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KNOCKDOWN METAL CRATE.
APPLICATION FILED FEB. 4, 1914.

1,122,858.

Patented Dec. 29, 1914.

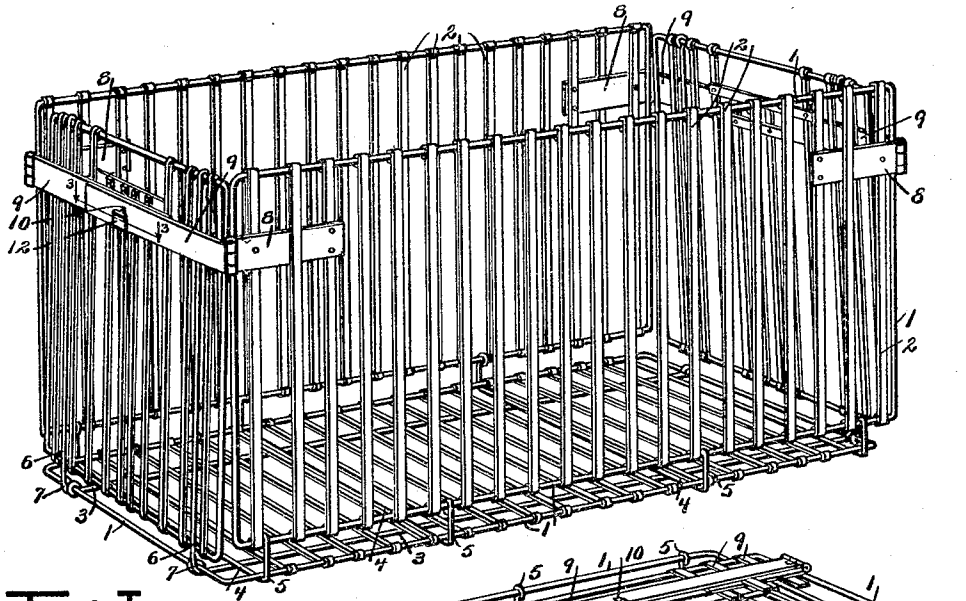


FIG. I.

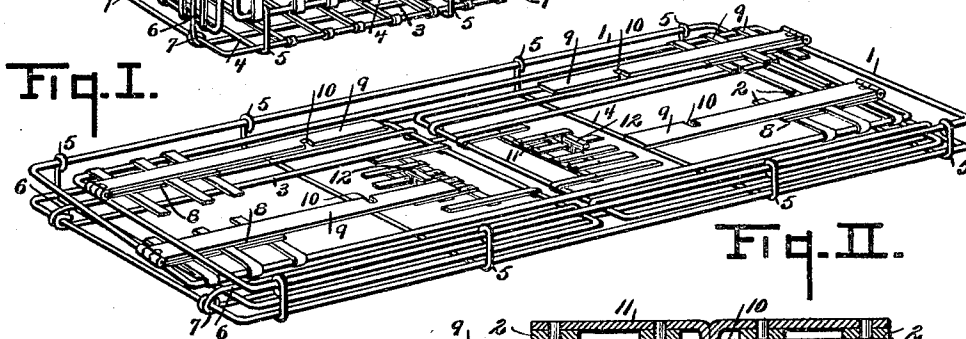


FIG. II.

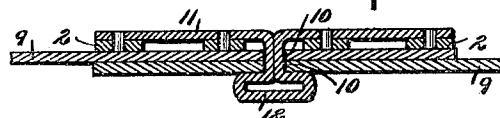


FIG. III.

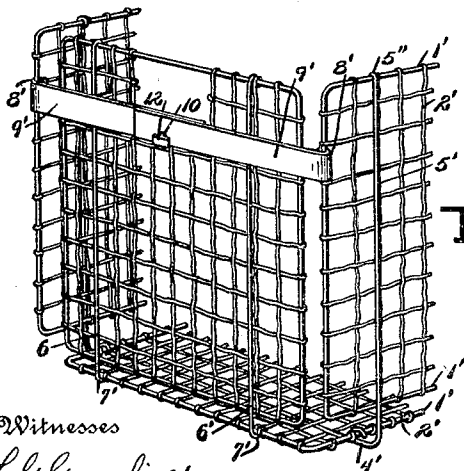


FIG. V.

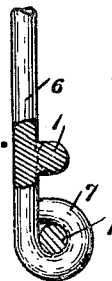


FIG. IV.

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KNOCKDOWN METAL CRATE.

1,122,858.

Specification of Letters Patent.

Patented Dec. 29, 1914.

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To all whom it may concern:

Be it known that I, JOHN H. CHAMBERLIN, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Knockdown Metal Crates, of which the following is a specification.

This invention relates to improvements in knockdown metal crates.

