

No. 835,820.

PATENTED NOV. 13, 1906.

W. C. EVANS & E. H. TAYLOR.
S. M. EVANS, ADMINISTRATRIX OF W. C. EVANS, DEC'D.
MEANS FOR SECURING TOOLS UPON SHAFTS.
APPLICATION FILED MAR. 27, 1905.

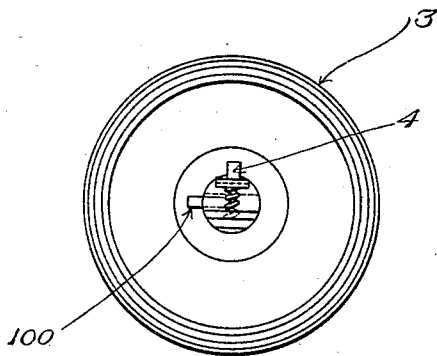


Fig. 1.

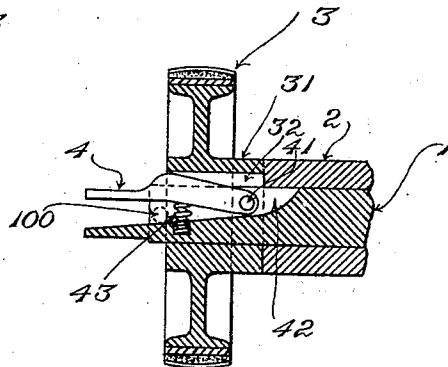


Fig. 2.

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UNITED STATES PATENT OFFICE.

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MEANS FOR SECURING TOOLS UPON SHAFTS.

No. 835,820.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed March 27, 1905. Serial No. 252,199.

To all whom it may concern:

Be it known that we, WARREN C. EVANS, residing at Exeter, in the county of Rockingham and State of New Hampshire, and EUGENE H. TAYLOR, residing at Lynn, in the county of Essex and State of Massachusetts, citizens of the United States, have invented a certain new and useful Improvement in Means for Securing Scouring and other Rotary Tools for Boots and Shoes upon Their Shafts, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to means for securing upon their supporting and operating shafts scouring and other rotary tools which are employed in the manufacture of boots and shoes.

The invention consists in an improved means for the said purpose which shall enable the tool to be quickly and readily applied to or removed from its shaft and by which the rotation of the tool in unison with its shaft shall be insured.

We have illustrated an embodiment of our invention in the accompanying drawings, in which latter—

Figure 1 shows in elevation a rotary scouring-tool and its shaft with our invention applied thereto. Fig. 2 is a view mainly in section on a vertical plane lengthwise of the shaft.

We have illustrated the invention as employed for connecting a scouring-tool to its shaft; but it is not necessarily restricted to use in this particular connection.

Having reference to the drawings, 1 designates the tool-shaft, and 2 a bearing therefor, 3 being a rotary scouring-tool having a hub 31, which fits upon the end of said tool-shaft projecting beyond bearing 2. For the purpose of securing the tool in place the said end is furnished with a transversely-extending pin or equivalent projection, as 100, which when the tool is in working position upon the shaft projects radially across the outer end of the hub 31 of the tool. Thereby the tool is held from accidentally coming off the end of the shaft. In this instance the said pin is fixed to the shaft. The interior of the hub of the tool is formed with a longitudinal groove 32,

open at both ends, and in applying the tool to the shaft the tool is held in position to present the groove 32 to the pin 100. The tool may now be slipped onto the shaft, the pin passing through the groove. When the tool is fully on, it is turned part way around, so as to shift the groove away from the pin. So long as the groove remains out of register with the pin the latter will hold the tool on the shaft.

For the purpose of preventing unintended relative movement between the tool and shaft which would place the groove and pin in line with each other and enable the tool to become displaced on or from the shaft a latch 4 is provided. The said latch is pivoted at its inner end at 41 within a transverse open groove or slot 42, which is formed in the end of the shaft 1 and is acted upon by a spring 43, operating to project its engaging edge at the side of the shaft and cause said edge to enter the groove 32 of the interior of the hub of the tool. So long as the latch occupies the groove 32 the tool will be held thereby from turning relative to the shaft, and consequently it will be held lodged by the pin 100 from endwise movement on the tool-shaft. Should, however, the latch 4 be pressed inward by hand, so as to withdraw it from the groove 32, the tool may now be turned by hand relative to the shaft, and by bringing the groove in apposition to the holding-pin the tool will be free to be withdrawn from the tool-shaft. For convenience in working the latch by hand for the purpose of disengaging it from the groove in the hub of the tool the free extremity of the latch projects beyond the outer end of the hub into readily-accessible position, and for advantage in moving the latch against the resistance of the spring the shaft is furnished with a flattened extension which is parallel with the outstanding portion of the latch. Upon taking hold of the two projecting portions between a thumb and one or more fingers of one hand and applying force of compression the latch will be caused to move inward, and thus disengaged from the tool.

What we claim is—

1. In combination, a tool-shaft having one extremity thereof adapted to receive a tool and provided with a radial tool-locking projection, the tool having the open groove or slot

to enable the tool to be slipped over the said projection onto the end of the tool-shaft, and a latch independent of said tool-locking projection, operating to lock said tool from rotary movement on said shaft with said groove or slot out of register with said projection.

2. In combination, a tool-shaft having one extremity thereof adapted to receive a tool and provided with a radial tool-locking projection, the tool having the open groove or slot to enable the tool to be slipped over the said projection onto the end of the tool-shaft, and a latch carried by the said tool-shaft to enter said groove or slot and thereby lock said tool with the groove or slot out of register with the projection.

3. In combination, a tool-shaft having one extremity thereof adapted to receive a tool, and provided with a radial tool-locking projection, the tool having the open groove or slot to enable the tool to be slipped over the said projection onto the end of the tool-shaft, and the spring-actuated latch mounted on the tool-shaft and entering the said groove or slot to prevent the tool from turning to

place the groove or slot in register with the projection.

4. In combination, a tool-shaft having one extremity thereof adapted to receive a tool, and provided with a radial tool-locking projection, the tool having an open groove or slot to enable the tool to clear the projection in being slipped onto the tool-shaft, and the latch, entering the said groove or slot to lock the tool from turning, with the groove or slot thereof out of register with the projection, and provided with the operating extension projecting longitudinally beyond the tool.

In testimony whereof we affix our signatures in presence of witnesses.

WARREN C. EVANS.
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Witnesses to signature of Warren C. Evans:

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