

J. D'HOMERGUE.

3 Sheets—Sheet 1.

Car Brake.

No. 10,336.

Patented Dec. 20, 1853.

Fig. 1.

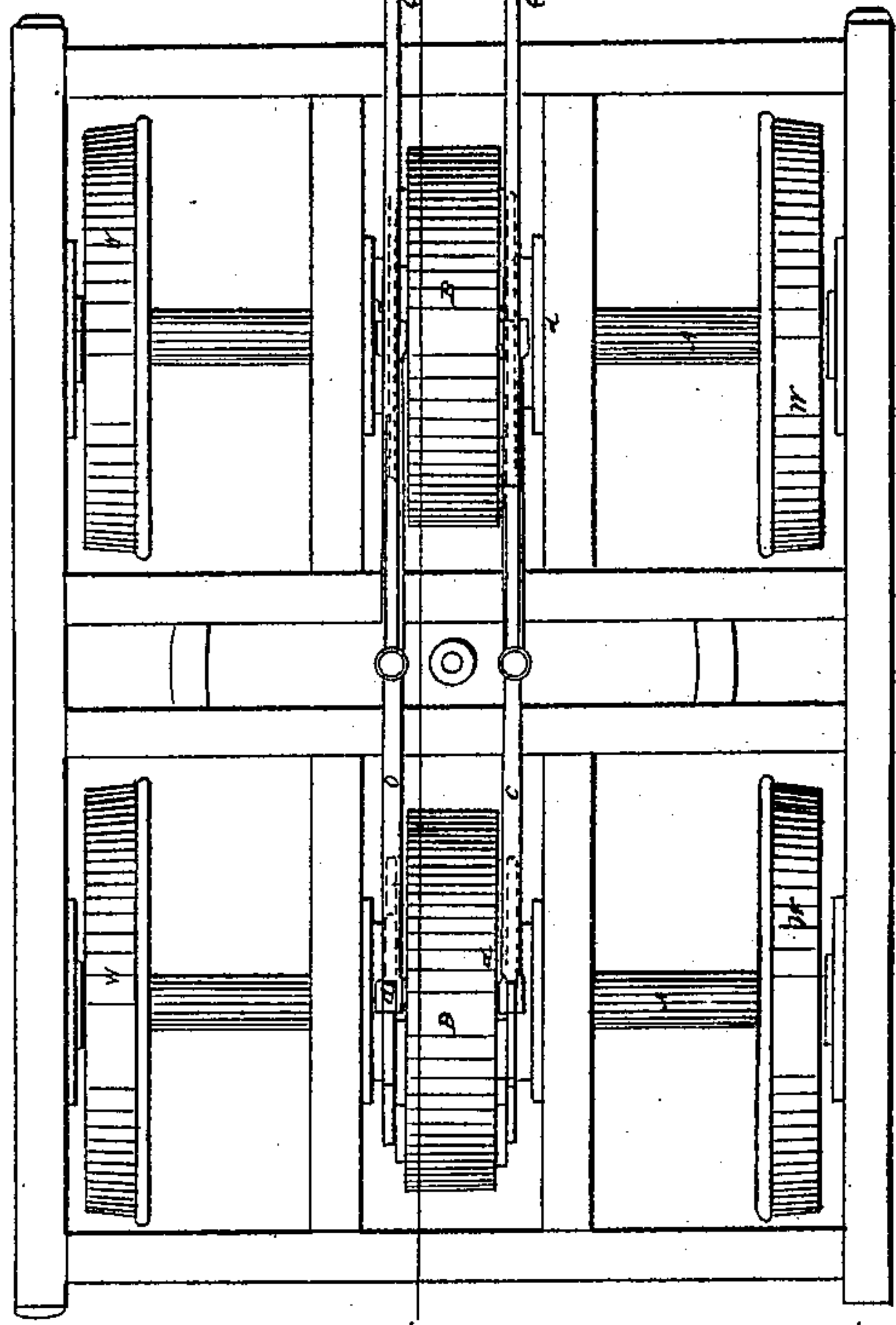


Fig. 2.

