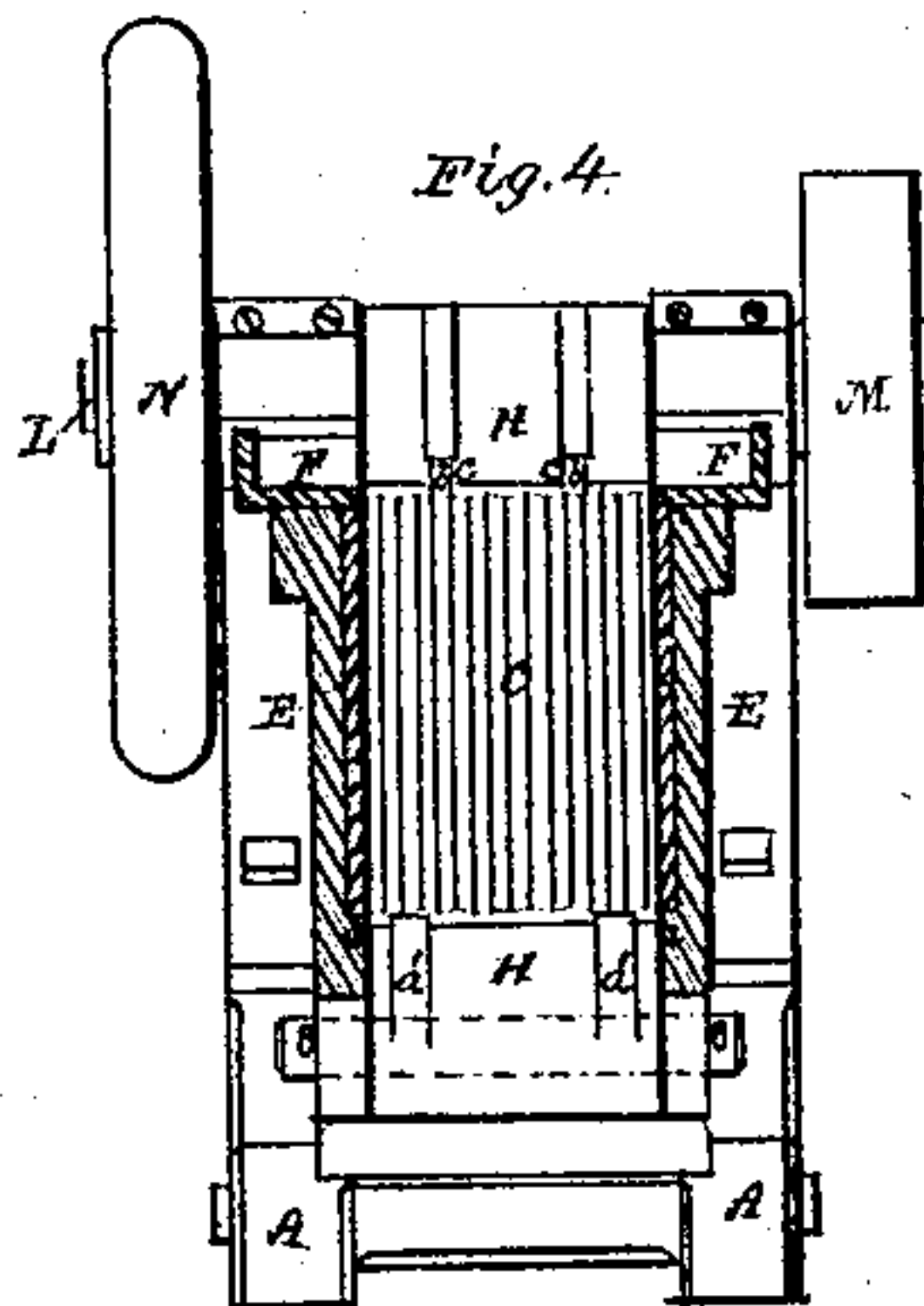
