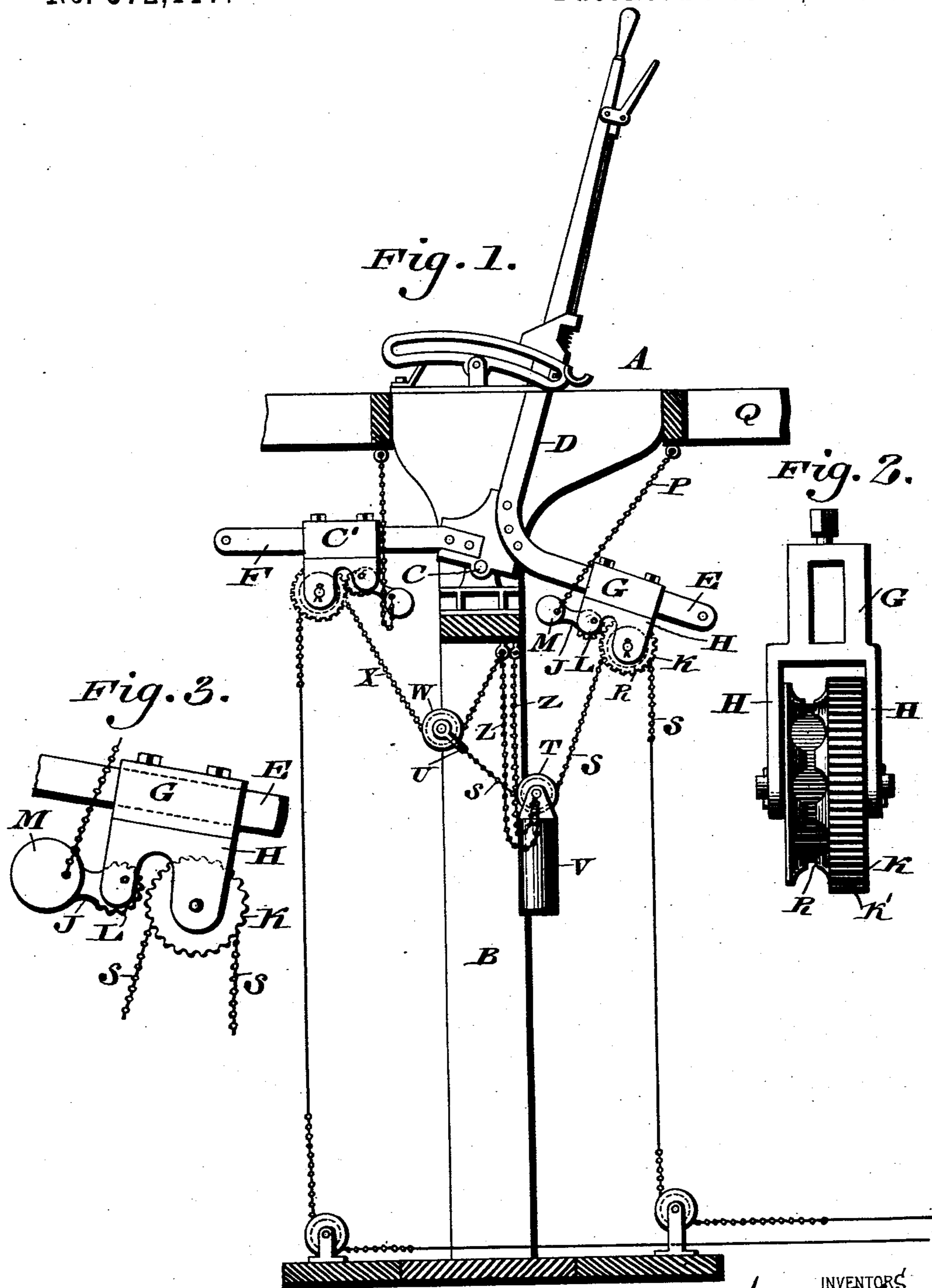


(No Model.)

J. R. & J. W. JONES.
COMPENSATING DEVICE FOR RAILROAD SIGNALS.

No. 572,117.

