

(No Model.)

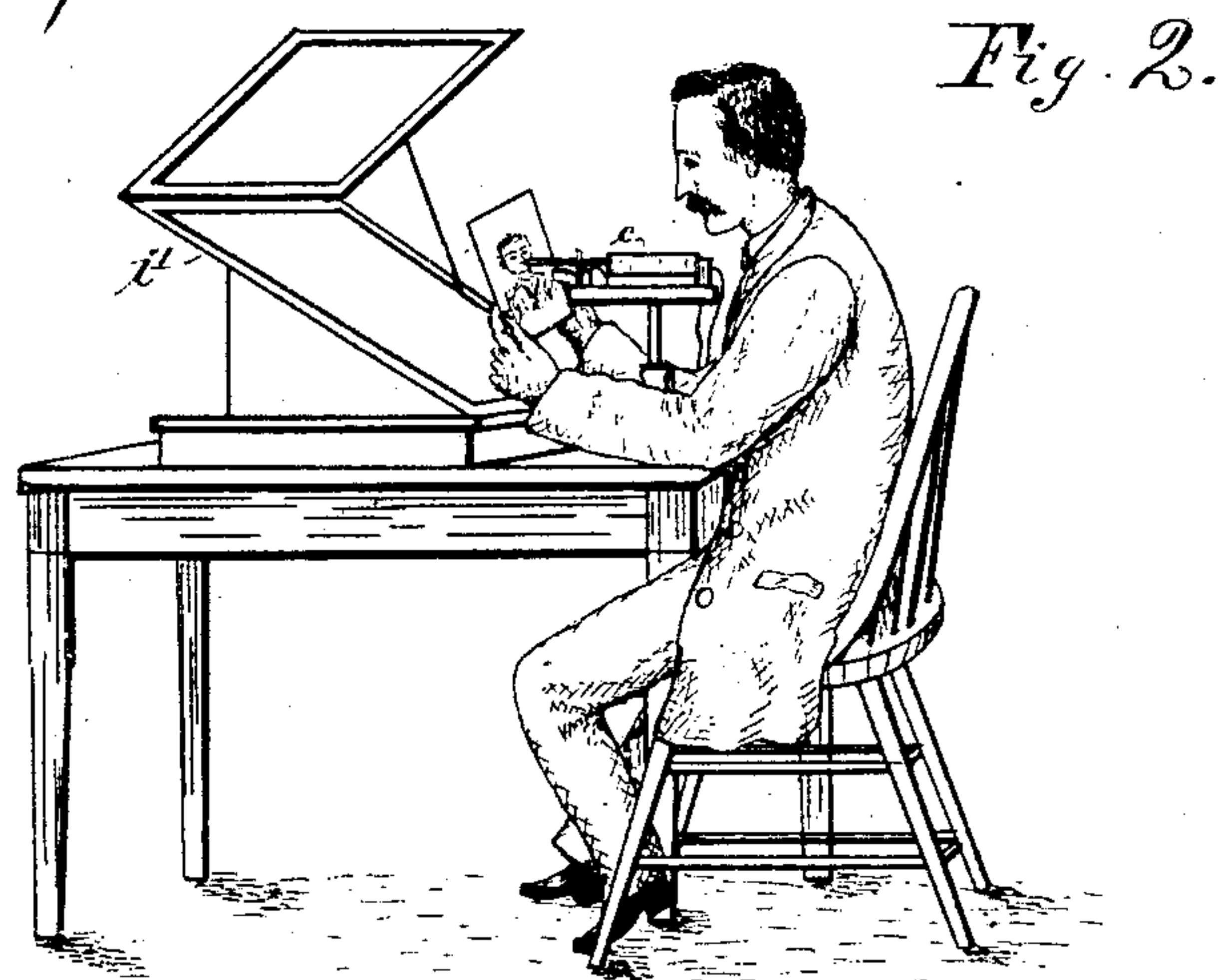
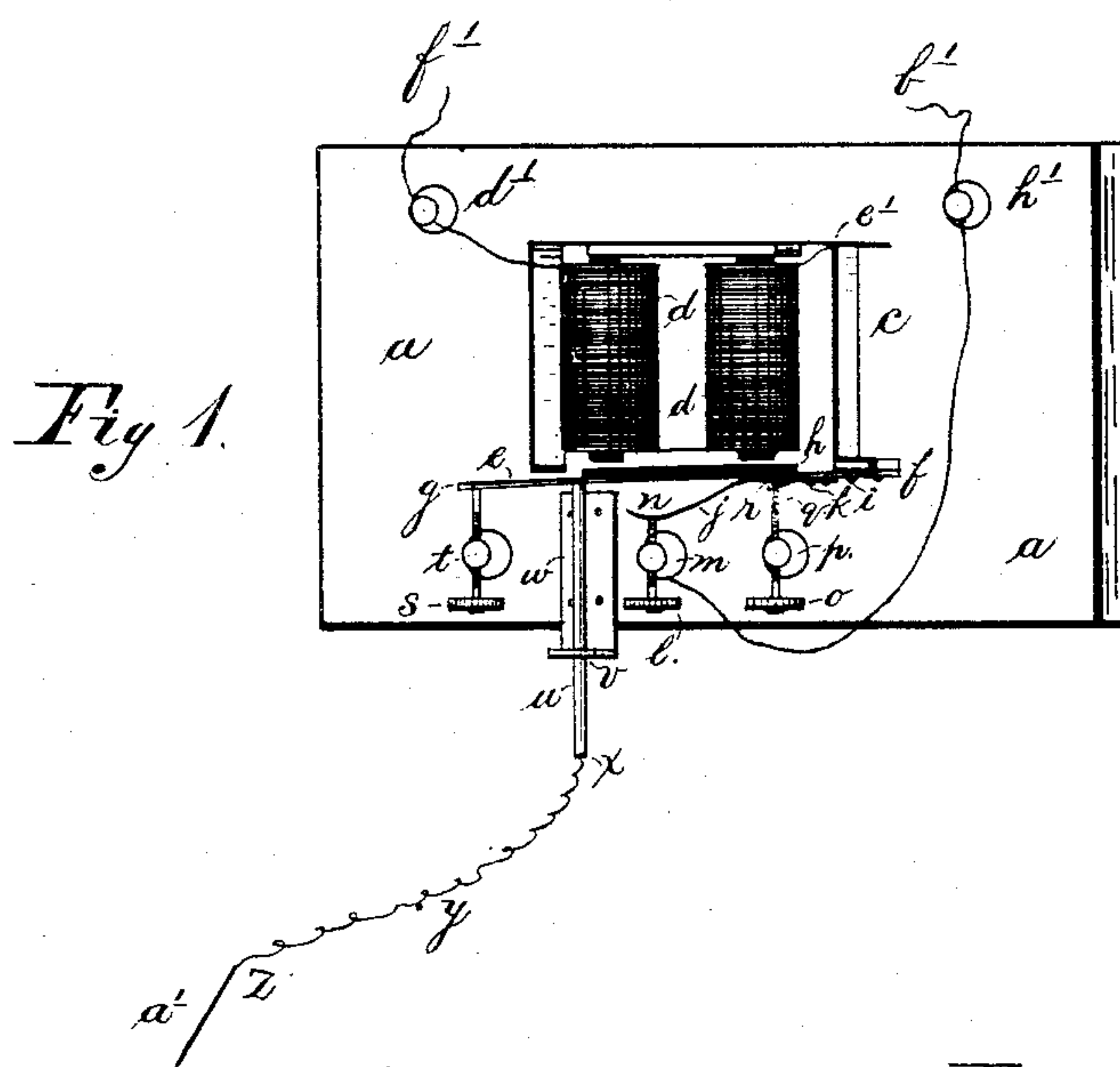
2 Sheets—Sheet 1

J. T. BURKE.

ELECTRIC PHOTOGRAPHER'S RETOUCHING POINT.

