No. 826,891. PATENTED JULY 24, 1906.

J. SCHNEIBLE.

STRAINER TUB FOR BREWERS, &c.

APPLICATION FILED APR. 20, 1906.

4 SHEETS—SHEET 1.

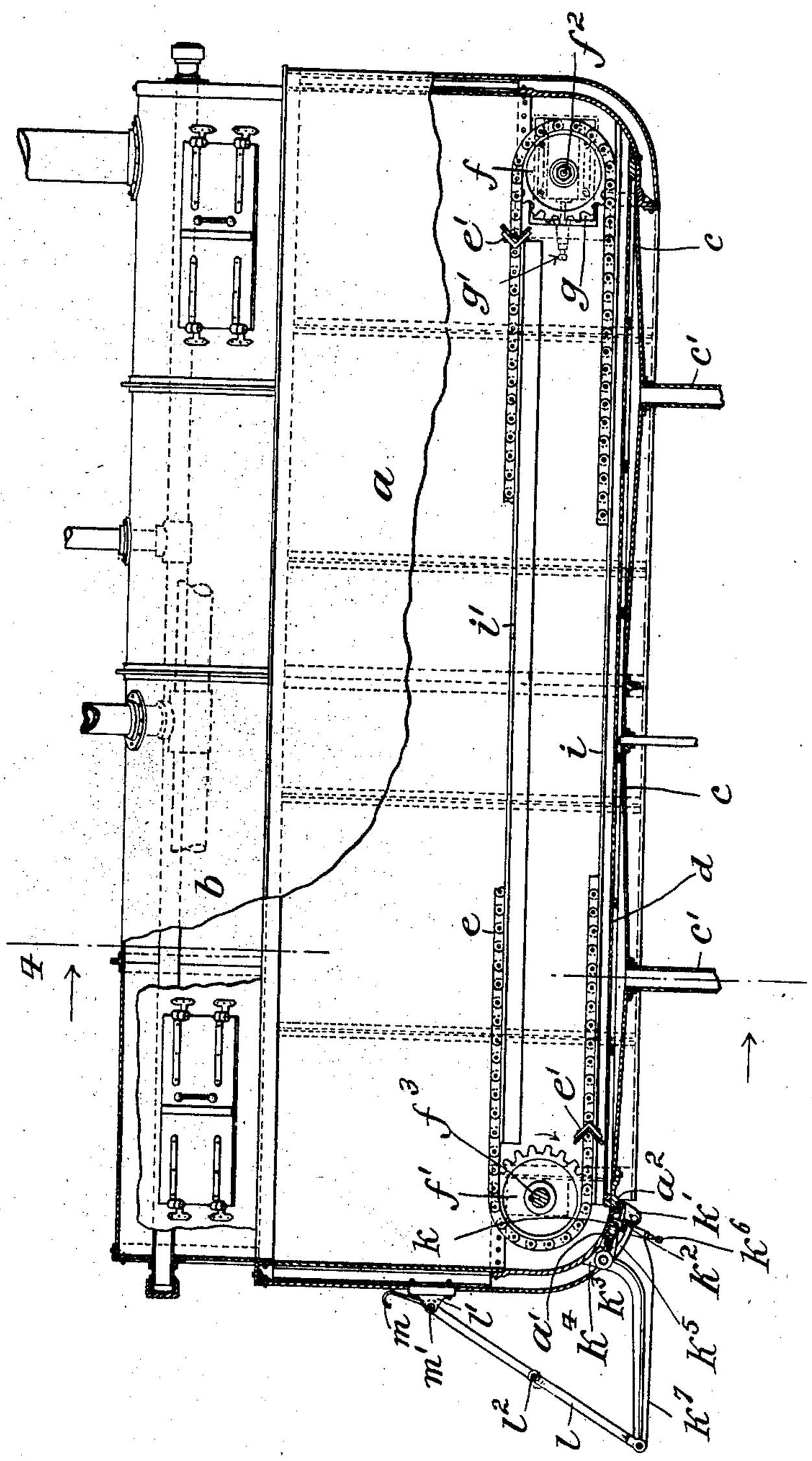

Fig. 1.

