

(No Model.)

G. JULIAN.
SOLE ROUNDING MACHINE.

No. 555,009.

Patented Feb. 18, 1896.

FIG. 1.

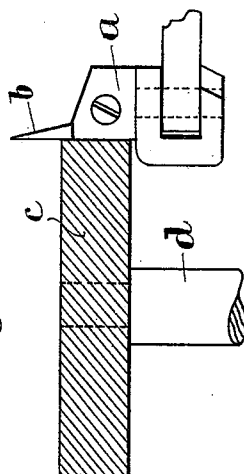
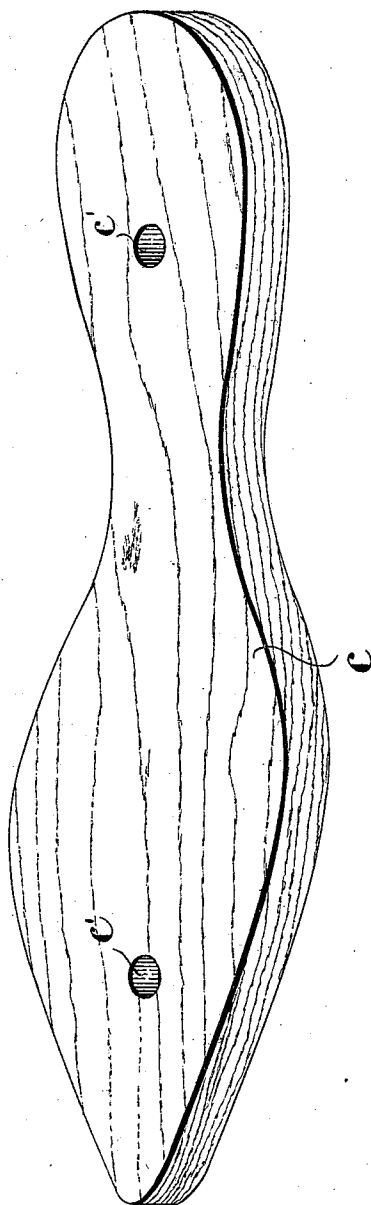


FIG. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

GIDEON JULIAN, OF BOSTON, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
CHARLES F. BROWN, TRUSTEE, OF READING, MASSACHUSETTS.

SOLE-ROUNDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 555,009, dated February 18, 1896.

Application filed January 25, 1895. Serial No. 536,180. (No model.)

To all whom it may concern:

Be it known that I, GIDEON JULIAN, of Boston, in the county of Suffolk and State of Massachusetts, having invented certain new and
5 useful Improvements in Sole-Rounding Machines, of which the following is a specification.

This invention relates to sole-rounding machines in which the trimming-knife is mounted on a carrier which is caused to travel along a sole-shaped bearing edge or track which is the margin of a part known as a "pattern,"
10 formed to support the sole-blank and constituting a part of a mechanical combination, said edge or track guiding the carrier and knife and therefore determining the shape of the sole. It has been found, in the operation of this class of machines, to be impractical to successfully lubricate the bearing
15 track or edge of the pattern part, as the construction is usually such that oil or other effective lubricant used would be communicated to the sole-blank. Attempts are sometimes made to use soap as a lubricant, but
20 not with satisfactory results.

Heretofore that portion of the mechanism called the "pattern" part in a machine of this class has always been made of metal, a metallic pattern part having always been considered essential, owing to the heavy pressure
30 which is necessarily exerted by the carrier against the edge or bearing of the pattern part. It has been found, however, that metal pattern parts besides being expensive to construct, are objectionable for the following reasons, namely: First, the contact of two unlubricated metallic bodies—that is, the carrier and the pattern part—is attended by so
35 much friction that the pattern part is worn away to such an extent that it is rendered useless in a comparatively brief period on account of the reduction of its size and the consequent change of form and proportion imparted to the sole; secondly, owing to the difference
40 in shape of the pattern parts—such, for instance, as a square toe and a needle toe—and the uniform direction of pull in the propulsive mechanism, there occur instances, usually in turning the toe and sometimes on the ball
45 and shank, when the pull approaches a direction nearly at right angles to the direction

