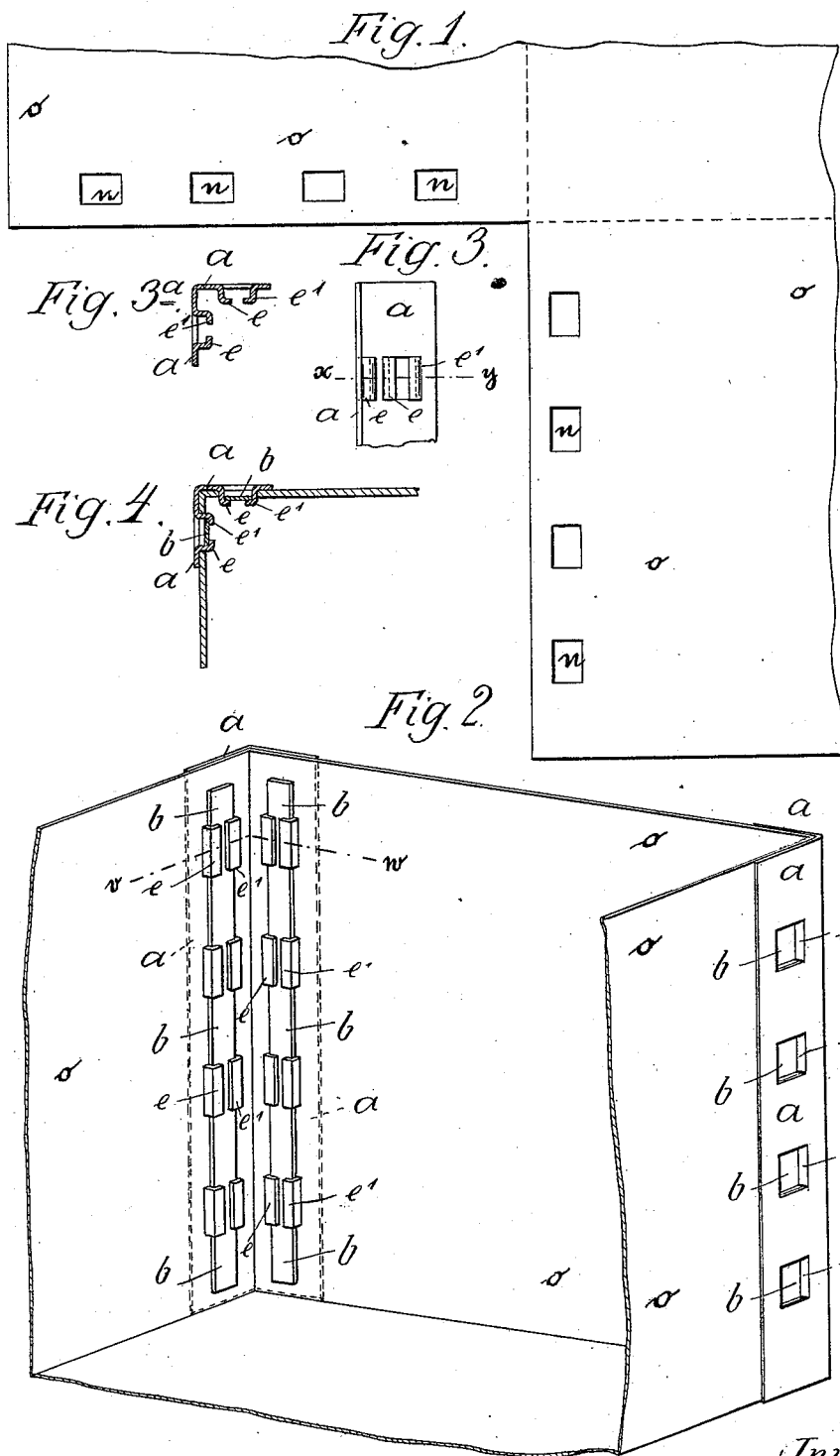


(No Model.)

L. CASPER.
COLLAPSIBLE BOX.

No. 403,089.

Patented May 14, 1889.



Witnesses:
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UNITED STATES PATENT OFFICE.

LEOPOLD CASPER, OF BERLIN, GERMANY.

COLLAPSIBLE BOX.

SPECIFICATION forming part of Letters Patent No. 403,089, dated May 14, 1889.

Application filed August 25, 1888. Serial No. 283,779. (No model.)

To all whom it may concern:

Be it known that I, LEOPOLD CASPER, a subject of the King of Prussia, German Emperor, residing at Berlin, in the Kingdom of Prussia, Empire of Germany, have invented certain new and useful Improvements in Collapsible Boxes, of which the following is a specification.

My invention relates to improvements in collapsible boxes; and the object of my improvements is to obtain a tight and resisting joining of the edges of the collapsible boxes. I attain this object by the mechanisms illustrated in the accompanying drawings, in which—

Figure 1 shows an upper view of a part of a collapsible box when brought into a flat state. Fig. 2 shows a perspective view of a part of a collapsible box provided with my improved edge-joinings. Fig. 3 shows a front view of a part of a joining-plate. Fig. 3^a shows a horizontal section of the joining-plate on the line *xy* of Fig. 3. Fig. 4 shows a horizontal section on the line *vw* of Fig. 2. Similar letters refer to similar parts throughout the different figures.

The collapsible box is cut and made from one piece of paper or card-board in the well-known manner by bending up the side walls from the bottom piece. Fig. 1 shows such a piece of flat card-board cut out in the well-known manner. Fig. 2 shows the box with the side walls, *o o*, after being bent up.

Before attaching my improved edge-joinings openings *nn* at regular distances are arranged in the side walls, *o o*, and after being bent up two neighboring side walls are joined by binding-plate *a*, which is provided with two rows of double hooks, *ee'*, stamped out of the metal plate *a* in the manner as illustrated

in Figs. 3 and 3^a. These hooks *ee' ee'*, lying parallel and opposite to each other, are arranged so as to fit and enter into the holes *nn* of the side walls. The hooks *ee'*, being inserted into the side walls of the box, are firmly secured to the same by thin strips of metal, *bb*, which close tightly the openings *nn* of the side walls. Thus the box is ready for use. The thin strips of metal being removed and the joining edges being taken away, the box may be collapsed, as shown in Fig. 1.

I am aware that prior to my invention collapsible boxes have been made with edge-joinings fitting into the holes of the card-box and operating in combination with a strip of metal; but the edge-joinings have heretofore had closed loops, which have been stamped out of the metal strip.

In my arrangement I make use of separated hooks, as before described. They can be perfectly correct bent out and in a right angle, so that when the strip of metal is inserted a tight and close joining is obtained.

What I claim as my invention, and desire to secure by Letters Patent, is—

A collapsible card-box having perforated side walls, *o*, and provided with edge-joinings *a*, having separated hooks *ee'*, arranged parallel and opposite to each other, passing through the perforations and secured by the metal strips *b*, which close the openings of the side walls, for the purpose as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

LEOPOLD CASPER.

Witnesses:

B. ROI,

THEODOR HEESE.