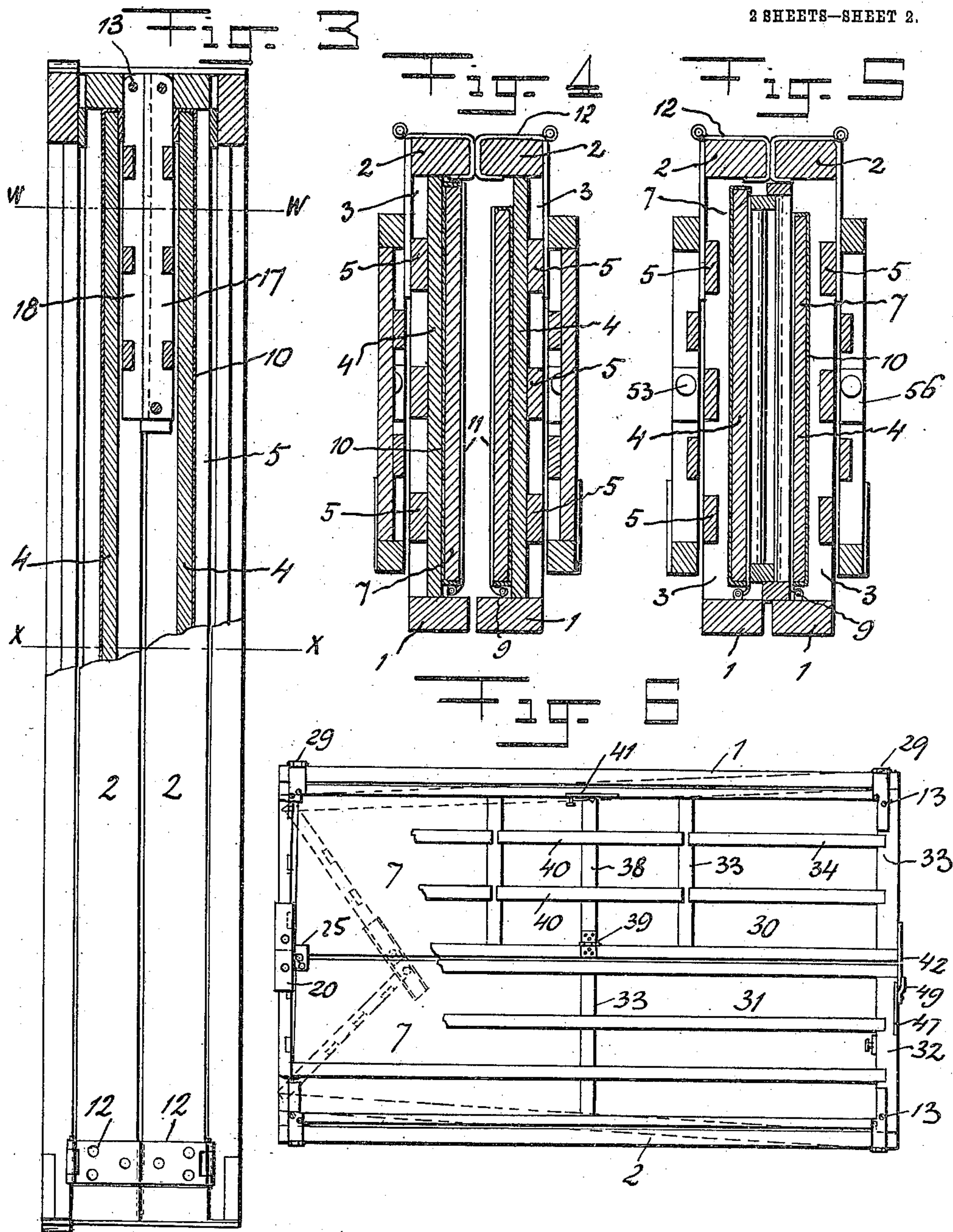


A. BUCHALKA.
COLLAPSIBLE CRATE.
APPLICATION FILED MAR. 17, 1910.

964,207.

Patented July 12, 1910.

2 SHEETS—SHEET 2.



WITNESSES

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ANTON BUCHALKA, OF BRADDOCK, PENNSYLVANIA.

COLLAPSIBLE CRATE.

