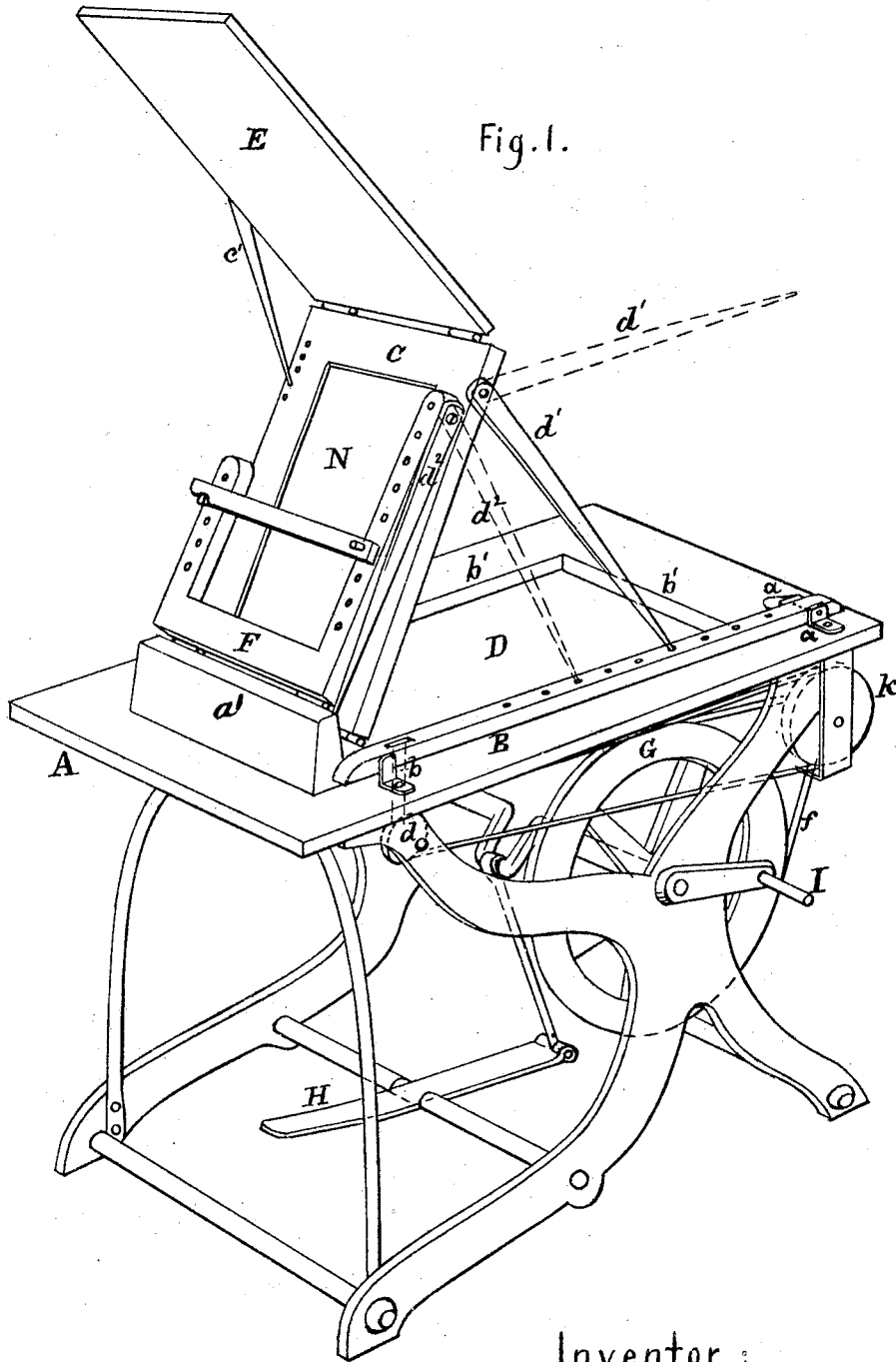


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Processes of Retouching Photographic Negatives.

No. 144,723.

Patented Nov. 18, 1873.



