

No. 887,254.

PATENTED MAY 12, 1908.

V. KÄMMERER.
MIXING MACHINE.

APPLICATION FILED AUG. 3, 1907.

2 SHEETS—SHEET 1.

Fig. 1

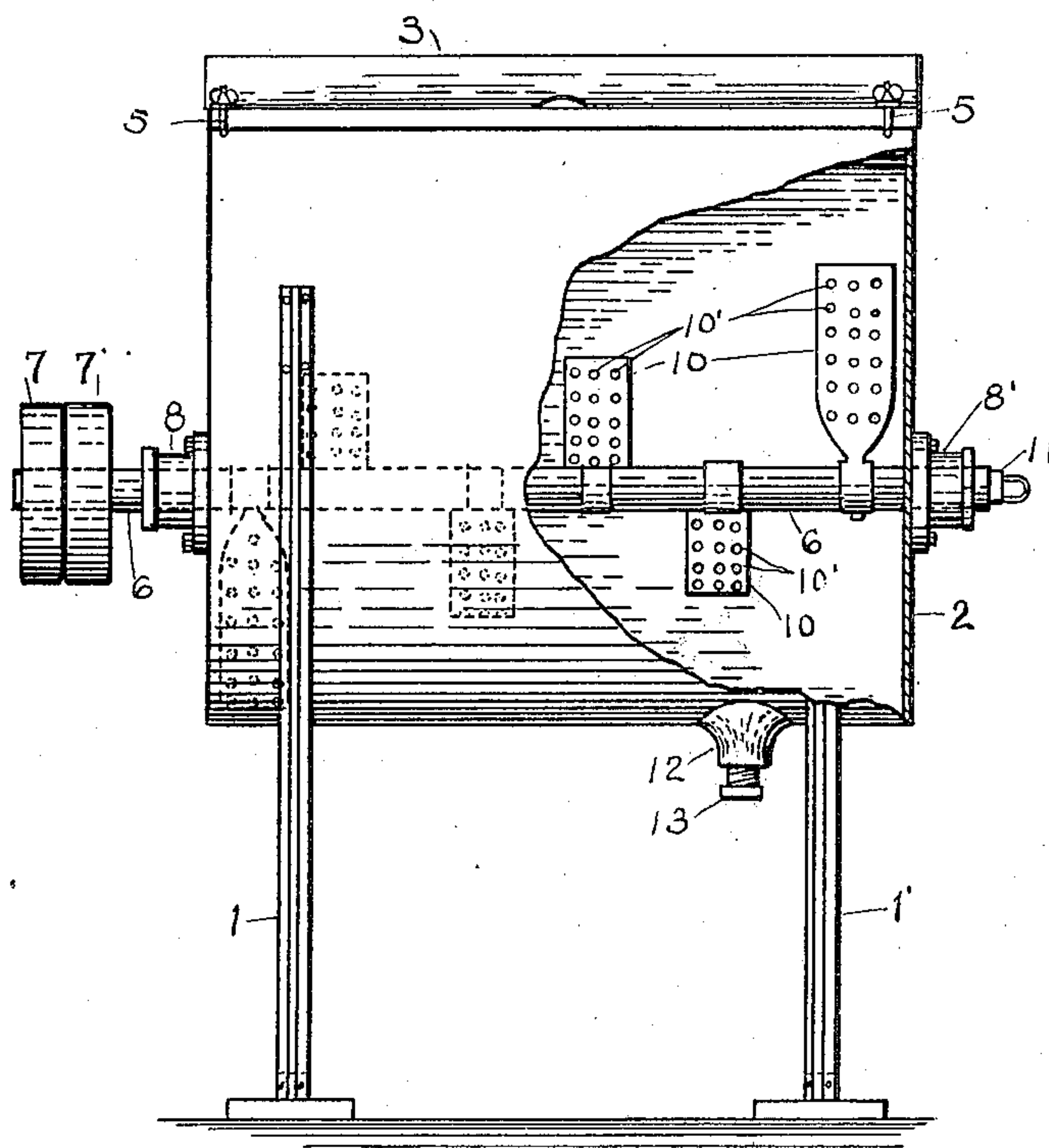
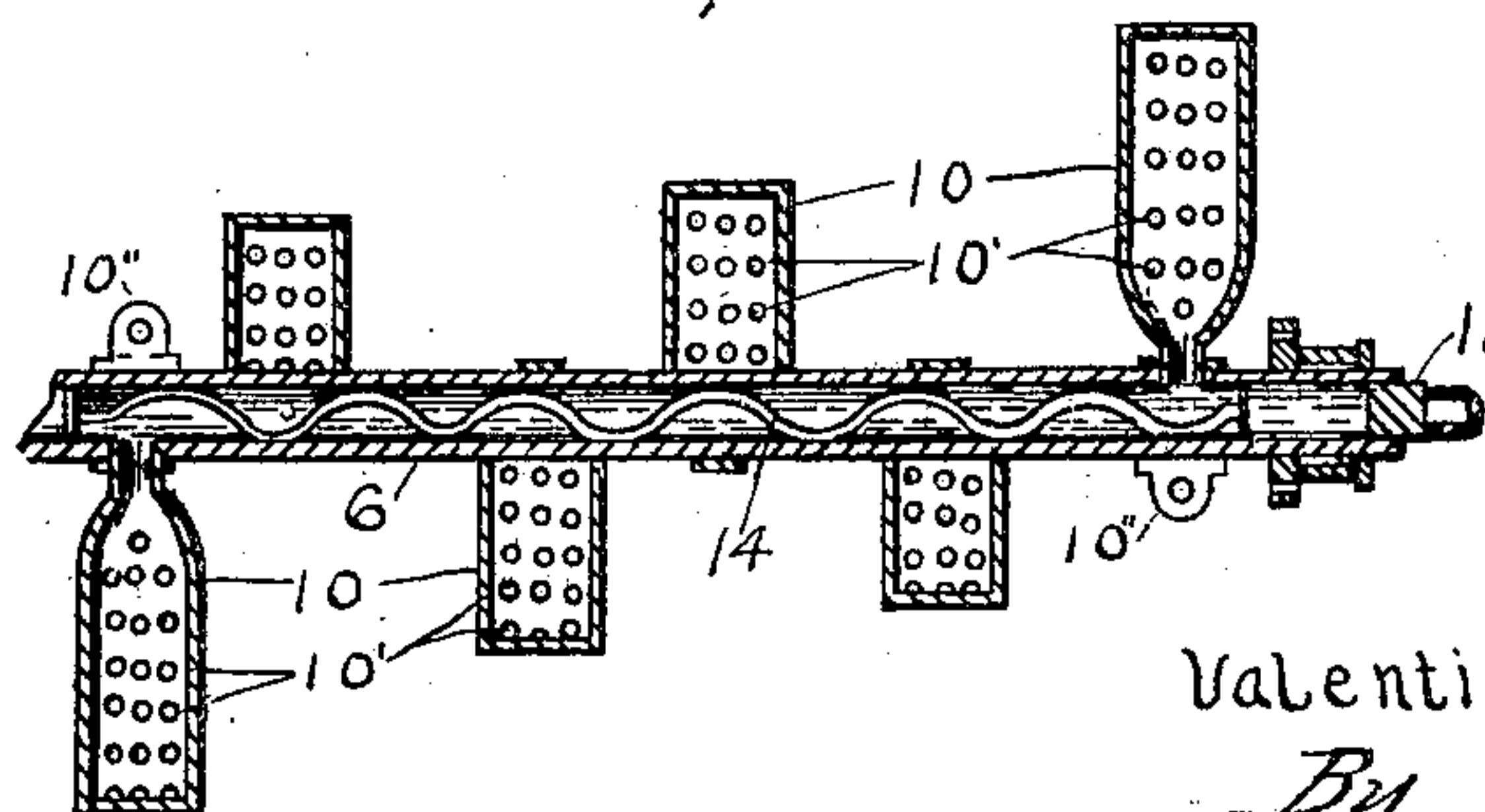


