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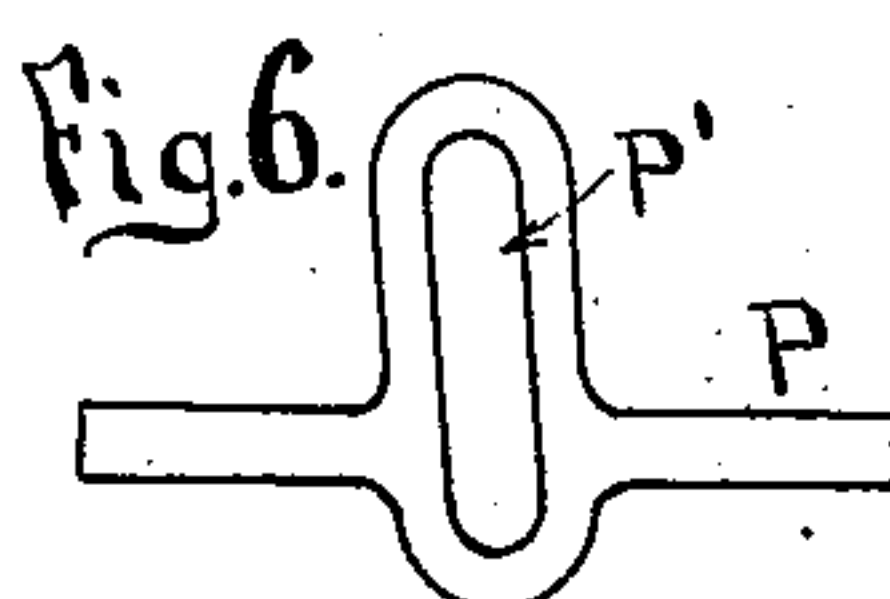
