

(No Model.)

T. C. BARNES.

DIAMOND MILLSTONE DRESSING MACHINE.

No. 286,251.

Patented Oct. 9, 1883.

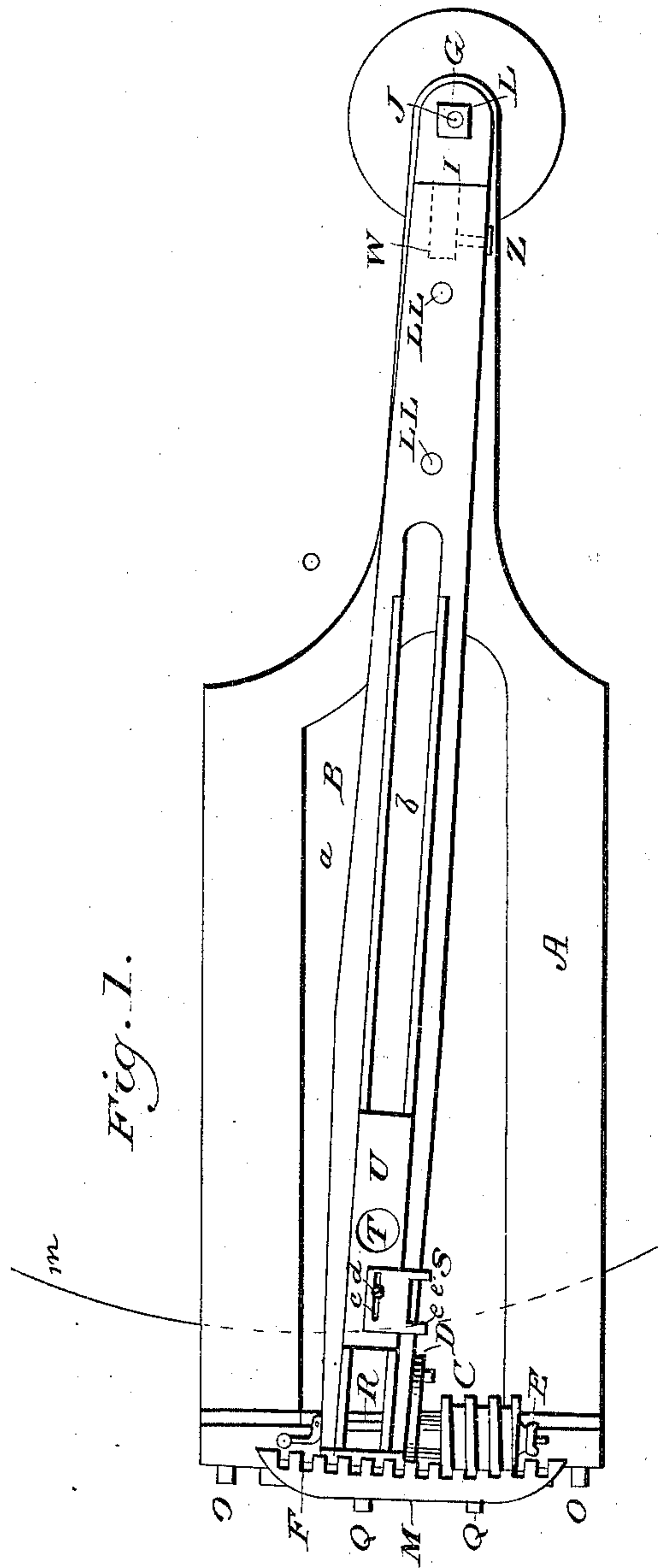


Fig. 1.

Fig. 4.