Attest:

Edgeworth Bruce

W. W. McGinn

Inventor:

by Joseph Schneible

Redding, Kiddle & Gurley Attys.

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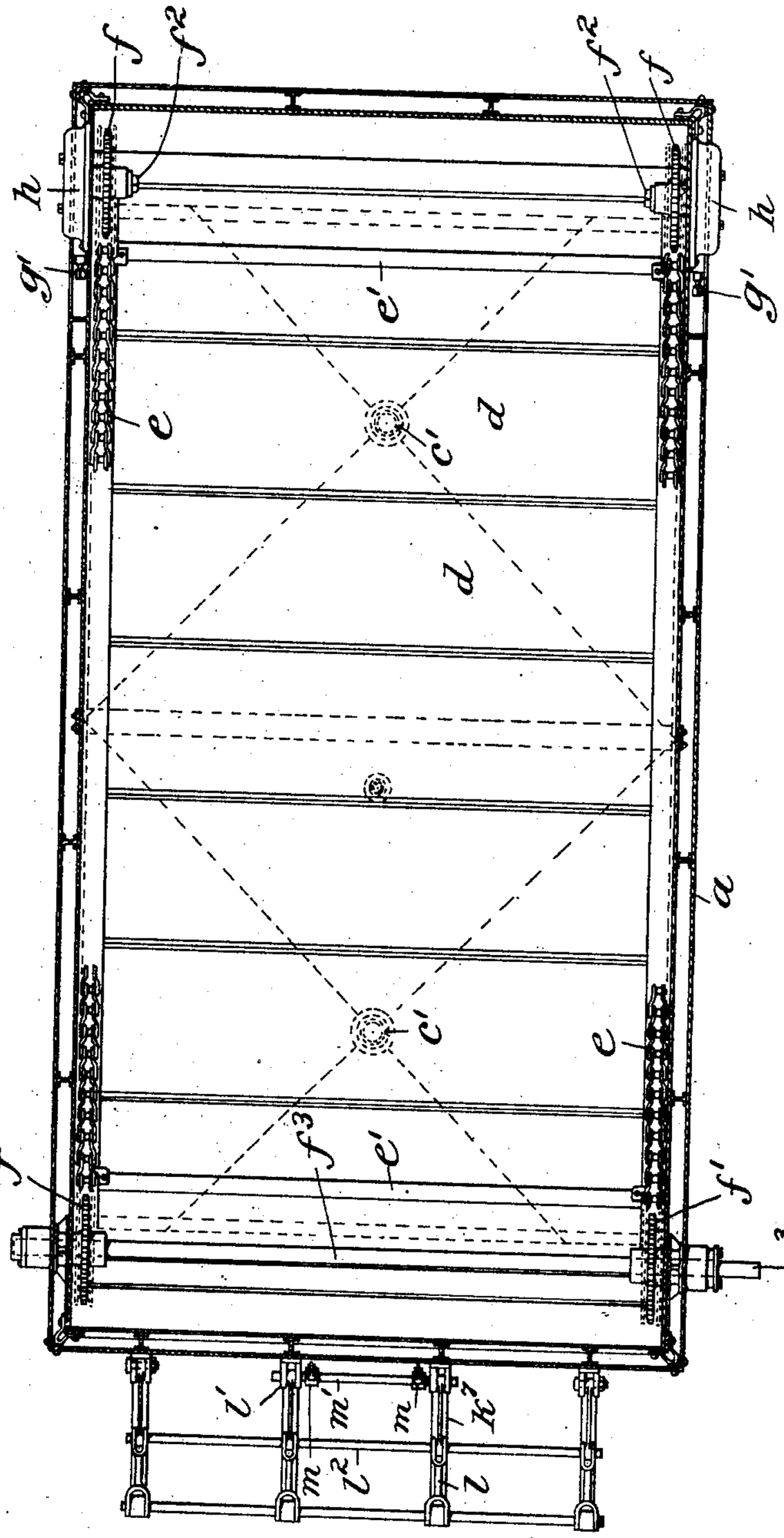
4 SHEETS—SHEET 2.

