Jan. 7, 1964 F. T. C. BREWER ETAL 3,116,849

EMERGENCY KIT

Filed July 7, 1961

FIG. 1

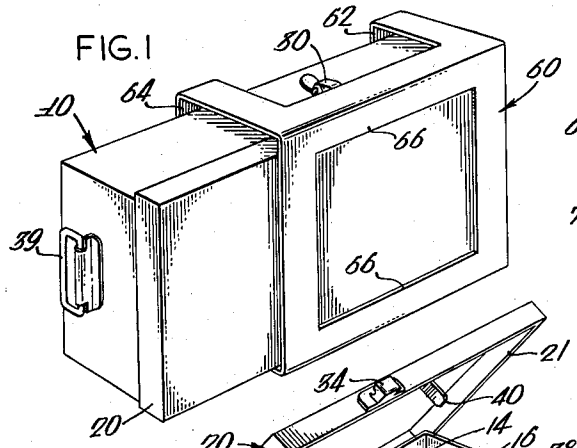


FIG. 2.

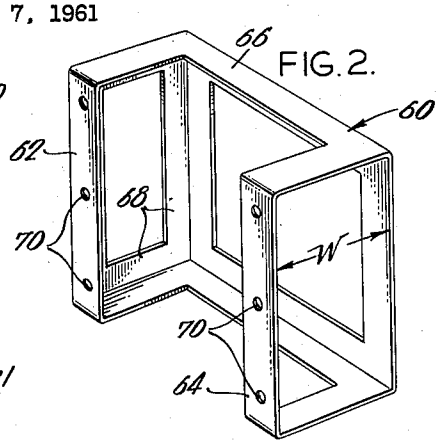


FIG. 5.

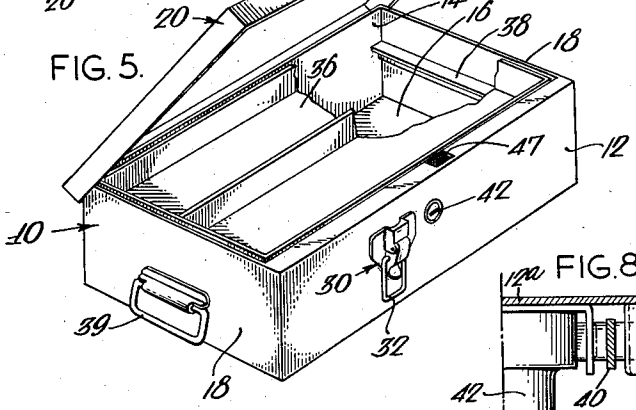


FIG. 3.

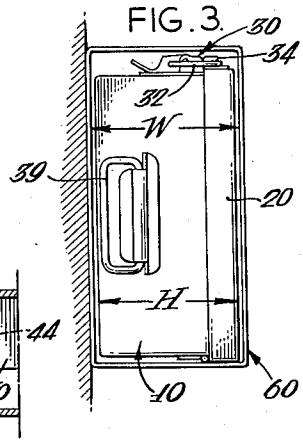


FIG. 8.

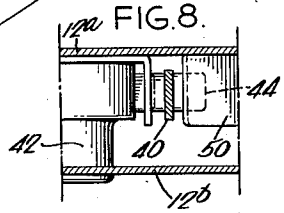


FIG. 4.

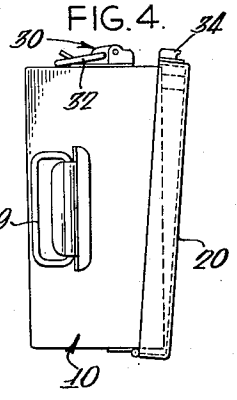


FIG. 6.

