T. HANVEY.

BARRELS.

No. 188,128. Patented March 6, 1877.

Fig. 1.

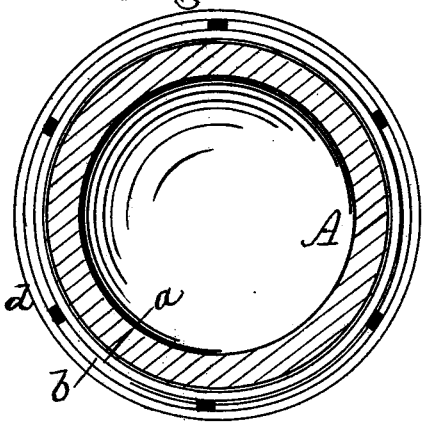


Fig. 2.

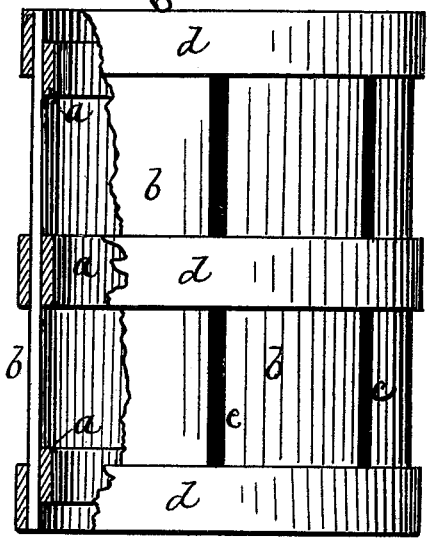


Fig. 3.

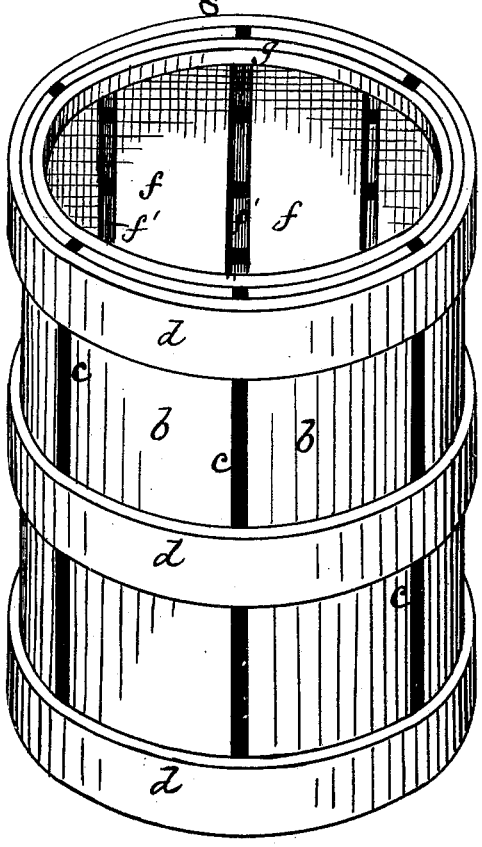
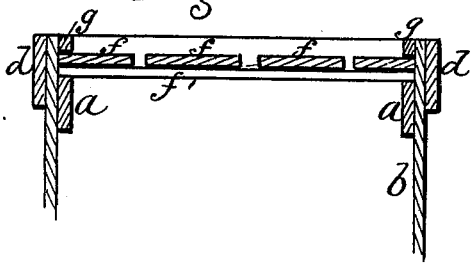


Fig. 4.



Inventor.
Thomas Hanvey,
per R. F. Osgood,
Atty.

Witnesses.
E. B. Scott
N. Campbell.

UNITED STATES PATENT OFFICE.

THOMAS HANVEY, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE HANVEY BARREL MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN BARRELS.

Specification forming part of Letters Patent No. **188,128**, dated March 6, 1877; application filed January 24, 1876

To all whom it may concern:

Be it known that I, THOMAS HANVEY, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Barrels; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a diagram showing the manner of forming the barrel-cylinder upon the mandrel. Fig. 2 is a sectional elevation of the barrel-cylinder. Fig. 3 is a perspective view of the completed barrel. Fig. 4 is a vertical section of the top of the barrel.

