

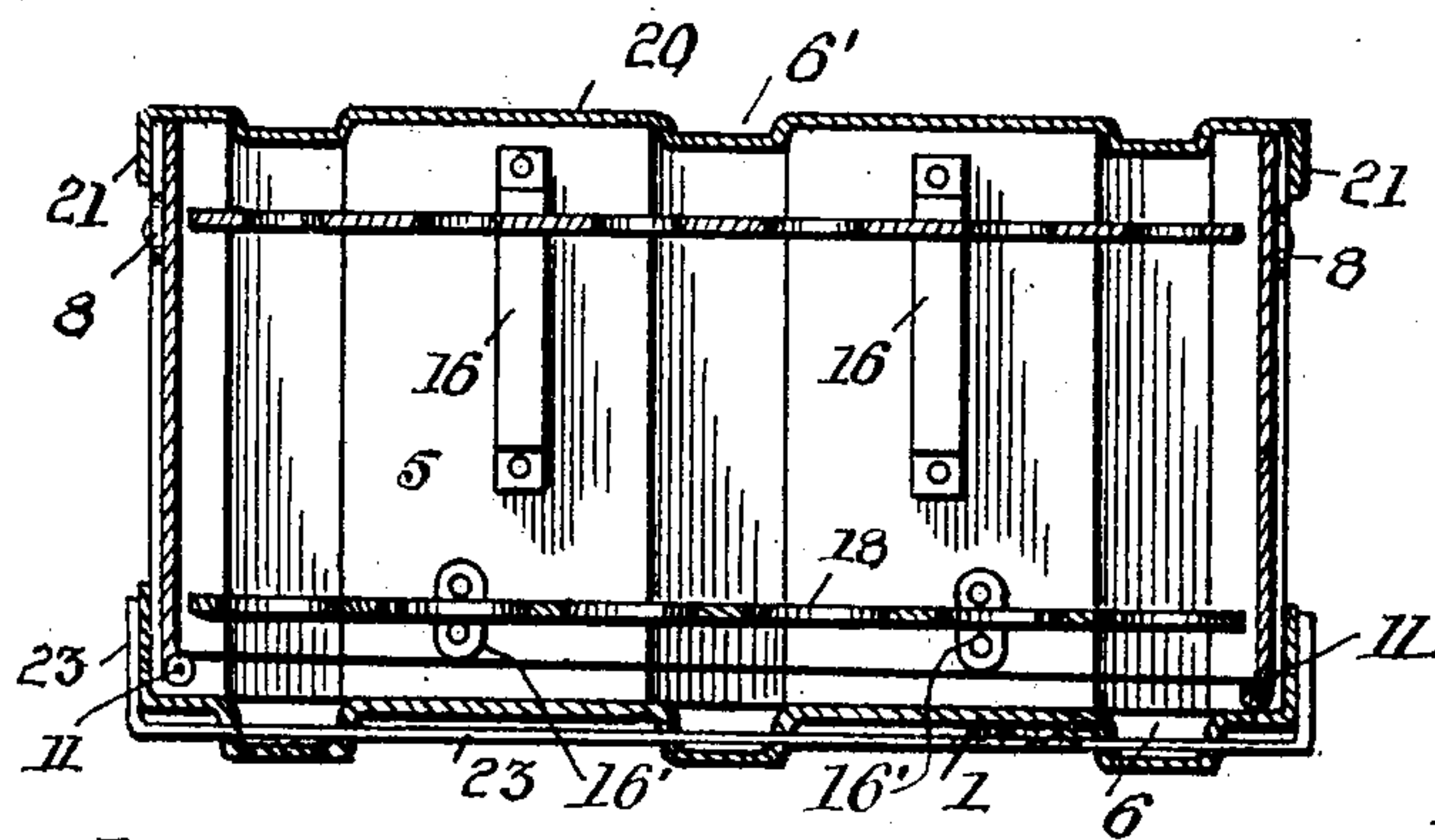