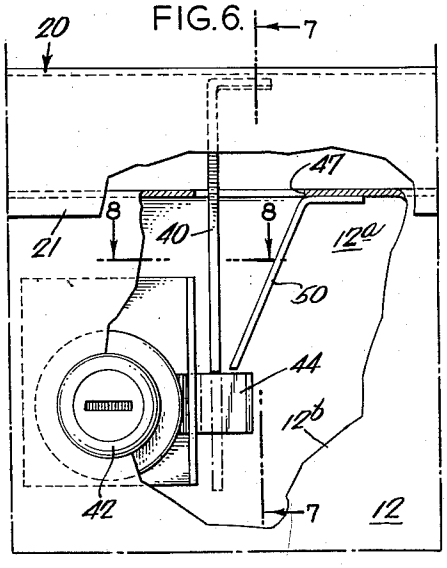
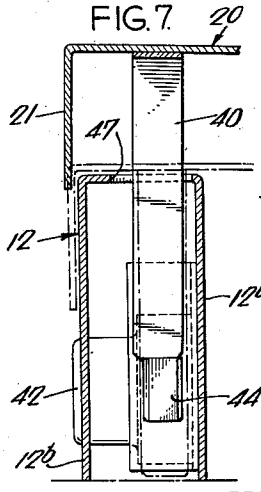


FIG. 7.



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3,116,849

EMERGENCY KIT

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8 Claims. (Cl. 220—1)

This invention relates to a kit for medical equipment and medication used for treating persons in an emergency situation.

The purpose of an emergency kit is to provide the necessary equipment needed to tend to a person in an emergency situation. According it is essential that the kit be stocked with a predetermined type of equipment and medication and that these items be easily and quickly acessible.

A major disadvantage of prior emergency kits has been the fact that equipment can be removed for use in an emergency situation or otherwise and the kit can then be reclosed and appear ready for reuse. Accordingly there is the posibility that the partially equipped kit might be taken for use in an emergency and it is readiiy appreciated that a kit containing only part of the necessary equipment might be a needed item and valuable time might be lost in obtaining missing equipment or locating a complete kit. Additionally it is noted that if the sterile equipment is used and then replaced without being resterilized, this presents a risk of infection on the next use of the equipment.

An object of the present invention is to provide an emergency kit having novel features of construction and arrangement whereby the kit may not be reclosed once it has been opened until it has been reprocessed thereby minimizing the chance of using a partially equipped kit.

Another object of the present invention is to provide an emergency kit of tamper-proof construction which cannot be closed once it has been opened by means of a probe or the like.

A further object of the present invention is to provide a receiver for the kit of the present invention which is dimensioned with respect to the kit to prevent insertion of the kit therein when it is open.

The present invention provides an emergency kit in which the lid may be opened easily and quickly to provide a ready access to the contents of the kit and stop means is provided for preventing complete closing of the lid once it has been opened. The stop means is selectively actuatable by a key, for example, to permit reclosing of the lid and the key is usually controlled by the person or department in charge of maintaining the kit, for example, the pharmacy of a hospital. By this arrangement it is intended that when the kit has been opened to remove equipment in an emergency situation or otherwise, it cannot be reclosed until the pharmacist has checked and replenished the kit. In this manner there is an assurance that a closed kit is one that is ready for use and contains all of the equipment necessary in an emergency situation.

The various feature of construction and arrangement of the kit of the present invention are set forth more fully hereinafter with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of a kit made in accordance with the present invention in place in a support bracket;

FIG. 2 is a perspective view of the support bracket;

FIG. 3 is a side elevational view of the kit nested in the bracket;

FIG. 4 is a side elevevational view of the kit in the position where the stop means prevents complete closing;

FIG. 5 is a perspective view of the kit with the closure lid open to expose the interior of the kit;

FIG. 6 is a fragmentary elevational view with parts of the kit broken away to show the details of stop means in accordance with the present invention for preventing closing of the lid;

FIGS. 7 and 8 are enlarged sectional views taken on lines 7—7 and 8—8 of FIG. 6.

Referring now to the drawing, there is shown an emergency kit made in accordance with the present invention. The kit includes a generally box-like container 10 having front, rear, bottom, and side walls 12, 14, 16, and 18 respectively and a closure lid 20 hinged to the rear wall 14 for selectively closing the container. The lid 20 which has a depending peripheral lip 21 is normally maintained in a closed position by manually operable locking means, in the present instance, a conventional toggle latch 30 having the usual pivotally mounted hook 32 on the front wall 12 operable to engage a catch or detent 34 on the lip 21 of the lid. If desired, a removable tray 36 may be supported in the container on flanges 38 projecting inwardly from the side walls 18 and a handle 39 may be provided on each of the side walls 18 for gripping and handling the kit.