Patented Dec. 1, 1896.



WITNESSES:

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JOSEPH R. JONES, OF PHILADELPHIA, AND JOSHUA W. JONES, OF HARRISBURG, PENNSYLVANIA, ASSIGNORS OF ONE-THIRD TO THOMAS A. JONES, OF PHILADELPHIA, PENNSYLVANIA.

COMPENSATING DEVICE FOR RAILROAD-SIGNALS.

SPECIFICATION forming part of Letters Patent No. 572,117, dated December 1, 1896.

Application filed April 20, 1896. Serial No. 588,238. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH R. JONES, residing in the city and county of Philadelphia, and JOSHUA W. JONES, residing at Harrisburg, in the county of Dauphin, State of Pennsylvania, citizens of the United States, have invented a new and useful Improvement in Compensating Devices for Railroad-Signals, &c., which improvement is fully set forth in the following specification and accompanying drawings.

Our invention has relation to compensating devices for railroad-signals, &c.; and it consists in the employment of a chilled cast corrugated sprocket-wheel and a chilled cast corrugated eccentric pawl having its corrugations adapted to engage with the corrugations in said sprocket-wheel, all as will be hereinafter set forth, and specifically pointed out in the claims.

Figure 1 represents a side elevation of a compensating device for railroad-signals, &c., equipped with the novel features embodying our invention. Fig. 2 represents an end elevation of a chilled cast corrugated wheel employed, having a sprocket-hub; and Fig. 3 represents a portion of Fig. 1 on an enlarged scale.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a portion of the operating mechanism of a compensating device for railroad-signals, the same consisting of the lever D, which is fulcrumed at C to a suitable standard B, said lever having the lateral arms F and E, upon which the yokes C' G are mounted, respectively.

Referring to the right-hand yoke, H designates ears depending therefrom, in which is journaled the chilled cast sprocket-wheel K, which is provided with the corrugations K', which latter are adapted to be engaged by the corrugations L of the eccentric pawl J, which is fulcrumed in said yoke G adjacent said sprocket-wheel and is provided with a counterbalance M, the latter having one end of a chain P attached thereto, while the other end of said chain is secured to the flooring Q, especial attention being called to the location of the corrugated face of the pawl J relative

to its pivotal point of attachment in the yoke, the same being eccentric to said corrugated face, it being further noted that a chilled cast pawl is preferably employed.

R designates a grooved hub adjacent said sprocket-wheel K, over which the chain S passes, said chain leading, through the medium of suitable connections and compensating devices, to the proper parts of a railroad signal, switch, &c., (not shown,) which it is desired to operate.

The operation of the present invention is substantially the same as that disclosed in a contemporaneously-pending application filed by us March 14, 1896, Serial No. 583,254, for compensating devices for railroad-signals, &c., to which reference is herein made for a fuller description of the detailed operation of the different elements, the present invention being designed to protect the employment of a chilled cast corrugated sprocket-wheel and a chilled cast corrugated pawl, the same being eccentrically mounted, so that its corrugated face will engage the corrugations of said wheel when the latter and its pawl are in elevated position. Emphasis is also laid upon the fact that by the employment of a chilled cast wheel having the corrugations thereon in conjunction with a chilled cast weighted pawl having a corrugated face, eccentrically pivoted with respect to the adjacent corrugated wheel, there is no liability of failure of the wheel to be positively locked by its pawl at the proper period, and, furthermore, by mounting said pawl eccentrically upon its fulcrum and weighting it, as indicated, the continued elevation of the desired lever-arm, as F in the present instance, will cause the corrugated surfaces of the wheel and pawl to become more firmly interlocked, the parts being further rendered exceedingly durable by being cast chilled, as is evident.

When an arm, as E, is lowered, the pull on the chain P will cause the disengagement of the corrugated faces of the pawl and wheel, as indicated at the right of Fig. 1.

It will be evident that although we preferably employ a chilled cast wheel and pawl we do not desire to be limited thereto in every instance.

