

No. 778,758.

PATENTED DEC. 27, 1904.

T. M. McINTOSH.
FOLDING EGG CASE.

APPLICATION FILED APR. 15, 1903.

2 SHEETS—SHEET 1.

Fig. 1.

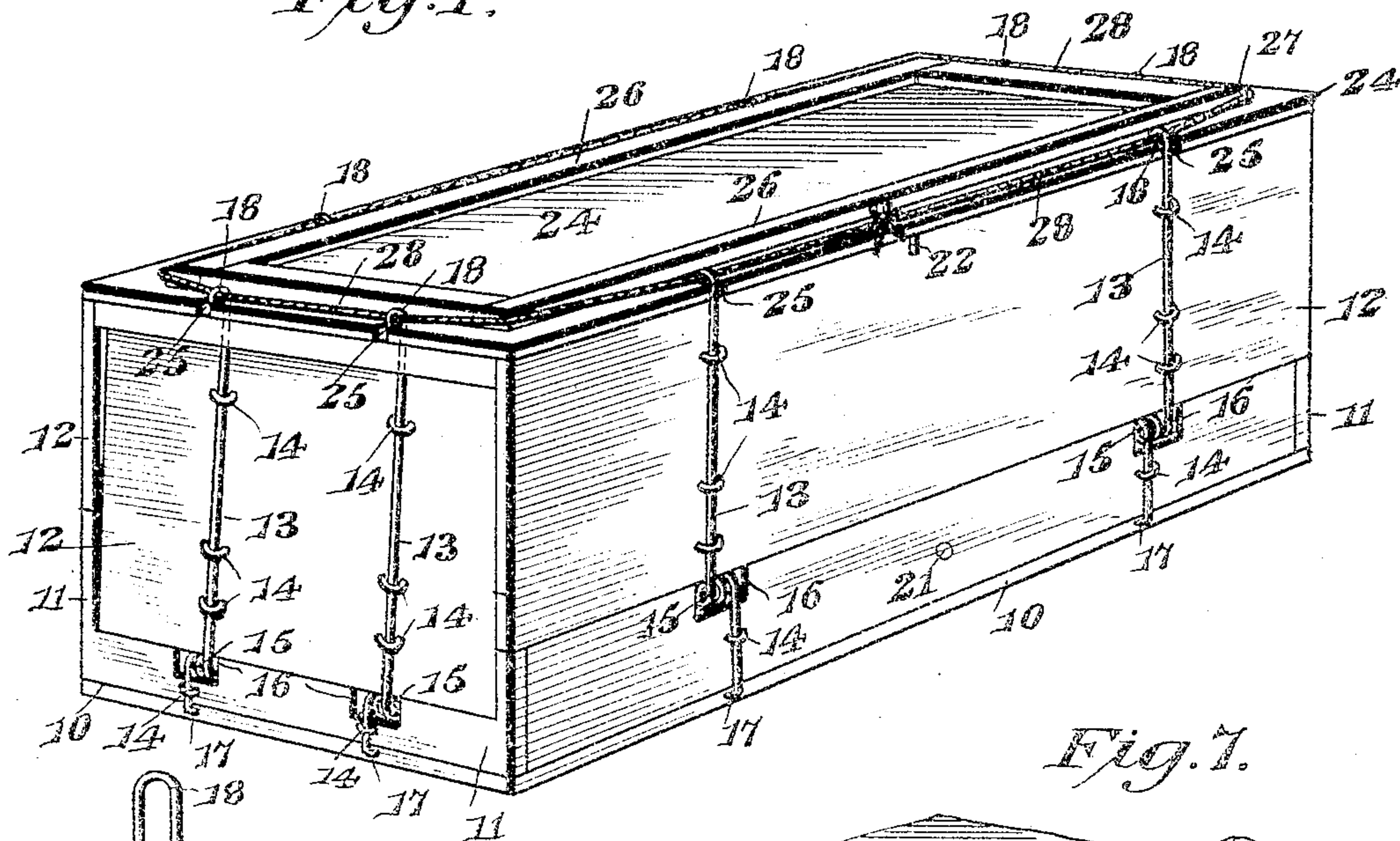


Fig. 6.

