

(No Model.)

E. & B. HOLMES.
Apparatus for Steaming Staves.

No. 238,688.

Patented March 8, 1881.

Fig. 1.

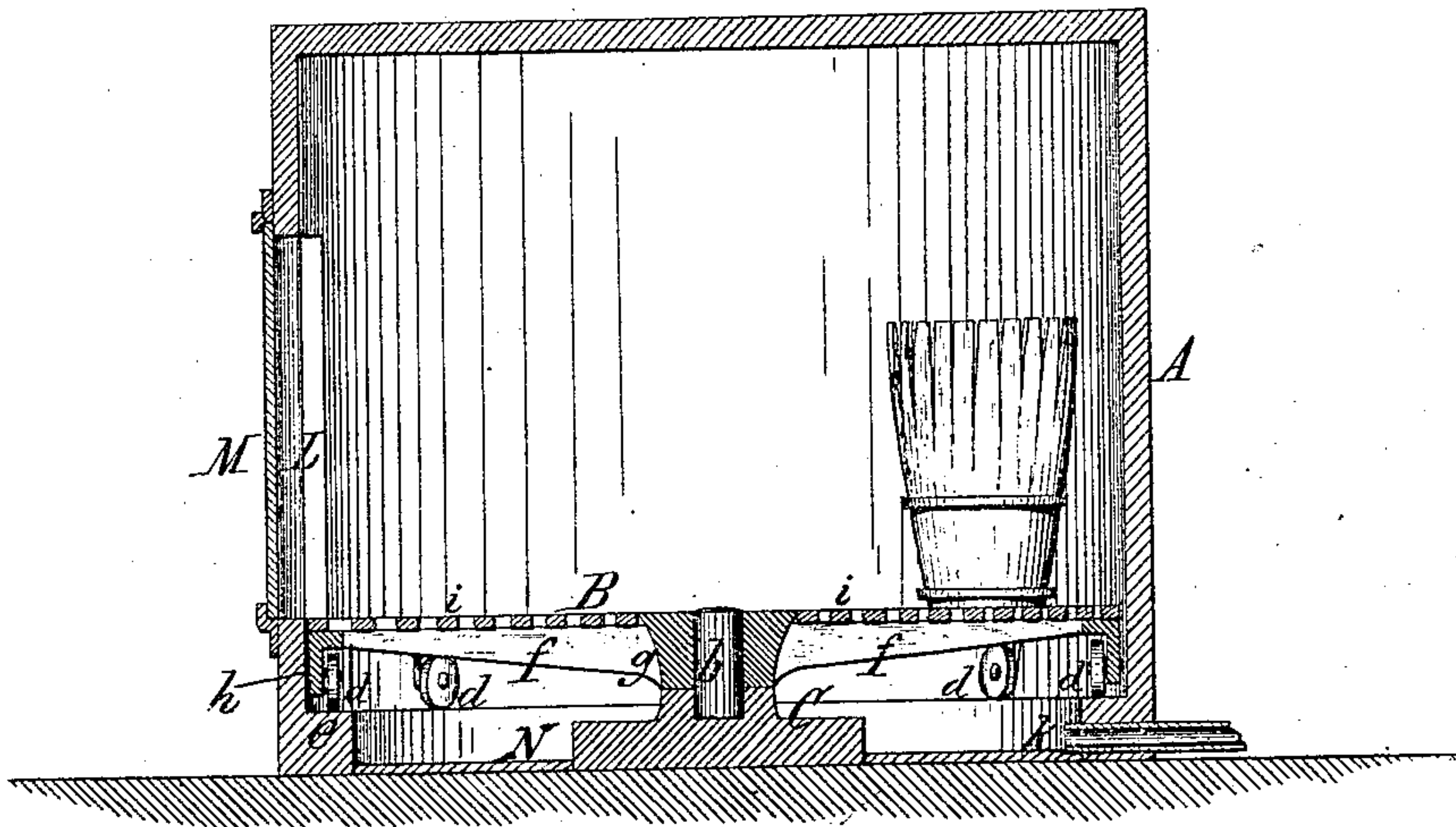
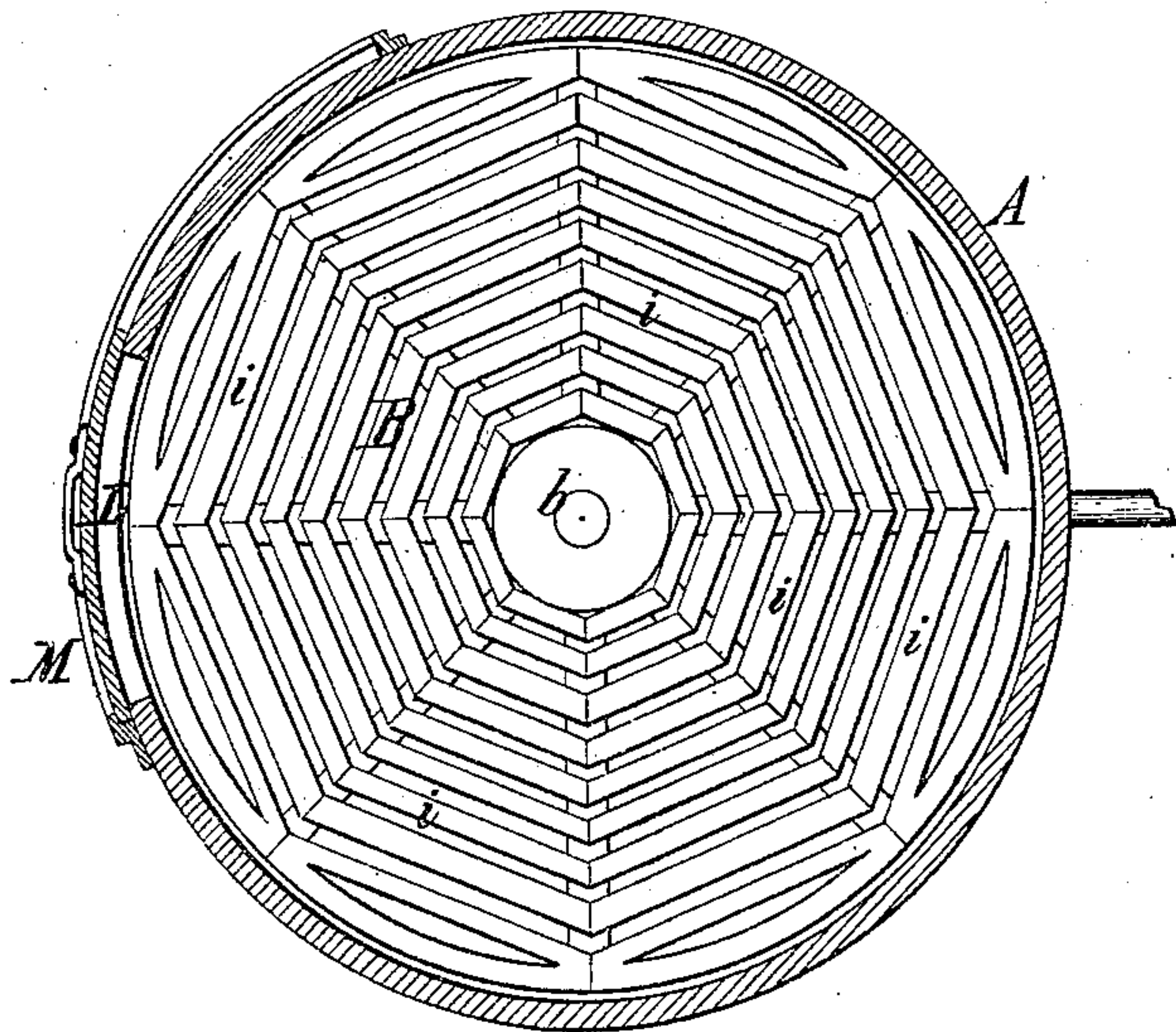


