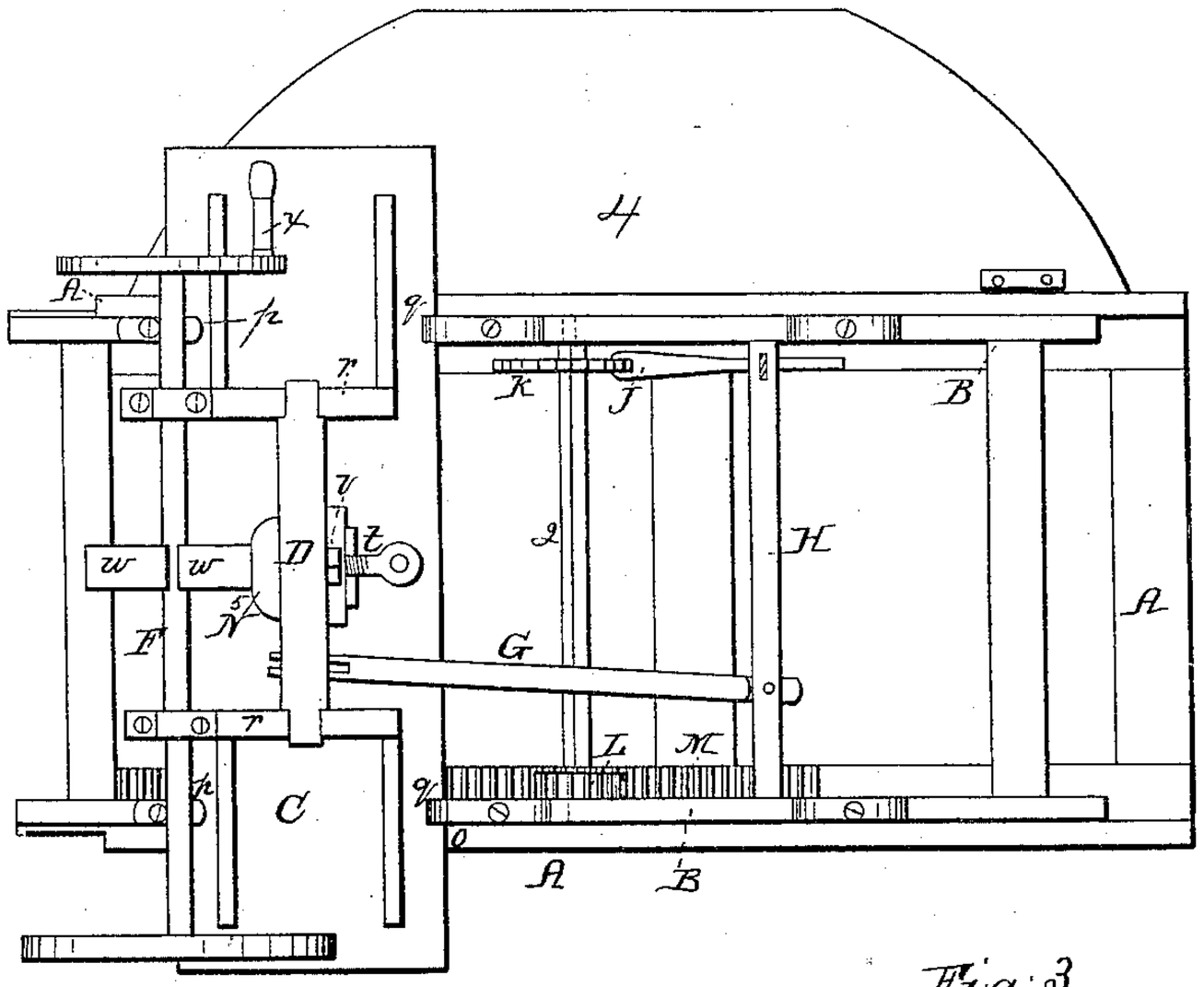
C. D. Brewer,

Dressing Millstones.

