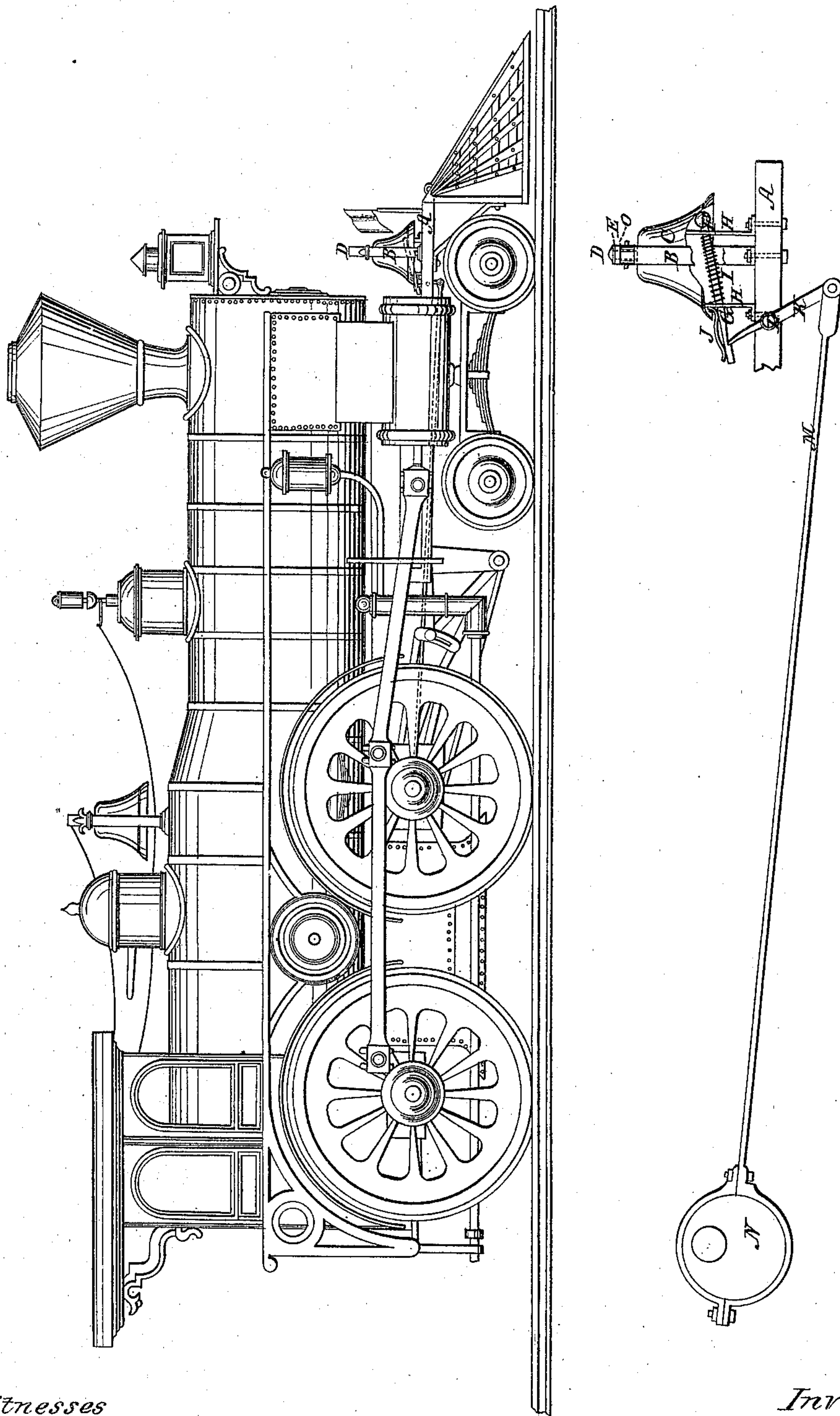


B. Briscoe.

Locomotive Alarm Bell.

N^o 87,464.

Patented Mar. 2, 1869.



Witnesses

H. F. Eberts.

H. J. Hamilton.

Inventor.

Benjamin Briscoe.

United States Patent Office.

BENJAMIN BRISCOE, OF DETROIT, MICHIGAN.

