

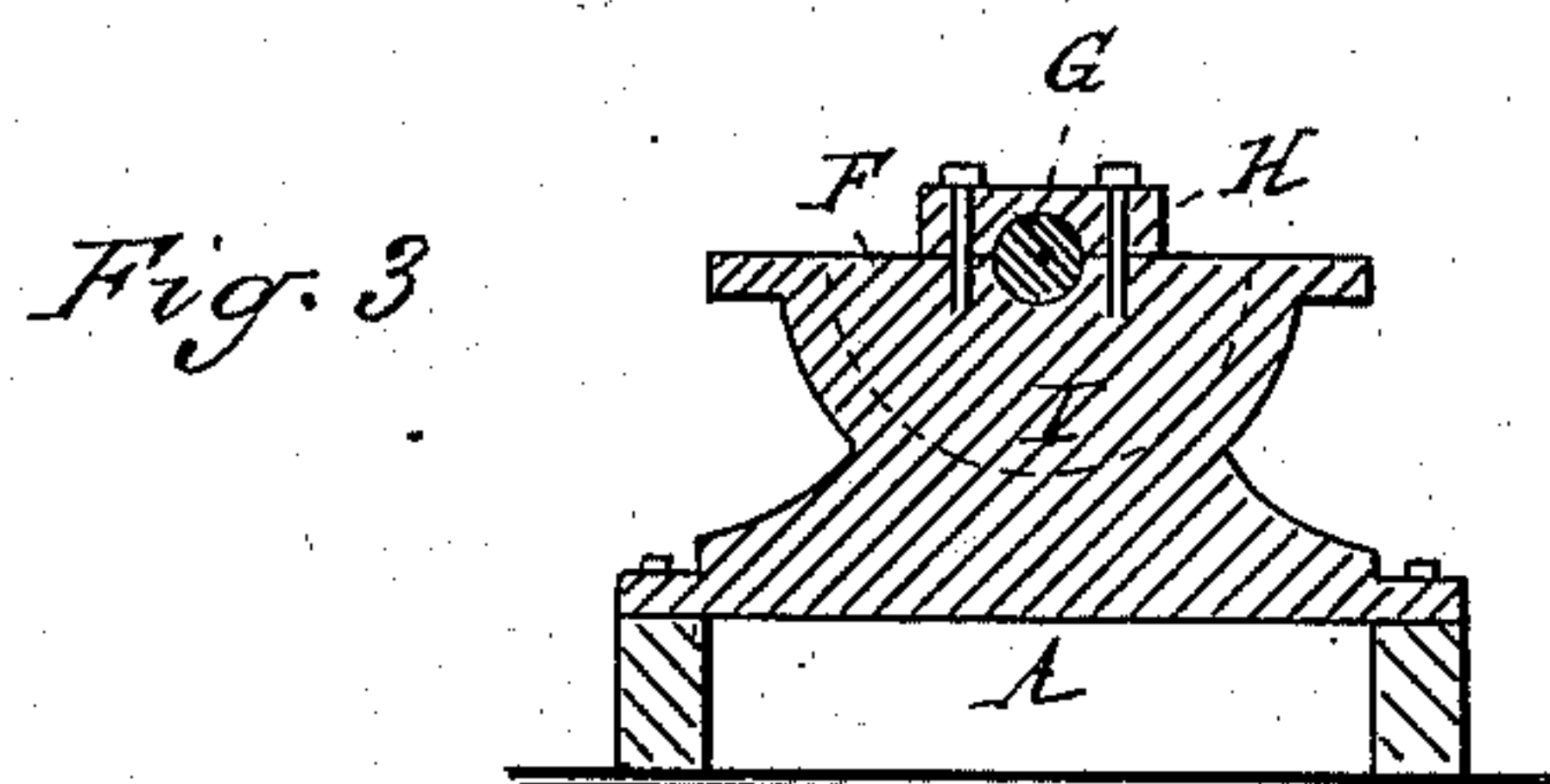
