No. 636,357. Patented Nov. 7, 1899.

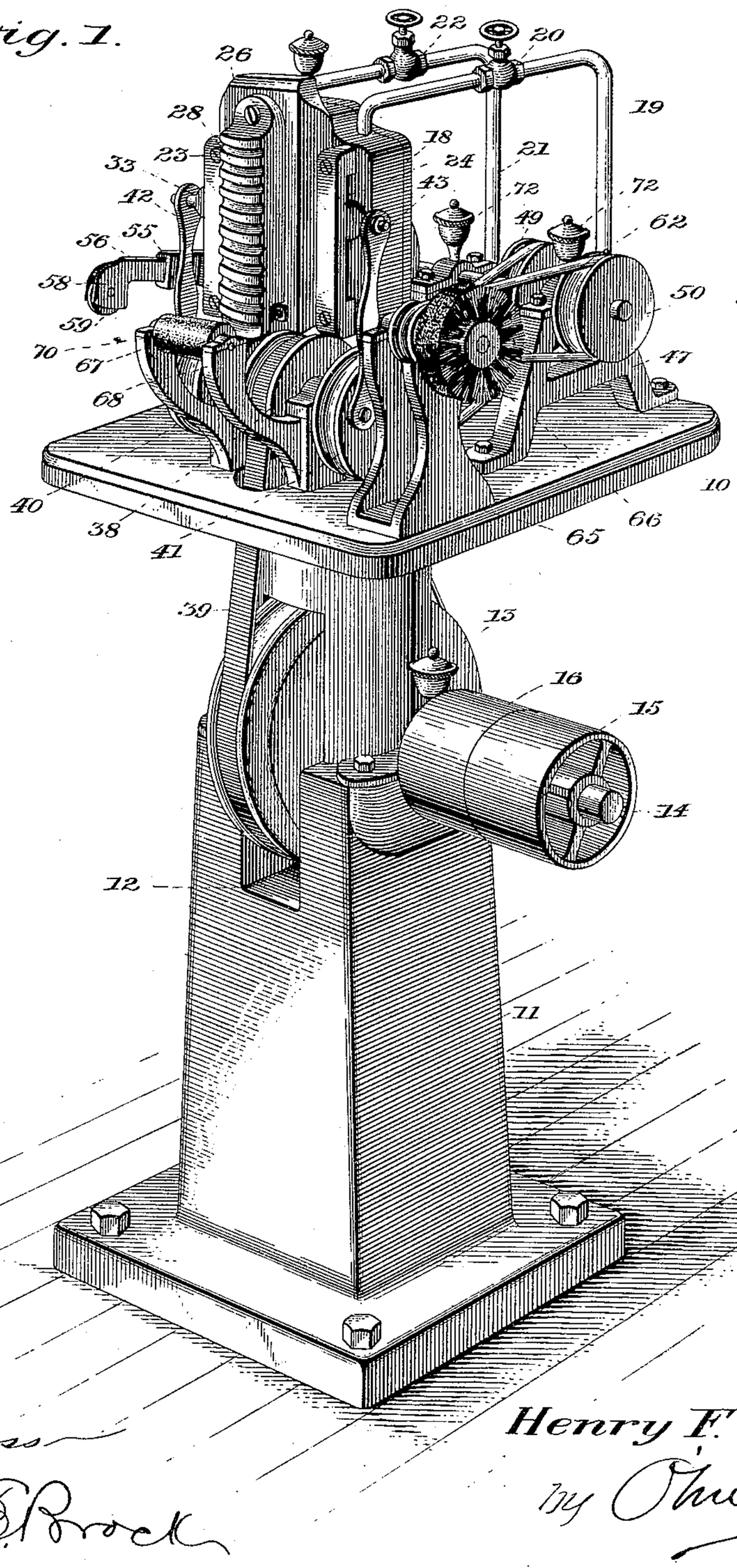
H. F. ROONEY.

HEEL FINISHING MACHINE.

(Application filed Feb. 15, 1898.)

(No Model.) 4 Sheets—Sheet 1.

