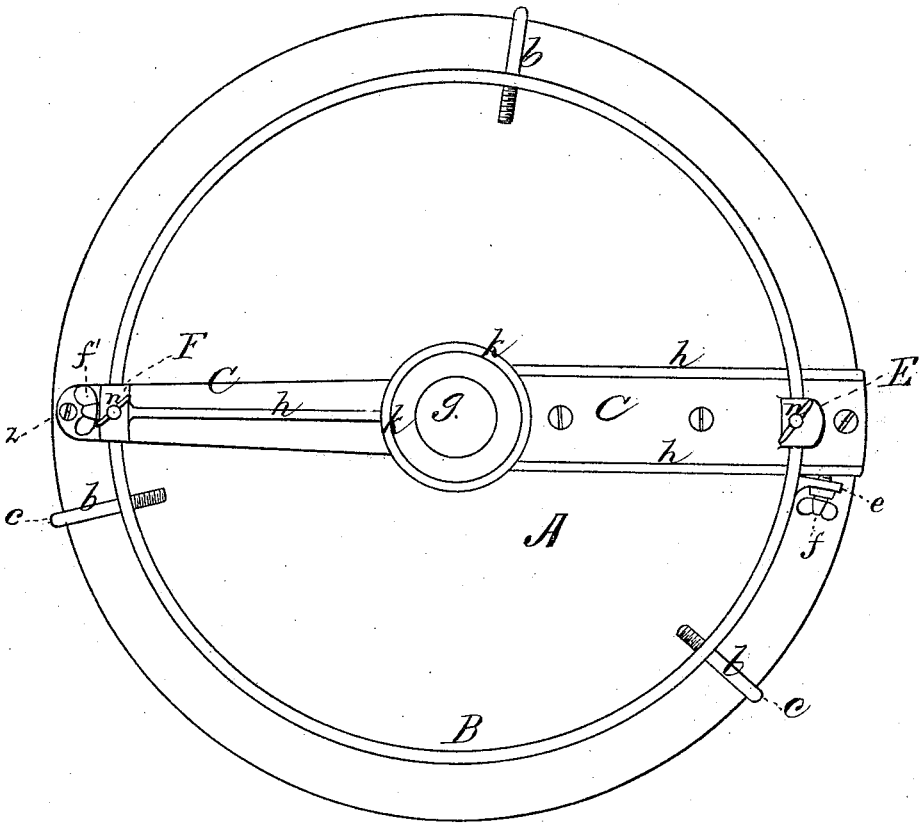
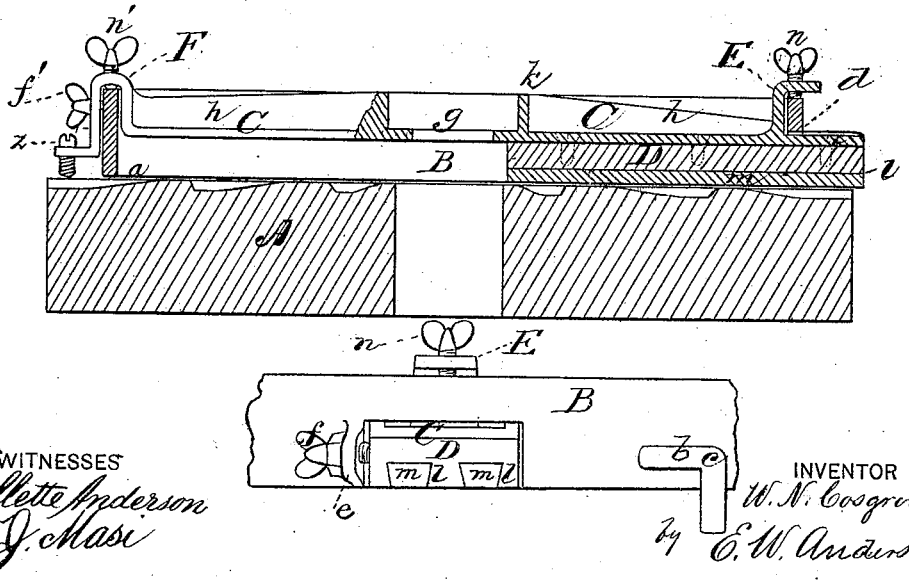
W. N. COSGROVE.

MILL STONE STAFFING MACHINE.

No. 181,774. Patented Sept. 5, 1876.





WITNESSES

Villette Anderson

F. J. Masi

INVENTOR

W. N. Cosgrove

by E. W. Anderson

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM N. COSGROVE, OF FARIBAULT, MINNESOTA, ASSIGNOR OF ONE-FOURTH OF HIS RIGHT TO JNO. S. JORDAN, OF SAME PLACE.