No. 285,008.

Patented Sept. 18, 1883.



Witnesses:

C. A. Sweet.

Shenwood Welch

*Inventor:*

John T Burke.

By J. S. Duffie  
Attorney.

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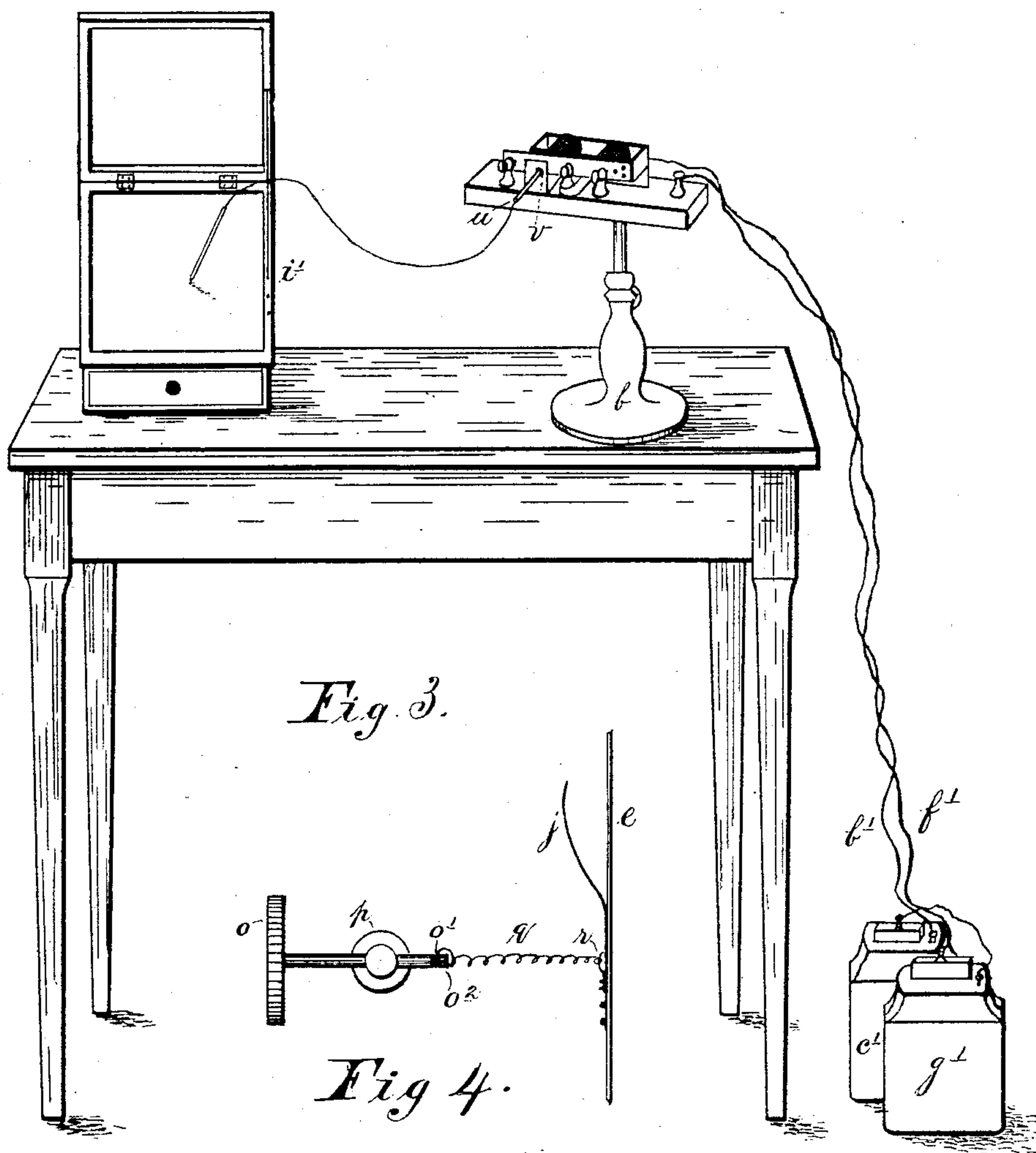
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C. B. Swett.  
Sherwood Welch

Inventor:

John T. Burke.  
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# UNITED STATES PATENT OFFICE.

