

REL. WOODEN RECEPTACLES,
Boxes, Crates,
Knockdown, Folding,
Horizontal Pivot.

Draftsm

No. 889,191.

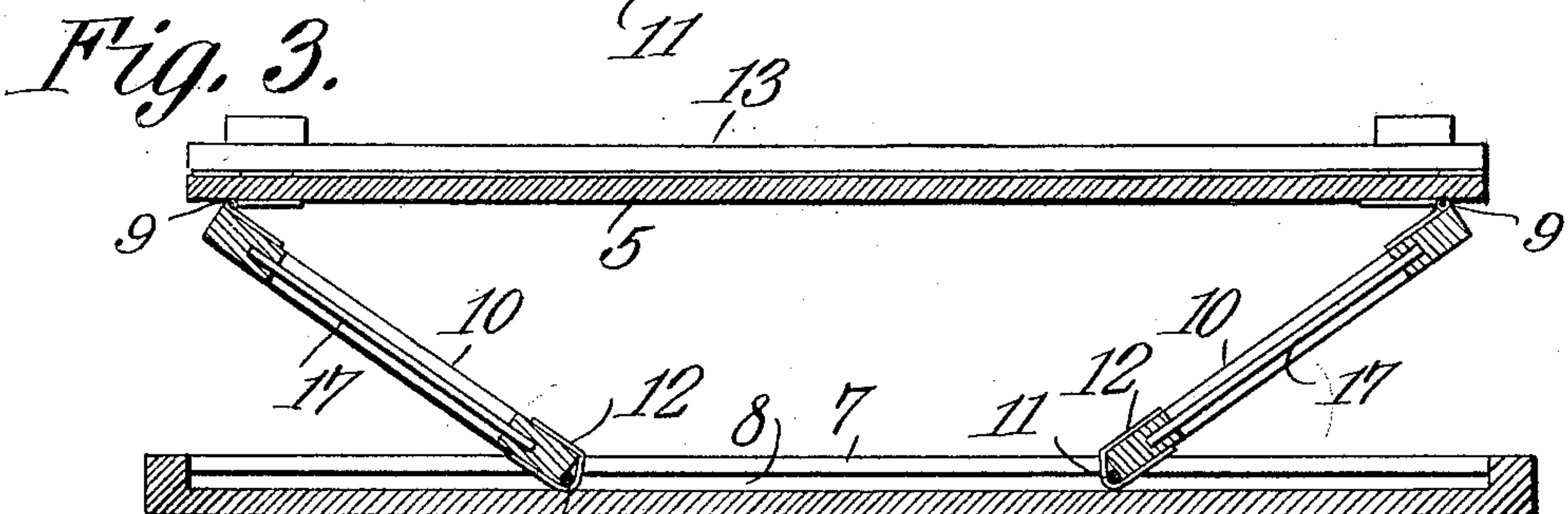
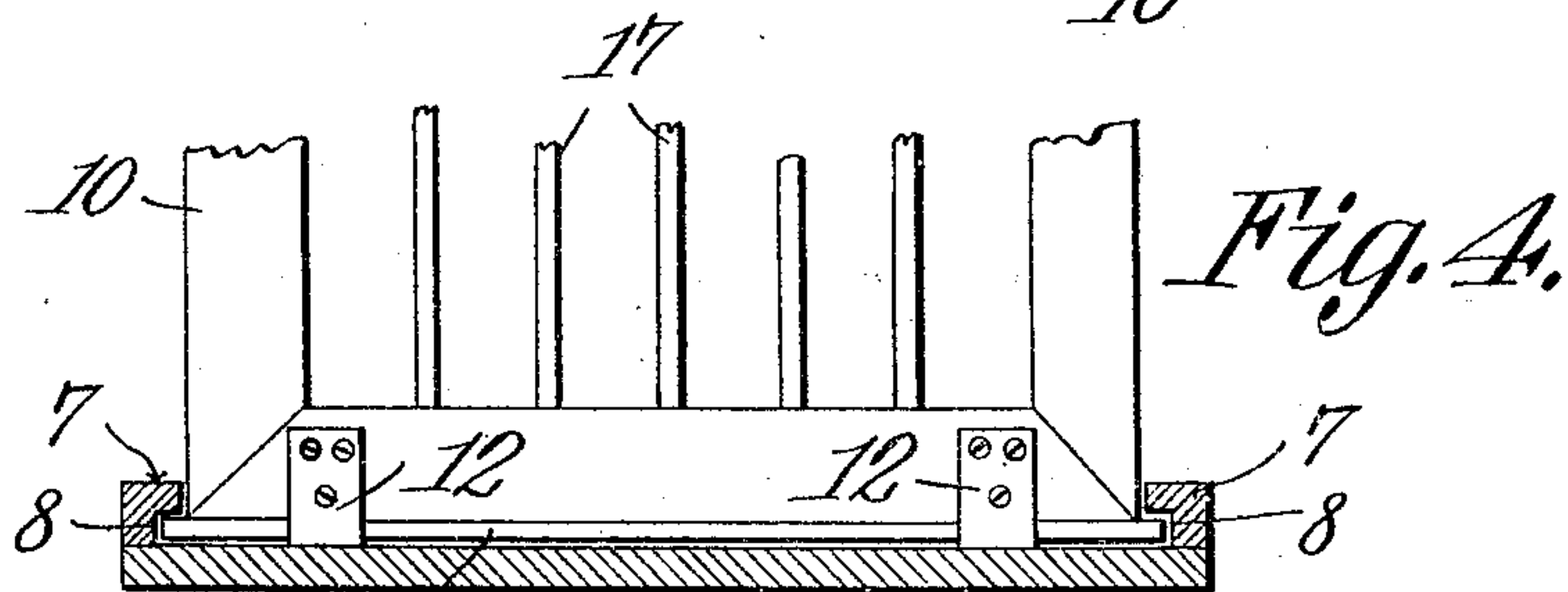
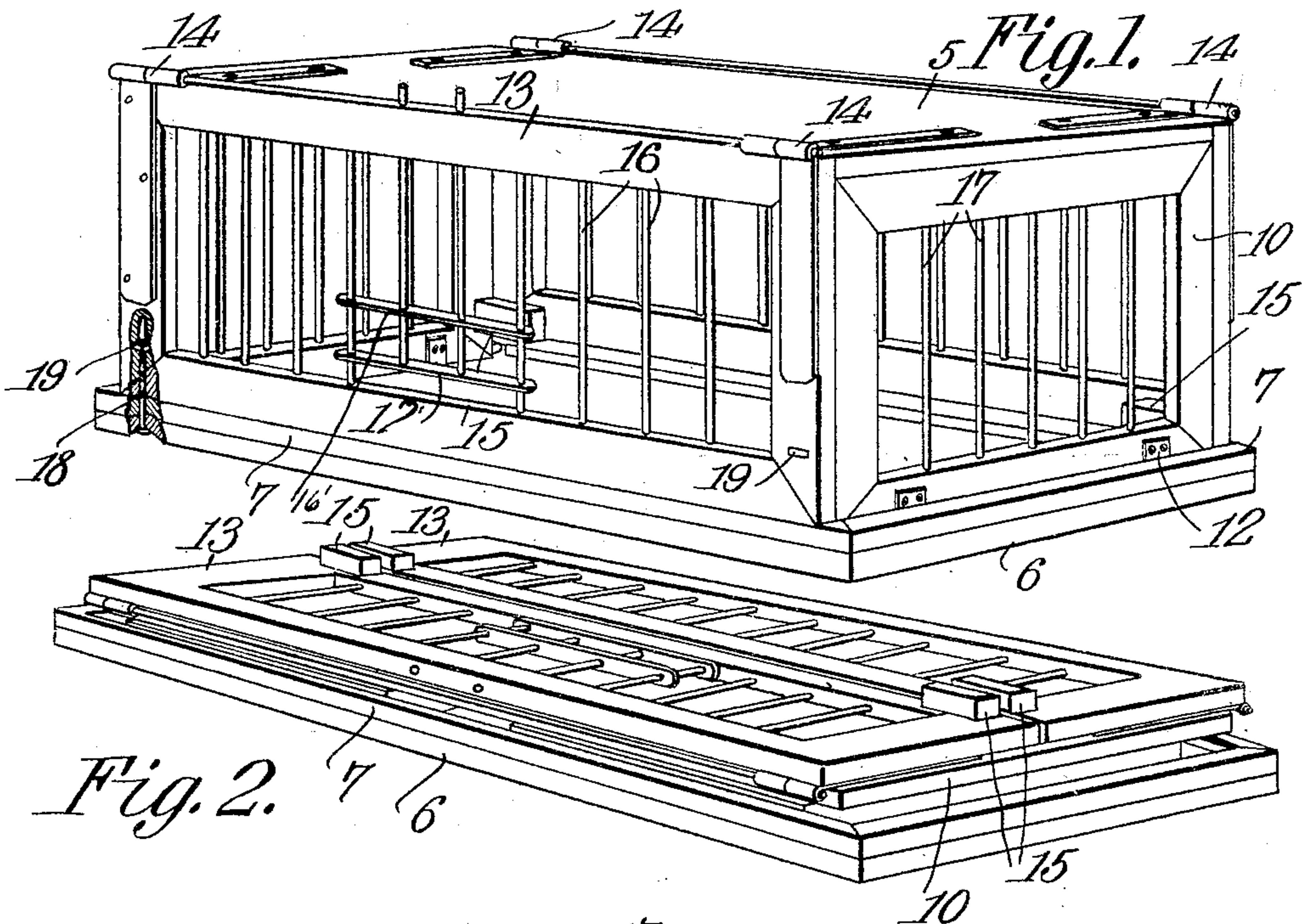
S. W. BELL.

