

W. H. DRAKE.
FOLDING CRATE.
APPLICATION FILED JAN. 4, 1908.

943,525.

Patented Dec. 14, 1909.
2 SHEETS—SHEET 1.

Fig. 1.

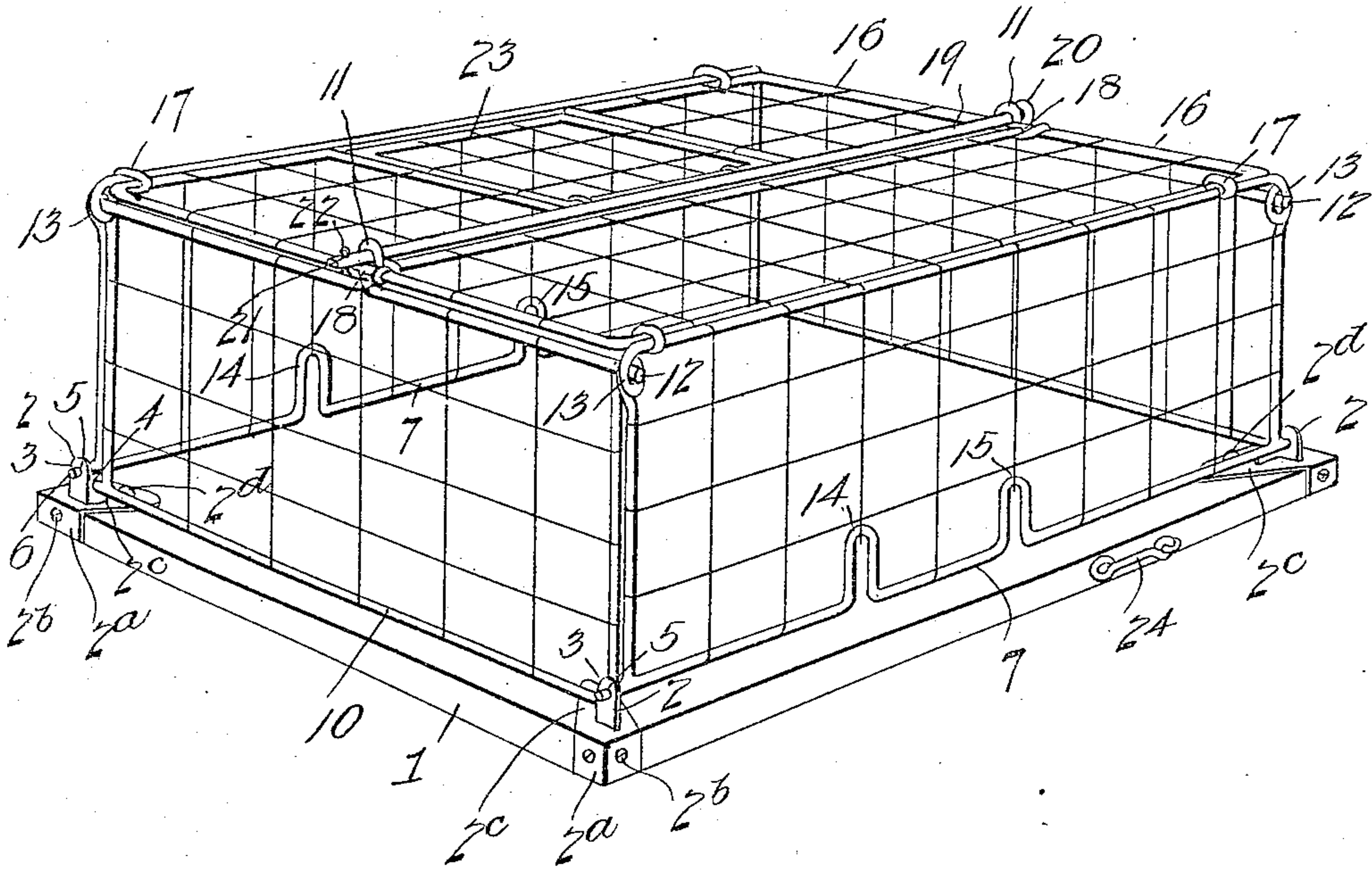
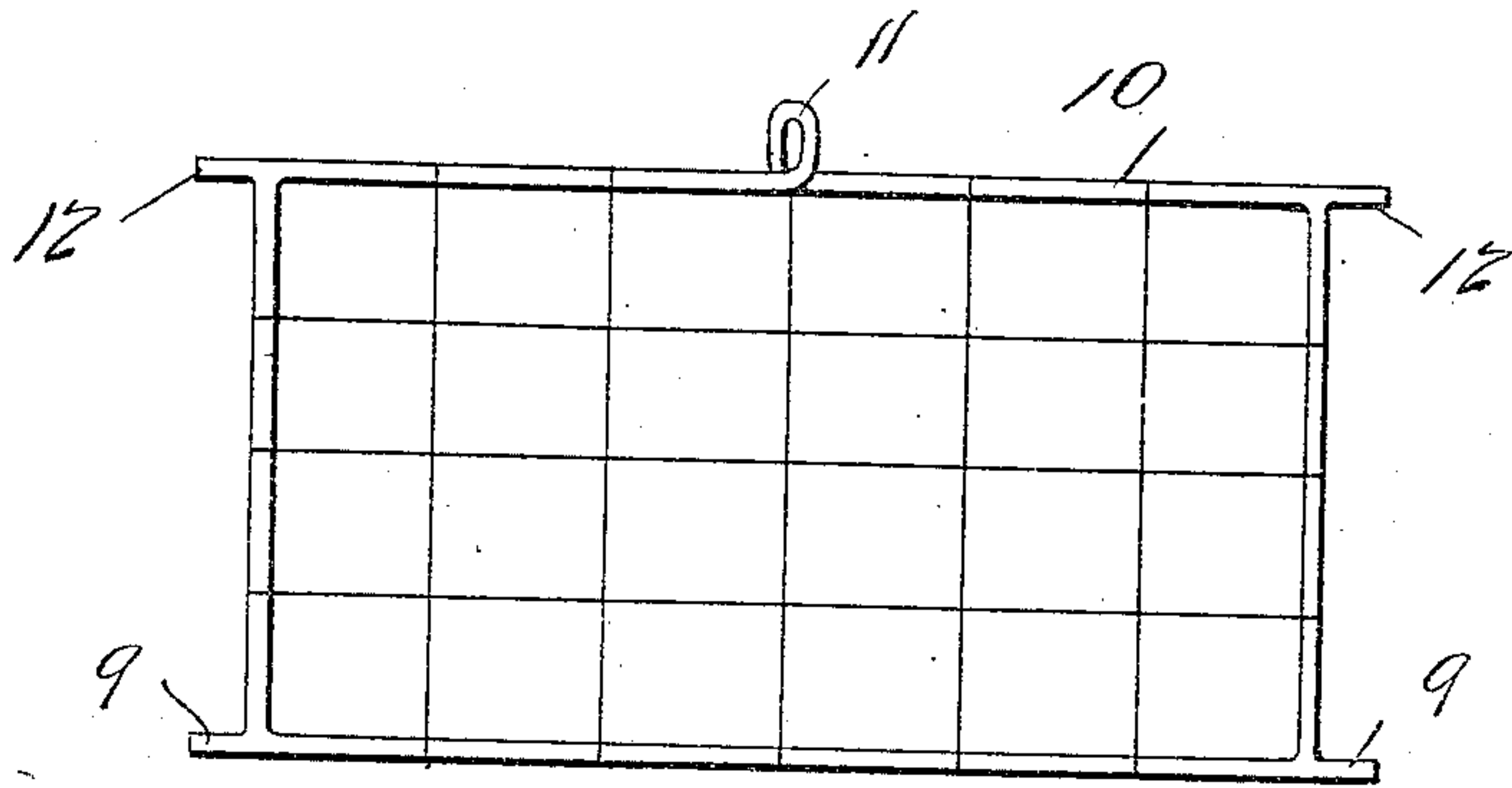