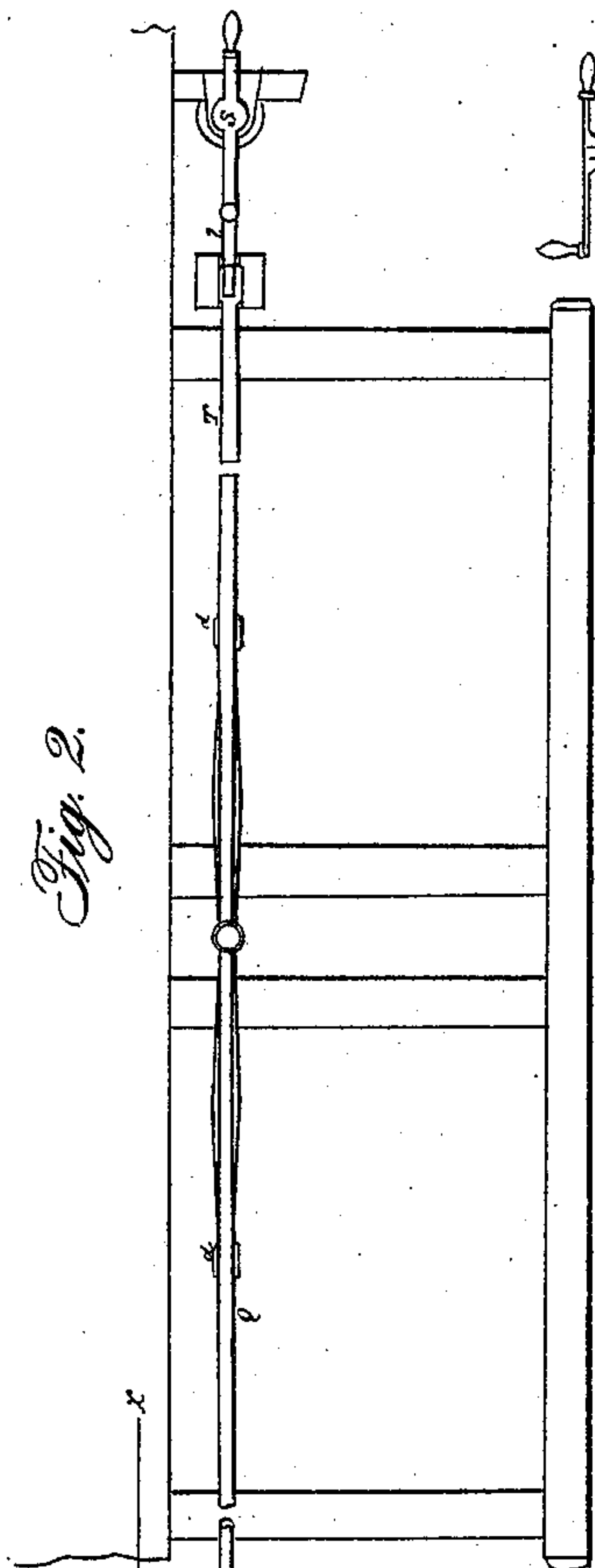


Fig. 3.