PATENTED JUNE 2, 1908.

SELF CLEANING KNOCKDOWN POULTRY AND MERCHANDISE SHIPPING CRATE.

APPLICATION FILED NOV. 12, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

E. J. Stewart
L. A. McKee

Samuel W. Bell

INVENTOR

By

C. A. Snow & Co.

ATTORNEYS

No. 889,191.

S. W. BELL.

PATENTED JUNE 2, 1908.

SELF CLEANING KNOCKDOWN POULTRY AND MERCHANDISE SHIPPING CRATE.

APPLICATION FILED NOV. 12, 1906.

2 SHEETS—SHEET 2.

Fig. 5.

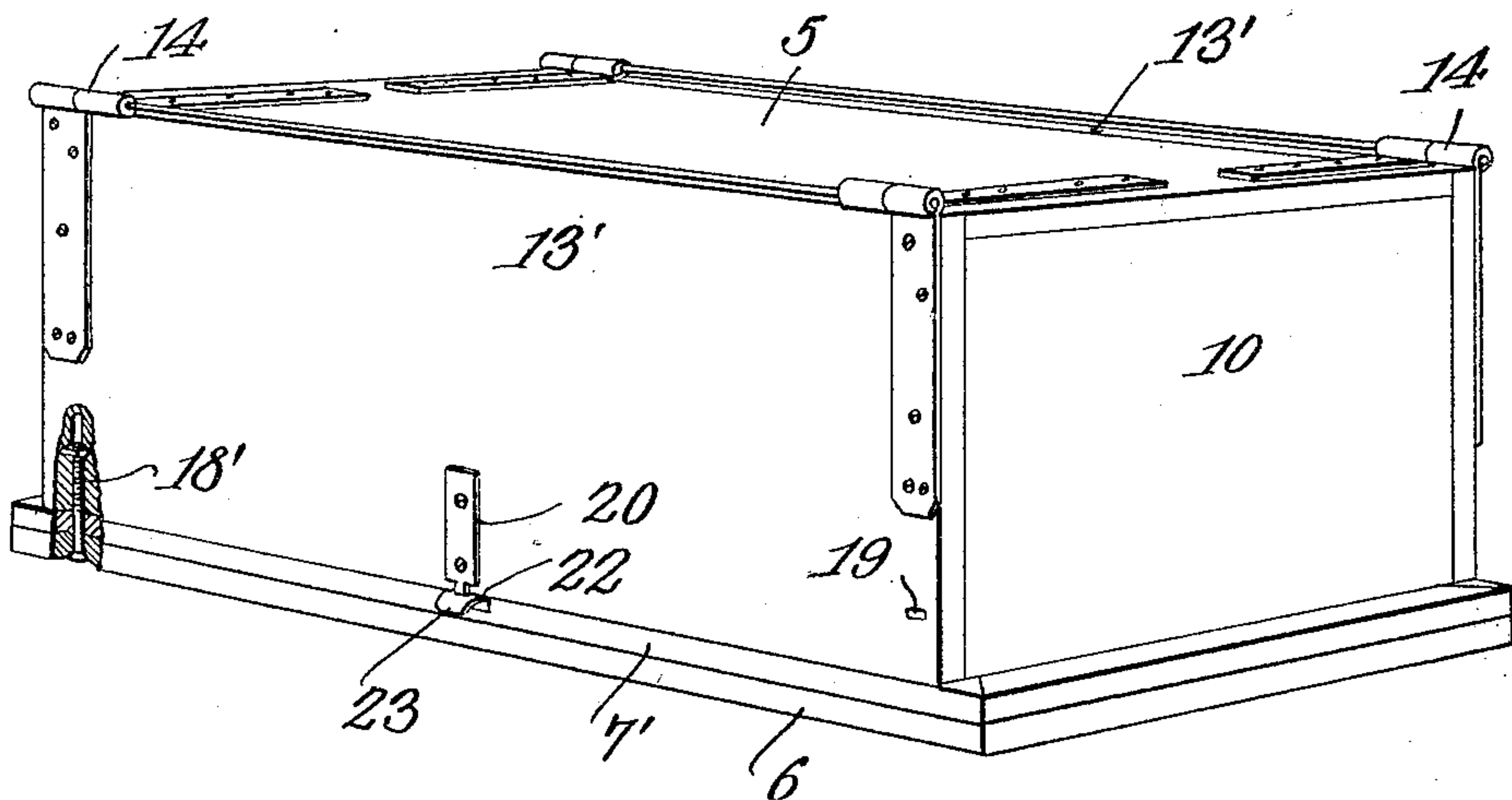


Fig. 6.

