

No. 888,554.

PATENTED MAY 26, 1908.

W. I. TUTTLE.
COLLAPSIBLE BOX.

APPLICATION FILED JAN. 14, 1907.

2 SHEETS—SHEET 1.

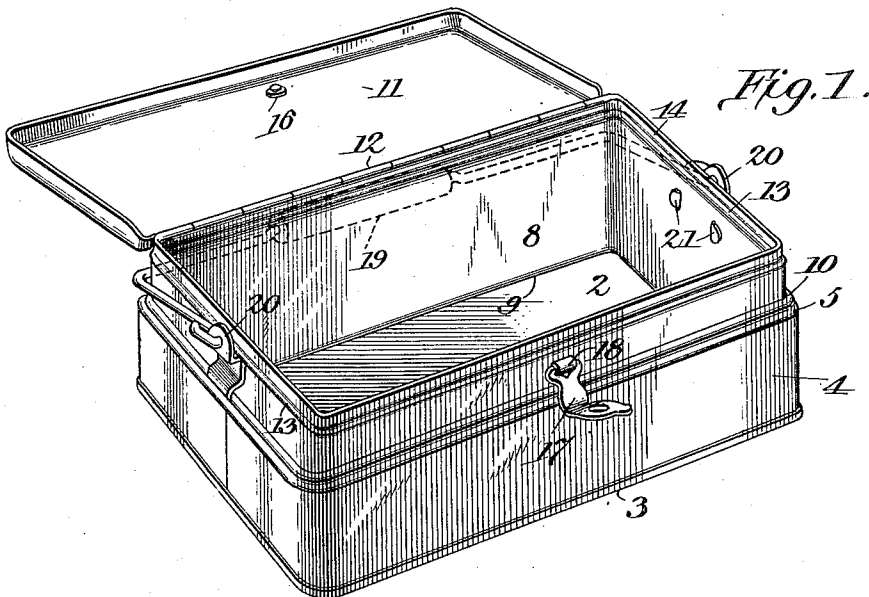


Fig. 1.

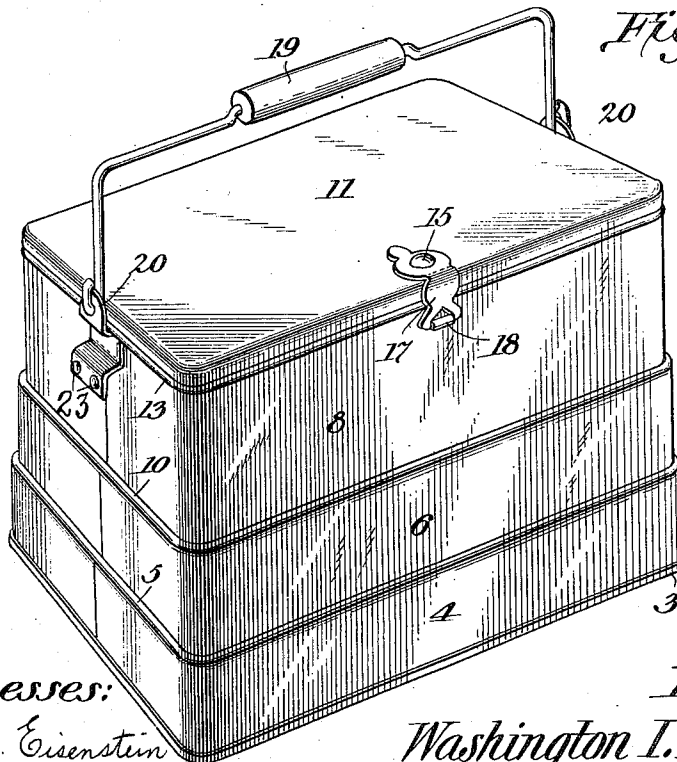


Fig. 2.

Witnesses:

J. C. Eisenstein
H. H. Byrne

Inventor,

Washington I. Tuttle.

By

Lucien, Lushman & Pea
Attorneys.

