Sept. 9, 1941. A. E. LAMARTHE 2,255,598

CLOSING DEVICE FOR RECEPTACLES

Filed Sept. 7, 1939

Fig. 1.

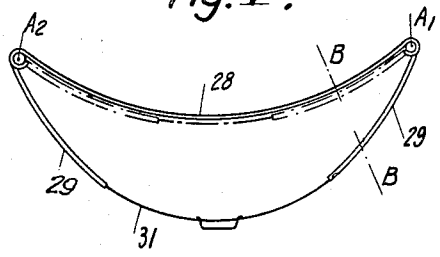


Fig. 4.

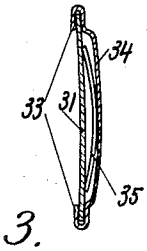
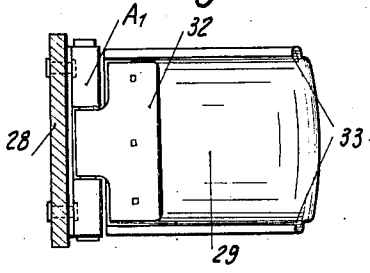


Fig. 3.

Fig. 2.



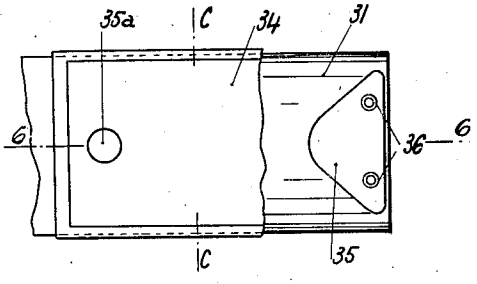
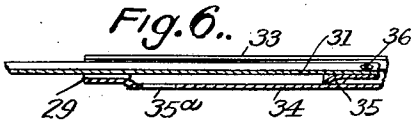


Fig. 6.



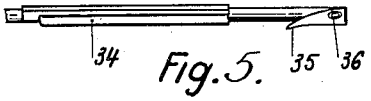


Fig. 5.

Fig. 7.

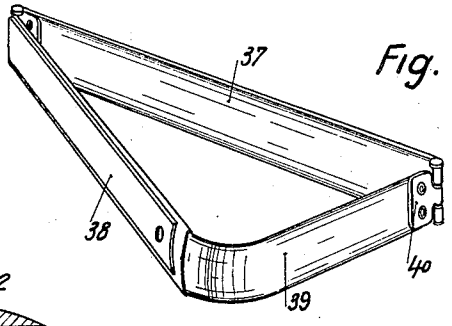


Fig. 9.

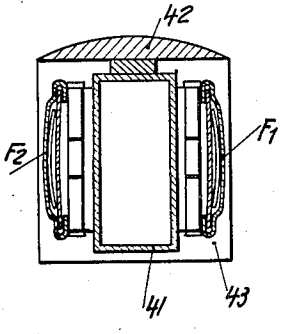
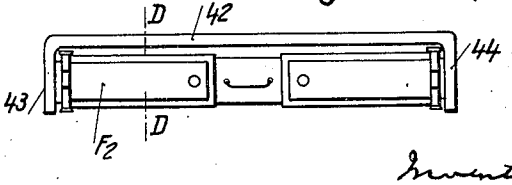


Fig. 8.



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UNITED STATES PATENT OFFICE

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CLOSING DEVICE FOR RECEPTACLES

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Application September 7, 1939, Serial No. 293,844
In France September 28, 1938

2 Claims. (Cl. 150—10)

The present invention has for its object a closing device intended to be connected to the walls of the orifice of which it is desired to effect the closure, said device comprising a laterally rigid frame member to the ends of which are hinged the proximate ends of an extensible frame member formed of telescopic sections, of which at least one section is laterally rigid and one laterally flexible, the laterally flexible section being formed by a spring blade or band slideably connected to a laterally rigid blade or band.

With this closing device, the spring blade becomes curved by the effect of a pull which moves it away from the rigid frame member, and places the extensible frame member in the position of maximum extension wherein it is retained in the open position by the angularity of the laterally flexible frame member thus providing the opening between the frame members. Said closing device therefore offers, with respect to similar closing devices, the advantage of providing a much larger opening which permits of ready access to the inside of the receptacle, without said device's being of greater bulk, in the closed position, than a normal closing device.

Closing of the frame member is effected by exerting pressure on the laterally flexible spring blade of the extensible frame member which causes the sections thereof to telescope and bring the extensible frame member in contact with the rigid member of the frame.

