

Sept. 5, 1950

A. J. NICKOLAS

2,521,475

FREEZING SECTION

Filed April 15, 1948

Fig. 1.

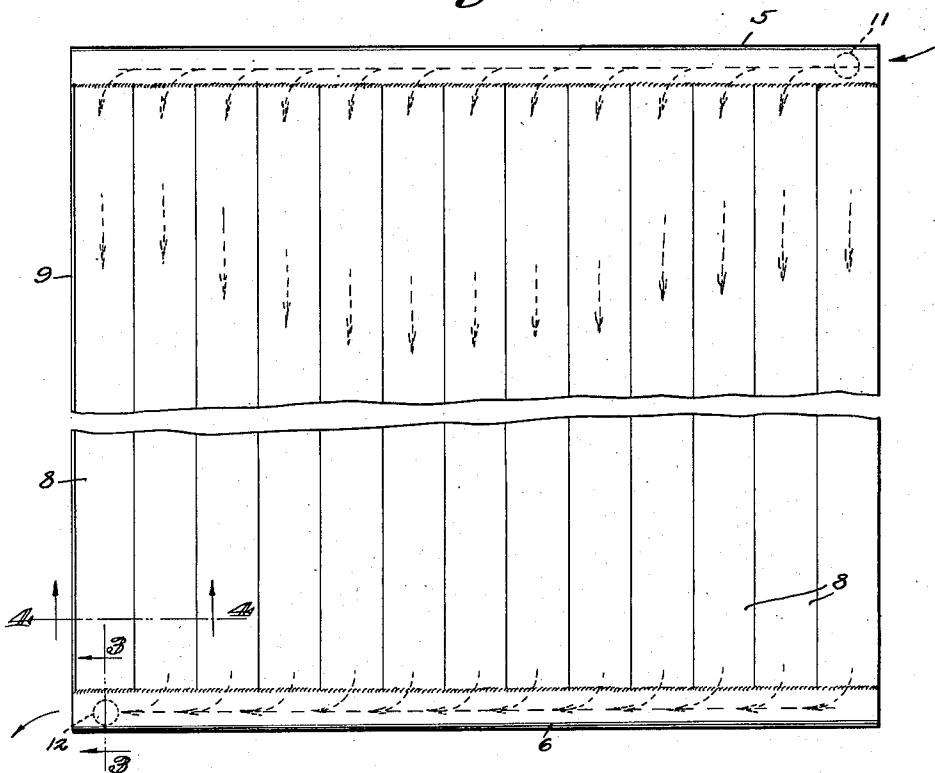


Fig. 2.

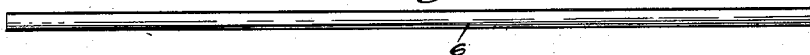


Fig. 3.

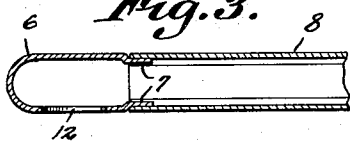


Fig. 4.

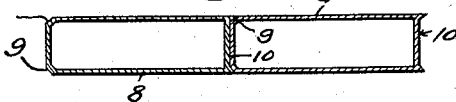
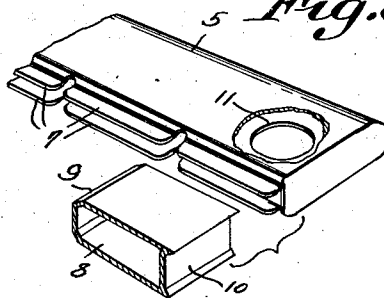


Fig. 5.



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FREEZING SECTION

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2 Claims. (Cl. 257-256)

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This invention relates to a freezing unit made up of a plurality of independent sections constructed and arranged in such a way that the construction will present one of great strength per unit of weight, and will at the same time provide a structure which will facilitate speed in freezing of a smooth ice surface from the beginning of the freezing process, by maintaining a uniform depth of freezing solution throughout the entire sections insuring against blank spaces being formed which would cause an uneven ice surface, the construction of the device being especially designed for use in forming portable ice rinks.

