

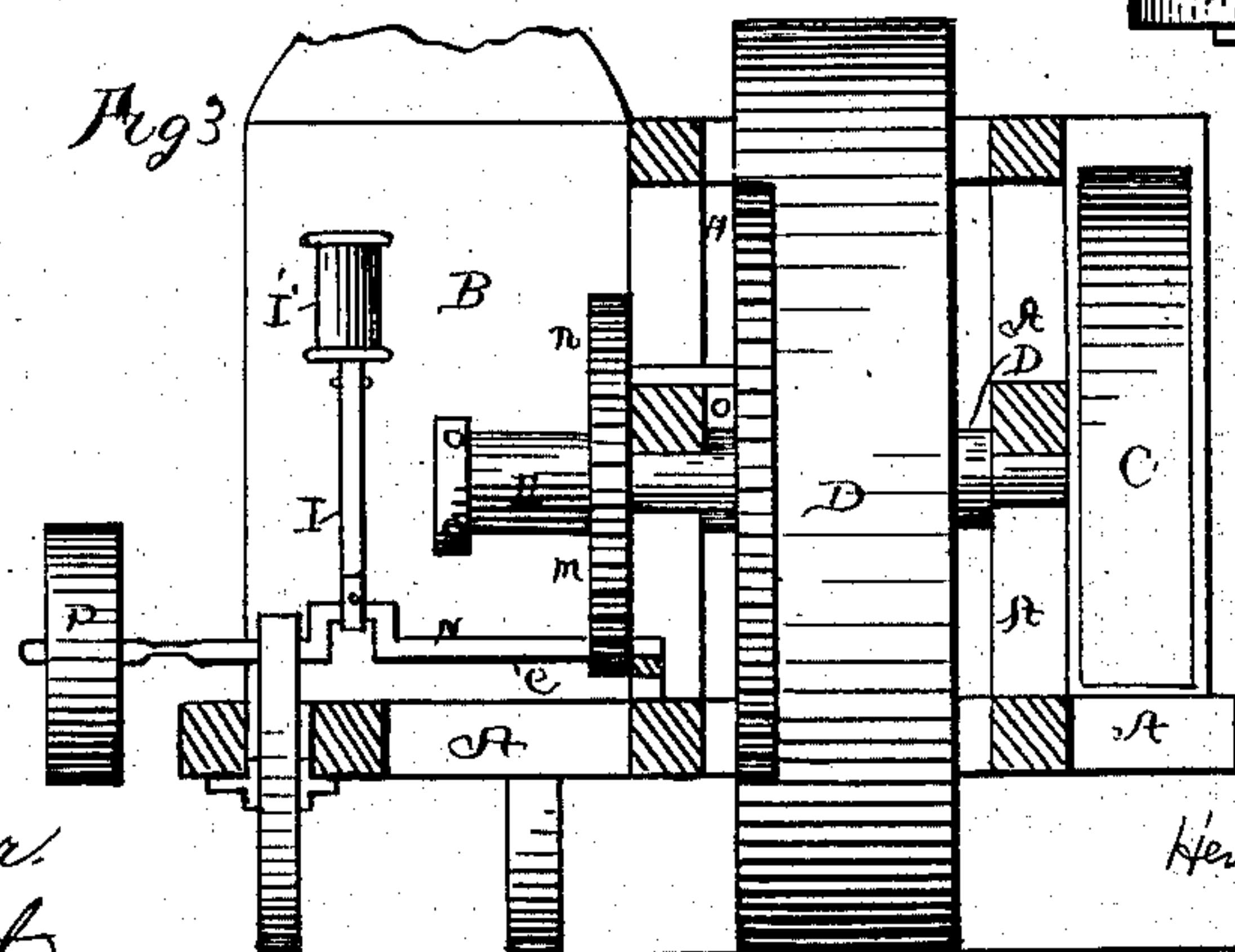
