

R. C. SIMMONS.
MACHINE FOR OPERATING UPON SOLES.
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1,030,618.

Patented June 25, 1912.

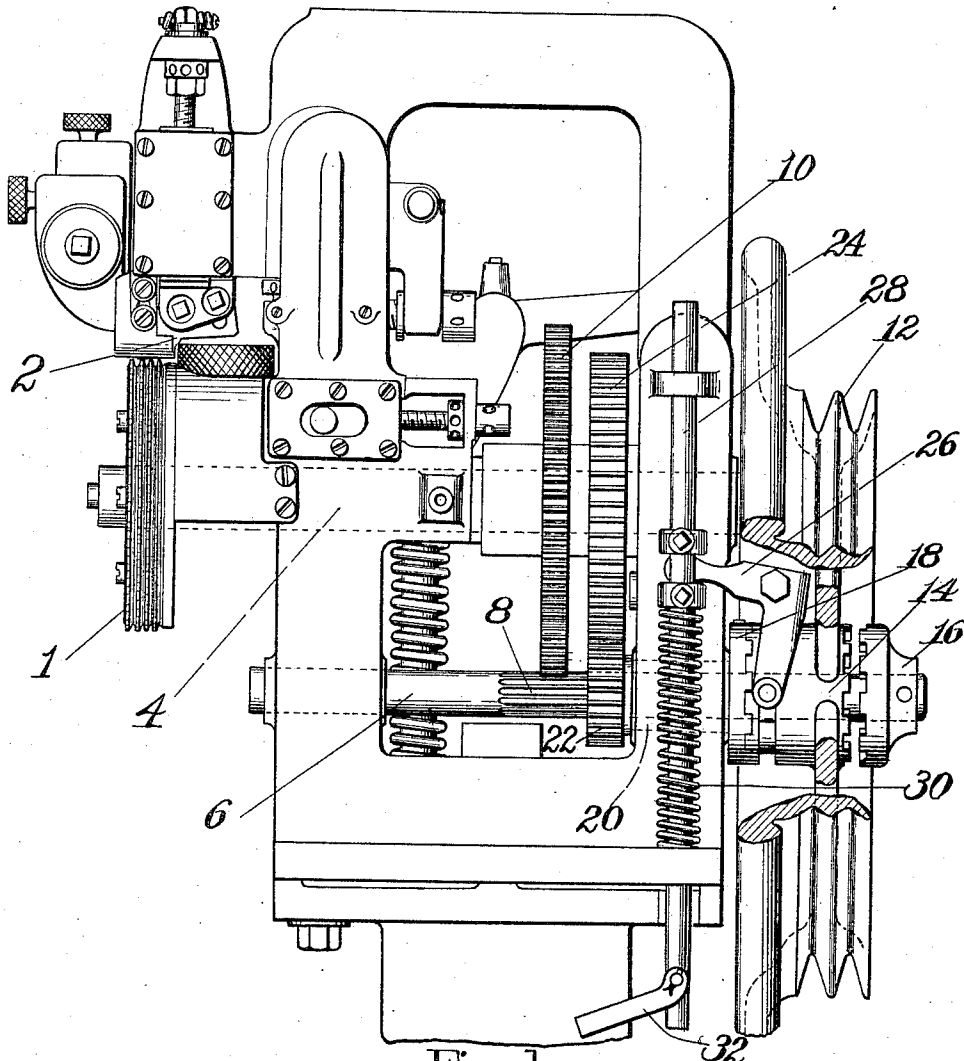


Fig. 1.

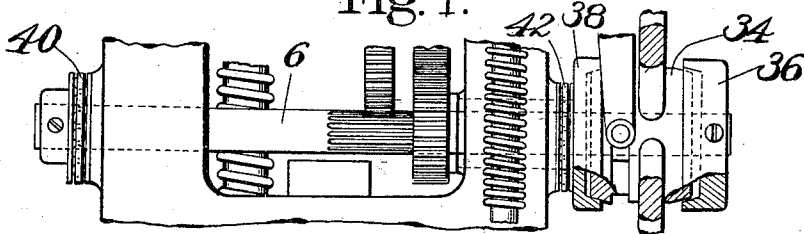


Fig. 2.

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MACHINE FOR OPERATING UPON SOLES.

1,030,618.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RALPH C. SIMMONS, a citizen of the United States, residing at Beverly, in the county of Essex and Commonwealth of Massachusetts, have invented certain Improvements in Machines for Operating upon Soles, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to machines for operating upon soles and is shown embodied in a channeling machine.

Machines are in use in preparing soles for attachment to boots or shoes in which a sole is advanced against an operating tool by a feed wheel having engagement with the marginal portion thereof. As is well-known, various operations upon the marginal portion of the sole are performed in machines of this type. In some classes of work it is desirable that the rotation of the feed wheel be automatically effected. Where a sole is being operated upon along such an abrupt curve as occurs at the toe, to secure the best results it is at times desired that the movement of the sole against the operating tool should be retarded.

