

(No Model.)

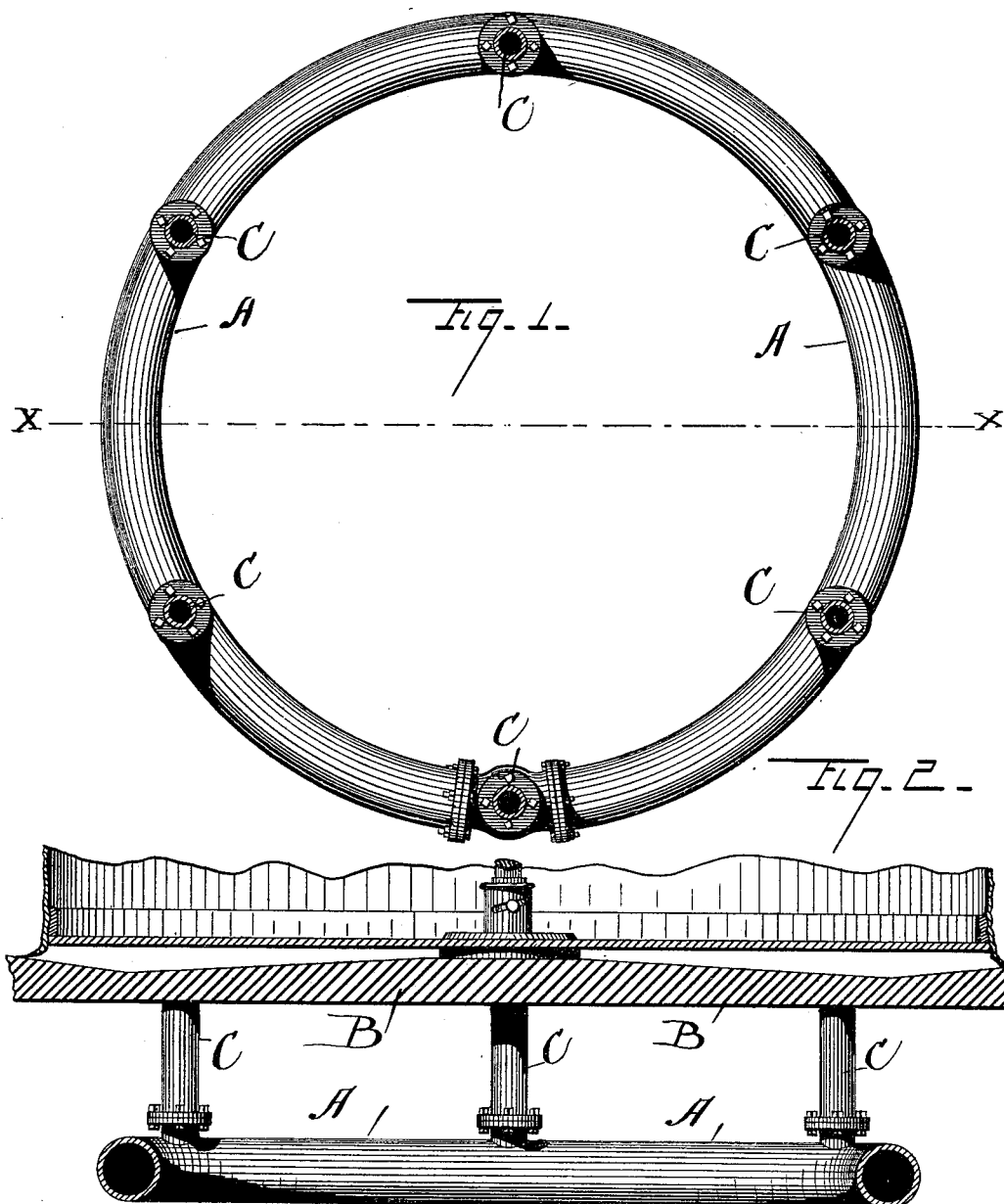
3 Sheets—Sheet 1.

M. GOTTFRIED.

MASHING MACHINE.

No. 386,880.

Patented July 31, 1888.



