Sept. 27, 1932. G. R. HUTCHISON 1,879,269

DISPENSING APPARATUS

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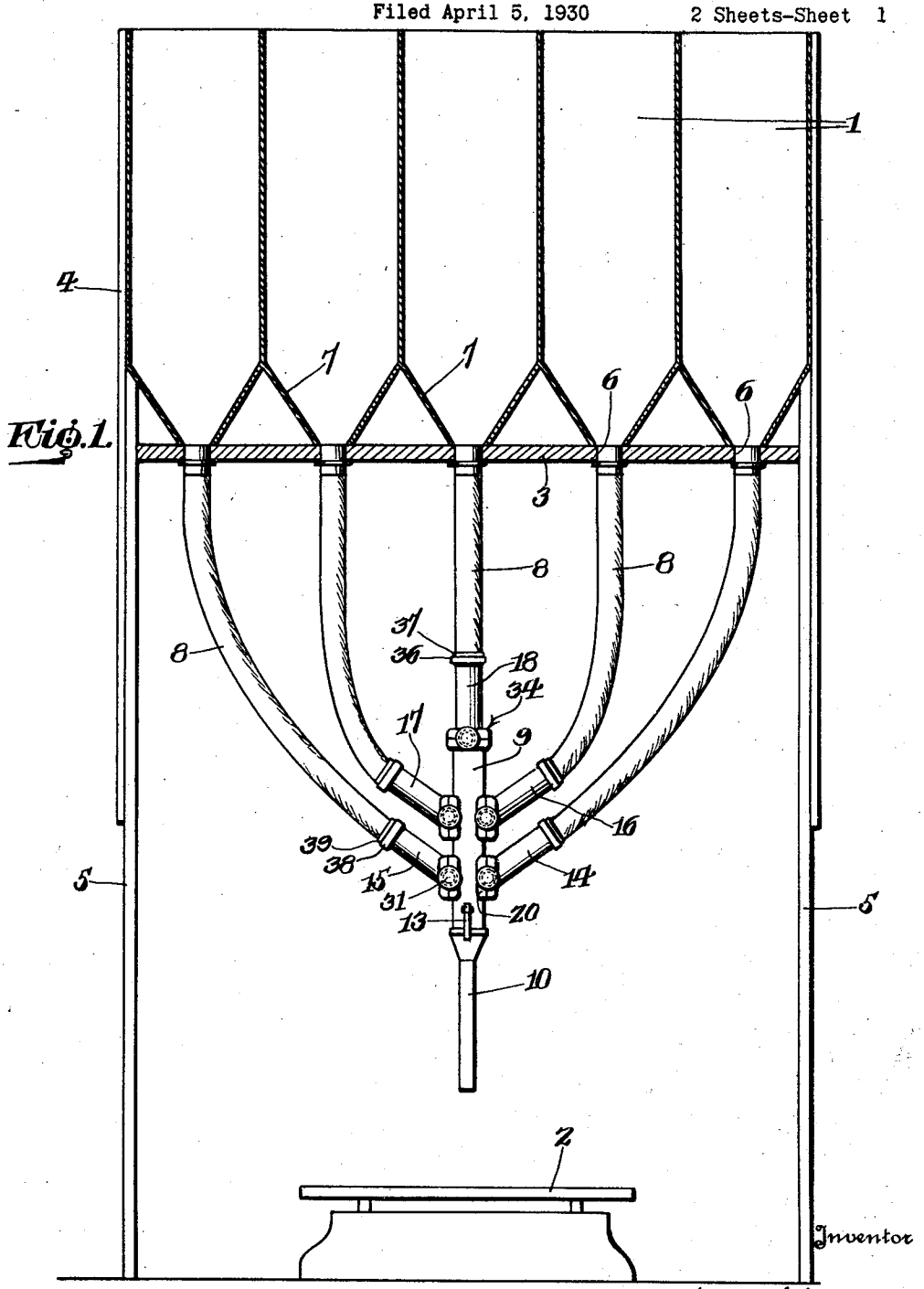


Fig. 1.