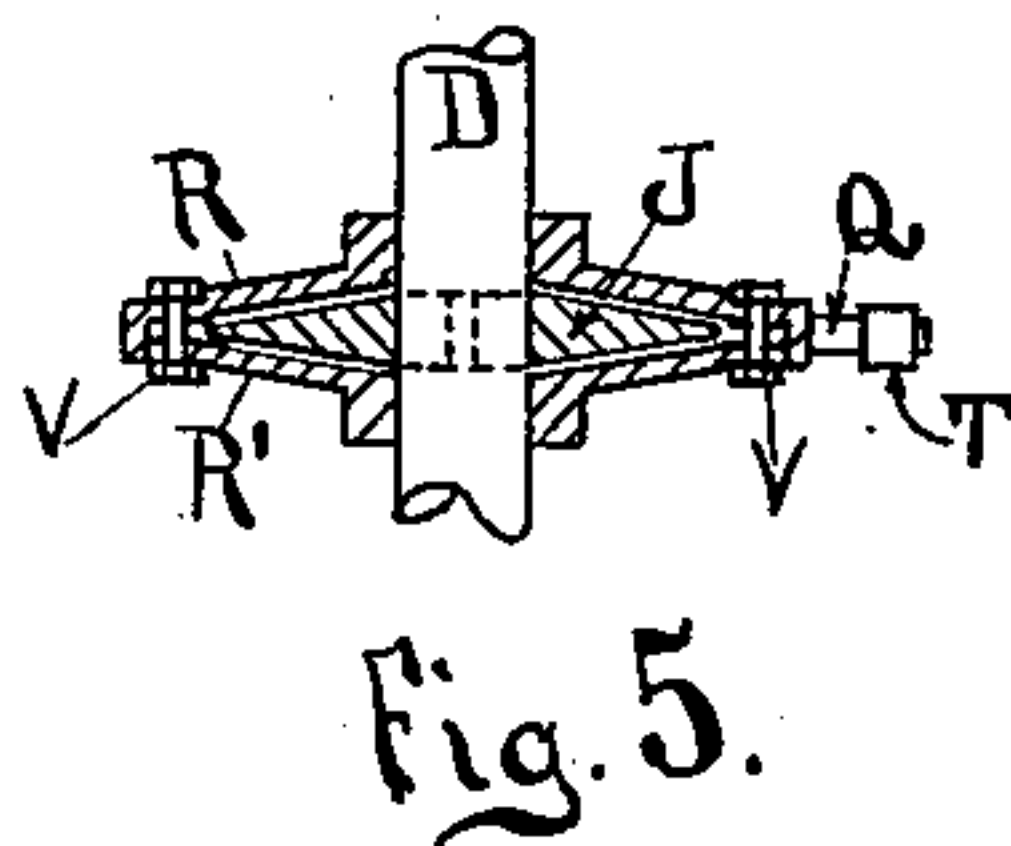
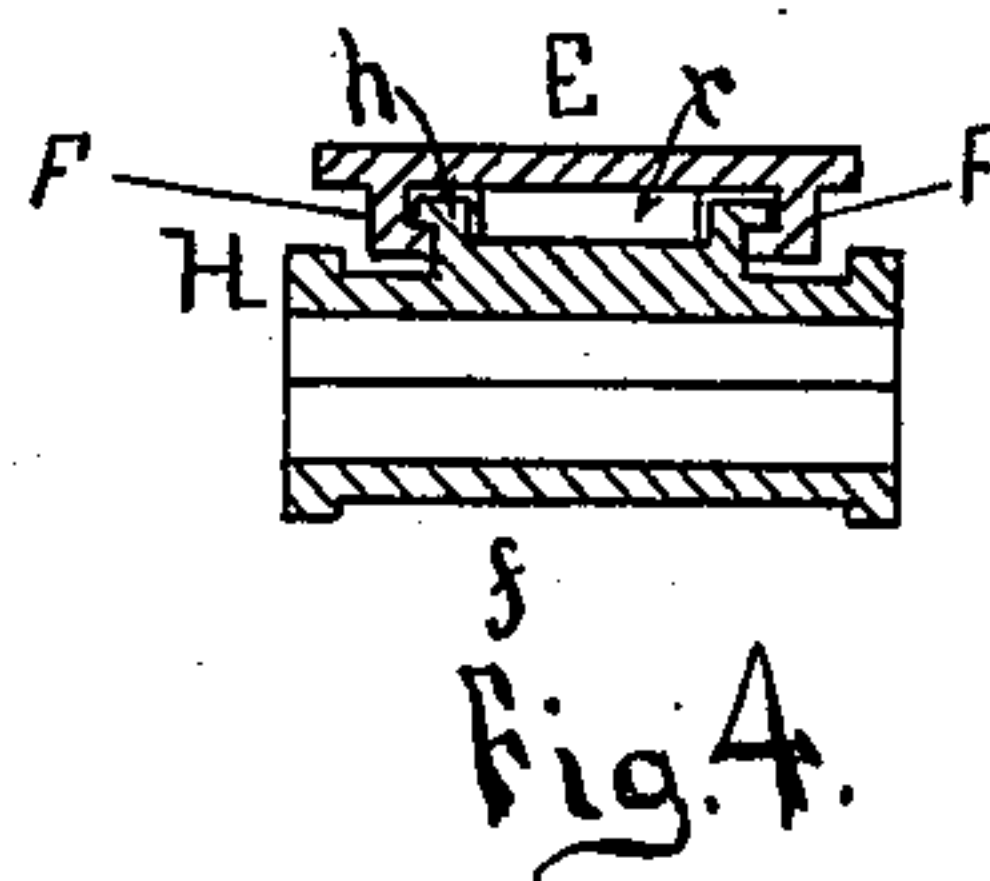
