

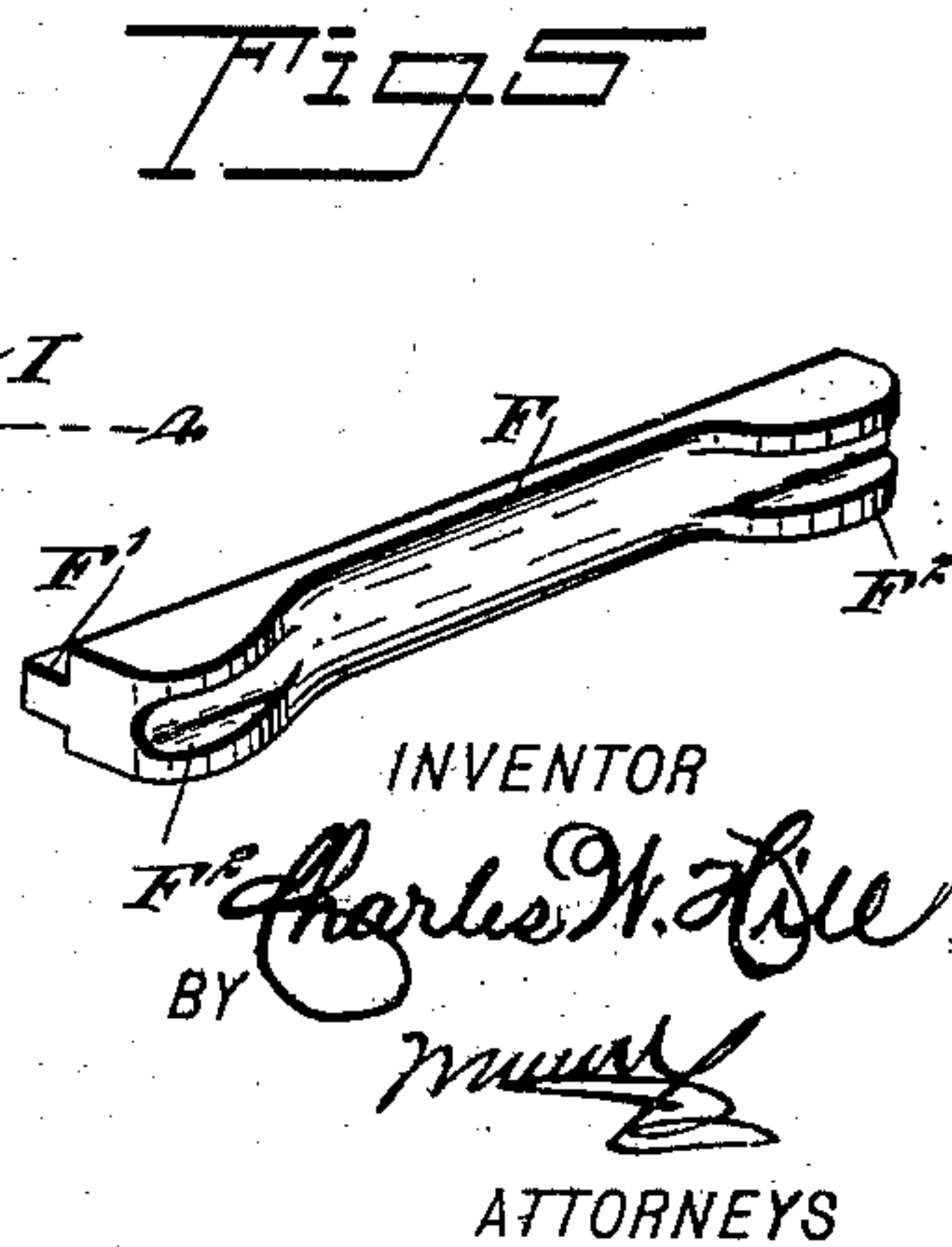