Fig. 1.



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(No Model.) 4 Sheets—Sheet 2.

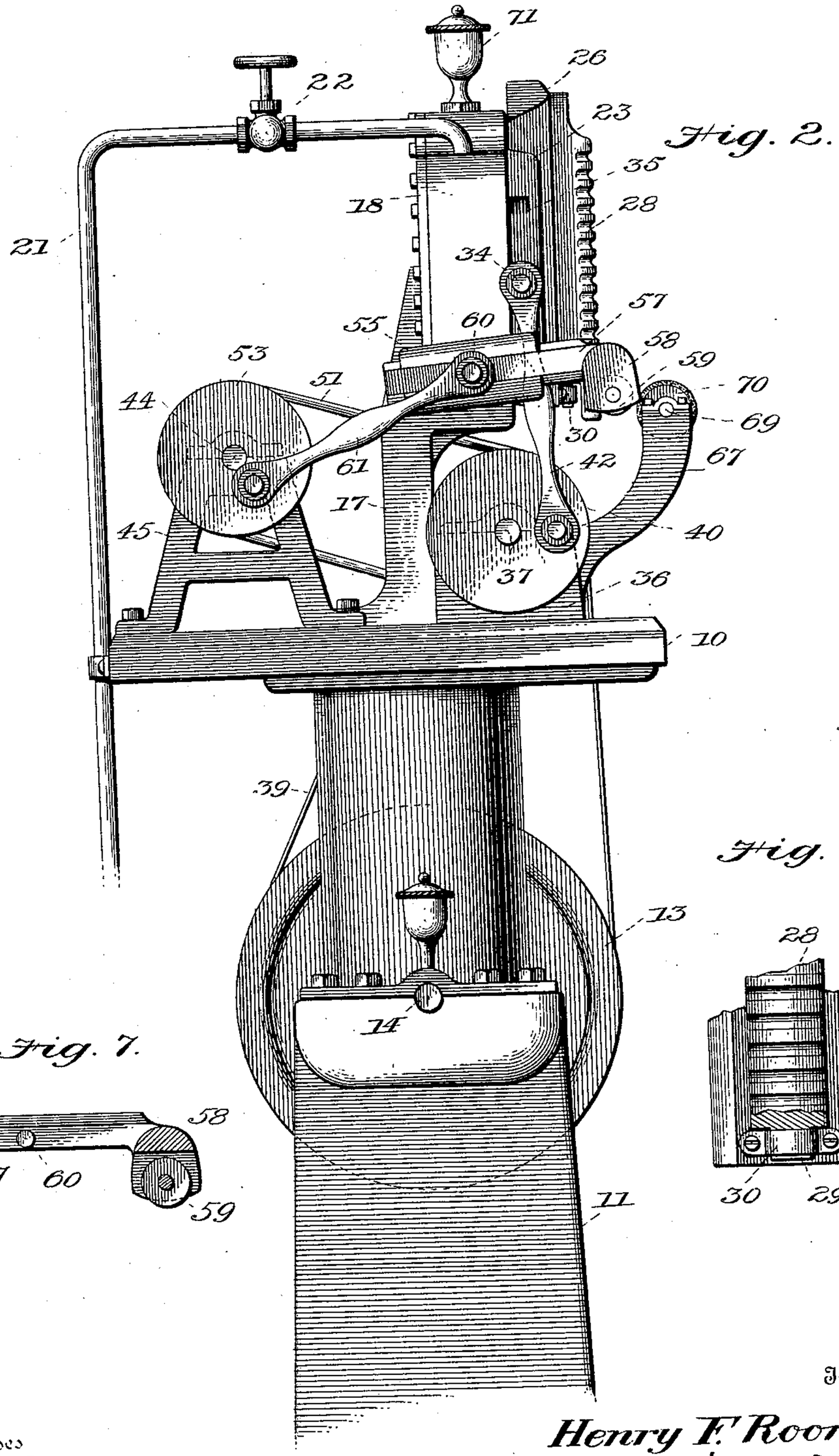

Fig. 2.

