

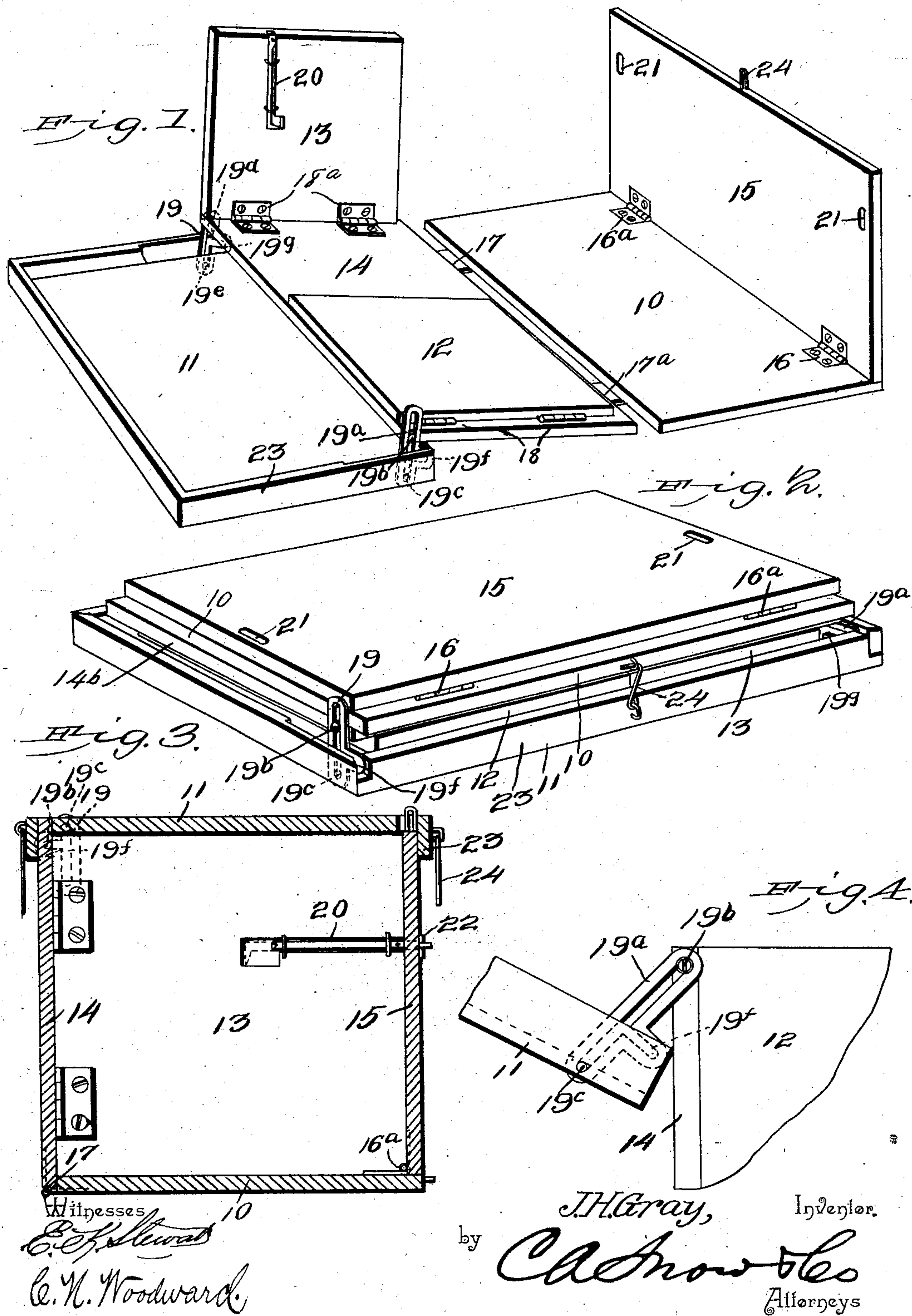
No. 721,296.

PATENTED FEB. 24, 1903.

J. H. GRAY.
FOLDING CRATE.

APPLICATION FILED APR. 22, 1902.

NO MODEL.



UNITED STATES PATENT OFFICE.

JAMES H. GRAY, OF ST. ALBANS, WEST VIRGINIA.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 721,296, dated February 24, 1903.

Application filed April 22, 1902. Serial No. 104,163. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. GRAY, a citizen of the United States, residing at St. Albans, in the county of Kanawha and State of West Virginia, have invented a new and useful Folding Crate, of which the following is a specification.

