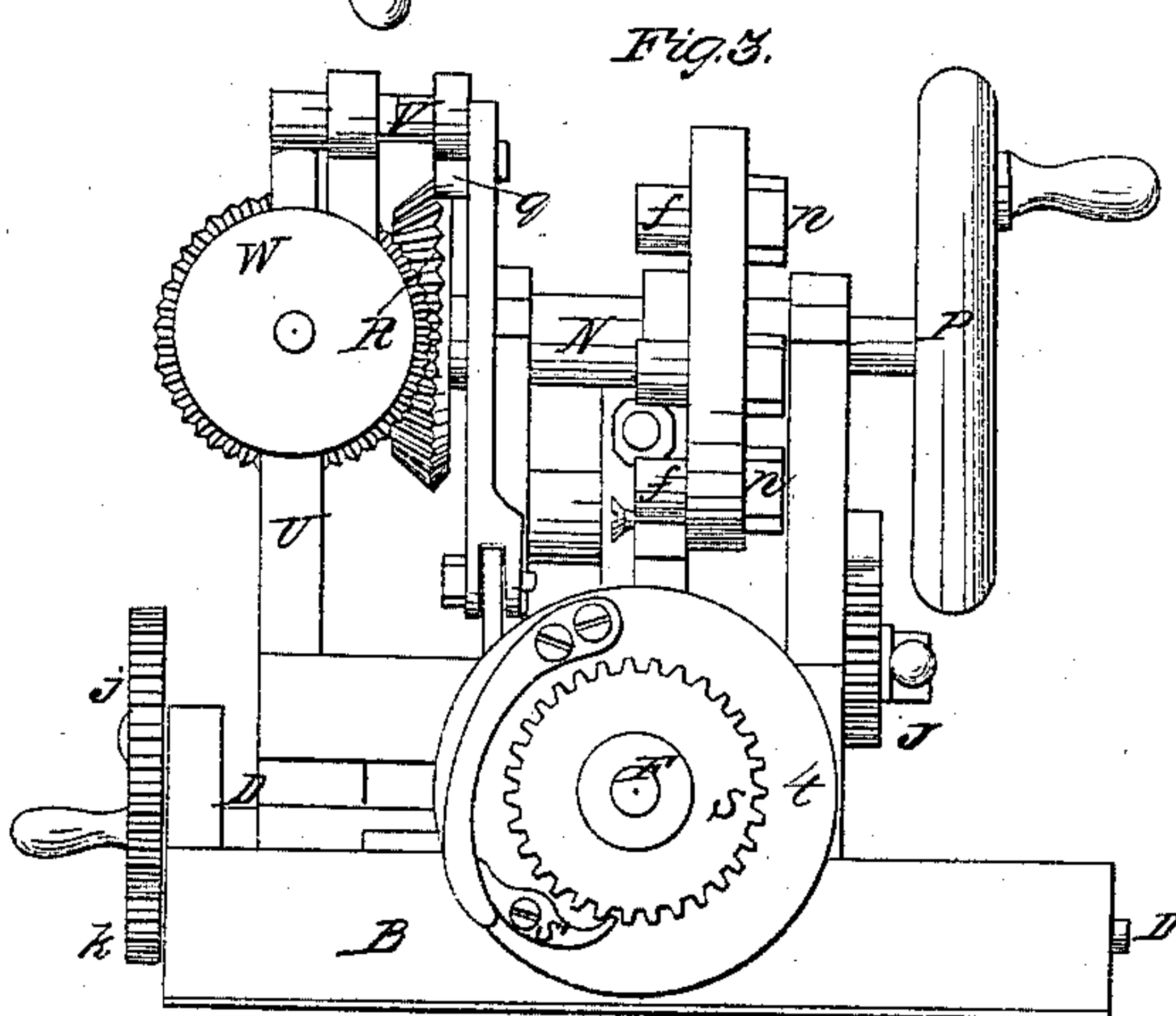
