Oct. 13, 1959 C. E. STONE ET AL 2,908,450

DISPENSER FOR ROLLS OF STRIP MATERIAL

Filed Nov. 28, 1956 4 Sheets-Sheet 1

FIG. 1.

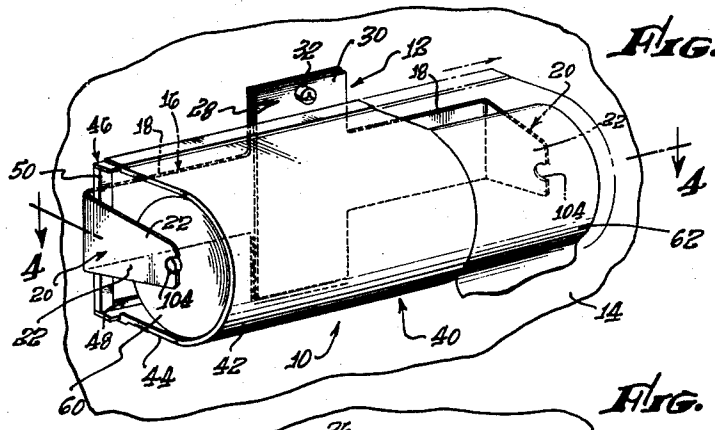


FIG. 2.

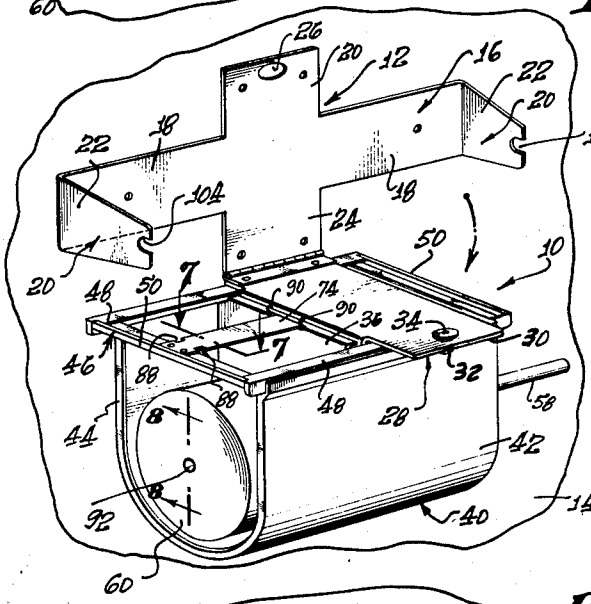


FIG. 7.

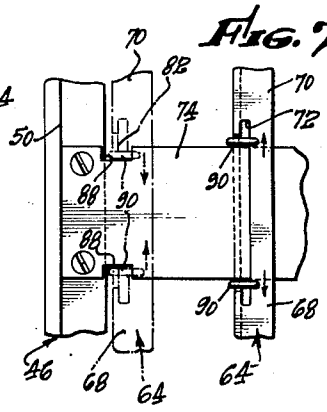
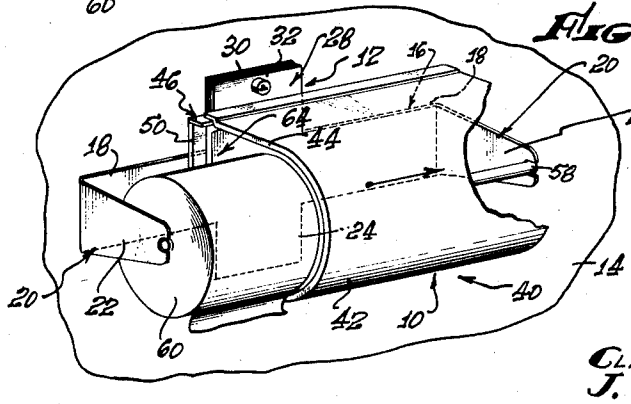


FIG. 3.



INVENTORS.
CLAIRE E. STONE,
J. C. LAYTON

By Thomas P. Maloney
ATTORNEY.

Oct. 13, 1959 C. E. STONE ET AL 2,908,450

DISPENSER FOR ROLLS OF STRIP MATERIAL

Filed Nov. 28, 1956 4 Sheets-Sheet 2

FIG. 4.

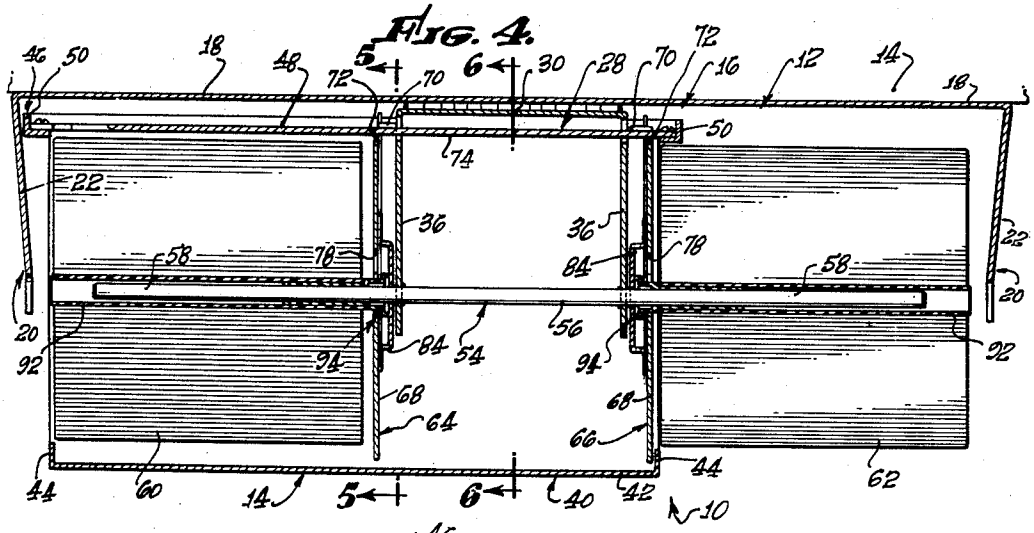


FIG. 5.