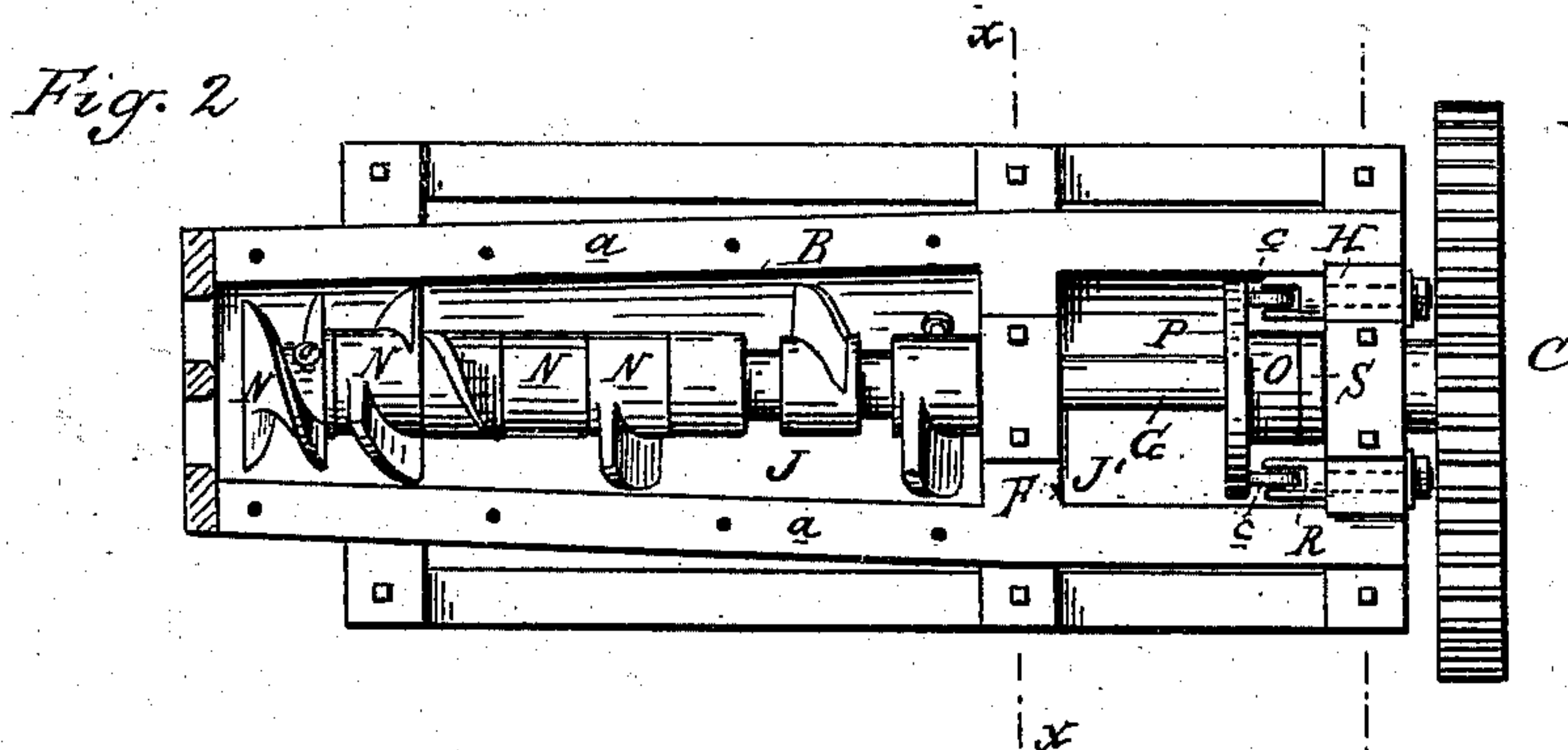