WITNESSES

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A. Geo. Beaundry

INVENTOR

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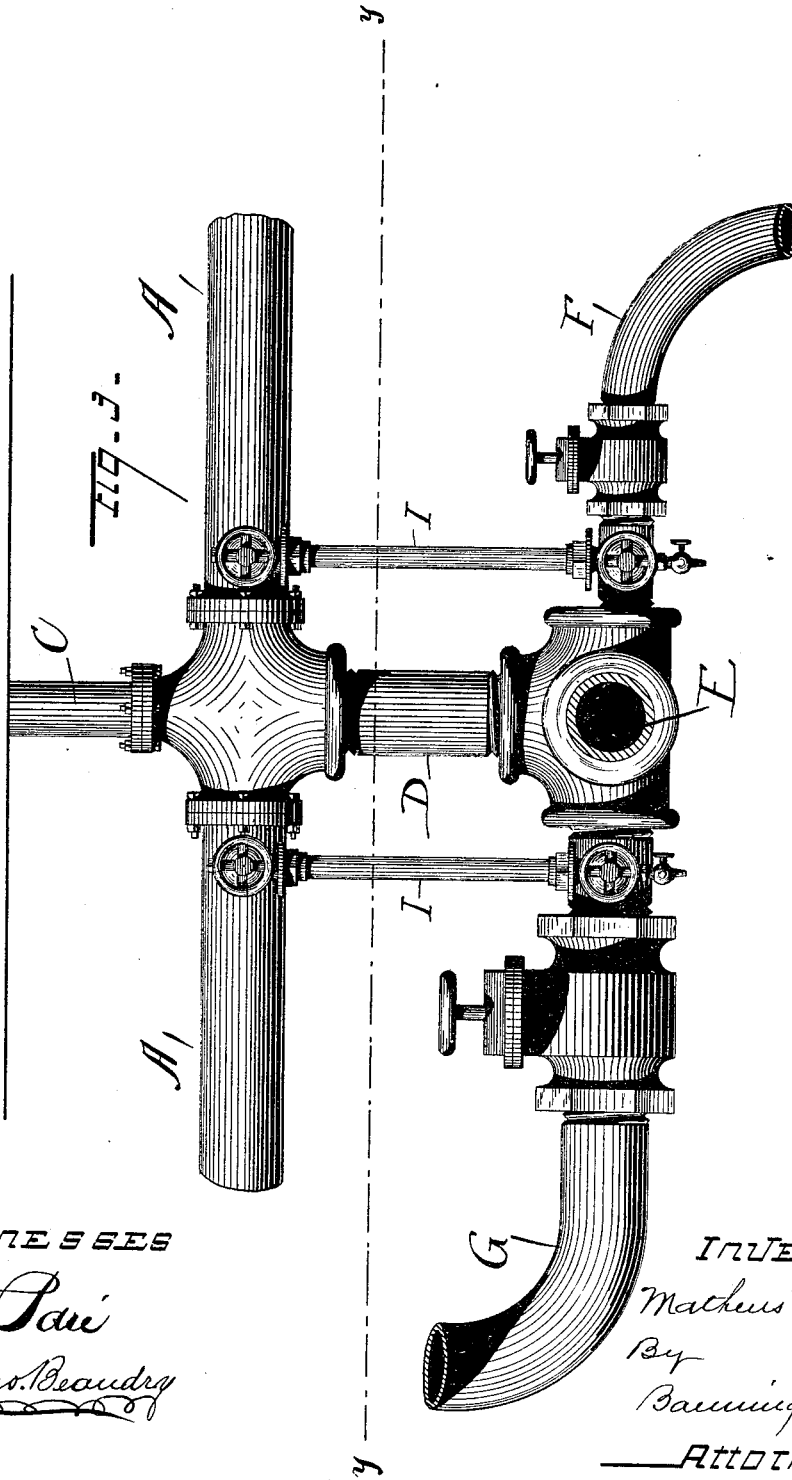