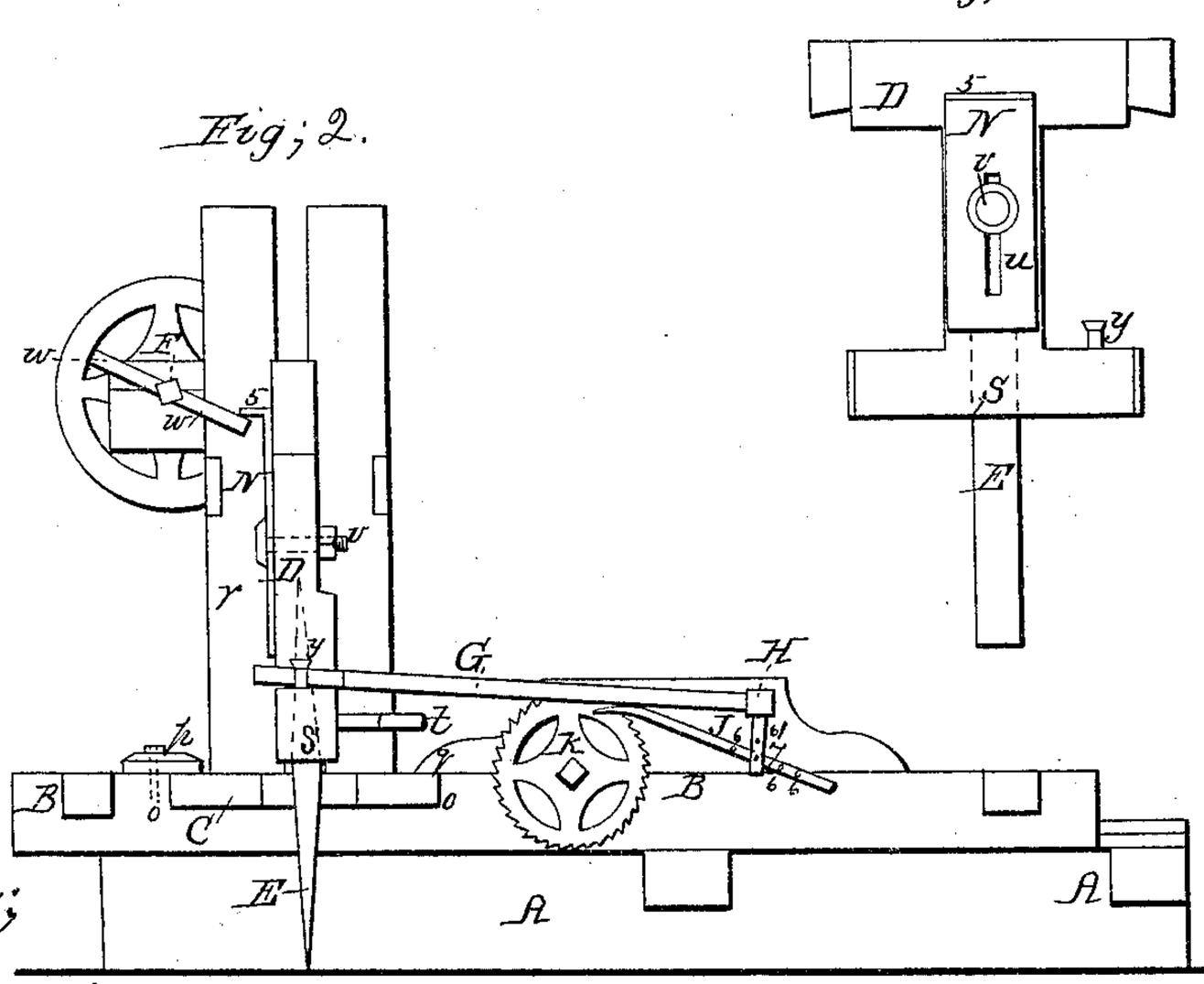
No. 29,857. Patented Sep. 4, 1860.

Fig; 1.



Fig; 3.

Fig; 2.



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UNITED STATES PATENT OFFICE.

CHARLES D. BREWER, OF LEWISBURG, PENNSYLVANIA.

MACHINE FOR DRESSING MILLSTONES.

Specification of Letters Patent No. 29,857, dated September 4, 1860.

To all whom it may concern:

Be it known that I, CHARLES D. BREWER, of Lewisburg, in the county of Union and State of Pennsylvania, have invented a new and useful Improvement in Millstone-Dressing 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, in which—

Figure 1, represents a plan view of a stone-dressing machine with the improvement applied; Fig. 2, a vertical longitudinal section of Fig. 1; and Fig. 3, a front view of the pick carrier and pick.

Like characters, when on the respective figures, indicate the same objects.

The nature of my invention consists in the arrangement and construction of certain parts of the machine, as hereinafter described, whereby the force of the pick is varied, while the feed may be either kept the same or varied also, at pleasure.

In the drawings, A, represents the stationary platform; B, the longitudinally-moving carriage; C, the transversely moving carriage; D, the pick carrier; E, the pick; F, the operating shaft; and G, H, I, K, L, and M, the devices whereby the required forward feed motion is given to the carriage (B); and N, an adjustable stud-plate, on the pick carrier, for regulating the extent of motion or force of the pick.