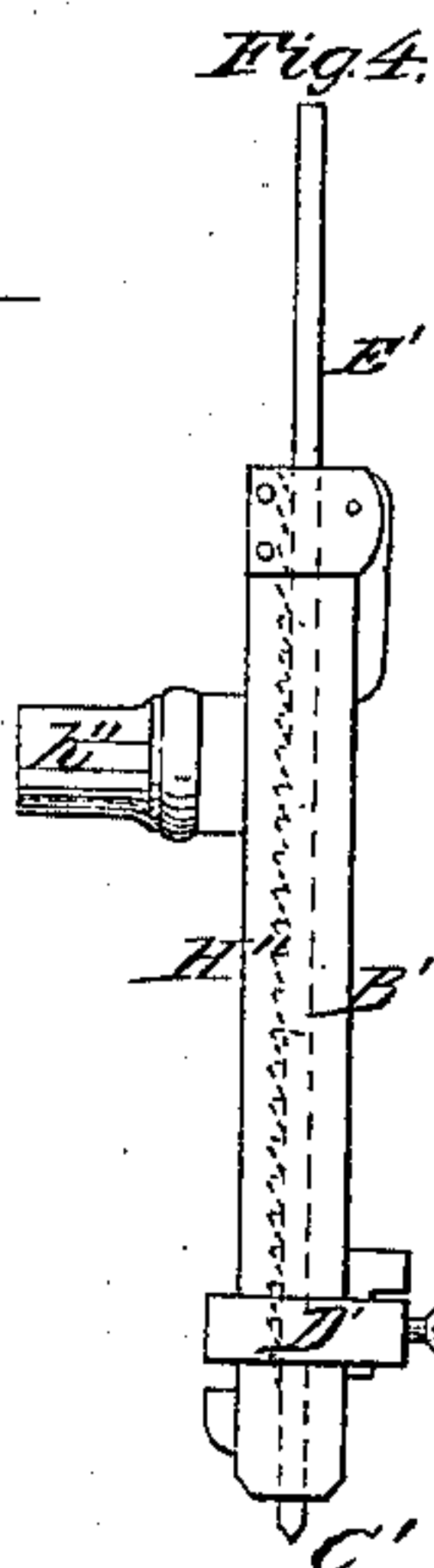
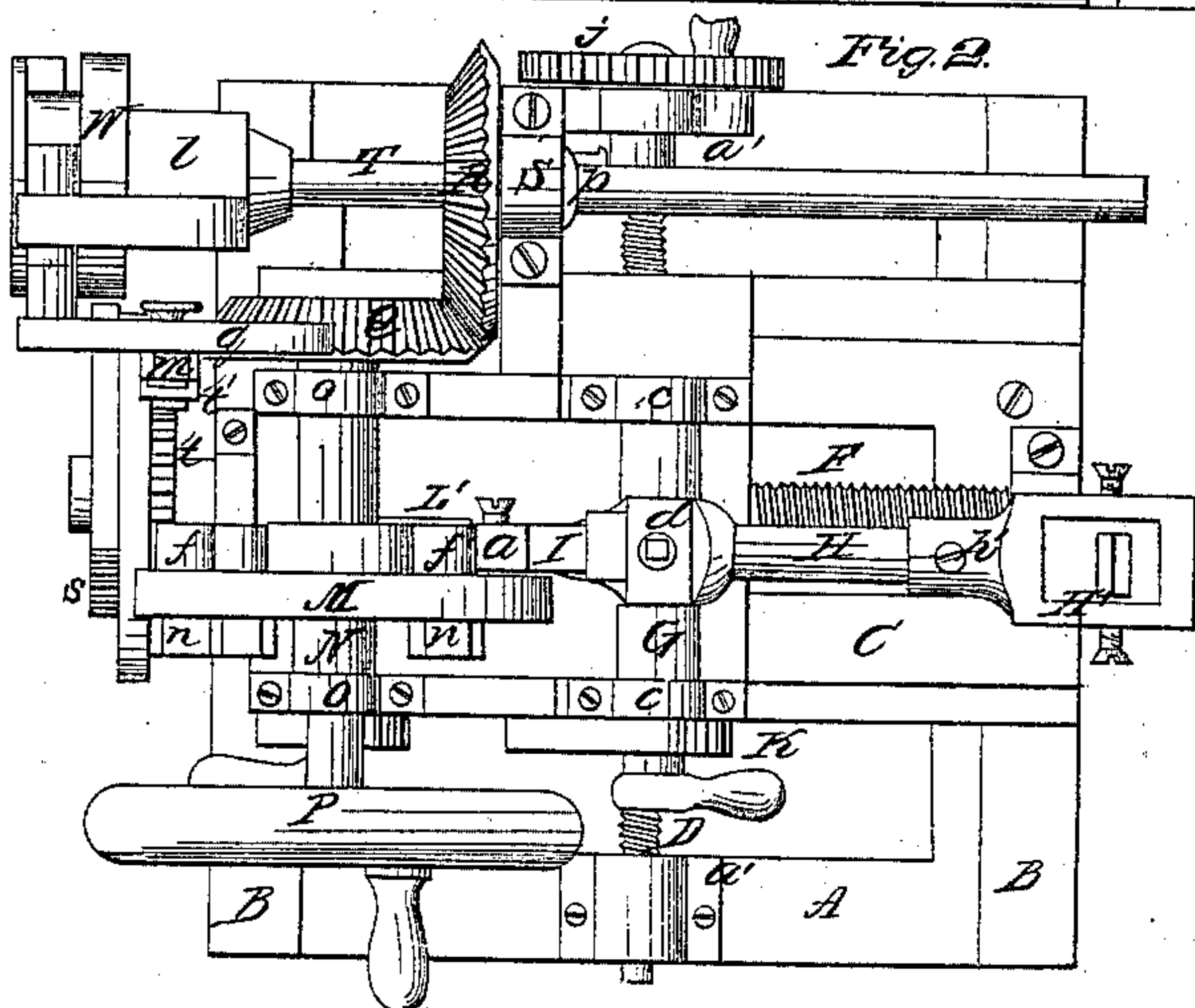
