Nov. 30, 1926. 1,609,089

A. L. JONES

TOWEL DISPENSING MACHINE

Filed May 3, 1922 5 Sheets-Sheet 1

Fig. 1.

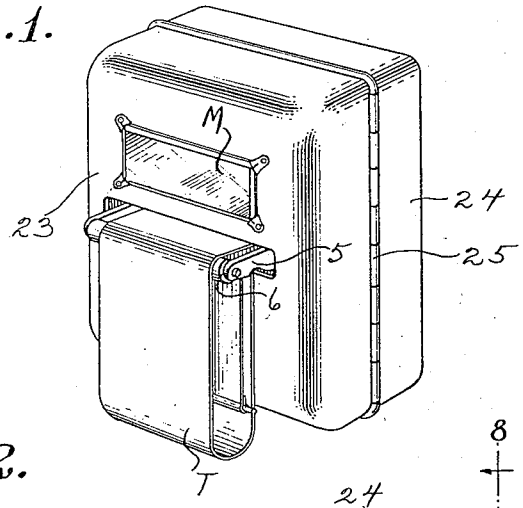
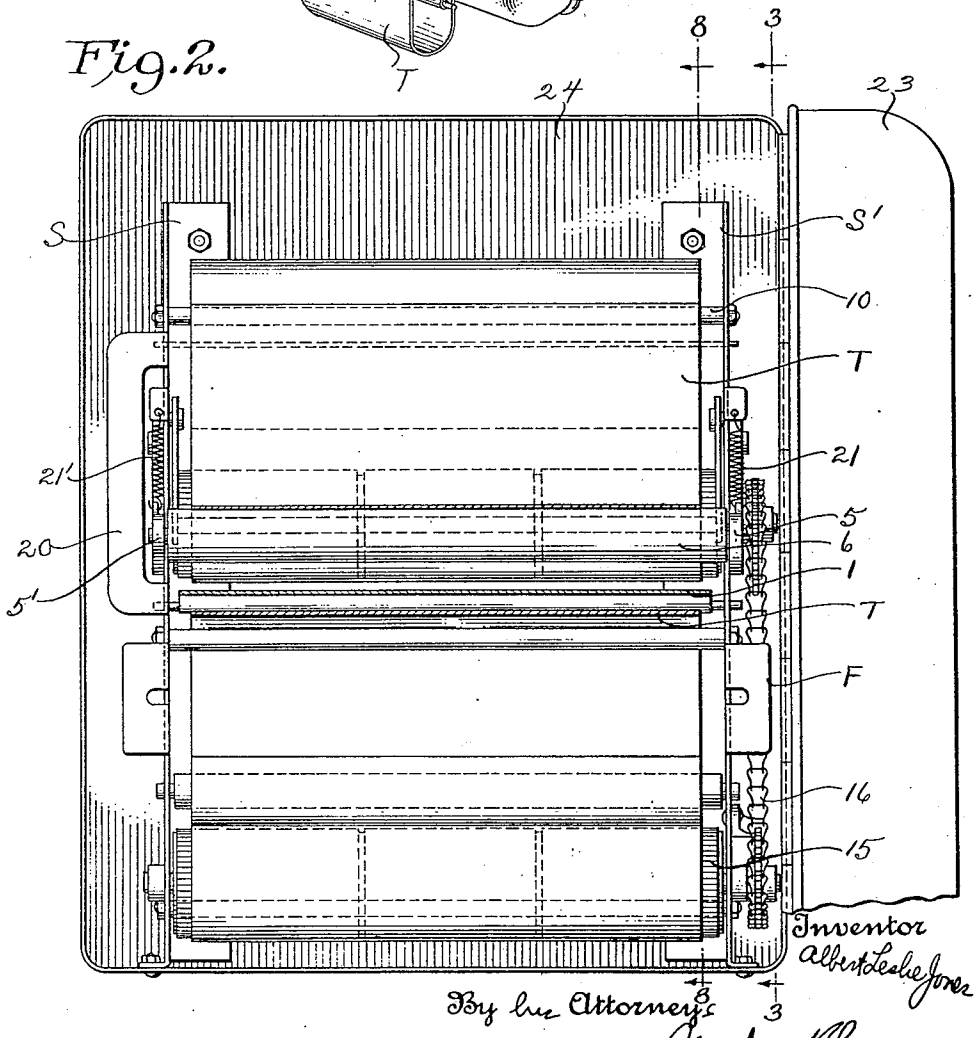


Fig. 2.