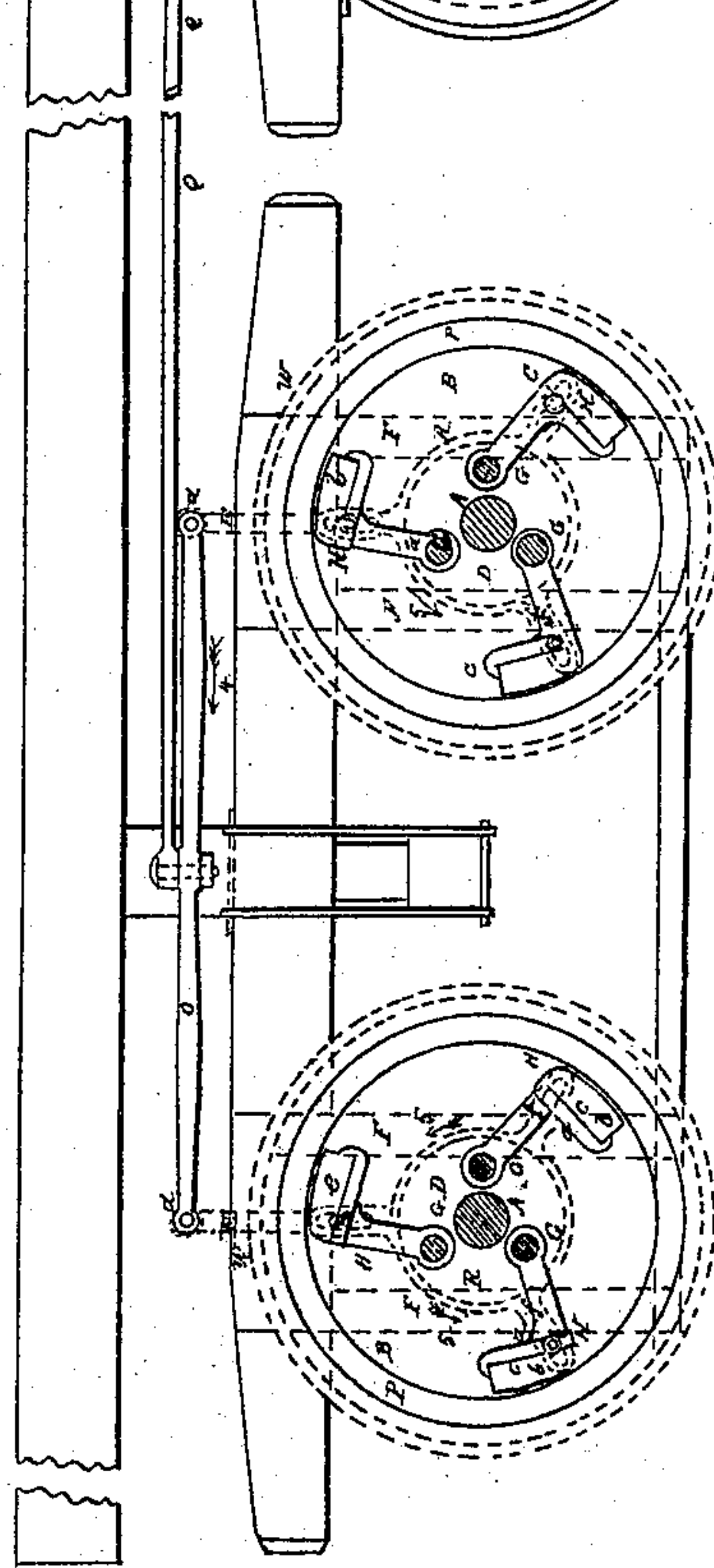
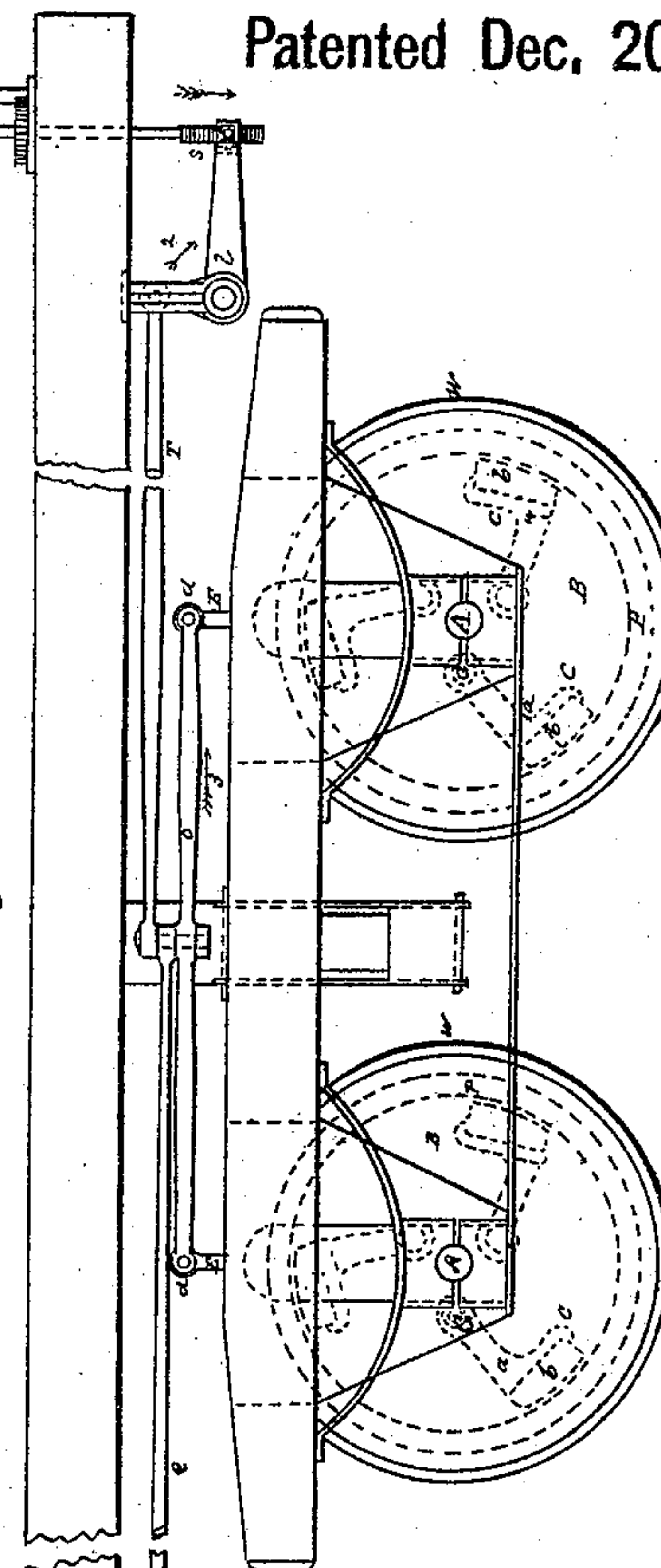


