UNITED STATES PATENT OFFICE.

WILLIAM A. O. WUTH, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF, WASHINGTON BECK, AND HENRY FEURHAKE, OF SAME PLACE.

IMPROVEMENT IN METHODS OF CLEANING GLASS-MOLDS.

Specification forming part of Letters Patent No. **221,139**, dated October 28, 1879; application filed October 2, 1879.

To all whom it may concern:

Be it known that I, W. A. OTTO WUTH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Method of Cleaning Glass-Molds; and I do hereby declare the following to be a full, clear, and exact description thereof.

Glass-molds and plungers when used become coated with a hard film or coating of magnetic oxide of iron, which is exceedingly injurious to the glassware, in that it imparts to it a greasy appearance instead of the brilliant surface obtained in the mold when new or clean. This coating is formed by one day's use of a mold, and the only way heretofore known of removing it is by scouring the mold with a stone dipped in oil or emery; but this is objectionable, because almost invariably the mold is made uneven thereby, is soon worn away, and the pattern, if any, is ruined by the rubbing off of the clear sharp lines and corners. It is only by preserving these clear sharp lines and corners that it is possible to obtain pressed glassware resembling cut glassware. In addition to this, it is an operation which, owing to the hardness of the oxide, requires much time and labor, and is consequently a large item of expense, as the molds and plungers have to be cleaned every day. An ordinary plain mold will take from one to two hours to clean. There are many molds of fine and intricate pattern which are never cleaned, because it cannot be done without injuring or ruining them.

By my invention I can remove the coating of magnetic oxide from the mold or plunger and restore it to its first finish in a short time, without destroying, injuring, or changing its original surface or pattern; and it consists in submitting it to a heated bath of tartrate of ammonia, either neutral or having an excess of ammonia or other salt of the organic acids, such as citric, succinic, or any equivalent salt.

To enable others skilled in the art to use my invention, I will describe its use and operation.

I make a solution of tartrate of ammonia, either neutral or alkaline, and place it in a suitable kettle or boiler and heat it, and immerse the mold or plunger to be cleaned therein. As the action of the bath is quite slow, even when boiling at the ordinary pressure of the atmosphere, I prefer to use a closed boiler of any convenient construction having a pressure-gage, and boil the solution at a pressure indicated by the gage—of, say, one hundred pounds. The mold or plunger is left in the boiler until the oxide is dissolved or softened and then removed, and when cooled is rubbed with a rough cloth until bright. The solution will not act upon the metallic iron of the mold, and hence removes only the coating of magnetic oxide. No attention or labor, except the preparation and heating of the bath and the immersion, removal, and drying of the mold, is necessary. Thus there is a great saving of time, labor, and cost, and the molds and plungers are preserved uninjured and last a long time.

I may also use citrate of ammonia, or the salts of potash or sulphur, or other salts having an equivalent action. These salts must be either neutral or alkaline.

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

The method herein described of cleaning glass molds or plungers—that is to say, treating them to a heated bath of solution of tartrate of ammonia or equivalent salt, substantially as described.

In testimony whereof I, the said W. A. OTTO WUTH, have hereunto set my hand.

WILLIAM AUGUST OTTO WUTH.

Witnesses:
JNO. K. SMITH,
T. B. KERR.