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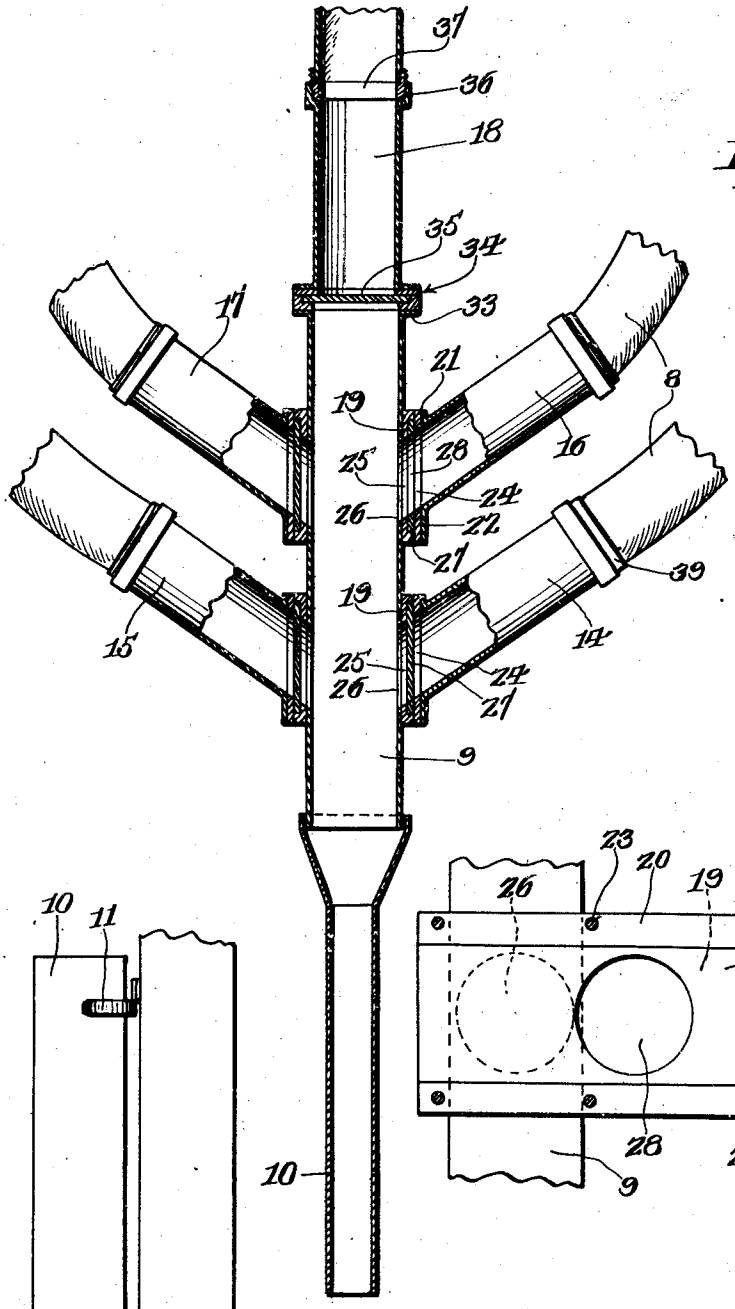


Fig. 2.

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE

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DISPENSING APPARATUS

Application filed April 5, 1930. Serial No. 441,950.

This invention relates to a dispensing apparatus particularly adapted for use in grocery stores, and has for its primary object to provide, in a manner as hereinafter set forth, a dispensing apparatus by means of which groceries, such as navy beans, lima beans, rice, coffee and the like may be selectively conducted from suitable bins to a container, such as a paper bag, seated on a scale.

A further object of the invention is to provide a dispensing apparatus for the purpose aforesaid, by means of which a desired quantity of a selected commodity may be conveniently and expeditiously transferred from a bin to a bag or the like, and the flow of the commodity to the bag stopped instantly when the desired quantity has been transferred to the bag.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter more particularly described, and as illustrated in the accompanying drawings wherein is shown an embodiment of the invention, but it is to be understood that the description and drawings are to be taken as illustrative and that the invention is intended to be limited only by the scope of the claims hereunto appended.

In the accompanying drawings in which like numerals are employed to designate like parts throughout the same.

Figure 1 is an elevation of a dispensing apparatus in accordance with this invention, showing the same in association with a plurality of bins located directly over a scale.

Figure 2 is an enlarged fragmentary sectional elevation of the dispensing apparatus.

Figure 3 is an enlarged detail of one of the valves with which the apparatus is equipped.

Figure 4 is a fragmentary elevation showing the discharge spout in inoperative position.

