

Aug. 6, 1929.

P. A. FISCHER ET AL

1,723,232

SANITARY PACKAGE FOR DRINKING CUPS AND DISPENSING DEVICE

Filed Sept. 2, 1925

2 Sheets-Sheet 1

Fig. 1.

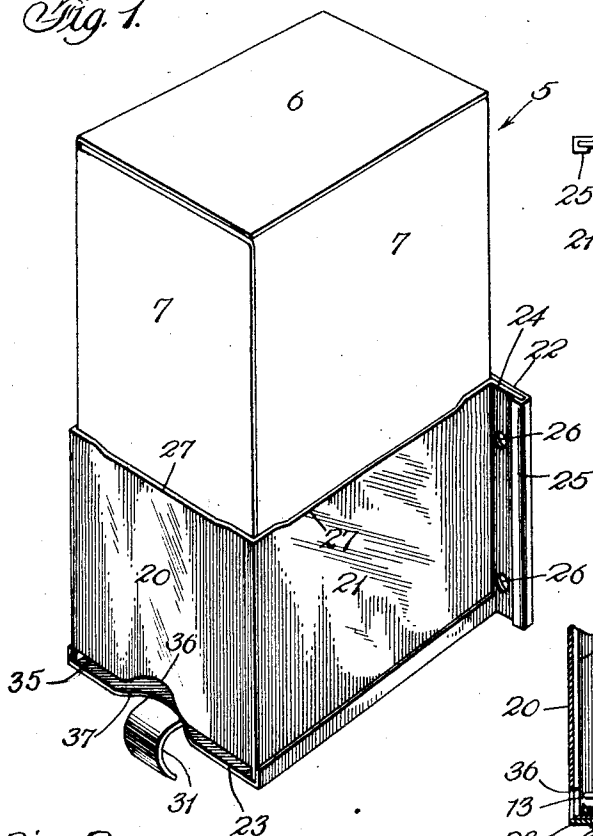


Fig. 3.

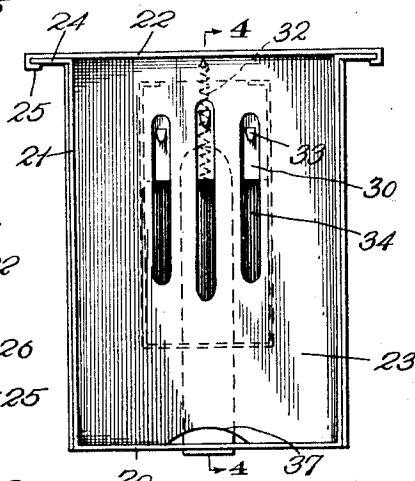


Fig. 2.

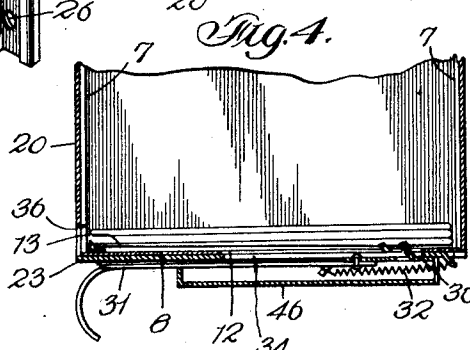
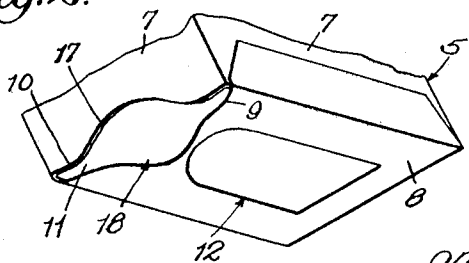


Fig. 6.

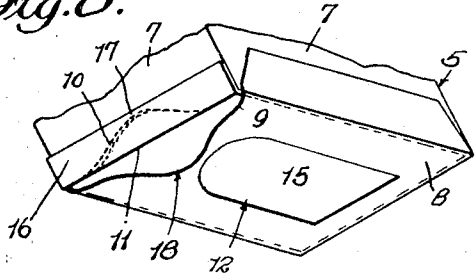
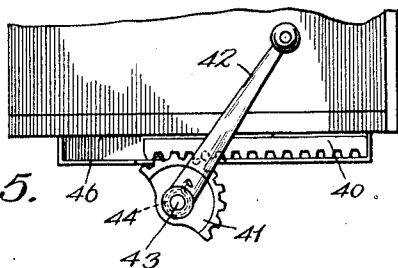


Fig. 5.



