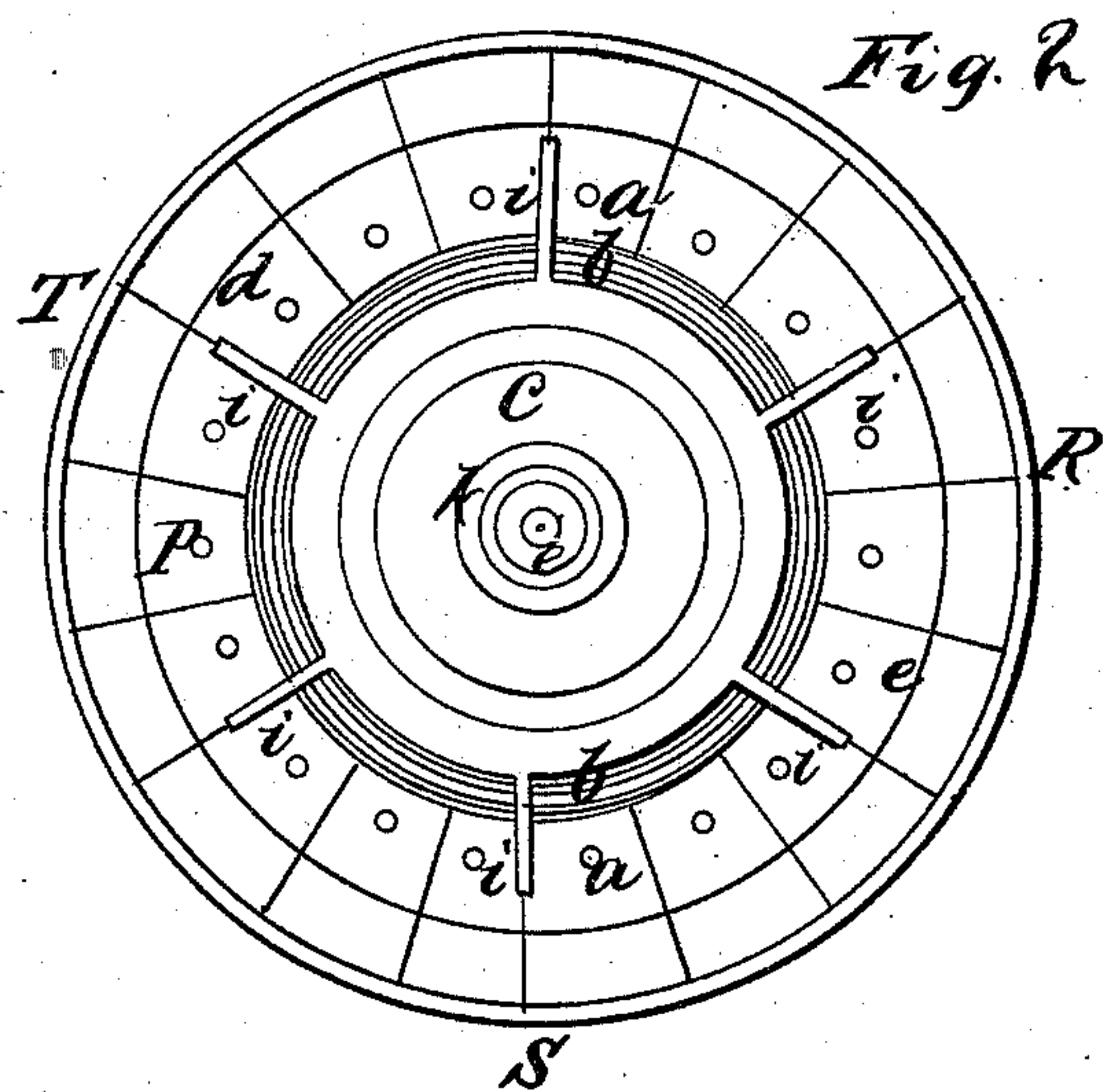
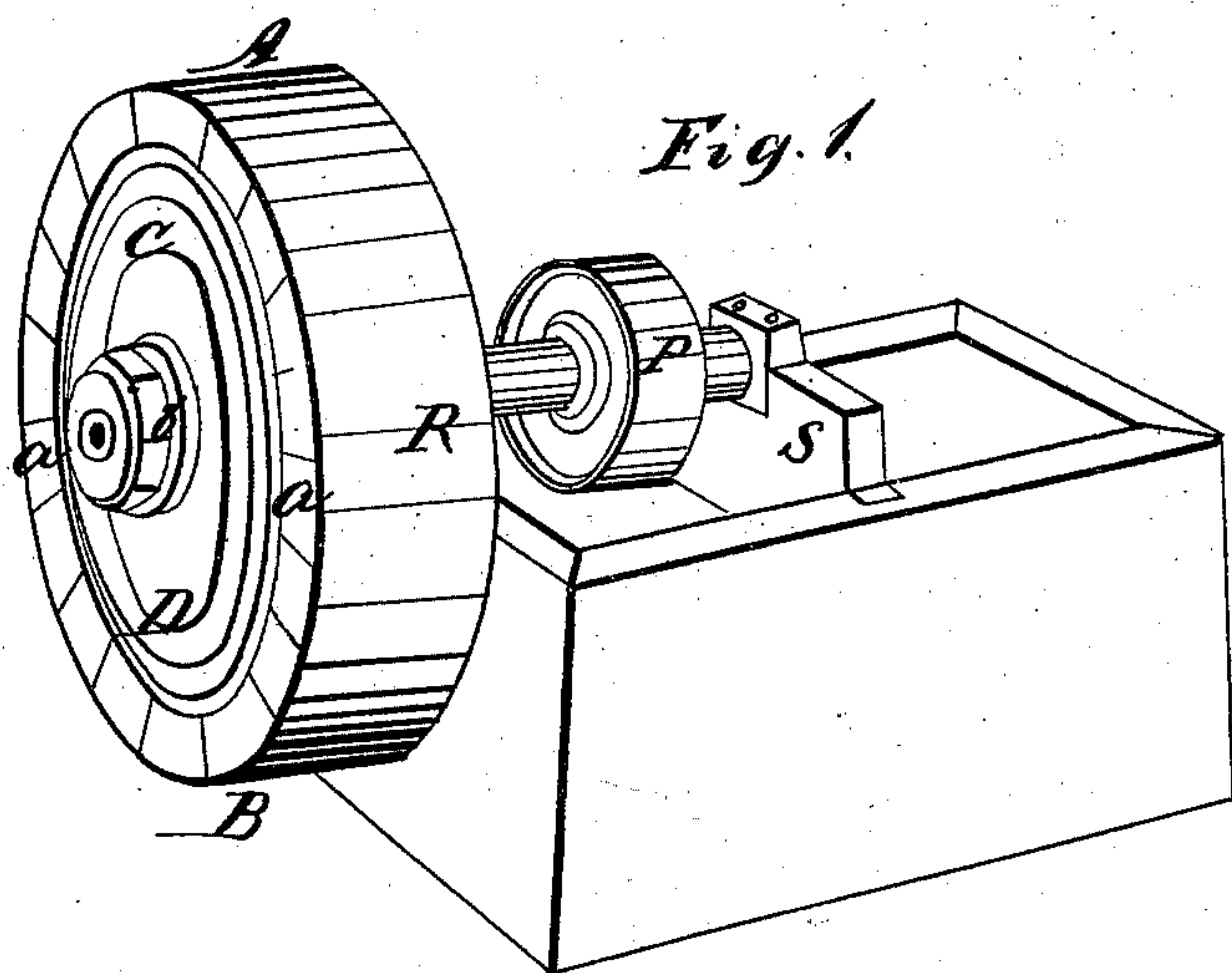


