W. J. NEEBES, JR.

KNOCKDOWN BOX.

APPLICATION FILED DEC. 5, 1907.

938,887. Patented Nov. 2, 1909.

Fig. 1.

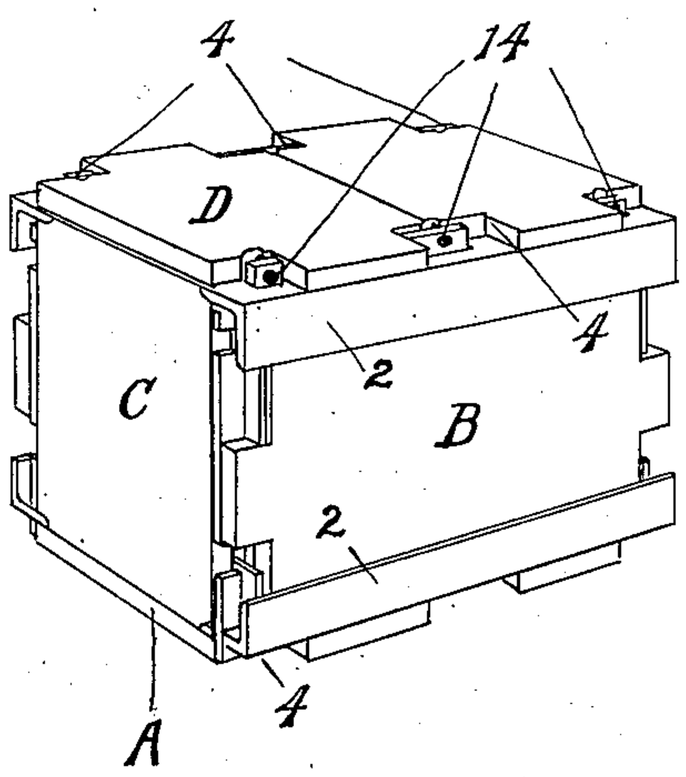


Fig. 2.