Fig. 8.

Fig. 7.

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(No Model.) 4 Sheets—Sheet 3.

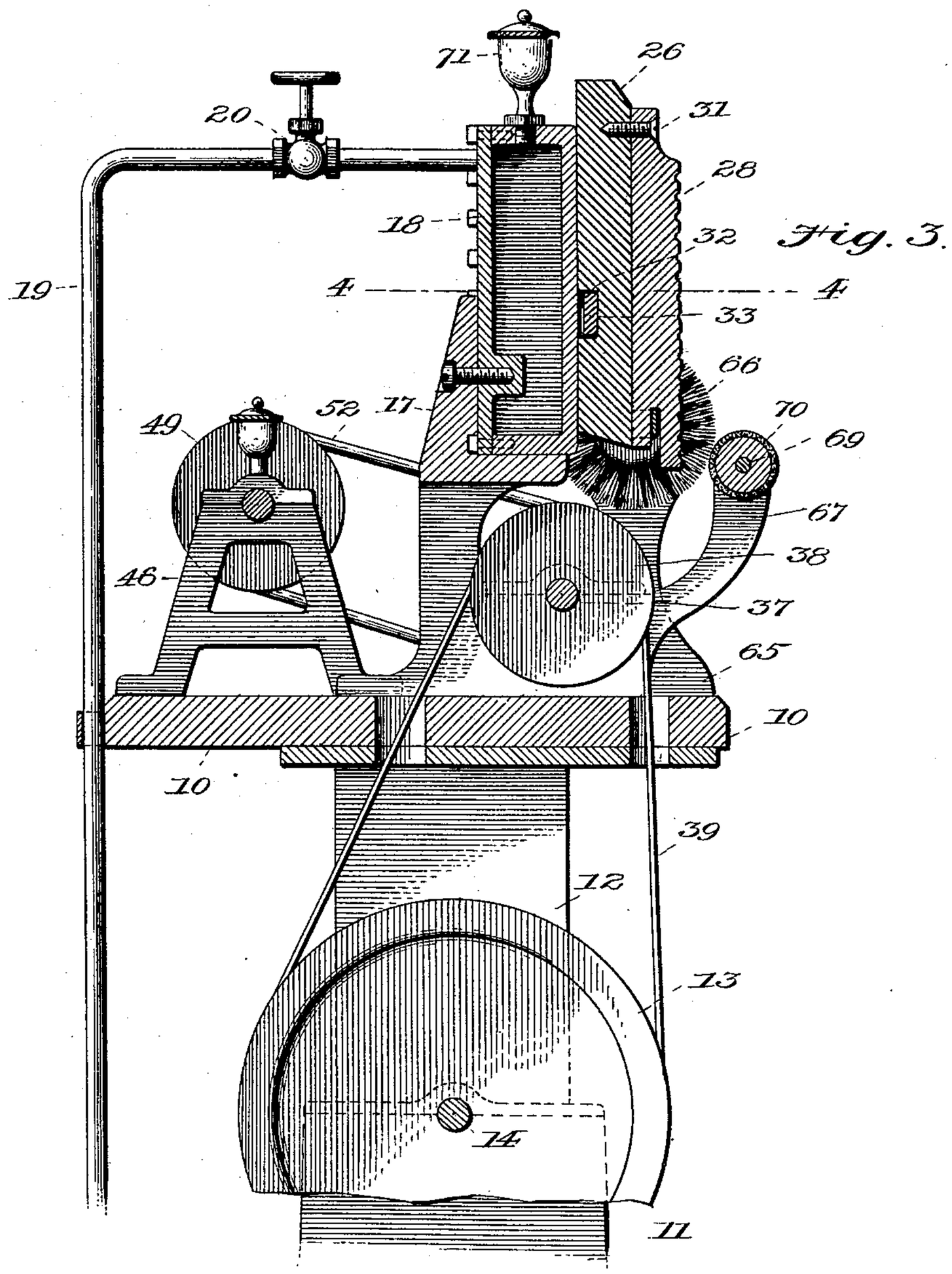
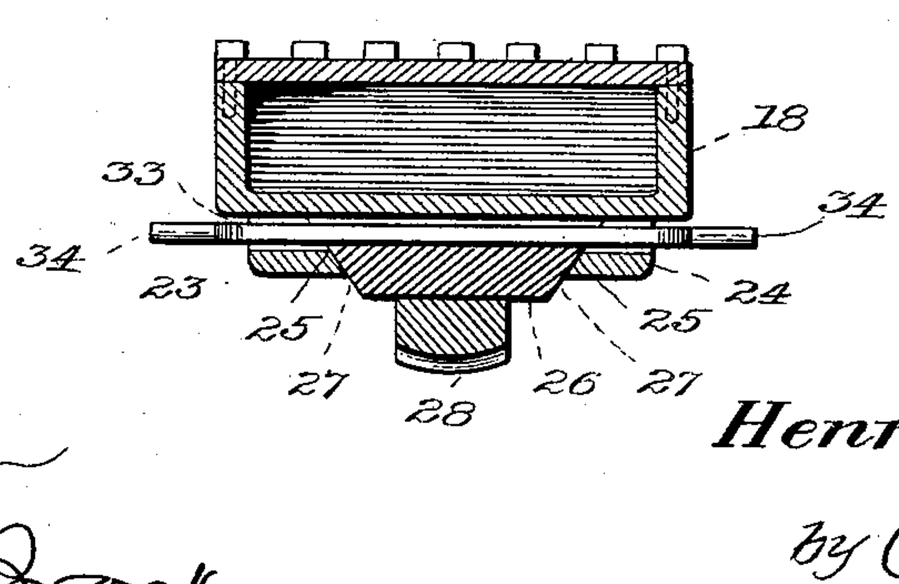


