No. 785,546. PATENTED MAR. 21, 1905.

W. H. GERRITY.

LEATHER POLISHING ROLL.

APPLICATION FILED MAY 3, 1904.

Fig. 1.

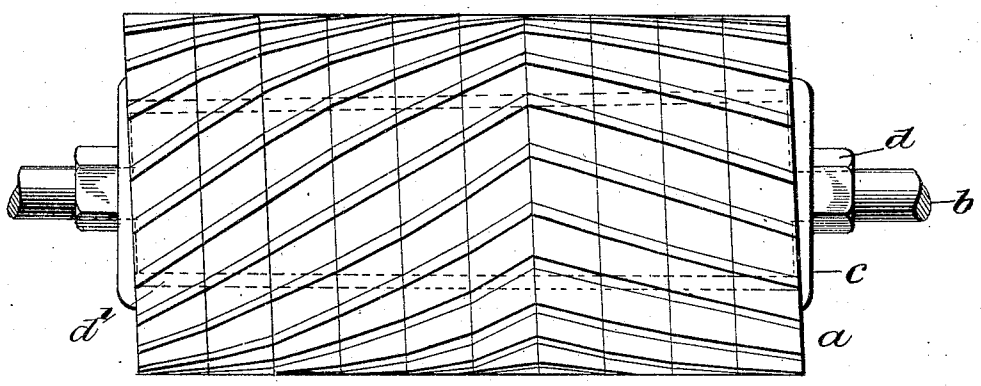
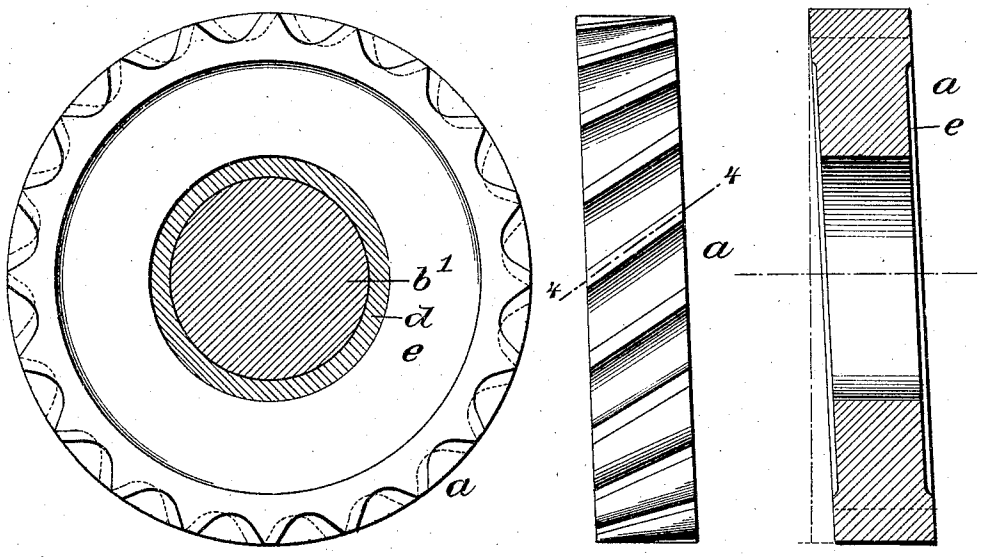



Fig. 2. Fig. 3. Fig. 4.




WITNESSES:

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No. 785,546. Patented March 21, 1905.

# UNITED STATES PATENT OFFICE.

WILLIAM H. GERRITY, OF NEW YORK, N. Y.

## LEATHER-POLISHING ROLL.

SPECIFICATION forming part of Letters Patent No. 785,546, dated March 21, 1905.

Application filed May 3, 1904. Serial No. 206,143.

*To all whom it may concern:*

Be it known that I, WILLIAM H. GERRITY, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Leather-Polishing Roll, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in rolls of glass or other hard material for polishing leather and the like, particularly to such rolls as are disclosed in my copending application for leather-polishing machines, filed August 15, 1903, Serial No. 169,610, of which this application is a continuation.

The object of the invention is to improve the construction and operation of the polishing-roll, so that it may be cheaply produced and be durable and efficient in operation.