This invention relates to shipping crates or boxes adapted to be folded, so that the parts will lie compactly one upon the other when not in use; and the invention consists in certain novel features of construction, as hereinafter shown and described, and specifically pointed out in the claims.

In the drawings illustrative of the invention, Figure 1 is a perspective view of the device partially folded. Fig. 2 is a perspective view of the device wholly folded or collapsed, ready for the return shipment. Fig. 3 is a transverse section of the device arranged as a crate or casing. Fig. 4 is a detail view with the cover raised.

In this device is comprised a casing or box composed of the bottom 10, top 11, ends 12 13, back 14, and front 15. The front 15 is hinged, as at 16 16^a, to the bottom 10 on one side, and the back 14 is likewise hinged, as at 17 17^a, to the other side of the bottom. The ends 12 and 13 are hinged to the ends of the bottom 10, as at 18 18^a, respectively, as shown, and adapted to fold inward when the device is collapsed, as indicated at the right of Fig. 1. The cover 11 is connected to the back 14 by slotted plates 19 19^a, the plates engaging pins 19^b 19^c 19^d 19^e in the cover 11 and back 14, respectively, as shown, the pins having heads, so that the plates will not escape from the pins when the device is operated. Each of the slots in the plates 19 19^a is provided with a lateral cavity 19^f 19^g, adapted to engage the pins when the crate is arranged for use, as shown in Fig. 3. The hinges 16 16^a are set to cause the lower edge of the front 15 to rest upon the bottom 10, as shown in Figs. 1 and 2, while the hinges 17 and 17^a are set to permit the lower edge of the back 14 to fold up in front of the rear edge of the bottom 10, as indicated. The ends 12 and 13 are each provided with a sliding bolt (represented at 20) adapted to respectively engage apertures 21 in the front 15. One of the bolts only is shown; but it will be under-

stood that each end will be provided with one of the bolts, the bolts being perforated at their outer ends and adapted to receive coll- 55
ets or holding-pins 22 when the device is ar-
ranged for use as a crate or box, as indicated
in Fig. 3. When thus constructed, the device
is capable of being folded down or "col- 60
lapsed," as in Fig. 2, with all the parts lying
one upon the other and occupying only as
much space as the area of the bottom 10 or
top 11 and as thick as five thicknesses of the
material composing the walls of the device.
The slotted plates 19 19^a permit a sufficient 65
flexibility between the cover 11 and the other
parts to permit the cover to assume its posi-
tion upon the folded ends 12 and 13 when the
device is collapsed, as shown in Fig. 2, while
the shorter transverse slots or recesses 19^f 19^g 70
are adapted to engage the pins 19^b 19^d when
the device is arranged for use, as shown in
Fig. 3. The cover 11 will preferably be pro-
vided with a band or border 23, depending be-
neath its edges and adapted to embrace the 75
adjacent edges of the members 12, 13, 14, and
15 when the device is arranged for use, as
shown in Fig. 3, to afford an additional sup-
port to the device and also to increase its
security. By this simple means a crate or 80
casing is produced which is as strong as an
ordinary box or crate secured rigidly at the
corners, while at the same time capable of
being readily collapsed or "knocked down"
when not in use or when it is to be returned 85
to the shipper.

While the device herein illustrated shows a box having closed sides, it will of course be understood that the invention is equally applicable to an open or slatted crate or any 90
other specific structure and embodying any
suitable proportions and material and that
the device may be employed for any desirable
purpose. The hinges may be extended in the
form of straps, or additional straps may be 95
supplied to strengthen the parts. Hooks and
staples 24 may be attached, as shown, to hold
the parts when collapsed.

Having thus described my invention, what I claim is—

1. In a folding crate, the combination of the bottom member, the front and back members hinged to the edges of said bottom member by inside and outside hinges respectively per-

mitting them to fold against opposite sides of
said bottom, the end members connected with
the back member by inside hinges permitting
them to fold flat against said back member
5 upon the side opposite to the bottom member,
the top member, and slotted hinge-plates con-
necting said top member with pins project-
ing from the ends of the back member near
the upper edge of the same, substantially as
10 set forth.

2. In a folding crate, the combination with
the back member having headed pins project-
ing from the ends thereof near its upper edge,
of the top member having a surrounding

flange and pins extending inwardly there- 15
from, and the slotted hinge-plates having re-
cesses extending laterally from the slots there-
of, said slotted hinge-plates engaging the pins
of the back and top members, substantially
as set forth. 20

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

JAMES H. GRAY.

Witnesses:

I. L. JOHNSON,
GEORGE WEIMER.