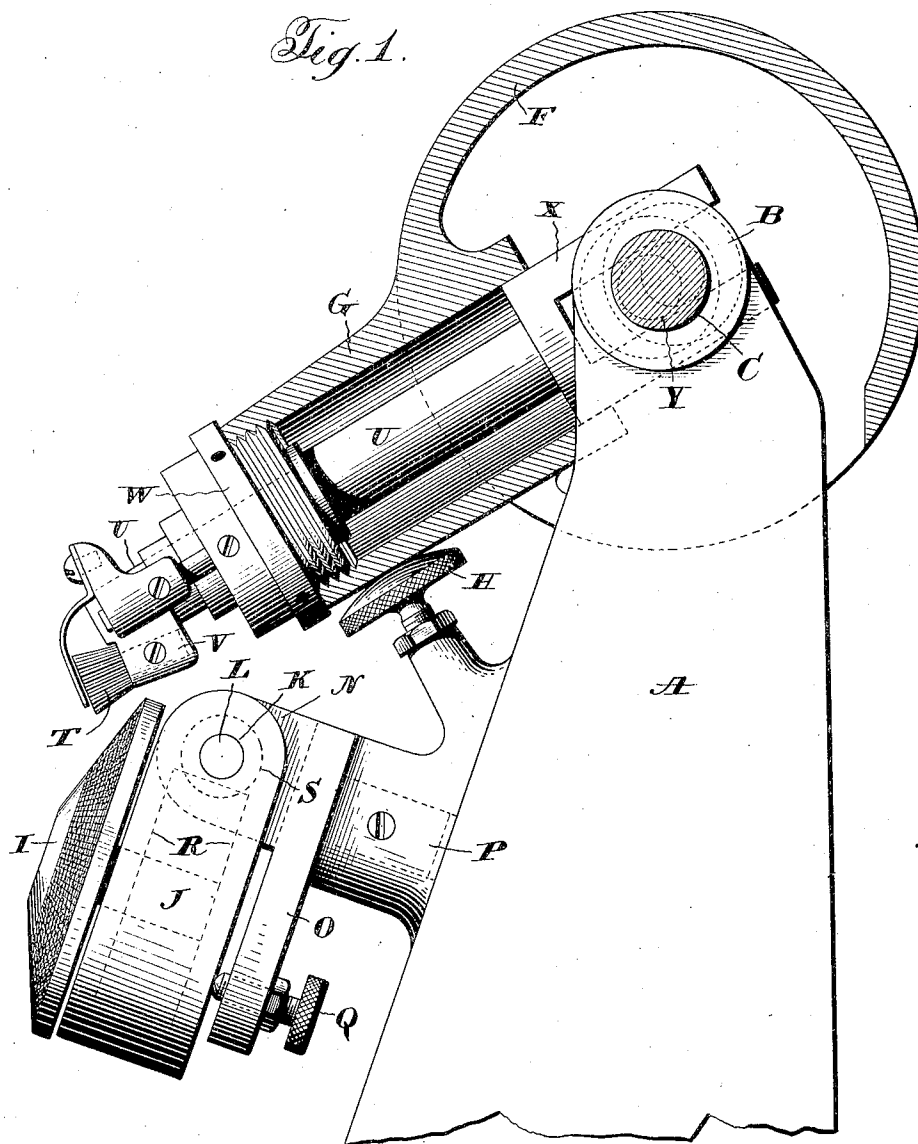


L. W. G. FLYNT.
MACHINE FOR IMPRESSING THE EDGES OF SHOE SOLES.
APPLICATION FILED JUNE 27, 1907.

934,434.

Patented Sept. 21, 1909.
4 SHEETS—SHEET 1.



