

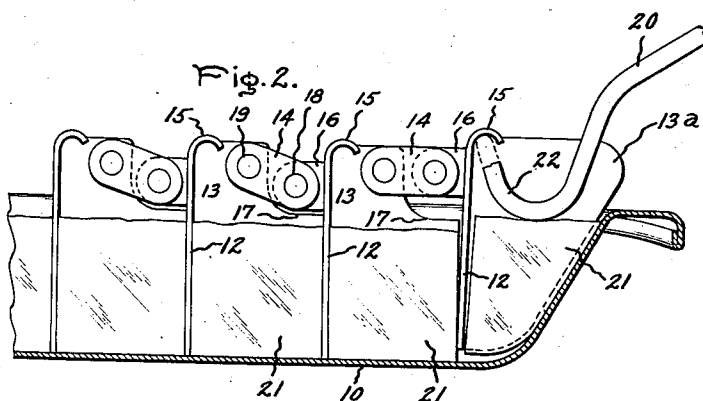
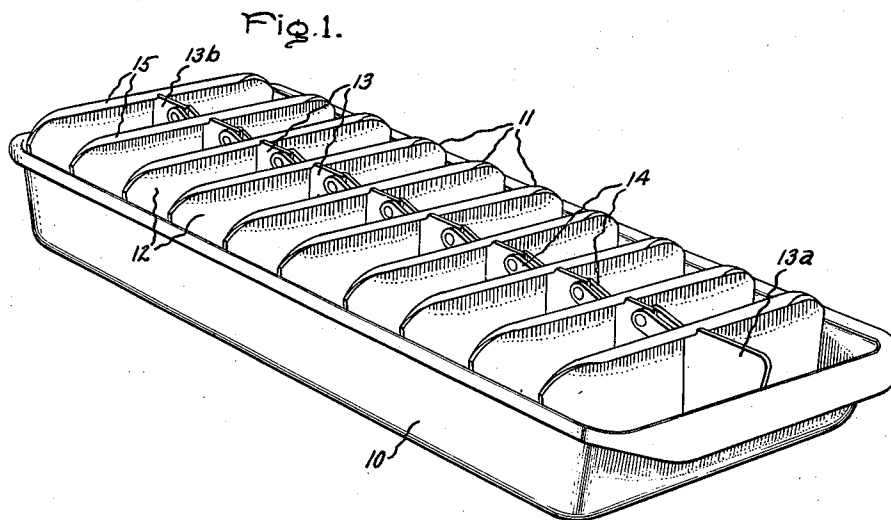
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FREEZING TRAY

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FREEZING TRAY

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4 Claims. (Cl. 62-108.5)

My invention relates to freezing trays, and particularly to freezing trays of the type having a grid assembly arranged to facilitate the removal of ice blocks without thawing, and constitutes an improvement over the invention disclosed and claimed in my copending application Serial No. 147,056, filed June 8, 1937, and assigned to the same assignee as my present invention.

It is an object of my invention to provide a freezing tray and partition assembly therefor including a plurality of similar partition elements cooperating with the tray to form ice block compartments and having an improved arrangement for retaining the elements in assembled relation and for facilitating the breaking of frozen bonds between the ice blocks and the freezing tray.

Further objects and advantages of my invention will become apparent as the following description proceeds, and the features of novelty which characterize my invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of my invention, reference may be had to the accompanying drawing in which Fig. 1 is a perspective view of a freezing tray and partition assembly embodying my invention; and Fig. 2 is an enlarged longitudinal sectional elevation of a portion of the tray shown in Fig. 1 and showing a tool or lever being employed to release ice blocks from the tray.

In Fig. 1, I have illustrated a freezing tray and a grid or partition assembly comprising a plurality of T-shaped partition elements 11 arranged in juxtaposition. Each of the partition elements 11 comprises a transverse wall 12 and a longitudinal wall 13 secured thereto and extending from one side thereof to form the T. The longitudinal wall of the front partition element indicated at 13a is shaped to fit the contour of the end of the tray. The several elements are arranged in alignment longitudinally of the tray, the longitudinal walls extending in the same direction and in alignment. The several elements are secured together by a plurality of double links 14 preferably arranged above the normal level of ice in said tray and which afford limited relative movement between the elements and retain them in assembled relation. Each of the partition elements is provided with an overturned flange 15 which constitutes an abutment for receiving a force directed against the top surface of an ice block to lift the element

from its position in the tray in a manner to be described hereinafter.