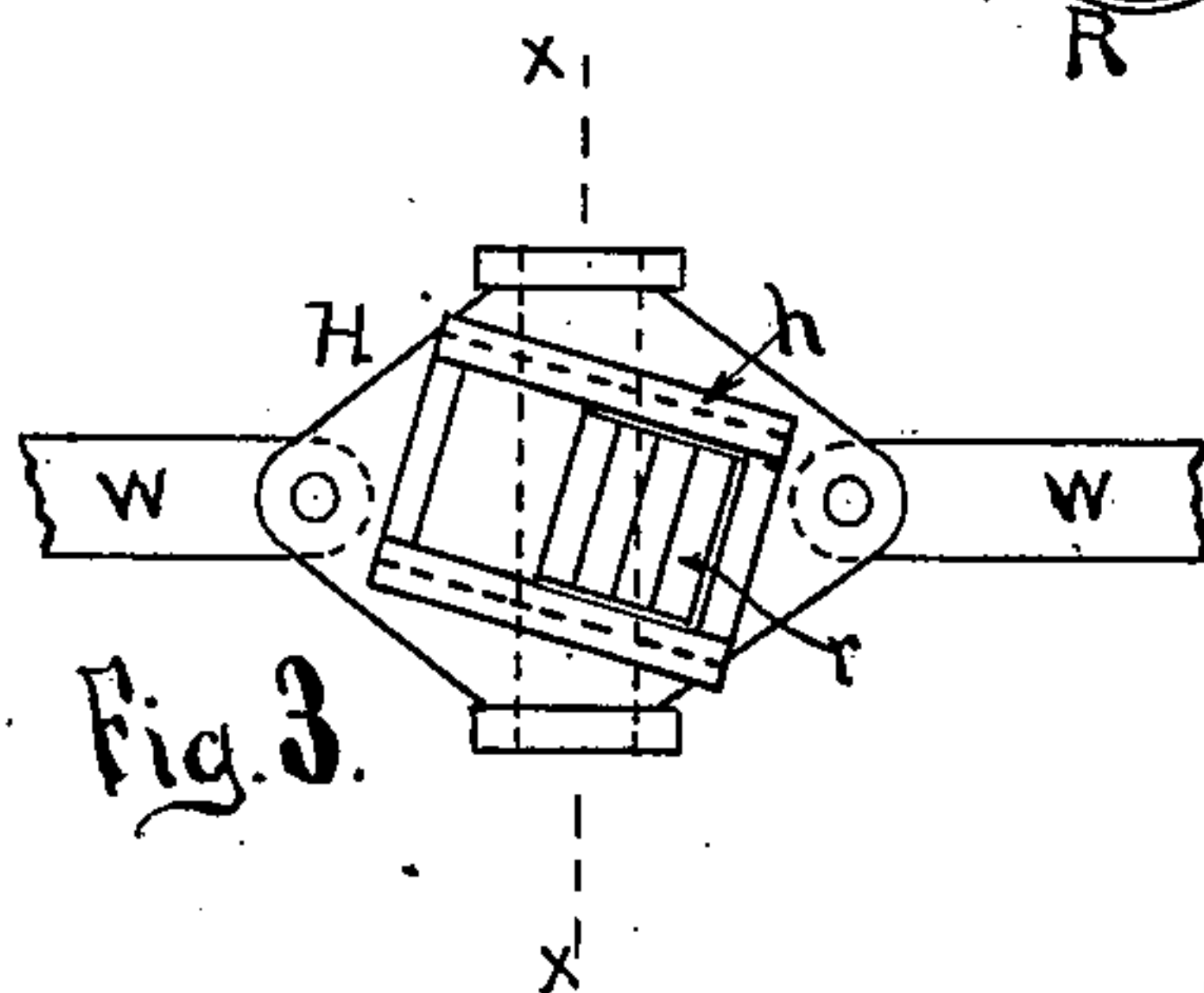
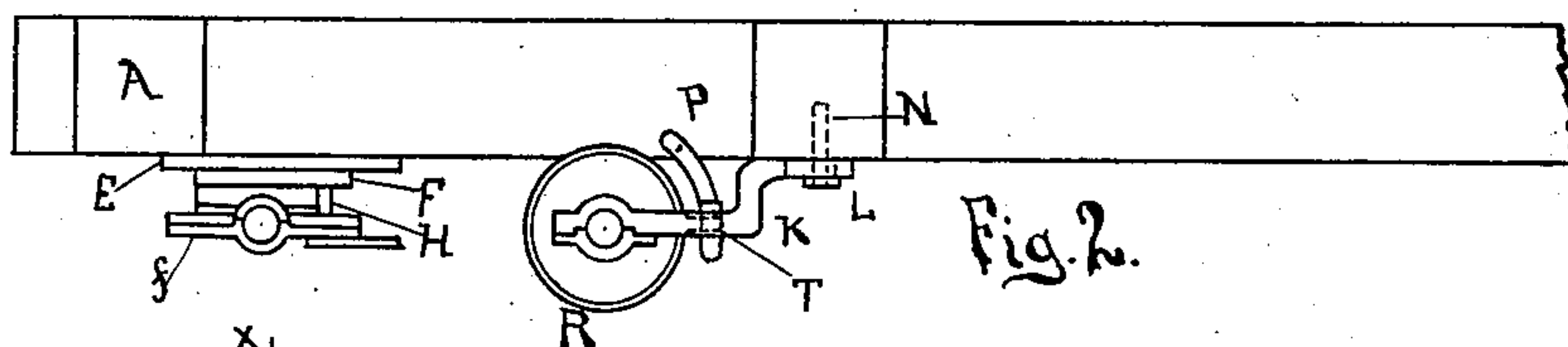