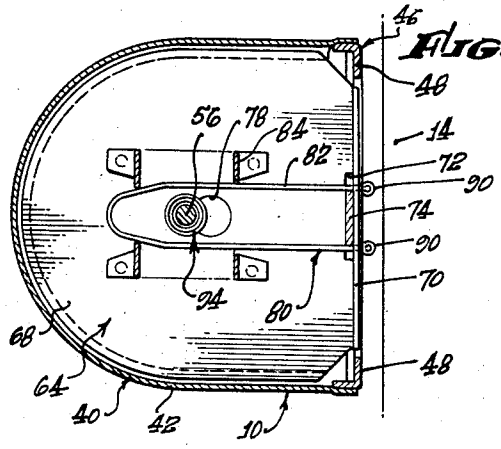


FIG. 6.

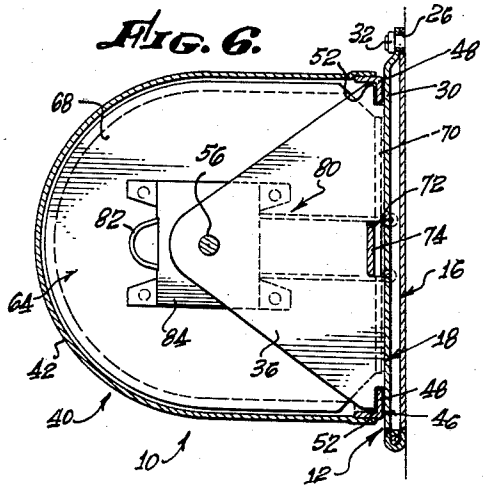
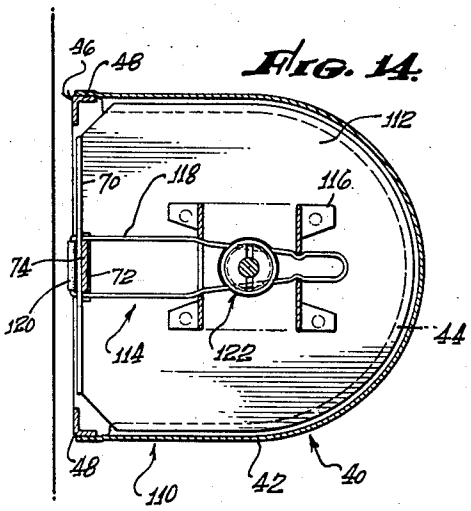


FIG. 14.



INVENTORS.
CLAIRE E. STONE,
J. C. LAYTON

By Thomas C. Mahoney
ATTORNEY.

Oct. 13, 1959 C. E. STONE ET AL 2,908,450

DISPENSER FOR ROLLS OF STRIP MATERIAL

Filed Nov. 28, 1956 4 Sheets-Sheet 3

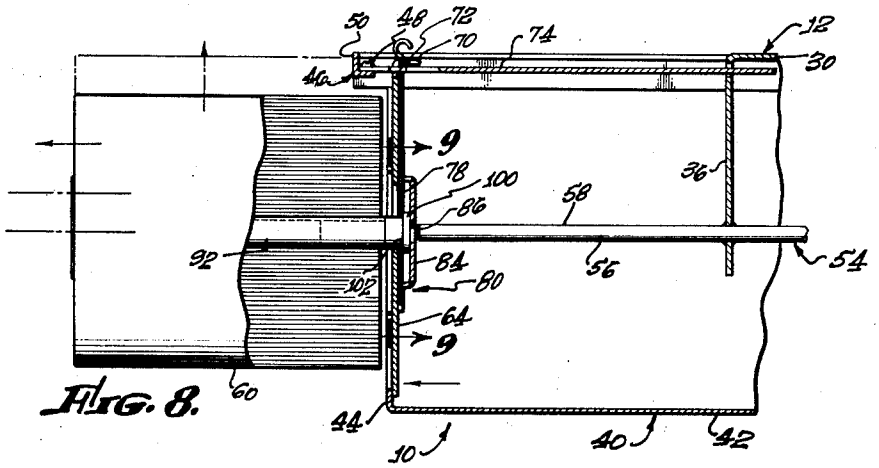


FIG. 8.

FIG. 9.

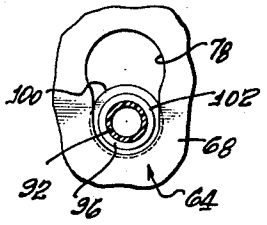


FIG. 10.

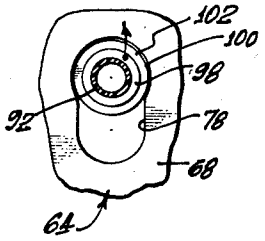
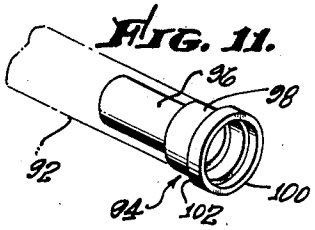


FIG. 11.



