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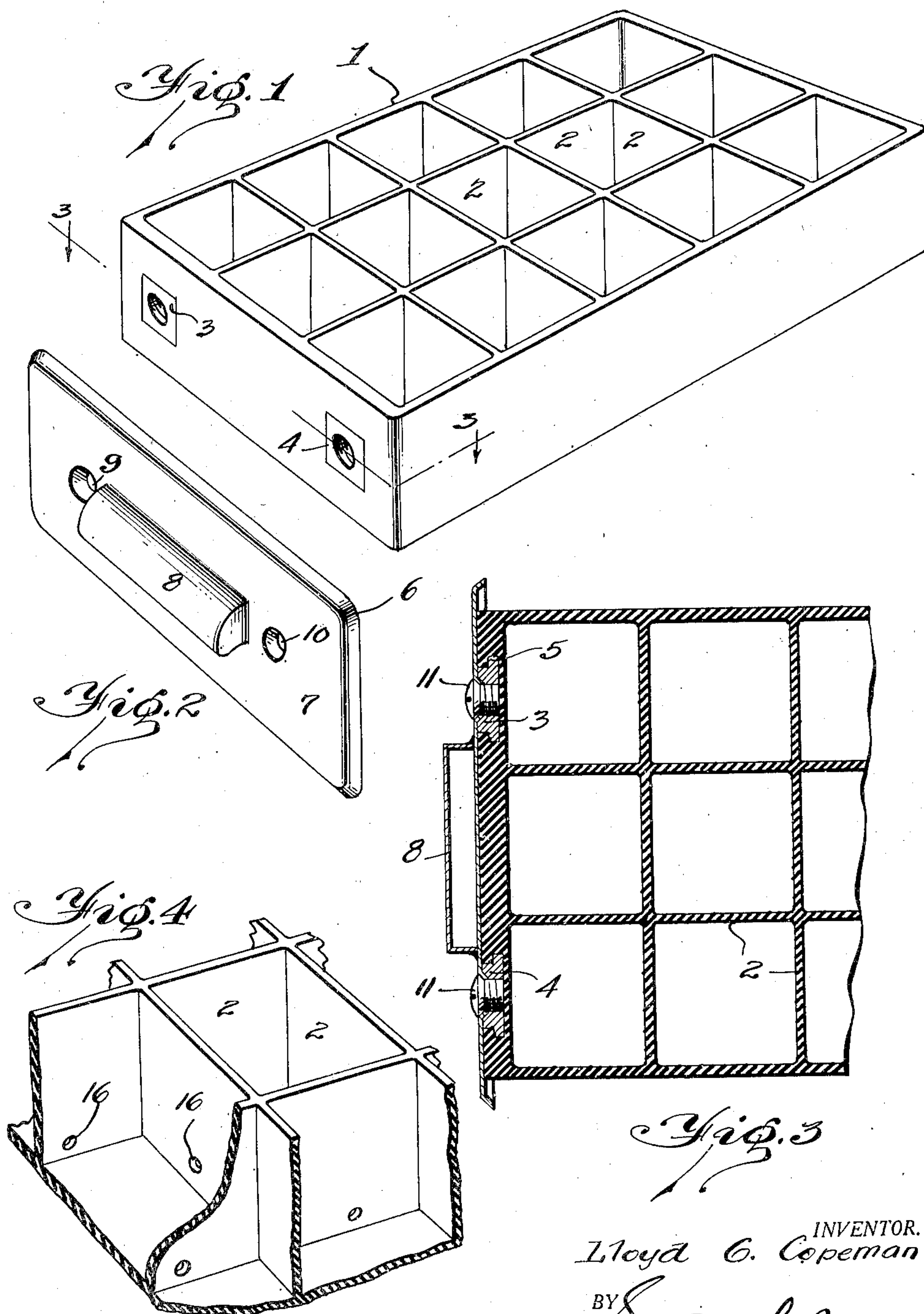
L. G. COPEMAN

1,777,483

SHARP FREEZING CONTAINER

Filed June 28, 1928

2 Sheets-Sheet 1



INVENTOR.  
Lloyd G. Copeman.  
BY *Stuart C. Barnes*  
ATTORNEY.