Fig. 3.

Fig. 4.



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(No Model.) 4 Sheets—Sheet 4.

Fig. 5.

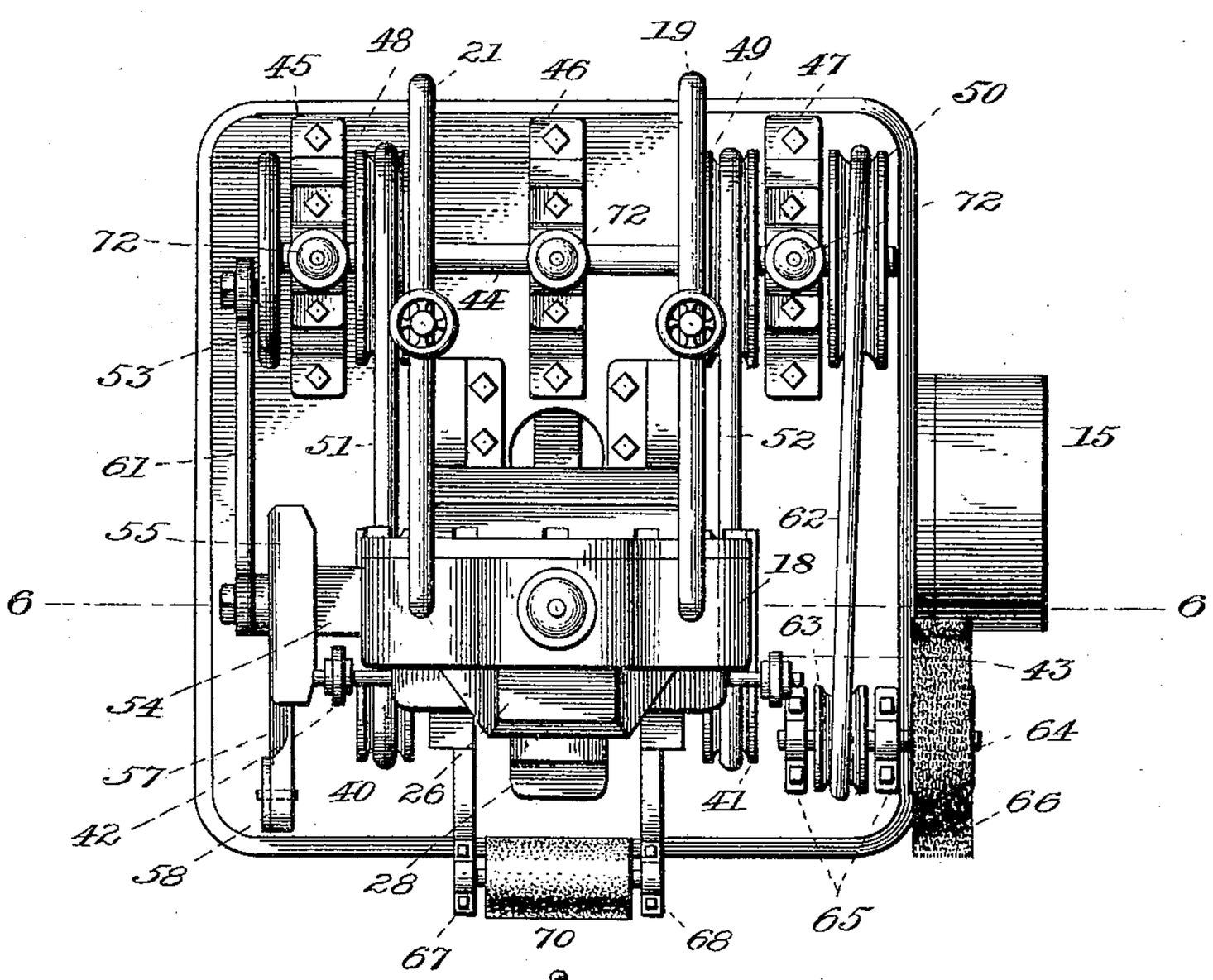
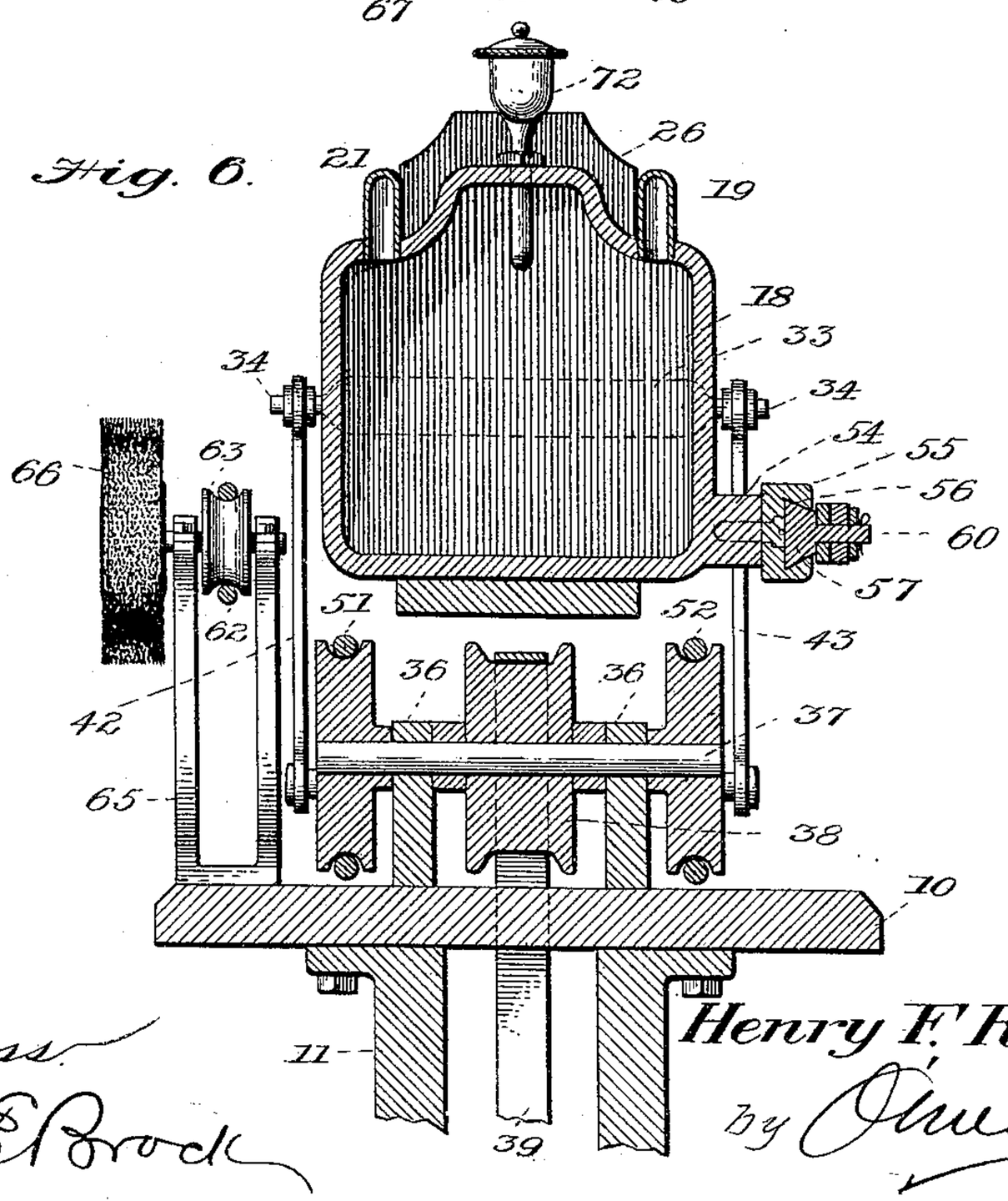