Fig. 2.



Witnesses
J. L. Macdonald
Frank J. Veihmeyer.

Inventor
William H. Drake

By
Edmund Bräis,
Attorneys.

943,525.

Technical drawing of a mechanical part, likely a cross-section or side view, plotted on a grid. The part features a rounded top-left corner labeled 13. The base has two notches labeled 14 and 15. A small protrusion on the left base is labeled 6. Dimensions 7 and 1 are indicated at the bottom left.

Fig. 5.

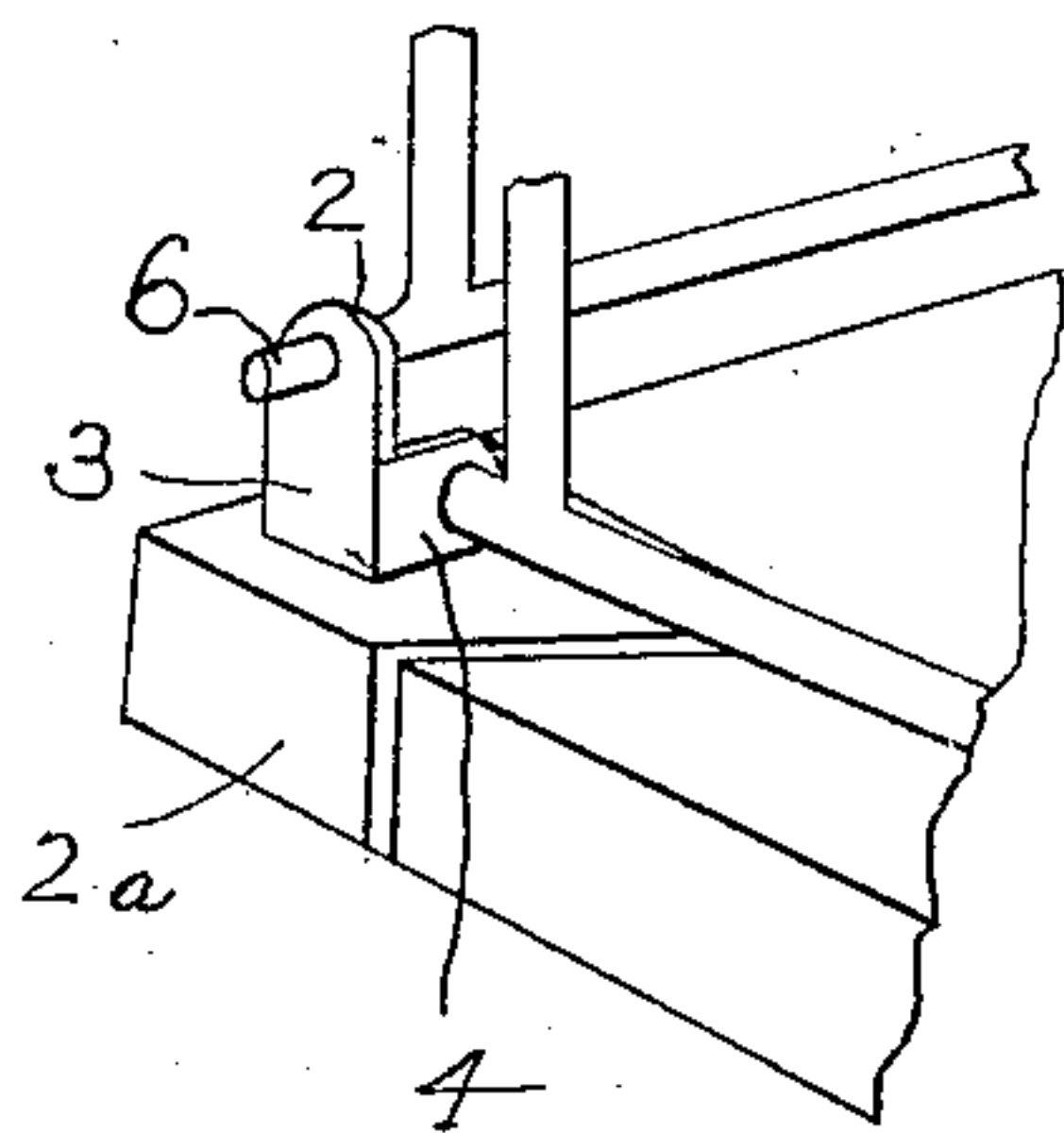


Fig. 3.

