

No. 743,994.

PATENTED NOV. 10, 1903.

R. W. THOMSON.
HEEL FINISHING MACHINE.
APPLICATION FILED MAY 4, 1903.

NO MODEL.

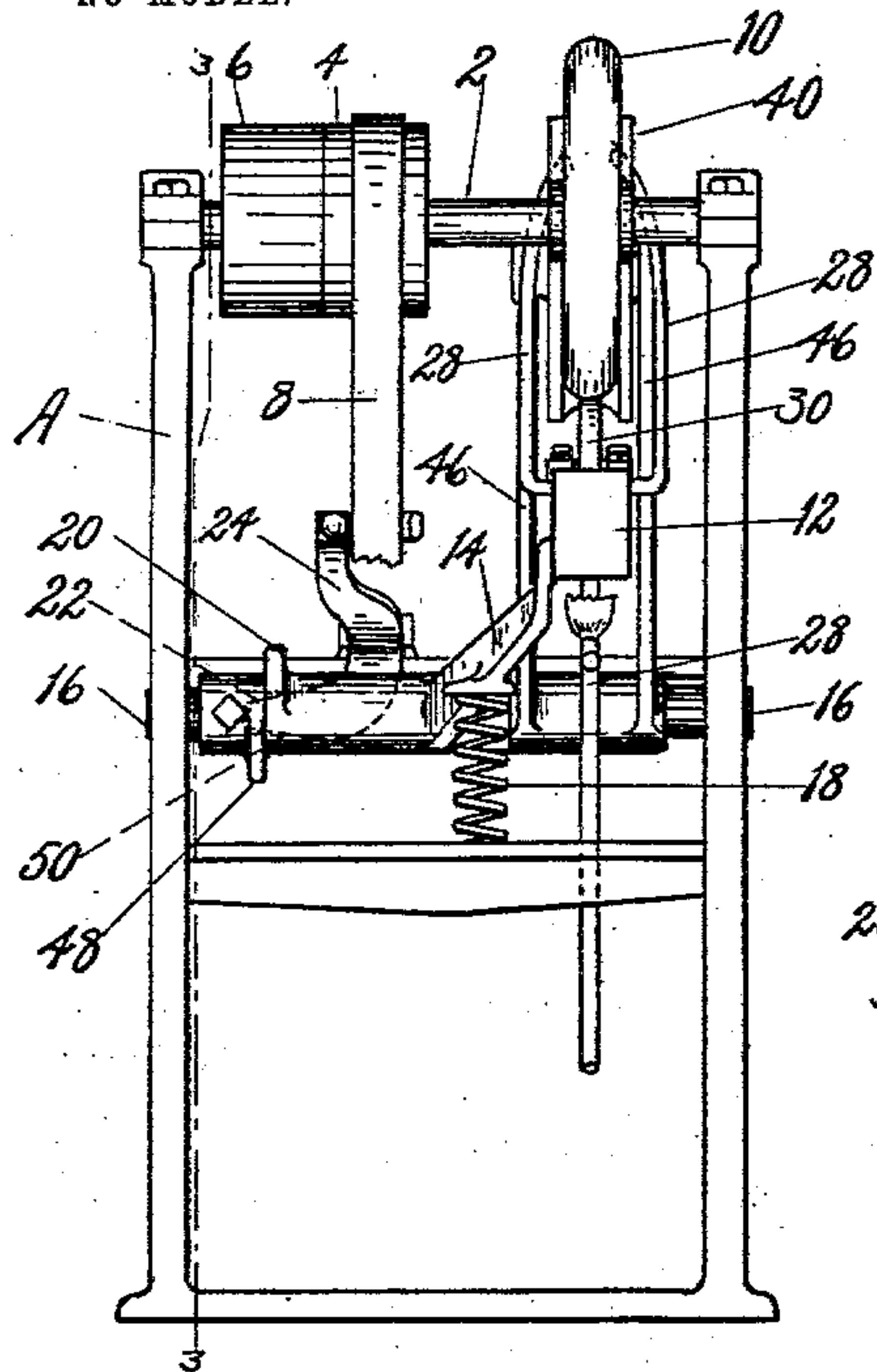


FIG. 1.

