(No Model.)

E. & B. HOLMES.

Apparatus for Drying Barrels.

No. 235,531. Patented Dec. 14, 1880.

Fig. 1.

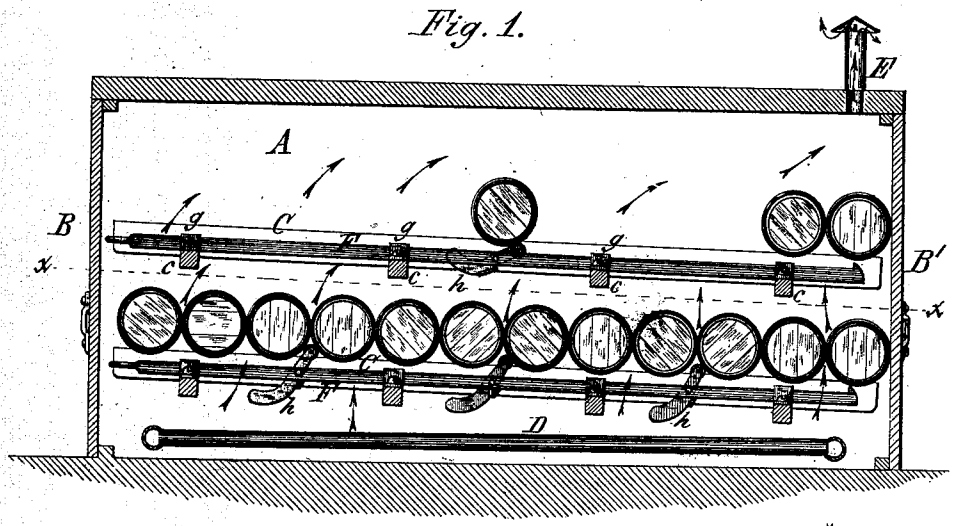


Fig. 2.

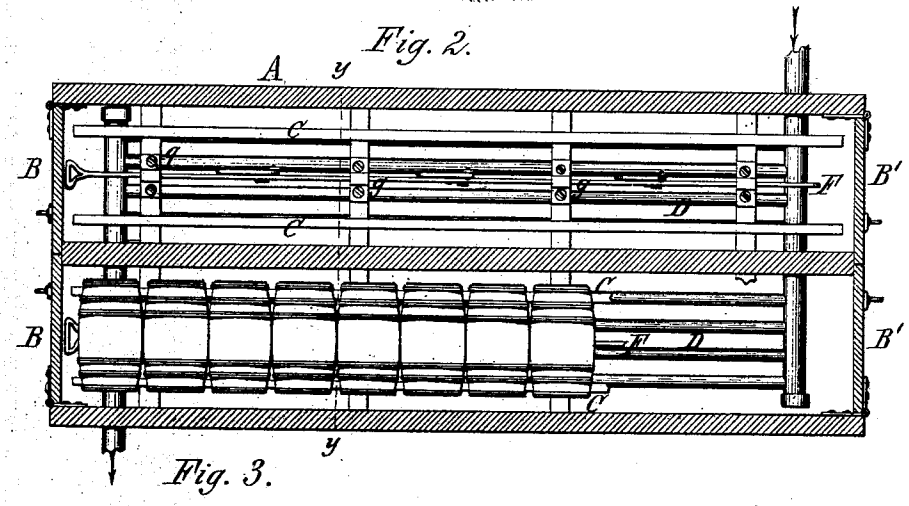


Fig. 3.

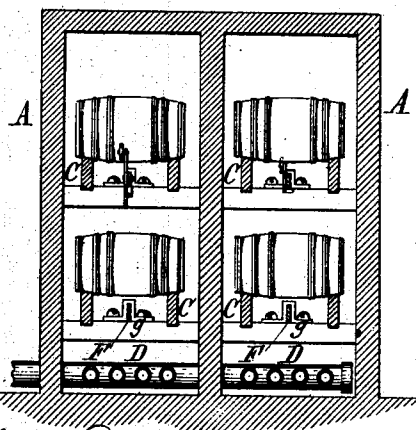


Fig. 4.

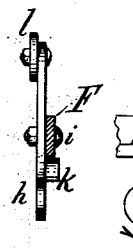
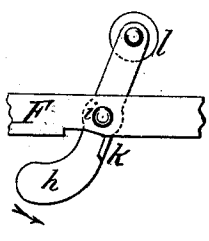


Fig. 5.



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EDWARD HOLMES AND BRITAIN HOLMES, OF BUFFALO, NEW YORK.

APPARATUS FOR DRYING BARRELS.

SPECIFICATION forming part of Letters Patent No. 235,531, dated December 14, 1880.

Application filed April 14, 1880. (No model.)

