

(No Model.)

H. H. TAYLOR.
CULTIVATOR AND PULVERIZER.

No. 396,441.

Patented Jan. 22, 1889.

Fig. 1.

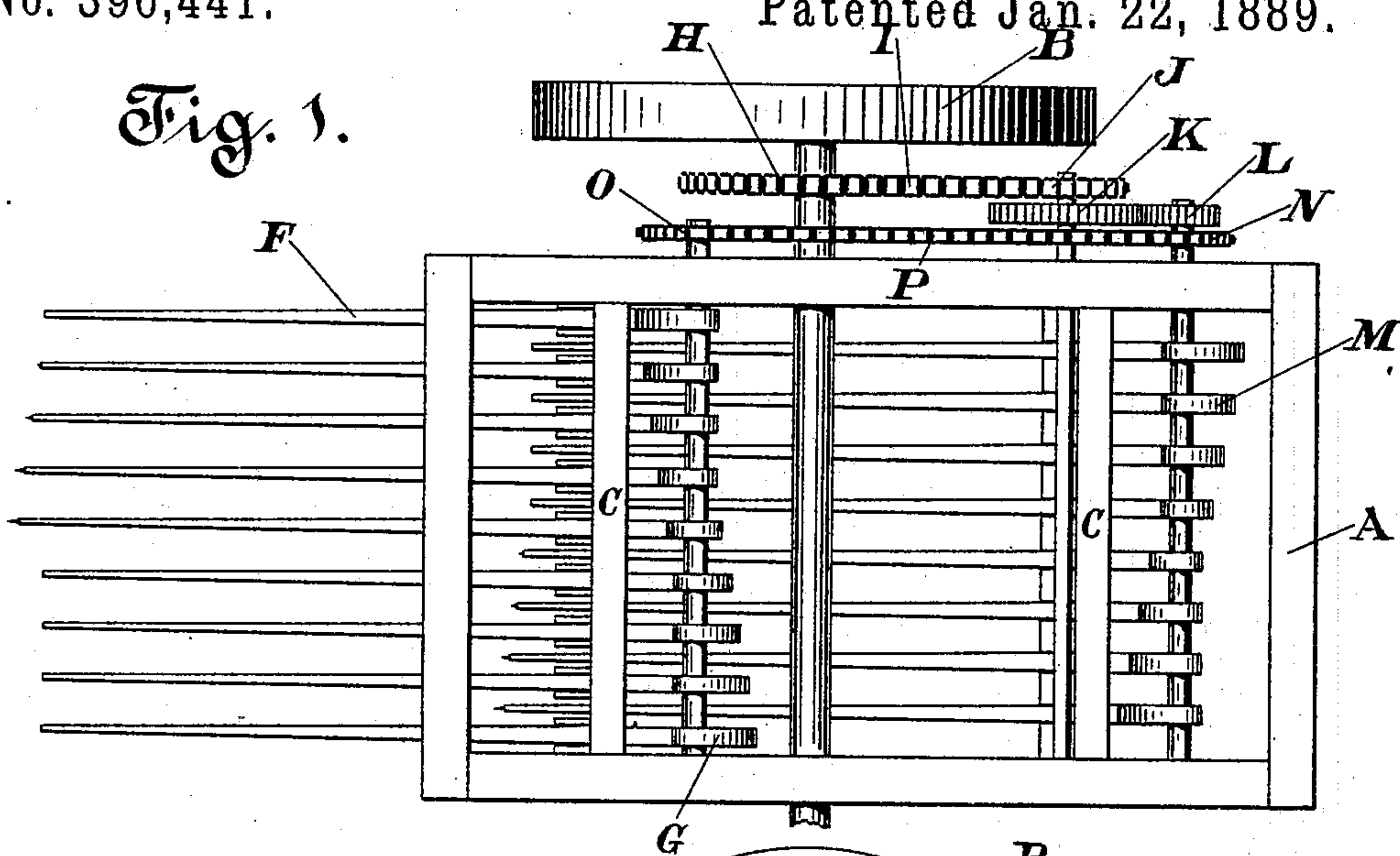


Fig. 2.

