United States Patent [19]

Fudge

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[54] **FIRE EXTINGUISHER CABINET**

[75] Inventor: **William L. Fudge,** Minneapolis, Minn.

[73] Assignee: **Larsen's Manufacturing Company,** Minneapolis, Minn.

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[52] **U.S. Cl.**..... **220/82 R,** 49/463, 52/470, 70/95, 220/41, 220/55 L, 292/DIG. 45, 292/DIG. 46

[51] **Int. Cl.**..... **B65d 25/54,** B65d 43/12

[58] **Field of Search**..... 220/82, 41, 55 L; 70/95; 292/259, DIG. 45, DIG. 46; 312/138, 330; 49/466, 463, 465; 52/470, 471, 127, 288

[56] **References Cited**

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Primary Examiner—William I. Price
Assistant Examiner—Allan N. Shoap
Attorney, Agent, or Firm—Merchant, Gould, Smith & Edell

[57] **ABSTRACT**

An open front elongated cabinet has an elongated breakable front panel covering the open front which must be broken during emergency conditions to gain access to a fire extinguisher contained within the cabinet. The cabinet is provided with spaced guideways into which the the breakable panel member is slidably inserted or removed in a direction transversely of the longitudinal dimension of the panel member during periodic checking and/or replacement of the fire extinguisher. The cabinet is formed to limit movement of the panel member along the guideway in one direction and a removable closure member is positioned in a closure-forming position to prevent removal of the panel member in an opposite direction. A lock secures the closure member in place to render the cabinet tamper proof and to prevent the unauthorized removal or theft of the fire extinguisher.

