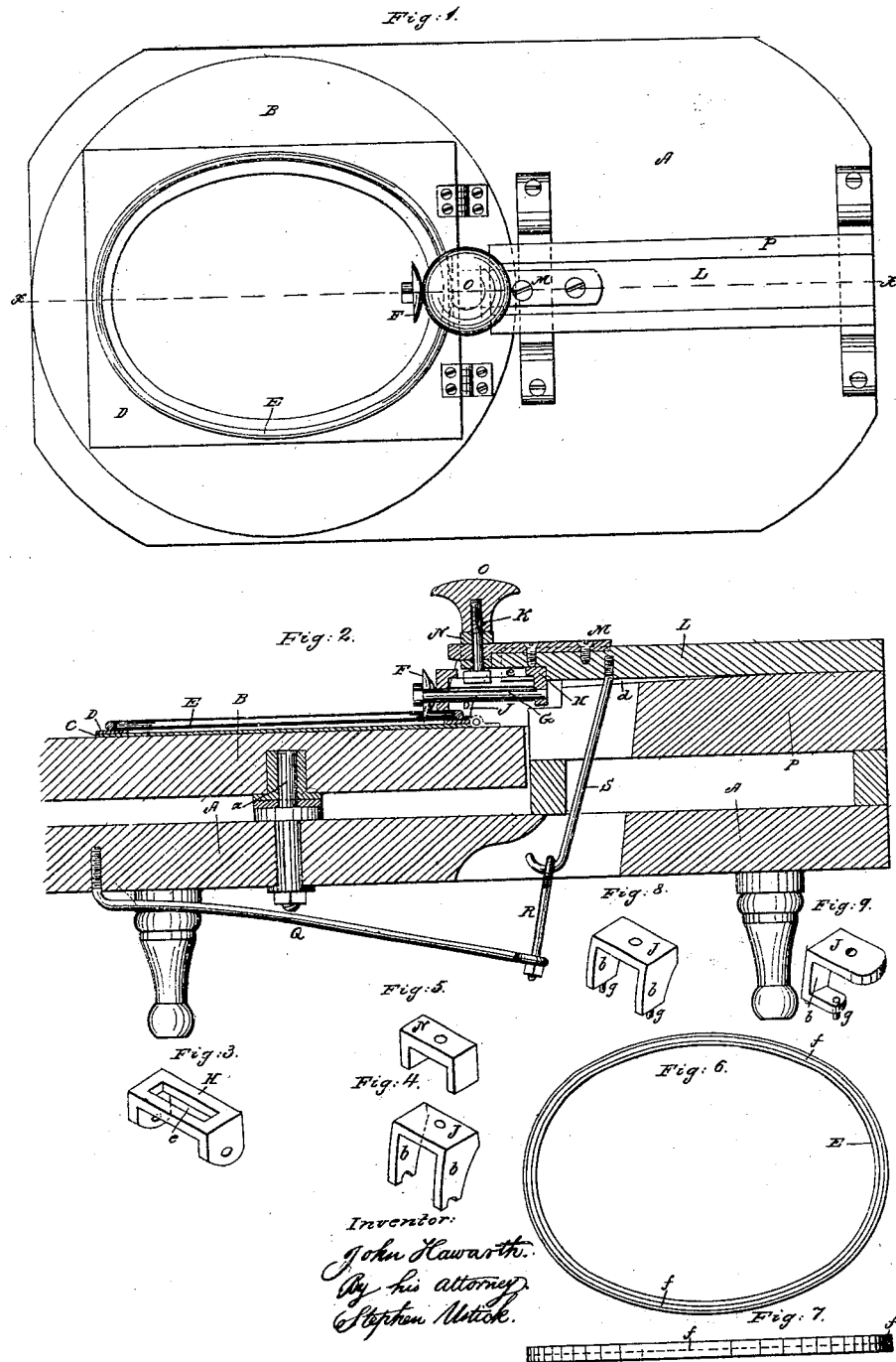


J. HAWORTH.
Photographic Print Cutter.

No. 109,615.

Patented Nov. 29, 1870.



United States Patent Office.

JOHN HAWORTH, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 109,615, dated November 29, 1870; antedated November 26, 1870.