Inventor
Albert Leslie Jones

By his Attorneys
Hooker & Blum

Nov. 30, 1926. 1,609,089

A. L. JONES

TOWEL DISPENSING MACHINE

Filed May 3, 1922 5 Sheets-Sheet 2

Fig.3.

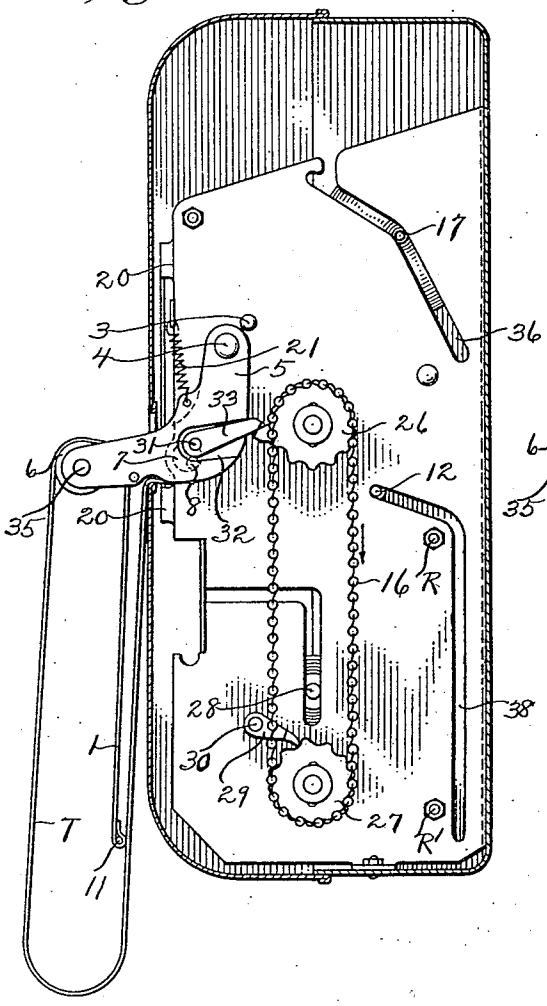


Fig.4.

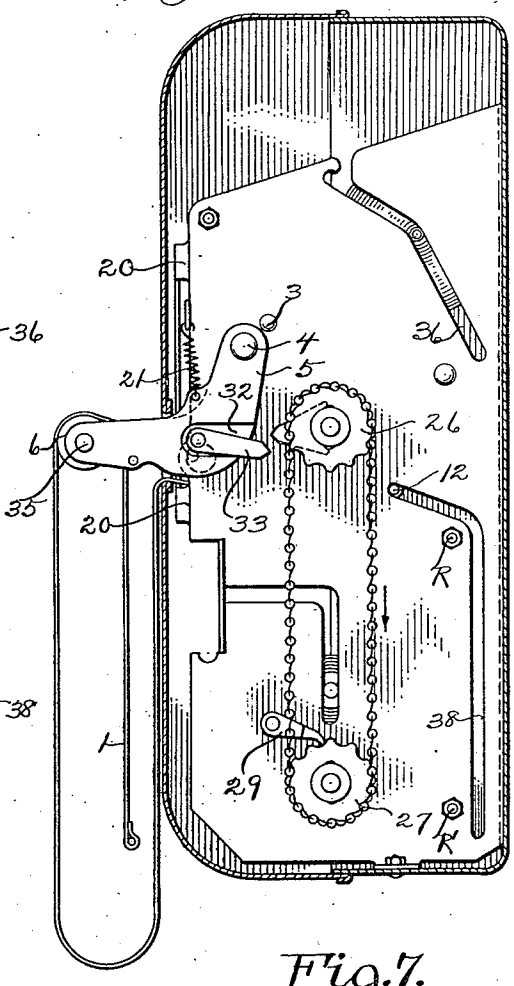


Fig.7.

