

A. EPPLER.
SHOE TURNING MACHINE.
APPLICATION FILED JAN. 5, 1905

944,260.

Patented Dec. 28, 1909.
3 SHEETS—SHEET 1.

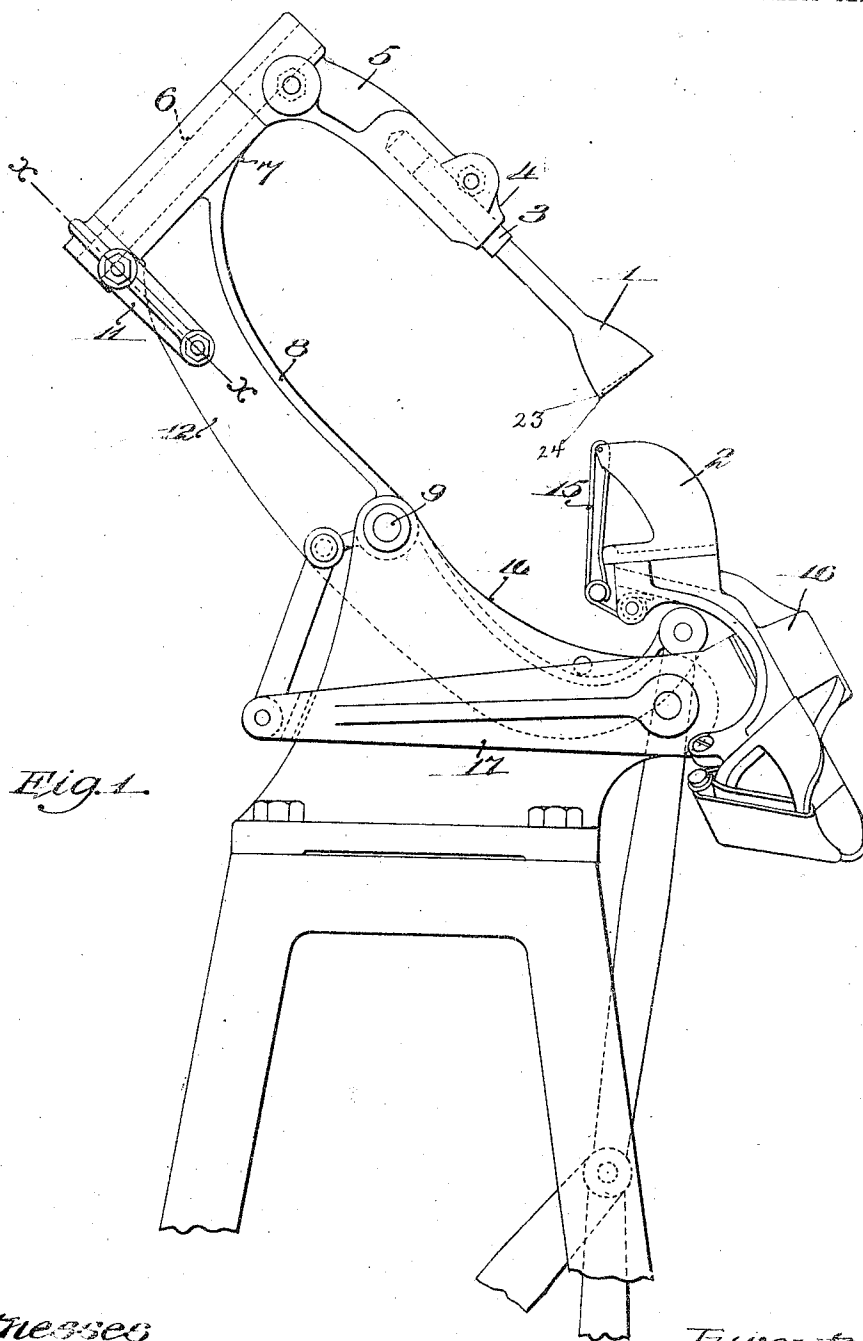


Fig. 1.

