

R. HÜBLER.

Machines for Turning Wooden Heels.

No. 135,037.

Patented Jan. 21, 1873.

Fig. 1.

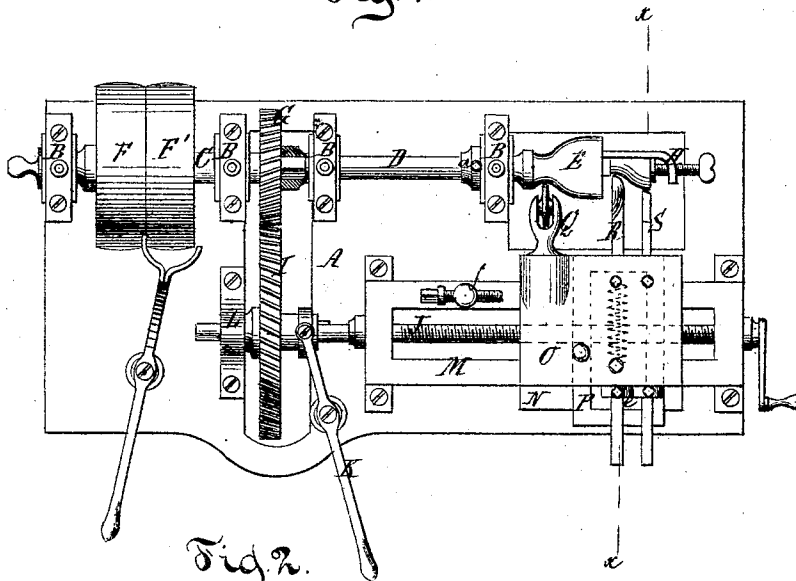
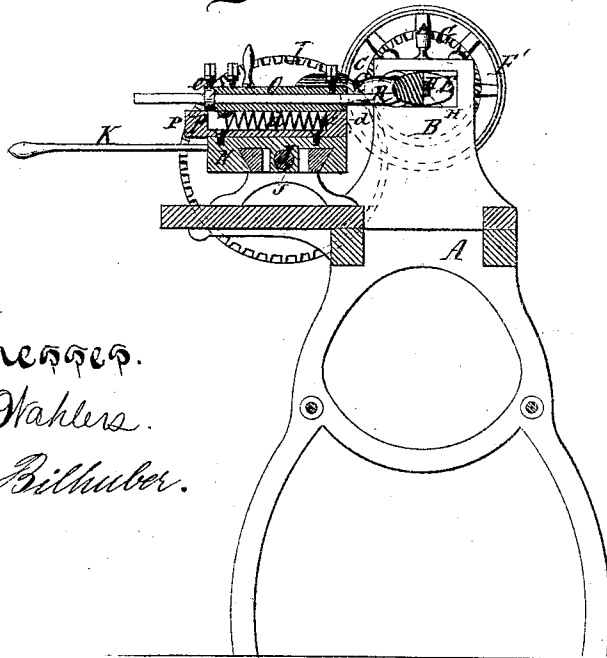


Fig. 2.



Witnesses.

Chas. Wählers.

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UNITED STATES PATENT OFFICE.

RICHARD HÜBLER, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR TURNING WOODEN HEELS.

Specification forming part of Letters Patent No. 135,037, dated January 21, 1873.

To all whom it may concern:

Be it known that I, RICHARD HÜBLER, of the city, county, and State of New York, have invented a new and Improved Machine for Turning Wooden Heels; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention. Fig. 2 is a transverse vertical section of the same in the plane *x x*, Fig. 1.

Similar letters indicate corresponding parts.