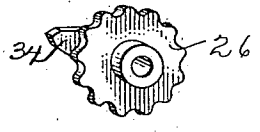


Fig.5.

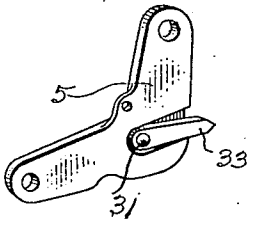
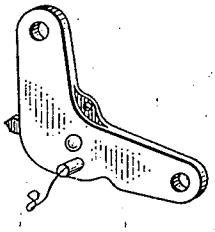


Fig.6.



Inventor.
Albert Leche Jones
By his Attorneys
Mabee & Mann

Nov. 30, 1926. 1,609,089

A. L. JONES

TOWEL DISPENSING MACHINE

Filed May 3, 1922 5 Sheets-Sheet 3

Fig. 8.

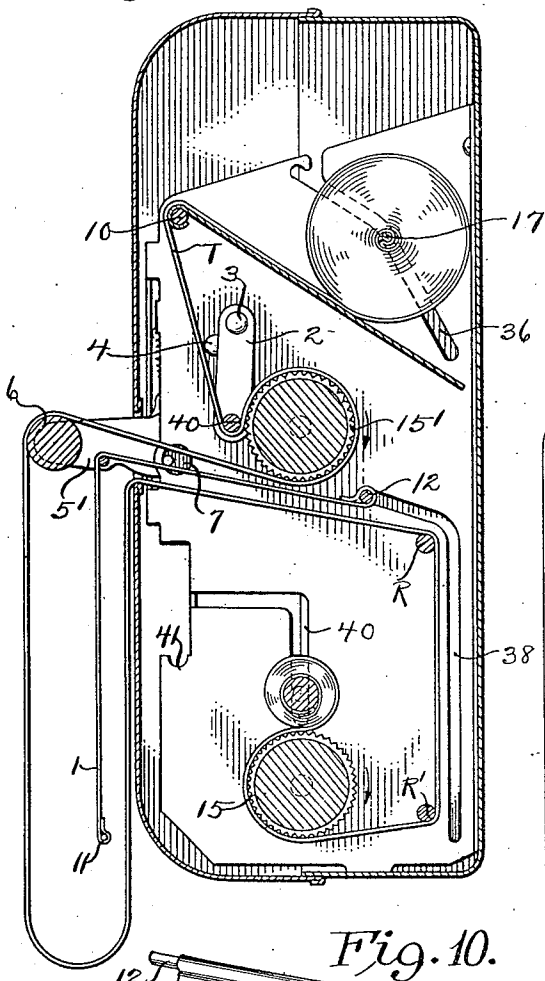


Fig. 9.

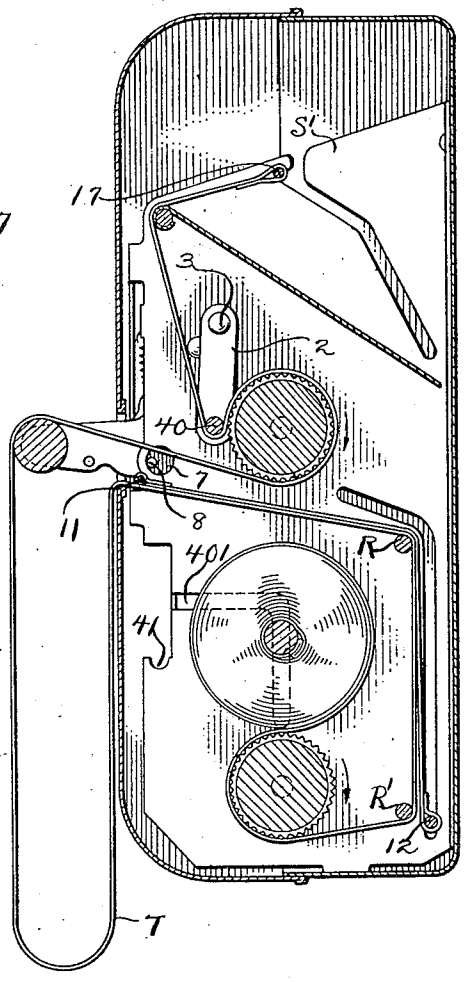
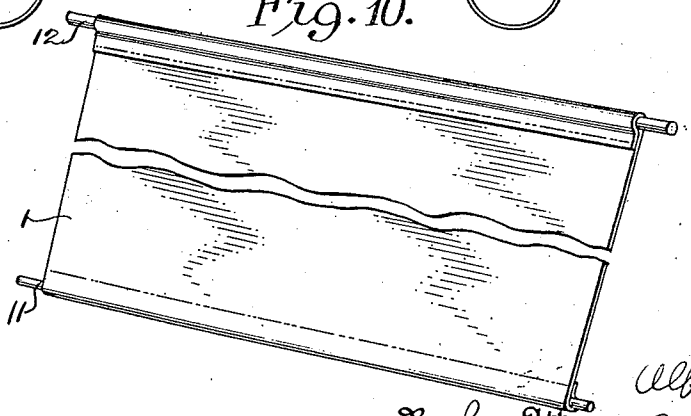