Fig. 2



Witnesses
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Inventor
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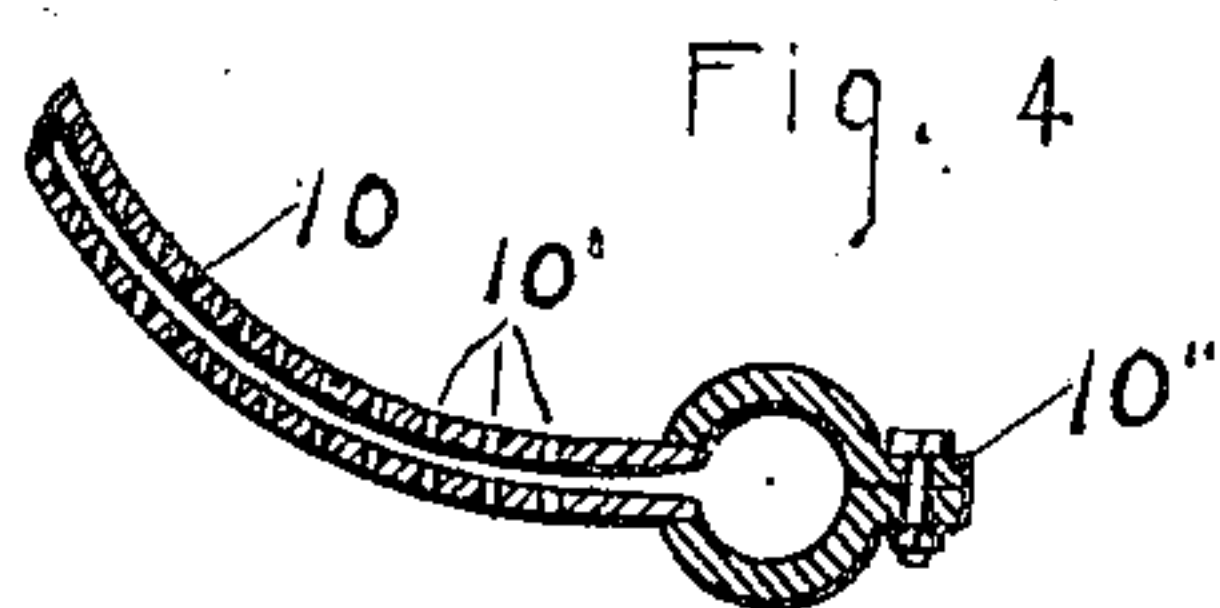
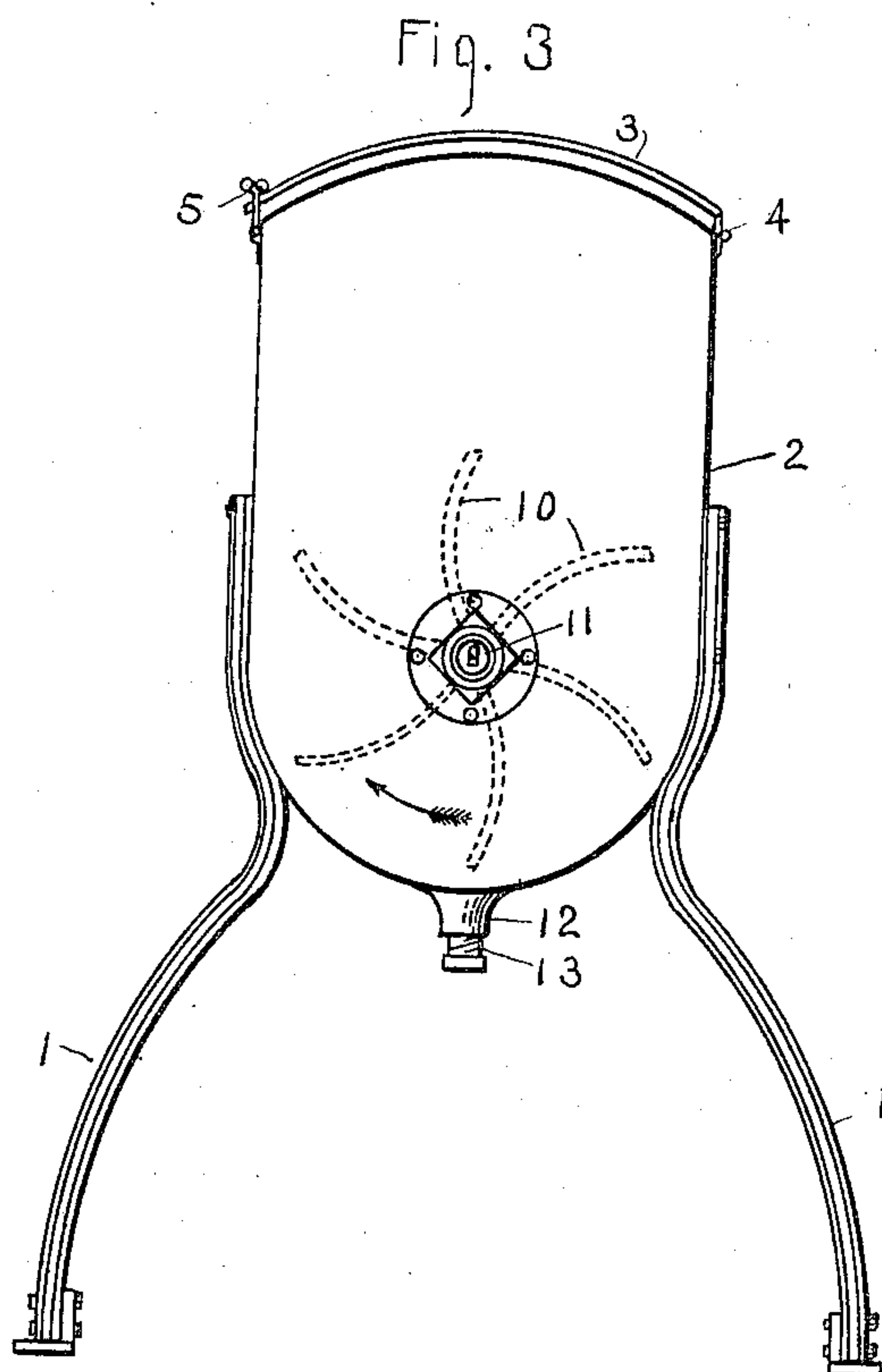
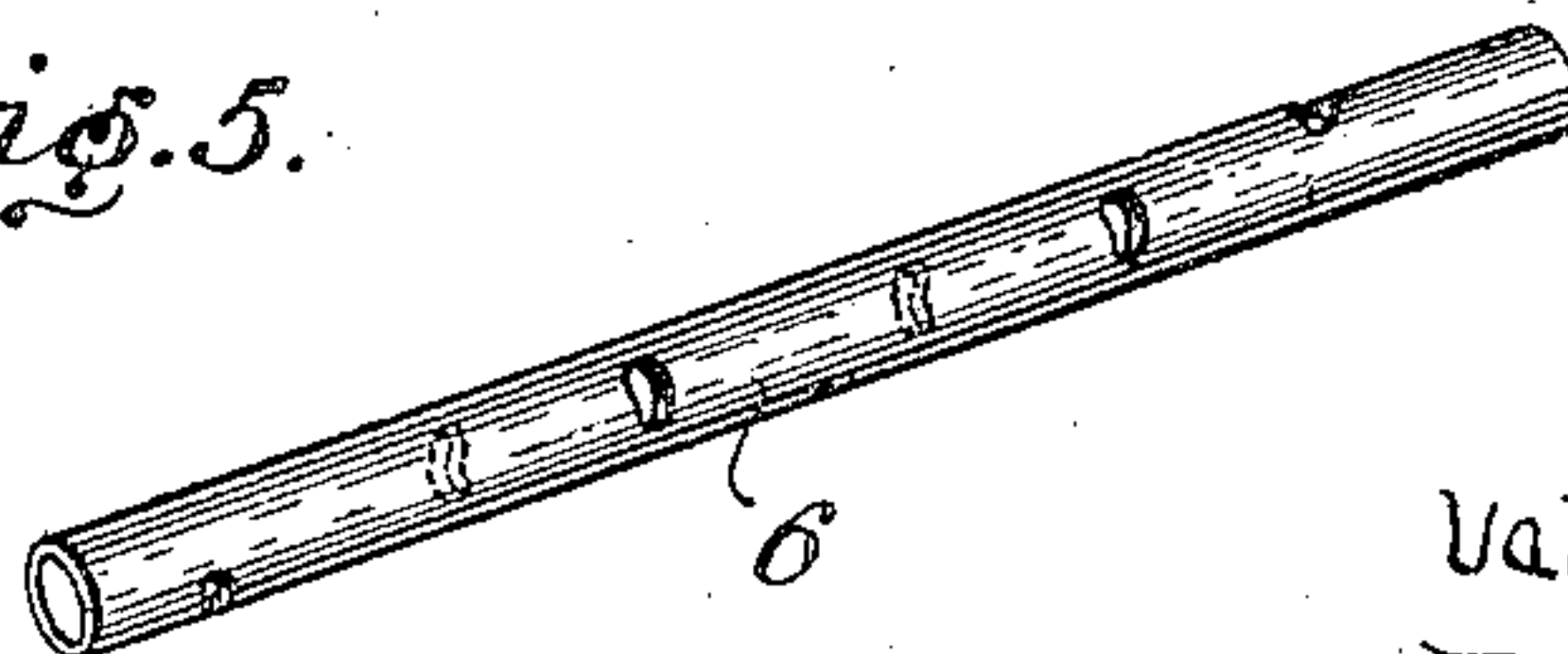