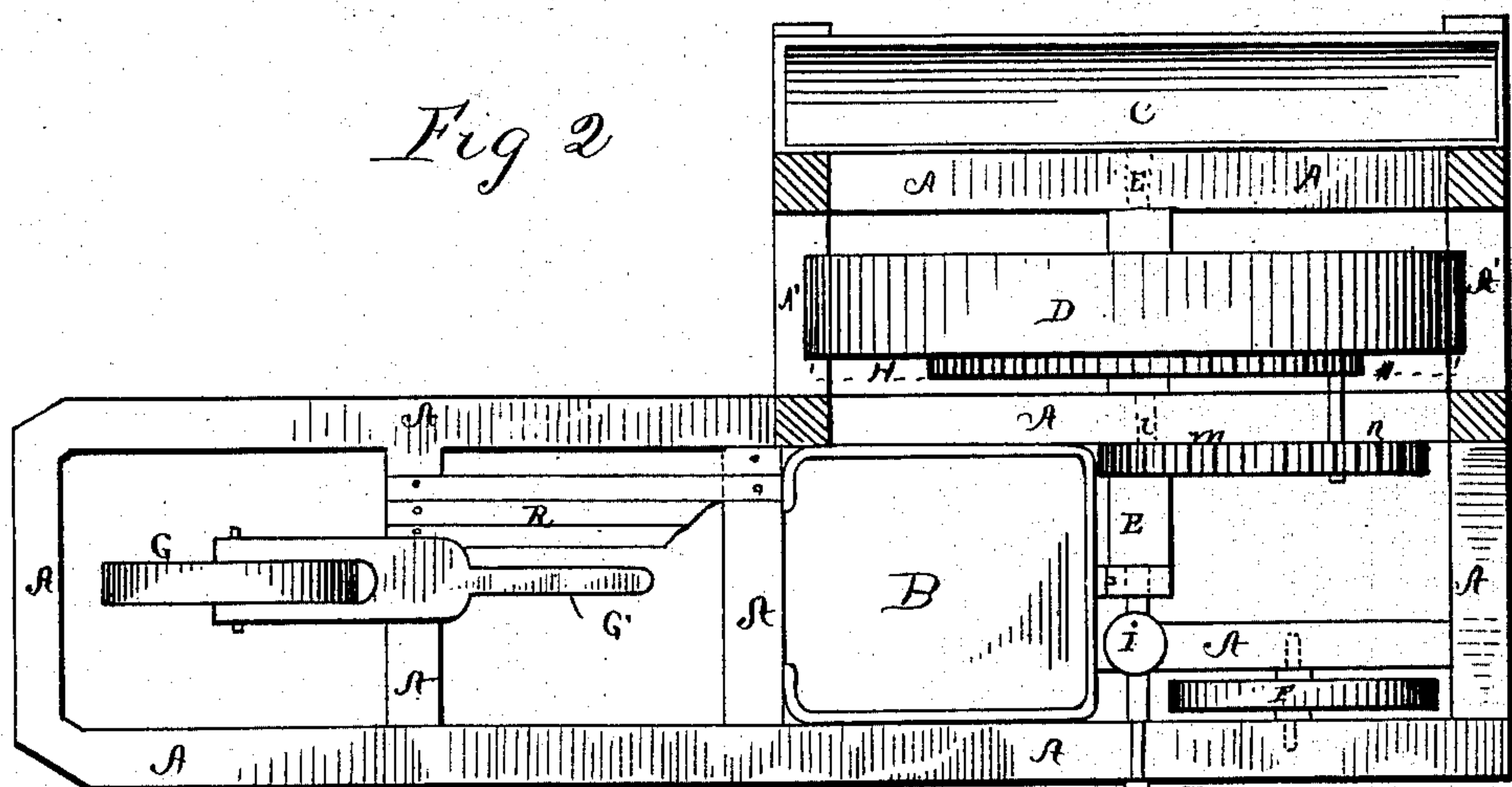
