

1,255,064.

A. SUNDEN.

DISPENSING DEVICE,

APPLICATION FILED MAY 15, 1917.

Patented Jan. 29, 1918.

3 SHEETS—SHEET 1.

Fig. 1.

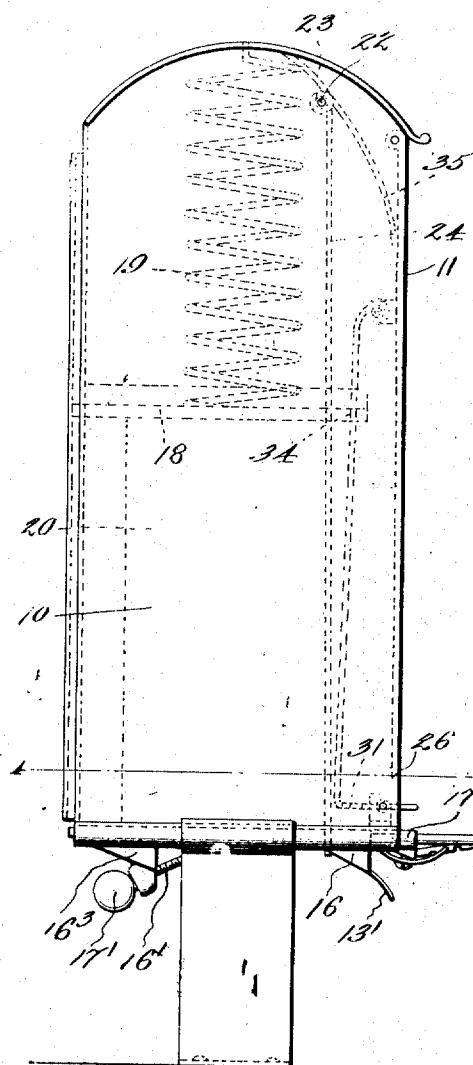
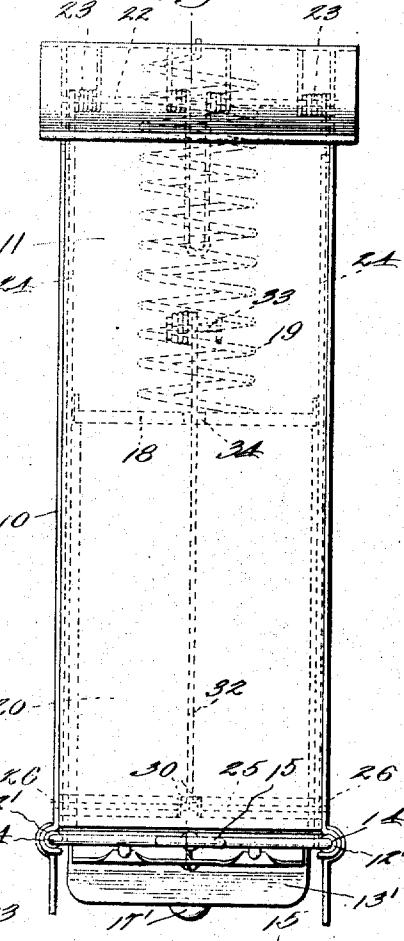


Fig. 2.