Fig. 2.



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4 SHEETS—SHEET 3.

Fig. 4.

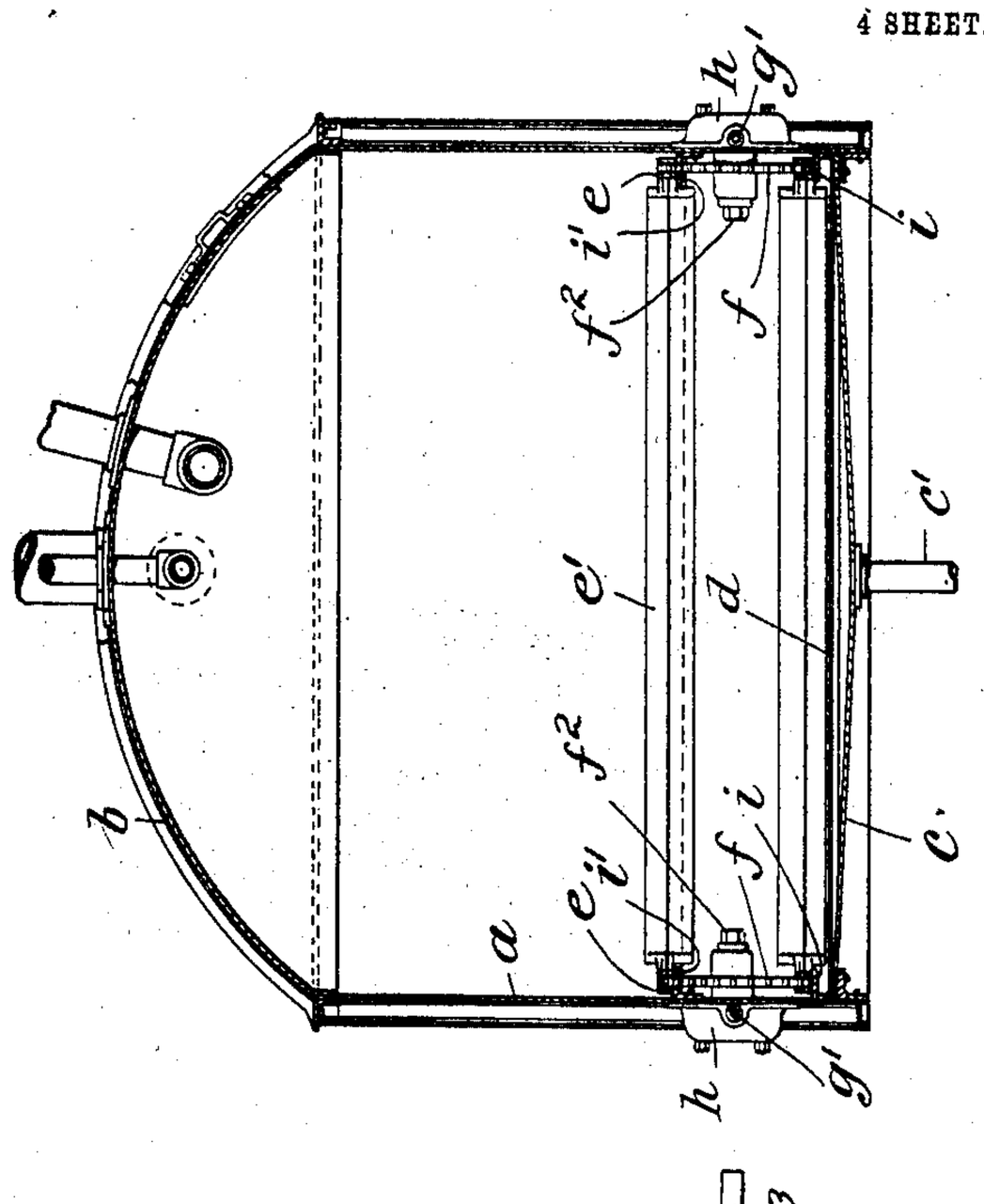
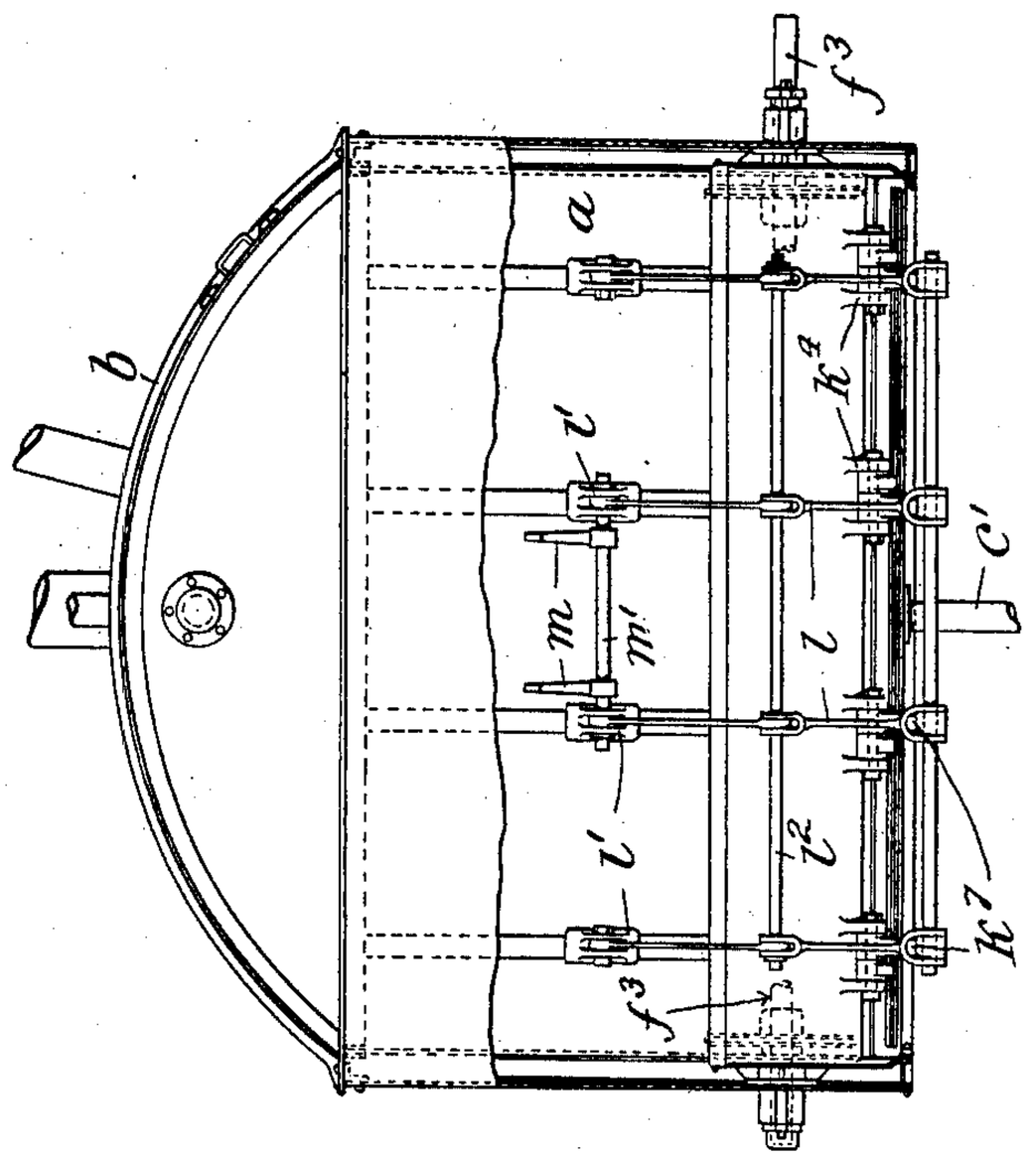


Fig. 3.



