

(No Model)

W. B. HOWE.
KNOCKDOWN PAPER DRUM.

No. 585,386.

Patented June 29, 1897.

Fig 2

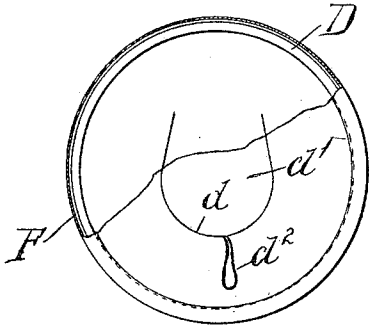


Fig 1

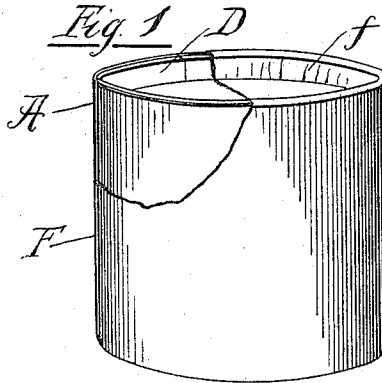


Fig 4

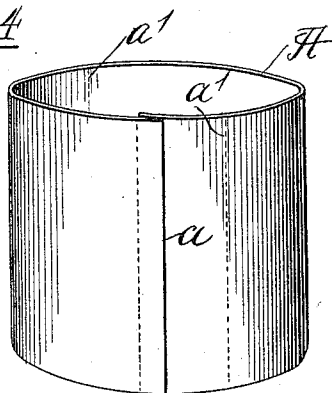


Fig 3

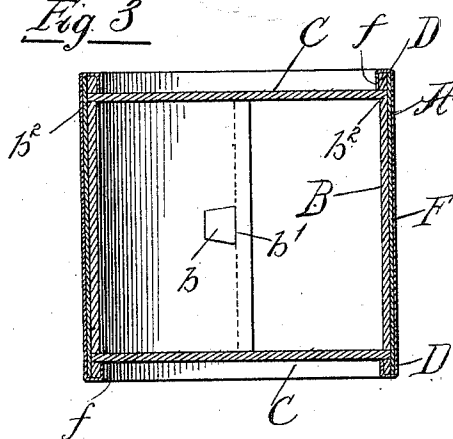


Fig 6

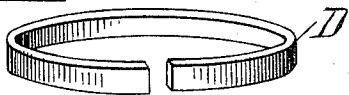


Fig 5

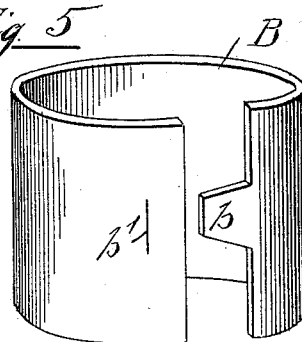
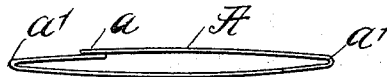


Fig 7



Fig 8



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Witnesses

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UNITED STATES PATENT OFFICE.

WARREN B. HOWE, OF CHICAGO, ILLINOIS.

KNOCKDOWN PAPER DRUM.

SPECIFICATION forming part of Letters Patent No. 585,386, dated June 29, 1897.

Application filed August 31, 1896. Serial No. 604,411. (No model.)

To all whom it may concern:

Be it known that I, WARREN B. HOWE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Knockdown Paper Drums; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked
10 thereon, which form a part of this specification.

This invention relates to improvements in cylindric or drum-shaped paper or strawboard cartons of that variety which are commonly
15 known as "knockdown" boxes, because made in such manner as to be capable of being folded flat for storage and transportation.

The invention consists in the matters hereinafter set forth, and particularly pointed out
20 in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a complete drum or cylindric carton constructed in accordance with my invention. Fig. 2 is a top plan view thereof. Fig. 3 is a transverse section thereof,
25 taken through the longitudinal axis of the drum. Fig. 4 shows in perspective the outer cylindric wall of the drum. Fig. 5 is a perspective view of the inner cylindric wall of the drum. Figs. 6 and 7 are similar views
30 of one of the end walls or heads of the drum and of a circumferential strip for holding said head in place. Fig. 8 is an end view of the outer cylindric wall when collapsed.

