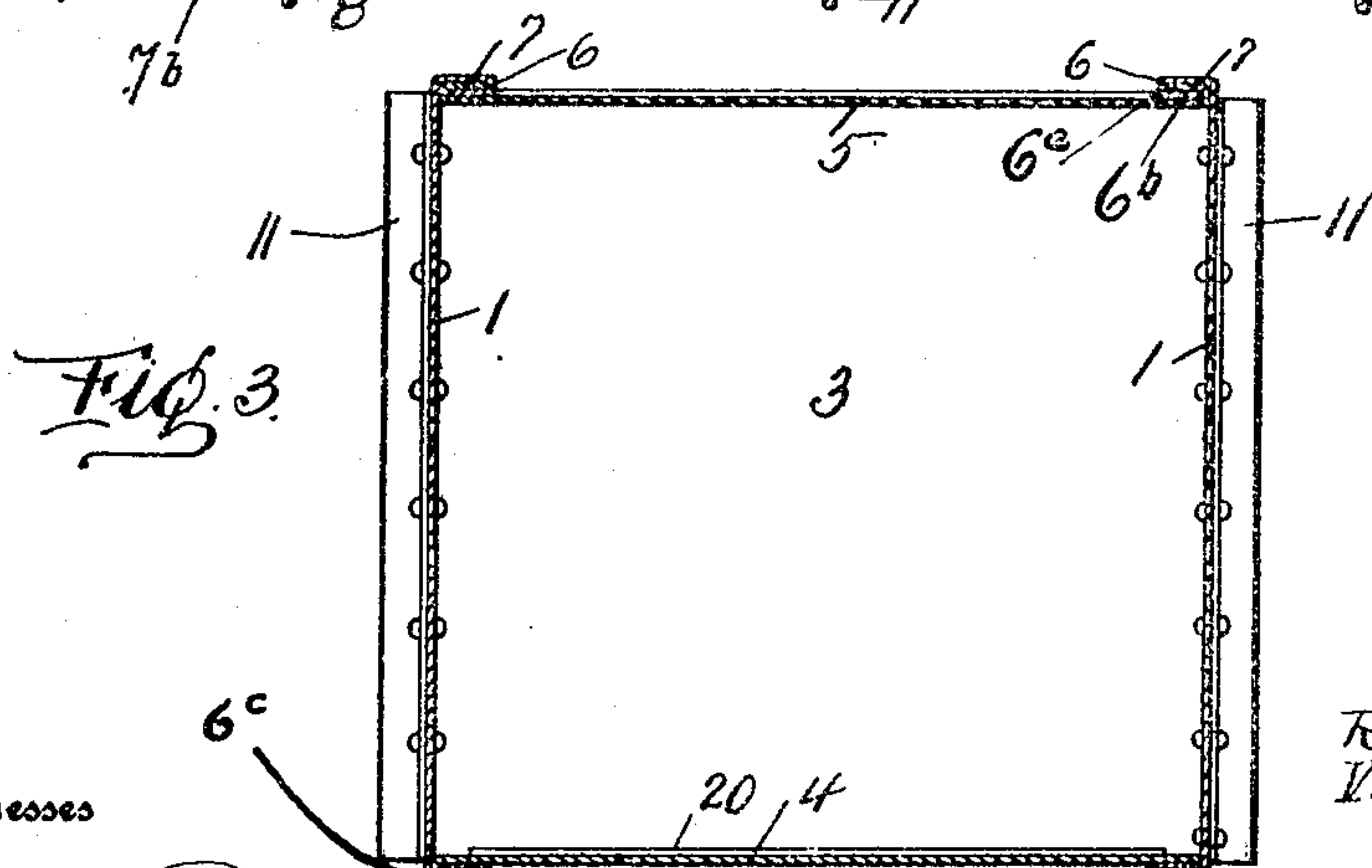