Fig. 10.



Inventor
Albert Leslie Jones
By his Attorneys
Mark & Clum

Nov. 30, 1926. 1,609,089

A. L. JONES

TOWEL DISPENSING MACHINE

Filed May 3, 1922 5 Sheets-Sheet 4

Fig. 11.

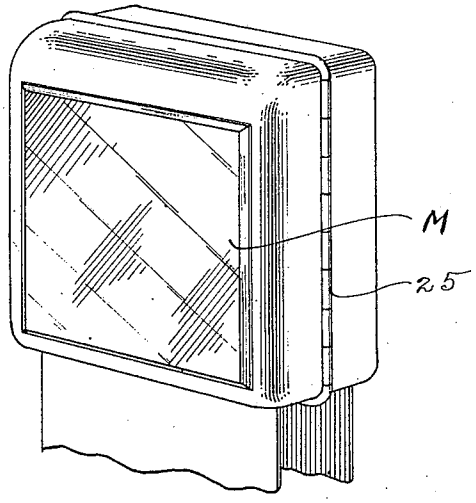
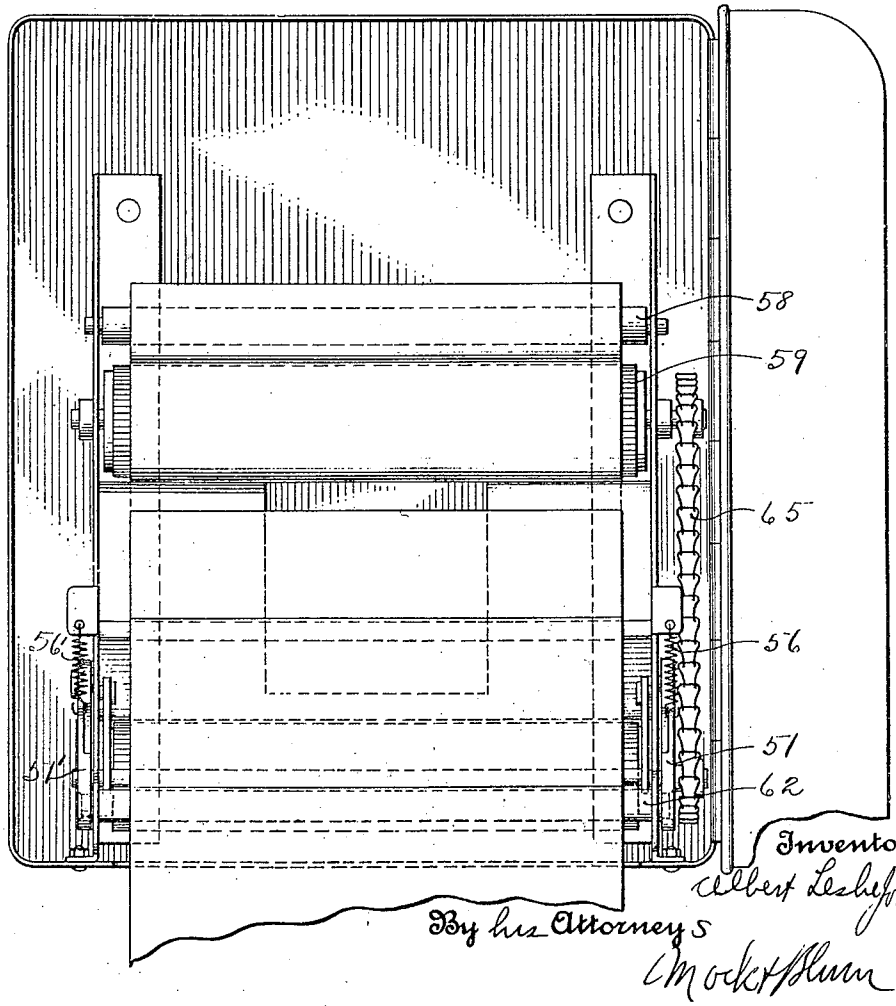