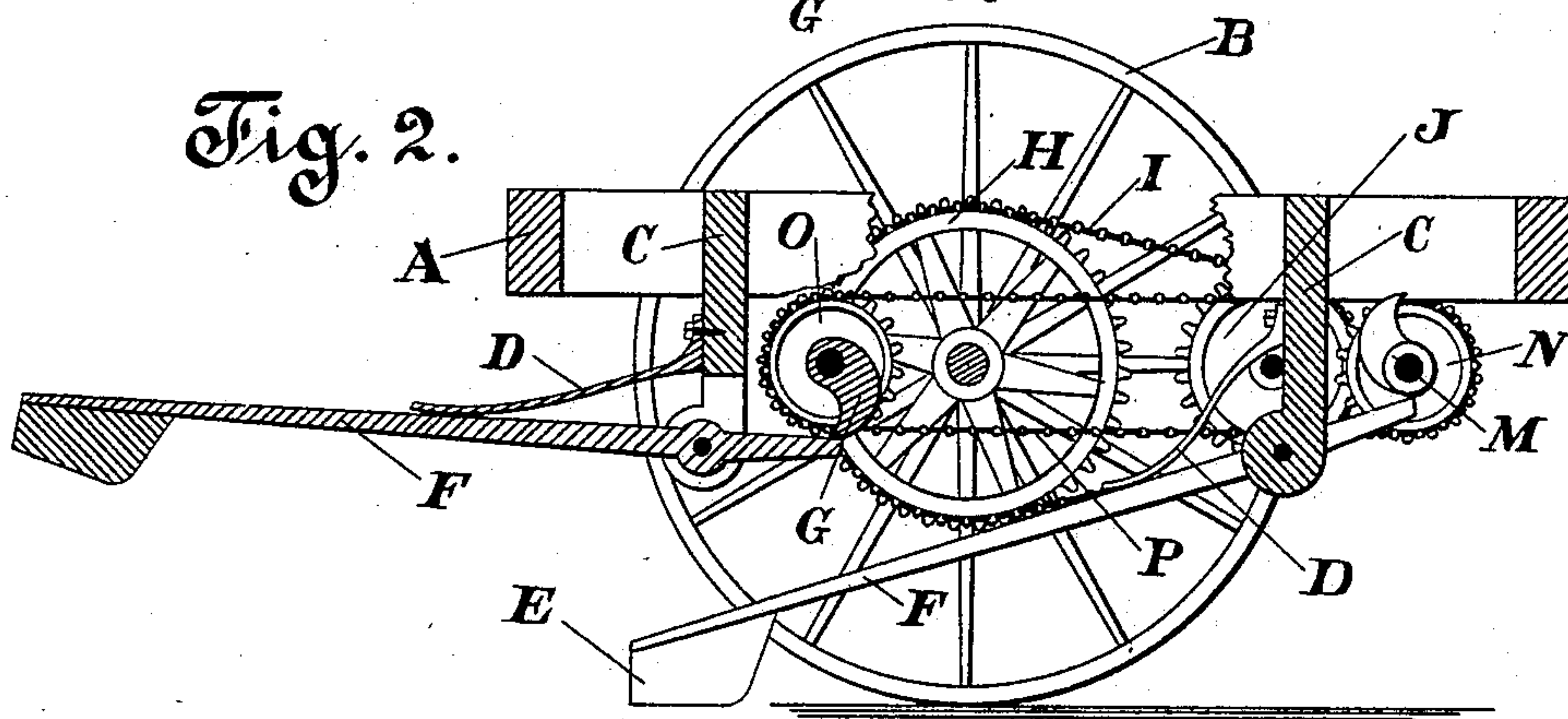