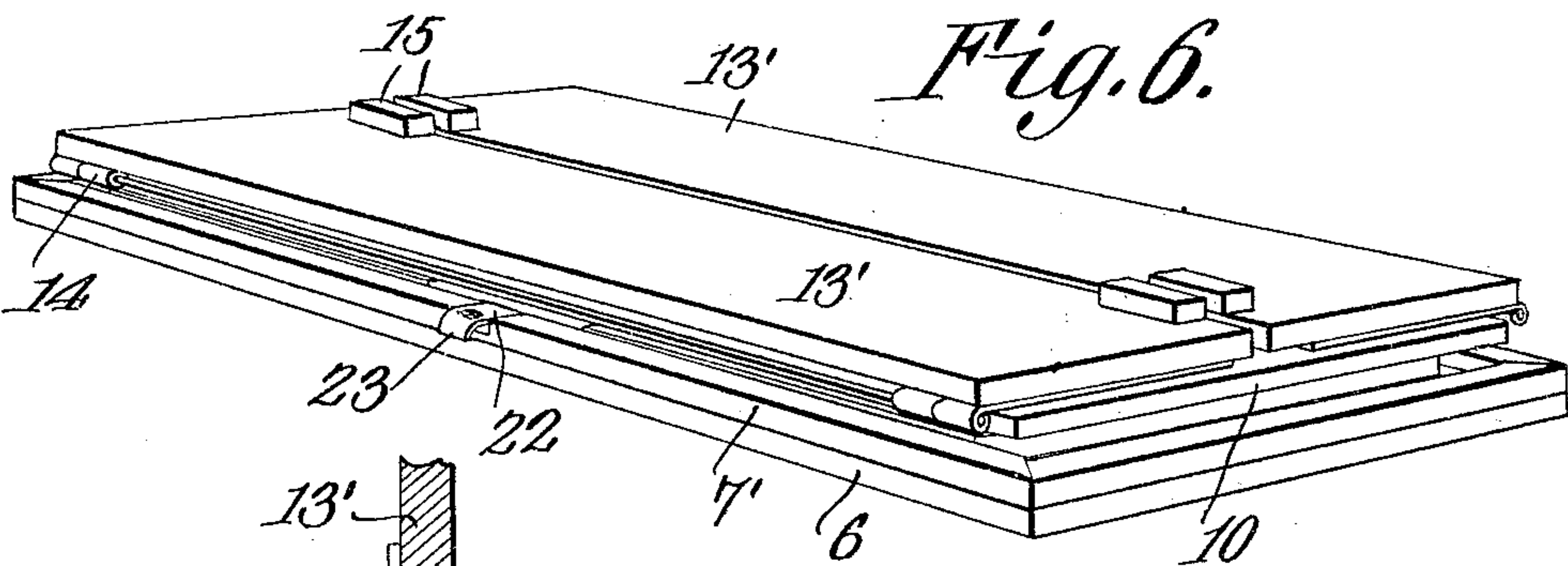