IMPROVEMENT IN PHOTOGRAPHIC PRINT-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN HAWORTH, of the city of Philadelphia and State of Pennsylvania, have invented certain Improvements in Photograph Print-Cutters, of which the following is a specification.

The nature of my invention consists in the combination of a guide-strip of oval or other form, and revolving table, which holds the print to be cut, the cutter-guide being connected with a clamping-plate, and the cutter being on a revolving shaft, held by a carrier connected with a swivel-plate, attached to a horizontal sliding bar. The said bar is held down by a spring, whereby the cutter is brought to bear upon the print with sufficient force to cut through it as the table, above mentioned revolves, as hereinafter described.

To enable others skilled in the art to which my improvement appertains to make and use my invention, I will now give a detailed description thereof.

In the accompanying drawing, which makes a part of this specification—

Figure 1 is a plan of the improved cutter.

Figure 2 is a vertical longitudinal section of the same, at the line X X of fig. 1.

Figure 3 is an isometrical view of the slotted cutter-carrier H.

Figure 4 is a like view of the swivel-plate J.

Figure 5 is a like view of the cap-piece N.

Figures 6 and 7 are top and edge views of the guide-strip E, in a modified form.

Figures 8 and 9 are modified forms of the swivel J.

Like letters in all the figures indicate the same parts.

A is the stand, to which the several parts of the cutter are connected.

B is a revolving table, which turns on the center-pin *a*, seen in fig. 2.

The glass plate C, upon which the print to be cut is placed, lies flat upon the table B, and the hinged clamping-plate D holds the print thereon.

The said plate is provided with a guide-strip, E, of oval or other form, corresponding to the form of the print or paper desired.

F is a circular cutter on the revolving shaft G, hung in the carrier H, which has a swivel movement, by means of its connection with the swivel-plate J having downward-projecting jaws, *b b*, slotted at their lower ends, as seen in figs. 2 and 4, so as to have an easy fit over the guide-strip E, to admit of the free turning of the table B, for cutting the prints.

The carrier H is shown in detail in fig. 3.

K is a center-bolt, which connects the carrier H and swivel-plate J with the horizontal sliding bar L, the bar having a projecting-plate, M, attached to its front end, against the lower side of which the said swivel-plate is held by the bolt K, passing through the same, and a cap-piece, N, and the nut O, on the

upper end of the bolt, being screwed down upon the said cap-piece, as seen in fig. 2. The cap-piece N is shown in detail in fig. 5.

The sliding bar L rests at its rear end on the bottom of the groove *d* of the permanent bar P, in which it slides, the front end of the bar being pressed downward by means of the spring Q acting through the connecting rods R S, so as to press the revolving cutter F down upon the print or paper with sufficient force to cut the same as the table is revolved by the operator.

As the table is revolved the cutter F has its distance from the center of the table varied, according to the form and size of the guide-strip E, by means of the connection of the carrier H, with said strip and with the sliding bar L, as before described, whereby the print or paper is cut of the exact form of the said strip.

The size of the print is varied by the adjustment of the carrier H, the slot *e* admitting of its being moved inward toward the center of the table B, or outward from the same, the nut O being unscrewed for the adjustment, and afterward screwed tight to hold the parts together.

If desired, the guide-strip E may have a groove, *f*, on its top side, as seen in fig. 6, to receive the ends of pins, *g g*, projecting from the lower ends of the jaws *b b* of the swivel-plate J, as represented in the modification shown in fig. 8.

The guide-strip E, instead of being of elliptical form, as represented in the drawing, may be of any other form desired, by having a single pin, *g*, to the swivel J, as represented in fig. 9.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the guide-strip E on the clamping-plate D, with the table B, for regulating the form of the print, substantially in the manner above described.

2. The combination of the revolving cutter F, shaft G, swivel-plate J, the sliding bar L, and center-pin K, having a nut, O, the said parts being constructed, arranged, and operating in relation to each other and to the guide E, substantially in the manner and for the purpose set forth.

3. The combination and arrangement of the spring Q and rods R S, with the stand A and sliding bar L, substantially as and for the purpose above described.

In testimony that the above is my invention, I have hereunto set my hand and affixed my seal this 16th day of May, 1870.

JOHN HAWORTH. [L. S.]

Witnesses:

THOMAS J. BEWLEY,
STEPHEN USTICK.