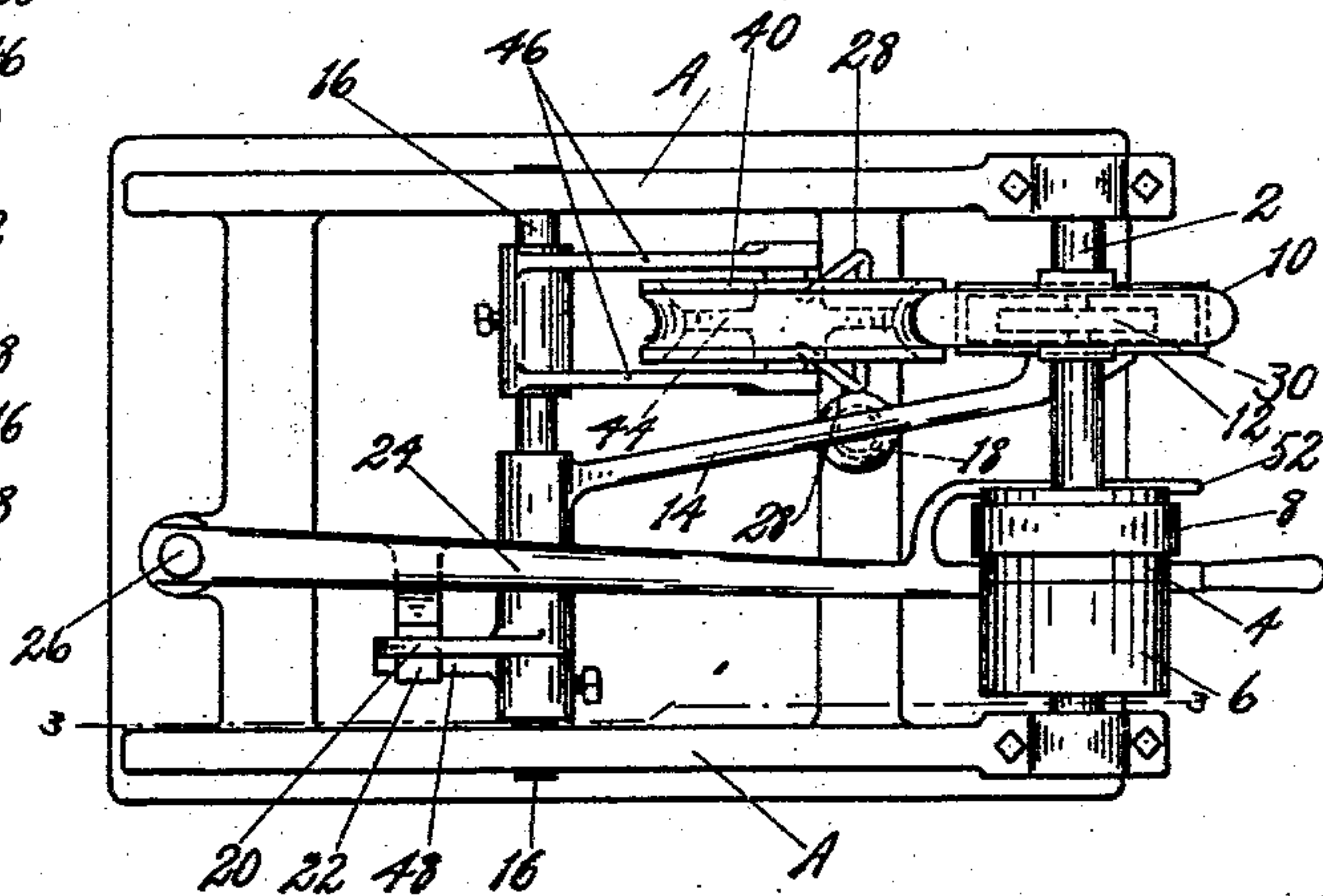


FIG. 2.

