

940,179.

P. J. MEYER.  
ENGRAVING MACHINE.  
APPLICATION FILED APR. 28, 1909.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 1.

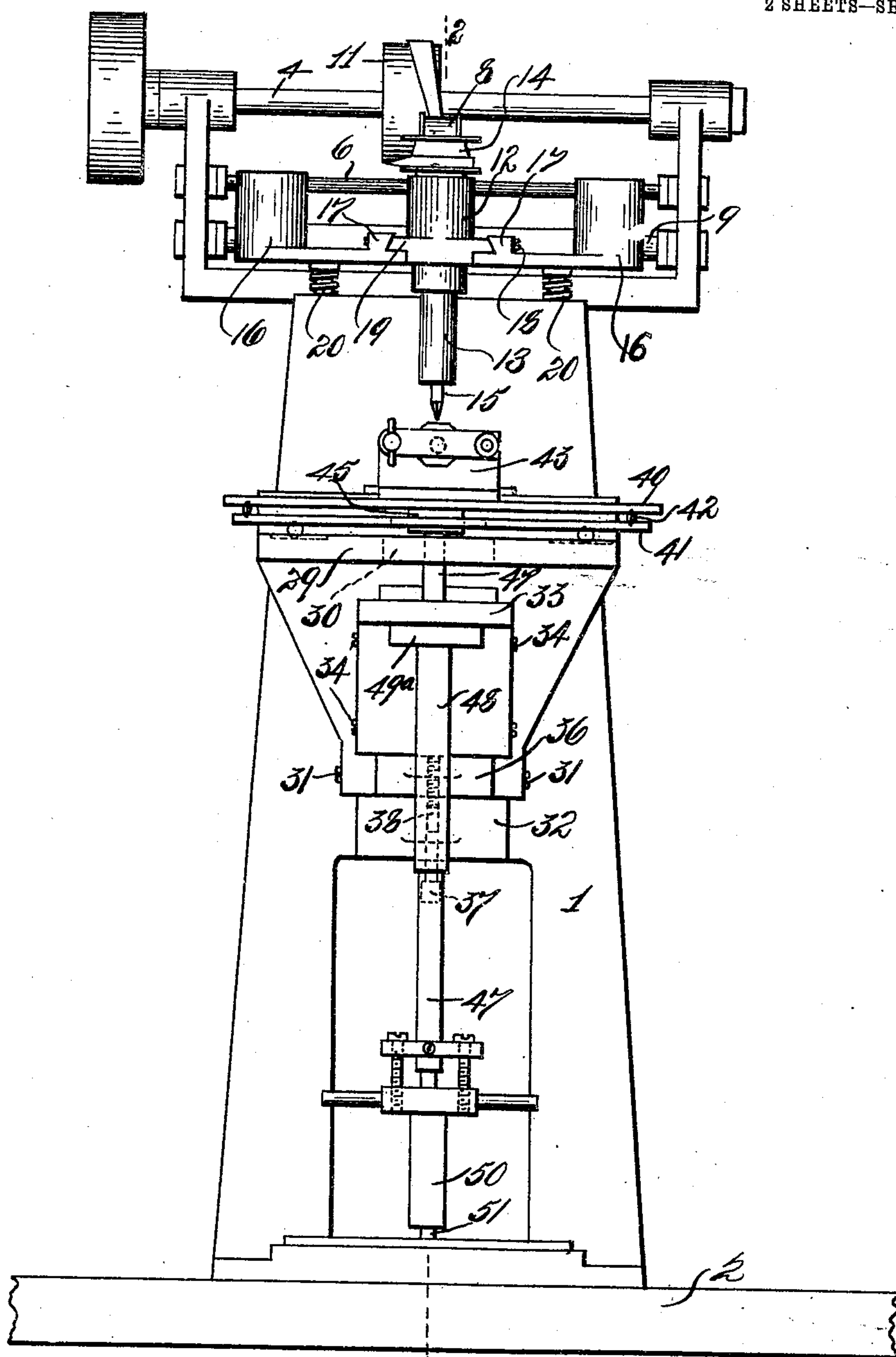


Fig. 1.