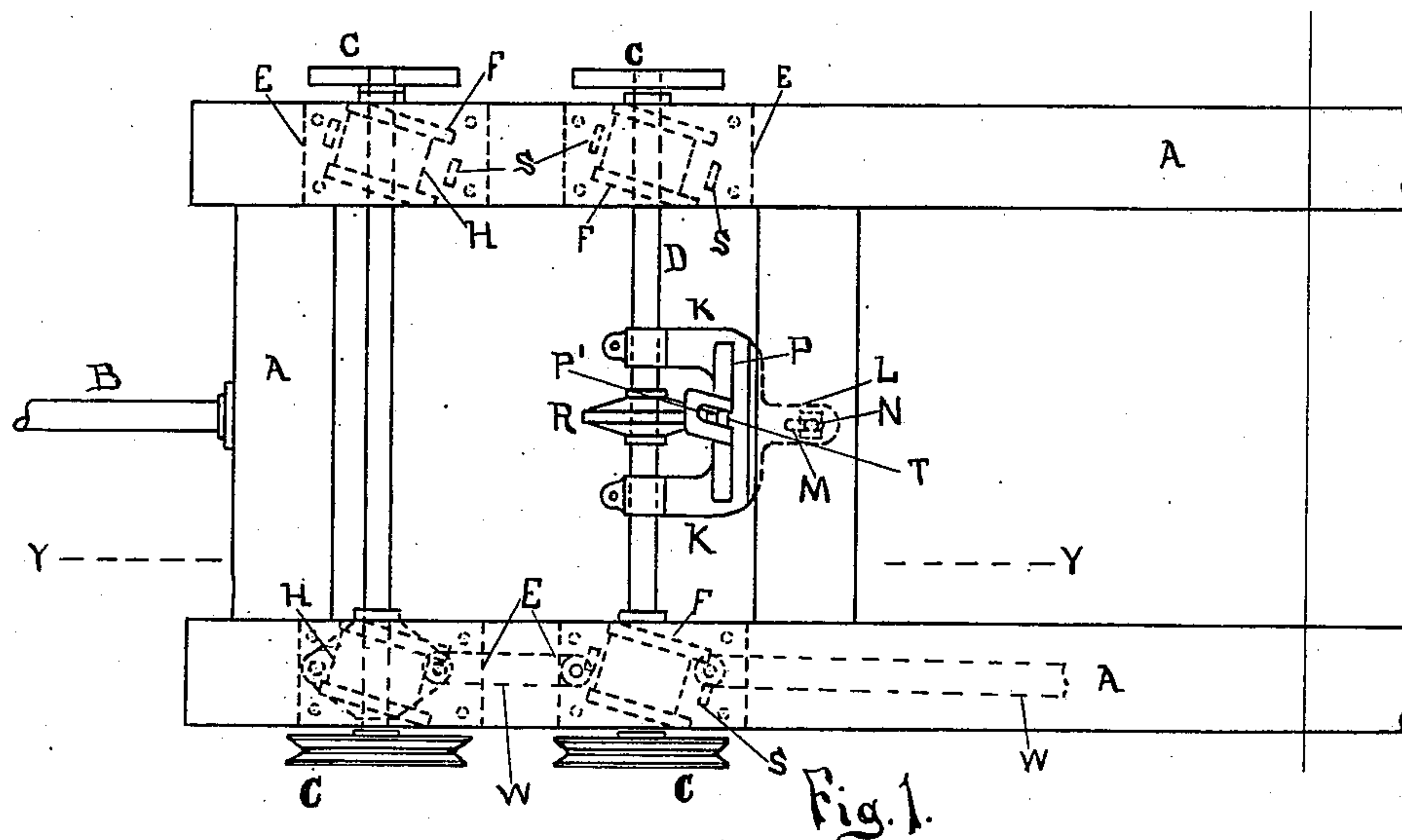
2 Sheets—Sheet 1.

