G. DANFORTH & W. SMITH.

Wheel for Dressing Boot and Shoe Soles.

No. 197,966. **Patented Dec. 11, 1877**

Fig. 1.

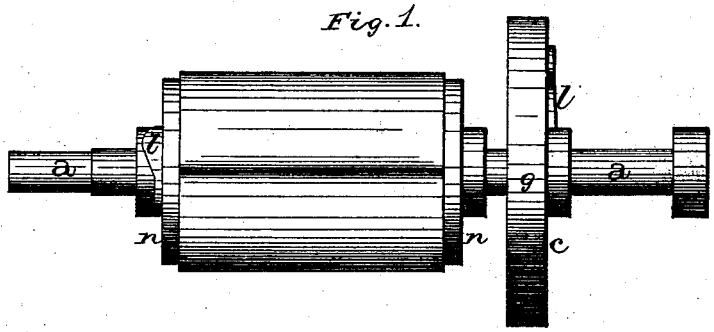


Fig. 2.

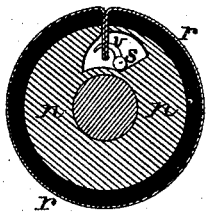
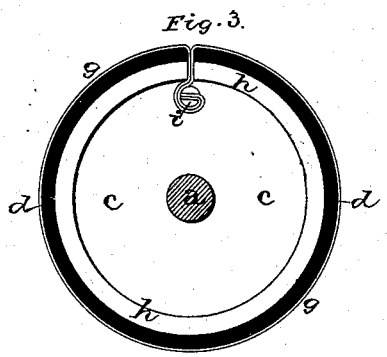


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE DANFORTH AND WILLIAM SMITH, OF COCHITUATE, MASS.

IMPROVEMENT IN WHEELS FOR DRESSING BOOT AND SHOE SOLES.

Specification forming part of Letters Patent No. **197,966,** dated December 11, 1877; application filed November 9, 1877.

To all whom it may concern:

Be it known that we, GEO. DANFORTH and WM. SMITH, of Cochituate, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Wheels for Dressing the Soles of Boots and Shoes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in wheels for dressing the soles of boots and shoes; and it consists in the arrangement and combination of parts that will be more fully described hereinafter, whereby the sand-paper or emery-cloth is secured and tightened upon the wheel.

Figure 1 is a side elevation of our invention. Figs. 2 and 3 are detail views of the same.

a represents the shaft, which is to be driven by any desired mechanical appliances. Securely fastened to this shaft is a large narrow wheel, *c*, which has its periphery covered with pure soft gum, *d*, of any suitable thickness. The ends of this gum do not quite meet, so that the sheet of sand-paper or emery-cloth *g*, which is passed around over the outside of the gum, may have its two ends passed down between them, and through the slot in the flange *h*, which is formed on the inside of the wheel.

Projecting through the body of the wheel, just below the slot in the flange, is the split shaft *i*, which has the lever *l* attached to its outer end. The ends of the paper or cloth are passed through this split shaft, and then the end of the lever is pressed downward, so as to cause the shaft to partially revolve, and thus wrap the cloth or paper around the shaft in such a manner as to tighten the cloth or paper upon the periphery of the wheel. This wheel is used for dressing the shanks of boots and shoes.

Upon the same shaft is placed a second wheel, *n*, not so wide, but much longer than the other, and which is used for dressing the soles of boots and shoes. This wheel *n* is also covered with a thick sheet of pure soft gum, the ends of which do not come quite together, so as to allow the ends of the sand-paper or emery-cloth *r* to be passed down between them into the recess formed in the wheel. In this recess is placed a partially-revolving shaft, *s*, which is armed with a number of curved claws, *v*, for catching in the ends of the cloth or paper, for not only preventing them from coming out, but also for tightening the cloth or paper upon the wheel. To the outer end of this shaft is fastened a small operating-lever, *t*, by means of which the shaft is turned.

By means of the curved claws, when the shaft is turned, the cloth or paper is caught, and not only securely held, but should it at any time become loose it is only necessary to press the outer end of the operating-lever downward, when the downward pressure of the curved teeth will at once tighten the cloth or paper securely upon the wheel.

By thus combining both wheels together upon a single shaft, the entire bottom of a boot or shoe can be finished by the same operator, and without the trouble of moving them from one machine to the other.

It will be noticed that, owing to the thick sheet of rubber around the two wheels, the paper or emery-cloth is as fully protected where it passes down into the wheel as at any other point. Were it not for this elastic rubber at this and all other points, which allows the paper or cloth to give under the pressure upon it, the cloth or paper would be worn very rapidly away, and very soon have to be replaced by other. This elasticity at the point where the paper or cloth passes down into the wheel is especially needed and useful.

Having thus described our invention, we claim—

The combination of the revolving shaft *a*, wheel *n*, partially-revolving shaft *s*, located in the wheel, and provided with the hooks *v*, for catching in the ends of the cloth or paper, substantially as shown and described.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 30th day of October, A. D. 1877.

GEORGE DANFORTH. [L. S.]
WILLIAM SMITH. [L. S.]

Witnesses:
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