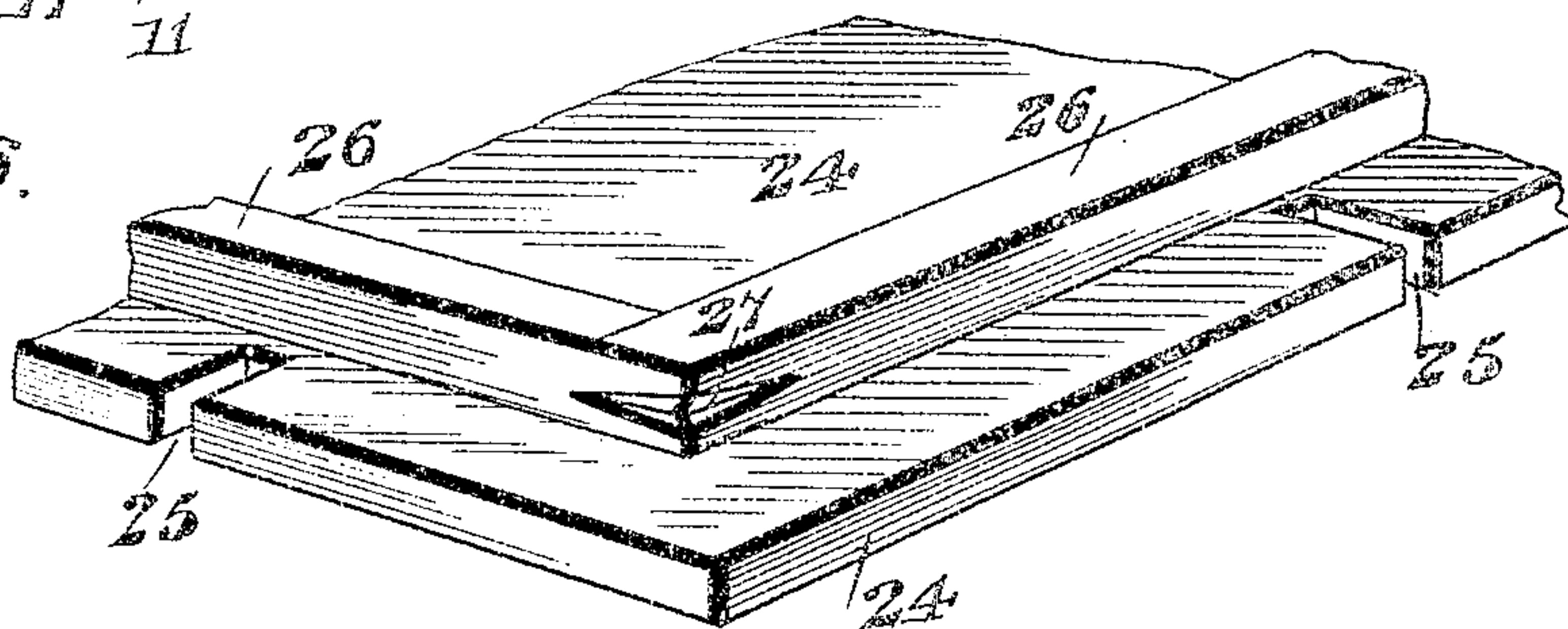
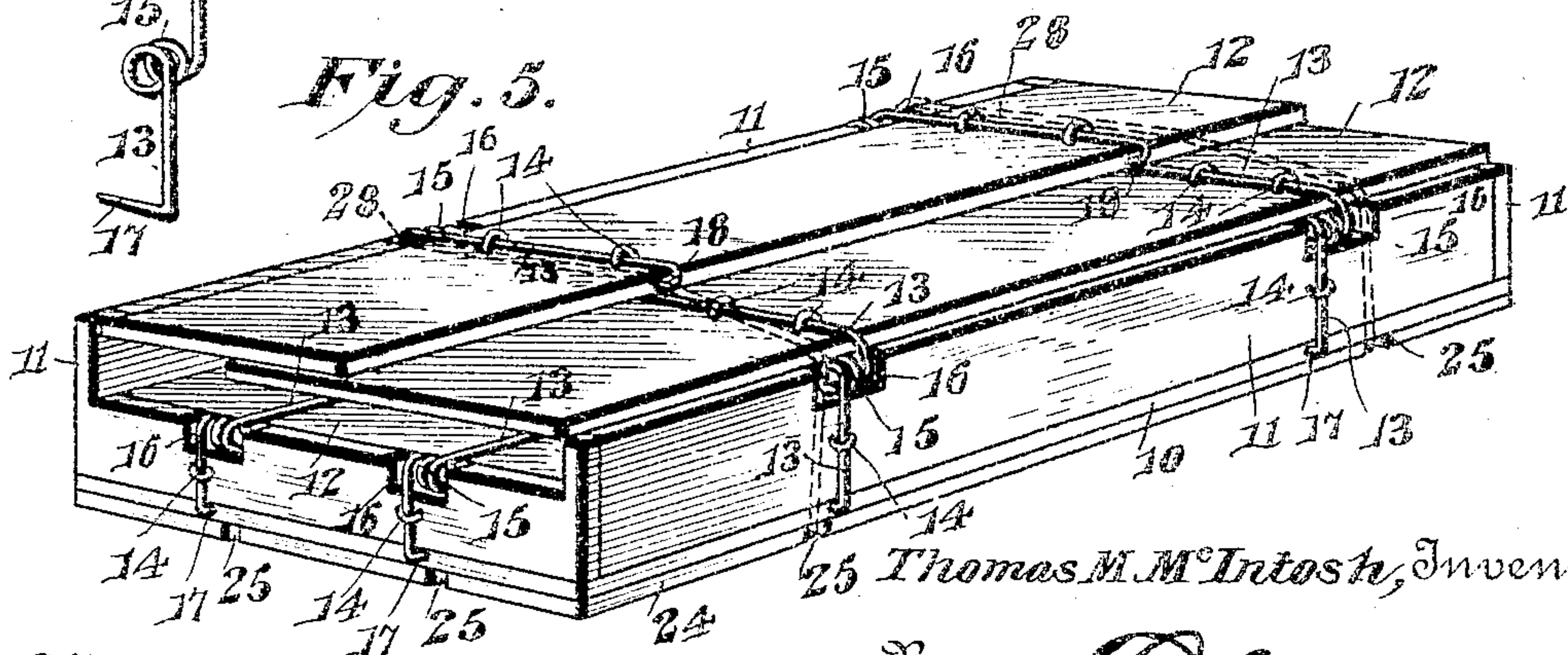


