

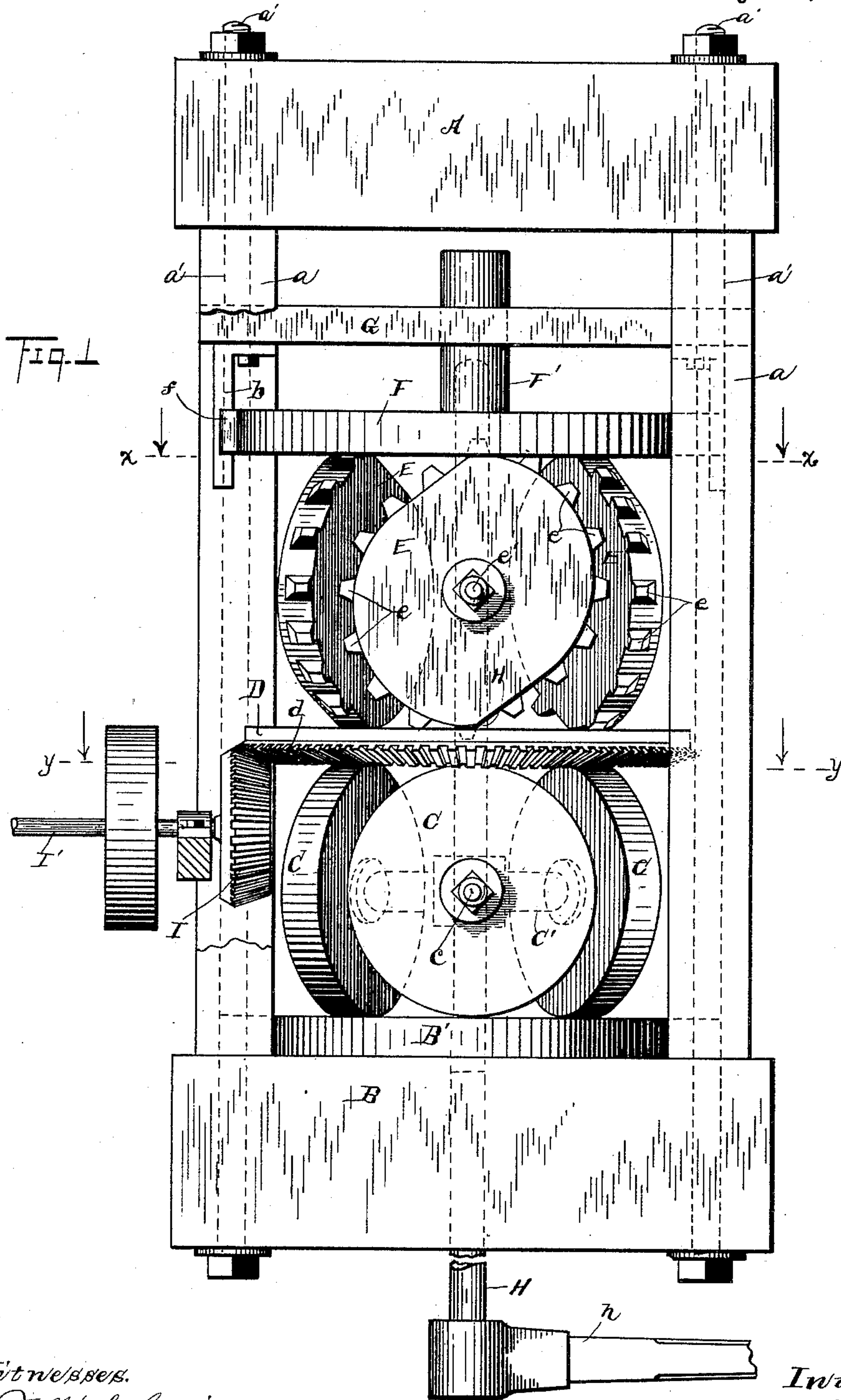
(No Model.)