Fig. 5.



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UNITED STATES PATENT OFFICE.

VALENTIN KÄMMERER, OF PHILADELPHIA, PENNSYLVANIA.

MIXING-MACHINE.

No. 887,254.

Specification of Letters Patent.

Patented May 12, 1908.

Application filed August 3, 1907. Serial No. 386,921.

To all whom it may concern:

Be it known that I, VALENTIN KÄMMERER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Mixing-Machines, of which the following is a specification.

My invention relates to improvements in machines for preparing gelatin, in that form known as "finings", extensively used in breweries for clarifying the beverages there produced.

The objects of my invention are to provide a simple and efficient machine by means of which finings may be prepared, by a direct process, and without the employment of heavy manual labor as now required, and a further object is to provide means in the machine whereby the solids used may be thoroughly mixed and commingled with, or dissolved in, the liquids.

I attain these objects by the mechanism hereinafter particularly described and shown in the accompanying drawings in which:

Figure 1. is a side elevation of the complete machine, showing the side partially broken away and viewing the interior. Fig. 2. is a sectional view of the shaft and beating and collecting arms connected thereto. Fig. 3. is an end elevation of the machine, and Fig. 4. is a detail of the beating and collecting arm. Fig. 5, is a perspective view of a shaft removed from the casing showing the arrangement of the openings therein.

The machine stands on pedestals or supports as 1 and 1', and consists of a heavy casing 2, the lower part of which is semi-cylindrical in cross section, while the top is dome shaped and provided with a cover 3. This cover is connected by several hinges 4, at the rear and can be clamped securely in place by the screws 5, at the front.

On the shaft 6, and beyond the casing of the machine, are tight and loose pulleys 7 and 7' respectively; suitable bearings are provided at 8 and 8', in which provision is made for maintaining some form of packing to prevent the liquid from issuing.

I prefer to make that portion of the shaft within the machine, and extending oppositely to the pulleys hollow having spaced elongated openings, and attach on it a series of beating and collecting arms 10 of hollow construction and containing a plurality of perforations 10' adapted to register with the

openings of the shaft, through which the liquid may enter, pass into the shaft 6, and be discharged at the end by the removal of the plug 11. Provision is also made to withdraw the contents of the machine at the opening 12, which is suitably provided with the removable cap 13.