Fig. 5.



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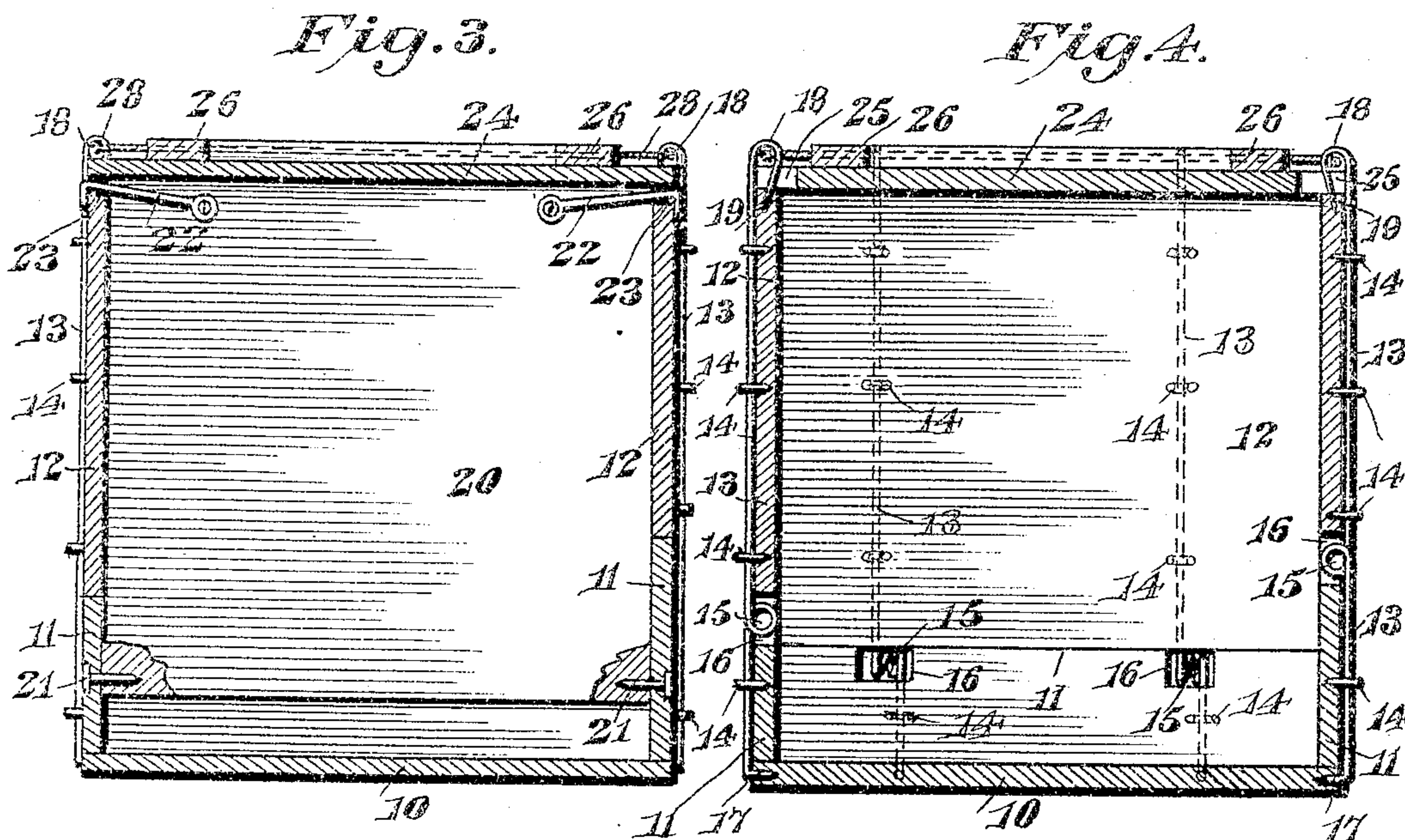