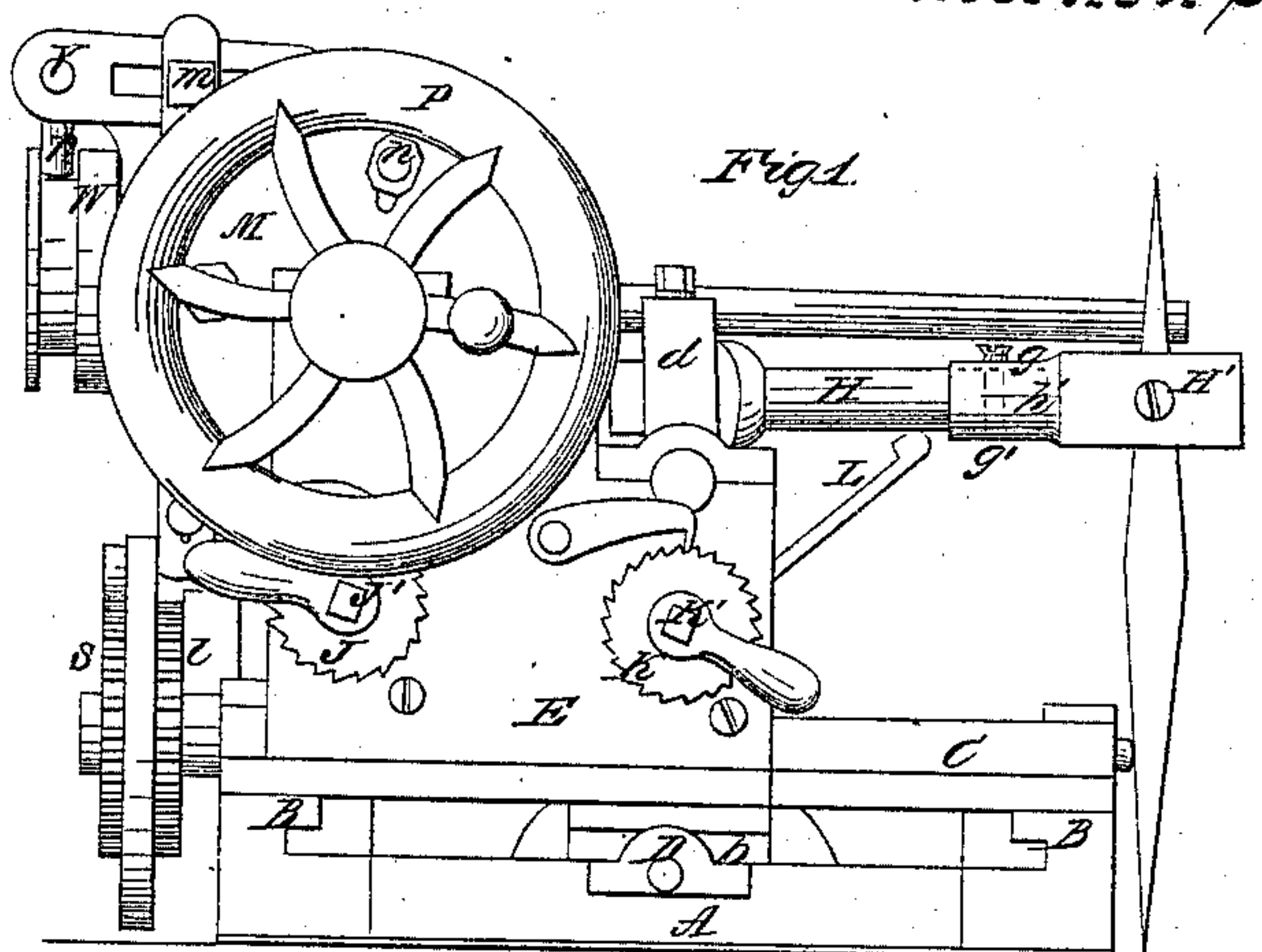