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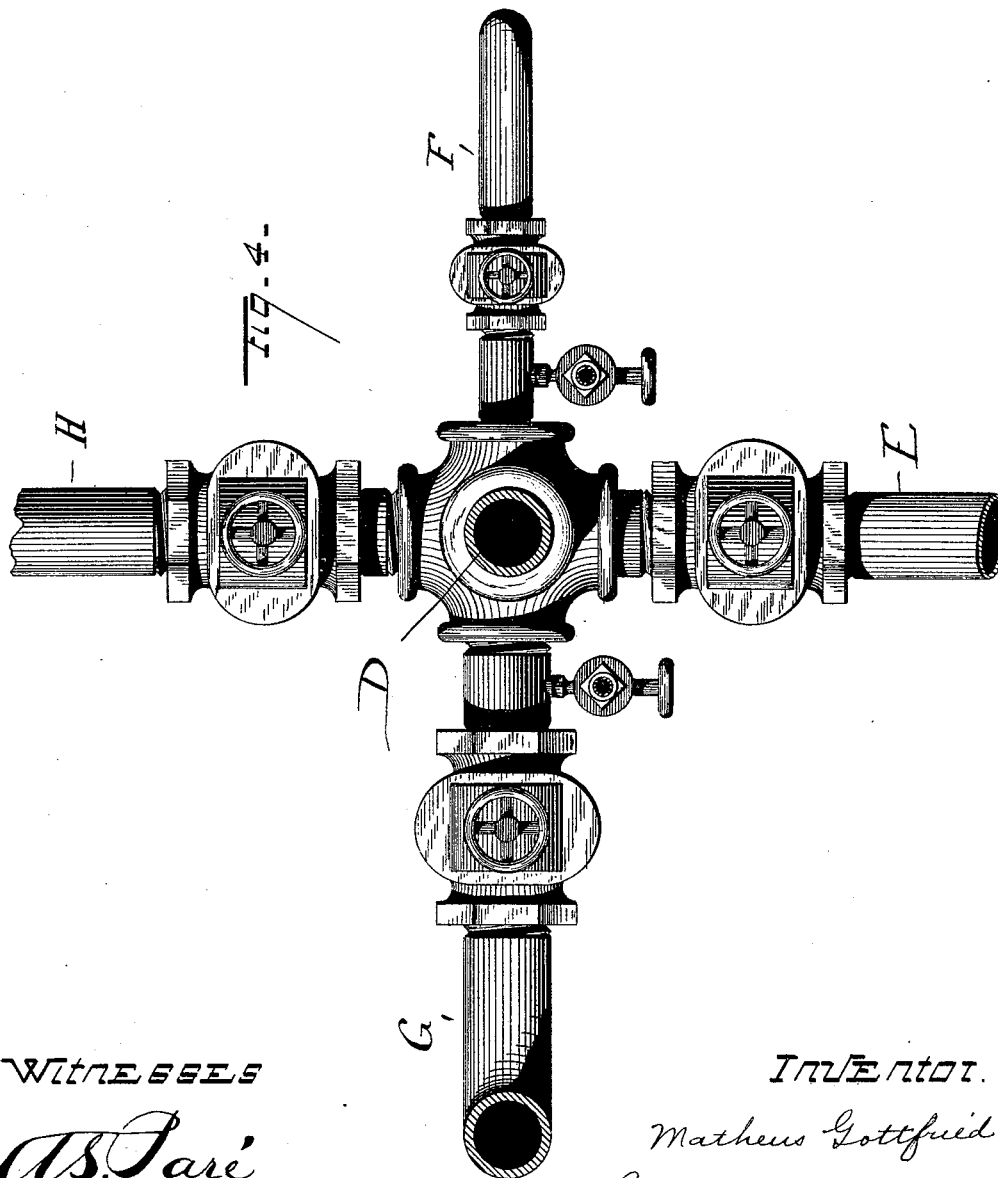
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UNITED STATES PATENT OFFICE.

