E. R. WESTON.

Photograph Burnisher.

No. 162,442. Patented April 20, 1875.

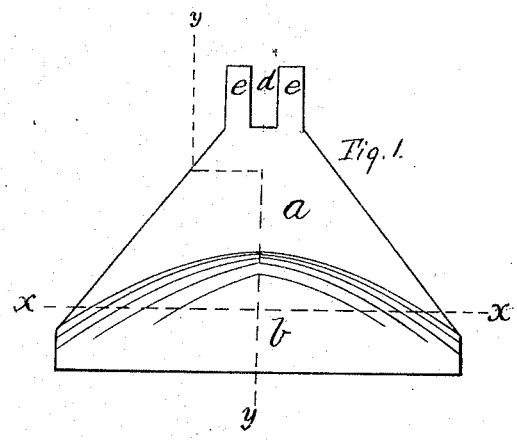

Fig. 1.

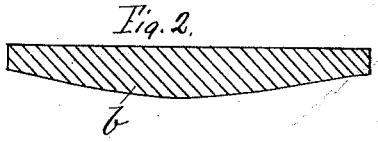

Fig. 2.

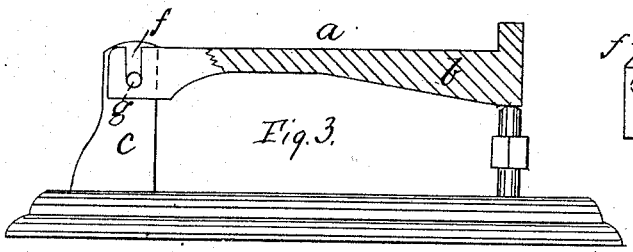

Fig. 3.

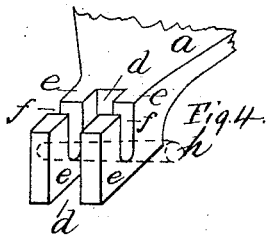

Fig. 4.

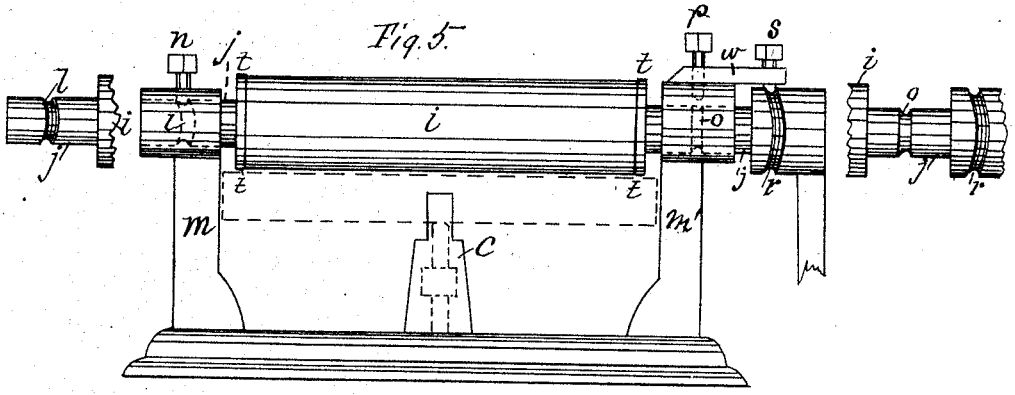

Fig. 5.

Witness
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Atty.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

EMILE R. WESTON, OF BANGOR, MAINE, ASSIGNOR TO JOSEPH P. BASS, OF SAME PLACE.

IMPROVEMENT IN PHOTOGRAPH-BURNISHERS.

Specification forming part of Letters Patent No. **162,442**, dated April 20, 1875; application filed January 18, 1875.

To all whom it may concern:

Be it known that I, EMILE R. WESTON, of Bangor, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Burnishers for Photographs, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 shows a bottom plan of burnishing-tool plate; Fig. 2, section of same on line *x x;* Fig. 3, view of bed-plate and standard, with a partial section of burnishing-tool plate on line *y y*. Fig. 4 shows a view of tail-piece of the burnishing-tool plate; Fig. 5, a front elevation of the burnishing-machine, showing devices for reciprocating the feed-roll, with details.

Same letters show like parts.

My invention consists of certain improvements in the construction of machines for burnishing photographs, &c., relating, first, to an improved material for the burnishing tool or plate; second, to the form of the burnishing-tool plate; third, to the means of attaching said plate to the supporting-standard, and, fourth, to an improved means of communicating a two-way feeding motion to the feed-roll.

