

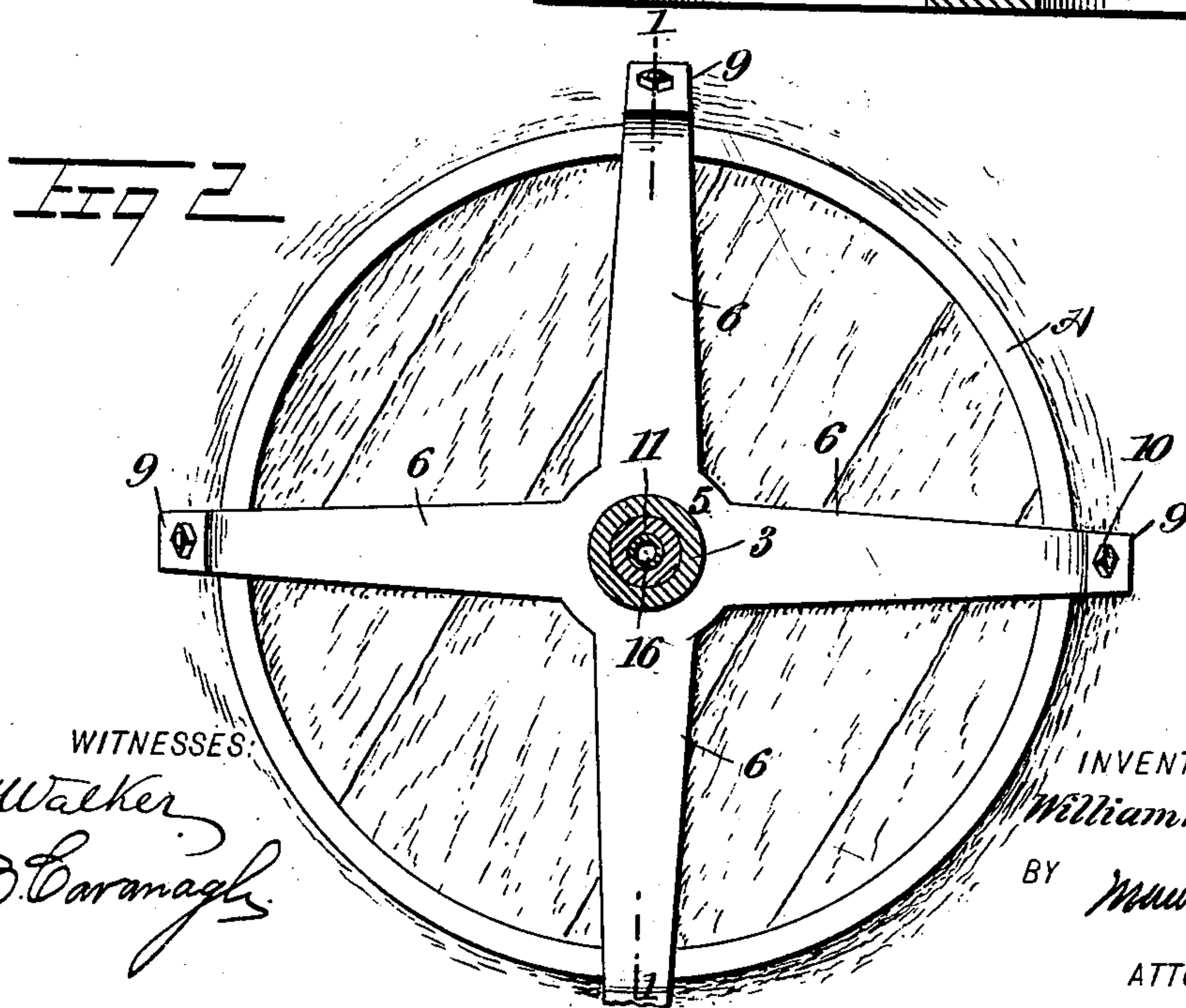
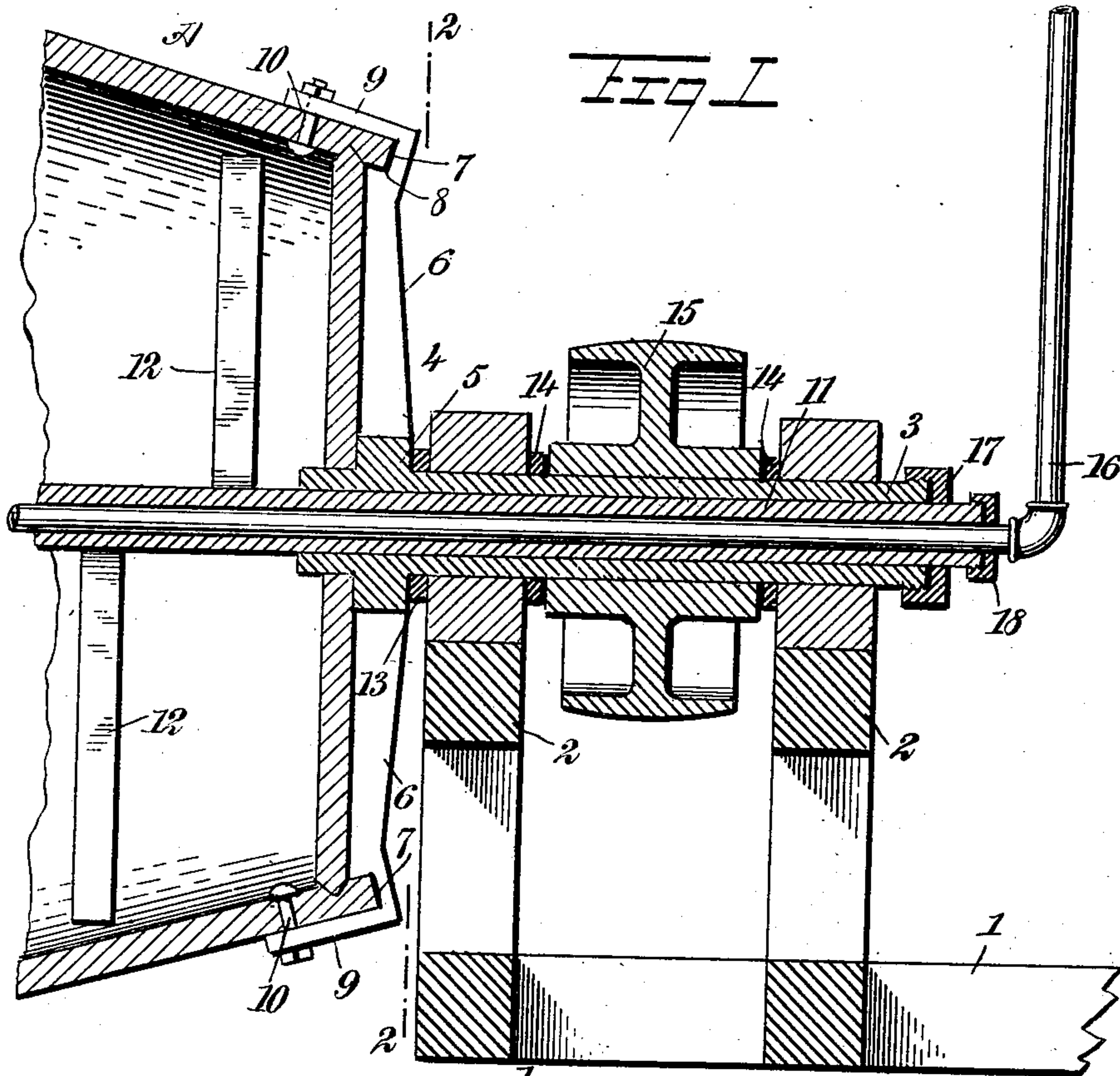
No. 742,749.

