

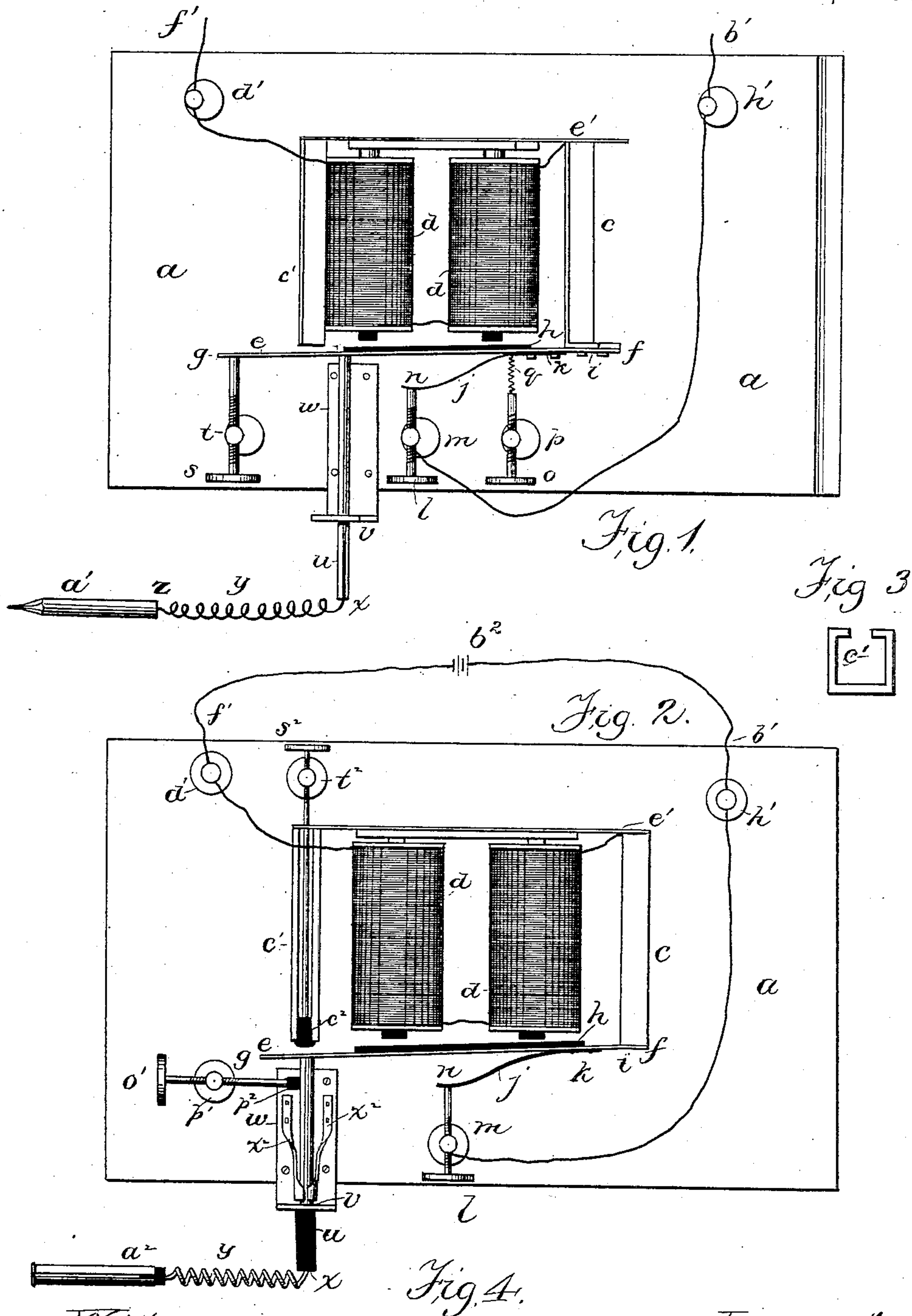
(No Model.)

H. H. McELHINEY.

PHOTOGRAPHER'S RETOUCHING POINT.

No. 294,059.

Patented Feb. 26, 1884.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## PHOTOGRAPHER'S RETOUCHING-POINT.

SPECIFICATION forming part of Letters Patent No. 294,059, dated February 26, 1884.

Application filed December 5, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HASKELL HARRIS McELHINEY, 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 the Adjustment of Burke's Electric Photographer's Retouching-Point; 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.

Figure 1 is a top plan view of "Burke's electric photographer's retouching-point," patented September 18, 1883, by United States Letters Patent No. 285,008. Fig. 2 is a top plan view of the invention as improved by me. Fig. 3 is an end view of column  $c'$  of frame  $c$ . Fig. 4 is a face view of one of the springs,  $x^2$ , before being bent into shape to grasp hollow tube  $u$ .

