July 28, 1942. E. C. STREATER 2,291,116

COOLER CONSTRUCTION

Filed April 25, 1940 2 Sheets-Sheet 1

Fig. 1

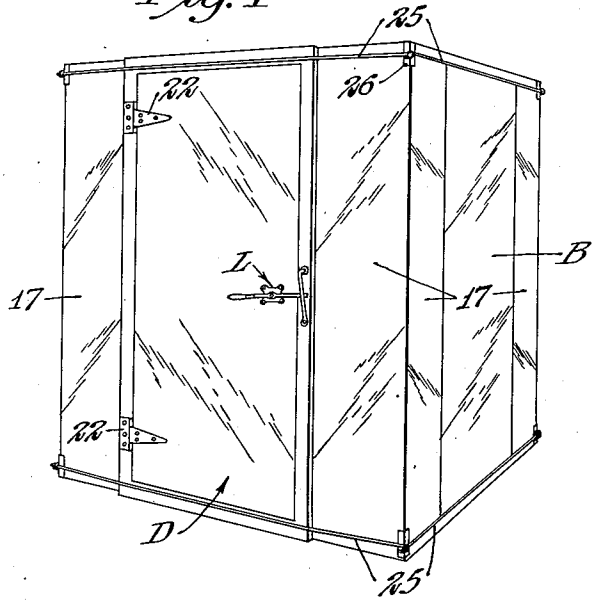


Fig. 2

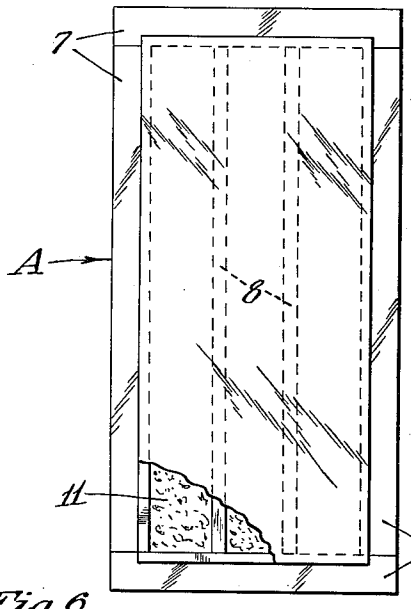


Fig. 3

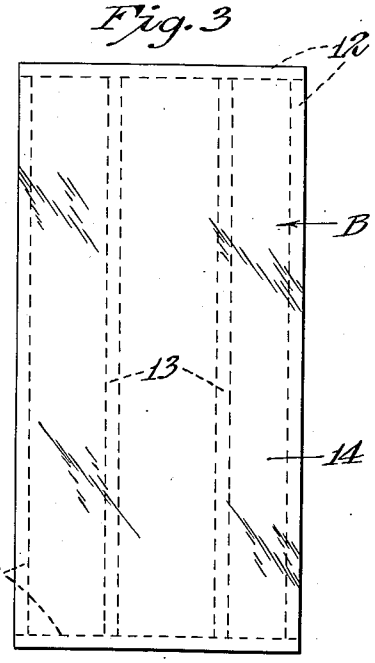


Fig. 6

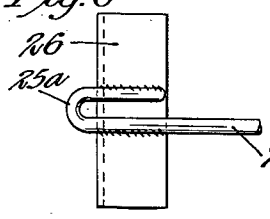
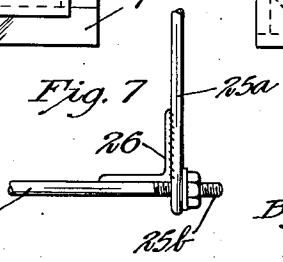


