

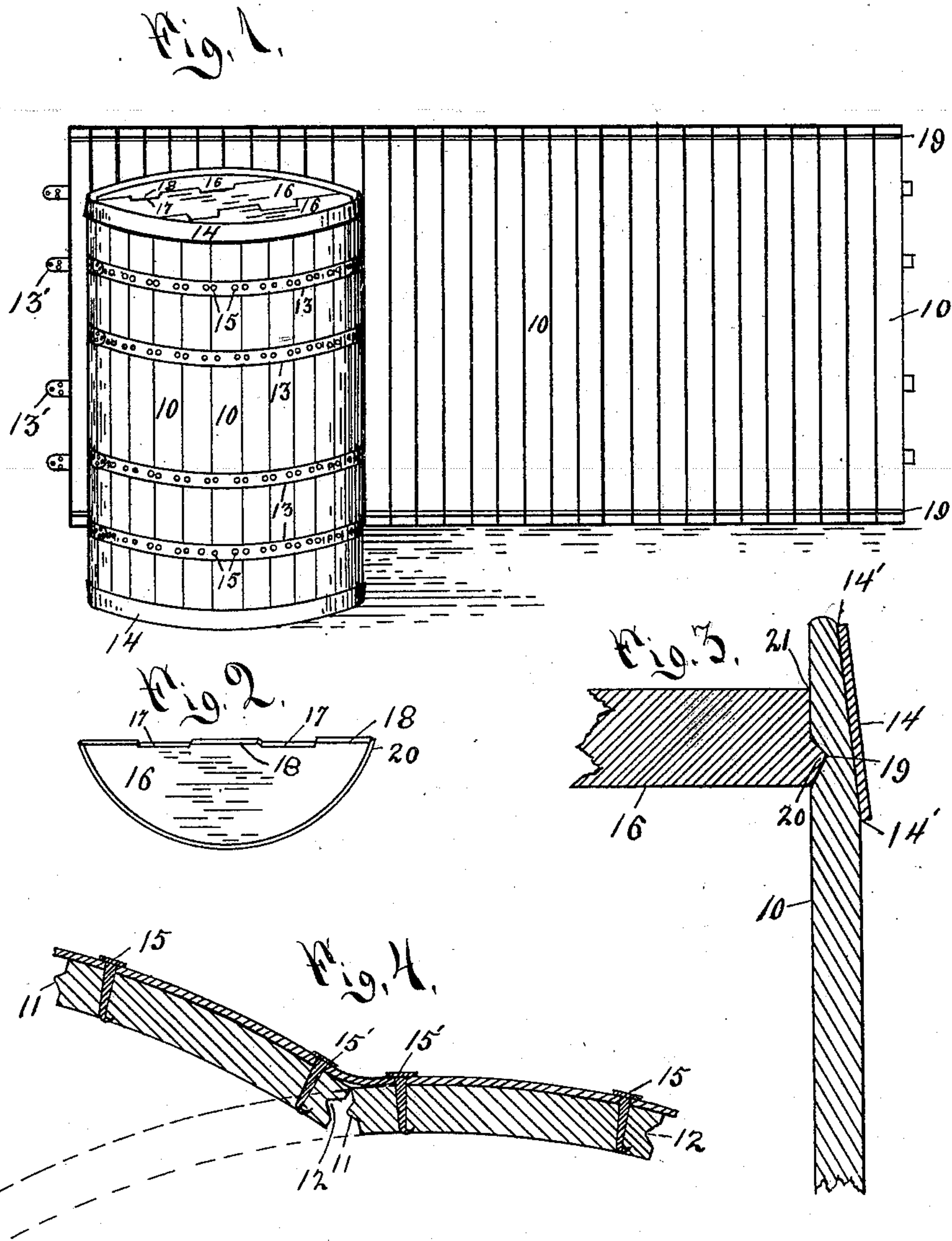
No. 624,376.

Patented May 2, 1899.

R. M. PHILLIPS.
KNOCKDOWN BARREL.

(Application filed Nov. 4, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

RALPH M. PHILLIPS, OF JAMESTOWN, NEW YORK.

KNOCKDOWN BARREL.

SPECIFICATION forming part of Letters Patent No. 624,376, dated May 2, 1899.

Application filed November 4, 1898. Serial No. 695,458. (No model.)

To all whom it may concern:

Be it known that I, RALPH M. PHILLIPS, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Knockdown Barrel, of which the following is a specification.

