No. 699,268. Patented May 6, 1902.

O. D. WETMORE.

GLUE TANK.

(Application filed July 21, 1900.)

(No Model.)

Fig. 1.

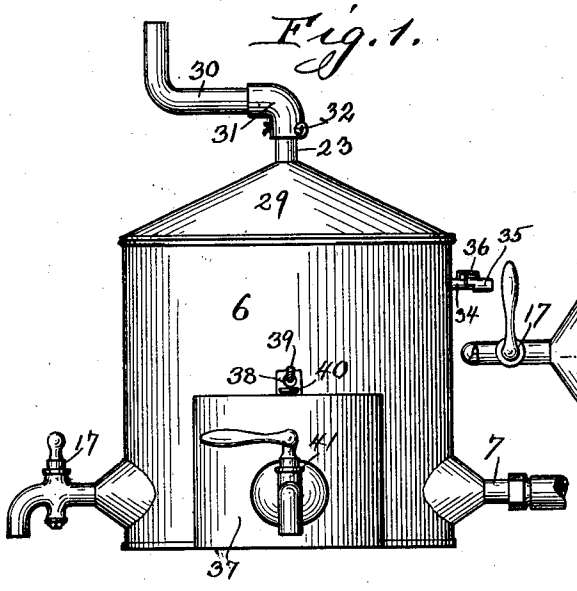


Fig. 2.

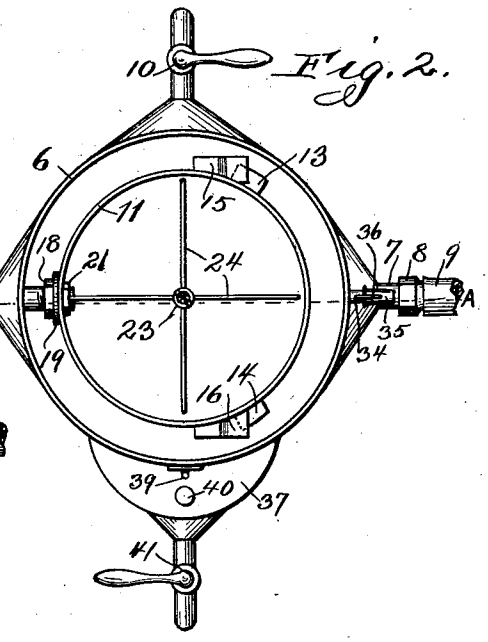


Fig. 3.

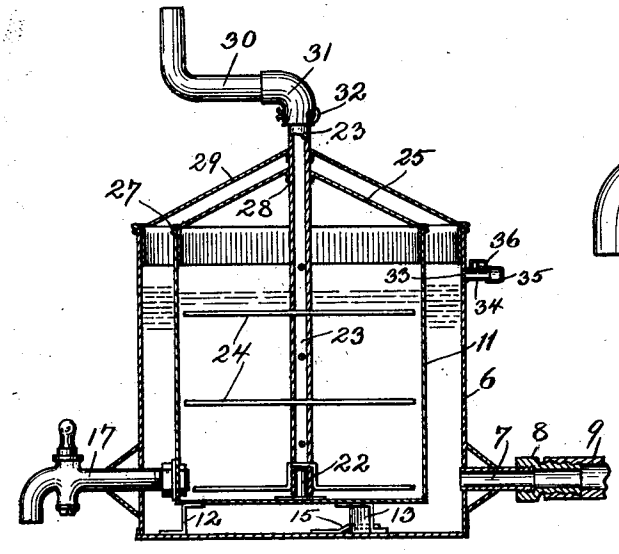


Fig. 4.

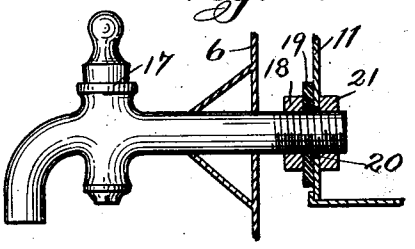


Fig. 5.



Witnesses:
R. J. Jacker.
L. E. Serage

Inventor:
Orin D. Wetmore,
By Coburn, Hibben & McElroy
Atty's.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ORIN D. WETMORE, OF CHICAGO, ILLINOIS.

GLUE-TANK.

SPECIFICATION forming part of Letters Patent No. 699,268, dated May 6, 1902.

Application filed July 21, 1900. Serial No. 24,370. (No model.)

To all whom it may concern:

Be it known that I, ORIN D. WETMORE, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Glue-Tanks, of which the following is a specification.

My invention relates to a novel glue-tank for preparing and keeping glue in condition for use. As these tanks have hitherto been constructed in the form of an open tank with a water-jacket surrounding it, from which open tank the glue is dipped, a crust, as it were, forms on the top of the glue which was exposed to the outside air, which crust had to be skimmed off before the glue was dipped out for use. The uniform quality of the glue was also dependent upon stirring it with a paddle in the ordinary manner.

In my improved device the glue is made and kept in a closed tank surrounded on all sides by a water-jacket, so that no crust can form, and it is drawn off as desired by a faucet from the lower part of the tank, so that there is no necessity for any waste. I also provide a stirrer with blades extending throughout the tank, which can be rotated, so as to insure the ingredients of the glue being properly mixed and a uniform quality maintained throughout the tank.

Referring to the accompanying sheet of drawings, in which the same reference characters are used to designate identical parts in all the figures, Figure 1 is a side elevation of a tank with a reservoir for keeping the supply of hot water for diluting the glue attached. Fig. 2 is a plan view of the same with the lids for the tank and water-jacket removed. Fig. 3 is a central section on the line A A of Fig. 2. Fig. 4 is an enlarged detail in section, showing the connection of the drawing-off faucet with the tank; and Fig. 5 is a detail in perspective.

