

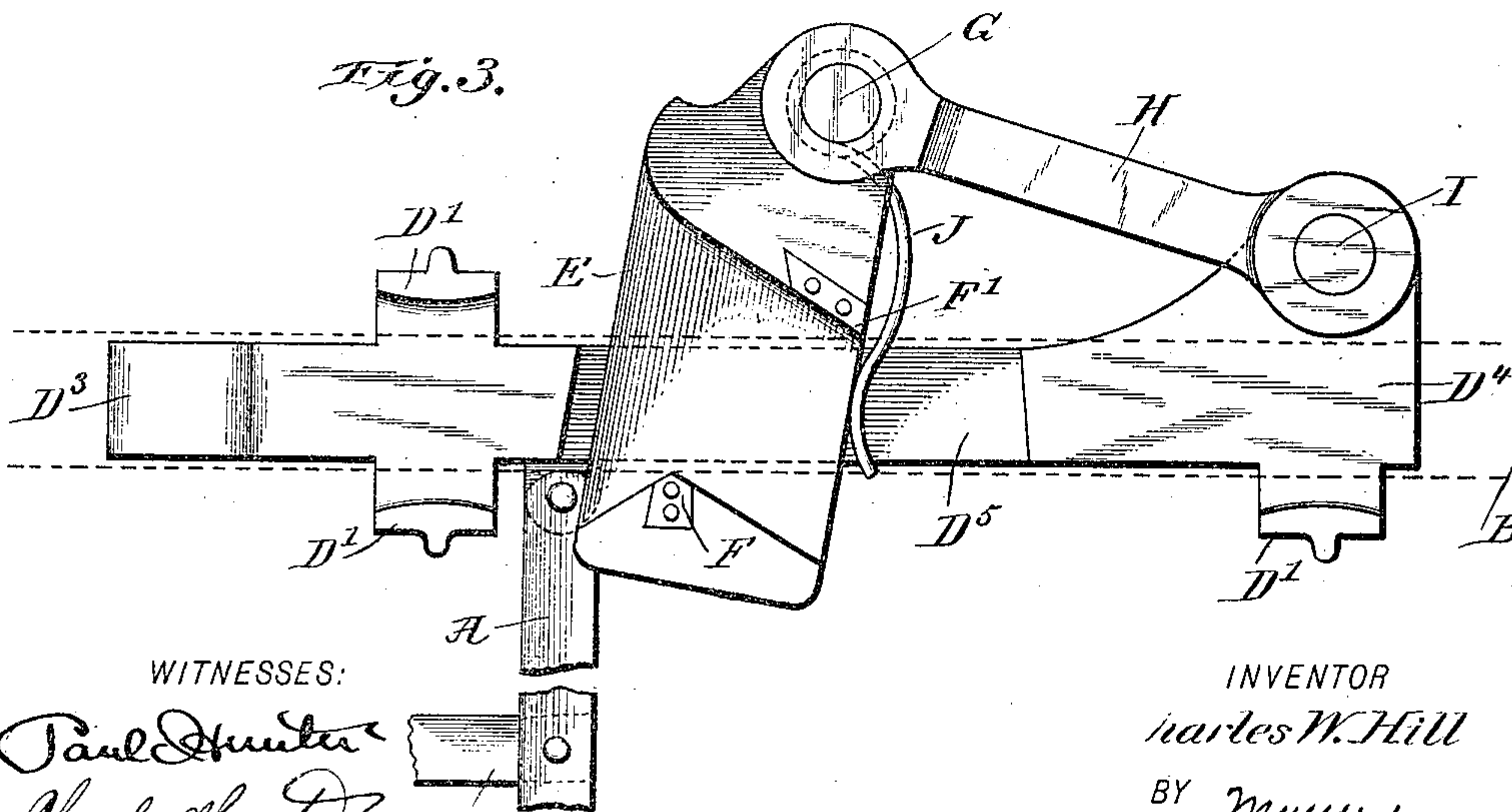
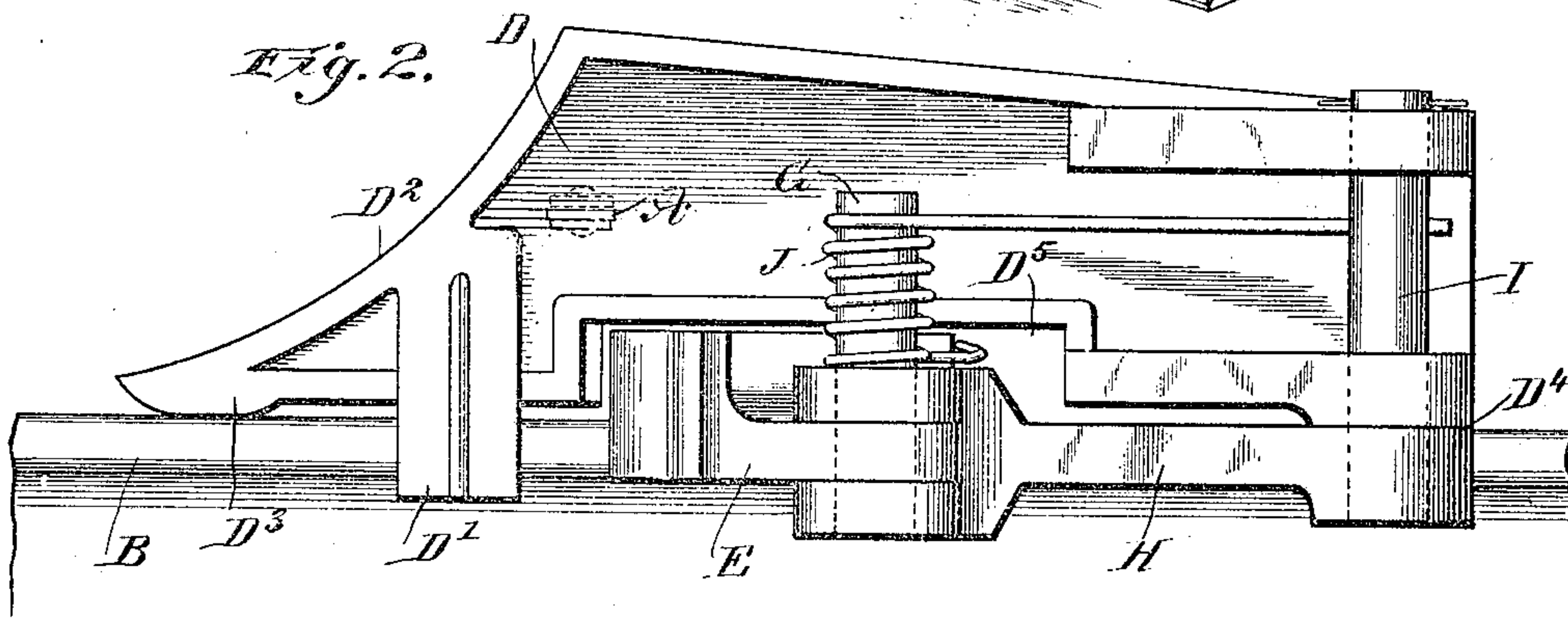