IMPROVEMENT IN MILLSTONE-STAFFING MACHINES.

Specification forming part of Letters Patent No. **181,774**, dated September 5, 1876; application filed June 17, 1876.

To all whom it may concern:

Be it known that I, WILLIAM N. COSGROVE, of Faribault, in the county of Rice and State of Minnesota, have invented a new and valuable Improvement in Millstone-Staffing Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my invention. Fig. 2 is a vertical central section thereof. Fig. 3 is a detail view.

The object of this invention is to provide an improved machine for staffing millstones, which shall be readily adjustable and equally applicable to runners and bed-stones. The invention consists in the construction and novel arrangement of a metallic ring having a perfect face, and guides adjustable to the stone, and a diametric staff with center opening, end adjustments in connection with said ring, and wooden face grooved for filling of coloring matter, as hereinafter shown and described.

In the accompanying drawings, the letter A designates the stone. B represents the ring, whose diameter is a little less than that of the stone, and whose lower or bearing edge *a* is ground perfectly true. At several points guides *b* are attached to the ring, and turned down to extend over the edge of the stone, and hold the ring in position while being revolved thereon. The ring is designed to have sufficient depth and weight to prevent it from springing. The guides *b* are made with a rectangular bend at *c*, to extend over the edge of the stone, and are threaded for adjustment in the ring. At one point an opening or notch, *d*, is cut or formed in the lower edge of the ring, to receive one end of the staff, and on one side of this opening a projecting lug, *e*, is formed, and provided with a threaded aperture for the reception of a set-screw, *f*, which serves to secure the staff when adjusted to the face of the ring. C represents the staff, which is arranged to extend diametrically across the ring. The body of the staff is usually made of metal, and of sufficient length to extend across the stone, or nearly so. A central opening, *g*, is provided to clear the spindle and bed-stone. In order to give it strength, vertical ribs *h* may be formed on its branches, extending from the circular flange *k* of the central opening toward or to the ends. D represents a wooden block or facing, which is attached to one branch of the staff, by screws or otherwise. On its under side this block is provided with longitudinal grooves *l*, which are designed to carry the paint or coloring matter *m*, and for that purpose may be slightly dovetailed in cross-section. From the upper side of this branch of the staff an arm, E, extends upward over the ring, and is provided with a set-screw, *n*, which bears on the upper edge of the ring, and serves to adjust the staff thereto. On the opposite branch of the staff an arm or bend, F, is arranged to extend over the edge of the stone, and is provided with a set-screw, *n'*, to adjust this end of the staff to the ring. When the staff is adjusted on the stone, it is secured to the ring by two thumb-screws—one of which, *f*, has been mentioned as being connected with the ring. The other, *f'*, extends through the arm or bend *l* of the branch, and bears against the ring. At the end of the branch opposite that which carries the block or "red-staff" is arranged a set-screw, *z*, which is designed to serve in adjusting the face of the red-staff to the "proof-staff," which is kept in every mill to test the common wood staff. In case it is necessary to staff the center of the stone lower than the grinding-surface, this screw is used to adjust the staff accordingly. It also serves to adjust the staff on the stone until the adjustment to the ring above referred to is effected.

When the staffing device is properly adjusted and revolved on the stone, the coloring matter of the grooves marks the places which require to be dressed. This is repeated until the staff colors the entire face of the stone.

When both runner and bed-stone are reduced to perfect faces, the runner is placed on its spindle.

In some particulars the details of construc-

tion may be varied by those skilled in the art. Hence it is not desired to confine the construction to the precise limits herein described and shown.

I am aware that it is not new to form a tram staff with a metallic back, and a face of wood or other porous material capable of holding a coloring matter by absorption; hence I do not claim such device, broadly.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the ring B, of the radial right-angular guides *b*, substantially as specified.

2. In combination with the ring B, the diametrical staff C, adapted to be clamped and adjusted on the said ring, substantially as specified.

3. In combination with the ring B, having edge opening *d*, the diametrical staff C, having arms E F, and set-screws *n n'* and *f f'*, substantially as specified.

4. In combination with the ring B and diametrical staff C, having wood facing D, the leveling-screw *z*, substantially as specified.

5. The edge ring B, having projecting lug *e*, with set-screw *f*, and the edge opening *d*, in combination with the diametrical staff C, projecting through the said opening, substantially as specified.

6. The staffing device for millstones, consisting of a metallic ring provided with guides to hold it in position on the stone, concentric with its periphery, a diametrical metallic staff, faced with wood, carrying a coloring material in grooves upon its under side, and set and thumb screws for adjusting the staff to the ring and face of the stone, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM N. COSGROVE.

Witnesses:

O. F. PERKINS,

C. B. CASE.