JOHN THOMAS BURKE, OF NEBRASKA CITY, NEBRASKA.

## ELECTRIC PHOTOGRAPHER'S RETOUCHING-POINT.

SPECIFICATION forming part of Letters Patent No. 285,008, dated September 18, 1883.

Application filed June 1, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN T. BURKE, a citizen of the United States, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Electric Photographers' Retouching Points or Pencils; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My machine or automatic electric movable photographer's retouching point or pencil is described as follows:

My invention consists of a set of electric magnets, to the armature whereof is attached an automatic electric movable photographer's retouching-point, which is adjusted by means of set-screws and springs, for the purpose of giving the said movable point of said photographer's retouching-point any action or movement which may be required for such work. The armature aforesaid is actuated by means of an electric current passing through an electro-magnet.

My invention has for its object a method by which negatives of photographs can be retouched automatically by means of an electric movable photographer's retouching point or pencil put in motion by an electric current, enabling the operator to hold the negative in his hands and to remove whatever defects he wishes to obliterate in the said negative or deepen any shadows on the same by moving with his hands said negative to and in any position he may deem proper before and in front of said point to accomplish such work; or he may place the negative on a photographer's retouching-stand and take the pencil in his hand, and, by directing it to the points of the negative desired to be retouched, the work is done more evenly than it could be done by the hand alone, from the fact that the retouching-point is gently but constantly kept in motion by means of the electric current aforesaid and machine hereinafter described.

In the accompanying drawings, Figure 1 rep-

resents a top plan view of my machine with the spiral spring and retouching-point attached thereto. Fig. 2 represents the machine mounted on a table with the spiral spring detached and the retouching-point *a'* inserted in the end of the hollow tube *u*, and shows the operator holding the negative to the point of the retoucher in his hands. Fig. 3 is a perspective view of my machine mounted on a table with the spiral spring and retouching-point attached thereto, showing the manner of applying the same when the negative is held in the retouching negative-plate holder and the retouching-point is held in the hand. Fig. 4 is an enlarged view of set-screw *o*, spiral spring *q*, and vibrating spring *j*.

*a* is a plain surface, made either of wood or metal, attached to an adjustable upright stand, *b*, Fig. 3, on which plain surface is fastened, by means of screws, rivets, or bolts, an iron frame, *c*, of suitable proportion to hold magnets *d d*.

*e* is a thin brass spring-plate running from points *f* to *g*, and to which is attached armature *h*. Said brass spring-plate *e* is attached to frame *c* by rivets or screws at point *i*.

*h* is an armature, made of iron or steel, and is attached to the under side of brass spring-plate *e*, and immediately over or against the ends of magnets *d d*.

*j* is a vibrating spring, attached at point *k* by means of rivets to brass spring-plate *e*, against which is brought to bear a threaded screw, *l*. The threaded screw *l* passes through a metal post or standard, *m*, in which a thread is cut. Said screw *l* is adjusted to brass spring *j* at point *n*—that is, the end of the screw rests against the upper side of the spring *j* when the spring is standing up, as shown in Fig. 1, but it is not attached to the screw, so that the electric current may not be hindered from bringing the armature *h* against the ends of magnets *d d*.

