

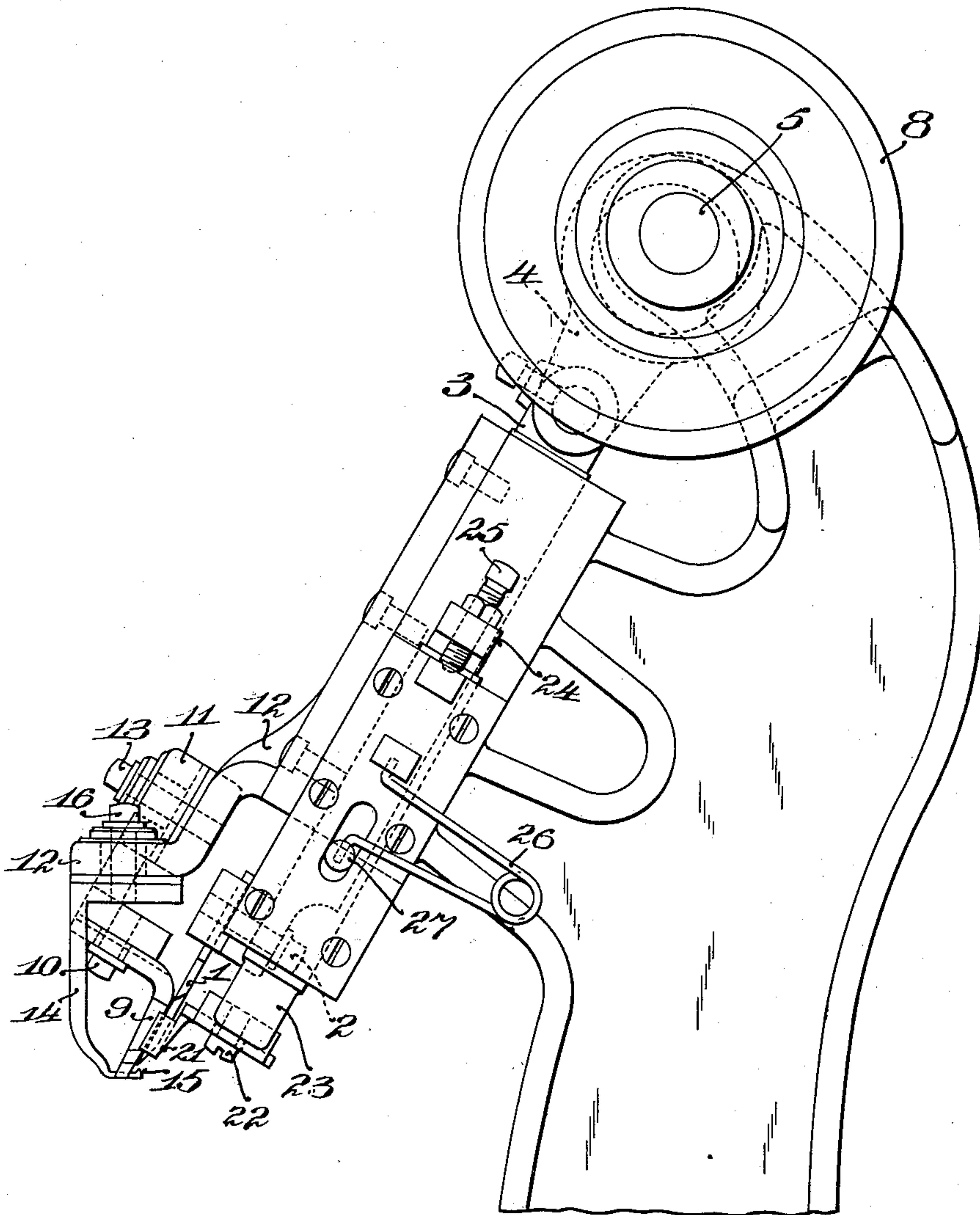
J. B. HADAWAY.
VAMP TRIMMING MACHINE.
APPLICATION FILED JULY 6, 1904.

968,553.

