

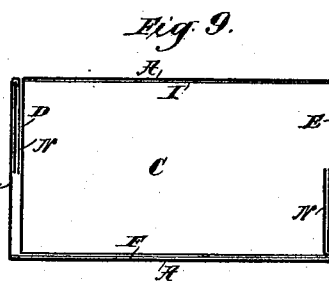
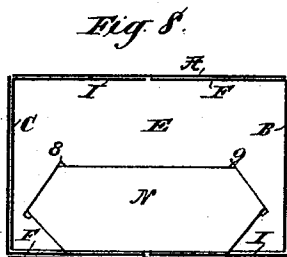
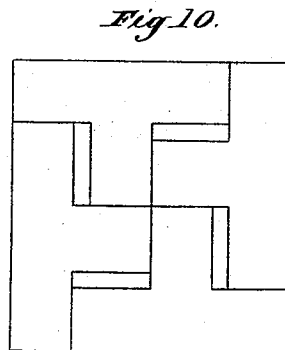
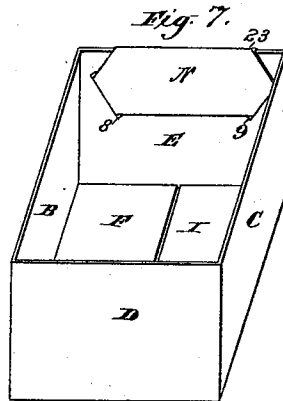
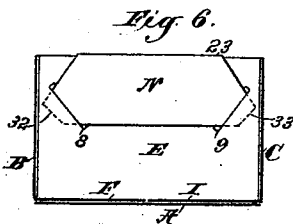
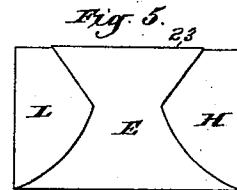
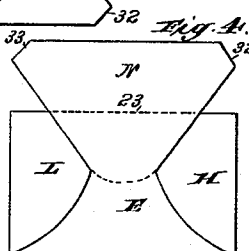
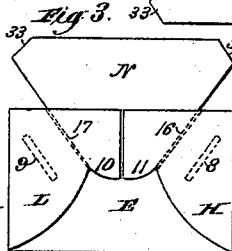
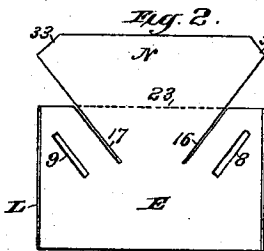
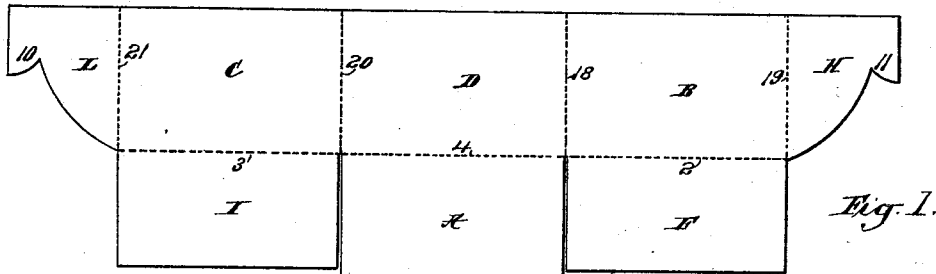
(No Model.)

2 Sheets—Sheet 1.

F. M. TURCK.
PAPER BOX.

No. 516,247.

Patented Mar. 13, 1894.



