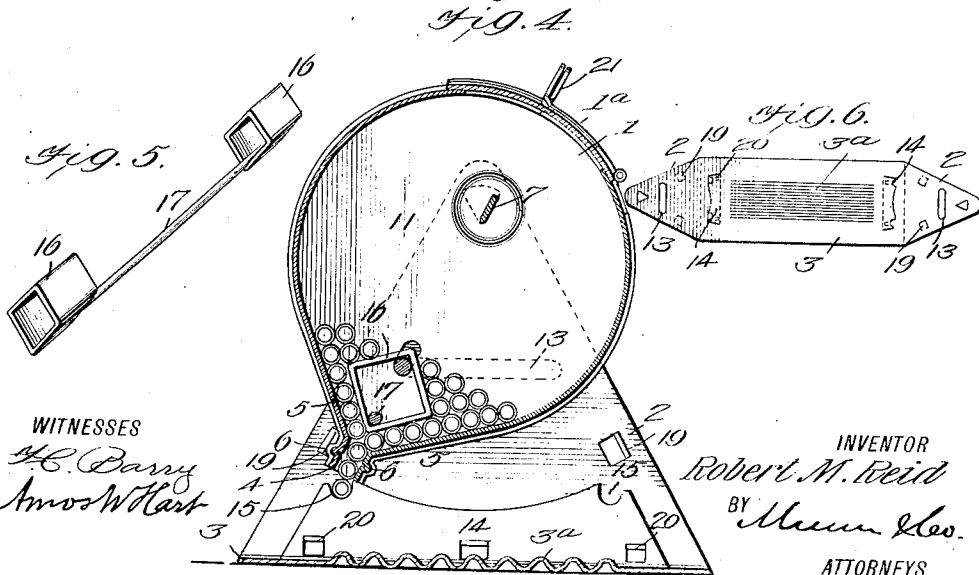
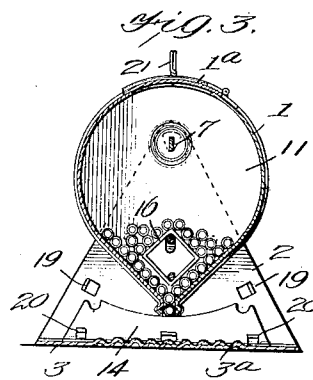
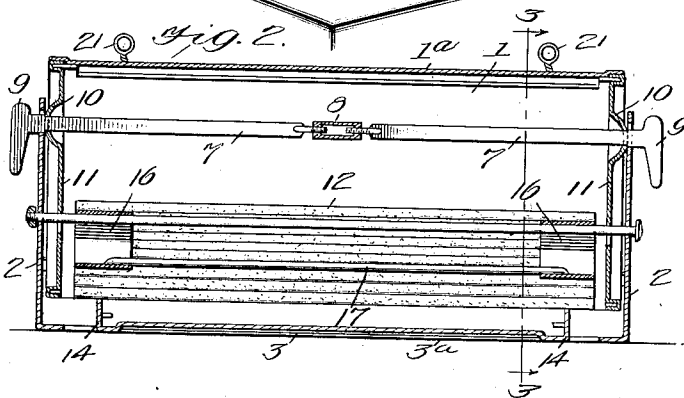
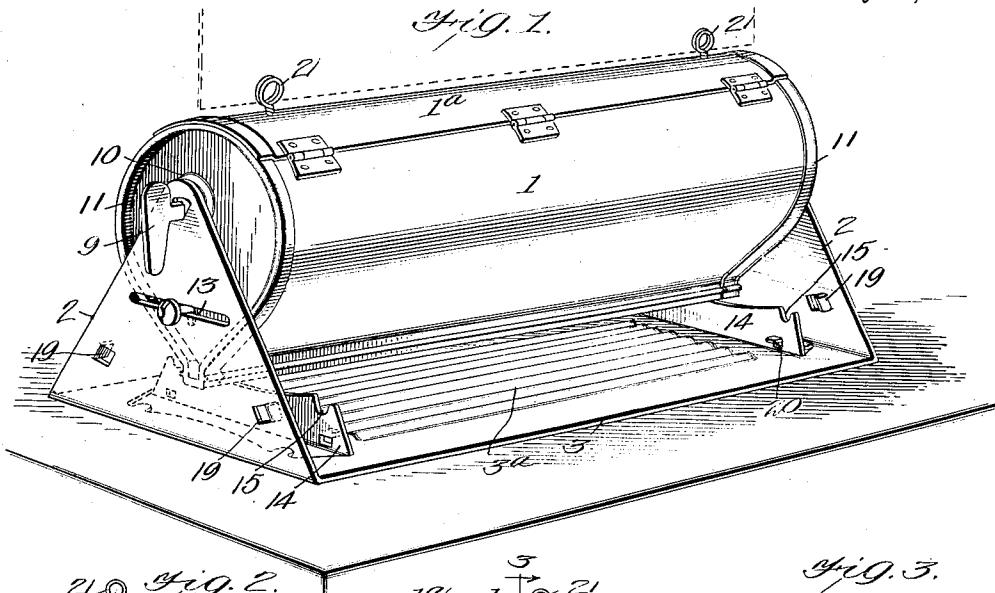


