2 Sheets—Sheet 1.

J. C. COOKSON & L. RASTETTER.

MILLSTONE DRESSING-MACHINE.

No. 191,938. Patented June 12, 1877.

Fig. 1.

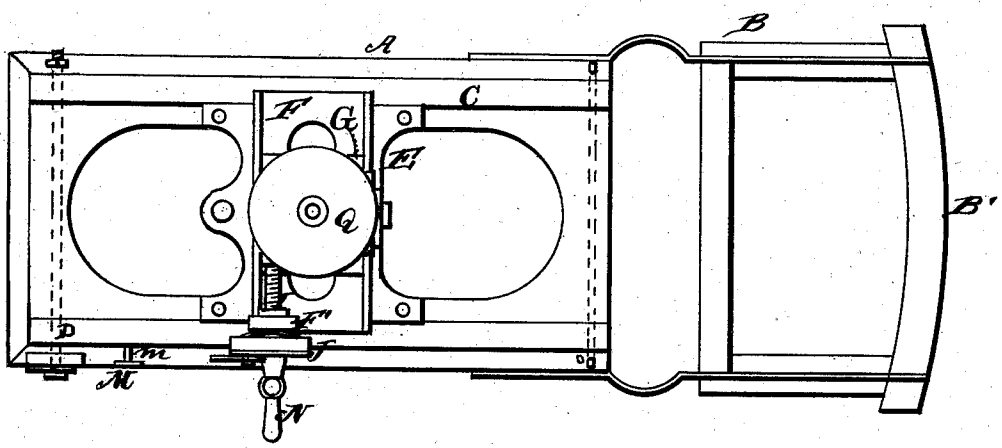


Fig. 2.

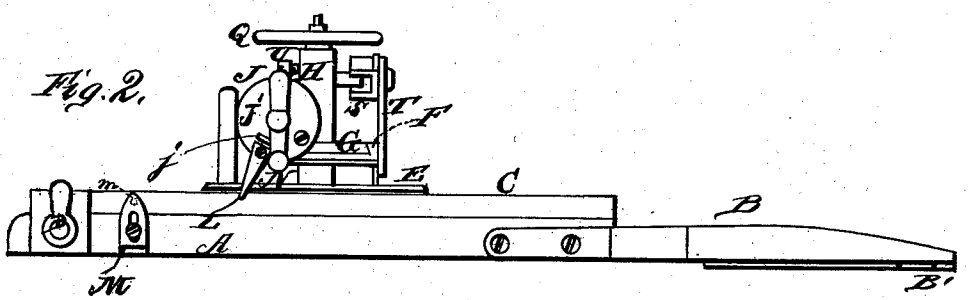


Fig. 3.

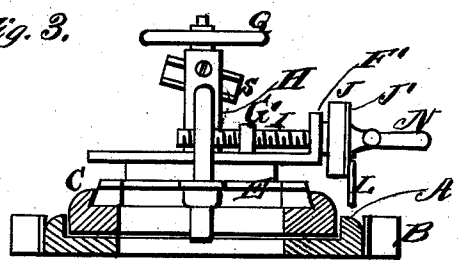


Fig. 4.

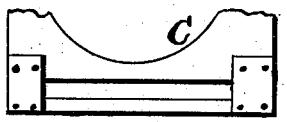
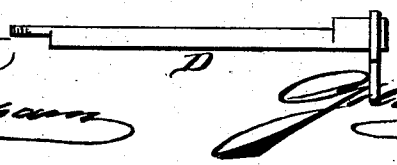


Fig. 5.



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2 Sheets—Sheet 2.

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MILLSTONE DRESSING-MACHINE.

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Fig. 6.

