

(No Model.)

C. D. WOOLWORTH.
REFRIGERATOR WALL OF WOOD PULP.

No. 429,830.

Patented June 10, 1890.

Fig. 1.

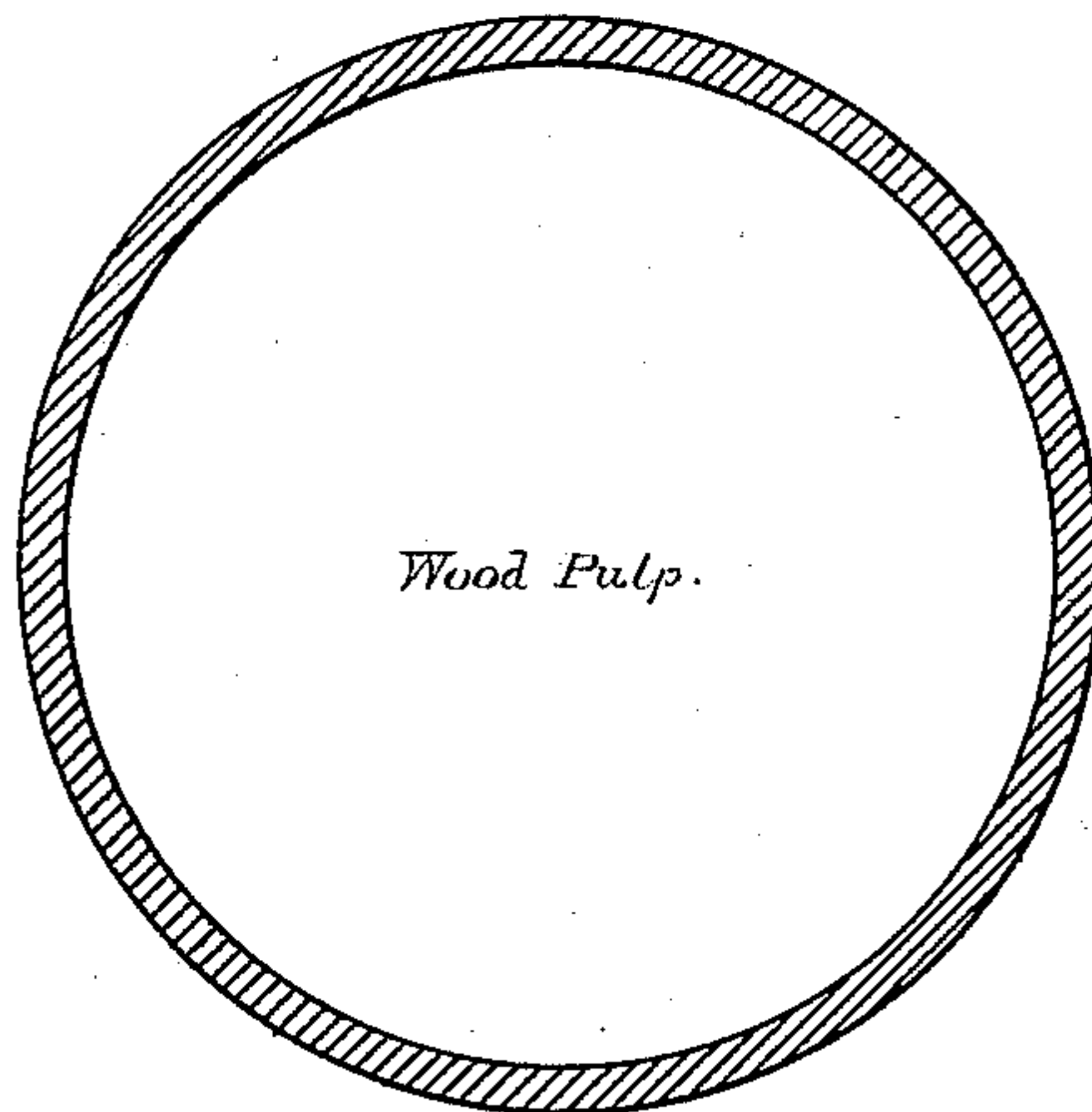


Fig. 2.