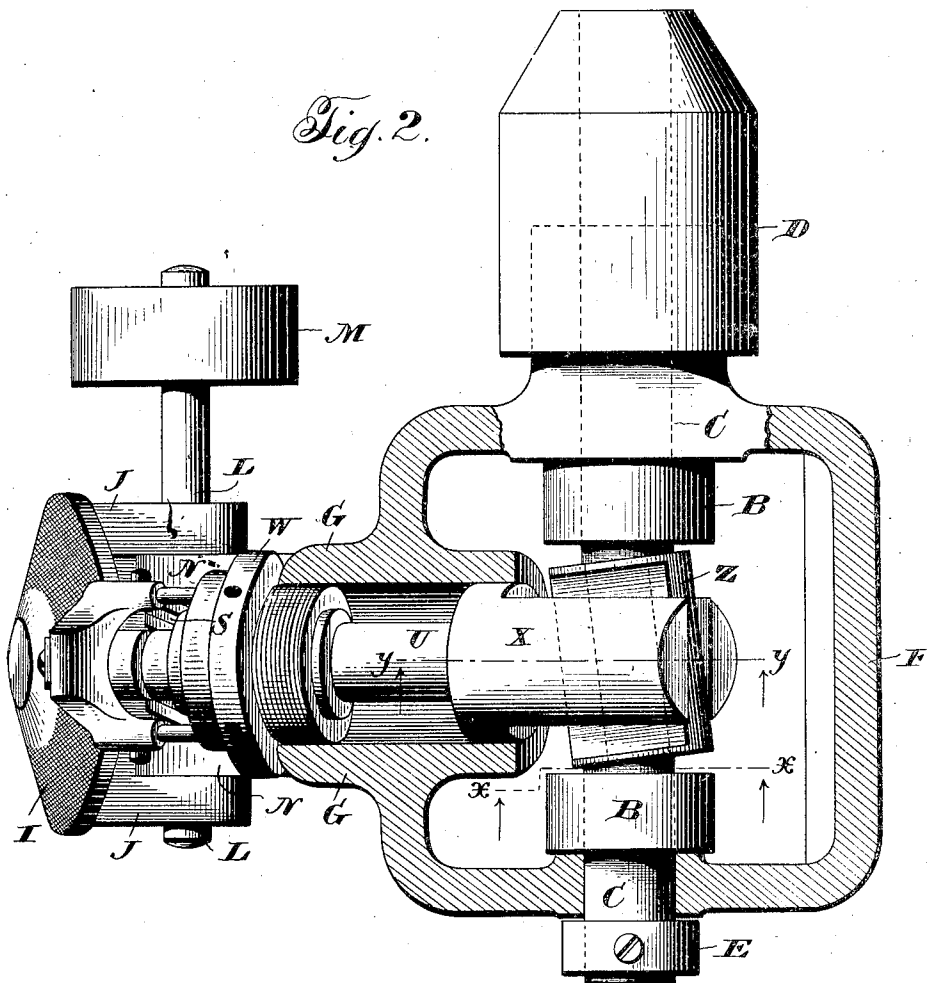
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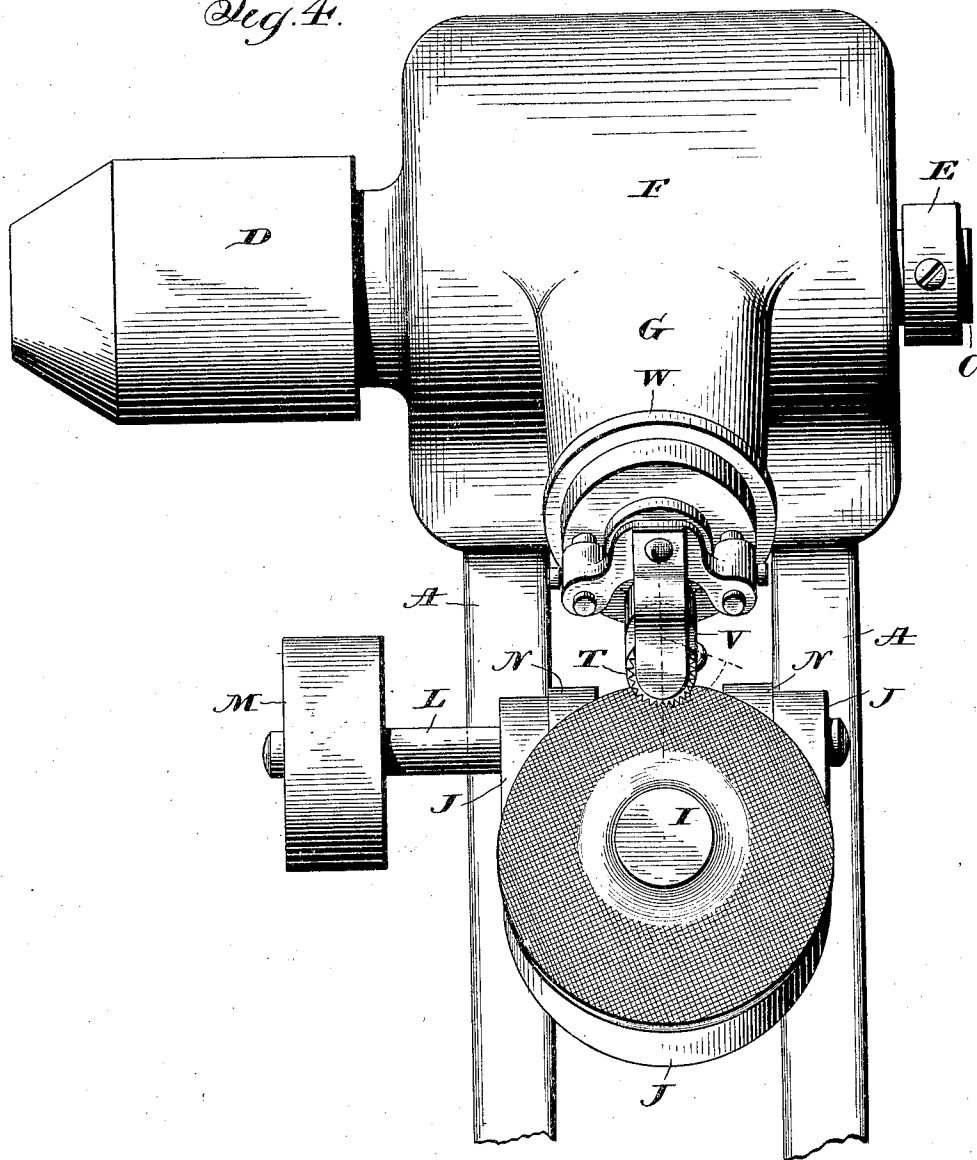
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Fig. 4.