Attest:
Edgeworth Bruce
W. J. McGinn

Inventor:
Joseph Schneible
by Redding, Kiddle & Peeler Atty's.

No. 826,891. PATENTED JULY 24, 1906.

J. SCHNEIBLE.

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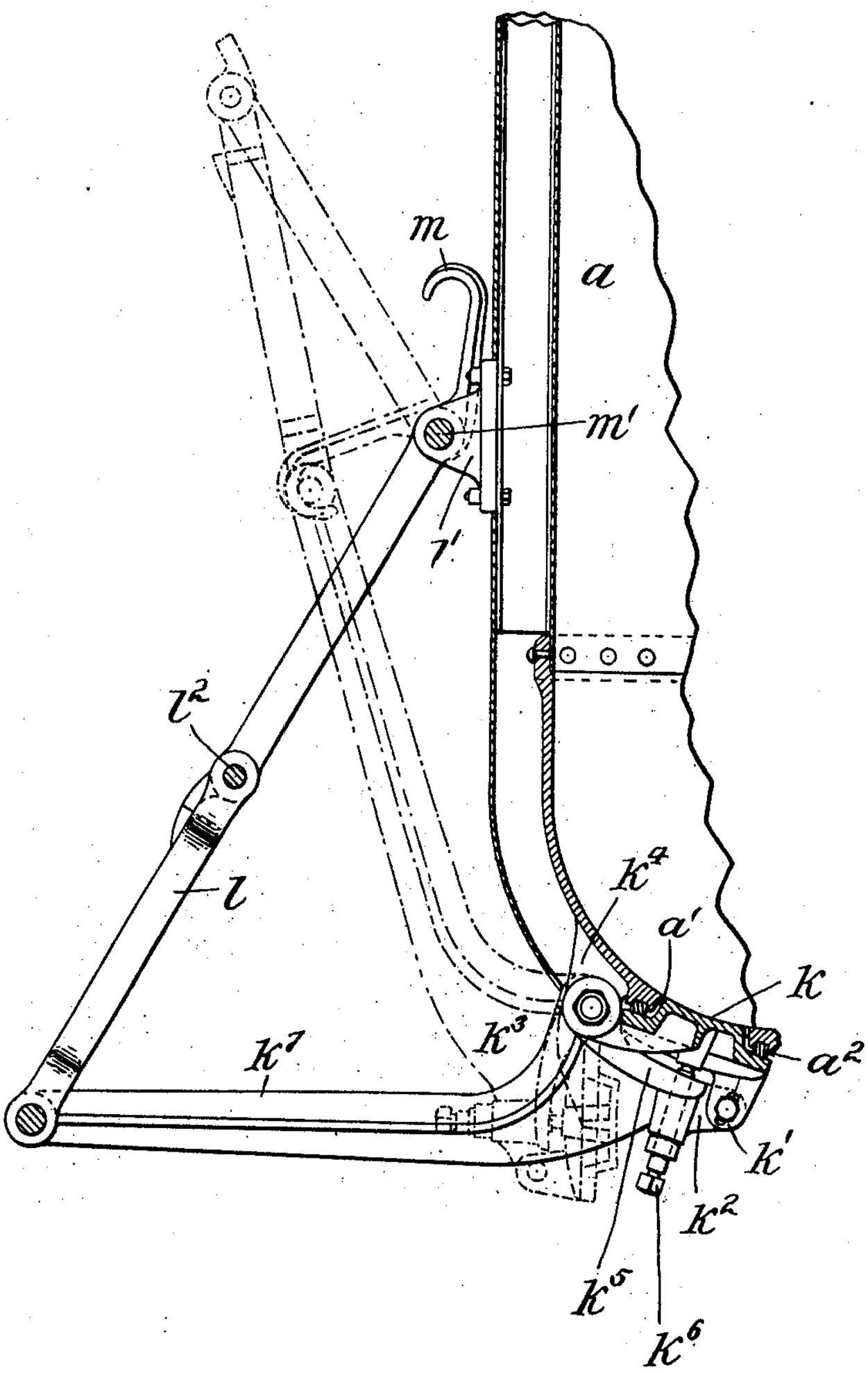
4 SHEETS—SHEET 4.

