

(No Model.)

J. G. BUZZELL.

ABRADING DISK.

No. 317,622.

Patented May 12, 1885.

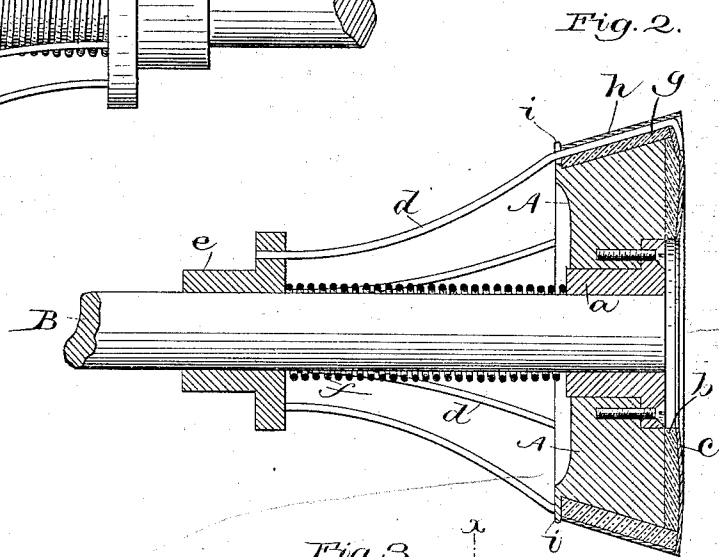
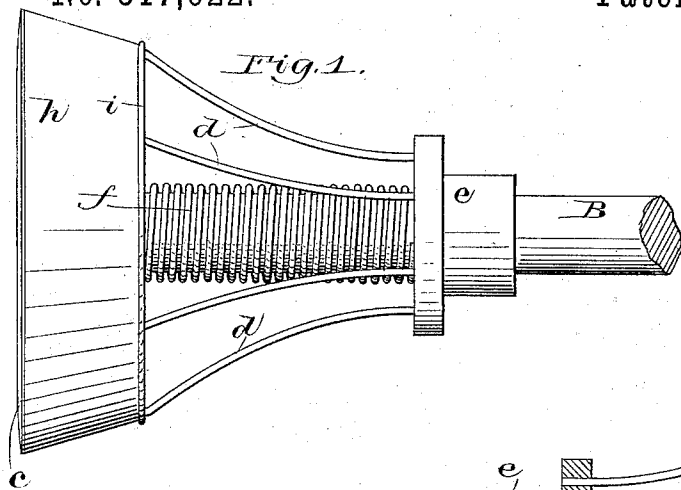


Fig. 4.

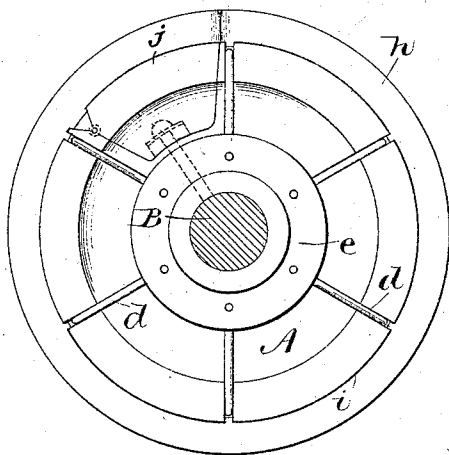
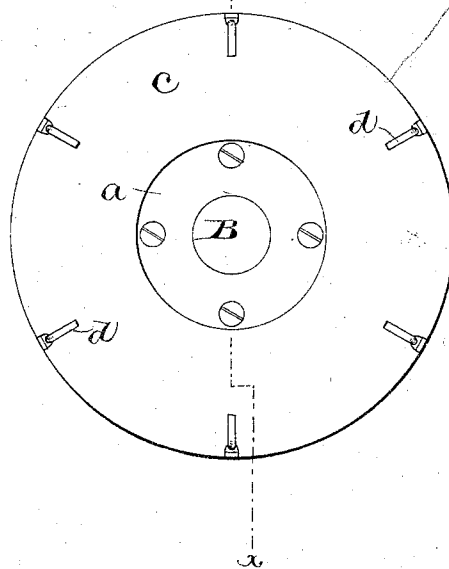


Fig. 3.



Witnesses

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ABRADING-DISK.

SPECIFICATION forming part of Letters Patent No. 317,622, dated May 12, 1885.