Fig. 12.



Inventor
Albert Leslie Jones
By his Attorneys
Mockett Blum

Nov. 30, 1926. 1,609,089

A. L. JONES

TOWEL DISPENSING MACHINE

Filed May 3, 1922 5 Sheets-Sheet 5

Fig. 13.

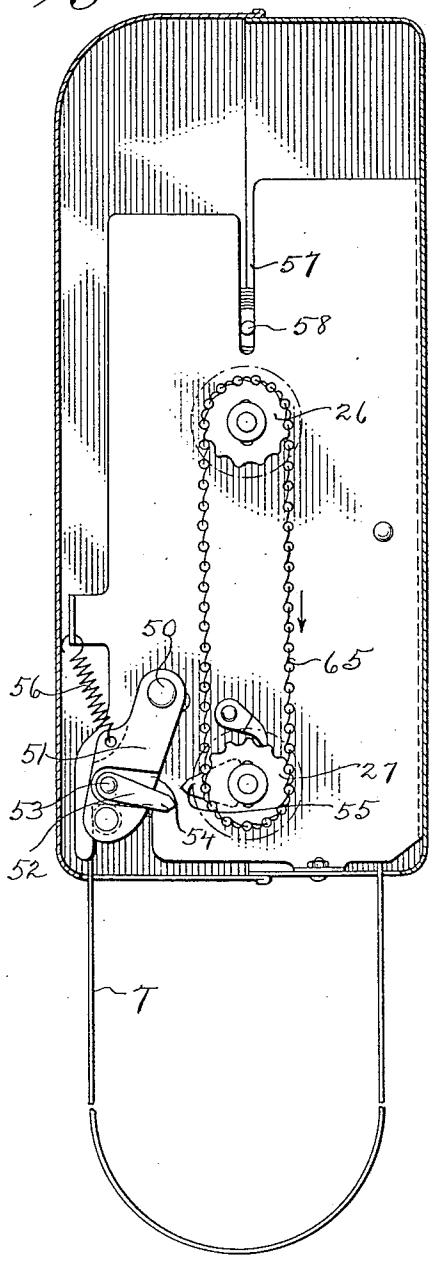
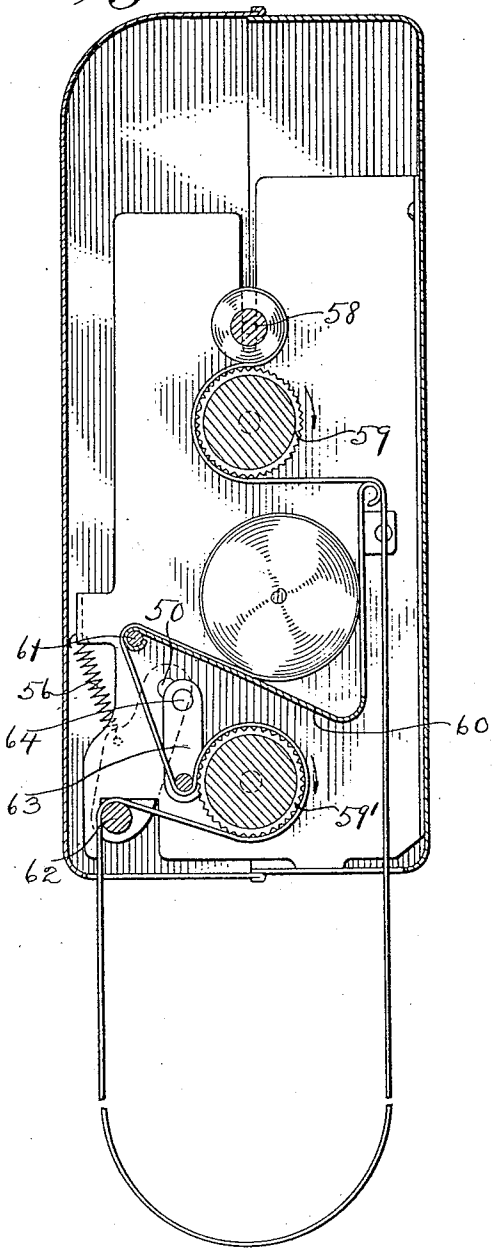


