J. R. AND M. B. DRIVER.
COLLAPSIBLE CONTAINER.
APPLICATION FILED MAY 6, 1919.

1,336,895.

Patented Apr. 13, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

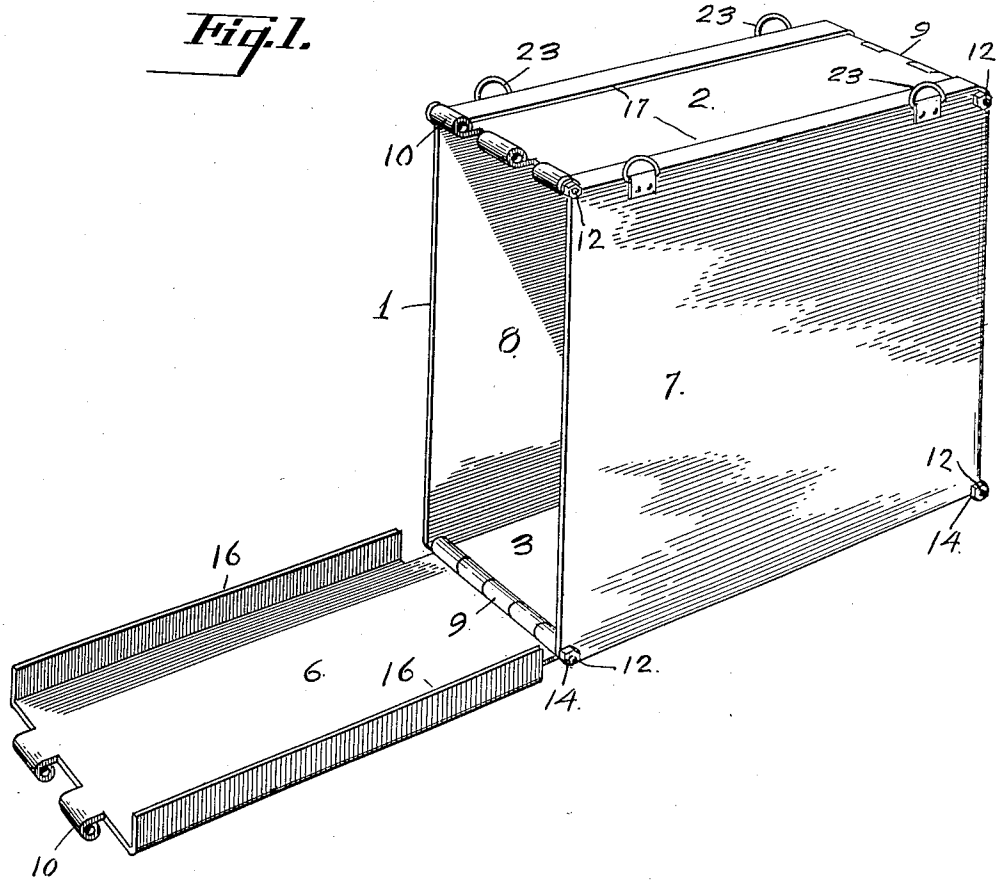


Fig. 2.

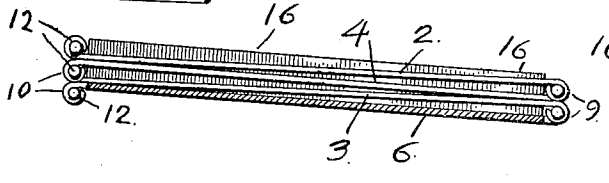
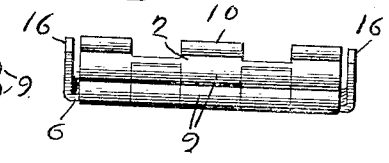


