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W. D. BRYSON

SHIPPING DRUM OR CONTAINER

Filed Sept. 19, 1921

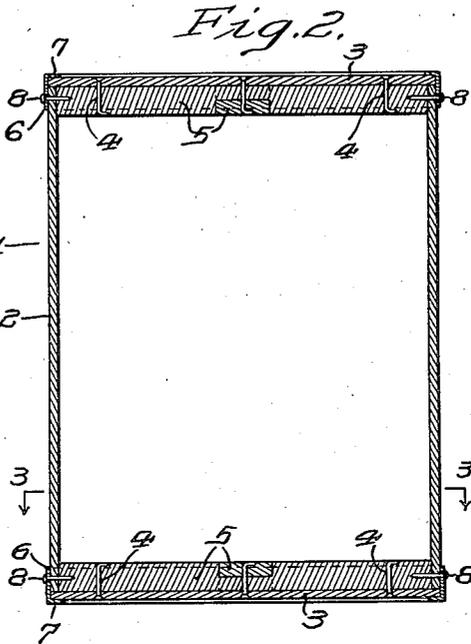
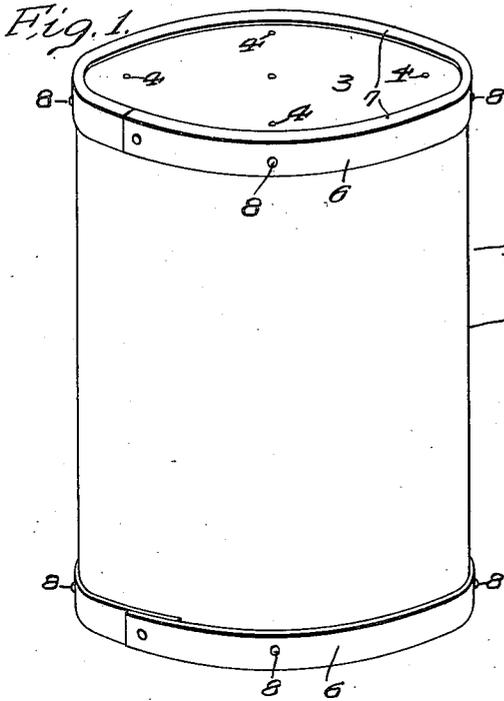


Fig. 3.

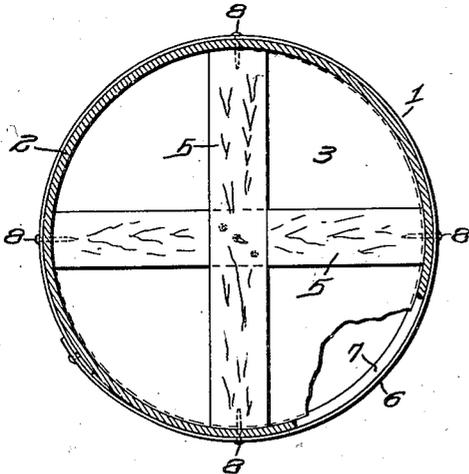
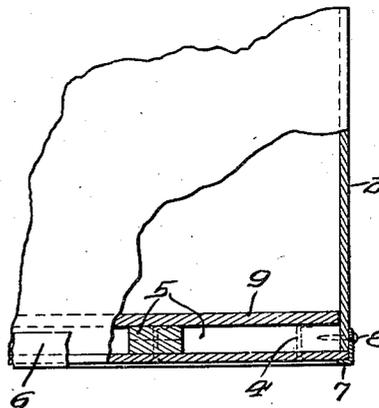


Fig. 4.



WITNESS

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BY

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# UNITED STATES PATENT OFFICE.

WALTER D. BRYSON, OF RIDLEY PARK, PENNSYLVANIA, ASSIGNOR TO FIBRE CONTAINER COMPANY, A CORPORATION OF PENNSYLVANIA.

## SHIPPING DRUM OR CONTAINER.

Application filed September 19, 1921. Serial No. 501,678.

*To all whom it may concern:*

Be it known that I, WALTER D. BRYSON, a citizen of the United States, and a resident of Ridley Park, county of Delaware, and State of Pennsylvania, have invented certain new and useful Improvements in Shipping Drums or Containers, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to shipping drums or containers and has for its principal object the providing of a drum in which lightness of weight and strength are combined and suitable for containing dry products, such as, for example, coffee, spices, and dry chemicals.

A further object of my invention is to provide a shipping drum the walls and heads of which may be formed of fibrous material and which provides ample protection to the contents from moisture and atmospheric conditions.

A still further object of my invention is to provide a shipping drum which, after being emptied, may be refilled and re-shipped.

A still further object of my invention is to provide a shipping drum which may be manufactured at a comparatively small cost, is durable and is attractive in appearance.

The invention further includes all of the other various objects and novel features of construction and arrangement hereinafter more definitely specified and described.

