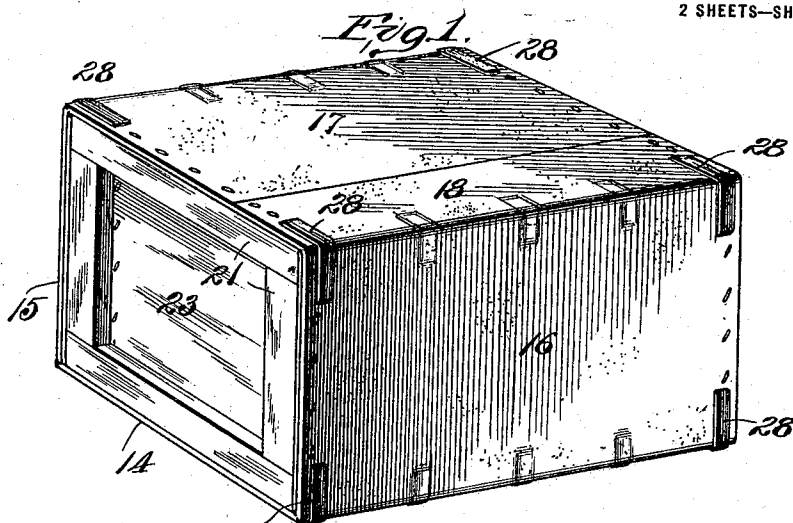
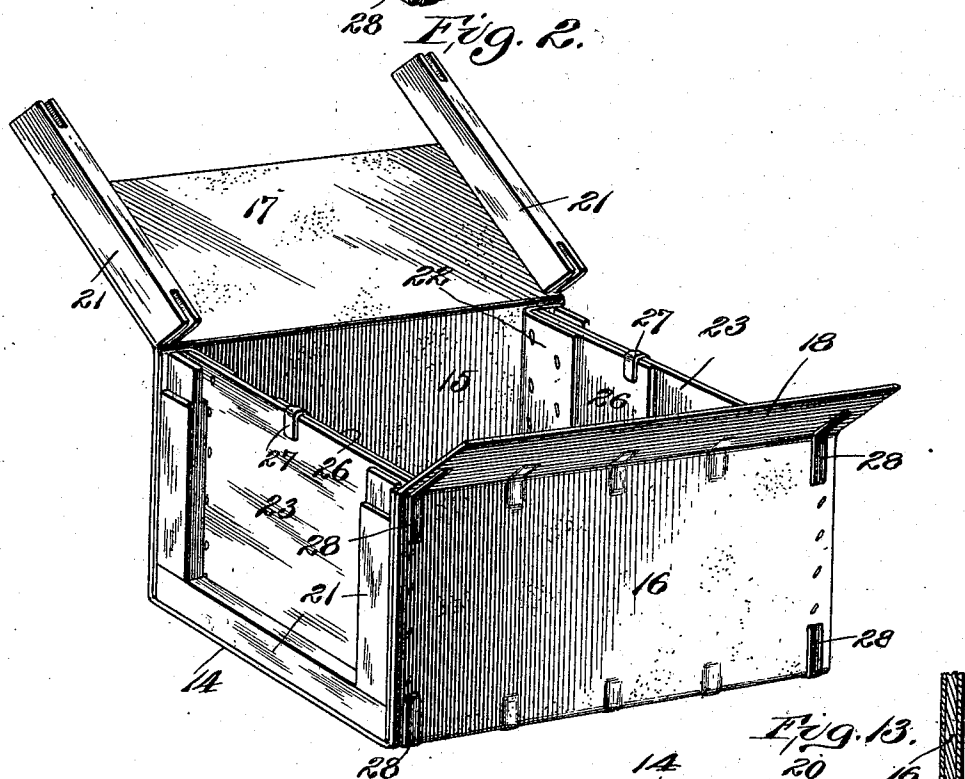
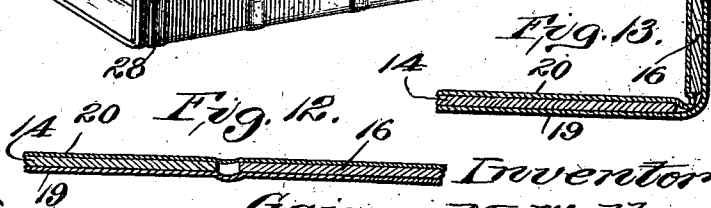


1,217,852.

G. M. WALKER.  
KNOCKDOWN SHIPPING BOX.  
APPLICATION FILED OCT. 6, 1914.

Patented Feb. 27, 1917.  
2 SHEETS—SHEET 1.



Attest:  
Mr. H. J. Scott.  
R. B. Crivie.