H. GAWLEY.

OFFSET FOR SAWMILL CARRIAGES.

No. 563,476.

Patented July 7, 1896.



Witnesses

C. Hondelink
Ambrose C. Hindman.

Inventor

Hector Genovly
By Edward Teygard
His — Attorney.

(No Model.)

2 Sheets—Sheet 2.

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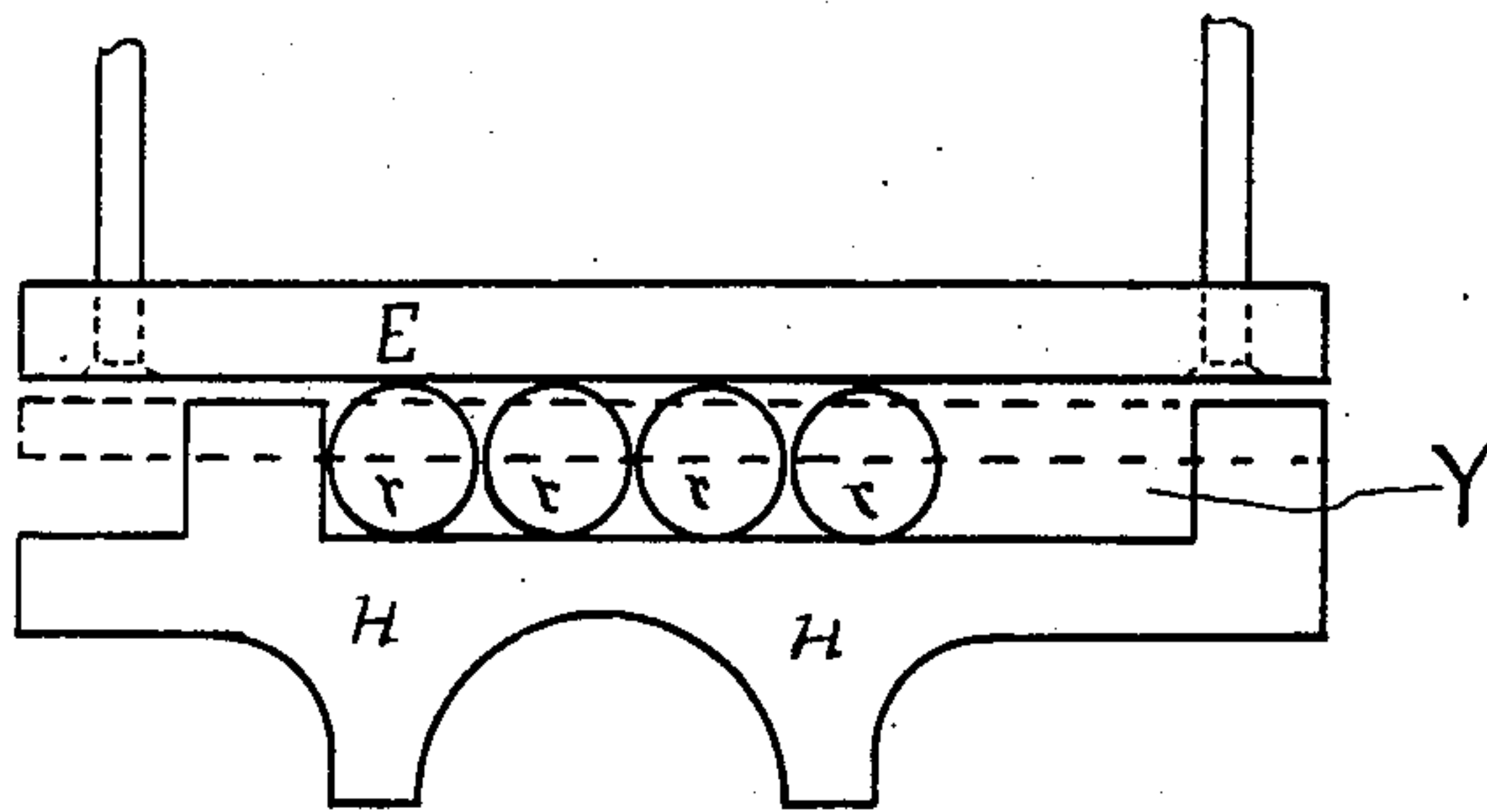