Witnesses :

A. P. Lacey

H. A. Daniels

Inventor :

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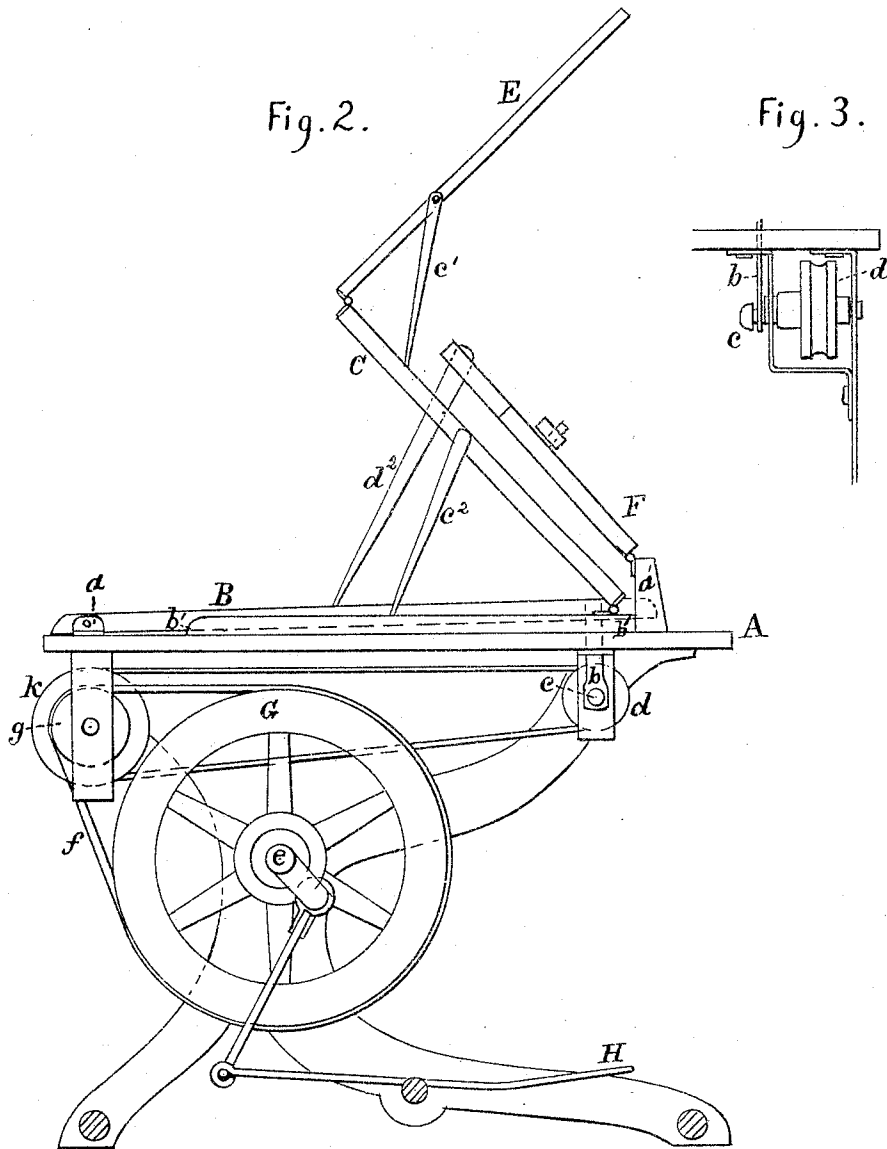
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UNITED STATES PATENT OFFICE.

DAVID H. WRIGHT, OF TERRE HAUTE, INDIANA.

IMPROVEMENT IN PROCESSES OF RETOUCHING PHOTOGRAPHIC NEGATIVES.

Specification forming part of Letters Patent No. **144,723**, dated November 18, 1873; application filed September 30, 1873.

To all whom it may concern:

Be it known that I, DAVID H. WRIGHT, of Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Retouching Photograph Negatives; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, and are in two sheets.

Figure 1, Sheet 1, is a perspective view. Fig. 2, Sheet 2, is a side elevation of the reverse side. Fig. 3, Sheet 2, is a pulley, eccentric, and pitman detached.