The platform (A) is adapted, in the usual manner, to rest upon the face of the stone which is to be dressed, and supports the carriage (B), which is adapted to slide longitudinally backward and forward (thereon)—it being supported steadily and guided accurately by tongues and grooves in the respective side pieces of the same, in the usual manner. The carriage (C) is constructed and applied to slide transversely upon the carriage (B), being guided by a recess, *o*, cut in each side piece of the same, and held therein adjustably by means of the turn-buttons *p*, *p*, and the fixed projections *q*, *q*, on the carriage (B). The carriage (C) has two stationary uprights *r*, *r*, which have, each, a slot in its upper end and a groove in its inner side, adapted together to receive between the said uprights the pick carrier (D), and also to allow it to be slid up and down, guided by the grooves and slots. The pick-carrier (D) is intended to be made of cast metal, in the form seen in Fig. 3, and with a suitable socket in its lower end, (at S) for the reception of one end of the pick (E),—the latter being adjustably secured therein by means of a thumb-screw, *t*, in the usual manner. On the face of this pick-carrier (D) the plate (N) is adjustably secured by means of a vertical slot, *u*, in the same, and a nutted bolt, *v*, which passes through both. The upper end of the plate (N) is bent outward so as to produce thereat the lip or stud, 5, and on the underside of this lip the arms *w*, *w*, of the operating shaft (F), alternately come in contact so as to raise and let fall the pick carrier (D) as the shaft (F) is rotated by the operator's revolving the crank-handle *x* on the same—the pick-carrier (D), with the pick (E), falling together, by gravitation, until arrested by the point or edge of the latter, striking the face of the stone—as heretofore.

On one of the lower arms of the pick-carrier (D) there is fixed a stud, *y*, which is embraced loosely by the slotted end of the lever (G) whose opposite end is jointed to the shaft (H), which shaft has a rigid arm, 1, projecting from its under side, and to which is adjustably jointed the pawl (I), which latter gears in the teeth of the ratchet wheel (K) on one end of the shaft 2; and on the opposite end of shaft (2) the pinion (L) is fixed, and gears into the rack (M) which is fixed longitudinally on the platform frame (A), all substantially as seen in the drawings, or as generally arranged in saw mill feeds and well known.

On the crank side of the machine, a platform, 4, is hinged, as seen in Fig. 1, for the purpose of affording a seat for the operator and also for enabling him thereby to hold the machine firmly and steadily in place, upon the face of the stone, while the machine is being operated.

The mode of operation is as follows: The platform (A) being placed, in the position desired, upon the stone as before stated; the pawl (I) is lifted and the carriage (B) drawn back, by hand, when the pawl is then let fall and rotary motion given to the crank-shaft (F); and as the arms (*w*, *w*,) are carried around, they, alternately, lift and let fall the pick frame (D), and at every fall of the same, the point or edge of the pick (E) strikes the face of the stone with a force or effect proportioned to the weight of the pick and carrier and the distance through which

they fall; and, at every rise of the same, the slotted end of the lever (G) is raised, and thereby the pawl I is caused to rotate the ratchet wheel (K) the space of one notch, and consequently, through the media of the pinion (L) and rack (M), to move the carriage (B), with its appendages, a like distance, or the distance which may be required between each place at which the pick is to strike the stone.

It will be perceived, as the plate (N) is adjustable on the carrier (D), and the pawl (I) also adjustably connected with the arm (1), by the holes 6—6, and pin 7, so as to cause it to turn the ratchet wheel (K) one notch at each forward motion of the pawl, that the pick frame may be operated to cause either a light or heavy blow to be given by the pick, as the nature or condition of the stone may require—without either diminishing or increasing the feed—by simply lengthening or shortening the leverage of the arm (1), and lowering or raising the plate (N). It will also be perceived that the carriage (C) can be readily moved and adjusted so as to cause it to traverse laterally over the whole width of the space (about a foot or fifteen inches) between the two side pieces of the platform (A), without moving the said platform,—or without requiring the operator to remove from his position upon the same; and the pick-carrier being constructed and arranged to slide between the uprights (*r*, *r*,), and to be detached from the slotted lever (G), as described, the said pick and carrier can be readily withdrawn for sharpening the pick &c., or replaced with the greatest facility, as occasion may require.

The whole apparatus is simple in construction, very effective and practical for the purpose, and besides, is neither costly nor liable to get out of order in using.

Having thus fully described my improved machine, and pointed out its utility, what I claim as new therein of my invention, and desire to secure by Letters Patent is—

The use of the plate (N) when the same is made adjustable on the pick carrier (D) by means of the slot (*u*) and screw bolt (*v*) or their equivalents, as described, and to operate in combination with the adjustable pawl (I) and lever arm (1), to enable the operator to vary the force of the pick without varying the feed of the carriage (B), as set forth and described.

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Witnesses:

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