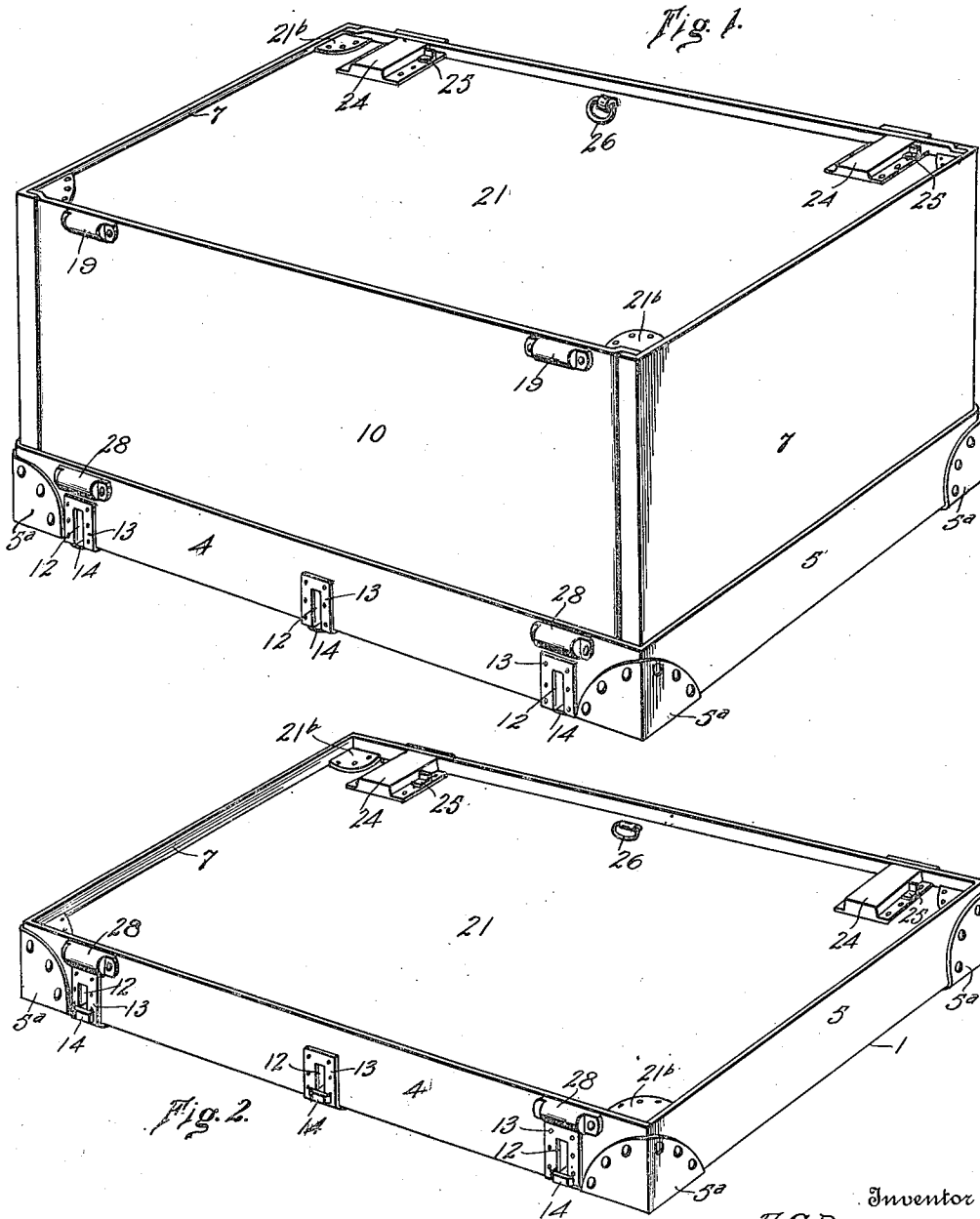


E. C. ROSE.
FOLDING GRATE.
APPLICATION FILED MAR. 5, 1910.

964,121.

Patented July 12, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

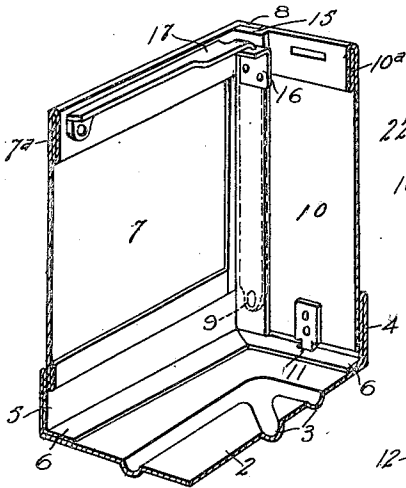


Fig. 3.

