



# UNITED STATES PATENT OFFICE.

WILLIAM M. DAVIS, OF BROOK HAVEN, ASSIGNOR TO HIMSELF AND  
SIDNEY S. NORTON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR ORNAMENTING AND LETTERING LOOKING-GLASSES, SIGNS, &c.

Specification forming part of Letters Patent No. **108,458**, dated October 18, 1870.

I, WILLIAM M. DAVIS, of Brook Haven, county of Suffolk, in the State of New York, have invented a Machine for Lettering and Ornamenting Looking-Glasses and Glass Signs, of which the following is a specification:

Figure 1 is a perspective view.

A is a frame or table, on the top of which is adjusted a movable elbow, B, through which motion is communicated from an upright shaft, C, on which is a pulley, D. From this a band passes to a double pulley, E, and from this another band passes to the pulley F, which turns the scraper G.

The supporting-pin H, resting on glass or other smooth surface, keeps the elbow B in its true horizontal position, and the block Z supports the operating end when not in motion.

The articulated elbow B admits of the scraper G being moved freely in all directions horizontally over the templet I.

The scraper G, an enlarged view of which is given at No. 2, is adjustable, and the pulleys D E F so proportioned as to give the required rapidity of motion.

The templet or pattern I may be made of brass, wood, or other suitable material. If of wood, I use veneers, having three or more glued together, the grains crossed to prevent warping. The design is then drawn on the panel, and afterward cut through it, as shown at I, where it is adjusted in grooves, which brings its under side about half an inch above the surface of the table.

The machine being now ready for work, I place the glass which I design to ornament directly under the pattern I, and, the machine being in motion, I take hold of the handle J and introduce the revolving scraper G into the openings in the pattern I, following them, letting the scraper touch the glass lightly, thus removing a portion of the silver or other coating from the glass exactly corresponding with the design.

When the design is of such a character that it cannot be completed by one pattern I use two or more, as required, each pattern having its appropriate part.

In addition to the elbow described above, I use a swinging frame or double elbow for making continuous lines, script letters, and the like, and to make reduced copies of patterns. This is adjustable to and forms a part of my machine.

Fig. 3 is a perspective view of said swinging frame. The principle on which it operates is the same as in the elbow hereinbefore described, except that the guiding-pin K enables me to work from differently-made patterns. These patterns, instead of having the design cut through them, are merely grooves or channels, in which is moved the guiding-pin K.

The scraper, instead of being attached to the handle J, is fixed at L, at which point motion is communicated to it from the upright shaft C.

The glass M is placed under the scraper at L, and the pattern N under the guiding-pin K.

O represents a supporting-wire, which passes through a small pulley pendent from the ceiling, and is brought within easy reach of the operator, enabling him to elevate or depress the scraper G at pleasure.

What I claim is—

The within-described ornamenting and lettering machine, which cuts out the design or letter from what is afterward to serve as a field or background, by means of the revolving scraper, guided by templets or patterns, substantially as herein set forth.

WILLIAM M. DAVIS.

Witnesses:

K. N. JONES,  
ROLLIN GERMAIN.