Patented Aug. 30, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Edward S. Day
Alfred H. Hildreth

Inventor
John B. Hadaway
by his Attorneys
Phillips Van Everen & Fish

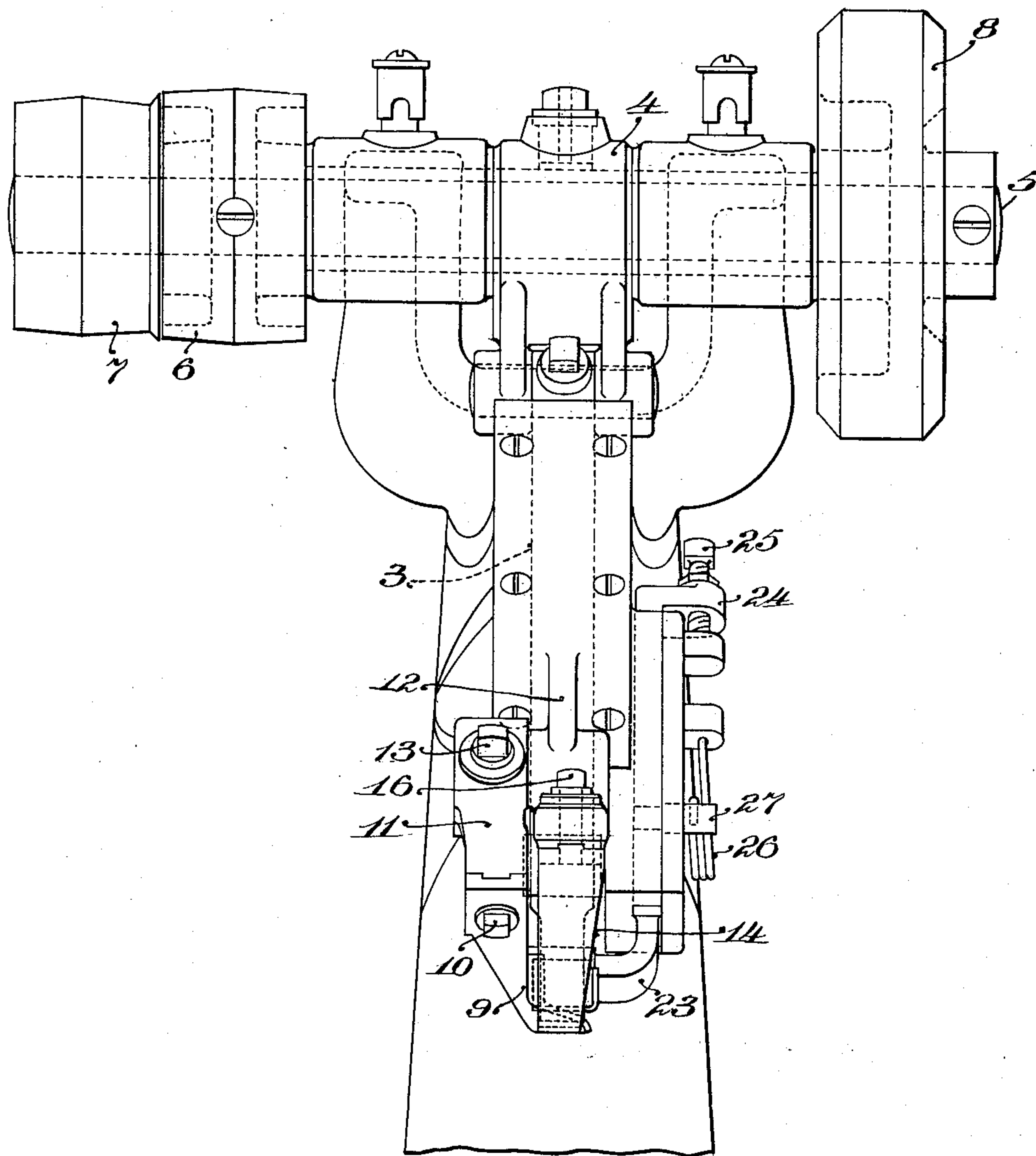
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3 SHEETS—SHEET 2.