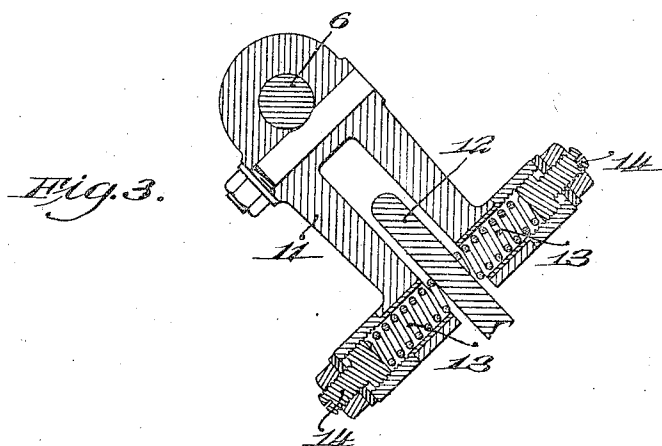
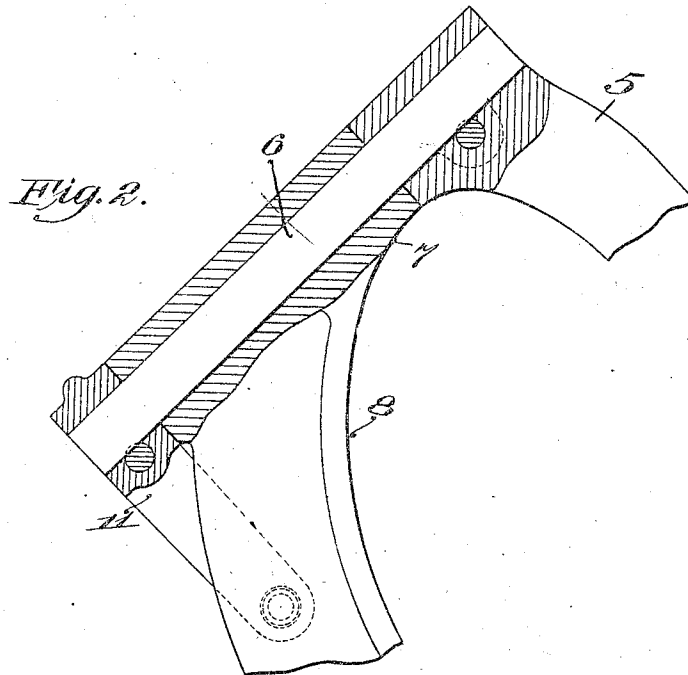
Witnesses
Edward S. Day
Jarnum F. Dorsey

Inventor
Andrew Eppler
by his Attorneys
Phillips Van Curen Fish

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Witnesses
Edward S. Day
Arnum F. Dorsey

Inventor
Andrew Eppler
by his Attorneys
Philip Van Curen Cook

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3 SHEETS—SHEET 3.

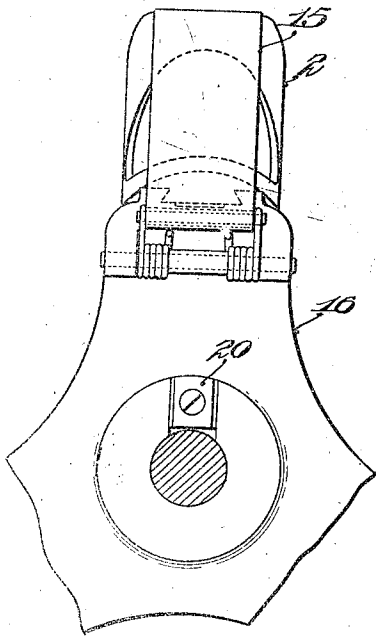


Fig. 5.

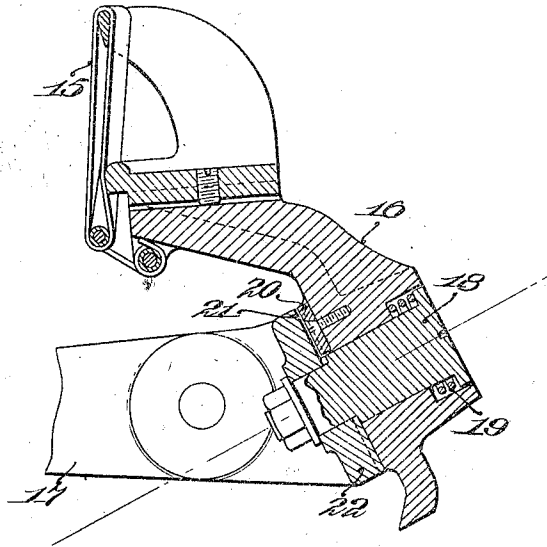


Fig. 4.

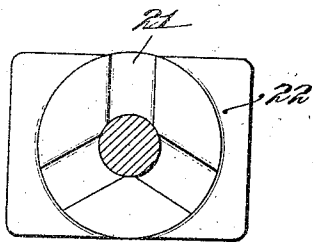


Fig. 6.

Witnesses
Edward S. Day
Samuel T. Dorsey

Inventor
Andrew Eppler
By his Attorneys
Phillips Van Curen Fish

UNITED STATES PATENT OFFICE.