A feature of the present invention resides in the provision of stop means for selectively preventing closing of the lid once it has been opened. To this end a lock 42 is mounted in the front wall of the container having the usual latch bolt 44 which cooperates with a tang 40 depending from the underside of the lid 20 to prevent closing of the lid once the lid has been opened. The latch bolt 44 is normally biased to an extended position in the path of the tang 40 preventing the lid from being closed as shown in solid lines in FG. 6 and is actuatable by means of a key to a retracted position out of the path of the tang permitting closing of the lid when desired as shown in broken lines in FIG. 6. In the present instance the lock 42 is mounted between spaced inner and outer panels 12*a* and 12*b* comprising the front wall of the container and an opening 47 is provided in the top of the front wall for receiving the tang 40.

It is intended that the key for the lock be in the custody of the person or department responsible for the maintenance of the kit, for example, the pharmacist or pharmacy of a hospital. The pharmacy reprocesses kits that have been used by replacing items that have been removed and resterilizing sterile equipment, recloses the lid by means of the key and then issues the kit for use. When the kit is ready for use, the latch 30 is in the locked position and the bolt 44 under its normal bias abuts the side face of the tang 40 yet permitting movement of the tang 40 when the lid is opened.

When it is desired to use the contents of the kit, the hook 32 is released and the lid is opened. When the lid is opened, the tang 40 is moved out of the opening 47 and the latch bolt 44 under its normal bias moves to the extended position. In this position the latch bolt 44 is disposed in the path of the tang 40 preventing movement thereof beyond the latch bolt and thereby preventing the lid from being closed completely. When the kit has been used, it is returned to the person in charge of maintaining the kit, for example, the pharmacist who reprocesses the kit, recloses the lid by retracting the latch bolt 44 with the key for the lock 42 and then issues it for reuse.

An important feature of the present invention is the tamper-proof construction of the kit which prevents closing of the lid 20 by means other than the key for actuating the lock 42. To this end an elongated shield 50 is provided between the inner and outer panels of the front wall 12 which at one end is secured adjacent the opening

47 and extends downwardly at an angle so that its free terminal end is spaced from the lock to provide a clearance for the tang 40. The shield is preferably wider than the width of the latch bolt 44 and overlies the latch bolt 44 when the bolt is in the extended position as shown in FIG. 6 to cover the tip of the bolt so that a probe or the lilke may not be used to engage the tip and move the bolt to a retracted position. Additionally the length of the tang 40 is preferably less than the combined width of the lip 21 of the closure lid 20 and the distance between the top edge of the front wall 12 and the upper edge of the latch bolt 44 so that when the latch bolt 44 is in the extended position and the tang 40 is supported on the upper edge of the bolt (shown in solid lines in FIG. 7), the lip 21 of the closure lid overlaps and is spaced closely to the front wall 12 of the container. By this arrangement it is not possible to retract the latch bolt 44 by means of a probe, close the lid 20 and then withdraw the probe.

As a further insurance against reuse of a kit before it has been reprocessed, a receiver is provided for the kit which is dimensioned relative to the kit to prevent insertion thereof in the receiver when the lid of the kit is open. In the present instance, the receiver is in the form of a support bracket 60 which may be mounted on a wall or the like and which as shown in FIG. 2 consists of a pair of rectangular collar members 62 and 64 secured together along one side by elongated connecting pieces 66. The kit is adapted to be inserted through the collar 64 and abut a partial end face 68 on the collar 62. The collars are preferably spaced apart a distance less than the length of the kit so that the kit projects beyond the front end of the bracket as shown in FIG. 1. The opposite side of each of the collar members is provided with openings 70 to receive fastening members for securing the bracket on a wall or the like. The width W between the sides of the collar members is slightly greater than the height H of the kit in the closed position to closely embrace the kit. It is noted that by this arrangement, the kit cannot be replaced in the bracket once it has been used until it has been reprocessed and reclosed.

From the foregoing it may be seen that a kit made in accordance with the present invention is easily and quickly accessible and the key operated stop means provides means for determining when a kit has been used and therefore might not be fit for reuse by reason of incomplete and/or unsterile equipment. By this arrangement there is some assurance that a kit will not be reused until those in charge of the maintenance of the kit have reprocessed it. As noted above, in a hospital, for example, the pharmacy is usually charged with this responsibility and accordingly it is intended that when a kit has been used, it is to be returned to the pharmacy and they in turn will issue a completely reprocessed emergency kit. Reprocessing involves the replacement of any item removed and the resterilization of all sterile equipment.