4 Claims, 5 Drawing Figures

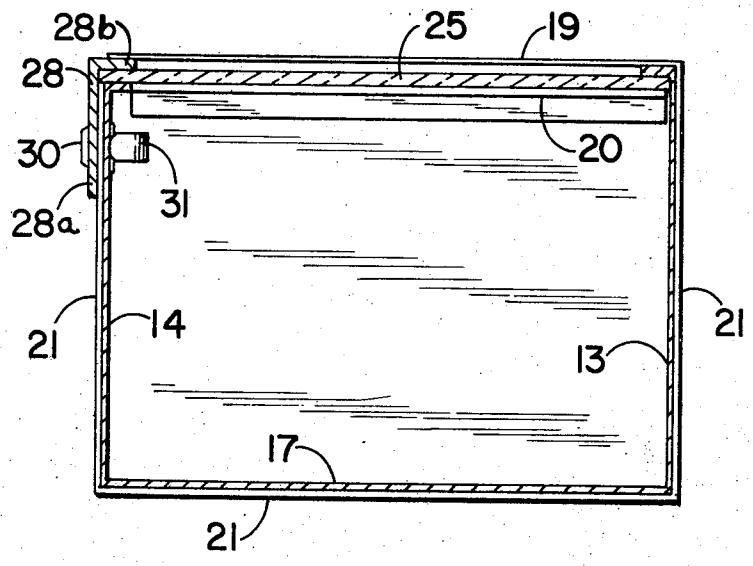


FIG. 1

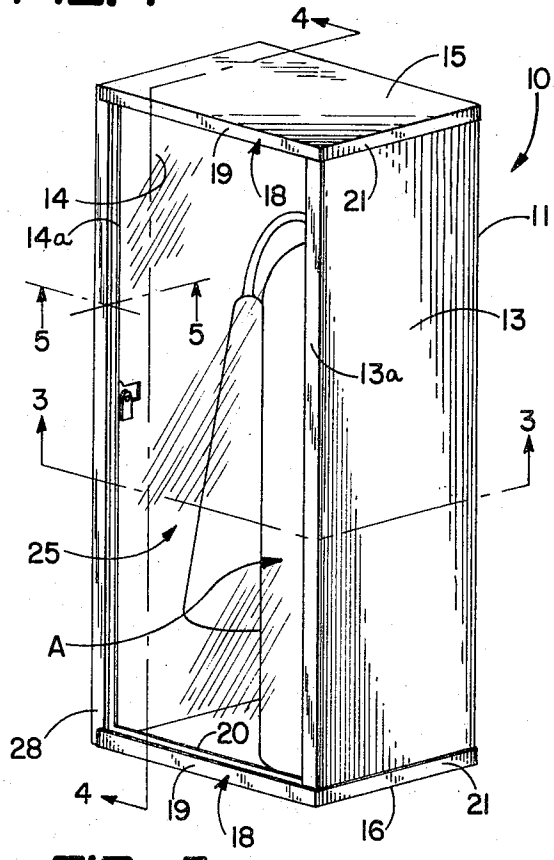


FIG. 2

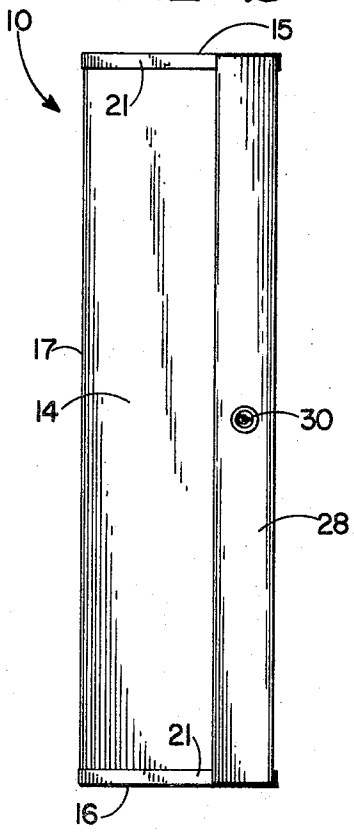


FIG. 3

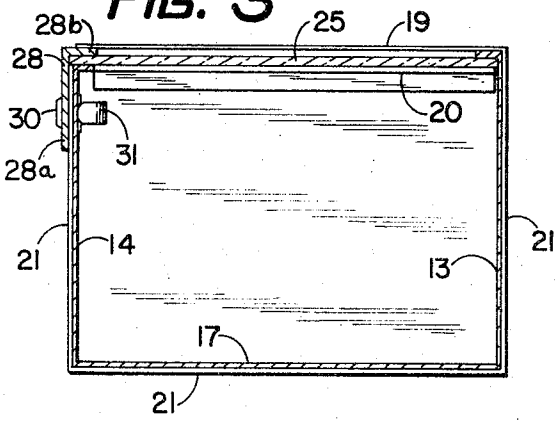


FIG. 4

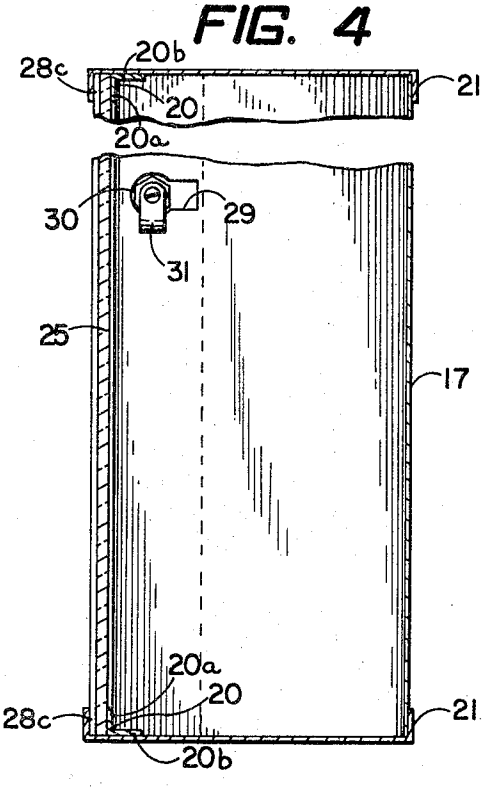
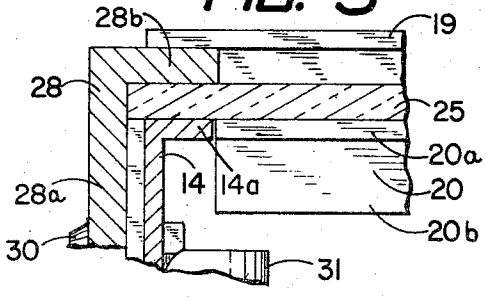


FIG. 5



FIRE EXTINGUISHER CABINET

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to cabinets and is more specifically concerned with a lockable cabinet for receiving and supporting a fire extinguisher.