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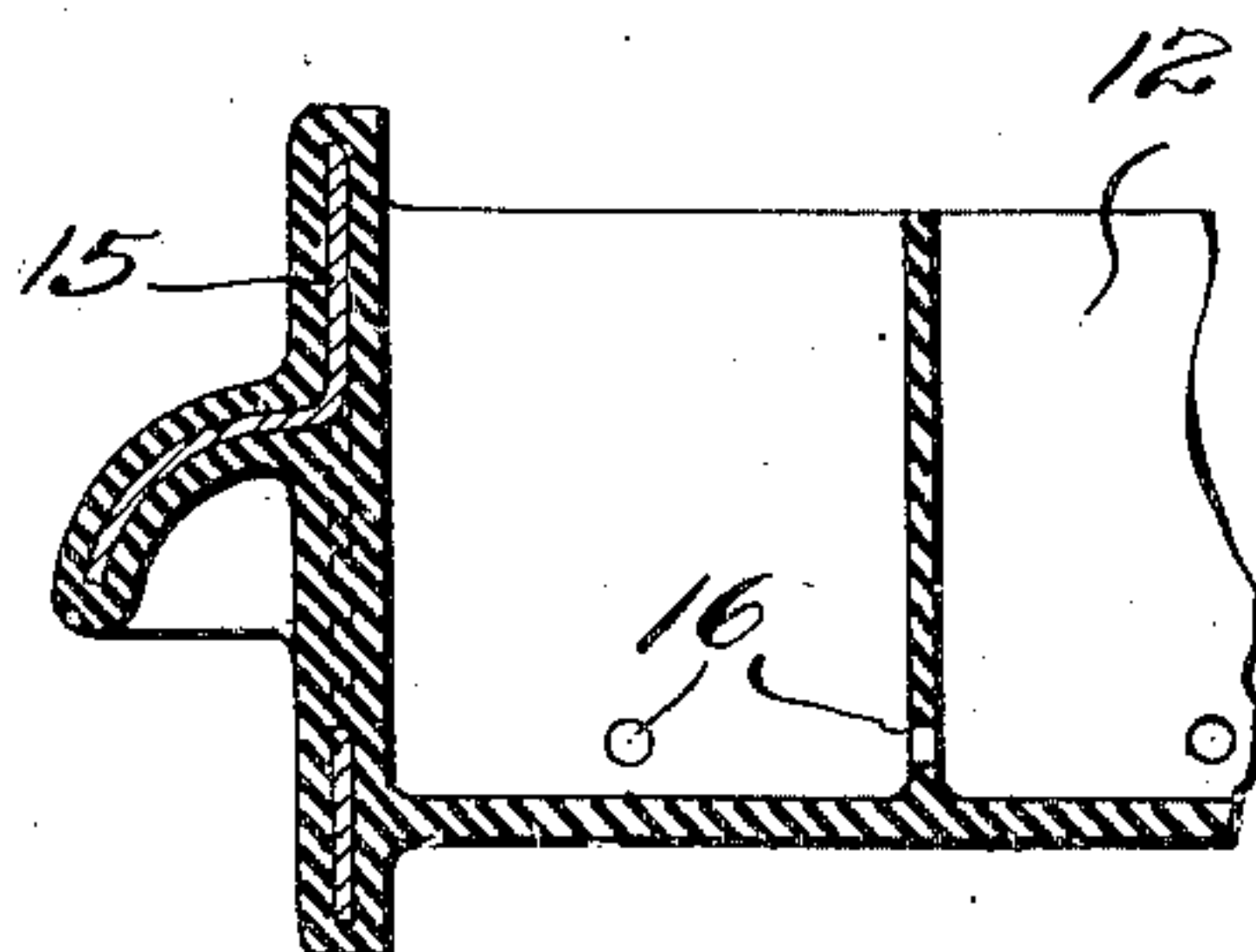
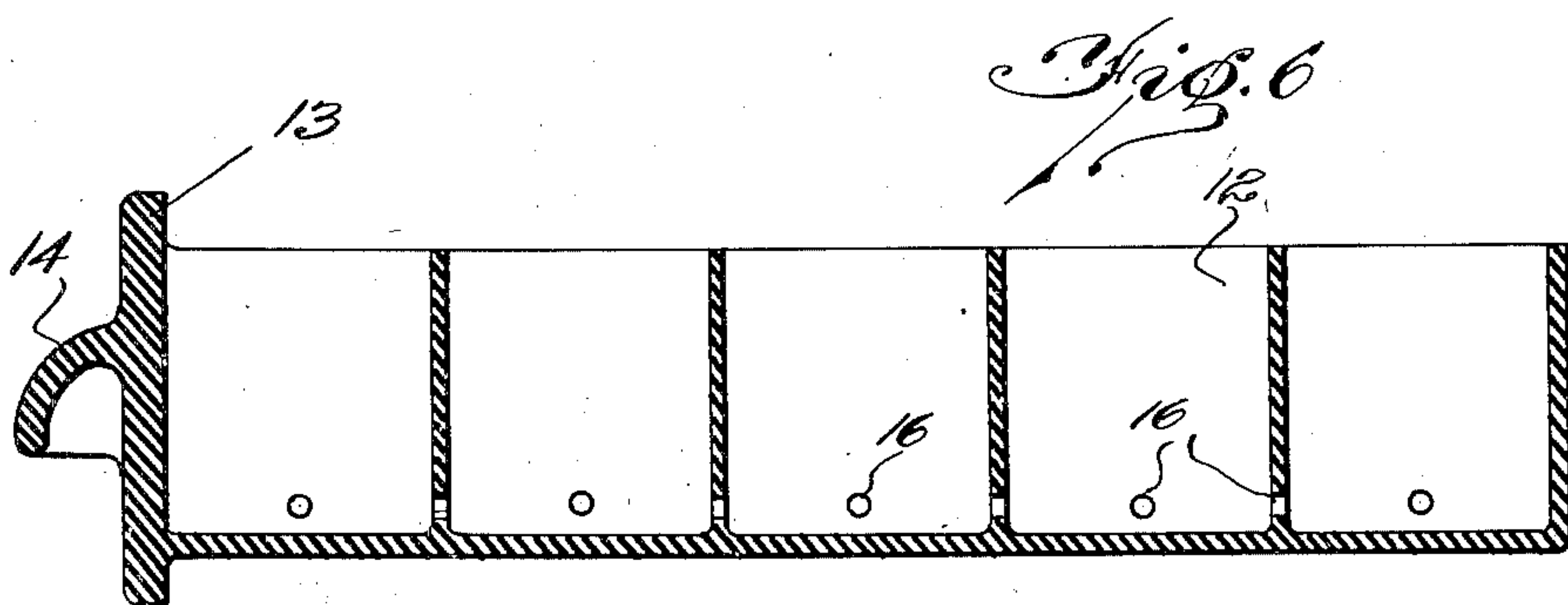