3 Sheets—Sheet 1.

A. L. PLATT.
POWER PRESS.

No. 432,836.

Patented July 22, 1890.



Witnesses.

Will S. Lowrie.
Will B. Sage

Inventor.

Albert L. Platt.
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(No Model.)

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Fig. 2

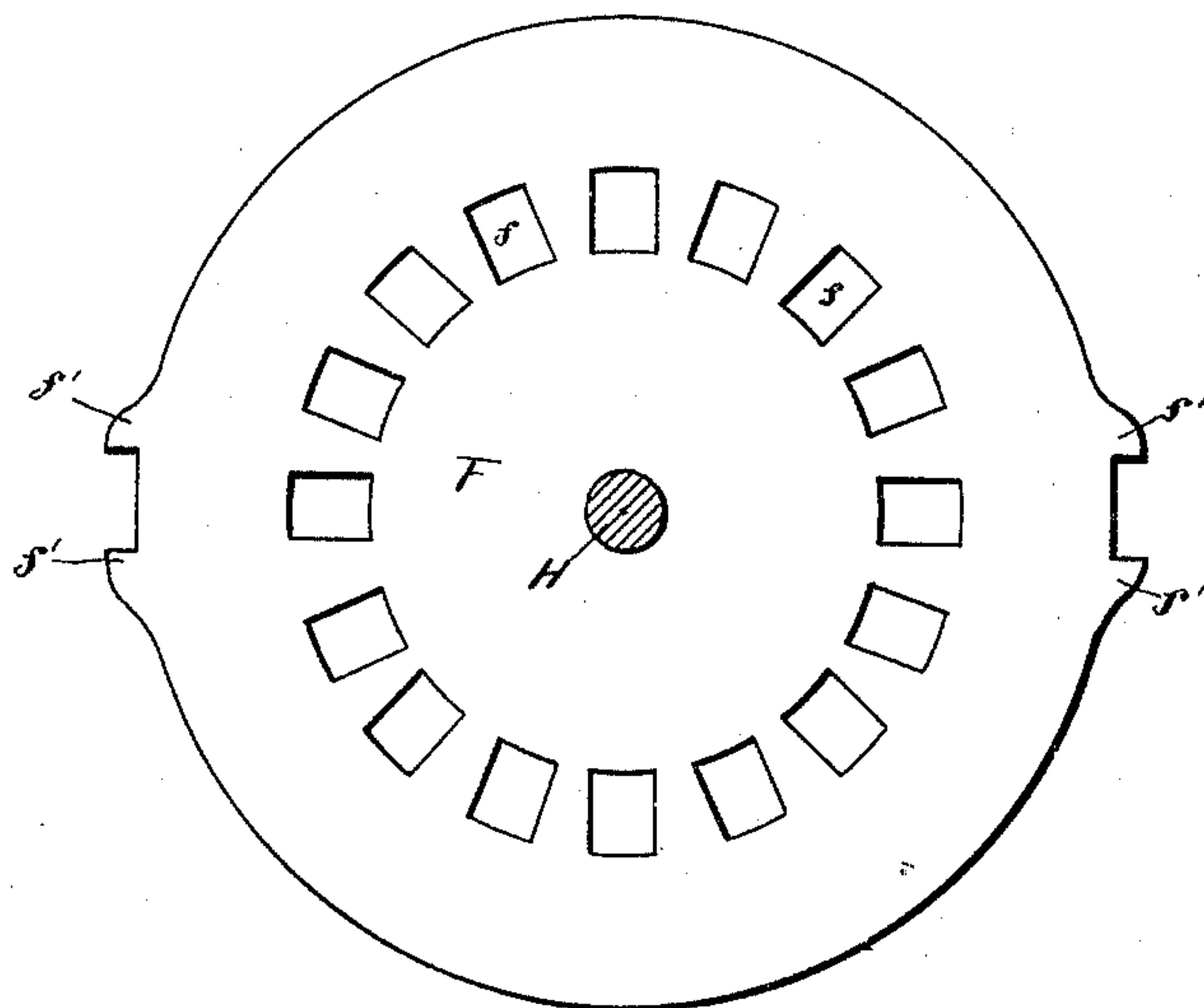
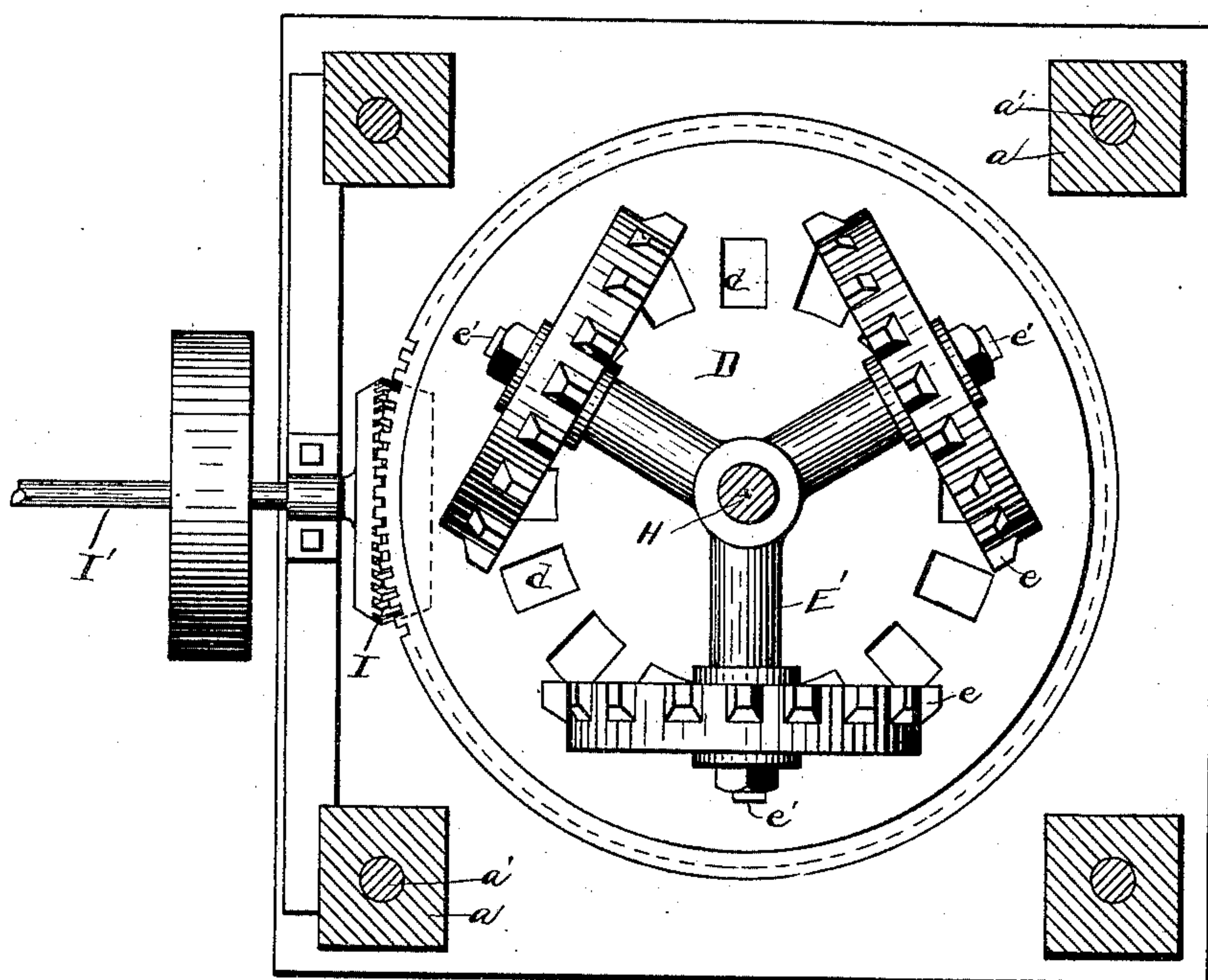


