

(No Model.)

O. W. CRAWFORD.
COMPOSITE BARREL.

No. 578,974.

Patented Mar. 16, 1897.

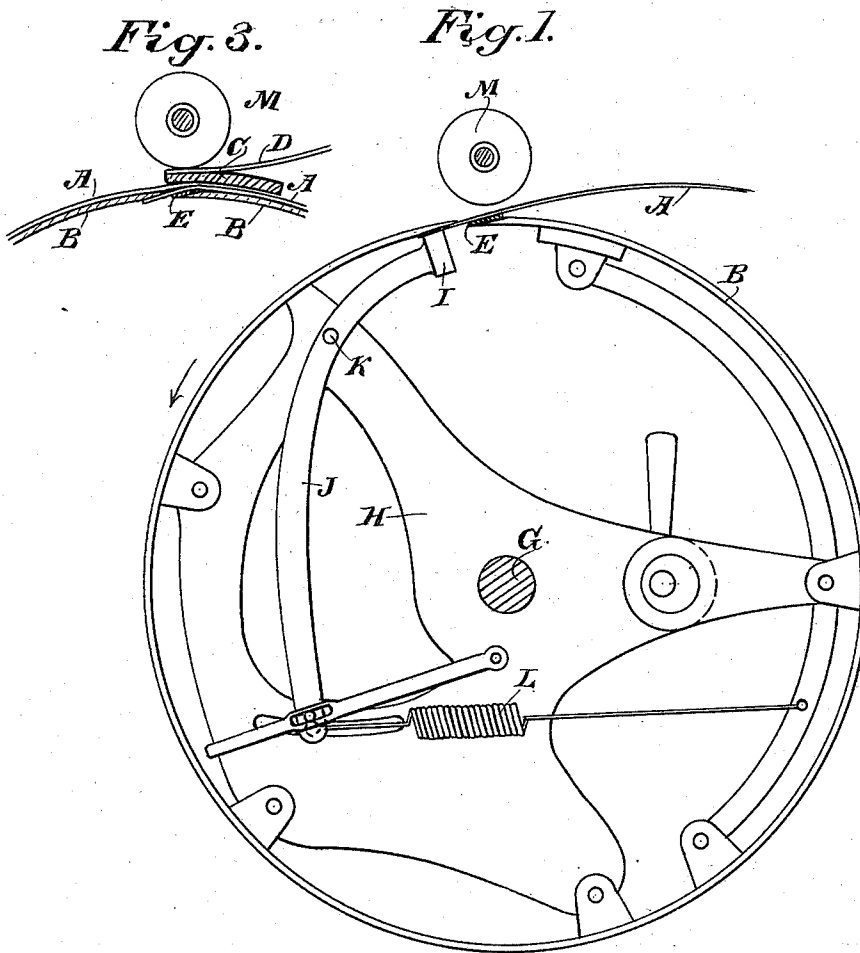
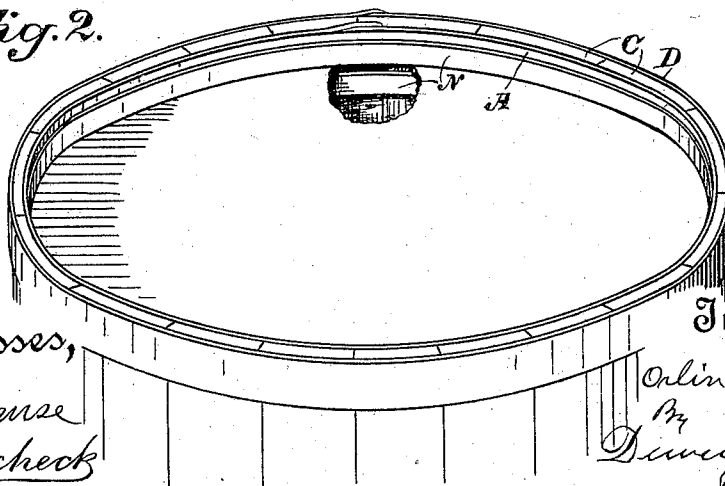


Fig. 2.



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UNITED STATES PATENT OFFICE.

ORLIN W. CRAWFORD, OF SAN FRANCISCO, CALIFORNIA.

COMPOSITE BARREL.

SPECIFICATION forming part of Letters Patent No. 578,974, dated March 16, 1897.

Application filed July 17, 1896. Serial No. 599,512. (No model.)

To all whom it may concern:

Be it known that I, ORLIN W. CRAWFORD, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Composite Barrels; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in composite barrels; and it consists of the improved barrel which I shall hereinafter fully describe and claim.