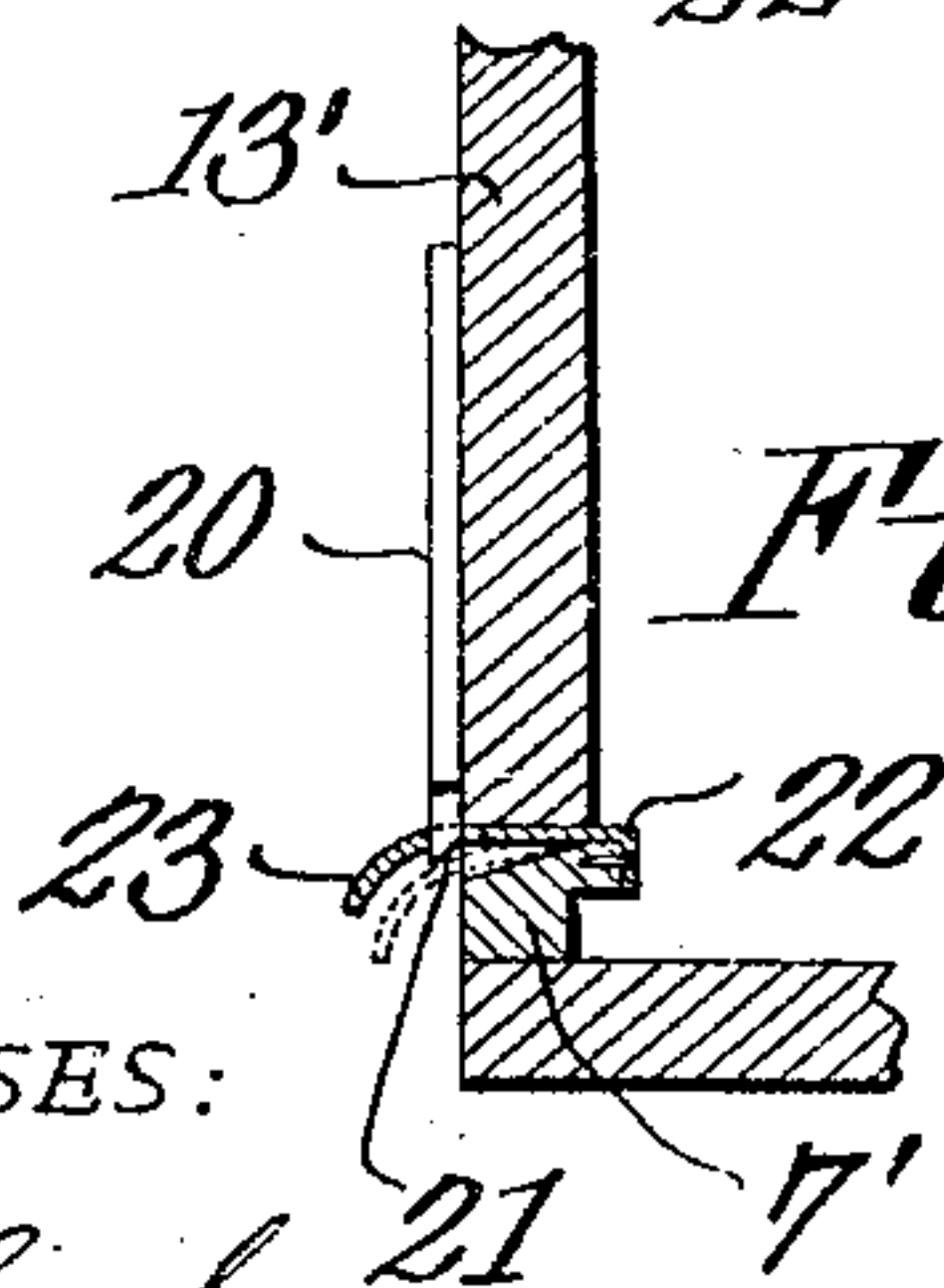


