L. V. F. SENDELBECK.

FOLDING CRATE.

APPLICATION FILED APR. 7, 1915.

1,205,035.

Patented Nov. 14, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

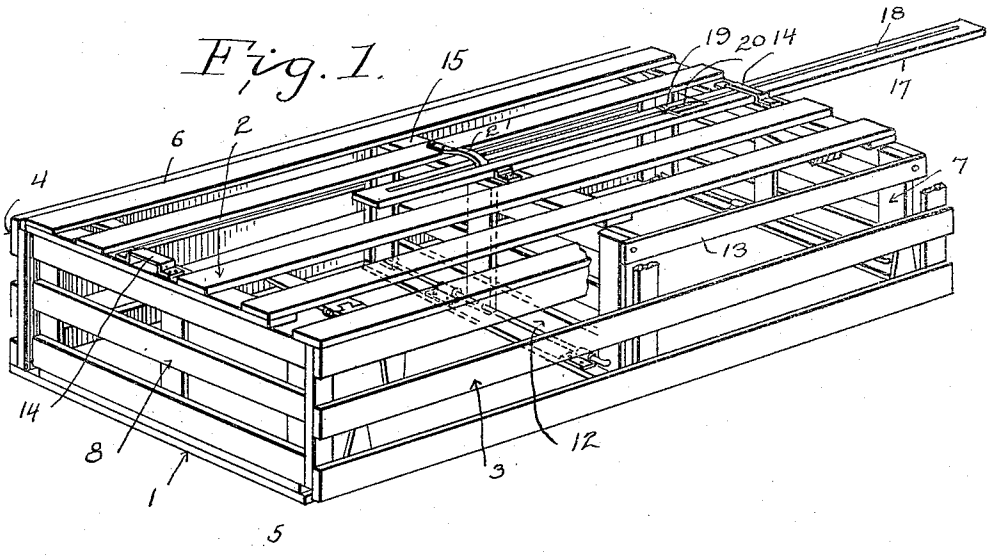
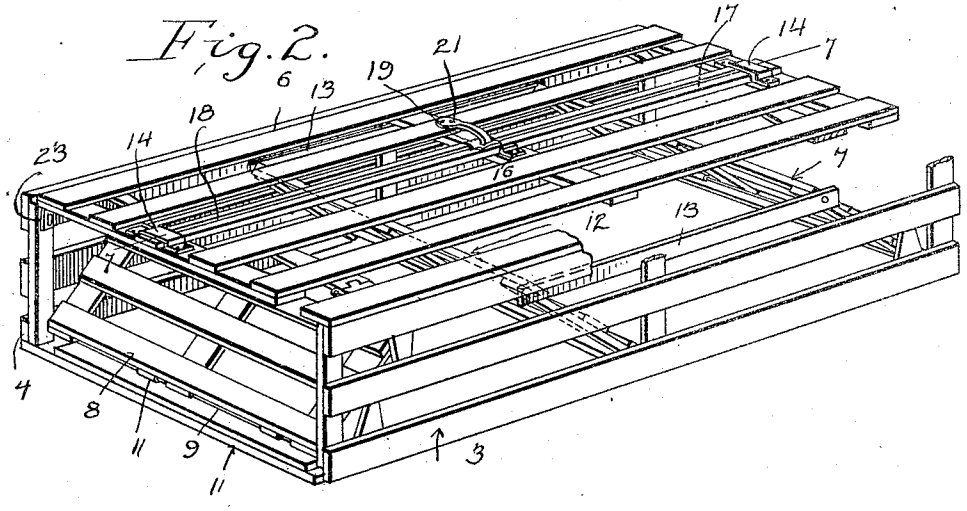


Fig. 2.



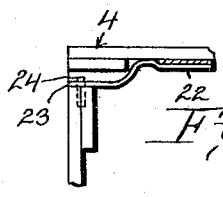


Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4

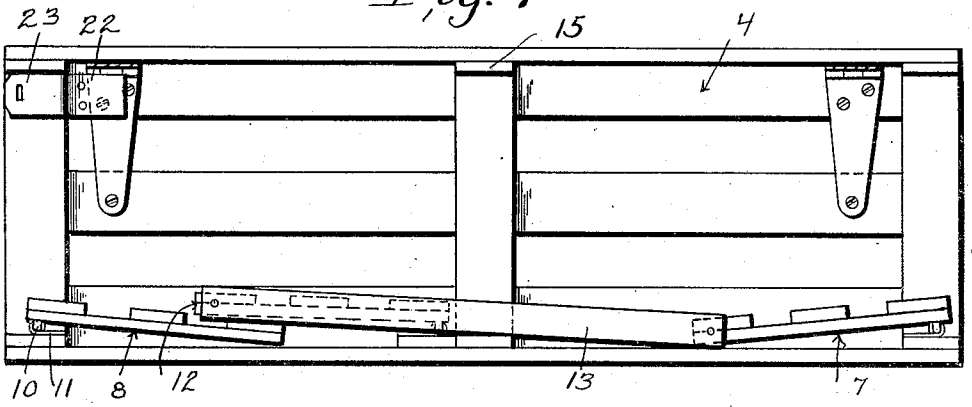


Fig. 7.