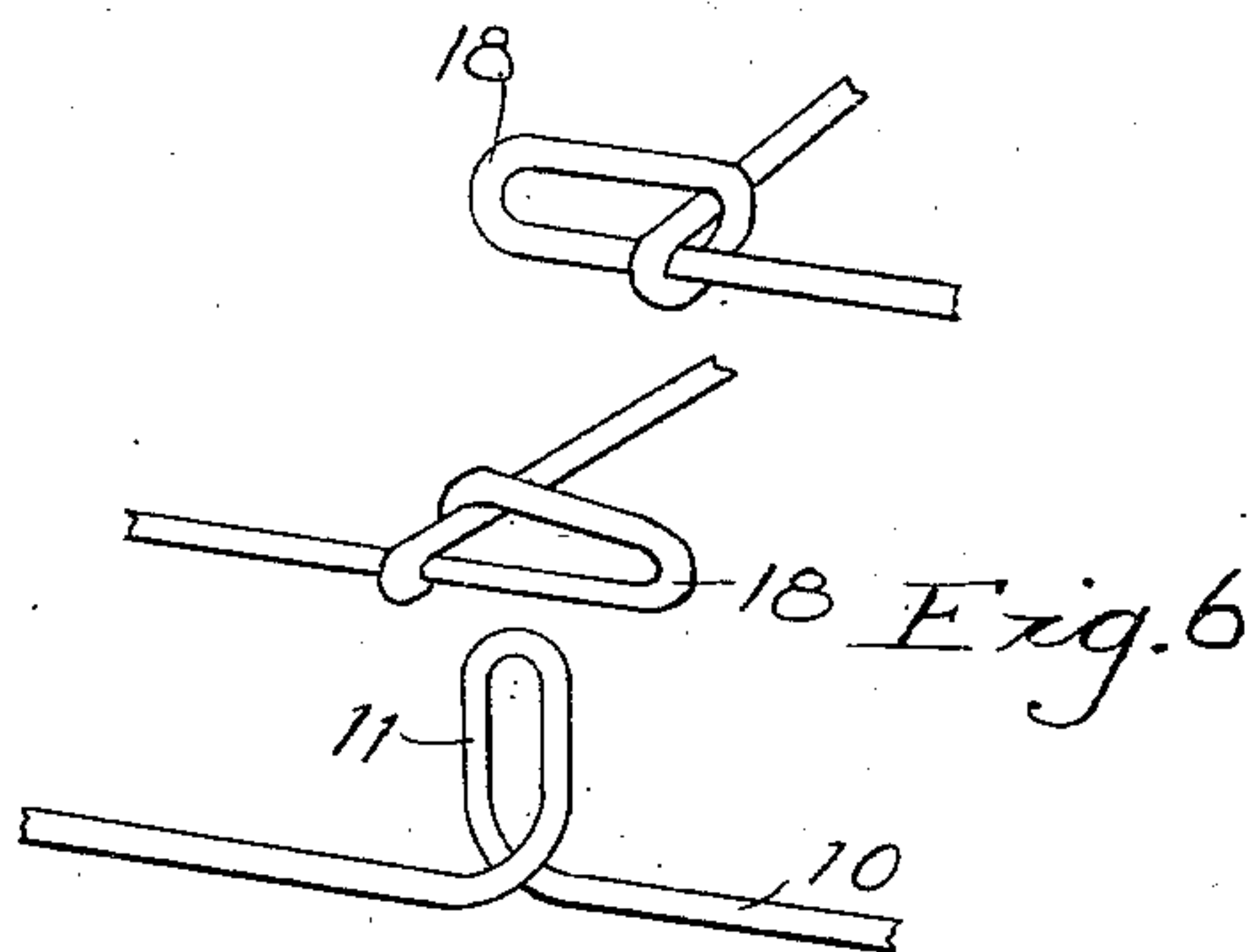
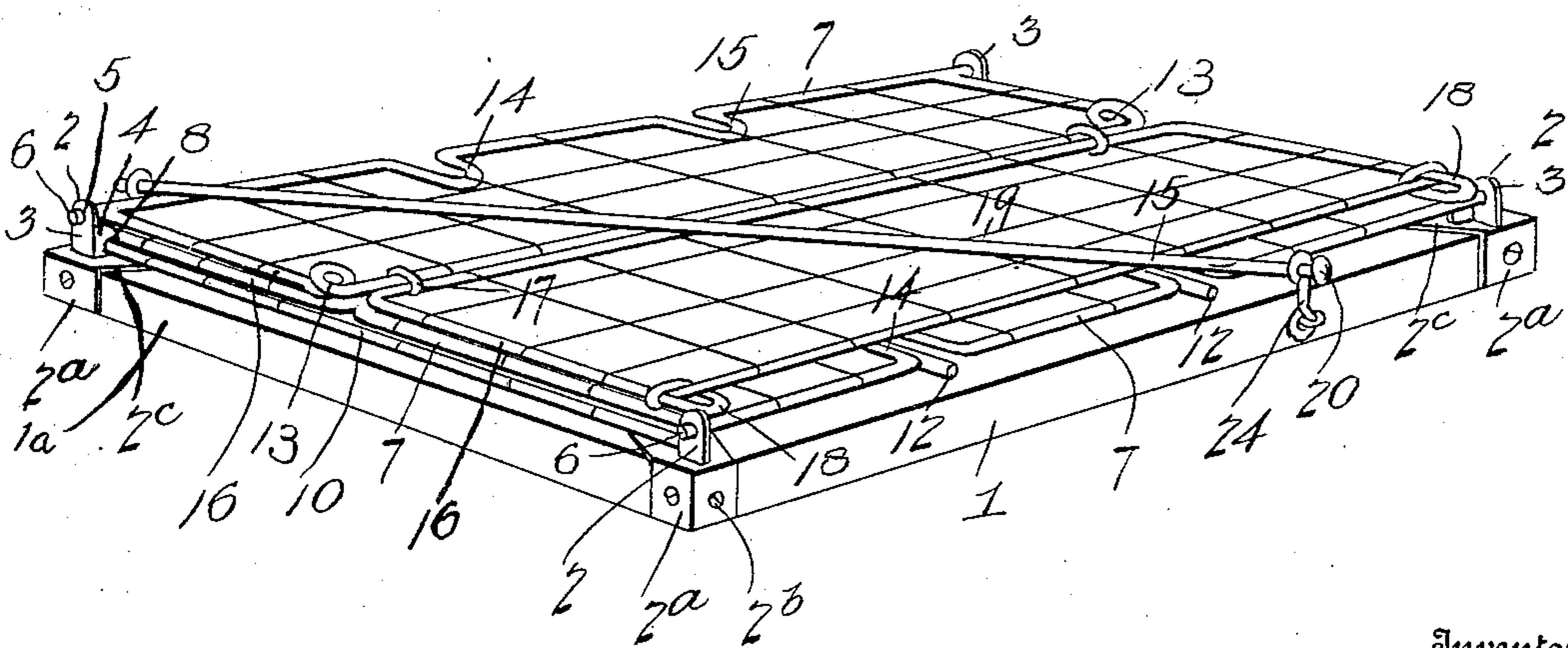