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2 Sheets-Sheet 2

Fig. 6.

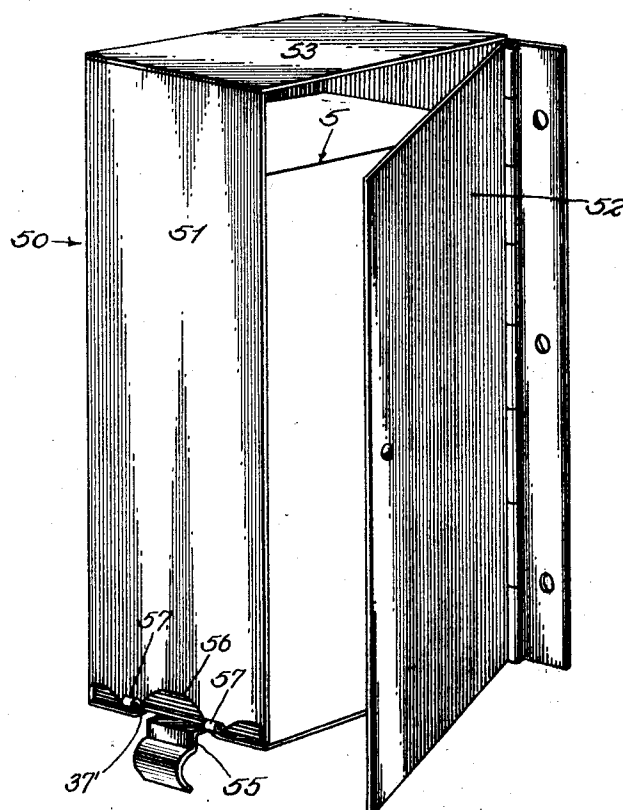
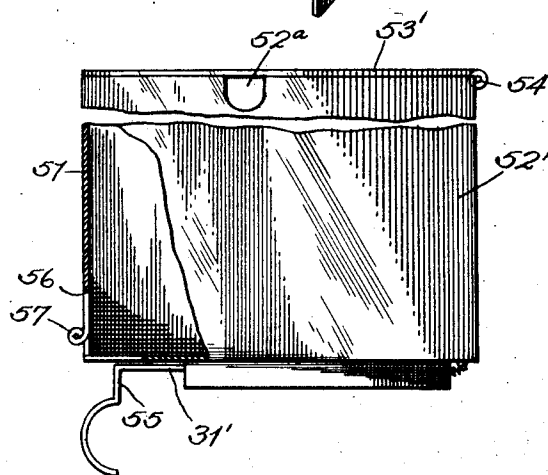


Fig. 7.



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UNITED STATES PATENT OFFICE.

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SANITARY PACKAGE FOR DRINKING CUPS AND DISPENSING DEVICE.

Application filed September 2, 1925. Serial No. 54,106.

This invention is in a new and improved sanitary package for paper drinking cups, and in a dispensing device for delivering the cups one at a time directly from the sanitary package.

The principal object of the invention is to deliver the cups individually from the package directly to the consumer, without any intermediate handling, so that the cup, as delivered, is clean and sanitary.

The sanitary package and its cooperating holder and dispenser are particularly adapted for holding and delivering a flat paper drinking cup of the type shown in the patent to Philip A. Fischer, No. 1,373,182, dated March 29, 1921, but may be used for other flat cups also.

The sanitary package for the cups comprises a container the sides and one end of which are closed. It contains a stack of cups, the individual cups being arranged horizontally. Across the other or bottom end of the container means are provided for holding the cups in the container, but allowing endwise delivery of individual cups.

The dispenser of the invention is a receptacle or holder into which the above described sanitary package is put, just as it comes from the factory. This dispensing device engages with the bottommost cup in the sanitary package, and individually ejects the cups as needed. Meanwhile, the cups remaining in the sanitary package are completely protected from dust, dirt and handling.

The sanitary package, as it leaves the factory, may be provided with a removable seal, for protecting the cups from dust and germs during shipment. This removable seal is removed just before the package of cups is put into the dispenser as will appear.

Both the package for the cups and the dispenser, may be correspondingly cut away, so that in case the mechanical ejecting device should fail to work, the user may be given access to the bottommost cup for removing it.