PATENTED OCT. 27, 1903.

W. S. STANDISH.
MIXING DEVICE.

APPLICATION FILED MAR. 25, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM S. STANDISH, OF EAST LAS VEGAS, TERRITORY OF NEW MEXICO.

MIXING DEVICE.

SPECIFICATION forming part of Letters Patent No. 742,749, dated October 27, 1903.

Application filed March 26, 1903. Serial No. 149,508. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. STANDISH, a citizen of the United States, and a resident of East Las Vegas, in the county of San Miguel and Territory of New Mexico, have invented new and useful Improvements in Mixing Devices, of which the following is a full, clear, and exact description.

This invention relates to certain novel and useful improvements in a mixing device, and has particular application to a rotatable mixer of the type commonly known as a "barrel" or "cask" mixer, designed, especially in the present instance, for mixing and in separating ores and similar material.

In carrying out the present invention I have particularly in view the provision of means combined with the main portion of the apparatus for supporting and holding the weight of a cylinder or cask and the contents thereof, while at the same time permitting the use within said cask of a hollow shaft carrying beater-blades and a steam-pipe used in the mill.

A further object of the present invention is to provide in combination with the mixing-cask a simple, efficient, and durable clamp which will hold the cask as it revolves upon the shaft, this clamp being so constructed that all the weight of the cask and contents is removed from the inner hollow shaft and is borne by the clamp and its spindle.

