

# UNITED STATES PATENT OFFICE.

WILLIAM ADAMSON, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN CLARIFYING GLUE.

Specification forming part of Letters Patent No. **12,304**, dated January 30, 1855.

*To all whom it may concern:*

Be it known that I, WILLIAM ADAMSON, of the city of Philadelphia and State of Pennsylvania, have invented a new and Improved Process of Clarifying Glue, Gelatine, and Size; and I do hereby declare that the following is a full, clear, and exact description of the same.

The ordinary glue, gelatine, and size are oftentimes discolored and rendered opaque and speckled in the process of manufacture where glue is used in making enamels and where size is used for covering paper, and in many similar applications in the arts it is very important that the glue should be clear and colorless; otherwise it will cause the paper-enamel or other objects to which it is applied to be discolored.

It has been several times attempted to clarify the liquid glue before it sets into the solid state. Albumen in the form of white of egg has been tried; but this is a costly material, and could not be profitably used in the manufacture of any but the most expensive kinds of glue. This substance has, moreover, been found to cause the glue to rot or decompose very soon. Animal blood has also been tried; but this is liable to the same objection as the white of egg, and is, besides, tedious and troublesome in its application. Manufacturers therefore do not employ any clarifying agent for the commoner forms of glue or gelatine, and very rarely clarify even the superior qualities of glue.

I have discovered calcined plaster-of-paris (or sulphate of lime) possesses the property of entirely clarifying the liquid glue, removing all impurities—such as suspended flesh and fat—and thus renders the manufactured article transparent, clear, unspotted, and less liable to rot than even the common glue.

To enable others skilled in the art to use and apply my invention, I proceed to describe my method of applying this substance.

I employ the ordinary calcined and ground plaster-of-paris, or that superfine quality of it which is known in commerce under the name of "terra-alba." The powdered sulphate of lime or terra alba is mixed with water sufficient to saturate it and make a thick solution. This solution is then poured into the vat containing the liquid glue and stirred from three to five minutes. The whole is then suffered to stand for fifteen minutes, during which time all the impurities are precipitated to the bottom of the vat, and the clear liquid is afterward drawn off above, by a spigot, siphon, or other convenient mode, into coolers and suffered to harden in the ordinary manner. The quantity of sulphate of lime or terra-alba employed is to be varied according to the quality of the material out of which the glue has been manufactured, and according to the degree of clearness and purity which it is desired to impart. I have found two pounds of sulphate of lime or terra-alba to one hundred gallons of liquid glue to be a good proportion and to produce a very superior article of glue. By the use of this substance glue, size, or gelatine may in this way be clarified at a very economical rate.

Having thus described my improvement, what I claim, and desire to secure by Letters Patent, is—

The employment of the material above specified for the purpose of clarifying glue, gelatine, size, &c.

WM. ADAMSON.

Witnesses:

ALF. C. GOWAN,  
CHARLES D. FREEMAN.