2. Description of the Prior Art

Prior art fire extinguisher cabinets have been entirely successful in providing adequate protection for fire extinguishers contained therein. By way of example, deficiencies in design and construction have not only not discouraged tampering, but have resulted in structures which often do not provide adequate protection against the elements. In addition, the breakable front panel must be periodically removed to service or replace the fire extinguisher within the cabinet. On certain cabinets, this is accomplished by removing a closure plate mounted on the top wall of the cabinet and allowing the panel to slide downwardly from the bottom wall of the cabinet or by lifting the panel upwardly with respect to the top wall. For example, my prior U.S. Pat. No. 3,587,913, issued to William L. Fudge and Lloyd L. Klein, on June 28, 1971, discloses a bottom mounted closure plate which permits removal of a breakable front panel vertically downwardly through the bottom wall of a fire extinguisher cabinet. On many occasions, this operation results in the panel being inadvertently dropped with the possibility of accidental breakage of the panel and possible injury to the individual servicing the fire extinguisher. Since the longitudinal dimension of such cabinets are normally vertically oriented, removal of the panel member in a vertical direction generally requires considerable clearance in the direction in which the panel member is removed.

SUMMARY OF THE INVENTION

With these problems in mind, a cabinet for fire extinguishers is provided which is formed from an elongated, open front, rectangular box having spaced guideways extending in a direction transversely of the longitudinal dimension of the cabinet along an edge of a top and bottom wall adjacent the open front. A breakable panel member, for closing the open front, is insertable into and removable from the guideways transversely of the longitudinal dimension of the panel member and cabinet. One sidewall limits movement of the panel member in one direction along the guideways and has an angular edge portion which overlies an adjacent edge of the panel member. A removable closure member, having a material thickness dimension somewhat greater than that of the cabinet walls, extends substantially between the top and bottom walls and is disposed in a closure forming position to limit movements of the panel member along the guideways in an opposite direction. The closure member is cross-sectionally L-shaped and has one leg disposed in justaposition to the other sidewall with the other leg thereof overlying the adjacent edge of the panel member and the opposite ends thereof each received within an adjacent guideway when the closure member is in the closure forming position. A lock is mounted on the one leg generally midway between the opposite ends of the closure member for insertion into an opening formed through the other sidewall adjacent the open front.

The particular arrangement of the spaced guideways, the angular edge portion on the one sidewall and the closure member in relation to the breakable panel member provides an arrangement of parts which is virtually tamperproof. In addition to this advantage, the breakable panel member is so mounted to be removed in a direction transversely of the longitudinal dimension thereof during periodic servicing or replacement of a fire extinguisher within the cabinet. This not only permits removal of the panel member in a limited amount of space, with a minimum of difficulty, but since such cabinets are normally mounted with their longitudinal dimension vertically oriented, permits removal of the closure member substantially without fear that the panel member will accidentally fall to the ground. An important consideration, in cabinets of the general type here, is the cost of manufacture; and the present invention provides or improves construction which can be economically manufactured.

BRIEF DESCRIPTION OF THE DRAWINGS

Referring to the drawings wherein like characters indicate like parts throughout the views;

FIG. **1** is a view in perspective of an improved fire extinguisher cabinet constructed in accordance with the present invention;

FIG. **2** is a view in side elevation thereof as seen from left to right of FIG. **1**;

FIG. **3** is an enlarged view in horizontal section thereof with the fire extinguisher removed as seen from the line **3—3** of FIG. **1**;

FIG. **4** is an enlarged view in vertical section as seen from the line **4—4** of FIG. **1**, portions thereof being broken away; and