With the above-recited objects and others of a similar nature in view my invention consists in the peculiar construction, combination, and arrangement of parts, as is described in this specification, delineated in the accompanying drawings, and set forth in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a vertical sectional view taken through mechanism embodying my improvements on the line 1 1 in Fig. 2, the view also showing the arrangement of the cask-supporting frame, the hollow shafting, and the steam-pipe; and Fig. 2 is a sectional end view of the cask on the line 2 2 in Fig. 1, showing the manner of securing the clamping-arms thereto.

In the accompanying drawings, wherein I have shown an embodiment of my invention, 1 designates a base or supporting-bar of any suitable material, either wood or metal, having extended upward therefrom the standards 2 2, which standards are apertured near their upper ends to permit the passage of the hollow spindle 3 of the cask-clamp, which I have as a whole designated by the numeral 4. This clamp, as will be seen particularly by reference to Fig. 2, is formed with a hub portion 5, from which extend the arms 6 6 6 6, there being four of such arms in the present instance arranged in the shape of a cross, the end portions of said arms being formed with a grooved portion 7, formed by the shoulder 8 and the extended extremity 9 of said arms, which portion 9 is bent almost at right angles to the main portion 6—that is to say, inclined slightly outward to conform to the blank at the side of the cask—the groove 7 in said arms being adapted to receive the chime of said cask when the clamp is in position thereon. The cask or cylinder, which in the present instance is designated by the letter A, is secured to said arms through the medium of bolts 10 passing through said arms and through the cask, the construction being such that the cask will be rigidly supported by the clamp.

As has been heretofore stated, the spindle of the clamp is hollow and is journaled in bearings in the vertical supports or standards 2 2, and passing through this hollow spindle in such manner as to extend into the cask is a smaller hollow shaft 11, which is adapted to support the beater-blades 12, such beater-blades being employed for mixing the contents of the cask and revolving and turning with said shaft. A suitable collar or packing-ring 13 is placed between the hub of the clamp and a portion of the adjacent standards 2, in which the clamp-spindle finds bearing, similar collars 14 14 being placed between said standards 2 2 and the belt-pulley wheel 15, which is mounted upon the clamp-spindle and is adapted to impart a rotary motion to said spindle and to the hollow shaft. Steam is conducted into the cask from any suitable source of supply through the medium of a pipe 16, which passes through the hollow shaft and discharges into the cask

or receptacle. A stuffing-box collar 17 is screwed onto the end of the revoluble spindle of the clamp, and a similar collar 18 of smaller diameter is secured at the end of the tubular shaft at the point of entrance of the pipe 16 into said shaft.

While I have shown and herein described one particular embodiment of my invention, it is of course to be understood that I do not limit myself to the precise details of construction shown herein, as there may be modifications and variations in certain respects without departing from the essential features of the invention or sacrificing any of the advantages thereof.

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

1. The combination with a receptacle or cask, of means for supporting the same, said means comprising a frame, a spindle revolubly journaled in said frame, radially-extending arms on one end of said spindle, the end of the spindle being adapted to enter the head of the cask or receptacle, the end of each of the arms extending outward at an angle relative to the main portion thereof, a groove formed in each arm between the angular extremity thereof and the main portion, the construction being such that the chime of the cask is adapted to fit in said groove, while the angular extremity will lie flat against the outer surface of the cask, and means for rigidly securing the cask to said arms, substantially as set forth.

2. The combination of a cask or receptacle,

a frame, a tubular spindle journaled in said frame, grooved arms carried by said spindle adapted to be secured to the chime of the cask, a hollow shaft passing through said spindle into the cask, and mixing-blades carried by the portion of the shaft within the cask, substantially as set forth.

3. The combination of a cask or receptacle, a frame, a tubular spindle revolubly journaled in said frame, radially-extending grooved arms formed on said spindle and adapted to be secured to said cask at the chime thereof, a hollow shaft passing through said spindle into the interior of the cask or receptacle, mixing devices carried by a portion of the shaft within said receptacle, and a steam-pipe adapted to pass through said hollow shaft and discharge into the interior of the receptacle, substantially as set forth.

4. The combination of a frame, a tubular spindle revolubly journaled therein, radially-extending grooved clamping-arms formed on said spindle and designed to seat the chime of a cask, a hollow shaft extending through the tubular spindle, a steam-pipe passing through the hollow shaft, and a belt-pulley for imparting power to the tubular spindle and to the shaft, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM S. STANDISH.

Witnesses:

W. B. BUNKER,
C. N. HIGGINS.