

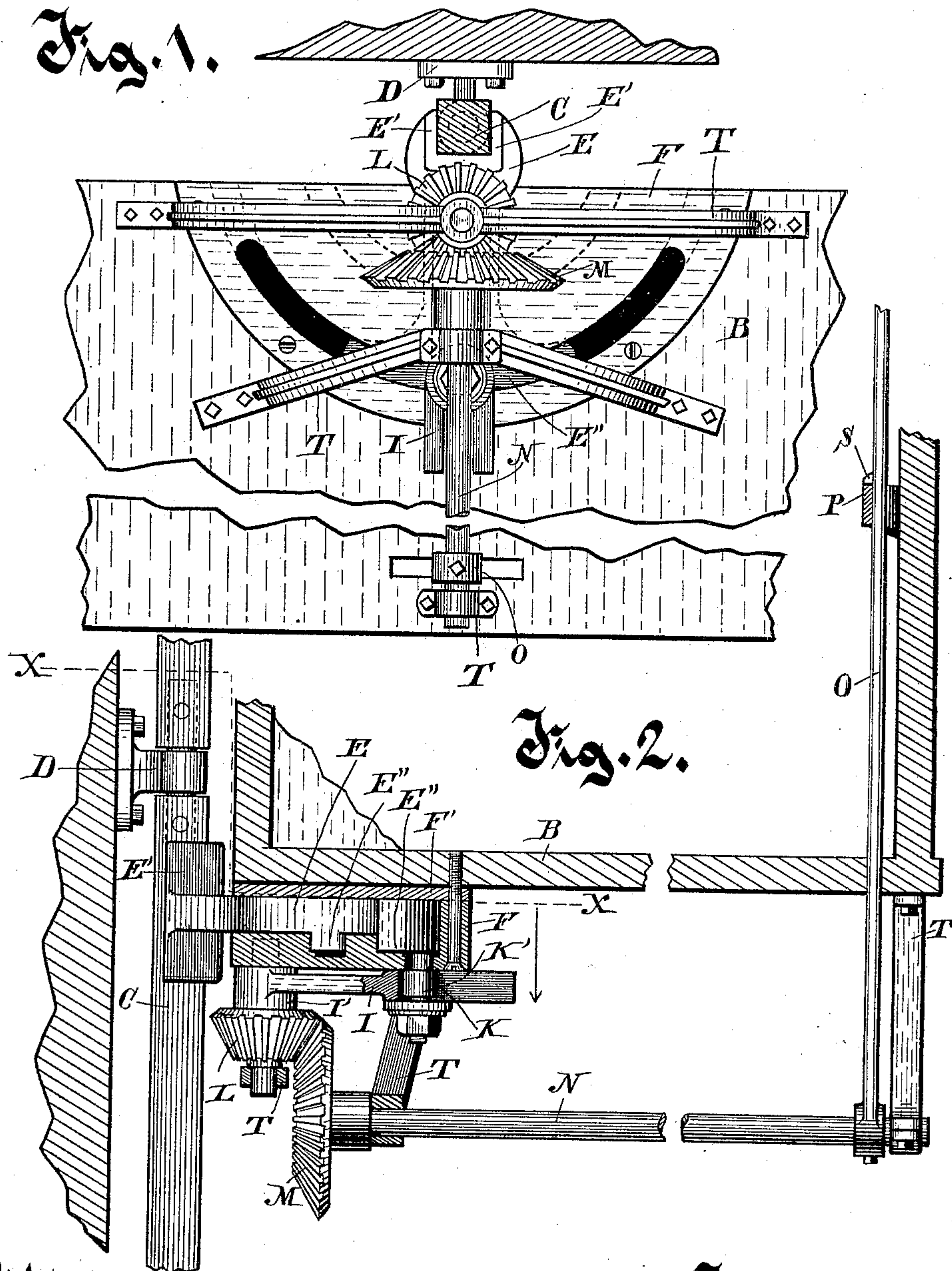
(No Model.)

3 Sheets—Sheet 1.

P. H. BRODESSER.
ELEVATOR.

No. 417,225.

Patented Dec. 17, 1889.



Witnesses.