Burke's invention is found to be defective in this: it cannot be properly adjusted to do fine or soft work, and the operator is liable to receive electric shocks therefrom. In my invention both of these objections are overcome. In Burke's invention the brass spring  $e$  strikes against the metal end of set-screw  $s$ , which gives it (the spring) a hard and decided stop, and then against the metal end of column  $c'$ , giving another hard and decided stop, which makes the retouching-point  $a'$  drive at the photographic plate by hard and decided licks, and is liable to scale off the coating. To prevent this, I provide a rubber cushion,  $c^2$ , for the plate  $e$  to strike against, and provide for a slight pressure against hollow tube  $u$ , to regulate its movement, hereinafter described. Moreover, in Burke's invention it has been found that to allow the hollow tube  $u$  free linear motion the hole  $v$  must be large enough to allow it to work a little loosely, and the pencil is therefore not always guided to the exact point desired. To remedy this, I have provided two springs,  $x^2$   $x^2$ , which are hereinafter fully described; and I have dispensed with set-screw  $o$ , threaded post  $p$ , and spiral spring  $q$ , as they are useless, the same end being attained by making brass spring-plate  $e$  and vi-

brating spring  $j$  a little stiffer. I have also dispensed with threaded post  $t$  and set-screw  $s$ , as the vibration of the brass spring  $e$  and the length of stroke can be regulated by set-screws  $l$  and  $s^2$ .

The invention as improved by me and as shown in Fig. 2 of the accompanying drawings is described as follows:

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

$e$  is a 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, 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  $j$ ; but it is not attached to the screw, so that the electric current may not be hindered from bringing the armature  $h$  against the end of rubber bumper  $c^2$ . When I wish to lengthen the stroke of spring-plate  $e$ , I turn set-screws  $l$  and  $s^2$  to the left. When I wish to shorten the stroke, I turn them to the right.

$u$  is a hollow metal tube, fastened to the brass spring-plate  $e$ , and immediately opposite the open end of column  $c'$  of frame  $c$  and extending out and passing through hole  $v$  in plate  $w$ . To the open end of this hollow tube, at point  $x$ , is attached a stout spiral spring,  $y$ , to the end of which, at point  $z$ , is attached a pencil-holder,  $a^2$ , adapted to hold a photographic retouching-point. Column  $c'$  of frame  $c$  is hollow, to allow the insertion of rubber bumper  $c^2$  and set-screw  $s^2$ . This set-screw  $s^2$  passes through threaded post  $t^2$ , and has a head on its small end, which is inserted in the rubber bumper  $c^2$ , so that when the screw is turned to the right the bumper is forced out at the open end of the column, and when turned to



the left it is drawn back into the open end of the same. Plate  $w$  is screwed down to the upper face of the base  $a$ , and has its outer end turned up, through which there is a hole,  $v$ , for the passage of hollow tube  $u$ . On the upper face of plate  $w$  are two grasping-springs,  $x^2 x^2$ , which grasp and encircle the tube and hold it steady in position, and at the same time allow it free linear motion. However, plate  $w$  may be dispensed with, and the springs  $x^2 x^2$  may be screwed down on the face of the base  $a$ , as these springs sufficiently guide tube  $u$  without the assistance of hole  $v$ .

$o'$  is an adjustable screw, working in post  $p'$ . The end of this screw is covered with a soft-rubber cap,  $p^2$ , which bears gently against the side of hollow tube  $u$ , and thus gives it a regular, gentle, and soft stroke. The hollow tube from point  $v$  to its end, the spiral spring  $y$ , and the pencil-holder  $a^2$  are all covered with rubber or other insulating material, and thus prevent the operator from receiving electric shocks.

$f'$  is a wire running from the negative pole of a battery to binding-post  $d'$ , and from thence to electro-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 a wire running from the positive pole of a battery 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 circuit.

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 pencil-holder, and consequently to the retouching-point. The retouching-point is taken in the hand and carried over the points in the negative desired to be retouched while the

negative is on the retouching negative-plate holder; 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  $u$  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.

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

1. The combination, in a photographer's retouching device having frame  $c$ , magnets  $d d$ , and spring  $e$ , having armature  $h$ , and hollow tube  $u$ , of hollow column  $c'$ , with threaded post  $t^2$ , set-screw  $s^2$ , and rubber bumper  $c^2$ , substantially as shown and described, and for the purposes set forth.

2. The combination, in a photographer's retouching device having frame  $c$ , hollow column  $c'$ , rubber cap  $c^2$ , set-screw  $s^2$ , brass spring  $e$ , having armature  $h$ , and hollow tube  $u$ , of springs  $x^2 x^2$ , grasping hollow tube  $u$ , and set-screw  $o'$ , passing through threaded post  $p'$ , and having soft-rubber cap  $p^2$ , adapted to press gently against the side of hollow tube  $u$ , substantially as shown and described.

3. In combination with electric batteries  $b^2$ , wires  $f' b'$ , magnets  $d d$ , spring-plate  $e$ , having on its under face armature  $h$ , insulated tube  $u$ , spiral spring  $y$ , and pencil-holder  $a^2$ , substantially as shown and described, and for the purposes set forth.

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

HASKELL HARRIS McELHINEY.

Witnesses:

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A. C. SWEET.