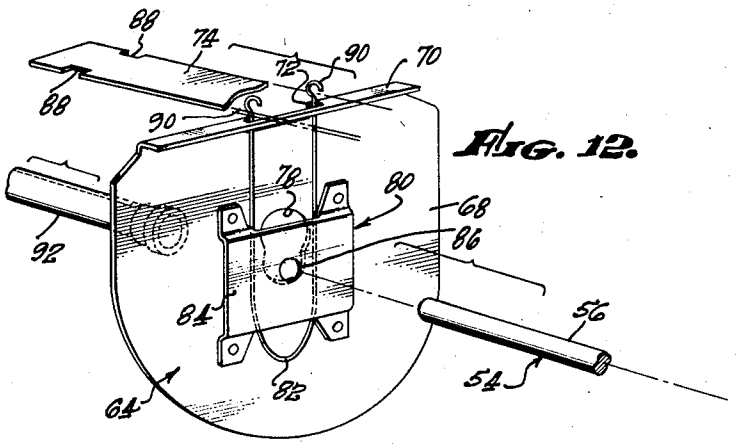


FIG. 12.

CLAIRE E. STONE,
J. C. LAYTON INVENTORS.

By Thomas P. Maloney
ATTORNEY.

Oct. 13, 1959 C. E. STONE ET AL 2,908,450

DISPENSER FOR ROLLS OF STRIP MATERIAL

Filed Nov. 28, 1956 4 Sheets-Sheet 4

FIG. 13.

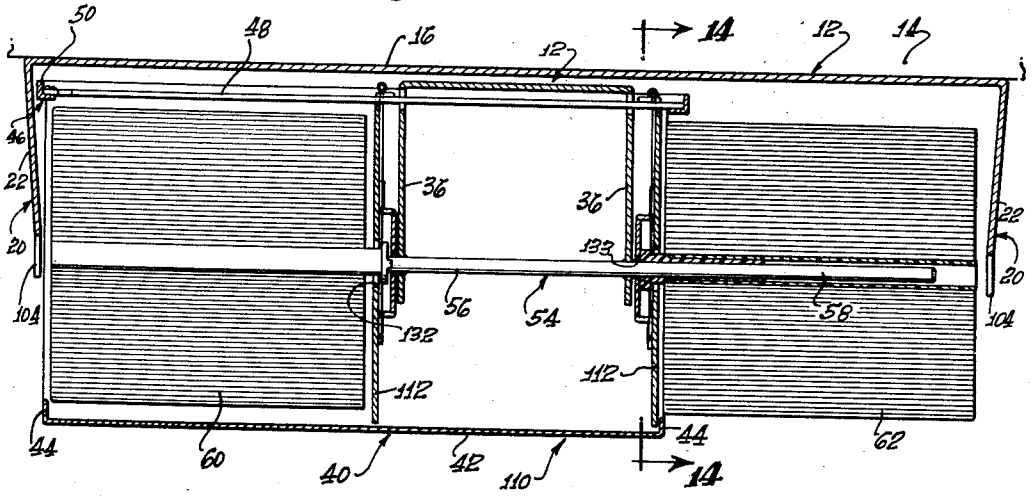


FIG. 15.

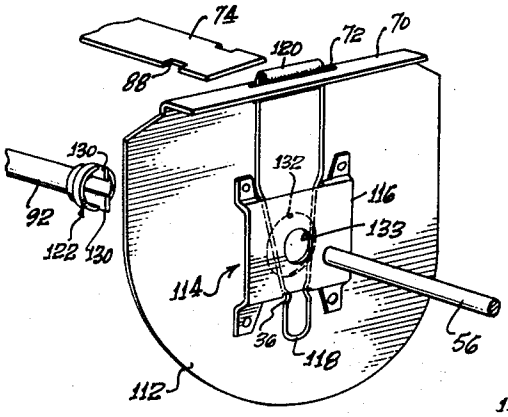


FIG. 16.

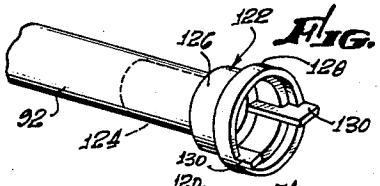


FIG. 19.

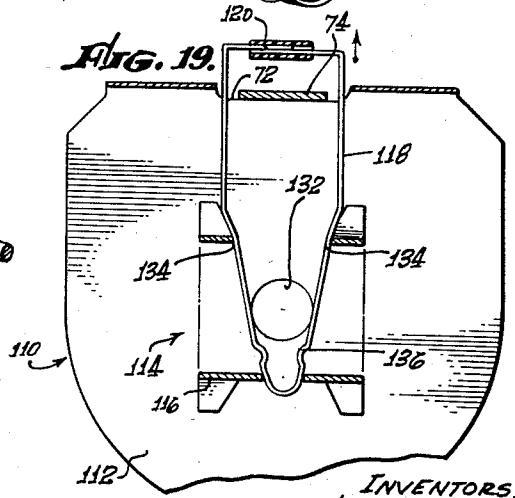


FIG. 17.

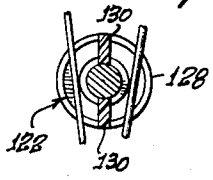
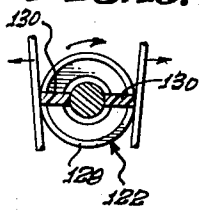


FIG. 18.



INVENTORS,
CLAIRE E. STONE,
J. C. LAYTON

By Thomas P. Maloney
ATTORNEY.

United States Patent Office 2,908,450 Patented Oct. 13, 1959

2,908,450

DISPENSER FOR ROLLS OF STRIP MATERIAL

Claire E. Stone, Tujunga, and J. C. Layton, La Habra, Calif., assignors to Towlsaver, Inc., Los Angeles, Calif., a corporation of California

Application November 28, 1956, Serial No. 624,776

11 Claims. (Cl. 242—55.3)

This invention relates to a dispenser for rolls of strip material and will be described as being embodied in a dispenser for toilet tissue provided in roll form, although it will be obvious to those skilled in the art that the principles of construction and mode of operation of the dispenser may be utilized with success in many other types of dispensers for strip material supplied in rolls.

