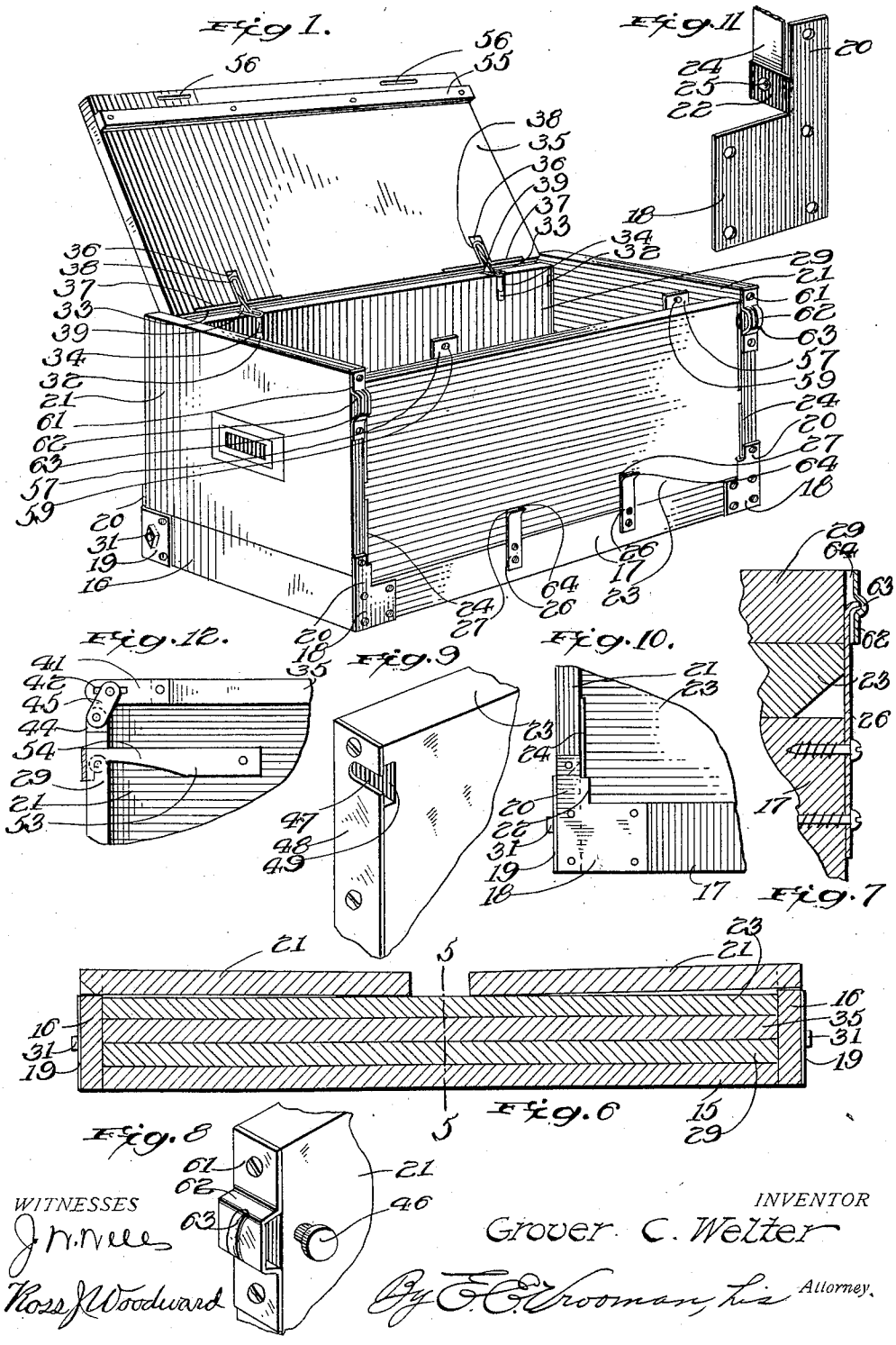
G. C. WELTER.

FOLDING BOX.

APPLICATION FILED MAR. 30, 1912.

