W. G. ENTREKIN.

Photograph-Burnisher.

No. 163,170. Patented May 11, 1875.

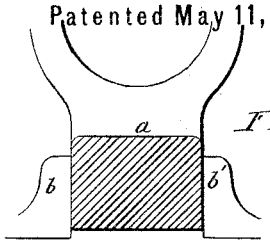


FIG. 3.

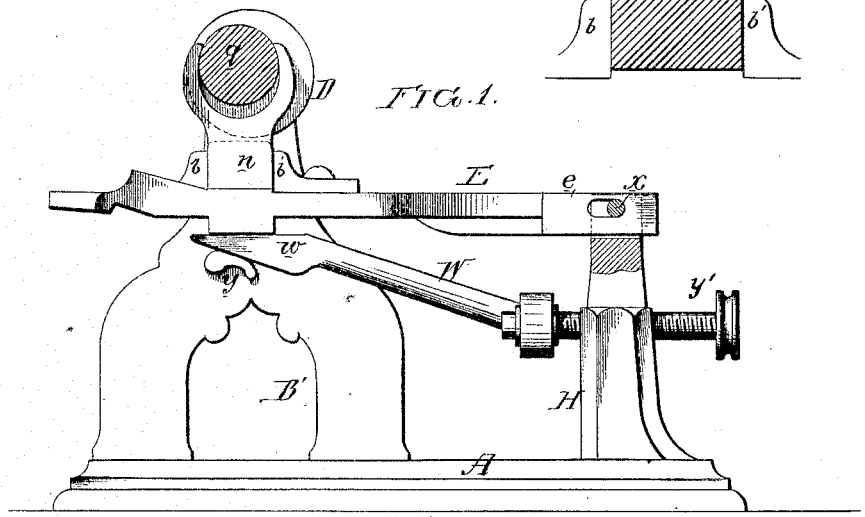
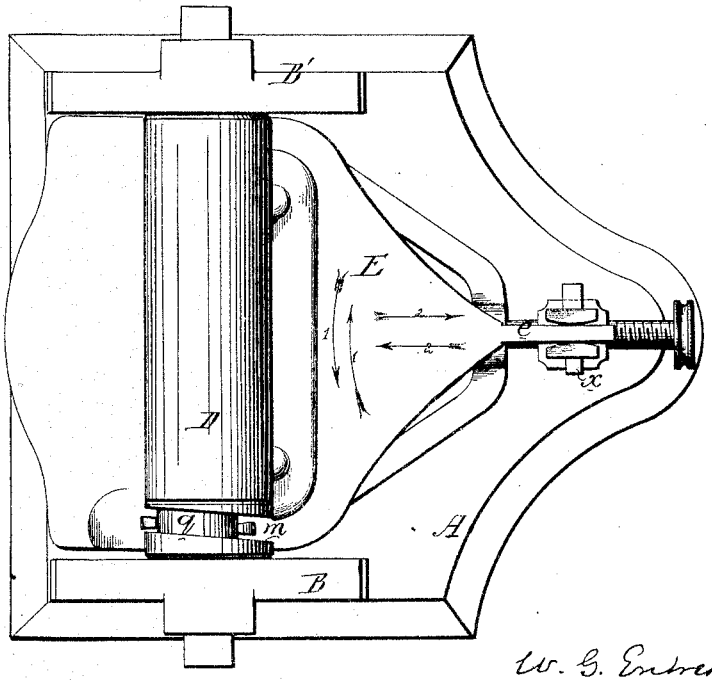


FIG. 1.

FIG. 2.



Witnesses, Hubert Howson
Thomas McElwain

W. G. Entrekin
by his Attys
Howson and Son

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

UNITED STATES PATENT OFFICE.

WILLIAM G. ENTREKIN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PHOTOGRAPH-BURNISHERS.

Specification forming part of Letters Patent No. **163,170**, dated May 11, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, WILLIAM G. ENTREKIN, of Philadelphia, Pennsylvania, have invented an Improvement in Photographic Burnishing-Machines, of which the following is a specification:

My invention relates to an improvement in the photograph burnishing-machine for which Letters Patent were granted to me on the 2d day of December, 1873; and the object of my improvement is to give a more varied movement to the burnisher than in the said patented machine, thereby increasing the burnishing effect on the photograph.

This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical longitudinal section of a burnishing-machine with my improvements; Fig. 2, a plan view; and Fig. 3, a detached view of part of the machine.

A is the base of the machine, and to this base are secured the two standards B and B′, in the upper ends of which are the bearings for the journals of the roughened or draw-filed roller D. E is an arm, to which, near the front end, is fitted the burnishing-bar *a*, between two flanges, *b* and *b′*, one of which may be removable and adjustable, as described in my said Letters Patent. The rear end *e* of the burnisher-arm passes through and is guided by the forked top of the standard H, a pin, *x*, passing through the standard and through an elongated slot, *e*, in the arm, so that the latter can be reciprocated longitudinally in the direction of the arrows 2 2. At the same time the end *e* of the said burnisher-arm is so loose laterally in the said standard that the arm can be laterally vibrated in the direction of the arrows 1 1. The connection of the arm E with the standard H is also such that the outer end of the arm can be raised or permitted to fall by the wedge-shaped ends *w* of the yoke W, the said ends being interposed between projections *y* on the standards B and B′, and projections on the under side of the arm E. The yoke is made adjustable by means of a screw *y′*, which passes through the standard H.

The above device for adjusting the burnisher to or from the roughened roller is too fully described in my aforesaid patent to need more minute explanation.

I prefer to impart the combined longitudinally-reciprocating and laterally reciprocating or vibrating movement to the burnisher-arm in the following manner: At one end of the roughened roller is cut a scroll-groove, *m*, the bottom of which is made eccentric in respect to the center of rotation of the roller.

The forked upper end of a stud, *n*, attached to the arm E, embraces the eccentric portion *q* of the roller and fits within the scroll-groove, the opposite sides of which will, as the roller is turned, vibrate the arm E laterally through the medium of the stud in the direction of the arrows 1 1, while the eccentric portion *q* of the roller will, through the same medium, reciprocate the burnisher longitudinally in the direction of the arrows 2 2.

It will thus be seen that as the photograph-card, under the control of the roller, is drawn by the same over the face of the burnisher *a*, the latter having the within-described compound movement will have a better burnishing effect on the face of the picture than if the burnisher had an oscillating movement only as in my said patent.

I claim as my invention—

1. The burnisher *a*, combined with the roughened feed-roller D, and with appliances for imparting both a lateral and a longitudinal reciprocating movement to the burnisher, substantially as set forth.

2. The combination of the scroll-groove *m*, of the roller D and eccentric portion *q* of the same with the forked stud *n*, attached to the burnisher-arm E, all substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM G. ENTREKIN.

Witnesses:

JAMES BRAMBLE, Jr.,

HARRY SMITH.