Referring to the accompanying drawings, Figure 1 represents an end view of a machine adapted for the manufacture of my barrel and showing the parts in position for the first operation. Fig. 2 is a detail of a part of said machine, showing the latter ready to take the staves and hoops. Fig. 3 represents the improved barrel.

In the construction of metal-lined barrels efforts have been made to fit the lining within the outer wooden barrel so closely that there will be no movement or looseness between the two. This has been effected by fillings of cement and also by a process of rubbing or burnishing the interior lining after it has been placed within the outer barrel.

The object of my invention is to unite the inner metal lining closely with the outer longitudinal staves, so that the whole forms a homogeneous composite package.

In the manufacture of my improved barrel I take a thin metal sheet A, which will form a cylinder of the proper diameter and length for the size of package to be constructed. The edge of this sheet is clamped to any suitable cylindrical metal former B, about which it may be rolled and the outer staves C and hoops D simultaneously applied. In my present illustration I have shown the former-drum B comprising an outer elastic metal shell supported and turnable upon a shaft G by means of heads or arms H at each end. The meeting edges of the shell B are not united, but stand with such relation to each other that the edge of the sheet A may be slipped between them and then clamped to the inner surface of one side by a clamp I, which is actuated by a lever J, fulcrumed, as shown, at K. The opposite end of the lever is connected with a spring L, which acts to normally hold

the clamp closed against the edge of the sheet A until the latter has been rolled closely around the drum and the cylindrical part of the barrel completed.

When the sheet A has been inserted and clamped, as above described, a thin strip of wood E is laid under the sheet lengthwise of the drum and resting upon the other edge. The drum is then rotated until the sheet of metal has been wrapped closely about it and the edges overlapped. The first longitudinal wooden stave C is then laid upon the metal sheet A, its edge coinciding with the wooden strip E, and the ends of the hoops D are inserted beneath the roller M. As soon as the overlapping edges of the tin, the edge of the stave, and the ends of the hoops have passed beneath the roller M they are firmly nailed together, the nails passing through the hoops, staves, the overlapping edges of the sheet-metal lining, and the wooden strip E and clenching against the metal drum beneath. The drum is then rotated, staves being placed in position as it is turned until the barrel-cylinder is complete. The meeting edges of the staves and the overlapping ends of the hoops are then nailed through and secured, the nails turning over and clenching upon the surface beneath.

An important feature of my process is the introduction of the thin strip of wood or other suitable perforable material E between the inner edge of the sheet metal and the metallic former. This forms a soft support to the sheet-metal lining, through which the ends of the nails used to fasten the two parts together will penetrate before striking the metallic drum beneath, and when they do strike this drum the ends will be turned over and clenched, so as to secure the two parts firmly together. If it is attempted to fasten the edges of the tin together without the use of this supplemental strip or support, the points of the nails will be simply turned over upon the outside of the sheet metal and cannot be driven through, because the sheets of metal lying closely against the inner metallic surface are practically a part thereof and will turn the points of the nails without allowing them to enter. This soft strip or support forms a surface through which the nails pass readily, and when they strike the inner me-

tallic drum they are turned over and clenched against the inner surface of the sheet.

When the barrel is finished, it is removed from the drum and the thin strip of wood
5 can be removed from the interior of the lining, to which it is fixed by the clenching of the nails, and the process of forming the cylinder is complete. The heads of the barrel are also made with metallic linings and are
10 inserted into the ends of the barrel, fitting against interior hoops N, which are fixed around the interior of the barrel a sufficient distance from the ends to allow the heads to be thus introduced, and they may be firmly
15 fixed in this position by a second interior hoop outside of the head.

A barrel of this construction is light, strong, and is especially valuable for containing coffee or other similar or aromatic substances
20 which deteriorate by being exposed to the atmosphere.

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

25 As an improved article of manufacture, a

barrel or package having a wooden exterior and a metal interior and consisting of an outer cylinder formed of hoops and longitudinally-disposed staves, and a metal lining, forming the interior of the barrel, and corresponding with the length of the staves whereby they extend between the outermost limits of the latter, interior hoops fixed directly against the metal lining at points inside of the ends of the same, wooden heads with
3 metal plates covering their innersides, adapted to rest upon the interior hoops, and other interior hoops placed upon the outer portions of the heads and against that portion of the metal lining which projects beyond the heads
4 to the outermost limits of the staves, and securing devices passing through the hoops, staves, and overlapping edges of the lining.

In witness whereof I have hereunto set my hand.

ORLIN W. CRAWFORD.

Witnesses:

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