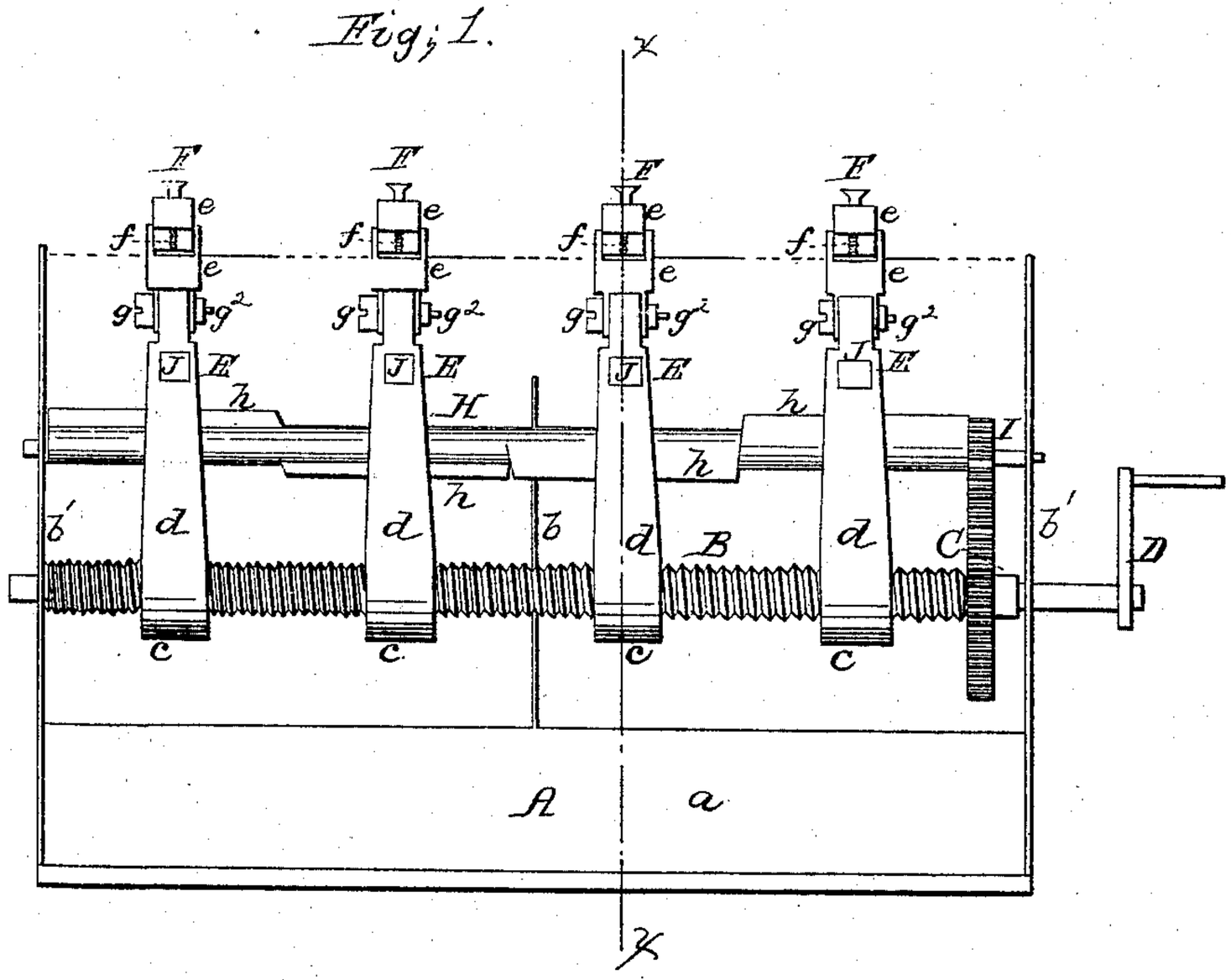
W. Y. Gill,

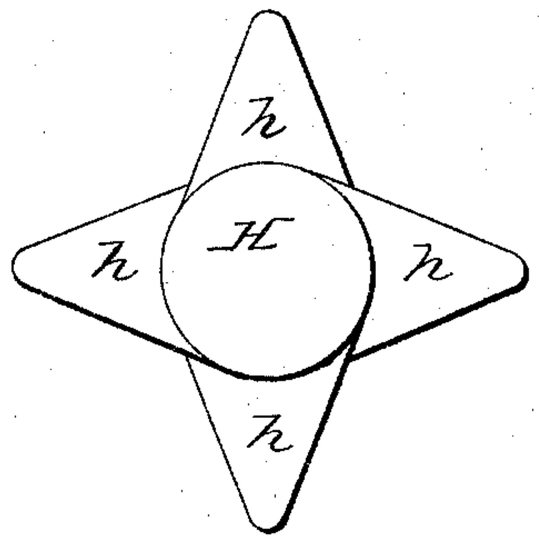
Dressing Millstones.

No. 17,326. Patented May 19, 1857.

