





# UNITED STATES PATENT OFFICE.

JOHANN KRATOFIL AND SAMUEL P. LEVY, OF CHICAGO, ILLINOIS.

## SHOE-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 640,920, dated January 9, 1900.

Application filed April 24, 1899. Serial No. 714,341. (No model.)

*To all whom it may concern:*

Be it known that we, JOHANN KRATOFIL and SAMUEL P. LEVY, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Shoe-Cleaning Machine, of which the following is a specification.

This invention relates to the art of brushing and scrubbing, and more particularly to devices known as "foot-cleaners;" and the object of the same is to produce certain improvements in shoe-cleaning machines.

To this end the invention consists in an article of furniture adapted for household and office use and wherein the foot can be placed, and by turning a suitable crank various brushes remove the dirt from the shoe and, if blacking has been applied thereto, produce a polish thereon.

The following specification describes our preferred manner of carrying out this idea, as best illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of the machine complete, partly broken away to show its interior structure. Fig. 2 is a plan view.

Mounted on legs or supports 1 1 is a casing comprising sides 2, a headboard 3, which preferably has a mirror, hooks 4 for the hat, &c., an umbrella-rack 5, and such other details as go to make up part of an article of furniture, although the same form no part of our invention. 6 designates the bottom of this casing, and 7 its front end, and through the latter, over the former, slides a drawer 8, having a handle 9.

Within the casing are mounted parallel boards 10, slotted to form guides, hereinafter described, and transversely across the casing, above the drawer, are separated foot-rests 11, on which the shoe may be rested between said boards and above the drawer, it being understood that the top of the casing is open. The drawer is obviously for the purpose of receiving such mud and other dirt as may be brushed off of the shoe, and from time to time it can be removed and emptied, as will be clear.

Rising from one of the sides 2 is a support 20, carrying a drive-wheel 21, having a crank-handle 22, this wheel and its handle standing just forward of the headboard and in conven-

ient position to be reached by an operator whose foot rests upon the rests 11.

23 is a driven shaft having a pulley 24, connected by belt 25 with the drive-wheel 21, and on this shaft is mounted a spool 26, carrying a toe-brush 27, which is obviously rotated by turning the drive-wheel.

30 are the side brushes, moving in guides within said boards 10 and connected by pitman-rods 31 with crank-pins 32 in the heads of the spool 26 or in crank-wheels 33, carried by the ends of the shaft 23. By preference these crank-pins 32 are set opposite each other, so that the brushes 30 will have an alternate reciprocating movement. These brushes obviously cleanse the sides of the shoe which rests upon the rests 11.

41 designates the heel-brush, mounted on a spool 41, whose shaft 42 is journaled in the boards 10 and carries a sprocket-wheel 43, connected by crossed belt 44 with one wheel 45 of a double pulley mounted on a counter-shaft 46 and whose other pulley is connected by a belt 47 with a second pulley 48, mounted on the driven shaft 23. Thus the rotation of the latter turns the counter-shaft, and the counter-shaft causes the rotation of the heel-brush to remove the dirt from the heel of the shoe while upon the rests 11.

Especial attention is called to the fact that the driving-wheel 21 is intended to be rotated in the direction indicated by the arrow, which will turn the toe-brush 27 in a similar direction and which by reason of the crossing of the belt 44 will turn the heel-brush 41 in the opposite direction, and as the inner faces of both the toe and heel brushes move downward while the side brushes reciprocate alternately there will be no tendency to lift the foot off the rests nor to move it from a proper position thereon.

The exact proportions, details, construction, and materials of parts are not essential, and considerable change can be made therein without departing from the spirit of our invention. It will be seen that the user of this machine passes his foot through the open top of the casing and rests it upon the rests 11, and thereafter a rotary movement of the drive-wheel 21 causes the toe-brush 27 to clean the toe of the shoe, the side brushes 30



to clean the sides thereof, and the heel-brush  
40 to clean the heel, or if he has just applied  
blackening to these parts of his shoe the latter  
will be polished. All dirt, mud, &c., removed  
5 from the shoe by contact with the rests and  
by the movements of the brushes fall into the  
drawer 8, which is withdrawn and is dumped  
at intervals. This point we consider quite  
important, especially when used in connec-  
10 tion with brushes revolving in such direction  
as to carry all dirt from the shoe downward  
into the drawer.

We do not limit ourselves to the exact con-  
struction of brushes shown, as they will be  
15 shaped and built to conform with the neces-  
sary requirements; nor is the headboard,  
with its adjuncts, at all essential, although it  
is preferably used in this connection.

What is claimed as new is—

20 1. In a shoe-cleaning machine, the combi-  
nation with a casing, of oppositely-sliding side  
brushes therein, a driven shaft having cranks  
connected with said side brushes, and a toe-  
brush mounted on said shaft; of a heel-brush,  
25 a counter-shaft, belts connecting the counter-  
shaft with the heel-brush and with the driven  
shaft, and a power-shaft for rotating the  
driven shaft, as and for the purpose set forth.

30 2. In a shoe-cleaning machine, the combi-  
nation with a casing having transverse sepa-  
rated foot-rests, and a removable drawer be-  
neath the latter; of rotary toe and heel brushes  
turning inward toward each other, and two

oppositely-sliding brushes for the sides of the  
shoe moving along guides in said casing, as 35  
and for the purpose set forth.

3. In a shoe-cleaning machine, the combi-  
nation with a casing having side boards pro-  
vided with guides, side brushes moving there-  
in, and a driven shaft having a rotary toe- 40  
brush and crank-wheels connected by pit-  
man-rods with said side brushes; of an idle  
shaft below the driven shaft and belted there-  
to, a rotary heel-brush belted to the idle shaft,  
and a driving-shaft belted to a second wheel 45  
on the driven shaft, both rotary brushes turn-  
ing inward toward each other, as and for the  
purpose set forth.

4. In a shoe-cleaning machine, the combi-  
nation with a casing having slotted side 50  
boards and transverse and separated foot-  
rests, a drawer beneath the latter, a head-  
board rising from the casing, and a support;  
of a driving-shaft journaled in said support,  
side brushes moving in the slots of said 55  
boards, a driven shaft having crank-wheels  
connected by pitman-rods with said brushes,  
connections between this shaft and the driv-  
ing-shaft, a rotary heel-brush, and connec-  
tions between this brush and the driven shaft, 60  
all as and for the purpose set forth.

JOHANN KRATOFIL.  
SAMUEL P. LEVY.

Witnesses:

EDWIN GEO. BROTHERTON,  
NELLIE HOOLIHAN.