July 19, 1960 J. E. SMITH 2,945,718

LATCH FOR CONTAINER COVERS

Filed July 15, 1958

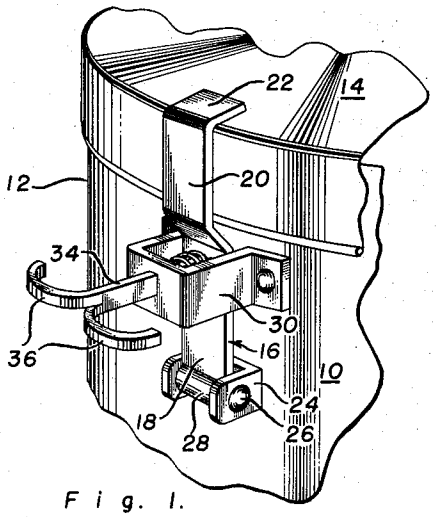


Fig. 1.

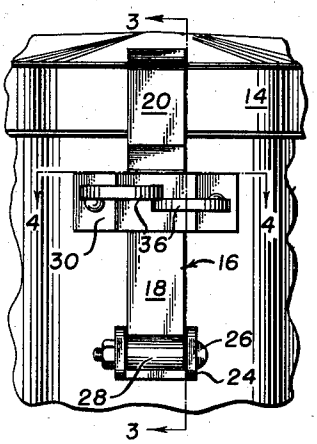


Fig. 2.

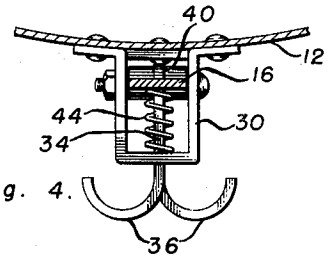
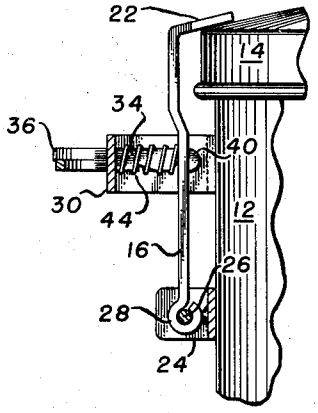


Fig. 4.

Fig. 3.



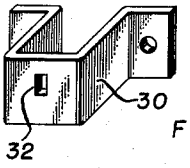
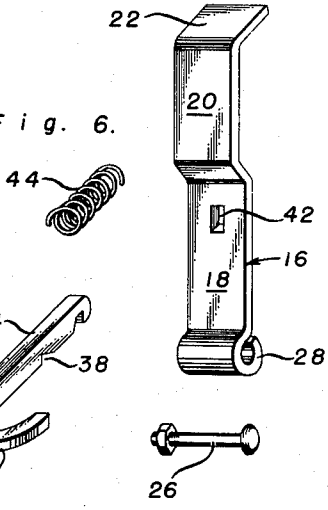
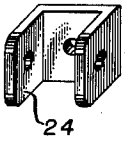


Fig. 6.





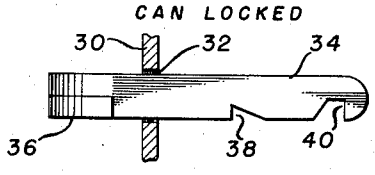
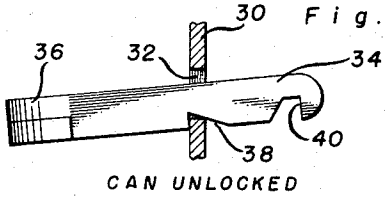


Fig. 5.



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United States Patent Office 2,945,718
Patented July 19, 1960

2,945,718

LATCH FOR CONTAINER COVERS

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Filed July 15, 1958, Ser. No. 748,704

4 Claims. (Cl. 292—127)

This invention relates to a hold-down latch for container covers.

Large readily accessible containers such as garbage cans, for example, provide a constant source of annoyance in that they are quite often tipped over and the contents spilled or otherwise removed by stray dogs and the like.