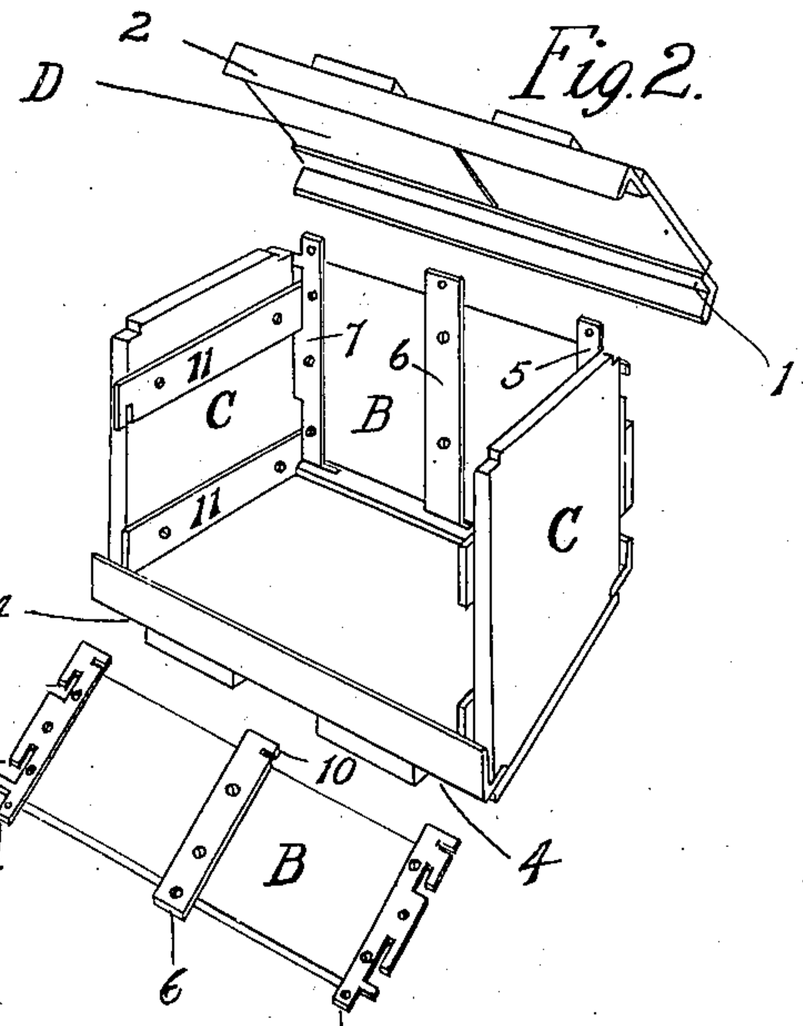
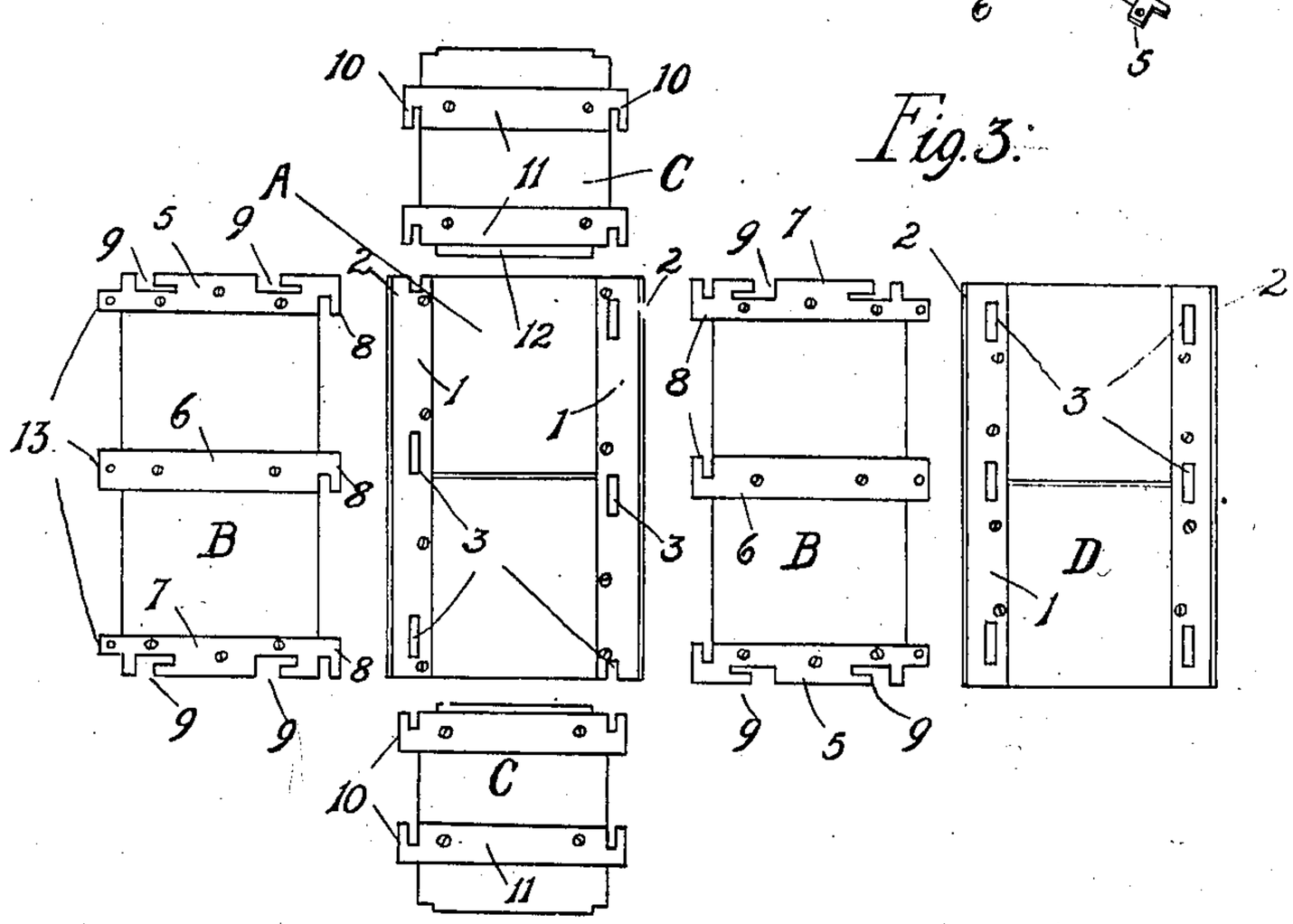


