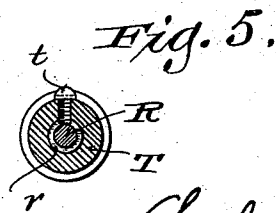
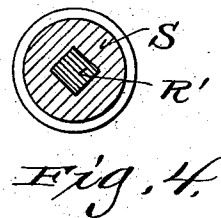
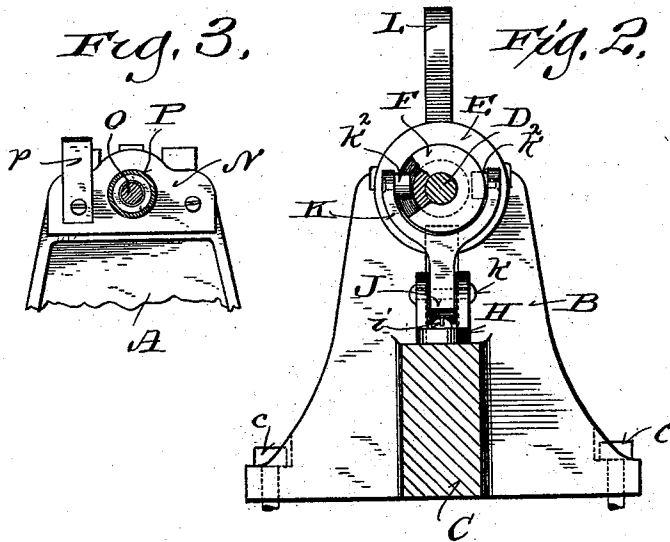
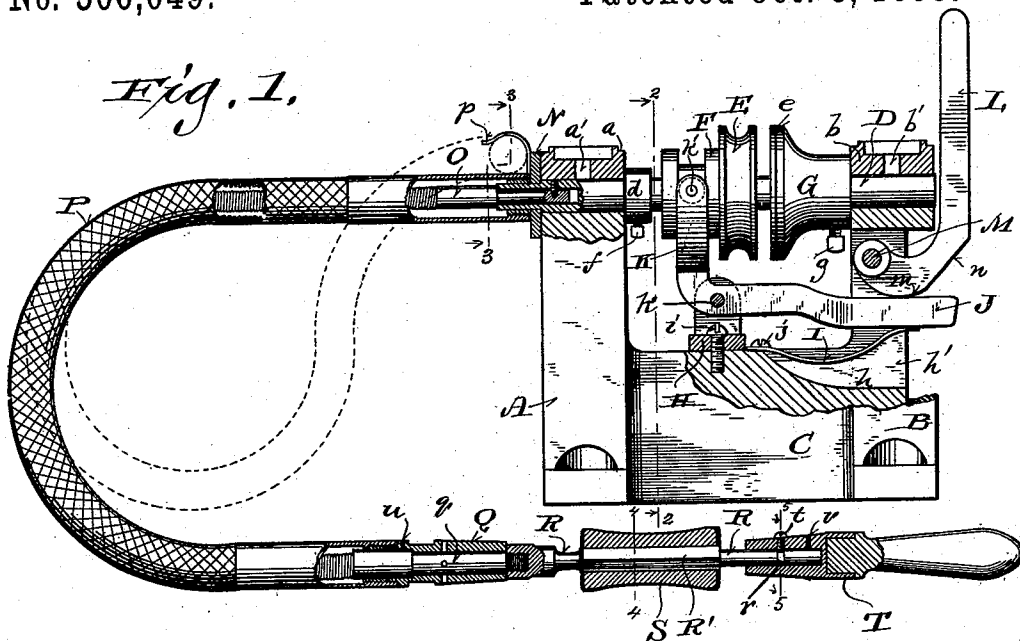


(No Model.)

C. H. KREBS.
BOOT OR SHOE SMOOTHING DEVICE.

No. 506,049.

Patented Oct. 3, 1893.



Witnesses.
Geo. W. Louny.
J. W. Louny.

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UNITED STATES PATENT OFFICE.

CHARLES H. KREBS, OF MILWAUKEE, WISCONSIN.

BOOT OR SHOE SMOOTHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 506,049, dated October 3, 1893.

Application filed July 3, 1893. Serial No. 479,437. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. KREBS, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Boot or Shoe Smoothing Devices; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to devices for smoothing boots and shoes while the same are being treed, and consists in certain peculiarities of construction, and combination of parts, as will be fully set forth hereinafter and subsequently claimed,

In the drawings, Figure 1 is a side elevation of my improved device, partly broken away, or in section, to better illustrate details of construction. Fig. 2 is a transverse vertical section on the line 2—2 of Fig. 1. Fig. 3 is a like section on the line 3—3 of the same figure. Figs. 4 and 5 are detail sections on the lines 4—4, and 5—5, respectively, of Fig. 1, and drawn to an enlarged scale.

