

John A. Whipple, "Preparing Plates by Steam," May 1852

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PREPARING PLATES BY STEAM.

BY J. A. WHIPPLE.

BY many daguerreotypers it is thought impossible to prepare daguerreotype plates by power with that degree of perfection that they can be made by hand. This is a mistaken idea, as I can prove to any one in a few minutes who will call at my rooms and see the operation of machinery for that purpose. I have now had steam power in successful operation for the past four years, and can with truth say, I should hardly know how to work were I go back to the tedious old way of scouring and scrubbing and hand-buffing principle. Its advantage on the score of economy as well as ease and expedition are very great; for the small sum of twenty-five cents for coal I can keep my engine going from morning till night, one boy can tend it and scour more plates for buffing than three operators could use. The buffs being put in motion by steam all that is necessary is for the plate to be held upon them; one can buff and coat as many plates as a third person can sit, and when a regular system is adhered to (without which no operator can succeed) the results are always as uniform and successful as could be desired. When I first commenced I had the greatest difficulty in making a scouring apparatus that would answer and do as well as by hand; the buffs were easy enough to manage. I tried various methods without success and was on the point of giving it up when a happy thought presented itself, to use an air cushion. I tried it; it worked to a charm, nothing could be better; by graduating it, the softest touch only could be given; or by condensing the air it could be made as hard as a board for cutting away fast. I also found that great speed was very advantageous; the spindle upon which the air-cushion is placed makes from 12 to 1500 revolutions per minute; this will give results that cannot be obtained otherwise, and by the means double wholes or whole plates can be made ready for the buffs in so short a time as to astonish one who is used only to cleaning by hand. My engine is 3 1/4 in. diameter of cylinder, and 6 inches stroke, running about 150 revolutions per minute, and is rated at one horse power. The boiler is an upright tubular one somewhat resembling a large stove, eighteen inches diameter and five feet high. Many think the escape of steam in a daguerreotype room is sure to prevent good results. I have not found it so; the vapor arising from water boiling in an open vessel is a very different affair from that escaping from under high pressure, the electrical state of the latter is entirely changed. When a kettle of water boiling upon a stove in my buffing room would cause trouble, great quantities of steam from the boiler does no harm; at least this has been my experience. Heating the mercury by steam I have found a most excellent plan; it is not a little too hot

or a little too cold; it is one of the few things in daguerreotyping that can be depended upon; it is always just right the heat varying but the least degree with the variation of the barometer, which practically is of account, the atmospheric pressure changing so slightly and at comparatively long intervals.

The way I arrange it, is simply to solder upon the bottom of my mercury bath a small cup and connect it with a pipe to my boiler having no other pipe to carry the waste steam and condensed water away, letting on just steam enough to keep the waste pipe hot, I am then sure that all is right.

After enumerating the many and great advantages of steam, I should be doing injustice not to say that to manage it with success and profit, it is absolutely necessary that one should have the most thorough practical knowledge of all its operations, otherwise it would be attended only with vexation and annoyance, not to say danger. To illustrate, I will give a specimen of my first operation. This boiler was put in place, the engine connected with suitable pipes and bolted to the floor. The boiler being new, leaked, and to prevent this a few handfuls of meal was put in, which had the desired effect; a fire was kindled, and presently the steam began to roar—in a close room it was frightful, especially to one unaccustomed to it. After putting the fire out and somewhat quelling its fury, steam was let on, the wheels began to move a little too fast; in endeavoring to shut it off the wrench slipped and fell, and by the time it was replaced the engine had gained such headway that it broke its fastenings which were insufficient, and jumped like a race horse—then came the finale; the weight was shaken from the safety-valve, the hot water and steam came rushing and roaring out in torrents, drenching us from head to foot and wetting nearly everything in the room. If the meal had not been added, steam only would have escaped doing little or no harm. However, after a few weeks use, one becomes accustomed to its management, and can tend it with the same regularity and certainty as he would mercurialize a plate after sitting. In fact, a regular system is everything in a daguerreotype establishment as well as in a merchant's counting-room, and without it no one can expect to prosper. I shall take pleasure in showing my apparatus to those who may have a desire to see it.

[End of text.]

EDITOR'S NOTES:

An illustration of Whipple's steam engine is seen in an advertisement for Whipple in George Adams, *Boston Directory: Containing the City Record, a General Directory of the Citizens, and a Special Directory of Trades, Professions, &c. 1848–9* (Boston: James French, 1848): 11. See also the advertisement, "Whipple's Steam Daguerreotype Establishment," *Massachusetts State Record and Year Book of General Information. 1848* (Boston: James French, 1848): back matter page 7.

Whipple's steam engine also powered a large fan to cool the sitters. This is described in a work of fiction. See Anne E. Guild, *Grandmother Lee's Portfolio* (Boston: Whittemore, Niles, and Hall, 1857). 63–66.¹

For additional information regarding Whipple and his use of steam, see M. Grant, "John Whipple and the Daguerrean Art," *Photographic Art-Journal* (New York) 2:2 (August 1851): 94–95;² John Werge, *The Evolution of Photography: With a Chronological Record of Discoveries, Inventions, Etc.* (Piper & Carter and J. Werge, 1890): 52–53.

1. http://www.daguerreotypearchive.org/texts/B8570001_GRANDMA-LEE-PORT_1857.pdf
2. http://www.daguerreotypearchive.org/texts/P8510015_WHIPPLE_PAJ_1851-08.pdf

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