Fig. 4.

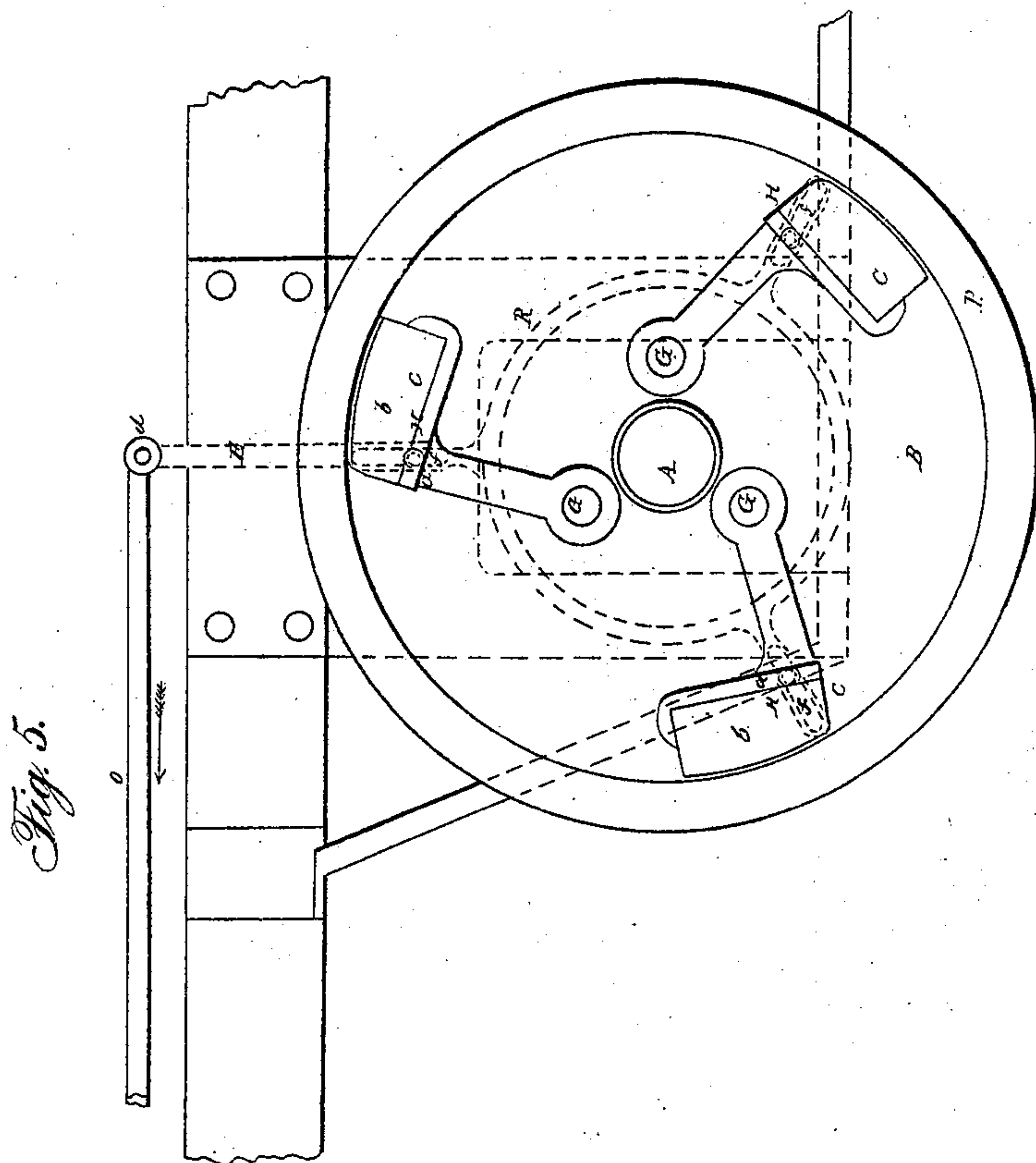
