

No. 740,753.

PATENTED OCT. 6, 1903.

S. GREER.
COLLAPSIBLE CRATE.
APPLICATION FILED SEPT. 30, 1902.

2 SHEETS—SHEET 1.

NO MODEL.

FIG. 1.

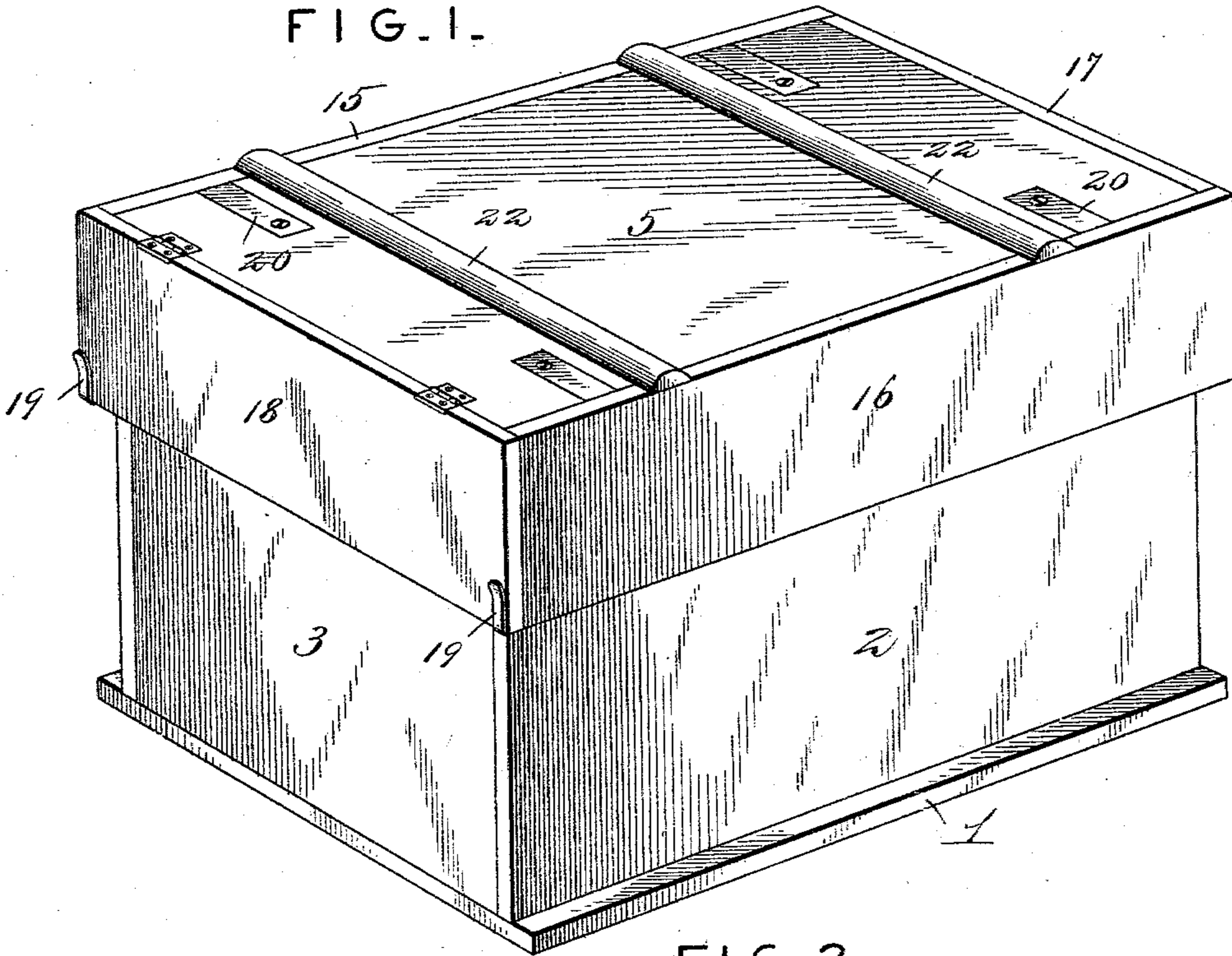
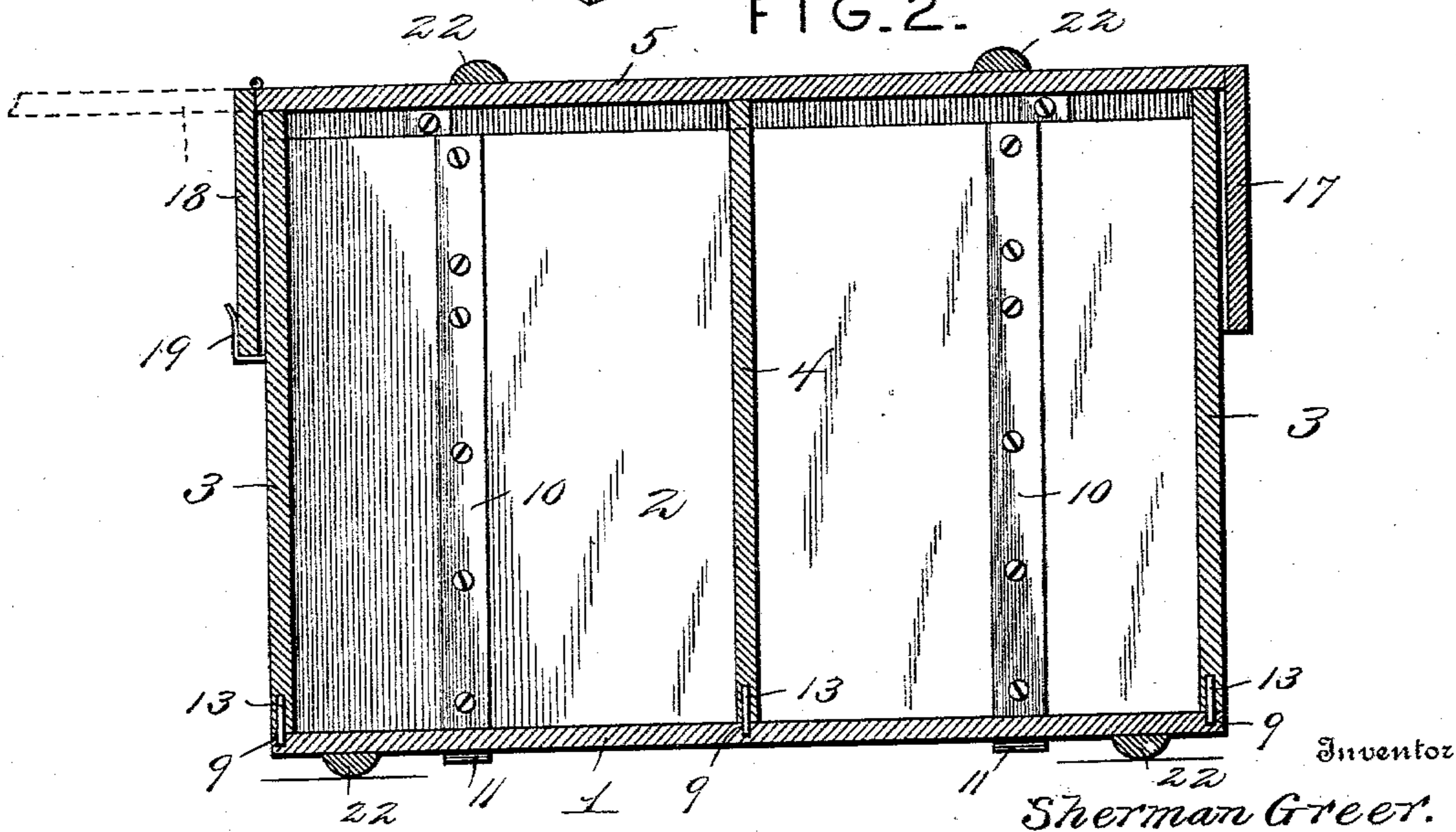


FIG. 2.