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Fig. 5.

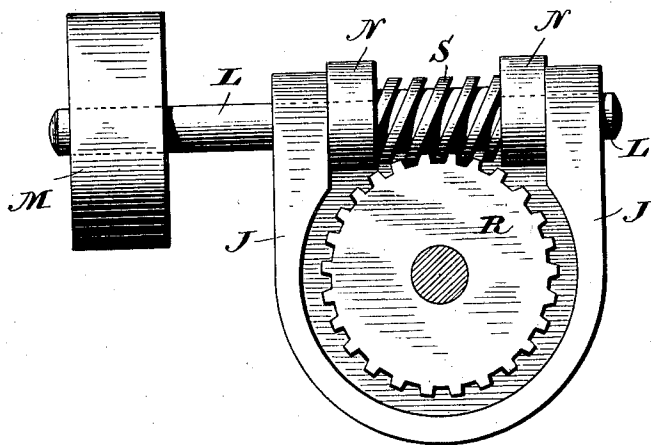


Fig. 6.

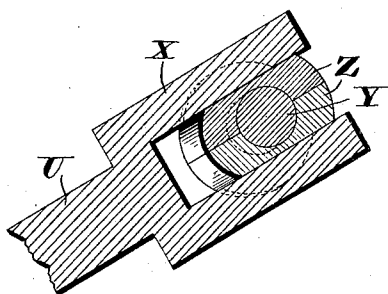


Fig. 7.

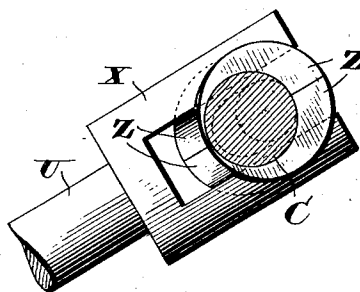
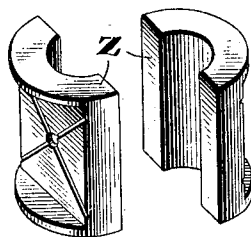


Fig. 8.