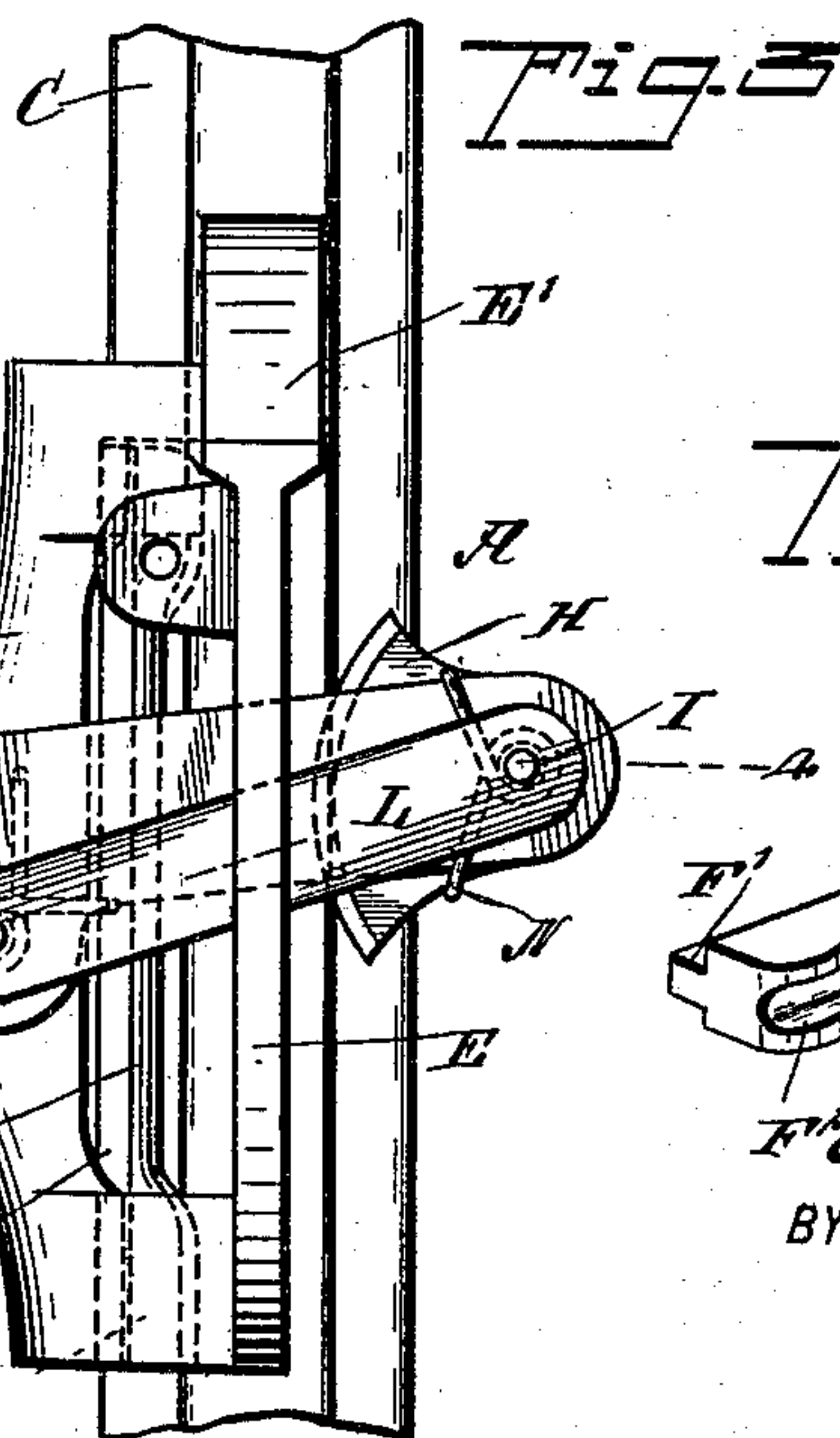
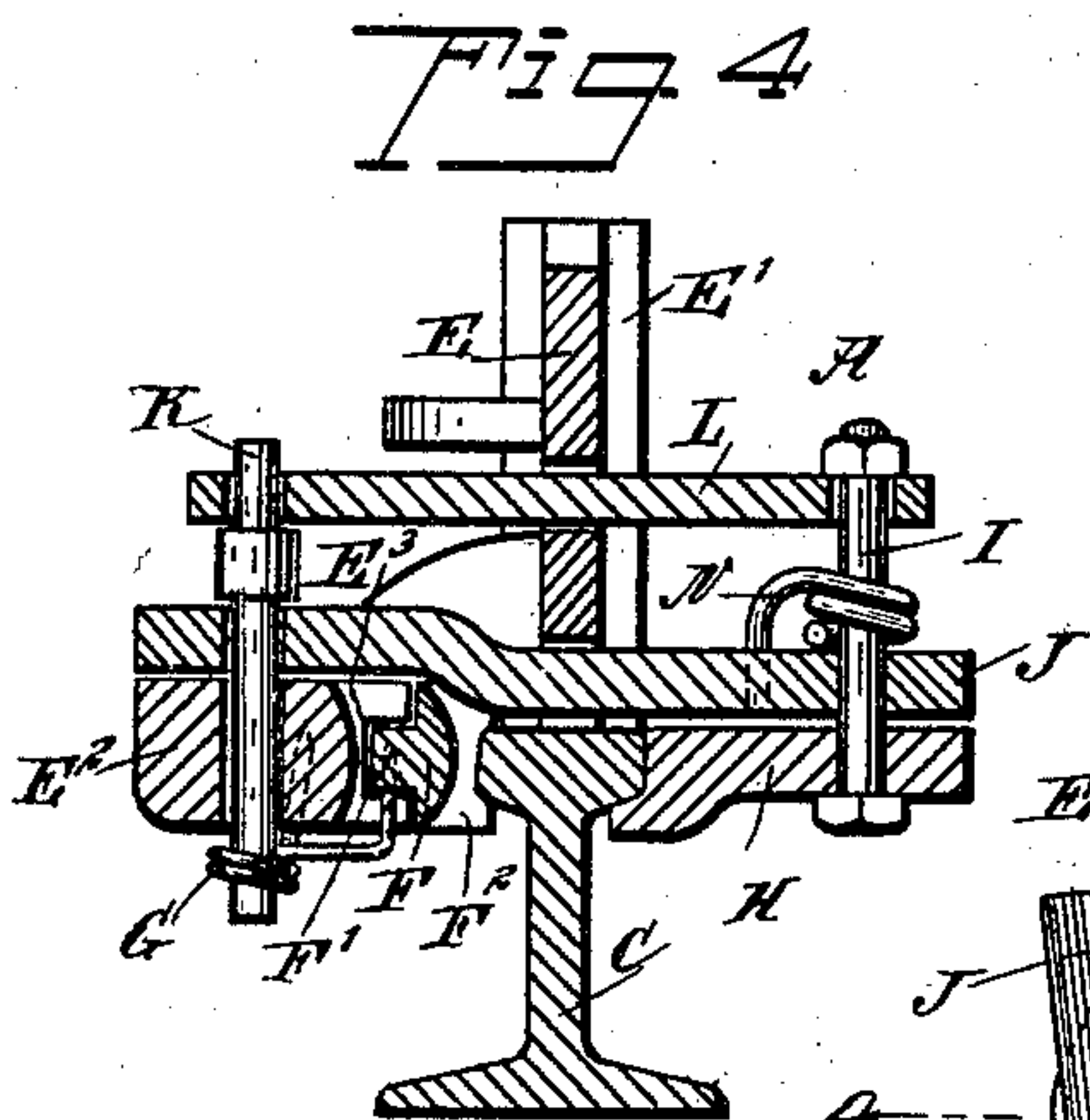