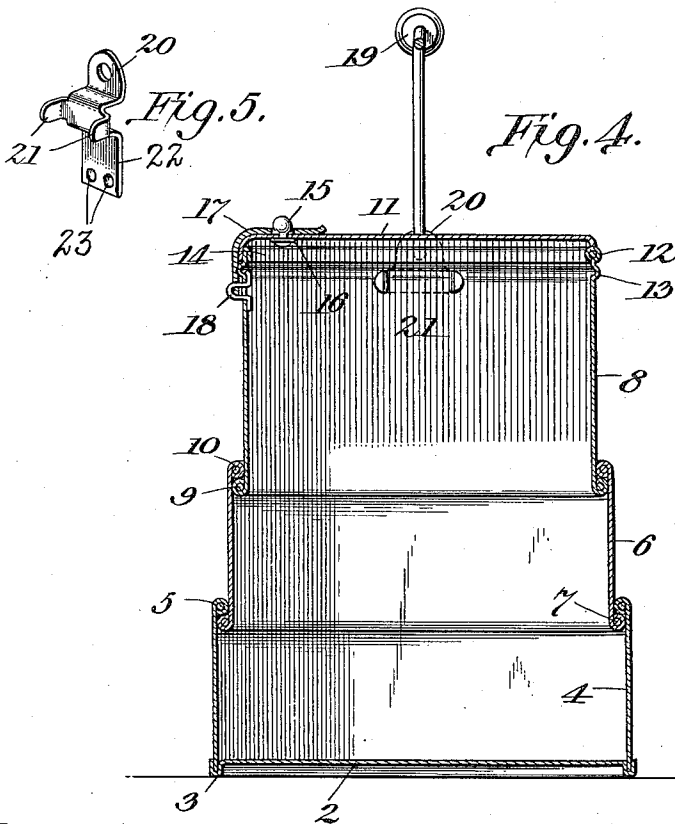
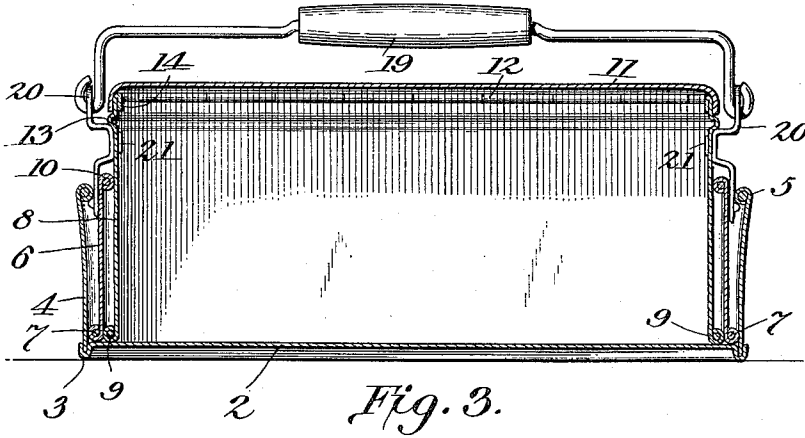
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Washington I. Tuttle.

By Snyers, Cushman & Lea
Attorneys.

UNITED STATES PATENT OFFICE.

WASHINGTON I. TUTTLE, OF BALTIMORE, MARYLAND.

COLLAPSIBLE BOX.

No. 888,554.

Specification of Letters Patent.

Patented May 26, 1908.

Application filed January 14, 1907. Serial No. 352,246.

To all whom it may concern:

Be it known that I, WASHINGTON I. TUTTLE, a citizen of the United States, residing at Baltimore, Maryland, have invented new and useful Improvements in Collapsible Boxes, of which the following is a specification.

This invention relates to telescoping boxes or receptacles, which are characterized by a series of nesting sections, which, when the box or receptacle is in collapsed or telescoped condition, lie one within the other in close relation, but which may be extended telescopically to increase the capacity of the box; suitable connections being made between the sections so as that they will not become separated from one another.

Broadly considered, telescoping boxes and receptacles of this general character are old, and my present improvements have to do with certain details of construction of this generally old type, which make for cheapness, strength and durability; which result in a receptacle having maximum capacity in both its collapsed and extended condition; and which, either in extended or collapsed condition, present an interior which is practically free from objectionable crevices and projections, which crevices and projections would not only interfere with the close packing of the receptacle, but would also form catch-alls for the contents of the box.