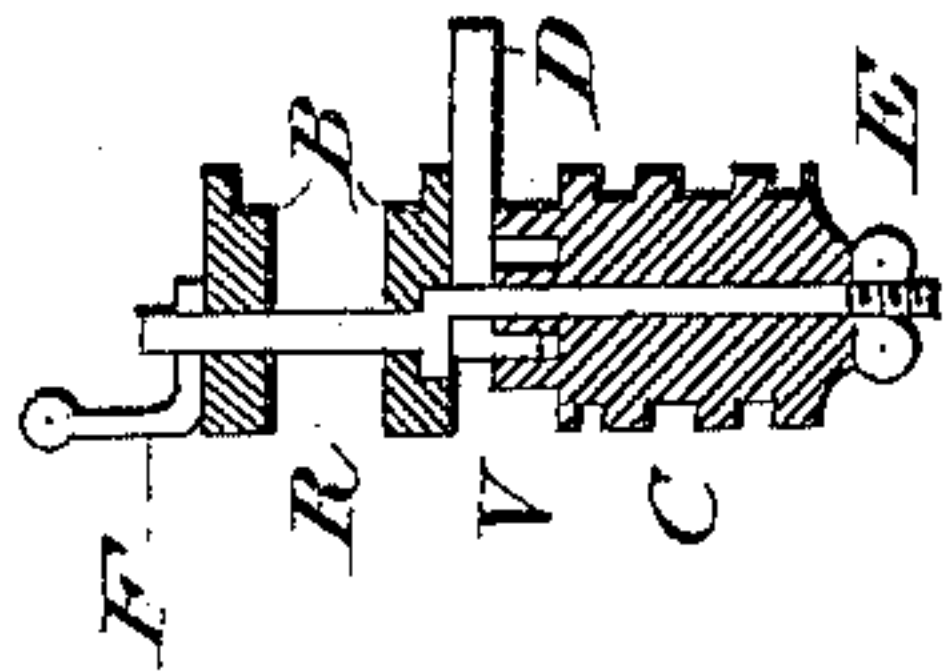


Fig. 2.