1,053,258. **Patented Feb. 18, 1913.**

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3

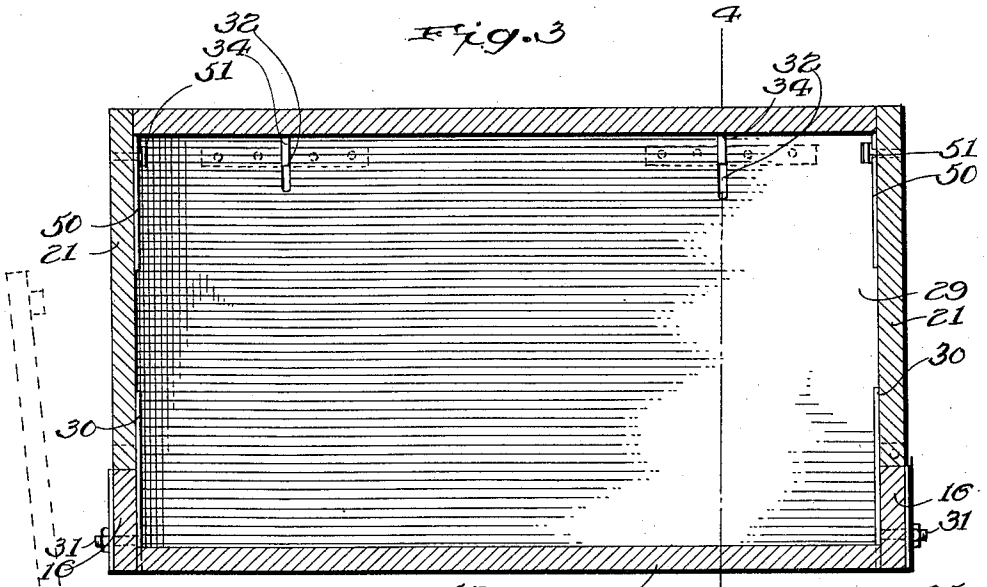


Fig. 4

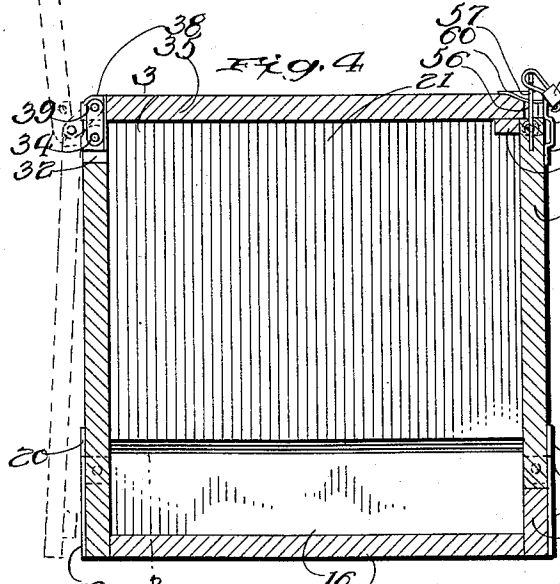


Fig. 13

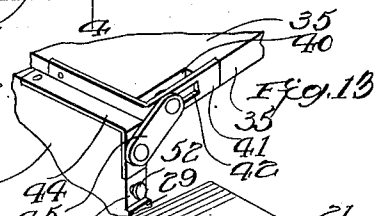


Fig. 2.

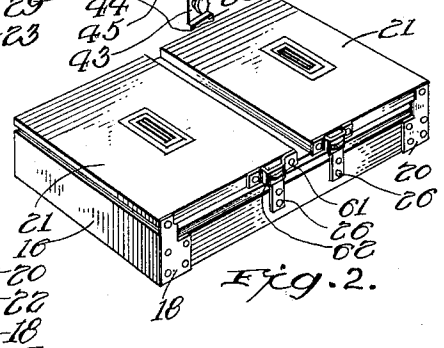
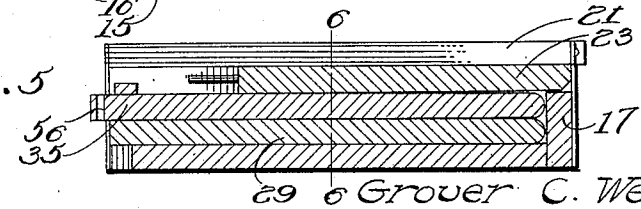


Fig. 5



Witnesses

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UNITED STATES PATENT OFFICE.