WITNESSES

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INVENTOR

Alexius Sundén,
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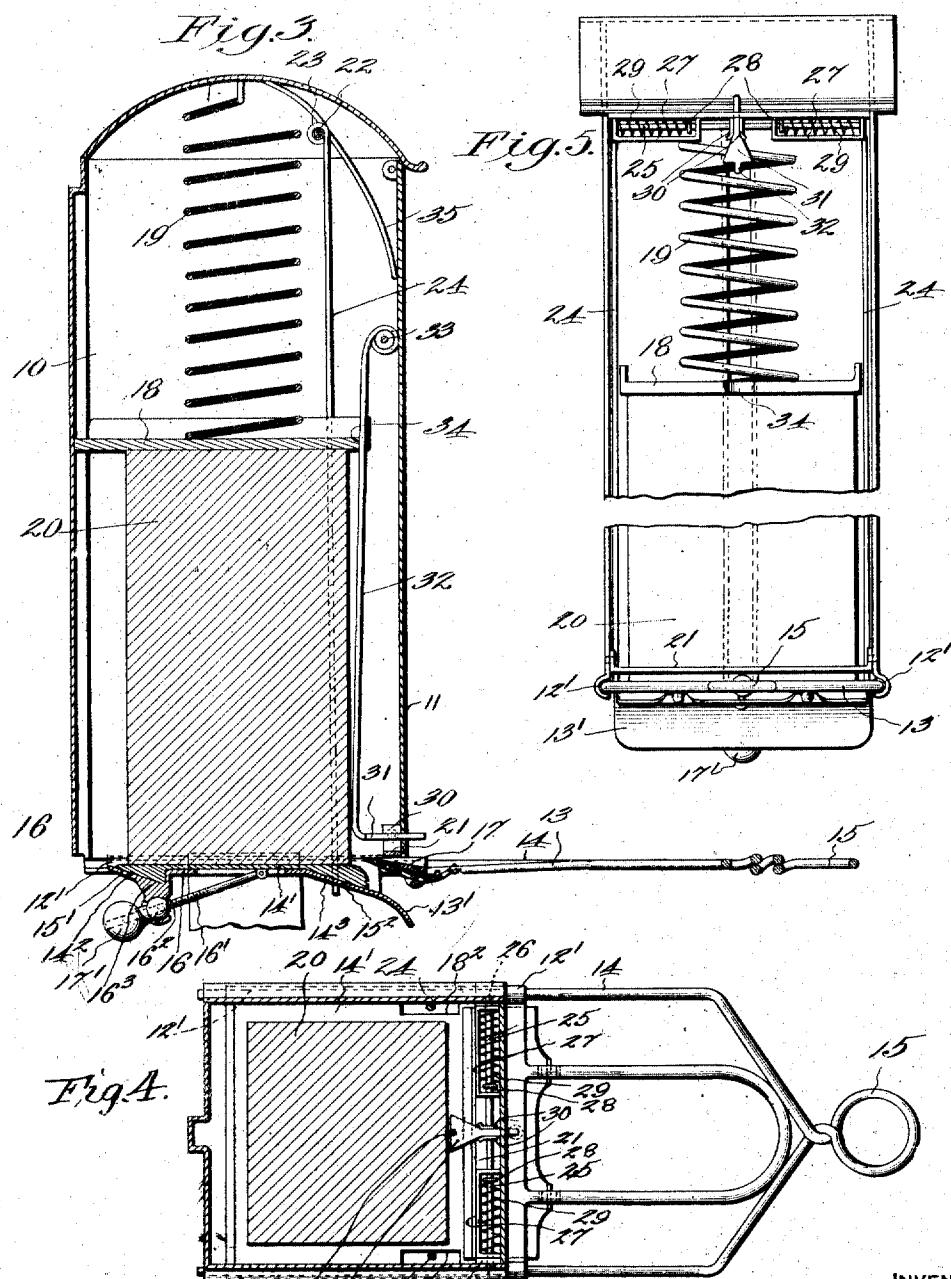
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WITNESSES

12' 36' 26' 21' 26' 12' Mexius Sundén,
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3 SHEETS—SHEET 3.