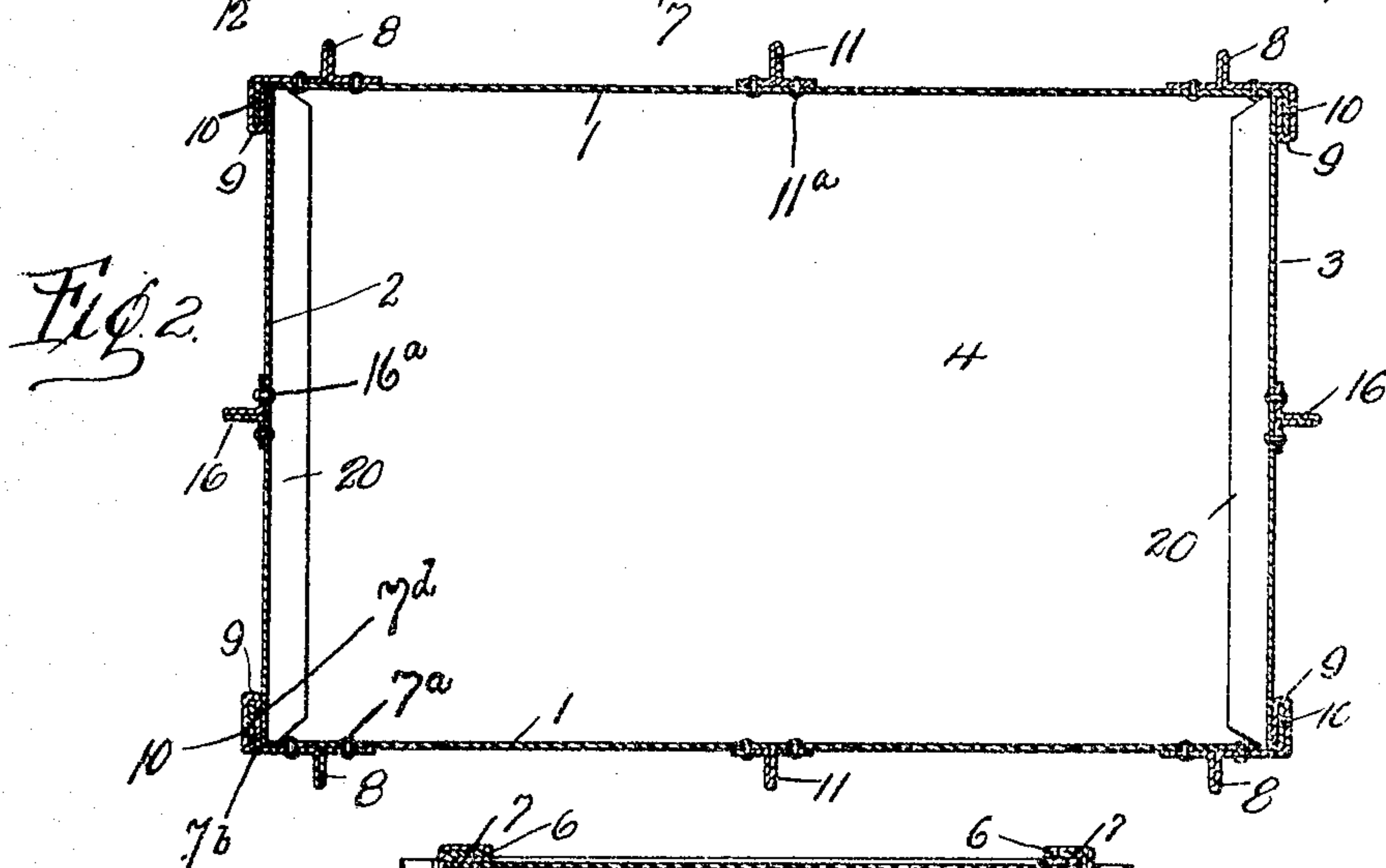
