

(No Model.)

S. ROSS, Jr.

PRESS FOR ATTACHING ABRASIVE MATERIALS TO TOOLS.

No. 472,824.

Patented Apr. 12, 1892.

Fig. 1.

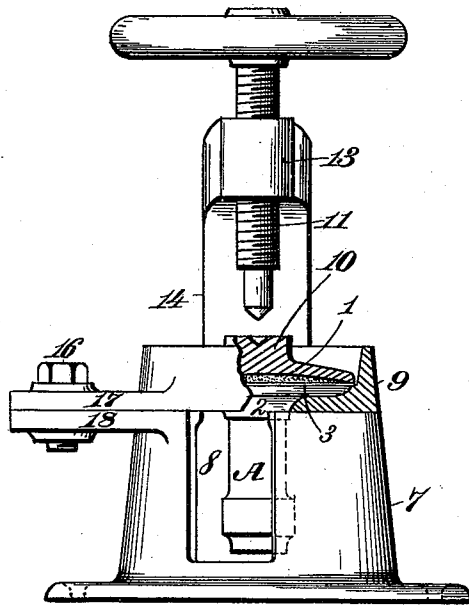
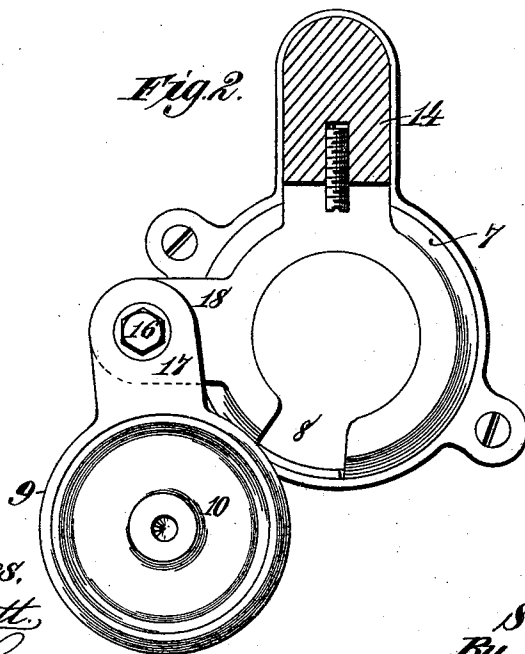


Fig. 2.



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UNITED STATES PATENT OFFICE.

SIMON ROSS, JR., OF CINCINNATI, OHIO.

PRESS FOR ATTACHING ABRASIVE MATERIAL TO TOOLS.

SPECIFICATION forming part of Letters Patent No. 472,824, dated April 12, 1892.

Application filed December 5, 1891. Serial No. 414,142. (No model.)

To all whom it may concern:

Be it known that I, SIMON ROSS, Jr., a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Presses for Attaching Abrasive Material to Tools, of which the following is a specification.

This invention has for its object to provide a novel, simple, efficient, and economical press for setting or attaching abrasive material to the face of a tool; and it consists in the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a sectional elevation of the setting-press with the finishing-tool in position for applying the finishing material. Fig. 2 is a sectional plan view showing the seat thrown back.

This invention is primarily adapted to completing the finishing-tool shown in my application, Serial No. 395,349, filed June 6, 1891. Finishing-tools of the kind shown in my said former application are composed of flexible disks, sometimes of rubber and sometimes of felt. These disks are so flexible that they readily yield under strain in cross-sections and accommodate themselves to the inequalities of the work being finished. It has been found by experience that abrasive material attached directly to the flexible disk when made of either rubber or felt has sufficient elasticity to allow the cemented material to bend without tearing, provided the adhesion of the cement is complete. A tool of this kind has a shank for attaching it to the revolving mandrel, which shank must be accommodated in the setting mechanism by openings through the same.

In the accompanying drawings, 1 represents the abrasive material to be applied to the flexible disk 3. This disk is supported upon a shank A. The press is constructed to receive the shank by making the base 7 open or hollow, so that the shank depends down inside the opening 8. It is of sufficient depth to allow the shank A to pass in and out freely. 9 represents the bed of the press, having a

cavity the face of which is shaped in contour to conform to the shape of the upper surface of the disk 3, which rests thereon.

As shown in the drawings, the tool has a boss 2, as well as a disk-like projection therefrom. When of this shape, the bed conforms thereto and holds the flexible portions of the tool in a rigid position under pressure, which is applied by the follower 10. In the preferred form of construction this follower is loose.

11 represents a compressing screw-shaft, which is threaded and taps in the nut 13 of the press-standard 14, which overhangs the bed of the press, so that the shaft 11 impinges upon the center of the follower 10. In order that the tool may be readily sprung out of its supporting-base, so that the screw need only be turned a slight distance, I make the bed of the press 9 swing upon an axial bolt 16. This hinge is formed by the shank 17 on the bed 9 and the shank 18, which projects laterally from the base 7.

8 represents an opening in one side of the base sufficiently large to allow the shank A to pass freely out when the bed is turned outward on its axial bolt in the position shown in Fig. 2.

In practice the operator places the rubber disk in the bed of press 9, places a piece of abrasive material, properly prepared with moistened glue or cement, on top of the disk, applies the follower, and swings the bed 9 into position. The hand-wheel is turned to apply the pressure thereto, and it is left in that position until the cement is firmly set, when the hand-wheel is turned to slacken the screw, the bed swung round, and the tool removed and another placed therein.

While the form of press shown herein is convenient, other forms of applying weight or pressure to implements which will hold the glued tool in position may be employed without affecting the principle of invention herein set forth. I have shown the screw-power as applicable to applying compressive force to the follower 10 and holding the finishing material in position for setting. Any other equivalent power may be used in lieu thereof.

Having described my invention, what I claim is—

1. A press for attaching abrasive material to the face of a tool, consisting of a base 7, a laterally-movable bed supported by the base and having a cavity to receive the disk of the tool, a follower fitting into the said cavity for pressing the abrasive material upon the disk, and means for imparting pressure to the follower, substantially as described.
2. A press for attaching abrasive material to the face of a tool, consisting of a base having an opening or hollow to receive the shank of the tool, a bed having its inner face shaped to conform to the upper face of the tool resting thereupon, a follower having its compressing-face conforming to the outer face of the

tool, and means for actuating the follower to move it into the bed, substantially as described.

3. A press or setting-machine composed, substantially, of the base 7, provided with the opening 8, the bed 9, the follower 10, and the screw-press mechanism for applying pressure to the follower upon an article supported by the bed of the press, substantially as specified.

In testimony whereof I have hereunto set my hand.

SIMON ROSS, JR.

Witnesses:

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