July 10, 1934. F. KOCH 1,966,012

CONTAINER

Filed Oct. 5, 1929 2 Sheets-Sheet 1

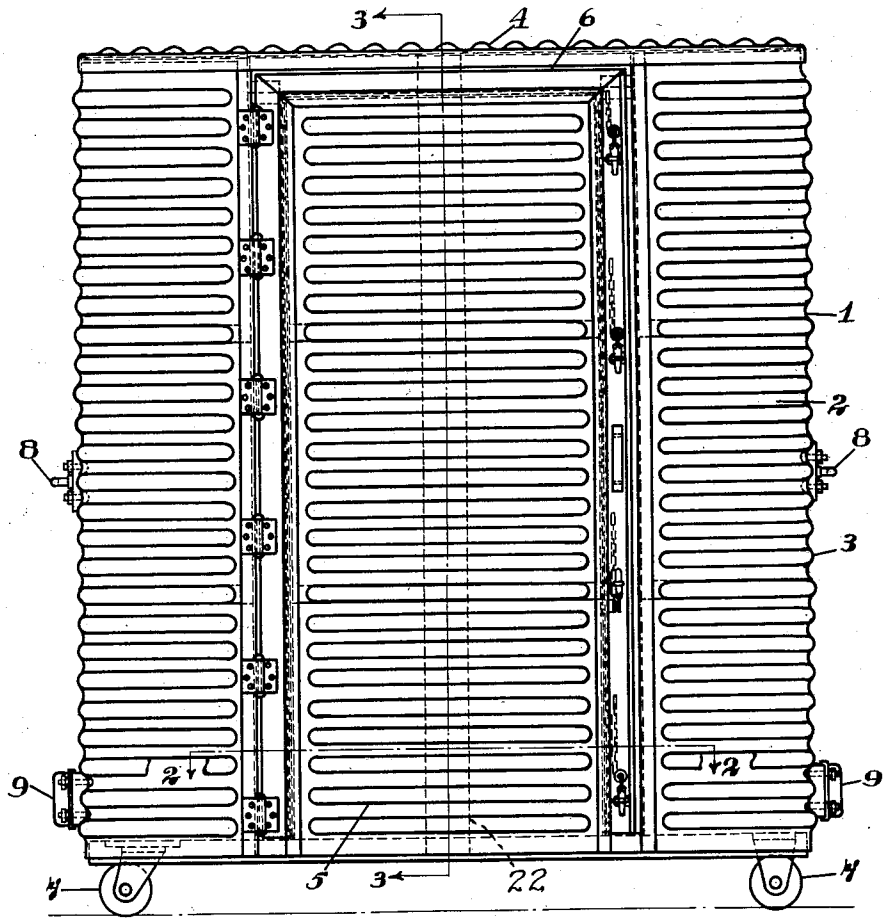


Fig. 1.

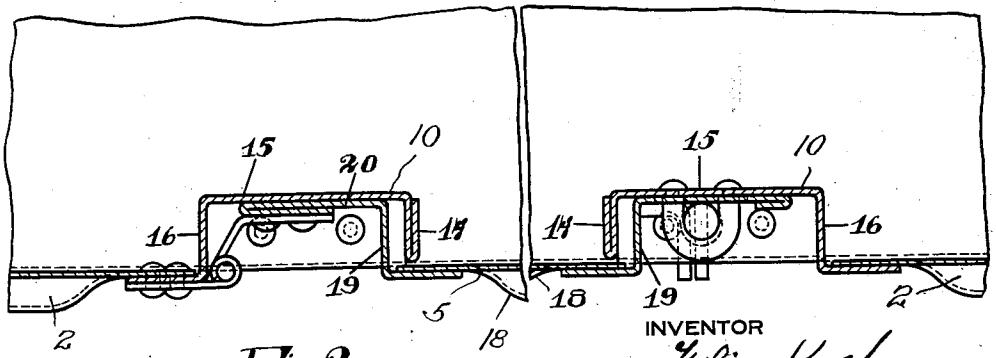


Fig. 2.