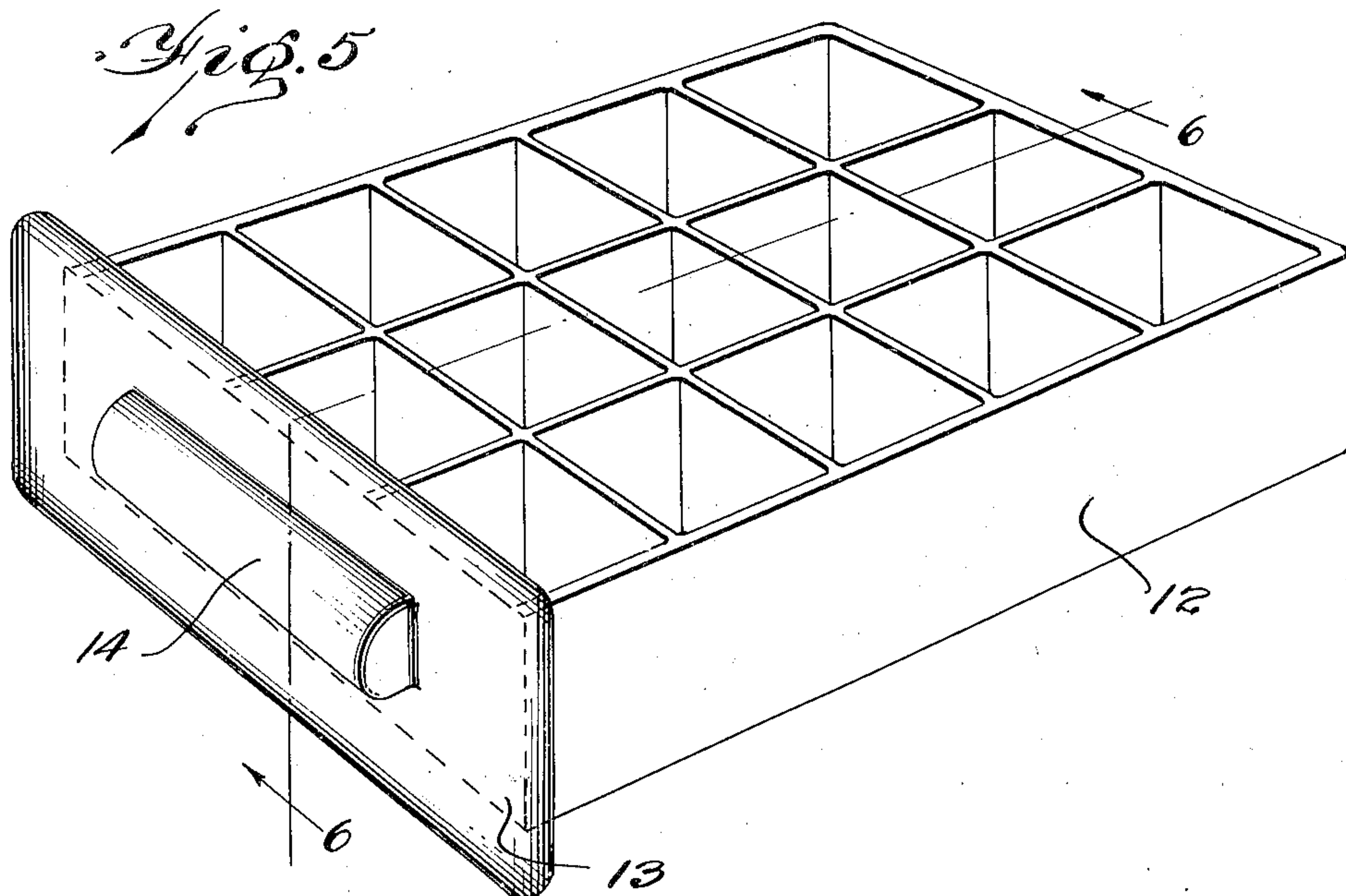
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*Fig. 7*