Fig. 4.



Witnesses

T. R. Moxson
Frank J. Veihmeyer.

Inventor

William H. Drake

ಹೊಳೆ

Chas Bros

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM HENRY DRAKE, OF ASHEVILLE, NORTH CAROLINA.

FOLDING CRATE.

943,525.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed January 4, 1908. Serial No. 409,298.

To all whom it may concern:

Be it known that I, WILLIAM H. DRAKE, a citizen of the United States, residing at Asheville, in the county of Buncombe and State of North Carolina, have invented certain new and useful Improvements in Folding Crates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved folding or knockdown crate.

In shipping merchandise, especially poultry, fruits and vegetables, it is necessary to use strong and durable crates for the protection of the articles. The cost of these crates is such that it warrants their return to the owner after each shipment for use again. If said crates can be compactly folded so that they will only take up a small space, a material saving is possible in the freight charges for returning the "empties."

It is the aim of this invention to provide a crate which is strong and durable when erected and which may be folded compactly and secured in the latter position for the purpose of return shipment.

Other objects of the invention will become apparent from the following description.

The invention consists of the features of construction and combinations of devices hereinafter described and specified in the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a perspective view of the crate erected. Fig. 2 is a detailed view of one of the end pieces. Fig. 3 is a broken detailed view of one of the side pieces, Fig. 4 is a perspective view of the crate folded, and Figs. 5 and 6 are detail views to better illustrate the hinge plates and the loops on the end pieces of the top sections, respectively.