In the drawings herewith, in which I have illustrated one embodiment of my invention in order that the same may be clear to those skilled in the art: Figure 1 is a perspective view of a box constructed in accordance with my invention, the box being shown in that view in collapsed condition with the cover open. Fig. 2 is a similar view showing the box extended and the cover closed. Fig. 3 is a longitudinal section of the collapsed box. Fig. 4 is a transverse section of the box extended. Fig. 5 is a detail view to show the means for locking the box sections together in collapsed condition.

Referring to the drawings by numerals, corresponding parts being designated by like numbers in the different views, 2 indicates the box bottom, which, as shown in Figs. 3 and 4, has the peripheral bead 3 which forms a seat to receive the vertical wall 4 of the box, said bottom 2 and its attached wall 4 forming the lower section of the box. The wall 4 is rolled inwardly at its top to form an inwardly

projecting bead 5, and preferably the bead 5 is reinforced by a wire, so as to give greater strength and rigidity to the section and reduce likelihood of distortion, which, it is apparent would interfere with, if it did not absolutely prevent, telescoping of the sections.

Sliding within the bottom section first described, is a second section 6, which is provided at its bottom with an outwardly-turned, wire-reinforced bead 7; the sections fitting snugly with their oppositely turned beads 5 and 7 in contact with the proximate walls; and it will be seen by reference to Fig. 4 that in extended position of the box these beads engage each other and lock the parts against complete separation; but in collapsed condition (see Fig. 3) the section 6 rests upon the bottom 2 of the box.

Reference to Figs. 1 and 3 shows that the bottom section and the section 6 are substantially of the same height, so that when nested, as shown more clearly in Fig. 3, the section 6 projects but little, if any, above the outer or bottom section. Within the section 6 is mounted another section 8, which, in the present embodiment of the invention is shown as the top or last section said section 8 having an outwardly-turned wire-centered bead 9 which engages a similar bead 10 turning inwardly at the top of section 6, as clearly shown in Fig. 4. The section 8 has secured thereto, in the three-section type of receptacle herein shown, the cover 11 which is hinged at 12 to the side wall of section 8, the said section 8 being beaded at 13 near the top to give it rigidity and form the cover bead, and preferably the upper edge of the section is turned in as at 14 to give greater strength and a neat finish to the top. The cover 11 is provided with a projecting button 15 which is secured by a washer 16 on the underside of the cover, which button 15 is designed to receive a latch 17 secured to the section 8 by means of a U-shaped fastener 18, the ends of which pass through slits in the front of the section and are turned down as shown clearly in Fig. 4. The said top section 8 carries also the bail 19 which is secured to the ends of the section by means of ears 20 the side limbs 21 of which enter slits in the walls of section 8 and are bent down so as to lock the ears 20 firmly in place. The said ears 20 preferably stand away at their bail-engaging ends from the walls of the box, (see Fig. 3), so as to give clearance for the handle or bail 19 and permit

it to swing freely out of contact with the box, said bail 19 being of such size as that it will fall outside of the box as shown in Fig. 1 and be out of the way, either for convenience in packing the boxes or to permit free opening of the cover 11. The said ears 20 have their lower ends 22 sprung outwardly, as shown, so that when the box is in collapsed condition the ends or links will enter between the sections 4 and 6 (see Fig. 3) this entrance of the ends 22 being automatically effected when the sections are telescoped together. Each downwardly projecting end 22 has a small teat or projection 23, preferably stamped up from the metal, which engages the rib 5 on the lower or bottom section to lock the parts together in collapsed position; the natural elasticity of the adjacent walls of the sections clamping the locking end 22 sufficiently to effect this locked condition, but not preventing the end 22 from snapping into and out of place. This feature is of considerable importance as it gives a simple and effective locking device to hold the parts in collapsed condition, if it should so happen that the frictional engagement of the sections was insufficient and this feature is of particular value as insuring the maintenance of the box in collapsed or rested condition after it has received its original package and until such time as it may be desired to use it as a lunch kit.