FIG. **5** is the greatly enlarged detailed sectional view as seen from the line **5—5** of FIG. **1**.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, the numeral **10** generally indicates an improved fire extinguisher cabinet. Cabinet **10** is in the form of an elongated, open front, rectangular box **11** having spaced side walls **13, 14,** spaced top and bottom walls **15, 16** respectively, and a back wall **17** which connects the side walls **13, 14** and top and bottom walls **15, 16.** Spaced guideway means **18** extending along an edge of each of the top and bottom walls **15, 16** are each formed from an inwardly formed angular edge portion **19,** rigidly attached to the respective top and bottom wall **15, 16** adjacent the open front of the cabinet **10,** and a longitudinally extending flange member **20.** Flange members **20** each have a cross-sectionally L-shaped configuration including a leg portion **20***a* spaced inwardly of an adjacent angular edge portion **19** and leg portions **20***b* which are rigidly affixed to respective top and bottom walls **15, 16** by spot welding or the like. Each of the leg portions **20***a* extend parallel to respective edge portions **19** to form the guideways **18.** As shown in the drawings, each of the top and bottom walls **15, 16** are provided with appropriate angular edge portions **21** for joining (also by spot welding or the like) the top and bottom walls **15, 16** to the side walls **13, 14** and the back wall **17** so as to form the open front rectangular box **11.** Although not shown, it can be assumed that the back wall **17** is provided with appropriate openings for mounting the cabinet **10** to a supporting wall structure, also not shown.

For the purpose of providing quick access to a fire extinguisher A during periods of emergency, there is provided an elongated, breakable, transparent panel member **25.** While such panel members **25** have heretofore been formed from a material such as glass, it will be appreciated that other materials (i.e., plastics, etc.) may be utilized as long as their characteristics are of a somewhat similar nature to glass or construction of such a nature as to permit quick access to the fire extinguisher A during such periods of emergency. Panel member **25** is generally planar and slidably insertable into the guideways **18** to close the open front of the cabinet **10** and prevent unauthorized access to or theft of the fire extinguisher A. Fire extinguisher cabinets of the above-described type are generally secured to a supporting wall structure with the longitudinal dimension thereof vertically oriented so as to support the fire extinguisher A in a vertically oriented position, see FIG. **1.** Heretofore, fire extinguisher cabinets of the above type have been constructed so the breakable panel member **25** is either slidably removed vertically upwardly through the top wall **15** or vertically downwardly through the bottom wall **16** for periodic servicing, inspection or replacement of the fire extinguisher A. In either case, the panel member **25** is removed from its position closing the open front of the cabinet along its longitudinal dimension, resulting in a requirement for substantial clearance adjacent the cabinet **10** in the direction in which the panel **25** is to be removed. In the present embodiment, the panel **25** is slidably insertable into or removable from the guideways **18** in a sideways direction transversely of the longitudinal dimension of the panel **25** and cabinet **10.** Thus, substantially lesser clearance is required for removal of the breakable panel **25** from the cabinet **10** of the present invention.

One of the side walls (side wall **13**) is positioned adjacent the open front to limit movement of the panel member **25** along the guideways **18** in one direction so as to position the panel **25** to close the open front of the cabinet **10.** An angular edge portion **13***a* is rigidly attached to the side wall **13** adjacent the open front so as to overlie an adjacent edge of the panel **25** when the panel **25** is in engagement with the side wall **13** and closing the open front of the cabinet **10.** The overlying relationship of the angular edge portion **13***a*, together with the angular edge portions **19,** serves as protection against the elements entering the cabinet **10** when the panel member **25** is in place as well as to protect the panel member **25** from the accidental displacement.

A removable closure member **28** extends longitudinally substantially between the top and bottom walls **15, 16.** The closure member **28** is provided for limiting movements of the panel **25** along the spaced guideways **18** in an opposite direction to remove the panel **25** from the guideways **18.** Heretofore, such closure members have been associated with either the top or bottom wall of such cabinets and have been constructed in such a way as to add unnecessarily to the cost of these types of cabinets. In a top wall mounting, such closure members have not only not been weatherproofed, but have required the removal of the panel member from the cabinet along its longitudinal dimension for periodic inspection, etc. This not only requires considerable clearance to accomplish, but is a difficult task which often results in accidental dropping of the panel and/or breakage of the panel and injury to the individual servicing the fire extinguisher. Likewise, in a bottom wall mounting, removal of the closure member from the bottom wall often results in the panel accidentally dropping out of the cabinet, again with the possibility of breakage of the panel and injury to the individual servicing the fire extinguisher. As can be seen from the drawings, the construction of the present cabinet **10** wherein the panel member **25** is removed from the guideways **18** in a sideways or transverse direction with respect to a vertical longitudinal dimension of the cabinet **10,** permits removal of the closure member **28** from its closure-forming position without the possibility that the panel member **25** may accidentally drop from the guideways **18.** As can been seen, particularly in FIGS. **3** and **5,** closure member **28** has an L-shaped cross section with one leg **28***a* thereof disposed in juxtaposition to the other side wall **14** and the other leg **28***b* disposed to overlie an adjacent edge of the panel member **25** when the closure member **28** is in the closure-forming position of FIGS. **3** and **5.** The other side wall **14** is formed generally midway between the top and bottom walls **15, 16** with a keyhole-shaped opening **29** which is disposed generally adjacent the open front of the cabinet **10,** for a reason to be hereinafter described.