Other advantages of the invention will be more clearly brought out in connection with the following detailed description of certain preferred embodiments of the invention, illustrated in the accompanying drawings.

In these drawings, Fig. 1 is a perspective view of the sanitary package in place in the dispenser;

Fig. 2 is a perspective view of the bottom of the package;

Fig. 3 is a plan view of the dispenser;

Fig. 4 is a section on the line 4-4 of Fig. 3 additionally showing the package in place in the dispenser;

Fig. 5 shows a modification of the cup ejecting device;

Fig. 6 shows certain modifications of the dispenser;

Fig. 7 is a side view of the bottom of Fig. 6, with a modified top; and

Fig. 8 is a view similar to Fig. 2 of a modification of the cup package.

Referring now to these drawings, in which similar reference characters indicate similar parts, the sanitary package for the cups is a box-like container 5 comprising a top 6, and side-walls 7. A cup retaining member 8 extends across the bottom end of the container 5, three sides of the member 8 being secured to the walls 7, while the fourth side 9 is free, cooperating with the lower edge 10 of the front wall 7 for forming a delivery slot 11. There is a slight sag of member 8, due to the weight of the cups, and this makes the slot 11 large enough for the endwise delivery of a flat cup. The slot could of course be enlarged by cutting away the lower edge of the front wall 7, but ordinarily this is not necessary.

The member 8 is cut away centrally, forming an aperture or window 12 of any desired conformation through which the ejector may engage with the bottommost cup for ejecting it, as will appear. Referring to Fig. 4, 13 indicates the bottommost cup of the stack of cups in the container 5. The bottom 8 of the container may be integral with the rest of the box, if desired.

Before the package of cups leaves the factory it is preferably sealed up against the entry of dirt, dust and germs. One such sealing means is illustrated in Fig. 8 and comprises a flat member 15 which is slid in just underneath the bottom cup 13, and which has a flap 16 which is pasted or otherwise secured to the front vertical wall 7 of the container.

The lower edge 10 of the front wall 7 is cut away as indicated at 17, and the front edge 9 of the bottom member 8 is cut away, as indicated at 18; corresponding edges of the dispenser are cut away as will appear.

The dispenser, or holder, into which the package of cups 5 is inserted, will now be described. This member comprises a front wall 20, side walls 21, a back wall 22 and a bottom 23 forming an open-topped holder. The side walls 21 of the holder are provided with flanges 24 over which are bent the vertical ends of the back wall 22 as indicated at 25, thus forming a stiff rib through which screws 26 are passed for securing the device to the wall.

The upper edges of the walls 20 and 21 may be flared outwardly slightly, as indicated at 27, for facilitating the insertion of the package 5.

The mechanical ejector for the cups comprises a reciprocable slide member 30, which is moved forwardly by the manually operated pull member 31, and is moved backwardly by spring 32 connected at its opposite ends to the bottom of the dispenser and to pull member 31.

The reciprocable member 30, is provided with a plurality of upwardly projecting fingers or prongs 33, which project through a corresponding plurality of slots 34 in the bottom of the holder, into engagement with the bottommost cup 13 in the package 5, the window 12 in the bottom of the package 5 permitting such engagement.

The lower front edge of the front wall 20 is cut away, as indicated at 35 for forming a discharge slot for the cups. When the cup package is in the holder, the discharge slot of the package and the discharge slot of the holder come into registry. It will be apparent that successive reciprocations of member 31 will cause the prongs 33 to engage with the bottommost cup, and result in the successive endwise delivery of the cups through the two registering slots.

The lower edge 35 is arched upwardly, as indicated at 36, to register with the upward arch 17 of the lower front edge of the walls 7 of the container.

The front edge of the bottom 23 may be cut away, as indicated at 37, so as to register with the cut away portion 18 of the bottom member 8, when the package is in place in the holder. The several cut away portions permit the user, in the event of the failure of the ejecting device to work, to grasp the bottom cup and pull it out with his fingers.

Referring to Fig. 5, a modification of the ejecting device is there shown, and comprises the rack 40, which is fixed to the ejector 30, the rack being operated back and forth by the gear 41 meshing therewith, the gear being oscillated by a handle 42 fixed on the

same shaft 43 with the gear. A spring 44 around the shaft 43 brings the handle 42 back to its starting position after a cup has been ejected.