B. Webb,

Polishing Wheel.

Nº 11,396.

Patented July 25. 1854.



UNITED STATES PATENT OFFICE.

BENJAMIN WEBB, OF UNADILLA FORKS, NEW YORK.

POLISHING-WHEEL.

Specification of Letters Patent No. 11,396, dated July 25, 1854.

To all whom it may concern:

Be it known that I, BENJAMIN WEBB, of Unadilla Forks, in the county of Otsego and State of New York, have invented a new and useful Spring Polishing-Wheel for Polishing the Blades of Hoes, Axes, and other Articles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in providing a polishing wheel, the periphery of which is formed of a series of blocks, each standing upon a small spiral, or other spring, the latter resting on a solid surface of the central portion of the wheel. These blocks forming an outward circular surface are bound by a leathern strap on which the emery or other polishing substance is placed, so that an elastic surface is formed for grinding, by means of which the article to be polished, when pressed to the surface of the wheel comes in contact with a larger surface than it otherwise would and the polishing is done in a more uniform and perfect manner.

A, B, (Figure 1) of the annexed drawings exhibits the wheel as finished and put up for use. *a, a*, is the series of blocks forming the entire circle of the wheel, and R, is the grinding surface, being a leathern band covered in the usual manner with flower of emery. C, D, is a circular plate, or washer behind the nut *b*, the former having a proper orifice for the purpose in its center, is slipped over the end of the axle, resting against wire pins projecting from the sides of the radiating blocks, and the latter is then screwed on to the end of the axle keeping the parts in their places.

Fig. 2, represents a side view of the wheel without the washer and nut just described, exhibiting more clearly the internal construction. *a, a*, are the radiating blocks, extending quite around the circle; *b, b*, are the spiral springs set under each block, and resting on the circular surface of the solid hub C. *e*, is the end of the axle protruding through the center of the hub C, far enough to receive the washer and nut on the outside. R, S, T, is the leathern band inclosing the whole and forming the grinding, or polishing surface on the outside. P, are the wire pins driven into the radiating blocks *a* and

on both sides thereof and projecting slightly to relieve the surface of the blocks from the abrasion of the washer. There is moreover a groove of half an inch in width turned into the back of the washer in which these pins move when the blocks are pressed inward from the surface when in use. To keep the spiral springs in their places a hole is bored into the bottom of each block just sufficient to receive the coil of the spring for a short distance; the other end of the spring resting on the plane surface of the iron hub. These radiating blocks are cut away within the circle *d*, for about a quarter of an inch in depth, forming a recess all around so that the washer sets within this recess making a neat finish outside. This circular series of blocks is made to pass around with the solid hub C, (the latter being keyed firmly to the axle,) by means of iron arms or wings *i*, projecting from the hub, and passing in between the radiating blocks, as shown in the figure. The blocks of course are loose from each other, so that when pressed inward in the use they will not pinch, but move freely. There is upon the back, or opposite side of the wheel, a plate cast solid with the hub, of similar dimensions and character with the washer in front as above described; and a neck $\frac{1}{2}$ of the hub in front passes through the front washer, the nut on the end of the axle being screwed up tight against the outer end of this neck, the washer is therefore left loose within, and does not press against the wire pins, or blocks.

The wheel is propelled by hand or by power through a belt applied to the pulley P, (Fig. 1.); or it may be connected and arranged to suit the user with other machinery.

What I claim as my invention and desire to secure by Letters Patent is—

The forming of an elastic polishing wheel to be used for polishing and grinding by the use of a series of springs placed under sections of the surface moving vertically from the center and independent of each other substantially in the manner and for the purposes described, the whole being combined and arranged substantially as above set forth.

BENJAMIN WEBB.

Witnesses:

WM. BAKER,
OTIS WHIPPLE.