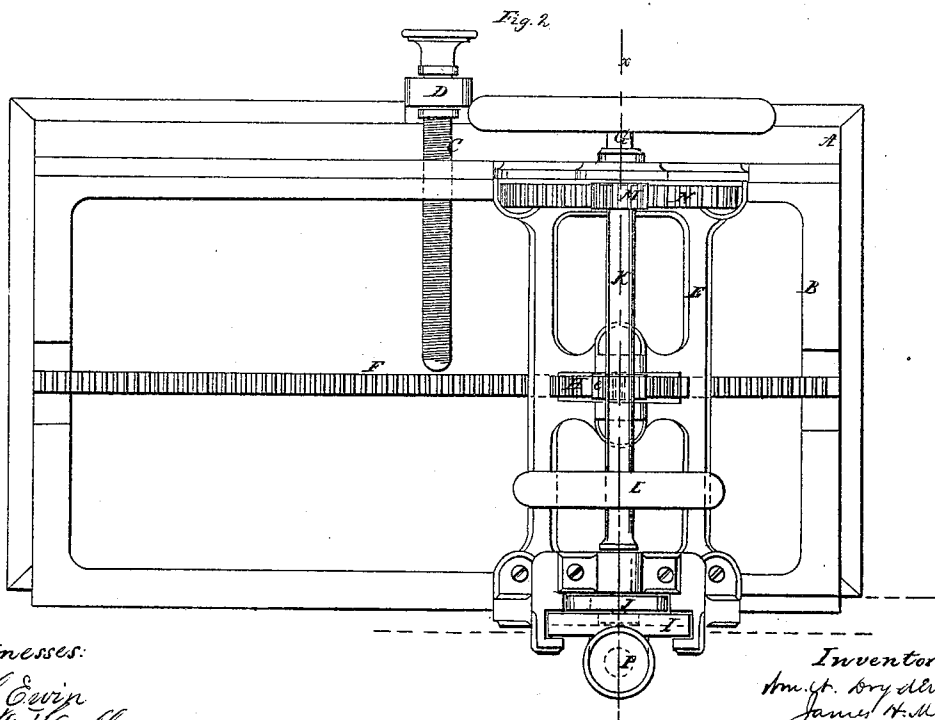
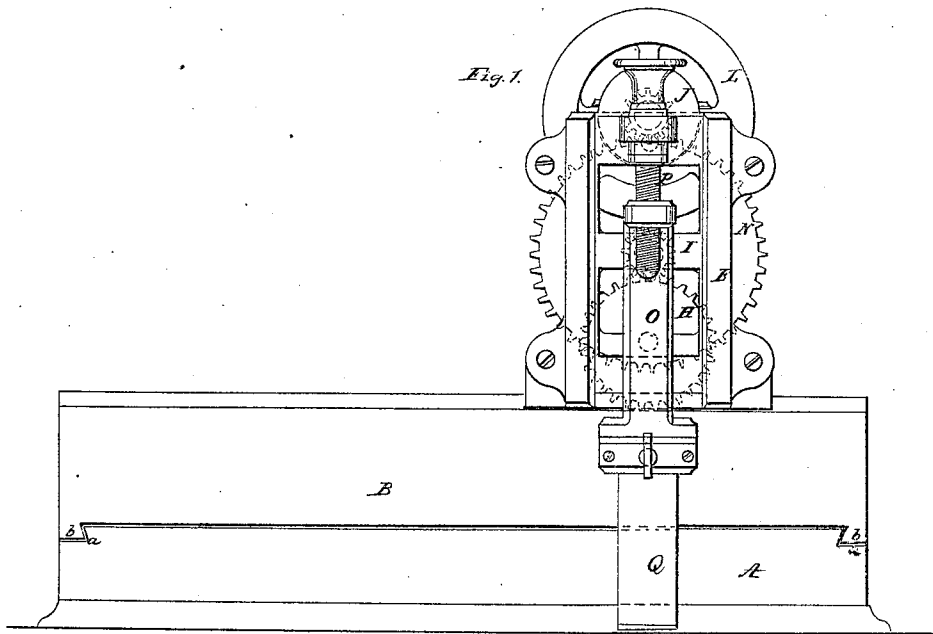