A housing member 46 may be employed in connection with the reciprocating device of Fig. 4 and Fig. 5, as shown, this member acting as a guide for the slide 31.

In the modification shown in Fig. 6, a slightly different form of dispenser is shown, comprising a box-like member 50 having a front wall 51, a hinged side door 52, and a top 53. This dispenser 50 is substantially dust proof; the package 5 of cups is inserted through the door 52.

A modification of the top is shown in Fig. 7, where the top 53' is hinged, as shown at 54. In this modification, the side walls 52' are cut out, as shown at 52^a, so that the fingers may readily grasp the cup package for lifting it out.

A somewhat modified form of ejecting device is shown in Figs. 6 and 7. The pull member 31' corresponding to the pull member 31 of Fig. 4, is bent downwardly, as at 55, at a point within the plane of the front wall 51. The bottom of the container 50 is cut away as indicated at 37', corresponding to the cut away part 37 of Fig. 1. It will be seen, in Fig. 7, that this positioning of 55 enables the finger of the user readily to engage with the bottom cup and pull it out, in the event of the failure of the ejecting device.

Figs. 6 and 7 show a slight modification of the discharge slot for the cups. The central lower part of the front wall 51 is arched upwardly, as at 56, this arch corresponding to 36 of Fig. 1. The lower front wall is also provided with two downwardly extending tongues 57, preferably rounded as shown. The positioning of these tongues is useful for controlling the delivery of the cups, and they are preferably of flexible metal so that they may be bent up and down, whereby they may be accurately positioned for allowing the delivery of the bottommost cup, but for preventing the delivery of the next cup just above the bottom one.

While we have illustrated in considerable detail certain preferred ways of carrying out our invention, it should be understood that the invention is not to be limited to these details, but may be carried out in other ways.

We claim as our invention:—

1. Dispensing means for flat paper drinking cups and the like, comprising an open-topped box-like bracket member having a horizontally disposed dispensing slot at the lower, front edge thereof, reciprocable manually operated cup-ejecting means at the bottom of the box, in combination with a dispensing package closed at its upper end and having a cup retaining member extending

across its lower end, one edge of which is free of the box for forming a dispensing slot adapted to register with the dispensing slot in the bracket member, the cup retaining member being cut away to allow the cup-ejecting means to engage with the bottommost cup in the package to eject it.

2. Dispensing means for flat paper drinking cups and the like, comprising an open-topped box-like bracket member having a horizontally disposed dispensing slot at the lower, front edge thereof, reciprocable manually operated cup-ejecting means at the bottom of the box, in combination with a dispensing package closed at its upper end and having a cup retaining member extending across its lower end, one edge of which is free of the box for forming a dispensing slot adapted to register with the dispensing slot in the bracket member, the cup retaining member remaining in position intact as the cups are dispensed through said slots, and being cut away to allow the cup-ejecting means to engage with the bottommost cup in the package to eject it.

3. A dispensing device for folded drinking cups, comprising a holder having an ejecting device and having an ejecting slot adjacent thereto, in combination with a package for the folded cups adapted to be inserted into the holder, said package having its sides and one end closed, a cup retaining end member, cut away for allowing the ejecting device to engage with the bottommost cup for ejecting it, said cup retaining member extending across the delivery end of the package and being secured to three sides of the package, the fourth side of said member being free and adapted to cooperate with the lower front edge of the package to form a delivery slot for the cups, said delivery

slot being adapted to register with the ejecting slot in the container.

4. A dispensing package for flat paper drinking cups, comprising a box member, closed at its upper end, and a cup retaining member extending across its lower end for supporting the cups in dispensing position, the cup retaining member being provided with a centrally disposed window for exposing a portion of the bottommost cup, the material of the cup retaining member, adjacent one end of the window, extending across from one side of the box to the other and cooperating with the lower front edge of the box member for forming a dispensing slot for the cups.

5. A dispensing package for flat paper drinking cups, comprising a box member, closed at its upper end, a cup retaining member extending across its lower end for supporting the cups in dispensing position, the cup retaining member being provided with a centrally disposed window for exposing a portion of the bottommost cup, the material of the cup retaining member, adjacent one end of the window, extending across from one side of the box to the other and cooperating with the lower front edge of the box member for forming a dispensing slot for the cups, and a sheet member adapted to be placed on the bottom of the box member for protection during shipment, and adapted to be removed when the cups are to be dispensed.

In testimony whereof we affix our signatures.

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