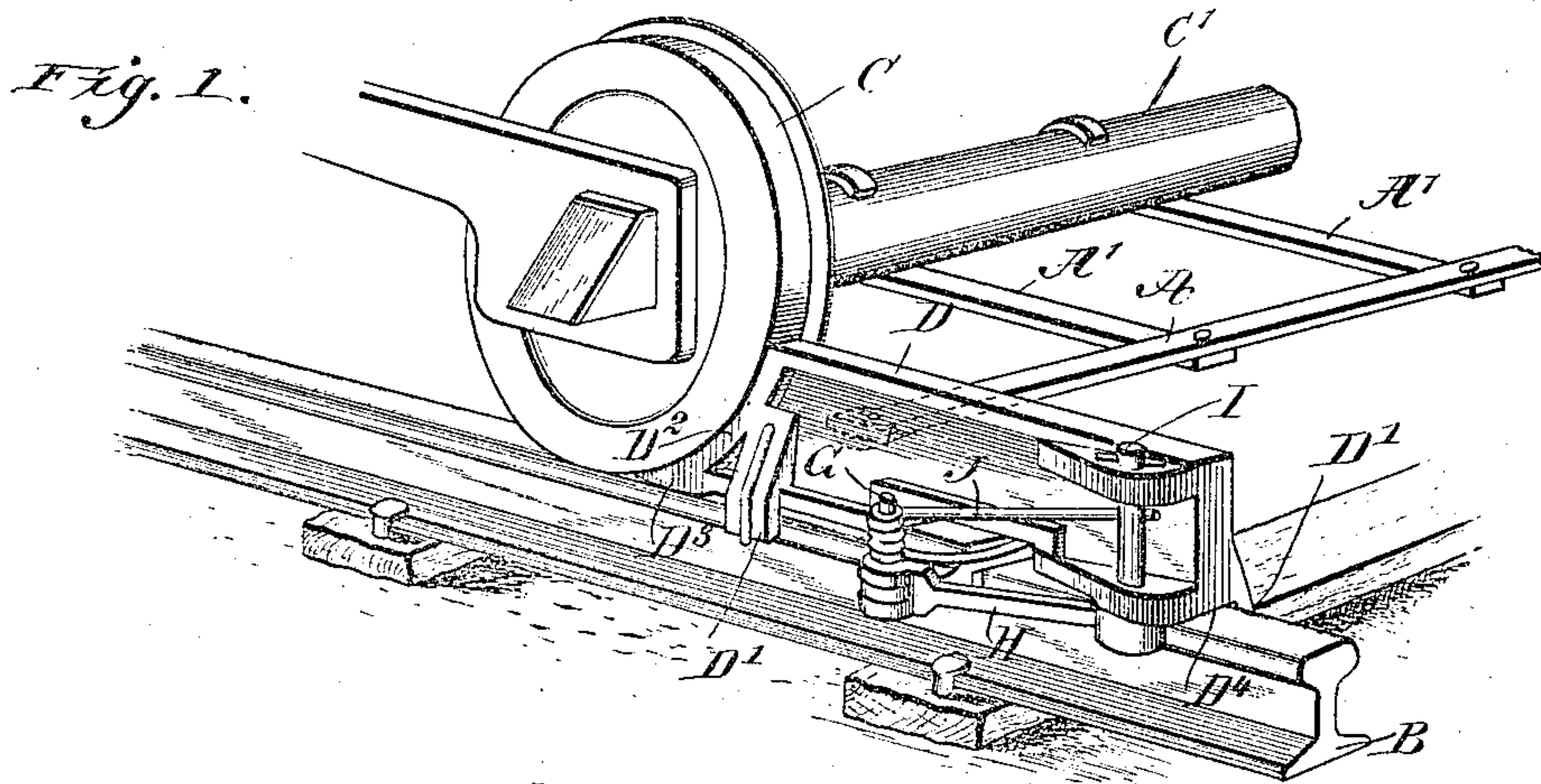
No. 734,869.

