(No Model.)

O. V. BLAZIER.

RAILWAY TIME SIGNAL.

No. 451,193. Patented Apr. 28, 1891.

Fig. 1.

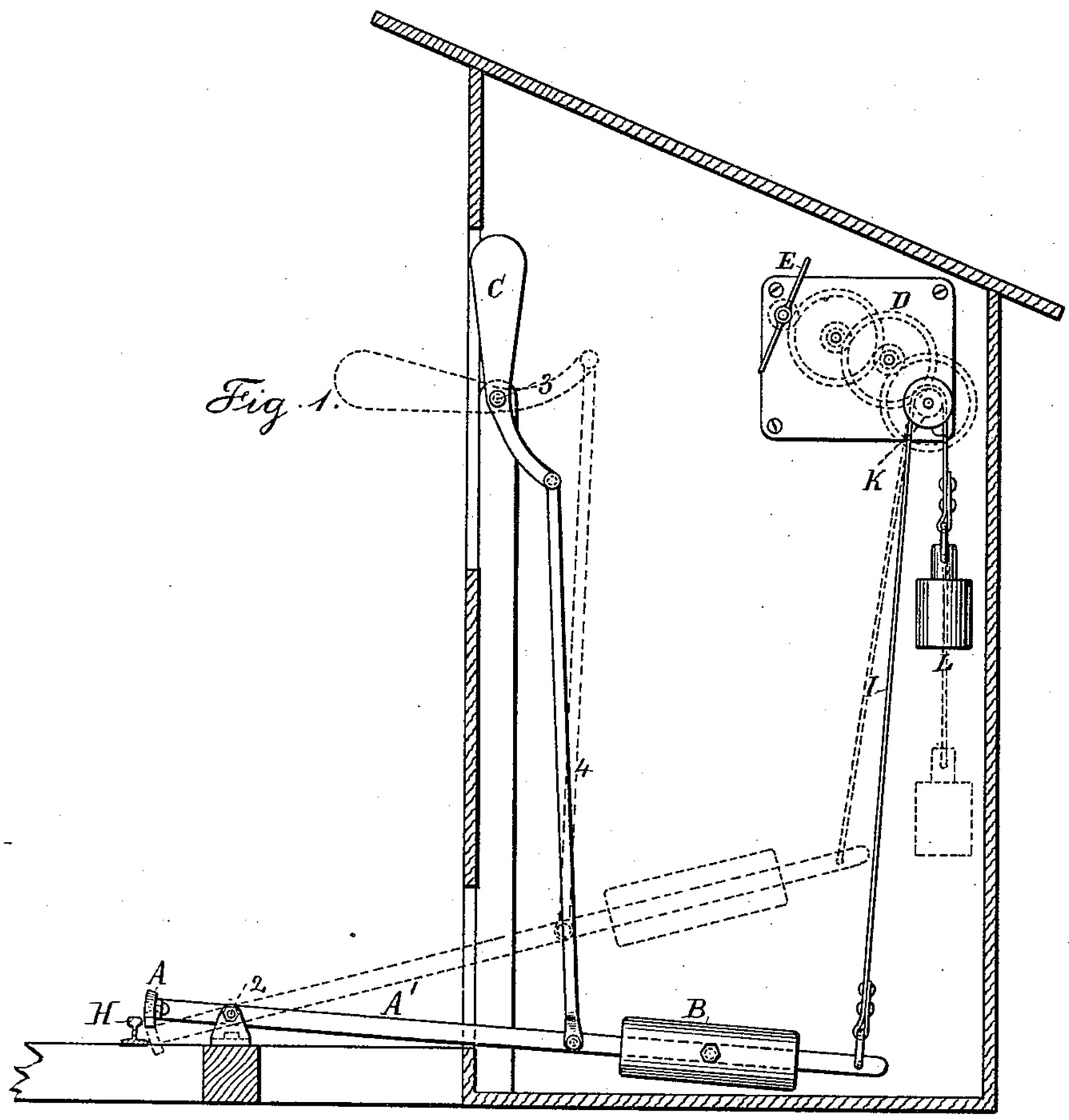
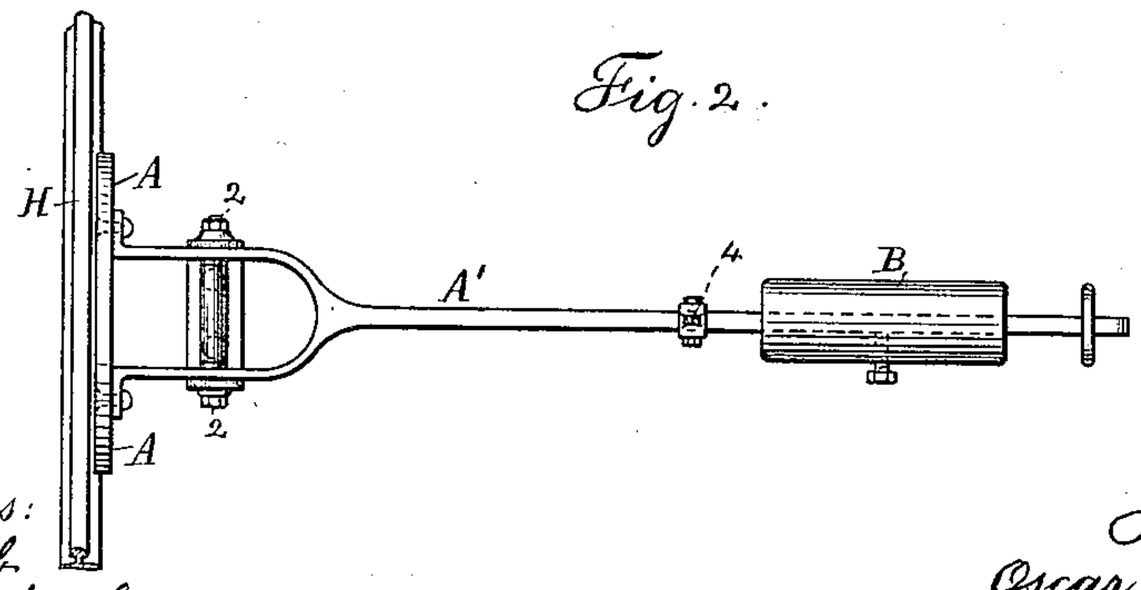