I have discovered during my experiments that a burnishing-tool cast from iron, containing a comparatively large proportion of manganese, such as Franklinite iron, possesses peculiar fitness for use in burnishing-machines where the polish is communicated to the article by friction, especially when said tool is to be heated. Iron of this description is hard, capable of receiving a very high polish, and is not liable to scratch, while the manganese contained in it imparts to the tool a peculiar slipperiness not found in other materials. In regard to the form of the plate, it has, hitherto, been usual to make a flange on the front edge of the plate projecting downward, to prevent injury to the card or other article from the smoke or flame from the lamp or gas-jet. This construction gives a thick mass of iron across the front close to the thin part of the plate, and, when heat is applied, the thin portion of the plate heats more rapidly, causing unequal expansion, and a liability to break. To obviate this I thicken the plate at its front edge to about the width of the flange hitherto employed, and gradually diminish the thickness toward the rear and sides. This causes the plate to heat more equally, its thin portions being farthest from the flame, while at the same time the thickness of the iron at the front takes the place of the flange in retaining the flame. This construction is shown in the drawings, Fig. 1, showing the plate *a* with its thickened portion *b;* Fig. 2, showing a section of the thickened portion of the plate on line *x x;* and Fig. 3, a section of same on line *y y*, Fig. 1.

Franklinite iron, and iron of like description containing manganese, being difficult to drill, I attach the burnishing-tool plate to the standard *c*, Fig. 3, at the rear of the machine by the device shown in Fig. 4. The tail-piece of the plate is slotted longitudinally at *d*, the two side pieces thus formed *e e* being transversely slotted at *f f*. The upper end of the standard *c* is fitted into the slot *d*, and has a hole, *g*, drilled through it corresponding to the transverse slots *f f*. (See Fig. 3.) When the plate is in place, a pin, *h*, (shown in dotted lines, Fig. 4,) is passed through these slots *f f* and through the hole *g* in the standard *c*, holding the plate securely in place.

My means of causing the feed-roll to reciprocate is shown in Fig. 5, which, at *i*, shows the roll. Diagonally around its arbor *j*, at one end, extends a groove, *l*. In the standard *m* of the machine is a set-screw, *n*, extending downward and into this groove.

It is evident that, as the roll is turned, this screw and diagonal groove will communicate a reciprocating motion to it.

In order to make the roll a reciprocating or direct feeding rool at will, I provide a second groove, *o*, running straight around its arbor, and a second screw, *p*, entering said groove through one of the standards.

If a two-way feed-roll is desired, it may be obtained by raising the pin *p* from its groove *o*, and turning down the screw *n* into the diagonal groove *l*. If the direct forward feed is

preferred, the screw *p* is turned down into its straight groove *o*, and the screw *n* raised, thus preventing any endwise motion of the roll.

The reciprocating motion may likewise be produced by a screw, *s*, passing downward through an extension, *w*, of the standard *m'* into a diagonal groove, *r*, cut around the end of the handle, by which the machine is turned. As, however, the handle is firmly keyed to the arbor of the roll, this would merely be an equivalent to the groove in the arbor.

At the ends of the roll *i* I place bosses *t t*. These serve the twofold purpose of keeping the roll from the surface of the burnishing-tool, and of keeping a space between them, into which the end of the card may be inserted far enough to give the feed-roll hold enough to draw it through; but I do not claim these bosses, as I am aware that similar devices are shown in the patent of Marshall and Marshall, dated July 12, 1864. Nor do I claim in this application, broadly, a burnisher-plate provided with a downwardly-projecting flange across the front edge to protect the picture from the smoke and flame of the heating device used, this feature being substantially the subject-matter of a previous application of mine now pending, and in interference with a patent granted to Wm. G. Entrekin, December 2, 1873.

My present application relates to a burnisher-plate of peculiar construction—viz, thickened at its front edge and growing gradually thinner toward the rear and side edges, the object being to secure a more gradual heating of the plate, and at the same time protect the picture.

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

1. A burnishing-tool made from Franklinite iron or cast-iron containing a large proportion of manganese.

2. A burnishing-tool plate thickened at its front edge and gradually diminishing in thickness toward the rear and sides, as shown.

3. A burnishing-tool plate provided with a tail-piece, having the slots *d f f* therein, as and for the purposes specified.

4. In a burnishing-machine, a feed-roll, *i*, provided with a diagonal groove, *l*, extending around its arbor, in combination with the screw *n* in its supporting standard, as shown.

5. The feed-roll *i*, provided with groove *l* and screw *n*, in combination with a groove, *o*, and set-screw *p*, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of January, 1875.

E. R. WESTON.

Witnesses:
J. B. BOSS,
WM. FRANKLIN SEAVEY.