Fig. 3

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Fig. 4

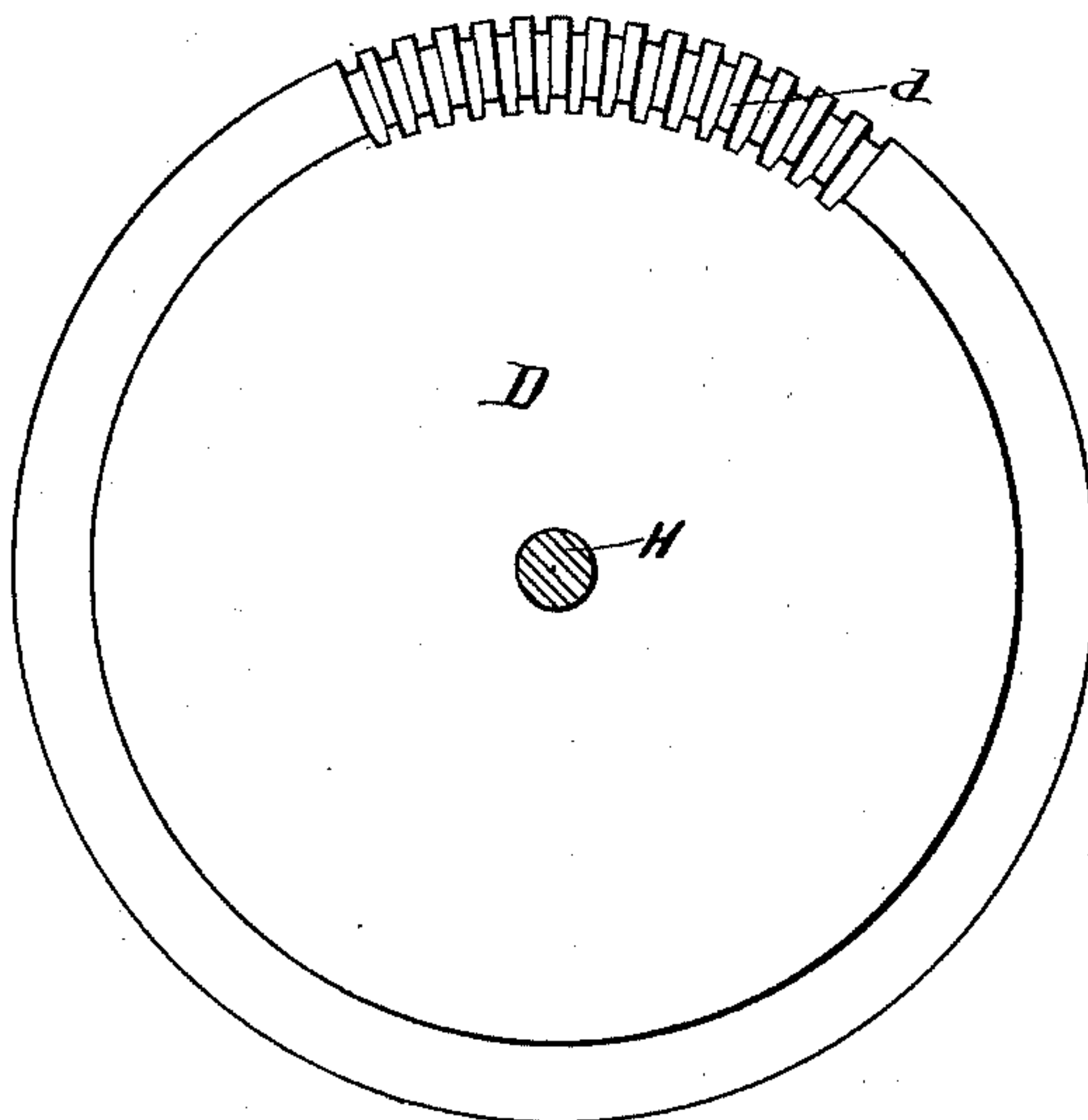