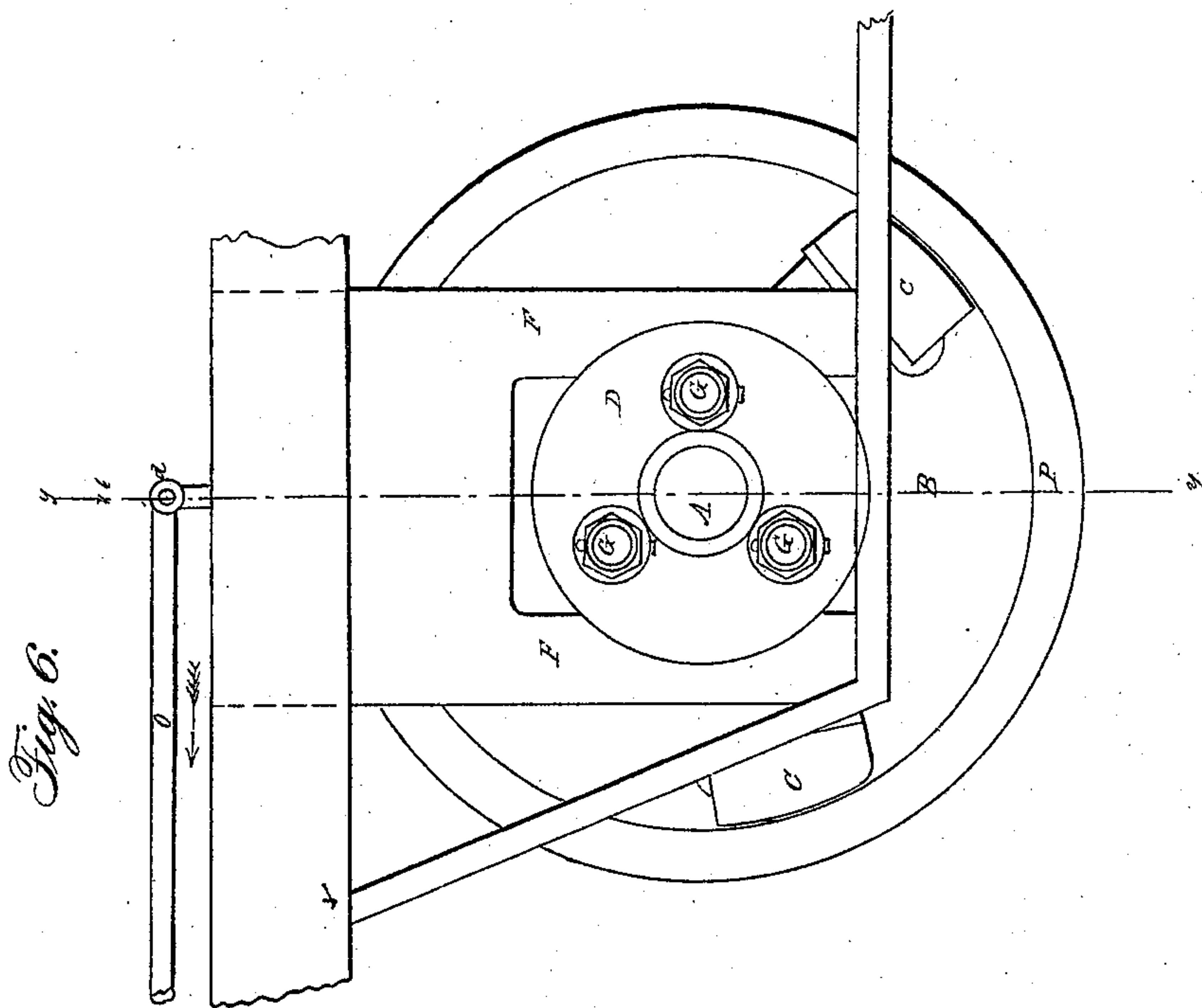