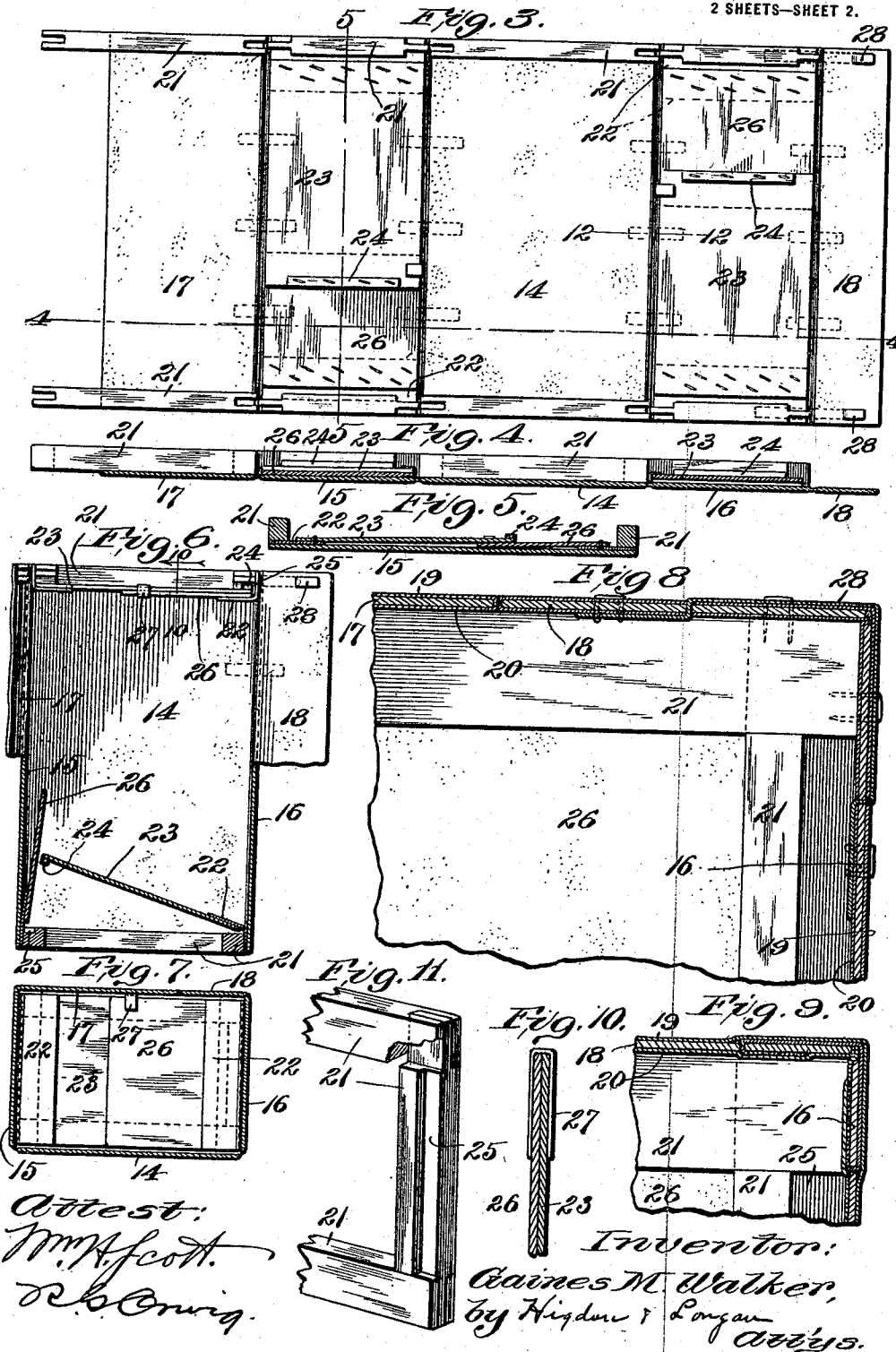
Inventor:  
Gaines M. Walker,  
by Higdon & Longan  
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2 SHEETS—SHEET 2.



Attest:  
Wm. A. Scott.  
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Inventor:  
Gaines M. Walker,  
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# UNITED STATES PATENT OFFICE.

GAINES M. WALKER, OF ST. LOUIS, MISSOURI.

## KNOCKDOWN SHIPPING-BOX.

1,217,852.

Specification of Letters Patent.

Patented Feb. 27, 1917.

Application filed October 6, 1914. Serial No. 865,270.

*To all whom it may concern:*

Be it known that I, GAINES M. WALKER, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Knock-down Shipping-Boxes, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in knockdown shipping boxes, and is especially directed to the class of boxes constructed of light material, such as wood-veneer reinforced by tough paper facings, wherein all of the box parts are assembled and folded in the flat for shipping purposes, ready for setting up into box shape for use.