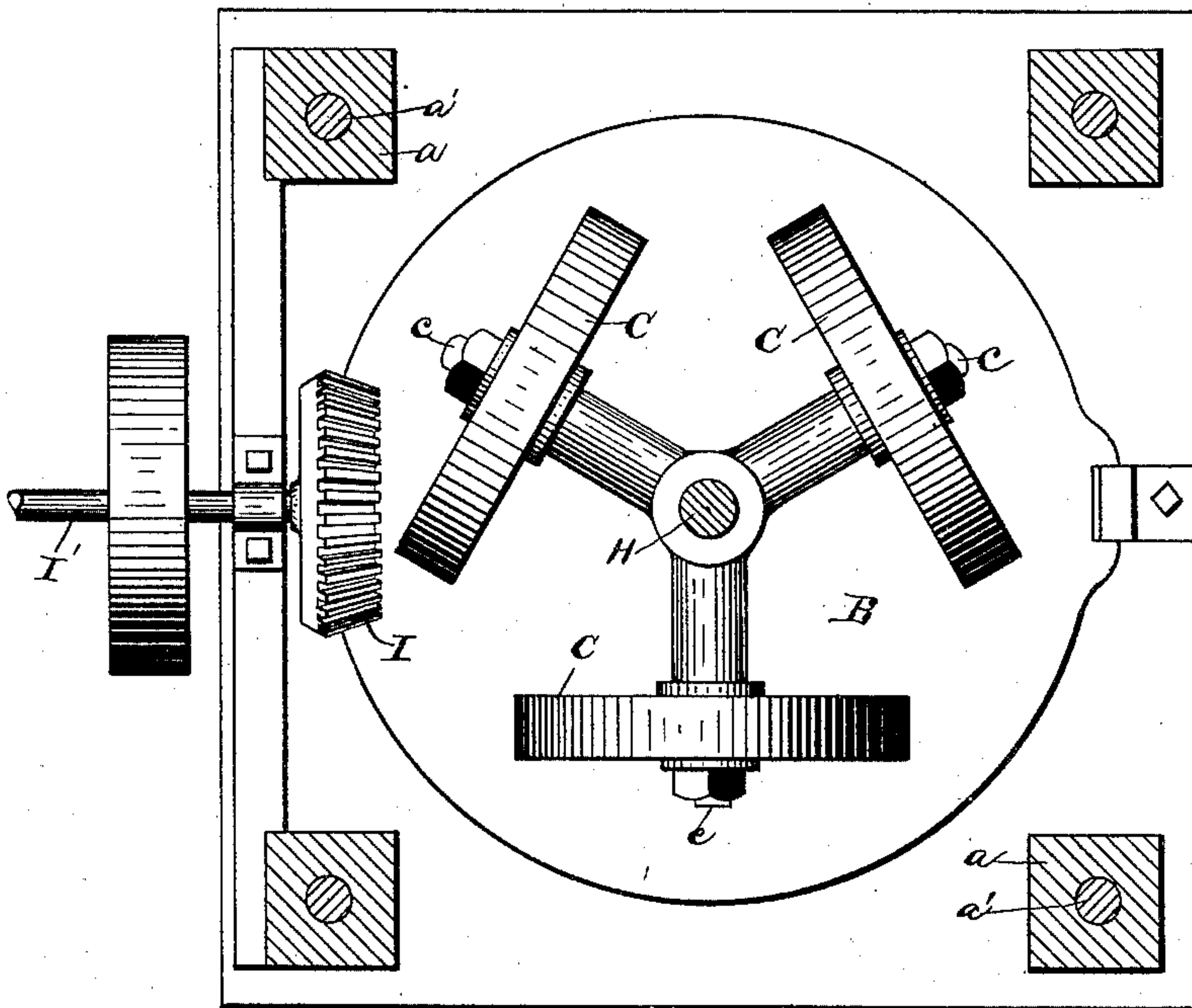


Fig. 5

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UNITED STATES PATENT OFFICE.

