

and

Greenville S. C. Jan 26 1899

Dear Brother Osborne:

I send
you a formula for ~~fill~~
silencing the big Minnow.
It may be of use sometime.
Your letter of Dec 17. 1898
is the only information
I have had from your
quarters concerning the
reported gift.

I trust you are well
and in prospect of all
things this winter.

My regards to your
household.

Yours truly

John Peate

Silvering the big mirror!
While pure filtered rain water will
do, distilled water is best for all purpo-
ses in cleaning and silvering mirrors.

1st to make the reacting solution

900 grains of pure white sugar

85 grains of nitric acid

7 oz of pure alcohol.

distilled water to make up 50 ounces

This should be made at least 8 or 10 days
before using. The older it is, the better.

This solution must be kept in a large
stoppered bottle.

Next wash the face of the mirror
with distilled water till it is chemically
clean. Which may be known when
the water adheres to the face of the
mirror like a coat of varnish for
a short time when the mirror is
turned on its edge to free it from
the water on its face. When the
mirror is clean put a belt of rubber
around it forming a ring about one

inch above the edge of the Mirror, turn the Mirror on its back and cover the face with pure water, till near the top of the rubber skin, and let it remain while you make the silvering solution -

Now take 1400 grains of Nitrate of Silver and dissolve it in a quart of distilled water in a two quart glass Jar. Then take 700 grains of potash pure by alcohol, and dissolve it in a half a quart of water. Use a glass rod in stirring all solutions - Now take a bottle of Aqua ammonia, and drop carefully into the dissolved Silver the ammonia and stir with the glass rod. It will at once turn to a light brown and when it begins to clear up stop putting in the ammonia - Now pour in the potash solution when it will turn to a muddy brown. Now clear up by dropping in ammonia and stirring briskly ^{where} and it begins to clear up stop dropping in

The ammonia ammonia for a few minutes
 care must be taken not to get an excess
 of ammonia and this is known when the
 solution has a decided straw color. If the
 solution has this well marked straw
 color some silver must be added and
 stirred into the solution. It is no use to
 try to silver if the solution is decidedly
 of a yellow color - Now as the mirror
 is too large to be silvered with facets
 now as in ^{the} case with small mirrors, one
 must have the solution poured on its
 face. It will be well to filter through
 soft cotton the solution, after which
 add water enough to make up the
 amount necessary to cover the mirror
 at least half an inch deep on the
 edge - This solution must ^{be} in a large
 glass, or porcelain jar or dish that will
 hold 18 or 20 quarts - Now when all
 is ready take about three half pints
 of the remaining solution from the
 Stepped bath, and pour it quickly
 into the silvering solution, and stir it
 rapidly when the solution will soon
 turn to a ~~dark~~ ^{dark} color - While ~~stirring~~ ^{stirring}

This general collection, leave on a wetout
 tip up the big mirror and let the
 water run off, ~~then~~ ~~turn~~
 it on its back and pass in the ~~the~~
~~the~~ collection from three or four
 sides of the mirror. In fifteen or
 or 20 minutes according to the
 temperature of the room the silver
 will begin to deposit on the mirror.
 When the collection shows up on
 the mirror, tip the mirror up and
 let the solution run off. Then spray on
 gently wash the face of the mirror with
 water, and spray it with alcohol
 and let it stand on its edge till dry.
 In the mean time remove the rubber belt
 then carefully ~~go~~ over the face with soft pad
 of clean showing skin in circular strokes
 and after that it will be ready for careful
 polishing with fine powder in circular strokes over

The Mirror after the silencing solution
is poured off, while standing on its edge
can be carefully washed down with
fine cotton, well soaked in water
It must not be rubbed hard. The
silencing surface will not be injured
as if silencing with face down in a bath
which would be to make a job with
a Mirror of 1500 weight, 61 inches in diameter

It is of the first importance to have
every thing ready as far as possible the
day before so that all may be of the
same temperature.

~~John Peate~~
John Peate
Greenville
Pa.