My invention relates to a new process of retouching photographic negatives, and to a new combination of the devices for operating the new process; and consists in imparting, by any suitable machinery or devices, proper motion to negative-easels, or to hand-rests, so that, by holding the retouching-pencil in proper position, near or in contact with the surface of the negative, the retouching is performed by the motion imparted by machinery to the negative itself, or to the hand holding the pencil, thus producing a finer stippled effect, and performing the work in less time than it can be done in the usual way by the hand alone.

The easel and operating devices are arranged upon and attached to a table, A, of suitable size and structure. B is a bar, with holes or notches on the top, hinged or pivoted at one end to suitable supports, *a*, and attached at the other end to a pitman, *b*, connecting with an eccentric or cam, *c*, on the inner end of a pulley, *d*. C represents the negative-easel, hinged to the frame *b'*, and provided with a prop, *d'*, pivoted to the side of the easel, and arranged so that the lower end may rest in one of the holes on bar B, as shown in Fig. 1. The easel is provided also with a prop, *e'*, on the opposite side from prop *d'*, arranged to rest on frame *b'*, to support the easel when the motion is imparted to the hand-rest instead of the easel. D represents a reflector in the frame *b'*, which frame serves as the bed of the easel when folded down. E is a shade, hinged to the top of the easel, provided with a prop, *e'*. F is a hand-rest, hinged to a base, *a'*, in front

of the easel, and is provided with a prop, *d''*, arranged for the lower end to rest upon the bar B, as shown in Fig. 1 by dotted lines. G is a drive-wheel on shaft *e*, having its bearings in the standards of the table, and arranged to be run by a treadle, H, or by a crank, I. The rim of the wheel is constructed so as to carry a belt or band, *f*, extending over a pulley, *g*, (see Fig. 2,) on the axle of a wheel, K, which carries a band extending over pulley *d*, on the inner end of the shaft of which is the eccentric *c*, to which is attached pitman *b*, the upper end of which connects with the end of bar B.

The rate of speed of bar B and number of motions of the easel or hand-rest in a given time, it is readily seen, depend upon the relative sizes of the wheels and pulleys.

At present the wheel G is made about fifteen inches in diameter, and wheel K about one-third of that size, which wheel K and its pulley *g* are used only to obtain increased speed, and might be dispensed with by making wheel G sufficiently large, and running band *f* over pulley *d*.

The length of the movement of the easel or hand-rest is regulated by shifting the position of the lower end of the props. To increase the length of the movement, the props are placed nearer the end of the bar which is connected with the pitman, and to lessen, farther from that end.

In retouching by my new process, the negative N is placed on the easel C, and the lower end of prop *d'* in one of the holes in bar B, as shown in Fig. 1, and the wheel G is revolved, imparting vibratory motion to the bar B, and to the easel and negative, and by holding the retouching-pencil in proper position in relation to the surface of the negative rapid retouches are produced by the machinery, thus producing a finer stippled effect, and performing the work in less time than by the usual mode.

When it is desired to perform the work of retouching by imparting the motion to the pencil instead of the negative, the prop *d'* is turned up, as shown by dotted lines in Fig. 1, and prop *e'* turned down to rest on frame *b'* to support the easel, as shown in Fig. 2, and the lower end of *d''* is placed in one of the holes in bar B, as shown in Fig. 1 by dotted lines,

and the hand holding the retouching-pencil rests on the rest *f*, and the movements of bar B impart the requisite retouching motion to the hand and pencil.

Any suitable devices may be employed which will impart to the negative or pencil the proper motion by which the retouching may be performed.

What I claim as new in the process of retouching photographic negatives is—

1. Imparting motion to the negative by means of suitable machinery or devices, so that by holding the retouching-pencil in proper position the retouching is performed by the motion imparted to the negative, substantially as described.

2. The improvement in the process of retouching photographic negatives by imparting motion to the retouching-pencil being

held in the hand of the operator on a rest having vibratory motion, substantially as described.

3. The combination of a bar, B, having vibratory motion, with a photograph-easel, C, or hand-rest F, substantially as and for the purposes described.

4. The combination of the bar B, pitman *b*, eccentric *c*, wheels G K, and pulleys *d g*, with the negative-easel C or rest F, substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of September, 1873.

DAVID H. WRIGHT.

Witnesses:

GEO. W. HOLLOWAY,
J. M. ADAMS.