The water-jacket 6 I preferably construct in the form of a cylindrical can, which is adapted to be seated upon a table or other support and which is provided near its bottom at one side with a pipe 7, opening into it and provided with the connection 8, by which it is secured to a pipe 9, by which steam is introduced into the jacket to keep the water therein heated to the desired temperature. Opening into this same jacket, preferably near the same level, is another pipe, which terminates in a faucet 10, by which the surplus water may be drawn off as desired. Seated centrally within this water-jacket 6, and preferably of the same cylindrical shape and can-like construction, is the tank proper, 11, which is provided with the legs or supports 12, 13, and 14, which are secured to the outer edge of the bottom of the tank, preferably at equidistant intervals, and which are conveniently constructed of short Z-shaped strips of metal, the upper horizontal portion of which is secured to the bottom of the tank. As it is necessary to accurately position the tank in the center of the jacket, this is facilitated and the tank secured in proper position by the employment of the catch-strips 15 and 16, which are of the shape clearly shown in Fig. 5 and which coöperate with the standards or supports 13 and 14, respectively, in properly positioning the tank and securing it in place in the manner clearly shown in Figs. 2 and 5. The jacket 6 has secured in one side thereof near the bottom a faucet 17, similar to the faucet 10, but with the pipe thereof provided with the screw-threaded inner end, upon which is placed the nut 18, having the rubber gasket or washer 19 next to it, the screw-threaded end of the faucet being adapted to be passed through an aperture 20, formed in the side of the tank 11, when it is put in position in the jacket and the parts drawn together, and a liquid-tight joint being made by then screwing the nut 21 upon the inner end of the faucet on the inside of the tank. With this construction it will be seen that the glue in the tank, which is kept so hot as to be quite thin, can be readily drawn off as desired through the cock 17, which, passing through the water-jacket, is kept so hot that the glue cannot harden therein so as to stop it up. Centrally located in the bottom of the tank is the bearing-post 22, which is secured upon the bottom of the tank in any desired manner and serves as a bearing for the preferably hollow shaft 23 of the stirrer, which has the radial arms 24, formed by passing rods through the shaft 23 and securing them thereto in any desired manner. The top of the tank is closed by the conical lid 25, which has the short cylindrical flange thereon, preferably crimped and fitting on the inside of the tank, a boss

27 being formed between the body of the lid and the flange, which boss fits down upon the rim of the tank, so that the lid closes it thoroughly. A central cylindrical aperture 28 is provided in the top of the lid to permit the passage of the shaft 23 therethrough. The jacket 6 is provided with a lid 29, similar in all respects to the lid 25, except that it is of the larger size necessary to close the jacket. The shaft 23 is provided at its upper end with a crank-handle 30, by which it may be turned, and this is preferably made detachable by means of the elbow-sleeve 31 and the cotter-pin 32, coöperating with an aperture in the upper end of the shaft. A vent 33 is formed in the side of the jacket near the top of the tank, so as to prevent the water in the jacket accidentally getting so high as to run into the tank. This vent is conveniently formed of the small tube 34, opening into the side of the jacket and provided with the cap 35, which is conveniently held attached thereto by means of the wire loop 36.

The operation of my device will be readily apparent. The covers of the tank and jacket being removed, the materials for the glue are placed in the tank, and the covers are then replaced and steam is admitted through the pipe 9, so as to heat the water in the jacket to the boiling-point, and while the glue is being dissolved the handle 30 is stirred to assist in the solution of the ingredients and to insure their being thoroughly and uniformly distributed. As the glue is drawn off it is frequently desired to make it thinner for some purposes, and as the water in the jacket is apt to be impure I provide the feeder 37, which consists of a small tank which is preferably crescent-shaped in horizontal section, so as to fit snugly against the side of the water-jacket, as shown in Figs. 1 and 2, and it may be provided with an eye 38, which catches over a hook 39, secured to the side of the water-jacket. The feeder-tank is provided with a filling-aperture, which is closed by the cap or plug 40, and has opening into it the faucet 41, by which the pure water therein, which is maintained in a heated state owing to its proximity to the jacket, can be withdrawn for use as desired.

While I have shown my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of some modifications in form and structure and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the art.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a glue-tank, the combination with the closed water-jacket, of the closed tank supported therein so that it is surrounded throughout by the contents of the jacket, and a faucet passing through the water-jacket into said tank, substantially as and for the purpose described.

2. In a glue-tank, the combination with the closed water-jacket, of the closed tank supported therein so that it is surrounded throughout by the contents of the jacket, a rotating stirrer in said tank having a handle projecting outside of the water-jacket, and a faucet passing through the water-jacket into said tank, substantially as and for the purpose described.

3. In a glue-tank, the combination with the water-jacket, of the tank supported therein and surrounded on all sides thereby, removable covers for said tank and jacket, and a faucet passing through the water-jacket into said tank, substantially as and for the purpose described.

4. In a glue-tank, the combination with the water-jacket, of the tank supported therein so as to be entirely surrounded by the fluids in said jacket, a rotating stirrer mounted in the said tank, removable covers for said tank and jacket through which said stirrer passes, and a faucet passing through the water-jacket into said tank, substantially as and for the purpose described.

5. In a glue-tank, the combination with the water-jacket, of the tank supported therein so as to be entirely surrounded by the fluids in said jacket, removable covers for said jacket and tank having a centrally-located aperture therein, the stirrer rotatably mounted in said tank and consisting of a shaft having its upper end projecting through said aperture and blades carried thereby within the tank throughout its length, and a removable handle, substantially as and for the purpose described.

ORIN D. WETMORE.

Witnesses:
L. E. SERAGE,
J. H. MCELROY.