

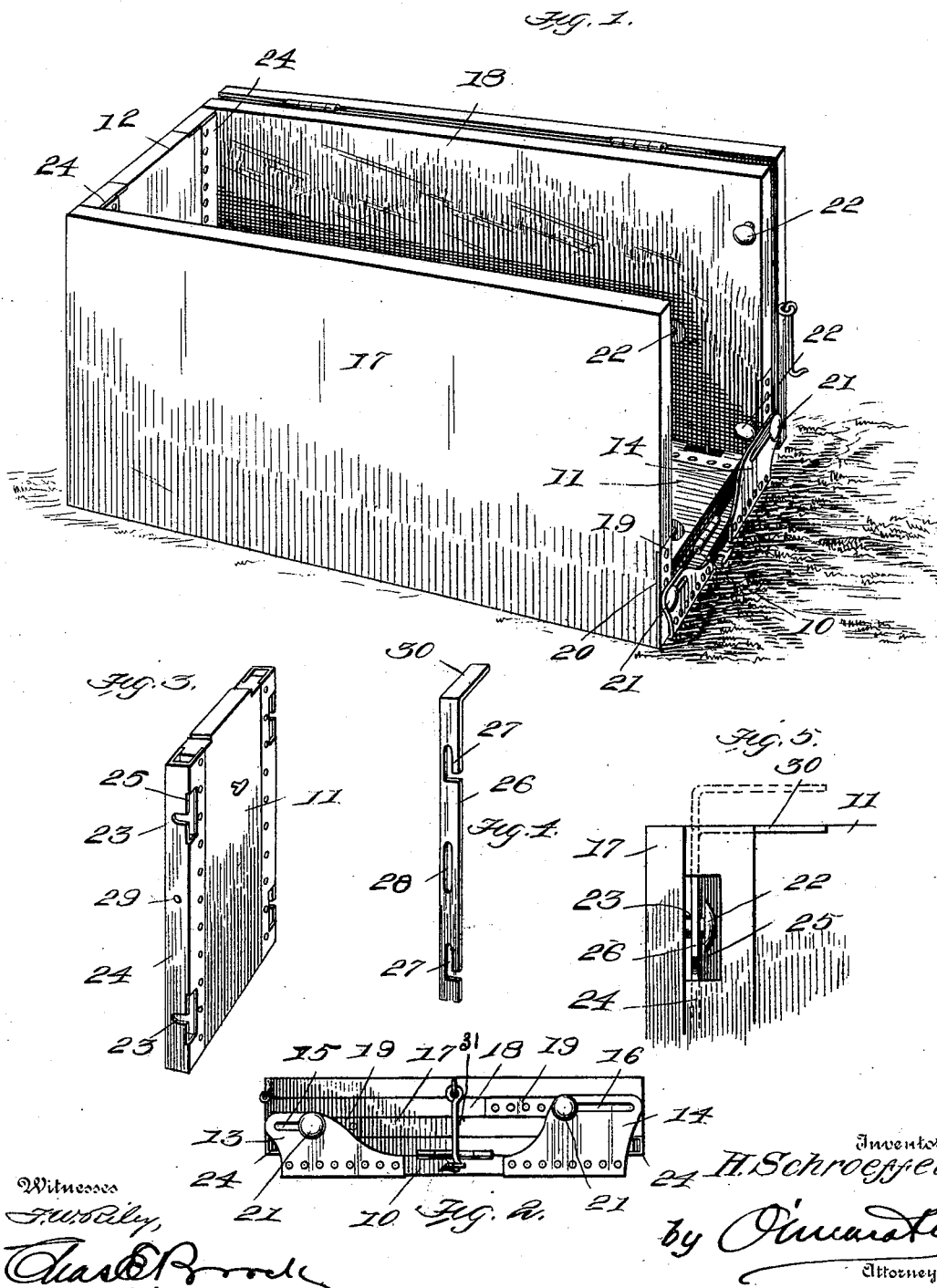
No. 647,994.

Patented Apr. 24, 1900.

H. SCHROEFFEL.  
COLLAPSIBLE SHIPPING BOX.

(Application filed Nov. 4, 1899.)

(No Model.)



# UNITED STATES PATENT OFFICE.

HENRY SCHROEFFEL, OF ALLEGHENY, PENNSYLVANIA.

## COLLAPSIBLE SHIPPING-BOX.

SPECIFICATION forming part of Letters Patent No. 647,994, dated April 24, 1900.

Application filed November 4, 1899. Serial No. 735,818. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY SCHROEFFEL, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Collapsible Shipping-Boxes, of which the following is a specification.

My invention relates to collapsible boxes, and has for its object to provide an improved device of this class so constructed that the several component parts may be folded one upon another for shipping or packing and rigidly secured together when in their extended position for use.

