FREIGHT HANDLING CONTAINER FOR TRANSPORTATION OF GOODS

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Fig. 5

Fig 6

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This application is a continuation in part of my earlier application Ser. No. 406,713 filed November 12, 1929, wherein I disclosed an improved packing case or freight handling container constituted by a series of telescopic uprights connecting together rigid top and bottom members and side walls independent of said telescopic uprights, the height of which is adapted to correspond at any moment with that of the said uprights. As described in my prior specification the subject matter of which is disclosed with further detail in the present specification, ropes may be secured to the bottom member for allowing an easy handling of the container. The side wall, as disclosed in the prior specification consists of superposed series of metal plates adapted to slide vertically over one another according to the total wall height desired, an inner waterproof wall, preferably of rubber-coated fabric, controlled by a pulley arrangement being adapted to be lowered from the rigid top member by an amount corresponding to the wall height used.

My invention as described in my prior and in the present specification has for its object a container showing the above advantageous features and furthermore the detail arrangements or modifications which will appear in the following description given by way of example of a freight-handling container according to my invention.

Fig. 1 is a front view of the closed container the side walls of which are partly shown broken away.

Fig. 2 is a perspective view of the container after removal of the outer plates and partial lifting of the inner waterproof curtain.

Fig. 3 is a plan view of the bottom or floor member.

Fig. 4 shows one of the devices used for securing the lower part of the inner curtain to the floor member.

Fig. 5 illustrates the device used for controlling the inner curtain.

Figs. 6 and 6a show the control means for the telescopic uprights.

Figs. 7 and 8 are detail views.

The container shown comprises a floor member 1 and a roof member 2 formed each by four suitably stayed U-iron beams connected by means of continuous upper and lower sheet iron surfaces. The members 1 and 2 are connected through six telescoping tubes formed each of two elements 5-5' suitably secured by means of collars to tubular elements 6, 6' welded respectively to the floor and roof elements. This is provided by causing the tubes 3 to engage the elements secured to the floor, said tubes being split at their lower end so as to ensure a proper securing by means of the collars 6 fastened over them.
the inner curtain and the two couples of transverse shafts 12—12' controlling the strips acting on the transverse sides thereof are controlled by a single removable crank 13 disposed on the outside of the middle of one small side of the roof; this crank controls directly the shaft 11 preferably through a ratchet wheel such as r, the shafts 12 being controlled through gear wheels connecting them with the shaft 11. A very reliable and regular control is thus obtained.

When the curtain is quite down, its lower edge is held in watertight contact with the floor by means of a number of presses (Fig. 4) constituted by a hook 14 bearing against the underside of the floor element and by a screw 15 screwed into said hook and bearing against the lining at the lower edge of the curtain 6.

On the outside of the curtain 6 are removably disposed two superposed series of four corrugated sheet irons 16—16' secured respectively to the roof and floor elements. This may be effected by means of a suitable hinge arrangement comprising for instance a pin 17' rigidly secured to the roof and floor inside a recess provided thereof and a cooperating female part 17' carried by the corresponding sheet iron. The upper sheet irons are disposed just outside the lower sheet irons along which they are adapted to move vertically when the uprights are being collapsed or extended. When in place the lower sheet irons are secured together at the angles of the container by means of inner rods engaging eye pieces welded to the inside of the ends of the lower sheet irons.

The upper sheet irons are set in place in their turn and secured together at the angles by means of four similar rods 18 (Fig. 8) engaging the superposed eye-pieces carried in alternation by each of the two corresponding sheet irons. Each rod 18 has at its upper end a hook adapted to engage an aperture provided in the web of the U-iron forming the roof. A suitable lock 8 disposed at each angle of the roof is adapted to bolt each rod so as to prevent any tampering of the container.

The telescopic tubes are controlled as shown in Fig. 3 by two removable cranks 19—19' controlling each the simultaneous displacement of the two upper tubular elements disposed on one same side of the container. The crank 19 (Fig. 6) for instance acts through the agency of the pins 22 and 24 and the aligned shafts 21 on the sunwheels 22' and 24' carrying the threaded shafts 23 and 25. These threaded shafts 23 and 25 control nuts such as 26 rigidly secured to the upper tubes whereby the extensional movement of the container is provided for. A scale is carried by the upper tubular elements whereby their movement may be adjusted in conformity with the corrugations of the upper sheet irons; obviously the corrugations of the two superposed series of sheet irons should correspond. At the same time this marking allows the volume afforded by the container for the extension given to it to be immediately ascertained.

I have shown at 20 (Fig. 1) the rings serving to hoist the container. These rings are secured through flat iron parts to the periphery of the floor member.

The operation of my improved container is easy. It is sufficient to remove the rods at the angles for removing laterally the corrugated sheet irons. Thereupon the inner curtain is raised and the grates panels serving to protect the curtain and to hold the goods in place during transportation are removed so as to allow the container to be loaded. By reason of the open space between two telescopic tubes, an automobile or the like bulky object may be easily loaded on the floor element. Or else I may use light platforms carried by supports adapted to be secured to the tubes 3 or 3' whereby a series of independently loaded compartments may be provided.

After the goods have been loaded, the reverse operations are effected for closing the container. For adjusting the height of the container the collars 8' surrounding the lower split tubes are opened and the cranks 19—19' are used for giving the desired height to the container. Thereupon the collars are fastened again so as to release the threaded shafts of the weight of the roof member.