ANDREW EPPLER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SHOE-TURNING MACHINE.

944,260.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed January 5, 1905. Serial No. 239,713.

To all whom it may concern:

Be it known that I, ANDREW EPPLER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Turning Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in shoe turning machines which are used for turning the rear or counter portion of a turn shoe and which comprise a form, and a plunger movable into and out of the form and cooperating therewith to turn the rear or counter portion of a shoe over the form.

In the shoe turning machine illustrated in the application of the applicant filed April 16, 1902, Serial No. 103,150, difficulty has been experienced, in the operation of the machine, in the entrance of the plunger into the form, owing to the fact that in the shoes operated upon the thickness of the materials upon one side of the plunger is sometimes greater than the thickness upon the other side, with the result that the plunger crowds or jams in entering the form, sometimes causing the shoe to be ripped, and always necessitating the application of greater force than is needed to do the work. It is proposed according to the present invention to overcome this defect by providing means for supporting the plunger and form so constructed as to permit relative movement of the plunger and form transversely of the sole of a shoe placed on the form, whereby they may adjust themselves to the thickness of the materials between the sides of the form and the plunger when the plunger is entering the form.

In the accompanying drawings illustrating the preferred embodiment of the present invention Figure 1 is a side elevation of the machine, Fig. 2 is a vertical section of the upper end of the plunger carrying arm, Fig. 3 is a section on the line $x-x$ Fig. 1, showing the springs for yieldingly holding the plunger in position, Fig. 4 is a vertical sectional elevation of the form carrying turret, Fig. 5 is a bottom plan of the turret, two of the arms being broken away, looking in the direction of the axis of the turret, and

Fig. 6 is a plan of the face of the turret carrying lever showing the recesses which are engaged by the detent carried by the turret.

The plunger 1 cooperates with the form 2, in the manner illustrated and described in the said application, to turn the shoe. The plunger 1 is provided with a shank 3 which is received in a split socket 4 in an arm 5 secured upon the forward end of the shaft 6, which is mounted in a bearing 7 on the plunger carrying arm 8, which in turn is pivoted at 9 to the frame 10 of the machine. The rock shaft 6 carries upon its rear end a fork 11 which is secured thereto and provided with two downwardly hanging arms which embrace the opposite sides of the web 12 of the plunger carrying arm 8. The lower ends of the arms of the fork 11 carry springs 13 which bear upon the opposite sides of the web 12, the thickness of the web 12 being somewhat less than the distance between the arms of the fork 11. Adjusting screws 14 are provided for adjusting the pressure of the springs upon the web 12 and by these means the proper position of the plunger with relation to the form may be secured.

The forms 2, are constructed like those shown in the patent to Meyer, No. 763,620, June 28, 1904, being provided with a belt 15 running over the curved rear edge of the form and in close proximity to the outer and inner surfaces of the rear wall thereof. The forms 2 are three in number and are mounted upon the turret 16 which in turn is mounted upon the form carrying lever 17. A stud 18 passes through a hole in the center of the turret 16 and affords a pivotal support for the turret. A spring 19 is interposed between the head of the stud 18 and the bottom of the recess in the turret which said head fits. This permits the turret to move axially in order to withdraw the detent 20 secured upon the bottom of the turret from engagement with a recess 21 in the face 22 of the form carrying lever. The several forms 2 are different in size and the positions of the recesses 21 are such that when the detent is in engagement with a recess the turret will be held in proper position to present one of the forms in proper cooperative position with relation to the plunger 1.

The capacity of the plunger to yield in

entering the form is preferably limited so that the plunger cannot strike the form but at the same time it is sufficient to compensate for irregularities in the thickness of the materials in the shoe so that the plunger may center itself with relation to the materials and the form as it begins the shoe turning operation.

The present invention is not limited to the illustrated embodiment thereof but may be embodied in widely different forms.

Having thus described the invention, what is claimed is:—

1. A machine for turning the rear or counter portion of a turn shoe, having, in combination, a form over which the shoe is turned, and a plunger movable into and out of the form, said plunger and form having pro-

vision for relative movement transversely of the sole of a shoe placed on the form as the plunger enters the form, substantially as described. 20

2. A machine for turning the rear or counter portion of a turned shoe, having, in combination, a form over which the shoe is turned and a plunger movable into and out of the form mounted to move transversely of the sole of a shoe placed on the form as the plunger enters the form, substantially as described. 25

In testimony whereof I affix my signature, in presence of two witnesses. 30

ANDREW EPPLER.

Witnesses:

HORACE VAN EVEREN,
BENJAMIN PHILLIPS.