To all whom it may concern:

Be it known that we, EDWARD HOLMES and BRITAIN HOLMES, both of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Apparatus for Drying Barrels, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an apparatus for drying barrels or groups of staves set up in the form of barrels by means of truss-hoops.

The object of our invention is to produce a simple apparatus into which the barrels or groups of staves to be dried are readily introduced and from which they are easily removed, and in which the operation of drying is carried on expeditiously and economically.

Our invention consists of a drying apparatus or kiln provided with skids or rails on which the barrels are supported, and suitable doors arranged in the walls of the drying-chamber opposite the ends of the skids for the introduction and removal of the barrels to and from the drying-chamber; suitable heating-pipes arranged in the lower part of the drying-chamber, and one or more openings formed in the upper part of the drying-chamber for the escape of the vapor; also, in the combination with the skids or rails upon which the barrels are supported, of a rod provided with one or more pawls whereby the barrels can be pushed forward over the skids when necessary; also, of the particular construction of said pawls, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of our improved drying apparatus. Fig. 2 is a horizontal section in line *x x*, Fig. 1. Fig. 3 is a cross-section in line *y y*, Fig. 2. Fig. 4 is an end view, on an enlarged scale, of the movable pawl on the push-rod. Fig. 5 is a side elevation thereof.

Like letters designate like parts in each of the figures.

A represents the drying-chamber, built of wood, brick, or other suitable material, and provided at its ends with doors B B′.

C represents inclined skids or rails, arranged longitudinally in the drying-chamber. The latter is made of any desired length, and of sufficient width to receive barrels of the usual length.

D represents heating pipes or coils, arranged upon the bottom or elsewhere in the lower portion of the drying-chamber, and supplied with steam or hot air from any convenient source.

E represents one or more openings or outlets, formed in the roof of the drying-chamber for the escape of the vapor rising from the barrels during the operation of drying.

F represents a bar or rod, arranged longitudinally between the side rails or bars of the skids C, and sliding in guide-pieces *g* secured to the cross-beams *c* upon which the skids rest.

h represents one or more pawls or dogs, pivoted to the side of the bar or rod F.

When the dog or pawl *h* is in its normal position its upper part, above the fulcrum *i*, leans forward, while the lower part, below the fulcrum *i*, is curved backward, and tends, by its weight, which is greater than that of the upper part of the pawl, to turn the pawl in the direction of the arrow, Fig. 5.

k is a projecting stop secured to the lower part of the pawl so as to strike against the lower side of the bar or rod F when the pawl is in the proper position for pushing a barrel forward, as shown in Fig. 5.

As the barrels roll from the higher to the lower portion of the skid they depress the upper arm of the pawl F and pass over the same, as shown in the upper skid. (Represented in Fig. 1.)

The upper end of the pawl F is preferably provided with a roller, *l*, to facilitate the passage of the barrels over the same.

If a barrel should lodge on the skid where it cannot be conveniently reached, the bar F is drawn backward until one of the pawls *h* engages behind the barrel, with the stop *k* bearing against the under side of the rod F, as shown in the lower skid of Fig. 1. By pushing the bar F forward—that is, in the direction in which the skid inclines—a pressure is applied to the barrel by the pawl, which is rigid in this position, and the barrel is easily dislodged.

The barrels to be dried are introduced into the drying-chamber through the door B, oppo-

site the upper ends of the skids, and removed therefrom through the door B′, opposite the lower ends of the skids, in an obvious manner.

Two or more drying-chambers, A, may be arranged side by side, as indicated in the drawings, so that the operation of drying can be carried on in one or more of the chambers while the other chamber is being emptied and refilled.

We claim as our invention—

1. In an apparatus for drying barrels, the combination, with the drying-chamber A, of heating-pipes D, arranged upon or above the floor of the drying-chamber, one or more skids, C, arranged in the drying-chamber above the heating-pipes, without any floor or other obstruction between the heating-pipes and the skids, thereby permitting a free upward passage for the heated air from heating-pipes through the skids and around the barrels supported thereon, doors B B′, arranged in the drying-chamber opposite the ends of the skids, and vapor-escape E, substantially as set forth.

2. The combination, with a drying-chamber A and skid C, of the rod F, provided with one or more pawls, *h*, substantially as and for the purpose set forth.

3. The combination, with the rod F, of the pawl *h*, pivoted thereto at *i*, and having its lower weighted arm provided with a stop, *k*, adapted to engage against the under side of the rod F when the pawl is in its normal position, substantially as and for the purpose set forth.

4. In an apparatus for drying barrels, the combination, with a drying-chamber, A, of one or more skids, C, arranged in the drying-chamber above the heating apparatus, doors B B′, arranged in the drying-chamber opposite the ends of the skids, and mechanism substantially as described, whereby the barrels can be pushed over the skids.

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