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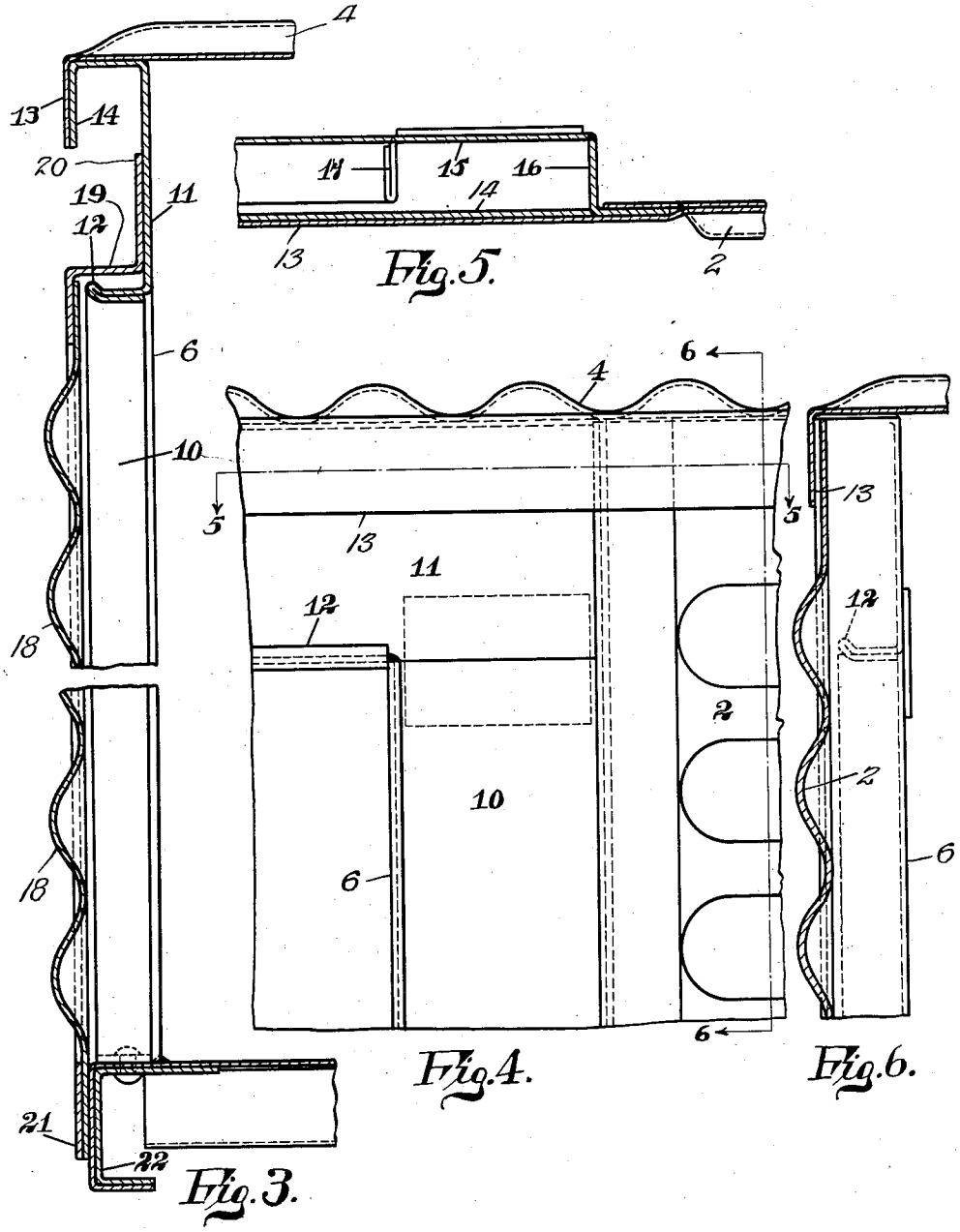


Fig. 5.

Fig. 3.

Fig. 4.

Fig. 6.

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CONTAINER

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Application October 5, 1929, Serial No. 397,631

10 Claims. (Cl. 105—366)

My invention relates to containers of the type which are manually handled on and off the car on to a loading platform and which are of a necessity made light enough to be easily handled by one or two men and yet be strong enough to withstand the rough usage which they are subjected to.

An object of my invention is to provide an L. C. L. container which is light enough to be easily handled when mounted on casters and having a door in one of the walls thereof which does not project beyond the wall of the container when in closed position.