Fig. 7



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Fig. 4

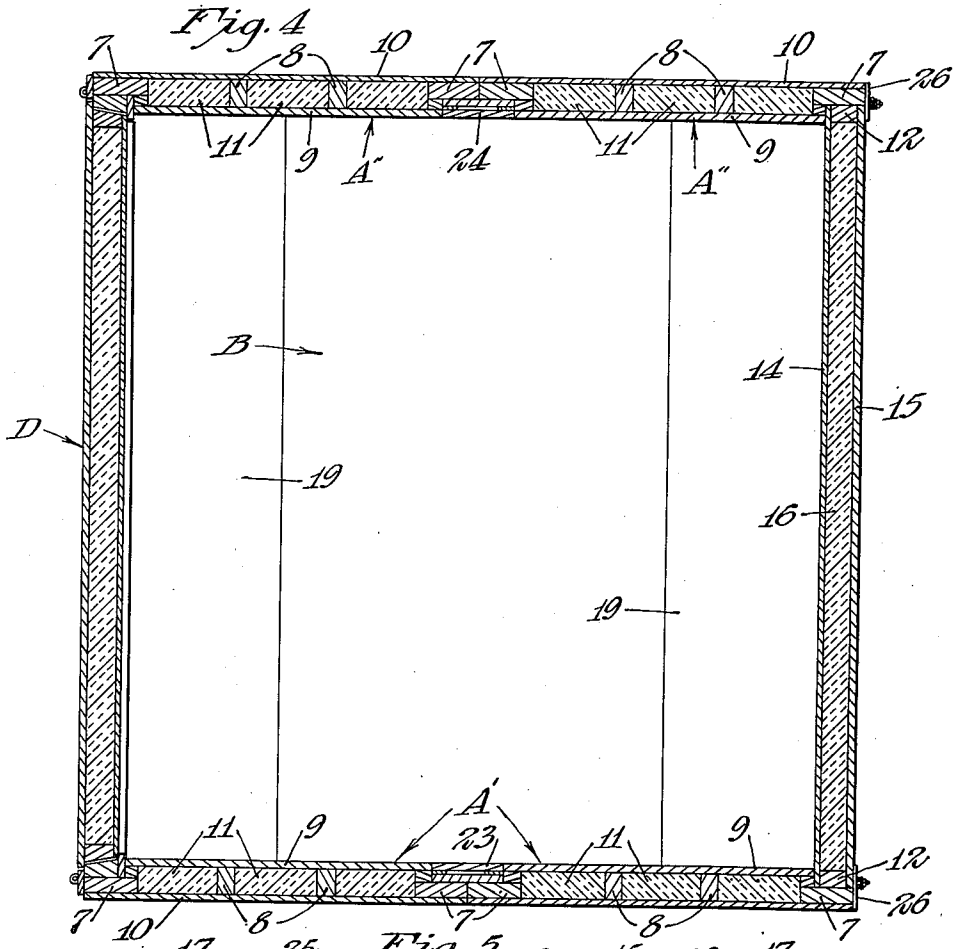
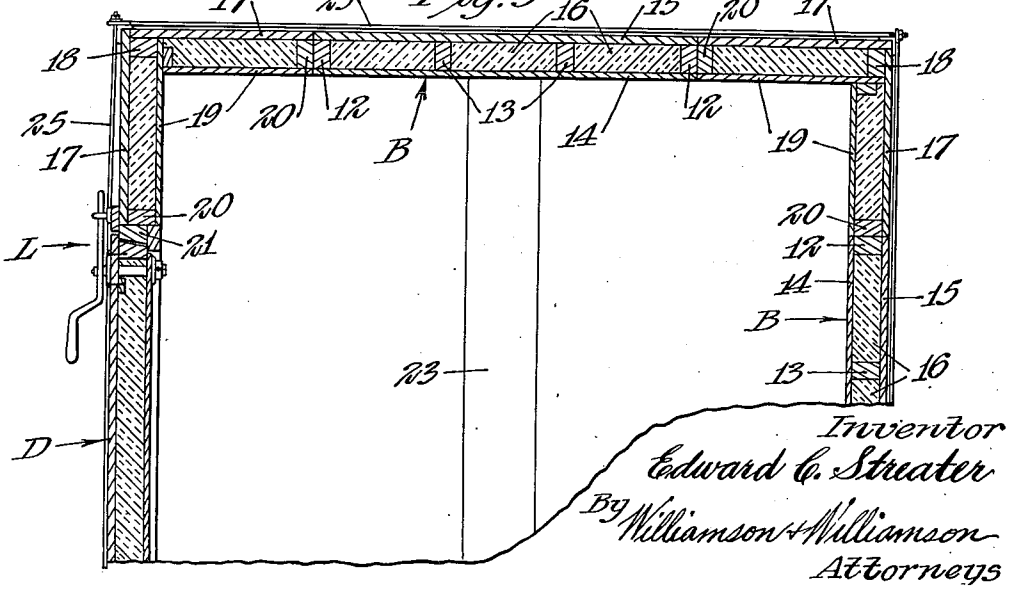