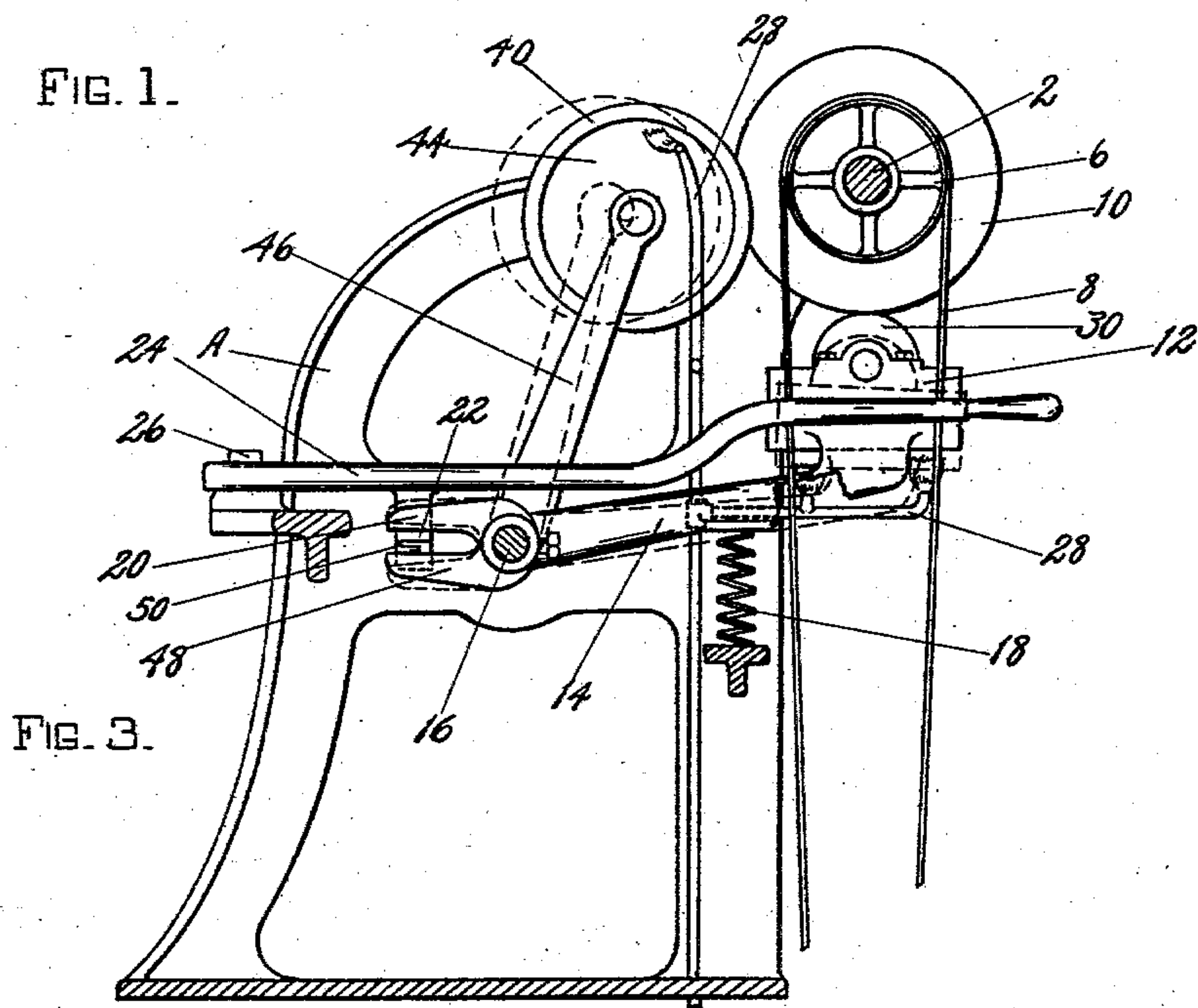


FIG. 3.

WITNESSES.

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XPEDITE FINISHING COMPANY, OF BERWICK, MAINE, A CORPORATION
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HEEL-FINISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 743,994, dated November 10, 1903.

Original application filed March 25, 1902, Serial No. 99,851. Divided and this application filed May 4, 1903. Serial
No. 155,827. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. THOMSON, a
citizen of the United States, residing at Lynn,
in the county of Essex and Commonwealth of
5 Massachusetts, have invented certain Im-
provements in Heel-Finishing Machines, of
which the following description, in connec-
tion with the accompanying drawings, is a
specification, like reference characters on the
10 drawings indicating like parts in the several
figures.

The present invention relates to heel-fin-
ishing machines for applying wax to the edges
of heels by means of a rotary wheel or other
15 work member, and this application is a di-
vision from pending application, Serial No.
99,851, filed March 25, 1902.

The object of the invention is to improve
the construction and arrangement of ma-
20 chines of this class.

One feature of the invention consists in pro-
viding improved means for supplying wax di-
rectly to the work member, in combination
with means under the control of the work-
25 man whereby the wax-supplying means may
be moved toward and from position for sup-
plying wax.