Fig. 7

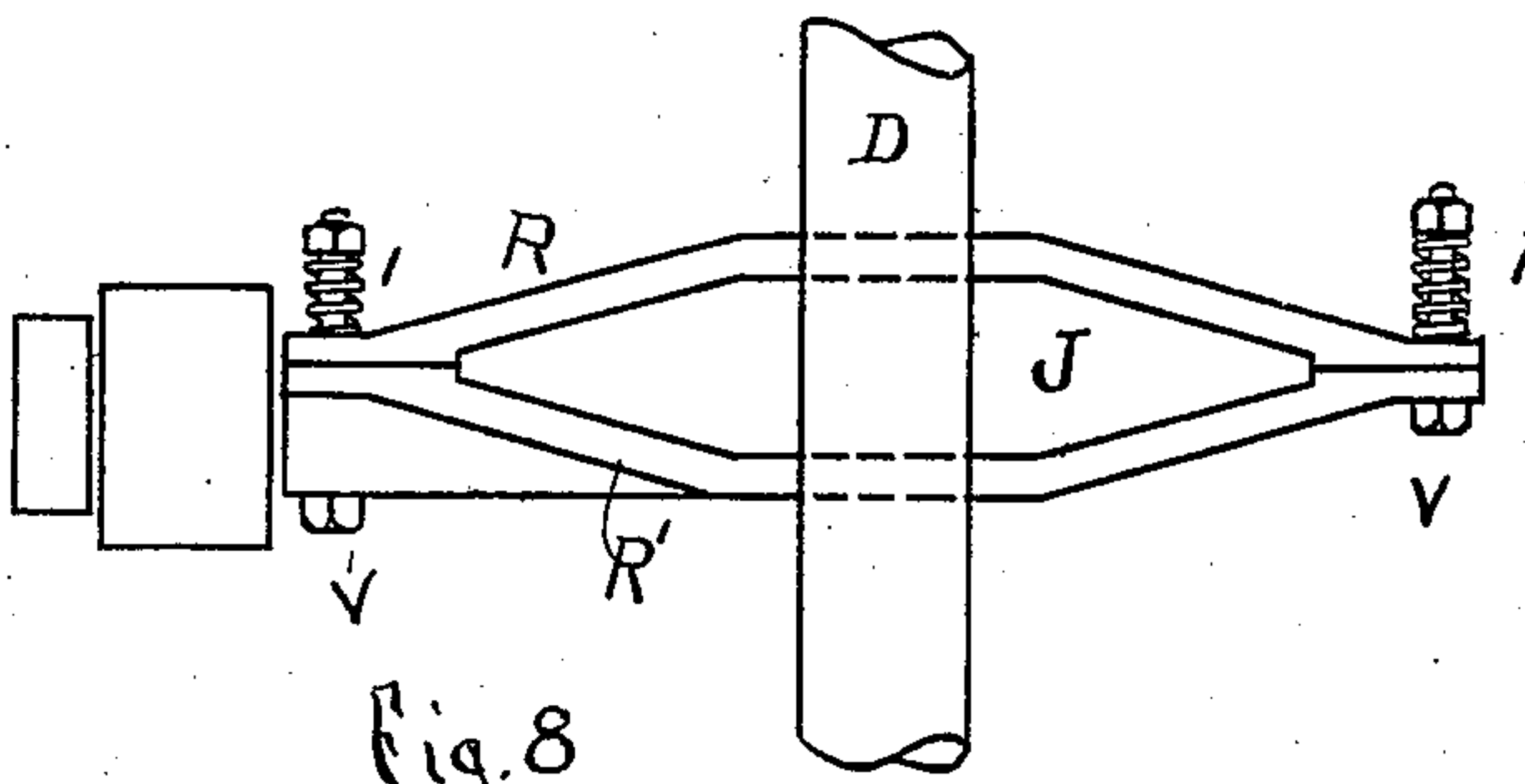


Fig. 8

Witnesses:
Christopher Hondelink
Ambrose R. Hindman

Hector Gawley
By Edward Taggart
His Attorney

UNITED STATES PATENT OFFICE.

HECTOR GAWLEY, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO MERCY P. MONTGOMERY, OF SAME PLACE.

OFFSET FOR SAWMILL-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 563,476, dated July 7, 1896.

Application filed May 27, 1896. Serial No. 550,856. (No model.)

To all whom it may concern:

Be it known that I, HECTOR GAWLEY, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a certain new and useful Offset for Sawmill-Carriages, of which the following is a specification.

This invention relates to a new and improved offset for sawmills, and is designed to be used especially in connection with mills having band-saws; and the objects of my invention are, first, to move the carriage and log back from the saw, so as to prevent injury to the saw in its reverse motion; second, to quickly give this backward motion or offset with the least possible strain upon the mechanism, and, third, to obviate jarring or straining upon the mechanism used for such purpose. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a carriage constructed in accordance with my invention, the view, however, showing but one part of a carriage. Fig. 2 is a sectional view on line Y Y of Fig. 1, looking toward the friction-disk and its connection. Fig. 3 is a plan view of the axle-box and supporting-plate. Fig. 4 is a sectional view on line X X of Fig. 3. Fig. 5 is a sectional