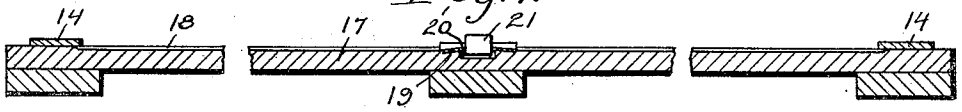


Fig. 6.

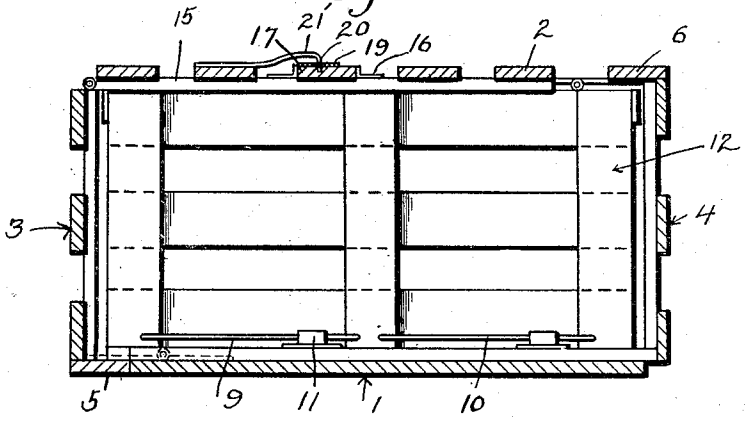
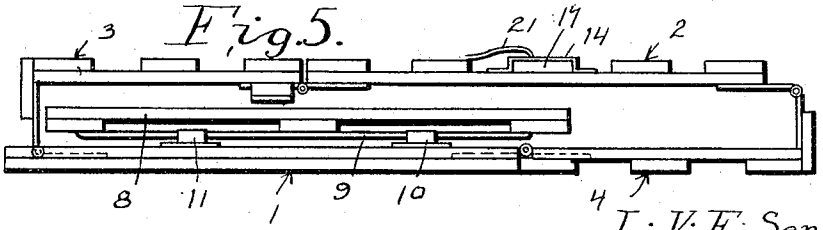


Fig. 5.



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LEO V. F. SENDELBECK, OF WATERLOO, ILLINOIS.

FOLDING CRATE.

1,205,035. Specification of Letters Patent. Patented Nov. 14, 1916.

Application filed April 7, 1915. Serial No. 19,797.

To all whom it may concern:

Be it known that I, LEO V. F. SENDELBECK, a citizen of the United States, residing at Waterloo, in the county of Monroe and State of Illinois, have invented certain new and useful Improvements in Folding Crates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in folding crates, and has for its principal object to provide a device which may be used to ship articles of various kinds, and which after having its destination and having been emptied of its contents, may be readily folded into a small and compact bundle so as to occupy a minimum amount of shipping space when being returned to the sender.

Another object of the invention is to provide a device which may be used as either a coop or crate, and also to provide a box which may be easily folded for return shipment.

Still another object of the invention is to provide a novel means for folding such devices and supporting them in their unfolded position to prevent them from collapsing.

With these and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which,

Figure 1 is a perspective view of a crate constructed in accordance with this invention showing the same in its fully extended position, Fig. 2 is a view similar to Fig. 1, showing the crate with the ends partially folded in, in the first step of folding the device, Fig. 3 is a detail view of one of the end latches, Fig. 4 is a longitudinal sectional view of the crate, showing the ends folded inwardly ready for folding the side walls, Fig. 5 is an end view of the crate showing the same in its folded position, Fig. 6 is a transverse sectional view through the crate when in its extended position, and Fig. 7 is a sectional view taken on line 7—7 of Fig. 1 showing the sliding bar in its locked position.