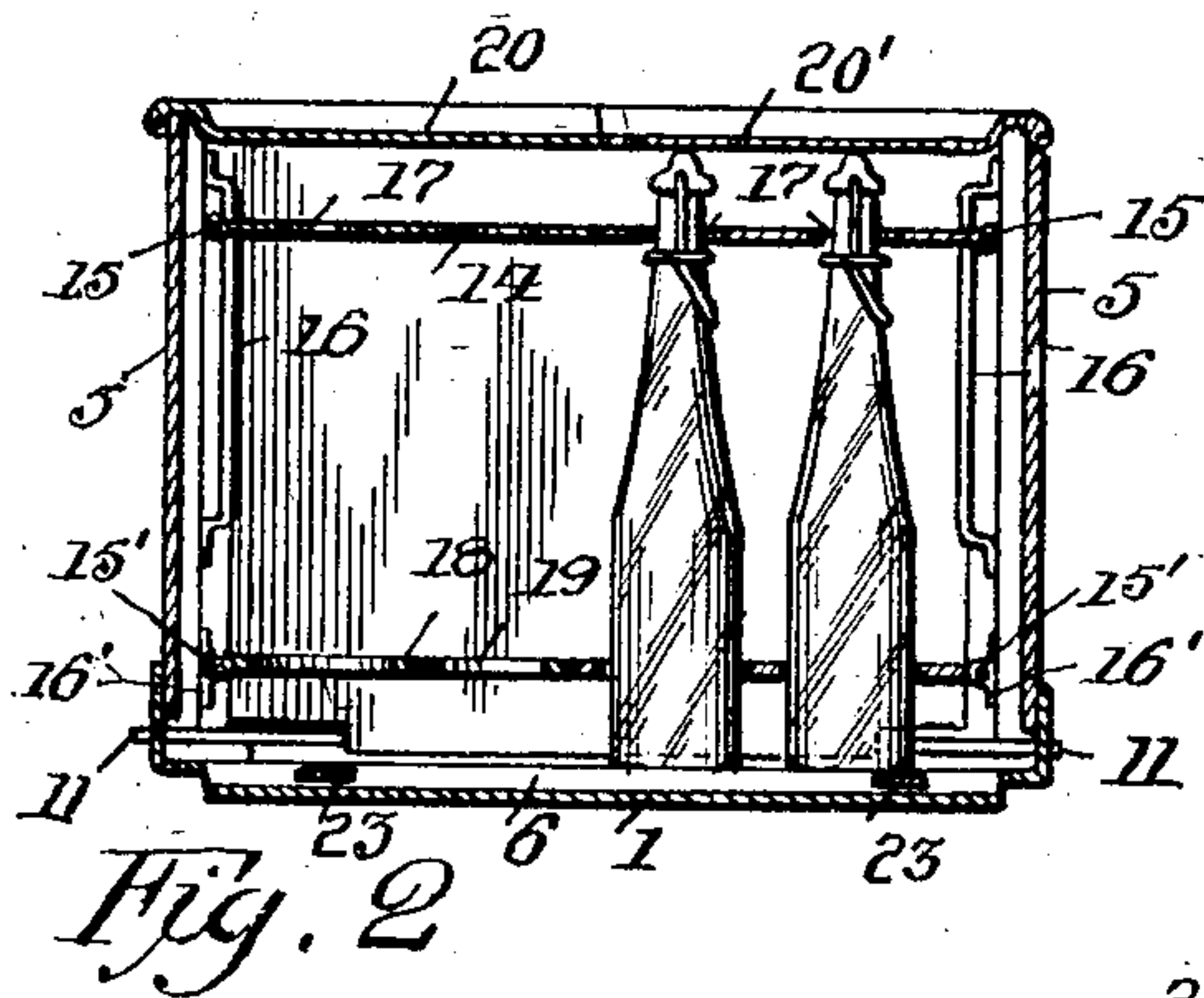