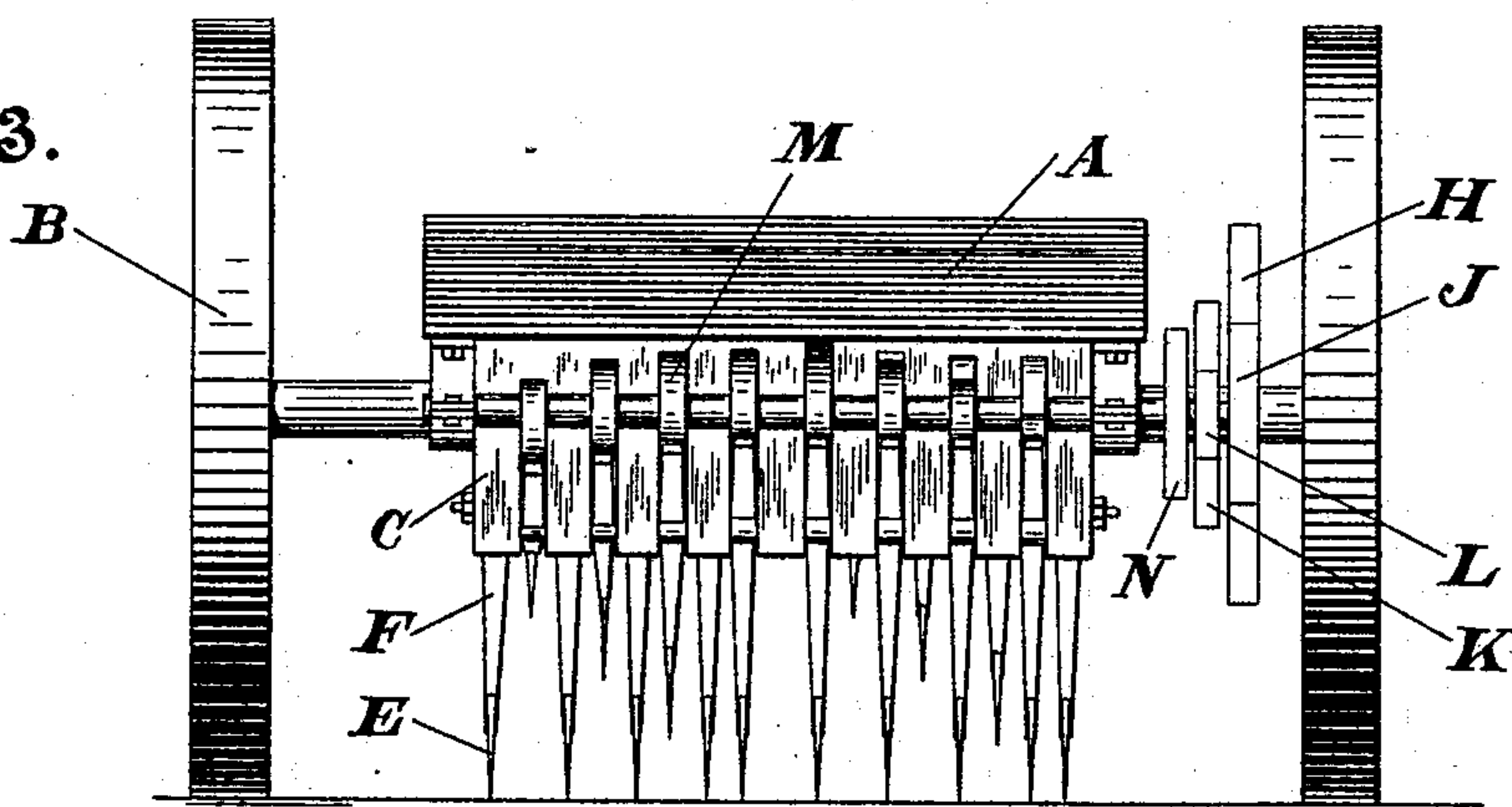