Another object of my invention is to provide an L. C. L. container having a door in one of the walls thereof which when closed is weatherproof to protect the contained lading.

Another object of my invention is to provide a door frame in one of the walls of an L. C. L. container which is adapted to prevent water from entering the interior of the container between the door and door frame.

Referring now to the drawings, Fig. 1 shows in elevation, a container embodying my invention; Fig. 2 is an enlarged section of the door frame and door along the lines 2—2 of Fig. 1 with the mid-portion of the door broken away; Fig. 3 is an enlarged section through the door and container taken along the lines 3—3 of Fig. 1; Fig. 4 is an enlarged detail of one of the upper corners of the door frame showing the method of securing the door frame to the container wall; Fig. 5 is a section taken along the lines 5—5 of Fig. 4; Fig. 6 is a section taken along the lines 6—6 of Fig. 4.

Referring now in detail to the drawings where like reference characters refer to like parts, reference character 1 indicates a container having side walls 2, end walls 3 and roof 4 formed of corrugated sheets in order to provide great strength with a minimum weight of material. In order to dispense with extra framing members the end walls of the container have been made so as to overlap the side walls to adjacent the member 16 as shown in Fig. 2 and overlap the rear side wall to adjacent the splice plate 22 as shown in Fig. 1. It is to be understood, however, that if desired the usual structural frame work may be provided. Although the container has been illustrated as having the walls and roof formed of corrugated sheets, it is to be understood that sheets of other shape than corrugated may be used when desired. Hingedly mounted on one of the walls of the container is a door 5 which is even with the adjacent wall when in closed position so that no portion of the door projects beyond the container to become damaged during transit. Mounted in the wall of the container and extending within the container is a door frame 6 which combines with the door to provide a weatherproof seal to prevent the enclosed lading from becoming damaged by water. Mounted beneath the container are casters 7 on which the container may be freely moved on to and off the car from a loading platform or to any convenient storage place. One of these casters is preferably made swiveled so as to permit easier handling. Handles 8 are mounted on the end walls of the container to provide a convenient means of controlling and moving the container. A buffer block 9 of wood or other material is provided near the base of the container in order to provide a convenient buffer to prevent injury to the container when loading or unloading or in transit from one point to another.

Since containers of the type illustrated are mainly used for shipping less than carload lots of small package goods and are usually sent direct from the manufacturer or distributor to the local retailer without being re-packed, it is desirable that the interior of the container be readily accessible so as to permit rapid loading of the container and also that the doors when closed be weatherproof to protect the lading. Other desirable features are a means of securely locking the door to prevent theft of the contents of the container and a design of door which will not be easily damaged while the container is being moved from one point to another. In order to combine all of these desirable features in a container, I have provided a door frame 6 in one of the walls of the container which is preferably of a substantially U-shaped in cross section and which projects inwardly of the container to permit the door to fit down in the frame when closed so as not to project beyond the adjacent portions of the wall of the container. In the embodiment of the invention as illustrated in the drawings, I have provided U-shaped members 10 at the sides of the door frame which project inwardly of the container and are secured to the side wall 2. Along the top of the door frame is provided a substantially U-shaped member 11 which is secured to the roof 4 of the container and the adjacent portions of the side wall 2. The joints between the members 10 and 11 are preferably made water-tight by welding or other convenient means. The members 10 along the sides of the door frame are securely fastened to the floor and the joint made water-tight by welding or other convenient means. The portion of the member 11 along the top of the door frame has an up-turned flange 12 formed therein which is substantially equal in length to the width of the door opening and which diverts any water entering the channel portion 11 of the door frame towards the sides of the frame into the members 10. The roof 4 has a downward depending portion 13 to which the flange 14 of the member 11 is secured and which forms a hood over the door frame and closed

door to prevent water from dripping off the roof down on to the joint between the door and door frame.

