United States Patent [19]

Luckadoo

[11] **3,776,411**

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[54] **HOLDER FOR THIN FLAT PLASTIC CONTAINERS, PARTICULARLY FOR BLOOD SERUM**

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[21] Appl. No.: **211,324**

[52] **U.S. Cl.** ..... **220/20,** 206/38 R, 220/29

[51] **Int. Cl.** **B65d 7/24**

[58] **Field of Search** ..... 220/20, 22, 23.2, 220/DIG. 25, 29; 206/1, 38 R, 38 B, 47 A, DIG. 24

[56] **References Cited**

UNITED STATES PATENTS

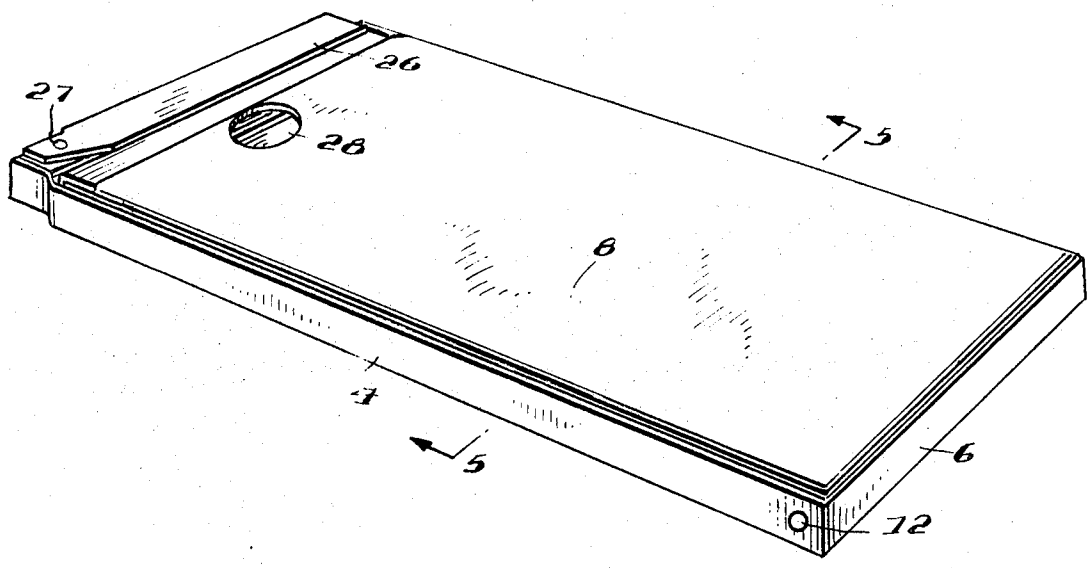
557,101	3/1896	Battin	206/38 R
1,699,765	1/1929	Staples	206/DIG. 24
2,548,828	4/1951	Syverud	206/1
1,534,519	4/1925	Gooding	206/38 B
2,809,766	10/1957	Anderson	220/20
2,447,787	8/1948	Atkinson	206/38 B
2,566,714	9/1951	Barnett	206/1

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[57] **ABSTRACT**

A thin flat container formed of a heat conductive material, such as aluminum consists of a shallow tray having a closure hinged along one edge and movable between open and closed positions. At the end of the tray opposite the hinge there is an outwardly opening channel for receiving test samples of the serum or the like which is enclosed in a plastic bag and is fitted in the tray. A closure member for the channel is hinged to the tray at one end of the channel, and has on one side a downward extension sufficient to engage over the upper free edge of the door. The arrangement is intended for holding serum such as blood cells, plasma or the like during freezing at very low temperatures and storing it in a refrigerated space. The closing and locking member has a hole at the end remote from the hinge, for engagement by a tool for opening it, and also a hole at the hinge end above the hinge pivot through which a hook may be inserted to engage the pivot and lift the whole device.

4 Claims, 5 Drawing Figures



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Fig. 1.