Within the hollow shaft 6, I may place a helix, or coiled plate 14, in such manner that the revolutions of the shaft operate to force any liquid which may have entered towards the end secured by the plug 11.

I prefer to make the beating and collecting arms 10 curved in the direction of their rotation, and provide a clamping means as 10'' so that they can be adjusted upon the shaft at any desired angle, so that I may arrange them in a helix, that is to say, distributed equally about the shaft; the ends of the beating and collecting arms may approach very closely to the inner surface of the casing 2, so that all substances therein may be subjected to their action. It will also be seen that by mounting the arms adjustably on the shaft, they can be moved in respect to the openings in the shaft, so as to partly close the communicating openings in the arms, whereby the flow of liquid through the same can be regulated, so as to discharge the required amount.

In most breweries the finings, used for clarifying, are mixed in a vat with a heavy wooden paddle, by hand labor, which is unsatisfactory, because of the time necessarily taken in the operation and the expense and imperfections in the product obtained. In my machine I place a suitable quantity of the isinglass, or other form of gelatin to be used, together with sufficient water, and, as the isinglass swells, or "grows", as it is termed, it is essential that the mass be constantly stirred, otherwise the finings will not be of the proper consistency, but lumpy and requiring an excessive quantity of isinglass to produce desired results. In my machine I may continue the operation indefinitely, even after the proper results have been obtained, for the prolonged operation of the machine does not injure the finings, although excellent results are attained expeditiously.

The finings may remain in the machine until it is desired to make use of them, when they may be drawn through the opening 12, or, by removing the plug 11, the finings will be gradually discharged while the machine is operating; thus it is possible to obtain

quicker results, as only properly prepared finings will enter the perforations in the beating and collecting arms and be delivered, the coarser, uncombined matter not thoroughly prepared remaining in the machine until it has attained the proper consistency and is in condition for use.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a mixing machine, the combination with a horizontally disposed casing having a semi-cylindrical body, a cover and means of support therefor, of a hollow shaft, open at one end and revolubly mounted therein, driving means for said shaft, a helical member disposed within the shaft, a closure for the shaft, a plurality of hollow beating and collecting arms adjustably secured helically about the shaft, having a plurality of perforations in the sides thereof and communications with the interior of said hollow shaft, all as and for the purpose specified.

2. In a mixing machine, the combination with a horizontally disposed casing having a semi-cylindrical body, a cover and suitable means of support, of a hollow shaft, rigidly closed at one end and open at the other, revolubly mounted in water tight bearings attached at each side of said casing, a removable closure for the open end of said shaft, a plurality of flattened hollow beating and collecting arms, curved and having an adjustable attaching means to said shaft, perforations in said beating and collecting arms, said perforations communicating with the recess in the hollow shaft, and said arms ar-

ranged helically upon said shaft, all as and for the purpose specified.

3. In a mixing machine, the combination with a casing of a revoluble hollow shaft extending through said casing, provided with openings and hollow beaters and collectors adjustably mounted on said shaft registered with said openings.

4. In a mixing machine, the combination with a casing of a revoluble hollow shaft, extending through said casing, provided with openings and a closed end, curved hollow beating and collecting arms adjustably mounted on said shaft registering with said openings, said arms being provided with perforations, whereby the substance within the casing will be collected and conveyed out through said beaters and shaft, for the purpose described.

5. In a mixing machine, the combination with a casing provided with a cover, of a revoluble hollow shaft mounted in said casing provided with elongated openings and a closed end, a coiled plate arranged in said shaft, a plug for closing the open end of said shaft, hollow beating and collecting arms, curved longitudinal of their length, adjustably mounted on said shaft registering with said openings, whereby said arms can be arranged on said shaft in a spiral manner.

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

VALENTIN KÄMMERER.

Witnesses:

JOHN C. OETERS,
WARREN E. WILLIS.