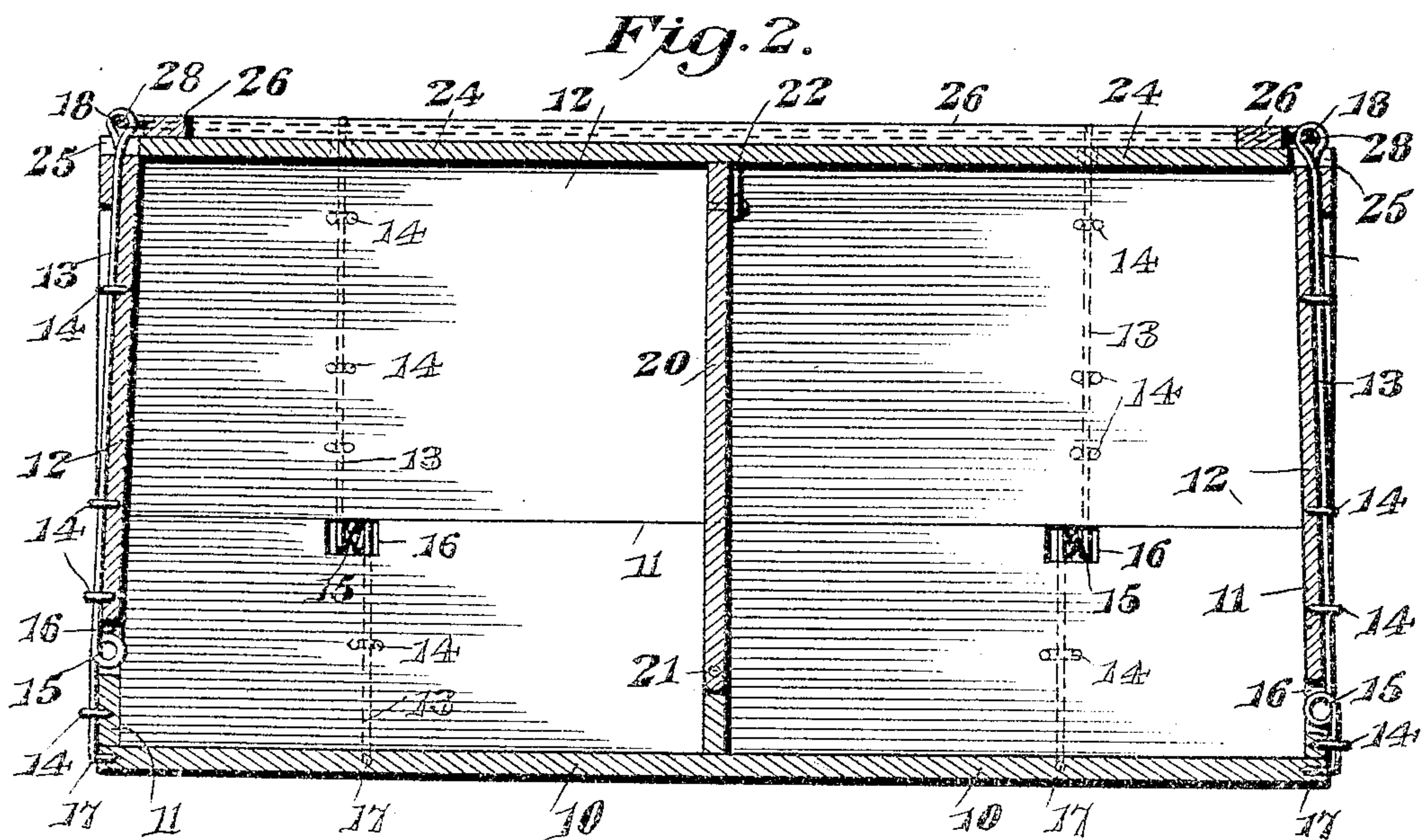
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