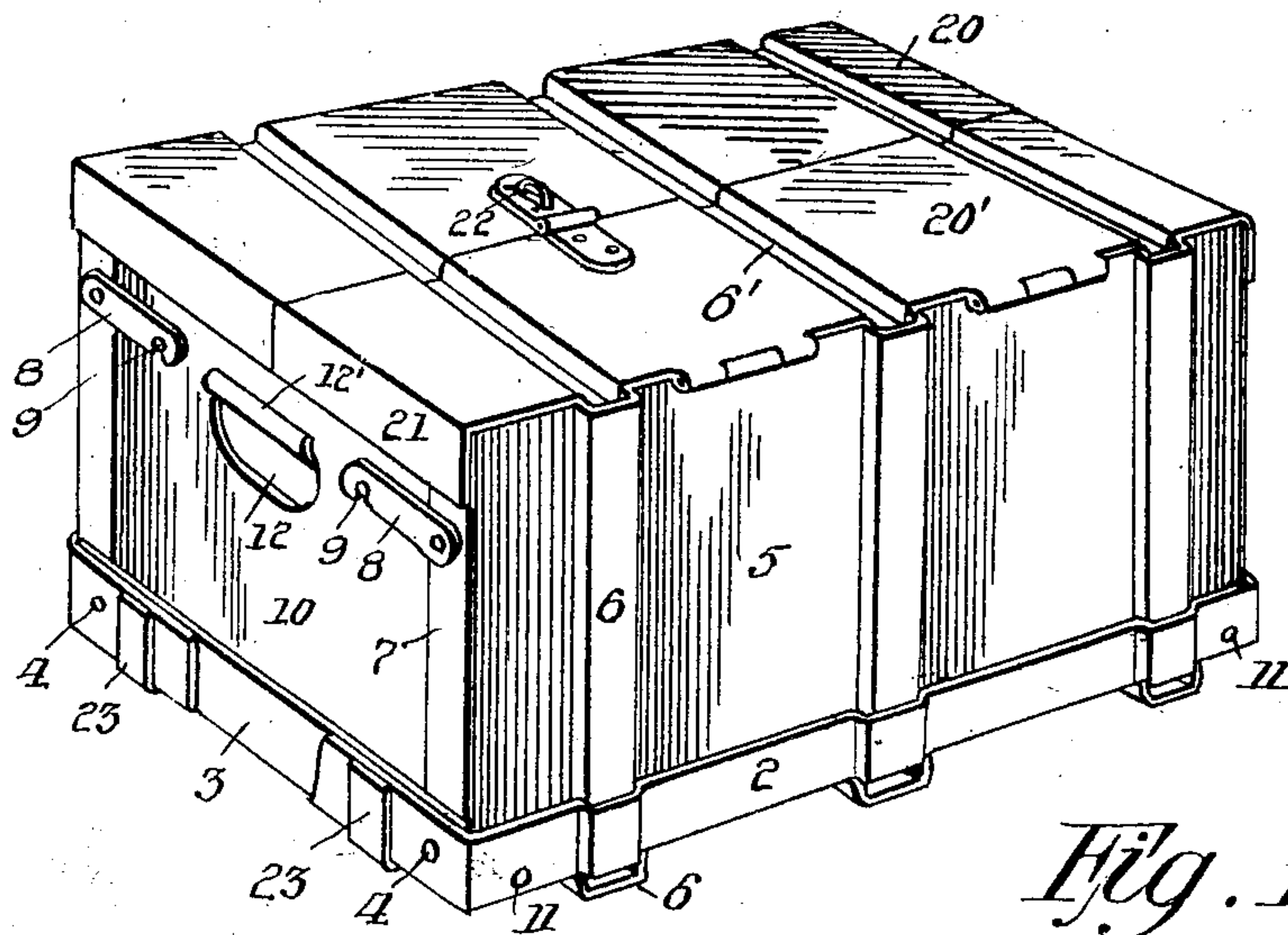
No. 771,140.