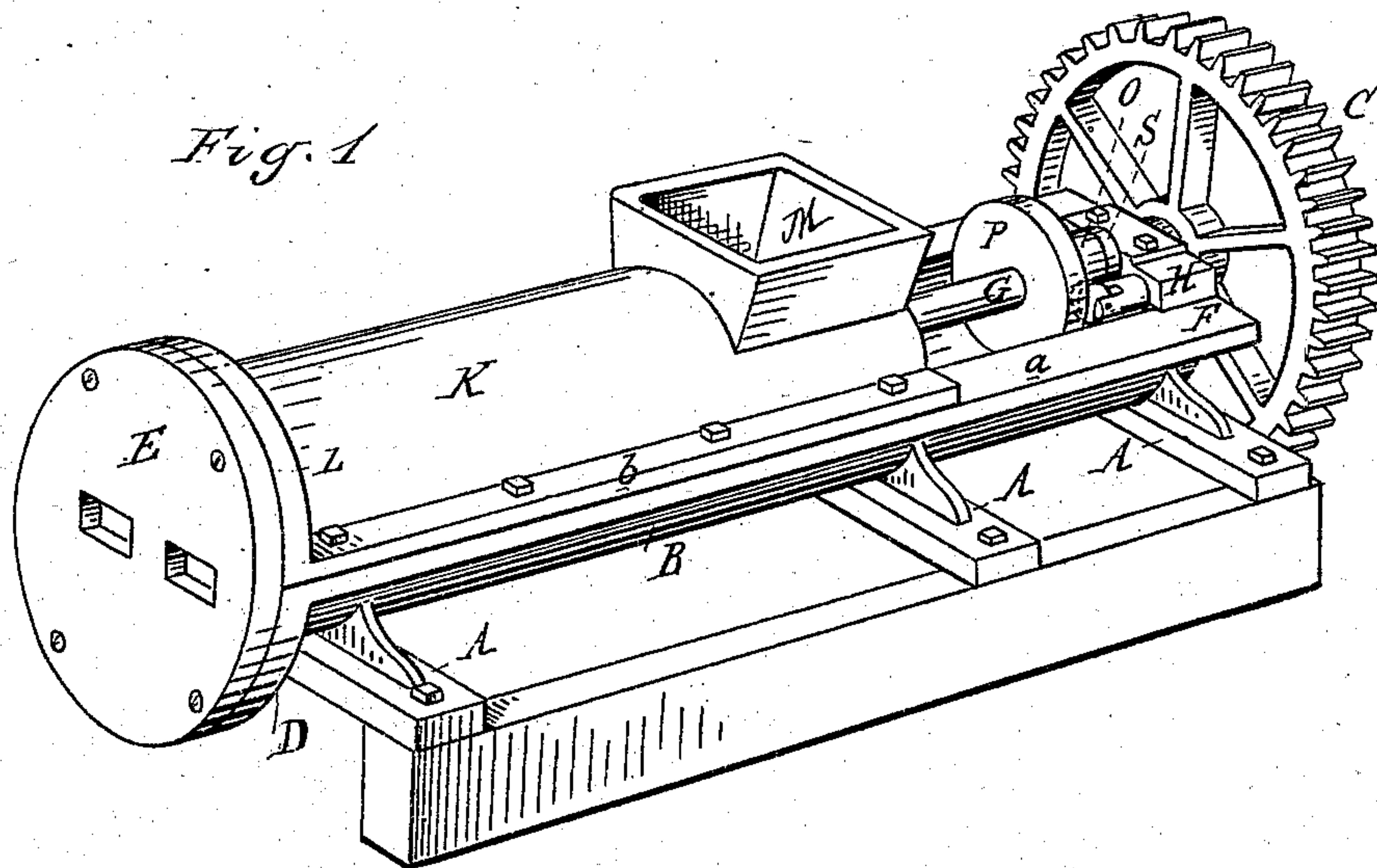
(No Model.)

