

No. 645,795.

Patented Mar. 20, 1900.

W. S. EATON.
ENGRAVING MACHINE.

(Application filed Dec. 21, 1899.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

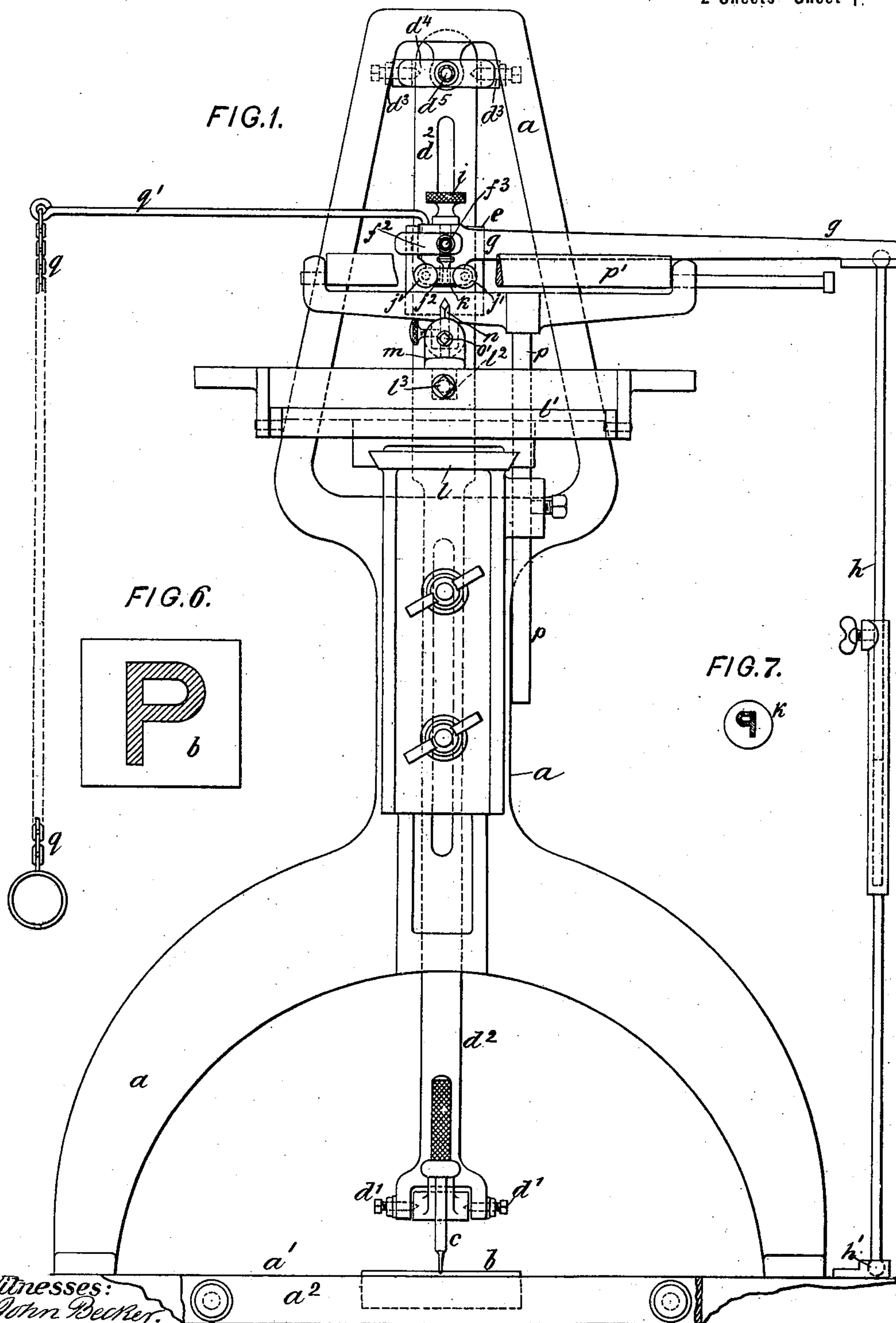


FIG. 6.

