

(No Model.)

L. O. GIRVIN & J. LOFF.  
PHOTOGRAPHER'S RETOUCHING MACHINE.

No. 404,534.

Patented June 4, 1889.

Fig. 2.

Fig. 1.

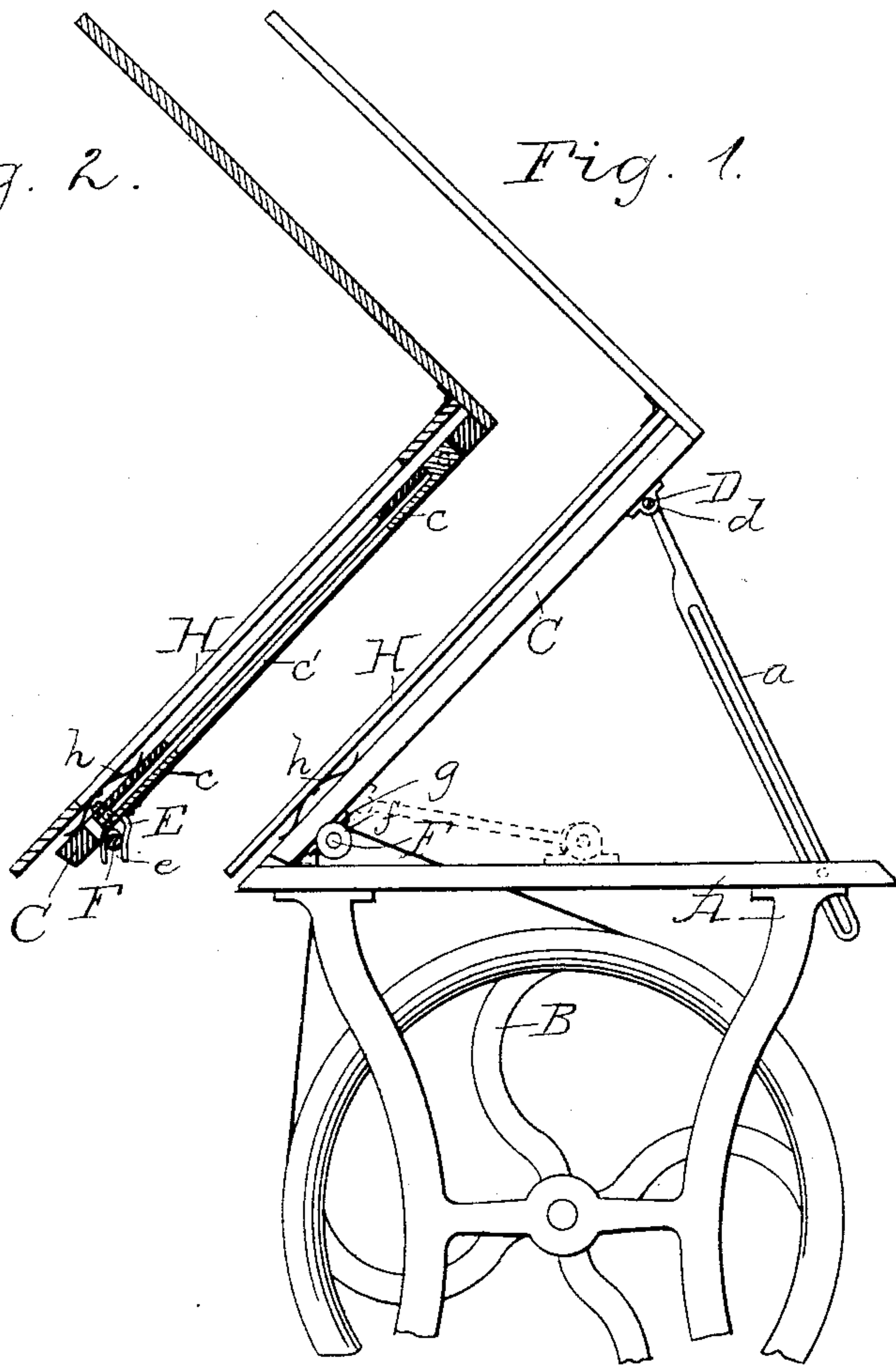


Fig. 4.

