

T. A. RICHARDS.

TOOLS FOR FACING EMERY WHEELS.

No. 183,469.

Patented Oct. 17, 1876.

Fig. 1.

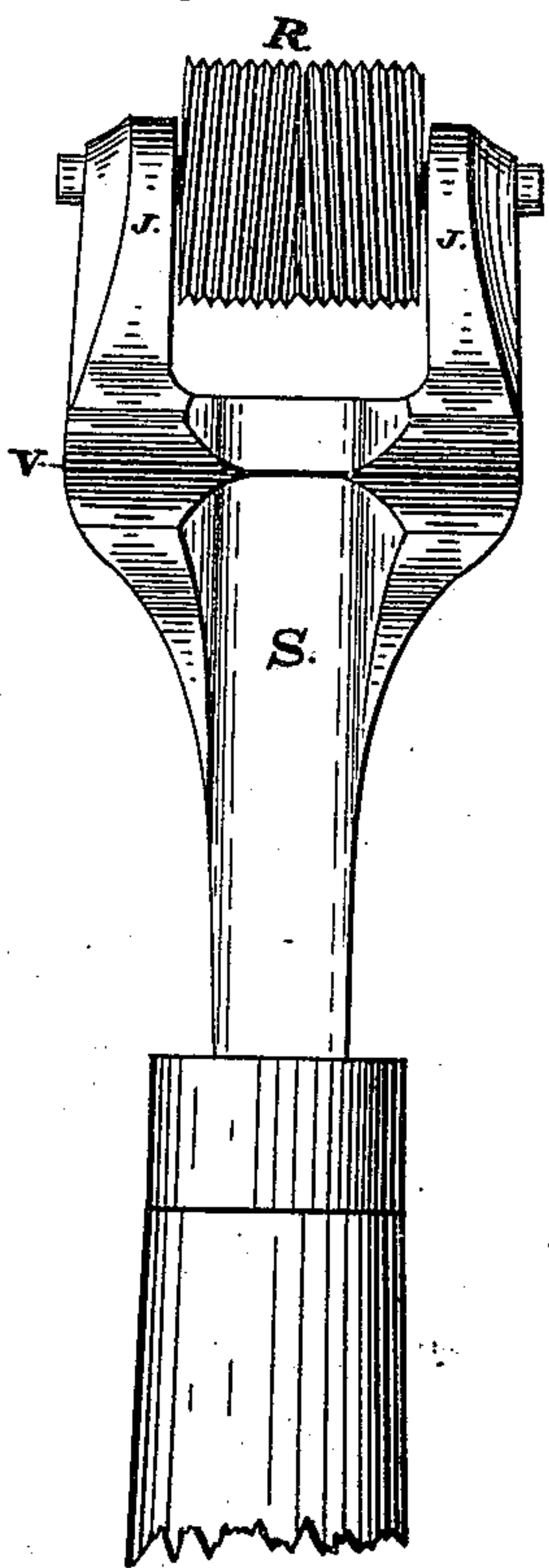


Fig. 3.

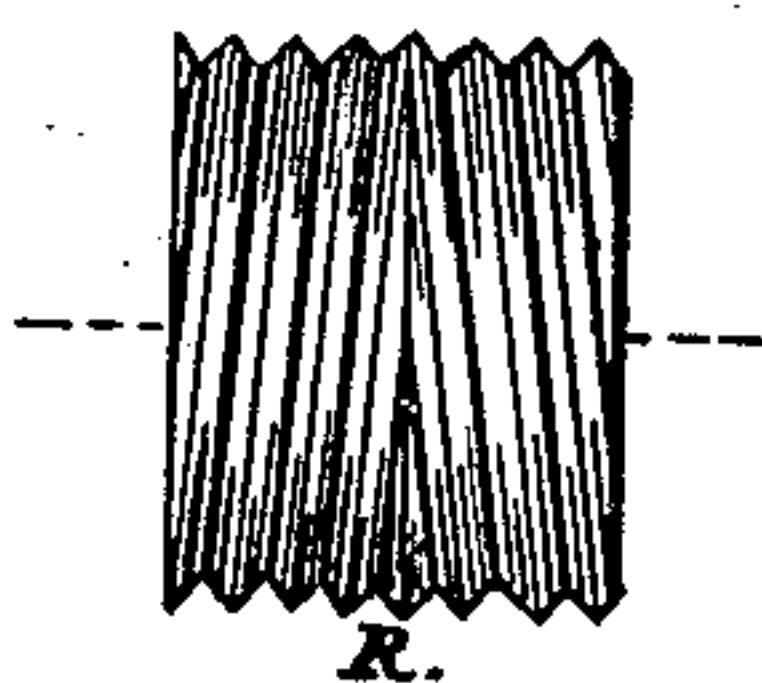
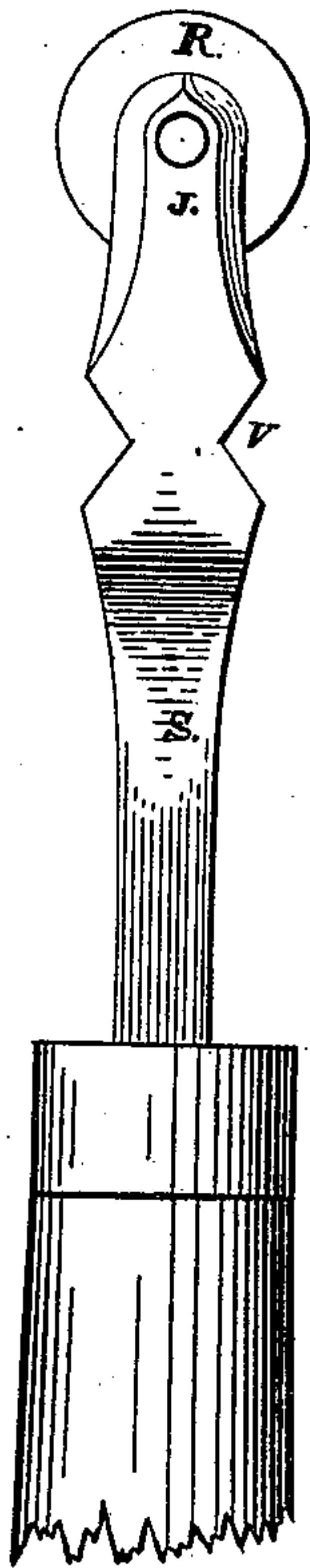