view of the friction-disk, which is used to regulate the time of the offset. Fig. 6 is a detached view of the cam portion of the yoke P, showing the cam-slot and the general position of the same, in which moves the arm T, as hereinafter described. Fig. 7 represents, on an enlarged scale, a transverse sectional view cut through the center of the rollers shown in Fig. 3 on a line at right angles to said rollers for the purpose of showing more fully the receptacle in which said rollers move; and Fig. 8 shows an enlarged view of the parts shown by Fig. 5 with the springs, which are preferably used for the purpose of preventing too rigid action of the clamping-plates.

Similar letters refer to similar parts throughout the several views.

A is the carriage-frame, of any ordinary construction.

B is a feed-arm connected to the frame,

which is used for the purpose of giving the longitudinal reciprocal movement to the carriage-frame.

C C are the wheels of the carriage-truck, which are mounted upon axles D in the ordinary manner.

E E are plates secured to the frame A rigidly, and serve as supporting-plates, which support the frame upon the journal-boxes of the axles.

F are guides in the plate, which allow the frame and the supporting-plate E to slide obliquely upon the axle-box H for the purpose of giving the offset motion to the carriage which supports the log operated upon. The box H forms a bearing for the axletree-journals.

h are raised portions which engage with the guide F of the plate E and form a receptacle for the antifriction-rollers r.