PATENTED SEPT. 27, 1904.

O. P. GALER.
FOLDING METALLIC CRATE.
APPLICATION FILED DEC. 21, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 4.

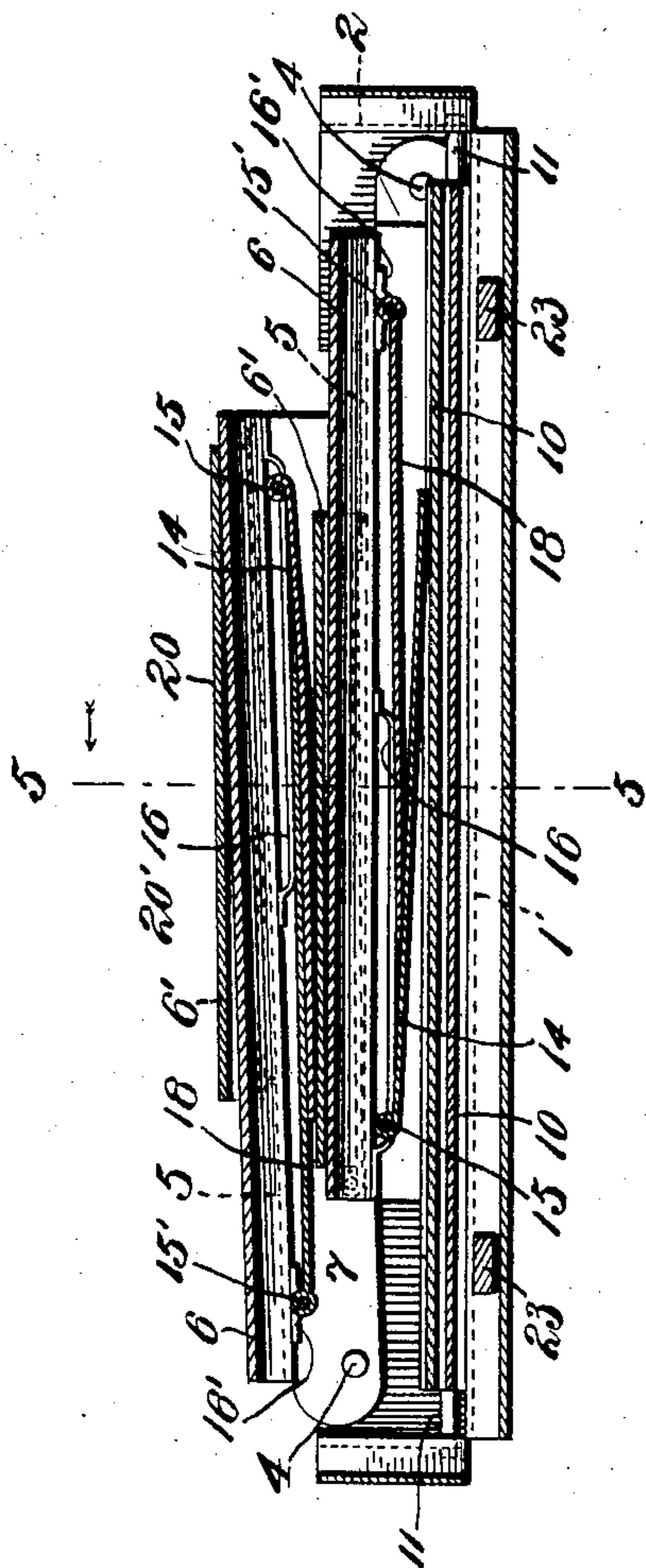
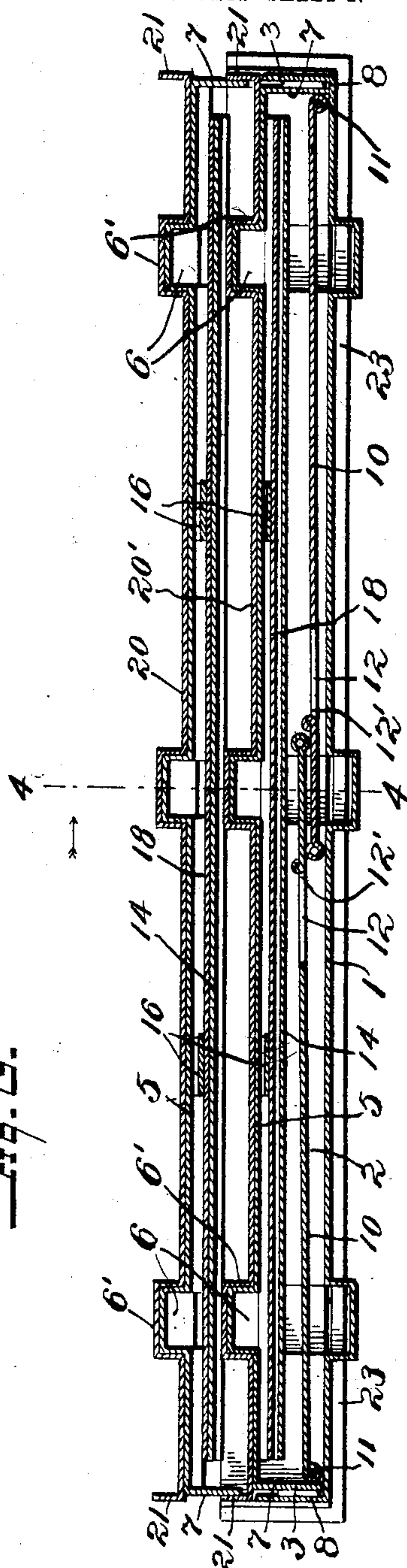