C. H. Keeney.
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(No Model.)

3 Sheets—Sheet 2.

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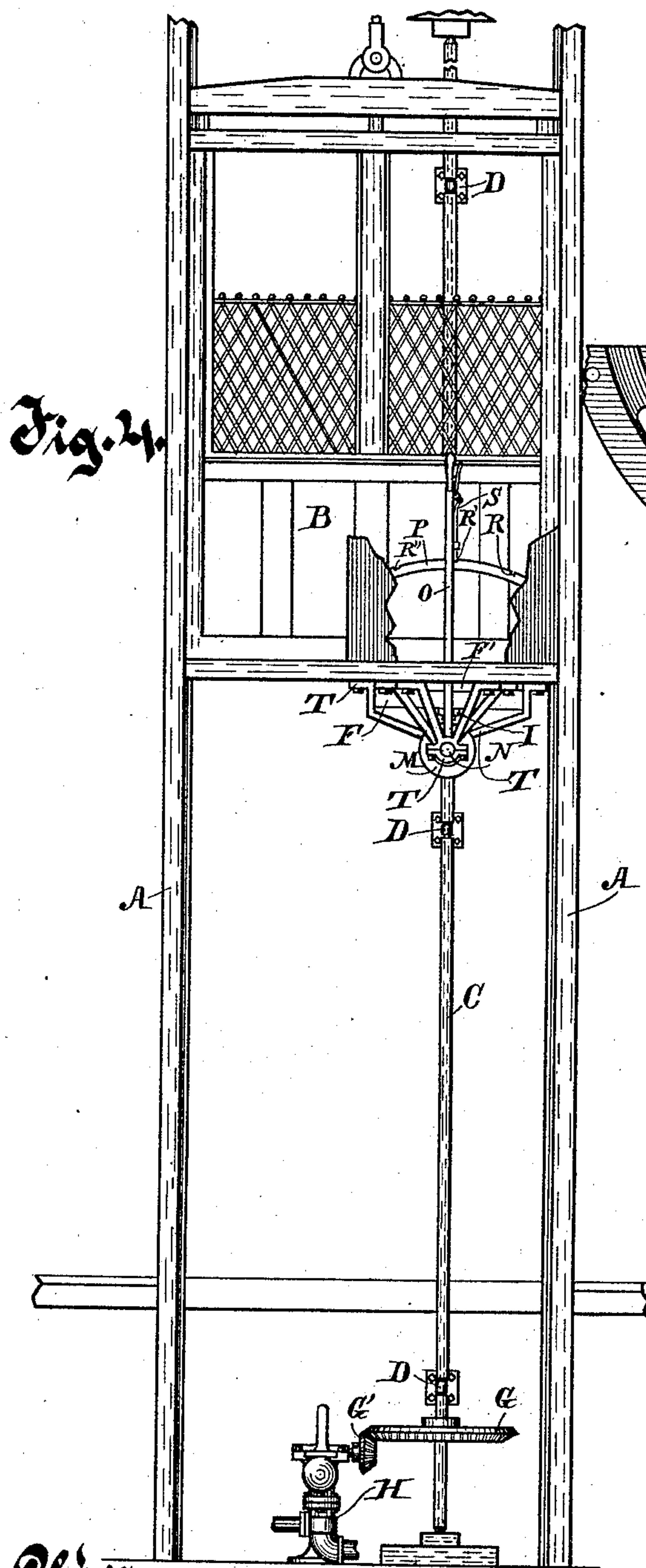


Fig. 4.