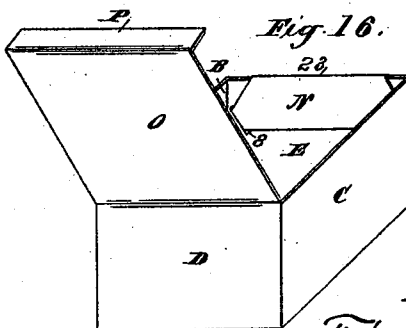
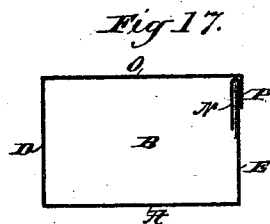
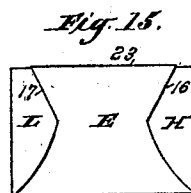
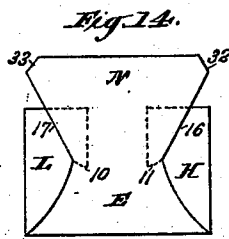
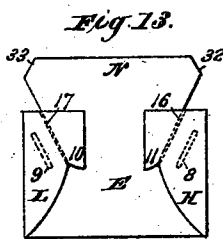
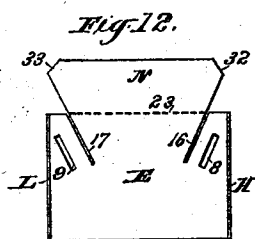
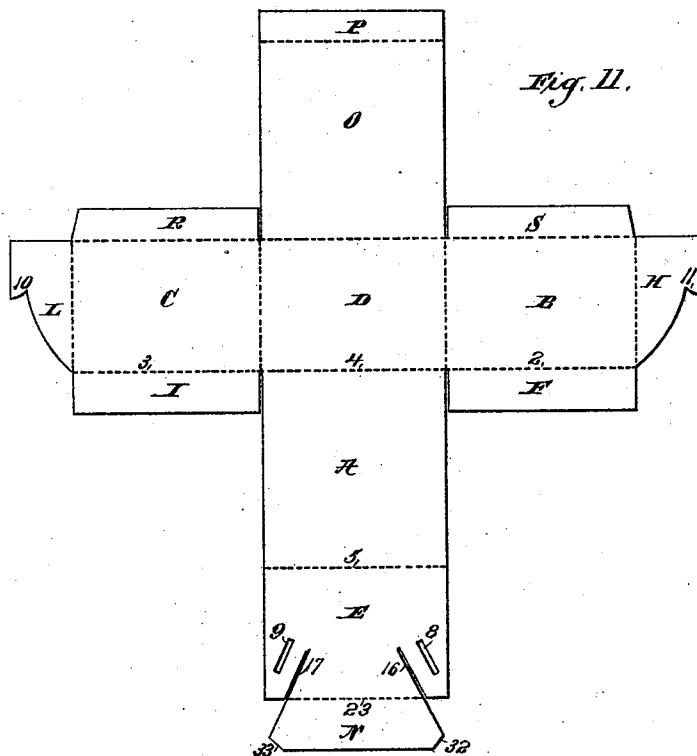
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F. M. TURCK.
PAPER BOX.

No. 516,247.

Patented Mar. 13, 1894.



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UNITED STATES PATENT OFFICE.

FREDERICK M. TURCK, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HENRY J. HOWLETT, TRUSTEE, OF SAME PLACE.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 516,247, dated March 13, 1894.

Application filed July 25, 1892. Serial No. 441,148. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK M. TURCK, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Paper Boxes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to that class of boxes usually made from paper in the form commonly known as mill-board or cardboard which is a sheet of such thickness as to be stiff and strong enough to enable a blank to be cut therefrom and so incised and scored or creased as to adapt it to be bent into hollow or box form and have its otherwise free parts interlocked and fastened together for use as a container of articles or material; but this may of course be any similar material suitable for the purpose, as combined cloth and paper, thin metal sheets and the like. As the blanks composing such boxes contain within themselves the means for sustaining them in a hollow or box form and are thus adapted for storage or shipment in flat form to be set up and locked together by the user, they are commonly duplicated, supplied with covers by means of bodies made appropriately shallow for that purpose and with or without covers are known as knockdown boxes. Boxes of this class as heretofore constructed have depended largely for their strength upon the use of material of extra thickness, necessitated by the weakening of the material due to the structure of the locking devices, thereby entailing additional expense.

One object of this invention is to so construct a box that it may be made of much lighter material than is ordinarily used, by reducing the number of the locking devices employed to sustain it in box form; another object is the making of a structure especially adapted to be employed in duplicate as a covered package, thus composing a package consisting of two such boxes one acting as a cover that provides doubled walls on its four sides as well as its top and bottom, and thus adapts it for the carriage of heavy or bulky articles; and another object is to maintain the normal strength of the material by reducing the num-

ber of incisions therein necessary to maintain the blank in box form.

The invention consists in constructing the box from a single blank of material, cut, creased and shaped so that its component parts are adapted to be doubled or folded into hollow or box form and be secured in such form by means of a single set of locking devices, and without the aid of cement or glue as a means for attaching any of its parts.

It further consists in a box formed from a single blank so cut, creased and shaped that it may not only be doubled or folded into hollow or box form and be secured by a single set of locking devices, but have its bottom constituted by two plies of material or made double.

It also embraces such a box with or without the doubled bottom but having a cover flap formed as an integral part of the blank or attached thereto.

It also includes the peculiar blank from which the box is formed.

