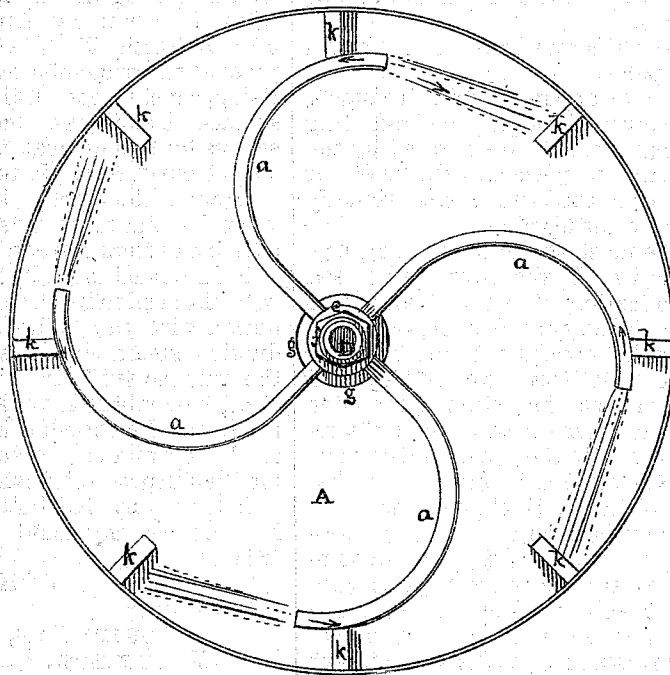
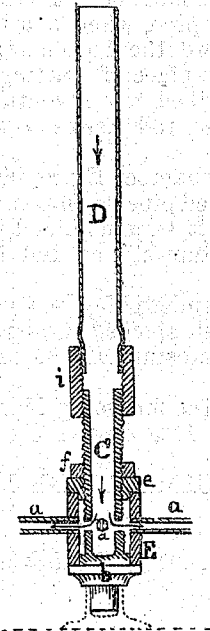
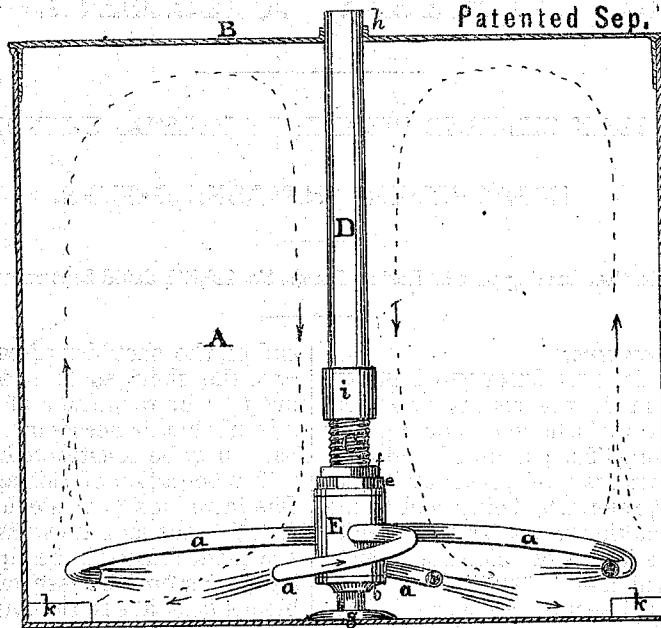


JOHN C. BIRKET.

Improvement in Mashing Tubs.

119,072.

Patented Sep. 19, 1871.



Witnesses
A. Moore
H. S. Miller

John C. Birket.
 Inventor
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UNITED STATES PATENT OFFICE.

JOHN CHARLES BIRKET, OF PEORIA, ILLINOIS.

IMPROVEMENT IN MASHING-TUBS.

Specification forming part of Letters Patent No. 119,072, dated September 19, 1871.

To all whom it may concern:

Be it known that I, JOHN CHARLES BIRKET, of the city of Peoria, in the county of Peoria and in the State of Illinois, have invented a new and Improved Mashing-Tub; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a sectional elevation; Fig. 2, a horizontal sectional view; and Fig. 3, a detached sectional view of induction steam-pipe and its connections.

Like letters in the different figures of the drawing indicate like parts.

This invention is an apparatus for introducing steam into a receiver through pipes radiating from a central pipe, which are rotated by the egress of the steam to permeate the mash or feed at the same time the latter are continually stirred by the said rotating pipes.

A represents the mash-tub or feed-boiler, provided with blocks *k k*; B, the cover to be used in case of an application of the apparatus to a feed-boiler, in which the pipe D passes through it at *h*; C, a short hollow shaft, connected with the pipe D by the joint *i*, its lower end stepped in socket *g*; D, vertical induction steam-pipe from a steam-boiler, entering the top of the receiver A, and attached to the upper end of shaft C by the joint *i*, the shaft C being set in socket *g* in center of receiver A; E, chamber or cylinder carrying nearly horizontal radiating-pipes *a a a*, which are curved semicircularly so as to jet and point downward the steam parallel with the sides of the receiver. This chamber fits loosely on the circular shoulder of the terminal end *b* of the hollow shaft C, and at the upper

end on the shoulder of cap *e*, which is screwed onto the short shaft C, and secured above by nut *f*. The revolution of the radial pipes *a a a* is all that is necessary, however the auxiliary parts may be constructed.

The operation of this apparatus is as follows: The introduction of steam through the vertical pipe D finds an outlet through the chamber E, and thence through the pipes *a a a a*. The steam, impinging on the mash or feed, and also on the blocks *k k*, causes the pipes to revolve, at the same time stirring the contents of receiver, as well as boiling the mash or feed and cooking it, which it does in one-third less time than by the ordinary methods. The steam being emitted from pipes at the circumference of receiver, and thence rising, causes a current in the meal or feed on the surface toward the center pipe, whence it descends by loss of heat toward the bottom, and thence outward again to the place of starting.

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

1. In a mashing-tub, the chamber E provided with the semicircularly-curved pipes *a*, in combination with the hollow shaft C, joint *i*, and induction steam-pipe D, substantially as and for the purpose set forth.

2. The combination of the semicircularly-curved pipes *a* of the chamber E with blocks *k* arranged on the bottom of the tub, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of June, 1871.

JOHN CHAS. BIRKET.

Witnesses:

CHAUNCEY NYE,
E. THURLOW.

(18 & 28.)