

[54] **PLASTIC LATCH**
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 [51] Int. Cl. **E05c 19/06**
 [58] Field of Search **292/87, 114, DIG. 38**

[56] **References Cited**

UNITED STATES PATENTS

1,242,391	10/1917	Ulrich	292/87
1,316,818	9/1919	Sweet	217/56
2,315,415	3/1943	Gilbert	292/87 X
2,873,880	2/1959	Poulos	292/87 X

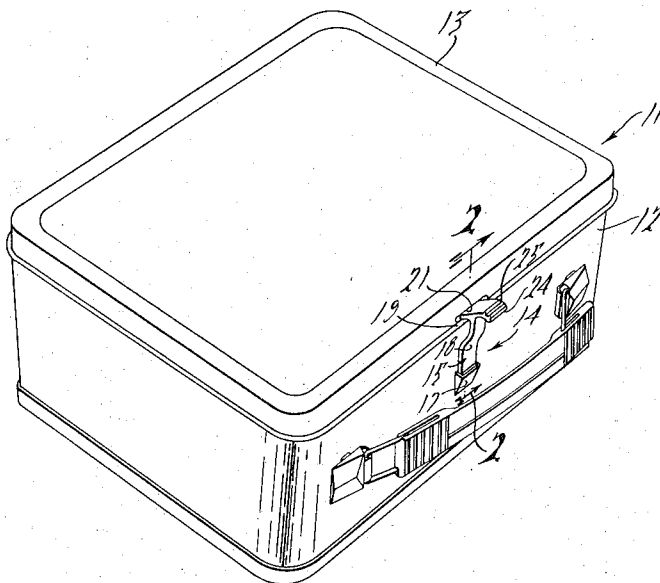
3,050,322	8/1962	Miller	292/114
3,144,166	8/1964	Cross	220/60
3,630,558	12/1971	Andreini	292/87
3,711,140	1/1973	Onori	292/87

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[57] **ABSTRACT**

A lunch kit or the like embodying an improved and simplified molded plastic latch for retaining the cover in a closed position. The plastic latch is formed from a single element having a base portion and a latch portion that is integrally connected to the base portion by a shank portion. A handle portion is also carried by the shank portion contiguous to the latch portion for deflecting the shank portion as a cantilever beam to move the latch portion to a released position.

