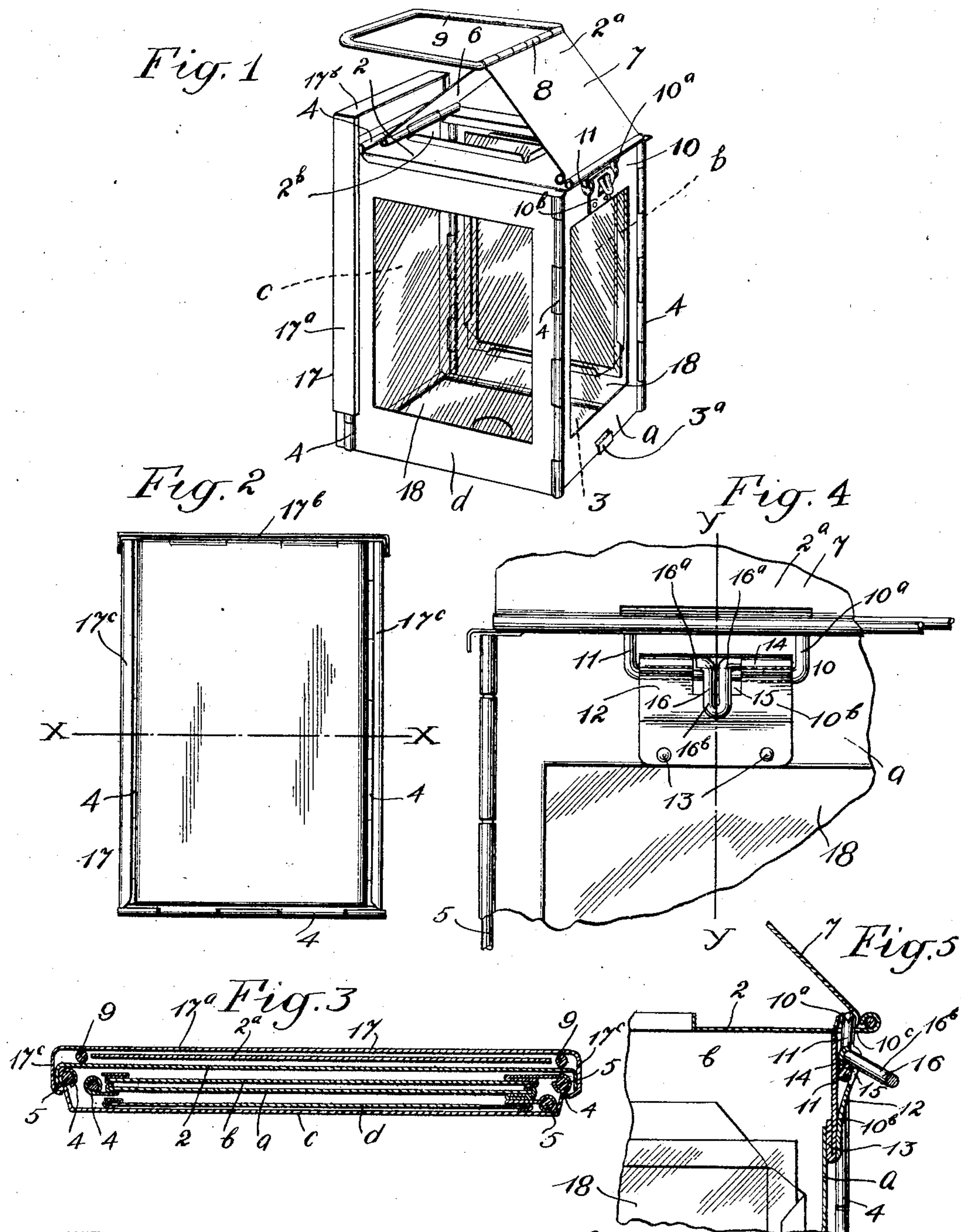


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PATENTED MAR. 28, 1905.

C. H. STONEBRIDGE.
COLLAPSIBLE BOX.

APPLICATION FILED JUNE 10, 1903. RENEWED AUG. 30, 1904.



WITNESSES:

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COLLAPSIBLE BOX.

SPECIFICATION forming part of Letters Patent No. 785,772, dated March 28, 1905.

Application filed June 10, 1903. Renewed August 30, 1904. Serial No. 222,753.

To all whom it may concern:

Be it known that I, CHARLES H. STONEBRIDGE, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Collapsible Boxes, of which the following is a specification.

This invention relates to collapsible boxes, and more particularly to collapsible lanterns having a foldable box-like body, and in its particular elements of improvement relates to the subject-matter of two applications for Letters Patent for collapsible boxes filed by me, respectively, December 18, 1902, and January 31, 1903, and respectively bearing the Serial Nos. 135,777 and 141,299, to which prior applications reference is hereby made as to a disclosure of a complete device such as the said present improvements relate to.