Fig. 2.



Witnesses

Edward S. Day

Alfred H. Hildrich

Inventor

John B. Hadaway
by his Attorneys

Phillips Van Coven & Fish

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3 SHEETS—SHEET 3.

Fig. 3.

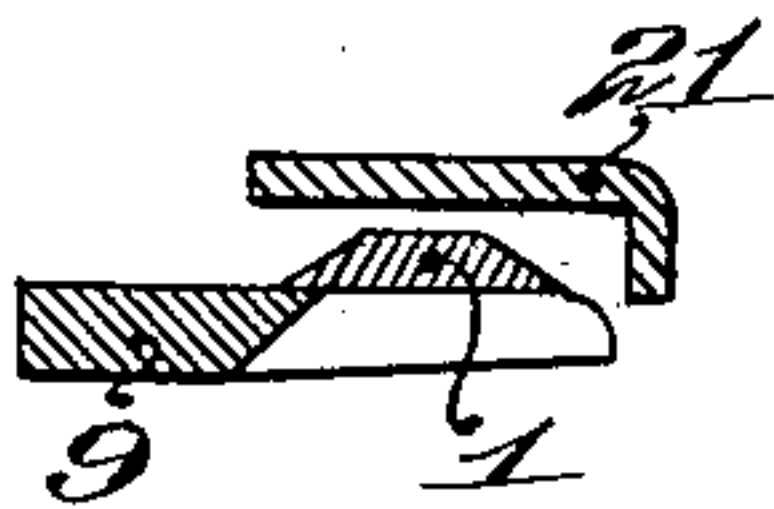
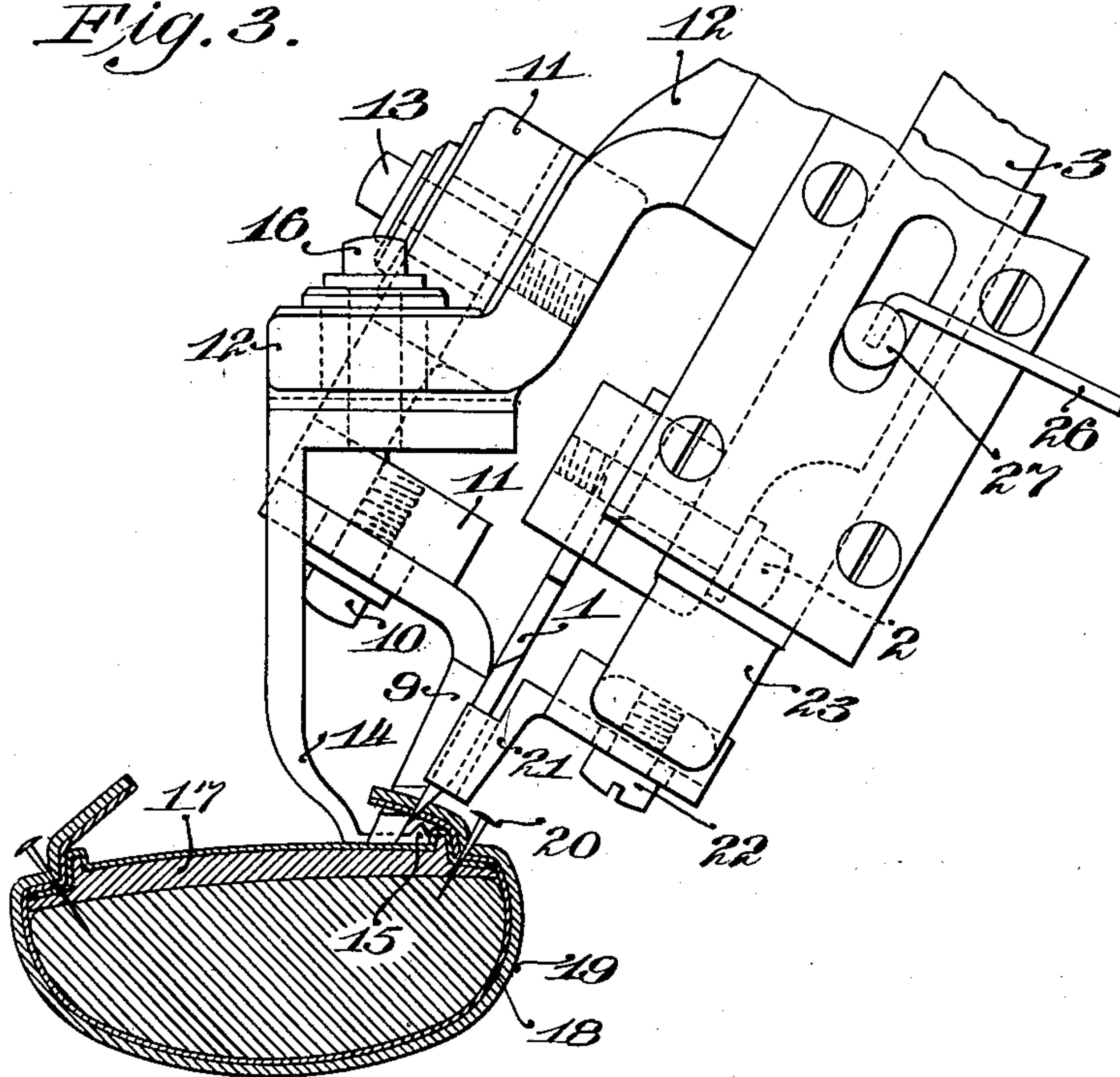