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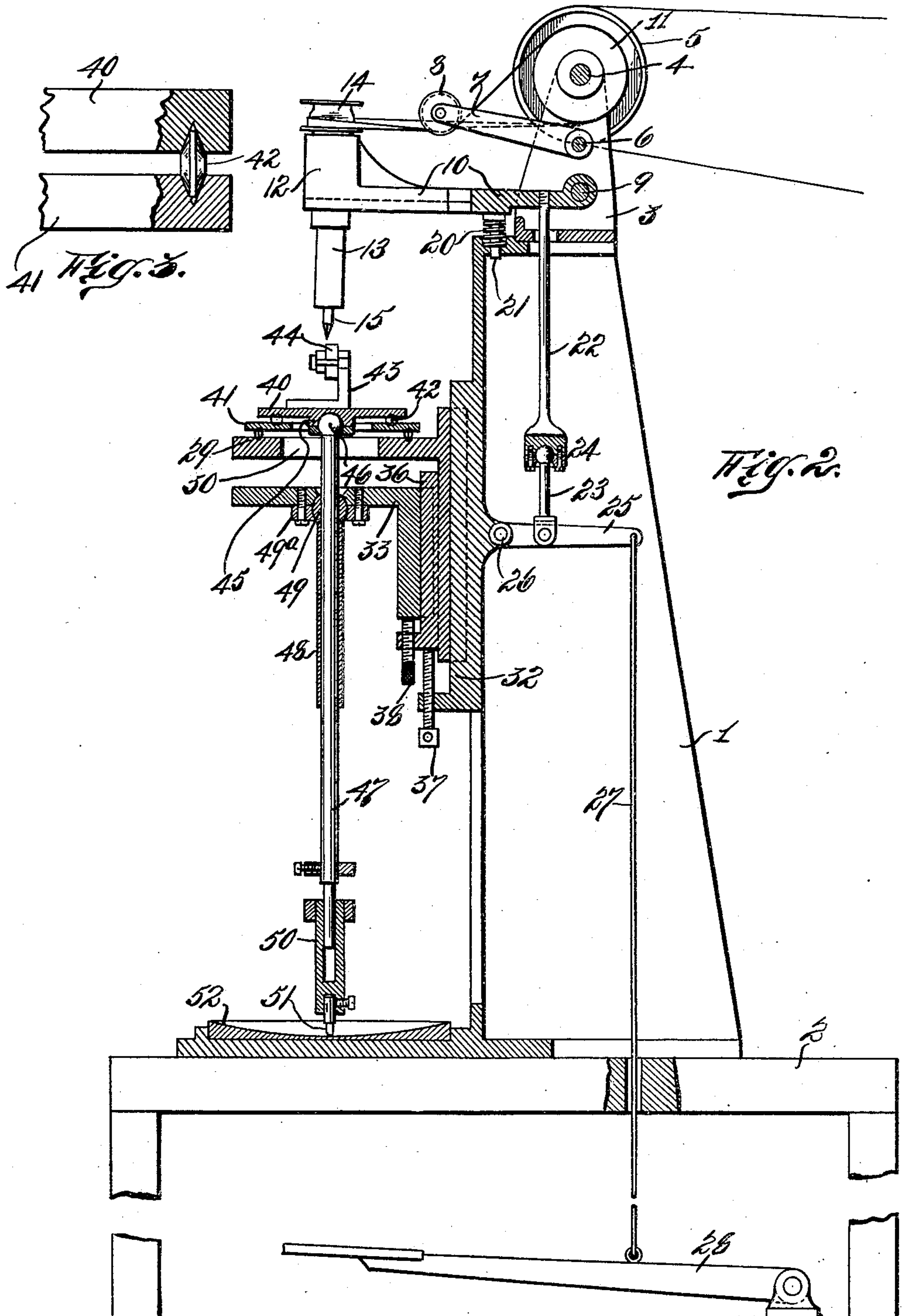
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# UNITED STATES PATENT OFFICE.

PETER J. MEYER, OF NEW YORK, N. Y.

ENGRAVING-MACHINE.

940,179.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed April 28, 1909. Serial No. 492,756.

*To all whom it may concern:*

Be it known that I, PETER J. MEYER, a citizen of the United States, residing at Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Engraving-Machines, of which the following is a clear, full, and exact description.

The object of this invention is to provide an improved machine of the pantographic type for engraving letters and characters.

It is particularly applicable for use in engraving numbering machine wheel blanks.

One of the improved advantages of my invention consists in means for regulating the pressure of the engraving tool upon the work.

Another improved advantage consists in moving the work at all times in all directions without moving the engraving tool.

Many other improved advantages are obtained by the construction and relative arrangement of the parts, all of which will be set forth hereinafter.

The scope of my invention will be fully set forth in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the machine of my invention. Fig. 2 is a transverse vertical section on line 2—2, Fig. 1. Fig. 3 is a detail, partly in section, drawn to an enlarged scale, showing the character of roller used for the work platform.