One of the major problems encountered in public washrooms and lavatories is the maintenance of a continuous supply of toilet tissue and an associated problem is the prevention of waste by the public using the washrooms or lavatories. Many attempts have been made in the past to provide various types of dispensers for toilet tissue which incorporated means for providing an auxiliary or additional supply of toilet tissue after the exhaustion of the initial supply. However, none of the prior art devices has been quite acceptable and it is an object of the present invention to provide a toilet tissue dispenser for use in the above mentioned environments which includes means for mounting a plurality of rolls of toilet tissue whereby one roll of tissue is exposed for use and whereby when said one roll of toilet tissue is exhausted an additional, supplementary roll can be exposed for use by the user of the device.

Another object of our invention is the provision of a toilet tissue dispenser which includes a mounting means adapted to facilitate the mounting of the dispenser on a suitable surface, said mounting means having a housing supported thereupon which is intended to enclose an auxiliary roll of toilet tissue, the roll of tissue in use being supported on the mounting means and being exposed for use until completely consumed. Therefore, the simultaneous use of a plurality of sources of tissue and the resultant waste attributable to such availability are eliminated since the dispenser of our invention, of necessity, entails the complete consumption of the roll of tissue in use before the auxiliary roll can be exposed for use.

Another object of our invention is the provision of a toilet tissue dispenser of the aforementioned character wherein the housing of the dispenser is mounted for movement on an associated mounting means and wherein the housing is adapted to completely enclose and prevent the use of an auxiliary roll of tissue, the roll of toilet tissue in use being exposed to permit it to be utilized.

A further object of our invention is the provision of a toilet tissue dispenser of the aforementioned character which includes means within the housing adapted to prevent movement of the housing until the initially available roll of toilet tissue is expended, thus preventing the exposure of the auxiliary roll of tissue until the initially exposed roll of tissue has been exhausted and thus preventing the possible waste inherent in the presentation to the public of two sources of tissue.

Another object of our invention is the provision of a toilet tissue dispenser of the aforementioned character which includes retainer means adapted to prevent the

removal of an exposed roll of tissue by a user thereof and thus eliminating the petty theft which results when conventional tissue dispensers are utilized.

Another object of our invention is the provision of a toilet tissue dispenser of the aforementioned character wherein the mount for the dispenser includes mounting means for supporting a plurality of toilet tissue rolls in operative relationship therewith and wherein the housing of the dispenser is retained in shielding relationship with one of the rolls of tissue to maintain it as an auxiliary supply until an exposed roll of tissue is completely consumed. An associated object of our invention is the provision of guide means on the mount for the housing whereby said housing can be moved with respect to its mount to expose the auxiliary roll of toilet tissue when the initial roll of tissue has been consumed.

An additional object of our invention is the provision of a toilet tissue dispenser of the aforementioned character which can be quickly and easily serviced by authorized personnel so that an exhaust roll may be readily replaced in the dispenser by an auxiliary roll which is housed within the housing until the roll in use has been exhausted.

Other objects and advantages of our invention will be apparent from the following specification and the accompanying drawings which are for the purpose of illustration only and in which:

Fig. 1 is a perspective view of a dispenser constructed in accordance with the teachings of our invention;

Fig. 2 is a view similar to Fig. 1 showing the housing of the dispenser lowered for servicing of the dispenser;

Fig. 3 is a view similar to Fig. 1 showing the manner in which the housing of the dispenser is shifted upon its associated mount when the exposed roll of toilet tissue has been consumed to permit the utilization of the auxiliary roll;

Fig. 4 is a longitudinal, sectional view taken on the broken line 4—4 of Fig. 1;

Fig. 5 is a vertical, sectional view taken on the broken line 5—5 of Fig. 4;

Fig. 6 is a vertical, sectional view taken on the broken line 6—6 of Fig. 4;

Fig. 7 is an enlarged, fragmentary, top plan view taken from the broken line 7—7 of Fig. 2;

Fig. 8 is an enlarged, fragmentary, sectional view showing the manner in which an exposed roll of tissue is mounted in operative relationship with the dispenser;

Fig. 9 is an end elevational view taken from the broken line 9—9 of Fig. 8;

Fig. 10 is a view similar to Fig. 9 with the parts disposed in positions different from that in Fig. 9;

Fig. 11 is an enlarged, perspective view of a trunnion inserted in the end of the toilet tissue core;

Fig. 12 is an exploded view showing the relationship of various components of the dispenser;

Fig. 13 is a partly sectional view of an alternative embodiment of the dispenser of our invention;

Fig. 14 is a vertical, sectional view taken on the broken line 14—14 of Fig. 13;

Fig. 15 is an exploded view of various components of the alternative embodiment of the dispenser of our invention;

Fig. 16 is an enlarged, perspective view of an end trunnion adapted to be inserted in the core piece of a roll of tissue;

Fig. 17 is an enlarged, fragmenary view showing the relationship between the end trunnion and retaining means therefor;

Fig. 18 is a view similar to Fig. 17 with the parts in different relationship; and

Fig. 19 is a vertical, enlarged, sectional view showing

the trunnion releasing position of the detent means therefor.

Referring to the drawings and particularly to Figs. 1–4 thereof, we show a toilet tissue dispenser **10** constructed in accordance with the teachings of our invention and including a supporting bracket **12** which supports the dispenser **10** upon a wall **14**, or other supporting surface. The supporting bracket **12**, as best shown in Fig. 2 of the drawings, includes a cruciform wall engaging portion **16** provided with oppositely and laterally extending arms **18**. Formed upon the outermost extremities of the arms **18** are roll retaining means **20**, said roll retaining means being constituted by right-angularly oriented, integrally formed tabs **22** which, as best shown in Figs. 1–4 of the drawings, serve to prevent outward longitudinal movement of the rolls of toilet tissue mounted in operative relationship with the dispenser **10** and thus prevent unauthorized removal of said rolls from operative relationship therewith.