10 The object of this invention is, to provide a knockdown metal crate of simple and compact construction which is very strong when erected and is easily fastened in erected position and which can easily be collapsed in a

15 knockdown form for shipping or storing. Further objects, and objects relating to details and economies of construction and operation will definitely appear from the detailed description to follow.

20 I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

25 A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing forming a part of this application, in which:

30 Figure I is a perspective view of a crate embodying my invention. Fig. II is a perspective view of the crate folded in knockdown condition, part of the crate being broken away for convenience in illustration. Fig. III is a sectional view on the line 3—3 of Fig. I showing in detail the means for fastening the crate in erected position. Fig. IV is a detail view partly in section showing the means for hinging the end panel to the bottom. Fig. V is a perspective view of the

40 end of a crate constructed according to modified form of my invention.

In the drawing, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

50 Considering the numbered parts of the drawing my crate is comprised of a bottom member and side and end members. The structure of each of these members is practically the same and in the preferred form of my invention they comprise a rectangular wire frame 1, the parallel side members of which are connected by means of a plurality

55 of flat bars 2—2, running parallel to the ends

of said frame, the ends of said bars being wrapped around the side members. The bottom member is braced by means of a pair of wire rods 3—3 running parallel to the sides of the bottom member and having their ends wrapped around the ends of said bottom member. The bottom member is also provided with the wire rods 4—4 running parallel to the ends of said bottom and soldered or otherwise secured to the side members thereof. The ends of said wire rods 4—4 are turned up, as at 5—5 and are looped around the wire rods forming the lower sides of the side members, so that the side members are pivotally supported upon the ends of said wire rods preferably at a little distance above the bottom member. The end members are likewise provided with rods 6—6 extending parallel to the sides of said members and having their lower ends looped around the wires forming the ends of the bottom so that the end members are hinged in this manner to the bottom member. These rods 6—6 are looped around the tops of the end members at their upper ends and preferably of the ends welded to the bottom. The rods 6—6 are secured on the end members so that the lower sides of the end members are slightly lower than the lower sides of the side members. The object of this is to permit the end members to swing into place on top of the bottom when the crate is folded and to permit the side members to fold into place on top of the side members in a plane substantially parallel to the bottom.

90 Secured to the side members near the top thereof are straps 8—8 to which the straps 9—9 are hinged at points substantially in line with the sides of said side members. These straps 9—9 are adapted to swing on their hinges to positions at right angles to the side members. Each of the straps 9 is provided with a notch 10 in its lower edge and the notches 10 of adjacent straps come to alinement with each other when the straps are supported at right angles to the side members. Secured to each end member is a strap 11 which is folded and bent so as to form an outwardly projecting I-shaped stud 12 over which the notches 10 in the strap 9 engage. This serves to securely fasten the crate in its upright position. Due to the manner in which the straps 8 are secured to the side members of the crate and the manner in which the side members are

pivoted to the bottom, the straps 9 spring and give sufficiently to allow the notches therein to be lifted clear of the stud 12 to collapse the crate. However, the spring of the side members serves to keep the notches normally seated tightly upon the stud so that when the crate is erected it is securely held in the upright position.

In Fig. V I have shown a modified construction, in which the bottom, side and end members of the crate are formed of a rectangular wire frame 1' connected by parallel strands of wire 2—2' intersecting to form a network. Wire rods 5'—5' are secured to the side members parallel to the ends thereof and the lower ends of said rods are turned inwardly at right angles and looped around the sides of the bottom as at 4'—4'. The ends are secured to the bottom by rods 6'—6' hinged to the ends of the bottom as at 7'—7', as in the preferred form. In Fig. V I have shown the straps 9' provided with notches 10, hinged to the side of the straps around the ends of the side member, as at 8'—8'.

I am aware that the particular embodiment which I have here shown is susceptible of considerable variation without departing from the spirit of my invention, and, therefore, I do not wish to be restricted to the same. In actual practice I have found that the form here shown is to be preferred and, therefore, I desire to claim the same specifically as well as broadly as indicated by my appended claims.

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

1. In a crate of the class described, the combination of a bottom member, side and end members suitably hinged to said bottom member, straps hinged to said side members near the upper edge thereof and adapted to swing into position at right angles to said side members, notches in the lower edges of said straps adapted to be brought into alinement with each other, and T-shaped studs carried by said end members in position to be engaged by said notches to secure the crate in erected position, all coacting substantially as described for the purpose specified.

2. In a crate of the class described, the combination of a bottom member, side and end members suitably hinged to said bottom member, straps hinged to said side members and adapted to swing into positions at right angles thereto, notches in said straps disposed so as to be brought into alinement with each other and headed studs carried by said notches to secure the crate in erected position, all coacting substantially as described for the purpose specified.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

JOHN H. CHAMBERLIN.

Witnesses:

LULLA G. GREENFIELD,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."