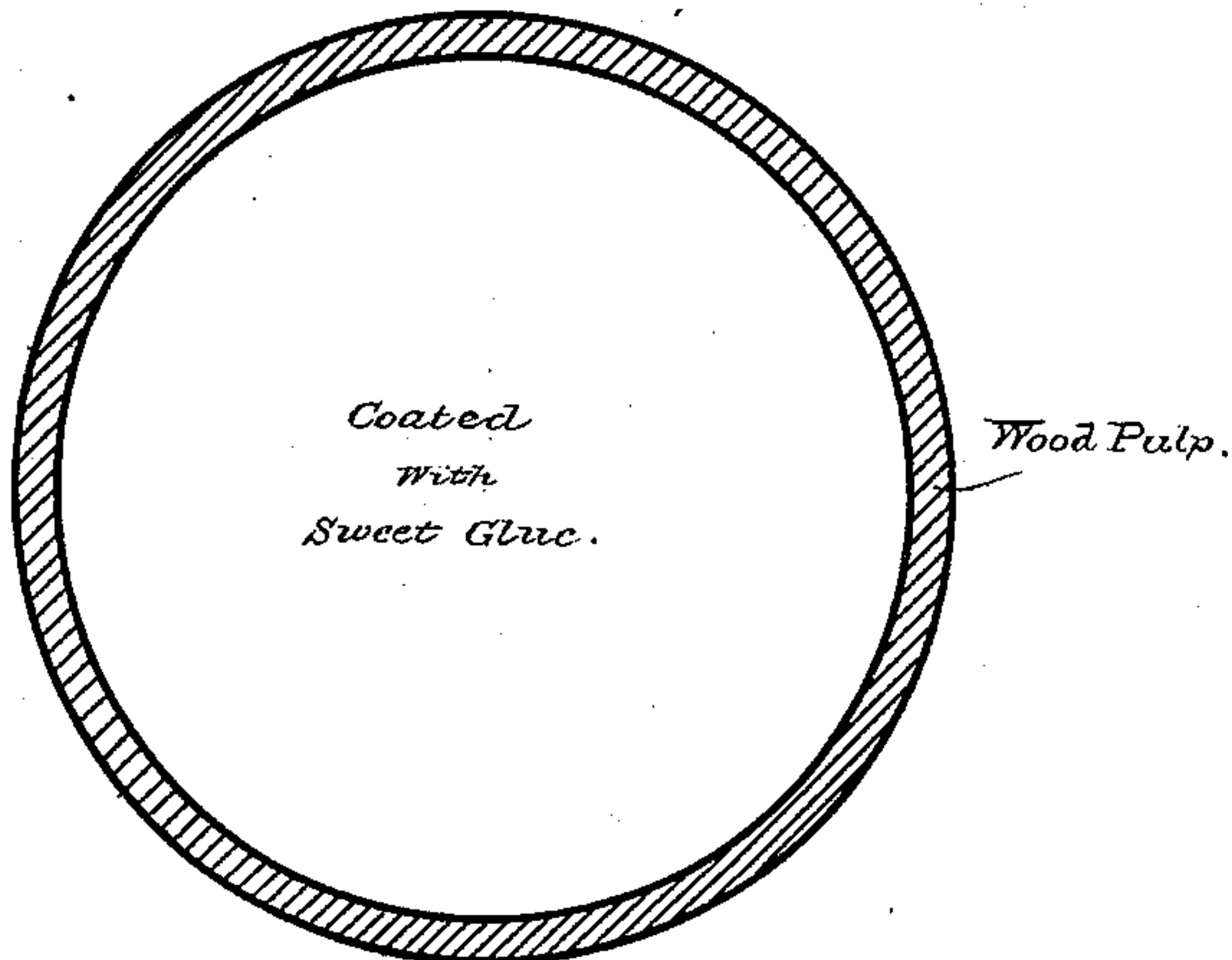