Fig. 4.

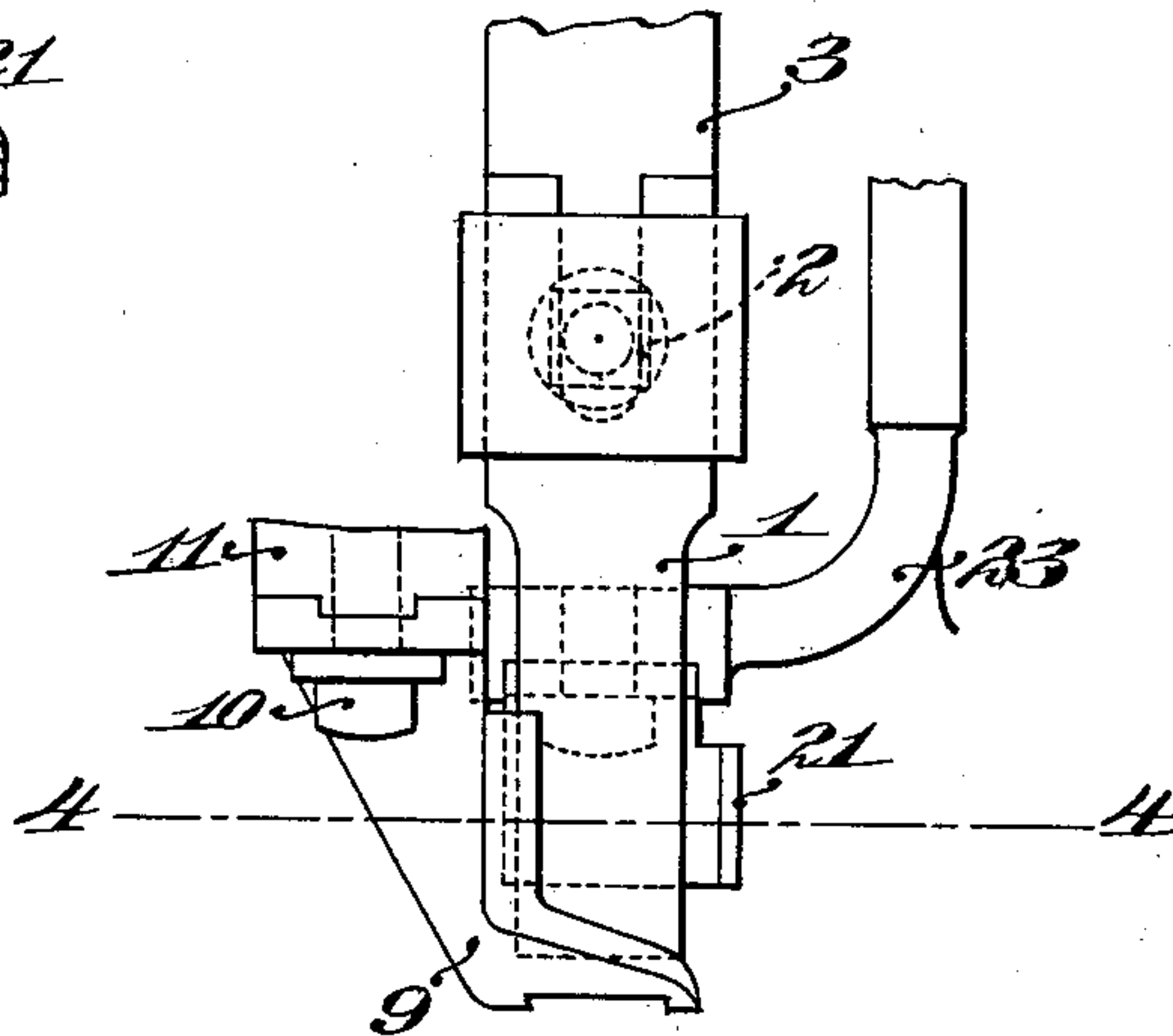


Fig. 5.

Witnesses
Edward S. Day
Alfred H. Hildreth

Inventor
John B. Hadaway
by his Attorneys
Phillips Van Eversen & Fish

UNITED STATES PATENT OFFICE.

JOHN B. HADAWAY, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

VAMP-TRIMMING MACHINE.

968,553.

Specification of Letters Patent. Patented Aug. 30, 1910.

Application filed July 6, 1904. Serial No. 215,509.

To all whom it may concern:

Be it known that I, JOHN B. HADAWAY, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Vamp-Trimming 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 vamp trimming machines.

In the manufacture of shoes and particularly of welted shoes, it is necessary after the upper has been lasted and before the welt is sewed to the shoe to trim the projecting edges of the vamp and lining, as otherwise the action of the instrumentalities of the sewing machine and particularly of the looper are interfered with.

The object of the present invention is to provide a simple and efficient machine by which this operation can be performed rapidly and in an accurate and satisfactory manner, without any liability of injuring the shoe.

With the above object in view the present invention contemplates the provision in a vamp trimming machine of a trimming knife and means for guiding a lasted shoe, said means being constructed and arranged to guide the shoe with the surface of the sole in a plane inclined to the plane in which the trimming knife cuts, and with the lip of the sole extending in a direction substantially parallel with the plane in which the knife cuts. By so arranging the guiding means and trimming knife the operation of trimming the vamp is readily performed without any liability of the knife striking against the lasting tacks.