964,207.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed March 17, 1910. Serial No. 549,891.

To all whom it may concern:

Be it known that I, ANTON BUCHALKA, a subject of the Emperor of Austria-Hungary, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Collapsible Crates, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to collapsible and folding crates, and the primary object of my invention is to provide a shipping crate that can be collapsed or folded into a comparatively small parcel that will not occupy

15 much space by return shipment, thus allowing a poultry raiser to ship practically a train load of fowls to the market and the crates containing the fowls be returned in one car load, thereby saving freight and dispensing with considerable labor that would be necessary to handle the crates in a prescribed time if they were not collapsed or folded.

Another object of this invention is to provide a collapsible crate of strong and durable construction, rigid when set up and compact when knocked down, the crate being inexpensive to manufacture, and of such construction as to be easily maintained in a sanitary condition.

A further object of this invention is to provide a collapsible crate consisting of comparatively few parts easily and quickly assembled, and in connection with the parts of the crate I use novel locks for retaining the parts in a set up or folded position.

With these and such other objects in view that will hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawings forming part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed, as to the size, shape and manner of assemblage, without departing from the spirit and scope of the invention.

In the drawings:—Figure 1 is an end view of the crate, partly broken away and partly in section, Fig. 2 is a cross sectional view of a portion of the crate with one of the lids thereof in an open position, Fig. 3 is

a bottom plan of the crate folded, partly broken away and partly in section, Fig. 4 is a cross sectional view of the folded crate taken on the line X—X of Fig. 3, Fig. 5 is a similar view taken on the line W—W of Fig. 3, Fig. 6 is a top plan of the crate in a set up position, Fig. 7 is an enlarged sectional view of one of the locks forming part of the crate, Fig. 8 is a perspective view of a detached latch, and Fig. 9 is a perspective view of a detached plate adapted to form part of the crate.

A crate constructed in accordance with my invention comprises side walls, bottom plates adapted to fold upwardly against said side walls, sectional end plates adapted to be collapsed between the folded bottom plates, and lids adapted to be folded against the outer sides of said side walls, whereby the crate will be reduced in its dimensions to a parcel that can be easily handled.

The side walls consist of longitudinal bottom frames 1 and longitudinal top frames 2 connected by end posts 3 and intermediate posts 4, these posts being connected by longitudinal equally spaced slats 5. The posts 3 and 4 are of less width than the frames 1 and 2, thereby providing ledges 6, and hinged to the ledges 6 of the frames 1 are bottom plates 7 and 8 adapted to swing inwardly to form the bottom of the crate, said bottom plates being folded upwardly against the posts 4, between the posts 3, when the crate is folded. The hinges 9 of the bottom plates 7 and 8 are located between the posts 3 and removed from the edge of the ledge 6, for a purpose that will presently appear. The bottom plates 7 and 8 have the upper surfaces thereof covered with metal, as sheet tin 10 and the under side of said bottom plates at the ends thereof are bound by straps 11.

The upper and lower ends of the posts 3 and the outer ends of the frames 1 and 2 are bound with metal 12 and pivotally mounted upon the ledges 6 of the frames 1 and 2 by vertical rods 13 are sectional end walls comprising two sections 14 and 15, each section being composed of bottom frames 16 and top frames 17 connected by vertical slats 18. The ends of the frames 16 and 17 of the section 15 are adapted to extend between the frames of the section 14, and said sections are pivotally connected by a vertical rod 19 extending through the ends of the top and bottom frames of said sections.

The bottom frame 16 of the section 14 is provided at its end with an inwardly projecting plate 20 having vertical locking pins 21 and 22, the pins 21 being adapted to engage in sockets 23 provided therefor in the ends of the straps 11 and the bottom plates 7 and 8, while the pins 22 are adapted to extend upwardly between the edges of the bottom plates 7 and 8, said bottom plates being cut away to provide clearance for said pins. The pins 22 are provided with heads 24 and adapted to engage under said heads are slotted latches 25 pivotally mounted upon the bottom plate 8 and adapted to be swung into engagement with said pins and extend on to the bottom plate 7. The latches are provided with knobs 26, whereby they can easily move into and out of engagement with the headed pins 22.

The upper frame 17 of the section 14 is bound with a metal plate 27 having vertical pins 28, for a purpose that will presently appear.