It is highly desirable that drums or containers used in shipping goods and merchandise should combine strength, durability and lightness in weight and that the body portion or wall and heads of the drum should be as thin as possible consistent with essential strength for by making the drum light in weight without sacrificing cubical capacity, the shipping and hauling charges are kept to a minimum. I have found that a satisfactory container or drum which embodies the desirable features above mentioned can be constructed of fibrous material, such as paper stock; for example, I have made a satisfactory drum of six plies of fibre board or pulp board firmly secured together by an adhesive such as silicate of soda and having jute liners on the exposed surfaces, the several plies or layers being formed into a cy-

lindrical shape to form the body portion in a manner well known in the art.

In the accompanying drawing, in which like numerals designate like parts in the different figures, Figure 1 is a perspective view of a drum embodying my invention; Fig. 2 is a vertical longitudinal sectional view of the drum shown in Fig. 1; Fig. 3 is a sectional view taken on the line 3-3 of Fig. 2 and Fig. 4 is a fragmentary detail view partly in section showing a modification of the device shown in Fig. 1.

The drum 1 has a wall 2 formed of fibrous material, such as paper or any other suitable material, preferably about one-fourth inch in thickness, and is generally made by superimposing a proper number of plies of paper stock fed from webs to a forming machine, the plies being firmly secured to each other by an adhesive such as silicate of soda, the making of this wall being by a method well known in the art. The heads of the shipping drum are made by first cutting out from the fibrous material discs 3 of a diameter equal to the outside diameter of the body of a drum to form closures for the openings at the ends of the body of the drum; to each of the discs I then secure, by clinched nails 4, two wooden battens 5 double mortised midway of their length.

The wooden battens are preferably substantially equal in length to the inside diameter of the body portion of the drum so that the space between the ends of the battens and the edge of the disc is substantially equal to the thickness of the wall, and in a drum having a capacity of about one hundred pounds, the battens may be substantially three-fourths of an inch in thickness and one and one quarter inches in width thus making a total thickness through the head and battens of substantially one inch, forming, when secured to the body portion of the drum, a closure of great strength and rigidity. Metal rings 6, having flanges 7, are provided to assist, among other things, in retaining the heads upon the body of the drum and also to provide protection for the ends of the drum when it is being handled or is in transit.

The heads of the drum are secured to the body portion in the following manner: The head, with the battens secured thereto, is

positioned over the open end of the body, the battens extending within the interior of the body substantially three-fourths of an inch and the fibre disc 3 resting at its periphery upon the wall of the body portion. After the head is assembled on the body of the drum as just described, the metal ring 6, which has been made of proper size, is pressed tightly over the disc 3, the flange 7 being seated upon the upper peripheral margin of the disc, and the band portion of the ring encircling the edge of the disc and the upper portion of the wall or body portion. The metal ring, among other things, also forms a tight joint and prevents any sifting of the contents of the drum. After the metal ring has been placed in position the nails 8 are driven therethrough and through the wall of the drum into the ends of the wooden battens, the nails being driven approximately three-eighths of an inch from the end of the drum, i. e., at a sufficient space therefrom to prevent the nails from tearing free from the wall or body portion. It should be noted that it is altogether preferable that the grain of the wood battens should run longitudinally thereof whereby the probability of splitting the wood when the nails are driven into the battens is very much less than if the nails are driven across the grain. The heads of nails 4 indicate the locations of the battens so no difficulty arises in properly driving the nails 8.

The drum may be easily opened by withdrawing the nails 8 by any convenient tool whereupon the metal ring is lifted and the head removed. It will be evident that the drum may, when desired, be refilled and reshipped a number of times inasmuch as none of the parts forming it are destroyed during the opening operation.

If desired, discs 9 of a fibrous or other suitable material, may be placed upon and supported by the battens thereby preventing contact between the wooden battens and the contained material when that is desirable

for any reason and also forming air insulating chambers between the discs 3 and 9 and the battens 5. If desired, sheets of flexible material may be used instead of the fibre discs 9.

It will be understood that minor variations and changes in the details of construction and arrangement of parts would readily suggest themselves to persons skilled in the art and fall within the spirit and scope of my invention. I do not desire, therefore, to be limited or restricted to the exact details of construction and arrangement shown and described.

Having thus described my invention, I claim and desire to protect by Letters Patent of the United States:

1. In a shipping drum, the combination with a cylindrical body portion of fibrous material, of a head of fibrous material having wooden battens secured thereto, said battens extending within said body portion, a metal band surrounding an end of the drum, said band having a flange seated upon the peripheral margin of the head and nails passing through said band and said body portion into the ends of said battens.

2. In a shipping drum, the combination of a cylindrical body portion of fibrous material, a circular head for said body portion seated upon an end thereof, wooden battens secured to said head, the length of said battens being substantially equal to the inside diameter of said body portion, a metal ring having a flange engaging the outer surface of said head and having a band portion extending around an end of the drum to a depth substantially equal to the thickness of the battens whereby nails may be driven through said band portion and said body portion into the ends of the battens to securely hold said head.

In witness whereof I have hereunto set my hand this 17th day of September, 1921.

WALTER D. BRYSON.