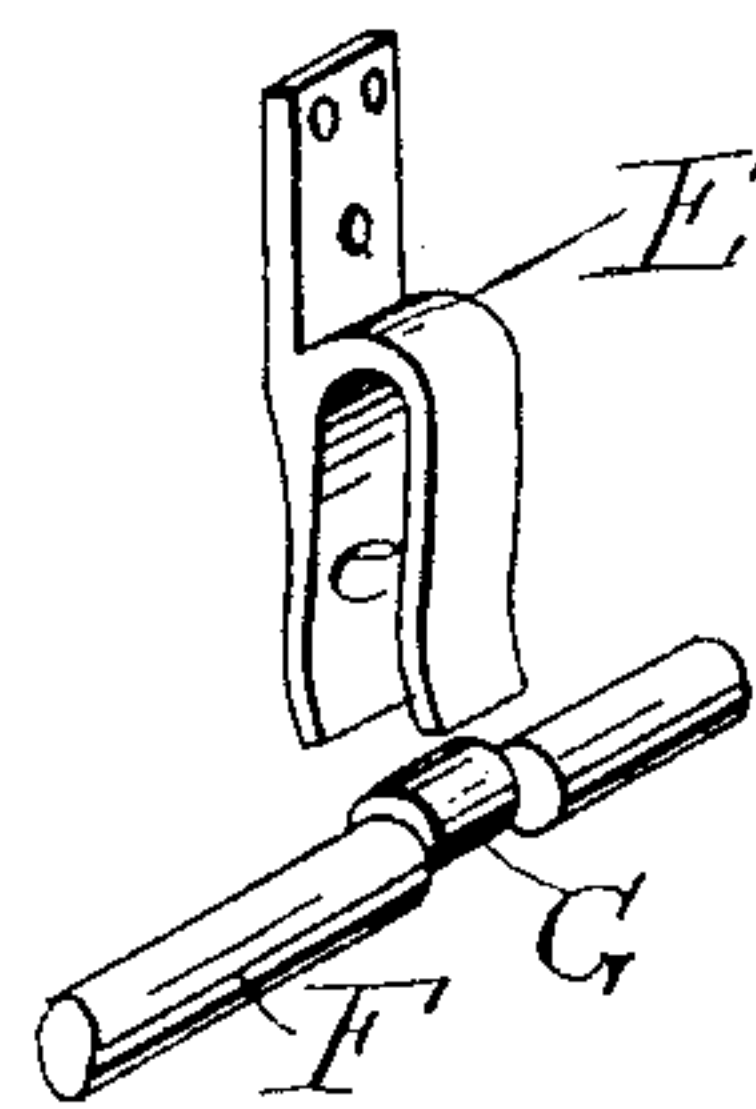
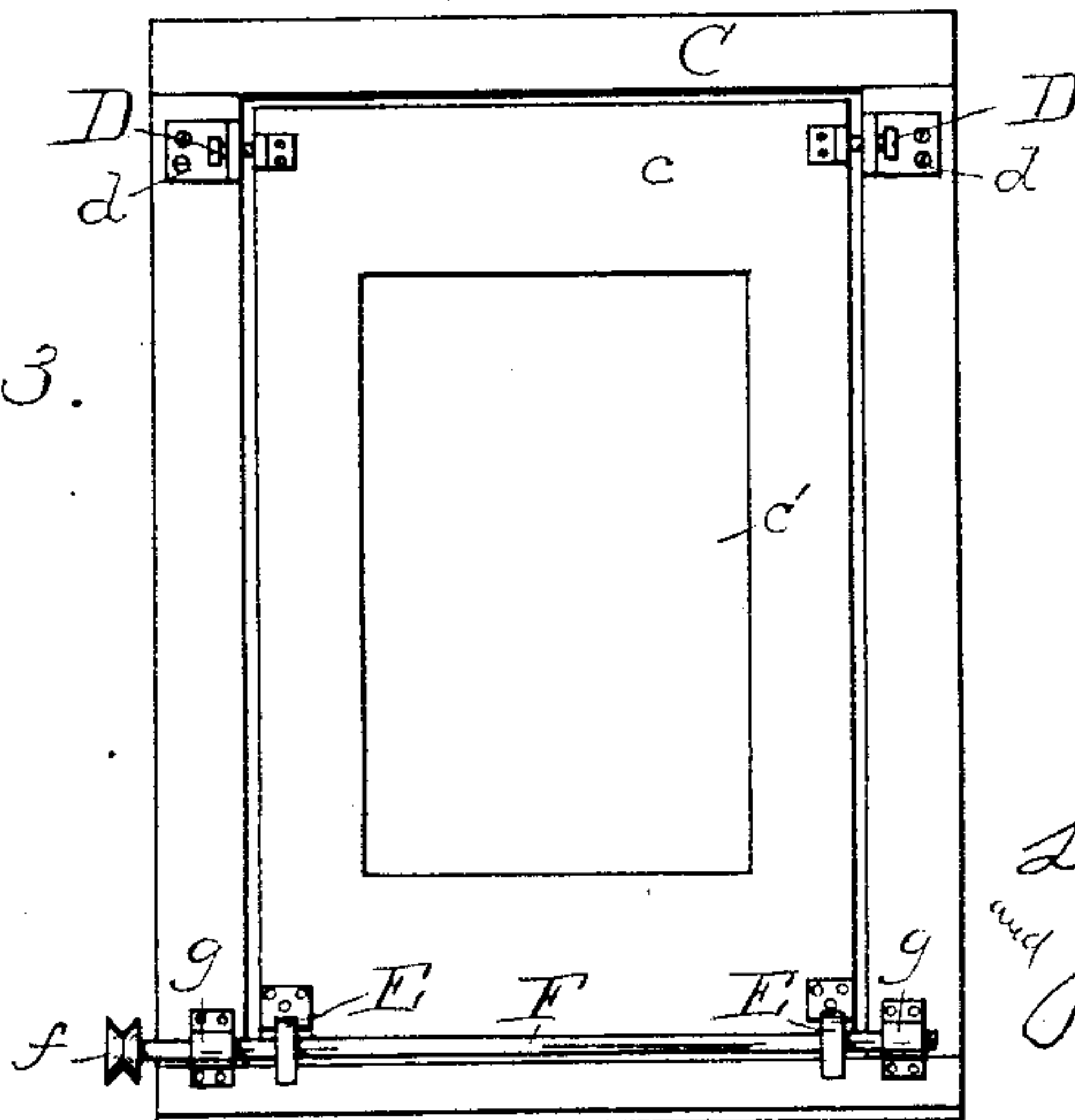