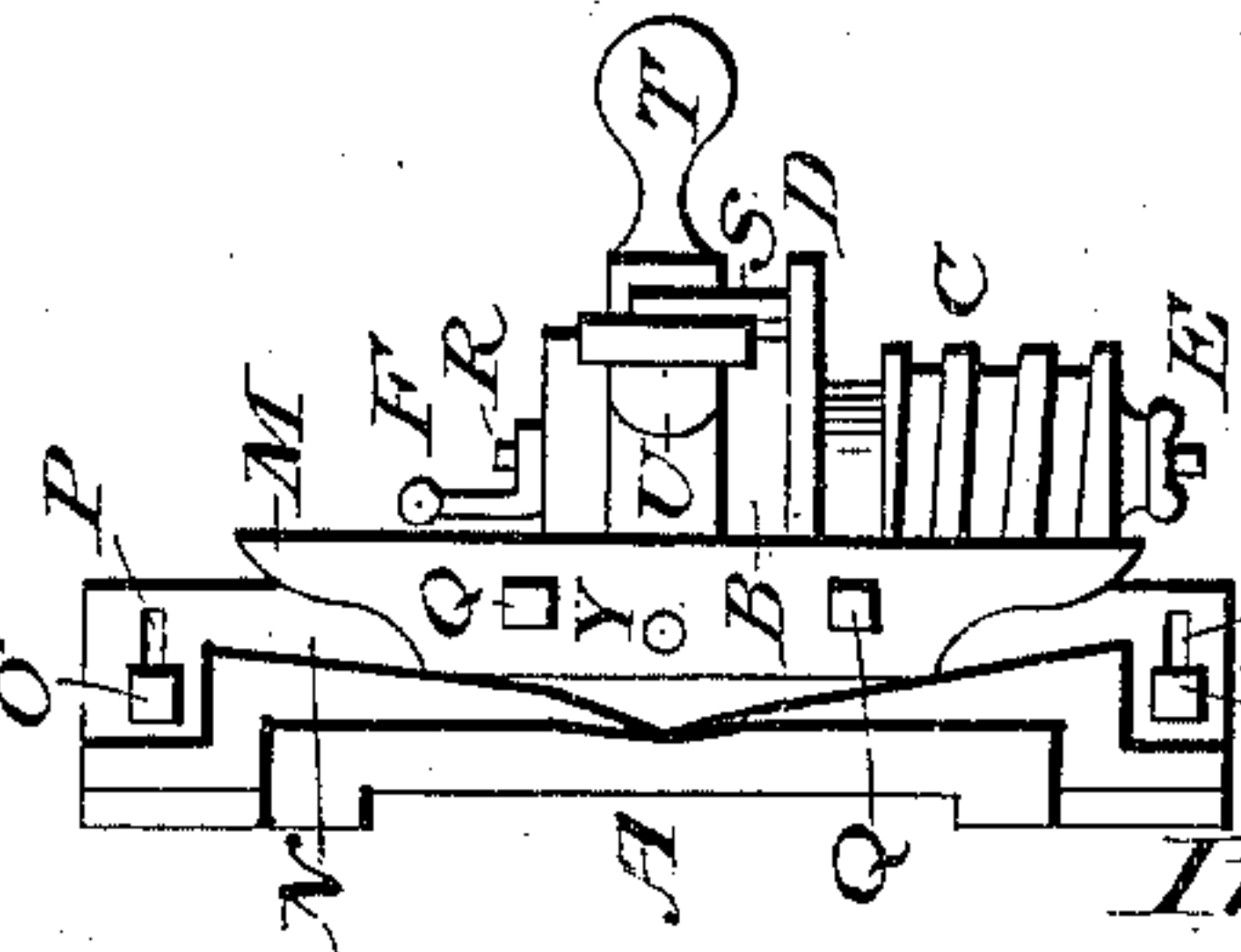


Fig. 3.

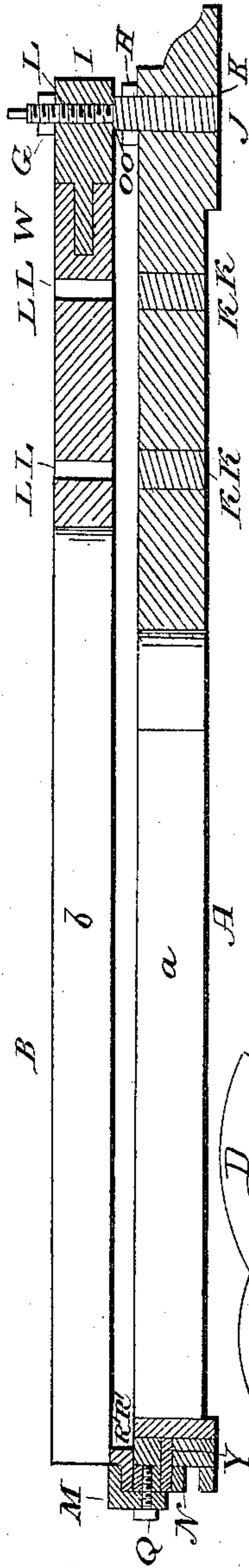


Fig. 2.

