

(Model.)

E. THAYER.
POLISHING WHEEL.

No. 260,336.

Patented June 27, 1882.

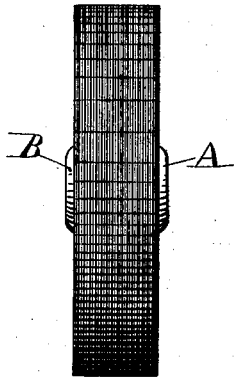


FIG. 1.

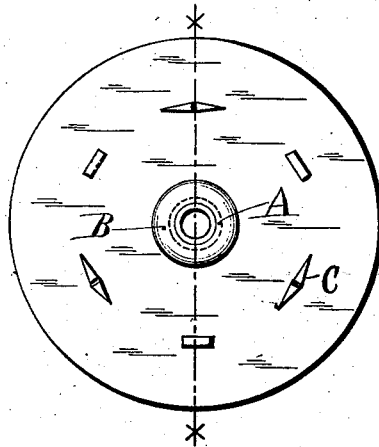


FIG. 2.

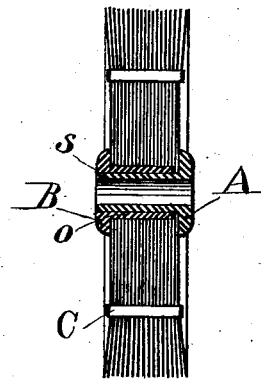


FIG. 3.

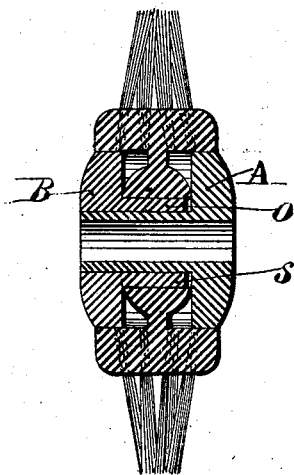


FIG. 4.

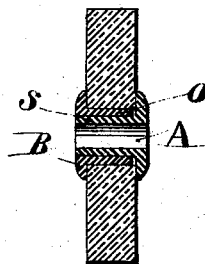


FIG. 5.

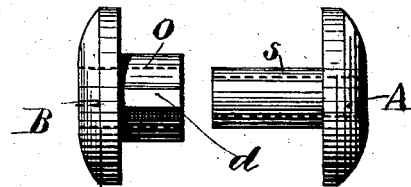


FIG. 6.

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ELLIS THAYER, OF PAWTUCKET, RHODE ISLAND.

POLISHING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 260,336, dated June 27, 1882.

Application filed June 1, 1882. (Model.)

To all whom it may concern:

Be it known that I, ELLIS THAYER, of the town of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Polishing-Wheels; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to polishing-wheels as employed in finishing metallic articles or polishing other hard substances of relatively small size.

The invention consists, mainly, of two disks or clamps applied one to each side of the polishing-wheel, and united by a spindle formed by the union of the shanks (one sliding into the other) with which the clamps are provided, and the novel adaptation of these devices to the polishing-wheel, whereby great strength and durability are imparted to the same. The clamps, with their connecting-spindle, constitute a supplementary hub, which re-enforces the hub of the polishing-wheel around the center, where its strength has been greatly impaired by the coring out made necessary to insert the wire fastening at the butt of the bristles. This device can be applied to buff-wheels and emery-wheels, and would conduce to their strength and durability. The clamps are indented in the wheel and are adapted to fill the space cored out to insert the wire.

In the drawings, Figure 1 represents an edge view or the periphery of a polishing-wheel made of layers of thin cloth, &c. Fig. 2 is a side view, showing the metallic fasteners—head and points alternately—employed to keep the layers in contact; and Fig. 3 is a cross-section of the same, taken through the line *x* *x* of Fig. 2. My improved hub is shown in all of said figures. Fig. 4 represents a felt brush, and Fig. 5 a bristle brush, in section, with my improved hub applied to each, likewise in section; and Fig. 6 represents the two parts that compose the hub, and as it appears before applied to the wheel.

Similar letters of reference indicate corresponding parts.

The hub is composed of two parts, A and B,

and is a hollow cylinder with flanges at each end, similar in appearance to the ordinary spool for sewing-thread when the parts are united. It may be made of wood, metal, composition, or other substance suitable for the purpose. I prefer to make it of wood, because cheaper. A central hole is bored longitudinally through each part. That in the part B is made larger to receive the shank *s* of the part A, which extends through the part B to its outer edge, the part B shooting over the shank *s*, and the shank *o* forms a circumferential band between the rims or flanges of the hub. To prevent rotation of the parts A and B between each other, they may be glued together or fastened by nails or screws. A feather or key, *d*, Fig. 6, is attached to the shank *o* to prevent rotation of the wheel on the hub. The hole in the part A is designed to receive the axle, screw, or frictional mandrel used to drive the wheel.

By the use of my hub with bristle wheels, as represented in Fig. 5, it will be found unnecessary to use wax to prevent the bristles from pushing through at the butts and to strengthen the hollow core in which the bristles are set. The wax so used is poured onto the wood in a heated state, which frequently causes the wood to check or split, thereby impairing its durability. As seen in said Fig. 5, my hub, in conjunction with the frame of bristle wheels, makes a solid continuous core or hub and imparts great strength to the wheel. The layers of cloth, chamois skin, &c., of which some kinds of polishing-wheels are made have heretofore been fastened together by stitching or sewing, which, as the wheel wears down, are frequently cut or become broken through the friction with the article polished.

My invention provides for the use of flexible metallic fasteners, which may be withdrawn and set nearer the hub from time to time, as the wear on the periphery of the wheel requires. These fasteners are adapted as shown in head and point views at C, Fig. 2.

My improved hub is applied by passing the part B through the hole previously made in the center of the wheel, then inserting the part A. The shank *o* will correspond to the thickness of the wheel, and when pushed through the flange hugs the side of the wheel. The

part A is passed through the part B until its flange meets the shank *o* and hugs the wheel on the side opposite B. The flanges of the two parts clamp the wheel, as shown in Figs. 3, 4, and 5.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—
The combination of a polishing-wheel and a supplementary hub for re-enforcing the wheel

around the core, composed of clamps indented in the sides of the wheel and united by a spindle formed of the shanks of the clamps, which slide one into the other, substantially as described and illustrated.

ELLIS THAYER.

Witnesses:

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