The arrangement of the links and the manner in which they facilitate the release of ice blocks from the tray is more clearly shown in Fig. 2. The longitudinal wall of each of the elements except the one farthest from the wall 13a and indicated at 13b is provided with a lug or projection 16 extending through the upper portion of the transverse wall 12 of the element and lying within a recess or cut-away corner 17 of the longitudinal wall of the adjacent element when the elements are in assembled relation. The links 14 are pivoted at one end to the lugs 16 as indicated at 18 and at their other ends to the upper portions of the adjacent longitudinal walls as indicated at 19. The pivot points 18 are lower or nearer the bottom of the tray than the pivot points 19. For this reason, when one of the elements 11 is raised or moved away from the tray with respect to an adjacent element on its left side, as indicated in Fig. 2, the two elements of the pair are separated and a movement longitudinal of the tray is imparted to the element being raised. This longitudinal movement is caused by the rotation of the raised element about the pivot point 19, the link 14 forcing the elements apart until it has been raised to a position substantially that of the link 14 near the end of the tray shown in Fig. 2. The partition element at the right end of Fig. 2 is shown being raised by a bifurcated hooked lever 20 which engages the top surface of an ice block 21 in the tray and the under side of the flange 15 and exerts a force between the ice block and the flange to lift the partition element. The lifting of the partition element in this manner breaks the frozen bonds between the ice block and the walls 12 and 13a of the partition element and on upward movement of the element also breaks the bond between the ice block and the tray due to the longitudinal movement imparted to the element which forces the block against the inclined end of the tray and breaks it free. The remaining blocks 21 may readily be broken free in the same manner by lifting the partition elements in succession from the right to the left end of the tray, the slight longitudinal movement in each case being sufficient to break the frozen bond between the tray and the ice block. In this manner, the ice blocks are broken free from the partition element and from the tray and any desired number of pairs of ice blocks may be broken free and removed, it being obvious that the partition elements may

be rotated upwardly and out of the way in order that one may pick out the blocks of ice.

In operation the partition assembly is placed in the tray and the tray filled with water to a level approximately that indicated as the top of the ice blocks in Fig. 2, this level being such that the hooked end of the lever 20 indicated at 22 can easily engage a flange 15 and also rest on the top surface of an ice block 21 a sufficient distance away from the transverse wall 12. The tray filled with water is then placed in the freezing unit of a refrigerating machine and the water allowed to freeze. When it is desired to remove the ice blocks from one or more of the partition elements the tray may be removed from the freezing element, placed on a suitable supporting surface, and the tool 20 employed to release the ice blocks from the first partition element or right-hand end of the tray, as shown in the drawing. The ice blocks frozen to the partition elements not lifted by the tool 20 remain frozen to the tray and after the freed ice blocks have been removed, the tray may be returned to the freezing unit.

While I have described and illustrated my invention in connection with a freezing tray for household refrigerators, other applications will readily be apparent to those skilled in the art. I do not, therefore, desire my invention to be limited to the particular construction illustrated, and I intend in the appended claims to cover all modifications within the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In combination, a freezing tray and a removable partition assembly arranged to cooperate therewith to form a plurality of ice block compartments, said partition assembly including at least one pair of transverse partition elements spaced apart longitudinally of said tray, and a link connecting the elements of said pair of elements above the normal level of ice in said tray and affording relative movement therebetween, said link being arranged to force said elements apart a limited distance longitudinally of said tray when one of said elements of said pair is moved outwardly from said tray with respect to the other element of said pair to facilitate the breaking of a frozen bond between said tray and an ice block formed adjacent said one element.

2. In combination, a freezing tray and a removable partition assembly arranged to cooperate therewith to form a plurality of ice block compartments, said partition assembly comprising a plurality of similar transverse partition elements arranged in alignment longitudinally of said tray, and a plurality of links connecting said elements above the normal level of ice in said tray and affording limited relative movement between said elements, each two adjacent ones of said elements being connected by at least one

of said links, the one of said links connecting any two of said elements being arranged to force one of said two elements a limited distance longitudinally of said tray when said one element is moved outwardly from said tray to facilitate the breaking of a frozen bond between said tray and an ice block frozen adjacent said element.

3. In combination, a freezing tray and a removable partition assembly arranged to cooperate therewith to form a plurality of ice block compartments, said partition assembly including a plurality of similar partition elements arranged in alignment longitudinally of said tray, means including links for connecting said elements in assembled relation and for affording limited relative movement therebetween, each of said elements having an abutment for receiving a force exerted between said element and the top surface of an ice block in a compartment formed adjacent said element to move said element away from the bottom of said tray and facilitate the breaking of a frozen bond between said ice block and said element, the one of said links connecting any two of said elements being secured to one of said two elements at a point more remote from the bottom of said tray than the point at which the link is connected to the other of said two elements whereby upon application of a force to move said other of said two elements away from the bottom of said tray a movement longitudinally of said tray is imparted to said other element to facilitate the breaking of a frozen bond between an ice block and said tray.

4. In combination, a freezing tray and a partition assembly arranged to cooperate therewith to form a plurality of ice block compartments, said partition assembly comprising a plurality of similar partition elements, each of said partition elements including a transverse dividing wall and a longitudinal dividing wall extending from one side of said transverse dividing wall and forming walls of the ice block compartments, said partition elements being arranged in juxtaposed relation with said longitudinal dividing walls extending in the same direction and in substantial alignment, a lug on one of said partition elements extending from the transverse wall thereof on the side away from the longitudinal wall thereof and toward an adjacent partition element, and a link pivotally connected to said lug and to the longitudinal wall of said adjacent element, the pivotal connection of said link to said lug being nearer the bottom of said tray than the pivotal connection of said link to said adjacent element whereby movement of said one element away from said tray produces movement of said element longitudinally of said tray to facilitate the breaking of a frozen bond between said tray and an ice block in a compartment formed by said element.

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