Fig. 5.



Attest:

Edgeworth Bruce

W. B. McGinn

Inventor:

by Joseph Schneible

Redding, Riddle & Graves

Attys.

UNITED STATES PATENT OFFICE.

JOSEPH SCHNEIBLE, OF WEEHAWKEN, NEW JERSEY.

STRAINER-TUB FOR BREWERS, &c.

No. 826,891. Specification of Letters Patent. Patented July 24, 1906.

Application filed April 20, 1906. Serial No. 312,762.

To all whom it may concern:

Be it known that I, JOSEPH SCHNEIBLE, a citizen of the United States, residing in Weehawken, State of New Jersey, have invented certain new and useful Improvements in Strainer-Tubs for Brewers, &c., of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to the construction of mash and strainer tubs, such as are commonly employed in brew-houses; and it has for its object to make possible the employment of rectangular tubs of this character and to attain the advantages which may be derived from the use of such rectangular tubs.

The invention will be more fully described hereinafter with reference to the accompanying drawings, in which it is illustrated and in which—

Figure 1 is a view, partly in side elevation and partly in longitudinal section, of a mash or strainer tub which embodies the invention. Fig. 2 is a view of the same in horizontal section above the plane of the traveling scrapers and stirrers, the endless chains being partly broken away to show details of construction below them. Fig. 3 is a view of the same in end elevation. Fig. 4 is a view in vertical section on the plane indicated by the line 4 4 of Fig. 1. Fig. 5 is a detail view, on a larger scale, illustrating particularly the means for operating the gate.

The body *a* of the improved tub is substantially rectangular both in plan and in vertical section, a hood or cover *b*, preferably curved, as shown, being superimposed upon the body *a*. The bottom *c* is dished toward one or more outlets, as at *c'*, and slightly above the bottom is supported a false or strainer bottom *d*, which may be of any preferred constructon adapted to permit the separation of the wort from the grains after conversion has taken place in the tub and to retain the grains.

For the stirring of the mash in the strainer-tub and also for the removal of the grains after the wort has run off there is provided a stirrer and grain-remover combined, which comprises one or more endless chains *e*, adapted to support at intervals bars *e'*, which are preferably of angle-iron or other suitable material placed as shown in Fig. 1. The chains *e* are supported by chain-wheels *f* and *f'*, which are mounted on studs or short shafts f^2 and a shaft f^3, respectively, the shaft f^3 being a driving-shaft. The studs f^2 are adjustable toward and from the shaft f^3 for the purpose of taking up slack in the chains *e* and for this purpose may be mounted in bearings *g*, mounted to slide in bosses *h*, secured to the sides of the tub. Adjusting-screws *g'* are threaded through the ends of the bosses *h* to adjust the bearings *g*, their outer ends being accessible outside of the tub, so that adjustment can be effected at any time without interrupting the use of the tub. It is highly desirable that the bars *e'* shall not drag heavily upon the strainer-bottom *d* and that they shall not be separated therefrom by too great a space. Accordingly tracks or ways *i* are provided, upon which the ends of said bars *e'* may rest, the tracks or ways being preferably in line with the chains, so that the chains themselves shall not drag upon the strainer-bottom between the bars even if they are slack. The tracks or ways *i* are provided for the lower members of the chain, but, if desirable, in order to prevent sagging of the upper members tracks or ways *i'* may be provided therefor.

If the shaft f^3 be rotated in one direction, as contra-clockwise, or in a direction opposite to that indicated by the arrow in Fig. 1, the bars *e'* act as stirrers for the mash; but if said shaft be driven in the direction indicated by the arrow the bars *e'* will carry forward the grains on the strainer-bottom to the left-hand end of the tub, as seen in Fig. 1, and provision is therefore made for the removal of the grains at that end.