Fig. 5



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UNITED STATES PATENT OFFICE

2,291,116

COOLER CONSTRUCTION

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Application April 25, 1940, Serial No. 331,613

1 Claim. (Cl. 20—2)

This invention relates to refrigerating structures and more particularly to that type known as "walk-in" coolers such as the large coolers generally used in butcher shops and similar establishments and wherein they are of such size that it is possible to enter the structures to hang or remove meat and other perishable products.

It is an object of my invention to provide a cooler structure made up of a plurality of parts which are preformed at the factory and which can be quickly and easily assembled on the job with a considerable saving of time and expense.

Another object of the invention is to provide a plurality of identical units arranged in such a manner that the size of the cooler can be altered with great ease or wherein coolers of different sizes can be erected merely by the addition of panel units.

A further object of my invention is the provision of floor and ceiling units which are identical in structure and which can be interchanged to provide what amounts to a new floor unit after the original floor panels have been used for some time.

Still another object of the invention is to provide means for tying the structure together in a simple manner yet in such manner that the different preformed sections of the cooler are securely held together to provide strength and to insure good insulating qualities.

These and other objects and advantages of the invention will more fully appear from the following description made in connection with the accompanying drawings, wherein like reference characters refer to the same parts throughout the views, and, in which:

Fig. 1 is a perspective view of an assembled cooler;

Fig. 2 is an elevation of a floor or ceiling panel;

Fig. 3 is an elevation of a wall panel;

Fig. 4 is a vertical section through an assembled cooler;

Fig. 5 is a fragmentary horizontal section through a cooler;

Fig. 6 is a fragmentary view of one end of a tie wire and clip used to keep the various sections together; and

Fig. 7 is a fragmentary view of two connected tie wire ends.

In Fig. 2 there is shown a typical floor or ceiling panel A comprising a frame portion 7 with a plurality of longitudinal reenforcing members 8 extending lengthwise thereof and, as shown in Fig. 4, a pair of inner and outer panel members 9 and 10 are secured to the frame and confine a suitable insulating material 11 between them. It will be seen from Fig. 4 that the frame portions 7 extend outwardly a greater distance than the inner panel members 9 while the outer panel members 10 have their edges substantially in registration with the outer edge portions of the frame member 7.

In Figs. 3 and 5 are shown wall panels B which comprise frame members 12 with intermediate reenforcing strips 13 and inner and outer panel walls 14 and 15 which are adapted to confine insulating material 16. It will be seen in Fig. 5 that the wall panel elements 14 and 15 are of the same size and substantially coincide with the frame members 12.

In Fig. 5 there are also shown two corner sections which comprise outer side portions 17 which lie at right-angles to each other and are joined at a corner post 18. The corner unit is provided with inner walls 19 and vertical edge pieces 20 are disposed between the inner and outer walls at their edges to confine insulating material, as described above, in connection with the other panel units.

There is also shown in Figs. 1 and 5 a door indicated generally at D which is provided with a frame 21 and the door is hung on the frame with suitable hinges 22 and latch mechanism is provided as is generally shown at L. The entire door unit with its frame 21 is of the same dimensions overall as one of the wall panels B so that it can be placed in the wall of a cooler structure at any place where a wall panel can be positioned.