THOMAS M. McINTOSH, OF FLANAGAN, ILLINOIS, ASSIGNOR OF ONE-HALF
TO ROBERT G. MURPHY, OF FLANAGAN, ILLINOIS.

FOLDING EGG-CASE.

SPECIFICATION forming part of Letters Patent No. 778,758, dated December 27, 1904.

Application filed April 15, 1903. Serial No. 152,781.

To all whom it may concern:

Be it known that I, THOMAS M. McINTOSH, a citizen of the United States, residing at Flanagan, in the county of Livingston and State of Illinois, have invented a new and useful Folding Egg-Case, of which the following is a specification.

This invention relates to egg-cases employed for shipping and storing purposes.

It is the object to provide an article of this character that is very simple in its structure so that it can be manufactured at practically the same cost as the non-collapsible kind now in general use, said structure being capable of compact folding and when set up being rigid, strong, and not liable to accidentally collapse.

It is furthermore the object to provide an egg-case having side walls that will assume and retain their proper operative relations, so that the fastening of the parts together is greatly facilitated.

The practical embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the case when set up. Fig. 2 is a longitudinal sectional view through the same. Fig. 3 is a cross-sectional view through an intermediate portion of the case. Fig. 4 is a cross-sectional view near one end. Fig. 5 is a perspective view showing the case folded. Fig. 6 is a detail perspective view of one of the hinge connections. Fig. 7 is a detail perspective view, on an enlarged scale, of a portion of the cover.

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

In the structure illustrated a base is employed comprising a bottom 10, having angularly-disposed upstanding side portions 11 secured thereto, these side portions being of different heights, as will be seen by reference to the various figures. To the base portion 11 of the sides are hinged folding walls 12, the connections being in the form of rods or wires 13, that extend across said base portions and walls and are fastened thereto by suitable staples 14. Intermediate portions of these connections are coiled, as shown at 15,

to constitute spring-hinges, which are located in cut-away portions 16 in the base-walls 11. The lower ends of the rods 13 are formed into offset terminal spurs 17, that are driven into the edges of the bottom 10, while the upper ends are bent to form upstanding eyes 18, the free terminals thereof being pointed to constitute spurs 19, that are driven into the upper edges of the folding walls. As a result of this construction the folding walls are fastened to the base by means of spring-hinges, and the connecting devices constitute binders, which serve to hold the parts securely together on account of their engagement with the bottom 10, the base-wall portion 11, and the upper edges and outer sides of the folding walls 12. An intermediate partition 20 is also preferably employed, which is hinged at its lower end by means of pivots 21, its upper end being provided with outstanding hooks 22, that are arranged to engage over the upper edges of the adjacent side walls, which walls are provided with notches 23 to receive the hooks.