Another feature of the invention consists
in providing wax-supplying means for deliv-
30 ering wax directly to the work member and
other means for heating the work member,
together with means under the control of the
workman for rendering both said heating and
said wax-supplying means inoperative.

35 Other features of the invention, including
certain details of construction and combina-
tions of parts, will be hereinafter described,
and pointed out in the claims.

Figure 1 is a front elevation of a machine em-
40 bodying my invention in one of the best forms
which I have devised. Fig. 2 is a plan view
of the machine. Fig. 3 is a sectional view on
the line 3 3 of Figs. 1 and 2.

The frame A is provided with bearings for
45 a shaft 2, on which are mounted fast and
loose pulleys 4 and 6, adapted to receive a
belt 8, by which the shaft may be rotated.
The work member 10 is mounted on the shaft
2 and is here shown as a flexible non-metallic
50 work-rubbing tool, which may be a cloth

wheel or a cloth-covered wheel or brush of
any suitable construction.

The wax-supplying means comprises a wax-
holder 12, from which the wax is supplied
directly to the work member 10. The wax- 55
holder is mounted on a movable support 14,
which in the embodiment of the invention
here shown is a lever fulcrumed on a shaft
16 and acted upon by a spring 18 to hold the
wax-holder in operative relation to the work 60
member. Means is provided by which the
workman may actuate the support 14 to move
the wax-holder into a position where it is in-
operative for supplying wax to the work mem-
ber. To this end the arm 20 of the lever 14 65
is arranged to be acted upon by the cam-sur-
face 22 of a controlling device 24. The con-
trolling device is shown as a lever pivoted at
26 to the frame A and the free end of which
is extended into position to be reached con- 70
veniently by a workman standing in position
for presenting the heel of a shoe to the work
member 10. This arrangement enables the
workman to move the wax-supplying means
into an inoperative position when the use of 75
the machine is to be temporarily discontin-
ued or when for any reason he desires to dis-
continue the delivery of wax to the work
member 10. After the controlling device 24
is moved to place the wax-supplying means 80
in inoperative position it will continue to hold
said supplying means away from the work
member until it is reversely moved by the
workman. When it is desired to deliver
again the wax, the controlling device will by 85
movement in the opposite direction release
the arm 20 of the lever 14 and permit the
spring 18 to raise the wax-holder into opera-
tive position.

The wax commonly employed in machines 90
of this class is solid at normal temperatures
and requires to be melted in order that it may
be used to the best advantage. I have there-
fore made the wax-holder 12 in the form of
a wax-pot and have arranged gas-pipes 28, 95
provided with suitable burners, so that gas-
flames may be made to heat the wax-pot and
melt the wax.

I prefer to employ as a part of the wax-sup-
plying means a roll or disk 30, arranged to dip 100

into the wax in the wax-pot and by running in contact with the rim of the work member when the wax-supplying means is in operative position deliver the wax to the work member. The wax-delivering disk may be conveniently mounted in bearings in the wax-pot and may be rotated by frictional contact with the positively-rotated work member. The delivering device might of course be rotated by means independent of the work member, if so desired. It is obvious that the delivering device will become heated by running in the hot wax, and as it might injure the work member if allowed to remain in contact with said work member at such times as the latter is standing idle it is very advantageous to equip the machine with means by which the workman may move the wax-supplying means at will, as above described, into an inoperative position, such that the delivering device is out of contact with the work member.

The disk 30 of the wax-supplying means delivers the wax in a thin line on the work member, and it is desirable that the wax be spread over the working face of said member in order that it may be applied evenly to the work. I have therefore provided means (shown as a roll 40) arranged to act on the work member to spread the wax between the point where the wax is applied to it and the point where it engages the work.

It is found that to obtain the best results in finishing heels with the wax commonly used for the purpose the wax should be applied to the heel in as hot a condition as is practicable. I have therefore equipped the machine with means for heating the work member so as to maintain the wax hot while it is being rubbed onto the heel. To this end in the embodiment of the invention herein shown I have provided means for heating the roll 40, which by running in contact with the work member will heat the working face of said member without burning or otherwise injuring it. The roll as here shown is provided with a wide rim shaped in counterpart of the rim of the work member and also with a relatively thin web 44, connecting said rim to the hub and providing a space at the ends of the roll to receive gas-flames from burners of the gas-pipes 28. It is of course obvious that the means for heating the work member might be constructed and used independently of the means for spreading the wax on the surface of the work member. The heated roll 40 is preferably rotated by its frictional contact with the work member; but it might be rotated by independent means, if preferred.