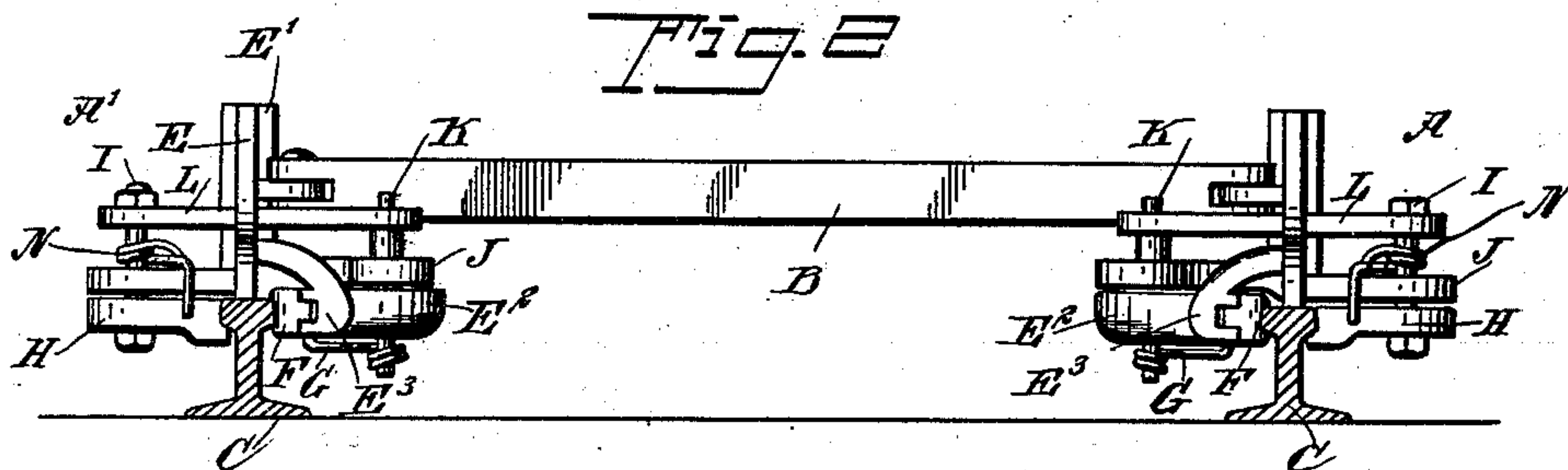