Lock means **30** is mounted on the leg **28***a* generally midway between opposite ends thereof for insertion into the keyhole-shaped opening **29.** A rotatable latch member **31** is mounted on the lock **30** for rotation into a position wherein it has lockable engagement with the side wall **14** (see FIG. **4**) to maintain the closure member **28** in the closure-forming position of FIGS. **1–5.** In this position, the other leg portion **28***b* has opposite end portions **28***c* which are received within an adjacent guideways **18.** This arrangement eliminates expensive closure member construction prevalent in prior cabinets and provides a maximum deterent to attempts at tampering with the closure member **28** by persons attempting to gain unauthorized entry to the fire extinguisher A for purposes of theft or vandalism and the like. In addition, the side wall **14** includes an inwardly formed angular edge portion **14***a* which is substantially in alignment with the leg portions **20***a* of flange members **20.** Flange member **14***a* extends parallel to and in a coincident relationship with the other leg **28***b* of the closure member **28** when the closure member **28** is in its closure-forming position. The flange **14***a* serves to provide additional strength to the edge of the side wall **14** adjacent the open front of the cabinet and thus maintain the closure-forming position of the closure member **28** should an unauthorized person attempt to pry the closure member **28** away from the side wall **14.** In addition to the strengthening factor of angular edge portion **14***a*, it will be seen by reference to FIG. **5** of the drawings that the thickness dimension of the material forming the closure member **28** is relatively thicker than that of the material forming the rectangular box **11.** This increased thickness adds substantially to the strength of the closure member **28** and effectively makes it more difficult to deform the member **28** so as to gain unauthorized entry into the cabinet **10.**

What I claim is:

1. In an improved fire extinguisher cabinet comprising:

a. an elongated open front rectangular box having spaced side walls and spaced top and bottom walls;

b. spaced guideway means, extending along an edge of each of said top and bottom walls adjacent the open front;

c. an elongated, breakable, transparent panel member for closing the open front slidably insertable into and removable from said guideways transversely of the longitudinal dimension of said panel members and box;

d. an angular edge portion rigidly attached to one of said side walls adjacent said open front so as to overlie an adjacent edge of said panel, said one side wall limiting movement of said panel member along said guideways in one direction;

e. a removable closure member extending substantially between said top and bottom walls for limiting movement of said panel along said spaced guideways in an opposite direction when in a closure forming position;

f. said closure member having an L-shaped cross section with one leg thereof disposed in justaposition to said other side wall and the other leg thereof disposed to overlie an adjacent edge of said panel member in the closure forming position;

g. the other of said side walls having an opening formed therethrough adjacent said open front and generally midway between said top and bottom walls;

h. lock means mounted on said one leg generally midway between opposite ends thereof for insertion into the opening in said other side wall and having a lockable engagement with said other side walls; and

i. said other leg portion having opposite end portions which are each received within an adjacent guideway when said closure member is in the closure forming position.

2. The structure of claim **1** wherein said guideway means extending along an edge of each of said top and bottom walls are each formed from an inwardly formed angular edge portion of a respective top and bottom wall and a longitudinally extending flange member spaced inwardly from and extending parallel to respective angular edge portions of said top and bottom walls.

3. The structure of claim **2** wherein said other side wall includes an inwardly formed angular edge portion adjacent said open front, said angular edge portion of said other side wall being substantially in alignment with said flange members of said guideway means and inwardly spaced, parallelly extending in a coincident relationship with said other leg of said closure member when said closure member is in its closure forming position.

4. The structure of claim **1** wherein the thickness of the material forming said closure member is relatively thicker than that of the material forming said rectangular box.

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