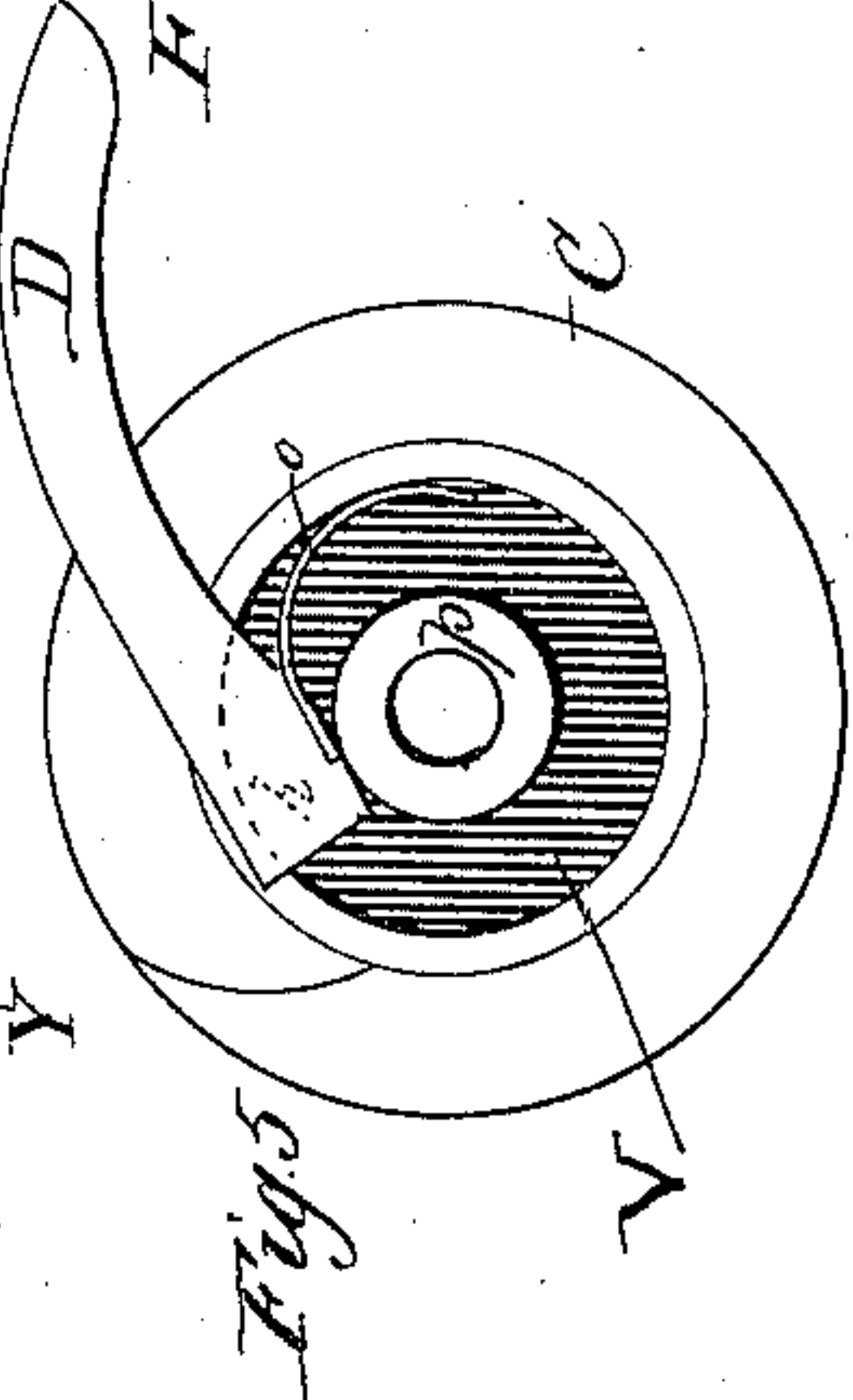
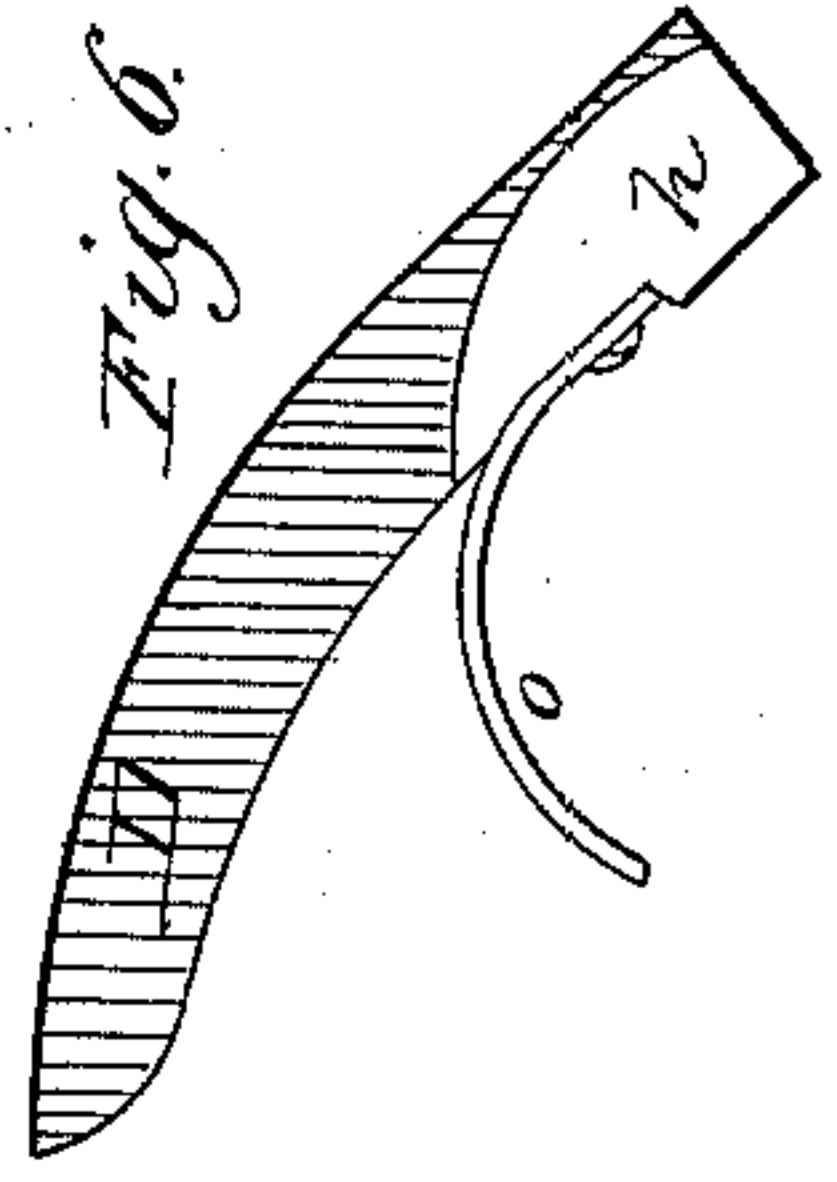


