

United States Patent Office.

A N D R E W D I E T Z, O F N E W Y O R K, N. Y.

Letters Patent No. 79,736, dated July 7, 1868.

IMPROVED PROCESS OF TREATING GLUE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ANDREW DIETZ, of the city of New York, in the county of New York, and State of New York, have invented or discovered a new and improved Process or Method of Treating or Preparing and Refining Glue; and I do hereby declare that the following is a full, clear, and exact description thereof, and of its mode or manner of operation.

My invention or discovery relates to an improved method of treating and preparing glue after it has been made in the usual manner, by means of which the cheaper and inferior kinds and qualities of glue are made equal to the better and higher grades or qualities, and also at the same time refined from impurities; and glue so treated, when prepared in a liquid or partially fluid condition, is much less liable to become sour or mould, and thereby have its adhesive quality weakened, and such prepared glue will much longer retain its fluid or semi-fluid condition.

My process or method of treating and preparing and refining glue is substantially as follows:

Of the cheaper and inferior kinds or qualities of glue, I take any desired quantity and soak it in cold water until it becomes like a jelly, using for such purpose about three gills of water to the pound of glue. This operation of soaking the glue and thus converting it into a jelly is only necessary, however, when hard, dry glue is to be treated and refined. When desired, or convenient, the glue may be taken when hot directly from the vats in which made, and the other ingredients hereafter mentioned immediately mixed and incorporated with it.

For a pound of the glue, I then take about three ounces of rosin and about half an ounce of oil, which are heated and melted, either separately or together, and then completely and thoroughly stirred and mixed together. Linseed-oil may be used, but I prefer kerosene or some other of the hydrocarbons. Benzine may also be made use of and incorporated with the rosin.

The glue, having been soaked in cold water, as before mentioned, is then heated to the boiling-point, or is taken hot from the tanks in which made, and the rosin and oil, in a melted state, are then poured into and mixed with the heated glue, and the whole kept simmering for from five to ten minutes, the mass being also frequently stirred, so that the several ingredients or substances shall be thoroughly mixed and combined with each other, after which the mass is set aside and allowed to cool and settle.

The impurities deposit themselves at the bottom in the form of a sediment, and there is produced a refined and improved article of glue, equal in color and in quality to the higher grades, and better by very many grades than the glue originally taken to be treated.

After having been thus treated and refined, the prepared article can be made into sheets and dried like ordinary glue, or can be retained in a fluid, or partially fluid, condition in cans or bottles, or in a soft state, in boxes. When, however, it is desired to retain it in a semi-fluid condition in cans or bottles, or put it in boxes, such cans or bottles should not be corked, or the boxes tightly covered, until the article has become thoroughly cooled.

When required for use, it is reduced to any consistency required by adding water to it, the addition of which renders it very light-colored, the mixture being at first almost milky in appearance.

The mixing and combining of the rosin and oil with the glue, not only purifies the glue, but also has a preservative effect, preventing the glue, when made liquid for use, so soon becoming sour, or moulding, and such prepared glue will also, when made thin, retain its fluid condition for a much longer time than ordinary glue, the water evaporating much more slowly.

The exact proportion above mentioned of rosin and oil to each other and to the pound of glue is not material, though I have found that the combining such articles, in the proportions mentioned, is in most cases highly satisfactory, and produces a very excellent and greatly improved product. The proportions of such articles will necessarily vary somewhat, according to their condition or purity, and their proportions may also be varied according to the particular use to which the product is to be applied; for instance, when the glue is

designed for preparing canvas for oil-cloths and similar uses, a greater quantity of rosin can be used, and for such use I have also found linseed-oil very satisfactory, though for ordinary uses I prefer to use petroleum or benzine.

There should, however, in all cases be sufficient rosin and oil mixed with the glue to purify and improve the product, as described, but not enough to injure or weaken its adhesive qualities.

The mixing with this article, either while being or after it has been prepared, of a small quantity of carbolic or wood acid, about a teaspoonful to the gallon of glue, will more certainly prevent its moulding or souring or deteriorating in quality.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Treating glue with rosin or other proper resinous substance, and petroleum or hydrocarbon or fixed oils, substantially as and for the purposes set forth.

2. Combining with glue, so treated and prepared, carbolic or wood acid, substantially as and for the purposes set forth.

A. DIETZ.

Witnesses:

S. D. LAW,

FRED. B. SEARS.