April 11, 1967 W. D. TURKINGTON ETAL 3,313,583

TOWEL DISPENSER

Filed May 19, 1965

Fig. 1.

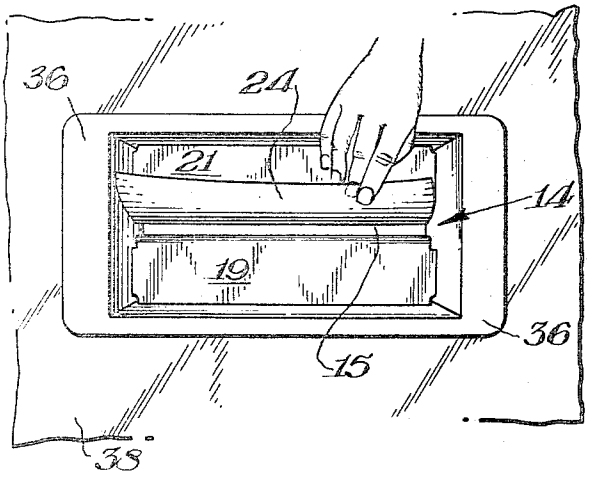


Fig. 2.

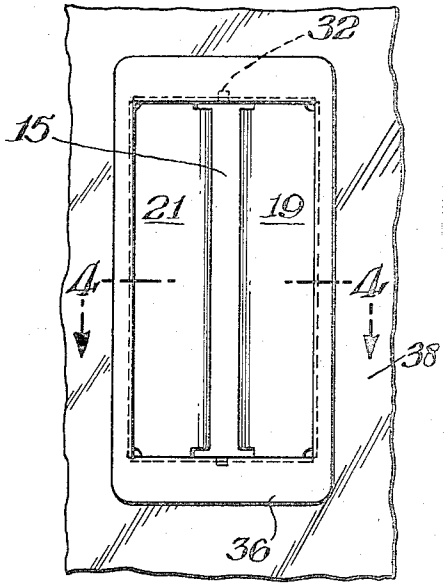


Fig. 4.

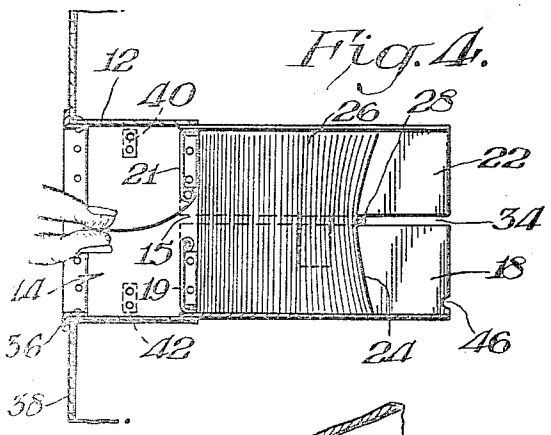


Fig. 5.

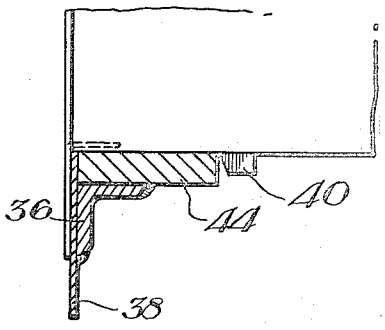
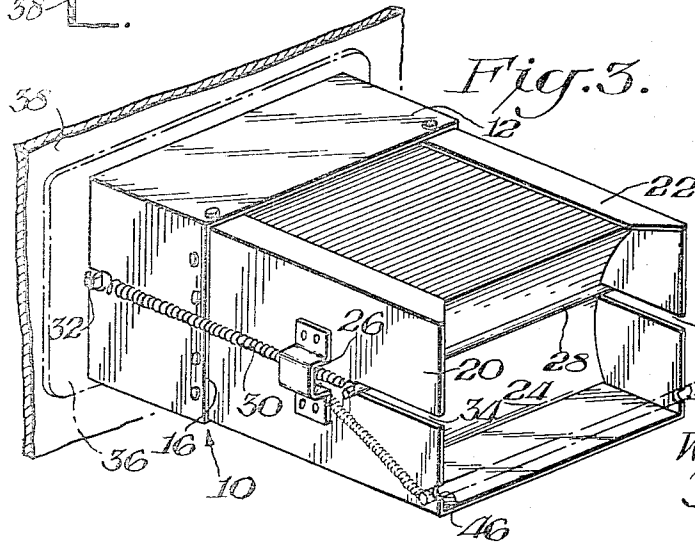


Fig. 3.



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TOWEL DISPENSER

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This invention relates to a towel dispenser which houses a plurality of towels, more particularly to such dispensers which are commonly used in automobile service stations and the like.