The vertical leg **24** of the cruciform portion **16** of the bracket **12** is provided with an elliptical latch receiving opening **26** and has hingedly secured to its lower extremity a movable portion **28** of the supporting bracket **16**, said movable portion including a rectangularly shaped plate **30** in the upper extremity of which is mounted a lock **32** having a bolt **34** receivable in the bolt receiving opening **26** in the upper extremity of the leg **24** of the cruciform portion **16** of the supporting bracket **12**. The lower extremity of the rectangular plate **30** is hingedly secured to the lower extremity of the leg **24**, as best illustrated in Fig. 2 of the drawings, whereby the plate **30** can be moved upwardly into a position in which it is juxtaposed to the vertically oriented leg **24** and in which the bolt **34** may engage the bolt receiving opening **26** in said leg whereby to maintain the plate **30** in operative relationship and in juxtaposition to the vertical leg **24**, for purposes which will be described in greater detail below.

On the other hand, release of the bolt **34** from operative engagement with the opening **26** permits the plate **30** to be swung down into the position shown in Fig. 2 of the drawings.

Formed upon, or otherwise secured to, the rectangularly shaped plate **30** is a pair of outwardly projecting, laterally spaced mounting and guide plates **36** which, as will be described in greater detail below, serve as a support for a movable housing **40**, said housing, as best illustrated in Figs. 1–4, being movable from one extremity of the supporting bracket **12** to the other extremity thereof.

The housing **40** is formed from sheet metal, or the like, and includes a substantially semi-cylindrical enclosure portion **42**, said enclosure portion being provided with lips **44** at the opposite extremities thereof and having its opposite edges fastened to a supporting frame **46**. The supporting frame **46** is substantially rectangular in configuration and includes a pair of longitudinally oriented, vertically spaced angles **48**, said angles being maintained in operative relationship with each other by vertically oriented connectors **50**.

Formed in the upper and lower rear corners of each of the mounting and guide plates **36**, as best shown in Fig. 6 of the drawings, is an angularly formed track means or guide notch **52**, said notches receiving the elongated angles **48** constituting a part of the housing supporting frame **46** and thus serving to guide and support the housing **40** during movement with respect to the mounting and guide plates **36** and the supporting bracket **12** incorporating said plates.

Fastened in and supported by the guide plates **36** is roll tissue mounting means **54** constituted by an elongated spindle **56** whose opposite extremities **58** extend beyond the opposite sides of the guide plates **36** and serve to support rolls of toilet tissue **60** and **62**, respectively, in operative relationship with the dispenser **10**, as best shown in Fig. 4 of the drawings.

Supported within the housing **40** and in operative relationship with the enclosure **42** thereof is a pair of toilet tissue roll blocking and locating means **64** and **66** which, as best shown in Figs. 4 through 8 of the drawings, are identical in construction and mode of operation. Because of the identity in construction and mode of operation of the blocking and locating means **64** and **66**, the description of the locating means **64** will suffice as a description of the associated locating means **66**.

Each of the blocking and locating means **64** and **66** is constituted by a sheet metal member **68** whose configuration is such that, as best shown in Figs. 5 and 6 of the drawings, the peripheral edge thereof conforms substantially to the interior surface of the enclosure portion **42** of the housing **40**. It will be noted also that, as best shown in Fig. 8 of the drawings, the adjacent lip **44** on the enclosure portion **42** of the housing engages the peripheral edge of the blocking and locating member **68** to prevent outward movement of said blocking and locating member beyond the confines of the enclosure portion **42** of the housing **40**.

The blocking and locating member **68** is, as best shown in Figs. 4–5 and 12 of the drawings, provided on its inner edge with a right-angularly oriented flange **70** and with a notch **72** for the reception of a guide and retainer track **74** which extends across and is secured to the supporting frame **46** of the housing **40**.

Because of the securement and mounting of the blocking and locating members **68** constituting the blocking and locating means **64** to the housing **40** in the above described manner, limited movement between the housing **40** and the blocking and locating members **68** can take place without disturbing the physical connection of the blocking and locating members **68** to the housing **40**, for a purpose which will be described in greater detail below.

The roll tissue blocking and locating member **68** is provided with a keyhole shaped opening **78** through which the roll mounting spindle **56** can pass and is also provided with latching and detent means indicated generally at **80**, said latching and detent means including a U-shaped spring catch **82** mounted in a retainer **84** for vertical movement, said retainer having a centrally located opening **86** for the passage of the roll mounting spindle **56**, as best shown in Fig. 12 of the drawings.

The spring catch **82** co-operates with detent notches **88** formed in the outer extremities of the guide and retainer track **74** to maintain the associated blocking and locating member **68** in operative relationship and predetermined position with the extremity of the guide and retainer track **74**. Finger grips **90** are provided on the upper extremity of the arms of the U-shaped spring catch **82** to facilitate the release of the spring catch from the detent notches **88** in the guide and retainer track **74** and the co-operative relationship of the spring catch **82** with the guide and retainer track **74**. More particularly, the detent notches **88** provided therein are graphically illustrated in Fig. 7 of the drawings, the full line portion of the figure illustrating the approach of the blocking and locating member **68** to the detent notches **88** on the track **74** and the dash line portion of the figure indicating the engagement of the spring catch **82** with the detent notches **88** to lock the member **68** against movement with respect to the track **74**.

Each of the rolls **60** and **62** of toilet tissue is provided with a central core **92** formed from cardboard, plastic, or similar material, said core being cylindrical and of a size to fit over the opposite extremities **58** of the roll mounting spindle **56**. Inserted in the inner extremity of each of the cores **92** is a trunnion or mounting member **94**, said trunnion being formed from plastic or other suitable material and incorporating an elongated, cylindrical shank **96** which, as best illustrated in Fig. 11 of the drawings, has an enlarged cylindrical bearing portion

98 formed integrally therewith, said bearing portion terminating in a larger retainer portion 100 defining a shoulder 102 which, as best illustrated in Figs. 9 and 10 of the drawings, is capable of engaging the lower portion of the keyhole shaped opening 78, as best illustrated in Fig. 9 of the drawings, to retain said trunnion or mounting member 94 in operative relationship with the blocking and locating member 68 in which it is inserted.