I. Frelich, Dressing Stone.

N^o 33,191.

Patented Sep. 3, 1861.



Witness:
J. H. Boudrie
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UNITED STATES PATENT OFFICE.

ISAAC FRELIGH, OF BARDSTOWN, KENTUCKY.

IMPROVEMENT IN MACHINES FOR DRESSING STONE.

Specification forming part of Letters Patent No. 33,191, dated September 3, 1861.

To all whom it may concern:

Be it known that I, ISAAC FRELIGH, of Bardstown, in the county of Nelson and State of Kentucky, have invented a new and useful Improvement in Machines for Dressing Stones; 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, making part of this specification, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a plan. Fig. 3 is a rear elevation.

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

The subject of my invention is a machine for dressing and furrowing millstones of every description to suit the different kinds of grain to be ground; and the invention consists in the peculiar construction and arrangement of parts, hereinafter explained.

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 bed-plate of my machine, provided on its under side with a strip a^4 , of gum-elastic or analogous substance, (shown in blue,) for the purpose of causing it to cleave to the face of the stone to be dressed, and thereby prevent vibration or moving about of the machine while in operation.

B B represent two lateral ways attached on opposite sides of the bed-plate.

C is a sliding frame fitted so as to have movement upon the ways B.

D is a screw journaled parallel with and midway of the ways B in boxes $a' a'$, attached to the bed-plate. The said screw works through a nut b , attached to the under side of the sliding frame C, by which means the frame is moved in a lateral direction.

E represents a carriage supporting the actuating mechanism of the machine and fitted to slide longitudinally to the sliding frame C and at right angles to the motion of the latter. The carriage is moved forward and backward by a screw F, journaled in boxes at each end of the sliding frame and working through a nut attached to the under side of the carriage in precisely the same manner as the sliding frame.

G represents a rock-shaft fitted in boxes $c c$,

provided with a vertical slotted arm d , which receives the shank of the pick-handle H.

