

W. L. HOWLAND.

BOX.

APPLICATION FILED JULY 25, 1908.

929,438.

Patented July 27, 1909.

Fig. 1

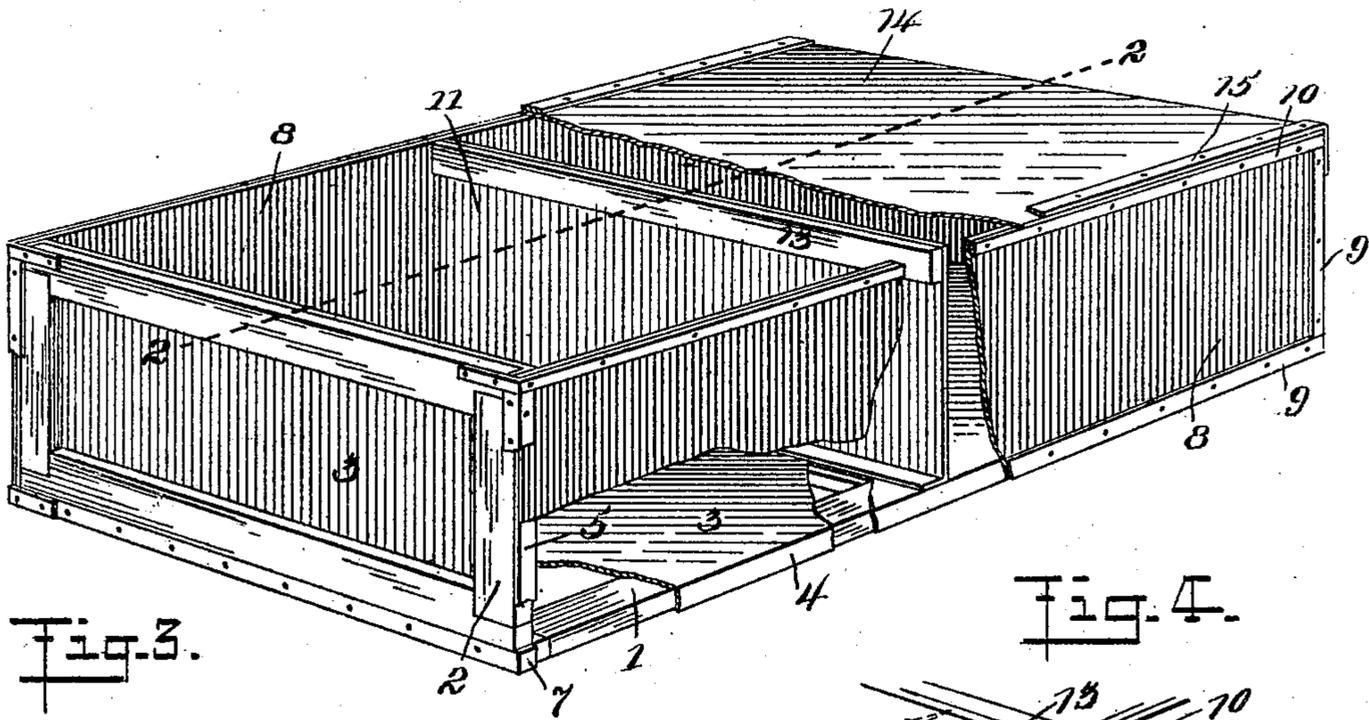


Fig. 3.

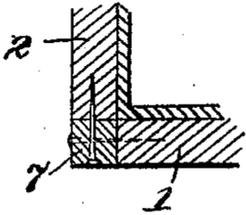


Fig. 4.

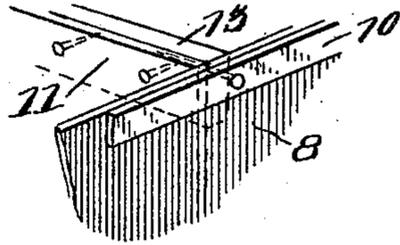


Fig. 2.