When the dispenser 10 is in use, one of the rolls 62 of toilet tissue is exposed for utilization while the other of the rolls 60 is, as best shown in Fig. 4 of the drawings, enclosed within the enclosure portion 42 of the housing 40. As graphically illustrated in Figs. 1 and 4 of the drawings, it is impossible for anyone other than authorized personnel to have access to the roll 60 which is located within the enclosure 42 of the housing and, as will be described hereinbelow, the exposed roll 62 must always be completely consumed before it will be possible for a person using the dispenser 10 to accomplish the movement of the enclosure portion 42 of the housing on the supporting bracket 12 in order to expose the auxiliary roll 60.

In order to service the dispenser 10 and to load it with rolls 60 and 62 of tissue, it is necessary to release the bolt 34 of the lock 32 by the utilization of a appropriate key. Release of the bolt 34 from the bolt receiving opening 26 in the rectangular plate 30, permits the housing 40 to be swung downwardly into the position shown in Fig. 2 of the drawings wherein the interior of the housing is exposed for the loading of rolls 60 and 62 of tissue therein. In order to load the rolls 60 and 62 of tissue in operative relationship with the dispenser 10, it is necessary to move the associated blocking and locating members 68 outwardly beyond the extremities 58 of the spindle 56 so that the retaining portion 100 of the trunnion can be inserted into the upper enlarged portion of the keyhole shaped opening 78 and then dropped downwardly into the smaller portion thereof so that the shoulder 102 upon the retaining portion 100 will engage the adjacent surface of the blocking and locating member 68 to hold the trunnion and thus the roll of toilet tissue in operative relationship therewith.

When the loading operation is accomplished at one side of the dispenser, the blocking and locating member 68 is shifted into a position adjacent an associated mounting and guide plate 36. The blocking and retaining member 68 on the other side of the dispenser 10 is then shifted outwardly beyond the associated extremity 58 of the spindle 56 and the loading operation repeated.

When the loading operation is completed, the housing 40 is shifted either to the left or the right to expose the roll of tissue to be initially utilized and to enclose the roll of tissue which is to serve as an auxiliary roll. In the present instance, the initially utilized roll is the roll 62 and the auxiliary roll is the roll 60. When the loading operation is completed, the plate 30 is swung upwardly and locked against the vertical leg 24 of the cruciform portion 16 of the supporting bracket 12 and the housing is thus located between the roll retaining means 20 of the supporting bracket 12 so that neither the exposed roll 62 nor the enclosed roll 60 can be shifted longitudinally out of operative relationship with the associated extremity of the spindle 56.

It will be noted also that the retention of the trunnion 94 of each of the rolls 60 and 62 in associated keyhole shaped openings 78 in their associated blocking and locating members 68 prevents longitudinal shifting of the rolls upon associated extremities 58 of the spindle 56.

When the housing 40 is disposed in the left-hand position in overlying relationship with the auxiliary roll 60, the right-hand blocking and locating member 68 is locked against movement with respect to the housing 40 by means of the engagement of the spring catch 82 with the detent notches 88 in the track 74. The position of the member 68 with respect to the housing 40 and, more particularly, with respect to the enclosure portion 42 of said housing is graphically illustrated in Fig. 4 of the drawings.

Therefore, should a user of the dispenser tend to move the enclosure portion 42 of the housing to the right in order to expose the auxiliary roll 60 before the exposed roll 62 has been completely used, such right-hand movement of the housing 40 will be resisted because of the fact that the housing 40 is latched to the blocking and locating member 68 and movement of the member 68 is itself prevented because of impingement of said member upon the unused, exposed roll 62 of toilet tissue. Therefore, the possibility that unauthorized persons may tamper with the dispenser 10 and expose the auxiliary roll prior to the complete exhaustion of the exposed roll is eliminated. In this manner, the wastage encountered in the use of conventional dual mounting of rolls of toilet tissue is eliminated since, as will be described immediately hereinbelow, the exposed roll must be completely exhausted before the auxiliary roll can be exposed to use.

When the exposed roll 62 of toilet tissue is completely exhausted, the diameter of the core which remains is less than the diameter of the opening 78 in the locking and locating member 68. Thus, the housing 40 may be shifted to the right to expose the auxiliary roll 60 of toilet tissue and this movement of the housing is accomplished merely by grasping the housing and causing the elongated angles 48 of the supporting frame 46 to traverse the guide and track notches 52 formed in the rear upper and lower corners of the mounting and guide plates 36 on the supporting bracket 12. When the housing 40 is thus moved, it assumes the position shown in Fig. 3 of the drawings and the auxiliary roll 60 of toilet tissue is now ready for utilization.

Once again the possibility that persons utilizing the dispenser 10 may tamper with the operation thereof occurs, since there might be a tendency to attempt to ascertain whether another roll is available within the housing 40 and movement of the housing 40 to cover the remaining exposed roll 60 might possibly result in a prankster or other person leaving the remaining roll covered within the housing so that a subsequent user would not realize that there was a supply of tissue available. However, such movement of the housing 40 into enclosing relationship with the exposed roll 60 is prevented since, when the housing 40 is shifted from the position shown in Fig. 1 of the drawings to the position shown in Fig. 3, the catch 82 engages the detent notches 88 on the track 74 since the track 74, being connected to the supporting frame 46 of the housing 40, is shifted simultaneously therewith. Thus, the blocking and locating member 68 is locked against the track 74 and the housing 40 cannot be moved since the exposed roll 60 of tissue prevents movement of the blocking member 68 and the connection of the blocking member 68 to the housing 40 prevents movement thereof.