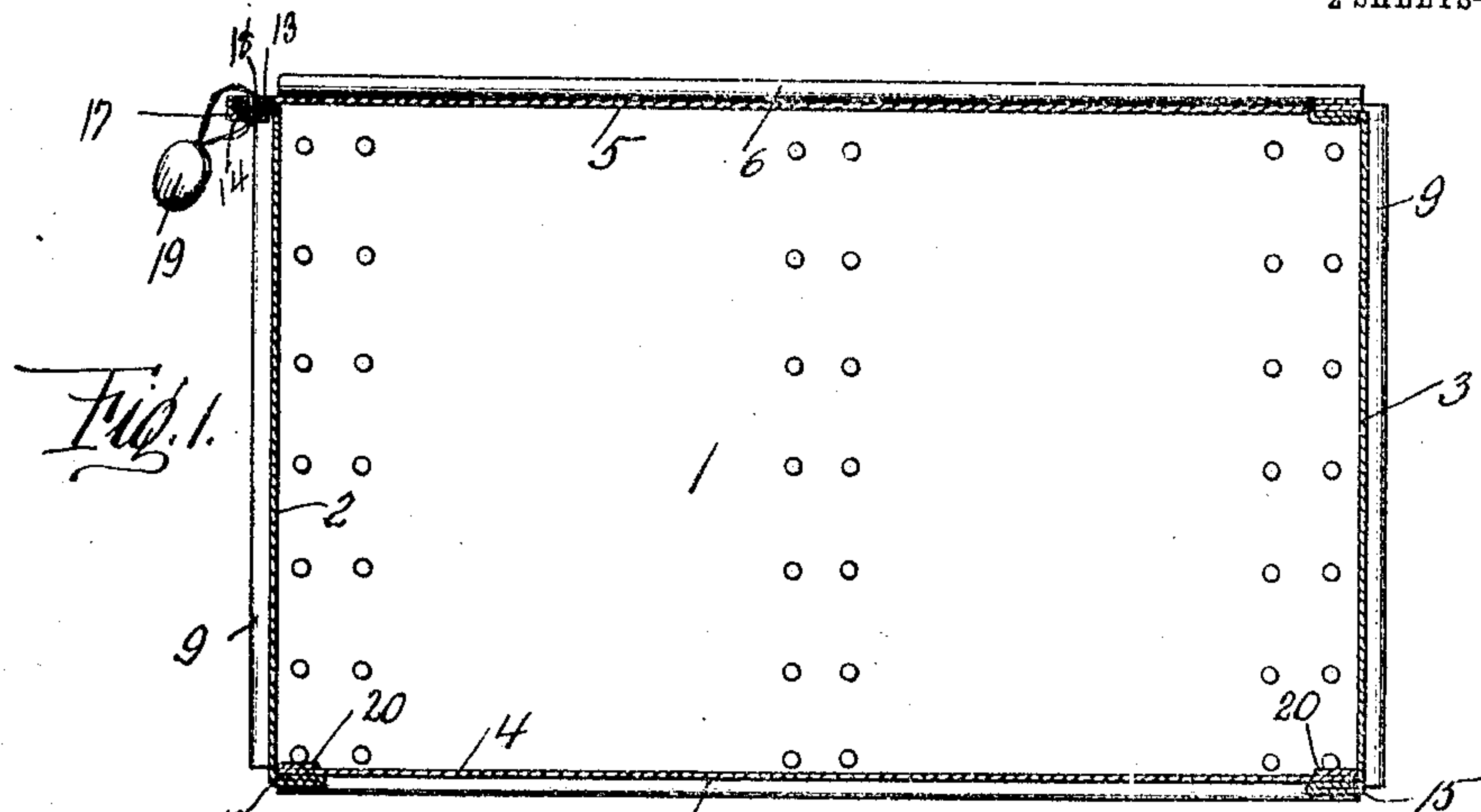