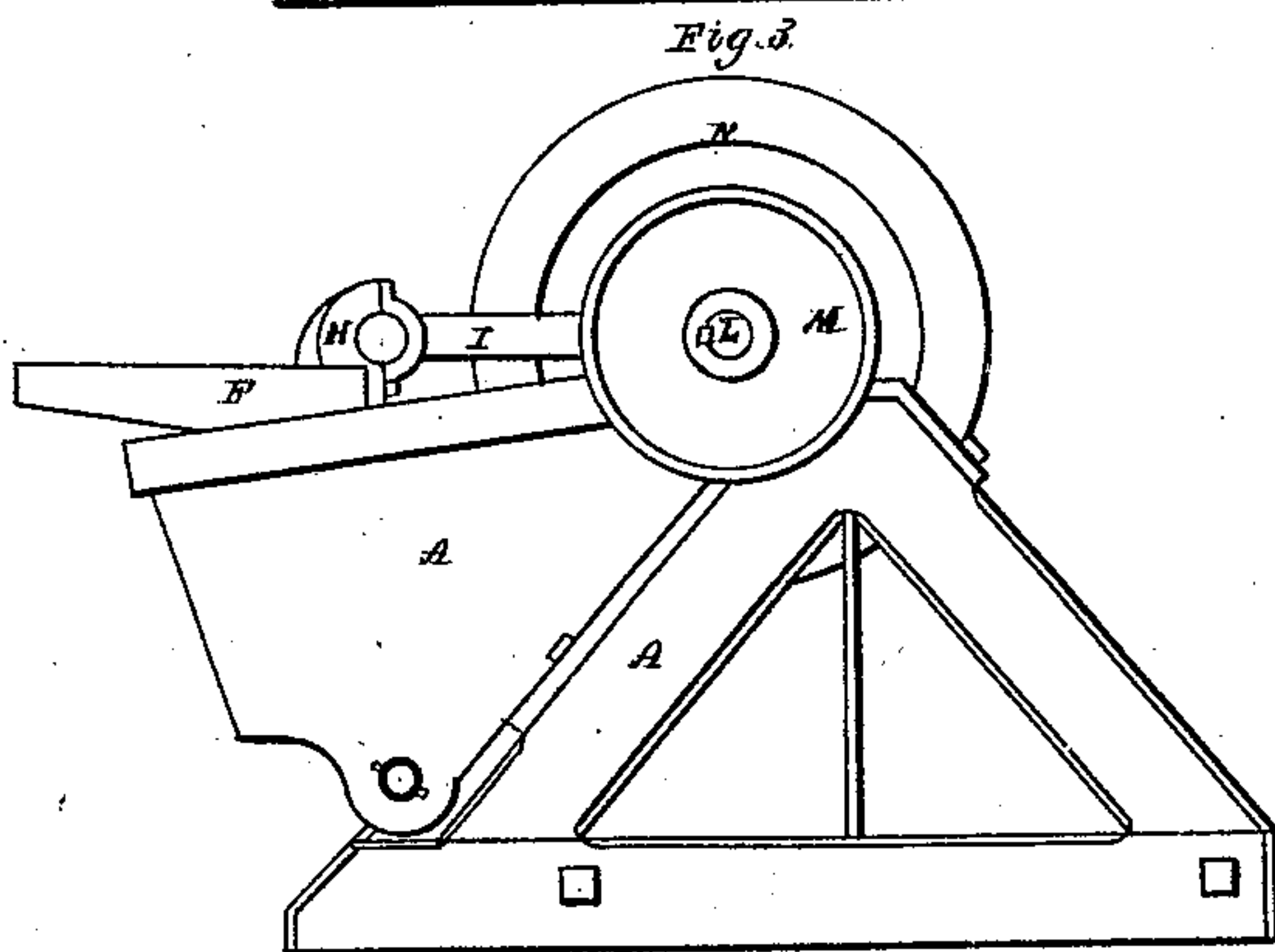