The kit of the present invention deters persons from using the kit in a non-emergency situation. For example, at present when an item available in the kit is needed in a routine treatment, there is a tendency to use it out of the kit with the idea of replacing it at a later time instead of going to the pharmacy for the item. Often the item is never replaced. The stop means of the kit of the present invention, while not preventing, deters this practice. The non-replaceability of the kit in the receiver is also a factor in this regard.

While a particular embodiment of the present invention has been illustrated and described herein, it is not intended to limit the invention to this embodiment and changes and modifications may be made therein within the scope of the following claims.

We claim:

1. A container having a closure for selectively closing said container, means for releasably securing said closure in closed position, stop means constructed and arranged automatically to move into a position positively preventing closing of said closure once it has been opened, key-operated actuating means for displacing said stop means to permit closing of said closure, means rendering said stop means inaccessible for such displacement except by said key means, and means for preventing said stop means from locking the closure in closed position.

2. A container having a closure for selectively closing the container, means for releasably securing said closure in closed position, means on one of the walls of the container having an element normally biased to an extended position and actuatable to a retracted position, stop means on said closure operable to engage said element in the extended position and constructed and arranged positively to prevent closing of said closure, and key-operated means for actuating said element to the retracted position out of the path of said stop means and permit closing of said closure, said stop means being constructed to prevent said element from locking said closure in closed position.

3. A container having side walls and a closure for selectively closing the container, manually operable means for releasably securing said closure in closed position, one of said walls of the container comprising spaced panel members and means defining an access opening between said panels, a bolt mounted in said one wall between said panel members and biased toward an extended position but actuatable to a retracted position, a tang depending from the closure operable to pass through said opening and engage said bolt in the extended position and constructed and arranged positively to prevent closing of said closure, and key-operated means for actuating said bolt to the retracted position out of the path of said tang thus to permit closing of said closure and in which position the tang is in the path of movement of said bolt thus to hold the bolt in its retracted position biased against said tang.

4. A container as claimed in claim 3 including a shield mounted between said panel members adjacent said opening and extending downwardly from said opening so that the free end thereof overlies the tip of the bolt when the bolt is in the extended position thereby to prevent access to the tip of the bolt through said opening.

5. A container of generally box-like form having front, rear, bottom, and side walls and a closure lid of generally rectangular form having a depending peripheral lip, said closure lid being hingedly secured to the rear wall of the container for selectively closing the same, manually operable means for releasably securing said closure lid in closed position, a bolt mounted in the front wall of the container and biased toward an extended position but actuatable to a retracted position, means defining an opening in the front wall of the container, a tang depending from the underside of the closure lid operable to pass through said opening in the front wall of the container and engage said bolt when the bolt is in the extended position and constructed and arranged positively to prevent closing of said closure whereby said lip of the closure lid overlaps and is spaced closely to the front wall of the container, and means for actuating said bolt to the retracted position out of the path of the tang and permit closing of said closure.

6. The combination of a receiver for supporting a container as claimed in claim 1, said receiver having an opening through which the container is inserted to support the same therein, said opening being dimensioned relative to said container to permit insertion of the container in the receiver when said closure is in the closed position and prevent insertion of said container therein when the closure is in the open position.

7. The combination as claimed in claim 6 wherein said receiver consists of a bracket adapted to be mounted on a wall or the like comprising a pair of generally rectangular collar members mounted in spaced apart

relationship and wherein the distance between opposite sides of each of the collars is dimensioned relative to said container to permit insertion thereof in the bracket when the closure is in the closed position and prevent insertion in the bracket when the closure is in the open position.

8. The combination recited in claim 2 and further including:

(*a*) a receiver for supporting said container and being constructed so as to receive and support said container only when the said closure is closed.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,116,849 January 7, 1964

Frederic T. C. Brewer et al.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 1, line 15, for "According" read -- Accordingly --; line 18, for "acessible" read -- accessible --; line 23, for "posibility" read -- possibility --; line 26, after "equipment" insert -- is not satisfactory in an emergency where the missing equipment --; line 61, for "feature" read -- features --; line 71, for "elevevational" read -- elevational --; column 2, line 34, for "FG." read -- FIG. --; column 3, line 7, for "lilke" read -- like --.

Signed and sealed this 16th day of June 1964.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents