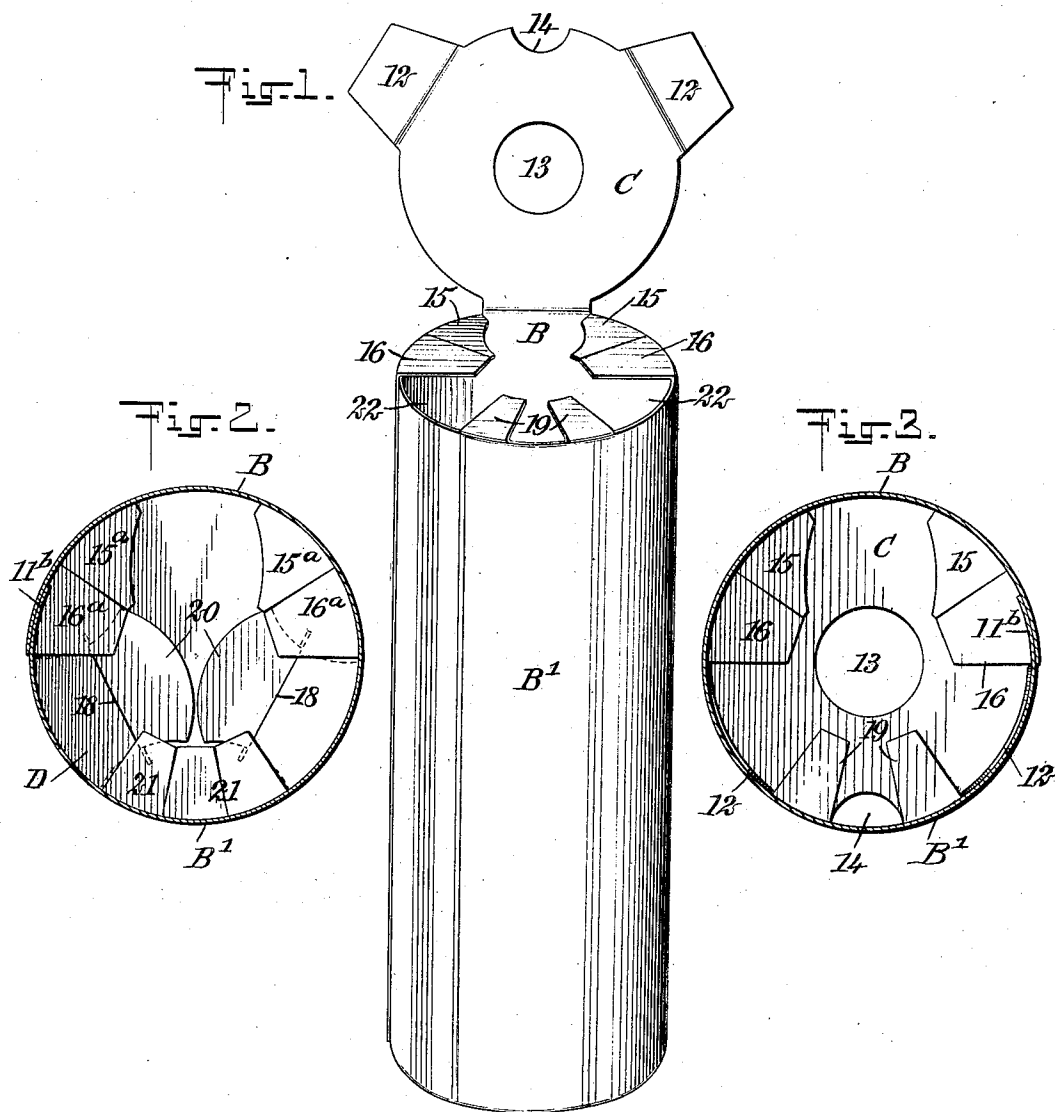


No. 880,952.

PATENTED MAR. 3, 1908.

J. M. YARNALL.
FOLDING PAPER BOX.
APPLICATION FILED AUG. 31, 1907.

2 SHEETS—SHEET 1.



WITNESSES
James M. Yarnall
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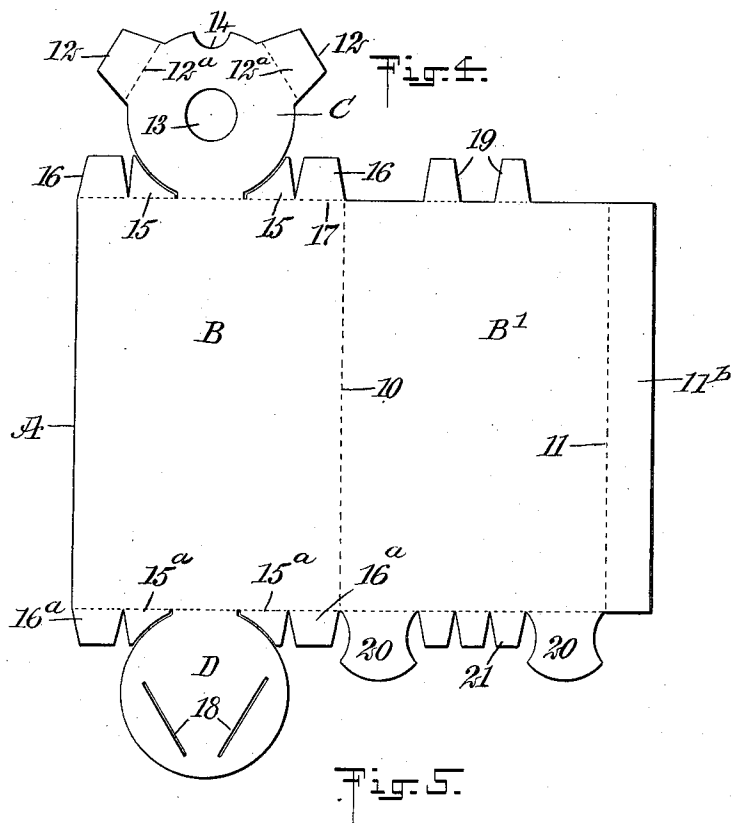
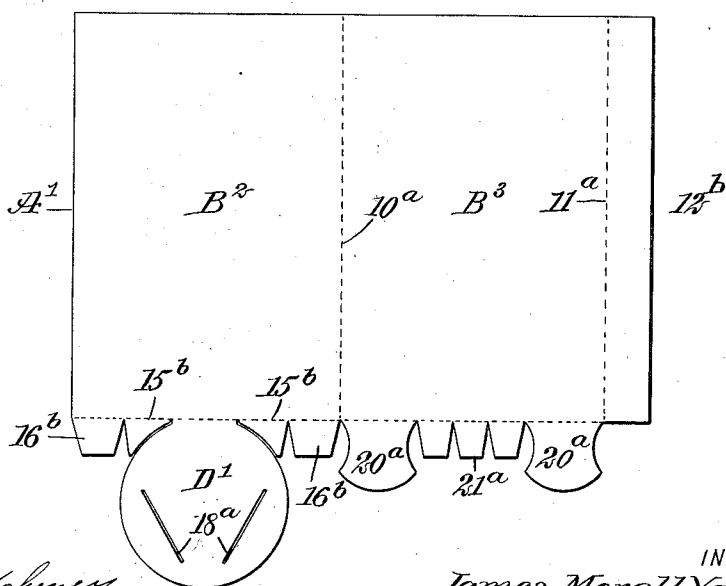
INVENTOR
James Morell Yarnall
BY *Mumford*
ATTORNEYS

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2 SHEETS—SHEET 2.



WITNESSES

Prof. Cheney.
(H. H. A. K. S.)

INVENTOR

James Morell Yarnall

BY

Memoranda

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES MORELL YARNALL, OF NEW YORK, N. Y.

FOLDING PAPER BOX.

No. 880,952.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed August 31, 1907. Serial No. 390,938.

To all whom it may concern:

Be it known that I, JAMES MORELL YARNALL, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Folding Paper Boxes, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a paper box that when not in use will fold flat, or which will accommodate and perfectly adapt itself to cylindrical objects or objects that are practically of that form, and further to so construct the box that it will be very simple and exceedingly economic.

The invention consists in the novel construction and combination of the several parts as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved box with the top open; Fig. 2 is a transverse section looking in direction of the bottom of the box; Fig. 3 is a transverse section through the box looking toward its top the top being closed; Fig. 4 is a plan view of the blank employed in constructing the box shown in Fig. 1; and Fig. 5 is a plan view of a slightly modified form of the blank.

The preferred form of blank is that which is shown in Fig. 4. The body A of the blank, which may be of any desired size, is divided by score lines 10 and 11 which are parallel with its sides into two main panels B and B' of equal dimensions, and a glue flap 11^b, the glue flap being adjacent the main panel B'. A cover member C of circular formation constitutes a portion of the panel B extending from the central portion of its upper edge, and this cover member C is shown as provided with a central circular opening 13 and a segmental recess 14 in the central portion of its free edge, and at each side of the said recess 14 a tuck end 12 is included with the said cover member, being separated therefrom by score lines 12^a, but I desire it to be understood that the opening 13 and recess 14 may be omitted, but they are employed when the box is to be used as a container for cylindrical batteries.

In the further construction of the blank,

at the upper end portion of the panel B flaps 15 are formed, one at each side of the cover member C, and between the flaps 15 the score line 10, and the opposing side edge of the body, flaps 16 are formed, and these flaps 16 are preferably of wedge formation. The flaps 16 and the flaps 15 are separated from the main panel B by means of a transverse score line 17. At the lower edge of the main panel B a bottom member D is provided that extends from the central portion of the lower edge of the aforesaid panel B. This bottom member D is circular but the tuck flaps employed for the cover member are omitted and in their stead, slots 18 are produced in the said bottom member, which slots converge in direction of its free outer edge, as is clearly shown in Fig. 4.

With reference to the panel B', it is provided with two flaps 19 at its upper edge and these flaps are likewise of wedge formation and are located one at each side of the center of said panel. At the lower edge of the main panel B' tuck ends 20 are formed, one adjacent the score line 10 and the other adjacent the score line 11, and between these tuck ends 20, a series of flaps 21 is provided at the said lower edge of the said panel B'. It may be here stated that the combined width of the panels B and B' is such that when the panels are given a cylindrical shape, the diameter of the said panels so shaped will correspond to the diameter of the head member C and the head D'.

In forming the box the glue flap 12 is bent inward upon the score line 11 and is suitably attached to the inner face of the panel B at its outer side edge. The box may now be folded flat for transportation and storage. When, however, it is to receive an object of cylindrical form the body of the box is pressed with the fingers to a cylindrical form or is carried to such shape by the introduction of the object. Either before or after the introduction of the object the flaps 15^a and 16^a and 21 at the bottom edge of the two panels B and B' are carried inward and made to assume the horizontal position shown in Fig. 2. Then the bottom member D is folded up to bear against the flat edges mentioned, which act as sustaining flaps, and then the tuck ends are folded over upon the bottom member D and are passed inward through the slots 18 in said bottom member, as is also shown in Fig. 2. After the object

is in place in the box body the upper flaps 15, 16, and 19, are folded inward horizontally over the object, as is shown in Fig. 1, and when these flaps are thus folded it will be observed that there will be a space 22 between the adjacent flaps 16 and 19, which spaces are of sufficient size to admit the introduction of the tuck ends 12 when the cover member C is folded down upon the top of the box and its contents.

Sometimes a cover and consequently the sustaining flaps therefor are not needed and in that event the blank is constructed as is shown in Fig. 5. The body A' of this blank is divided into two panels B² and B³ by score lines 10^a and 11^a, which score lines likewise provide for a glue flap 12^b, and the panels B² and B³ correspond to the panels B and B' in the other form of blank. The panel B² is provided at its lower edge with a circular bottom member D' corresponding to the bottom member D, being likewise provided with slots 18^a, and at the bottom edge of the panel B² flaps 15^b and 16^b are formed, corresponding to the flaps 15^a and 16^a in the blank shown in Fig. 4, and at the bottom edge of the panel B³ tuck ends 20^a are provided, corresponding to the tuck ends 20 of the blank shown in Fig. 4, and between these tuck ends 20^a a series of flaps 21^a are likewise produced.

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

1. In folding paper boxes for cylindrical objects, a blank consisting of a body divided by score lines into two main panels of equal size and a glue flap, a circular cover member and a circular bottom member extending respectively from the top and the bottom edges of the outermost main panel, the cover member being provided with opposing tuck ends and the bottom member with opposing slots, flaps at the top and the bottom edges of the outermost main panel, centrally located flaps at the upper and the lower edges of the other main panel, and tuck ends at each side of the flaps at the lower edge of the latter mentioned panel.

2. In folding paper boxes for cylindrical objects, a blank consisting of a body divided by score lines into two main panels of equal size and a glue flap, a circular cover member and a circular bottom member extending respectively from the top and the bottom edges of the outermost main panel, the cover member being provided with opposing tuck ends and the bottom member with opposing slots, flaps at the top and the bottom edges of the outermost main panel, centrally located flaps at the upper and the lower edges of the other main panel, and tuck ends at each side of the flaps at the lower edge of the latter mentioned panel, the diameter of the cover and bottom members correspond-

ing to that of the body formed by the union of the two main panels when said body is bent to the cylindrical shape.

3. In folding paper boxes for cylindrical objects, a blank comprising a body divided by score lines into two main panels of equal width and a glue flap, one of said main panels having a slotted circular bottom member at its lower edge and flaps at each side of the said member, the other main panel having at its bottom edge tuck ends and flaps intervening the tuck ends, the said main panels being of greater width than the diameter of said bottom member.

4. As an improved article of manufacture, a box which consists of two main body panels separated by score lines and adapted to fold flat or assume a cylindrical shape, a hinged cylindrical cover, and a hinged cylindrical bottom for the body panel, means for locking the bottom to the body panels, and tuck ends carried by the cover adapted when the cover is closed to engage with the inner faces of the body panels, the body panels being of greater width than the diameter of the cover and the diameter of the bottom, the relatively cross sectional measurements of said cover, bottom, and body being such that when the body is given a cylindrical form, the cover and the bottom portions of the body panels are of substantially the same diameter as that of the body panels.

5. As an improved article of manufacture, a box the body of which consists of two main panels separated by score lines and adapted to fold flat or assume a cylindrical shape, a hinged cylindrical cover and a hinged cylindrical bottom for the body, tuck ends carried by the cover adapted when the cover is closed to engage with the inner face of the body, the body panels being of greater width than the diameter of the cover and the diameter of the bottom, the relatively cross sectional measurements of said cover and bottom being such that when the body is given a cylindrical form the cover and bottom portions of the body are of substantially the same diameter as that of the body, and inwardly directed sustaining flaps at the top and bottom of the body in engagement relatively with the inner faces of the cover and the bottom.

6. As an improved article of manufacture, a box, the body of which consists of two main panels separated by score lines, a hinged cylindrical cover, and a hinged cylindrical bottom for the body, means for locking the bottom to the body, means for holding the cover when closed in frictional engagement with the body, the body panels being of greater width than the diameter of the top of the cover and the bottom of the body, the relative cross sectional measurement of said cover, bottom, and body, being such that when the body is in given cylindrical form

the cover and bottom portions of the body
are of substantially the same diameter as
that of the body, and inwardly directed sus-
taining flaps at the top and the bottom of the
5 body for engagement respectively with the
inner face of the said cover and the said
bottom.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

JAMES MORELL YARNALL.

Witnesses:

R. J. RICHARDSON,
HENRY L. BURNS.