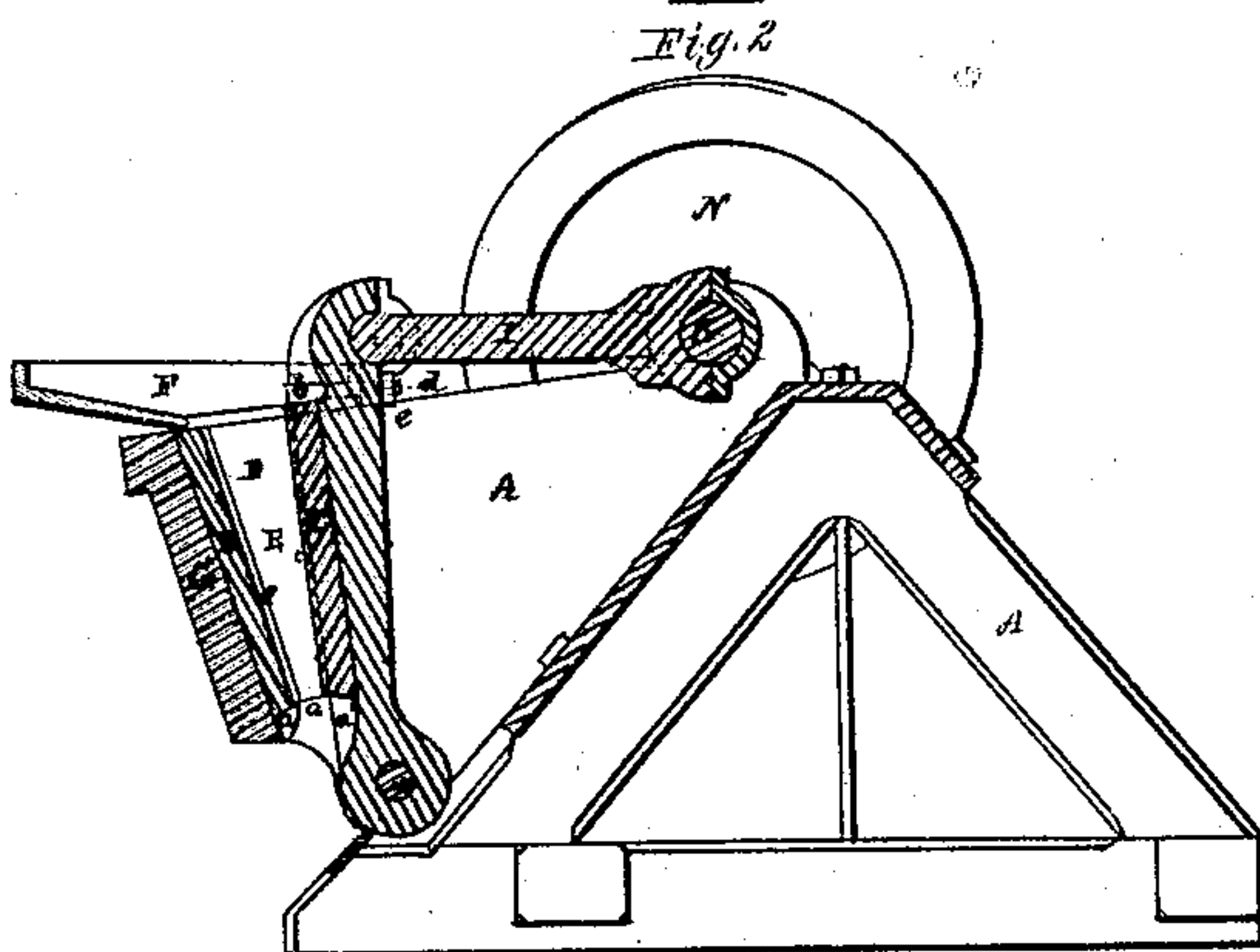
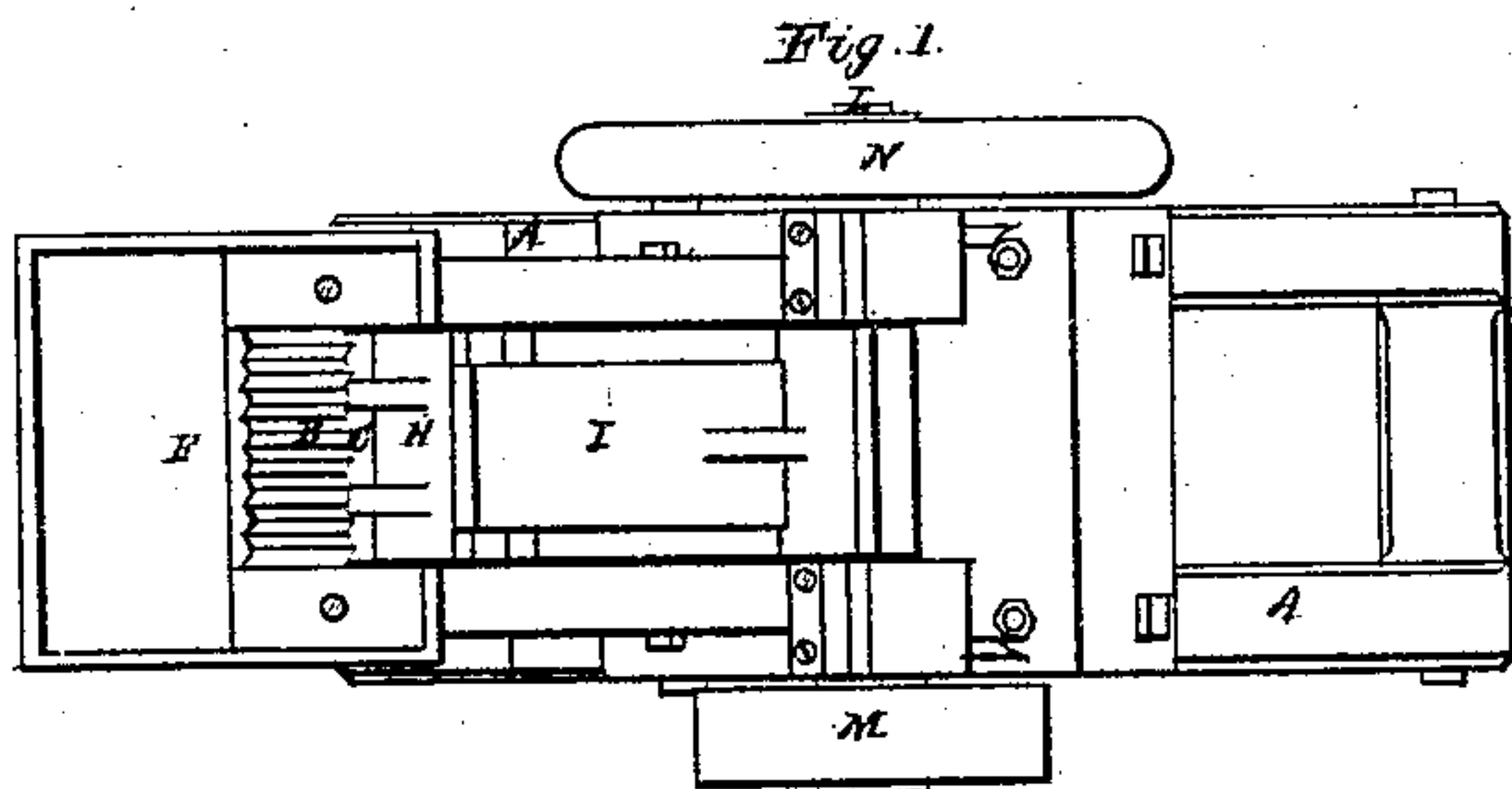