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UNITED STATES PATENT OFFICE.

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TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

MACHINE FOR IMPRESSING THE EDGES OF SHOE-SOLES.

934,434.

Specification of Letters Patent.

Patented Sept. 21, 1909.

Application filed June 27, 1907. Serial No. 381,130.

To all whom it may concern:

Be it known that I, LOUIS W. G. FLYNT, a subject of Great Britain, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Machines for Impressing the Edges of Shoe-Soles, of which the following is a specification, reference being had therein to the accompanying drawing.

The present invention relates to machines for forming stitch imitation impressions or indentations in the projecting edges of shoe soles and particularly to that class of sole indenting machines in which the indenting tool consists of a wheel provided with teeth shaped and spaced to produce the desired form of indentation. Certain features of the invention are, however, not limited to use in connection with a sole indenting machine provided with an indenting wheel but may be embodied in other types of sole indenting machines.

One of the objects of the present invention is to produce a sole indenting machine provided with an indenting wheel mounted to be rotated by the engagement of the work therewith in which the wheel is so actuated as to assist in the feeding of the work. With this object in view a feature of the invention contemplates the provision in a machine of the character referred to of means for shifting the wheel bodily in the general direction of the feeding movement of the work and downwardly along a path terminating in substantially the lowest position of the wheel with relation to the work support.

Another object of the present invention is to provide an improved means for actuating the tool of a sole indenting machine which is simple in construction and efficient and durable in operation. With this object in view a feature of the present invention consists in the improved tool actuating mechanism hereinafter described and claimed which mechanism is particularly applicable to a sole indenting machine provided with an indenting wheel but which except as defined in the claims, is not limited to use in any particular type of sole indenting machine.

Other objects of the invention are in general to improve the construction and mode of

operation of sole indenting machines and with these objects in view the present invention also consists in certain devices, combinations, and arrangements of parts hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art from the following description:—

The several features of the present invention will be clearly understood from an inspection of the accompanying drawings in which is illustrated a sole indenting machine embodying the same in their preferred form.

In the drawings, Figure 1 is a side elevation of the machine, a portion of the casing being shown in vertical section; Fig. 2 is a plan view of Fig. 1 with the casing shown in horizontal section; Fig. 3 is a detail view of the operating shaft removed; Fig. 4 is a front view; Fig. 5 is a plan view of the table support and associated parts with the table removed; Fig. 6 is a section on the line *y-y* of Fig. 2; Fig. 7 is a section on the line *x-x* of Fig. 2; and Fig. 8 is a detail perspective view of the separable bearing box, or brasses, for the angularly disposed crank of the operating shaft.

Referring more specifically to the drawings wherein like reference characters designate corresponding parts in the several views, A—A represent a pair of supporting uprights attached to or forming a part of the ordinary frame or column, not necessary to be shown herein, at alined points in the upper ends of which are bearings B for a horizontally disposed operating shaft C having at one end a pulley D and at its opposite end a removable collar E for securing the shaft in place. Pivoted to rock upon the shaft C is a casing F open at its bottom for the reception of the upper ends of the uprights A and to permit the adjustment of the casing over said uprights. The casing has a forwardly extending cylindrical portion G to constitute a bearing for an oscillating shaft, as will presently appear, and beneath this cylindrical portion I provide an adjustable rest H adapted to adjust the casing with the parts carried thereby to any position desired and to support the same in such position.

I represents the work support which is of

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frusto-conical formation rotatably and removably mounted in a casing J, said casing J being in turn pivoted as at K to a shaft L operated by a pulley M belted to or otherwise operatively associated with the pulley D. Either of these pulleys D or M may be driven from any suitable source of power. The shaft L is rotatably mounted in ears N on a bracket O removably and adjustably secured to the uprights A as at P.

Q is an adjusting screw passing through the bracket O and bearing on the bottom of the casing J to adjust the table to different positions on the shaft L.