In carrying out my invention, I make the base or bottom 1 preferably of wood. To each corner of said base there is secured a double hinge plate 2 having two upright pieces or lugs arranged at right angles to each other. Each plate has an angular flange 2^a fitting down over one corner of the base and secured thereto by screws 2^b, and a horizontal plate portion 2^c fastened to the surface of said base by screws 2^d. The outer upright lug 3 extends above the other lug 4

and lies in a plane parallel to that of the end 1^a of the base. Sockets 5 in the upper ends of said lugs 3 are engaged by pivot pins 6 extending from the bottom rim of the side pieces 7. The other lugs 4 are also provided with sockets 8 engaged by pivot pins 9 on the bottom rim of the end pieces 10. It will thus be seen that the end pieces are mounted so as to fit between the side pieces when both are erected and to lie below said side pieces when folded.

Each side and end piece comprises a bent wire rim or frame covered with wire netting. Each end piece is provided with a central upwardly projecting loop 11 on its upper rim and horizontally extending pins or studs 12 at its upper corners. Each side piece has eyes 13, formed by suitably bending the wire of the frame, adapted to engage said studs 12 when the crate is erected. The lower rim of each side piece is offset at 14 and 15 to provide clearance for the studs 12 when the parts are folded as shown in Fig. 4.

To the upper rim of each side piece, one half section 16 of the top is connected by hinges 17. Loops 18 are formed on the inner corners of the rim of each section of the top to fit over the loops 11 on the end pieces. Said loops 11 are long enough to extend through and above the loops 18 permitting a locking rod 19 to be passed through the former loops whereby the parts are held rigidly in place. Said locking rod is headed at one end, as at 20, and is provided with a slot 21 in its other end through which a split pin 22 or suitable lock or seal may be passed. The usual flap door 23 is arranged in one of the top sections.

When it is desired to fold the crate, the locking rod is first removed and the end pieces are then folded in first. In doing this, the side pieces are turned slightly outward to permit the studs 12 to clear or pass the lower rim thereof through the offsets 14 and 15.

It will be readily seen that when the side and end pieces are hinged so near together, as is necessary to make the structure rigid when erected, some means, such as the offsets shown, must be supplied to provide for the clearance or passage of said studs 12 past the lower rims of said side pieces, after the latter have been turned slightly outward in order that the crate may be folded compactly. After the ends have been folded in

upon the base, the side pieces with the top sections hinged thereto are folded flat, one above another, upon said ends.

To fasten the crate in its folded or knock-down position, the locking rod is passed through links 24 of suitable length, one link being secured to each of the lateral edges of the base as shown in Fig. 4. Said rod may be locked in said links in the same manner as it is secured in the loops 11.

It will be noted that the arrangement of the interlocking studs, eyes and loops is such that they all lie flat when the parts are folded whereby said parts are capable of occupying the minimum space.

I claim:

1. In a folding crate, the combination, with the base, of side and end pieces hinged thereto, said end pieces having horizontally extending studs, said side pieces having eyes adapted to receive said studs, said side pieces also provided with offsets in their lower edges to permit clearance of said studs when the parts are folded, and top pieces adapted to be secured in place.

2. In a folding crate, the combination, with the base, of side and end pieces hinged thereto and comprising bent wire rims or frames covered with wire netting, said end pieces having horizontally extending studs,

said side pieces having eyes formed by suitably bending the wire forming their rims and adapted to receive said studs, said side pieces also having offsets in their lower edges formed by bending up portions of their rims for providing clearance for said studs when the parts are folded, and top pieces adapted to be secured in place.

3. In a folding crate, the combination, with the base, of side and end pieces hinged thereto, said end pieces having upwardly extending loops on their upper edges, top sections hinged to said side pieces and having loops adapted to engage the loops on said end pieces, links fastened to the lateral edges of said base, a rod adapted to be passed through the loops on said end pieces above the other loops to secure said loops together when the crate is erected, said rod also adapted to be passed through said links from side to side above the parts when folded to retain them in that position, and means to lock said rod in either said loops or links.

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

WILLIAM HENRY DRAKE.

Witnesses:

ROBT. B. GLENN,
W. M. HAIGHT.