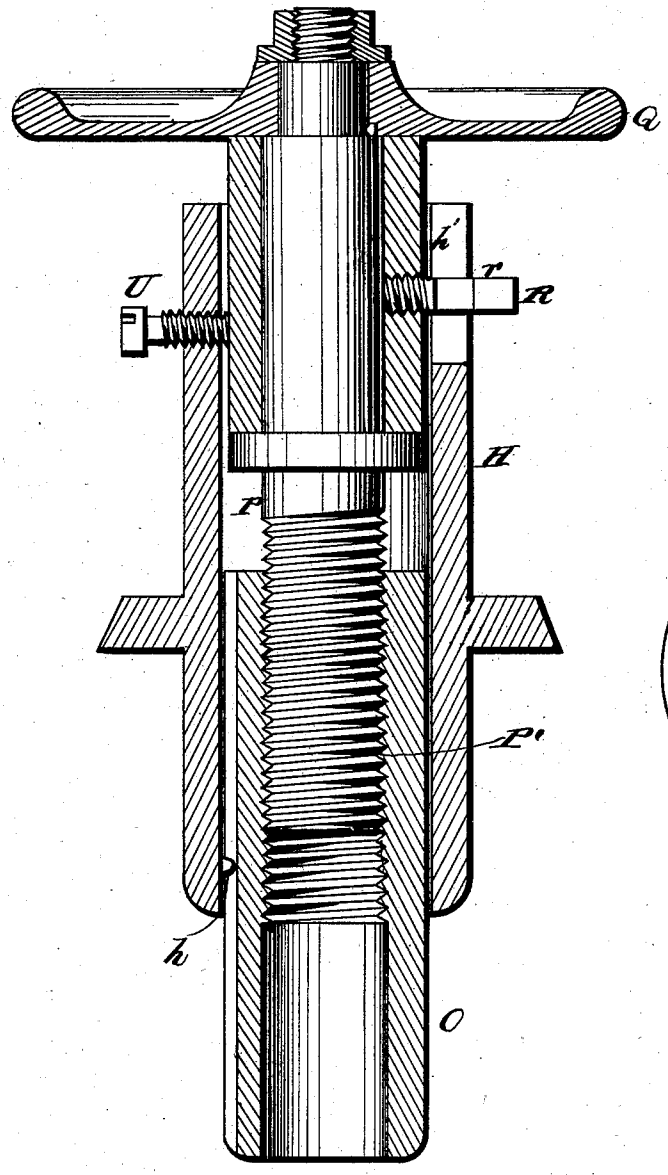
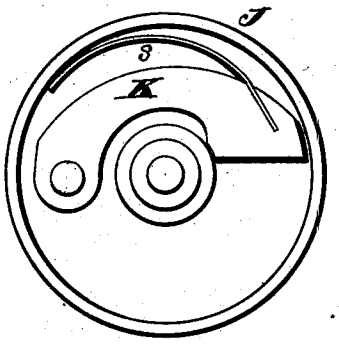


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN C. COOKSON AND LOUIS RASTETTER, OF FORT WAYNE, INDIANA, ASSIGNORS TO JOHN ORFF, OF SAME PLACE.

IMPROVEMENT IN MILLSTONE-DRESSING MACHINES.

Specification forming part of Letters Patent No. **191,938**, dated June 12, 1877; application filed March 31, 1877.

To all whom it may concern:

Be it known that we, JOHN C. COOKSON and LOUIS RASTETTER, of Fort Wayne, in the county of Allen and State of Indiana, have invented a new and valuable Improvement in Millstone-Dressing Machines; and we 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 our millstone-dressing machine, and Fig. 2 is a side elevation thereof. Fig. 3 is a transverse vertical sectional view, and Figs. 4 and 5 are detail views thereof. Fig. 6 is an enlarged central vertical sectional view of the tool-holding device, and Fig. 7 is an enlarged view of the drum with the top removed.

This invention is an improvement on the devices embraced in Letters Patent No. 185,125, dated December 5, 1876. It consists in certain improvements for more conveniently and effectually securing the dressing-machine to the millstones; also, in certain improvements in the mechanism for automatically causing the upper tool-carriage to travel across the machine, as hereinafter more fully set forth.

In the accompanying drawings, A designates the bed-plate of our millstone-dressing machine, and B an extension of the same, which reaches quite across the stone, and is provided with a curved flat plate, B′, at its front end.

The bed-plate A, with its extension, B, in practice, is placed upon the stone to be dressed, so that the eye of the stone lies at or about the junction of the bed-plate and its extension, which, together, extend entirely across the face of the stone. By this construction several advantages are attained, a more extended and firmer bearing is secured, and oscillations of the bed-plate prevented.

The bed-plate, with its extension, also acts as a straight-edge or level in dressing the stone, its length being equal to or greater than the diameter of the stone to be dressed, and extending entirely across it.

Said bed-plate supports a longitudinal guideway, C, that may be raised and lowered at one end by means of an eccentric crank-shaft, D, which is journaled across said bed plate under said guideway, the other end of said guideway being pivoted to said bed-plate at *o*. Said bed-plate and guideway have a longitudinal middle opening to allow the movement of the stone-dressing tool.