The section 8, it will be noticed by reference to Fig. 3, while it is locked against separation from the middle section by the opposed beads 9 and 10, is free to telescope within the sections below it until it rests upon the bottom 2 of the lower section. The cover section 8, furthermore, is so proportioned relative to the other sections of which the box is made, that, when the box is in collapsed condition, it extends above the other sections, thereby giving clearance for the ears, bail, and cover so that they will not interfere with the collapsing of the box by striking the lower sections, and also permits the use of the downwardly extending locking end of the ear. It will be seen that in the collapsed condition of the receptacle the interior surface of the box is unbroken, its area being defined by the bottom, the cover, and the surrounding side walls of the upper section 8, only, without projections or crevices at any point on its interior to collect and retain the material packed therein. This absence of crevices and catch-alls is partly due to the fact that the sections are so connected to each other that there are no interior upwardly-facing beads, ledges, or protuberances to catch the material which may be placed in the box, for it will be observed that since each of the several sections telescope within the adjacent lower section and have at their lower ends outwardly projecting beads, it is possible to provide individual sections with

smooth interior faces, and have the joints between the several sections for downwardly facing ledges, so that material can find no lodging place on the interior of the box either when it is in extended or collapsed condition. When the box is in collapsed condition as shown in Fig. 3, and as described above, this condition of an absolutely smooth interior, without break or crevice, is due to the fact that the sections may telescope without hindrance until they rest upon and are supported by the bottom 2 of the bottom section, and since there is nothing to prevent close contact between the lower edge of the cover section 8 and the bottom of the lower section, obviously no crevice or opening exists through which the material can creep, and an absolutely smooth interior is secured. Furthermore, by thus constructing the upper section and assembling it with the other sections as described, the walls of the section 6 and bottom section can never come in contact with the material initially packed into the box, which is usually tobacco, (it being understood that this box is primarily intended, although not restricted, for use as an original package in which tobacco is sold, the box, after the contents originally placed therein have been used, having been found very serviceable as an extension lunch box or kit) and these side walls are thus kept sweet and clean and uncontaminated by the contents of the original package, so that after the tobacco has been used it becomes necessary only to clean the inner wall of the top section 8 and the bottom 2 to fit the box for use as a lunch kit or receptacle.

It will be understood, of course, that such changes in form and construction as involve merely the work of the designer and mechanician may be made without departing from the spirit of my invention, and I do not, therefore, limit myself to the details of construction shown and described except in so far as I am limited by the prior art to which this invention belongs.

Having fully disclosed my invention, I claim:

1. In a collapsible box and in combination; a bottom section, one or more intermediate sections, an upper section of greater height than the other said sections which projects above the tops of the other sections when the box is in collapsed condition to form a lid and bail carrying extension, and a lid and bail secured to the extended portion of said upper section.

2. In a collapsible box and in combination; a bottom section, one or more intermediate sections, an upper section of greater height than the other said sections so as to extend above the tops of the other sections when the box is in collapsed condition, means for locking said sections against complete separation when in extended position,

and means carried by said upper section to automatically engage the bottom section and lock the box in collapsed condition.

3. In a collapsible box and in combination; a bottom section, one or more intermediate sections, an upper section of greater height than the other said sections so as to extend above the tops of the other sections when the box is in collapsed condition, means for locking said sections against complete separation when in extended position, and locking limbs carried by said upper section to engage the bottom section and lock the box in collapsed condition.

4. A box comprising a series of collapsible sections, and a spring locking limb carried by one section and adapted to engage and lock the series in collapsed condition.

5. A box comprising a series of collapsible sections, and a locking limb extending downwardly from the upper section adapted to enter between the lower sections and lock the series in collapsed condition.

6. A box comprising a series of collapsible

sections, and a downwardly extending limb on the upper section having a locking teat adapted to enter between the lower sections and lock the series in collapsed condition.

7. A box comprising a series of collapsible sections, bail-carrying ears on the upper section, downwardly extending limbs on said ears to enter between said lower sections, and locking teats on said limbs to hold said series in collapsed condition.

8. In a collapsible box, the combination with a series of telescoping sections, of an ear carried by one of said sections and having an upwardly projecting bail-carrying portion and a downwardly projecting limb to lock the series in collapsed condition.

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

WASHINGTON I. TUTTLE.

Witnesses:

ELIZABETH A. PARKER,
RICHARD W. MARCHANT, Jr.