When the container is empty, I may after removing the corrugated sheet irons, collapse the container entirely by removing the tubes 3 3', the grates panels and the corrugated sheets. The tubular elements rigidly secured to the roof element engage then the tubular elements rigidly secured to the floor element, the height of which is such as will allow the tubes, panels and sheet irons to be housed between the collapsed roof element and the floor element. The roof and floor are then securely attached together by means of four suitably locked hooks.

What I claim is:

1. A freight handling container comprising a rigid top and a rigid bottom member, a series of telescopic uprights connecting said members together, side walls independent of said uprights and the height of which is adapted to correspond at any moment with that of the said uprights and means for securing the side walls to the periphery of the top and bottom members.

2. A freight handling container comprising rigid top and bottom members, a series of telescopic uprights connecting said members together, side walls constituted by superposed series of metal plates adapted to slide vertically over another, independent of said uprights and the height of which is adapted to correspond at any moment with that of
said uprights and means for securing the side walls to the periphery of the top and bottom members.

3. A freight handling container comprising a rigid top and bottom members, a series of telescopic uprights connecting said members together, side walls constituted by superposed series of metal plates adapted to slide vertically over one another, independent of said uprights and the height of which is adapted to correspond at any moment with that of the said uprights and by an inner waterproof curtain, means for securing the metal plates to the periphery of the top and bottom members, means for hanging the inner curtain to the top member on the inside of and near the upper series of plates and means for lowering said curtain by the desired amount.

4. A freight handling container comprising a rigid top and bottom members, a series of telescopic uprights connecting said members together, side walls constituted by superposed series of metal plates adapted to slide vertically over one another, independent of said uprights and the height of which is adapted to correspond at any moment with that of the said uprights and by an inner waterproof curtain, formed by a single cover of rubber coated canvas provided throughout its surface with horizontal pleats, means for securing the metal plates to the periphery of the top and bottom members, means for hanging the inner curtain to the top member on the inside of and near the upper series of plates, pulleys disposed in the top element, elongated means wound over said pulleys and secured to corresponding points of the lower periphery of the curtain and common hand actuated means controlling said pulleys.

5. A freight handling container comprising a rigid top and bottom members, a series of telescopic uprights connecting said members together, side walls constituted by superposed series of metal plates adapted to slide vertically over one another, independent of said uprights and the height of which is adapted to correspond at any moment with that of the said uprights and by an inner waterproof curtain, formed by a single cover of rubber coated canvas provided throughout its surface with horizontal pleats, means for removably securing the metal plates to the periphery of the top and bottom members, means for hanging the inner curtain to the top member on the inside of and near the upper series of plates, pulleys disposed in the top element, means wound over said pulleys and secured to corresponding points of the lower periphery of the curtain, common hand actuated means controlling said pulleys and means for removably securing in a watertight manner the lower edge of the curtain to the bottom member near its periphery.

6. A freight handling container comprising a rigid top and a rigid bottom member, telescopic uprights connecting said members together at the corners, two superposed overlapping series of vertical plates hingedly secured to the top and bottom members respectively, eye pieces at the sides of the plates and rods passing through the eye-pieces of any two adjacent plates of either series.

7. A freight handling container comprising a rigid top and a rigid bottom member, telescopic uprights connecting said members together at the corners, two superposed overlapping series of corrugated iron sheets hingedly secured to the top and bottom members respectively, eye pieces at the sides of the plates and rods passing through the eye-pieces of any two adjacent plates of either series.

8. A freight handling container comprising a rigid top and a rigid bottom member, telescopic uprights connecting the corresponding corners of the said members together, hand-actuated means carried by the bottom member controlling the extension of the collapse of the uprights carried by an adjacent side of said member, side walls independent of said uprights and the height of which is adapted to correspond at any moment with that of the said uprights and means for securing the side walls to the periphery of the top and bottom members.

9. A freight handling container comprising a rigid top and bottom members, telescopic uprights connecting the corresponding corners of the said members together, hand-actuated means carried by the bottom member controlling the provision of supports carried by the top and bottom members and vertical gridded panels carried thereby on the inside and near the side walls.

10. In a freight handling container as claimed in claim 1 the provision of supports carried by the uprights and light horizontal partitions carried thereby and dividing the inside of the container into compartments.

11. In a freight handling container as claimed in claim 1 the provision of supports carried by the uprights and light horizontal partitions carried thereby and dividing the inside of the container into compartments.

12. A freight handling container comprising a rigid top and a rigid bottom member, telescopic uprights connecting said members together at the corners, two superposed overlapping series of corrugated iron sheets hingedly secured to the top and bottom members respectively, eye pieces at the sides of the plates, rods passing through the eye-pieces of any two adjacent plates of either series, and
means for locking the upper rods to the top rigid member.

13. In a freight handling container as claimed in claim 1, hooking means for connecting the collapsed top member to the bottom member and means for locking said means.

14. In a freight handling container as claimed in claim 1 the provision of a scale of volumes carried by the uprights.

15. A freight handling container comprising two rectangular horizontal members, telescopic uprights connecting the corresponding corners of said members, an outer removable side wall of variable height secured to the two members on the outside of the uprights and an inner collapsible side wall on the outside of the uprights secured to the upper member and adapted to be removabley secured to the bottom member.

In testimony whereof I affix my signature.  
JEAN GONZALEZ de ANDIA YRARRAZAVAL.