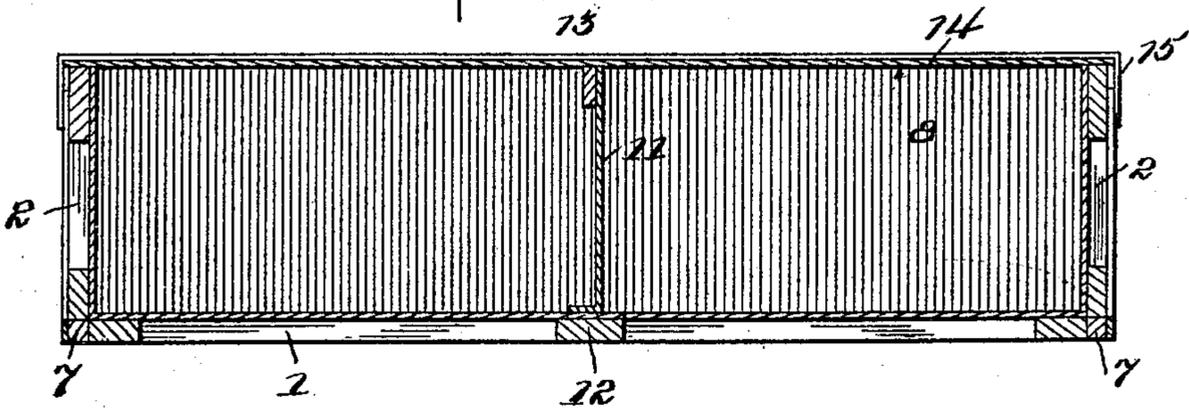
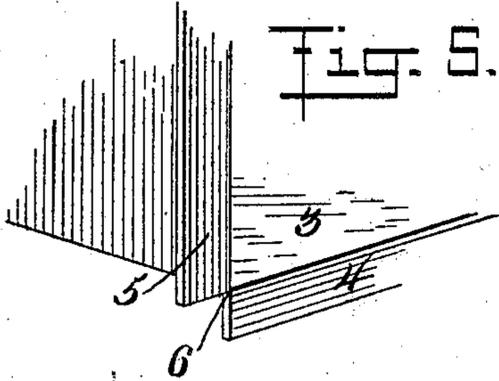


Fig. 5.



WITNESSES

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BOX.

No. 929,438.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed July 25, 1908. Serial No. 445,395.

To all whom it may concern:

Be it known that I, WILLIAM L. HOWLAND, a citizen of the United States, and a resident of Cedar Rapids, in the county of Linn and State of Iowa, have invented new and useful Improvements in Boxes, of which the following is a full, clear, and exact description.

My invention relates to boxes, and has for its object to provide a box which while strong, can be easily and cheaply manufactured and may be quickly put together by the user when desired.

Other objects of the invention will appear in the following more complete description of the invention.

In this specification I will describe the preferred form of my invention, but it will be understood that I do not limit myself thereto, as I consider myself entitled to all forms and embodiments of the invention which may be held to fall within the scope of the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, in which—

Figure 1 is a perspective view of the box with portions cut away to show its construction; Fig. 2 is a sectional view of the box on line 2—2 of Fig. 1; Fig. 3 is an enlarged sectional view showing the manner of the adjustment of the bottom and side frame members with reference to the corner member and to the inner pulp board; Fig. 4 is an enlarged perspective view showing the method by which the partition is secured to the sides of the box; and Fig. 5 is an enlarged perspective view showing the manner in which the inner pulp board is cut at the corners of the box and is folded.

By referring to the drawings, it will be seen that I provide a bottom frame member 1 and end frame members 2. These frame members 1 and 2 are preferably constructed of wood and may be put together in any approved manner, but it will be understood that the frames consist of border strips which are mortised and are held together in a manner familiar to those acquainted with the art. The width of the border strips may vary, depending on the use to which the box is to be put, there being a considerable open space between the border strips in each of the frames.