Fig. 6.



Witnesses:
Harry A. Barnes
William A. Barney

Inventor:
Thomas C. Barnes

UNITED STATES PATENT OFFICE.

THOMAS C. BARNES, OF LOGANSPORT, INDIANA.

DIAMOND MILLSTONE-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 286,251, dated October 9, 1883.

Application filed May 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. BARNES, of Logansport, in the county of Cass and State of Indiana, have invented a new and useful Diamond Millstone-Dressing Machine, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of my improved apparatus. Fig. 2 represents an end view of the same. Fig. 3 represents a longitudinal section of the frame, lipped radiating beam pivoted thereto, and rack. Fig. 4 represents a horizontal section through the feeder, showing one end of the radiating beam, the trigger, and the crank-shaft of the feeder. Fig. 5 represents an end view of the feeder with the trigger inserted in the circular cavity in the end of the feeder. Fig. 6 represents an inverted plan view of the trigger and its spring, and Fig. 7 represents an edge view of the trigger.

Similar letters indicate like parts in all the figures.

My invention relates to improvements in machines for dressing millstones; and it consists of a slotted bed-plate adapted to rest on the face of the millstone to be dressed, with one end at the eye of the stone, to which bed-plate is pivoted, at its inner end, a slotted radiating beam adapted to turn circularly on the bed-plate, and also to revolve axially on a gudgeon, the radiating beam carrying a slide in its slot, provided with a handle on its upper face, by means of which the slide is reciprocated, and provided with a diamond on its lower face, to cut the stone in the reciprocations of the slide, the latter being provided with an adjustable gage-plate, which operates a trigger in a cavity in one end of a feeder, provided with spiral grooves on its outer surface, which engage with a curved rack secured to an adjustable bolster, and impart a circular movement to the outer end of the radiating beam, secured to the feeder or driver, as hereinafter more fully set forth.

