

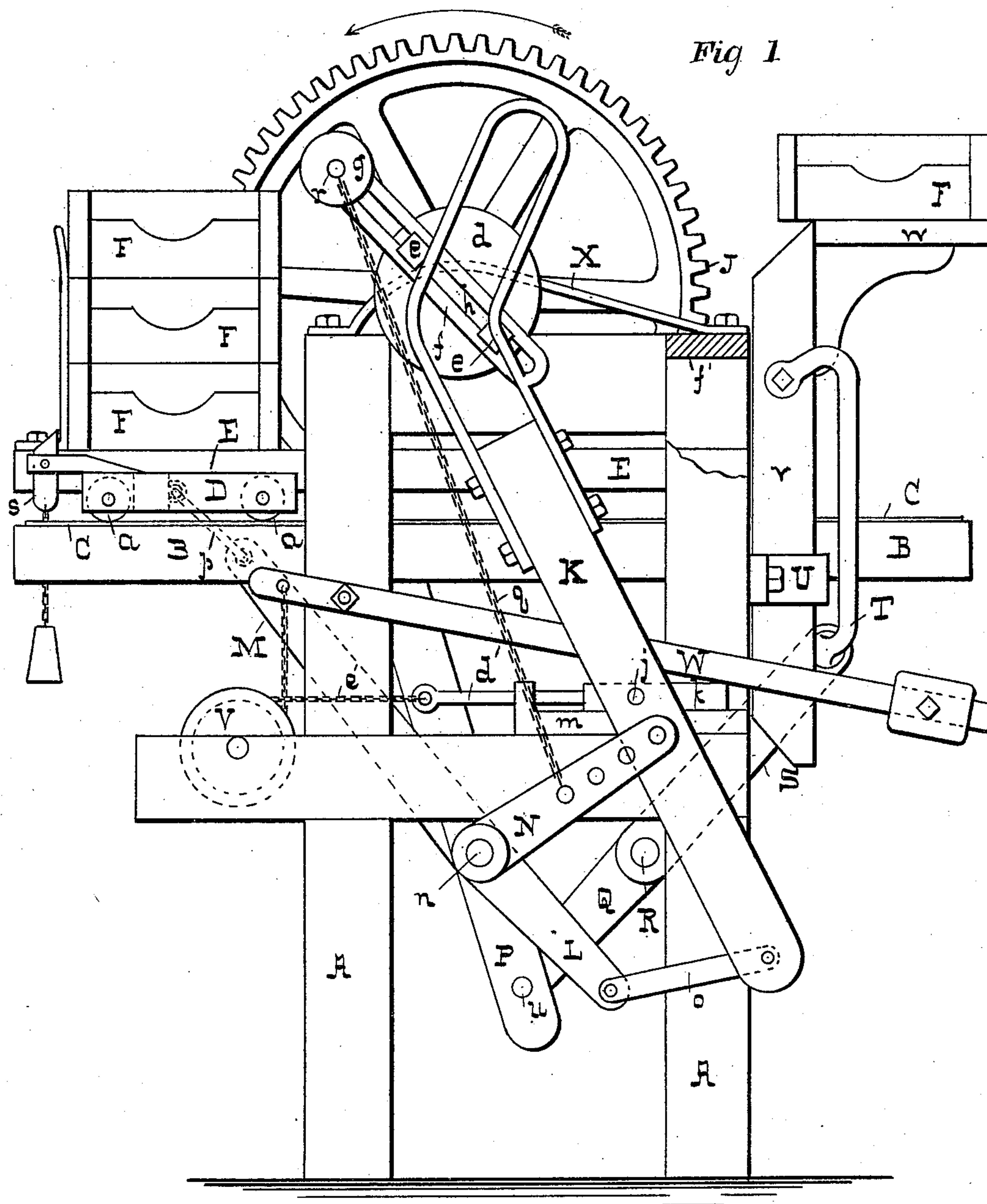
(No Model.)

3 Sheets—Sheet 1.

C. A. ADAMS.
BRICK MOLD SANDER.

No. 470,963.

Patented Mar. 15, 1892.



- WITNESSES -

Don't Fisher
George A. Hemley

- INVENTOR -

Charles A. Adams.
by Wm. H. T. Howard,
Atty.

(No Model.)