With this object in view my invention consists in providing a bottom having the ends of the box hinged thereto so that they will fold inwardly toward each other, providing slotted plates to the respective ends of said bottom and securing the sides of the box to said plates by a headed pin passing through the slots, said sides being so arranged that the horizontal position of one will be higher than the other, and hinging a top to one of the side sections.

My invention further consists in providing an improved locking means for the respective side and end sections, comprising a slotted grooved bar which is secured to each longitudinal edge of the end sections, the slots therein being engaged by a headed pin on the side sections and locked to said bar by a strip slidable in the groove of said bars.

My invention further consists of such parts and combinations of parts, as will be fully described hereinafter, pointed out in the claims, and illustrated in the drawings forming a part of this specification, and in which—

Figure 1 is a perspective view of a box constructed in accordance with my invention. Fig. 2 is an end elevation of the same, the parts being folded. Fig. 3 is a perspective view of one of the end sections. Fig. 4 is a similar view of one of the securing-strips, and Fig. 5 is an enlarged detail view of the manner of locking the parts together.

Referring now to the several parts by reference-numerals, 10 indicates the bottom of the box, which is substantially rectangular in shape, and secured to each end are hinged inwardly-folding end sections 11 and 12, said

hinges being attached to the bottom a sufficient distance from the edges so that when the end section assumes a vertical position the outer walls thereof will be flush with the end edges of the box.

Secured to the end edges of the bottom are two vertical plates 13 and 14, respectively; provided with transverse slots 15 and 16. The slot 16 in the plate 14 is on a slightly-higher plane than the one in plate 13, as will be presently explained.

Two side sections 17 and 18 are provided, each having a plate 19 countersunk in its edge, as at 20, from which project headed pins or buttons 21, engaging the slots in the vertical plates 13 and 14 to form a hinged connection thereto, whereby the said side sections are adapted to fold one upon another.

Pins or buttons 22 project inwardly from the inner walls of the side sections 17 and 18 and engage in the slots 23 of the grooved bars 24 of the end sections, said bars being cut away at 25 to engage the shanks of the pins or buttons 22. I also provide a securing-strip 26, having a number of bayonet-slots 27 to correspond with the number of pins on each end of the respective side sections, so that when the parts are in position to form a complete box the vertical portion of the slots 27 will engage the shanks of the button 22, and thus lock the side and end sections together and add rigidity to the structure thus formed. An intermediate slot 28 is also provided in this strip engaged by the pin 29, passing transversely through the grooved bar, so that when the operator grasps the right-angular extension 30 on the upper end of said strip to raise the same the upward movement thereof will be limited thereby. It will be noticed that the right-angular extension above referred to lies snugly in a cut-out portion in the top edge of each end section, so that a flush surface is afforded the top of the box, which is hinged to the side section 18, and can be secured to the side section 17 to lock the box by any well-known means, such as a hasp or padlock. On each end of this top is fastened a hook 31 by a suitable eye designed to engage a pin on the bottom, so that when the parts are in their collapsed positions they may be held against displacement. Said hook 31 is also adapted to engage an eye or pin on

the end section 11 when the box is set up and tends to strengthen the parts and add rigidity thereto.

From the foregoing it will be readily seen 5 that I have provided an exceedingly efficient and durable folding box, and while its construction has been described as for that of a shipping-box I would have it understood that in actual practice I reserve the right to make 10 it of any size and for any purpose which may be found convenient.

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

15 1. In a device of the kind described, the combination with the bottom, side and end sections, of slotted plates secured to the ends of the bottom, headed pins projecting from said side sections and engaging the slots 20 whereby the sides are hinged to the plates, the plates of one of the side sections having their slots on a higher plane than those of the other side section, slotted bars on the respective end sections and buttons on the side 25 sections engaging said slotted bars to lock the several parts together, substantially as described.

2. In a folding box, the combination with a rectangular bottom, of slotted plates secured 30 to the ends thereof, of side sections, buttons or headed pins projecting therefrom, and slidably secured in the slots of the above-mentioned plates; whereby the side sections may

be folded one upon the other and then slid toward the longitudinal center of the bottom 35 until their longitudinal edges are flush, and hinged end sections also secured to the bottom, substantially as described.

3. The combination with the bottom, hinged side and end sections, a grooved bar on each 40 longitudinal edge, of the respective end sections provided with slots, a slidable strip in the groove of said bar having a bayonet-slot adapted to register with the slots in the bar, and headed pins adapted to rest in slots of 45 the bar and be engaged by the slots of the strips, whereby the side and end sections are locked together, substantially as described.

4. In a device of the kind described, the combination with the bottom, of inwardly- 50 folding hinged sections secured to each end of said bottom having slots, the slot on one plate being in a higher plane than those of the other, side sections engaging said slot and slidably secured to said plates, a grooved 55 bar secured to each longitudinal edge of the end sections, headed projections secured to the side sections and engaging slots in said grooved bar and a sliding locking-strip engaging the projections and fastening the pro- 60 jections and bar together, substantially as described.

HENRY SCHROEFFEL.

Witnesses:

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