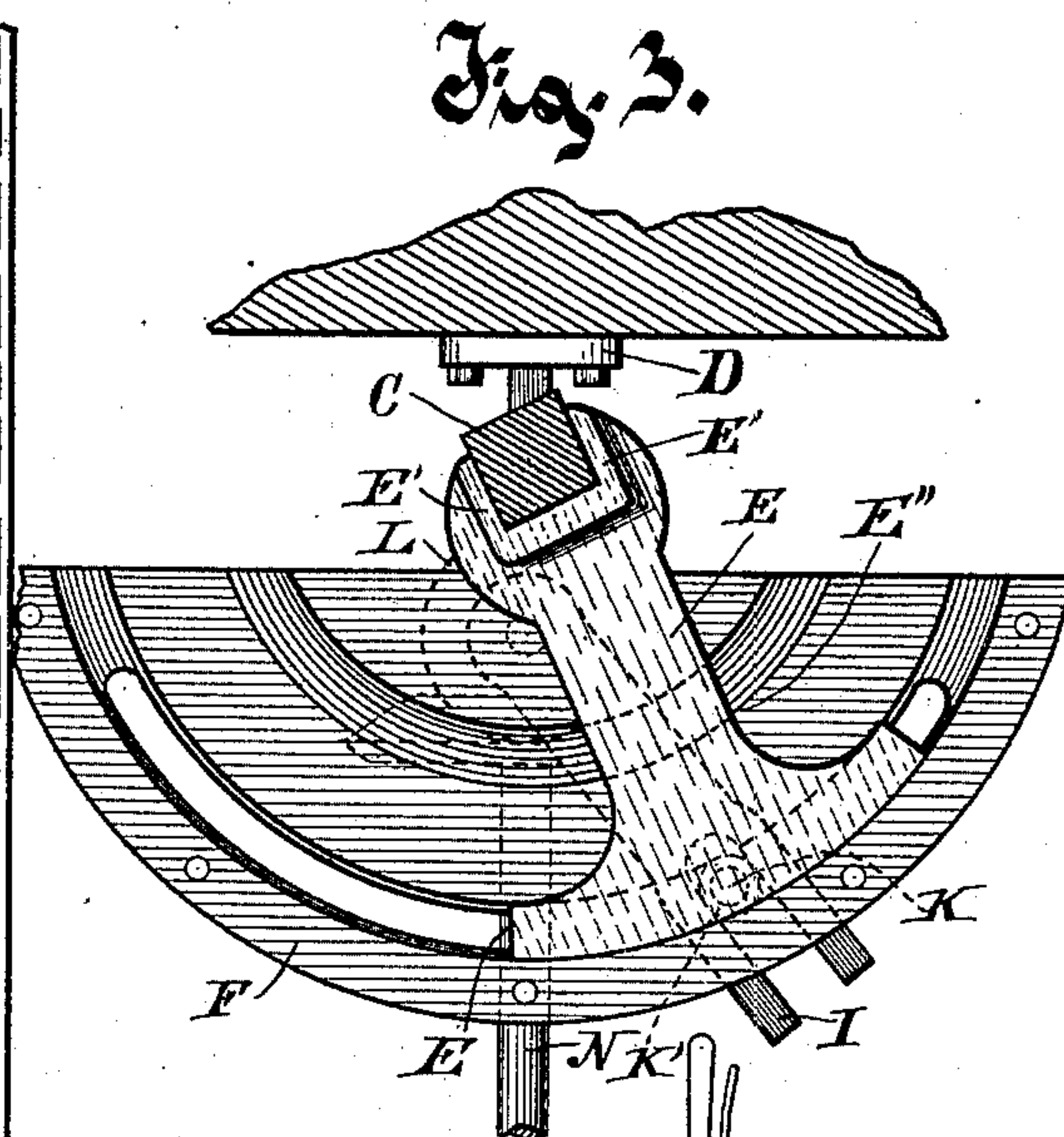


Fig. 3.