In assembling the structure I first position the two floor panels which in Fig. 4 are designated at A' with their longitudinal frame portions 7 abutting each other, and then place a strip 23 over the exposed portions of the frame 7 which abut at the sides of the adjacent panels and nail said strip 23 to keep it in position. With the two floor panels in place three projecting frame sides 7 on each panel provide a continuous step or sill upon which the wall panels and corner units may be mounted. It will be seen from Fig. 5 that each side of each corner unit is one-half the width of one of the wall panels B, and since the corner unit is rigidly constructed in one piece it provides a very substantial corner structure for the cabinet. If desired all four corner units can be placed in position with their lower ends resting on corner portions of the floor panel frames 7, and wall panels B can then be placed between the spaced vertical edges of adjacent corner units with the vertical edges of the wall panels in abutment with the edges of said corner units. The

ceiling panels which are designated at A^2 in Fig. 4 can then be placed in position with their outwardly extending frame portions overlying the top edges of the wall panels B. A strip 24 connects the adjacent edges of the ceiling panels in the same manner as the strip 23 which is placed between the shouldered or stepped portions of adjacent edges of the floor panels A'.

During this portion of the erection of the cabinet the walls can be temporarily tacked to keep them from falling, but at this point in the erection it is next necessary to tie the entire structure together. This is done by placing metal rods 25 along each side of the cooler at the top and bottom thereof. The looped end of one of such rods is shown in detail in Fig. 6. Each of the rods 25 is provided with a straight threaded end and the opposite end thereof is turned over to provide a hook to receive the straight threaded end of a rod extending along a side of the cooler at right-angles to the first rod. In the detail in Fig. 7 the looped rod end portion extending vertically at the right-hand end of the figure is numbered 25*a*, and the threaded end of the rod which extends through the loop is numbered 25*b*. Corner clips 26 are welded to the looped ends of the rods and are adapted to be at the corners of the corner units, and when the nuts on the threaded rods are drawn up on their rods they will firmly draw the corner units toward each other and clamp the wall units between them in abutting edge-to-edge relationship and simultaneously the floor and ceiling panels will be gripped at their stepped edges to firmly tie all of the panels and corner units together into a rigid structure. It is, of course, understood that one of the standard wall panels is to have a door unit positioned in its place. This can be done, of course, since the entire door unit has the same dimensions as the standard wall panel.

A cooler such as the one described above can be fabricated at the factory and shipped in knocked-down condition to the point of erection. Since the wall panels and door unit are of equal size it is not necessary to install them in any particular relationship and the same is true of the floor and ceiling panels which are of identical structure, and in the initial erection it is unnecessary to distinguish between the panels used for the floor and ceiling. After the cooler has been used for some time the floor generally becomes saturated with moisture and softens since it is made of wood. Rather than replace the floor when its condition has become too bad for further weight bearing the cooler can be dismantled in a few moments time and reassembled with the floor panels and ceiling panels reversed. The ceiling panels thus provide a completely new floor structure for the cooler and the moisture saturated and possibly worn original floor panels will still function with perfect satisfaction as ceiling units.

Another important feature of the invention is the ability to erect the structure in a confined space. Unlike structures which are built up on the job it is unnecessary to have much space at the sides and back of the cooler during erection. The rigid corner units and the intermediate wall panls and door can be placed in position from within the confines of the cooler and even the ceiling panels can be slipped into place by a man standing inside of the walls. If the space around the cooler is very small the tie rods 25 can be loosely held in position before tightening by temporary nails or staples.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What is claimed is:

In a cooler structure and the like, a floor panel having a stepped portion at its edges, a ceiling panel having an inverted stepped portion at its edges, wall panels having their upper and lower ends fitted into the stepped portions of said floor and ceiling panel edges, tie rods extending substantially horizontally along the outer sides of said wall panels under tension to pull said wall panels together and to camp the stepped portions of said floor and ceiling panels between upper and lower edges of said oppositely disposed wall panels, said tie rods comprising elongated rod-like elements each having a straight threaded and nutted end and having its opposite end reversely bent and spaced from the remainder of the rod at least at the bend thereof, and a corner clip having a portion thereof secured to the bent end of said rod and spaced inwardly from the bend in said rod, said corner clip and said bent rod portion comprising a loop for receiving the straight end of an adjacent rod, and said corner clip being positioned to receive edge portions of adjacent panels at a corner joint.

EDWARD C. STREATER.