In putting the box together, the end frame members are laid at either end of the bottom frame member, so that the bottom and end frame members will rest on a table in alignment with each other. An inner pulp board 3 is then secured to the bottom and end frame members, by bending it over their sides and fastening it as shown at 4 and 5 in Fig. 1. Kerfs 6 are then cut in the turned-over portion of the inner pulp board 3, in alignment with the lines separating the end frame members 2 from the bottom frame member 1. These kerfs 6 are best shown in Fig. 5, and it will be seen that when these kerfs have been made, the end frame members 2 may be turned upwardly at right-angles to the bottom frame member 1, leaving a smooth and even surface of the pulp board, covering the bottom and ends of the box. When the end frame members 2 are turned to positions at right-angles to the bottom frame member 1, the lower surfaces of the end frame members 2 will be approximately in alignment with the upper surfaces of the bottom frame member 1. In the rabbets formed by the positions of the end frame members 2 relatively to the bottom frame member 1, are disposed corner members 7, which are nailed or otherwise secured to the bottom and end frame members 1 and 2 respectively. Side pieces 8, of pulp board are then secured at either side to the bottom and end frame members 1 and 2, and these pieces 8 of pulp board are bound to the bottom and end frame members 1 and 2 by metal or other strips 9, and a metal or other strip 10 is disposed against the side pulp board portions 8 at their upper surfaces, the said strips 10 being secured to the pulp board 8 and to the end frame members 2.

A partition 11 may be provided, the said partition consisting of pulp board and having its lower surface formed as a flange, so that it may be secured to the pulp board 3 and to a brace 12, which may be disposed across the box between the side strips of the bottom frame member 1. To the upper portion of the partition 11 may be secured a reinforcing strip 13, which in turn may be secured to the side pulp boards 8 and to the strips 10.

The box is covered by disposing a pulp board 14 thereover, the pulp board 14 being secured to the end frame members 2 and to the side pulp boards 8, the top pulp board

14 being bound by strips 15 in the same way that the side pulp boards 8 are bound by the strips 10.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a box, bottom and end frame mem-
bers to which a sheet of pulp board is
secured, the end frame members having their
10 lower edges approximately in alinement with
the top of the bottom frame member, corner
members disposed in the rabbets formed by
the bottom and end frame members, the cor-
ner members being secured to the frame
15 members, pulp boards forming the sides of
the box, the pulp boards being secured to the
bottom and end frame members, reinforcing
members over the sides of the box, a partition
in the box, and a reinforcing member secured
20 to the partition, the reinforcing member
secured to the partition and the reinforcing
members on the sides of the box being
secured together.

2. In a box, bottom and end frame mem-
25 bers, a sheet of pulp board secured to the
said members, pulp board forming the sides
of the box, the pulp board forming the sides
being secured to the bottom and end frame
members, a pulp board partition in the box,

the lower surface of the pulp board partition 30
forming a flange by which it is secured to
the bottom of the box, and a transverse rein-
forcing strip secured to the partition, rein-
forcing strips secured to the pulp board
sides of the box, the transverse reinforcing 35
strip being secured to the reinforcing strips
secured to the sides of the box.

3. In a box, bottom and end frame mem-
bers, a sheet of material secured to the said
members, members forming the sides of the 40
box, the members forming the sides being
secured to the bottom and end frame mem-
bers, a partition in the box, the lower surface
of the partition forming a flange by which
it is secured to the bottom of the box, a 45
transverse reinforcing strip secured to the
partition, and reinforcing strips secured to
the sides of the box respectively, the trans-
verse reinforcing strip being secured to the
reinforcing strip secured to the sides of the 50
box.

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

WILLIAM L. HOWLAND.

Witnesses:

E. B. ZBANEK,
H. N. BOYSON.