Paper or other disposable towels are frequently used in automobile service stations and dispensed in the general vicinity of the gasoline pump so as to be readily accessible for a multiplicity of uses. Such uses include for example washing the automobile windows. There is accordingly a need for a versatile towel dispenser which can reliably operate regardless of its orientation.

An object of this invention is to provide a simple and economical towel dispenser which can be used in any orientation.

In accordance with this invention, the towel dispenser includes a housing for the towels with a discharge opening at one end. A tension device is arranged on the housing which urges the towels toward the opening. The tension device includes a contact member engaged against the towels with resilient means reacting against the contact member and a portion of the housing near its discharge opening for urging the member toward the discharge opening to reliably dispense towels regardless of the orientation of the housing.

In an advantageous form of this invention, the housing comprises a sleeve which is open at one end which has the discharge opening at its other end. A pair of U-shaped channels are inserted in the sleeve projecting through the open end. The channels are spaced from each other to provide a track for a contact bar which is resiliently mounted against the towels. The housing sleeve has a peripheral flange adjacent its discharge face. When the housing is mounted with the discharge face in a horizontal plane the housing is supported by the flange. Due to the weight of the filled housing no additional fasteners are necessary. A pair of jam blocks however are provided on the sleeve for mounting the housing with its discharge face in a vertical plane. When this is done the member such as a gasoline pump within which the housing is to be mounted is provided with a support. The housing is then positioned so that the support becomes wedged between the jam blocks and the peripheral flange. Novel features and advantages of the present invention will become apparent to one skilled in the art from a reading of the following description in conjunction with the drawings wherein similar reference characters refer to similar parts in which:

FIG. 1 is a plan view of one embodiment of this invention with the discharge face disposed in a horizontal plane;

FIG. 2 is a front view in elevation of the embodiment of this invention shown in FIG. 1 with the discharge face disposed in a vertical plane;

FIG. 3 is a perspective view of the embodiment of the invention shown in FIG. 2;

FIG. 4 is a cross-sectional view taken through FIG. 2 along the line 4—4; and

FIG. 5 is a fragmentary view partially in section of a portion of the dispenser shown in FIGS. 2–4.

As most clearly shown in FIG. 3 towel dispenser 10 is made of a sleeve member 12 having discharge face 14 at one end and its other end 16 being open. A U-shaped channel member 18 is disposed in sleeve 12 and cooperates with a pair of L-shaped members 20 and 22. Members 20 and 22 may also be integral and U-shaped similar to lower member 18. Members 18, 20 and 22 are secured to sleeve 12 to form the housing for disposable towels 24.

Towels 24 are interfolded in a conventional manner so that when one towel is pulled from dispenser face 14 as shown in FIGS. 1 and 4 the succeeding towel is brought into a position for easy grasping for subsequent use.

Members 18 and 20 are also attached to each other by bracket 26. A corresponding bracket is provided for securing members 18 and 22 to each other. The open spacing between L-shaped members 22 and 20 renders the interior of the housing easily accessible when desired.

Paper towels 24 are continuously pushed toward dispensing face 14 by contact rod 28. This continuous pushing movement is accomplished by securing each end of contact rod to coil spring 30 secured to eyelet 32 on sleeve 12. The spacing between U-shaped member 18 and L-shaped members 20 and 22 provides a convenient track 34 for accurately guiding contact rod 28. Additionally, as indicated in FIG. 3, bracket 26 is offset in its central portion to permit contact rod 28 to slip by it.

Spring 30 is under tension so that as the number of towels decrease the pressure against them also decreases. This becomes necessary for the following reasons:

(1) As the number of towels decrease a reduced pressure is necessary in order to eliminate the dispensing of a plurality of towels at one time instead of just one towel at a time; and

(2) The increased pressure at full load is necessary to support the full load of towels when the dispenser is mounted in an inverted position.

Because of the spring loading, the dispenser can be installed in any position. FIG. 1, for example, shows the dispenser mounted with discharge face 14 in the horizontal plane. In this position resiliently biased contact rod 28 continuously urges towels 24 upwardly so that they are readily accessible. A peripheral flange 36 is secured on sleeve 12 around the dispensing face 14. When mounted in the position shown in FIG. 1, the entire housing is simply positioned in an opening with the peripheral flange 36 providing all of the necessary support and due to the weight of the loaded dispenser no additional fasteners are required.