PATENTED JULY 28, 1903.

C. W. HILL.
RAIL CLAMP.

APPLICATION FILED NOV. 25, 1902.

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. 734,869, dated July 28, 1903.

Application filed November 25, 1902. Serial No. 132,824. (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 rail-clamps, such as shown and described in the Letters Patent of the United States No. 648,258, granted to me April 24, 1900.

The object of the present invention is to provide a new and improved rail-clamp which is simple and durable in construction, very effective in operation, more especially designed for use on car-trucks carrying steam-shovels, excavators, and the like, and arranged for automatically forming a stop or block for the car-truck wheels to prevent backward movement of the truck, but to allow free forward traveling thereof as the work progresses and the car-truck advances correspondingly.

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

A practical embodiment of the invention is represented in the accompanying drawing, 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 enlarged side elevation of the improvement, and Fig. 3 is an inverted plan view of the same.

In the practical application of the improvement on a car-truck use is preferably made of two rail-clamps alike in construction and connected with each other by a transverse beam A in such a manner that each clamp engages a rail B, over which travels the corresponding car-wheel C of the car-truck. The transverse beam A is provided with hook-arms A', engaging with their hooks the car-axle C', so that the connected rail-clamps are carried along on the forward movement of the car-truck. Each rail-clamp is provided with a stop D, disposed over the rail in longitudinal alinement therewith, and the said stop has depending guide-lugs D', extending on opposite sides of the rail B, to prevent the

stop from moving transversely out of alinement with the rail.

The forward end of the stop D is provided with a shoe D², adapted to be engaged by the tread of the car-wheel C, and the front and rear bottom portions D³ and D⁴ of the said stop D are adapted to travel on the top of the rail B, as plainly indicated in the drawings. In the under side of the stop D, between the portions D³ and D⁴, is formed a recess D⁵ for the passage of a transversely-extending clamping-bar E, provided with depending clamping-jaws F and F', engaging the sides of the head of the rail B at points disposed diagonally, as will be readily understood by reference to Fig. 3. The outer end of the clamping-bar E is connected by a pivot G with a link H, extending longitudinally and fulcrumed at its rear end on a pin I, held on the stop D at the rear end thereof. A spring J, coiled on the pivot G, presses the clamping-bar E to hold the clamping-jaws F and F' in contact with the head of the rail to lock the stop D normally in position on the rail.