Many cover latches have been designed in the past for securing the tops of large containers but these have been either so complex or cumbersome as to be bothersome to use or else they are not positive locking structures and therefore, do not successfully perform the job for which they are intended.

It is, therefore, an object of this invention to provide a cover latch for containers which is readily operated to lock on or release a cover member.

Another object of this invention is to provide a cover latch which has a positive and secure locking action.

Another object of this invention is to provide a cover latch which is readily adapted to a container.

These and other objects of the invention will become apparent from the following specification and drawings.

In the drawings:

Fig. 1 is an oblique showing of the cover latch mounted on a container;

Fig. 2 is a front view of the structure of Fig. 1;

Fig. 3 is a side cross-section along line 3—3 of Fig. 2;

Fig. 4 is a top cross-section taken along line 4—4 of Fig. 2;

Fig. 5 is an enlarged partial section of the structure shown in Fig. 3; and

Fig. 6 is an exploded view of Fig. 1.

Generally, the subject device comprises a swinging spring-biased latch bolt member fastened to a container body by suitable brackets. One of the brackets houses a spring and a pull-rod latching member for holding the swinging latch bolt in either a locked or unlocked position.

Referring in detail to the drawings and more specifically to Fig. 1, a container **10** is generally shown having a body portion **12** and a cover or lid **14**. A swinging pivoted latch bolt member **16** having a straight lower shank **18** and a U-shaped upper section **20** with an elongated upper cover engaging arm **22** is pivoted at its lower end to the container body **12**.

The pivot connection comprises a U-shaped bracket **24** having a pivot pin and bolt member **26** therethrough which cooperates with a bent flange **28** on the lower tip of the latch bolt **16**.

An inverted U-shaped bracket **30** is fixed to the container body **12** and encloses the latch bolt member **16** at a point adjacent the lower end of the U-shaped section **20** to limit the swing of the latch bolt **16** about the pivot pin **26**.

Referring to Figs. 2 through 6, inclusive, the upper bracket **30** has a central slot **32** cut out of the outer face thereof through which is inserted a push-pull latch bolt operating member **34**. The end portion of the latch bolt operating member **34** external of the upper bracket **30** is split longitudinally through the thin dimension thereof

and the resulting tabs are bent in opposite directions to provide a pair of finger grips **36** as shown. Intermediate the ends of the latch bolt operating member **34** and cut out of the lower edge thereof, is a locking detent **38** which cooperates with the slot **32** in the upper bracket **30** as shown in Fig. 5. On the end of the latch bolt operating member **34** interior of the upper bracket **30** is a hook member **40** which fits into a locking slot **42** on the lower shank **18** of the swinging bolt **16** adjacent the lower side of the U-shaped upper section **20**. The latch bolt operating member **34** is thus secured to the swinging bolt **16**.

A compression spring **44** is concentrically mounted on the latch bolt operating member **34** between the upper bracket **30** and the lower shank **18** of the swinging bolt **16** to provide the necessary pressure for maintaining the hook member **40** in the locking slot **42**. The compression spring **44** also provides locking pressure for the swinging bolt **16** to hold the U-shaped upper section **20** and the elongated upper cover engaging arm thereof, in positive locking contact with the container lid or cover member **14**.

The above description refers to a single latch member for securing a container lid or cover. It is to be understood that a plurality of these latch members may be placed about the periphery of a container for this purpose and that two or more of these latch members would provide a stronger and more realistic means of securing a container lid.

The operation of the device is as follows:

Referring to Figs. 1 through 5, and assuming the cover member or lid **14** to be on the container **10**, the cover latch device is in locked position with the push-pull latch bolt operating member **34** in the "Can Locked" position shown in Fig. 5 with respect to the upper bracket **30** with the locking detent **38** disengaged from the central slot **32** in the upper bracket **30**.

When it is desired to remove the lid **14** of the container **10**, the finger grips **36** on the push-pull latch bolt operating member **34** are grasped and the latch bolt **34** is pulled outward through the central slot **32** against the pressure of the spring member **44**. As a result of the engagement of the hook member **40** on the latch bolt **34** with the locking slot **42** in the straight lower shank portion **18** of the swinging bolt **16**, the outward motion of the latch bolt **34** causes the swinging bolt **16** to pivot outward about the pivot pin **26** in the lower bracket **24**.