It is the object of my invention to produce a barrel which has the heads, as well as the sides, provided with ventilating-openings, and which combines great strength with simplicity and cheapness of manufacture. To this end I make the barrel of thin strips or veneers of wood, cut or sliced from a boiled log or block, as described in my patent of April 3, 1866, and rolled or pressed to remove the sap, and then build up the barrel, as follows: A is an ordinary iron mandrel, of the kind used in making this class of barrels. It is of cylindrical form, and of the same length as the barrel. I wrap around this mandrel three hoops or bands, *a a a*, two at the ends and one in the center, and tack the overlapping ends together to hold them in place. These form the interior hoops or bands of the barrel-cylinder. I next lay across these hoops or bands longitudinal strips *b b*, of the sliced stuff above described, and tack them to the interior bands or hoops. These longitudinal strips envelop the whole mandrel; but spaces *c c* are left between their edges, which form the ventilating-openings in the sides of the barrel. The strips *b b* may be of any desired width, according to the width of the block from which they are sliced. I next wrap outside these longitudinal strips exterior hoops or bands *d d d*—two at the ends and one in the center—coincident and in line with the interior hoops *a a a*. I then nail through the three thicknesses, the nails clinching upon the mandrel, and thus secure the parts all firmly together. I would say that the two end interior hoops or bands *a a* are set in sufficiently from the ends of the longitudinal strips to form the seats or shoulders for the heads of the barrel to rest on, as shown in Figs. 2 and 4. This forms the cylinder or body portion of the barrel. The heads of the barrel are formed by nailing strips *f f'*, of the kind before described, across each other at right angles, leaving the same open spaces *c c*. These strips are nailed together, and the head is then turned or cut out of circular form, to fit in the open end of the barrel-cylinder. It rests upon the edge of the inner hoop or band *a*, and is secured outside by the ordinary headlining *g*.

The barrel thus formed has the ventilating-passages over the whole surface, the heads as well as the sides; and hence, when the barrels are set or packed up in tiers, one on top of another, the currents of air have a free passage upward through the heads, and are not obstructed as where the heads are closed.

A special advantage arises from the use of the interior and exterior hoops or bands *a a* and *d d*. These, coming in line, give great stiffness, both outwardly and inwardly, and require but a very thin shell to the barrel. These hoops or bands serve an important additional purpose in forming the shoulders to the heads.

I am aware that a two-ply barrel has been known in which the inner ply is made shorter than the outer one, to form shoulders to the heads; but in such case the double thickness extends over the whole surface of the barrel.

Closed or tight barrels may be made with the same arrangement of the exterior and interior hoops or bands. In such case the longitudinal strips may be close-jointed and laid with either a single or double thickness; or a single ribbon or shell of the wood may be wrapped around once or more and overlapped and secured by nails. The hoops or bands in that case give the desired thickness and strength, and the inner hoops, being placed inside, form the shoulders or seats for the heads in the same manner.

Ventilated barrels of the kind before described are useful for holding fruits and other perishable articles that require much air. I design to make not only barrels, but also other packages, such as casks, kegs, &c.

I am aware that it is not new to make barrels of thin strips of wood of the kind above described. Neither is it new to make stave barrels with the sides or tops perforated for ventilation. Such I therefore disclaim. I also disclaim one barrel placed inside another, with the hoops coinciding and inclosing the outer thickness.

What I claim as new is—

1. A ventilated barrel, composed of thin strips or veneers of wood, nailed to hoops or bands holding the same, with heads made of similar strips, crossing each other at right angles, the whole surface of the barrel having open joints between the strips, to allow free passage of air, as herein shown and described, and for the purpose specified.

2. A barrel constructed of a single body, *b*, with interior and exterior hoops *a a a* and *d d d*, placed in coincidence, the whole secured by nailing through the three thicknesses, as herein shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

THOS. HANVEY.

Witnesses:
R. F. OSGOOD,
E. B. SCOTT.