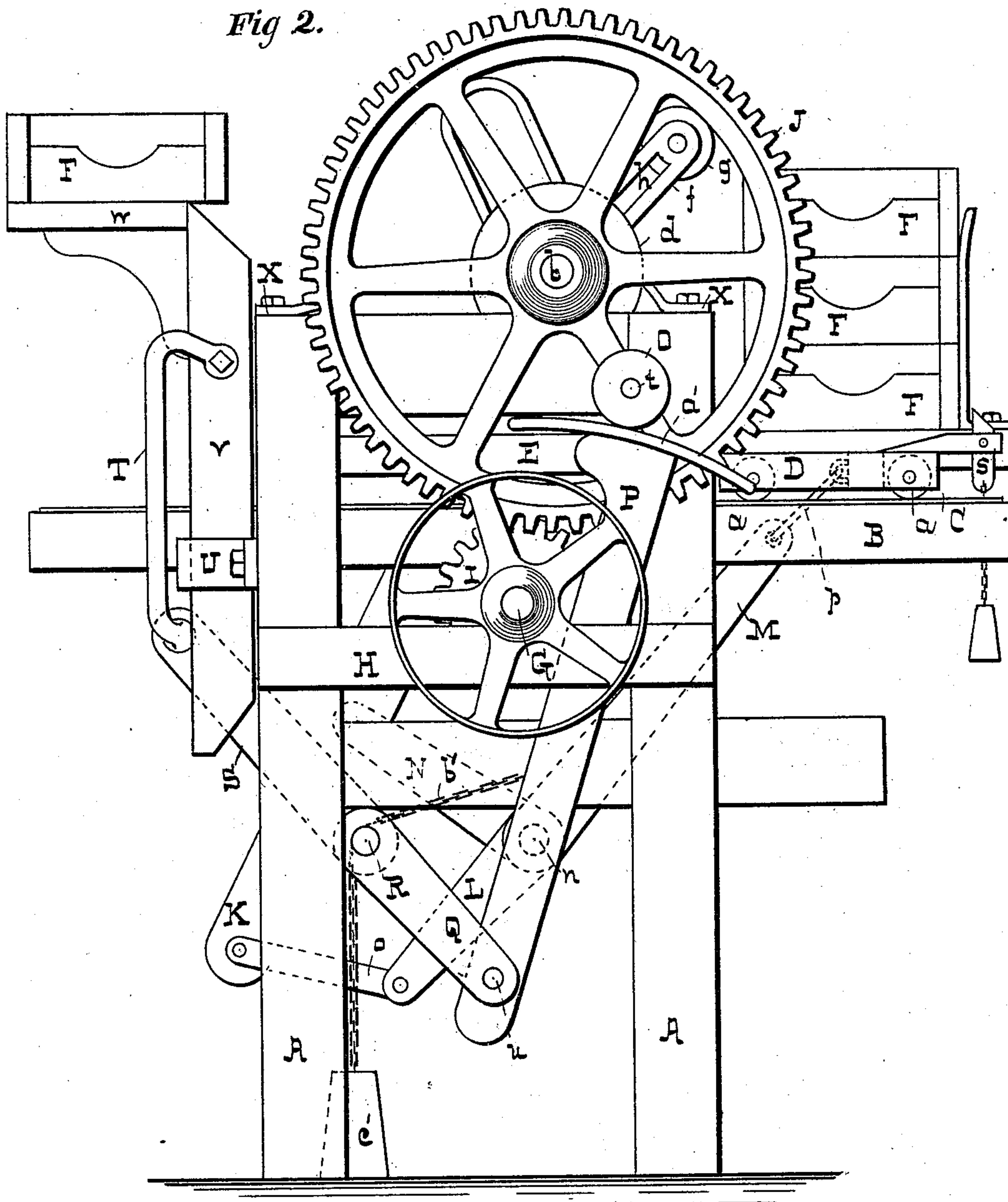
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Fig 2.



- WITNESSES -

Dan'l Fisher
George A. Hensley

- INVENTOR -

Charles A. Adams,
by Wm. H. T. Howard,
att'y.