ALBERT L. PLATT, OF CLINTON, ILLINOIS, ASSIGNOR OF THREE-FOURTHS TO
VESPASIAN WARNER AND HENRY A. MAGILL, OF SAME PLACE.

POWER-PRESS.

SPECIFICATION forming part of Letters Patent No. 432,836, dated July 22, 1890.

Application filed December 2, 1889. Serial No. 332,323. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. PLATT, of Clinton, in the county of De Witt and State of Illinois, have invented certain new and useful Improvements in Power-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in power-presses; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation. Fig. 2 is a plan, partly in section, on line $x x$, Fig. 1. Fig. 3 is a bottom plan of disk F. Fig. 4 is a plan, partly in section, on lines $y y$, Fig. 1. Fig. 5 is a bottom plan of member D.

A and B are the top and bottom members of the press-frame, and these are rigidly connected in any suitable manner—for instance, as shown, by means of uprights a and tie-rods a' . The frame-work may be of metal or wood according to circumstances; but if of wood the lower member B should be re-enforced by a metal plate B' , and if the frame-work be of metal members B B' would of course be cast integral. Next above plate B' are the three carrying-wheels C C C, these wheels being adapted to travel in a circular path on plate B' . Wheels C are held in place by means of a three-armed spider C' , the extremes c of the spider serving as axles for these wheels. Next above wheels C and adapted to ride thereon is located a heavy lateral wheel or disk D, and next above this disk are three cam-wheels E, these cam-wheels being adapted to travel in a circular path on disk D. The cam-wheels are provided with sprockets e , and disk D has a series of pockets d , arranged in circular order and adapted to engage the sprockets, whereby the relative movements of cam-wheels and disk are rendered positive. These cam-wheels are preferably of the two-cam variety shown, and are held in place by means of spider E' , the spider being of the three-arm variety, and the extremes of the arms e' serving as axles for the

cam-wheels. Next above the cam-wheels and resting thereon is located a heavy disk F. The latter is provided with pockets f , arranged in circular order on the under face thereof, for receiving the sprockets of the cam-wheels. Disk F does not revolve on its axis, but, on the contrary, is held accurately in position—for instance, by means of ways b , connected with the frame-work of the press, these ways being embraced by shoulders f' of the disk. This disk has a vertically-reciprocating movement on the ways, the disk being moved upward by the action of the cam-wheels below and moving downward by gravity. Disk F has an upwardly-projecting centrally-located hub F' , that operates in a central vertical hole of stationary table G, the latter being rigidly connected with the frame-work of the press. Hub F' may extend more or less above the table, according to circumstances. For some purposes the hub, when in its depressed position, should be flush with the top surface of the table—for instance, in case of molds of some kind that are to be moved along over the table. For other purposes this hub should extend so far above the table that, for instance, dies, plunger, molds, or platen may be attached to the hub.

His an upright shaft having a bearing above in a central hole in disk F and hub F' , the shaft having a bearing below in a centrally-located hole in member B B' , this shaft extending through central holes in disk D and the two spiders. This shaft may remain stationary and serve only as a steady-pin for holding disk D and the two spiders in place, in which case some provision must be provided for rotating disk D for operating the press. To this end a preferable construction is shown, disk D having teeth—for instance, beveled teeth d —for engaging bevel-pinion I, the latter being mounted on the driving-shaft I' . In case it is desired to operate the press by horse-power, shaft H may serve as a driving-shaft, in which case it should extend below the frame-work of the press and have attached a sweep h , (shown in Fig. 1,) in which case disk D is keyed fast to shaft H, and the beveled gearing shown would in such case of course be dispensed with.

