

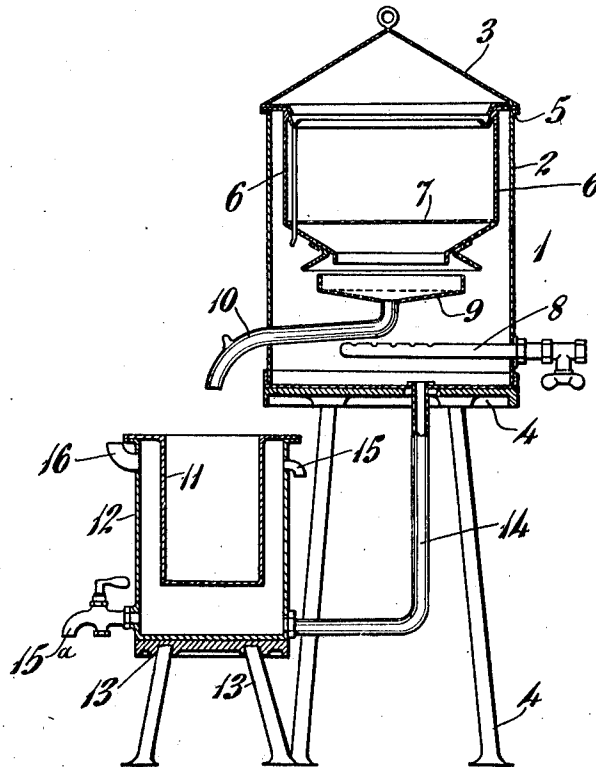
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GLUE HEATER.

APPLICATION FILED JULY 24, 1909.

989,101.

Patented Apr. 11, 1911.



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UNITED STATES PATENT OFFICE.

CHARLES M. ZIMMERMAN, OF CINCINNATI, OHIO.

GLUE-HEATER.

989,101.

Specification of Letters Patent.

Patented Apr. 11, 1911.

Application filed July 24, 1909. Serial No. 509,414.

To all whom it may concern:

Be it known that I, CHARLES M. ZIMMERMAN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Glue-Heaters, of which the following is a specification.

My invention relates to devices for melting glue by the direct application of steam, and means for keeping the melted glue of a uniform temperature.

By the old method of applying either live or dry steam to glue in jacketed kettles for the purpose of heating the glue, much injury is done, in many cases the fibers of the glue being destroyed, and it is the purpose of my invention to eliminate all such disadvantages in such a manner as will be hereinafter set forth.

Another object of my invention is to provide a simple and inexpensive means for keeping glue warm without the direct application of steam and at the same time provide hot water which is constantly required and is an essential element in a glue room.

A further object of my invention is to provide means for keeping glue at a uniform temperature after said glue has been melted, by utilizing the hot water caused from the condensation of the steam in the glue melting apparatus.

With these objects in view, I provide a glue melting apparatus, a separate and distinct heating receptacle and a pipe connecting said glue melting apparatus with the glue heating receptacle. I also provide certain other parts and combinations of parts as herein set forth.

In the drawing, the figure is a vertical section of the complete device.

In my preferred construction of the apparatus, 1 indicates an instantaneous glue filtering converter, consisting of a cylindrical jacket or kettle 2 having a lid or cover 3, and legs or stand 4. Placed inside of the jacket 2 and resting on the flange 5 at the top of the jacket 2 is another jacket or casing 6, with perforated bottom 7, on which the soaked glue is placed. I provide a pipe 8 through which steam passes with apertures properly placed therein to allow the steam to pass up into the glue, thereby melting it. As the glue is melted, it drops down through the openings in the

perforated bottom 7 into a catch pan 9 and is carried away by a pipe 10 and deposited into a jacketed receptacle 11, said receptacle resting on the top of the jacket 12 and the jacket 12 in turn resting on supporting table 13. From receptacle 11 the glue may be dipped as it is needed. I provide a pipe 14 connected to the jacket 2 at one end and to the bottom of the jacket 12 at the other. The purpose of this pipe is to provide means for allowing the hot water caused from the steam becoming condensed as it comes in contact with the outer walls of the glue filtering converter 1 to flow into the water jacket or reservoir 12. As the jacket 12 becomes filled with said hot water, it heats the jacketed glue receptacle 11 which in turn heats the glue which has been deposited therein and keeps same warm and at a uniform temperature. In case the condensation of steam is of too great a volume for the jacket 12 to hold, I provide an overflow pipe 15. In shops where glue is used extensively, hot water is a most essential element. Therefore, I provide a faucet 15^a in the jacket 12 in order that workmen may conveniently obtain hot water for their individual glue jackets from the water jacket 12.

In case the condensation of steam is of insufficient volume to supply the jacket 12 with the required amount of hot water I provide an auxiliary supply pipe 16 through which I may add as much hot water as is necessary to maintain the proper temperature. For instance, when the apparatus is first put into operation it may be desired to first fill the jacket 12 with hot water and thereby prepare the receptacle 11 for immediate use.

There are various ways in which my invention might be modified without departing from its spirit and scope, and I do not wish to be confined to the exact details shown.

What I claim as new and desire to secure by Letters Patent is:

1. An apparatus of the character described, comprising a glue melting receptacle 6 having a perforated bottom 7 and non-perforated sides, inwardly converging or tapering walls below said perforated bottom, a jacket 2 surrounding said receptacle and spaced apart therefrom to form a steam space around said glue melting receptacle, a steam inlet pipe 8 for said jacket, a glue catch pan 9 disposed beneath said glue melt-

ing receptacle and a liquid glue pipe 10 extending from the bottom of said pan outwardly through said jacket 2, a glue heating kettle consisting of an open top jacket 5 12 having an open top flanged inner receptacle 11 extending downwardly therein and being of smaller diameter than said jacket 12 to form a water jacket therebetween, said glue heating kettle being arranged to 10 receive the liquid glue directly from pipe 10, and a pipe 14 extending from the bottom of the jacket 2 to the bottom of the jacket 12 to convey the condensed steam from the jacket 2 to the jacket 12 all ar- 15 ranged and combined in such a manner as to utilize the condensed steam and in melting the glue to heat the glue and maintain it in proper condition for use, substantially as set forth and for the purposes specified.

20 2. An apparatus of the character described, comprising a glue melting receptacle, means whereby the glue is melted, a glue heating kettle adapted to receive the liquid glue directly from said glue melting 25 receptacle, a water jacket surrounding said kettle and a steam pipe leading from said

glue melting receptacle to said glue heating water jacket, whereby steam from said glue melting receptacle is utilized to heat the water in said jacket and maintain the glue 30 therein in proper condition for use, substantially as set forth and for the purposes specified.

3. An apparatus of the character described, comprising a glue melting receptacle 35 provided with an inner casing spaced apart from the outer casing and having a perforated bottom and a discharge opening below said perforated bottom, a catch pan below said discharge opening, a discharge 40 pipe leading from said catch pan, a glue heating receptacle adapted to receive liquid glue from said discharge pipe, a water jacket for said glue heating receptacle, and a pipe leading from the bottom of said glue 45 heating receptacle to the bottom of said water jacket, substantially as set forth and for the purposes specified.

CHARLES M. ZIMMERMAN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