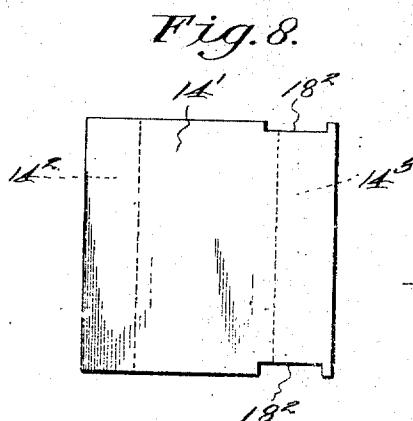
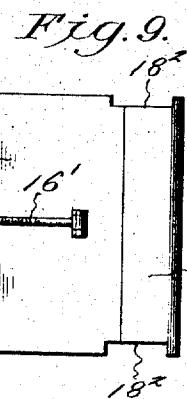
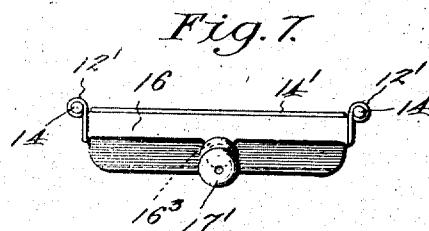
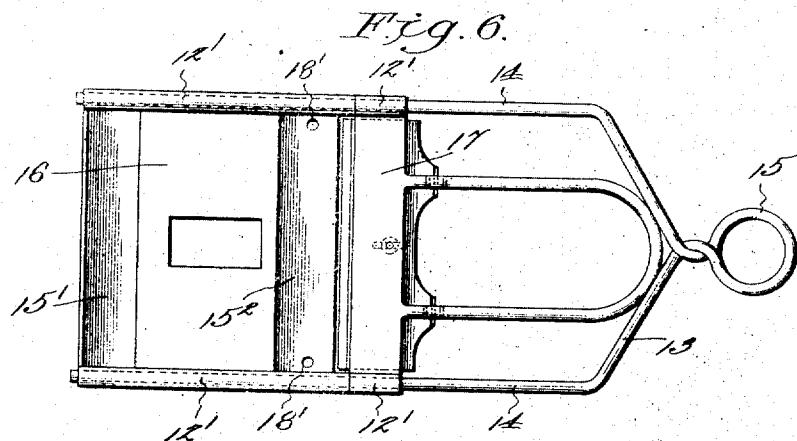


Fig. 10.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALEXIUS SUNDÈN, OF CENTRALIA, WASHINGTON.

DISPENSING DEVICE.

1,255,064.

Specification of Letters Patent. Patented Jan. 29, 1918.

Application filed May 15, 1917. Serial No. 168,838.

To all whom it may concern:

Be it known that I, ALEXIUS SUNDÈN, a subject of Sweden, have filed my declaration of intention to become a citizen of the 5 United States, residing at Centralia, in the county of Lewis and State of Washington, have invented new and useful Improvements in Dispensing Devices, of which the following is a specification.

This invention has reference to appliances adopted for use in hygienic conveniences for household and public utility.

The essential object of the invention is to provide a convenient and sanitary dispenser, 15 wherein a bar or small supply of soap may be placed in readiness for use, and so arranged that the soap can be utilized for all ordinary purposes and yet prevented from undue contact with the water and individual 20 handling, whereby the soap is also prevented from being mislaid or unduly removed from its place.

Other objects are to arrange a simple and durable dispenser, which can be operated 25 either automatically or manually, according to desire, this invention preferably described for automatic operation.

The invention also embodies a receptacle wherein a given quantity of soap is arranged 30 and always maintained in position with respect to an adjustable reciprocating blade or cutting element, whereby a thin layer or slice of soap may be readily severed for instant use when desired, thereby reducing 35 to a large extent, the various ways in which soap is generally wasted.

In carrying out my invention I provide a novel construction of means which can be conveniently and quickly manipulated with 40 a view of regulating the thickness of the slices to be severed from the bar of soap.

This invention further embodies a closure for the receptacle with means coöperating with the soap for locking the closure in a 45 position to keep the receptacle closed so that no soap can be obtained therefrom, except what the slicing device delivers into the hand to be readily utilized, said means being automatically operated to release the closure at 50 a predetermined interval, or in other words when the soap diminishes to a predetermined size, at which time the receptacle should be refilled.

In connection with these means the invention further provides means for automatically moving the cover to an open posi-

tion when the opening end is released from the sides of the receptacle, in which position the cover will stay until the receptacle is refilled and closed for continual use.

By automatically opening the cover in cooperation with the soap at predetermined times, said cover by staying in open position indicates, in advance, when a new bar or cake of soap should be placed in the receptacle as will be readily understood.

The nature and advantages of the invention will be better understood from the following description when read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this specification like numerals of reference indicate similar parts in the several views and wherein:

Figure 1 is an elevation of the device constructed in accordance with my invention showing the parts in normal position.

Fig. 2 is an end elevation.

Fig. 3 is a vertical sectional view through the device.

Fig. 4 is a horizontal sectional view therethrough.

Fig. 5 is an elevation showing the cover in an opened position.

Fig. 6 is a detail view of the cutting device with the slide removed.

Fig. 7 is an end elevation of the cutting mechanism.