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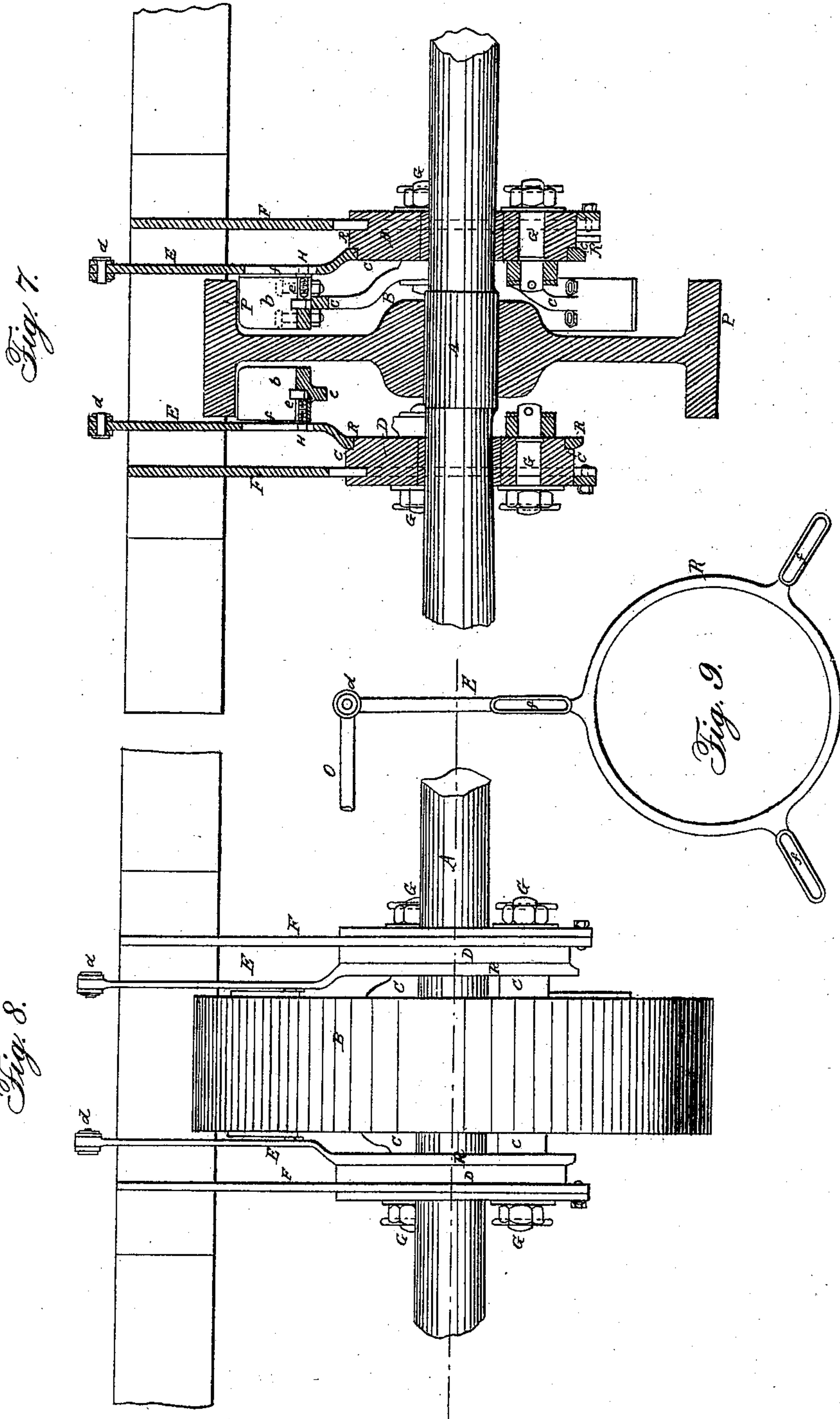
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3 Sheets—Sheet 3.