J is a disk or disk-shaped piece attached rigid to the axletree D, the object of which is to form a bearing or retarding surface for the friction-disk R R'.

K is a U-shaped yoke, which is provided with an extension or lug L, the form of which is shown in Figs. 1 and 2. Said yoke K is adapted to slide upon the axle D.

M is a slot in the projection or lug L of the yoke K, and acts as a guide in connection with the pin N. N is made rigid with the frame A, and extends through the slot M and allows the yoke K to have a longitudinal motion with reference to the frame. The pin N is provided with an antifriction-roller.

P is a cam-yoke, the form of which is fully illustrated in Fig. 6, and P' is the slotted cam-shaped opening in which the roller T of the arm Q is adapted to move.

The friction disk or clamp is composed of the parts R and R'. The same are attached together by means of the bolts V V, which are preferably provided with the springs l l, the object of the said springs being to prevent a too rigid grasp upon the lens-shaped piece J. These springs may be applied directly to the parts R R', or the parts R R' may be made of spring metal, if desired, or instead of using a coil-spring, as shown in Fig. 8, a spring of rubber may be used.

W represents a rod connecting the boxes H H, so that all the axle-boxes will move together.

In Fig. 7, which shows an enlarged view of the journal-box or axle-box H H, Y represents the opening or space within which the anti-friction-rollers *r r r r* are adapted to move. The plate E, placed above and resting upon the rollers, moves freely and independently of the supporting-boxes H H. In my device I do not move or slide the axle-boxes upon the axle, the offsetting being brought about by means of the supports above the axle, so that the carriage may be offset more readily and easily and without any strain or sliding motion upon the axle itself.

The operation of my invention is as follows: Starting at a point after the saw has made its cut through the log, and as the same is ready to be returned for a new cut, the feed-arm B now begins to move the frame backward, or to the left, as shown in Fig. 1. The back movement of the truck immediately turns the axle, and with it the lens-shaped collar or wheel J, and with J the friction-disks R and R'. This moves the cam-roller T of the arm Q upward in the cam-guide P'. This begins to offset the frame or carriage, and the offset moves as the cam T rises in the cam-groove P' until the stops S come in contact with the axle-boxes H, the supporting-plates E, moving in their inclined guides, assisting in completing the offset. The offset is now complete, and the carriage is moved to a point to begin a new cut. By reversing the motion the roller T is carried downwardly, and the carriage is carried forward, placing the log in position to receive another cut. Thus the offsetting and returning of the carriage is automatic, the same receiving its motion by means of the mechanism above described through the motion imparted by the feed-arm.

Having thus described my invention, what

I claim to have invented, and desire to secure by Letters Patent, is—

1. The combination of a carriage, a supporting-plate on the carriage, an axle and axle-box, and oblique ways between the axle-box and the supporting-plate whereby the carriage is moved obliquely in offsetting or moving the same back from the saw, substantially as described.

2. The combination of a reciprocatory carriage, axle-boxes having oblique ways on their upper sides, axles mounted in the axle-boxes and provided with supporting-wheels, supporting-plates attached to the carriage and engaging the oblique ways on the upper sides of the axle-boxes, and devices actuated by one of the axles, substantially as described, whereby the carriage is offset on its back stroke, as and for the purposes set forth.

3. In combination with a carriage and axle, an axle-box moving in oblique ways, a friction-disk adapted to be turned by the axle, an inclined slot, an arm carried by the friction-disk engaging with said inclined slot, the movement of said arm in said inclined slot adapted to offset the carriage at the backward or reverse movement of the carriage, substantially as described.

4. In combination with a carriage, axle-boxes adapted to move obliquely with reference to the carriage, stops adapted to limit the oblique movement of said boxes, a friction-disk having a projecting arm, a cam-yoke with which said arm engages, and a U-shaped yoke which allows a certain longitudinal movement with reference to the carriage, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

HECTOR GAWLEY. [L. S.]

Witnesses:

EDWARD TAGGART,
CHRISTOPHER HONDELINK.