

UNITED STATES PATENT OFFICE.

HENRY HERMANN, OF JERSEY CITY, NEW JERSEY, AND MORRIS L. HOLMAN,
OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PUTTING UP CAUSTIC ALKALIES.

Specification forming part of Letters Patent No. **152,634**, dated June 30, 1874; application filed
June 17, 1874.

To all whom it may concern:

Be it known that we, MORRIS L. HOLMAN, of the city of Brooklyn, State of New York, and HENRY HERMANN, of Jersey City, State of New Jersey, have invented an improved method of putting up convenient and uniform portable packages of strong liquid white potash or caustic lye of fixed and uniform density ready for immediate use, of which the following is a specification.

Potash and caustic soda have become necessary in a vast number of manufacturing processes, and they are widely used in families for making soap, and for other purposes. The difficulty formerly experienced was that they could not be kept on hand ready for use. If kept in solid form they would liquefy and lose their strength, besides damaging many things they came in contact with. If kept in liquid form of sufficient strength they would lose their strength unless kept in air-tight vessels, and these not being at hand people had to submit to the inconvenience of getting the materials fresh every time they were wanted, and losing the surplus not used at that time. The surplus was oftentimes even troublesome to dispose of about factories and private houses.

It was this difficulty that the Thompson patent was intended to overcome, and which it did overcome to some extent by furnishing convenient packages of solid caustic soda, so put up as to exclude the air; but Thompson's method did not overcome all of the difficulties. When a manufacturer or family purchases one of Thompson's packages, the package must be broken open, and the solid contents broken up and dissolved in hot water before it is ready for use. Families may do this readily enough, but it is often inconvenient for manufacturers. They want the article ready for use at once.

There has long been felt the need of small packages of these strong alkalies in liquid form ready for immediate use, and our improvement supplies this want. We inclose the liquid potash in cases or bottles of glass

or any vitrified substance, with stoppers of similar substances ground in to fit, or with corks or stoppers prepared to resist the action of these strong alkalies. There are many ways of preparing the corks or stoppers, and we do not claim any particular method of preparation.

We propose to furnish to the trade for family use, and for manufacturing purposes, these bottles or packages of uniform size and uniform strength, so that if a certain quantity and a certain strength of liquid are wanted the consumer can purchase one of our packages containing the right quantity and strength. We propose to put up the liquid of a test strength of twenty degrees density by Baumé's alkalimeter, and of different fixed densities up to forty degrees.

We have not been able to keep it well in solution much stronger than forty degrees, and that is the strength we propose to put it up for general purposes, to be kept for sale by the trade; but for consumers who desire to have it less powerful, we claim as our improvement the putting of it up in these packages of a strength not less than twenty degrees, as before stated. We can put it up above forty degrees, but it is not wanted at present for any purpose.

By this method, we avoid all of the objections to the Thompson method. Our lye can be kept any length of time in any climate, and if the package at hand should not happen to be of the size to contain just the quantity wanted for use at that moment, by our method of packing no more need be taken out than will be used at the time, and the balance can be corked up and preserved safely till needed again, even if it should not be wanted for months.

By the Thompson method of packing, the whole package becomes useless when once opened, although the manufacturer or family may not want to use at that time more than a half or a quarter of the package, which may be kept for sale at the nearest store.

Having thus described our method, what

we claim as new, and desire to secure by Letters Patent, is—

The putting up for sale, as an article of merchandise, uniform portable packages of liquid white potash or caustic lye of fixed and uniform strength, of not less than twenty degrees density, tested by Baumé's alkalimeter, ready for immediate use, so put up as to preserve its strength any length of time, and

enable the consumer to use a part of a package without impairing the value of the balance, substantially as specified.

MORRIS L. HOLMAN.
HENRY HERMANN.

Witnesses:

A. W. LEWIS,
M. F. KNUDSON.