The outward motion of the latch bolt operating member **34** is continued until the locking detent **38** thereon engages the lower edge of the central slot **32** in the upper bracket **30**. At this point, the upper U-shaped section **20** and the elongated cover or lid engaging arm **22** of the swinging bolt **16** have been swung to a position beyond the outer periphery of the container lid **14** so that the lid **14** may be removed from the body **12** of the container **10**. The swinging bolt **16** and the push-pull latch bolt operating member **34** are held in the "Can Unlocked" position illustrated in Fig. 5 by the interengagement of the locking detent **38** on the latch bolt operating member **34** and the central slot **32** on the upper bracket **30**.

When the container lid **14** has been replaced, the finger grips **36** on the push-pull latch bolt operating member **34** are utilized to disengage the locking detent **38** from the central slot **32**. The spring member **44** thereby expands and forces the swinging bolt **16** back towards the container **10** and brings the U-shaped upper section **20** and elongated lid engaging arm **22** into positive locking contact with the container lid **14** to hold same securely on the container.

By the foregoing description and drawings I have shown my device to be a simple, practical readily operable and adaptable container cover or lid latch. It is to be understood that the modification shown is for the purpose of

example only and is not intended to limit the scope of the appended claims.

I claim:

1. A latch device for container covers comprising a swinging latch bolt member pivoted at one end to the body of a container, said swinging bolt member having a straight shank portion adjacent its pivoted end and a U-shaped section at its opposite end for engaging the cover of said container, a locking slot in the straight shank portion of said swinging bolt member adjacent the U-shaped section thereof, a push-pull latch bolt operating means having a hooked end thereon connected to said swinging bolt member by said hooked end and extending through said locking slot, an inverted U-shaped bracket member enclosing said swinging bolt member adjacent said locking slot and secured to said container body, a centrally located slot in the outermost face of said bracket for receiving the opposite end of said push-pull latch bolt operating means, spring means between said swinging bolt member and said bracket for biasing said swinging bolt member towards said container and a locking detent on said push-pull latch bolt operating means adapted to engage said bracket adacent the periphery of said central slot to hold said swinging bolt away from said container against the action of said spring.

2. A latch device for container covers comprising a swinging latch bolt member pivoted at one end to the body of a container, spring biased operating means for said swinging bolt comprising a push-pull latch bolt operating means connected to said swinging bolt member intermediate the ends thereof and a compression spring concentrically mounted with respect to said latch bolt operating means for biasing said swinging bolt into contact with said container, said swinging bolt having a U-shaped container cover engaging section at its other end, said U-shaped section having an elongated outer arm extending over the upper surface of said container cover when said swinging bolt member is in juxtaposition with said container.

3. In a latch device for container covers having a swinging latch bolt member pivoted at one end to the body of a container, spring biased actuating means for said swinging bolt member comprising a push-pull latch bolt operating means connected to said swinging bolt member intermediate the ends thereof for moving said swinging bolt member away from said container, a bracket member enclosing said swinging bolt member intermediate the ends thereof and mounted on the body of the container in operative relationship with said push-pull latch bolt operating means for holding said swinging bolt member away from said container, and a compression spring concentrically mounted on said latch bolt operating means intermediate said bracket and said swinging bolt member for forcing said swinging bolt member into contact with said container.

4. In a latch device for container covers having a swinging latch bolt member pivoted at one end to the body of a container, spring biased actuating means for said swinging bolt member comprising a bracket member enclosing said swinging bolt member at a point intermediate the ends thereof and secured to said container body, a central slot in the outermost face of said bracket, a push-pull latch bolt operating means extending through said slot and connected to said swinging bolt member, a locking detent on said latch bolt operating means intermediate the ends thereof, in operative relationship with said bracket adjacent the periphery of said central slot and compression spring means mounted between said swinging bolt member and said bracket for biasing said swinging bolt member into juxtaposition with said container, said locking detent adapted to be interengaged with said bracket adjacent the periphery of said central slot upon an outward movement of said latch bolt to hold said swinging bolt member away from said container against the action of said spring means.

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