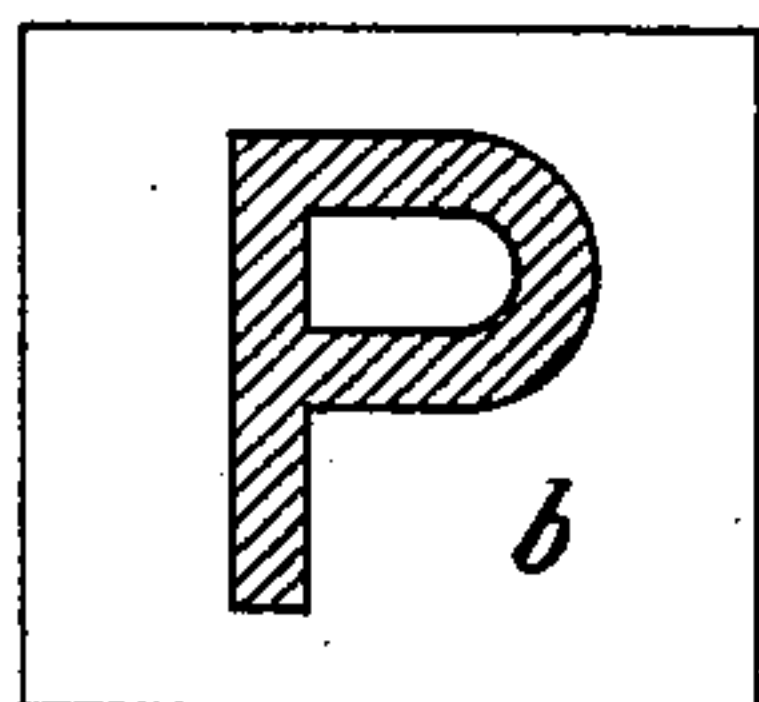


FIG. 7.



Witnesses:
John Becker.
William Miller

Inventor: William S. Eaton
by his attorney, Reader & Brinard

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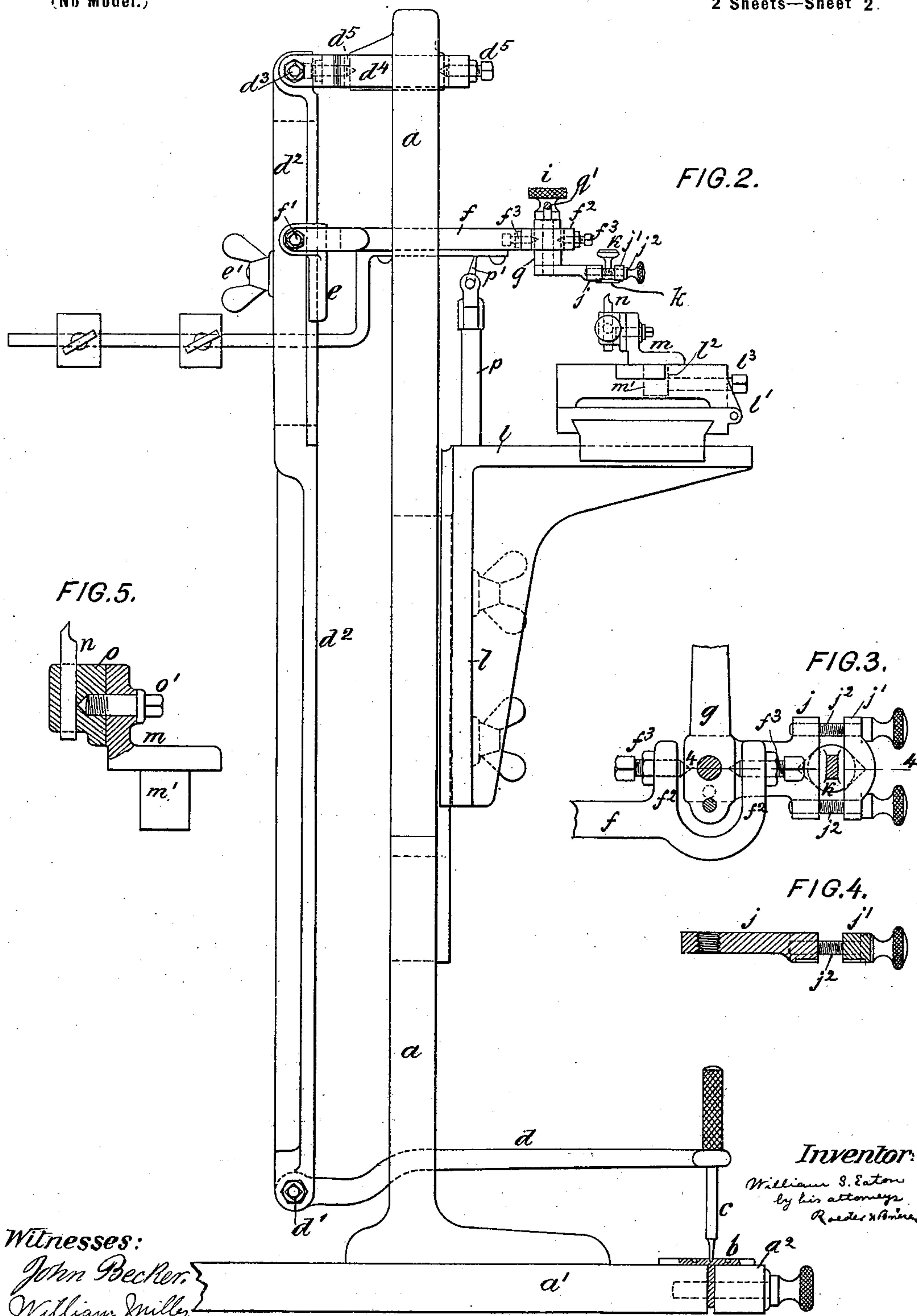
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UNITED STATES PATENT OFFICE.