Fig. 7.



WITNESSES:

E. J. Stewart
L. A. McKee

Samuel W. Bell,

INVENTOR.

By *CA Snow & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL W. BELL, OF MARIETTA, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM J. WARK, OF MARIETTA, OHIO.

SELF-CLEANING KNOCKDOWN POULTRY AND MERCHANDISE SHIPPING CRATE.

No. 889,191.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed November 12, 1906. Serial No. 343,089.

To all whom it may concern:

Be it known that I, SAMUEL W. BELL, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented a new and useful Self-Cleaning Knockdown Poultry and Merchandise Shipping Crate, of which the following is a specification.

This invention relates to knock-down shipping crates and more particularly to that class of crates especially designed for shipping and transporting poultry and other live stock.

The object of the invention is to provide a comparatively simple and inexpensive crate capable of being readily set up for use and which may be quickly knocked down or folded for transportation or shipment.

A further object is to provide a crate the end walls of which are pivotally connected with the top and bottom sections, respectively, and movable inwardly over the upper surface of the bottom section to folded position thus scraping the floor of the crate and effectually removing any particles of dirt or other foreign matter adhering to the floor.

A further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a perspective view of a knock-down crate constructed in accordance with my invention, showing the same set up for use. Fig. 2 is a similar view showing the crate knocked-down or folded. Fig. 3 is a longitudinal sectional view showing the crate in partially folded position. Fig. 4 is a transverse sectional view. Fig. 5 is a perspective view illustrating a solid or closed crate for shipping merchandise. Fig. 6 is a similar view of the crate shown in Fig. 5 in folded position.

Fig. 7 is a detail longitudinal sectional view showing the construction of the spring catch. 55

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved device which may be formed of wood or other suitable material is preferably rectangular in shape, as shown, and consists of a top or upper section 5 and a bottom or lower section 6, the latter being provided with a marginal rib or flange 7 having a longitudinal groove or channel 8 formed therein and preferably extending the entire length of the bottom section, as shown. 60 65

Pivotally connected with the upper section 5, as indicated at 9, are the end walls or sections 10 the lower edges of which are provided with transverse rods or pins 11 secured to the bottom of the sections in any suitable manner as by straps or clips 12. The opposite ends of the rods 11 project laterally beyond the adjacent vertical edges of the end walls and are seated in the grooves or channels 8 thus forming a sliding and pivotal connection between the walls and bottom section 6. The side walls or sections 13 are pivoted to the tops of the crate, as indicated at 14 and are adapted to be folded downwardly in engagement with the adjacent vertical edges of the end walls of the sections 10, there being stop-lugs or blocks 15 secured to the free edges of the side sections and spaced inwardly from the opposite ends thereof for engagement with the adjacent edges of the end walls 10 thus locking the end walls against accidental displacement. 70 75 80 85