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

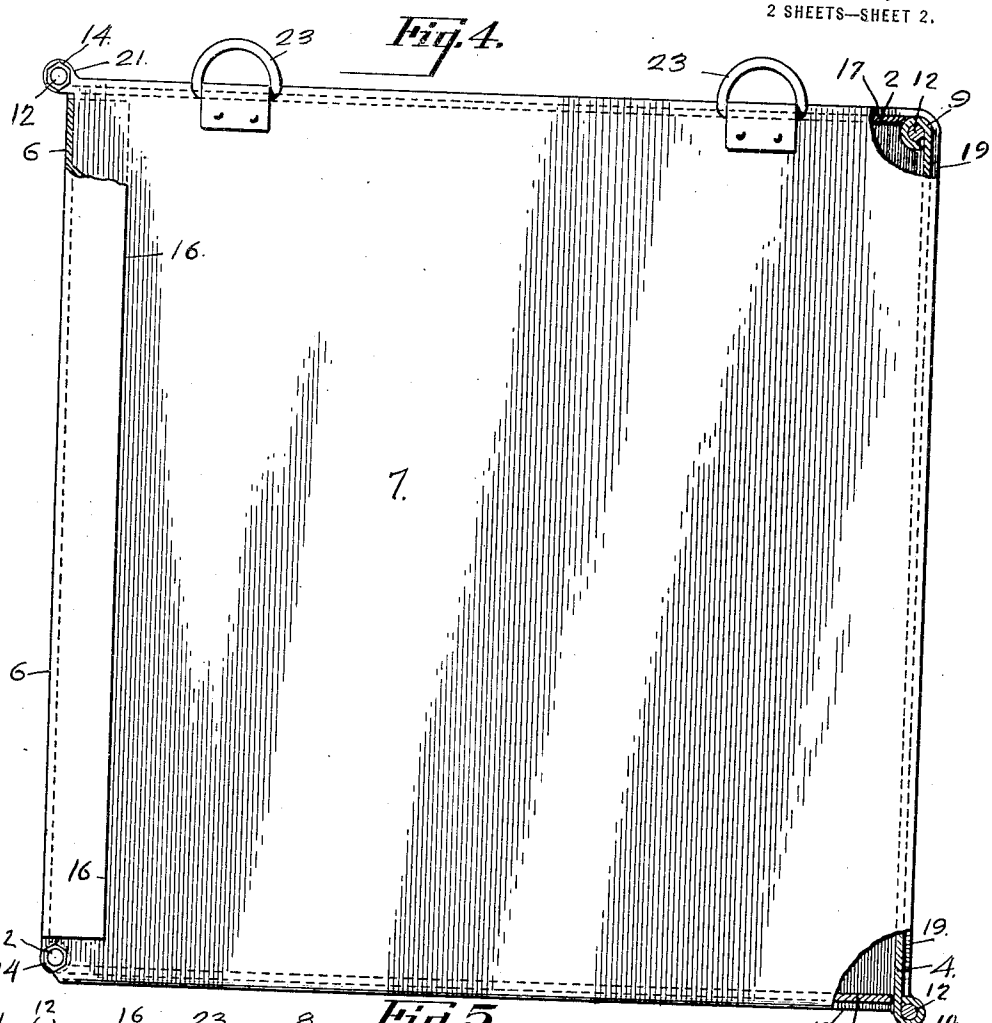
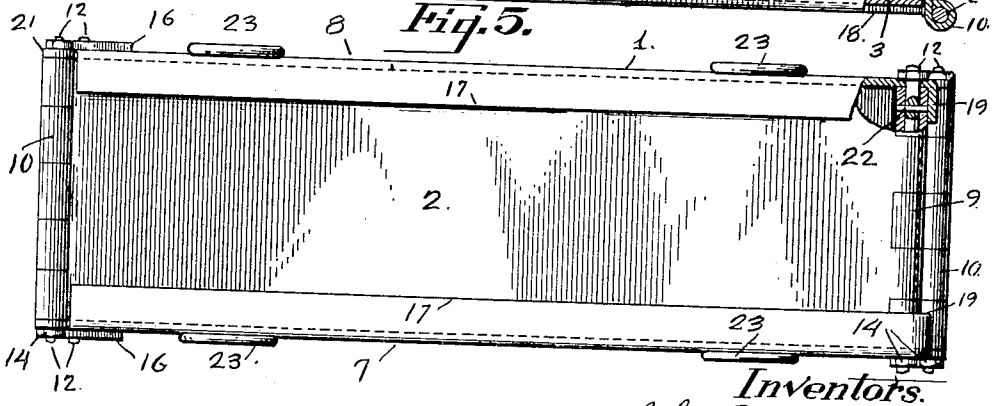


Fig. 5.