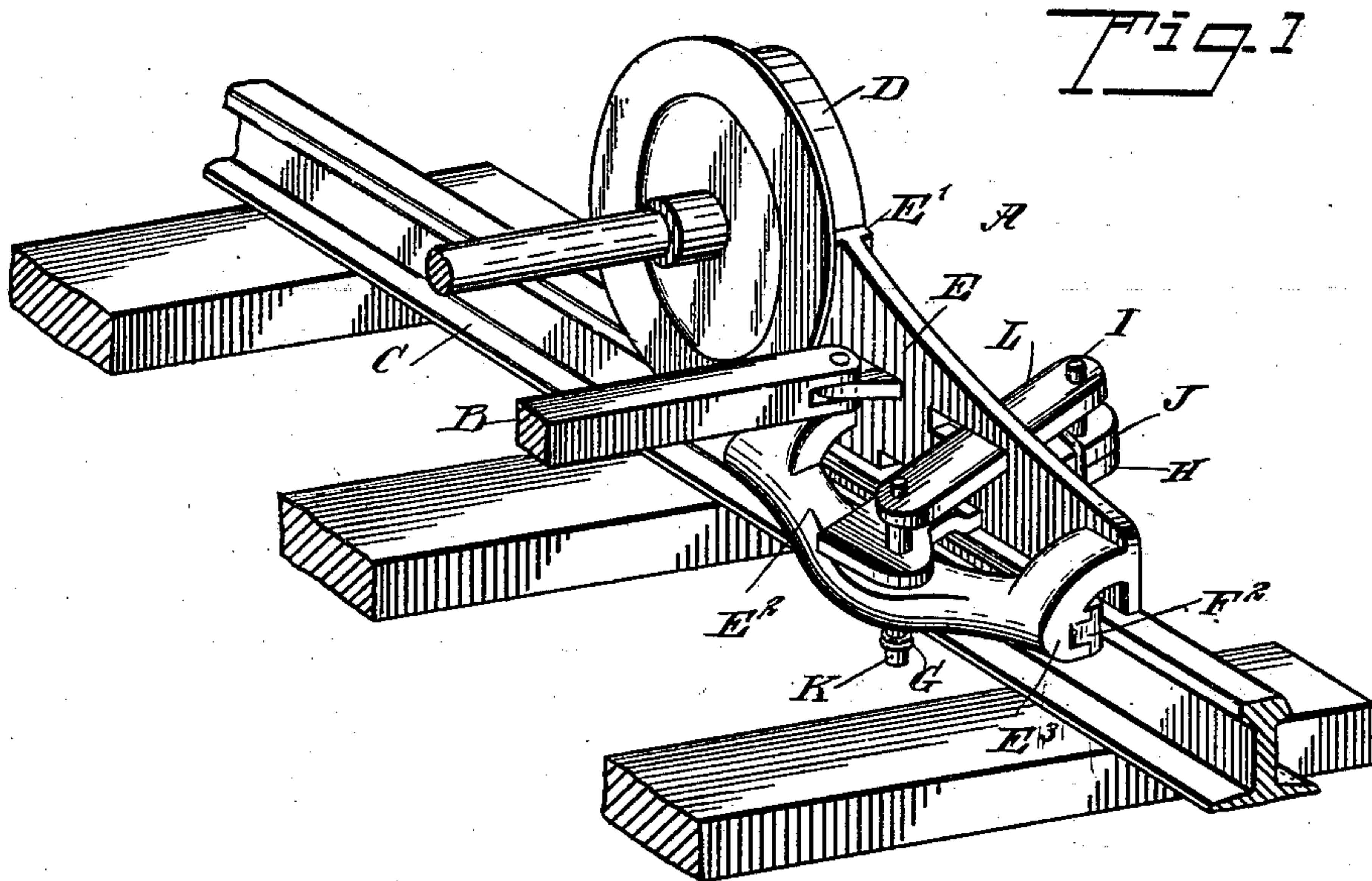
No. 648,258.