As shown in the drawings, 1 is a vertical standard mounted on a suitable table 2, and provided with an auxiliary frame 3, in which are mounted the shaft 4, for the driving pulley 5, the stud 6 for the arm 7 of the idler pulley 8, and the shaft 9 for the pivoted bracket 10, carrying the engraving spindle. A pulley 11 is shown as mounted on the shaft 4. The bracket 10 is shown as carrying the sleeve 12 at one end through which the spindle 13 projects. A pulley 14 is mounted upon the sleeve 13 to drive the same. A tool 15 is mounted in the spindle 13 or as is usual, in the machines of this character.

On Fig. 1 of the drawing will be seen two blank spindle holding sleeves 16. Each one may have a spindle, such as the spindle 13, and be provided with its pulley, and a pulley provided for each one on the shaft 4 in like manner, as is the spindle 13. I have shown the spindle 13 as adjustable, forward and backwardly by providing guide

ways 17, and set screws 18, to clamp a guide plate 19 which is secured to the spindle holder 12. A spring 20 on a post 21 in the main frame tends always to lift the spindle bracket 10 into the position shown in Fig. 2. An arm 22 connected to an arm 23 by a ball and socket joint 24 serves to locate the spindle when desired. For this purpose the arm 23 is pivoted to an arm 25 secured at 26 to the main frame 1, and a link 27 secured to a treadle 28 is provided for effecting that purpose.

The work table 29 is provided with a central opening 30, and the table is secured by set screws 31 to a guide plate 32, which is a part of the main frame 1. A table 33 is provided to support the universal joint hereinafter described, which table 33 is secured by set screws 34 to the vertical portion 36 of the work table 29. Set screws 37 and 38 are provided, which will respectively adjust the work table, and the universal joint table. On top of the work table 29 there are mounted two parallel plates 40 and 41. Plate 40 is provided on its under side with slots such as shown in detail in Fig. 3, in which rollers 42 may be located. The plate 41 has similar slots on both of its surfaces, the slots on the upper surface being parallel with the slots on the plate 40, while the slots on the lower surface are at right angles thereto. Slots are provided in the work table itself parallel with the slots on the under side of the plate 41. By this construction, a limited freedom of motion in any direction is secured for the upper plate 40, which plate carries the clamp 43 for the wheel 44, which is to be engraved. A boss 45 on the lower part of the plate 40 is engaged by a ball 46 at the end of a tracer arm 47. The tracer arm 47 extends through a sleeve 48 provided with a ball 49 at its upper end, which is located in a socket formed in the universal joint table 33, and by a plate 49<sup>a</sup> secured thereto. The lower end of the tracer arm is provided with a socket 50, having a usual tracing point 51 set in its lower end, which socket can be moved vertically to a limited extent.

52 is the pattern plate, such as is usually employed in machines of this character.

In operation, the work to be engraved is clamped by the clamp 43. The tables engaging the balls 46 and 49 are properly regulated, so that they will be in proportion to the size of the pattern, and the size of character desired. This can be readily accom-



plished by use of the set screw 38. The operator then puts her foot upon the treadle, and brings the tool 15 down into contact with the work, at the same time causing the tracing point 51 to travel over the pattern.

I claim as my invention:

1. The herein described engraving machine, comprising a standard, a work table support upon the standard, a universal movable work table upon said work table support, a clamp for the work carried by the table, a tracer arm universally pivoted to the work table, a second support secured to the standard, a sleeve having a universal connection with said second support, the said tracer arm extending through said sleeve, a tracing point at the end of said arm, and a pattern to be engaged thereby, an engraving tool, a spindle therefor, means for rotating the spindle, a bracket carrying the spindle, said bracket being pivoted to the standard, and a treadle adapted to control the vertical position of the engraving tool with relation to the work.

2. The herein described engraving machine, comprising a standard, a work table

support upon the standard, a universally movable work table upon said work table support, a clamp for the work carried by the table, a tracer arm universally pivoted to the work table, a second support secured to the standard, a sleeve having a universal connection with said second support, the said tracer arm extending through said sleeve, a tracing point at the end of said arm, and a pattern to be engaged thereby, an engraving tool, a spindle therefor, means for rotating the spindle, a bracket carrying the spindle, said bracket being pivoted to the standard, and a treadle adapted to control the vertical position of the engraving tool with relation to the work, the engraving tool work, universal joint and sleeve, with universal joint for the tracer arm, being all in vertical alinement.

Signed at New York city this 27th day of April 1909.

PETER J. MEYER.

Witnesses:

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BEATRICE MIRVIS.