MATHEUS GOTTFRIED, OF CHICAGO, ILLINOIS.

MASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 386,880, dated July 31, 1888.

Application filed April 17, 1886. Renewed January 3, 1888. Serial No. 259,654. (No model.)

To all whom it may concern:

Be it known that I, MATHEUS GOTTFRIED, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Mashing-Machines, of which the following is a specification.

The object of my invention is to arrange means for drawing off the malt extract from mashing-tubs and for supplying the mash with water with facility; and my invention is more particularly adapted to be used with a double-floor mash-tub, such as described and claimed in an application filed simultaneously herewith.

In the drawings, Figure 1 is a plan view of a general circular pipe or conduit, into which the malt extract is drawn from the tub, and from which it is conveyed to the beer-kettle. Fig. 2 is a transverse vertical section taken in the line *xx* of Fig. 1, and shows a section of the bottom of the mash-tub. Fig. 3 is a front elevation of the circular pipe and the pipes for pumping or carrying water up between the floors of the mash-tub for the purpose of supplying the mash with water, and the pipes for drawing the malt extract to the beer kettle; and Fig. 4 is a plan view of such pipes, taken in the line *yy* of Fig. 3.

In the drawings, A is a general receiving-pipe for the malt extract; B, the floor of the mash-tub; C, the pipes connecting the mash-tub with the malt-receiving pipe. D is a pipe for draining the malt extract off from the receiving-pipe. E is a pipe leading to the beer-kettle. F is a pipe for drawing the undissolved and mealy mash from between the floors and out of the receiving-pipe connected with the bottom of the mash-tub. G is the pipe by which the water is carried up into the bottom of the mash-tub. H is a waste-pipe; and I I are glass or transparent tubes through which small streams of the malt extract flow while the same is being drawn from the common reception-pipe, so that its condition may be observed.

In making my improvement I take, by preference, a mash-tub constructed with a double floor, the lower one being the bottom proper and the upper one a false or supplemental bottom with a space between them, as shown in Fig. 2. At a proper distance below the floor of the mash-tub I arrange a common receptacle, preferably a circular pipe, as shown

in Fig. 1, into which the malt extract is drawn from the tub through a series of pipes, C, as shown in Fig. 2. At a convenient point in this circular pipe, which I term the "reception-pipe," a pipe, D, leads into a head or receptacle containing four openings besides the one in which the pipe D is inserted. In each of these four openings the end of the pipe is screwed or otherwise securely inserted, for the purposes hereinafter described. One of these pipes, E, leads to the beer-kettle in which the malt extract is boiled in the initiatory process of brewing. When the stop or cock in this pipe is opened and the other pipes are closed, except the pipe D, the malt extract is carried into the beer-kettle. Another pipe, G, leads from a force-pump or other source of water-supply under pressure, and when it and the pipe D are open and the stops in all the other pipes are closed water is forced up into the reception-pipe and on up between the floors of the mash-tub and into the mash-tub through the perforated floor. When the water thus forced into the mash-tub has had imparted to it the strength and qualities of the malt by being thoroughly mixed and stirred therewith, so as to become what is termed the "malt extract," it is carried down through the pipes C into the general receiving-pipe A, whence it is conveyed through the pipes D and E to the beer-kettle. Before this is done, however, the pipe F is opened and the mealy and undiluted portions of the malt which have worked down between the floors and into the receiving-pipe A are drawn off by means of the suction-pipe F. After the malt extract has been conveyed to the beer-kettle and the mash removed from the tub, water may be introduced in any convenient manner for washing and cleansing the tub, which is drawn off through the pipes C, general pipe A, and waste-pipe H, to the sewer or other place of waste. While the malt extract is flowing through the pipe D, by opening the stops or cocks at the tops of the glass or transparent tubes I I small streams of the extract will flow down through these pipes and inward to the pipe E, where they will join the main stream and be carried to the beer-kettle. Thus the state of the malt extract can be readily seen and determined by the color flowing through the glass tubes. When the malt extract begins to run muddy, showing that the

mash-tub is sufficiently drained, the further flow of the malt may be stopped by turning the cock in the pipe E, and the introduction of unsuitable or mealy extract prevented.

5 It will be seen that the malt extract in its passage from the mash-tub into the common reception-pipe and through the pipes D and E to the beer-kettle is prevented from coming into contact with the air, and in this way cooling of the extract or contaminating it with impurities is avoided.

10 What I claim as new, and desire to secure by Letters Patent, is—

The combination of a mash-tub, drain-pipes C, leading therefrom to a common pipe or receptacle, A, a main pipe, D, leading from such receptacle into a delivery-pipe, E, transparent pipe or pipes I, leading from the common pipe or receptacle A into pipes F G opening into the delivery-pipe E, and the delivery-pipe E, 15 leading to the boiling-kettle, all arranged and operating substantially as described. 20

MATHEUS GÖTTFRIED.

Witnesses:

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