Fig. 2.



Witnesses:
J. Stair
Chas. A. Smith

Inventor:
Oscar V. Blazier
per Lemuel W. Serrell
Atty

UNITED STATES PATENT OFFICE.

OSCAR V. BLAZIER, OF GILLETTE, NEW JERSEY.

RAILWAY TIME-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 451,193, dated April 28, 1891.

Application filed February 9, 1891. Serial No. 380,809. (No model.)

To all whom it may concern:

Be it known that I, OSCAR V. BLAZIER, a citizen of the United States, residing at Gillette, in the county of Morris and State of New Jersey, have invented an Improvement in Railway-Signals, of which the following is a specification.

This invention is intended for displaying a semaphore or visual signal upon the passage of a train, and such signal is withdrawn gradually by the descent of a weight controlled by a fly so that such signal remains visible the desired length of time to prevent one train approaching too close to another.

Before my invention train-signals had been controlled by clock-work and a fly, and in some instances alarm-bells were rung by such signal mechanism.

My invention relates to the peculiarities of construction and combinations of devices, hereinafter set forth, whereby the sudden movement resulting from the passing train does not injure any of the parts and they are very much more simple and cheaper than those heretofore employed for this purpose.

In the drawings, Figure 1 is a diagrammatic view of my signaling device, and Fig. 2 is a plan representing the track-lever.

One rail of the track is represented at H, and adjacent to the same is a track-bar A with inclined ends over which the wheels of the locomotive or car pass and depress this track-bar, and there is a lever A′ pivoted at 2 and connected with the track-bar A, and this lever A′ extends to the inclosure or support for the signaling apparatus, and there is upon this lever A′ a weight B, sufficient for the purpose of moving the signal apparatus hereinafter described.

The semaphore or visual signal C is pivoted at 3 upon the signal-post or inclosure, and there is a link 4 connecting the inner end of this signal with the lever A′, and the weight B is sufficient to raise this signal C to its normal position of "safety," and when the train in passing depresses the track-bar A the weight B is raised by a direct action and the semaphore C falls by its own weight to a horizontal or nearly horizontal position to indicate "danger." It will now be understood that if these parts only were made use of the semaphore would move up and down as the wheels of the railway-train passed along over the track-bar A, and when the train had entirely passed by the semaphore would be raised immediately to a position indicating "safety." To prevent this operation and to insure a gradual movement of the semaphore C upon its return from a position of "danger" to that of "safety," I employ a train of gearing D, with a rapidly-revolving fly E and a motor-barrel K, over which a strap I passes from the lever A′ to the weight L. Hence when the lever A′ is raised suddenly the strap I is relieved of strain and the slack thereof is taken up by the weight L, such strap I sliding freely over the motor-barrel K by the action of the counter-weight L, because such strap I is entirely slack; but as soon as the weight B commences to descend the strap is tightened, the weight L being at one end and the weight B at the other. This weight B, however, is sufficient to overcome the weight L and cause the rotation of the motor-barrel K, train of gearing D, and the fly E, and the weight B can only descend slowly according to the speed of rotation of the train of gearing and there is nothing that is liable to get out of order, and the belt or band I, being usually of leather, is very durable and it is inexpensive to replace the same when worn out, and there are no ratchets and pawls that are liable to be injured or to fail in operation.

These signals are to be placed at suitable distances along the track, and they indicate approximately the time that has elapsed from the passing of the train by the position of the semaphore upon its upward return movement, so that one train may be kept at the proper distance from another train and accidents prevented.

I claim as my invention—

1. The combination, with the track-bar A, lever A′, and weight B, of a visual signal, a direct connection between the lever and visual signal for displaying such signal when the weight of the lever is raised by the passing train, a fly and train of gearing and a motor-barrel upon such train of gearing, a strap connected with the weighted lever and passing over the motor-barrel, and a counter-weight to take up the slack of such strap,

whereby the fly and gearing regulate the time consumed in the parts returning to their normal position by the weighted lever, substantially as set forth.

2. The combination, with the track-bar A, lever A′, and weight B, of the swinging visual signal C, pivoted at 3, a direct connection between the lever and the visual signal, a motor-barrel, a strap or band connected to the weighted lever and passing over the motor-barrel, a counter-weight to take up the slack of such strap or band, and a regulating-fly and train of gearing for driving the same from the motor-barrel, substantially as set forth.

Signed by me this 2d day of February, 1891.

OSCAR V. BLAZIER.

Witnesses:
WILLIAM M. STILLMAN,
FRANK R. VANDERHOOF.