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY F. ROONEY, OF RANDOLPH, MASSACHUSETTS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE ROONEY MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS.

HEEL-FINISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 636,357, dated November 7, 1899.

Application filed February 15, 1898. Serial No. 670,346. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. ROONEY, a citizen of the United States, residing at Randolph, in the county of Norfolk and State of Massachusetts, have invented a new and useful Heel and Sole Burnishing Machine, of which the following is a specification.

This invention relates to an improved heel-finishing machine; and the object of the said invention is to generally improve machines of this character and render them simpler, stronger, and more durable and easier and more effective in operation.

A further object of my invention is to provide a machine of this character comprising an improved burnisher or stoner, edge-setter, and brush, and especially to improve the construction of these various tools, whereby the best results may be attained.

The invention consists in the improved construction, arrangement, and combination of parts, such as will be hereinafter fully described and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a view in elevation of the left side of my machine. Fig. 3 is a central longitudinal sectional view of my machine looking from the left side. Fig. 4 is a cross-sectional view through the burnisher-holder and its tool and the heating-chamber, taken on the line 4 4 of Fig. 3. Fig. 5 is a top plan view of my machine. Fig. 6 is a transverse sectional view through the upper part of my machine, taken on the line 6 6 of Fig. 5. Fig. 7 is a detail elevation, partly in section, of the supporting-arm carrying the seat-wheel. Fig. 8 is a detail elevation of a portion of the burnisher-holder and its tool, showing the means for supporting the lower end of said tool.

Like numerals of reference indicate the same parts wherever they occur in the different figures of the drawings.

In the said drawings, 10 designates a supporting-table mounted on a suitable tapering base 11, which constitutes the main frame of my machine. This base 11 is slotted in its upper part, as at 12, and in the said slotted portion is mounted the main driving-pulley 13, mounted on a suitable shaft 14. This shaft 14 is provided with suitable bearings and lubricators, as shown in the drawings, and extends beyond the frame on one side and has mounted thereon the tight and loose pulleys 15 and 16, respectively, by means of which the main driving-wheel 13 is operated.