According to the construction here shown I form the roll of a number of disks secured side by side upon an axial shaft or other means, these disks being provided with spiral ribs, said disks being molded with a sunken portion inward from the peripheral portion, thus leaving but a relatively narrow belt to be ground away to fit the disks together, the disks being formed on a slight cant or bevel, so that their meeting surfaces will lie diagonally of the axis of the roller, and thus when the roller is in operation its action covers any marks left by the meeting surfaces of the disks, which marks might otherwise appear in case the disks were placed on the shaft in true transverse plane.

The invention resides in certain novel features of construction and organization, which will be fully set forth hereinafter.

Reference is had to the accompanying drawings, showing an example of one form of the invention, in which drawings like characters of reference indicate like parts throughout the several views, and in which—

Figure 1 is a front view of the roller. Fig. 2 is a side view of one of the disks. Fig. 3 is an edge view thereof, and Fig. 4 is a cross-section thereof on the line 4 4 of Fig. 3.

The disks *a* are mounted on a central shaft *b*, and said disks are molded on a slight cant or slant, so that when placed on the shaft *b* their meeting edges will range diagonally of the shaft as contradistinguished to at right angles thereof. The disks may be secured on the shaft by any desired means—for example, by means of the taper washers *c* and nuts *d*. The disks are arranged in two groups, and each disk is formed with a number of spirally-disposed peripheral ribs, the ribs of the disks of one group matching to form continual spiral ribs on the roller-surface and the ribs of the disks of the other group matching to form similar spiral ribs, but the ribs of one group being disposed opposite to the ribs of the other, as Fig. 1 shows. Also to attain the best results in polishing the skins there should be a difference in the inclination or pitch of these spiral ribs. This is probably best shown in Fig. 1, in which the left-hand group of ribs run on essentially an angle of thirty-four and one-half degrees to the axis of the roller, and the ribs of the right-hand group run on essentially an angle of sixteen degrees to the axis of the roller. The disks *a* are formed on each side with sunken surfaces *e*, which occupy the central portions of the disks and extend outward in close proximity to the peripheries. When the disks thus formed are engaged together, the peripheral portions only are in contact, the recessed inner portions being out of contact. This allows the side faces of the disks to be readily ground in order to fit the disks together, and it saves the labor and expense of grinding the entire face of the disk, as would be necessary in case said face were flat or flush. The disks may be mounted on the shaft *b* in any manner desired; but preferably the shaft is formed with an enlarged portion *b'* (see Fig. 2 and dotted lines, Fig. 1) at the points encircled by the disks, and on this enlarged portion the disks are arranged with an intervening sleeve of fiber or other yielding substance *d'*, which allows a tight fit to be made without danger of fracturing the disks.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the terms of my claims.

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

1. A leather-working roll comprising a cen-

tral shaft, a yielding sleeve thereon, and a plurality of glass disks encircling the sleeve and shaft and means for fastening the disks in place.

2. A leather-working roll comprising a central working shaft, and glass disks mounted thereon.

3. A leather-working roll comprising a central shaft, and glass disks mounted thereon side by side, and having lugs or teeth on their peripheries to produce ribs on the periphery of the roll.

4. A leather-working roll comprising a central shaft, and glass disks mounted thereon, said disks lying side by side and having lugs or teeth on their peripheries, the teeth extending diagonally and matching to produce spiral ribs on the periphery of the roll.

5. A polishing-roller comprising a plurality of disks fastened together side by side, said disks being disposed diagonally of the axis of the roller.

6. A polishing-roller comprising a plurality of disks fastened together side by side, said disks being disposed diagonally of the axis of the roller, and the disks having spirally-disposed peripheral ribs matching to form spiral ribs on the roller.

7. The combination of a shaft, a number of disks mounted on the shaft side by side and extending diagonally of the shaft, and means for holding the disks in place.

8. A polishing-roller having a central shaft, a number of friable disks mounted on the shaft side by side said disks having sunken portions in their sides causing the disks to lie out of contact with each other at said sunken portions and the sides of the disks being ground at points outward from the sunken portions, and means for exerting pressure on the disks longitudinally of the shaft for clamping the ground portions of the disks together.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM H. GERRITY.

Witnesses:
ISAAC B. OWENS,
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