of the knife-track, and if under these conditions a metal pattern be used, the friction between the carrier and track is so excessive as to cause a binding and abrasion between the carrier and track, resulting in a
55 great strain upon the mechanism, being often sufficient by reason of cramping to stop the machine or to cause a breakage, and requiring the application of greatly-increased power to operate the machine in these portions of
60 the cut; thirdly, the impossibility in the operation of a sole-cutting mechanism having a metallic track or bearing for the carrier, of cutting a very considerable number of
65 soles of exactly the same form without the renewal of parts. I have discovered that by employing wood as the material of which said bearing edge or track is constructed I
70 overcome the above-mentioned objections and produce a bearing edge or track which develops comparatively little or no friction by contact with the knife-carrier, is not worn to any appreciable extent by such contact,
75 even after very long continued use, does not require lubrication and is less expensive than a metal pattern part or track.

My invention therefore consists in the combination, with a knife-carrier, of a combined sole-support and knife-guide having a surface
80 or seat adapted to support the sole, and a wooden bearing or edge adjoining said seat and constituting a track or guide for the carrier, said track reducing the wear of the rubbing parts to the minimum and preventing
85 by absence of abrasion any alteration in the form of the pattern piece or track as well as effecting an economy in power required for operation, introducing thereby a greatly-increased efficiency and economy in the operation
90 of sole-rounding mechanisms.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of a sole-support and knife-guide, made of wood; and Fig. 2 represents
95 a transverse section of the same and a side view of a knife-carrier in contact therewith.

In the drawings, *a* represents the knife-carrier of a sole-rounding machine, and *b* the trimming-knife affixed thereto, the carrier being made of metal, as usual. Said carrier
100 and knife may be of any suitable construction

tion and the carrier may be impelled and pressed against the bearing edge or track, hereinafter described, by any suitable mechanism—such, for example, as that shown in 5 Letters Patent of the United States No. 528,128, dated October 23, 1894.

The sole is supported by a seat, which is the upper surface of a block or piece *c* of any suitable kind of wood, preferably one of the 10 harder woods, such as maple, the margin of said block being sole-shaped and constituting a wooden track or guide against which the knife-carrier is pressed.

The block *c* is made considerably thicker 15 than the metal pattern parts ordinarily employed in sole-rounding machines and is provided with orifices *c' c'* to receive studs *d* provided for the engagement of the block in the sole-rounding machine. The upper surface 20 of the block *c* constitutes the seat upon which the sole bears, while the margin of the block constitutes a comparatively-frictionless edge or track presented to the knife-carrier, so that the wear resulting from the contact between 25 the carrier and its track is very much less than would be the case if a metal pattern part were employed, and the production of a large number of soles of exactly the same shape is permitted without the disadvantage and expense of renewal of parts, the other disadvantages attending the use of metal pattern 30

parts in sole-rounding machines being wholly obviated.

An additional advantage of considerable importance is that the comparative absence 35 of friction, due to the employment of the said wooden bearing edge or track, enables the machine, when structurally capable of increased speed, to be operated much more rapidly and with less expenditure of power than when a 40 metal bearing edge or track is employed.

The term "carrier," as used herein, is intended to apply to the part which bears against the bearing edge or track, whether such part be integral with the knife or made in a separate piece and attached thereto. 45

I claim—

In a sole-rounding machine, the combination with a knife-carrier, a sole-supporting seat or surface, and a wooden bearing edge 50 joining said surface, said wooden bearing edge constituting a knife-carrier track or guide, substantially as specified.

In testimony whereof I have signed my name to this specification, in the presence of 55 two subscribing witnesses, this 23d day of January, A. D. 1895.

GIDEON JULIAN.

Witnesses:

C. F. BROWN,

A. D. HARRISON.