Fig. 14.



Inventor
Albert Leslie Jones
By his Attorneys
Wood, Herron & Evans

Patented Nov. 30, 1926. 1,609,089

UNITED STATES PATENT OFFICE.

ALBERT LESLIE JONES, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO STEINER SALES COMPANY, A CORPORATION OF UTAH.

TOWEL-DISPENSING MACHINE.

Application filed May 3, 1922. Serial No. 558,084.

My invention relates to a new and improved form of towel dispensing machine.

One of the objects of my invention is to provide a machine in which the threading of the long strip of toweling through the various parts of the machine will be facilitated.

Another object of my invention is to provide a device or machine in which it will be impossible to pull out the end of the long strip of toweling from the said device.

Another object of my invention is to provide a simplification of parts so that the device can be manufactured more economically.

Another object of my invention is to provide a device in which the portion of the strip of toweling which is exposed for use shall project from the bottom of the case or cabinet enclosing the various elements of the machine.

Other objects of my invention will be set forth in the following description and drawings which illustrate two preferred embodiments thereof.

Fig. 1 is a perspective view of one embodiment of my invention.

Fig. 2 is an inner view of the parts shown in Fig. 1 and is partially in section.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 3 but showing the parts in a different position.

Fig. 5 is a perspective view of the pivoted pawl carrier.

Fig. 6 is a perspective view of the members shown in Fig. 5, but showing the other side thereof.

Fig. 7 is a perspective view of the upper gear wheel and the stop projecting therefrom.

Fig. 8 is a sectional view on the line 8—8 of Fig. 2.

Fig. 9 is a view similar to Fig. 8 but showing the protective shield in a different position.

Fig. 10 is a perspective view of the protective shield.

Fig. 11 is a perspective view showing another embodiment of my invention.

Fig. 12 is an elevation of the elements contained within the case shown in Fig. 11.

Fig. 13 is a sectional view of Fig. 12.

Fig. 14 is a view similar to Fig. 13 but showing the parts in a different position.

In the first embodiment shown in Figs. 1–10 inclusive, all the parts are contained within a case having a body 24 provided with a cover secured thereto by means of a hinge 25. The cover 23 has a mirror M secured thereto in any suitable manner and it is also provided with a slot through which project the members 5 and 5′, to be later described more fully, said members 5 and 5′ having the roller 6 connected thereto.

The exposed portion of the long strip of toweling which is intended for instant use, projects as shown in Fig. 1 and the front portion thereof, which is the clean portion intended for instant use, is separated from the rear or soiled portion of the said exposed strip by means of a protective shield 1 to be later more fully described.

As clearly shown in Fig. 8, the strip of toweling is coiled into a roll. The inner end of this roll is now formed into a loop, as clearly shown in Fig. 9 and a rod 17 made of any suitable rigid material, such as metal, is located within this loop. This roll of toweling rests upon a downwardly inclined shelf, said shelf having the outer rounded end 10. This shelf is secured in any suitable manner to the angular plates S and S′ which are secured to the body 24.

As clearly shown in Figs. 3, 4, 8 and 9, the forwardly projecting portions of the said plates S and S′ are provided with slots 36 having the contour shown in Figs. 8 and 9. As is clearly shown in said Figs. 8 and 9 the outer ends of the said slots terminate in hook-like portions. Hence when the end of the said strip of toweling is pulled, the said rod moves within the said slot 36, and when the strip of toweling is practically used up, the said rod 17 is engaged by the said hook-like ends of the said slot 36 and is firmly held against further movement by any unauthorized person.