In order to service the dispenser 10, the housing 40 is once again swung down into the position shown in Fig. 2 of the drawings and the intended auxiliary roll of tissue is mounted in operative relationship with the blocking member 68 for insertion of the trunnion 94 of said roll in operative relationship with the blocking member 68. The spring catch 82 is then released from engagement with the detent notches 88 and the roll pushed over the adjacent extremity 58 of the spindle 56 to cause the roll to be received within the interior of the housing 40.

It will be noted at this juncture that notches 104 are provided in the retaining means 20 to permit outward movement of the cores 92 of exhausted rolls past the retaining means 20 when the blocking and locating members 68 mounting the same are moved in juxtaposition to said retaining means.

After the dispenser 10 has been serviced in the above described manner, the housing 40 is swung back into

the original position and locked in the same by energization of the lock **32** and the housing will retain the position shown in Fig. 3 of the drawings until exhaustion of the roll of toilet tissue **60** takes place when the housing **40** can be shifted to the left to expose the waiting auxiliary roll.

It is readily apparent, therefore, that the toilet tissue dispenser of our invention can always maintain an auxiliary roll of tissue within the enclosure portion **42** of the housing **40** and that the auxiliary roll cannot be exposed for vandalism until complete exhaustion of the exposed roll takes place. Thus, wastage of the tissue is discouraged since only one roll is exposed at a time. Moreover, once an auxiliary roll has been exposed to view after the exhaustion of the initially exposed roll, it is not possible for tamperers to return the auxiliary roll to a position within the housing where it could not be perceived by persons desiring to use the same.

Because of the provision of the roll retaining means at the opposite extremities of the housing, it is impossible for a user to abstract the rolls of tissue from the housing and thus subject a subsequent user to an exhausted dispenser.

Also of considerable importance is the fact that the provision of the trunnions **94** in the cores **92** permits the rolls of tissue to be interlocked with the blocking and retaining members **68** with which they are associated, thus preventing sliding movement of the rolls on the associated extremities of the spindle **56**. Moreover, the positive engagement of the rolls of toilet tissue with the blocking and locating members **68** insures proper operation of the dispenser since the locating and blocking members **68** are always disposed in their proper operative relationship with respect to the housing **40**.

An alternative embodiment **110** of the dispenser of our invention is shown in Figs. 13–19 of the drawings and since the only significant difference between the embodiment **110** and the dispenser **10** previously disclosed hereinabove lies in the provision of a different type of a trunnion and a different type of latching and detent means, the other portions of the dispenser **110** which are identical with those of the dispenser **10** will be designated by identical reference numerals and no further description thereof appears to be indicated.

The blocking and retaining members **112** of the dispenser **110** are identical in configuration with the blocking and retaining members **68** of the dispenser **10** described hereinabove and incorporate right-angular flanges **70** and are provided with notches **72** for the reception of the guide and retainer track **74** which is mounted on the supporting frame **46** of the housing **40**. Latching means **114** is mounted on the members **112**, said latching means including a retainer plate **116** which mounts a spring catch **118**, said spring catch being provided at its upper extremity with a finger grip **120**.

Designed for co-operative relationship with the spring catch **118** is a trunnion **122** insertible in the end of an associated core **92**, said trunnion including a mounting shank **124** receivable in the core and having a bearing portion **126** on which is provided a retainer portion **128**, said retainer portion being provided with integral spreader lugs **130**.

An opening **132** is formed in the blocking and retaining member **112** concentrically with a smaller opening **133** formed in the retainer plate **116**. The lower portion of the spring catch **118** is engageable by cam surfaces **134** on the retainer plate **116** and has detent notches **136** on its lower extremity adapted to engage adjacent surfaces of the retainer plate **116** to maintain the spring catch **118** in a lowermost position in which it will engage the shoulder on the retainer portion **128** of the trunnion **122** to maintain an associated roll of toilet tissue in operative relationship with the blocking and locating member **112**.

Insertion of the trunnion **122** in operative relationship with the spring catch **118** is graphically illustrated in Figs. 17 and 18 of the drawings, Fig. 17 illustrating the initial location of the spreader lugs **130** between the opposed legs of the spring catch **118**. When the lugs are located in the position shown in Fig. 17, they are rotated 90° into the position shown in Fig. 18 wherein their opposite extremities engage the legs of the spring catch **118** and spread said legs to permit the rear retainer portion **128** of the trunnion **122** to move past the legs and to permit the shoulders defined by the retainer portion **128** of the trunnion **122** to be engaged by the spring catch **118**. Thus, the trunnion **122** can be inserted in operative relation with the spring catch **118** when it is disposed in the lowermost, operative position shown in Fig. 15 of the drawings.

On the other hand, when the release of the trunnion **122** is desired, the finger grip **120** can be pulled upwardly to permit the legs of the catch **118** to spread and to permit the passage of the retaining or retainer portion **128** of the trunnion **122** therepast. In all other respects, the operation of the dispenser **110** of our invention is identical with that of the previously disclosed dispenser **10** of our invention.

We thus provide by our invention a dispenser for various types of strip material in roll form which is characterized by the provision of means whereby there is presented for use an initial exposed roll of material, while another auxiliary roll is maintained within a housing enclosure for instant availability upon complete consumption of the exposed roll. However, the enclosed roll is not available for tampering or mischievous vandalism and the housing is locked thereupon in enclosing relationshp therewith until complete consumption of the exposed roll takes place. Moreover, after the initially exposed roll has been consumed, the auxiliary roll can be readily exposed to view and to use by the simple expedient of laterally shifting the housing enclosing the auxiliary roll to expose the same.