Located in the central forward part of the table 10 and about centrally over the supporting-base 11 is a supporting-bracket 17, which carries the steam-chamber 18, the said chamber being securely held thereon by means of suitable screws, as illustrated. This steam-receptacle can be made of any suitable shape or construction; but I have shown it of rectangular form. A steam-inlet pipe 19, running from the source of supply, enters the top of the chamber 18 on one side and is provided with a suitable cut-off valve 20. An exhaust-pipe 21 enters the opposite side of said steam-chamber and is also provided with a cut-off valve 22, said pipe running back to the engine-room.

On the front face of the chamber 18 are secured by means of suitable screws the strips 23 and 24, inclined rearwardly on the inner edges to form grooves 25, and between which is adapted to slide the burnisher-holding plate 26. This plate or holder 26 is provided with forwardly-inclined sides 27, which engage the grooves formed by the inclined sides 25 of the strips 23 and 24. This holder 26 is constantly in contact with the steam-chamber 18 and is kept heated thereby. The burnishing iron or stone 28, whichever it may be desired to use, is secured on the front face of this holder 29 by means of a projecting tongue 29, formed on the lower end of the iron or other tool, which is adapted to engage a loop or strap 30, screwed or otherwise secured to the holder 26. The upper end of said tool is

screwed to the holder, as illustrated at 31 in the drawings. It will thus be seen that the iron or stone may be readily and easily removed and replaced, as may be desired.

In the rear face of the burnisher-holding plate 26 is cut a transverse groove 32, in which is secured the bar 33, extending beyond the sides of the holder, as illustrated, and provided with trunnions 34 on its respective ends.

The strips 23 and 24 are slotted, as at 35, to admit the bar 33, said slots being of a length sufficient to admit of the reciprocating of the burnisher-holder, as will be hereinafter described.

Mounted on the table 10 are the standards 36, in which is journaled the shaft 37, which is located under the sliding burnisher-holder 26, slightly forward of the bracket 17. A driving-pulley 38 is mounted on the center of the shaft 37 and is connected by means of a belt 39 with the main driving-pulley 13 on the main driving-shaft 14. On the ends of this shaft 37 are tightly mounted the two pulleys 40 41. The pitmen 42 43 are eccentrically pivoted to the pulleys 40 and 41, respectively, and are pivoted at their upper ends to the trunnions 34 of the lever 33, which is secured to the burnisher-holder 26, as before described. It will thus be seen that upon the rotation of the shaft 37 through the medium of its connection with the main driving-shaft a vertical reciprocating movement will be imparted to the burnisher-holding plate and its carrying-tool through the medium of its pitman connections heretofore described.

On the supporting-table 10, in the rear of the mechanism heretofore described, I mount the shaft 44, journaled in suitable supporting-standards 45 46 47. This shaft 44 has tightly mounted thereon the three pulleys 48, 49, and 50. The pulleys 48 and 49 are in line with the pulleys 40 and 41, respectively mounted on the front shaft 37, and are connected therewith by means of the belts 51 52 to impart a rotary movement to said shaft 44. On the left-hand end of the shaft 44 is rigidly mounted a disk 53. On the lower left-hand end of the steam-chamber 18 is cast a block 54, to which is screwed or otherwise secured a block 55, having on its outer face a dovetail groove 56, in which is adapted to slide a bar 57. This bar 57 carries on its forward end a bifurcated extension 58, in which is mounted the seat-wheel 59. A stud-pin 60 is formed on the bar 57 in about its central portion, as shown in the drawings, and on which is suitably pivoted one end of a pitman 61, the other end of said pitman being eccentrically pivoted to the disk 53 on the shaft 44. It will thus be seen from the above description that a reciprocatory movement is imparted to the bar 57 and its seat-wheel 59 through the medium of its pitman connection to the disk 53 on the shaft 44, said shaft being revolved, as heretofore described. On the right-hand end of the shaft 44 is rigidly mounted the pulley 50, heretofore mentioned, which is connected by means of a belt 62 to a pulley 63, mounted on a shaft 64, journaled in supporting-standards 65, located on the forward right-hand side of the machine. On the outer end of the shaft 64 is rigidly mounted the brush 66. It will thus be seen that a rotary movement is imparted to this brush 66 through the medium of its belt connection with the shaft 44.