Since the other end of the strip of toweling is secured against removal by any unauthorized person in a manner later to be described, both ends of the strip of toweling are thus firmly held in the machine when the said toweling is used up and indeed at all other times so that the toweling cannot be removed except by an authorized person.

The end of the strip of toweling is led over the rounded end 10 of the said shelf and is then led around the non-revoluble cylinder or bar 40 connected to the links 2

which are pivoted to their respective side plates S and S′ by the pivots 3.

The toweling is then passed around the upper roller 15′ connected to the upper gear wheel 26 shown in Figs. 3 and 4. This upper roller 15′ is preferably provided with a jacket made of corrugated rubber in which each corrugation is split so as to provide two half teeth.

Since the member 40 is connected to the links 2 it can be swung away from the said upper roller 15′ so as to enable the end of the strip of toweling to be readily passed around the said upper roller 15′. However, when the strip of toweling is pulled in the operation of the device, the said links assume the position shown in Figs. 8 and 9 in which they are urged so as to tend to press against the surface of the adjacent roller 15′. In this position the bar 40 acts like a clamp and prevents the movement of the toweling with respect to roller 15′, when roller 15′ is held against movement. The strip of toweling is then passed over the roller 6, secured to the arms 5 and 5′ which are pivotally secured at 4 to their respective side plates S and S′. The toweling T is then caused to form a loop as shown in Figs. 8 and 9 and the inner end is then passed over the bottom of the said slot in the cover 23 and around the lateral tie-rods R and R′ which are secured to the said side plates S and S′.

The end of the strip of toweling is then laid around the roller 15 which is of a similar construction to the upper roller 15′ and is then secured to a tube 28 in any suitable manner, as, for example, in the manner described in my said previously mentioned application.

The said tube 28 can move in angular slots 401 which are formed in the said plates S and S′. Hence when the entire strip of toweling has been substantially used up and the rod 17 is in the locking position shown in Fig. 9 the attendant can open the door 23 which may be locked by any suitable locking device and he can move the rod 28 out of the slots 401 and cause it to rest in the notches 41 formed in the said side plates S and S′.

The rollers 15 and 15′ are connected to the gear wheels 26 and 27 and these are also connected by the chain 16. Hence, when the outer part of the loop shown in Fig. 1 is pulled, the chain moves in the direction of the arrows shown in Figs. 3 and 4 and the rollers 15 and 15′ revolve in the direction of the arrows shown in Figs. 8 and 9.

In order to prevent more than a desired portion of the strip of toweling from being exposed by a single pull upon the outer leg of the loop, the upper gear wheel 26 is provided with a stop 34 shown in Fig. 7. The members 5 and 5′ are connected to springs 21 and 21′ respectively and these tend to hold the said members 5 and 5′ in the position shown in Fig. 4. The member 5 is provided with a pawl 33 pivoted thereto at 31 and moving in a recess 32. The said members 5 and 5′ are also provided with pins 8 which extend into perforations 7 in the said plates S and S′ so as to limit their movement.

The weight of the pawl 33 causes it to normally assume the position shown in Fig. 4 in which it contacts with the lower edge of the said recess 32.

When the user pulls down the outer leg of the loop T the member 5 is forced inwardly and into the position shown in Fig. 3. The projection 34 which is caused to revolve with the upper gear wheel engages with pawl 33 during the revolution of the said gear wheel 26 and forces said pawl 33 against the upper face of the said recess 32 as shown in Fig. 3, thereby locking the parts against further movement. When the pull upon the outer leg of the loop is discontinued, the tension spring 21 then forces the member 5 into the position shown in Fig. 3, thereby releasing the pawl 33 from the stop 34 and causing the pawl 33 to drop back to its normal position so that another portion of the strip of toweling can be exposed.

