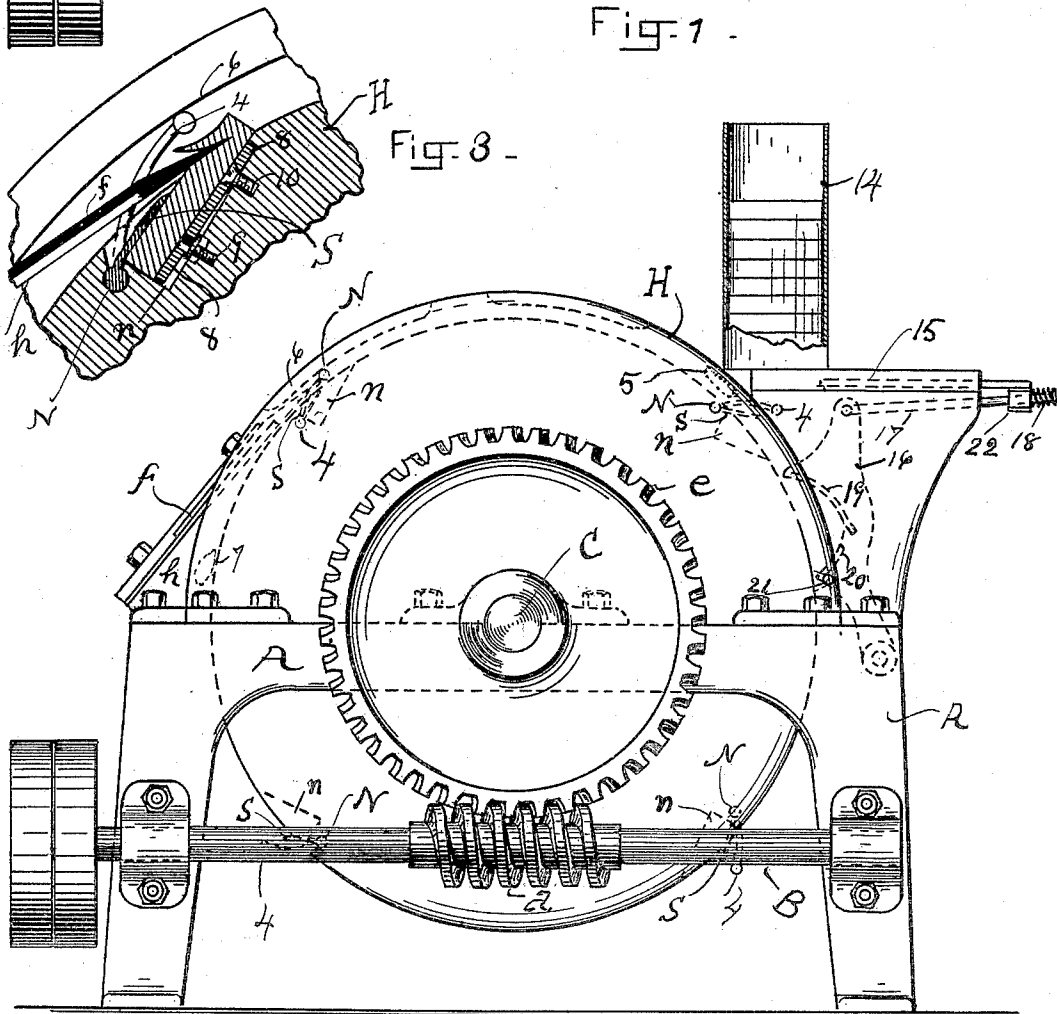
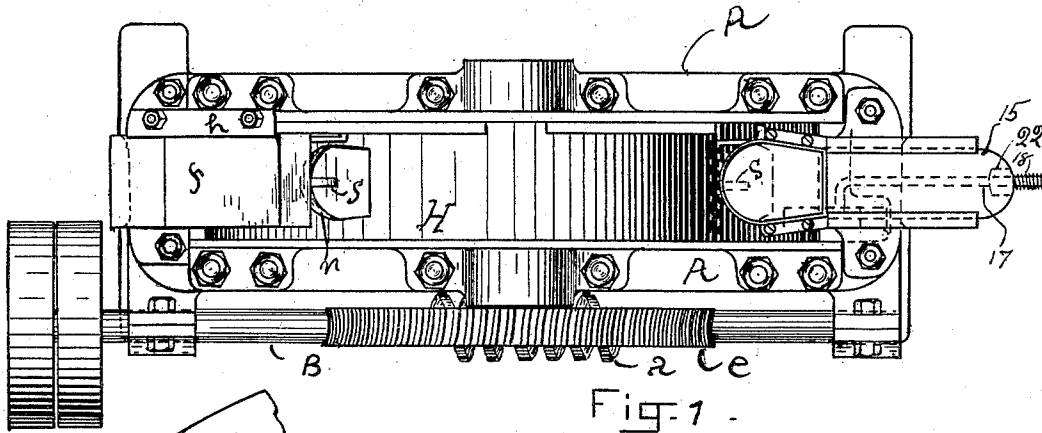