Fig. 3.



WITNESSES

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KNOCKDOWN BOX.

938,887. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed December 5, 1907. Serial No. 405,222.

To all whom it may concern:

Be it known that I, WILLIAM J. NEEBES, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Knockdown Boxes, of which the following is a specification.

The invention relates to knock down boxes, and has for its objects; the provision of a knock-down-box in which the sections may be packed together in very compact and secure form when in knock-down condition; the provision of a knock-down-box which may be easily assembled and in which the sections are rigidly held in position after the assembling; the provision of a box which may be disassembled to disclose the contents with the least possible disturbance of such contents, and, in general, the provision of a simplified and improved form of knock-down-box construction. One embodiment of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the box with the sections assembled,

Figure 2 is a perspective view of the box with the top and side removed to indicate the arrangement of parts upon the inside, and

Figure 3 is a plan view of the inside of all of the sections which go to make up the box.

The box is adapted for a large variety of uses, and for the packing of a number of different classes of goods, but is designed especially for use in the tobacco trade, where the custom is on inspection of the goods to turn the box containing the tobacco upside-down spilling the contents upon the stripper, which operation tends to disarrange and break the tobacco. After this operation, the tobacco is replaced which tends to damage it further and cause additional loss. My box is so designed as to permit of the inspection of the tobacco without spilling of the contents and is so constructed that the sides and top of the box may be removed and again replaced with the least possible disturbance and disarrangement of the contents of the box and a minimum amount of labor.

Referring to the drawings and particularly to Figure 3, A is the bottom of the box, B—B are the sides of the box, C—C are the ends of the box and D is the top thereof. The bottom A comprises a flat board carrying at either side the angle members 1 with the upstanding flanges 2, and the slots 3 are provided in the bottom flanges of the angles 1, the corners of the main side supporting the angles being cut away at 4 adjacent the slots 3 as indicated in Figure 2. The top D of the box is similarly provided with angles 1 having flanges 2, the only distinction over the bottom member being in the positioning of the slots 3, in the flanges of the angles which slots come adjacent the corresponding cut-away portions 4 in the main top board as indicated in Figure 1. For convenience in construction the main bottom and top members A and D are preferably made in two sections as shown. The side members B—B fit inside of the flanges 2 and are provided with the three transverse cleats 5, 6 and 7 each of which is provided at its lower end with a hooked member 8 for coöperating with the slots in the bottom member A. To engage these hooks 8 with the slots 3, such hooks 8 are pushed through the openings 3 and the side members then moved longitudinally until the hooked portion of the members 8 interlock with the flanges of the angles, thus securing such side members against vertical movement. The end cleats 5 and 7 are also provided with the locking recesses 9 for coöperating with the hooked members 10 on the transverse cleats 11 carried by the end members C. After the side pieces B have been placed in position the neck portions of the hook-members 10 are pressed through the end portions of the recesses 9 and the end member is then moved downwardly to lock the parts together. The downward movement of the end members C carries the bottom cleats 11 thereof against the top of the bottom member, and the portions 12 on such end members overlap the ends of the bottom member so that the end members together with the side members to which they are locked are prevented from any movement longitudinally of the bottom member. After the end members have been locked in position the top member D is placed in position with the upper ends 13 of the cleats 5, 6 and 7 extending through the slots 3 in such top member. The ends of the cleats are provided with holes as shown, and the top member is clamped in position by means of cotter pins 14 passing through these holes and engaging the top flange of the angle-members 1. The ends of the top section D overlap the ends of the end sections C (Figure 1), so that after the top