Fig. 3.



Attest.

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UNITED STATES PATENT OFFICE.

HORACE H. TAYLOR, OF SANTA ROSA, CALIFORNIA, ASSIGNOR TO HIMSELF
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CULTIVATOR AND PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 396,441, dated January 22, 1889.

Application filed August 9, 1888. Serial No. 282,385. (No model.)

To all whom it may concern:

Be it known that I, HORACE H. TAYLOR, a citizen of the United States, residing at Santa Rosa, Sonoma county, and State of California, have invented an Improvement in Cultivators and Pulverizers, of which the following is a specification.

My invention relates to improvements in cultivators and pulverizers, which will be understood by reference to the accompanying drawings, and the letters referring thereto.

Figure 1 is a plan view with one wheel broken off; Fig. 2, a side elevation of the same, and Fig. 3 a cross-sectional view showing the machine cut vertically through the center of the axis of the bearing-wheels.

A represents the main frame of the machine; B, the bearing and traction wheels; C, the cross-timber to which the cutter-bars are pivoted.

D represents the returning-spring.

E represents the cutters or pulverizing-blades.

F represents the cutter-bars.

G represents the cams on the rear shaft.

H represents the main sprocket driving-wheel.

I represents the connecting belt or chain, which is driven by the wheel H and drives the sprocket-wheel J, which is upon the shaft with and drives the spur-wheel K. The spur-wheel K gears with and drives the pinion L, which is upon the forward cam-shaft and revolves the cams M, and the sprocket-wheel N is connected with the sprocket-wheel O by means of the belt P.

Q and R represent braces.

S represents the shoulders and plates for attaching the main spindles or grounds T, upon which the bearing and traction wheels revolve.

The following is the construction of my improved cultivator and pulverizer: I generally form the frame A of suitable timber, although a metal frame may be employed with the same general result. I form the traction-wheels B with such corrugated periphery as is generally employed in machinery of that class when the gearing is to be revolved by the traction of the machine. I generally form the cutter-bars F of steel, with cutters E, also

of good hard steel, tempered in the way to secure the greatest durability and strength. I proportion the gearing so as to give a rapid motion to the cam-shaft, so as to give quick alternate strokes to the cutters E. I generally employ the usual chain-belts for connecting and operating the chain or sprocket wheels. I connect the sprocket-wheel H with the bearing-wheel B by means of pawls in the usual way to cause the same to revolve with the bearing-wheel B when it is moved forward and allow it to remain still while the wheel B is revolved in a backward direction, as the wheel H is loose upon the journal, and is only caused to revolve by means of the pawls connecting it with the bearing-wheel B.

The following is the operation of my improved cultivator and pulverizer: I do not confine myself to any particular capacity as regards size or power to operate the machine; but where animal-power is employed to draw the same I employ the usual mode of hitching the team, and a caster and steering wheel is not generally required; but where steam-power is employed to operate the same I employ a caster-wheel or other well-known device for guiding the same. As the machine is moved forward, the traction-wheel B is revolved, giving motion to the sprocket-wheel H, which in turn gives motion to the sprocket-wheel J by means of the belt I, which gives motion to the spur-wheel K, which, gearing with the pinion L, revolves the cams M and the wheel N, thereby revolving the cams G by means of the belt P. At each revolution of the cam-shafts the cams, being set alternately, cause the cutter-bars F to operate alternately and rapidly, by which means the cutters E cut up and finely pulverize the soil, cutting and destroying the weeds. By this arrangement the machine is rendered of very light draft compared to that of plows or cutters, which have a constant and dead drag in the ground.

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

In a cultivator and pulverizer, the combination, with the main frame, of the cross-bars C, the transversely-arranged rotatable shafts, the cams fixed to the said shafts, the two sets

of cutter-bars F, arranged one set in advance
of the other and journaled near one end to
the lower portion of the said cross-bars, and
the springs D, secured at one end to the cross-
5 bars and their opposite ends bearing upon
the upper sides of the bars, the said bars hav-
ing their upper ends extended beyond the

fulcrum-point to be engaged by the cams, sub-
stantially as specified.

HORACE H. TAYLOR.

Witnesses:

JOHN H. REDSTONE,
ADDIE NYE.