

B. BANNISTER & J. C. PERKINS.

Polishing and Grinding Wheels.

No. 148,545.

Patented March 17, 1874.

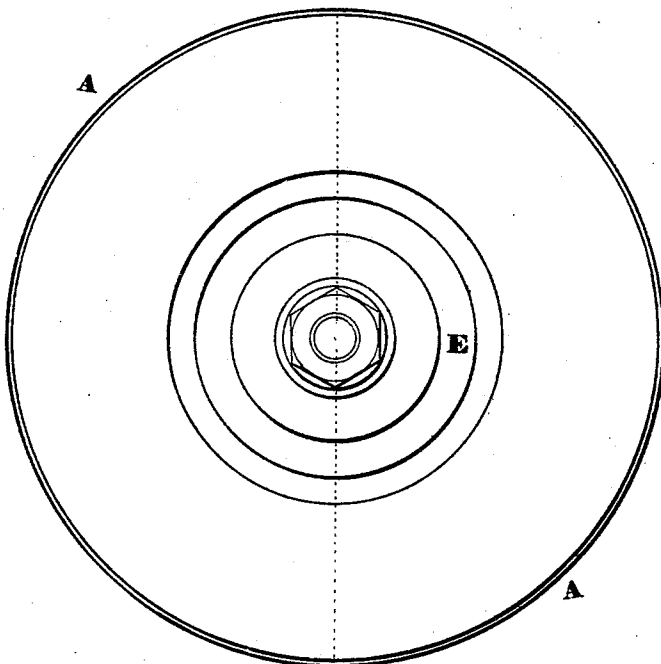


Fig 1

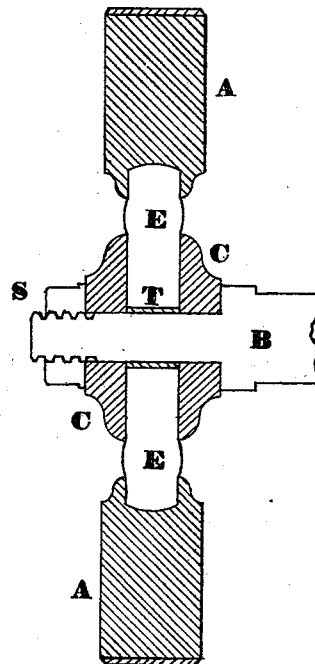


Fig 2

WITNESSES

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UNITED STATES PATENT OFFICE.

BURR BANNISTER AND JOHN C. PERKINS, OF KALAMAZOO, MICHIGAN,
ASSIGNORS OF ONE-THIRD THEIR RIGHT TO WILLIAM H. STODARD,
OF SAME PLACE.

IMPROVEMENT IN POLISHING AND GRINDING WHEELS.

Specification forming part of Letters Patent No. 148,545, dated March 17, 1874; application filed
May 14, 1873.

To all whom it may concern:

Be it known that we, BURR BANNISTER and JOHN C. PERKINS, of the village and county of Kalamazoo, in the State of Michigan, have invented a new and Improved Elastic Wheel for Polishing and Grinding; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of the description.

This invention consists, mainly, in the employment, in connection with a solid grinding or polishing wheel, of an elastic center adapted by its elasticity to permit the wheel to run in a true circle, whether it is accurately centered upon the shaft or not, the interposition of the elastic center between the wheel and the shaft serving also to obviate the danger of bursting the wheel from the expansion of the heated shaft, as will be fully described hereinafter.

In the drawings, Figure 1 represents a side elevation, and Fig. 2 a sectional elevation, of an improved wheel.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully the construction of the same.

A represents the grinding-wheel, constructed of any proper material, which has a central opening, as shown. B represents the shaft of the wheel, provided with a shoulder and threaded end, as shown. E represents a disk

of india-rubber, the periphery of which is suitably held in the central opening of the wheel A, and which itself has a central opening to receive the shaft B, as shown. T represents a cylinder, which may, if desired, be interposed between the shaft and the rubber. C C represent washers, and S a nut, by means of which the rubber disk is properly clamped to the shaft.

By means of the described construction the wheel is made capable of running in a true circle when moving at a high speed, whether it is accurately centered upon the wheel or not, this result being in accordance with principles of centrifugal motion. Moreover, the solid portion of the wheel is removed from contact with the shaft, so that all danger of bursting from its expansion when heated is avoided. Moreover, also, the solid portion is not pressed by the clamping devices, so that the danger of breaking a warped wheel by excessive pressure is avoided.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of a solid grinding or polishing wheel with an elastic center, substantially as described.

BURR BANNISTER.

JOHN C. PERKINS.

Witnesses:

OSCAR T. TUTHILL,

ROBER P. JAMES.