INVENTOR.  
Lloyd C. Copeman  
BY *Stuart C. Barnes*  
ATTORNEY.



## UNITED STATES PATENT OFFICE

LLOYD G. COPEMAN, OF FLINT, MICHIGAN, ASSIGNOR TO COPEMAN LABORATORIES COMPANY, OF FLINT, MICHIGAN, A CORPORATION OF MICHIGAN

## SHARP-FREEZING CONTAINER

Application filed June 28, 1928. Serial No. 288,928.

This invention relates to sharp freezing containers, and has to do particularly with a novel handle or front panel structure for sharp freezing trays such as used for forming ice cubes in mechanical refrigeration systems.

In my prior application, Serial No. 274,717, filed May 3, 1928, I have shown and described novel sharp freezing containers formed preferably of rubber, whereby to permit easy removal of the ice cubes. The trays shown in such application are adapted to be inserted in the apertures in the sharp freezing unit either as complete units or in suitable metallic frames for receiving the same. When the trays are carried or reinforced by metallic frames, it is an easy matter to secure a handle or front panel structure to the metallic frame in order to complete the general form of the front of the sharp freezing unit.

The present invention relates specifically to the construction and manner of forming a handle and cover plate structure for integrally moulded rubber ice cube trays, the handle and cover plate structure being preferably of metal and being secured to the tray in a novel manner. This invention also contemplates the formation of other handle and cover plate structures and particularly the forming of an integrally moulded rubber tray and rubber handle and cover plate structure.

In the drawings:

Fig. 1 is a perspective view of an integrally moulded rubber tray structure provided with suitable inset or moulded-in lugs for receiving the handle and cover plate structure.

Fig. 2 is a perspective view of one form of handle and cover plate structure as adapted to be secured to the tray shown in Fig. 1.

Fig. 3 is a plan view of the assembled unit shown in Figs. 1 and 2, and being taken partly on line 3—3.

Fig. 4 is a perspective fragmentary view of the integrally moulded partitions of the rubber tray, and showing the manner of providing for the equalization of the water in the various ice cube parts.

Fig. 5 is a perspective view of a modified

form of tray structure, wherein the cover plate and handle are moulded integrally with the tray structure.

Fig. 6 is a sectional view taken on line 6—6 of Fig. 5.

Fig. 7 is a cross-sectional fragmentary view showing a modified form of structure wherein the integrally moulded handle and cover plate structure is provided with a reinforcing means.

The low side or cooling unit of domestic refrigerators and the like are usually formed of metal and recently some have been formed of stone, and such low sides are usually provided with a plurality of apertures for receiving the sharp freezing containers such as ice cube trays and the like.

In Fig. 1 I have shown a rubber ice cube tray which may be generally designated 1 and which is provided with the usual partitions 2 for defining the ice cube chambers. The material of this tray is preferably of moulded rubber or other similar material to which ice will not readily adhere, whereby the cubes can be easily removed from the various compartments.