Once the shifting of the housing has occurred, it is not possible to return the housing to the position of enclosing the auxiliary roll, thus preventing the possibility that a roll may be available for use but sealed within the housing without the knowledge of the person utilizing the dispenser.

The dispenser of our invention is also characterized by the ease with which is may be serviced and by its compact and attractive appearance.

We claim as our invention:

1. In a roll toilet tissue dispenser, the combination of: a support; a housing having an enclosure slidably mounted on said support for movement between first and second positions; mounting means secured to said support for supporting a first roll externally of and a second roll internally of said enclosure; and roll blocking means mounted on said enclosure to prevent relative movement between said enclosure and the end of an external roll engaged by said blocking means.

2. In a roll toilet tissue dispenser, the combination of: a support; a housing having an enclosure slidably mounted on said support for movement between first and second positions; mounting means secured to said support for supporting a first roll externally of and a second roll internally of said enclosure; roll blocking means mounted on said enclosure to prevent relative movement between said enclosure and the end of an external roll engaged by said blocking means; and interlocking means on said blocking means for locking said enclosure to said blocking means whereby said enclosure cannot be moved into housing relationship with said roll once said roll has been exposed.

3. In a dispenser for exposed and reserve rolls of material, the combination of: a support; a housing incorporating an enclosure mounted for longitudinal movement on said support; a blocking member secured in one extremity of said enclosure for engagement with an end

of said exposed roll to prevent movement of said enclosure into overlying relationship with said exposed roll; and an automatic spring latch located in said housing and interposed between said support and enclosure to lock said enclosure against movement on said support after it is moved to expose the reserve roll.

4. In a dispenser for strip material in roll form, said dispenser being adapted to maintain exposed and reserve rolls for successive use in end-to-end relationship, the combination of: a support; an enclosure operatively secured to said support for movement in respect thereto; blocking means secured within one extremity of said enclosure and engageable with an end of said exposed roll to prevent said enclosure from being moved into overlying relation with said exposed roll; and an automatic spring latch in said housing interposed between said support and enclosure to lock said enclosure against movement on said support after it is moved to expose the reserve roll.

5. In a dispenser adapted to receive a plurality of rolls of strip material in end-to-end relationship, the combination of: a support; a roll enclosure operatively secured to said support and longitudinally movable thereupon, said roll enclosure being adapted to cover one roll; roll mounting means mounted on said support for maintaining said rolls in operative relationship with said enclosure; and blocking means secured to said enclosure and engaging the end of an exposed roll to prevent movement of said enclosure over said exposed roll.

6. In a dispenser for a pair of rolls of strip material disposed in end-to-end relationship, the combination of: a support; a roll enclosure operatively secured to said support and longitudinally and vertically movable thereupon; roll mounting means secured to said support for maintaining said rolls in operative relationship with said enclosure during longitudinal movement thereof; and blocking means secured within said enclosure at one extremity thereof and engageable with an extremity of an adjacent roll, said blocking means being constituted by a blocking plate having an aperture therein adapted to pass over said roll mounting means during movement therepast when an exposed roll has been exhausted.

7. In a roll tissue dispenser for maintaining a plurality of rolls in end-to-end relationship, the combination of: a support; a roll enclosure for one of said rolls slidably mounted on said support for movement between first and second positions; mounting means secured to said support for supporting a first roll externally of and a second roll internally of said enclosure; and blocking means located in said enclosure at one extremity thereof and connected thereto, said blocking means being engageable with an extremity of said external roll to prevent movement of said enclosure past said external roll prior to the exhaustion thereof.

8. In a roll tissue dispenser for maintaining a plurality of rolls in end-to-end relationship, the combination of: a support; a roll enclosure for one of said rolls slidably

mounted on said support for movement between first and second positions; mounting means secured to said support for supporting a first roll externally of and a second roll internally of said enclosure; and blocking means located in said enclosure at one extremity thereof and connected thereto, said blocking means being engageable with an extremity of said external roll to prevent movement of said enclosure past said external roll prior to the exhaustion thereof, said blocking means being constituted by a blocking plate having an aperture therein adapted to by-pass said mounting means after the exhaustion of an external roll disposed thereupon.

9. In a dispenser for a plurality of rolls of strips material arranged in end-to-end relationship, the combination of: a support; guide means on said support; a housing enclosure secured to and longitudinally movable upon said guide means; roll mounting means on said support; and blocking means secured to said enclosure for engagement with the end of an exposed roll to prevent movement of said enclosure over said exposed roll until the exhaustion thereof.

10. In a dispenser for a plurality of rolls of strip material arranged in end-to-end relationship, the combination of: a support; guide means on said support; a housing enclosure secured to and longitudinally movable upon said guide means; roll mounting means on said support; and blocking means secured to said enclosure for engagement with the end of an exposed roll to prevent movement of said enclosure over said exposed roll until the exhaustion thereof, said blocking means including a blocking plate incorporating an aperture adapted to by-pass said mounting means after the exhaustion of an exposed roll on said mounting means.

11. In a dispenser for rolls of strip material, the combination of: a supporting bracket; an elongated housing having a portion operatively connected to said bracket and movable longitudinally thereupon; mounting means located within said housing and said portion for maintaining a plurality of said rolls in operative relationship with said housing and said portion; and blocking means secured within said portion of said housing and movable with said portion and engageable with an end of an adjacent roll to prevent relative movement between said housing portion and said roll.

References Cited in the file of this patent

UNITED STATES PATENTS

179,087	Schmittner	June 20, 1876
434,325	Reeves et al.	Aug. 12, 1890
2,337,655	Gordy	Dec. 28, 1943
2,510,537	Agamaite	June 6, 1950
2,805,030	Wolters	Sept. 3, 1957

FOREIGN PATENTS

441,445	Germany	Mar. 7, 1927
247,416	Switzerland	Dec. 1, 1947