Fig. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

OLIVER PERRY GALER, OF McKEES ROCKS, PENNSYLVANIA.

FOLDING METALLIC CRATE.

SPECIFICATION forming part of Letters Patent No. 771,140, dated September 27, 1904.

Application filed December 21, 1903. Serial No. 186,020. (No model.)

To all whom it may concern:

Be it known that I, OLIVER PERRY GALER, a citizen of the United States of America, residing at McKees Rocks, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Folding Metallic Crates, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in folding crates, and relates more specifically to a metallic crate.

One of the objects of the invention is to provide a metallic crate that may be folded when empty, so as to occupy considerably less space than when in the built-up form, with means within the crate for the secure holding of articles packed in the crate.

A further object of the present invention is to provide a folding metallic crate that may be constructed entirely of sheet metal stamped into form at a comparatively small cost.

A still further object of the present invention is to provide a folding metallic crate that will be extremely rigid when in the built-up form and which may be advantageously used either with or without a cover or lid.

Briefly described, my invention embodies a metallic crate built up of sides, ends, and a bottom hinged together, so as to fold when in the knockdown form, the sides and the bottom being preferably constructed with strengthening-ribs formed by the die when shaping the member.

A crate constructed in accordance with my invention is particularly valuable for use in the packing of bottles, and for this purpose I provide hinged bottle-holders which receive and hold the bottles near each end, and thus prevent movement of the same within the case or crate.

Other novel features of construction enter into my invention besides those enumerated above and will be hereinafter more specifically described and then particularly claimed, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application and showing a practical embodiment of my

invention, like numerals of reference indicating like parts throughout the different views, in which—

Figure 1 is a detail perspective view of a metallic crate in the built-up form constructed in accordance with my invention. Fig. 2 is a transverse vertical sectional view of the same. Fig. 3 is a central longitudinal sectional view of the same. Fig. 4 is a transverse vertical sectional view of the crate when in the knockdown or folded form, said view taken on the line 4 4 of Fig. 5. Fig. 5 is a central longitudinal sectional view of the crate when in the folded form, said view taken on the line 5 5 of Fig. 4.

To put my invention into practice, I provide a bottom or base 1, the edges of which are bent up at right angles to form side flanges 2 and end flanges 3. The blank from which the bottom or base is formed has the flanges 2 extended and bent over onto the flanges 3, where they are secured by a rivet 4, which also forms the pivot on which the two sides 5 are mounted. These sides and the base or bottom are preferably formed with a die having ribs thereon to force out the blank at desired distances on the same, and thus form strengthening-ribs 6. As stated, the sides are hung on the pivots 4, the same passing through the flanges 7, turned inwardly at the ends of the sides, these flanges 7 at their upper ends or adjacent thereto carrying latches 8, adapted to be engaged with pins 9, carried by the ends 10. This is a convenient and cheap form of construction for securing the ends in the upright position, though it will be evident that other fastening means than that described may be employed. The ends when in the upright or built-up form are against the end flanges 7 of the sides 5, these ends being pivotally hung on a pintle 11, fastened to the lower edge of the ends by wrapping the sheet of which the end is formed around the pintle and the pintle mounted at its ends in the flanges 2. This is a cheap and effective manner of hinging the ends in position, though it will be evident that equivalent hinging means may be resorted to.

I preferably provide means for handling the crate conveniently by stamping out portions

of the metal in the ends 10, as at 12, and turning up the metal, as at 12', to form a hand-grip.