No. 10,336.

Patented Dec. 20, 1853.



UNITED STATES PATENT OFFICE.

JOHN D'HOMERGUE, OF NEW YORK, N. Y.

CAR-BRAKE.

Specification of Letters Patent No. 10,336, dated December 20, 1853.

To all whom it may concern:

Be it known that I, JOHN D'HOMERGUE, of the city, county, and State of New York, have invented a new and useful Improvement in Railroad-Car Brakes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, forming part of this specification, in which—

Figure 1 is a plan of the truck with floor of car removed. Fig. 2 is a plan of truck frame with portion of car floor removed, showing the rods connecting the two trucks supporting the car. Fig. 3 is a vertical longitudinal section on line *x x* of Fig. 1. Fig. 4 is side elevation of the truck, showing connection between the two trucks of a car. Fig. 5 is a section of sheave and rubbers, perpendicular to axis of sheave, and on line *x x* of Fig. 1. Fig. 6 is a side elevation of sheave and block to which brake cams are bolted. Fig. 7 is a vertical section through axis of sheave taken on line *y y* of Fig. 6. Fig. 8 is a front elevation of sheave and adjacent parts. Fig. 9 is an elevation of tri-branched ring, which gives motion to the brake cams.

Similar characters of reference in the several figures denote the same part of the machine.