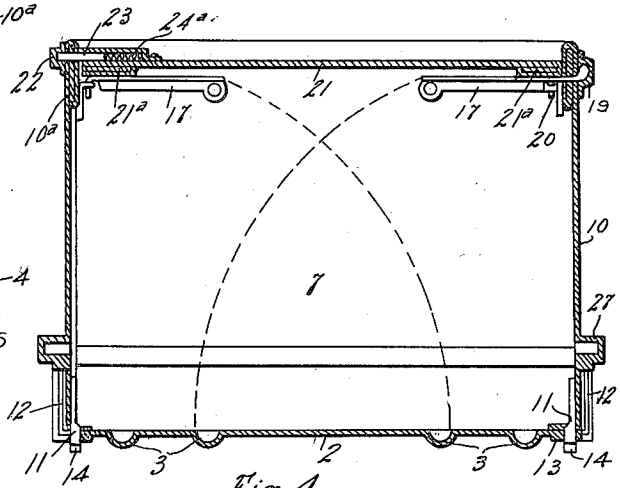


Fig. 4.

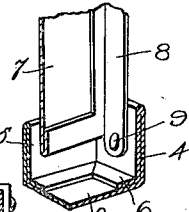


Fig. 6.

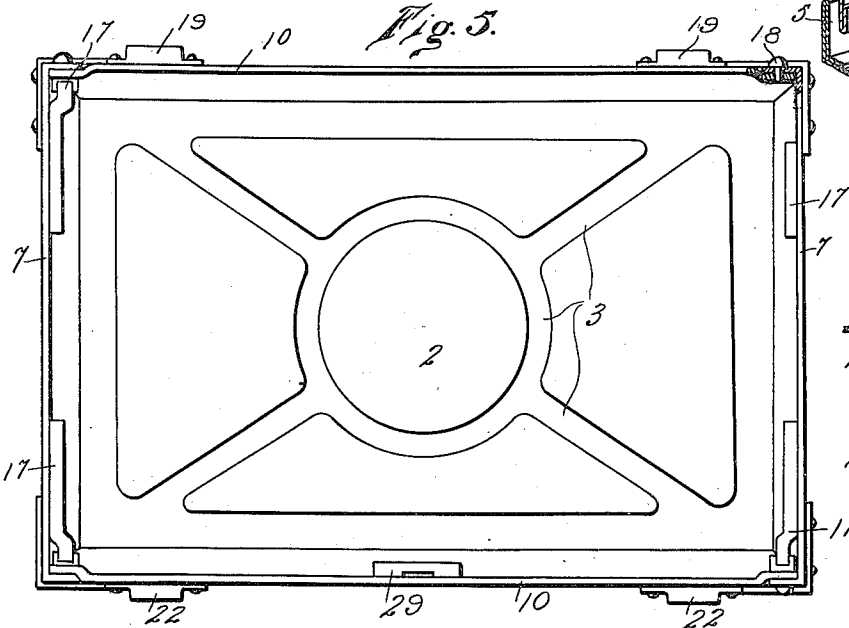


Fig. 5.

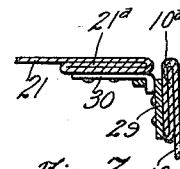


Fig. 7.

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UNITED STATES PATENT OFFICE.

ELMER C. ROSE, OF PHILADELPHIA, PENNSYLVANIA.

FOLDING CRATE.

964,121.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed March 5, 1910. Serial No. 547,586.

To all whom it may concern:

Be it known that I, ELMER C. ROSE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Folding Crates, of which the following is a specification.

My invention relates to packing cases, and particularly contemplates the provision of a strong and portable yet simple and inexpensive sheet metal structure of this character, which may be readily and quickly folded into a compact form to occupy a minimum of space when not in use, to make the same convenient for reshipping or storage.

Broadly my invention resides in the provision of a shallow foundation box having hingedly arranged therein a plurality of plates, which, when moved to a vertical position, form sides and ends of the box proper. A cover is further arranged to be detachably locked within said sides and ends when the same are in the vertical position, and is also adapted to be similarly locked within the used to indicate like parts throughout the several views, in which,

My invention further resides in the following features of construction, arrangement and operation as will be hereinafter described with reference to the accompanying drawings in which like numerals are used to indicate like parts throughout the several views, in which,

Figure 1 is a perspective view of my improved box in the distended position, Fig. 2 is a similar view showing the same in the folded position, Fig. 3 is a fragmentary perspective view of one inner corner of the box, Fig. 4 is a cross section through the box, Fig. 5 is a top plan view of the box, the cover being removed, and, Figs. 6 and 7 are fragmentary detail views of parts to be hereinafter specifically referred to.