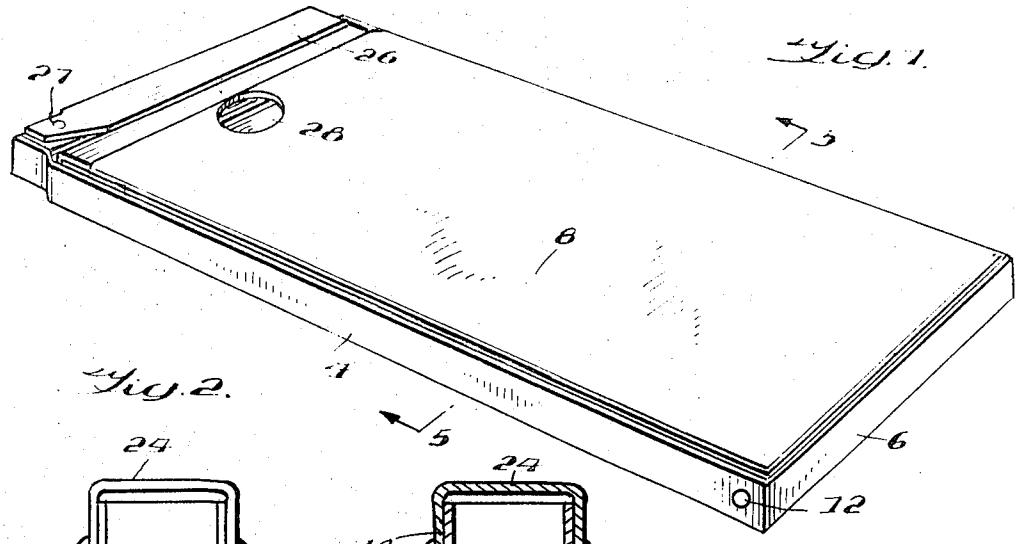
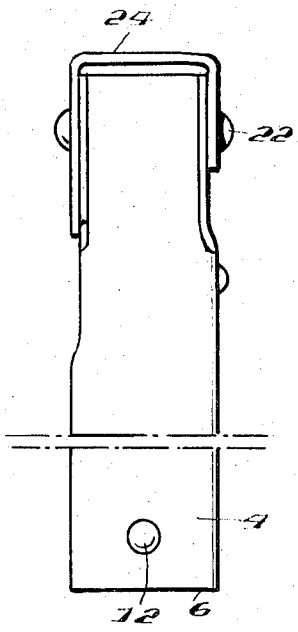


Fig. 2.



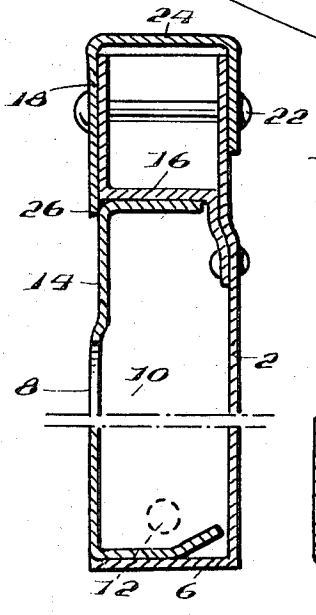


Fig. 3.

Fig. 5.

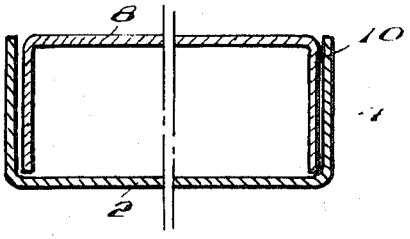
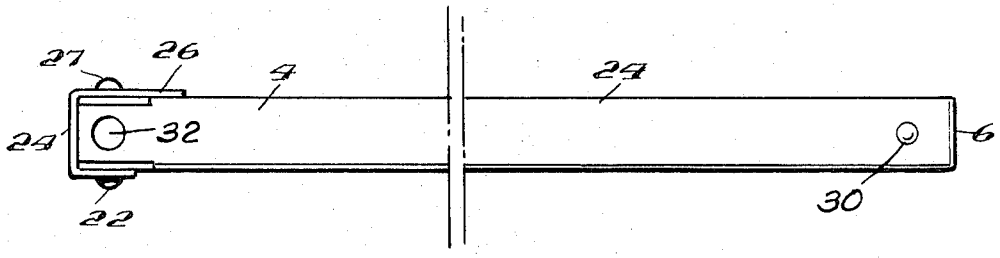


Fig. 4.



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HOLDER FOR THIN FLAT PLASTIC CONTAINERS, PARTICULARLY FOR BLOOD SERUM

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to an arrangement for holding flat flexible containers, such as plastic bags, particularly for blood serum and the like, for refrigeration and cold storage.