R. M. REID.  
 HOLDER AND DELIVERER FOR DRINKING STRAWS.  
 APPLICATION FILED AUG. 3, 1912.

1,062,503.

Patented May 20, 1913.



# UNITED STATES PATENT OFFICE.

ROBERT MINARD REID, OF COLORADO SPRINGS, COLORADO.

HOLDER AND DELIVERER FOR DRINKING-STRAWS.

1,062,503.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed August 3, 1912. Serial No. 713,151.

*To all whom it may concern:*

Be it known that I, ROBERT M. REID, a citizen of the United States, and a resident of Colorado Springs, in the county of El Paso and State of Colorado, have invented an Improved Holder and Deliverer for Drinking-Straws, of which the following is a specification.

I have devised an improved form of apparatus for containing and delivering straws used at soda-fountains and bars, whereby the construction of such apparatus is greatly simplified, the cost reduced, and the ease and effectiveness of operation increased. The straw holder or container is pivoted and adapted to swing or oscillate and provided interiorly with a straw agitator of peculiar construction and operation which serves also for limiting the lateral swing of the holder; and the base of the frame supporting the latter is provided with devices which serve a two-fold purpose, namely, to prevent escape or delivery of straws when the holder is in normal central position and to permit such delivery of and also receive and temporarily support a single straw when the holder is swung laterally to its limit.

The details of construction, arrangement, and operation are as hereinafter described, and illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of the complete apparatus. Fig. 2 is a central longitudinal section. Fig. 3 is a cross section on the line 3—3 of Fig. 2. Fig. 4 is an enlarged cross section on the same line as section shown in Fig. 3, but illustrating the operation of delivering straws. Fig. 5 is a perspective view of the straw agitator. Fig. 6 is a plan view of the blank from which the frame and base of the apparatus are produced.

The straw container and deliverer 1 is practically a cylinder pivoted horizontally in vertical supports 2 formed integral with a flat base 3. The under side or bottom of the container 1 is provided with a longitudinal slot 4 adapted to permit discharge of straws singly, and the portions of the body of the container adjacent to such slot are curved and gradually contracted, thus forming with the slot 4 a passage or mouth 5 favoring the discharge of the straws in the required manner. The flat terminal edges of the mouth are arranged parallel and

crimped or corrugated longitudinally, as indicated at 6 in Fig. 4, for the purpose of imparting the required stiffness and rigidity to the parts.

As shown, the container 1 is pivoted at a point a little above the middle, and the pivots are formed of two rods 7 which are connected at their inner ends by a turnbuckle 8. The outer ends of these rods are provided with elongated knobs 9 which serve as convenient means for oscillating the straw container or swinging it laterally, as required to effect the discharge of a straw.

The portions of the rods 7 adjacent to the knobs 9 are provided with shoulders which about conical projections 10 formed on the heads 11 of the container. The latter is provided with a hinged door 1<sup>a</sup> through which straws are introduced and through which also access is had to the turnbuckle 8. By due adjustment of the latter, the pivot rods 7 are drawn toward each other, so as to cause due friction between the shoulders of the rods 7 and the aforesaid conical projections 10, so that upon manipulating the knobs, the container 1 may be oscillated as required.