Fig. 8 is a top plan view of the slide.

Fig. 9 is a bottom plan view thereof.

Fig. 10 is a detail view of the adjustable cutter.

The device forming the subject matter of my invention embodies a receptacle 10 which may be constructed from any suitable material and configuration, it being preferably of elongated rectangular formation. The receptacle can be supported in various positions for use, it being most convenient to manipulate however when arranged in vertical position, and for which reason it is herein stated that the cover 11 is hingedly mounted adjacent the top of the receptacle. 100 Considering the receptacle in a vertical position it is bottomless, this opened extremity being closed by means of a reciprocating cutting element clearly illustrated in the drawings and to be presently described.

The reciprocating cutting element preferably embodies a wire frame 13 including

spaced parallel limbs 14 which at their upper extremities converge inwardly toward the longitudinal center of the receptacle and formed to provide a finger receiving loop 15. Carried by the parallel limbs 14 are separated sections 16 and 17 respectively of relatively different dimensions, the section 16 constituting the bottom or body of the reciprocating element, as well as a closure 10 for the lower end of the receptacle, while the other section 17 constitutes the cutting element or blade having one edge sharpened for this purpose. The sections 16 and 17 respectively may be supported upon the 15 limbs 14 in any suitable manner, but are preferably formed with loops 12' which embrace the limbs 14 of the frame, whereby the respective sections are held fixed relatively upon the frame. The plate 17 is disposed 20 above the section 16 and spaced therefrom, so that when a thin layer or slice of soap is severed from the bar 20, the said slice will pass through the space between the respective sections onto the hand of the operator, 25 which is held beneath this space. The section 16 has its extremity adjacent the plate 17 curved downwardly and rearwardly to provide a deflecting portion 13', for the purpose of directing the thin layer or slice of 30 soap severed from the bar onto the hand of the operator.

Mounted for sliding adjustment upon the section 16, is a slide 14' having its face disposed next to the section 16 beveled or inclined 35 adjacent its opposite extremities as at 14'. The section 16 adjacent the plate 17 is provided with an inclined surface 14' to co-operate with one of the beveled portions 14' of the slide to elevate or lower the latter, as 40 the slide is moved across the section 16 in one or the other direction. The section 16 adjacent its opposite end is formed with a V-shaped groove 15' which receives the other beveled or inclined portion 14' of the slide, 45 the inclined wall 15' of the groove co-operating with this beveled portion of the slide for the same purpose hereinabove mentioned of raising and lowering the slide as it is moved across the section 16. The slide is provided 50 to regulate the thickness of the slice to be severed from the bar, and as the slide is arranged to move beneath the cutting blade 17, it is manifest that when the slide is adjusted in the direction of the blade the said 55 slide through the co-operation of the inclined surfaces of the section 16 and the slide, moves downwardly to increase the space between the adjacent extremities of the blade 17 and the slide so that a relatively thick slice can be severed from the 60 bar. Conversely when the slide is adjusted in a direction away from the blade 17, the said slide is gradually elevated so as to lessen the distance between the adjacent extremities 65 of the slide and cutting blade respectively,

so that only a comparatively thin slice of soap can be severed from the bar, when the slide is moved in a direction to bring the cutting element across the open end of the receptacle. Any suitable means may be employed for adjusting the slide for this purpose, but as shown in this specific instance a threaded element 16' is carried by the under side of the slide approximately central thereof, and is hingedly associated therewith. The element 16' projects through an elongated opening or slot 16' in the section 16 and has its free extremity received within an apertured lug 16' projecting from the section 16. Swiveled upon the lug is a 80 threaded socket 17' which also receives the extremity of the threaded element, and manifestly when the socket is rotated to one or the other direction, the threaded element 16' is actuated to impart a sliding 85 movement to the slide in the proper direction. In addition to this adjustment for regulating the thickness of the slice, the cutting blade 17 is susceptible of sliding adjustment toward and away from the section 90 16. As shown in Fig. 10 the blade is provided with an elongated slot 20' which aligns with an opening in the cross piece 20' carried by the frame 13. A threaded fastening element passes through the said slot 20' 95 and is received within the opening in said cross piece, and it is obvious that when the fastening element 21' is loosened the cutting blade 17 can be adjusted relative to the section 16, and held in position by subsequently tightening the fastening element. Projecting from the cross piece 20' and disposed within the plane of the frame 13, is a substantially U-shaped member 21, and each limb of this member is embraced by spaced 100 lugs 22' formed on one of the edges of the blade, the lugs serving to guide the blade in its adjustment. The edge of the blade between the lugs is adapted to engage in the notches 23' formed on the parallel limbs of 105 the U-shaped member 21 and assists in holding the blade fixed relatively to the section 16 in the adjusted position of the blade.