Patented Apr. 24, 1900.

C. W. HILL.  
RAIL CLAMP.

(Application filed Dec. 27, 1899.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES WILLIAM HILL, OF FOREST CITY, ILLINOIS.

## RAIL-CLAMP.

SPECIFICATION forming part of Letters Patent No. 648,258, dated April 24, 1900.

Application filed December 27, 1899. Serial No. 741,707. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WILLIAM HILL, a citizen of the United States, and a resident of Forest City, in the county of Mason and State of Illinois, have invented a new and Improved Rail-Clamp, of which the following is a full, clear, and exact description.

The invention relates to stopping or blocking devices for steam shovels, excavators, and other machines mounted on a car-truck and traveling on a railroad for ditching, excavating, or other purposes.

The object of the invention is to provide a new and improved rail-clamp arranged to be carried on a car-truck to automatically form a stop for the wheels, to prevent backward movement of the truck, and to allow a free forward traveling thereof as the work progresses and the car advances accordingly.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement as applied. Fig. 2 is an end elevation of the improvement in position on the rails, the latter being shown in section. Fig. 3 is an enlarged plan view of the improvement. Fig. 4 is a transverse section of the same on the line 4-4 in Fig. 3, and Fig. 5 is a perspective view of one of the clamping-jaws.

The improved rail-clamp consists, essentially, of two stopping or clamping devices A A', connected with each other by a transverse beam B, adapted to be carried on a car-truck, so that the two devices A A' are suspended from the truck on the rails C, over which travel the wheels D of the car-truck. Each of the devices A A' is provided with a longitudinally-extending stop E, formed on its forward end with a segmental integral shoe E', adapted to be engaged by the tread of the car-wheel D, and on the inside of each stop E is formed a bearing E<sup>2</sup> for carrying a longitudinally-extending clamping-jaw F, formed on its back with a tongue F', fitting into a correspondingly-shaped longitudinally-ex-

tending slot E<sup>3</sup> in the bearing E<sup>2</sup>. The ends of the jaw F are formed with grooved clamping-heads F<sup>2</sup> (see Fig. 5) to engage the inside of the head of the rail C, said jaw F being pressed into engagement with the head of the rail by a suitable spring G. The outside of the head of the rail is adapted to be engaged by the peripheral cam-face of a jaw H, fulcrumed on a pin I, carried by a lever J, extending loosely transversely through a slot in the stop E to be fulcrumed on a pin K, carried by the bearing E<sup>2</sup> on the inside of the stop E, as is plainly illustrated in the drawings. A link L also connects the pins I and K with each other, and a spring N, coiled on the pin I, engages with one end the forward edge of the lever J, the other end engaging the rim of the clamping-jaw H, so as to normally press the latter in a forward direction, and thereby allow the stop E to travel forward upon the forward movement of the car-truck without the clamping-jaw binding on the head of the rail; but in case the truck on which the device is applied tends to back up when a shovel or other device is in use, then the wheels D, by pressing on the shoes E' in a rearward direction, cause the clamping-jaws H to firmly engage the heads of the rails C, especially as the said clamping-jaws remain stationary, while the stop E slides rearwardly, and a swinging motion is thereby given to the lever J and the link L, to cause the clamping-jaw H to more firmly engage the head as the rearward movement of the stop E continues, and in doing so the other jaw F is more firmly drawn in contact with its side of the rail until the stop E becomes solidly locked on the rail, and consequently further rearward or backward traveling of the wheels D is prevented. When, however, the truck advances as the work progresses, the lever J will swing rearward to allow the jaw H to release the head of the rail, so that the entire rail-clamp is free to slide forward on the rail; but an immediate clamping of the rail takes place as soon as the truck begins a rearward movement.