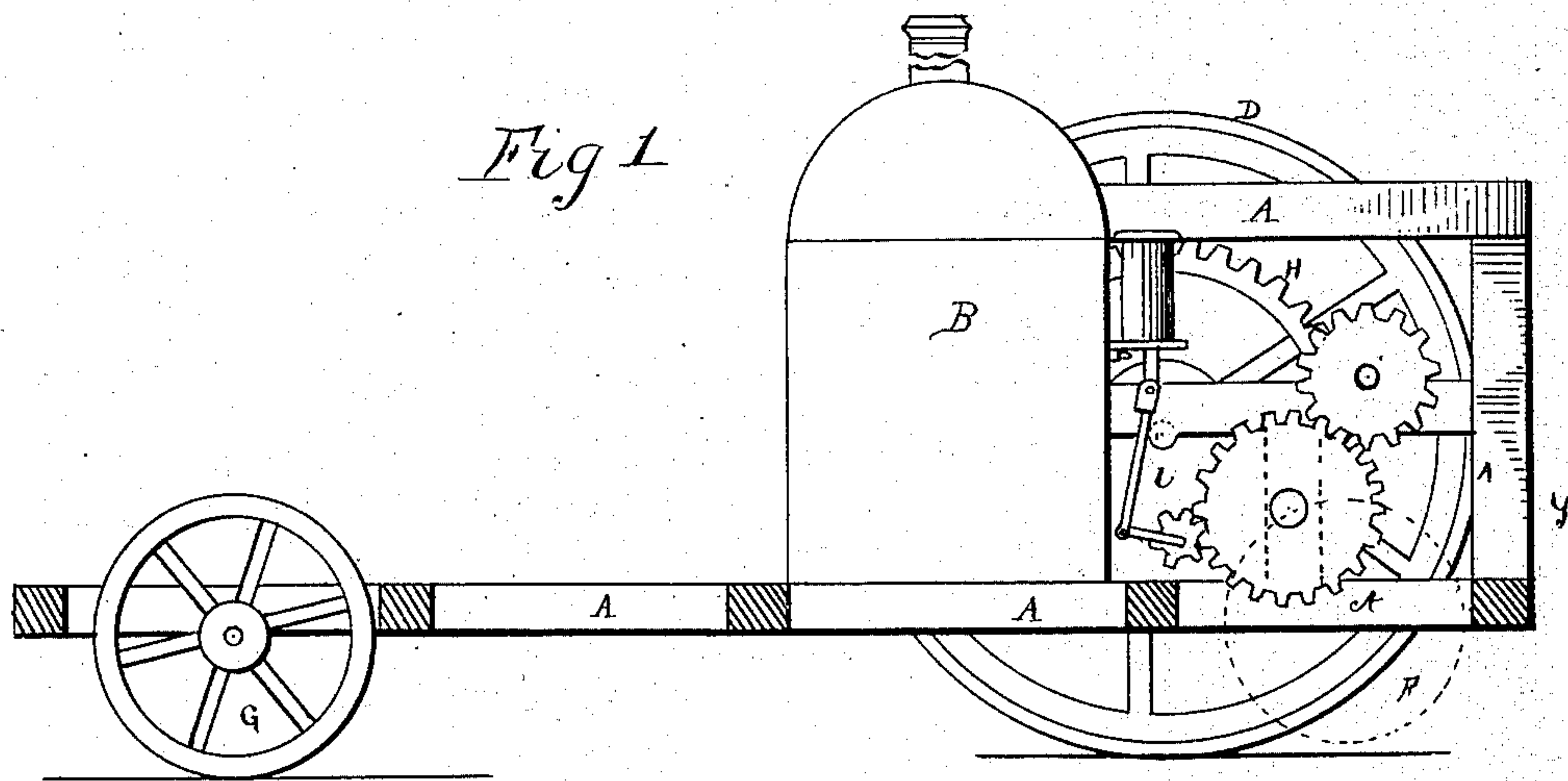
(No Model.)