In the operation of treeing boots and shoes, the same are stretched upon an expansible last, and while in this condition the leather is smoothed, usually by hand tools of wood, ivory, and other materials. My improved device is designed to accomplish this result, by power, and is used as an adjunct to the treeing machine referred to.

A B represent the standards of my machine, and C the connecting web, forming together the frame of the device, which is intended to be secured, at the proper height, to any suitable bench or support, as by screws or bolts *c c*.

D is a shaft, which is journaled in suitable bearings in the standards A B, provided with caps *a, b* having lubricating channels *a', b'* formed therein. The shaft D is provided with a friction-clutch, as shown in Fig. 1, E being the pulley and F the grooved wheel fast with said pulley, but both loose on said shaft.

G is the clutch disk, which is made fast to the shaft by set-screw *g*, and which bears upon its face a gasket or disk *e* of leather, rubber or analogous yielding material. Adjacent to the standard A the shaft is fitted with a collar *d*, made fast thereto by set-screw *f*.

The web C is hollowed out, as shown at *h*,

this opening coinciding with a vertical opening *h'* in the standard B.

H is a yoke or fork secured by screw *i* to the web C, just back of the opening *h*, and I is a curved spring located over said opening and secured to the web by a screw *j*.

J is a bent or offset lever, pivoted at *k* between the arms of the yoke or fork H and projecting through the opening *h'* in standard B, above spring I, the inner end of said lever J terminating in a spanner K having pins *k' k'* carrying rollers *k³ k²* engaging with the groove in wheel F.

L is an eccentric lever, pivoted at M in the opening *h'* in the standard B, said lever having an eccentric head *m* and adjacent thereto a flattened surface, *n*.

N is a plate secured to the upper end of standard A, and provided with a central opening through which shaft D projects, this end of the said shaft being hollow for engagement therewith of the flexible shaft O, of ordinary construction, said shaft having the usual protective tubular covering P. A spring clip or clasp *p* is also secured to this plate N, to hold the smoothing tool hereinafter described, and keep it and the flexible shaft out of the way, when not in use, as shown by the dotted lines in Fig. 1.

Q is a hollow handle inclosing a rod *q* which latter is connected to the adjacent end of the flexible shaft O, and to the other end of this rod *q* is screwed one end of the rod R which has a squared portion R' to receive the correspondingly shaped bore of the smoothing tool S, this construction avoiding the necessity of the use of set screws or keys, and preventing any slipping of said tool upon its shaft. The other end of this rod R is provided with a circumferential groove *r*, and is slipped into a socket of the other handle, T, and secured by a screw *t*, so that when said handle is firmly held the rod R may freely revolve therein.

The operation of my device will be readily understood from the foregoing description of its construction, in connection with the accompanying drawings. In the position shown in Fig. 1, the operative parts of the device are at rest, so that were there a belt on the pulley E connected with the source of power, said pulley and wheel F would merely rotate

on the shaft D. In order to operate the machine, it is only necessary to depress lever L, whose eccentric head *m* will in turn depress lever J and, through the operation of the spanner K, force the pulley E into operative frictional contact with the clutch-disk G and thereby revolve the flexible shaft O, rigid shaft R and smoothing tool S. It will be understood that there is a boot or shoe on the expansible last of the adjacent treeing machine (not shown), and hence, to smooth the same, the handles, Q T, are grasped by the operator, and thereby the interposed tool S is carried to the exact point desired, and the leather smoothed by the revolution of the tool, which motion can be instantly stopped by again bringing the lever L into the position shown in Fig. 1. To facilitate lubrication, oil-holes *u v*, are formed through the handles Q T, as shown. The smoothing tool S may be of any suitable material, and is readily slipped to place before the rod R is inserted in the socket of the outer handle.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a boot and shoe smoothing device, the combination with a suitable frame and a revoluble shaft journaled therein, of a lever-con-

trolled friction clutch on said shaft, a flexible shaft secured to an end of said revoluble shaft, a rigid shaft secured to the other end of said flexible shaft, loose handles on said last named rigid shaft, and a smoothing tool fast on said rigid shaft, intermediate of the said handles, substantially as set forth.

2. In a boot and shoe smoothing device, the combination with a suitable frame, and a revoluble shaft journaled therein, of a friction clutch on said shaft, a lever pivoted on said frame, and having a spanner in engagement with said clutch, an eccentric lever also pivoted on said frame and in engagement with said first named lever, a flexible shaft secured to one end of said revoluble shaft, a rigid shaft secured to the other end of said flexible shaft, a pair of loose handles on said last named rigid shaft, and a smoothing tool fast on said rigid shaft, intermediate of the said handles, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHARLES H. KREBS.

Witnesses:

H. G. UNDERWOOD,
WINIFRED L. DAVIS.