Fig. 3.



Witnesses,  
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Inventors.

By their Attorney F. D. Thomson



# UNITED STATES PATENT OFFICE.

LAURA O. GIRVIN AND JOHN LOFF, OF CHICAGO, ILLINOIS.

## PHOTOGRAPHER'S RETOUCHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 404,534, dated June 4, 1889.

Application filed April 18, 1887. Renewed October 29, 1888. Serial No. 289,843. (No model.)

*To all whom it may concern:*

Be it known that we, LAURA O. GIRVIN and JOHN LOFF, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Photographers' Touching-Up Apparatus, of which the following is a full, clear, and exact description, reference being had to the drawings, and to the letters of reference marked thereon.

Heretofore the touching-up of photographers' negatives has been accomplished with the aid of a stationary frame, in which the negative has been placed, and tattooed with a suitable pencil by hand to obliterate the defective spots or flaws on the negative. This tattooing operation is a tedious and difficult one, and can only be acquired by long experience, because of the delicacy and accuracy of touch the operator must possess.

It is the object of our invention to dispense with the tattooing operation so far as the motion of the operator's hand is concerned, and this we accomplish by means of a vibratory negative-holding frame, substantially as hereinafter described, and as illustrated in the drawings, in which—

Figure 1 is a side elevation of our invention. Fig. 2 is a partial vertical transverse section of the same. Fig. 3 is a rear elevation, and Fig. 4 is a detail view.

Reference being had to the drawings, A represents a table-frame, similar somewhat to the stand of a sewing-machine, which has journaled in suitable bearings in its legs or supports a drive-wheel B, which can be driven by a treadle or suitable motor. The drive-wheel is provided with a circumferential groove in its periphery, in which the belt that drives the rest of the apparatus runs.