As shown, the tub *a* is provided at its left-hand end, either in the bottom or close to it, with an opening *a'*, which extends entirely across the tub from side to side, and is preferably flanged, as at a^2. A door or gate *k* is provided to close the opening, being preferably hinged loosely, as by slotted ears *k'*, upon the short arms k^2 of levers k^3, which are pivoted coaxially on lugs k^4, secured to the tub. Other short arms k^5, secured to the arms k^2 to move therewith, carry adjusting-screws k^6, arranged to bear against the door *k*, so that the door may be set up more or less against its seat on the flange a^2 for the purpose of making a tight joint. The long arms k^7 of the levers k^3 are connected by elbow-jointed links *l* with supports *l'* on the end of the tub. Hooks *m* are hung upon a shaft *m'*, carried by two of the supports *l'*, to engage the shaft or rod l^2, which completes the elbow-joints of the links *l*, so that when

such links are flexed and the levers k^3 are raised, as shown by dotted lines in Fig. 5, the hooks will retain the parts in their dotted-line position with the door or gate open. In the position of the parts indicated by full lines in Fig. 5 the door is locked against the opening, the degree of pressure being determined by the adjusting-screws k^6.

I claim as my invention—

1. A rectangular mash and strainer tub having a strainer-bottom, a door or gate across one end for the discharge of grains from the strainer-bottom, chain-wheels mounted in the tub at the ends thereof, endless chains carried by said wheels, and transverse bars carried by said chains.

2. A rectangular mash and strainer tub having a strainer-bottom, chain-wheels mounted in the tub at the ends thereof, adjustable bearings for the chain-wheels at one end of the tub, endless chains carried by said wheels, and transverse bars carried by said chains above the strainer-bottom.

3. A rectangular mash and strainer tub having a strainer-bottom, bosses secured to the sides of the tub at one end, adjustable bearings mounted in said bosses, adjusting-screws extended through the ends of said bosses, chain-wheels carried by said adjustable bearings, other chain-wheels at the other end of the tub, chains carried by said wheels, and transverse bars carried by the chains above the strainer-bottom.

4. A rectangular mash and strainer tub having a strainer-bottom, a door or gate across one end for the discharge of grains from the strainer-bottom, chain-wheels mounted in the tub at the ends thereof, endless chains carried by said wheels, transverse bars carried by said chains, and tracks or ways to support the bars of the lower members of said chains.

5. A rectangular mash and strainer tub having a strainer-bottom, a door or gate across one end for the discharge of grains from the strainer-bottom, chain-wheels mounted in the tub at the ends thereof, endless chains carried by said wheels, transverse bars carried by said chains and tracks or ways in line with the lower members of said chains to support the same.

6. A rectangular mash and strainer tub having a strainer-bottom, a door or gate across one end for the discharge of grains from the strainer-bottom, chain-wheels mounted in the tub at the ends thereof, endless chains carried by said wheels, transverse bars carried by said chains, and upper and lower tracks or ways to support the bars of the upper and lower members of the chains.

7. A rectangular mash and strainer tub having a strainer-bottom, an opening across one end for the discharge of grains from the strainer-bottom, endless chains and transverse bars to transfer the grains toward such opening, a door or gate, levers supporting such door or gate, and means intermediate said levers and door to adjust the same with reference to the opening.

8. A rectangular mash and strainer tub having a strainer-bottom, an opening across one end for the discharge of grains from the strainer-bottom, endless chains and transverse bars to transfer the grains toward such opening, a door or gate, levers in the arms of which said door or gate is loosely mounted and adjusting-screws carried by said levers to coöperate with said door or gate.

9. A rectangular mash and strainer tub having a strainer-bottom, an opening across one end for the discharge of grains from the strainer-bottom, endless chains and transverse bars to transfer the grains toward such opening, a door or gate, levers supporting such door or gate, means intermediate said lever and door to adjust the same with reference to the opening and elbow-links connecting the free ends of said levers with fixed points on the tub.

This specification signed and witnessed this 12th day of April, A. D. 1906.

JOSEPH SCHNEIBLE.

In presence of—
BUCHANAN PERIN,
W. B. GREELEY.