(No Model.)

C. V. HUNT.

GRINDING OR POLISHING WHEEL.

No. 258,760. Patented May 30, 1882.

FIG. 4.

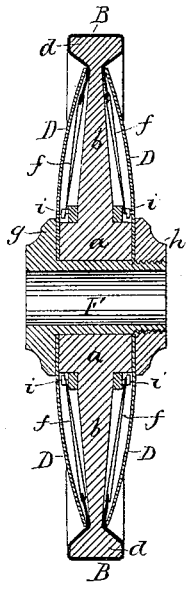


FIG. 5.

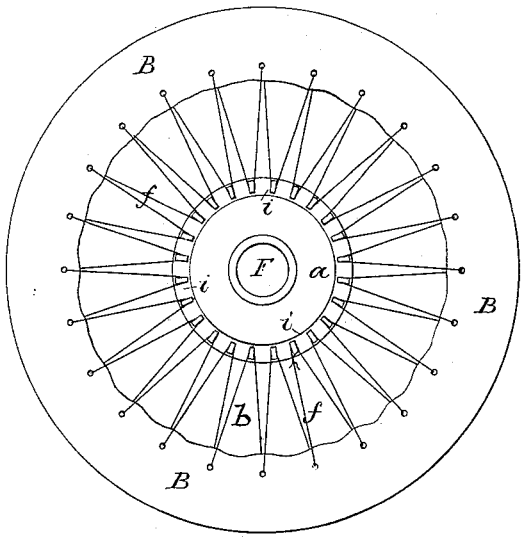


FIG. 1.

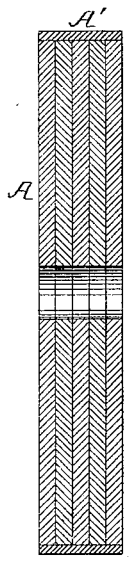


FIG. 2.

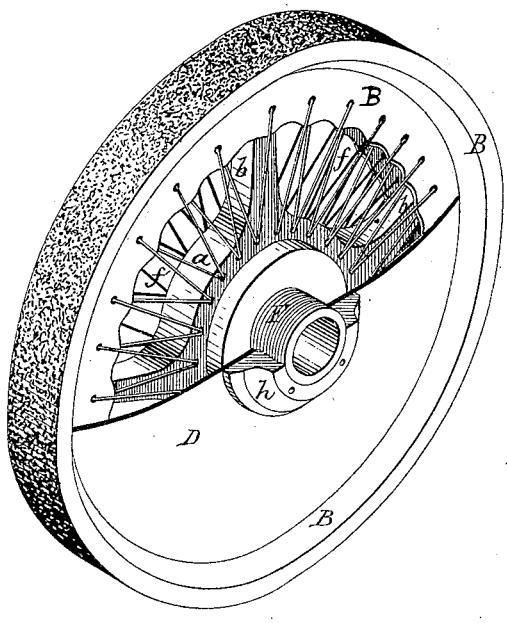
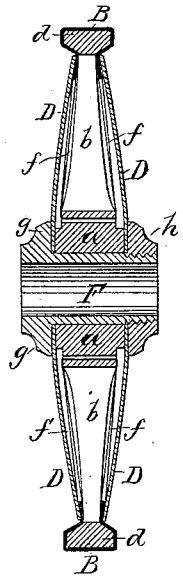


FIG. 3.



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UNITED STATES PATENT OFFICE.

CHARLES V. HUNT, OF PHILADELPHIA, PENNSYLVANIA.

GRINDING OR POLISHING WHEEL.

SPECIFICATION forming part of Letters Patent No. 258,760, dated May 30, 1882.

Application filed March 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES V. HUNT, a subject of the Queen of Great Britain and Ireland, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Grinding or Polishing Wheels, of which the following is a specification.

My invention relates to certain improvements in that class of grinding or polishing wheels in which the emery is secured by glue or cement to the periphery of a wheel or disk, the object of my invention being to produce a more durable wheel than usual, and one which will retain its truth.

In the accompanying drawings, Figure 1 is a sectional view of an ordinary wheel of the class to which my invention relates; Fig. 2, a perspective view, partly in section, of my improved wheel; Fig. 3, a vertical section of the same, and Figs. 4 and 5 views illustrating a modification of the invention.

The usual plan of making grinding or polishing wheels is to first turn in a lathe a wooden disk, A, Fig. 1, and then to secure to the periphery of this disk a strip, A', of leather, the latter being the medium for receiving and retaining the granular grinding or polishing material—usually emery—which is secured to the leather ring by glue or other suitable cement. A wheel of this sort is not durable and will not retain its truth, unequal expansion and contraction rendering the wheel unreliable in both of these respects.

My improved wheel (shown in Figs. 2 and 3) comprises a central metallic hub, *a*, with radial arms *b* and a rim, *d*, the latter in the present instance having a flat periphery. In practice, however, the periphery may be made convex, concave, or of any other shape which the character of the work to be performed may suggest.

To the rim of the wheel is adapted an annular sheet, B, of leather, which is caused to tightly embrace said rim by means of lacings *f f*, adapted to openings in the hub *a* and in the overlapping portions of the strip B.

Annular side plates, D D, are then applied to the wheel, one of these plates being clamped beween the hub of the wheel and a flange, *g*, on a sleeve, F, which forms the bushing for the wheel. The other plate is clamped between the hub of the wheel and a nut, *h*, on the sleeve F, and both plates are made concavo-convex, as shown in Fig. 3, so that their outer edges will bear upon and press inward the overlapping portions of the strip B, thereby forming a water-tight joint.

The wheel thus constructed is strong and durable, and has no tendency to become irregular from use, the concentration of the weight at and near the driving shaft or spindle overcoming any tendency to fracture owing to centrifugal force, and insuring the steady running of the wheel at the high speed necessary for performing its intended work.

In the modification of the invention shown in Figs. 4 and 5 a central disk-wheel, of wood, takes the place of the wheel shown in Figs. 2 and 3, and the lacings pass round hooks on rings *i*, adapted to the hub of the disk-wheel, the construction of the wheel in other respects being the same as that above described. The use of the wooden disk-wheel renders the wheel lighter than that shown in Figs. 2 and 3, and in view of this fact the modified wheel may in some cases be preferred.

The use of the side plates, D D, in this wheel is of importance, as the tight joint between the edges of said wheel and the leather covering B prevents the access of moisture to the wooden disk-wheel. In the modified wheel the bushing F is necessary; but in the wheel shown in Figs. 2 and 3 this bushing may, if desired, be dispensed with, threaded projections being formed on the hub *a*, and the annular plates D being thickened at the center and threaded internally for adaptation to said threaded projections of the hub.

I claim as my invention—

1. The combination of the central wheel, the covering-strip B, and lacings *f*, whereby said covering-strip is drawn over the rim of the said wheel, as set forth.

2. The combination of the central wheel, the covering-strip B, the lacings *f*, and the side plates, D D, as specified.

3. The combination of the central wheel, the covering B, the lacings *f*, the side plates, D, and the bushing F, with flange *g* and nut *h*, as specified.

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

CHARLES V. HUNT.

Witnesses:
HARRY DRURY,
HARRY SMITH.