Other advantages and peculiarities of my invention will become apparent from the ensuing description taken in conjunction with the accompanying drawing which shows diagrammatically and merely by way of example, some preferred embodiments of the invention and in which:

Fig. 1 is a plan view of a closure device according to my invention in the open position, the frame being curved in the longitudinal direction;

Fig. 2 shows a section thereof, on a larger scale, through B—B of Fig. 1;

Fig. 3 is an elevation thereof on a larger scale with portions broken away;

Fig. 4 is a section of same through C—C of Fig. 3;

Fig. 5 is a plan view of same;

Fig. 6 is a section on line 6, 6, Fig. 3.

Fig. 7 is a perspective view of a modified embodiment;

Fig. 8 shows an elevation of a device provided with two twin closure elements on either side of a common frame;

Fig. 9 shows an enlarged section thereof through D—D of Fig. 8.

The closing device shown in Fig. 1 comprises a frame 28 which is curved in the longitudinal direction and at the ends of which are pivoted at A_1 and A_2 two laterally rigid bands 29, having the same curvature as the frame and in each of which the corresponding end of a spring blade 31 is adapted to slide longitudinally.

Each lateral rigid band 29 is secured at one end to the support 32 of the knuckle, (see Figure 2). The two longitudinal edges of each band 29 are folded over to form guideways 33 for the spring blade 31 to reciprocate therein. The laterally rigid band 29 has also an outwardly depressed portion 34 extending through the major area thereof to form a hollow for housing a spring stop 35, (see Figures 3, 4, 5 and 6), which stop is secured by means 36 at the end of the spring blade engaged in the laterally rigid band 29. The end of the spring stop 35 is adapted to abut against the transverse wall of the hollow 34, which wall is proximate to the unconnected end of the band 29. This engagement of the spring stop with the said transverse edge of the hollow of the rigid band prevents a separation of the telescopic members formed by the flexible and rigid bands when the frame is opened. A hole 35A, provided at the transverse edge of the hollow near the free end of the laterally rigid band 29 permits the insertion of a suitable tool to depress the spring stop 35 when the same is brought to register with said hole, thereby making it possible to disassemble the device.

In the embodiment shown in Fig. 7, the rigid band is pivoted at one of the ends of a straight frame 37, whereas the spring blade which slides relatively to said band is directly fixed by its other end on the support of the knuckle enabling it to be hinged on the frame. This embodiment offers the advantage of increasing the opening of the orifice of the receptacle; it enables bags to be constructed which have bellows on one side only and a slideway which is likewise only apparent on one side of the bag.

Figs. 8 and 9 show two closing device elements F_1, F_2 fitted side by side on the same tubular frame 41 of rectangular cross-section; said frame supports an ornament 42 which conceals the various thicknesses of the mechanism and which has two ends 43, 44 that are turned over at right angles and conceal the hinges. Said ornament may optionally support the handle of the bag and also safety devices for preventing its opening.

The operation of the devices that have just been described is as follows: the various component elements being pressed in the closed position against the rigid band by the resiliency of the laterally flexible band or bands forming the extensible element, in order to open the device it suffices to exert a pull on the medial pull member. Said pull causes the various component elements to slide to the end of their travel where they remain locked owing to the frictional resistance of the various elements; in order to close the device again it suffices to exert a pressure in the opposite direction. This operation causes the various elements to slide relatively to each other and, after a certain position is reached, when the inherently resilient force of the flexed band or bands becomes preponderant and causes the device to close. The various elements then remain pressed against the rigid band and provide a hermetic closure for the receptacle provided with this device.

While I have illustrated and described the preferred forms of construction for carrying my invention into effect, these are capable of variation and modification, without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

I claim:

1. In a closing device for flexible receptacles, a frame member laterally rigid, an extensible frame member formed of telescopic sections, and articulation means coupling the proximate ends of the frame members, said extensible member having a laterally rigid section and a laterally flexible section telescopic in the rigid section, said laterally flexible section having a spring stop, and said laterally rigid section having housing means for said stop arranged to normally prevent separation of the telescopic sections when the device is opened.

2. In a closing device for flexible receptacles, a frame member laterally rigid, an extensible frame member formed of telescopic sections, and articulation means coupling the proximate ends of the frame members, said extensible member having laterally rigid sections at the articulation means, and a laterally flexible section telescopic in the rigid sections, said laterally flexible section having a spring stop at each end thereof, and said laterally rigid sections having housing means for said stops arranged to engage the spring stops to normally prevent separation between the telescopic sections when the device is opened, said housing means having openings adapted to register with the spring stops to receive a spring releasing tool.

ALFRED EDOUARD LAMARTHE.