It is desirable to discontinue the heating of the work member when the machine is not in use, so as to avoid the possibility of injuring the work-rubbing surface of the work member, and in order to do this conveniently the machine is equipped with means by which the heated roll may be moved out of opera-

tive relation to the work member. The roll is mounted in bearings in arms 46 of the shaft 16, before mentioned, which is a rock-shaft provided with another arm 48 in position to be engaged by a cam-face 50 on the controlling device 24, before described, which may be actuated in one direction for turning the rock-shaft to move the heated roll away from the work member. When the controlling device is moved in the opposite direction, the cam-face 50 permits the heated roll to return by gravity into engagement with the work member. By means of this construction the workman may move the heated roll into a position remote from the work member, as shown by dotted lines in Fig. 3, at the same time that he moves the wax-supplying means into its inoperative position, also shown by dotted lines in Fig. 3. The workman is thus enabled to avoid the danger of the work member being injured by heat from either the roll 40 or from the disk 30 of the wax-supplying means.

The controlling device 24 may be provided also with means, such as the arm 52, by which it is adapted to embrace the belt 8 and to shift the belt from the fast pulley 4 onto the loose pulley 6 at the same time that the heated roll and wax-supplying means are moved into their inoperative positions and to shift the belt in the opposite direction when the said parts are moved into their operative positions.

In the operation of the machine the shoe will be held in the hands of the workman and presented to the machine with the edge of the heel against the work member 10. It will be understood that the wax-delivering device 30 and the heated roll 40 are so located as to be out of contact with the work being operated upon by the work member.

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

1. In a machine of the class described, a work member for applying wax to the surface of the work and means for heating said work member, in combination with means independent of said heating means for supplying wax directly to the work member, and means under the control of the workman for moving the heating means and the wax-supplying means toward and from operative relation to the work member.

2. In a heel-finishing machine, a work member for applying wax to the surface of the work, and means for supplying wax to said work member, said wax-supplying means comprising a wax-holder, a rotary wax-delivering device mounted in said wax-holder, a movable support for said wax-holder, means for yieldingly sustaining the wax-holder in one position with relation to the work member, and means under the control of the workman for moving the wax-supplying means.

3. In a machine of the class described, the combination with a rotatable work member for applying wax to the surface of the work,

of means for supplying wax, said supplying means comprising a wax-holder and a rotatable delivering device adapted to be rotated by contact with said work member, together
5 with means under the control of the workman for moving said wax-supplying means to put the delivering device out of contact with the work member.

4. In a machine of the class described, a
10 work member for applying wax to the surface of the work, and means for heating said work member, in combination with means for supplying wax directly to the work member, said wax-supplying means comprising a
15 wax-pot, a wax-delivering device rotatably mounted therein, and means under the control of the workman for moving the heating means and the wax-supplying means toward and from operative relation to the work mem-
20 ber.

5. In a machine of the class described, a work member for applying wax to the surface of the work, in combination with a heated roll and a wax-supplying means both nor-
25 mally arranged to act on the work member for heating it and supplying it with wax, and means under control of the workman for rendering the roll and the wax-supplying means inoperative.

30 6. In a heel-finishing machine, a work member for applying wax to the surface of the

work, and means for supplying wax to said work member, said wax-supplying means comprising a wax-holder, a rotary wax-delivering device mounted in said wax-holder, a
35 lever for supporting said wax-holder, a spring arranged to act on one arm of said lever for sustaining the wax-supplying means with the delivering device in operative relation to the work member, and means com-
40 prising a cam under the control of the workman for acting on the other end of said lever to move the wax-supplying means away from the work member.

7. In a machine of the class described, a
45 flexible, non-metallic work member for applying wax to the surface of the work, means for supplying wax to the work member, said supplying means comprising a wax-pot, a wax-delivering device mounted in the wax-pot, and
50 means under the control of the workman for moving the wax-supplying means toward and from the work member, said means having provision for holding the wax-supplying means away from the work member. 55

In testimony whereof I have signed my name to the specification in the presence of two subscribing witnesses.

ROBERT W. THOMSON.

Witnesses:

NELSON W. HOWARD,
ARTHUR L. RUSSELL.