The present invention has for its object to provide certain features of improvement in a device of the character described, and particularly relating to devices for securing several of the members or features in collapsible though operative connection, and to a casing or locking device whereby when all the parts and members are in folded or collapsed condition the same may be so maintained in compact portable form.

Referring to the accompanying drawings, which form part of this specification, in which like reference characters denote like parts in the several figures, Figure 1 is a perspective view of a collapsible lantern embodying the present improvements and in extended or operative position and connection of parts. Fig. 2 is a side elevation of the same in collapsed or folded condition. Fig. 3 is a transverse sectional view of the same, taken upon the line X X, Fig. 2. Fig. 4 is a detail fragmentary front elevation of the same, showing the improved securing devices constituting an essential part of the invention; and Fig. 5 is a detail fragmentary vertical sectional view taken upon the line Y Y, Fig. 4. The views in Figs. 3, 4, and 5 are upon an enlarged scale.

Referring with particularity to the drawings, the lantern shown herein as embodying

the present improvements embodies a body portion 1, consisting of a plurality of pivotally-connected side or body members *a*, *b*, *c*, and *d*, a top member 2, pivotally connected with the side member *c* of the body portion, and a bottom member 3, pivotally connected with the side member *c* of the body portion and provided with a catch 3^a for detachably connecting the same with the side member *a*. The top member 2 is provided with a foldable guard 2^a for an air opening or vent 2^b in the top member. Each of the pivotal connections, four in number, of the four side members *a*, *b*, *c*, and *d*, the pivotal connection of the top member 2 with the side member *c*, and the pivotal connection of the bottom member 3 with the side member *c*, as well as of the guard 2^a with the top member 2, consists of a plurality of knuckles 4, formed upon the connected members and fixed pintles 5, passing through the several knuckles. The guard 2^a consists of two members 6 and 7, respectively, which are pivotally connected together, as at 8, by means of a bail 9, which serves as a handle for carrying the entire device, and all of the said members of the lantern, including the guard 2^a, are so formed and proportioned as to be capable of collapsing or folding into compact and substantially flat condition, as shown in Figs. 2 and 3.

According to the present invention I provide improved securing devices 10 for detachably uniting the side member *a*, the top member 2, and the guard 2^a, and said securing devices 10 embody a member 10^a, mounted upon the guard 2^a, and a member 10^b, mounted upon the side member *a*, the top member 2 being provided with an opening 10^c, as clearly illustrated in Fig. 5, for receiving said member 10^a in projection through the same. When said member 10^a has been projected through the opening 10^c and engaged with the member 10^b, the several members and parts *a*, 2, and 2^a are firmly united together.

The preferred form of construction of the securing devices 10 is as follows: The member 10^a consists of an elongated loop of stiff wire 11, which is pivotally connected with an edge portion of the member 7 of the guard 2^a,

being arranged substantially in the same plane as said member 7 when in operative connection with the member 10^b of the securing devices 10, being capable of easy manipulation for the projection of the same through the opening 10^c in the top member 2. Member 10^b of the securing devices 10 embodies a spring-tongue 12, preferably stamped out of sheet metal and secured at its lower edge, as at 13, in connection with the outer face of the side member *a*, the upper edge portion 14 of said tongue 12 being free to move under tension toward or away from the outer face of the said member *a*. Said upper edge portion 14 is bent inwardly, as clearly shown in Fig. 5, to form a knuckle arranged to bear directly upon the outer face of the said member *a*, and said spring-tongue 12 is provided with a rectangular opening 15, which is formed in the upper portion of the same substantially centrally thereof and including a portion of the knuckle at 14. Pivotaly mounted in said knuckle 14 is a finger-piece 16, formed of a single length of stiff wire, the end portions 16^a of which are pivotaly received in the knuckle 14, respectively, at opposite sides of the opening 15 and the central portion 16^b of which is formed into a depending loop, which projects upwardly through the opening 15 and normally depends in position for convenient manipulation when the loop 11, constituting the member 10^a of the securing devices 10, is passed downwardly through the opening 10^c in the top member 2 and between the knuckle 14 and the outer face of the said member *a*. Said loop 11 is of such proportions as to permit the knuckle 14 to enter the former and prevent the withdrawal of the former from engagement with the latter, thus firmly uniting the guard 2^a, the top member 2, and the side member *a* without their releasing by the finger-piece 16, the depending loop 16^b of which now rests upon or bears against said loop 11. If now the loop 16^b of the finger-piece 16 be firmly pressed upon, so as to force the same against the loop 11 of the member 10^a, the latter will be disengaged from the knuckle 14 and the same may be freely withdrawn through the opening 10^c, so as to permit disconnection of the several parts and features for folding.