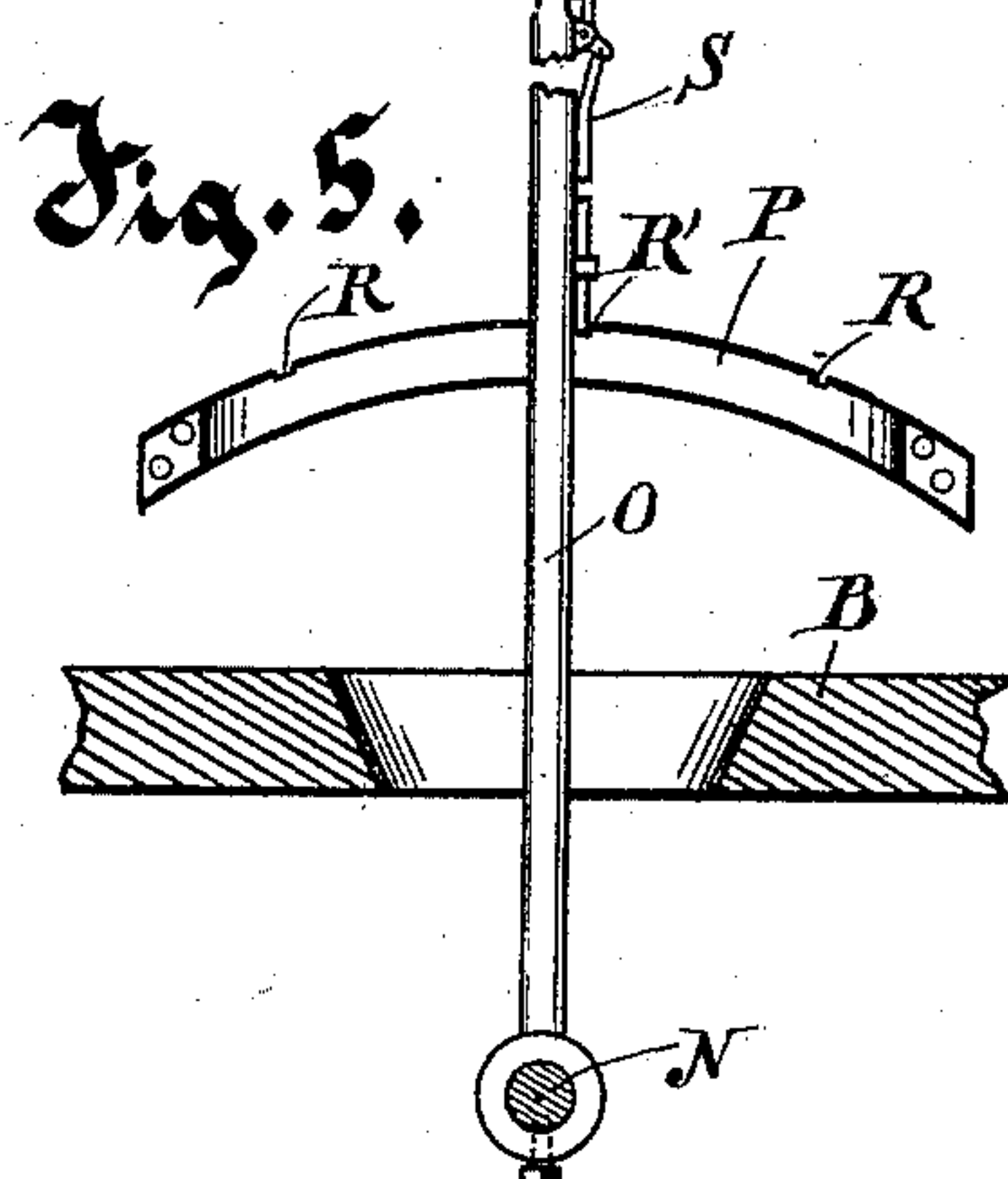


Fig. 5.