The dispensing apparatus is illustrated in the accompanying drawings in connection with a plurality of bins 1 located directly over a scale 2, but it is to be understood that the bins may be located at a point removed from the scale if desired, for instance on a floor above that on which the dispensing apparatus is in use. The bins 1 as shown are provided with a common bottom 3 and are enclosed within a wall structure 4 which is secured to a plurality of supports 5 projecting upwardly from opposite sides of the scale 2. The bottom 3 is formed with a plurality of spaced openings 6, and the bins 1 are formed with downwardly tapering bottoms 7 in registry with the openings 6. Secured to the bottom 3 and extending into the openings 6 are a plurality of flexible tubes 8, the lower ends of which are connected with a plurality of branches projecting from a vertically disposed, tubular receptacle 9 located directly over the scale 2. The receptacle 9 is provided with a reduced discharge pipe 10 which depends from the receptacle into proximity to the scale 2. The discharge spout 10 is hingedly connected to the lower end of the receptacle 9 in order that the spout may be swung to a position in parallel relation to the receptacle as shown in Figure 4. The receptacle 9 is provided with a resilient gripping element 11 for maintaining the spout 10 in inoperative position, and is further provided with a lug 12 for engagement by a resilient latch member 13 on the spout 10 for maintaining the latter in operative position.

In the embodiment herein shown and described there are five of the branches projecting from the receptacle 9, such branches being designated by the numerals 14, 15, 16, 17 and 18. The number of branches may be increased or decreased as desired, and one of the tubes 8 is employed for each of the branches. The branches 14, 15, 16 and 17 extend from the receptacle 9 at vertical inclinations, and each of such branches is connected with the receptacle by means of a valve housing. The valve housing is in the nature of an elongated flat plate 19 disposed transversely of the receptacle 9 and is formed with a right angularly disposed flange 20 which projects from the side edges of the plate and from one of the end edges thereof. Seated against the flange 20 is an elongated cover plate 21, against the outer face of which a flange 22 on the associated branch is seated. The flange 22, plate 21, flange 20

and receptacle 9 are connected together by means of suitable holdfast devices 23 which extend therethrough. The plate 21 is provided with an opening 24 having a sloping wall in registry with the inner peripheral face of the associated branch. The plate 19 is formed with an opening 25 having a sloping wall in registry with the wall of the opening 24. The wall of the receptacle 9 is formed with an opening 26 having a sloping wall in registry with the wall of the opening 25.

Slidably mounted between the plates 19 and 21 is a valve member 27 which is in the nature of an elongated plate and which is provided with an opening 28. Formed integrally with the member 27 is a shank 29 which extends through a recess 30 formed in the flange 20. The shank 29 is provided at its outer end with a grip member 31. The member 27 is normally maintained with the opening 28 out of registry with the opening 26 by means of a compression spring 32, the respective ends of which abut against the grip member 31 and an end of the valve housing. The grip member 31 may be forced in a direction toward the housing against the compression of the spring 32 to bring the opening 28 into alignment with the openings 26, 25 and 24. The opening 28 is formed with a sloping wall adapted for registry with the sloping walls of the openings 26, 25 and 24 and with the inner peripheral face of the associated branch.

The branch 18 projects upwardly from the receptacle 9 and is secured to a flange 33 on the upper end of the receptacle by means of a valve housing 34. The valve housing 34 is provided with a valve member 35 similar to the valve member 27 heretofore described. The valve housing 34 is similar to the valve housing heretofore described, differing therefrom in that the plates of the housing 34 are provided with openings having vertically disposed walls. Likewise the opening through the valve member 35 is formed with a vertically disposed wall in order to be in registry with the walls of the openings through the plates of the housing 34, and with the inner peripheral face of the branch 18. The branch 18 is provided at its upper end with an outwardly offset, internally threaded lip 36 for engagement by the external threads of a coupling member 37 secured to the lower end of one of the flexible tubes 8. A similar lip 38 is provided on the outer end of each of the branches 14, 15, 16 and 17 for engagement by a coupling member 39, one of which is secured to each of the remaining tubes 8.

It is thought that the many advantages of a dispensing apparatus in accordance with this invention will be readily apparent, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the size, shape, and arrangement of parts may be resorted to, so long as such changes fall within the scope of the invention as defined in the appended claims.