It is believed to be broadly new to provide a vamp trimming machine in which the guiding means and trimming knife are so arranged that when the shoe is fed through the machine and guided by the guiding means the surface of the sole is in a plane inclined to the plane in which the knife cuts and the lip of the sole extends in a direction substantially parallel to the plane in which the knife cuts.

Broadly considered, therefore, the invention contemplates the provision of any suitable means for guiding the shoe. Prefer-

ably, however, a guide is provided which bears against the sole and the inner surface of the lip. Such a guide constitutes the simplest and most efficient means for guiding the shoe which has yet been devised.

The arrangement, above referred to, of the guiding means and trimming knife is ordinarily sufficient to prevent the knife from coming in contact with the lasting tacks, but in order to absolutely prevent the knife from striking the tacks even if the shoe is carelessly manipulated a guard is preferably provided. This guard is preferably so located as to extend between the heads of the tacks and the knife, and is also preferably mounted so as to be capable of a yielding movement toward and from the shoe to accommodate the increased thickness of the stock at the toe portion of the shoe.

The vamp trimming knife may be of any suitable construction, but is preferably a vibrating blade which coöperates with a fixed blade extending inside of the vamp between the vamp and the sole, as this form of trimming knife trims the edge of the vamp smoothly and evenly, and can be so constructed and arranged as to allow the shoe to be easily guided while the knife is acting at the toe portion of the shoe.