In said drawings, A designates an outer cylindric wall made from a rectangular sheet of paper or strawboard by bringing the ends of the sheet together and securing them by
35 paste or otherwise in an overlapping joint *a*. Longitudinal scores *a'* *a'*, located at diametrically opposite points on the cylindric sheet A, enable it to be collapsed by the flattening and bringing together of the two equal sections into which the sheet is divided by said
40 scores.

B designates an inner cylindric wall also made of a rectangular sheet of paper or strawboard, preferably of a somewhat heavier quality than that employed for the outer wall A.
50 Said inner wall B is made somewhat shorter in the direction of the longitudinal axis of the cylinder than the outer wall and provided

with abutting or interlocking parts or surfaces so arranged that when the ends are engaged with each other the inner wall will be
55 held in its distended form and closely in contact with the outer wall, within which it fits. I have shown in the drawings as a means of interlocking the adjacent ends a tongue *b* and slit *b'*, arranged to interlock in the manner
60 illustrated. The sheet B is made of such length and the slit *b'* is so arranged that when the sheet is bent into cylindric shape and secured by the interlocking of the tongue *b* and the slit *b'* said sheet will fit tightly within the
65 outer cylindric wall A. The tongue and slit are located at the middle of the end of the wall, this construction enabling the inner wall to be conveniently inserted within said outer wall by being first twisted into a slightly-conical
70 shape and then forced into the same small end foremost. The central location and character of the connection between the tongue *b* and the slit *b'* will obviously permit such manipulation of the cylinder, and as the latter
75 enters farther and farther into the said outer wall it will gradually resume its cylindric shape and fit closely within the latter throughout its entire length.

The circumferential or end edges *b²* of the
80 inner cylindric wall form ledges or shoulders to support the heads C of the drum. Said heads are made of circular form from heavy paper or strawboard and are cut out of a diameter equal to the interior diameter of the
85 outer cylindric wall A. They are inserted in the ends of said outer cylinder and rest against the ledges formed by the ends of the inner cylindric wall B, as hereinbefore stated. After being thus inserted the heads C are secured
90 in place by annular strips D of strawboard, which are made of a width just sufficient to bring their outer edges just flush with the ends of the outer wall A of the drum when the strips are placed in the ends of the
95 latter against the heads C. Said strips are not designed to be ordinarily fastened in place before filling the carton otherwise than by the friction of their engagement with the cylinder A and are not secured together at their
100 extremities, which merely abut against each other. When the carton is finished and is in use, it will be covered by a wrapping or covering F of paper, which will be applied after

the carton is supplied with the desired contents. The paper wrapping thus provided will obviously serve to hold the strips E in place and thus hold the heads C securely in the drum. This construction is illustrated in Figs. 1 and 2 and in the sectional view, Fig. 3, wherein is shown a paper wrapping or covering F, applied to the exterior of the drum and having its ends or marginal parts bent over the strip D, the wrapping being preferably secured by adhesive material to the exterior of the drum. To permit access to the contents of the drum without removing its heads, one of the latter is herein shown as provided centrally with a slit *d* of U shape, which serves to divide off an interior flap *d'*, that it may be lifted or bent upward like a lid to admit the hand. A string or loop *d*², secured to the free end of said flap and extending out through the slit *d*, enables the flap *d'* to be readily lifted when desired.

A cylindric or drum-shaped carton of the construction thus described will obviously be of relatively great strength and rigidity, since the heads C will strongly resist any pressure tending to crush the drum laterally, while the ends of the inner wall B will support said heads against endwise pressure. Furthermore, as the inner wall B is never required to be creased or folded it may conveniently be made of very heavy strawboard and will in itself strongly resist any crushing strains.