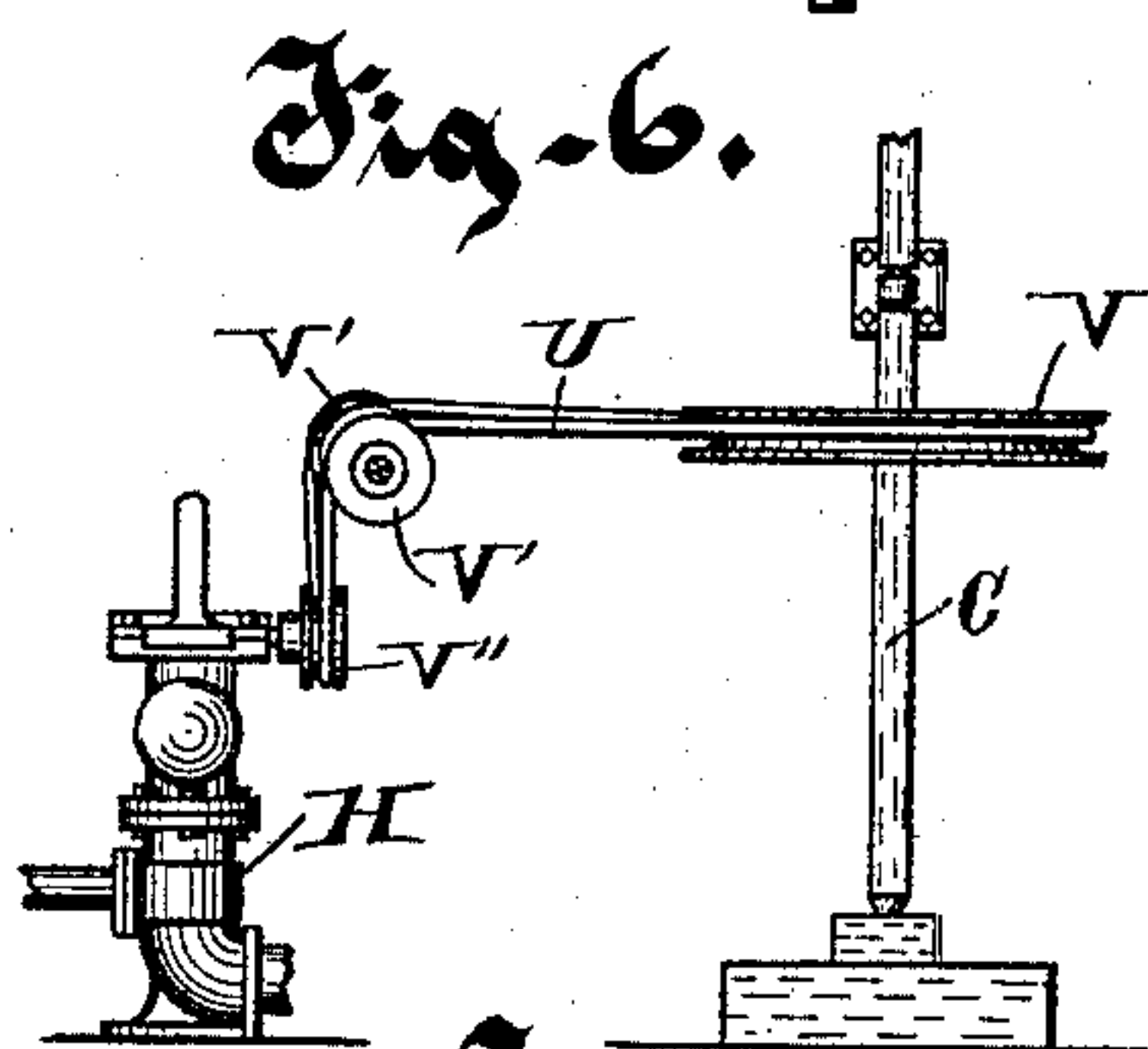


Fig-6.

Witnesses.