In order to allow the vibrating blade to be separated a sufficient distance from the fixed blade to receive the vamp and lining between them and at the same time maintain the vibrating blade in alinement with the fixed blade, a projection is formed on the fixed blade with which the vibrating blade remains in contact. The provision of this fixed blade extending inside of the vamp and provided with a projection coöperating with the vibrating blade to maintain said blade in alinement with the fixed blade when separated therefrom is believed to be new and constitutes a feature of the present invention.

The guide above referred to which bears against the sole extends in close proximity to the cutting edge of the fixed blade and acts to hold up the edge of the vamp and direct it between the blades. This arrangement of a fixed blade extending beneath the edge of a vamp and a sole guide which raises the vamp and directs it between the fixed blade and a coöperating blade is believed to be new and constitutes a feature of the pres-

ent invention, which feature contemplates the use of any suitable form of blade coöperating with the fixed blade.

In addition to the features of the invention above referred to, the present invention also consists in certain constructions, combinations and arrangements of parts tending to simplify and improve the construction and operation of vamp trimming machines, the advantages of which will be obvious to those skilled in the art from the following description.

The present invention will be clearly understood from an inspection of the accompanying drawings in which—

Figure 1 is a view in side elevation of a vamp trimming machine embodying the same in its preferred form. Fig. 2 is a view in front elevation of the machine illustrated in Fig. 1. Fig. 3 is a view in side elevation on an enlarged scale of a portion of the machine, illustrating, in cross section, a shoe in position to be acted upon by the trimming knife. Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 5, and Fig. 5 is a detail view illustrating the construction and arrangement of the trimming knife, the fixed blade coöperating therewith, and the guard for preventing the knife from coming in contact with the lasting tacks.

The trimming knife is indicated at 1 and is adjustably secured by means of a bolt 2 upon the lower end of a slide 3 mounted to reciprocate in a guideway on the front portion of the machine frame. This guideway is arranged at an angle of about 30° to the vertical so that the trimming knife is reciprocated in an inclined plane. The upper end of the slide 3 is connected by an eccentric strap and link 4 with an eccentric upon a driving shaft 5, journaled in bearings in the upper portion of the machine frame, the shaft being located in the same inclined plane with the slide 3 so that reciprocating movements are imparted to the slide directly from the shaft. The driving shaft 5 is provided, at one end with fast and loose belt pulleys 6 and 7 and at its other end with a balance wheel 8.

The trimming knife 1 is provided with a bevel at its lower end to form a cutting edge which coöperates with the edge of a fixed blade 9. The knife 1 is also beveled upon its front and rear edges as indicated in Fig. 4 so as to reduce the thickness of a portion of the cutting edge of the knife. The fixed blade 9 extends upwardly at the rear of its cutting edge and this portion of the blade is provided with a beveled edge which is overlapped by the rear edge of the knife 1 as indicated in Fig. 4, so that the cutting edge of the knife 1 is always maintained in alinement with the cutting edge of the fixed blade 9, and the knife 1 can be raised as high as desired to allow the edges of the

vamp and lining to be inserted between the knife and the fixed blade. The beveled edge on the upwardly extending portion of the fixed blade acts to separate the trimmed off portion of the vamp from the main portion, and allows the shoe to be easily fed forward to bring successive portions of the edge of the vamp into a position to be trimmed. At its upper end the fixed blade 9 is bent at right angles as indicated in Figs. 1 and 3, and is adjustably secured by means of a bolt 10 passing through a slot in the blade and screwing into a block 11. The block 11 is adjustably secured to a bracket 12 projecting from the guideway for the slide 3 by means of a bolt 13 passing through a slot in the block and screwing into the bracket. By adjusting the blade 9 on the block 11 its cutting edge can be brought into alinement with the cutting edge of the trimming knife 1, and by adjusting the block 11 on the bracket 12 the blade can be raised or lowered to compensate for the wearing away of its cutting edge.