WILLIAM S. EATON, OF SAG HARBOR, NEW YORK, ASSIGNOR TO THE EATON & GLOVER COMPANY, OF NEW YORK, N. Y.

ENGRAVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 645,795, dated March 20, 1900.

Application filed December 21, 1899. Serial No. 741,119. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. EATON, a citizen of the United States, and a resident of Sag Harbor, Suffolk county, State of New York, have invented new and useful Improvements in Engraving-Machines, of which the following is a specification.

This invention relates to a machine of the class designed for engraving seals or other articles in which the design shown upon the pattern-plate is to be reproduced in a reversed position.

It consists in the various features of construction pointed out in the claim.

In the accompanying drawings, Figure 1 is a front elevation of my improved engraving-machine; Fig. 2, a side elevation thereof; Fig. 3, an enlarged plan of the seal-holding chuck; Fig. 4, a section on line 4 4, Fig. 3; Fig. 5, a sectional detail of the tool-holder; Fig. 6, a plan of the pattern-plate, and Fig. 7 a plan of the seal engraved by the machine.

The letter *a* represents the frame of the machine, upon the base-plate *a'* of which the pattern-plate *b* to be reproduced is secured by means of a clamp *a²* in such a manner that its face points upward. The downward-pointing tracer *c*, that follows the lines of the pattern *b*, is secured to the free end of a lever *d*, pivoted at *d'* to a lever *d²*, which is at *d³* pivoted to yoke *d⁴*. This yoke is pivoted at *d⁵* to frame *a*, so that in this way the lever *d²* turns on a universal joint. The lever *d²* is engaged by a vertically-adjustable slide *e*, which may be clamped to the lever by nut *e'*. To the slide *e* is pivoted at *f'* a counter-weighted arm *f*, which will thus follow all the movements of the tracer *c*. The free end of the arm *f* is forked, as at *f²*, Fig. 3, and within this fork is pivoted at *f³* *f³* a lever *g*, which at its opposite end is joined to an adjustable rod *h*, pivoted at *h'* to base-plate *a'*. Thus the rod *h* will follow the motion of lever *g* and will hold it approximately in a horizontal position.

To the lever *g* is, by screw *i*, removably attached a chuck or work-holder adapted to hold face downward the seal-blank *k* or other body to be engraved. This chuck is composed of a notched relatively-fixed jaw *j* and

of a notched movable jaw *j'*, which may be drawn together by clamp-screws *j²* and between which the blank *k* is held.

To the frame *a* is secured, beneath the chuck *j j'*, a vertically-adjustable bed-plate *l*, supporting a slide-rest *l'*, having a socket *l²*. Within this socket is free to turn a pin *m'*, depending from tool-holder *m*, placed in proximity to the chuck and revoluble upon the slide-rest, to which it may be locked in any position desired by a set-screw *l³*.

The upwardly-pointing engraving-tool *n* is held by a perforated block *o*, which is revolutely attached to holder *m* by screw *o'*. In this way the tool may be set at different inclinations with relation to the seal-blank, so as to vary the width of the lines engraved.

In order to hold the seal-blank off the tool whenever desired, the base-plate *l* is provided with an upright *p*, having a pivoted rest *p'*, adapted to engage arm *f*. A chain *q*, secured to arm *f* by a rod *q'* and adapted to be pulled down by the operator, serves to press the seal-blank with a greater or less force upon the tool after the rest *p'* has been tilted and the blank has dropped into contact with the tool.

It will be seen that in the machine above described the tracer and the engraving-tool point in opposite directions—viz., both outwardly—and that the faces of the pattern-plate and seal-blank also point in opposite directions—viz., both inwardly. If the tracer is moved along the lines of the pattern, its motion will be transmitted through the train of levers and universal joints, but to a diminished degree, to the seal-blank, and the latter will be drawn over the engraving-tool. Thus the tool will engrave the design of the pattern-plate *b*, Fig. 6, on a reduced scale, upon the seal, Fig. 7; but the design upon the latter will be reversed, as it should be. In this way seals and other articles which are to be used as stamps, &c., may be readily provided with reduced and reversed engravings without first reversing the design on the pattern-plate, and thus the cost of their production is greatly diminished.

What I claim is—

In an engraving-machine, the combination of a tracer with a freely-swinging lever actu-

ated thereby, a forked arm adjustably clamped
to said lever, a lever *g*, hung within said arm,
a chuck, means for removably attaching the
chuck to said lever *g*, a vertically-adjustable
5 base-plate, a slide-rest supported thereon, an
engraving-tool, means for adjustably secur-
ing said tool to the slide-rest, an upright se-

cured to the base-plate, and having a pivoted
rest which is adapted to engage the forked
arm, substantially as specified.

WILLIAM S. EATON.

Witnesses:

WILLIAM SCHULZ,
F. V. BRIESEN.