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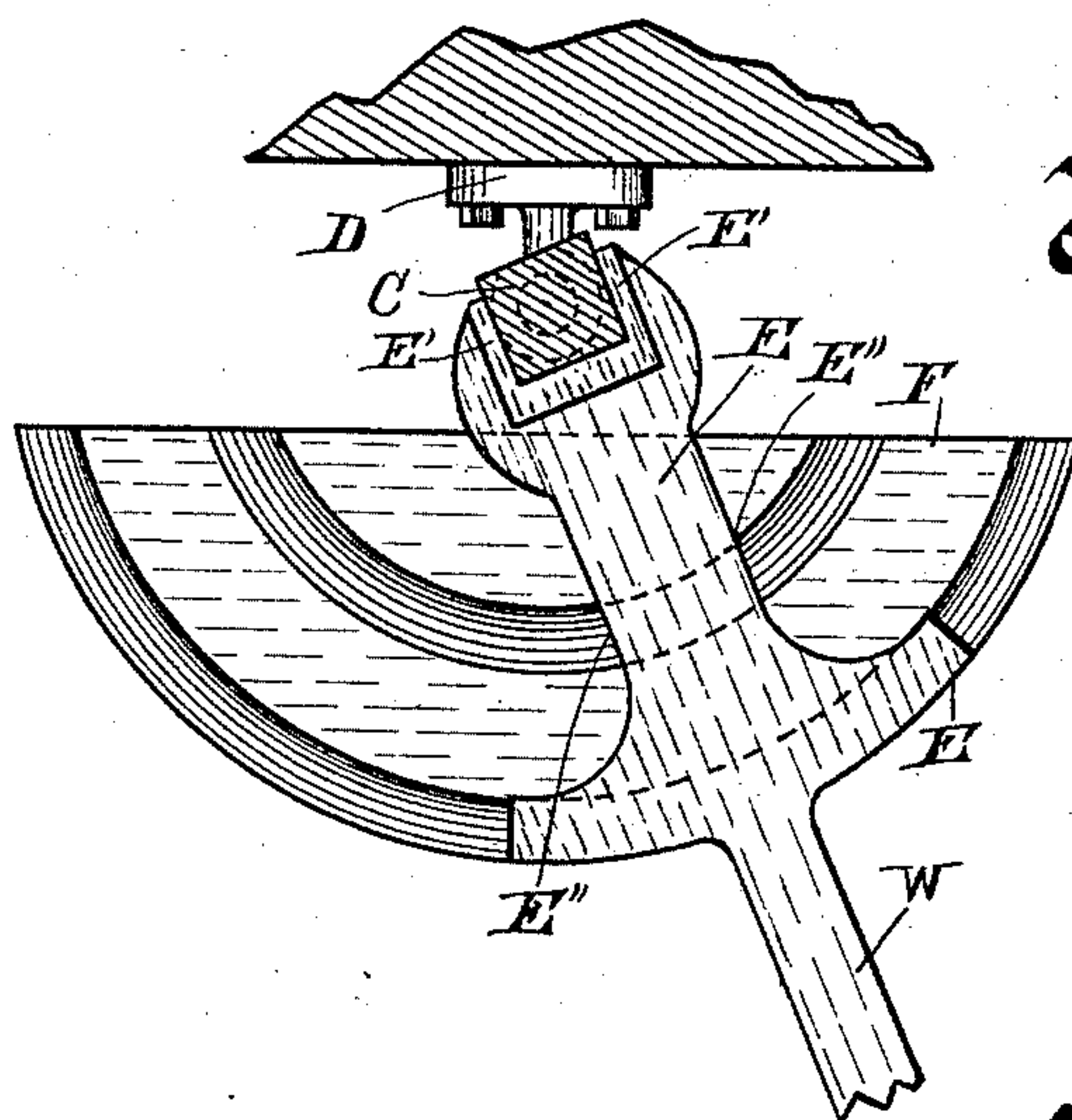
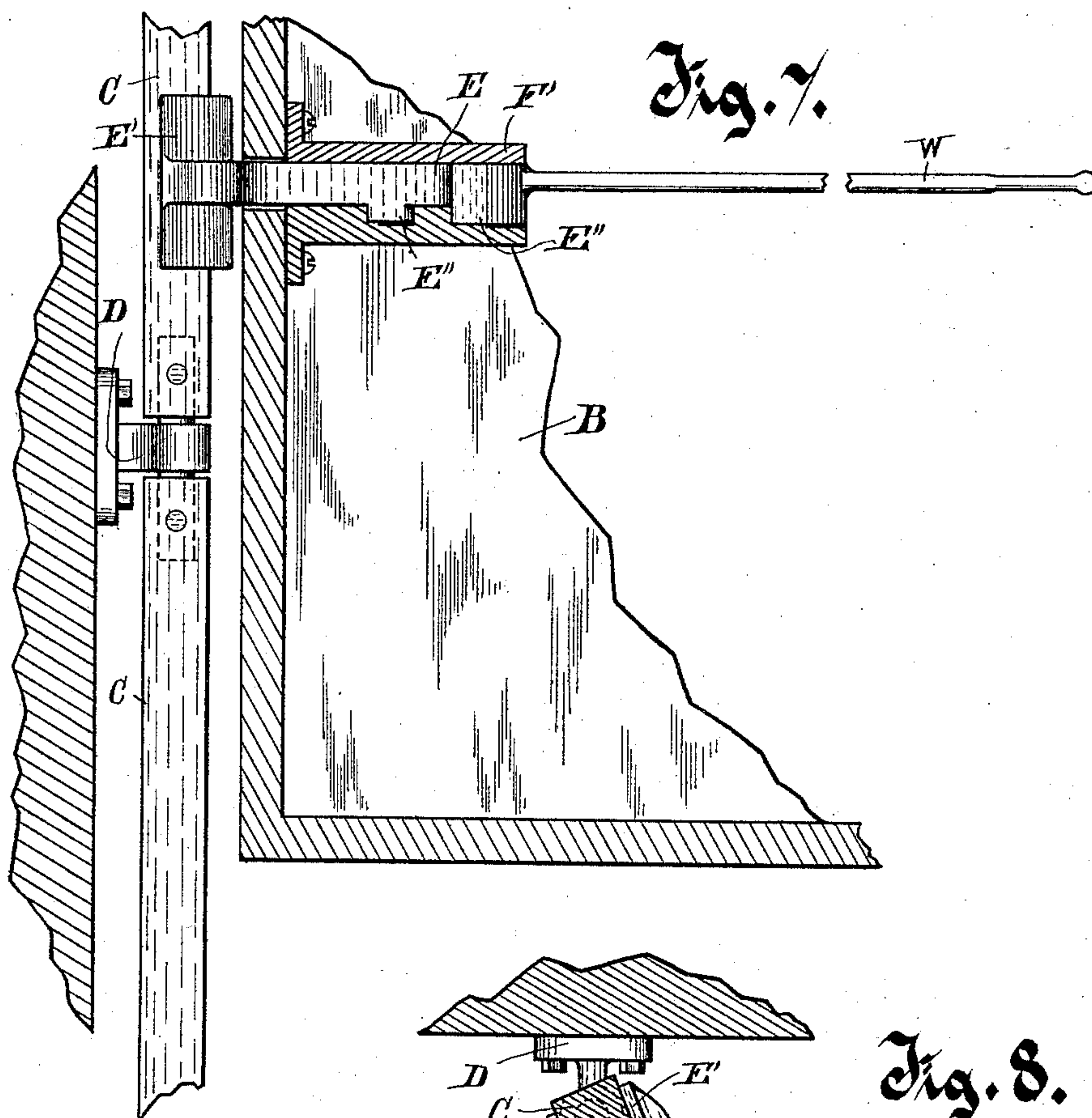
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3 Sheets—Sheet 3.