2 Sheets. Sheet 1.  
*Dryden & Montgomery,*

*Dressing Millstones.*

*N<sup>o</sup> 50,565.*

*Patented Oct. 24, 1865.*



*Witnesses:*

*John L. Cowin  
W. F. Hall.*

*Inventors:*

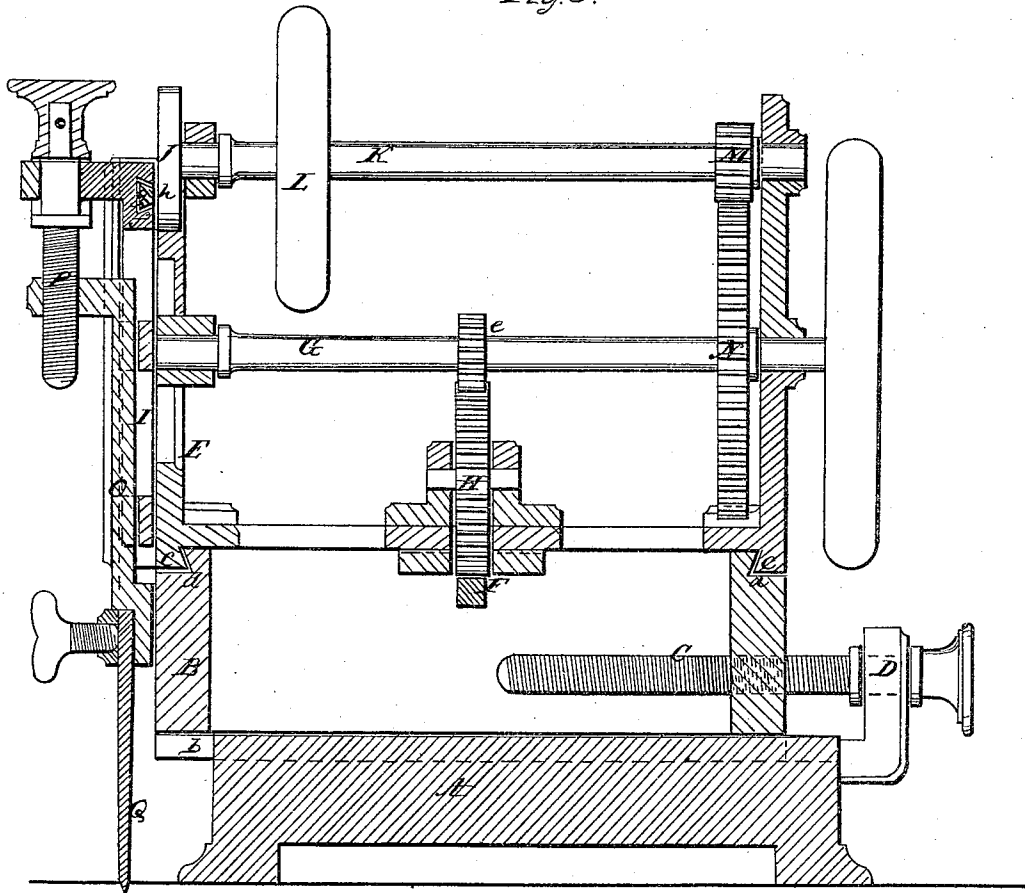
*Am. J. Dryden  
James H. Montgomery  
By Munroe & Co. Attys*

2 Sheets, Sheet 2.  
*Dryden & Montgomery,*

*Dressing Millstones.*

*N<sup>o</sup> 50,565. Patented Oct. 24, 1865.*

*Fig. 3.*



Witnesses:  
 *Jas. L. Erwin  
 W. F. Hall*

Inventors:  
 *Wm. C. Dryden  
 James H. Montgomery  
 By *Mumford*  
 *Atty**

# UNITED STATES PATENT OFFICE.

WILLIAM A. DRYDEN AND JAMES H. MONTGOMERY, OF MONMOUTH, ILL.

## IMPROVED MACHINE FOR MILLSTONE-DRESSING.

Specification forming part of Letters Patent No. 50,565, dated October 24, 1865.