Pivoted or hinged to the front edge of the table, or near the same, is a rectangular open frame C, which is maintained at a suitable angle by a brace a, pivoted to the top horizontal part of frame C, and the lower end of which is slotted longitudinally and passes through a suitable opening in the table. In this opening is a transverse pin which passes through the longitudinal slot in the brace a. By turning a thumb-nut on this pin the brace is pinched between said nut and the sides of the opening in said table, thus holding the frame C at the angle desired.

In the rectangular opening bordered by frame C is the negative-plate holder c, which consists of two thicknesses of board or other suitable material, the front one of which is removably secured to the rear one. The holder c is provided with an opening c', which corresponds in position and dimensions in both thicknesses of board. The negative-plate is placed between said boards in holder c, so that the picture or negative impression comes within the limits of opening c'. The boards are then brought tightly together by suitable screws or other devices.

The plate-holder c is pivoted at or near its upper end between adjustable pivotal screws D, which pass through the projecting lugs of plates d, secured to the rear surface at or near the upper ends of the vertical parts of frame C. The ends of screws D are pointed and enter correspondingly-shaped recesses in the upper side edges of the rear board of plate-holder c. Secured to the lower rear surface, near the corners of the plate-holder c, are plates having lugs E projecting from them, which latter are provided with vertically-elongated bearings e.

F represents a transverse shaft journaled in bearings g secured to the back surface of frame C in transverse alignment with lugs E. This shaft F passes through bearings e of lugs E, but the portions of said shaft within said bearings are offset, making eccentrics G, which, as said shaft revolves, oscillate holder c back and forth to the extent of the eccentricity of eccentrics G.

One end of shaft F passes through bearings g and beyond the side edges of frame C, and is provided with a suitable pulley f, which is connected by a belt (as before stated) with drive-wheel B. With every revolution of drive-wheel B the pulley f should revolve from about thirty to forty times. Then if the drive-wheel is run at a very moderate speed a much faster tattoo is accomplished, and a touch under better control is obtained than possibly could be by hand.

In order to obtain a hand-rest for the operator which will be beyond the limits of the oscillations of plate-holder c, we make a frame H, corresponding in lateral dimensions to frame C, although not so thick, and hinge it to the upper horizontal edge of said frame C.



Under the lower part of said hand-rest, as shown, we place bow-shaped springs *h*, which form a cushion to neutralize the vibrations imparted to the rest of the apparatus by the oscillating plate-holder. This hand-rest *H* may, if desired, be dispensed with.

We do not wish to be confined to shaft *F* and contingent mechanism for oscillating plate-holder *c*, because it is obvious other devices could be used in their stead. For instance, the belt from the drive-wheel could be run to and drive a spindle suitably journaled in bearings on the table, and a rod connect said spindle and plate-holder *c*, said rod being given a reciprocating motion by a crank or an eccentric on said spindle, substantially as indicated in dotted lines in Fig. 1.

What we claim as new is—

1. In a photographer's retouching-machine, the combination, with a rectangular frame, of an independent oscillating vibratory negative-plate holder and means for actuating the same, as and for the purpose set forth.

2. In a photographer's retouching-machine, the combination, with a rectangular frame and plate-holder, of transverse shaft suitably jour-

naled in said rectangular frame having eccentrics *G*, lug *E*, secured to the back of the plate-holder and having elongated bearings through which the eccentrics *G* pass, and means for operating said shaft, as set forth.

3. In a photographer's retouching-machine, the combination, with the rectangular frame *C*, independent vibratory negative-plate holder, and means for actuating the same, of a stationary hand-rest corresponding in transverse construction to and hinged to said rectangular frame, as and for the purpose set forth.

4. In a photographer's retouching-machine, the combination, with the rectangular frame *C*, vibratory negative-plate holder *c*, and adjustable pivotal screws *D*, of the transverse shaft *F*, journaled in bearings secured to frame *C*, and having eccentrics *G*, lugs *E*, having vertically-elongated bearings for said eccentrics *G*, pulley *f*, and drive-wheel *B*, as set forth.

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In presence of—

FRANK D. THOMASON,  
ROBERT J. COYNE.