Witnesses

Harry L. Amer.
Chas. D. Hoyer.

By Victor J. Evans
Attorney

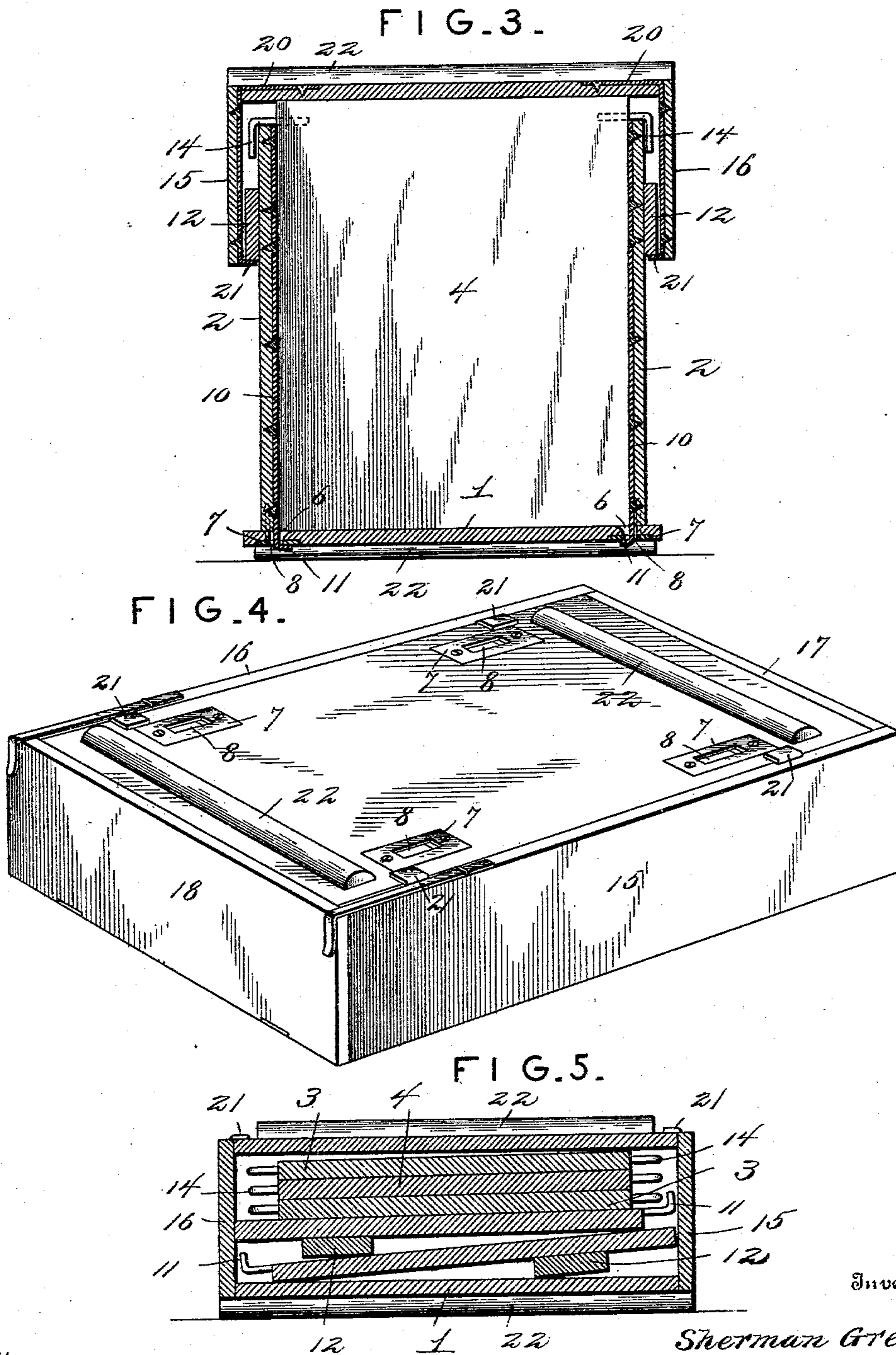
No. 740,753.