Connected to the frames 2 of the side walls by strap hinges 29 are lids adapted to be swung inwardly to form the top of the crate, these lids being designated 30 and 31, each lid being composed of end bars 32, intermediate bars 33 and longitudinal slats 34.

The confronting ends of the bars 32 have the underneath faces thereof bound by straps 35 provided with openings 36 communicating with sockets 37 formed in said bars to receive the pins 28 of the end wall section 14.

In order that fowls can be placed in the crate without opening the lids 30 and 31, the lid 30 is provided with a hinged section comprising a bar 38, hinged to the lid 30, as at 39, said bar supporting slats 40 adapted to have the ends thereof rest upon the intermediate bars 33 of said section. The free end of the bar 38 is adapted to be held by a conventional form of clasp 41 carried by one of the longitudinal slats 34 of the lid 30.

To retain the lids 30 and 31 in a closed position, I provide the end bars 32 of the lid 31 with novel locks adapted to engage pivoted latches 42 carried by the outer sides of the end bars 32 of the lid 30, and for the construction of these locks, reference will be had to Fig. 7 of the drawings, showing one of the locks in detail. The bar 32 is provided with a recess 43 and with a transverse slotted tube 44 adapted to hold a locking pin 45 having a reduced end 46 adapted to extend through an escutcheon plate 47 mounted upon the outer side of the bar 32 to close the outer side of the recess 43. The latch 42 is adapted to be swung into engagement with the plate 47 and is provided with an opening 48 to receive the reduced end of the pin 45, the end of said latch being further held by a keeper 49 secured to the plate 47. Pivotally mounted in the re-

cess 43 by a pin 50 is a spring pressed arm 51 having one end thereof extending into the slotted tube 44 to engage in the locking pin 45, while the opposite end of the arm is engaged by the shank 52 of a button movably mounted in the bar 32. The shank 52 is retained within the opening 54 provided therefor in the bar 32 by a collar 55 detachably mounted upon the shank 52, said collar being adapted to engage in an escutcheon plate 56 mounted upon the inner side of the bar 32, said plate being placed upon the shank 52 prior to securing the collar in place.

To fold the crate, the buttons 53 are pressed to release the latches 42, the lids 30 and 31 are then swung to the outer sides of the walls of the crate. The pivoted latches 25 are then opened and the bottom plates 7 and 8 swung upwardly upon the inner sides of the side walls. The sections 14 and 15 of the end walls can then be swung inwardly, whereby the top and bottom frames 1 and 2 of the side walls will be brought together. To lock these parts in a folded position, the latches 42 are swung across the ends of the side walls into the keepers 49 to be held within said keepers by the reduced ends 46 of the locking pins 45.

From the foregoing it will be observed that I have devised a novel shipping crate that can be easily and quickly folded to form a small parcel and set up to provide a rigid structure.

Having now described my invention what I claim as new, is:—

1. A folding crate embodying side walls, bottom plates hinged to said side walls and adapted to fold upwardly against the inner sides of said walls, sectional end walls pivotally connected to the ends of said side walls and adapted to have the sections thereof pivoted whereby said end walls can be folded inwardly against said folded bottom plates, lids hinged to the upper edges of said side walls and adapted to swing to the outer sides thereof, latches carried by one of said lids, locks carried by the other of said lids and adapted to engage said latches to hold said lids in a closed position, and latches carried by one of said bottom plates and adapted to be swung to engage the other bottom plate to lock said bottom plates in engagement with said end walls.

2. A collapsible crate embodying side walls, bottom plates hinged to the lower edges of said side walls and adapted to swing upwardly upon the inner sides of said walls, sectional end walls pivotally connected to the ends of said side walls and adapted to have the sections thereof pivotally connected whereby said sections can be swung inwardly against the inner sides of said side walls, means carried by the lower edges of said end walls and the confronting edges of said bottom plates for locking said plates in

engagement with said end walls, lids hinged
to the upper edges of said side walls and
adapted to swing to engage the outer sides
of said walls, said lids in a closed position
5 engaging the upper edges of said end walls,
and means carried by one of said lids and
adapted to lock said lids in a closed position.

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

ANTON BUCHALKA.

Witnesses:

A. H. RABSAG,
K. H. BUTLER.