The heads 11 are shown provided with grooves adjacent to their peripheries for receiving the ends of the cylindrical body of the container, as shown in Fig. 2. It will be seen that the pivot rods 7 and the turnbuckle 8 serve, in addition to the function before indicated, to hold the heads 11 tightly engaged with the body of the container. By this means, I effect an obvious economy in the construction of the apparatus, since neither soldering nor other supplemental means for connecting the body and the heads is required.

The frame of the apparatus comprising the vertical parallel supports 2 and the flat horizontal base 3 is preferably formed in one piece or from a single blank which, when extended flatwise, presents the form shown in Fig. 6. In other words, the base 3 terminates in triangular or pointed portions 2 which, when bent upward into vertical position, are parallel to each other. The pivot rods 7 of the container 1 pass through the apexes of the triangles, as shown.

It is necessary that the lateral swing or oscillation of the container 1 shall be limited, and for this purpose a rod 12—see Fig.

2—passes through the heads or ends 11 of the container and also through horizontal slots 13 formed in the vertical supports 2. One end of such rod may be made solid and the other provided with a nut for convenience of detachment when required. It is obvious that the rod will slide laterally in the slots 13 when the container is oscillated or swung laterally and that upon contact with the ends of the slots, such swing or oscillation will be arrested.

The base 3 is provided with means for regulating the discharge of straws from the container; that is to say, it is provided with guards 14 extending transversely of the base and having their upper edges curved concentrically with the pivot 9 of the container. It is apparent that while the latter hangs in normal position, as indicated in Figs. 1 and 3, the straws are prevented from escaping from the mouth 4 of the container; but when the container is swung laterally, as shown in Fig. 4, far enough to clear the concentric upper portion of the guards 14, a straw will drop out and be delivered from the mouth 4 of the container. Such straw might be delivered entirely outside the base 3, but it is desirable to deliver it into a support which enables it to be conveniently seized by the attendant of the soda-fountain. For this purpose, bars or strips 14 are provided at each end with notches 15 adapted to receive the straw as the container swings in one direction or the other. So, when the straw has been delivered and the container is released, the latter swings back to the normal position shown in Figs. 1 and 2, and the straw is left supported in the notches 15. The bars or strips 14 are, for the sake of economy of construction, formed as integral portions of the base 3, the same being cut out of the base by means of dies in the operation of cutting and shaping the base as a whole. The portion of the base between the guards and straw receivers 14 is corrugated longitudinally, as indicated at 3<sup>a</sup> in Figs. 1 and 2, so that due rigidity is imparted to the frame, thus enabling quite thin metal or other material to be used in its construction.

Within the container 1 is arranged a straw agitator of peculiar construction. It is formed of hollow rectangular portions 16 which are rigidly connected by a rod 17 that is soldered or otherwise secured to their lower angles. The parts 16 are quadrilateral or, in other words, present a triangle on the upper side and also on the lower side, which favors the passage of straws over their top portions and through the passages formed between their lower sides and the adjacent contracted portions 5 of the container. This agitator is supported loosely upon the rod 12 which, as before described, serves as a stop for limiting the lateral swing of the container 1. The agitator being thus loose,

has a certain play vertically and laterally which avoids any danger of injury to the straws passing over and under it.

The stop rod 12 passes through vertical slots 18 formed in the heads 11 of the container 1 which allows the agitator to descend a little at the end of each lateral swing or throw of the container, thus automatically narrowing the space between the agitating elements 16 and the adjacent parts 5 of the container at each swing. The space thus left or formed between the agitator and the parts 5 of the container is slightly greater than the diameter of a straw, so that straws slide downward in a single series, as indicated in Figs. 3 and 4.