PATENTED OCT. 6, 1903.

S. GREER.
COLLAPSIBLE CRATE.
APPLICATION FILED SEPT. 30, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Inventor

Sherman Greer.

Witnesses

Harry L. Amer.
Chas. S. Hoyer.

By

Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

SHERMAN GREER, OF LINCOLN, NEBRASKA.

COLLAPSIBLE CRATE.

SPECIFICATION forming part of Letters Patent No. 740,753, dated October 6, 1903.

Application filed September 30, 1902. Serial No. 125,445. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN GREER, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Collapsible Crates, of which the following is a specification.

This invention relates to collapsible crates, particularly adapted for the transportation of eggs; and the main object of the same is to provide a strong and durable device of this class having features of construction which permit the several parts to be reduced to compact form when empty, and thereby economize in the space occupied by a number of empty crates or when the latter are stored in bulk, and thus materially decrease the cost of freight or expressage, the improved device being convenient for handling by express, railroad, and transfer companies.

With these and other objects and advantages in view the invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of the improved crate arranged for use. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a transverse vertical section. Fig. 4 is a perspective view of the improved crate collapsed. Fig. 5 is a transverse vertical section of the crate as shown by Fig. 4, illustrating the several parts stored therein.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a bottom, to which are removably applied sides 2, ends 3, a transverse central partition 4, and an inclosing cover or top 5. The bottom 1 adjacent the side edges and near the ends has slots 6 cut therethrough and provided with inwardly-curved bevel walls, wear-plates 7 being secured over the said slots on the under side of the bottom and having openings 8 therethrough coinciding with the slots. The bottom 1 also has pairs of pin-holes or sockets 9 adjacent the opposite ends, as well as at the center, the said pin-holes or sockets being arranged in transverse alinement. Each of the sides 2 has a pair of metallic straps 10 secured against the inner surface

thereof and vertically disposed, the said straps being extended below the lower edge of the side and formed with inturned or hooked terminals 11. These straps extend over the full width of the sides to reinforce the same in a manner which will be presently set forth and on the outer surfaces of the sides below the upper edges battens 12 are secured and longitudinally disposed, each side having one of the battens, which is of sufficient width to render it strong and durable.

The two ends 3 and the partition 4 have dowel-pins 13 projecting below their lower edges to removably enter the holes or sockets 9, and at their upper portions the said ends and partition have oppositely-disposed outwardly-projecting hooks 14, which are secured in their side edges near their upper ends, so as to bear on the upper edges of the sides 2 when the parts of the crate are assembled.

In assembling the parts of the crate thus far described the sides are first placed in position by disposing them at such an inward angle of inclination as to permit the hooked terminals 11 of the straps 10 to pass through the slots 6 and openings 8, respectively, in the bottom and the wear-plates. After the said terminals have been inserted through the slots and openings the sides are drawn outward into vertical position, and the ends 3 and partition 4 are then inserted between the sides, as clearly shown by Fig. 2. It will be seen that the straps 10 distribute the supporting strain over the full width of the sides and also tend to reinforce the sides against breakage, as well as prevent the upper portion of the sides breaking down, as would be the case if a short-length hook device was used instead of the straps 10, as described. When the ends 3 and partition 4 are in place, the hooks 14 firmly bear on the upper edges of the sides, as before set forth, and prevent said sides from bulging or moving outwardly.

The cover or top 5 comprises an imperforate top plate 15, sides 16, and ends 17 and 18. The sides and ends have considerable width, so as to depend over the upper portions of the sides and ends of the crate-body and also to provide means for forming an inclosure with the bottom 1 for the sides 2 and