As heretofore stated, the crate is particularly adapted for use in the handling of bottled goods, and means must be provided for holding the bottles securely within the crate. A practical form of means to accomplish this end is shown in the present illustration and embodies hinged flaps or holders. In order that these may be folded, I provide an upper and a lower holder, each made in two sections. The sections 14, forming the upper holder, each extend half-way across the interior of the crate and are hinged to the respective sides 5. A convenient form of hinge is that of a pintle 15, fastened to the holder by wrapping the rear edge of the latter on the pintle and mounting the pintle in keepers 16, secured to the inner faces of the side walls 5. The keepers 16 are elongated in form, so that the pintles 15 may be moved vertically therein, thus permitting the raising and lowering of the upper bottle-holder to engage with and disengage from the necks of the bottles. The sections of the upper bottle-holder are each provided with openings 17, so positioned as to receive the necks of the bottles, as seen in Fig. 2. The lower bottle-holder also comprises two sections or members 18, each of which extends half-way across the crate and connected to the sides 5 by pintles 15', journaled in keepers 16'. These sections 18, forming the lower bottle-holder, have openings 19 to receive the bottles, as seen in Fig. 2. When used for this purpose, the crate is generally constructed without a lid or cover; but where it is desired to use the crate for goods which it is desired to cover or inclose safely I employ the lid or cover made in two sections 20 20', hinged to the respective side walls 5 and provided with end flanges 21. The sections of the lid may be locked in the closed position by a suitable fastening, such as a hasp 22. This lid or cover is provided with strengthening-ribs 6', which are pressed inwardly instead of outwardly, and in the folded position of the lid the ribs on one section fit over those on the other section.

In order to give extra strength to the bottom or base, I preferably employ strengthening-straps 23, which are passed through the ribs 6 of the bottom or base and have their ends turned up against the end flanges 3.

To place the bottles in the crate, it will be evident that the two upper sections 14 are swung upward, and after the bottles have been placed in position the upper sections are folded down, so as to receive the necks of the bottles in the openings 17. When the crate is empty, one section of the lower bottle-holder folds against the corresponding section of the upper bottle-holder against the side of the crate to which they are hinged, the fastenings of the

ends are detached and the ends folded down onto the bottom, and then the sides folded in on the ends one on top of the other. Where the lid or cover is employed, the latter will be folded back on top of the last side member folded. Suitable means may be provided for fastening the crate in the folded form when desired.

In the practice of the invention it will be observed that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A metallic folding crate, embodying a base provided with transverse strengthening-ribs and having upturned side and end flanges, with the ends of the side flanges turned over on the end flanges and secured thereto, side members provided with strengthening-ribs and having inturned end flanges of the base, end members carrying pintles pivotally mounted in the upturned flanges of the base, means for securing the end members and side members in the upright position, a lower holding member made in two sections, and hinged, one section to each side member, and an upper holding member also made in two sections, slidably connected to the side members, substantially as described.

2. In a metallic folding crate, a base provided with strengthening-ribs and having upturned side and end flanges, strengthening-straps threaded through the strengthening-ribs of the base and having their ends bent up against the upturned flanges of the base, side members having inturned end flanges hinged to the upturned flanges of the base, end members hinged to said upturned flanges of the base, and means for securing the side members and end members in the upright position, substantially as described.

3. In a metallic folding crate, a base, side walls and end walls hinged to said base, fastening means for securing the side and end walls in the upright position, horizontally-disposed lower holding members hinged to the inner faces of the side walls, and horizontally-disposed upper holding members slidably connected to the upper faces of the side walls, substantially as described.

4. In a metallic folding crate, a base, side walls and end walls hinged to said base, fastening means for securing said side and end walls in the upright position, and apertured holding members slidably connected to the inner faces of the side walls, substantially as described.

5. In a folding crate, the combination with the base, and the hinged side walls and end walls, of lower apertured bottle-holding members hinged to the side walls near their lower

edges, and upper apertured bottle-holding members slidably connected to the side walls, substantially as described.

6. In a folding crate, the combination with the base, and the side walls, and the end walls 5 hinged thereto, of horizontally-disposed upper and lower bottle-holding members, each made in two sections, and connected, one section of the upper and one section of the lower

to each side wall, and adapted to fold against the side walls when the crate is in the folded form, substantially as described.

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

OLIVER PERRY GALER.

Witnesses:

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C. H. GALER.