W. G. ENTREKIN.

Photographic Burnisher.

No. 197,259. **Patented Nov. 20, 1877.**

Fig. 4.

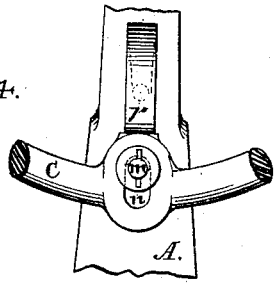


Fig. 1.

Fig. 2.

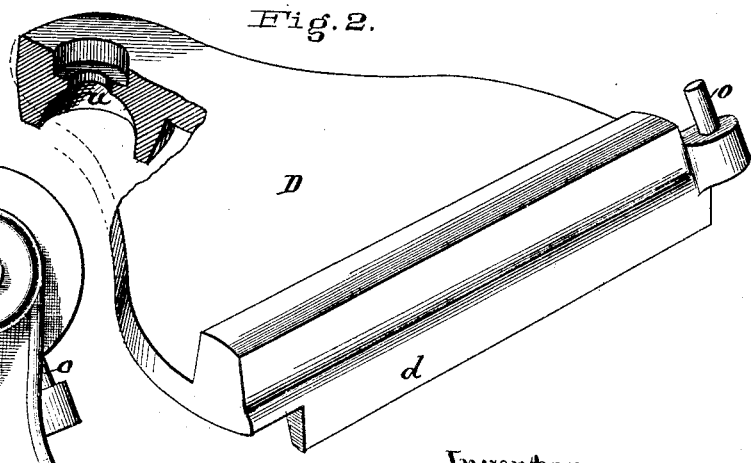
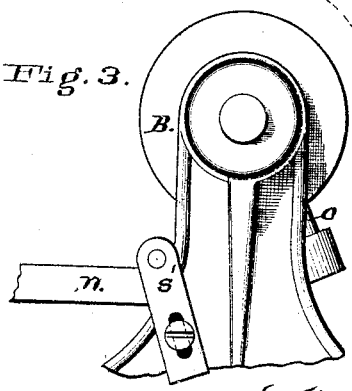


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM G. ENTREKIN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PHOTOGRAPHIC BURNISHERS.

Specification forming part of Letters Patent No. **197,259,** dated November 20, 1877; application filed March 31, 1874.

To all whom it may concern:

Be it known that I, WILLIAM G. ENTREKIN, of Philadelphia, State of Pennsylvania, have invented an Improvement in Burnishers for Photographs; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view. Fig. 2 is a view of the burnisher-plate, partly broken away; and Figs. 3 and 4 are detail views.

My invention is an improvement upon my photograph-burnisher, a patent for which was granted to me December 2, 1873; and it consists in constructing the burnisher so that it will yield to the pressure of the card, and allow the inequalities of the card to be equally burnished.

It also consists in making the stop-pins adjustable, and the joint upon which the burnisher-plate is hinged a ball-and-socket joint.

The photograph-card produced by this improved machine is very superior to any yet furnished to the trade, being uniform over all its surface.

In the drawings, A represents the frame, into which the roughened roll is journaled, and upon which the burnisher-plate is pivoted.

The general construction of my present machine is similar to that patented by me December 2, 1873, and need not be particularly described here.

Upon the standards of the frame A′ are fulcrums *f;* but instead of being placed directly underneath the pressure-roll B, so as to produce a solid bearing, they are placed nearer the standard A″. These form fulcrums for the yoke C, and transform it into a lever, and it ceases to be a mere wedge. The lever-yoke C has beveled parts by which it acts as a wedge, as heretofore; but its principal office is to act as a lever to impart a yielding pressure to the burnisher D. The two ends of the lever-yoke C act upon each end of the pressure-roll B, and the rocking motion allowed by the universal joint *p u* permits each end to act independently. The opposite end of the lever-yoke C is pivoted to the thumb-screw *m* by means of a slot, *n*, which allows the end of the lever-yoke to rise when a thicker card is placed under the roller, and a spring, *r*, firmly secured in the standard A″, presses upon the end of the lever-yoke and regulates the pressure. The top of the standard A″ is rounded into a hemisphere, *p*, and a spherical socket is made into the under side of the end of the burnisher-plate D, forming a ball-and-socket joint, which will allow the plate D to move in any direction. The pins *s*, which act as stop-pins, and prevent the roughened roll from injuring the polished burnisher, are in this improved machine made adjustable by being attached to a sliding bar, *s′*, which slides nearly vertically, and is held firmly in position by a screw passing through a slot.

My improved burnisher operates as follows: The lever-wedge yoke C having been forced forward over the fulcrum *f*, by means of the thumb-screw *m*, to a sufficient distance to bring the burnisher D, swinging upon the ball-and-socket joint *p u*, so near the roughened roll B as not to touch it, the pins *s* are then brought down upon the burnisher-plate D, and firmly fastened in position by means of the screws in the slots in the sliding plates *s′*, and, fire having been applied to the burner G, the machine is ready for use.

It will be noticed that, if a card of an irregular thickness be placed between the roller and burnisher, the burnisher, pivoted by means of the universal joint *p u*, and bearing against the two arms of the lever-yoke C, said lever-yoke will turn upon the fulcrums *f*, the slot *n* and spring *r* allowing the other end of the lever to operate accordingly, and adjust itself to all the irregularities of the card.

With this improvement photographs—which were heretofore apt to be burnished only on one side or end, or otherwise in spots—are evenly and beautifully polished throughout the whole extent of surface.

It is found that the photograph-card produced by my improved machine is very superior in its burnished surface to those in common use, not having spots nor streaks, which are found in cards burnished by the ordinary method.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a pressure feed-roll

yielding burnishing-tool having a universal joint with a yoke-wedge lever, substantially as described.

2. The burnisher-plate D, in combination with adjustable pins *s*, substantially as described.

3. The plate D, provided with the universal joint *p u*, in combination with the wedge-yoke lever C, having a slotted end, fulcrums *f*, thumb-screw *m*, and spring *r*, substantially as described.

The above specification of my said invention signed and witnessed at Manayunk this 28th day of March, A. D. 1874.

W. G. ENTREKIN.

Witnesses:

GEO. Y. TAMS,

WM. F. CONLOW.