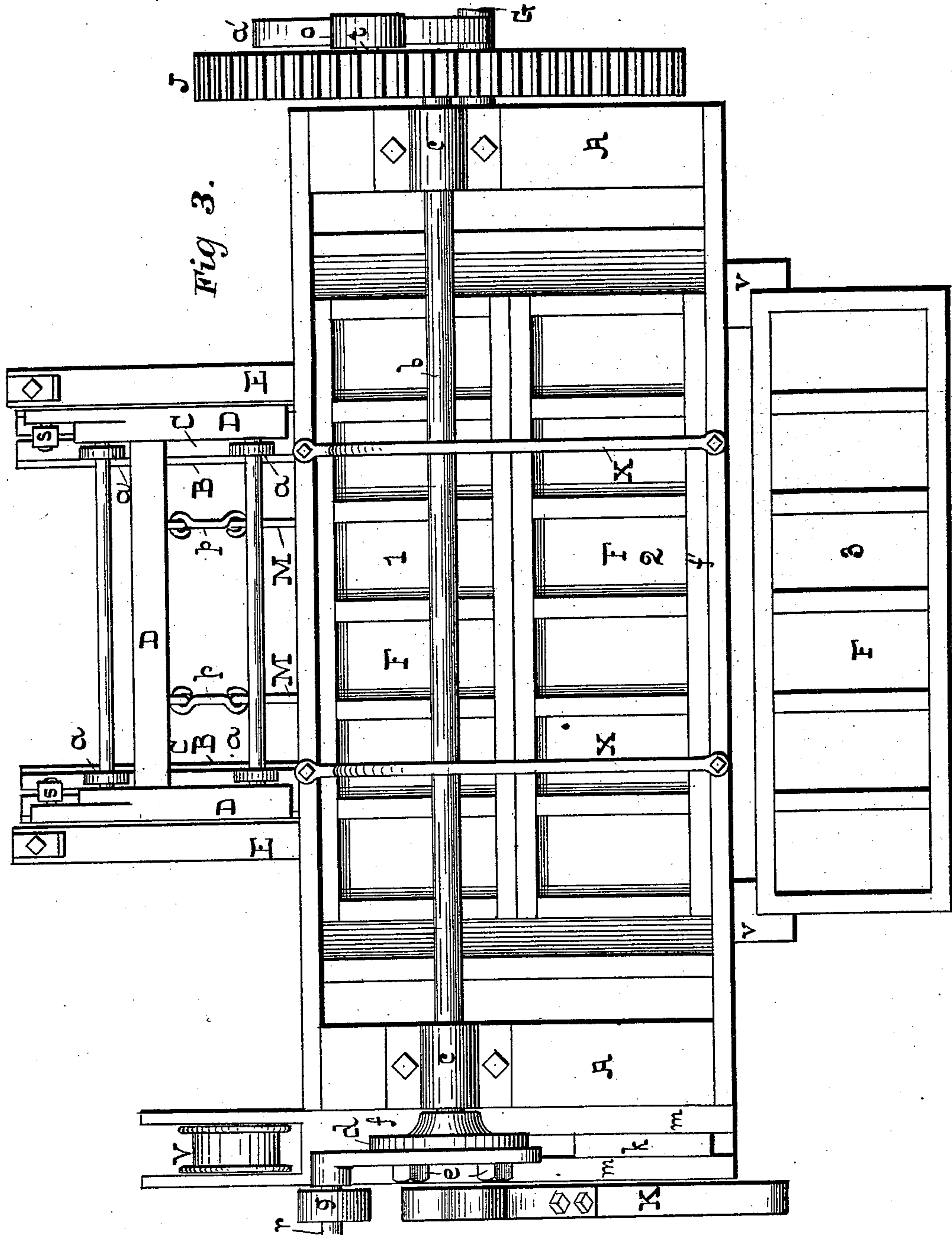
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George A. Hemsky

-INVENTOR-

Charles A. Adams,
by G. H. W. T. Howard
att'y.

UNITED STATES PATENT OFFICE.

CHARLES A. ADAMS, OF CANTON, MARYLAND.

BRICK-MOLD SANDER.

SPECIFICATION forming part of Letters Patent No. 470,963, dated March 15, 1892.

Application filed May 4, 1891. Serial No. 391,442. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. ADAMS, of Canton, Baltimore county, and State of Maryland, have invented certain Improvements in Machines for Sanding Brick-Molds, of which the following is a specification.

In the description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figures 1 and 2 are views of the machine as seen from opposite sides, and Fig. 3 a plan of the invention.

Referring to the drawings, A is the frame of the machine, and B B are horizontally-placed timbers elevated some considerable distance from the ground and secured to the frame A.

C C are track-rails fastened to the upper surfaces of the timbers B.

D is a carriage having truck-wheels *a*, which rest on the track-rails C, and is adapted to be moved longitudinally of the said rails by means of devices hereinafter described.

E E are supporting-timbers for the brick-molds, which are denoted by F, and they are situated slightly above the carriage and spread laterally, so as to be exteriorly of it when seen from the top, as in Fig. 3.

The molds to be sanded are placed one above another, with the lowest one resting on the supporting-timbers E, as shown in Figs. 1 and 2.

The devices for moving the carriage and with it the lowest mold which is withdrawn from under the others consists as follows:

G is a driving-shaft, the outer end of which is supported by an independent part of the frame H. (Shown only in Fig. 2.) The inner end of the shaft G rests in a box (not shown) attached to a part of the frame proper, and to it is keyed a pinion I. This pinion, which is shown in Fig. 2, is in engagement with a gear-wheel J on one end of a shaft *b*, which extends entirely across the machine and is supported in bearing-boxes *c* on the frame A. (See particularly Fig. 3.) On the other end of this shaft *b* is a disk *d*, to which is fastened by means of bolts *e* the slotted arm *f*, carrying a roller *g* at its longer end. The bolts *e* pass through the slot *h* of the arm

f. Consequently the distance of the roller *g* from the center of the shaft *b* may be altered at pleasure.