The shoe is fed through the machine by the operator and is so guided that the sole of the shoe is in substantially a horizontal plane, the trimming knife cutting toward the sole in a plane inclined to the surface of the sole and substantially parallel with the lip. For so guiding the shoe a sole guide 14 is provided, the lower end of which is arranged to bear against the sole and extends through a groove cut in the lower end of the fixed blade 9. The sole guide extends beyond the fixed blade as indicated in Fig. 3, and bears against the inner surface of the lip of the insole. Between its inner end and the fixed blade 9 the sole guide is provided with a projection 15 which as the shoe is fed through the machine acts to raise the edges of the vamp and lining and direct them between the cutting edges of the fixed blade and trimming knife. The sole guide is formed upon the lower end of a bar the upper end of which is provided with a horizontally extending portion which is adjustably secured to the bracket 12 by means of a bolt 16 passing through a slot in the bracket and screwing into the horizontal portion of the bar. Provision is thus made for adjusting the sole guide horizontally to bring it into the desired position with relation to the cutting edge of the fixed blade 9 and thereby regulate the distance from the lip at which the edges of the vamp and lining are trimmed.

The manner in which the shoe is guided through the machine and the edges of the vamp and lining presented to the trimming knife is clearly illustrated in Fig. 3 in which 17 indicates the insole, 18 the lining and 19 the vamp of a lasted shoe which is being subjected to the vamp trimming operation. As illustrated in this figure, the sole guide

14 bears against the sole and the inner surface of the lip, the shoe being so held and guided that the trimming knife 1 cuts toward the sole in a plane inclined to the surface of the sole and substantially parallel with the lip. The edges of the vamp and lining extend over the projection 15 of the sole guide and between the cutting edges of the fixed blade 9 and trimming knife 1 so that the vamp and lining are properly trimmed off at a fixed distance from the lip of the insole. The trimming knife acts upon the vamp and lining inside of the lasting tacks 20 so that the tacks do not interfere with the vamp trimming operation.

It will be noted that when a lasted shoe is presented to the vamp trimming knives the blade of the fixed knife extends beneath the vamp and that its cutting edge is at an angle to the sole of the shoe. This arrangement of the cutting edge of the fixed knife is of value since it permits the vamp to be cut by a shearing action without any liability of injuring the insole, the forward end of the cutting edge of the fixed knife being close to the sole of the shoe so that the vamp and lining are readily raised from the sole and directed between the cutting edges of the knives while the rear end of the cutting edge of the fixed knife is removed a sufficient distance from the sole of the shoe to avoid any liability of the insole being cut by the vibrating knife.

In order to avoid any possibility of the trimming knife striking the lasting tacks a guard 21 is provided consisting of a blade extending between the knife and the heads of the lasting tacks and provided at its forward edge with a flange extending in front of the forward edge of the trimming knife, this construction being best illustrated in Fig. 4. The guard 21 is provided at its upper end with a rearwardly projecting portion, and through a slot in this portion of the guard a securing bolt 22 passes and screws into the lower end of a slide 23. By means of this construction the guard 21 can be adjusted to bring it into the desired position with relation to the trimming knife. The slide 23 is mounted in a guideway at one side of the slide 3 and is provided at its upper end with a projection 24 through which an adjustable stop screw 25 passes. This stop screw is adapted to strike against a projection on the guideway for the slide and thereby limit the downward movement of the guard 21. A spring 26 secured at one end to a projection on the guideway for the slide 23 and at the other end to a stud 27 projecting from the slide through a slot in the guideway tends to move the slide 23 downward. The guard 21 is thus yieldingly mounted and can be so set by means of the stop screw 25 as to prevent the knife from striking against the tacks at all portions of

the shoe, the guard being allowed to rise when the crimped portions of the vamp and upper at the toe of the shoe are brought beneath the guard.

The nature and scope of the present invention having been indicated and the construction and mode of operation of a machine embodying the preferred form of the same having been specifically described, what is claimed is:—

1. A vamp trimming machine, having, in combination, a trimming knife, and means for guiding a lasted shoe constructed and arranged to guide the shoe with the surface of the sole in a plane inclined to the plane in which the trimming knife cuts, and with the lip of the sole extending in a direction substantially parallel with the plane in which the trimming knife cuts, substantially as described.

