March 29, 1932. G. N. MOORE 1,851,722

DISPENSING DEVICE

Filed Sept. 23, 1929

FIG.1.

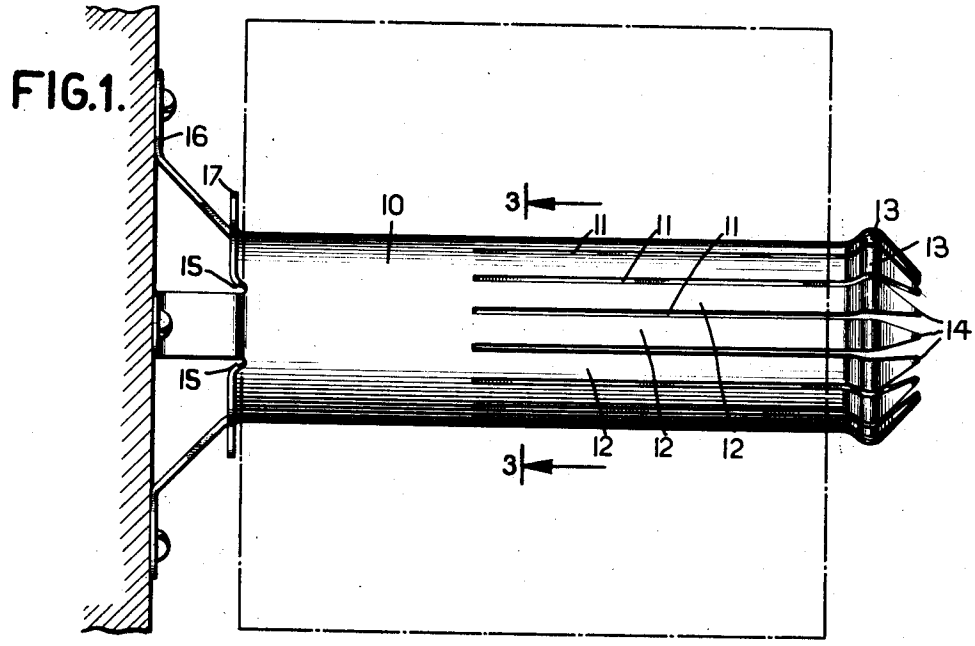


FIG.2.

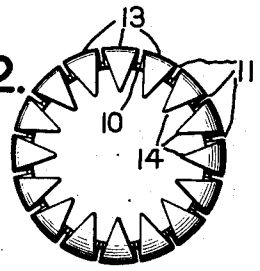


FIG.3.

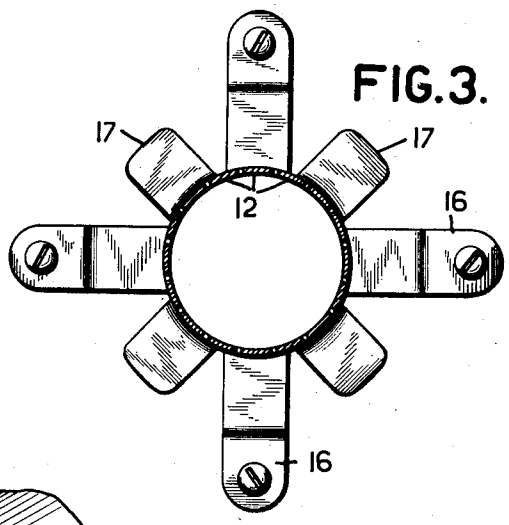
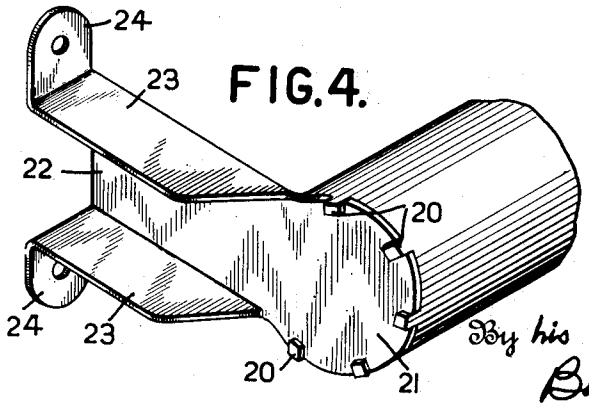


FIG.4.



Inventor
George N. Moore,
By his Attorneys
Bobbett & Ledbetter.

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UNITED STATES PATENT OFFICE

GEORGE N. MOORE, OF LIME ROCK, CONNECTICUT

DISPENSING DEVICE

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This invention is related to devices for supporting rolls of paper, more particularly rolls of toilet paper.

One of the objects of the invention is to provide a stationary spindle, on which the roll of paper can be slipped without removing or otherwise manipulating any part of the device. Another object is to provide for retarding the rotation of the roll on the spindle, sufficiently to enable the used to tear off pieces of paper at the points where the paper is partially severed, by a quick jerk, while leaving the roll sufficiently free to rotate on the spindle so it can be rotated by a steady pull on the paper, without danger of the paper tearing at the weakened points.