The object of my invention is to arrange the paper facings in such manner over the spaces between the box sections as to give the box maximum strength along its lines of articulation, as well as to minimize tearing of the paper facings along the lines between the box sections;

Further, to construct novel box heads provided with attached means for securing them in position for use; and

Further, to provide a novel hinge joint between the box heads and box sections, which will permit the heads to be folded flat against the box sections.

With the above and other objects in view, which will be made clear, my invention consists in certain novel details of construction and arrangement of parts hereinafter fully set forth, pointed out in my claims and illustrated by the accompanying drawings, in which:—

Figure 1 is a perspective of the box, closed as in use;

Fig. 2 is a perspective of the box set up and with its lid open;

Fig. 3 is a plan of the box in an open or flat position;

Fig. 4 is a longitudinal, sectional elevation of the box taken on the line 4—4 of Fig. 3;

Fig. 5 is a transverse, sectional elevation taken on the line 5—5 of Fig. 3;

Fig. 6 is a plan of the box, partially in section, with the lids or covers open;

Fig. 7 is a transverse, sectional elevation of the box with the lids closed;

Fig. 8 is an enlarged sectional, fragmental elevation showing the hinge connection between the lid and the side of the box;

Fig. 9 is a fragmental, sectional elevation of one of the paper covered hinges connecting the box sections between the ends;

Fig. 10 is an enlarged, transverse sectional elevation through the members of the box head, taken on the line 10—10 of Fig. 6;

Fig. 11 is a fragmental perspective, showing certain of the tenoned cleats at the ends of the box sections;

Fig. 12 is an enlarged, sectional elevation in the flat, showing the arrangement of paper over the joints between the box sections; and

Fig. 13 is a view similar to Fig. 12, showing the paper as when the box sections are set up in box form for use.

Referring by numerals to the accompanying drawings:

14 designates the bottom of the box, 15 and 16 the sides of the box, 17 a lid section and 18 a second lid section, all of the parts just designated being preferably constructed of wood-veneer having both of its faces covered with sheets, 19 and 20, of tough fabric, such as paper, the fabric or paper preferably being of one piece covering all of said sections.

At each end of each of said sections, save the lid section 18, there is secured a cleat, such as 21, the securing preferably being by metallic stitches, such as staples, and each cleat being shaped so as to form tenon joints with the next adjacent cleat.

As shown in Fig. 6, the sides 15 and 16 have secured between their bodies and the cleats 21 secured thereto, strips 22 of flexible material, such as fiber-board, which form a hinge connection between said sides and the box heads 23. Each of the box heads 23 is of a length approximately that of the width of the bottom 14, and carries along its free margin opposite the hinged margin a strip 24, arranged to seat in a channel 25 formed in the cleat 21 opposite the cleat at the hinge end of the head.

In order to provide a convenient means for holding the heads 23 in place, I provide the auxiliary box heads 26, which are hinged in identically the same manner as the heads 23, and which are arranged to lie inside of said heads 23 when the box is set for use.

In order to hold the heads and auxiliary heads in parallelism when the box is empty, I provide clips 27, as shown in Fig. 10, which secure the two heads against relative movement, thereby serving to lock the strips 24 in the channels 25 and prevent outward folding of the box sides. In this condition the

box is ready for use, and when folding the lids may be secured in an ordinary manner, as by nailing through the lids into the cleats 21.

5 At the corners of the box I provide the one piece strap hinges 28, whose body portions lie outside of the paper facings 19 and 20, but intermediate of their ends are inserted through the box sections, as clearly shown in  
10 Fig. 8, the body portions lying outside of the facings serving as wear plates at the corners of the box.

The box hinges between the various sections other than at the ends are like the  
15 hinges 28, just described, except that their ends are doubled over their bodies to contact the inner faces of the wooden portions of the box sections and that the paper facings are arranged outside, or to cover, said hinges, in  
20 order to hold them in place without stitching, as are the hinges at the corners.

Referring to Figs. 12 and 13, it is to be observed that the paper facings are slack over the spaces between the box sections, in  
25 order to obviate tearing of the paper when the box sections are relatively articulated, so that the box at all times possesses a maximum of strength at the points of articulation. One of the distinctive features of this

box is that all of the parts are connected, requiring no extraneous locking devices to secure the box sections in box form. 30

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent of the United States is: 35

1. In a box of the class described, a number of relatively articulable box sections having cleats, whose ends interlock, a box head hinged to one of said cleats, a strip on said head arranged to interlock with another of  
40 said cleats, and an auxiliary head arranged to overlie the first mentioned head.

2. In a knockdown shipping box, a number of hinged sections, a cleat at each end of each section, a head hinged adjacent one of  
45 the cleats and provided with a strip arranged to interlock with a cleat on an opposing section, an auxiliary head hinged adjacent the cleat on said opposing section, and means for holding said head and said auxiliary  
50 head against relative movements.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

GAINES M. WALKER.

Witnesses:

E. L. WALLACE,  
R. G. ORWIG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."