My invention relates to improvements in knockdown barrels; and the objects of my improvement are, first, the pieces of the barrel-head made to interlock on their inner edges, so that the whole head acts as one piece; second, the outer edge of the head cut with a shoulder to brace against and strengthen the chime and at the same time protect the croze or groove for the projection on the edge of the head, and this shoulder, with the interlocking joints of the head, does away with the need of heading-strips and stiffens the whole barrel; third, the ends of the straight staves chamfered in order that a straight-sided barrel may be headed with a driven flaring chime-hoop the same as a common barrel, and, fourth, the central hoops so nailed to the staves as to give a special draw thereon and tighten the joints between the staves; and I attain these objects as shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my barrel complete and a side elevation of the inside of staves attached to metal bands or hoops and forming what I call a "sheet" of staves. Fig. 2 is a detail view of a recessed piece of head. Fig. 3 is a sectional view showing the joining of head, stave, and flaring hoop at the chime. Fig. 4 is a sectional view of staves, hoop, and clenched nails, showing manner of nailing to give the draw on the joints.

Similar numerals refer to similar parts in the drawings.

10 10 represent the staves, and 11 their tongued and 12 their grooved edges.

13 13 are the central metal hoops or bands, which extend out in the overlapping or nailing ends 13' 13'.

14 14 are the flaring end or chime hoops, and 14' is the chamfered end of the staves to receive flaring hoops 14.

15 15' are the nails for attaching the central hoops to each stave.

16 16 are head-pieces having recesses 17 17 and projections 18 18 cut thereon.

19 is the croze or groove cut in the staves to receive the sharp projection 20 on the edge of the head, and 21 is the shoulder on the edge of the head to brace against the chime.

My barrel is usually made of seasoned wood with straight staves of uniform width. The ends of the staves are chamfered at 14' in order that the flaring end hoop may be driven on after inserting the head, and hoop 14 fits so tightly as to need no nailing. The heads are made of two or more pieces, with interlocking recesses and projections on their inner edges which fit each other, and when bound tightly in place by the end hoop act as one piece and allow of no end movement or shucking of the head, and as these head-pieces are cut several at a time by being clamped together they can be produced as cheaply as heads with straight joints. Shoulder 21 braces against the chime and with the interlocking joints in the head gives great stiffness to the whole barrel and does away with the need of heading-strips now used by barrel-makers to stiffen the chime and hold the head and barrel in shape. The central hoops or bands 13 13 are made of metal and nailed on the staves, two nails being driven and clenched through each hoop and stave in such a manner that the staves and bands curve outwardly, as shown in Fig. 4, and the length of hoop between nails 15' 15' on the edge of each stave is thereby shortened, so that when the barrel is set up and the sheet of staves is bent to the regular curve of the barrel, as shown in dotted outline in Fig. 4, the hoop 13 has a strong draw directly on the joint between the staves, and the staves being tongued and grooved the joints are thus made tight and strong for liquids or for dry and powdered articles like flour or lime.

To set up my barrel, the right number of staves is nailed to two or more bands 13 13 and form a sheet of staves. This sheet of staves is bent into the cylindrical form and drawn tight, so that ends 13' 13' can be nailed fast. The interlocking heads are then sprung into the grooves 19 19 at each end and the flaring chime-hoops 14 14 are driven on, completing the barrel.

It will be recognized at once that my barrels can be shipped knocked down in the form of sheets of staves, head-pieces, and chime-

hoops, occupying little space when so shipped in crates, and at a great saving in cost of carriage, and that the barrels can be used over and over, being knocked down and set up again as desired.

5 Having described my invention, what I claim as new is—

1. In barrel-heads, the pieces forming the head having recesses 17 and projections 18
10 along the cross-joints of the head to interlock said pieces and prevent endwise shucking at the joint, as shown and described.

2. In a barrel having the staves straight on the inside, the pieces forming the head having recesses 17 and projections 18 along the
15 cross-joints of the heads to interlock said pieces and prevent endwise shucking, the periphery of the head cut to fit a croze in the staves on the inner edge and the outer edge
20 cut straight to bear against the chime of the staves, as shown and described.

3. In a barrel having the staves straight on the inside, the pieces forming the head having recesses 17 and projections 18 along the
25 cross-joints of the head to interlock said

pieces and prevent endwise shucking, the periphery of the head cut to fit a croze in the staves on the inner edge and the outer edge cut straight to bear against the chime of the staves, the staves chamfered on their outer
30 ends to receive flanged hoops, as shown and described.

4. In knockdown barrels, the barrel made with straight staves tongued and grooved along their edges and nailed to metal bands
35 on an outward curve to tighten the joints, the heads having two or more pieces with interlocking joints and a shoulder at the periphery to sustain the chime, the outer ends of the staves chamfered to receive flaring
40 chime-hoops after the heads are sprung into the croze, substantially as shown and described.

In witness that I claim the foregoing I have hereunto subscribed my name in the presence
45 of two witnesses.

RALPH M. PHILLIPS.

In presence of—

FRANK TWEEDALE,
WRIGHT D. BROADHEAD.