2. The Prior Art

Various arrangements for holding flat plastic bags for blood serum for freezing and storage are known, consisting in general simply of a tray and a cover hinged at one end of the tray, with some means for holding the arrangement in closed position and some means for permitting its ready removal.

SUMMARY OF THE INVENTION

According to the present invention, it is desirable to have, with bags of blood serum or the like, samples which can be taken out and tested to determine blood types, compatibility and the like. It is important that these should be associated in some way with the main container, to avoid confusion as to their origin.

According to the present invention, there is provided a container for a plastic bag formed of aluminum or other material with good heat conductivity which provides for the freezing, storage and thawing of the contents without removing the plastic bag. This container is composed of a tray having a cover hinged thereto along one edge. Along the opposite edge the tray is provided with a channel for receiving samples of the blood stored in the plastic bag which is contained in the tray. A locking and closure member consists of an inverted channel member hinged at one end of the channel and swingable between a position in which it closes the top of the channel and a position in which the channel is accessible. This inverted channel member has a downward extension on the side of the tray cover which engages the outside of the upper edge of the cover and thus serves also to hold the cover in closed position.

The inverted channel member is provided with a hole adjacent its end remote from the pivot through which a hook can be inserted for pulling it upwardly to allow access to the channels and with an opening at the hinged end above the pivot point through which a hook can be inserted to engage the pivot pin for lifting the whole unit out of a refrigerator or the like.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows in perspective a holder according to the invention;

FIG. 2 is an end view from the right-hand end of FIG. 1;

FIG. 3 is a cross section substantially on the line 3—3 of FIG. 1;

FIG. 4 is a top plan view; and

FIG. 5 is a cross section substantially on the line 5—5 of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The main element of the arrangement is a shallow tray having a bottom wall 2 and upstanding side walls 4, along with a flange 6 along one edge which forms the bottom. A closure of inverted channel shape with a main wall 8 and side walls 10 is pivoted at 12 along the lower edge of the tray.

The upper end portion 12 of the wall 2 is stepped inwardly, as is the upper end portion 14 of the cover. Secured slightly below the upper edge of the main wall 2 is a Z-shaped member 16 with one part riveted to the wall 2, a central horizontal part and a part 18 opposite the part 12 and forming therewith an upwardly open channel.

The upper ends 20 of the side walls 4 extend upwardly to close the ends of the channel.

At one end of the channel there is pivoted by a pin 22 a downwardly open channel member 24 which fits over the members 12 and 18. This member has a downward extension 26 which can engage over the upper edge part of the cover 8 when this is in its closed position.

The downwardly open channel member thus provides a closure for the channel receiving chamber and at the same time acts as a lock for holding the cover 8 in closed position.

The cover 8 has a hole 28 near its top edge for use in opening it. The closure 24 has a hole 30 in the top wall thereof at the end remote from the pivot 22 for permitting the introduction of a hook by which the closure 24 can be swung up around pivot 22. It also has above the pivot 22 an opening 32 through which a hook member can be inserted and engaged around the pivot 22 for lifting the whole unit out of a refrigerator or the like, where these units are normally stored side by side in upright position.

I claim:

1. An arrangement for holding thin flexible containers comprising a relatively shallow tray having a back wall and an open side opposite the back wall and a closure for such open side hinged along one end of the tray, means forming a channel at the other end of the tray extending completely across the tray and having its opening directed away from the body of the tray, an inverted channel-like member, means hinging the inverted channel-like member at one end of the channel forming means and swingable thereover to close the channel, said inverted channel-like member having a side wall on the side of the tray closure of sufficient extent to overlie the free edge of the tray closure when the inverted channel-like member is in closing position, whereby to hold the closure in closed position, the space between the open side and the back wall being unobstructed and the channel overlying such space.

2. An arrangement as claimed in claim 1, in which said hinging means comprises a pin mounted in the walls of the channel-forming means and extending therebetween, and said inverted channel-like member has an opening therein above said pin of sufficient area to permit the insertion of a hook thereinto for engagement with the pin for lifting the arrangement.

3. An arrangement as claimed in claim 2, in which said inverted channel-like member has a hole in its outer wall adjacent the end remote from the hinging means to permit the insertion of a hook for raising the inverted channel-like member to open the channel.

4. An arrangement as claimed in claim 1, in which said inverted channel-like member has a hole in its outer wall adjacent the end remote from the hinging means to permit the insertion of a hook for raising the inverted channel-like member to open the channel.

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