Application filed October 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. BUZZELL, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Abrading-Disks, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

This invention has for its object certain improvements in disks which are more especially intended and adapted for evening and smoothing the "breast" of boot and shoe heels, and buffing or removing the grain from the "shank," and it will, in connection with the accompanying drawings, be hereinafter more particularly and fully described and claimed.

In said drawings, Figure 1 is a side elevation of my improved disk, shown as mounted upon an arbor. Fig. 2 is a longitudinal section taken as on line *x x*, Fig. 3. Fig. 3 is a front elevation taken as at the left of Fig. 1 and right of Fig. 2. Fig. 4 is a rear elevation taken as at the right of Fig. 1 and left of Fig. 2.

In these views, A represents the body of my disk, formed preferably of wood and secured on arbor B by means of the flanged bushing *a*, in a well-known manner, as shown in Figs. 2, 3. Upon the outer face of this disk I secure the felt cushion *b*, in a manner common and well known, and upon this cushioning-disk I mount the disk *c*, of sand-paper or emery-cloth, and I detachably secure such abrading-disk upon the cushion by means of the hooked elastic arms or wires *d*, which at their converging ends are rigidly secured in the flange of sliding disk *e*, mounted on arbor B, and forced from disk A by the expansive action of coiled spring *f*, mounted on said arbor, the outer or diverging ends of arms *d* being reduced and bent hook-like, as shown in Figs. 2, 3, so as to compress at their point of contact therewith by the action of spring *f* the sand-paper into the cushion, so that the operative face of disk *c* will be outside of said hooks, thus preventing said hooks from coming in contact with the surface which is being abraded. Said cushion *b* and abrading-disks *c* may extend entirely across the face of body A, or a central portion may be cut out, as shown, both being equally well-known methods.

I form the peripheral face of my disk oblique to its axis, as shown in Figs. 1, 2, and with a guard or support, *i*, at the inner or converging part of said oblique face, and I cover said face with a cushioning-band, *g*, on which I mount the abrading-band *h*, said band *h* being in a well-known manner cut with the requisite edge curvature to fit smoothly upon the peripheral face of cushion *g*, it being held in position by its edge bearing against said guard *i*, which extends outward from the peripheral face of cushion *g* just sufficiently to secure the sand-paper in place. If desired, sand-paper *h* may be stretched and secured in position on the disk by means of a hinged binding-section, *j*, (shown in Fig. 4,) and which is a common and well-known device for such purpose. The arms *d* are by means of their converging elastic pressure embedded in peripheral cushion *g*, so as not to interfere with the operation of the abrading-covering *h* when in use. By the use of said abrading-band *h* the concave breast of the heel may be scoured smooth and even without bringing disk *c* in contact with the sole or bottom, and then while the shoe is still in the hands of the operator the shank may, if desired, be scoured and buffed by the action of face or disk *c*. When the sand-paper disk *c* becomes worn by use and it is necessary to replace the same, the operator has only to slide sleeve *e* toward disk A, so as to loosen the hooks of arms *d* from said disk *c*, when it can be instantly dislodged and replaced by a new one.

I am well aware that it is old, common, and well known to mount a disk of sand-paper upon the cushioned face or plane of a rotary disk, and I am also aware that it is equally well known to mount a band of sand-paper upon the periphery of a rotary disk or roll; hence I claim neither, broadly, or in the abstract, my invention consisting in the method and means of securing the disk of sand-paper in place upon the plane of the cushion, in a disk having a peripheral face oblique to its axis and with a guard to prevent displacement of the band of sand-paper, and in the resulting combinations; hence

I claim as my invention—

1. In combination with an abrading-disk, a series of arms arranged around the periphery

thereof and formed hook-like at their outer ends, to engage the abrading-cover at its edge and secure it in place, and means whereby said arms may be lineally adjusted and re-
5 tracted, to press said abrading-cover against its cushioning-support, substantially as specified.

2. In combination with disk A, the arms *d*, sliding sleeve *e*, and spring *f*, all substantially
10 as specified.

3. An abrading-disk formed with a cushioned peripheral face oblique to its axis, and with a circumferential guard, *i*, adapted to sustain the abrading-band *h* and secure it in

position upon the disk, substantially as specified. 15

4. In an abrading-disk, the combination of a cushioned plane with means for securing the abrading-cover thereon and a cushioned peripheral face oblique to the axis of the disk 20 and provided with a circumferential guard, whereby the abrading-band is secured in position thereon, substantially as specified.

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Witnesses:

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