(No Model.)

F. W. POPE.
HEEL LIFT SKIVING MACHINE.

No. 466,743.

Patented Jan. 5, 1892.



WITNESSES:
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FREDERICK W. POPE, OF LYNN, MASSACHUSETTS, ASSIGNOR TO HENRY ROBINSON AND KNOTT P. MARTIN, OF SAME PLACE.

HEEL-LIFT-SKIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 466,743, dated January 5, 1892.

Application filed May 9, 1891. Serial No. 392,188. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. POPE, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain Improvements in Machines for Skiving Boot or Shoe Heels, of which the following, taken in connection with the accompanying drawings, is a specification.

In the accompanying drawings, Figure 1 is a plan view of the machine embodying this invention. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional detail to be referred to hereinafter.

The frame-work of this machine is designated in the drawings by the letter A. Said frame-work supports a revoluble shaft B and also a revoluble shaft C. The shaft B is provided with a power-receiving pulley and with a worm *a*. Said worm *a* is made to engage a gear *e*, to thereby revolve the shaft C. Said shaft C carries a drum H, which drum is fixed to and revoluble with the shaft C.

Upon the frame-work A is mounted a knife-supporting stand *h*, in which is supported the knife *f*. Said knife has its cutting-edge in close proximity to the periphery of drum H, and is supported in the stand *h*, adjustably to the end that it may be adjusted toward and from the drum. The drum H is provided with sockets or chambers suitable for receiving boot or shoe heels. Said sockets *n* are designed for receiving the boot or shoe heels and retaining the same with the rear or curved portion of the heel depressed below the periphery of the drum, so as to pass under the cutting-knife, but with a portion of the heel along its front or straight edge raised above the periphery of the drum to be engaged and removed by the cutting-knife *f*, all this substantially as shown in Fig. 3.

It is important that during the cutting operation the heel shall be firmly held against the action of the knife and made to travel with the drum H. To this end a rock-shaft N is journaled in the drum in close proximity to the socket *n*. Said shaft supports a finger-bar S to bear upon and hold the heel whenever required. It is desirable that said finger-bar shall automatically operate, first, to lift and permit the heel to be placed within the socket, then to depress upon and hold the

heel while under the action of the knife, and finally to lift and permit the heel to drop from out the socket. To this end the shaft N carries a fixed arm 4, and on the frame-work A are leaf-cams to engage the arm 4, and thereby effectuate the necessary rocking movements of said shaft N in order to lift and depress the finger-bar. Said cams are indicated in the drawings by dotted lines and are located at different points on the frame-work A, so that as the drum revolves said arm 4 said arm first engages the cam 5, whereby the finger-bar is lifted to permit the introduction of the heel. A further revolution of the drum brings the arm 4 into engagement with the cam 6, whereby the finger-bar is depressed and made to bear firmly upon the heel-blank, while the cam further revolves to carry the heel into engagement with the knife *f*, whereby a portion of the heel is removed. Next the arm 4 is moved into engagement with cam 7, whereby the finger-bar is again lifted and the heel-blank permitted to drop from the socket to the bed-plate of the machine below. The cam 6 is preferably formed of a springing material with sufficient yielding quality to accommodate the finger-bar to variations incident to different thicknesses of the heel-blanks.

It will be understood that the drum is provided with sockets *n* at different points in the periphery of the drum, and each of the same is provided with independent finger-bars and described means for engaging the cams, as stated, to the end that while a heel is being cut another may be introduced into a socket at some other point in the drum.

