(No Model.)

C. HULTS.

LOCOMOTIVE WHISTLE ALARM.

No. 338,413. Patented Mar. 23, 1886.

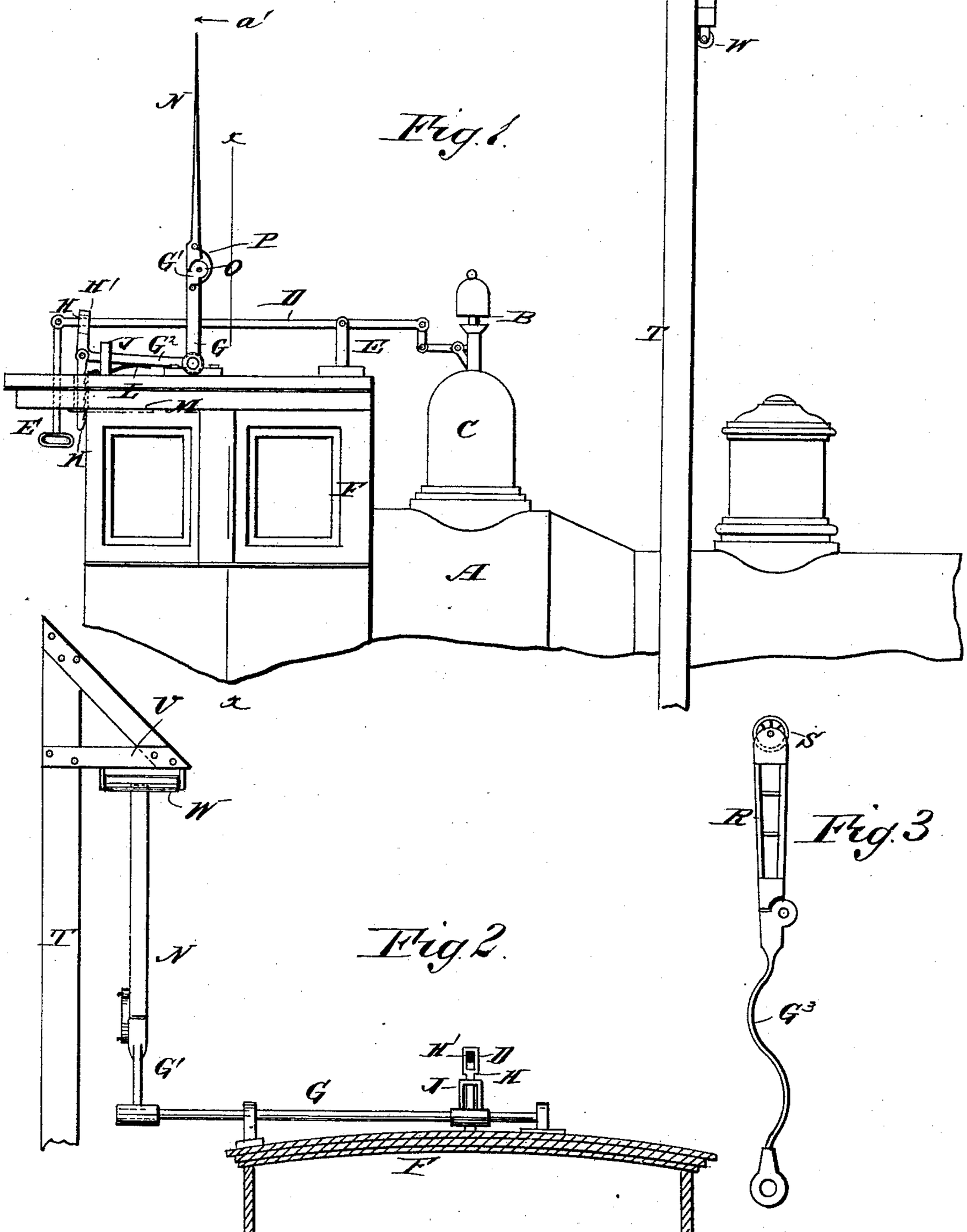

Fig. 1.

Fig. 2.

Fig. 3.

WITNESSES:

F. McArdle.

Jno. Mather Rutter

INVENTOR:

C. Hults.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES HULTS, OF TORCH LAKE, MICHIGAN.

LOCOMOTIVE-WHISTLE ALARM.

SPECIFICATION forming part of Letters Patent No. 338,413, dated March 23, 1886.