Within the casing J and rigidly secured to the table or support I is a worm wheel R meshing with a worm S secured to the shaft L whereby the rotation of the shaft, worm and wheel will effect the desired rotation and feeding movement of the table or work support.

Above the work support is an indenting wheel T which is carried by but offset from a shaft U whereby the turning of the shaft by instrumentalities now to be pointed out will effect an oscillation of the wheel carrying arm V. The wheel is free to rotate relative to said arm V. The shaft U passes through the cylindrical portion G of the casing F and is removably held therein by the detachable coupling W threaded therinto, the latter constituting one bearing for the shaft U and an enlarged cylindrical portion X at the inner end thereof and fitting the bore of the cylindrical portion G constituting another bearing for said shaft, whereby to properly center the shaft and preserve the same against vibration.

The enlargement X at the inner end of the shaft U just referred to is slotted inwardly from the end thereof for the reception of an angularly disposed crank Y formed on the shaft C intermediate the ends thereof (see Fig. 3), a separable bearing box, or brasses, Z being interposed between said crank and the parallel flat surfaces of the slotted portion of the shaft U, the opposing surfaces of these brasses being correspondingly flat, and the thickness of the bearing box, or brasses, when assembled being such as to snugly fit said slotted portion. The special formation of these brasses will be clear upon an inspection of Fig. 8.

Owing to the coöperative relation of the angularly disposed crank Y of the operating shaft with the slotted end of the tool shaft U, and the offsetting of the freely rotatable tool T from the shaft U, the rotation of the operating shaft will effect a back and forth rocking movement of the shaft U and bodily oscillation of the wheel T as indicated by the arc represented in Fig. 4, the extent of movement of the wheel being approximately twenty degrees, and said arc terminating in

substantially the lowest position of the wheel relative to the work support I or the work therebetween. This movement of the wheel will effect the desired impression or indentation in the work and inasmuch as its movement to its lowermost position is in the direction of feeding of the work beneath the wheel, the wheel will materially assist in such feeding operation. On the other hand, the rearward movement of the wheel being in an arc receding from the work the feeding of the work under the actuation of the work support I will not be materially impeded thereby.

It is to be observed that while in the hereto appended claims I will define the tool carrying shaft as having a "slotted portion," such term is to be understood as embracing any equivalent of such formation, as for instance two oppositely disposed arms connected to the shaft and having a space therebetween to accommodate the angularly disposed crank.

Having thus described the invention what is claimed is:—

1. A sole indenting machine, having, in combination, a work support, an indenting wheel, and means for moving the wheel in the same general direction as the feeding movement of the work and downwardly into the work along a path terminating in substantially the lowest position of the wheel with relation to the work support.

2. A sole indenting machine, having, in combination, a work support, an indenting wheel, and means for rapidly vibrating the wheel back and forth in the same general direction as the feeding movement of the work along a path extending downwardly into the work and terminating in substantially the lowest position of the wheel with relation to the work support.

3. In a machine of the character described, a freely rotatable indenting wheel, and instrumentalities for bodily oscillating said wheel in an arc terminating in substantially the lowest position of the same with respect to the work support to impress the work and assist in feeding the work, in combination with said work support.

4. In a machine of the character described, an indenting tool, and instrumentalities for bodily oscillating said tool in an arc terminating in substantially the lowest position of the same with respect to the work support to impress the work and assist in feeding the work, in combination with said work support.

5. In a machine of the character described, a freely rotatable indenting wheel, and instrumentalities for bodily oscillating said wheel in an arc terminating in substantially the lowest position of the same with respect to the work support to impress the work and

assist in feeding the work, in combination with said work support, and means for operating the work support to feed the work.

6. In a machine of the character described, an indenting tool, instrumentalities for bodily oscillating said tool in an arc terminating in substantially the lowest position of the same with respect to the work support to impress the work and assist in feeding the work, in combination with said work support, and means for operating the work support to feed the work.

7. A sole indenting machine, having, in combination, a work support, an indenting wheel, and means for moving the wheel to and fro in the line of feed along a path approaching the work support while the wheel is moving in the direction of feed and receding from the work support while the wheel is moving in the direction opposite to the feed.