H. RENDLEMAN.

TRACTION ENGINE.

No. 325,768.

Patented Sept. 8, 1885.



Witnesses
Harry S. Rohrer
R. E. Graub

Inventor
Henry Rendleman

J. H. Adriaans
Att'y

UNITED STATES PATENT OFFICE.

HENRY RENDLEMAN, OF ALTO PASS, ILLINOIS.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 325,768, dated September 8, 1885.

Application filed December 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY RENDLEMAN, a citizen of the United States, residing at Alto Pass, in the county of Union and State of Illinois, have invented a new and useful Traction-Engine, of which the following is a specification.

My invention relates to improvements in traction-engines; and its objects are, first, to provide a power that shall uniformly operate desirably for stationary or movable duty; second, to adjust its weighty parts so that the center of gravity of the entire machine shall be near the base and below the main axle; third, to secure such adaptation of the machine that it shall be capable of multiplex utility with invariable result; and, fourth, to attain these ends with simplicity and economy of structure. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side view of a machine embodying the principles of my invention, showing the correlation of the parts and the manner in which they coact in the production of the multifarious ends hereinafter referred to. Fig. 2 is a top plan view of the same; and Fig. 3 is a vertical section of the machine, taken on the line *xx* of Fig. 2.

Similar designations indicate corresponding parts in all the views.

Upon a strong frame-work, A, of any material, and having side extension, A', is mounted on one side a boiler, B, and on the other a water-tank, C, wherewith and a suitable heat-producer the power essential to the operativeness of the machine is generated. Between them, on a horizontal shaft, D', is suspended the traction-wheel D, which utilizes the motive power so produced in the propulsion of the machine and whatever is attached thereto.

E is the main shaft concentric with the shaft D'.

F is the balancing and G the guide wheel of the machine, the diversion of which is effected by a suitable handle, G', accessible from the floor R of the engine.

H is a large cog-wheel, serving to effect the revolution of the traction-wheel by transmitting the power of the actuating-pinion *o*, which in turn receives it from the pinions *l* *n* and the intermediate gear-wheel, *m*. This latter

may be shifted on its pivot *q*, so as to throw the shafts D' E out of action with the shaft K, and hence convert the movable into a stationary engine, the power in the latter case being taken up by the crank-shaft K, and thence conveyed by pulley *p* and belt to any desired point.

I is the steam-cylinder, whose contained piston reciprocates the connecting-rod I', and thus revolves the crank-shaft K, whose motion is transmitted either to the traction-wheel D or the pulley *p*, according as a locomotive or a stationary utilization is required, as above explained.

It will be understood that by means of this engine plowing may be efficaciously done by suspending one plow on each side of the machine, one of which is constantly lifted out of action, according to the direction being pursued, whereby turning is obviated. As the wheel D runs preferably in the last furrow, a good road-bed is secured, and owing to the equipoise of the machine, due to the relative location of the parts, a perfect balance is secured while in action. My invention contemplates pushing the plows; but it is no departure therefrom if the plows are pulled by the same means.

In harrowing, either simultaneously with the plowing or not, the harrow is dragged by a chain connecting it with a crane on the engine.

The grain-binder ordinarily used can, with ready alteration, be actuated by this engine upon suitably mounting it thereon.

In the propulsion of wagons ordinary means of attaching the engine thereto may be easily adopted to that end.

To effect the operation of stationary mechanisms this engine can be adapted without other change than throwing the cog-wheel *m* out of gear and connecting the pulley *p* by any suitable medium, as a belt, therewith.

Having fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The frame A, provided with side extension, A', and having the guide-wheel G in front and traction-wheel D and guide-wheel F at the rear thereof, actuated as illustrated.

2. The traction-wheel D at a rear corner of the machine, having an integral cog-wheel, H, concentric therewith, in combination with the crank-shaft K, actuated as shown, the pin-

ion *l*, gear-wheel *m*, pinions *n o* on the same shaft, and the frame A, having side extension, A', as set forth.

3. The frame A, in combination with the
5 boiler B, tank C, and traction-wheel D, said tank and boiler being placed on opposite sides of the wheel, to maintain the equilibrium of the machine and increase the tractive power of the wheel by adding to or adjusting the weight
10 upon it, as set forth.

4. The frame A, having floor R, whence the guide-wheel G may be diverted by its handle G', in combination with the wheels D F, located as shown, the boiler B and tank C of the

machine, cylinder I, and the means, herein 15 shown and described, whereby the power so generated is utilized either in the propulsion of movable loads or in the operation of stationary mechanisms, for the purposes and in the manner and relation specified. 20

In testimony that I claim the foregoing as my own I have affixed my signature in the presence of two witnesses.

HENRY RENDLEMAN.

Attest:

J. W. LEWIS,
WILLIS RENDLEMAN.