Letters Patent No. 87,462, dated March 2, 1869.

IMPROVED LOCOMOTIVE ALARM-BELL.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, BENJAMIN BRISCOE, of Detroit, in the county of Wayne, and State of Michigan, have invented a new and useful Improvement in Locomotive Alarm-Bells; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

Figure 1 is a side elevation of a locomotive, with my alarm attached upon the platform, in front.

Figure 2 is a view, partially in section, of the alarm and its attachments.

Like letters indicate like parts in each figure.

The nature of my invention consists—

First, in the arrangement of the bell of a locomotive on the front platform, for the purposes hereinafter described;

Second, in the mechanism by means of which it is operated continuously, as long as the locomotive is in motion; and

Third, in the arrangement of the striking-hammer in relation to the bell, in such a manner that each stroke of the hammer will rotate the bell a little.

On locomotives, the bell is usually placed between the steam-dome and the smoke-stack. The force of the escaping steam breaks the vibrations of the air, caused by the sound of the bell, and thus prevents the sound being carried to a greater distance.

To obviate this difficulty, place the bell on the platform, in front of the boiler, and by this gain the advantage, that the head of the boiler, and other solid part of the locomotive at that place, will act as a resounding-surface, assisting in throwing the sound of the bell forward.

By using the striking-mechanism, I do away with the necessity of pulling the bell-rope, and insure a constant and even ringing of the bell, while, by rotating the bell, I prevent the same from being worn out in one place, and thus retaining an even tone much longer.

A is the platform usually placed upon the front of locomotives, and upon which is surmounted and properly secured the frame B, to which the bell C is suspended in the following manner:

The shank of the bell is turned off smoothly, and inserted through a hole through the top of the frame, which hole should be so bored as to fit the shank of the bell closely, and, at the same time, not so tight as to prevent the bell from being rotated.

The top of the shank is provided with a proper nut, D, or key, by means of which it is held in the frame, and which rests upon a metal washer, E, which, in turn, rests upon a rubber washer, O, placed on the top of the frame, and surrounding the shank.

By this means, I secure the bell in a vertical position, allowing it no motion but the rotary one above described.

F is a hammer, provided with a suitable lever, G, to one end of which the hammer is attached.

This lever is sustained by the two vertical guides H, and is provided with a spiral spring, I, coiled around said lever, between the vertical guides.

It is also held in position by the spring J, which prevents the lever from being thrown out of place by the lever K, which is secured by and works upon the bolt L, and its lower end attached to the connecting-rod M, which receives a reciprocating motion by the revolution of the eccentric, N.

The hammer may be so placed as to impinge against the outer or inner side of the bell.

The hammer F is secured in a position out of the line of the centre of the bell, in such a manner that each stroke of the hammer will rotate the bell a little distance.

The eccentric, N, may be placed upon a sleeve on the shaft, and connected with the latter by any common clutch-device, so that the bell can be rung at the pleasure of the engineer, and to prevent the wearing of the parts unnecessarily during the time when the engine goes at its greatest speed, and when it is unnecessary to ring the bell.

The locomotive being in operation, the revolutions of the eccentric communicate a rocking motion to the lever K, by means of the connecting-rod. The upper end of the lever K engages with a proper notch on the lower side of the lever G, thereby withdrawing the same and the hammer-head from the side of the bell, and compressing the spiral spring I. The lever G, in thus being withdrawn, is slightly elevated, in the shorter guide, by the lever K, and the latter is disengaged from the notch in the lever G, which is instantly forced down by the spring J, when the recoil of the spiral spring throws the hammer violently forward against the bell, thereby producing a sound that can be heard at a long distance.

By this means, I secure the absolute certainty of the constant ringing of the bell during the whole time the locomotive is in motion.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The lever G, vertical guides H, spiral spring I, springs J, rocking lever K, and connecting-rod M, when constructed and arranged to operate the hammer, F, on the bell C, substantially as and for the purposes set forth.

2. The arrangement of the hammer F, operated as described, in such a manner that each stroke of the same will tend to rotate the bell C, substantially as and for the purpose set forth.

BENJAMIN BRISCOE.

Witnesses:

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L. C. HYDE.