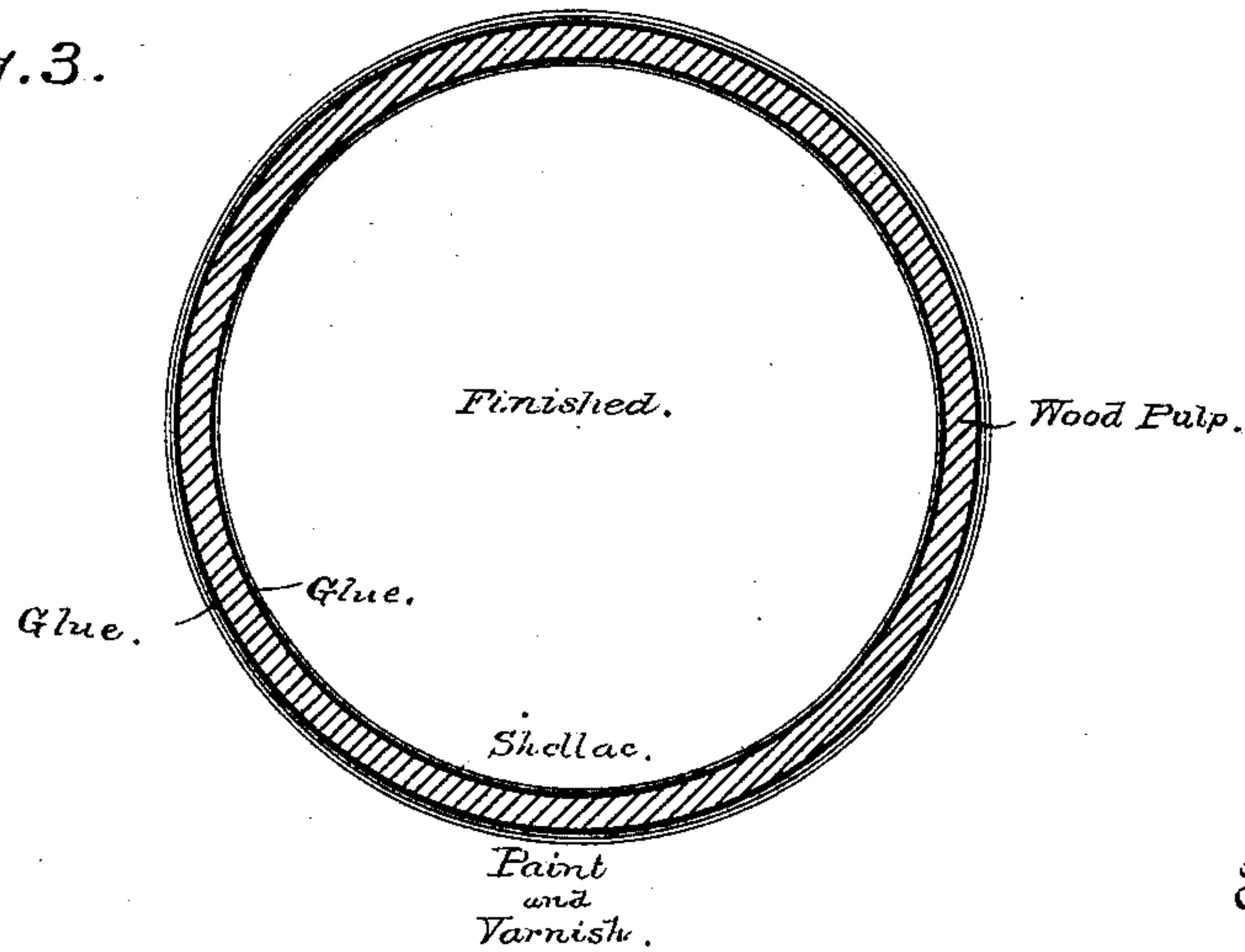