Referring to the drawings by characters of reference, the numeral 1 designates as an entirety the bottom of the crate, while the numeral 2 designates the top thereof. This top and bottom have hinged thereto respectively the front and rear walls designated generally by the numerals 3 and 4 respectively. Secured to the lower edge of the front wall 3 is a flange 5 which is hinged to the bottom wall, and secured to the upper edge of the rear wall 4 is the flange 6 which is hinged to the top wall.

It will thus be seen that a device is provided which will swing on its hinges so as to collapse laterally as illustrated in Fig. 3. The right and left hand end walls are designated respectively by the numerals 7 and 8, and these end walls are pivotally secured to the bottom in a manner which will be more fully hereinafter described.

In order to hold the side and end walls to the bottom, each of the walls is provided with suitable bars 9 and 10 which are secured to the walls and spaced therefrom. A suitable pair of brackets 11 are secured to the bottom near each end, and these brackets are provided with longitudinal central openings for the reception of the bars 9 and 10 so that the ends will not only be pivotally, but will be slidably mounted on the bottom.

If so desired, a suitable central partition wall 12 may be used in connection with the device and this partition wall is mounted intermediate the ends of the bottom and secured thereon in the same manner as the ends. Pivotally connecting the partition wall with one of the ends is a suitable link 13 by which the end wall and partition wall are moved into and out of operative position simultaneously.

It is to be understood that the top, bottom, sides, and ends may be constructed in any suitable manner, but in the present device, they are shown to be formed of longitudinally and transversely extending slats. A central longitudinal slat of the top wall is arranged to be removably supported in the top and is slidable beneath the cleats 14 which act as guides therefor. These cleats are secured to the transversely extending slats at each end of the top and secured to the central slat 15 of the top are the brackets 16, between which the slat is slidable.

The slat above referred to is designated by the numeral 17 and is formed with a longitudinally extending groove 18 in its upper face. A plate 19 is secured centrally of the slat 17, and this plate is provided with the slot 20 in which the end of the latch

21 seats. It will thus be seen that the latch will spring downwardly and into the opening 20 in the plate 19, thereby locking the slat 17 against movement when in its closed position.

In order to hold the end walls in their vertical position, the springs 22 are secured to the side walls near their upper edges. These springs are provided with the offset extensions 23 and are apertured to receive the pins 24 carried by the ends of the end walls near their upper edges. It will thus be seen that when the end wall is swung upwardly, the spring will be forced inwardly until the pins 24 register with the openings in the springs 22, at which time the pins will enter the openings and firmly lock the end walls in their vertical position.

It will be apparent from the foregoing that in use assuming the device to be in its folded position illustrated in Fig. 5, and it is to be opened, the user grasps the top and pulls upwardly thereon, thus causing the sides to assume the position illustrated in Fig. 3, during their upward passage. As soon as the device has been swung to its extended position, the end walls are then pulled upwardly as shown in Fig. 2 and when they reach the vertical, it will be evident that the latch spring 22 will engage the pin 24 and firmly lock the end walls against movement. In order to fill the crate, assuming it is to be used as a coop, the bar 17 is slid outwardly as shown in Fig. 1, thus allowing the user to gain access to one of the compartments. In order to gain access to the opposite compartment, the bar may be slid so that its opposite end projects over the end 8 of the crate, thus leaving an opening in the compartment opposite the first mentioned one. After the device has been filled, it will be evident that it may be labeled and shipped to the desired point whereupon upon removal of the contents, the latch springs 22 can be released, thus permitting the ends to swing inwardly and allowing the whole to be again folded into the position shown in Fig. 5. It will be evident that in the folded position, the crate will occupy the least possible amount of space in return shipping, thereby effecting a material saving to shippers. It is also apparent that in this position there are no projecting parts which are apt to catch on doors, door jambs, or the like.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the invention as claimed.

What is claimed is:

A folding crate comprising a bottom wall, front and rear walls hinged to said bottom wall, a top wall hinged to said front and rear walls, brackets secured to each end of the bottom wall, rods hingedly and slidably mounted in said brackets, end walls secured to said rods and adapted to slide and swing with said rods, springs secured to said front and rear walls and each provided with an aperture, pins secured by said end walls for engagement with the aperture of the spring to support said end walls, brackets secured to said top, a slat slidable into second mentioned brackets and provided with a longitudinal groove, a catch carried by the top and engaging the groove and a plate carried by the slat intermediate its ends and provided with an opening to receive the catch to hold the slat in a closed position.

In testimony whereof I affix my signature in presence of two witnesses.

LEO V. F. SENDELBECK.

Witnesses:

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LOUIS BODE.

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