The outer wall A is supported against inward pressure by the inner wall B and in turn sustains all outward or bursting strains or pressure and prevents the inner wall from being burst open or pulled apart at its meeting edges. Being made practically continuous or without open or detachable joints, the outer wall may therefore be conveniently made of comparatively thin material and may be folded along the score-lines *a'* without danger of breaking the sheet. The inner walls B are scored and shipped in their original condition and are simply bent into cylindric shape and secured by the interlocking of the flaps *b* and slits *b'* when it is desired to assemble the boxes. The heads C are obviously always in the most convenient shape for storage and shipping, as are also the strips D, which are packed in their unbent form. The materials constituting the several parts of the carton may thus be made up for shipment in solid packages of the most convenient form, and the drums may afterward be assembled by unskilled labor without other manipulation than the mere putting of the already-prepared parts together.

The drum made as described is not only desirable by reason of its strength and durability, but also for its ornamental appearance. Moreover, such drums may be used as toy drums whenever their contents are exhausted.

I claim as my invention—

1. A cylindric carton or drum embracing

a continuous tubular outer wall of flexible material, adapted to be folded flat, a separate non-continuous wall of less width than the outer wall, the ends of which are adapted to engage each other to hold said inner wall distended said inner wall being made of relatively stiff material without creases or folds, and heads inserted in the ends of the outer wall and resting against the end edges of the inner wall, substantially as described.

2. A cylindric carton or drum embracing an outer cylindric wall of flexible material, a separate inner cylindric wall of less width than the outer wall made of relatively stiff material without creases or folds, heads inserted in the ends of the outer wall and resting against the end edges of the inner wall, and means for holding said head in place consisting of loose strips bent into cylindric shape and inserted in the ends of the outer wall against the heads, substantially as described.

3. A cylindric drum or carton embracing a continuous outer cylindric wall of flexible material, a non-continuous inner cylindric wall made of relatively stiff material without creases or folds and having detachably-connected meeting edges, heads inserted in the ends of the outer wall and strips bent into cylindric form and inserted in the ends of the outer wall against the heads for securing the latter in place, substantially as described.

4. A cylindric drum or carton embracing a continuous outer cylindric wall of flexible material, a non-continuous inner cylindric wall made of relatively stiff material, without creases or folds and having on its meeting edges centrally located, detachable fastening devices, heads inserted in the ends of the outer wall and strips bent into cylindric form and inserted in the ends of the outer wall against the heads for securing the latter in place, substantially as described.

5. A cylindric drum or carton embracing a continuous outer cylindric wall of flexible material, a non-continuous inner cylindric wall made of relatively stiff material without creases or folds and having on its meeting edges an interlocking tongue and slit, heads inserted in the ends of the outer wall and strips bent into cylindric form and inserted in the ends of the outer wall against the heads for securing the latter in place, substantially as described.

6. A cylindric drum or carton embracing a continuous outer cylindric wall of flexible material provided with diametrically opposite longitudinal scores, a non-continuous inner cylindric wall made of relatively stiff material without creases or folds, and having detachably-connected meeting edges, heads inserted in the ends of the outer wall and strips bent into cylindric form and inserted in the ends of the outer wall against the heads for securing the latter in place, substantially as described.

7. A cylindric carton or drum embracing

an outer cylindric wall of flexible material,
a separate inner cylindric wall of less width
than the outer wall made of relatively stiff
material, heads inserted in the ends of the
5 outer wall and resting against the edges of
the inner wall, means for holding said heads
in place consisting of loose strips bent into
cylindric shape and inserted in the ends of
the outer wall against the heads, and a pa-
10 per wrapping or covering applied to the ex-

terior of the drum and engaging said strips
to hold the same in place.

In testimony that I claim the foregoing as
my invention I affix my signature, in presence
of two witnesses, this 21st day of August, 15
A. D. 1896.

WARREN B. HOWE.

Witnesses:

C. CLARENCE POOLE,

WILLIAM L. HALL.