2 Claims, 3 Drawing Figures



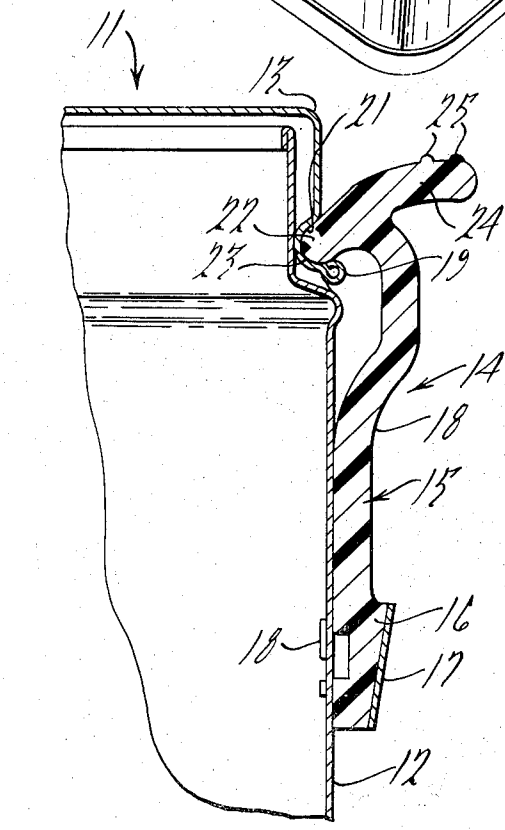
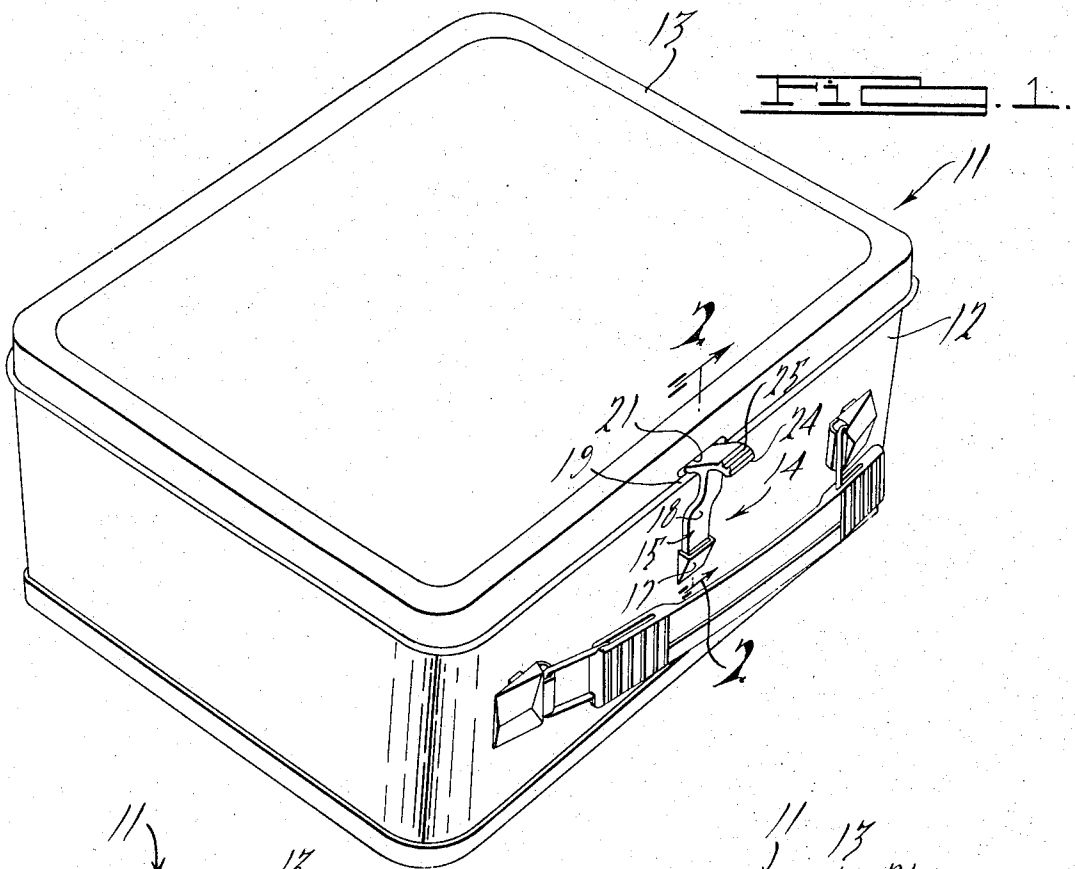


FIG. 2.

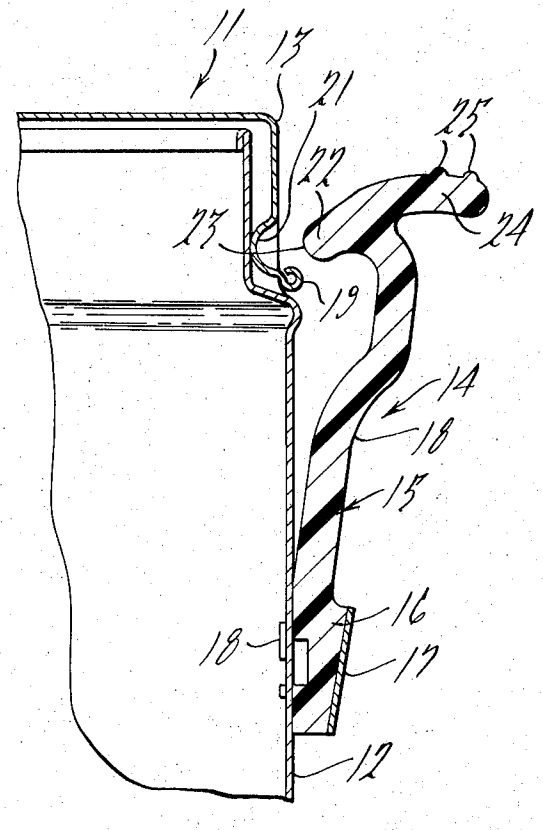


FIG. 3.

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PLASTIC LATCH

BACKGROUND OF THE INVENTION

This invention relates to an improved and simplified latch and more particularly to an improved, simplified plastic latch.

Latch elements are embodied for a variety of purposes for holding two members in a predetermined relationship. Most such elements comprise a keeper and a cooperating latch that engages the keeper. For the most part, these mechanisms are relatively simple and should be inexpensive. If, however, it is desired to bias the latch to either its engaged or disengaged position, generally the former, the addition of springs complicates the structure and adds considerably to its expense.

It is, therefore, a principle object of this invention to provide an improved and simplified latch mechanism.

