

H. F. WHEELER.

Improvement in Connecting Rotary Polishing-Tools to their Shafts.

No. 131,140.

Patented Sep. 3, 1872.

Fig. 1.

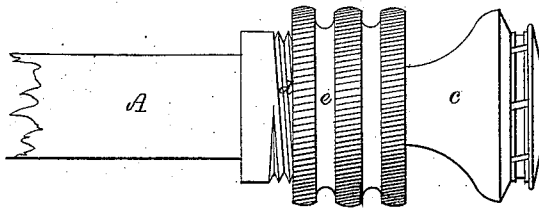


Fig. 2.

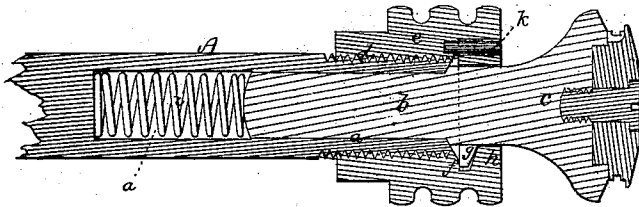


Fig. 4.

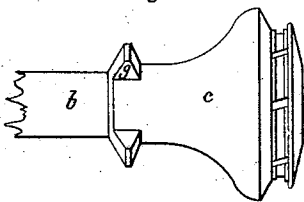


Fig. 3.

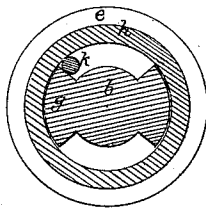
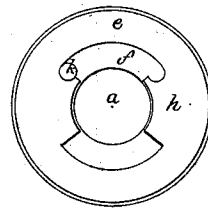


Fig. 5.



Witnesses.  
W. Geo. Alden.  
W. C. Boardman.

H. F. Wheeler.  
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Atty.

# UNITED STATES PATENT OFFICE.

HENRY F. WHEELER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CONNECTING ROTARY POLISHING-TOOLS TO THEIR SHAFTS.

Specification forming part of Letters Patent No. 131,140, dated September 3, 1872.

Specification describing a new Mode of Connecting Rotary Polishing-Tools to their Shafts, invented by HENRY F. WHEELER, of Boston, Suffolk county, Massachusetts.

This invention relates to means whereby a simple, strong, and durable connection is obtained between a burnishing or polishing tool and its supporting-shaft; and consists in the employment, in combination with such tool and shaft, of a sleeve which encompasses the stem of the tool and screws upon the shaft, a suitable coupling-connection being created between the two, by which the said stem is drawn and held immovably within its seat in the shaft, substantially as hereinafter explained.

The drawing accompanying this specification represents at A a cylindrical shaft such as is employed in machinery for "setting" the edges of boot and shoe soles, the outer end of such shaft being formed with an axial bore or socket, *a*, to receive the stem *b* of a setting-tool, *c*, a male screw, *d*, being cut upon the periphery of the shaft and surrounding the socket, upon which is screwed a sleeve, *e*, whose outer surface is preferably milled to enable it to be the more easily rotated. The mouth of the socket *a* is flaring to produce a tapering seat, *f*, such tapering seat being devised to receive an annular conical rib or collar, *g*, which is formed upon the stem of the setting-tool. The sleeve *e* has an annular lip, *h*, projecting inwardly toward the axis of the shaft A, the bore of such lip being of considerably less diameter than the periphery of the collar *g* in order to embrace the latter, while both sleeve and collar are formed with segmental notches to enable the latter to enter and pass through the former. The coupling-connection between the shaft A, sleeve *e*, and collar *g* is substantially the same as that shown in the ordinary fire-hose coupling, with this important and notice-

able difference, that while in such hose-couplings the sleeve is stationary with respect to the shaft, or the female portion or socket of the coupling, and has no tapering seat, in mine it is movable and screws upon or about the socket.

In this manner I am enabled to produce a joint or means of connection between a burnishing-tool and its shaft which, while being instantly available, is perfectly rigid and tight, owing to the tapering seat and the movable sleeve, and is unaffected by the jars and thrusts to which the tool is subjected.

I prefer to place in the bottom of the socket *a* a spring, *i*, to aid in easily removing the setting-tool, and I also prefer to employ a suitable stop-pin, *k*, affixed to the end of the shaft A and extending into one of the sectoral notches of the sleeve *e*, in order that only the requisite extent of rotation of the latter shall take place, and to prevent its misplacement or loss.

My invention is applicable to many purposes other than the special application herein shown.

## Claim.

I claim—

The herein-described coupling-connection, consisting of the shaft A, sleeve *e*, and stem *b*, when the former is formed with the tapering seat, the sleeve with the notched lip *h*, and screwing upon the shaft, as stated, and the stem with the conical notched collar or rib *g*, the spring *i* and stop-pin *k* being employed as auxiliaries to the former, the whole being organized and operating substantially as shown and explained.

HENRY F. WHEELER.

Witnesses:

F. CURTIS,  
W. E. BOARDMAN.