*o* is a set-screw for purpose of gaging the vibrations of the armature *h* and brass spring-plate *e*, (both pieces being held together as one.) This set-screw *o* passes through threaded post *p*, to the end of which is attached a spiral spring, *q*, the lower end of which spring is attached to the vibrating spring *j* at *r* by means



of a small hook or other similar device. This set-screw *o* and spiral spring *q* are for the purpose of regulating the brass spring-plate *e* and giving it greater rebounding power when required. Thus, when it is desired to give the spring a longer stroke, the set-screw *o* is turned back, thus drawing the spring-plate *e* up and away from the magnets *d d*. The vibrating spring *j* is securely attached to the upper face of brass spring-plate *e*, while the armature *h* is securely attached to the lower side of said plate, and thus the three form but one piece.

Fig. 4 is an enlarged view of set-screw *o*, standard *p*, spiral spring *q*, and small hook on the upper face of the vibrating spring *j*. It will be seen that the point of the set-screw *o* has a wrist, *o'*, cut on the end thereof, leaving a head, *o''*, while the lower end of the spiral spring is passed over the little hook at the point *r*. Thus it will be seen when the set-screw *o* is turned backward it draws the spring-plate *e* up, and, as it were, gives it more elasticity and power of rebounding.

*s* is a set-screw passing through threaded post *t*, for the purpose of regulating the vibrations of spring-plate *e*, and consequently the stroke of the retouching-point *a'*.

*u* is a hollow metal tube, fastened to the upper face of the brass spring-plate *e*, and extending out and passing through the hole *v* in the plate or guide *w*. This plate or guide is screwed down to the upper face of the plain surface *a*, and is for the purpose of guiding the hollow tube *u*. To the open end of this hollow tube, at point *x*, is attached a stout spiral spring, *y*, or hollow rubber tube, to the end of either of which, at point *z*, is attached a photographer's retouching-point, *a'*.

*f'* is the negative pole, running from the battery *g'* to binding-post *d'*, and from thence to electric magnets *d d*, running through magnets *d d*, thence to frame *c* at point *e'*, thence to vibrating spring *j* at point *n*.

*b'* is the positive pole, running from the battery *c'* to binding-post *h'*, thence to the metal post or standard *m* of threaded screw *l*, and thence to the point of said threaded screw *l*, and making connection where threaded screw *l* is adjusted to vibrating spring *j* at point *n*, which completes the electric current and causes the vibrations required.

This automatic retouching-point is operated as follows: When the electric current is turned on, the brass spring-plate *e* is caused to vibrate rapidly. This imparts motion by means of the hollow tube *u* and spiral spring *y* to the retouching-point *a'*. This retouching-point is taken in the hand and carried over the points of the negative desired to be retouched while the negative is on the retouching negative-plate holder *v'*, (see Fig. 3;) but when the operator wishes to dispense with the use of the negative-plate holder he removes the spiral spring *y* from the hollow tube *n* and puts the retouching-pencil in the end of said tube, and, taking the negative in one or both hands, he brings it up to the point of the retouching-pencil while the same is being kept in motion by said electric current. This enables him to get any angle of light on the negative he may desire, enabling him the better to see what points need retouching and the better how to do it. (See Fig. 2.)

Having described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

1. In combination with electric batteries *c'* and *g'*, magnets *d d*, and frame *c*, spring-plate *e*, having on its under face armature *h*, and on its upper face vibrating spring *j* and hollow tube *u*, said spring-plate being secured at one end to frame *c* by screws or nuts, and its other end being loose and capable of vibrating between magnets *d d* and the point of set-screw *s*, with set-screw *o*, spiral spring *q*, set-screw *l*, and set-screw *s*, all substantially as shown and described, and for the purposes set forth.

2. In combination with an electric apparatus having frame *c*, magnets *d d*, vibrating spring *j*, armature *h*, and spring-plate *e*, as described, hollow tube *u*, secured at one end to the upper face of said plate *e*, and its other end passing through the guide *w*, with spiral spring *y*, one end of which is attached to said hollow tube at its open end, and the other end carrying the retouching-point *a'*, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN THOMAS BURKE.

Witnesses:

ALEX. CALWELL,  
EDWIN J. MURFIN.