In the accompanying drawings, A represents the bed-plate of the machine, provided with a longitudinal slot, *a*. One end of the head-plate A is placed at the eye of the millstone, as shown in Fig. 1, and rests thereon, with its

opposite end projecting beyond the circumference *m* of the millstone.

B represents a radiating beam, pivoted at its inner end to the bed-plate A by the threaded bolt, J, provided with a shoulder, O, for the end of the radiating beam B and gudgeon I to rest on. The pivot-bolt J passes through holes L and K in the radiating beam B and bed-plate A, and is secured in place by the nuts G and H, as shown in Fig. 3. The beam B can be raised or lowered by turning the bolt J at its upper end. The bolt J can be inserted in any of the series of holes L L K K, as shown in Figs. 1 and 3, when required to be on a level surface. The beam B is provided with a longitudinal slot, *b*, in which a slide, U, is made to reciprocate. The slide U is provided with a handle, T, on its upper face, by which it is operated, and carries a diamond on its lower face, projecting through the slots *a b* in the bed-plate and radiating beam, whereby the millstone-dress is cut.

S represents a sliding gage-plate, adjustably secured to the top face of the slide U by means of the slot *c* and set-screw *d*, for the purpose of regulating a trigger, presently described, and provided with lips *e*, for operating the trigger D. The trigger D is provided on the rear end of its lower face with a short curved projection, *h*, to which a curved spring, *o*, is secured. The curved projection *h* and curved spring *o* are adapted to fit in a cylindrical cavity or ring, V, in the inner end of a feeder or driver, C, provided with spiral grooves on its outer surface. The cavity V is formed between the hub *p* of the feeder and the internal surface of the cylinder or ring, and into this cavity the curved projection *h* is inserted, a portion of the lower face of the trigger, near its rear end, resting on the end of the feeder, and the outer face of the forward end of the spring bearing against the side of the cavity V and holding the trigger in place. By this construction the trigger D, operated by the lips of the gage-plate S in the reciprocations of the slide by means of its handle T, will turn the trigger in its cavity V without moving the feeder; but when reciprocated in the opposite direction, the spring will be brought to bear on the side of the cavity V, and rotate the feeder. The gage is provided

with two lips, one of which throws the trigger forward and the other backward.

The feeder C is made fast to an eccentric-shaft, R, as shown in Fig. 4, which also passes 5 through the outer end of the beam B. The feeder C is secured in position on its eccentric-shaft R by a thumb-nut, E.

F represents a crank-nut to secure the shaft R to the beam B, and also for throwing the 10 feeder C in and out of gear with a curved rack, M, with which the feeder C engages. The curved rack M, which engages with the spiral grooves on the outer surface of the feeder C, is secured to an adjustable or tipping bolster, 15 N, by screws Q Q. The bolster N is hung on a pivot, Y, which passes through its center and into the middle of the end of the bed-plate A. Slots P P and bolts O' O' and nuts are provided, whereby the bolster may be adjusted, 20 as desired, and held in place.

R' (see Fig. 3) is a lip, which projects at the bottom of the radiating beam B, at the end of the latter, and passes under the curved cog-frame M.

25 I represents a pivoted shouldered gudgeon, secured in the inner end of the radiating beam B, thus allowing the radiating beam B to turn

on the shoulder of the gudgeon, or on its axis. The beam B is held in any desired position by the threaded bolt Z.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is— 30

1. In a machine for dressing millstones, the combination, with the pivoted tipping or ad- 35 justable bolster N, having slots P P, and the radiating beam B, connected therewith, of the shouldered gudgeon I, having clamp-screw Z, for securing said beam in any adjustment around its own axis, and the center pivot-bolt, 40 J, fixed in frame A, all as shown and described.

2. In a machine for dressing millstones, the combination, with the pivoted beam B, having lip R', and the bed-plate A, of the notched 45 plate M, the spirally-grooved feeder C, trigger D, connected with the latter, the diamond-carrying slide U, and its attached gage S, all as shown and described, to operate as and for the purpose specified.

THOMAS C. BARNES.

Witnesses:

WILLIAM EMMETT,
DAVID MIDDLETON.