*To all whom it may concern:*

Be it known that we, WILLIAM A. DRYDEN and JAMES H. MONTGOMERY, of Monmouth, in the county of Warren and State of Illinois, have invented a new and Improved Machine for Dressing Millstones; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet No. 1, is a front view of our invention; Fig. 2, a plan or top view of the same; Fig. 3, a transverse vertical section of the same, taken in the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved machine for dressing millstones, and is designed to supersede the complicated machines hitherto devised for that purpose, and still perform the work more rapidly and in a more perfect manner than it can possibly be done by the old hand process.

The invention consists in arranging a carriage on an adjustable frame, with a rack, gearing, and pick-driving mechanism, in such a manner that by the turning of a single shaft the pick will be operated and fed along to its work, an arbitrary or positive movement being given the pick, so that the same will cut a uniform depth, but be capable of being graduated or set to cut to a greater or less depth, as may be required.

A represents what may be termed the "base" of the machine, which is a rectangular block having a dovetail-rabbit, *a*, in each end of it at its upper part to receive corresponding dovetail cleats or projections *b b* at each end of a rectangular frame or box, B, which is fitted on A to hold B in proper position on A and admit of the former sliding freely forward and backward on the latter. This movement or adjustment of B may be effected by means of a screw, C, which passes through a nut or female thread in the rear side of B, and has its bearing in an arm, D, on the rear of A. (See Fig. 3.)

On the upper part of the box B there is placed a carriage, E, the latter being provided at its

base with dovetail-cleats *c c*, to fit in dovetail-rabbets *d d* at the front and rear side of B, said cleats and rabbets serving as guides for the carriage which moves in a longitudinal direction on B.

In the upper part of the frame or box B there is placed longitudinally and centrally a rack, F, and in the carriage E there is placed a driving-shaft, G, having upon it a pinion, *e*, which gears into a wheel, H, in the carriage, said wheel working in the rack F. By this means the traveling movement is given the carriage on the frame or box B.

In one end of the carriage E there is fitted a vertically-sliding frame, I, operated as follows: In the upper part of said frame, in its rear side, there is a horizontal groove, *f*, in which a slide, *g*, is placed, and this slide has the wrist-pin *h* of a crank-pulley, J, attached to it, said pulley being on a shaft, K, in the upper part of the carriage, which shaft has a fly-wheel, L, and a pinion, M, upon it, the latter gearing into a spur-wheel, N, on the shaft G, previously described. By this arrangement the traveling movement of the carriage and the up-and-down movement of the sliding frame I is obtained from the rotation of the shaft G.

In the sliding frame I there is fitted a vertical bar, O, which is allowed to slide freely up and down, and is adjusted in that direction by means of a screw, P. To the lower end of this bar O the pick Q is attached.

From the above description it will be seen that the pick is operated in consequence of being attached to the sliding frame I, and the depth of the cut of the pick may be regulated by adjusting the bar O higher or lower.

In using the device the front edge of the base A is placed in line with the furrow to be dressed and the shaft G turned, which operates the pick and also moves the carriage and feeds the pick along either to the right or left, according to the direction in which the shaft G is turned, the pick being adjusted farther forward or backward, so as to cut in parallel lines by adjusting the frame or box B through the medium of the screw C.

The device is extremely simple and efficient, may be used and manipulated with the greatest facility, and constructed at a very moderate cost.

Having thus described our invention, we claim as new and desire to secure by Letters Patent--

1. The carriage E, provided with a vertically-sliding frame, I, to which an adjustable pick, Q, is attached, and also provided with gearing to engage with a rack, F, on the frame or box B, and with a crank-pulley, or its equivalent, to operate the frame I, all arranged in such a manner that by the turning of a single shaft, G, in the carriage the pick will be operated and fed along to its work, substantially as described.

2. The giving of a positive motion to the pick through the medium of the crank-pulley J and slide g when combined with the adjustable carriage, substantially as described.

3. The adjustable frame or box B, placed on

the base A, and operated through the medium of the screw C, or its equivalent, when said parts are used in connection with the carriage E, having the pick Q attached, and all arranged to operate substantially in the manner as and for the purpose set forth.

The above specification of our invention signed by us this 28th day of September and 2d day of October, 1865.

W. A. DRYDEN,  
JAMES H. MONTGOMERY.

Witnesses for Dryden:

M. M. LIVINGSTON,  
THEO. TUSCH.

Witnesses for Montgomery:

ELIAS WILLITS,  
J. T. MORGAN.