2. A vamp trimming machine, having, in combination, a trimming knife, and a guide arranged to bear against the sole and inner surface of the lip of a lasted shoe, said guide being constructed and arranged to guide the shoe with the surface of the sole in a plane inclined to the plane in which the knife cuts, and with the lip of the sole extending in a direction substantially parallel with the plane in which the knife cuts, substantially as described.

3. A vamp trimming machine, having, in combination, a trimming knife for trimming the edge of the vamp, and a stationary guard located at one side of the plane in which the knife cuts to prevent the knife edge from coming in contact with the lasting tacks, substantially as described.

4. A vamp trimming machine, having, in combination, a trimming knife for trimming the edge of the vamp, and a yieldingly mounted stationary guard located at one side of the plane in which the knife cuts to prevent the knife edge from coming in contact with the lasting tacks, substantially as described.

5. A vamp trimming machine, having, in combination, a trimming knife, a sole guide to bear on the sole inside of the lip of a lasted shoe, said guide being constructed and arranged to guide the shoe with the surface of the sole in a plane inclined to the plane in which the knife cuts, and with the lip of the sole extending in a direction substantially parallel with the plane in which the knife cuts, and a guard at one side of the plane in which the knife cuts to prevent the knife from coming in contact with the tacks, substantially as described.

6. A vamp trimming machine, having, in combination, a fixed blade provided with a cutting edge arranged to extend inside of the vamp of a lasted shoe, a vibrating trimming knife provided with a cutting edge cooperating with the cutting edge of the fixed

blade, and a projection on the fixed blade extending beyond its cutting edge cooperating with the vibrating knife to maintain the cutting edge of the knife in alinement
5 with the cutting edge of the fixed blade when separated therefrom, substantially as described.

7. A vamp trimming machine, having, in combination, a fixed blade provided with a
10 cutting edge arranged to extend beneath the vamp of a lasted shoe, a trimming knife provided with a cutting edge cooperating therewith, and a sole guide to bear on the sole inside of the lip, arranged to raise the
15 vamp and direct it between the cutting edges of the fixed blade and trimming knife, substantially as described.

8. A vamp trimming machine, having, in combination, a trimming knife, a fixed blade
20 provided with a cutting edge arranged to extend beneath the vamp of a lasted shoe, means for guiding a lasted shoe constructed and arranged to guide the shoe with the surface of the sole in a plane inclined to the
25 plane in which the trimming knife cuts and with the lip of the sole extending in a direction substantially parallel with the plane in which the trimming knife cuts, and means for raising the vamp and directing it be-
30 tween the cutting edges of the fixed blade and cutting knife, substantially as described.

9. A vamp trimming machine, having, in combination, a fixed blade provided with a cutting edge arranged to extend inside of
35 the vamp of a lasted shoe, a vibrating trim-

ming knife provided with a cutting edge cooperating with the cutting edge of the fixed blade, and a guide extending beyond the cutting edge of the fixed blade and directly
40 engaging the vibrating knife to maintain the cutting edge of the knife in alinement with the cutting edge of the fixed blade when separated therefrom, substantially as described.

10. A vamp trimming machine, having, 45 in combination, a trimming knife for trimming the edge of the vamp, a cooperating fixed knife arranged to extend inside of the vamp of the lasted shoe presented to the knife, and means for guiding the shoe past
50 the knives with the cutting edge of the fixed knife extending in the direction of feed and at an angle to the sole of a shoe, substantially as described.

11. A vamp trimming machine, having, 55 in combination, a vamp trimming knife, a knife cooperating therewith arranged to extend inside of the vamp of a lasted shoe, and a guide separate from the knives, arranged to bear on the sole inside of the lip
60 and raise the vamp and direct it between the cutting edges of the knives, substantially as described.

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

JOHN B. HADAWAY.

Witnesses:

FRED O. FISH,

HORACE VAN EVEREN.