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 COLLAPSIBLE BOX AND CRATE.
 APPLICATION FILED APR. 30, 1908.

916,360.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.



Witnesses

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 R. L. McFARLAND.
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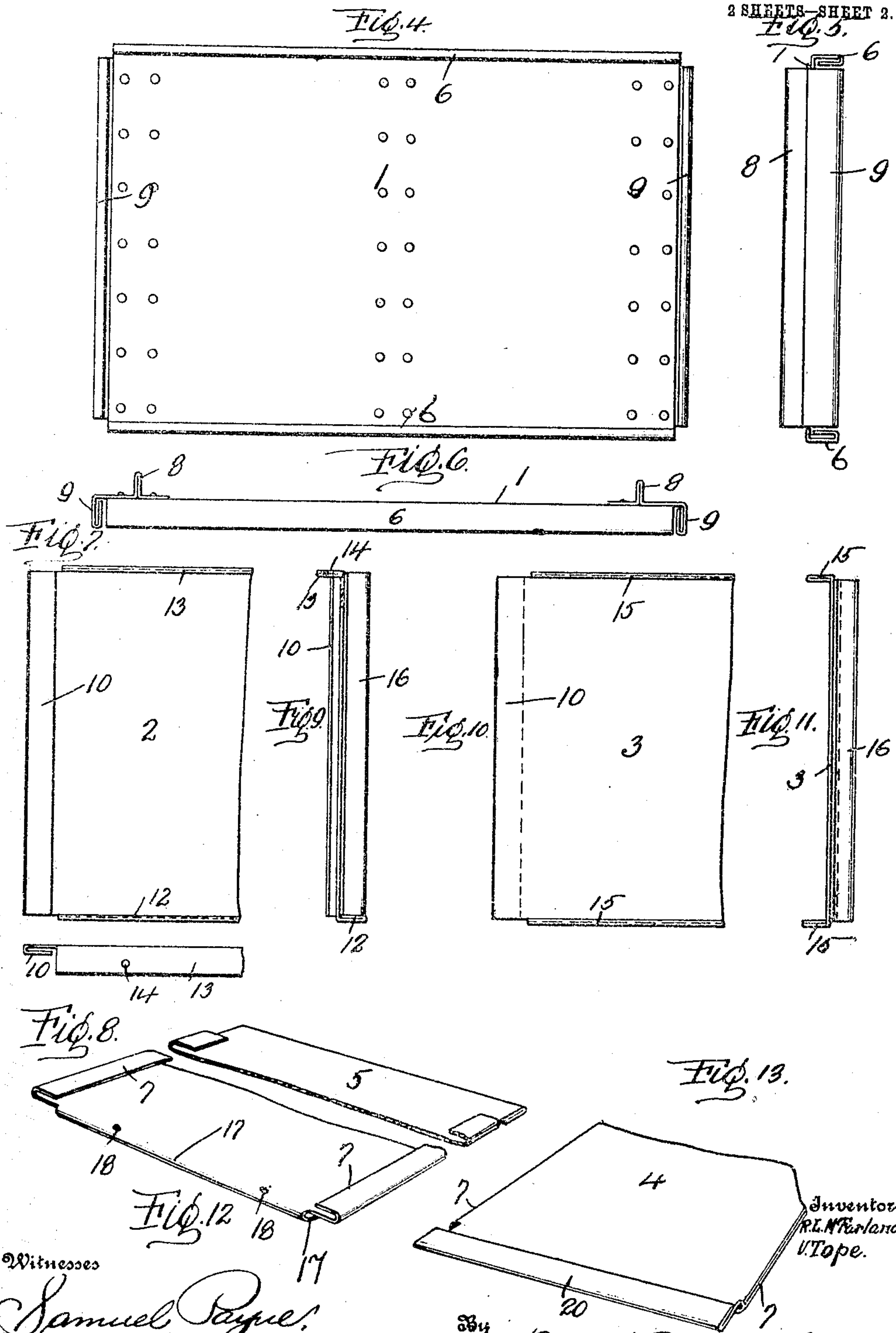
H. C. Everett & Co. Attorneys

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UNITED STATES PATENT OFFICE.

ROBERT L. McFARLAND AND VINCENT TOPE, OF SHARPSVILLE, PENNSYLVANIA.

COLLAPSIBLE BOX AND CRATE.

No. 916,360.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed April 30, 1908. Serial No. 430,152.

To all whom it may concern:

Be it known that we, ROBERT L. McFARLAND and VINCENT TOPE, citizens of the United States of America, residing at Sharpsville, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Collapsible Boxes and Crates, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to collapsible boxes or crates and the object thereof is to provide in a manner as hereinafter set forth a box or crate of such class that can be conveniently disassembled so as to occupy a comparatively small space when not in use and to furthermore provide a box or crate of such class that can be advantageously used for shipping merchandise and returned to the shipper in a collapsed form and which can be readily assembled for shipping purposes.

Further objects of the invention are to provide a collapsible crate or box which shall be simple in its construction, strong, durable, conveniently assembled and knocked down, and inexpensive to manufacture.

In describing the invention in detail, reference is had to the accompanying drawings which form a part of this specification and wherein like reference characters denote corresponding parts throughout the several views, and in which—

Figure 1 is a longitudinal sectional view of a collapsible box or crate in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a cross sectional view. Fig. 4 is an elevation of one of the sides. Fig. 5 is an end view of one of the sides. Fig. 6 is a plan of one of the sides. Fig. 7 is a fragmentary elevation of one of the ends. Fig. 8 is a fragmentary plan of one of the ends. Fig. 9 is an end view of one of the ends partly broken away, and partly in section. Figs. 10 and 11 are respectively a fragmentary elevation and an end view of the opposite end of the box. Fig. 12 is a perspective view of the top of the box partly broken away, and, Fig. 13 is a perspective view of a portion of the bottom of the box.

Referring to the drawings in detail, a box or crate in accordance with this invention comprises side walls 1, end walls 2 and 3, a bottom 4 and a top wall or cover 5. The walls and the bottom are constructed of

metallic material and preferably thin metallic plates, certain of which are reinforced in a manner as hereinafter referred to. The side walls 1 are similar in construction and the description of one will comply with the other.