When the container swings back from the position shown in Fig. 4 to its normal position, the agitator is raised slightly, since its pivot rod 12 then rests at the middle of the slots 13 in the end supports 2, which enlarges for the time being the distance or space between the agitator 16 and the parts 5 of the container. It will thus be seen that the agitator 16, 17, performs also the function of a guide and guard in that it assists in regulating the admission of straws to the mouth or passage 4, so that their delivery in the required manner and in regular succession is assured. In this connection, it may be observed that if a straw has been delivered to the receiving notches 15 of the guards 14, and the attendant should not remove it but inadvertently swing the container again to the delivery position, an additional straw will not be discharged, since the straw already resting in the notches will prevent its escape from the mouth 4. This will be apparent from inspection of Fig. 4.

In Fig. 1, the vertical supports 2 are shown provided with interior projections 19 which may serve as stops for the container 1 in place of the rod 12 before described. The inner sides of the guards 14 are also shown provided with projections 20 which may serve for confining an advertising card on the base 3. Holders 21 for advertising cards are likewise applied to the top of the container, the same being preferably formed of spring clamps in which the card may be held.

What I claim is:—

1. A straw containing and delivering apparatus, comprising a container proper, supports for the same in which it is pivoted and adapted to oscillate, and means arranged exteriorly of and beneath the same and serving to prevent delivery of straws when the container is in normal position and permitting such delivery when the container is swung laterally, as described.

2. A straw containing and delivering apparatus, comprising a container proper, vertical supports for the same in which it is pivoted, the pivot being applied eccentrically

cally or between the center and periphery of the container, whereby the latter is adapted to maintain a certain normal position due to gravity, and means exterior of the container and fixed beneath the same and serving when the container hangs normally pendent to prevent escape of a straw, as described.

3. In a straw containing and delivering apparatus, the combination with a straw container proper and supports in which the same is pivoted and adapted to swing laterally, of guards fixed in position beneath the container and consisting of bars or strips whose upper edges are concentric with the pivot of the container, whereby said guards serve to prevent delivery of straws until the container is swung laterally so that its mouth passes beyond the concentric portions of the guards, as described.

4. In a straw containing and delivering apparatus, the combination with a straw container proper, vertical supports in which it is pivoted eccentrically so as to swing laterally, and straw guards and receivers fixed in position below the container and having their upper portions formed concentrically with the pivots of the container and provided adjacent to the ends of such concentric portions with notches adapted to receive and support an individual straw when delivered thereto at the limit of oscillation of the container, as described.

5. In a straw containing and delivering apparatus, the combination with vertical supports having horizontal slots, of the straw container proper, a rod passing through the lower portion of the latter and also through the aforesaid slots, whereby it is adapted to serve as a stop for limiting the lateral throw of the container, as described.

6. In a straw containing and delivering apparatus, the combination with fixed supports, of the straw container proper pivoted in the latter, and an agitator arranged within the container, the same being suspended loosely therein and adapted for free vertical movement, as described.

7. In a straw containing and delivering apparatus, the combination with fixed supports, of the straw container proper pivoted

in the latter, and an agitator formed of rectangular portions rigidly connected, a longitudinal pivot on which the same is hung loosely adjacent to the mouth of the container, as described.

8. In a straw containing and delivering apparatus, the combination with vertical supports, of a straw container pivoted therein and having its under side constructed with a slot to which the adjacent portions of the container gradually converge, and an agitator arranged within the container and suspended loosely adjacent to the mouth formed by the aforesaid parts, as described.

9. In a straw containing and delivering apparatus, the combination of the straw container proper provided on the under side with a mouth for the discharge of straws, with vertical supports having horizontal slots, an agitator arranged within the container, and a pivot rod on which it is mounted loosely, the ends of the container having vertical slots through which such pivot rod passes and also through the slots in the supports, whereby the agitator is raised slightly when the container resumes its normal position after delivery of a straw, as described.

10. In an apparatus for the purpose specified, the combination with vertical supports, of a straw container comprising a body and heads having peripheral grooves to receive the body, a pivot rod formed in two parts connected by an adjusting device, said rods passing through the heads of the cylinder and the supports and having shoulders abutting the heads, whereby the rods serve as pivots and also for securing the heads tightly on the body, as described.

11. In an apparatus for the purpose specified, the frame and base for supporting the container proper, the same comprising a flat portion having vertical parallel ends, and guard strips or bars formed of integral portions of the base, the same being curved on the upper side to adapt them to serve as retainers for straws in the container, as described.

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Witnesses:

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