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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE CONTAINER.

1,336,895. Specification of Letters Patent. Patented Apr. 13, 1920.

Application filed May 6, 1919. Serial No. 295,760.

To all whom it may concern:

Be it known that we, JOHN R. DRIVER and MICHAEL B. DRIVER, citizens of the United States, and residents of the city of Berkeley, in the county of Alameda and State of California, have invented a certain new and useful Improvement in Collapsible Containers, of which the following is a specification.

It is the present practice to make crates or boxes, in which furniture and other articles are to be shipped, of lumber. The construction of such crates and boxes requires considerable skill in order to insure the packing of the articles so that the possibility of their damage during the shipment is minimized, and, consequently, much time is wasted before the articles can be shipped. Furthermore, the present prices of lumber are so high that, together with the time spent by the workmen in making the crates or boxes, the cost of such containers for shipping purposes is almost prohibitive. This cost is so much more a serious problem to the shipper, because the crates or boxes, as a rule, are not returned to him and therefore entail a complete loss of material, for which he must be reimbursed by a consequent increase in the price of the shipped articles.

One object of our invention is to produce containers, adapted for shipping purposes, of such material and in such sizes and quantities that the cost of the containers will be reduced to a minimum.

Another object of our invention is to provide collapsible containers that possess great strength and when assembled are very rigid and capable of withstanding considerable rough usage so as to offer a maximum protection for the articles packed therein.

Our invention is disclosed in the drawings, which form a part of the present specification and wherein like characters of reference are used to designate similar parts throughout the specification and the drawings, and in which—

Figure 1 is a perspective view of our container, the pintle for the upper hinge between the top section and the flanged end section being removed and the flanged end section resting flat on the ground;

Fig. 2 is a partly sectional side elevation of the flanged end section, with the bottom section, the other end section and the top section collapsed thereupon;

Fig. 3 is an end elevation of Fig. 2;

Fig. 4 is an enlarged, partly sectional and partly broken side elevation, of our container; and

Fig. 5 is a partly broken and partly sectional plan view of Fig. 4.

Our collapsible container 1 is preferably made of strong sheet metal and comprises a top section 2, a bottom section 3, end sections 4 and 6, and side members 7 and 8, each of the sections 2, 3, 4 and 6 being at one end edge provided with an inwardly disposed hinge 9, and at its other end edge with an outwardly disposed hinge 10, the pintles 12 of which hinges are removable and threaded at their ends in order to receive nuts 14. One of the sections, preferably one of the end sections 4 and 6, is at its side edges provided with flanges 16, the flanges in this instance being shown upon the end section 6. Each of the side members 7 and 8 is also at its top edge provided with a flange 17, at its bottom edge with a flange 18, and at one end edge with a flange 19, the flanges 17, 18 and 19 being adapted to engage respectively the top section 2, the bottom section 3, and the end section 4, while the flanges 16 on the section 6 are adapted to engage the unflanged end edges of the members 7 and 8. Two diagonally opposite, perforated lugs 21 are formed upon each of the side members 7 and 8 and are adapted to register with the outwardly disposed hinges 10, so that the pintles 12 may be inserted through the lugs and through the respective hinges, and the side members 7 and 8 are each at their two other corners provided with similar openings adapted to register with the inwardly disposed hinges 9 for the insertion of the pintles 12 through the side members and the hinges 9, whereafter the nuts 14, screwed upon the ends of the pintles, hold the sections and the side members of the container 1 rigidly together.