Geo. W. Rawson,
Stone Crusher.
No. 95,836, Patented Oct. 12, 1869.



Witnesses.
S. M. Piper
L. M. Mollen

Geo. W. Rawson.
by his attorney.
R. W. Choddy

United States Patent Office.

GEORGE W. RAWSON, OF CAMBRIDGEPORT, ASSIGNOR TO HIMSELF AND MICHAEL HITTINGER, OF SOMERVILLE, MASSACHUSETTS.

Letters Patent No. 95,836, dated October 12, 1869.

IMPROVEMENT IN STONE-CRUSHING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, GEORGE W. RAWSON, of Cambridgeport, of the county of Middlesex, and State of Massachusetts, have made a new and useful invention, having reference to Machines for Crushing Stone; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view;

Figure 2, a longitudinal section; and

Figure 3, a side elevation of my improved stone-crusher.

Figure 4 is a transverse section, taken through its crushing-mouth or between the jaws thereof.

The machine, like that of Eli W. Blake, as described in his patent, No. 20,542, has a movable and a stationary jaw, the movable jaw being provided with mechanism for operating it. To this much I make no claim.

I have arranged therewith a surplus-receiver, and other mechanical devices, as hereinafter explained.

The surplus-receiver is to receive the material to be crushed to feed it to the crushing-mouth, and to catch or retain, and reconvey to the mouth any surplus which may be forced upward out of the said mouth by the movable jaw while in operation. The said receiver, also, by its arrangement with the mouth or jaw-chamber, and the stationary and lateral jaw-plates, serves as a cap to the said plates, and a means of holding them in position when resting on the feet or projections which support them.

In the drawings—

A denotes the frame of the machine;

B, its stationary jaw-plate; and

C, the movable jaw-plate.

D is the mouth or space between the said plates, it being provided on its sides by two lateral stationary jaw-plates, E E.

Each of the aforesaid jaw-plates is to be made of iron, with its active face cast against a chill-plate.

The stationary plates B E E rest on ears, shelves, or studs, *a a a*, projecting from, or making part of the frame A, and, after being arranged within such frame, in manner as represented, such plates, B E E, are to be capped by the surplus-receiver F.

This receiver, formed as represented, is to be bolted or otherwise fastened on the top of the frame, so as to partially surround the top of the crushing-mouth or the entrance thereof.

The surplus-receiver is open at its rear end, to enable the movable jaw to be moved between the side plates E E, both toward and away from the stationary jaw-plate B.

The latter plate rests against an abutment, G, comprising part of the frame A.

By interposing one or more thin plates or wedges of metal between the jaw-plate B, and the abutment G, we can vary the distance of the jaw-plate from the movable plate C, so as to vary the width of the crushing-mouth or narrow space between the jaw-plates when the plate C is at the extreme of its advance toward the plate B.

The said plate C is sustained by a carrier, H, which, at its lower part, is pivoted to the frame A, and at its upper part is hinged to a pitman, I.

At its rear end the said pitman encompasses an eccentric, K, carried by a driving-shaft, L, on which is fixed a driving-wheel, M, and a fly-wheel, N.

Furthermore, the plate C rests on feet or brackets, *a' a'*, extended from the carrier H, and such plate is further held in place by means of two wedge-keys, *b b*, which go through corresponding holes, *c c*, made through the carrier.

Each of such keys is furnished with a screw, *d*, and a nut, *e*, arranged with it and the carrier, in manner as represented. By setting up the nuts, the keys will be drawn into their holes, and forced down upon the upper inclined surface of the plate C, so as, with the brackets *a' a'*, to act to firmly hold the plate to the carrier.

By revolving the driving-shaft a reciprocating vibratory motion will be imparted to the carrier and its jaw-plate C, whereby stones, when between the said jaw-plate and the plate B, will be crushed by them.

Each of the said last-mentioned jaw-plates has teeth or corrugations projecting from its inner face, *e e*, but the lateral jaw-plates or mouth-plates E E are without any teeth.

As the jaws and the lateral boundaries of the crushing-mouth are liable, while in use, to become worn, they are so constructed as to be readily removable from the frame, in order that, when injured, or too much worn, others may be substituted for them.

The surplus-receiver F, by catching any stone which may be forced upward out of the mouth D, and by holding a large amount of stone, and feeding it into the mouth as fast as it will receive it, saves much labor and attention, which would otherwise have to be bestowed on the machine in the way of feeding it with stone, and returning to it such as may be ejected from the mouth in an upward direction.

In its operation on stones when within its mouth, the machine will crush them, and, after they may have been broken to the right size, they will be discharged from between the two jaws, B C, in a manner well understood by those who use the Blake stone-crushing machine.

Machines of this kind are useful for crushing ores, as well as for reducing stone to be employed in making or repairing roads.

I make no claim to a hopper as ordinarily applied to a grinding-mill.

What I claim as my invention in the stone-crushing machine, as hereinbefore described, is as follows; that is to say—

1. The arrangement of the surplus-receiver F, with the stationary and lateral jaw-plates B E E, as described, viz, so as to extend over, and serve as a cap to such plates, and a means of aiding in holding

them in position when they are resting on the studs or projections *a a*, by which they are supported.

2. Also, the arrangement of the wedge-keys *b b*, and their screws *d d*, and nuts *e e*, with the jaw C, and its carrier H, applied together as set forth.

GEO. W. RAWSON.

Witnesses:

R. H. EDDY,
S. N. PIPER.