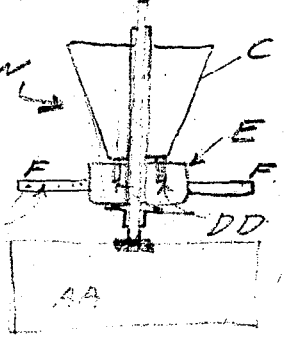

UNITED STATES PATENT OFFICE.

H. J. BROOKE AND F. B. LONGMIRE, OF PHILADELPHIA, PENNSYLVANIA.

SELF-ACTING SPARGER FOR DISTRIBUTING WATER UPON MALT IN MASH-TUBS.

Specification of Letters Patent No. 1,597, dated May 8, 1840.

To all whom it may concern:

Be it known that we, H. JONES BROOKE and FRANCIS B. LONGMIRE, of the city of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Apparatus used in the Process of Brewing and technically Known as a "Sparger," which improved instrument we denominate the "Self-Acting Sparger;" and we do hereby declare that the following is a full and exact description thereof.

The apparatus, or instrument, denominated a sparger, is employed for the purpose of distributing water upon the malt contained in the mashing tub, or tun, in order to extract the saccharine matter in the preparing of the wort. As heretofore made the sparger has been made to revolve near the surface of the mash tub, by the aid of gearing from a steam engine, or other motive power, it has been constructed at considerable expense, and from its complexity has been subject to wear and get out of order. In our sparger these difficulties are removed by rendering it self-acting, by causing it to operate upon the principle of "Barker's Mill."

In the accompanying drawing A, A, represents a mashing tub, or tun; B, B, a vertical shaft rising from the center thereof, and around which the sparger revolves.

C, is a receiver, or funnel, into which the water is to be allowed to flow, which is to actuate, and be distributed by, the sparger.

D, D, are two tubes which lead down from this funnel, and open into the receptacle E. From this receptacle proceed the horizontal tubular arms, F, F, which are perforated with holes, as shown at F^1, for the distribution of the water, and to cause the sparger to revolve. The lower side of the receptacle E, rests upon friction rollers, and there is, of course, a tube which passes through this receptacle, and through the funnel C, to embrace the vertical shaft.

To regulate the rapidity of the revolution of the sparger the tubular arms F, F are so inserted into the receptacle E, that they may be turned upon their axes, by which means a greater force of reaction may be used at pleasure, a regulation which is of considerable importance in the process of mashing.

Having thus fully described the construction of our self-acting sparger, and pointed out the manner in which the same operates, we do not claim the mere giving motion to a shaft by the reaction of water; but

We claim as our invention and desire to secure by Letters Patent—

The manner in which we have applied this principle by combining a reacting apparatus with the mashing tub, the whole being constructed in the manner and for the purpose herein described and set forth.

H. JONES BROOKE.
FRANCIS B. LONGMIRE.

Witnesses:
J. W. PALMER,
FRANCIS JORLT.