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Witnesses.

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UNITED STATES PATENT OFFICE.

PETER H. BRODESSER, OF MILWAUKEE, WISCONSIN.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 417,225, dated December 17, 1889.

Application filed April 8, 1889. Serial No. 306,352. (No model.)

To all whom it may concern:

Be it known that I, PETER H. BRODESSER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Elevators; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to a device used in connection with an elevator for letting on, cutting off, and discharging the water-supply by which the elevator is moved up and down.

In the drawings, Figure 1 is a view of the under side of a part of an elevator-car, showing that part of my device attached thereto and other parts with which it connects. Fig. 2 shows a central vertical section of a part of an elevator-car and those parts of my device which are directly connected therewith and other parts in immediate connection thereto. Fig. 3 is a plan and cross-section of portions of my device, taken on line X X of Fig. 2, looking downwardly. Fig. 4 is an elevation of a passenger-elevator having my device connected therewith. Fig. 5 is a detail of the lever-bar and segment-guide. Fig. 6 shows a modified form of connecting the shaft with the valve of the water-pipe. Fig. 7 is a vertical section of a part of an elevator-car with a modified form of my device in connection therewith. Fig. 8 is a transverse section and plan of that portion of the modified form of device shown in Fig. 7.

The same letters refer to like parts in all the views.

In the drawings, A A are the posts or side rails of the well on which the elevator B travels up and down. In the elevator-well, and preferably near one side of it, is a shaft C, extending from the top to the bottom of the well and having bearings at each end, wherein the shaft is supported, and in which it can be rotated to a limited extent. This shaft is square, but is provided with cylindrical parts in several places, which cylindrical parts are of less diameter than the thickness and width of the square portions of the shaft, which cylindrical parts form

journal-bearings, which are severally received in the brackets D D D. These brackets are secured firmly to the side of the well and serve for guide-bearings for the shaft C. A wrench-arm E is provided with jaws E' E', constructed and adapted to loosely fit the sides of the shaft C, which arm rests in a bracket F, which bracket is secured to the under side of the car. The wrench-arm E rests upon and within the bracket F, and swings in an arc thereon, being guided in its segmental motion by downward-projecting lugs E'' E'', which enter segmental slots therefor in the bracket F, by which also it is guided in its movements. A plate F', placed on the bracket F, forms a cover therefor over the arm E.

