwardly extending walls.

3. A selective sales cabinet comprising an outer casing, an annular vertically disposed wall in said casing, the central space inclosed by said annular wall forming a chamber for refrigerants, an annular container rotatably mounted in said casing with said annular wall as an axis, said container being divided by radial partitions into a plurality of compartments, a stationary cover for said container, said cover being provided with an access opening into registration with which any one of the compartments of said container may be brought by rotating said container into the proper posi-

tion, a top closure for said casing spaced above said cover, said top closure being provided with a lidded opening vertically alined with the opening in said cover, and an inclosed passage connecting said two openings.

4. A selective sales cabinet comprising an outer casing, an annular vertically disposed wall in said casing, the central space inclosed by said annular wall forming a chamber for refrigerants, an annular container rotatably mounted in said casing with said annular wall as an axis, said container being divided by radial partitions into a plurality of compartments, a stationary cover for said container, said cover being provided with an access opening into registration with which any one of the compartments of said container may be brought by rotating said container into the proper position, and a top closure for said casing spaced above said cover and provided with an access opening, the walls of the opening in said cover being vertically extended toward the opening in said top closure for the purpose described.

5. A selective sales cabinet comprising an outer casing, an annular vertically disposed wall in said casing, the central space inclosed by said annular wall forming a chamber for refrigerants, an annular container rotatably mounted in said casing with said annular wall as an axis, said container being divided by radial partitions into a plurality of compartments, a stationary cover for said container, said cover being provided with an access opening into registration with which any one of the compartments of said container may be brought by rotating said container into the proper position, a top closure for said casing spaced above said cover and provided with an access opening, the walls of the opening in said cover being vertically extended toward the opening in said top closure, and a packing carried by said top closure and surrounding said vertically extended walls for the purpose described.

6. A cabinet for the selective sale of frozen package goods comprising an outer casing, a vertically disposed annular partition in said casing and of less height than the outer wall of said casing, said partition inclosing a chamber, a cover adapted to fit down on said partition to close the top of said chamber, whereby refrigerant may be filled in about said partition and on top of said cover, said cover being provided with a lidded opening for access to said chamber, a container rotatably mounted in said chamber, said container being vertically divided to form a plurality of storage compartments, and means for rotating said container from without whereby any one of said compartments may be brought into registration with said lidded opening.

7. A cabinet for the selective sale of frozen package goods comprising an outer casing, a pair of concentric annular vertically disposed partitions in said casing of less height than the outer wall of the latter, whereby an annular chamber is formed between said partitions, a cover adapted to fit down over said partitions to close the top of said chamber, whereby refrigerant may be filled in around said walls and over said cover, said cover being provided with a lidded opening for access to said chamber, a container rotatably mounted in said chamber, said container being vertically divided to form a plurality of storage compartments, and means for rotating said container from without said compartment whereby any one of said compartments may be brought into registration with said lidded opening.

8. A cabinet for the selective sale of frozen package goods comprising an outer casing, a chamber in said casing having its vertical walls of less height than the walls of the outer casing, a cover for said chamber whereby refrigerant may be piled up thereon, said cover being provided with a lidded opening for access, a container rotatably mounted in said chamber, said container being vertically divided to form a plurality of storage compartments, and means for rotating said container from without said casing whereby any one of said storage compartments may be caused to register with said lidded opening.

9. In a selective sales cabinet, the combination of an outer casing, an annular vertically disposed partition in said casing forming between itself and the walls of said casing a compartment for storing refrigerants, a container rotatably mounted within said annular partition, a gear mounted on said container, a water and air tight bushing interposed between said partition and the wall of said casing and connecting registering holes in the same, a shaft journaled in said bushing, a pinion on the inner end of said shaft and meshing with said gear, and means for applying rotative power to the outer end of said shaft.

10. In a selective sales cabinet, the combination of an outer casing provided with an access opening, a container divided into a plurality of compartments and rotatably mounted in said casing so that by rotating the container any one of said compartments may be brought into registration with said access opening, means for rotating said container from without said casing, a circular indicator having a series of numerals marked thereon corresponding to said compartments, and means for imparting intermittent rotary movement to said circular member from said container rotating means whereby said indicator will indicate the compartment registering with said access opening.

11. A selective sales cabinet comprising a

casing, a pair of vertically disposed, concentric annular partitions mounted in said casing forming between them an annular chamber, the space between the outer partition and the walls of said casing and the space inclosed by the inner partition being used for the storage of refrigerants, an annular container rotatably mounted in said annular chamber, the walls of said container being perforated for the circulation of cold air in said container, and means for rotating said container from without said casing.

12. A selective sales cabinet comprising a casing, a chamber in said casing, the walls and floor of said chamber being spaced from the walls and floor of said casing to provide space for refrigerants around and beneath the casing, a rotary container in said chamber, means for rotating said container from without said casing, a cover for said container and a top closure for said casing, said cover and closure being provided with suitable means for access to said container.

13. A selective sales cabinet comprising a casing, a chamber in said casing, the walls and floor of said chamber being spaced from the walls and floor of said casing to provide space for refrigerants around and beneath the casing, a rotary container in said chamber, means for rotating said container from without said casing, a cover for said container and a top closure for said casing, said cover and closure being provided with suitable means for access to said container, and said top closure being spaced above said cover to provide space for refrigerants, whereby said container is substantially completely surrounded with refrigerant.

Signed at Johnstown, Pa., this 25 day of March, 1922.

RALPH W. GEARHART.