A door frame made as above described provides a substantially U-shaped member defining a door opening in the wall of the container and having a base portion 15 which provides a bearing for the door and substantially vertical sides 16 secured to the wall of the container and a side 17 which is over-lapped by the container door so as to prevent access of water into the container. The container door 5 is preferably made of corrugated sheets in order to be light in weight and yet of sufficient strength to resist the rough handling which it is subjected to. This door comprises a main body portion 18 and flanged portions 19 extending along both sides and the top of the door. Suitable hinges are secured to the flanged portion 19 on one side of the door and to the adjacent wall of the container. By referring to Figs. 2 and 3 of the drawings, it will be noted that the door when in closed position has the flanged portions 19 fitting down into the channel formed by the door frame and that these flanged portions 19 over-lap the portion 17 of the door frame to form a weather-proof seal. Since the door frame is made water-tight no water can leak into the interior of the container around the joints of the door frame, and the seal formed by the flange 17 of the frame and 19 of the door prevent any water which may escape past the portion 20 of the flange 19 and the base portion 15 of the door frame from entering the interior of the container. Along the lower portion of the door is a portion 21 extending substantially the full width of the body portion 18 of the door and over-lapping the portion 22 of the wall 2 below the door opening to prevent water from entering the container around the bottom of the door. When it is desired to lock the door the door locking means can be mounted in the flange 19 of the door on the opposite side of the door from the hinges and secured to the door frame. In this manner the locking means and handle for convenience in opening the door can be mounted in the U-portion of the frame below the adjacent side wall so as to prevent their being broken off in handling or damaging the door by catching on an obstacle.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a container having side and end walls and roof formed of corrugated sheets, an opening in one of the walls and a hinged door for closing said opening, said door when closed having no part projecting beyond the corrugations formed in the adjacent wall.

2. In a container having side and end walls and roof formed of corrugated sheets, an opening in one of the walls, a door for closing said opening, said door when closed having no portion projecting beyond the corrugations formed in the adjacent wall, and having a portion extending below the door opening and over-lapping the adjacent outer wall.

3. In a container having side and end walls and roof formed of corrugated sheets, an opening formed in one of the walls, a substantially U-shaped member extending along each side of the opening, secured to the adjacent wall and extending within the container, a substantially U-shaped member along the top of said opening secured to the roof and extending within the container and a door for closing said opening, said door when closed fitting into the U-shaped opening formed by the members along the sides and top of said opening and having no portion extending beyond the corrugations in the adjacent wall.

4. In an L. C. L. container having side and end walls and roof formed of corrugated sheets, a door frame defining an opening in one of the walls thereof, an outstanding flange on said door frame, a door for closing the opening in said frame, said door when closed being wholly within the plane of the wall adjacent said frame, a flange on said door, said door flange enclosing said frame flange.

5. In an L. C. L. container combining maximum capacity and minimum weight for a given space displacement and having side and end walls and roof of corrugated sheets, a substantially U-shaped depression in one of said walls defining a door opening, a door for closing said opening, said door being wholly within the plane of the adjacent wall when in closed position, a flange on said door fitting down into said substantially U-shaped depression to form a weather-proof seal.

6. In an L. C. L. container having side and end walls and roof of corrugated sheets, an opening in one of said walls, a door for closing said opening, inwardly extending flanges on the sides and top of said door, and channels formed in the wall of said container adjacent the sides of said opening to receive the inwardly extending flanged portions of said door.

7. In an L. C. L. container having a door opening in one of the walls thereof, the combination of U-shaped members formed in the wall adjacent said opening and within the plane of the side of the container and a door for closing said opening, said door when closed fitting into the frame formed by said U-shaped members.

8. In an L. C. L. container having a door opening in one of the walls thereof, the combination of substantially U-shaped members formed in the wall adjacent said opening and extending within the container, a door for closing said opening, said door when closed fitting into the frame formed by said substantially U-shaped members, and an upstanding edge formed along the top of said frame below the top of said door to prevent water from entering the container between the top of said frame and door.

9. In an L. C. L. container the combination of a door frame defining an opening in one of the walls thereof and a door for closing said opening fitting into said frame and overlapping a portion thereof to form a weather-proof seal, said frame comprising a U-shaped depression in said wall along the sides and top of said opening and forming a water tight seal at the bottom of said opening, said door having a bottom portion overlapping said wall at the bottom of the door opening.

10. In a container, side and end walls formed of corrugated metal, said end walls having portions thereof angularly disposed to said end walls and forming a portion of one of the sides, a corrugated metal roof overlying and enclosing said side and end walls, said side and end walls and roof being self-sustaining.

FELIX KOCH.