In order to protect the outer or clean leg of the loop from the inner or soiled portion the shield 1 which is preferably made of some flexible and non-absorbent material such as rubber or the like, is provided. This shield 1 has a bottom rod 11, which is made sufficiently heavy so as to keep the shield in the position shown in Fig. 1 and it is also provided with a top or inner rod 12. The top or inner rod 12 projects through and slides in the slots 38 formed in the said side plates S and S′ and shown in Figs. 8 and 9. While the device is in use, the shield is in the position shown in Fig. 8 and when it is desired to insert a fresh strip of toweling the rod 12 can be pulled to the bottom of slots 38 as clearly shown in Fig. 9. It is obvious that in this embodiment the soiled toweling in the form of a roll can be very quickly and conveniently removed and that a fresh strip of toweling can be very conveniently and quickly inserted and that the portion of the toweling intended for use is always maintained in a clean and sanitary condition and that it is impossible for an unauthorized person to remove the toweling.

In the embodiment shown in Figs. 11–14 the strip of toweling is led through the bottom of the cabinet so as to provide an exposed loop for use and to enable the mirror M to occupy the whole front of the cover of the cabinet. The side plates are provided

as before described, but the shelf 50 upon which the roll of toweling rests is now provided in the lower part of the cabinet.

The strip of toweling is led around the rounded end 61 of the said shelf and then passes around a roller or equivalent part similar to the roller 40 before mentioned and which is secured to the links 63, pivotally secured at 64 to the said plates. The toweling is then led around the roller 59' similar in construction to that before described and around the roller 62 secured to the ends of the pawl carriers 51 pivotally secured at 50 to their respective side plates and held in the position shown in Fig. 13 by the springs 56. The toweling is then led around the upper roller 59 and around the tube 58 which moves in the vertical slots 57 of the said side plates. The rollers 59 and 59' are connected to gear wheels 26 and 27 as before described and these are connected by a chain 65. One of the members 51 is provided with a pawl 52 pivoted at 53 in a recess 54 of the said member 51. The operation of the parts is substantially the same as that before mentioned.

This application is a continuation in part of my previously filed application Serial No. 541,003 filed on March 4th, 1922.

In both embodiments a pivoted pawl 29 is provided in connection with the lower gear wheel 27 so as to prevent any backward movement thereof. The shield is not shown in Figs. 13 and 14, but such a shield could be provided between the outer leg and the inner leg of the loop as before described.

I have described a preferred embodiment of my invention but it is clear that numerous changes and omissions can be made without departing from its spirit.

Wherever I refer to parts before described either in the description or in the claims by means of numbers, I do not wish to be limited to the specific embodiment herein illustrated.

I claim:—

1. In a towel dispensing device which includes a cabinet, means located in said cabinet and adapted to movably hold a length of toweling so that a loop thereof remains exposed for use outside of said cabinet, and a shield connected to said cabinet and adapted to be held between the inner and outer legs of said loop, said shield being so mounted that it is adapted to be withdrawn into said cabinet while it remains connected thereto.

2. In a towel dispensing device which includes a cabinet, means located in said cabinet and adapted to movably hold a length of toweling so that a loop thereof remains exposed for use outside of said cabinet, and a shield connected to said cabinet and adapted to be held between the inner and outer legs of said loop, one end of said shield being secured to a rod which is slidably connected to said cabinet.

3. In a towel dispensing device which includes a cabinet, side plates located in said cabinet and having slots formed with hook-like ends, a rod connected to a length of toweling and adapted to fit into said slots so that it can be moved slidably in said slots when said toweling is pulled, said hook-like ends of said slots being adapted to engage said rod when they contact therewith and prevent the removal of said rod out of said slots when said toweling is pulled.

4. In a towel dispensing device having a cabinet, a roller mounted in said cabinet and adapted to have a bight of the toweling passed around it and in frictional engagement therewith, a stop member connected to said roller and movable therewith, a movable control member adapted to be moved to an operative position to co-operate with said stop to prevent the turning of said roller, the said control member being normally in an inoperative position, said control member having a guide connected thereto over which the toweling is adapted to pass so that a pull on said toweling urges said control member to the operative position in which it engages said stop member, and a guide for one end of said bight mounted on a pivoted member, said last mentioned guide being adjacent said roller and being below the top of said roller, so that said bight is of sufficient length to be gripped by said roller against any relative movement thereof, when said roller is locked against movement.

In testimony whereof I hereunto affix my signature.

ALBERT LESLIE JONES.