E designates a longitudinally-sliding carriage running in the grooves of said guideway, and provided with a cross-guideway, F, in which runs the upper tool-carriage G, carrying the outer vertical cylinder H of the tool-holding mechanism. Said cylinder extends down through said carriages E and G to the middle opening of the bed-plate. Said upper carriage G is moved backward and forward in said guideway F by means of a screw-threaded shaft, I, which is journaled in a lug, F′, on said guideway F, and operates a nut, G′, on said upper carriage G. Said shaft is provided at its outer end with a drum, J, which has a detachable cover or cap, J′, to which is pivoted a spring-pressed cam or dog, K, that bears against the inside of the rim of said drum. When said cover J′ is turned in one direction the said dog engages with and turns said drum, rotating said screw-threaded shaft, so as to cause said carriage G to travel backward in its guideway F. But when said cover is turned the other way the said dog does not engage with said drum, and said carriage G is not moved. L designates a hanging triangular dog or arm, that is pivoted to said cover or cap J′, its base being adapted to engage, when turned in either direction, with a small block, *j*, formed on said cover, thereby turning the latter. This turning is automatically effected by the engagement of said hanging arm with a stud, *m*, on a vertically-adjustable plate, M, attached to said bed-plate. By the operation of the above devices carriage G is caused automatically to pass in its guideway F across guideway C step by step, each outward journey on said guideway causing it to move transversely a certain distance. It is brought back by a crank, N, on said screw-threaded shaft.

Fig. 6 shows, in enlarged detail, the devices for holding the tool. The outer cylinder H, already described, is provided near its lower

end, on the inside, with a stud or guide-pin, *h*, which sets into a vertical guide-groove on the outside of an internally screw-threaded tool-holder, O. P designates a vertical adjusting rod or shaft, provided with a screw-threaded downward extension, P′, which engages with said internally screw-threaded tool-holder, so as to adjust the same upward or downward, according to the direction in which the hand-wheel Q on the upper end of the said shaft P is turned. The diamond is thus adjusted so as to cut deep or shallow, as desired.

The tool-holder is also automatically adjusted by means of a stud or short arm, R, which extends outward from rod P through a vertical slot, *h′*, in the upper part of outer cylinder H. Said stud or short arm R is provided at its outer end with a roller or rounded end, *r*, that runs in a guideway or pivoted trough, S. Said guideway S is supported by a standard, T, on carriage-guideway F, and may be clamped thereto at any inclination, so as to automatically raise and lower the dressing-tool as said roller or end *r* of arm R works backward and forward within it. Said tool-holder may be held against any such adjustment, and fixed in one position by means of a clamping-screw, U, which works through cylinder H and bears against adjusting-rod P. This adapts the machine to dress straight across the face of the stone without varying the depth of the furrows.

Guideway S may be inclined either to the right or left, according to the bevel of the furrows which are to be cut into the face of the stone. It serves a double function—guiding the tool, as stated, and also supporting the same with the tool-holder and adjusting shaft or rod. The spring employed for supporting said parts in the previously-patented device of Orff, Cookson and Rastetter is thereby made superfluous.

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

1. In a millstone-dressing machine, the bed-plate A, provided with the extension B, having the curved flat plate B′, flush with the lower face of the bed-plate, substantially as described, and for the purpose set forth.

2. The combination of cylinder H, having guide-stud *h*, grooved screw-threaded tool-holder O, adjusting-rod P, provided with the arm R, having roller *r*, and guideway S, substantially as and for the purpose set forth.

3. The combination of cylinder H, having guide-stud *h*, grooved screw-threaded tool-holder O, adjusting-rod P, arm R, guideway S, and clamping-screw U, substantially as described, and for the purpose set forth.

4. The combination of cylinder H, having guide-stud *h*, with grooved screw-threaded tool-holder O and adjusting rod or shaft P, substantially as and for the purpose set forth.

5. In a millstone-dressing machine, the combination of the lower guideway pivoted at one end, with a cam-shaft journaled across the bed-plate below the other end of said guideway, substantially as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN C. COOKSON.
LOUIS RASTETTER.

Witnesses:
JAMES E. GRAHAM,
MART. V. B. GOTSHALL.