# UNITED STATES PATENT OFFICE.

JAMES BUDD, OF NEW YORK, N. Y.

## IMPROVEMENT IN PROCESSES OF DECORATING GLASS.

Specification forming part of Letters Patent No. **169,412**, dated November 2, 1875; application filed May 18, 1875.

*To all whom it may concern:*

Be it known that I, JAMES BUDD, of New York city, in the State of New York, have invented certain Improvements relating to Decorated Glass, of which the following is a specification:

I have discovered and practically wrought out means for producing the rich effect of fine wood veneering on the back of glass plates, mounting the plates thus decorated in tables, walls, and the like, to produce the effect of rich woods, with the cleanliness and non-absorbent qualities due to the hard plate-glass above it.

The mounting of the decorated plates of glass upon tables, walls, and the like will be made the subject-matter of a separate application.

Many efforts have been made to produce the effect of veneers upon plate-glass for interior finishing and other work. The ordinary modes of doing this are open to the fatal objections that dust, ink, and the like, sooner or later, insinuate themselves behind the glass, so as to completely defeat the decorative effect.

I apply an imitation of the rich surfacing desired directly on the back of the glass, and so prepare it that it is unaffected by water or any ordinary destructive agency.

The successful working of my invention requires skill in graining or otherwise applying the decorative material with the effect desired, and careful attention to the materials, and the manner of combining and applying them.

I take the ordinary acetic acid of commerce—say twenty-five per cent. anhydrous acid—and dilute it with about ten times its weight of water, and dissolve gelatine therein—Cooper's gelatine will answer—in the proportion of one pound of dry gelatine to sixty pounds of the diluted acid. To better effect the solution, the isinglass should be first soaked in water, and then exposed to a moderate heat, with gentle agitation, for a little time, in the manner usually practiced for dissolving gelatines. The acetic acid readily combines therewith, and may be added with stirring. In the menstruum thus prepared I grind a quantity of any desired dry color. I have worked very successfully with a finely-ground bark of the oak "Casuarina." The dry coloring-powder should be thoroughly incorporated therewith until the mixture is the consistency of a thin paste. The glass being thoroughly cleaned with whiting, and held in a horizontal position, the coloring material is applied thereon with brushes and other appliances used in graining, care being taken to apply the same rapidly and skillfully, so as to obtain the desired effect before it becomes too dry. It dries rapidly, and after an hour at ordinary temperatures, the whole is treated with a thin coating of light japan varnish. When this is dry, a background should be made composed of dry white lead ground in a similar solution of gelatine in diluted acetic acid, and stained with sienna or other suitable coloring matter, according to the wood or other material which is to be imitated. This is laid on the transparent or translucent japan varnish, and the artist, looking at it from the front to observe the effect, applies the streaks and spots of heavier color at will, to imitate rich streaks in the wood. When this is dry, I coat the whole with what is known in the trade as "patent knotting." It is a varnish which is not only water-proof, but adapted to resist all fats and ordinary dissolving agencies. After a few hours, the glass thus prepared is ready to be secured in place as a surface for a table, or as a panel in a wall, or elsewhere.

The solution of gelatine in dilute acetic acid, when all the conditions are most favorable, will be just semi-fluid when in a cold state. It will be just sufficiently gelatinous to refuse to come out of the bottle, but when warmed it works almost as thin as water.

I claim as my invention—

1. The within-described method of decorating glass, consisting essentially of first treating it with a layer of coloring matter in a solution of gelatine in dilute acetic acid, then coating it with a transparent varnish, then applying a second layer of coloring matter ground in a solution of gelatine in dilute acetic acid, and finally protecting it with a layer of knotting or analogous insoluble coating, as and for the purposes specified.

2. The glass plate herein described, adapted to be mounted on tables, walls, and the like, having one or more coats of coloring matter in a solution of gelatine and acetic acid, and a protecting coat of water-proof varnish, as specified.

In testimony whereof I have hereunto set my hand this 28th day of April, 1875, in the presence of two subscribing witnesses.

JAMES BUDD.

Witnesses:
WM. C. DEY,
HENRY GENTNER.