In the practical embodiment of my invention, I provide a shallow foundation box 1, comprising a base 2, of substantially rectangular shape, having a beading 3 extending continuously therein in order that the box may set level at all times. The foundation box 1 further comprises shallow sides 4 and ends 5 extending upwardly from the base 2, and stiffened and strengthened to a desired degree by mountings on the strips 6 bent back therefrom and resting upon the

base 2. The sides 4 and ends 5 being thus stiffened and strengthened, are held in position by caps 5^a serving also to protect the corners.

The portion just described forms a lower or foundation box within which the ends 7 of the box proper are foldably secured, said ends 7 having angular strips 8 extending at right angles thereto and hinged by a pin 9 at their lower ends to the sides 4 of said foundation box 1 adjacent its ends 5. The sides 10 of the box proper are provided each with a series of pins 11 projecting there-through on a plane therewith and arranged through conformable slotted openings 12 in the sides 4 and base 2 of the foundation box 1, said openings being arranged adjacent to and through the point of bending of said sides 4 and said base 2, and being provided with reinforcing strips 13 extending thereabout. The pins 11 of the sides 10 of the box proper being arranged through openings 12, are provided with lateral extensions on their outer ends forming flattened heads 14 to prevent their withdrawal from said openings. It will thus be seen that the sides 10 may be folded to lie within the foundation box 1, the pins 11 projecting through the openings 12 within the shallow sides 4 of said foundation box, while they may also be moved to the upright position to form with the ends 7 the box proper, the pins 11 being thereupon moved within the openings 12 extending within the box 2, as shown particularly in Figs. 1 and 4.

The sides 10 are provided with offset portions 15 at the end thereof fitting within the angular strips 8 of the ends 7, and said sides 10 are further provided with apertured plates 16 within which the curved nose of the latches 17, pivotally mounted upon the ends 7, are adapted to engage to lock said sides and ends in the upright and distended position in the course of forming the box proper. The sides 10 and ends 7 are formed with reinforced upper and outer edges by folding a portion of their material about the strengthening strips 7^a and 10^a respectively of heavier metal. To guide the offsets 15 correctly the same are provided with small openings adapted to fit about the pins 18 projecting inwardly from the angular strips 8. The sides 10 of the box proper are provided respectively with sockets 19 adapted for the reception of the hooks 20 of the cover

21, and with sockets 22, adjacent their upper, outer edges, adapted for the reception of the sliding latches 23 of said cover 21 mounted thereon in housings 24 with coil springs 24^a normally pushing the same outward and provided with operating pieces 25. The cover 21 is preferably constructed of a piece of sheet metal formed at its edges around a strengthening strip 21^a of heavier metal and is provided with stiffening and protecting caps 21^b at its corners, and said cover 21 is adapted to be associated within the upper edges of the sides 10 and the ends 7 of the box proper when the same are locked in the upright position, and is adapted to be secured therein against removal as just described, a ring 26 being provided to lift said cover out when the spring pressed sliding plates 23 are withdrawn from the sockets 22. When, however, the sides 10 are unlocked from the ends 7, and when said sides and ends are folded down as described within the foundation or lower box 1, said cover 21 is adapted to be locked within said foundation or lower box 1 in a similar manner in which it is locked within the sides 10 and ends 7, said foundation box, for this purpose being provided in its prospective sides 4, with sockets 27 and 28 similar to the sockets 19 and 22 of the sides 10 of the box proper. The complete distended and folded position of the elements comprising my improved box are clearly shown in Figs. 1 and 2, respectively. To further securely hold the cover 21 in position within the sides 10 and ends 7, when in the distended position, I provide the side 10 carrying the

sockets 22, with a slotted angular plate 29 adapted to receive within its slot a tongue 30 carried by the cover 21, as shown in detail in Fig. 7. 40

It will be understood that although I have shown and described elements fully capable of performing the functions assigned to them, various minor changes may be made in the constructions, especially in the particular formation of the metal, without departing from the spirit of the invention and the scope of the appended claim. 45

Having thus fully described my invention, I claim: 50

In a device of the character described, a foundation box, having upstanding side and end flanges, end walls having their ends bent inwardly at substantially right angles to stiffen the same mounted adjacent the end flanges, means to pivotally connect the inwardly bent ends to the side flanges, of the foundation box, side walls disposed adjacent the side flanges to cooperate with the end walls, said side walls being provided upon one side thereof with lugs having enlarged heads, the side flanges being provided with substantially vertically disposed slots to loosely receive said lugs, and said side walls having their ends off set to form sockets to removably receive said inwardly bent ends of the end walls. 55 60 65

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

ELMER C. ROSE.

Witnesses:

M. L. LEFFLER,
GEORGE W. SELTZER.