section has been locked to the side sections the end sections are also prevented from moving vertically. From the foregoing it will be seen that the parts are held securely in position by the top section D, and that the parts as they are assembled successively lock the preceding parts from movement in the direction necessary to free them.

The parts may be very conveniently packed together by fitting the side members B between the upstanding flanges 2 of the bottom member together with the end members C and then placing over such members the top section D whose side flanges 2 extend down and meet the upwardly extending side flanges of the lower section A, thus forming a sort of receptacle for the reception of the other sections of the box. This function is accomplished by having the upstanding flanges 2 spaced apart a sufficient distance to receive the sides and ends of the box as will be apparent from Figure 3. When the box is assembled, the flanges 2 serve to protect the edges of the side members and add considerably to the strength of the box. The various sections of the box are very quickly and easily assembled, and as only a slight movement in the plane of any one section is necessary to free it, the box may be disassembled for the inspection of the contents with a very light disarrangement of such contents. If an inspection of the entire contents of the box is unnecessary, the box may be only partially disassembled as by removing the top and one or more of the sides and ends, thus leaving the other portions of the box in position to support the contents.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. In combination in a knock-down-box, a bottom section provided with the slots 3, side sections having the hooks 8 for engaging the slots 3, and the end securing members 5 and 7, provided with the portions 12 projecting down past the ends of the bottom section overlapping the same, end sections provided with the hooks 10 for engaging said securing members in the side sections, and a top section overlapping the end sections and detachably secured to the side sections.

2. In combination in a knockdown box, a bottom section provided along the edges with reinforcing strips having locking slots, side sections provided with reinforcing strips projecting past the edges of the side sections and provided with hooks for engaging the slots in the bottom section and locking the bottom and side sections together on a relative longitudinal movement of the bottom section and side sections, and end sections provided with reinforcing strips projecting past the edges thereof and provided with means for interlocking with the strips on the side sections on a vertical movement of the end sections.

3. In combination in a knock-down box, a bottom section provided along the edges with reinforcing portions having locking slots, side sections provided with reinforcing strips projecting past the lower and upper edges of the side sections and provided at their lower ends with hooks for engaging the slots in the bottom section and locking the bottom and side sections together on a relative longitudinal movement of the bottom and side sections, end sections provided with reinforcing strips projecting past the edges thereof, and provided with means for interlocking with the strips on the side sections on a vertical movement of the end sections, and a top section overlapping the end sections and provided with openings for receiving the upper ends of the strips on the side sections.

4. In combination in a knock-down box, bottom, side and end sections provided with interlocking hooks and slots, the side sections being constructed to interlock with the bottom section by a movement longitudinal thereof, and the end sections being constructed to project down past the ends of the bottom section overlapping the same and being locked to the side sections by a vertical movement, and a top section constructed to overlap the end members and prevent the upward movement thereof, and detachably secured to the side members.

5. In combination in a knock-down box, bottom, side and end sections provided with interlocking hooks and slots, the side sections being constructed to interlock with the bottom section by a movement longitudinal thereof in opposite directions, and the end sections being constructed to project down past the ends of the bottom section overlapping the same and being locked to the side sections by a vertical movement, and a top section constructed to overlap the end members and prevent the upward movement thereof, and detachably secured to the side members.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

WILLIAM J. NEEBES, JR.

Witnesses:
PAUL CARPENTER,
ALFRED Y. ANDREWS.