By arranging the jaws F and F' as described and hanging the clamping-bar E on the link H it is evident that on a forward movement of the stop D the clamping-bar E is carried along, and its jaws glide freely over the sides of the head of the rail; but as soon as the stop comes to a standstill it is held against rearward motion by the jaws F and F' biting into the sides of the rail-head in a very firm manner. Thus a rearward movement of the car-wheel finds the stop D locked to the rail, so that the car-wheel cannot travel backward farther than the stop, and thus the car-truck is held against rearward movement.

It is understood that in the present invention the clamping-jaws actively hold the stop D against rearward motion as soon as the car-truck comes to a standstill, and it does not require the rearward motion of the stop to actuate the clamping-jaws, as is the case in the device shown and described in my former patent. The jaws are preferably made of hardened steel, with sharp vertically-disposed biting edges to firmly bite into the rail, so that the heavier the rearward pressure of the car-wheel against the shoe the firmer the biting edges cut into the rail-head. In case a jaw F or F' strikes a projection—say a rail

end somewhat out of transverse alinement with the preceding rail—then the clamping-bar E swings rearwardly on its pivot G sufficiently for the jaw to clear the projection. 5 The spring J then immediately returns the clamping-bar E into a clamped position.

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

- 10 1. A rail-clamp suitably supported and arranged to move with the car-truck, a link pivoted at one end to the support, a transverse clamping-bar pivoted to the other end of said link and carried thereby, said clamping-bar 15 having a transverse recess on its under side through which the top section of the rail passes, a spring pressing said clamping-bar normally forward with the rear edge of the side of said recess adjacent the pivot-point of 20 the clamping-bar bearing against the side of the rail next to said pivot-point and with the other side of the recess bearing against the other side of the rail at a point diagonally opposite said first-mentioned bearing-point, 25 said recess being somewhat wider than the tread of the rail and flared at its front end to permit said clamping-bar to move forward freely over said rail, the opposite sides of said recess at the points where they engage the 30 rail being formed into biting points or jaws, whereby when it is attempted to move said clamping-bar rearwardly said diagonally-disposed jaws engage and clamp the rail and thereby prevent such movement, as set forth.
- 35 2. A rail-clamp arranged to move forward with the car-truck and having a stop for engagement by the tread of a car-wheel, to prevent rearward motion thereof, and a clamping device carried by the stop and having 40 clamping-jaws engaging opposite sides of the rail at diagonally-located points on the rail, to normally hold the stop against rearward movement and to allow forward movement of the stop on the car-truck traveling ahead, 45 as set forth.
3. A rail-clamp arranged to move forward with the car-truck and having a stop for engagement by the tread of a car-wheel, to prevent rearward motion thereof, and a clamping 50 ing device carried by the stop and having clamping-jaws engaging opposite sides of the

rail at diagonally-located points on the rail, to normally hold the stop against rearward movement and to allow forward movement of the stop on the car-truck traveling ahead, the 55 said clamping device being spring-controlled, for holding the clamping-jaws in contact with the rail, as set forth.

4. A rail-clamp arranged to move forward with the truck and having a stop for engagement by the car-wheel, to prevent rearward motion thereof, a transverse clamping-bar having clamping-jaws engaging opposite 60 sides of the rail at diagonally-located points on the rail, to normally hold the stop against rearward movement and to allow forward movement of the stop on the car-truck traveling ahead, and a link fulcrumed on the stop and connected with the said clamping- 65 bar, as set forth.

5. A rail-clamp arranged to move forward with the truck and having a stop for engagement by the car-wheel, to prevent rearward motion thereof, a transverse clamping-bar having clamping-jaws engaging opposite sides 75 of the rail at diagonally-located points on the rail, to normally hold the stop against rearward movement and to allow forward movement of the stop on the car-truck traveling ahead, a link fulcrumed on the stop and connected with the said clamping-bar, and a 80 spring pressing the clamping-bar for holding the jaws in engagement with the rail, as set forth.

6. A rail-clamp arranged to move forward 85 with the car-truck and having a clamping-bar extending transversely of the rail and carried by a pivot at one end; a spring pressing the rear side of said bar to move its free end in advance of its pivoted end; and jaws extend- 90 ing downwardly from said bar to engage the sides of the head of the rail at points disposed diagonally; the jaw or biting-block on the pivoted end of the clamping-bar being in the rear of the jaw on the free end of the bar. 95

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

CHARLES WILLIAM HILL.

Witnesses:

E. W. PAUL,
WESLEY L. FERREE.