One or more of the hinges 9 or 10 and the pintles 12 may be suitably perforated and a securing pin 22 inserted through the pintle and the respective hinge for the purpose of preventing collapse of the sections 2, 3, 4 and 6, when the side members 7 and 8 are detached from the container. After removal of the pin 22 and after removal of one of the pintles 12, the sections can be readily collapsed upon one another, as shown in Figs. 2 and 3.

In suitable places at the top of the container 1, rings 23, adapted to receive therein

the hooks of the chains of a crane or other lifting device, not shown, are secured, the arrangement of the rings near the upper corners of the container adapting them to serve as means for maintaining the container in a balanced position when lifted, irrespective of the distribution of the articles within the container.

It is seen from the foregoing that we have provided a collapsible container of light weight and of simple and strong construction and adapted to be used numerous times for shipping articles therein and to be returned to the shipper in such collapsed form as to occupy only a minimum space.

Our invention being thus fully and clearly described, what we claim as new and desire to secure by Letters Patent is:

1. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, three of the sections; flanges upon the fourth section adapted to engage, respectively, the unflanged edges of the side members; and means for securing the side members to the sections so as to form a rigid container structure.

2. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, the top section, the bottom section and one end section; flanges upon the other end section adapted to engage, respectively, the unflanged edges of the side members; and means for securing the side members to the sections so as to form a rigid container structure.

3. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, three of the sections; flanges upon the fourth section adapted to engage, respectively, the unflanged edges of the side members; and means for detachably securing the side members to the sections so as to form a rigid container structure.

4. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed, and the pintles extending and being threaded beyond the hinges; side members provided with openings adapted to register with the respective hinges, and each side member also provided at three of its edges with flanges adapted to engage, respectively, the unflanged edges of the side members; and nuts fitting the ends of the pintles for securing the side members to the sections so as to form a rigid container structure.

5. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, the unflanged edges of the side members; means for detachably securing the side members to the sections so as to form a rigid container structure; and means for preventing collapse of the sections when the side members are detached.

6. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, three of the sections; flanges upon the fourth section adapted to engage, respectively, the unflanged edges of the side members; means for detachably securing the side members to the sections so as to form a rigid container structure; and detachable means for preventing collapse of the sections when the side members are detached.

7. A collapsible container comprising a top section, a bottom section and end sections, the sections being attached to each other by alternately arranged, inwardly and outwardly disposed hinges at their end edges so that the sections may collapse upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, three of the sections; flanges upon the fourth section adapted to engage, respectively the unflanged edges of the side members; and means for securing the side members to the sections so as to form a rigid container structure.

8. A collapsible container comprising a top section, a bottom section and end sections, the sections being attached to each other by alternately arranged, inwardly and outwardly disposed hinges at their end edges so that the sections may collapse upon one another when the pintle of one hinge is removed, and the pintles extending and being threaded beyond the hinges; side members provided with lugs having openings therein adapted to register with, respectively, the outwardly disposed hinges, and also provided with openings adapted

to register with, respectively, the inwardly disposed hinges, so that the pintles may extend through the respective openings; each of the side members also being provided at three of its edges with flanges adapted to engage, respectively, three of the sections; flanges upon the fourth section adapted to engage, respectively, the unflanged edges of the side members; and nuts fitting the ends of the pintles for securing the side members to the sections so as to form a rigid container structure.

9. A collapsible container comprising a top section, a bottom section and end sections, the sections being hinged together so as to be collapsible upon one another when the pintle of one hinge is removed; side members, each provided at three of its edges with flanges adapted to engage, respectively, three of the sections; flanges upon the fourth section adapted to engage, respectively, the unflanged edges of the side members; means for securing the side members to the sections so as to form a rigid container structure; and means attached to the container whereby the container may be maintained in a balanced position when lifted, irrespective of the distribution of the articles within the container.

In witness whereof we hereunto set our signatures.

JOHN R. DRIVER.
MICHAEL B. DRIVER.