Each of the heel-receiving sockets *n* is provided with a movable plate 8. Said plate bears upon a vertically-adjustable screw 9, and is also clamped in position by means of the screw 10, which to that end passes through a suitable opening in the plate. A suitable movement of the screw 9 operates to give more or less elevation to the plate, and the desired adjustment of the plate being once attained it is again clamped firmly by means of screw 10, all this to the end that the heel-blanks may be given any required pitch relatively to the cutting-knife. Said plate has its rear edge elevated to form a gage,

against which the heel is set and permits adjustment toward and from the periphery of the wheel when desired, for which purpose the screw 10 is made to pass through an oblong hole in said plate.

It will be understood that the heel-blanks may be deposited in the receiving-sockets *n* by hand, if desired; but I have devised a feeding mechanism for use in connection with the machine whereby the heel-blanks are fed automatically from a hopper to the receiving-sockets, and this I will now proceed to describe. Said mechanism comprises a hopper 14, into which the heel-blanks are placed one above the other in vertical column, as shown in Fig. 1. Beneath the hopper is a plate on which the bottom member of the column of heel-blanks is allowed to bear and along which it is moved to the receiving-socket of the drum. To this end the said plate is sufficiently depressed below the bottom edge of the hopper to permit the blanks being pushed laterally forward from beneath the column of heel-blanks and out of the hopper. To effect this forward movement of the heel-blanks I employ a slide 15, which to that end is mounted in suitable ways to permit forward movement against the heel-blank, and to said slide the necessary movements are imparted from the revolving drum H through an intermediate mechanism composed of cam-lever 16, connecting-rod 17, spring 18, cams 19 20, and pin 21. To this end the lever 16 is supported pivotally on the machine-frame, and the pin 21 is fixed in the drum H in position, so that as the drum revolves said pin 21 engages cam 20 and thereby moves the lever 16 forward to carry the feed-plate and heel-blank from the hopper to the receiving-socket *n* in the drum. A further movement of the drum carries the pin into engagement with cam 19, and thereby swings the lever 16 backwardly, effecting a withdrawal of the feed-plate to its original position for again being moved to carry the next succeeding heel-blank into the next succeeding heel-socket *n* of the drum.

It will be understood that duplicate pins 21 are set at various points in the drum H, so as to successively engage the feeding mechanism for removing heel-blanks successively from the hopper to the drum, as required.

The forward movement of the feed-plate is effected against the yielding tension of spring 18, to the end that the plate may limit its forward movement to accommodate variations incident to the different sizes of heel-blanks.

To this end the connecting-rod 17 is allowed to slide loosely in its boss 22 and engages the spring 17, as shown, to the end that when the feeding-plate stops its forward movement all further movement of the connecting-rod effected through operation of cam 20 and pin 21 may be taken up by spring 17.

I claim—

1. The revoluble drum H, having one or more heel-receiving sockets *n*, combined with means for revolving the drum, the finger-bar S, and finger-bar-operating mechanism for holding the blanks in the sockets, and the cutting-knife *f* for operating on the exposed portions of the blanks, substantially as described.

2. The revoluble drum H, formed with heel-receiving chambers *n*, combined with means for revolving the drum, the finger-bars S and described cams stationary with the framework of the machine to engage the finger-bar-supporting shaft for lifting and depressing the finger-bar, and the cutting-knife secured to the frame for operating upon the exposed portions of the blanks, substantially as described.

3. In a machine of the character described, the revoluble drum H, provided with one or more heel-receiving sockets, combined with means for revolving the drum, the cutting-knife *f*, the finger-bars S, and adjustable heel-gage plate S, and a finger-bar-operating mechanism, substantially as described.

4. In combination with the revolving drum H, having heel-receiving sockets, a hopper on the frame for holding heel-blanks, a slide 15, operating mechanism connected therewith, and a pin on the wheel for operating said connections, substantially as described.

5. In a machine of the character described, the revoluble drum H, provided with heel-receiving sockets, the knife for operating on the exposed portions of the heels, and means for revolving the drum, combined with the hopper for holding heel-blanks, the pivoted lever 16, provided with cams 19 20, and connections, as described, between the lever 16 and the drum and also between the lever 16 and hopper, substantially as described.

Signed at Lynn, Massachusetts, this 1st day of May, A. D. 1891.

FREDERICK W. POPE.

Witnesses:

H. ROBINSON,
C. B. TUTTLE.