From the foregoing it is evident that the clamping devices are completely automatic in operation—that is, allow a free forward movement of the car-truck, but prevent a backward movement thereof by firmly clamping the wheel-stop in position on the rail.



By having the clamping-jaws F and H engaging the head of the rail at the inner and outer sides thereof it is evident that the device can readily pass over rail-joints, as the clamping engagement is above the fish-plates.

The link L forms a support for the upper ends of the pins I and K, and thus takes up twisting strain when the device is used, the link also preventing the pins from spreading apart.

Having thus fully described my invention, I claim as new, and desire to secure by Letters Patent—

1. In a rail-clamp, the combination of clamping devices serving to clamp the rail upon movement of the car in one direction, and to release the rail upon movement of the car in the opposite direction, and a member extending between the clamping devices and the car-wheel, such member engaging the car-wheel to transmit movement from the wheel to the clamping devices, causing the clamping devices to operate as specified.

2. A rail-clamp arranged for suspension from a car-truck, and having a stop for engagement by a car-wheel, and clamping devices for clamping the rail upon a rearward traveling of the truck and for releasing the rail upon a forward movement of the truck, substantially as shown and described.

3. A rail-clamp arranged for suspension from a car-truck, and comprising a stop for engagement by the tread of a car-wheel, and clamping devices carried and actuated by said stop, and adapted to clamp the rail upon a backward movement of the stop and to release the rail upon a forward movement of said stop, substantially as shown and described.

4. A rail-clamp, comprising a pair of connected wheel-stops, and clamping devices, one for each rail and both carried by a car-truck, the clamping devices being controlled by the stop and the latter being adapted to be engaged by the wheels of the car-truck upon a rearward travel of said wheels, substantially as shown and described.

5. A rail-clamp, comprising a stop adapted to be engaged by the tread of a car-wheel, a spring-pressed jaw carried by said stop and adapted to engage the head of the rail at one side thereof, and a movable jaw carried by the stop, and adapted to engage the head of the rail on the opposite side thereof, substantially as shown and described.

6. A rail-clamp, comprising a stop adapted to be engaged by the tread of a car-wheel, a longitudinally-extending jaw carried by the stop and adapted to engage the head of the rail at one side thereof, a lever carried by said stop, and a clamping-jaw pivoted in the free end of the lever, and adapted to engage the rail-head at the opposite side thereof, substantially as shown and described.

7. A rail-clamp, comprising a stop adapted to be engaged by the tread of a car-wheel, a longitudinally-extending jaw carried by the stop and adapted to engage the head of the rail at one side thereof, a lever carried by said stop, and a clamping-jaw pivoted in the free end of the lever, and adapted to engage the rail-head at the opposite side thereof, the said pivoted clamping-jaw having a peripheral cam-face, substantially as shown and described.

8. A rail-clamp, comprising a stop adapted to be engaged by the tread of a car-wheel, a longitudinally-extending jaw carried by the stop and adapted to engage the head of the rail at one side thereof, a lever carried by said stop, and a clamping-jaw pivoted in the free end of the lever, and adapted to engage the rail-head at the opposite side thereof, the said pivoted clamping-jaw having a peripheral cam-face, and being pressed on by a spring carried by the lever, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES WILLIAM HILL.

Witnesses:

W. S. OSTHEIMER,  
JOSEPH SCHMIT.