Each side wall 1 has its upper and its lower edge provided with a combined guide way and seat for the reception of the top wall and bottom of the box or crate whereby these latter walls will be connected to the side walls. The combined guide ways and seats are provided by the bending inwardly of the top of the upper and lower marginal portions from the side walls as indicated by the reference character 6, then at right angles with respect to the portion 6 as at 6^a and then toward the body portion of the wall as at 6^b. The bottom 4 and the top wall 5 each has each of its longitudinal marginal portions bent at right angles as at 6^c and then inwardly as at 7 to provide angle-shaped flanges adapted to engage in the guide ways and against the seats formed on the side walls 1 and as clearly shown in Fig. 3.

Secured to the marginal portion at each end of a side wall 1 through the medium of the rivets 7^a is a T-shaped reinforcement 8, one of the arms thereof as at 7^b being extended to project beyond the end of the box or crate and then downwardly as at 7^c, then inwardly as at 9 and then upwardly as at 7^d to provide a combined guide way and seat for the reception of an angle-shaped flange 10 formed on an end wall. The end wall 2 as well as the end wall 3 is provided with a pair of angle-shaped flanges 10, these flanges engaging in the combined guide ways and seats formed at the ends of the side walls. The combined guide ways and seats at the ends of the side walls extend vertically whereas the other combined guide ways and seats on the side walls are formed at the longitudinal marginal portions of the said side ends are reinforced by vertically extending walls. The side walls 1, 1 intermediate their T-bars 11 which are secured to the walls 1 by the rivets 11^a. The end wall 2 has its lower edge flanged inwardly as at 12 and its upper end flanged outwardly as at 13, the latter being formed with openings 14 for a purpose to be hereinafter referred to. The end wall 3 has its lower edges flanged inwardly as at 15. Each of the end walls is provided approximately centrally thereof

with a T-shaped reinforcement 16 secured in position by the rivets 16^a. One end of the top wall 5 is bent to provide a flange 17 and the latter as well as the wall 5 is formed with openings 18, the said openings alining.

The box is set up in the following manner. The side walls 1 are connected to the end wall 3 by sliding the combined guide ways and seats at one end of said side walls upon the angle-shaped flanges 9 of the said wall 3. The bottom 4 is then connected to the side walls by inserting the angle-shaped flanges of the bottom 4 in the lower longitudinal guide ways and seats of the side walls 1. When the bottom 4 is placed in position it rests upon the flange 13 of the end wall 3. The end wall 2 is now mounted in position, said end wall 2 being moved upwardly from the bottom of the box, whereby the flange 12 of the end wall 2 will engage under the bottom 4, with the flanges 9 of the end wall 2, engaging the guide ways and seats at the other ends of the side walls 1. The top wall or cover 5 is then secured in position, the flanges thereof engaging with the upper longitudinal guide ways and seats of the side walls 1. A lock 19 is employed for securing the top wall or cover in position, the seal of the lock passing through the openings 14 and 18. To reinforce the ends of the bottom 4 the said ends are bent upon themselves as at 20.

What we claim is:

1. A collapsible receptacle comprising detachable side, end, and top walls and a bottom, reinforcements secured to the side walls and provided with vertically extending combined guide ways and seats, interengaging means between the top wall and the side walls, interengaging means between the bottom and the side walls, flanges carried by the end walls and engaging in the said guide

ways and seats, and flanges carried by the end walls and engaging under said bottom.

2. A collapsible receptacle comprising detachable side, end, and top walls and a bottom, reinforcements secured to the side walls and provided with vertically extending combined guide ways and seats, interengaging means between the top wall and the side walls, interengaging means between the bottom and the side walls, flanges carried by the end walls and engaging in the said guide ways and seats, and flanges carried by the end walls and engaging under said bottom, said top wall provided with an outwardly extending apertured flange, one of said end walls provided with an angle-shaped apertured flange overlapping the apertured flange of said top wall, and means for securing said apertured flanges together.

3. A collapsible receptacle comprising detachable side, end, and top walls and a bottom, reinforcements secured to the side walls and provided with vertically extending combined guide ways and seats, interengaging means between the top wall and the side walls, interengaging means between the bottom and the side walls, flanges carried by the end walls and engaging in the said guide ways and seats, flanges carried by the end walls and engaging under said bottom, and vertically extending metallic reinforcements secured to the outer faces of the side and end walls and arranged approximately centrally of the said walls.

In testimony whereof we affix our signatures in the presence of two witnesses.

ROBERT L. McFARLAND.
VINCENT TOPE.

Witnesses:

GRANT D. RICHARD,
J. J. BRANNAN.