Fig. 2.



Witnesses,  
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# UNITED STATES PATENT OFFICE

THERON A. RICHARDS, OF BROOKLYN, NEW YORK, ASSIGNOR TO  
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## IMPROVEMENT IN TOOLS FOR FACING EMERY-WHEELS.

Specification forming part of Letters Patent No. **183,469**, dated October 17, 1876; application filed  
December 23, 1874.

*To all whom it may concern:*

Be it known that I, THERON A. RICHARDS, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Emery-Wheel and Grindstone Facers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

The object of my invention is to true, trim, or face the worn or uneven faces of emery-wheels and grindstones, by means of the tool hereinafter described, consisting of the two screw-thread-faced roller-cutters and the handle, in combination, as shown in Figure 1 of the accompanying drawing.

The handle of the tool consists in the usual shank of hand-tools, intended to receive the common wooden enlargement for the grasp of the hand, though it may be cast solid with the shank, jaws, and all, in one piece; or the shank may be made of wood and the bracket-jaw part of metal.

The V-shaped notches are intended to receive a tool-rest as a fulcrum, by means of which pressure may be exerted upon the stone or emery-wheel. A V-shaped projection and corresponding rest, or any other similar and known form of rest device for securing pressure, may be substituted therefor.

The cutting or facing device consists of a roller, R, which should be of hard metal, (steel preferred,) and is provided with a continuous cutting-edge, disposed around the roller in the form of a spiral or a screw-thread. I place two of these cutters, one with right and the other with left hand thread, on a small shaft, S, whereon they have free and independent motion, and with the screw-threads of each cutter starting outwardly, or in opposite directions, from the center between them, and running off at the outward end of the cutters. For the projecting ends of this shaft S bearings are provided in the jaws J J of the tool, which are cut sufficiently deep to receive the roller-cutters, leaving their front faces projecting beyond the ends of the jaws

J J, and free to act upon any opposing surface.

In practical use these roller-cutters are made to bear by leverage upon the face of the revolving emery-wheel or grindstone wherever facing is required. The action of the revolving wheel or grindstone then causes revolution of the cutters, which may be very rapid, since the facer may be applied when they are at the full speed at which they are run in grinding. The revolutions of the cutters, running with an equal face speed, will therefore be very great, requiring that oil be kept on the bearing to prevent the setting of the cutters, and their consequent destruction or injury by the emery-wheel or grindstone. Having made a cut as deep as the cutters are intended to penetrate, by continuous pressing in one position, turning the tool over, and applying it in the same place on the emery-wheel, the cutting-edges of the reversed threaded cutter will pass over and diagonally across the cutting of its fellow cutter, and make another cutting as deep as the previous one. The same result may be obtained by moving the cutter along, so as to present the face of the adjoining cutter to the previous work of its fellow in either direction. Repetition of these operations at will accomplishes the desired facing, even of the hardest emery-wheels.

I do not herein claim the screw-thread, nor the right and left hand screw-thread, nor the diagonal cutters, as these form the subject-matter of a separate application, filed August 12, 1876.

I claim as my invention—

The tool for facing emery-wheels and grindstones shown and described, consisting of the handle H, provided with the jaws J J, and the roller-cutters R R, in combination, in the manner and for the purpose set forth.

THERON A. RICHARDS.

Witnesses:

JAMES A. SKILTON,  
JOHN R. HAMILTON.