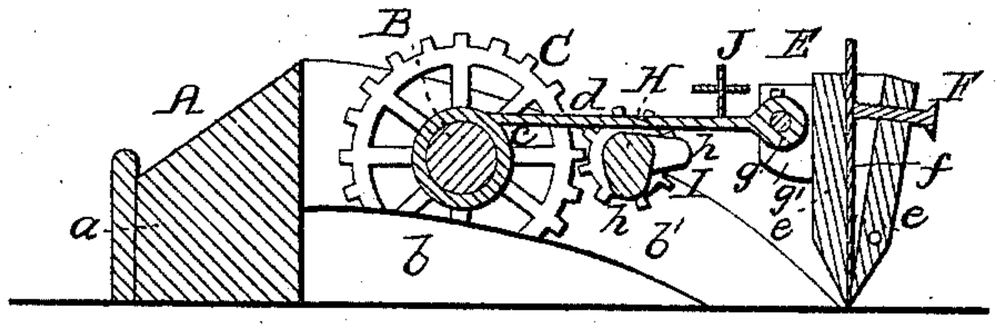
Fig; 1.



Fig; 3.



Fig; 2.



UNITED STATES PATENT OFFICE.

W. Y. GILL, OF HENDERSON, KENTUCKY.

MACHINE FOR RE-DRESSING MILLSTONES.

Specification of Letters Patent No. 17,326, dated May 19, 1857.

To all whom it may concern:

Be it known that I, W. Y. GILL, of Henderson, in the county of Henderson and State of Kentucky, have invented a new and useful Improvement in Machines for Re-Dressing Millstones; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of the machine. Fig. 2 is a vertical section through the line x, x, in Fig. 1 of the same. Fig. 3 is an end view of the cam shaft for operating the picks.

Similar letters of reference in each of the several figures indicate corresponding parts.

My invention provides a simple and cheap machine whereby the lands and furrows of mill stones can be dressed by a person of ordinary skill in an expeditious and accurate manner.

The nature of my invention consists in the combination of two or more picks with the guiding and operating screw shaft and lifting cam, when said parts are constructed and arranged and operating in the manner and for the purpose set forth.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, represents the frame of the machine. It consists of a solid block a, with three or more sills or bearings b, b', b', attached to it. The block and its sills are made with a plane surface underneath so as to set square down upon the stone and remain steady.

B, is the screw shaft. It has its bearing in the end sills b', b', of the frame. On one of its ends a pinion C, is keyed and at the extremity of the same end a crank D.

E, E, E, E, represent four picks arranged at equal distances apart on the screw shaft, each being furnished with an eye c, at the inner extremity of its handle d, said eye being tapped or furnished with a screw thread to match or work with the thread of the screw shaft. The picks, proper, consist of a handle d, two jaws e, e, and a steel blade or chisel f. The jaws are pivoted together so as to be adjustable up and down and in the path of a circle by means of a set pin g and slots g^1, and the blade or chisel is fastened or clamped between the jaws by means of a set screw F which passes through the moving jaw and bears against the stationary jaw, as illustrated in Fig. 2. By thus clamping the blade or chisel at its lower end it is made to become as it were a part of the jaws and thus play is prevented and danger of breakage by concussion with the stone avoided, and by having the picks pivoted, as shown, by simply loosening the nut g^2 of the set pin they can be set to cut all in the same line and at equal depths while dressing the lands of the stone, and at right angles with the lands or more or less oblique thereto as occasion may require in dressing the furrows, and by having the pin arranged in slots g^1 the picks can be adjusted to dress furrows more or less shallow as may be necessary.

H, is the cam shaft. Its cams h, h, h, h, are made of the same length as the distance between the picks, so that they shall operate upon the picks until they have completed the movement allotted to them, which is the distance from one pick to another, said movement being controlled by the sills b', b', which act as stops to the picks in their back and forward movements. The cams h, are all out of line or at right angles with each other, and they operate successively upon the picks.

I, is a small pinion on one end of the cam shaft. This pinion meshes into the large pinion on the screw shaft and thus combines the cam shaft with the screw shaft. The pinion I, is made smaller than the pinion C, in order that the speed of the cam shaft may be much greater than the speed of the screw shaft, and the picks thus operated sufficiently fast to perform their duty before completing their allotted movement.

J, is a vertical pin on each of the handles of the picks. Over these pins ring shaped weights may be placed and confined when it is necessary to give additional force to the picks. Instead of using weights a spring may be used if found desirable.

Operation: To dress the lands of a mill stone it is simply necessary to place the machine on the mill stone so that the picks will move from the eye toward the periphery. This being done the crank is turned and the picks caused to rise and fall by the cam shaft, and to traverse by means of the screw, in a straight line, and thus each one made to cut a portion of a straight line from the eye to the circumference of the stone. As

soon as the several portions of the line join and form one continuous straight line, from the eye to the circumference of the stone, the sill *b*, stops the lateral movement of the picks, when the machine is shifted slightly and the motion of the screw reversed, which causes the picks to traverse back again in a straight line, and thus to cut another line from circumference to eye. In this manner the operation proceeds until the whole of the lands of the stone are dressed. To dress the furrows it is simply necessary to have the picks traverse from end to end and to adjust the picks to the gradually increasing depth, the machine being moved along to cut different lines as occasion may require.

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

The combination of two or more picks E, E, with the guiding and operating screw shaft B and lifting cams *h*, *h*, when said parts are constructed and arranged and operated in manner and for the purpose set forth.

W. Y. GILL.

Witnesses:
G. Yorke At Lee,
Robt. W. Fenwick.