K is a lever fulcrumed at *j* to a block *k*, adapted under certain circumstances, hereinafter described, to slide longitudinally of a slotted guide *m*, supported by the frame A of the machine. (See Figs. 1 and 3.)

The upper end of the lever K, against which the roller *g* strikes in the revolution of the shaft *b* and its disk *d* in the direction indicated by the curved arrow, is shod with iron and thrown back in order to admit of the return movement of the said lever, as hereinafter described.

The lower end of the lever K is connected by a link *o* to an arm L on a shaft *n*, which extends entirely across the machine. To this shaft are keyed two arms M, which are attached to the carriage D by links *p*. The return movement of the lever K is effected by means of a chain *q*, which connects the stationary pin *r* of the roller *g* to an arm N, keyed to the shaft *n*.

From the foregoing description it will be seen that the carriage D has a reciprocating movement, and, as it is provided with weighted pawls *s*, at each forward movement it passes under the stacked molds and the pawls pass behind the lowest one. In the backward movement of the carriage the lower mold is drawn from under the others and carried along the timbers and left to be sanded, as hereinafter described. The said mold is finally brought to the inner end of the timbers E and thence to a shelf, hereinafter described, and from this position it is elevated so as to occupy the position shown to the right in Fig. 1 and to the left in Fig. 2.

The means for elevating the mold are as follows: Referring to Fig. 2, one of the spokes of the gear J has a pin *t*, on which is a roller O. P is a bar connected by means of a pin *u* at the lower end to an arm Q on the shaft R. On this shaft are also two arms S, having their upper ends loosely attached to the lower ends of the rods T, which are bolted to the uprights *v*. These uprights are connected at the top by means of a shelf *w* and are adapted to slide in staples U, projecting from the frame A. As the roller O descends it strikes the

upper end of the bar P, which is shod with a curved plate *a'*. In this operation the up-rights *v*, with the shelf *w*, are forced up.

To avoid injury to the machine in case of any obstruction to the operation of the up-rights *v*, the bar P is provided with a chain *b'*, which passes over the shaft R and is fitted with a weight *c'*, which normally rests on the ground, as shown in Fig. 2. Should the upward motion of the up-rights *v* be impeded, the bar P, instead of being forced down, is pushed outward, and the weight *c'* is lifted. This allows the roller O to pass the plate *a'* without moving the up-rights. As soon as the obstruction is removed the parts again assume their original position.

To prevent the breaking of any attachments of the carriage D in case it becomes jammed, the block *k*, to which the lever K is pivoted, is fitted with a rod *d'*, to one end of which a chain *e'* is fastened. This chain is wrapped around a sheave V and carried to the short arm of a weighted lever W. Should the movement of the carriage be prevented, the block *k* is forced back, carrying with it the lever K, and the roller *g* passes it without effecting its vibration.

X X are bars leading from a cross-piece *f'*, which is elevated above the carriage a distance equal to the height of a mold, to the forward part of the frame.

The operation of the machine is as follows: A number of molds are placed one upon another on the timbers E above the carriage D, as shown in the drawings. When the machine is set in motion, the first operation consists in moving backward the carriage, which carries with it the lowest one of the tier of molds. This mold is left by the carriage as it returns for another in the position of the mold marked 1 in Fig. 3. In the next operation or movement of the carriage another mold is carried to the said position and the first mold is by the second one pushed into the place of the

mold marked 2 in Fig. 3. The two molds within the frame are now filled with sand. The next operation of the carriage is to carry a third mold from the bottom of the tier to the position 1, when the first mold is pushed under the cross-piece *f'* to the position 3, which is on the shelf *w*. The sand which projects above its edge is struck off by the lower edge of the said cross-piece. During the operations described the up-rights *v*, with their shelf *w*, have been subjected to a vertical reciprocating motion, but so far an inoperative one in view of there being no molds fed to the said shelf; but as the first mold is pushed onto the shelf by the following molds it is lifted to the height shown by the isolated mold, when it is grasped by the attendant and turned over or inverted on the bars X. In this operation the contained sand falls to the other molds underneath. Enough sand has adhered to the inner surfaces of the mold to prevent the sticking of the clay, and the prepared mold is transferred to the brick-making machine.

It will be understood that the operation of the machine is a continuous one and that the sand is used over and over until exhausted, when a fresh supply is added.

I claim as my invention—

In a machine for sanding brick-molds, a reciprocating carriage for the purpose described, a rotary shaft carrying an arm fitted with a roller, a series of vibratory arms connected to the said carriage, and a lever actuated from the said rotative roller, fulcrumed to a yielding block, whereby in case of the said carriage becoming jammed the said block will be moved and the operation of the said lever be completed without any movement of the carriage, substantially as specified.

CHARLES A. ADAMS.

Witnesses:

WM. T. HOWARD,
DANL. FISHER.