Moulded integrally in the front end of the tray 1 is a pair of threaded lugs 3 and 4. These lugs may be provided with suitable shoulders 5 for securely holding the same in place. A combined cover plate and handle structure which may be generally designated 6 and which consists of the plate 7 and handle 8, may be secured to the front of the tray 1 by the aligning of the apertures 9 and 10 with the lugs 3 and 4, and the insertion of suitable screws 11 therethrough to engage the threaded portions of the lugs.

This combined cover plate and handle 6 is preferably formed of metal corresponding to the front of the low side of the refrigerator, and thus not only adds to the general æsthetic appearance of the low side but completely covers the sharp freezing chamber opening and isolates the sharp freezing chamber from the warmer air in the other parts of the refrigerator. This metal cover plate and handle, contacting with the front walls of the low side, will also materially assist in acceler-



ating the heat transfer between the low side and the contents of the tray.

In the modified form shown in Fig. 5 the tray may be generally designated 12 and the combined cover plate and handle is preferably moulded integrally with the tray 12 and preferably formed of the same material, namely, rubber. This integrally moulded cover plate may be designated 13 and the integral handle therewith 14. The rubber tray is preferably formed of white rubber and in such case the cover plate 13 and handle 14 will be formed of this same material. This will be particularly adaptable with low sides formed of stone, as the white cover plate and handle will harmonize directly with the white stone.

In Fig. 7 I have shown a further modified form wherein the combined cover plate and handle is formed of rubber and moulded integrally with the main tray 12 and a reinforcing plate 15, preferably metal, is moulded in the cover plate and handle. Such plate 15 not only reinforces the cover plate and handle but also acts as a good conductor in assisting heat transfer.

As clearly shown in Figs. 4, 6, and 7, the ice cube forming partitions, which are moulded integrally with the side walls of the rubber trays, are preferably formed with suitable apertures 16 adjacent the bottom thereof, whereby to assist in distributing and equalizing the level of the water when the tray is being filled.

What I claim is:

1. A sharp freezing container of the type adapted to be utilized in connection with low sides of mechanical refrigeration systems, comprising a container having walls and ice cube forming partitions moulded of rubber, and a combined cover plate and handle structure secured to one end of said rubber container.

2. A sharp freezing container of the type adapted to be utilized in connection with low sides of mechanical refrigeration systems, comprising a container formed of moulded rubber, a combined cover plate and handle structure at one end of the container, and lugs secured in an end wall of said container for securing said combined cover plate and handle structure to the end of the tray.

3. A sharp freezing container of the type adapted to be utilized in connection with low sides of automatic refrigeration systems, comprising a tray formed of moulded rubber, a combined cover plate and handle structure at one end of the tray, and lugs moulded integrally in one end of said tray for securing said cover plate and handle thereto.

4. A sharp freezing container of the type adapted to be utilized with low sides of automatic refrigerating systems, comprising a tray and cube forming partitions formed of moulded rubber, and a combined front wall

cover plate and handle structure formed, at least in part, of rubber and moulded integrally with said tray.

5. A sharp freezing container of the type adapted to be utilized with low sides of automatic refrigerating systems, comprising a tray formed of moulded rubber, and a combined front wall cover plate and handle structure positioned at one end of said tray and being formed partly of metal and partly of rubber.

6. A sharp freezing chamber of the type adapted to be utilized in connection with low sides of automatic refrigerating systems, comprising a tray and cube forming partitions formed generally of thin flexible elastic material, one of the end walls of said tray being relatively thick and adapted to integrally receive a cover plate and handle whereby to form a combined front wall cover plate and handle structure.

7. A sharp freezing container for use in connection with low sides of automatic refrigerating systems, comprising a tray and cube forming partitions formed generally of thin flexible elastic material, and a combined cover plate and handle structure of said same material and formed integrally with and at one end of said tray.

8. A sharp freezing container of the type adapted to be utilized with low sides of automatic refrigerating systems, comprising a tray formed of moulded rubber, and a combined relatively thick front wall, cover plate, and handle structure moulded integrally with said tray.

9. A sharp freezing container for use with low sides of automatic refrigerating systems, comprising a tray and cube forming partitions formed of moulded rubber, a rubber cover plate moulded integrally with one of the end walls of said tray, and a handle secured to said combined end wall and cover plate.

In testimony whereof I affix my signature.  
LLOYD G. COPEMAN.