This press is adapted to a great variety of work, and hence various modifications may be made, according to circumstances, to adapt the press for special purposes. For instance, member A, that necessarily sustains the end-thrust of hub F', may be located any desired distance above table G, according to the size of the dies, molds, or whatever mechanism or material is to be operated or wrought upon between the table and member A, and the form and construction of the table and of member A may of course be varied indefinitely, according to circumstances. Sometimes it is preferable to construct member A of wooden beams. For other purposes this part had better be of metal, and would likely require grooves or holes for securing bolts, &c., by which dies, molds, or other mechanism may be attached, and the same may be said of the table; also the shape and throw of the cam-wheel may be varied according to circumstances, so long as the three wheels are alike and opposite sides of each wheel are alike. It is evident that if these cam-wheels have sections thereof concentric with the axes of the respective wheels disk F will remain at rest during the engagement thereof with such concentric sections, in which case an intermittently-reciprocating movement would be imparted to disk F. If such concentric sections of the cam-wheels were respectively at the heels and toes of the cams, disk F would remain at rest for a time at the extremes of its throw, which in most cases is desirable.

It is evident that the modifications suggested are within the purpose and spirit of my invention, as they would not change the general features of the press, and it is believed that from the drawings and specification parties skilled in the art will have no difficulty in making such modifications as have been suggested, and others that may be needed to adapt the press for the various uses for which it is likely to be wanted.

It may be well to mention the fact that the pockets in disk F perform no function except to make room for the sprockets of the cam-wheels, and if the faces of these cam-wheels were broad enough to have suitable bearing-surfaces at the sides of the sprockets an annular groove in disk F to receive the sprockets would answer the purpose.

What I claim is—

1. In a press, in combination, bed-plate, lateral wheel, and movable disk arranged in the order indicated, carrying-wheels adapted to operate between the bed-plate and the lateral wheel, cam-wheels adapted to operate between the lateral wheel and movable disk, and suitable mechanism, preferably as shown, for

rotating the lateral wheel on its axis, substantially as set forth.

2. In a press, in combination, bed-plate, lateral wheel, and movable disk arranged in the order indicated and adapted to operate in parallel planes, carrying-wheels adapted to operate between the bed-plate and lateral wheel, and cam-wheels adapted to operate between the lateral wheel and movable disk, whereby such disk is actuated by rotating the lateral wheel and cam-wheels, substantially as set forth.

3. In a press, the combination, with bed-plate, lateral wheel, and gravity-disk arranged in the order indicated and adapted to operate in parallel planes, of a series of carrying-wheels and a series of cam-wheels, the former being adapted to operate between the bed-plate and lateral wheel and the latter being adapted to operate between the lateral wheel and gravity-disk, substantially as set forth.

4. In a press, the combination, with bed-plate, lateral wheel, and gravity-disk, carrying-wheel and cam-wheels arranged, respectively, between the bed-plate and lateral wheel and between the lateral wheel and gravity-disk, of upright-shaft, spiders mounted on such shaft, the extremes of these spiders serving, respectively, as axles of the carrying-wheels and for the cam-wheels, substantially as set forth.

5. In a press, in combination, bed-plate, lateral wheel, and movable disk, carrying-wheels and cam-wheels arranged, respectively, between the bed-plate and lateral wheel and between the lateral wheel and movable disk, such cam-wheels having sprockets on the faces thereof, the lateral wheel having pockets for engaging such sprockets of the cam-wheels, substantially as set forth.

6. In combination, upright press-frame having bed and opposing top member and intermediate table, lateral wheel and gravity-disk located in the order indicated between the table and bed-plate, cam-wheels and carrying-wheels arranged, respectively, between the lateral wheel and gravity-disk and between the bed-plate and lateral wheel, the gravity-disk having a centrally-located upwardly-projecting hub, such hub being adapted to operate in a corresponding hole in the table and adapted to extend more or less above the table, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 12th day of October, 1889.

ALBERT-L. PLATT.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.