Application filed July 28, 1885. Serial No. 172,868. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HULTS, of Torch Lake, in the county of Antrim and State of Michigan, have invented a new and Improved Locomotive-Whistle Alarm, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved automatic whistle-alarm, which can be operated automatically by inclined guides at the sides of the track, whereby a whistle-signal is given automatically by the locomotive before the train reaches a crossing, bridge, tunnel, or any other place, whereby a whistle-signal is to be given.

The invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of a locomotive-cab provided with my improved whistle attachment and of the standard or projection at the side of the track. Fig. 2 is a cross-sectional view of the cab on the line *x x*, Fig. 1, showing the obstruction projecting from a post at the side of the track. Fig. 3 is a modification of the upwardly-projecting lever.

The locomotive A is provided with a steam-whistle, B, of the usual construction, on the dome C, and the said whistle can be opened or sounded by means of a lever, D, pivoted on a standard, E, on the top of the cab F, the handle-rod E′ extending downward from the inner end of the lever E to the top of the cab. A shaft, G, is journaled transversely on the top of the cab, and is provided with an upwardly-projecting arm, G′, and with an arm, G^2, projecting toward the rear of the cab, and provided at its rear end with an arm, H, in which an elongated eye, H′, is formed, through which the rod D is passed. The arm G^2 passes through a guide, J, projecting up from the top of the cab. A spring, L, secured on the cab, has its free end resting against the under side of the arm G^2, and presses the swinging end of the said arm upward. A toothed bar, K, is pivoted to the rear end of the arm G^2, and projects downward. The said bar K is adapted to engage with an adjustable spring-catch, M, on the cab. A tapered arm, N, is pivoted to the top of the arm G′ of the shaft G by a knuckle-joint, O, in such a manner that the said arm or bar N can swing toward the front end of the locomotive, but not toward the back. A spring, P, is connected with the lower end of the bar N and with the upwardly-projecting arm G′, and holds the bar N in a vertical position. In place of the upwardly-projecting arm G′ a spring-arm, G^3, (shown in Fig. 3,) may be mounted on the end of the shaft G, and to the upper end of the said arm G^3 a signal-arm, R, is pivoted, which carries a roller, S, at its upper end. The shaft G projects beyond the right-hand side of the cab, and the arm G′ is secured on the outer end of the said shaft. Adjacent to the track posts T are located, from which arms U project toward the track, the arms being suitably braced; and on the under side of each arm a roller, W, is journaled in such a manner and at such an elevation that the upper end of the arm N can strike the same. In place of the bar U and the roller an inclined platform may be provided, on which the roller S of a signal-arm, R, can run. The posts T are arranged a suitable distance from the crossing, tunnel, bridge, &c., where the signal is to be given. When the locomotive arrives at one of the posts, the upper end of the arm N, which is made of spring material so as to be able to give, strikes the roller W, and is swung in the direction of the arrow *a*′, Fig. 1—that is, toward the rear of the cab—thereby pulling down the eye H′ on the swinging end of the arm G^2, and thereby pulling down the rear end of the lever D in the same manner as the arm is pulled down by the engineer to sound the whistle. A signal is thus given automatically. The neck or notched bar K engages with the catch M and locks the arm G^2 in the lowered position, thereby locking the end of the lever D in the lowered position, whereby a long blast is sounded, which is continued until the bar K is disengaged from the spring-catch M. If a long blast is not desired, the spring-catch M must be so adjusted that the rack or toothed bar K cannot catch on it. When the locomotive runs backward, the signal is not given, as the bar N can swing down in the inverse direction of the arrow *a* without affecting the shaft G.

When signals are to be given in running forward and backward, two of the above-described automatic signaling devices must be provided, one at each side of the cab; and two separate posts, T, and corresponding arms must be provided.

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

1. The combination, with the shaft G on the locomotive-cab, of the upwardly-projecting arm G′, the arm or bar N, connected with the same by a knuckle-joint. the arm G^2, projecting toward the rear and provided with an eye, and of the usual whistle-lever, D, which is passed through the eye on the end of the arm G^2, substantially as herein shown and described.

2. The combination, with the shaft G, of the upwardly-projecting arm G′, the arm or bar N, jointed to the same, the arm G^2, projecting toward the rear and provided with an eye, the whistle-lever D, passed through the said eye, the notched arm K, depending from the under side of arm G^2, and the catch M, adapted to engage said notched bar, substantially as set forth.

CHARLES HULTS.

Witnesses:

DANIEL BLAKELY,

J. W. PEARL.