On the front ends of the standards 36 and 37 are cast or otherwise secured the bracket-arms 67 and 68, in which is journaled a shaft 69, on which is mounted a roller 70, covered with a soft or textile material, the purpose of which is to afford a suitable support for the shoe during the operation of the machine.

In the top of the steam-chamber 18 is provided an oil-cup 71, which communicates by means of a pipe with the sliding face of the burnisher-holding plate 26 for the purpose of lubricating the same. Oil-cups 72 are provided for the other journals, as indicated in the drawings.

In the operation of my machine the operator holds the shoe on the supporting-roller 70 and against the burnishing iron or stone, whichever one it may be desired to use, the rapid reciprocation of said tool effectually and quickly accomplishing the desired result. The shoe is then passed over to the seat-wheel and held against the reciprocating wheel, which effectually sets the outer edges of the heel. The shoe is then passed over the revolving brush and the heel cleaned and completed.

From the above description the various uses and advantages of my invention can be readily comprehended.

While I have illustrated and described the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown and described, but hold that any slight changes or variations such as might suggest themselves to the ordinary mechanic would properly fall within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A heel-finishing machine comprising in its construction a supporting-frame, a reciprocating tool-holder mounted on said frame, and provided with a transverse groove, a bar secured in said groove, a crank-and-pitman connection with each end of said bar, and a burnishing-tool removably secured to said tool-holder.

2. A heel-finishing machine comprising in its construction a supporting-frame, a stationary heating-chamber mounted on said frame, a reciprocating tool-holding plate slidingly mounted upon said heating-chamber, a burnishing-tool removably secured to said holding-plate, and means for imparting a rapid reciprocating movement to the said tool-holder.

3. A heel-finishing machine comprising in its construction a supporting-frame, a stationary heating-chamber mounted on said frame, a reciprocating tool-holding plate slidingly mounted upon said heating-chamber and having a loop or strap 30, a burnishing-tool having a tongue 29 at its lower end adapted to engage the said loop or strap, means for removably securing the upper end of the tool to the said plate, and means for imparting a rapid reciprocating movement to the said tool-holder.

4. A heel-finishing machine comprising in its construction a supporting-frame, a steam-chamber carried thereby, steam-pipes connecting with said chamber, a tool-holding plate carried by said chamber and adapted to slide thereon, a burnishing-tool removably secured to said tool-holder, and mechanism connected with the main driving-shaft for imparting a reciprocating movement to said tool-holder and tool.

5. A heel-finishing machine comprising in its construction a main frame, a supporting-bracket mounted thereon, a steam-chamber carried thereby, steam-pipes connecting with said chamber, guideways secured to the face of said steam-chamber, a tool-holder adapted to slide in said guideways, a burnishing-tool removably secured to said holder, and connecting mechanism with the driving-shaft for imparting a rapid reciprocating movement to the tool-holder.

6. A heel-finishing machine comprising in its construction a supporting-frame, a heating-chamber mounted thereon, guideways secured on the front of said chamber and having slots, a tool-holding plate adapted to slide in said guideways, a burnishing-tool carried by said holder, a transverse bar fitted in a recess in said tool-holder and having its ends extending through the slots in the said guideways, a driving-shaft located beneath said tool-holder, and pitman connections between the said shaft and the ends of the transverse bar for imparting a reciprocatory movement to the tool-holder.

HENRY F. ROONEY.

Witnesses:
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ELISABETH A. FRENCH.

Correction in Letters Patent No. 636,357.

It is hereby certified that in Letters Patent No. 636,357, granted November 7, 1899, upon the application of Henry F. Rooney, of Randolph, Massachusetts, in the grant and heading of the printed specification, the title of the invention was erroneously written and printed "Heel-Finishing Machines," whereas the said title should have been written and printed *Heel and Sole Burnishing Machines;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 5th day of December, A. D., 1899.

[SEAL.]

WEBSTER DAVIS,
Assistant Secretary of the Interior.

Countersigned:

C. H. DUELL,
Commissioner of Patents.