GROVER C. WELTER, OF ROSWELL, NEW MEXICO.

FOLDING BOX.

1,053,258. Specification of Letters Patent. Patented Feb. 18, 1913.

Application filed March 30, 1912. Serial No. 687,326.

To all whom it may concern:

Be it known that I, GROVER C. WELTER, a citizen of the United States, residing at Roswell, in the county of Chaves and State of New Mexico, have invented certain new and useful Improvements in Folding Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to folding boxes which are so constructed that they may be readily converted from a set up position to a folded position, and which will be securely held in the folded position. This box forms a very compact mass when folded so that there are no parts which are liable to be injured in shipment. When the box is in a set up position the cover may be either shut down upon the box, folded down behind the rear wall, or moved so that it will be held in an inclined position above the rear wall.

This invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the box in a set up position with the cover raised. Fig. 2 is a perspective view of the box in a collapsed position. Fig. 3 is a vertical sectional view along the line 3—3 in Fig. 4. Fig. 4 is a vertical section along the line 4—4 in Fig. 3. Fig. 5 is a section along the line 5—5 in Fig. 4. Fig. 6 is a section along the line 6—6 in Fig. 5. Fig. 7 is a fragmentary sectional view through the forward edge of the box when in a collapsed position. Fig. 8 is a fragmentary perspective view of the upper portion of one of the end walls. Fig. 9 is a fragmentary perspective view of one corner of the front wall. Fig. 10 is a fragmentary elevation of one of the lower corners of the box. Fig. 11 is a perspective view of the plate shown in Fig. 10. Fig. 12 is a fragmentary view showing a different type of cover hinge from that shown in the remaining figures. Fig. 13 is a fragmentary perspective view showing the hinge illustrated in Fig. 12.

Referring to the accompanying drawings it will be seen that this invention comprises a bottom 15 which carries the end strips 16 and the front strip 17. Reinforcing plates 18 and 19 are secured to the corners of the box so that the front and end pieces will be braced thus making the box stronger. The plates carry upwardly extending tongues forming pivot ears 20 for the end walls 21, and the forward plates 18 are provided with tongues which extend from the lower portions of the pivot ears 20, and are bent inwardly to form the pivot ears 22 with which the front wall 23 is pivotally connected. The front wall has plates 24 mounted upon its end edges and pivot pins 25 pass through each pivot ear 22, and the plates 24 so that the front wall will be pivotally mounted. Spring catches 26 are secured to the front strip 17 and fit into sockets 27 when the box is in a set up position. A handle 28 is mounted in each of the end walls 21 so that the box may be conveniently handled when in a set up position. The rear wall 29 is provided with plates 30 which carry the pivot bolt 31 so that the rear wall may be pivotally mounted between the end strips 16. The upper portion of the rear wall is provided with slots 32 and strips 33 are secured to the rear wall and have their intermediate portions crimped to form bearings 34 which extend into the slots 32. A cover 35 is also provided with slots 36 and with strips 37 having their intermediate portions crimped to form pivot bearings 38 fitting into the slots 36. Links 39 have their ends pivotally mounted in the bearings 34 and 38 so that the cover will be pivotally connected with the rear wall and permitted to have a pivotal movement independent of its pivotal movement with the rear wall.

If desired, the form of hinge shown in Figs. 12 and 13 may be used. In this form the cover is provided with cut-out portions 40 in each corner and with strips 41 which extend along the edges of the cover, each strip being provided with a slot 42. The rear wall is also provided with a cut-out portion 43 in each corner in which a strip 44 is mounted. The strips 41 and 44 take the place of the strips 33 and 37, and are connected by a link 45 which is pivotally connected with the strip 44 and slidably mounted in the slot 42.