In the preferred embodiment of our invention the chain S, after passing over the sprocket-hub R, passes under the pulley T, to which the weight V is attached, said chain
 5 having its end attached to the clevis U, which carries the pulley W, the latter being supported by means of the chain X, which has one end attached to a suitable fixed point, while its outer end, after passing over a
 10 sprocket-hub similar to the hub R, is suitably connected to the device which it is desired to operate.

It will be understood that although the description has been principally confined to one
 15 side of the apparatus the construction of both sides is substantially identical.

In the preferred embodiment of our invention we employ a plurality of chains or connections Z, the same having their extremities at-
 20 tached to separate eyebolts and to a suitable portion of the weight V.

We hereby disclaim the feature of the combination of a signal and of an operating-lever provided with oppositely-projecting arms, sprocket-wheels provided with toothed
 25 flanges mounted on said arms, spring-actuated dogs for engaging the toothed flanges, stops for shifting the dogs when the lever is in normal position, a wire extending from the
 30 signal over the sprocket-wheels and back to the signal, and a weight supported by the portion of the wire between the sprocket-wheels.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—
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1. In a compensating device for railroad-signals, a wheel having a corrugated periphery, a pawl eccentrically mounted adjacent to said wheel, and having corrugations on its
 40 periphery adapted to engage the corrugations on said wheel, a counterbalance on said pawl, and a connection from the latter to a fixed point for causing the disengagement of said pawl and wheel at proper intervals.

2. In a compensating device for railroad-signals, switches, &c., a chilled, cast, corrugated wheel having a sprocket-hub, a yoke in which the same is rotatably mounted, a chilled, cast, corrugated pawl eccentrically
 50 mounted adjacent to said wheel, and provided with a counterbalance, a connection from said pawl to a fixed point, and a chain passing over said sprocket-hub and adapted to lead to suitable connections for actuating a
 55 signal-arm, switch, &c.

3. In a compensating device for a railroad-signal, a lever having a laterally-projecting arm with a yoke thereon, a wheel journaled in said yoke and having a corrugated periph-

ery, and a sprocket-hub, a pivoted pawl having a corrugated periphery adapted to engage the corrugated periphery of said wheel, a counterbalance on said pawl, and a chain or other connection secured at one end to said
 60 pawl and at the other end to a fixed point, said parts being combined substantially as described.
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4. In a compensating device for a railroad-signal, a lever with a projecting arm, a yoke mounted on said arm, a wheel journaled in
 70 said yoke and having a corrugated periphery and a sprocket-hub, a weighted pawl eccentrically mounted on said yoke and having corrugations adapted to engage the corrugations of the said wheel, and a chain having
 75 one end secured to said pawl and the other end to a fixed point.

5. In a compensating device for a railroad-signal, an operating-lever having laterally-projecting arms with yokes thereon, wheels
 80 and weighted pawls mounted on said yokes, said wheels having peripheral corrugations and sprocket-hubs, and said pawls having corrugations eccentric to the axis thereof, a clevis with a pulley journaled thereon, a
 85 weight with a pulley thereon, a chain secured to said clevis and passing around said pulley and one of said sprocket-hubs, and connected with a signal, and a second chain having
 90 one end secured to a fixed point and passing around the clevis-pulley and the other sprocket-hub and connected with the said signal.

6. In a compensating device, a chilled cast wheel having a corrugated periphery, a support therefor, a chilled cast pawl eccentrically mounted adjacent said wheel, and having
 95 corrugations on its periphery adapted to engage the corrugations on said wheel, a connection from said pawl to a fixed point, and
 100 a chain passing over a suitable portion of said wheel, and adapted to lead to connections for actuating a signal-arm, switch, &c.

7. In a compensating device, a wheel having a corrugated periphery and a sprocket-hub, a pawl eccentrically mounted adjacent to said wheel and having corrugations on its
 105 periphery adapted to engage the corrugations on said wheel, a counterbalance on said pawl, a connection from the latter to a fixed point
 110 and a chain passing over said sprocket-hub and adapted to lead to connections for actuating a signal-arm, switch, &c.

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