A cover 24 is arranged to be placed upon the side walls when set up and is provided in its edges with sockets 25, through which the upstanding eyes 18 of the connecting-rods pass. A flange 26 is located on the upper face of the top and extends around the same contiguous to its edges and inside the sockets 25, the outer side or shoulder of the flange being provided at its corners with notches 27. A securing device in the form of a cord or cable 28 is passed about the flange and is threaded through the upstanding eyes, this cord or cable also engaging in the notches 27. This arrangement of parts constitutes simple and yet efficient means for holding the side walls in their upright relation and at the same time fastening the cover upon the box.

In folding the box the fastening-cord is first removed, after which the cover can be taken off. The side walls can thereupon be folded inwardly one upon the other, because of the different distances of the hinges from the bottom. The cover is placed upon said bottom, and the whole is fastened in collapsed condition by cords passed about the structure and engaging in the notches of the cover and

of the hinges. This prevents the displacement of the parts. In setting up the box it is only necessary to remove these binders, whereupon the walls will spring to their proper relations and retain the same, so that the top may be readily placed in position. This is an important feature, for with a box not having spring-supported walls said walls will not remain in upright position, and difficulty is experienced in fastening the top thereof. It will be evident from the illustrations that this structure can be manufactured at small cost and when folded will occupy comparatively small space.

The case is especially designed for shipping eggs and will of course be provided with suitable cells and division-boards. When the case is folded, the division boards or sheets may be placed in the bottom, while the cell structures can be packed between the various walls. The device can be used for shipping various commodities—as, for instance, fruit or the like, in which case the said cells are dispensed with.

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

1. In a folding box, the combination with relatively swinging members, of a connection between the members comprising a continuous metallic rod having an intermediate integral coiled-spring portion located at the juncture of the members and constituting a spring connection that permits the swinging movement thereof, said rod being secured to the members, and having a spur provided on one end thereof, said rod furthermore constituting the means for holding the members against disassociation.

2. In a folding box, the combination with angularly-disposed folding sides, each having upstanding eyes, of a cover arranged to be fitted upon the sides and having sockets in its side and end edges to receive the eyes, said eyes projecting above the upper face of the cover, a flange located on said upper face contiguous to the sockets, and a fastening device extending about the cover longitudinally of and contiguous to the flange, said device detachably passing through the eyes and being protected by the flange.

3. In a folding box, the combination with angularly-disposed folding sides, each having upstanding eyes, of a cover arranged to be fitted upon the sides and having sockets in its edges through which the eyes extend, an upstanding angularly-disposed flange arranged upon the upper face of the cover contiguous to its edges and inside the sockets, said flange having notches in its corners, and a fastening-cord arranged to be passed through the eyes and around the flange.

4. In a folding box, the combination with a base, of a folding wall, and a contiguous strengthening device extending across the base and wall and secured thereto, said device having an intermediate coiled portion constituting a spring connection between the portions of the device extending across the base and wall and between said base and wall, said spring connection being located at the juncture of the base and wall, and the rod constituting the means for holding the base and wall against disassociation.

5. In a folding box, the combination with a bottom, of a side comprising an upstanding base portion resting upon the bottom, the edge of said bottom extending beneath the base portion, a folding wall, and a continuous strengthening device secured to the folding wall and extending across the base portion, said strengthening device having a terminal spur engaged in the edge of the bottom and having an intermediate integral coiled-spring portion located at the juncture of the base portion and folding wall.

6. In a folding box, the combination with a bottom, of a side comprising an upstanding base portion secured to the bottom, a folding wall, and a connection comprising a rod extending across the wall and base portion and having an intermediate integral spring portion constituting a spring connection between the wall and base and located at the juncture thereof, said rod and integral coil constituting the means for holding the base and wall against disassociation.

7. In a folding box, the combination with a base, of a folding wall located on the base, a rod extending across the base and wall and having an intermediate coil constituting a hinge connection between the two, the upper end of said rod extending above the upper edge of the wall and being doubled downwardly to form an eye, a cover having a socket that receives the eye, and a fastening device for the cover, said device passing through the eye.

8. In a folding box, the combination with a base portion, and a folding wall associated therewith, of a connection between the base portion and the folding wall comprising a continuous metallic rod having a spur at its lower end, an eye at its upper end, and an intermediate integral coiled-spring portion located at the juncture of the base and wall and constituting a spring connection between the two.

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

THOMAS M. MCINTOSH.

Witnesses:

ROBERT G. MURPHY,
JOSEPH G. LITCHFIELD.