Fig. 2.



Chas. J. Buchheit
Edw. J. Brady } Witnesses

Edward Holmes & Britain Holmes Inventors
by Wilhelm & Bonner
Attorneys

UNITED STATES PATENT OFFICE.

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

APPARATUS FOR STEAMING STAVES.

SPECIFICATION forming part of Letters Patent No. 238,688, dated March 8, 1881.

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 a new and useful Improvement in Apparatus for Steaming Staves, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an apparatus in which the staves, set up in the form of half-finished barrels by means of truss-hoops applied to the staves at one end, are steamed preparatory to securing the staves together fully in barrel form.

The object of our invention is the construction of a simple apparatus in which the operation of steaming can be carried on conveniently and expeditiously.

Our invention consists of an apparatus composed of a suitable tight inclosing-case, a perforated turn-table on which the groups or sets of staves are supported, a steam-supply pipe opening into the inclosing-case below the perforated turn-table, a water-receptacle through which the steam passes before it comes in contact with the staves, and in which the steam becomes charged with moisture, and an inlet-opening protected by a suitable door, and arranged in the inclosing-casing above the turn-table, and through which the staves are introduced into the apparatus and removed therefrom, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a sectional elevation of our improved apparatus. Fig. 2 is a horizontal section of the same, taken above the turn-table.

Like letters of reference designate like parts in the several figures.

A represents a tight casing, of cylindrical form, constructed of wood, brick, or other suitable material.

B is a revolving bottom, platform, or turn-table arranged within the lower portion of the casing A, and provided at its center with a vertical shaft, *b*, turning in a suitable step-bearing, C. If desired, the revolving platform B may be supported at its periphery by rollers *d*, running upon a circular offset or shoulder, *e*, formed with or secured to the under side of the casing A. As shown in the drawings, the revolving platform B is composed of radial arms *f*, ex-

tending from the hub *g* to the rim *h* of the platform, and horizontal slats or strips *i*, secured to the upper sides of the arms *f*, so as to leave open spaces between the slats or strips for the passage of the steam. The revolving platform B may, however, be provided with openings or perforations for the passage of the steam in any other suitable manner.

k represents one or more steam-inlet pipes opening into the casing A below or above the revolving platform B. The pipe or pipes *k* may be supplied with steam from the exhaust of a steam-engine, or in any other suitable manner.

L represents an opening of suitable size and form, arranged in the cylindrical side of the casing A, above the revolving platform B, for the introduction and removal of the staves to and from the interior of the casing A. M is a sliding or other suitable door by which the opening L is closed during the operation of steaming the staves.

The staves to be steamed are set up in the form of half-finished barrels by applying truss-hoops to each set or group of staves at one end thereof, as indicated in the drawings. The sets or groups of staves so secured together are introduced into the casing A through the opening L and placed upon the platform B, from its center toward its circumference, as far as the opening L will permit the platform to be filled. This being accomplished, the platform B is turned so as to bring the next adjacent empty portion of the platform opposite the opening L, when this portion of the platform is also filled with sets or groups of staves, and this operation is repeated until the platform B is entirely filled. The door M is then closed and steam is admitted to the casing A, through the pipe or pipes *k*, for a sufficient length of time to thoroughly steam the staves. During this operation the steam rises through the interstices between the slats *i* of the platform, or through any other perforations or openings with which the platform B may be provided, and permeates the groups of staves, which are in this manner most thoroughly subjected to the action of the steam. The water resulting from the condensation of the steam on the inner side of the case A and on the staves drips down and collects on the bottom below the

platform B. The steam which enters the space below the platform through the pipe *k* takes up a portion of this water and carries the same up and deposits it on the staves, thereby moist-
5 ening the same thoroughly. If the water resulting from the condensation is not sufficient to keep the steam surcharged with moisture, the bottom of the apparatus below the platform may be provided with the requisite quantity of water from any other convenient source.
10 The space N above the bottom of the apparatus and below the bottom of the door M forms a water-receptacle in which the water of condensation is collected.

15 The door M may be provided with a suitable packing for forming a steam-tight joint with the side of the casing A.

When the operation of steaming is finished the door M is opened, and the sets or groups

of staves are removed from the interior of the casing A by turning the platform B in an obvious manner.

We claim as our invention—

An apparatus for steaming staves, composed of a tight casing, A, revolving platform B, provided with suitable openings for the passage of the steam, a door, M, above the platform B, for introducing and removing the staves, and one or more steam-supply pipes, *k*, entering a water-receptacle, N, below the revolving platform, whereby the steam is saturated with water, which is carried up and deposited upon the staves, substantially as set forth.

EDWARD HOLMES.
BRITAIN HOLMES.

Witnesses:

JNO. J. BONNER,
EDW. J. BRADY.