It is another object of this invention to provide a simplified latch mechanism embodying a resilient element that is biased by its own resilience to one of its positions.

It is another object of this invention to provide an improved and simplified plastic latch.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view showing a lunch kit embodying this invention.

FIG. 2 is an enlarged cross sectional view taken along the line 2—2 of FIG. 1.

FIG. 3 is a cross sectional view, in part similar to FIG. 2, showing the latch mechanism in its released position.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A lunch kit embodying this invention is identified generally by the reference numeral 11. Although the invention is described in connection with such a lunch kit, it is to be understood that the latch which forms the subject of this invention may be used in other environments. The invention does, however, have particular utility in connection with lunch kits where low cost and foolproof operation is particularly desired.

The lunch kit includes a main body portion 12 that is formed from sheet metal or the like and which is formed with an internal cavity that is adapted to hold articles of food or the like. A cover 13 is hingedly connected to the body portion 12 along one of its peripheral edges in any known manner. The cover 13 is pivotal between an opened position and a closed position, as shown in the drawing. The cover 13 is also formed from sheet metal or the like.

A latch mechanism, indicated generally by the reference numeral 14, is positioned adjacent the free end of the cover 13 for holding the cover 13 in a closed position relative to the body 12. The latch mechanism 14 includes a latch piece 15 that is formed from nylon or another spring-like resinous plastic material. The piece 15 has a generally tapered base portion 16 that is adapted to be fixed to the body member 12 by means of a metal attaching clip 17. The clip 17 has tabs 18 that interlock with the body member 12 for securing the elements together.

Extending integrally from the base portion 16 is a shank portion 18 that has an offset upper extremity to

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clear a rolled over bead 19 formed at the lower periphery of the cover 13. The cover 13 is indented, as at 21, contiguous to the latch mechanism 14 so that the bead 19 serves as a keeper, as will become apparent.

At the upper extremity of the shank portion 18, the latch piece 15 is formed with an integral arcuately shaped latch portion 22. The latch portion 22 has a nose 23 that is adapted to engage the bead 19 at the indented portion 21 for retaining the cover 13 in a closed position (FIG. 2).

A handle portion 24 is integrally connected to the upper end of the shank portion 18 and is also arcuate in shape. The latch portion 22 and handle portion 24 form a substantially continuous arcuate head disposed at the upper end of the shank portion 18 so as to provide a generally T-shaped configuration. The exposed upper surface of the handle portion 24 is formed with integral transversely extending ribs 25 so as to provide a more easily gripped surface.

The latch piece 15 is, as has been noted, resilient and is normally maintained by its resilience in the position shown in FIG. 2. In order to release the latch mechanism 14, thumb pressure is applied to the handle portion 24 via ribs 25. This pressure will cause cantilever deflection of the shank portion 18 relative to the base portion 16. The latch portion 22 and particularly its nose 23 will then snap clear of the bead 19 to the position shown in FIG. 3. In this position, the cover 13 may be pivoted to its opened position.

Upon subsequent release of the pressure from the handle portion 24, the latch piece 15 will return to the position shown in FIG. 2. When the cover 13 is again closed, the bead 19 will engage the arcuate upper surface of the latch portion 22 and exert a pressure upon the shank portion 18 that again causes it to deflect as a cantilever beam. When the bead 19 registers with the latch portion of nose 23, the latch piece 15 will again be biased by its own resilience to the latch position shown in FIG. 2. No positive operation is, therefore, necessary to lock the cover 13 in its closed condition.

It is to be understood that the foregoing description is that of a preferred embodiment of the invention. Various changes and modifications may be made without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. A latch having a closure member or the like, said latch comprising a latch member formed from a resilient plastic material and having a base portion adapted to be secured to a first member, a shank portion integrally connected to said base portion and extending in cantilevered fashion therefrom, a cross head formed integrally at the other end of said shank portion, one part of said cross head comprising a latching portion adapted to coact with a keeper fixed to a second member for securing the first and second members together, the other part of said cross head forming a handle portion, and transversely extending ribs formed on said handle portion of said cross head for providing a gripping surface for resilient cantilevered deflection of said shank portion upon the application of pressure to said handle portion for movement of said latch portion from a latched position to a released position and the return to its latched position upon removal of said pressure, said shank portion being offset adjacent said latching

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portion for providing a clearance between said shank portion and the cooperating keeper.

2. A latch as set forth in claim 1, wherein the latching portion terminates in an arcuate nose adapted to coop-

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erate with the keeper and to be cammed by the keeper to its released position upon subsequent movement of the first and second members together.

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