It is to be noted particularly that the accurate registry of the openings through the wall of the receptacle 9 and through the valve members and valve housings with each other and with the inner peripheral faces of the branches provide a smooth passage from each branch to the receptacle without any obstruction, whereby any possibility of the clogging of the commodities being transferred from the bins is eliminated. It is to be noted further that the branches discharge into the receptacle directly over the scale on which the container is to be seated whereby any after flow of the commodity after the valve in the branch has been closed is prevented.

What I claim is:

1. A dispensing apparatus comprising an upstanding, tubular, open bottom receptacle having a top provided with an opening and a pair of opposed sides, each formed with a plurality of superposed spaced openings, a normally closed, horizontally slidably, spring controlled shut-off means at and connected upon said top for closing said top opening, a series of normally closed, horizontally slidable shut-off means secured to said sides and each for independently closing a side opening, a commodity discharge pipe connected with each of said means and normally closed by the latter, and a discharge nozzle attached to the open bottom of said receptacle.

2. A dispensing apparatus comprising an upstanding, tubular, open bottom receptacle having a top provided with an opening and a pair of opposed sides, each formed with a plurality of superposed spaced openings, a normally closed, horizontally slidably, spring controlled shut-off means at and connected upon said top for closing said top opening, a series of normally closed, horizontally slidable shut-off means secured to said sides and each for independently closing a side opening, a commodity discharge pipe connected with each of said means and normally closed by the latter, a nozzle encompassing and depending from the open bottom of said receptacle, means for hinging said nozzle to the receptacle, means for latching the nozzle in depending position with respect to said open bottom, and means for latching said nozzle in parallel spaced relation with respect to a side of said receptacle.

3. A dispensing apparatus comprising an upstanding, tubular, open bottom receptacle having a top provided with an opening and a pair of opposed sides, each formed with a plurality of superposed spaced openings, a a normally closed, horizontally slidably, spring controlled shut-off means at and connected upon said top for closing said top

opening, a series of normally closed, horizontally slidable shut-off means secured to said sides and each for independently closing a side opening, a commodity discharge pipe connected with each of said means and normally closed by the latter, a discharge nozzle attached to the open bottom of said receptacle, the spring controlled means at the top of said receptacle being disposed flatwise relative to said top, and the spring controlled means at the sides of the receptacle standing on the lower edges thereof, the said several means extending laterally from the top and sides of the receptacle.

4. A dispensing apparatus comprising an upstanding, tubular, open bottom receptacle having a top provided with an opening and a pair of opposed sides, each formed with a plurality of superposed spaced openings, a normally closed, horizontally slidably, spring controlled shut-off means at and connected upon said top for closing said top opening, a series of normally closed, horizontally slidable shut-off means secured to said sides and each for independently closing a side opening, a vertically disposed tubular branch extending from the means at the top of the receptacle, an upwardly inclined tubular branch extending from each of said means at the sides of the receptacle, each of said branches having its outer end provided with an offset interiorly threaded lip, commodity conducting lines, annular couplings engaging with said lips and lines for connecting the latter to the branches, and a nozzle attached to the open bottom of said receptacle.

5. A dispensing apparatus comprising an upstanding tubular receptacle having a top provided with an opening and a pair of opposed sides, each formed with a plurality of superposed openings, a valve casing disposed flatwise of and secured to said top, a series of valve casings each standing on its lower edge, said casings secured to sides and top each registering with an opening, an apertured spring controlled valve element in each of said casings for normally closing said openings, said elements being independently reciprocal through the casings to open and close said openings, means for limiting the shifting movement of said elements in either direction, said casings having branches extended therefrom, commodity conducting lines, means for coupling said lines to said branches, and a nozzle attached to the open bottom of said receptacle.

6. A dispensing apparatus comprising an upstanding tubular receptacle having an open bottom and common to the discharge lines of and selectively receiving the discharge from a series of commodity sources, valve casings secured to the outer faces of opposed sides of and communicating with the receptacle and each adapted to have a discharge line open thereinto, a valve casing secured upon the upper face of the top of and communicating with the receptacle and adapted to have a discharge line open thereinto, a normally closed spring controlled slide valve in each casing for controlling the discharge of the commodities into the receptacle, said valves being independently shiftable, a discharge nozzle hinged to the open bottom of the receptacle, means for latching said nozzle to and in discharge position with respect to said open bottom, and means for latching said nozzle in spaced parallel relation to one side of the receptacle.

In testimony whereof, I affix my signature hereto.

GEORGE R. HUTCHISON.