An important feature of the present invention consists in the provision, in a machine of this type, of means for automatically turning the feed wheel at a predetermined rate and means for changing the speed to a different predetermined rate. In the machine shown, the construction is such that the feed wheel may be rotated at any one of a plurality of speeds according to the desire of the operator. Preferably the construction is such that the change from one speed to another may be effected at any point in the course of operating upon a sole. In the machine shown, a single controlling member is provided by manipulation of which any one of a plurality of predetermined speeds may be secured, or if desired the transmission of movement to the wheel may be discontinued.

Other features of the invention will be hereinafter described and defined in the appended claims.

In the drawings,—Figure 1 is a view in side elevation of a channeling machine constituting one embodiment of the invention;

Fig. 2 is a fragmentary view similar to Fig. 1 illustrating a modification.

Referring to the drawings, the reference numeral 1 indicates a feed wheel of usual form constructed to have engagement with the under side of a sole at its margin and by its rotation advance the sole progressively against a channeling knife 2. The arrangement of the channeling knife and other devices shown which operate upon the upper surface of the sole need not be particularly described as it constitutes no part of the present invention. The feed wheel 1 is carried on a shaft 4 journaled in the frame of the machine. Beneath the feed wheel shaft is a driving shaft 6. The driving shaft 6 is provided intermediate its ends with teeth 8 meshing with the teeth of a gear 10 fixed upon the feed wheel shaft. A pulley wheel 12 arranged for continuous rotation and provided with a hub 14 is mounted upon the rear end of the driving shaft. Both the front face and the rear face of the hub 14 are notched to permit either of said faces to be brought into clutching engagement with parts to be described. The rear face of the hub 14 is adapted to have engagement with a clutch member 16 fixed upon the shaft 6. The front face of the hub 14 is arranged for engagement with a clutch member 18 rigid with a sleeve 20 which encircles the shaft 6 and is journaled for movement in the frame. The sleeve 20 carries at its front end a gear 22 meshing with a gear 24 fixed upon the feed wheel shaft 4. The hub 14 is of such size that in an intermediate position between the clutch members 16 and 18 it is out of contact with both of said members. As will appear from the drawings, the hub 14 is arranged for sliding movement upon the driving shaft 6. To effect this movement a lever 26 is journaled upon the machine frame, one end of said lever entering a groove formed in the periphery of the hub 14, the other end being engaged by lugs formed upon a rod 28 arranged for vertical movement in the frame of the machine. The spring 30 holds the rod 28 normally in its uppermost position wherein the hub 14 is clutched with the clutch member 18. The rod 28 is depressed by a suitable treadle.

It will be seen that the arrangement described permits the feed wheel to be rotated

at either of two speeds. In the event that it is desired to use continuously the lower speed and not resort to the use of the higher speed, the rod 28 which constitutes the clutch controlling member may be locked in its lowermost position. A latch 32 is shown in Fig. 1 for this purpose. As will be obvious, by depressing the clutch controlling rod 28 and swinging the latch 32 into a vertical position wherein it has engagement with the frame of the machine the rod 28 is held from upward movement.

There is shown in Fig. 2 a modified arrangement. In this modification the hub 34 of the pulley wheel has frictional engagement with members 36 and 38. To reduce the friction due to the end thrust upon the shaft 6, there are provided ball bearings 40, 42, which take up the end thrust imparted to said shaft. The mechanism shown permits a sole to be advanced against a channeling knife at either of two speeds according to the desire of the operator. In going about the toe of a sole, which is the most difficult part of a channeling operation, the operator may use the lower speed, using the higher speed along the sides of the sole where the sole moves substantially in a rectilinear path. If desired in the use of the mechanism shown a single speed may be used continuously throughout the operation of channeling a sole. The possibility of selecting either of a plurality of speeds is of advantage when the machine is used in this manner. For example, it may be desirable for an inexperienced operator to run the machine at a lower speed than an operator who has become skilled in its use.

It will be understood that the invention is not limited to the arrangement of parts shown and described. As will be obvious, various devices for varying the speed of rotation of the feed wheel may be substituted

for the clutch mechanism shown without departing from the present invention. The machine shown is to be considered as shown by way of example and not by way of limitation, the scope of the invention being pointed out in the appended claims.

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

1. A machine for operating upon soles, having in combination, an operating tool, a feed wheel for advancing the sole against the tool by engagement with its marginal portion, a driving shaft, means for transmitting rotary movement from the driving shaft to said feed wheel, a sleeve rotatably mounted upon said driving shaft, means for transmitting rotary movement from said sleeve to said feed wheel and a power driven member rotatably mounted upon the shaft constructed to transmit rotary movement to either the sleeve or the shaft at the will of the operator.

2. A machine for operating upon soles, having in combination, an operating tool, a feed wheel for advancing the sole against the tool by engagement with its marginal portion, a driving shaft operatively connected to the feed wheel to rotate the latter at a predetermined speed, a rotatable member for imparting movement to the feed wheel at a slower rate of speed and a power driven member rotatably mounted upon the shaft constructed and arranged to impart rotary movement to either the shaft or said rotatable member at the will of the operator.

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

RALPH C. SIMMONS.

Witnesses:

BERNARD BARROWS,
ALLAN H. BARROWS.