Such a box in addition to the strength of its structure has the additional advantage of requiring but slight manipulation in setting it up in box form for use, which is due to the fact that it requires but one locking device to secure its parts in place.

Practical embodiments of this improved box are shown in the accompanying drawings, in which—

Figure 1 is a plan view of a blank, cut, incised and creased or scored to adapt it to be brought into box form and locked together by a single fastening. Fig. 2 is an end elevation with the parts folded or bent into box form but with the side flaps extended, and the closing end upraised with its extension elevated. Fig. 3 is a similar view with the side flaps bent inward and laid against the end flap, introduced to more particularly show the relation of the hooked tongues and their engaging locking incisions. Fig. 4 is a similar view with said side flaps interlocked with the end flap. Fig. 5 is a similar view with the extension of the end flap folded over the edges of the side flaps and interlocked with itself. Fig. 6 is an inside view of the end of the lock box thus locked. Fig. 7 is a perspective view of the box constructed according to this in-

vention showing more particularly the inwardly extended auxiliary bottom flaps or extensions. Fig. 8 is a sectional elevation of two boxes constructed according to this invention and slipped one over the other to form a closed box and illustrates more particularly the provision in such use of the box of a package having doubled walls on its sides, as well as its top and bottom. Fig. 9 is a similar view taken at right angles to Fig. 8. Fig. 10 is a plan view illustrating the mode of economically cutting boxes of this description from a single blank. Fig. 11 is a plan view similar to Fig. 1 of a modified form of this box. Figs. 12, 13, 14 and 15 correspond respectively in position of parts with Figs. 2, 3, 4 and 5 of Sheet 1 and hence need no specific description. Fig. 16 is a perspective view of the box showing its cover as raised. Fig. 17 is a transverse sectional view of the box showing the cover closed. In this view although the part P of this cover is shown as lapping over the outside edge of the box, it will usually be tucked within the inside edge of the box.

The blank shown in Fig. 1 is cut, incised and scored in the manner shown by hand or by means of any of the appliances used in the manufacture of boxes and although shown as shaped to produce a square box, it may be given any other configuration as may be desired. It is composed of a bottom A to opposite sides of which are attached by a creased or scored line 4 or 5 the end pieces D, E. The end piece D carries at its opposite sides connected therewith by means of creased or scored lines 18, 20 the box sides B, C and these in turn have depending from them connected by creased or scored lines 2, 3, flaps F, I that are provided to form an auxiliary or duplex bottom to the box. The side pieces B, C also carry, attached to them by creased or scored lines 19, 21, laterally projecting or extended flaps H, L which are adapted to be lapped upon one end E of the box as will presently appear, and these flaps are respectively provided with tongues having hooked projections 11, 10. The end piece E is provided with an extension N connected therewith by a creased or scored line 23 and the outer ends of which extension are shaped to form tongues 32, 33 that are adapted, when said extension N is folded upon the body of the end piece E to laterally enter tucking slots 8, 9. The end piece E is furthermore provided with incisions 16, 17 that are adapted to engage with the hooked projections 11, 10 of the flaps H, L. The extension N although shown as conforming in the direction of its sides with the angle at which the incisions 16, 17 are made need not have that shape, but any other that is suitable; thus the incisions may be made on lines parallel with the side edges of the box or at a greater or lesser angle thereto, the extension N extending more or less near the side edges according to the disposition of the incision and although its tongues 32, 33 are

illustrated as adapted to enter the slots 8, 9 laterally, this manipulation of them may be a straight line movement if the parts are shaped to provide for it, and that locking manipulation may be directly toward the bottom of the box. Furthermore although two locking slots 8, 9 are illustrated, one, preferably in the center, will be sufficient with a corresponding tongue on the extension N, but when this arrangement is adopted the locking tongue will necessarily protrude through the end piece and show on the outside of the box, and, although, in some cases this is objectionable, it nevertheless has advantages as that attained where a sealing label is desired on the package, as a label so used will, if pasted upon the exterior so as to overlap the projecting tongue, operate to seal the parts by adhering to this locking tongue. With a blank thus constructed it will be understood that the flaps I, F are first bent upward on the lines 3, 2, so that they may pass inward over the bottom A, then the end flap D is bent upon the line 4 so as to stand upright and the sides B, C are bent inward upon the lines 18, 20 and the end piece E is bent upward on the line 5. The parts will then stand as is illustrated in Fig. 2 where the side flaps H, L are aligned with the sides B, C but when these flaps H, L are bent centrally over the end flap E, as in Fig. 3, it will be found that the lower points of the hooked projections 11, 10 will coincide with the lower extremities of the interlocking incisions 16, 17 so that said hooked projections 11, 10 when entered into the incisions 16, 17 will perfectly interlock with the end flap E, as is shown in Fig. 4 and prevent said end flap from being displaced laterally. Now upon bending the extension N so that it will fold over the exposed upper edges of the end pieces H, L, and lap upon the inside of the end flap E, as in Fig. 5, and has its tongues 32, 33 entered into the slots 8, 9, as in Fig. 6, the said extension N will then perfectly bind the parts together, and at the same time present a doubled or folded exposed upper edge of the box end where there are two plies of material laid together.