The nature of my invention consists in the employment of hollow sheaves attached permanently to the middle of the axles, within each of which sheaves and detached from it, is a system of cams, moved simultaneously as hereafter to be described, and made to press against the inner periphery of the rim of the sheave, making an effectual brake.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

In the drawings A is the axle with which the wheels W turn, in the middle of which is fixed the sheave B which has the form shown in Fig. 7. On each side of the sheave B, and firmly secured by the pillar plates F, are the cast iron blocks D, to each of which is attached by the bolts G, the three cams C, each consisting of the iron arm and holder *a* and wooden rubber *b*. In the inner face of each block D is the rabbet *c*, in which rests the slotted tri-branched ring R shown in Fig. 9, to the upper branch E of which, by the joint *d*, is attached the rod O, the longi-

tudinal movement of which produces a corresponding motion of the ring R in the rabbet *c*. Each of the cams C has on its outer face a stud H, secured in the cam by a screw *e*; over each of these studs H is placed one of the slots *f* of the tri-branched ring R, as shown in Figs. 5 and 7, so that the motion communicated to the ring R by the rod O is transmitted to the cams C, causing them to move about their attachments G on the block D, and the rubbers *b* to approach or recede from the inner surface of the rim P as required. The blocks D are so situated as to enable the axle A to turn freely within them, so that when the rubbers are not in contact with the sheave, the cams and their attachments have no connection with the running gear.

There are on each side of every sheave B three cams constructed, arranged, and connected as above described, each system being movable by a tri-branched ring R working upon the block D. Each pair of arms E on the same side of the truck, are connected by the rod O, the longitudinal movement of which operates the cams with which said arms are connected. The rods O on the same side of the two trucks supporting a car are connected by a rod Q attached at their middle points. The rubbers of the rear truck have the reverse position of those used in the forward truck the object of which will be hereafter described.

The operation of my brake is as follows: The car having motion as indicated by arrow 1, Figs. 3 and 4, and the signal to brake being given, the screws S are turned moving the levers *l* as indicated by arrow 2, and drawing the rods T attached to the rods O as shown by arrow 3; this movement of the rods O of the front truck draws the rubbers of the cams C against the inner periphery of the sheaves, by means of the tri-branched rings R as above described, stopping almost instantly the front truck. The rear truck which is so attached to the car as to have a small longitudinal motion under it, runs forward as indicated by arrow 1, causing its rods E by reason of the pressure of the rods Q, to take the direction shown by arrow 4, turning the rings R of that truck in the direction of arrows 5, and bringing the cams C closely against the inner periphery of the sheaves; this running together of the trucks presses the

rubbers close to the sheaves and speedily stops the car. By reversing the screws S the sheaves are released and the car is free to move forward.

5 The car may be fastened upon the trucks so that the distances between their centers shall be invariable, in which case the two rods T shall be so arranged in front that one shall be drawn forward and the other
10 pushed back, thus tightening the cams upon one side of the sheaves in the fore truck and on the opposite side of the sheaves of the rear truck. This arrangement is dependent upon the same component parts as that
15 first described, the variation being merely in the device employed to bring the invention under the control of the operator, any of the well known arrangements being applicable to produce the result.

20 The distance between the rubbers and the inside periphery of the sheaves is not more than three eighths of an inch when in what may be termed their normal state, conse-

quently but little movement is required to bring them in contact with the sheave, stop 25 its rotation and arrest the progress of the train

This brake can be applied to locomotives and thus enable the engineer to apply a check to the engine at the instant of giving 30 the signal to operate the brakes on the other parts of the train.

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

The herein described arrangement of the 35 cams C upon the blocks D and within the sheaves B, so as to press simultaneously against the inner periphery of said sheaves by the action of the tri-branched ring R substantially as herein fully set forth.

New York, October 24th, 1853.

JOHN D'HOMERGUE.

In presence of—

ROBERT GALLAGHER,
ALFRED DICKINSON.