Each side wall is provided with a pin 46 which fits into the slot 47 formed in the strip 48 mounted upon the edge of the front wall 23. The head of the pin 46 fits into the socket 49 so that the side walls will be held in a raised position. The rear wall 29 carries the strips 50 which are similar to the one shown in Fig. 9, and are provided with slots in which the pins 51 fit to assist in holding the end walls erect. In the form shown in Fig. 12, the rear wall carries the

pins 52 and the end walls carry the catches 53 which have their free end portions cut as shown at 54 to guide the pins 52 in the proper place.

The cover 35 is provided with a longitudinally extending strip 55 which fits within the front wall 23 when the cover is closed and prevents the pins 46 and 51 from slipping out of the notches in the plates 48 and 50, as clearly shown in Fig. 4. The cover is provided with longitudinally extending slots 56 through which the locking tongues 57 pass so that the locks 58 may be passed through the openings 59 thus securely fastening the box. It will be obvious that either lead seals may be used to lock the box as shown in Fig. 4, or any desired type of lock may be substituted such for instance as a suitable padlock. Plates 60 are mounted upon the portions of the cover through which the slots 56 are formed so that the cover will be protected from wear.

The end walls 21 are each provided with a plate 61 which has its central portion formed into a pocket 62 having its central portion crimped to form a recess 63 in which the curved end 64 of the strips 26 fit when the box is in a collapsed position.

When shipping this box, the box is folded as shown in Figs. 2, 5 and 6 with the cover folded back of the rear wall and the cover and rear wall folded into the box and rest upon the bottom 15, the cover 35 being on top of the rear wall. The front wall is then folded down upon the cover and the end walls folded upon the front wall with the catches 26 passing into the pockets 62 and held in place by their curved ends 64 fitting into the recesses 63. It will thus be seen that, by an inspection of Figs. 5 and 6, the different portions of the box fit together very compactly so that there is no danger of any of the portions being broken when the box is being shipped from one point to another.

When the box is in use the end walls are raised and the front wall then raised so that the pins carried by the front wall fit into the slots 47. The cover and rear wall are then raised so that the pins mounted in the rear corners of the end wall will fit in the slots formed in the plates 50, thus securely holding the box in a set up position. The cover can then be raised and the hinged end lowered behind the rear wall so that the cover will stay in the raised position shown in Fig. 1, or the cover may be turned back of the rear wall to the position indicated by the dotted lines in Fig. 4. If desired, the cover may be closed as shown in Fig. 4, with the strip 55 fitting within the front wall and with the tongues 57 passing through the slots 56 so that the securing means 58 may be passed through the openings 59 thus securely locking the box.

From the foregoing description it will be readily seen that this box may be very easily set up and will fold into a very compast mass so that it may be shipped without danger of being broken in transit.

What is claimed is:—

1. A foldable box comprising a bottom, front rear and side walls, links pivotally mounted upon the sides of said rear wall and projecting above the edge, a cover provided with cut-out portions, plates mounted in said cut-out portions and bent along the hinged edge of said cover, said cover plates being provided with longitudinal slots in the side portions, and pivot pins passing through said slots and through said links to pivotally and slidably mount said cover between said links.

2. A box comprising a body portion, the rear wall of said body portion being provided with slots leading from its upper edge, plates secured to the rear wall of said body portion and crimped intermediate their length to form pivot housings fitting into said slots, links pivotally mounted in said housing and extending beyond the rear wall of said body portion, a cover for said box provided with slots leading from its inner edge, and strips carried by said cover and crimped intermediate their length to form pivot housings fitting into said second-mentioned slots, said links having their outer ends pivotally mounted in said second mentioned pivot housings.

3. A box comprising a body portion, strips carried by said body portion and bent to form pivot housings, a cover for said box, strips carried by said cover and bent to form pivot housings, and links pivotally mounted in the housings of said first-mentioned strip and extending beyond the upper edge of said body portion and having their free ends pivotally mounted in the housings of said second mentioned strips.

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

GROVER C. WELTER.

Witnesses:
CLAUDE M. ALLISON,
WOODFEN G. WELTER.