ends 3 when the latter are collapsed, as clearly indicated by Figs. 4 and 5. The end 18 of the cover or top is hinged to open upwardly, and secured to the lower edges of the sides 5 16 are spring-snaps 19 to engage the end 18 and hold the latter closed. Secured to the top plate 15 are the upper terminals of metallic straps 20, which are bent at an angle and also extend over and are attached to the 10 inner surfaces of the sides 16 and have their lower terminals bent inwardly to form hooks 21 to engage the lower edges of the battens 12. In applying the cover or top as an entirety to the crate the end 18 is released and 15 turned upwardly, and the entire cover is then slipped longitudinally over the upper portion of the crate-body, the inwardly bent or hooked terminals 21 of the straps 20 sliding along the under edges of the battens and prevent the 20 cover from being lifted from the body of the crate. After the cover is fully applied the end 18 is lowered and engaged by the catches 19, and longitudinal sliding movement or displacement of the said cover is thereby ob- 25 structed. It will be seen that the contents of the crate will be readily accessible by moving the cover longitudinally after releasing and opening the end 18.

When the crate is collapsed or reduced to 30 compact form, the sides 2 and ends 3, as well as the partition 4, are disconnected from the bottom 1 and are regularly disposed in the cover 5, which is inverted to receive said parts, as clearly shown by Figs. 4 and 5. Af- 35 ter the sides, ends, and partition of the crate-body are placed in the inverted cover the bottom 1 is turned over and slipped under the inwardly-projecting hooked terminals 21 of the straps 20, the end 18 of the cover be- 40 ing open for this purpose and afterward closed and engaged by the spring-catches, and in this condition a number of crates can be stored in the space usually occupied by a full-sized crate or one without collapsible features.

45 In stacking or storing a number of crates either in collapsed or operative condition great inconvenience is experienced by hav- ing the engaging sides or bottom and top of the individual crates lying too close to and 50 wearing upon the similar parts or sides of adjacent crates, and to overcome this disad- vantage the bottom and cover are provided with transversely-extending ribs 22, which have sufficient projection above and below 55 the plane of the parts to which they are attached to prevent contact with adjacent crates of a similar or any other structure. The ribs 22 of the bottom 1 are close to the opposite ends of the latter, whereas the 60 similar ribs on the cover are nearer the cen- ter of said cover. The purpose of this is to permit the bottom ribs to bear on the top or

cover without obstruction by the ribs on the latter, and, moreover, the said ribs by such arrangement provide a stronger support to 65 sustain the weight of a stack of crates and overcome any tendency toward splitting or fracturing either the bottom 1 or the cover 5. The bottom 1 of the improved crate is also projected at the side edges beyond the plane 70 of the sides 2, or, in other words, is made wider than the actual width of the crate. The purpose of this construction is to have the bottom fit snugly within the cover when the parts of the crate are reduced to compact 75 form, as shown by Figs. 4 and 5.

Changes in the form, proportions, dimen- sions, and minor details may be resorted to without departing from the nature or spirit 80 of the invention.

Having thus fully described the invention, what is claimed as new is—

1. In a crate, the combination of a bottom having slots therethrough inwardly from the opposite side edges and sockets near the ends 85 and at the center, sides having strips secured to their inner surfaces and provided with lower intumed terminal hooks removably inserted through the said slots, and normally bearing against the under surface of said bottom, op- 90 posite ends and a partition having depending dowel-pins to removably engage the sock- ets and also provided with upper outwardly- projecting hooks to engage the upper edges 95 of the sides, and a lid or cover having wide depending sides and ends adapted to serve with the bottom as a closure for the remain- ing parts when collapsed.

2. In a crate, the combination of a bottom having slots therethrough inwardly from the 100 opposite side edges and sockets near the ends and at the center, sides having strips secured to their inner surfaces and provided with lower intumed terminal hooks removably in- 105 serted through the said slots and normally bearing against the under surface of said bottom, opposite ends and a partition hav- ing depending dowel-pins to removably en- 110 gage the sockets and also provided with up- per outwardly-projecting hooks to bear on the upper edges of the sides, battens on the outer upper portions of the sides of the crate, and a cover having a hinged end and wide depend- 115 ing sides, the ends being equal in width to the sides, the sides of the cover also being provided with intumed hook devices to slid- ably move over and engage the under edges of the battens.

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

SHERMAN GREER.

Witnesses:

SELENA J. MCDILL,
MILLICENT E. GREER.