P. H., A. & J. M. KELLS.

BRICK MACHINE.

No. 255,870.

Patented Apr. 4, 1882.



Attest:

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UNITED STATES PATENT OFFICE.

PHILIP H. KELLS, ABRAM KELLS, AND JACOB M. KELLS, OF ADRIAN, MICH.

BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 255,870, dated April 4, 1882.

Application filed January 4, 1882. (No model.)

To all whom it may concern:

Be it known that we, PHILIP H. KELLS, ABRAM KELLS, and JACOB M. KELLS, of Adrian, in the county of Lenawee and State of Michigan, have invented new and useful Improvements in Brick-Machines; and we hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in the construction of that class of brick-machines known as "horizontal" machines, by means of which a greater simplicity and economy of construction is had than has heretofore prevailed while a greater strength is obtained.

The invention consists in the peculiar construction of the parts and their various combinations, as more fully hereinafter described.

Figure 1 is a perspective view of our improved machine. Fig. 2 is a top plan of the same with the cap removed. Fig. 3 is a vertical cross-section on the line xx in Fig. 2.

In the accompanying drawings, which form a part of this specification, A represents the feet of the machine, cast with and forming an integral part of the lower half of the tub B, which extends from the master-wheel C to the flange D, which forms the means, with suitable screws, of securing the die-plate E. The lower half of the tub B is preferably in the form of half of a cylinder split longitudinally, and it is cast with outwardly-projecting flanges a and with the semicircular flange D and with saddles or bearings F, which form bearings in which the shaft G revolves, and which are provided with retaining-caps H. Upon the under side of these saddles are cast the diaphragms I, which divide the lower half of the tub into the two chambers J J', as shown in Fig. 2.

The feet A, the lower half, B, of the tub, the flanges a and D, the saddles or bridges F, and downwardly-projecting diaphragms I are all cast in one piece, whereby great strength is obtained, and the labor and expense of fitting and securing the parts together, when cast separately, are avoided. The upper half or cap of the tub B, and which is lettered K, is

of similar form to the lower half, and is cast with an outwardly-projecting flange, b , on each side, which, when the cap is in place, rest upon the flanges a , and the parts are secured together by bolts, as shown in Fig. 1. This cap is also cast with a projecting semicircular flange, L, to which the upper part of the die-plate E is removably secured. The cap is also cast with or provided with a hopper, M, at its rear end, and the interior of the cap at this end is cast with an end plate, which is in line with the diaphragm which divides the chambers J and J'.

The shaft C is supported in the bearings F F, and projects into the tub, as shown in Fig. 2, and in the chamber J this shaft has secured to it, in any of the known or convenient ways, the spiral or partially-spiral flanges N for grinding the clay introduced into the hopper and forcing it through the dies in proper form for brick or tile. This shaft is driven by the master-wheel C from any convenient source of power. To prevent and counteract the backward end-thrust of this shaft, when in operation, there is rigidly secured to it a collar, O, which is provided with a strong outwardly-projecting flange the rear face of which bears against the friction rollers or wheels c , which are journaled in the ends of the bearings R, suitably secured to the rear end of the lower half of the tub and its rear bridge, F.

A washer, S, is interposed between the rear end of the collar O and the rear bearing, which supports the shaft and assists in resisting this end-thrust with the least possible friction.

The die-plate shown is for the manufacture of bricks; but this may be changed for one for the purpose of making tile, if desired.

What we claim as our invention is—

1. In a horizontal brick or tile machine, the grinding-shaft provided with a flanged collar, in combination with the friction-wheels and their bearings, substantially as and for the purposes specified.

2. The shaft G, having spiral leaves N and annular flange, the tub B, master-wheel C, and washer S, combined with the bearings R and friction-wheels c , as set forth.

3. In a brick-machine, the lower semi-cylindrical casting having end bearings for the op-

erating-shaft, a diaphragm for dividing the mud-box and to form a recess for receiving mechanism for modifying friction, and bearings for the attachment of a die-plate, as set forth.

5 4. In a brick-machine, the lower semi-cylindrical casting, B, having bearings for the shaft G and die-plate E, and the diaphragm I, cast in one piece and adapted to serve with oper-

ating mechanism, a die-plate, and semi-cylindrical cap K, as and for the purposes set forth.

PHILIP H. KELLS.
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Witnesses:

SETH BEAN,
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