I is a horizontal arm attached to the under side of the rock-shaft and provided with an adjustable face a , against which the projections f in the face-plate M impinge as the shaft N is revolved, and thereby impart an intermittent motion to the pick.

The shank of the pick, fitting the vertical slotted arm, can be adjusted and secured by means of a screw, so as to accommodate picks of different lengths and have them always strike the face of the stone at the same angle.

H' is the pick-stock, provided with a socket h' , which fits upon the end of the handle H. The pick-stock is secured upon the handle by means of a screw g , the point of which enters a latitudinal groove g' made in that portion of the handle fitted within the socket and represented by dotted lines in Fig. 1. This groove permits the pick-stock to be adjusted, so that the pick will always strike square upon its edge.

Fig. 4 represents another form of pick-stock and pick, which is more particularly intended for light work. H'' is the stock, provided with a socket h'' , by which it is attached to the pick-handle in the same manner as the other stock. B' represents a hinged lid, between which and the stock the pick C' is secured by a clamp D', embracing the stock and lid. The upper end of the pick rests against the follower E', provided on one side with ratchet-teeth, which engage in corresponding teeth in the stock. (Shown in dotted lines in Fig. 4.) This construction of pick-stock admits of a ready adjustment of the pick and at the same time holds it rigidly in position.

J and K are rag-wheels secured, respectively, upon shafts J' and K', to which are attached springs L L', bearing upward, the former beneath the handle H and the latter beneath the horizontal arm I, for the purpose of adjusting the stroke of the pick and regulating its force.

M is a disk-plate secured upon shaft N and provided with a series of radial slots, in which the shanks of pins $f f$ are inserted and secured by screw-nuts $n n$. The shaft N has its bearings in boxes O O of the carriage. P is a balance-wheel secured upon one end of the shaft

N, and Q a bevel gear-wheel secured upon the opposite end, which works into a bevel gear-wheel R, which is provided with a hollow journal *p*, fitted to revolve in box S, attached to the carriage.

T is a shaft fitted at one end in a box *l*, attached to the vertical standard V, secured upon the bed-plate. The said shaft is supported at its other end in the hollow journal, through which it passes. A feather in the hollow journal, fitting into a groove in the shaft T, causes the two to revolve simultaneously, and at the same time permits the hollow journal and gear-wheel to have lateral movement upon the shaft.

V represents a rock-shaft, with a slotted arm *q* secured upon one end and an arm *r* upon the opposite end, which works in a cam-groove formed in the periphery of the wheel W, secured upon the end of the shaft T.

t is a flanged gear-wheel fitted loosely upon the end of the screw F, and *s* is a ratchet-wheel keyed to the same on the outside of the flanged gear-wheel. A forward or backward motion is imparted to the carriage by means of a spring-catch *s'*, working into the teeth of the ratchet-wheel *s* as the flanged gear-wheel is revolved by means of the rack *t'*, connected with the slotted arm. By adjusting the wrist-pin *m* in the slotted arm *q* the feed can be

regulated to suit the quality of work desired. The motion of the carriage is changed by shifting the position of the spring-catch. The sliding frame is moved laterally by means of the gear-wheel *j* working into the pinion *k*, secured upon the end of the screw D.

By the above-described construction and arrangement of parts a machine is produced which is capable of doing a great variety of work. All the parts being made adjustable, it is equally calculated to do coarse or fine cracking, facing, or furrowing.

Having thus described my invention, what I claim as new herein, and desire to secure by Letters Patent, is—

1. The combination of the feathered shaft T, cam-wheel W, rock-shaft V, arms *q r*, rack *t'*, flanged gear-wheel *t*, and screw-shaft F, operating in the manner explained to impart an intermittent motion to the carriage E of an automatic stone-dressing machine.

2. The rag-wheels J K, shafts J' K', and springs L L', operating in conjunction to adjust the pick and regulate its stroke, as explained.

ISAAC FRELIGH.

Witnesses:

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