The side and end sections or walls are preferably provided with a plurality of spaced bars 16 and 17, some of the bars 16 of one of the side sections being mounted for vertical movement therein and connected by cross bars 16' to form a gate 17' whereby access may be readily obtained to the interior of the crate. 90 95

Extending through the bottom section 6 at the opposite ends of the crate are threaded pins or bolts 18 which engage suitable nuts 19 seated in the end bars of the side sections 13 thereby to securely lock said side sections in engagement with the bottom section 6 and prevent accidental collapsing of the crate during transportation or shipment. 100 105

In folding the crate the side sections are

released by removing the bolts 18, after which the side sections are folded upwardly and laterally on the top section 5. The end sections 10 are then folded inwardly and downwardly on the bottom section, as best shown in Figs. 2 and 3 of the drawings so that the crate will occupy a comparatively small space when not in use. The bolts or pins 18 after being removed from the bottom section may be threaded in the nuts 19 of the side walls so as to be out of the way and in convenient position to be again used in setting up the crate. Attention is here called to the fact that when the end sections or walls 10 are moved inwardly to folded position the lower edges of said sections will bear against and scrape the upper surface of the bottom section 6 thus effectually removing any particles or deposits of dirt and other foreign material on said bottom section. It may of course be understood that the crate will be tilted on one side to permit the discharge of of the dirt after the floor has been scraped.

When it is desired to set the crate up for use the top section is elevated after which the end sections 10 are adjusted longitudinally of the bottom section and forced into engagement with the adjacent surface of the stop-flange or rib 7, after which the side sections 13 are swung downwardly and the bolts 18 threaded through the bottom section into engagement with the nuts 19. It will thus be seen that the stop-lugs or blocks 15 by engagement with the adjacent faces of the end walls will effectually lock the end walls in vertical position while the movable bars 16 by engagement with the bottom section will prevent spreading movement of the side sections.

In Figs. 5 and 6 of the drawings there is illustrated a solid or closed form of crate especially adapted for shipping merchandise. In this form of the device the side walls 13' are provided with locking bolts 20 the reduced ends of which are inclined or beveled, as indicated at 21, for engagement with an opening in a spring plate or keeper 22. The plate or keeper 22 is countersunk in the marginal rib or flange 7' and is provided with a terminal finger piece 23 the free end of which is bent or curved downwardly so that when the side walls of the crate are moved to

closed position the inclined end 21 of the bolt will ride over the curved surface of the plate and thus be guided to the locking recess. 55

In order to knock down the crate shown in Fig. 5 it is merely necessary to remove the bolts 18' and depress the finger-piece 23 when the side walls or sections may be swung upwardly and the crate folded in the manner before stated. 60

It will of course be understood that the crates may be made in different sizes and shapes and constructed with either open or closed walls according to the nature of the commodities to be transported or shipped. 65

From the foregoing description it will be seen that there is provided an extremely simple, inexpensive and efficient device admirably adapted for the attainment of the ends in view. 70

Having thus described the invention, what is claimed is:

A knock-down crate including a top section, a bottom section provided with a vertically disposed marginal flange having its exterior walls imperforate and its interior walls provided with spaced grooves extending the entire length of the bottom section, end sections pivotally connected with the top section, straps secured to the free ends of said end sections and having their intermediate portions spaced from the bottom of the end sections to form loops, rods seated in said loops and projecting beyond the vertical edges of the end walls for engagement with the adjacent grooves, blocks spaced inwardly from the adjacent ends of said side sections for engagement with the end sections when the side sections are folded downwardly to operative position, nuts seated in openings in the side sections, and bolts carried by the bottom section and engaging the nuts for locking the bottom and side sections in engagement with each other, said side sections being foldable downwardly on the top section when the crate is knocked down. 75 80 85 90 95

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

SAMUEL W. BELL.

Witnesses:

C. C. MIDDLESWART,
W. M. HART.