Another object is to produce a device of the character described that is strong, durable and sightly, but which can be manufactured at a comparatively small cost.

I shall now describe my invention, with the assistance of the accompanying drawings, in which,

Fig. 1 is a side elevational view of the device, showing it attached to a wall, and showing with dotted lines a roll of paper mounted on the spindle;

Fig. 2 is an end view of the spindle alone;

Fig. 3 is a sectional view on line 3—3 of Fig. 1, and

Fig. 4 is a perspective view of part of a modified form of my device.

Referring to Figs. 1, 2 and 3, the tubular spindle 10, which is composed of resilient sheet metal, is slotted, as at 11—11—11 etc., to form fingers 12. The end of each finger is bent to form a radially extending hump 13, and the extremities 14 of the fingers extend obliquely toward the axis of the spindle, so that all of the extremities together form a conical end adapted to enter the tubular core of the roll of paper. To insure that the small end of the cone shall enter the core of the roll, even when the spindle is distended, the extremities 14 extend inward considerably beyond a line co-incident with the inner surface of the spindle wall, as is shown in Figs. 1 and 2.

The other end of the spindle 10 is also slotted, as at 15—15, and each alternate finger or tongue thus produced is bent to form a foot 16, and provided with a screw-hole whereby the device can be secured with screws to a wall, toilet room door, or the like. The intermediate tongues are cut to a suitable length and bent radially outward, forming abutments 17 to guide the roll of paper.

Each of the fingers 12 is bent so it tends to spring outward slightly. This does not show in Fig. 1, because that figure shows the position of the fingers when they are confined by the tubular core of the roll. It is to be understood, however, that this tendency of the fingers to spring outward, due to the resiliency of the metal, causes each finger to exert a small pressure against the wall of the tubular core, the aggregate amount of which is sufficient to frictionally retard rotation of the roll on the spindle. Toilet paper is usually rolled on a paste board tube, and at regular intervals the paper is weakened by a row of perforations, or some other form of partial severance. The tension of the fingers is made such as to produce sufficient friction to enable the user to separate pieces from the roll at these weakened points by a quick jerk which will not rotate the roll. On the other hand, the friction is slight enough to enable one to rotate the roll by a steady pull on the end of the paper.

To mount a roll of paper on the spindle it is only necessary to place one end of the tubular core of the roll over the conical end of the spindle and push the roll into place. The oblique extremities 14 of the fingers cam the ends of the fingers toward the axis of the spindle, allowing the core to pass the humps 13. After the roll is in place on the spindle the humps prevent the roll working off of the spindle. The roll simply rotates between the humps 13 and the abutments or guides 17.

There are various ways of making this device. One way is to start with a flat piece of sheet metal, and form the fingers and other members thereon before forming the sheet into a tube. Another way is to begin with a piece of tubing, slotting and otherwise working the metal while it is in tubular form. In the latter case the cross section of the fingers will be arcuate. This is seen in Fig. 3. Of

course, the fingers can be given the arcuate form where the device is made from flat metal, if desired. This arcuate cross section makes the fingers slightly stiffer than they would be if they were flat.

The modified embodiment of my invention shown in Fig. 4, differs from that just described, in that it is made in two pieces instead of one, and the spindle extends parallel instead of perpendicular to the wall. It is to be understood that the end which is not shown in Fig. 4 is like the corresponding part of Fig. 1. At the other end the tube is notched to form lugs 20, which lugs enter recesses formed in the edge of a circular sheet metal disc 21, the lugs being bent down against the disc. The diameter of the disc equals that of the tube, and the disc is held firmly against the end of the tube by the lugs.

The disc 21 is an extension of a plate 22, which plate extends back to the wall. Flanges 23—23 on each edge of this plate terminate in feet 24—24, having holes to receive screws whereby to secure the fixture to a wall or the like.

While I have described my invention as made of sheet metal, it is to be understood that its construction is not necessarily limited to this material. Nor is it to be understood that its use is limited to toilet paper; made in suitable proportions it can be used for other purposes, for example, rolls of paper towels. While I have described what I now consider the preferred embodiment of my invention it is to be understood that modifications in its structure are possible without departing from the spirit of the invention or exceeding the scope of the appended claims.

What I claim is as follows:

1. A support for a roll of toilet paper, comprising a tubular spindle, the wall of which is slotted through a substantial part of its length to form fingers, which fingers are resilient and are bent so they tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on the spindle, said retardment being insufficient to prevent rotation of the roll by a steady pull on the end of the paper, but sufficient to enable the user to tear off pieces of paper at points where the paper is partially severed, by a quick jerk; and means for attaching said spindle to a wall or the like.