Arranged within the receptacle is a plunger or follower 18 which is carried by one 115 end of a spring 19, the opposite end of the spring being connected to the top of the receptacle and exerting a pressure to normally maintain the follower advanced within the receptacle. A bar of soap 20 is placed 120 within the receptacle in advance of the follower, and forced by the latter toward the bottom or open end of the receptacle to rest upon the slide as shown. Obviously when the cutting device in its entirety is moved 125 across the open end of the receptacle in the proper direction, a thin layer or slice of soap is severed from the bar. During this operation the section 16 is moved the requisite distance to bring the downwardly curved 130

portions thereof to a position whereby it will properly guide the severed portion of the soap through the space between the respective sections upon the hand of the operator. Arranged between the cutting element or blade 17 and the upper portion of the frame 13 is a substantially U-shaped member 21 which prevents the soap from being projected through the open bottom of the receptacle when the cutting device is adjusted to bring the blade into an active position.

The cutting device may be manually returned to normal position if desired, but I 15 preferably provide means for automatically returning the same to this position, which as shown in this specific instance embodies a bolt 22 passed transversely through the receptacle adjacent its upper end and about 20 which a coil spring 23 is wound. The two outermost convolutions of the spring are extended longitudinally of the receptacle in close proximity to the sides thereof, to provide resilient arms 24, the extremities of 25 which are associated in any suitable manner with the section 16 of the cutting device, so that when the latter is actuated in the manner above described to sever a slice or layer of soap from the bar 20, the arms 24 are 30 tensioned to automatically return the cutting device to normal position as will be readily understood. As shown in this instance, the arms 24 are received within apertures 18 in the section 16, which apertures 35 register with elongated cut away portions 18² in the slide. By reason of the construction described, and the contemplated operation of the device, it is obvious that a thin layer or slice of soap can be readily severed 40 from the bar contained within the receptacle, and delivered upon the hand of the operator for use when desired, thereby preventing undue waste of soap or loss of the latter by misplacement of the bar which frequently occurs in work shops or like places.

The cover 11 may be locked in its closed position in any suitable manner, but for this purpose I preferably make use of a pair of aligned sliding bolts 25 adapted when the 50 cover is closed to be projected through openings 26 in the side walls of the receptacle. Secured to the under side of the cover adjacent its free edge is a substantially U-shaped bracket 27 for each of the bolts 25, the bolts being slidable through apertures in the parallel portions of the brackets and provided with a shoulder 28 against which one end of the spring 29 bears, the opposite end of the spring engaging against 55 the bracket supporting the bolt to normally hold the active extremity of each bolt in an inactive position. It is of course understood that a spring 29 encircles each of the bolts. The adjacent extremities of the bolts are enlarged as at 30 and disposed in close proxim-

ity to each other to be separated by means of a V-shaped element 31 when the cover is moved to a closed position. It is apparent that when the bolts are actuated by the V-shaped element their respective active extremities are projected through the bracket 27 to be received within the openings 26, in which arrangement of parts the cover 11 is locked in its closed position. The V-shaped element is carried by one end of the resilient arm 32 which has one end coiled about the bolt 33 carried by the under side of the cover, and each coil attributes to the arm 32 a tendency to retract the V-shaped element from between the enlarged extremities 30 of the bolt 25. The resilient arm 32 projects through a loop or eye 34 disposed centrally at the upper edge of the plunger or follower 18, whereby the arm 32 is held under tension by the follower 18, which maintains the 85 V-shaped element in a position to project the bolts 25 through the openings 26. The end of the arm 32 which carries the V-shaped element is offset as shown so that as the cake of soap diminishes to a predetermined 90 size whereby the plunger or follower assumes a position beneath the offset extremity of the arm 32, the latter is permitted to assume its normal position during which movement the V-shaped element is retracted 95 from between the bolts 25, to permit the latter under the influence of the spring 29 to be moved from the openings 26, thus unlocking the cover 11. It will thus be noted that the plunger 18 coacts with the resilient 100 arm 32 to retain the cover locked in closed position until a predetermined interval, that is when the cake of soap diminishes to a predetermined size which necessitates recharging of the receptacle, at which time the 105 cover is automatically adjusted to open position through the instrumentality of a spring 35 which is coiled about the bolt 22 and having one end bearing against the cover as shown. The device is not only simple in 110 construction, but is both positive and efficient in operation for the purpose intended.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily understood 115 I desire to make it known that I do not limit myself to the precise construction and arrangement of parts herein illustrated, and that such changes therein may be resorted to when desired as fall within the scope of 120 what is claimed.