The shaft C is provided with a gear-wheel G, meshing with the pinion G' on a shaft which operates the water-valve in the water-pipe H, which is so constructed that by turning the shaft C in one direction water is admitted into the cylinder to raise the elevator-car, and by turning it in the reversed direction water is discharged from the cylinder, so as to allow the elevator to descend, and by stopping the shaft at a point midway between its extreme movements to right and left water will be cut off entirely and neither admitted nor discharged from the cylinder, whereby the elevator remains in stationary position.

To provide for swinging the arm E, a lever-arm I, having a hub I', is pivoted by an axle through the hub on the bracket F, and a pin K, passing through a slot in the free end of the arm I, is fixed in the outer end of the arm E. The pin K is provided with an anti-friction sleeve K', which bears against the arm I on each side of the slot. A pinion L, rigid on hub I', meshes with a pinion M, rigid on shaft N, which is provided with a lever-bar O, extending upwardly through the bottom of the car alongside one wall of the car. A segment-guide P is affixed to the side of the car, and the lever-bar O swings within and alongside the segment-guide, which is provided with a series of recesses R, R', and R'', into which a locking-bar S, connected to and movable on the bar O, is adapted to enter and lock the lever-bar in position at one of the recesses R R' R''. The shaft N and the hub I' are supported on the under side of the

car by the brackets T T T, secured thereto, as shown in Fig. 1.

It will be seen that by swinging the lever-bar O either to right or left the shaft C will be swung or rotated to right or left, and the parts are so constructed and related to each other that by swinging the lever-bar to one side, as to R, water will be admitted to the cylinder from the pipe and will force the elevator up, and by swinging the bar to the other side, as to R'', the water will be cut off, and will also be permitted to be discharged, whereby the elevator will be lowered, while by swinging the lever-bar to an upright position, to R', the water is cut off, and is also held against being discharged, whereby the elevator is held in stationary position.

It will be understood that the jaws E' E' are adapted to slide up and down along the shaft C and to grasp it at whatever point the elevator may be, the parts of the brackets D D which are about the cylindrical parts of the shaft C being smaller in lateral dimensions than the shaft is, so that the jaws E' E' pass freely along the shaft past the brackets.

In a modified form shown in Fig. 6 the shaft C is connected with the water-valve shaft by means of a belt U, running on a pulley V over idle pulleys V' V' and on a pulley V'' on the shaft of the water-valve.

The means hereinbefore described for turning the shaft C to right or left are considered the most desirable for practical use; but the shaft C may be swung by affixing a handle W, as shown in Fig. 7, directly to the arm E, the arm E being in the bracket F, which for this purpose is located and affixed on the inside of the side wall of the car, the construction and location of which modified form of device are fully illustrated in Figs. 7 and 8.

The mechanism for elevating and lowering the elevator and the connection of such mechanism with the water-supply are not

shown in the drawings, as such mechanism is well known and is no part of the invention herein shown and described.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a bracket having segmental slots and secured to an elevator-car, of a swinging wrench-arm pivoted on the car and having jaws adapted to slide upon and bear against a shaft adapted to oscillate, supported alongside the line of travel of the car, and lugs projecting from the wrench-arm into the segmental slots in the bracket, as and for the purpose set forth.

2. The combination of a shaft extending vertically in an elevator-well and adapted to be rotated limitedly, in combination with a swinging wrench E, lever-arm I, pivoted at one end and connected loosely at its free end with the free end of the arm E, a pinion L, rigid on the hub of the arm I, shaft N, having pinion M rigid thereon, and lever-bar O, rigid to shaft N, substantially as described.

3. The combination of a swinging wrench-arm E, located and supported in a bracket F, secured to the car of an elevator and having its pivotal point beyond the edge of the car, with an arm I, pivoted to the bracket F and having its pivotal point within the line of the edge of the car, and a pin K, fixed in the free end of the arm E and moving in a slot in the free end of the arm I, against the walls of which slot the pin is adapted to bear, with means, substantially as described, for swinging the arm I, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PETER H. BRODESSER.

Witnesses:

GEO. MUELLER,
C. T. BENEDICT.