2. A support for a roll of toilet paper, comprising a tubular spindle, the wall of which is slotted through a substantial part of its length to form fingers, which fingers are resilient and are bent so they tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on the spindle, said retardment being insufficient to prevent rotation of the roll by a steady pull on the end of the paper, but sufficient to enable the user to tear off pieces of paper at points where the paper is partially severed, by a quick jerk; and means for attaching the other end of said spindle to a wall or the like, leaving the slotted end free-standing so a roll of paper can be slipped thereon without detaching the spindle from the wall.

3. A spindle for a roll of toilet paper, comprising a tube adapted to slip freely into the tubular core of the roll, one end of said tube being slotted longitudinally to form fingers, which fingers are resilient and are bent so they tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on the spindle; the other end of the tube being also slotted, the fingers thereby formed being bent into a suitable shape to form feet, whereby to secure the spindle to a wall or the like.

4. A spindle for a roll of toilet paper, comprising a tube adapted to slip freely into the tubular core of the roll, one end of said tube being slotted longitudinally to form fingers, which fingers are resilient and are bent so they tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on the spindle; the other end of the tube being also slotted, a portion of the fingers thereby formed being bent into a suitable shape to form feet, whereby to secure the spindle to a wall or the like, the remaining fingers being bent outward to form shoulders for guiding the roll as it rotates on the spindle.

5. A support for a roll of toilet paper, comprising a tubular spindle, the wall of which is slotted through a substantial part of its length to form fingers, which fingers are resilient and are bent so they tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on the spindle; and means for attaching the other end of said spindle to a wall or the like, leaving the slotted end free-standing so a roll of paper can be slipped thereon without detaching the spindle from the wall, the end of each finger being bent to form a radially extending hump, whereby to prevent the roll running off of the spindle, the extremities of the fingers extending toward the axis of the tube, all together forming a cone which cams the fingers inward when the roll is pressed on the spindle, allowing the humps to pass through the roll.

6. A support for a roll of toilet paper, comprising a member adapted to enter the tubular core of the roll, on and with reference to which the core can revolve, a plurality of resilient fingers carried by said member, which fingers tend to spring outward and by pressing against the inner wall of the tubular core

of the roll produce friction that retards rotation of the roll on said member, said retardment being insufficient to prevent rotation of the roll by a steady pull on the end of the paper, but sufficient to enable the user to tear off pieces of paper at points where the paper is partially severed, by a quick jerk, and means for attaching said member to a wall or the like with one end free-standing, so the roll can be slipped thereon without detaching the member.

7. A support for a roll of toilet paper, comprising a member adapted to enter the tubular core of the roll, on and with reference to which the core can revolve, a plurality of resilient fingers carried by said member, which fingers tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on said member, said retardment being insufficient to prevent rotation of the roll by a steady pull on the end of the paper, but sufficient to enable the user to tear off pieces of paper at points where the paper is partially severed, by a quick jerk, said fingers being slightly arcuate in cross-section, and means for attaching said member to a wall or the like with one end free-standing, so the roll can be slipped thereon without detaching the member.

8. A support for a roll of toilet paper, comprising a tubular spindle, the wall of which is slotted through a substantial part of its length to form fingers, which fingers are resilient, the end of each finger being bent to form a radially extending hump, whereby to prevent the roll running off of the spindle, the extremities of the fingers extending toward the axis of the tube, all together forming a cone which cams the fingers inward when the roll is pressed on the spindle, allowing the humps to pass through the roll; and means for attaching the other end of said spindle to a wall or the like, leaving the slotted end free-standing so a roll of paper can be slipped thereon without detaching the spindle from the wall.

9. A support for a roll of toilet paper, comprising a tubular spindle, the wall of which is slotted through a substantial part of its length to form fingers, which fingers are resilient, the end of each finger being bent to form a radially extending hump, whereby to prevent the roll running off of the spindle, the extremities of the fingers extending toward the axis of the tube, all together forming a cone which cams the fingers inward when the roll is pressed on the spindle, allowing the humps to pass through the roll; and means for attaching the other end of said spindle to a wall or the like, leaving the slotted end free-standing so a roll of paper can be slipped thereon without detaching the spindle from the wall, said extremities extending inward considerably beyond a line co-incident with the inner surface of the spindle wall.

10. A spindle for a roll of toilet paper, comprising a tube adapted to slip freely into the tubular core of the roll, one end of said tube being slotted longitudinally to form fingers, which fingers are resilient and are bent so they tend to spring outward and by pressing against the inner wall of the tubular core of the roll produce friction that retards rotation of the roll on the spindle, the other end of the tube being notched to form lugs; a disc attached to a plate, said plate having flanges terminating in feet whereby to secure the plate to a wall with screws, said disc having a diameter no less than the outside diameter of the spindle and having notches to receive said lugs, which lugs are bent down onto the disc to unite the disc and spindle.

In testimony whereof I affix my signature.

GEORGE N. MOORE.