What is claimed is:

1. A soap dispensing device embodying a receptacle having an open end, a cutting element arranged to reciprocate across said open end, a spring pressed follower arranged within the receptacle for maintaining the soap in position with respect to the knife whereby a slice may be severed from the soap, a hinged cover for the receptacle, 130

means for locking the cover in closed position, and means timely operated by movement of the follower for releasing said cover,

2. A soap dispensing device embodying a receptacle having an open end, a slide arranged to reciprocate across said open end and including a cutting blade, a spring pressed follower arranged within the receptacle to maintain the soap in proper position 10 with respect to the open end whereby a layer may be severed from the soap by said blade, a hinged cover closing the receptacle, means for locking the cover in closed position, means for effecting a release of the cover 15 when said follower assumes a predetermined position, and means for automatically adjusting the cover to an opened position when released.

3. A soap dispensing device embodying a receptacle having an open end, a slide mounted to reciprocate across said open end and including a cutting blade, a spring pressed follower arranged within the receptacle to maintain the soap in a position 25 whereby a layer may be severed therefrom with said blade, a hinged cover closing the receptacle, and means coöperating with the follower to lock the cover in closed position, and automatically releasing said cover on a 30 predetermined position of the follower.

4. A soap dispensing device embodying a receptacle having an open end, a slide arranged to reciprocate across said opening and including a cutting blade, a spring 35 pressed follower arranged within the receptacle for maintaining the soap in proper position to be severed by said blade, means coöperating with said follower for locking the cover in closed position and automatically 40 releasing the cover upon a predetermined position of the follower, and means for automatically adjusting the cover to an open position when released.

5. A soap dispensing device embodying a bottomless receptacle, a cutting device arranged to reciprocate across the open bottom, and including an element constituting a closure and a cutting blade, a frame supporting 45 said element and blade and including a U-

shaped member, said blade being spaced 60 from the element whereby a slice is severed from the soap when the cutting device is moved in one direction across the bottom, said blade being mounted for sliding adjustment toward and away from said element for regulating the thickness of the slice severed, spaced lugs carried by the blade and embracing said U-shaped member whereby said blade is guided in its adjustment, and means for holding said blade fixed 60 relatively to said element.

6. A soap dispensing device embodying a bottomless receptacle, a cutting device arranged to reciprocate across the open bottom, and including an element constituting a closure for said bottom, and a cutting blade, said blade being spaced from said element whereby a slice is severed from the soap when the cutting device is moved in one direction, a slide superimposed upon said element, co-operating inclined portions forming part of said element and slide respectively, whereby the latter is elevated and lowered upon reverse movements thereof, to vary the distance between said slide and cutting blade 75 to regulate the thickness of the slice, a threaded stem associated with the slide and projecting through an opening in said element, a bearing receiving said stem, and a member threadedly associated with said 80 stem whereby the slide may be adjusted in either direction upon reverse rotation of said member.

7. A soap dispensing device embodying a bottomless receptacle, a cutting device arranged to reciprocate across the open bottom, a spring pressed follower arranged within the receptacle, a transverse shaft, a spring coiled about said shaft and having its extremities coextensive in length with the 85 length of the receptacle, and said cutting device being formed with notches to receive said extremities whereby said device is automatically returned from an active to an inactive position.

In testimony whereof I affix my signature.

ALEXIUS SUNDÈN.