8. In a machine of the character described, a freely rotatable indenting wheel, a work support, and instrumentalities for operating the indenting wheel including means for bodily shifting the indenting wheel in the same general direction as the feeding movement of the work and downwardly into the work at a point terminating in its lowest position with respect to the work support.

9. In a machine of the character described, an indenting wheel, a slotted shaft carrying said wheel offset therefrom, and means for effecting bodily oscillation of said wheel including a fixed operating shaft arranged transversely to said first mentioned shaft and having an angularly disposed crank engaging the slotted portion of said first mentioned shaft.

10. In a machine of the character described, an indenting tool, a slotted shaft carrying said tool offset therefrom, and means for effecting bodily oscillation of said tool including a fixed operating shaft arranged transversely of said first mentioned shaft and having an angularly disposed crank engaging the slotted portion of said first mentioned shaft.

11. In a machine of the character described, an indenting wheel, means for bodily oscillating said wheel including an operating shaft having a crank portion, the axis of which is arranged at an angle to the axis of the shaft, and connections between said crank portion and said wheel.

12. In a machine of the character described, an indenting tool, means for bodily oscillating said tool including an operating shaft having a crank portion, the axis of which is arranged at an angle to the axis of the shaft, and connections between said crank portion and said tool.

13. In a machine of the character described, an indenting tool, a shaft carrying

the same, and means for operating the tool including an operating shaft having a crank portion, the axis of which is at an angle to the axis of said operating shaft, and an engagement between said crank portion and the tool carrying shaft.

14. In a machine of the character described, an indenting tool, a shaft carrying the same, and means for operating the tool including an operating shaft having a crank portion, the axis of which is at an angle to the axis of said operating shaft, and an engagement between said crank portion and the tool carrying shaft, said engagement consisting of a slotted portion of said tool carrying shaft extending over said crank portion.

15. In a machine of the character described, an indenting tool, a shaft carrying the same, means for operating the tool including an operating shaft having a crank portion, the axis of which is at an angle to the axis of said operating shaft, and an engagement between said crank portion and the tool carrying shaft, said engagement consisting of a slotted portion of said tool carrying shaft extending over said crank portion, and a bearing box interposed between said crank and slotted portions.

16. In a machine of the character described, an indenting tool, a shaft carrying the same, means for operating the tool including an operating shaft having a crank portion, the axis of which is at an angle to the axis of said operating shaft, and an engagement between said crank portion and the tool carrying shaft, said engagement consisting of a slotted portion of said tool carrying shaft extending over said crank portion, and a bearing box interposed between said crank and slotted portions, composed of separable bearing brasses.

17. In a machine of the character described, an indenting tool, a shaft carrying the same and having a slotted portion, and an operating shaft extending transversely of said tool carrying shaft and having an intermediate crank portion, the axis of which is at an angle to the axis of the operating shaft, said crank portion of the operating shaft passing through the slotted portion of the tool carrying shaft.

18. In a machine of the character described, an indenting tool, a shaft carrying the same and having a slotted portion, and an operating shaft extending transversely of said tool carrying shaft and having an intermediate crank portion, the axis of which is at an angle to the axis of the operating shaft, said crank portion of the operating shaft passing through the slotted portion of the tool carrying shaft, in combination with a bearing box interposed between the crank and slotted portions.

19. In combination with a rotatable indenting wheel, a shaft offset from and carrying said indenting wheel, said shaft having a slotted portion, and an operating shaft extending transversely of said wheel carrying shaft and having an intermediate crank portion, the axis of which is at an angle to the axis of the operating shaft, said crank portion of the operating shaft passing through the slotted portion of the wheel carrying shaft.

20. In combination with an indenting tool, a shaft offset from and carrying said indenting tool, said shaft having a slotted portion, and an operating shaft extending trans-

versely of said tool carrying shaft and having an intermediate crank portion, the axis of which is at an angle to the axis of the operating shaft, said crank portion of the operating shaft passing through the slotted portion of the tool carrying shaft, in combination with a bearing box interposed between the crank and slotted portions.

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

LOUIS W. G. FLYNT.

Witnesses:

FRED. C. PATRICK,
QUENTIN W. BOOTH.