17 designates the improved casing or locking device, constituting an essential feature of the present invention, and the same is shown in Fig. 1 in the position it occupies when the parts are in extended or operative position, the same being shown in Figs. 2 and 3 in the position which it occupies when the entire device is in collapsed or folded condition. In constructing the body portion 1 of the lantern the pintles and knuckles 5 and 4, respectively, whereby are united the side members *b*, *c*, and *d*, are arranged in each series to slightly project outwardly from the sides of the said member *c*, which, as clearly

shown in Figs. 1 and 3, is made of slightly-dished formation to receive the other parts and members in flat folded condition. The casing or locking device 17 is formed to be engaged with the knuckles 4, connecting said side members *b*, *c*, and *d* when the lantern is in operative position, as shown in Fig. 1, as a supplemental side member or body-stiffener, and also to be connected with such knuckles when the lantern is in collapsed condition, as shown in Fig. 2, to firmly lock all the parts and members together in such collapsed condition and to serve as a cover or casing for the lantern. When the lantern is in operative position of parts, the casing or locking device 17 is engaged with the lantern, so as to cover the side member *c* exteriorly, said side member *c* being preferably of continuous oblong formation, whereas said members *a*, *b*, and *d* may be of open formation and provided with mica or other transparent or translucent light-emitting portions 18. When the lantern is in collapsed condition, as shown in Figs. 2 and 3, all of the parts and features of the same are folded into flat condition, the side members *a* and *d* being folded between the side members *b* and *c* and the top member 2 being folded flat upon the side member *b* beneath the guard 2^a and bail 9. With the parts and features in these positions, the casing or locking device 17 is engaged with the knuckles connecting the said members *b*, *c*, and *d* in a position the reverse of that above described, in which position it extends exteriorly of the guard 2^a and incloses between itself and the side member *c* the top member 2, the guard 2^a, and the said members *a*, *b*, and *d*, as well as the bottom member 3, which is folded between the side member *c* and the side member *d*.

In the preferred form of construction the casing or locking device 17 consists of a plate or cover 17^a, provided with an end flange 17^b and side flanges 17^c, the latter being angular in form for firm engagements with the knuckles connecting the side members *b*, *c*, and *d*. Said plate or cover 17^a is preferably of substantially the same area as the side member *c*, and, when it is associated with the several features and parts of the lantern in collapsed condition, all of the latter are securely housed and locked between said plate or cover 17^a and the said member *c*.

The operation, advantages, and method of use of the present improvements will be readily understood, particularly by reference to said prior applications initially herein referred to. When the lantern is knocked down or collapsed, so that the parts occupy the position shown in Figs. 2 and 3, the casing or locking device 17 is merely reversed from the position which it occupies when the lantern is in operative position and firmly maintains the several parts and features in collapsed condition for transportation in

very small space, and the entire device in this position is effectually protected against breakage or other damage. The securing devices 10 enable the guard 2^a, top member 2, and side member *a* to be conveniently connected and disconnected, as desired, such disconnection requiring merely the application of light pressure to the loop 16^b of the finger-piece 16 to free the loop 11 from the knuckle 14. When the loop 11 is in connection with said knuckle 14, the spring quality of the tongue 12 firmly maintains such connection and the resultant connection of the several parts.

I do not desire to be understood as limiting myself to the specific construction as shown and described herein, but reserve the right to vary the same in adapting the invention to varying conditions of use without departing from the spirit of the invention or the terms of the following claims.

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

1. In a device of the class described, a body member, a top member, and a guard for an opening in the top member; and securing devices for detachably uniting the same, comprising a member mounted upon said guard and arranged for projection through an opening in said top member, and a member mounted upon said body member and arranged for engagement with said member which is mounted upon said guard and pro-

vided with a finger-piece for disconnecting the two members of said securing devices. 35

2. In a device of the class described, a body portion consisting of a plurality of body members pivotally connected together and capable of folding in a flat condition, and a casing or locking device slidably connected with one of said body members when the body portion is in operative condition exteriorly of the same and which is slidably connected with said body member exteriorly of the other body members when the body portion is in folded condition. 40 45

3. In a device of the class described, a body portion consisting of a plurality of body members pivoted together and capable of folding into flat condition, said body members being pivotally connected by means of knuckles and pintles, and a casing or locking device normally connected with one of said body members exteriorly of the same and by means of the knuckles and pintles associated with the same and similarly connected with said body member exteriorly or the other of said body members when the device is in folded condition. 50 55

In testimony whereof I have signed my name in the presence of the subscribing witnesses. 60

CHARLES H. STONEBRIDGE.

Witnesses:

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RAYMOND I. BLAKESLEE.