This invention relates to a machine for turning wooden heels in which the block to be turned is secured to a spindle, which also carries the pattern, while the cutter or tool is secured in a slide-rest, which is provided with a stop that is caused to bear upon the surface of the pattern by a spring acting on the slide-rest, in such a manner that when the spindle carrying the pattern and the block to be turned is revolved, while the slide-rest is moved in a direction parallel to said spindle, the tool imparts to the work the required shape corresponding to the pattern. The pattern-spindle is made detachable from the driving-gear, so that it can be removed and replaced by another carrying a different pattern. With the turning-tool is combined a cutting-off tool that serves to cut off the end of the work to the required distance, and both these tools are provided with suitable gages, which serve to adjust them in the required position. The motion of the slide-rest parallel to the pattern-spindle is rendered automatic by gearing the screw acting on the same together with the driving-shaft.

In the drawing, the letter A designates a frame, which supports four standards, B, that form the bearings for the driving-shaft C and for the spindle D that carries the pattern E. On the driving-shaft are mounted the fast and loose pulleys F F', and a cog-wheel, G, and it is provided with a socket in its end to receive the inner end of the pattern-spindle, said pattern-spindle being retained in position by a collar, *a*, so that by unscrewing this collar the spindle can be withdrawn and replaced by another carrying a different pattern. From

the outer surface of the pattern E projects a clamp or other equivalent fastening device, H, which serves to secure the "work" in the position shown in Fig. 1, so that said work will revolve with the pattern-spindle. The cog-wheel G meshes in another cog-wheel, I, that is feathered on a screw-spindle, J, so that it can be thrown in or out of gear by the action of a lever, K; and the cogs of the wheels G and I are by preference made oblique, so as to prevent any rattling and to produce a smooth, uniform, and even motion. The screw-spindle J has its bearings in a standard, L, and in a guide-piece, M, fastened on the frame A, and on said guide-piece is fitted the carriage N, which carries the tool-rest O. The screw-spindle engages with a nut formed at the bottom of the carriage N, and if the cog-wheel I is thrown in gear with the cog-wheel G, and a revolving motion is imparted to the driving-shaft, the carriage will move automatically on the guide-pieces M in a direction parallel to the driving-shaft and to the pattern-spindle. On the carriage N is formed a guide-way, P, which extends at right angles to the guide-piece M, and on which moves the tool-rest. From this tool-rest extends a stop, Q, which is held in contact with the surface of the pattern by a spring, *d*, (see Fig. 2,) acting on the tool-rest. The stop Q is provided with a roller in its end to reduce friction. In the tool-rest is secured the cutter R, which acts on the surface of the work. The position of this tool in the tool-rest is determined by a gage, *e*, secured thereon by a set-screw. After the work has been adjusted on the end of the pattern, as shown, the tool-rest is moved until it strikes a stop, *f*, secured to guide-piece M, this stop being adjusted so that the stop Q will be opposite the thinnest part of the pattern; then the cog-wheel I is thrown in gear with the cog-wheel G and the driving-shaft is set in motion. As the pattern revolves the tool is caused to turn off the work to correspond to said pattern, while the tool-rest travels automatically in a direction parallel to the pattern-spindle until the surface of the work is finished. When this object has been accomplished the tool R is removed and the cutting-off tool S is inserted, the wheel I is thrown out of gear, and the work is cut off to the required length.

By this combination of mechanism the operation of turning wooden heels for boots and shoes can be accomplished with great rapidity; and by my arrangement the work is turned out smooth, so that it requires but little more labor to finish the same ready to be covered with leather.

What I claim as new, and desire to secure by Letters Patent, is—

1. The spindle D, carrying the pattern E, and a device, H, for securing the work against the end of the pattern, said spindle being connected with the driving-shaft C, substantially in the manner shown and described.

2. The tool-rest O and stop Q, in combination with the spindle D carrying the pattern E, and a device for fastening the work against said pattern, and with a screw-spindle, J, which is geared together with the driving-shaft, and serves to impart an automatic motion to the tool-rest, all constructed and operating substantially in the manner set forth.

This specification signed by me this 10th day of December, 1872.

RICHARD HÜBLER.

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.