FIGS. 2–5 show the housing mounted with its dispensing face 14 in a vertical plane. As illustrated in these figures the dispenser is mounted on the side housing of, for example, a gasoline pump 38. To assure a safe mounting of dispenser 10, sleeve 16 is provided with a pair of jam blocks 40 and 42 as shown in FIGS. 4 and 5. The gasoline pump is also provided with a pair of support members, one of which is indicated at 44 in FIG. 5. As shown in FIG. 5 peripheral flange 36 rests against the exterior of pump housing 38. Support member 44, secured to pump 38 is of such a width that as dispenser 10 is brought to rest on it member 44 becomes wedged between the tapered jam blocks 40 and 42 and flange 36.

Advantageously, U-shaped member 18 is provided with a pair of notches 46. For filling the dispenser, contact rod 28 is withdrawn from track 34 and placed in notches 46 as indicated in phantom in FIG. 3. The open end of the dispenser can thereby be readily filled with towels 24. Afterwards the contact or pusher rod 28 is again inserted in track 34 and dispenser 10 is ready for operation.

As best shown in FIG. 4 channel members 18, 20 and 22 are secured within sleeve 12 remote from open dispensing face 14. A first flange 19 is secured to member 18 within sleeve 12. A second flange 21 is secured to L-shaped members also within sleeve 12 adjacent first flange

19. The opposed ends of flanges 19 and 21 are rolled and spaced from each other to form dispensing slot 15. Advantageously, because dispensing slot 15 is at the remote end of sleeve 12, the towels are protected from the elements, such as rain and dust.

What is claimed is:

1. A towel dispenser, said contact member being a pusher rod, said resilient means being a coil spring secured to said rod, tracks being provided in said housing for guiding the movement of said rod, opposite sides of said housing being slotted, said slotted sides comprising said tracks, said housing comprising a sleeve open at one end with said dispensing opening in the other end, a U-shaped channel member inserted in said sleeve and extending from said open end, a pair of L-shaped members inserted in said sleeve and extending from said open end, and said U-shaped member being spaced from said L-shaped members to form said slotted sides.

2. A dispenser as set forth in claim 1 wherein a peripheral flange is provided upon said sleeve around said dispensing opening.

3. A dispenser as set forth in claim 2 wherein bracket means are secured to said U-shaped member and said L-shaped members, said bracket means spanning the gap between said members for guiding said spring and maintaining said members in place.

4. A dispenser as set forth in claim 2 wherein a pair of aligned notches are provided on opposite sides of said U-member for holding said rod in an inactive position during loading.

5. A towel dispenser comprising a housing for the towels, a dispensing opening at one end of said housing, tension means on said housing reacting against the towels to urge them toward said dispensing opening, said tension means comprising a contact member for engagement with the towels, resilient means reacting between said contact member and a portion of said housing near said dispensing opening for urging said contact member toward said opening, said housing comprising a sleeve open at one end with said dispensing opening at the other end, a U-channel member being inserted in said sleeve and extending from said open end, a pair of L-shaped members being inserted in said sleeve and extending from said open end, said U-shaped member and said L-shaped members being spaced from each other to form slotted sides in said housing, jamming means being on said sleeve for mounting said dispenser with said dispensing opening in a vertical plane.

6. A dispenser as set forth in claim 5 wherein said jamming means comprises a flange on said sleeve disposed adjacent said dispensing opening and jam blocks on said sleeve spaced from said flange, said jam blocks having a tapered side disposed toward said flange whereby a support member may be wedged between said jam blocks and said flange.

7. A dispenser as set forth in claim 5 wherein the face of said sleeve having said dispensing opening is completely open, a first flange being secured to said U-shaped member and disposed within said sleeve remote from its open dispensing face, a second flange being secured to said L-shaped members and disposed within said sleeve adjacent said first flange, and said first and second flanges being spaced from each other to form a dispensing slot remote from said open dispensing face of said sleeve.

8. A towel dispenser comprising a housing for the towels, a dispensing opening at one end of said housing, tension means on said housing reacting against the towels to urge them toward said dispensing opening, tracks in said housing, a pusher bar, resilient means reacting between a portion of said housing near said dispensing opening and said pusher bar, aligned notches being in said housing at the end of said housing opposite said dispensing opening, said aligned notches being remote from said tracks, and said pusher bar being movable to and from a position in said tracks and in said notches for selectively engaging with said towels to urge them toward said dispensing opening and being in an inactive position during loading.

9. A towel dispenser comprising a housing, a peripheral flange around one end of said housing, a discharge slot in said housing spaced from said peripheral flange, tension means on said housing reacting against the towels therein to urge them toward said discharge slot, said tension means comprising a contact member for engagement with the towels, resilient means reacting between said contact member and a portion of said housing near said flange for urging said contact member toward said discharge slot, said peripheral flange extending outwardly from the sides of said housing to provide support means to facilitate the mounting of said housing, and the sides of said housing between said flange and discharge slot being a shielding chamber for said discharge slot.

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