Fig. 3.



Witnesses

H. A. Lamb

J. M. Copenhaver,

Paint
and
Varnish.

Inventor

CHARLES D. WOOLWORTH

By his Attorney

W. L. Swin.

UNITED STATES PATENT OFFICE.

CHARLES D. WOOLWORTH, OF CHICAGO, ILLINOIS, ASSIGNOR TO CALVIN C. WOOLWORTH, OF CASTLETON, NEW YORK.

REFRIGERATOR-WALL OF WOOD PULP.

SPECIFICATION forming part of Letters Patent No. 429,830, dated June 10, 1890.

Application filed June 24, 1889. Serial No. 315,385. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. WOOLWORTH, a citizen of the United States, and a resident of Chicago, in the State of Illinois, have invented a new and useful Improvement in Refrigerator-Walls of Wood Pulp, of which the following is a specification.

It has long been known that wood pulp as compacted and molded in centrifugal machines is in its virgin or natural state an excellent non-conductor of heat, and various attempts have been made to utilize it for the walls of refrigerators and water-coolers. One method heretofore employed was to indurate the pulp cylinders the same as other pulp ware; but it was found that this very materially reduced the non-conducting quality of the wood pulp, and to this extent lessened its utility. In Patent No. 374,183, to Charles B. Gardner, it is proposed to confine the chemical treatment of the cylinders to about one-third of the thickness toward the center at each surface, leaving the central or middle portion—about one-third—in its natural or virgin state. I have invented an improvement in such refrigerator-wall, whereby practically the entire thickness of the wood pulp may be preserved in its virgin or natural state, and at the same time protected against absorbing moisture, and adapted to be decorated in the usual or suitable ways.

Another object of this improvement is to prevent imparting to the contents of the refrigerators any odors, as those of the resin and naphtha and linseed-oil commonly used in the chemical treatment of the pulp preliminary to ordinary induration.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of the drawings represents a cross-section of a hollow pulp cylinder as it comes from the centrifugal molding-machine. Fig. 2 represents a like view of the same at an intermediate stage of its treatment; and Fig. 3 represents a like view of the finished cylinder

ready for use as the "walls" of a cylindrical refrigerator.

In carrying this invention into effect I first produce, in customary manner, by means of a centrifugal pulp-molding machine, a hollow cylinder of wood pulp, Fig. 1, having suitable thickness and other proportions for the walls of a given size of cylindrical refrigerator or a given zone thereof. The same is then thoroughly dried in a suitable manner. This is best done in a kiln heated to a temperature of from 130° Fahrenheit up. The outside surface is then sandpapered to remove its mold-marks and adapted it to receive the required finish. A coating of glue—such as is known as "sweet glue," the same being perfectly sweet and free from smell—is then applied to all parts of the cylinder, and the latter is again baked until the glue is thoroughly dry. A perfectly-hard superficial coating is thus formed both on the inside and on the outside of the cylinder, as illustrated by Fig. 2, leaving the entire thickness of the pulp in its original state with its non-conducting qualities unimpaired. The outside may be supercoated in any approved way to waterproof and finish it. Japan paint followed by a coat of varnish is preferred. To the inside a coating of shellac is applied, which renders this surface hard and water-proof and at the same time free from all smell. The finished cylinder is represented by Fig. 3.

The refrigerator may be completed according to any approved plan.

Any required cutting of the cylinder should be done after its surfaces are hardened by the coatings of glue baked dry, as aforesaid. This insures smooth edges, which are preferably hardened by two coats of shellac, as the latter dries quickly, and but a small quantity is required for this purpose; but the cut edges may alternatively be coated with the glue and the cylinder again baked.

Having thus described the said improvement, I claim as my invention and desire to patent under this specification—

A hollow cylinder of wood pulp having its surfaces provided with a coating of sweet glue and with a superposed coating of shellac on the inner surface of the cylinder, and any approved waterproofing and finishing-coatings superposed on the outer surface of the cylinder, whereby the entire thickness of the pulp cylinder is preserved in its natural or original state and the interior is rendered odorless, substantially as hereinbefore specified, for the purpose set forth.

CHARLES D. WOOLWORTH.

Witnesses:

J. E. CAILEY,
GEO. B. PARKER.