Although the flaps H, L are described as provided with hooked tongues 11, 10, to engage incisions as 16, 17, there need be no actual interlocking devices of this nature, since the flaps H, L may be devoid of the hooked projections and be simply entered through the incisions and enveloped by the extension N and be secured by the means whereby the box end E is interlocked with itself. The box thus constructed will be provided with a duplex bottom consisting of the main bottom A and the auxiliary flaps F, I, as is clearly indicated in Figs. 7 and 8, and hence it will be perceived that if two such boxes—one acting as the cover—are adjusted together as in Figs. 8, and 9, a package will be formed having double walls all around, as will be apparent from the duplex bottoms of each box and

the juxtaposed sides and ends of the two boxes, thus forming a package having unusual strength and well adapted for the carriage of cartridges, screws and other heavy contents. Moreover, the construction is such, as will be apparent from Fig. 10, that an economic production thereof will be accomplished, since a square sheet may be cut with inconsiderable loss or scrap.

This box may be modified without departing from the invention, as is shown in Fig. 11, where the blank illustrated is marked with the same general letters of reference to indicate like parts and is shown to have attached to the end piece D an extension to serve as a cover O, which cover has an extended lip P, and the sides C, B, are shown as having lips R, S at their upper edges which it will be understood, extend inwardly over the top of the box and thus form ledges to support the side edges of said cover when it is closed. In this illustrated modification it will also be observed that the bottom flaps I, F are diminished in width which is practical where it is not desired to have the box of unusual strength by providing it with the double bottom, these flaps in this case simply serving to support the sides at the junction of them with the bottom, and it may now be remarked that the structure shown in Sheet 1 may have such bottom flaps when it does not require the duplex bottom.

While I have described a particular construction of locking device and modifications of it, it will be further understood that with this novel construction of a box formed from a blank, the parts of which are integral, and provide within themselves a single locking device securing the blank in box form, any and many varieties of locks may be used without avoiding the broad scope of the invention.

What, therefore, is claimed is—

1. A box formed from a single blank of material, cut, shaped and creased to adapt its component parts to be relatively disposed, secured and maintained in hollow or box form by means of a single fastening device, substantially as described.

2. A box formed from a single blank of material, cut, shaped and creased to adapt its component parts to be relatively disposed, secured and maintained in hollow or box form by means of a single set of locking devices, substantially as described.

3. A box consisting of a bottom to which the two end pieces are attached at opposite points, one of said end pieces having attached to it the two side pieces of the box and the other end piece being provided with a locking tongue or tongues and a locking slot or slots, and said side pieces each having a depending flap that in part forms an auxiliary bottom for the box and each being provided with an extended flap that folds inward at the locking end of the box upon the end piece which latter is provided with an extension adapted to overlap the upper edges of the side flaps and interlock with itself and thus envelop said flaps and securely hold the parts in box form, substantially as described.

4. A box consisting of a bottom to which the two end pieces are attached at opposite points, one of said end pieces having attached to it the two side pieces of the box and an extension or cover flap and the other end piece being provided with a locking tongue or tongues and a locking slot or slots, and said side pieces each having a depending flap that in part forms an auxiliary bottom for the box and each being provided with an extended flap that folds inward at the locking end of the box upon the end piece which latter is provided with an extension adapted to overlap the upper edges of the side flaps and interlock with itself and thus envelop said flaps and securely hold the parts in box form, substantially as described.

5. A blank for the formation of a box consisting of a single piece of material cut, incised and creased to provide a main bottom, from opposite points of which extend the two end pieces, one of which has attached to it at opposite points the two side pieces, the other end piece being provided with an extension carrying a locking tongue or tongues and having in its body a locking slot or slots, and said side pieces each having a flap that in part forms an auxiliary bottom, and being provided with an extended flap adapted to overlap the box end, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FREDERICK M. TURCK.

Witnesses:

H. T. MUNSON,
ROBT. C. TAYLOR.