Another object of the invention is to provide a device of this character wherein a plurality of longitudinally extended passages are connected at both ends by manifolds which serve to equally distribute and supply all of the passages of the sections with the freezing solution, whereby the freezing mixture is forced through a section directly without coiling back and forth, with the resultant loss of freezing efficiency.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, herein-after more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing

Figure 1 is a plan view of a freezing unit constructed of a plurality of sections formed in accordance with the invention.

Fig. 2 is an edge elevational view thereof.

Fig. 3 is a sectional view taken on line 3-3 of Fig. 1.

Fig. 4 is a sectional view taken on line 4-4 of Fig. 1.

Fig. 5 is a fragmental perspective view illustrating the manner of connecting the rectangular tubes with the manifolds at the ends of the tubes.

Referring to the drawing in detail, the invention embodies a plurality of units made up of sections each of which comprises manifolds 5 and 6, which manifolds are of tubular formation, and have one side open, the open side being formed into spaced flanges 7 which are slightly offset with respect to the outer surfaces of the manifolds, as clearly shown by Fig. 3 of the drawing.

These flanges 7 afford means whereby the rectangular tubes 8 may be secured to the mani-

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folds, the spaces between the flanges 7 accommodating the ends of the side walls of the tubes 8, where they are bonded to the flanges 7 as by welding.

As clearly shown by Fig. 4 of the drawing, one side wall of each tube 8 is formed with offset corners 9 that are disposed at oblique angles with respect to the upper and lower surfaces thereof, the opposite side wall of each rectangular tube being slightly recessed as at 10 to accommodate the adjacent side wall of the rectangular tube positioned thereagainst, in the formation of the freezing unit.

An inlet opening indicated at 11 is formed at one end of the manifold 5, while the manifold 6 is provided with an outlet opening 12 at the opposite end of the unit, so that the freezing mixture or solution is forced directly through the various tubes 8, where the solution passes into the manifold 6 and is exhausted through the opening 12 to be returned through the unit to accomplish the freezing step in the formation of an ice rink or other construction for which the freezing unit may be used.

The freezing units may be placed together in parallel relation with each other in the formation of a skating rink, the size of the skating rink being determined by the number of units used.

While I have shown and described the device as particularly adapted for use in the construction of portable ice skating stages, for hotels, cabarets, night clubs, theaters or the like, it is to be understood that the device may be effectively employed in shelving, refrigerator and ice box structures.

Due to the construction shown and described, I have provided a structure for use as above described, wherein the use of sand and heavy pipe coils is eliminated, thereby greatly reducing the weight on the supporting floor of the device.

It will of course be understood that a suitable waterproofing material will be used between the units and the supporting floor, according to the use for which the invention or units are installed.

Having thus described the invention, what is claimed is:

1. An ice freezing unit comprising a pair of spaced parallel manifolds having closed ends, each manifold having one of its longitudinal sides open, pairs of flanges formed along the open sides of the manifolds, the pairs of flanges being spaced apart, rectangular connecting tubes having open ends fitted over pairs of flanges of the manifolds and being welded thereto, connecting the tubes and manifolds whereby the tubes connected with

the manifolds at both ends of the tubes provide for circulation of freezing solution directly through the tubes in one direction, and said manifolds having inlet and outlet openings through which freezing solution circulates.

2. A freezing unit comprising a pair of spaced parallel manifolds having closed ends, each manifold having one of its longitudinal sides open, pairs of flanges extending laterally along the open sides of the manifolds, the pairs of flanges being spaced apart, rectangular connecting tubes having open ends fitted over the pairs of flanges of the manifolds and being welded thereto connecting the tubes and manifolds whereby the tubes are connected with the manifolds at both ends of the tubes, said tubes being arranged in parallel relation with respect to each other having their longitudinal edges contacting each other, and said manifolds having inlet and outlet openings through which freezing solution circulates.

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