

(No Model.)

H. C. MUSTARD.

AUTOMATIC DEVICE FOR OPERATING WHISTLES.

No. 592,015.

Patented Oct. 19, 1897.

Fig. 1.

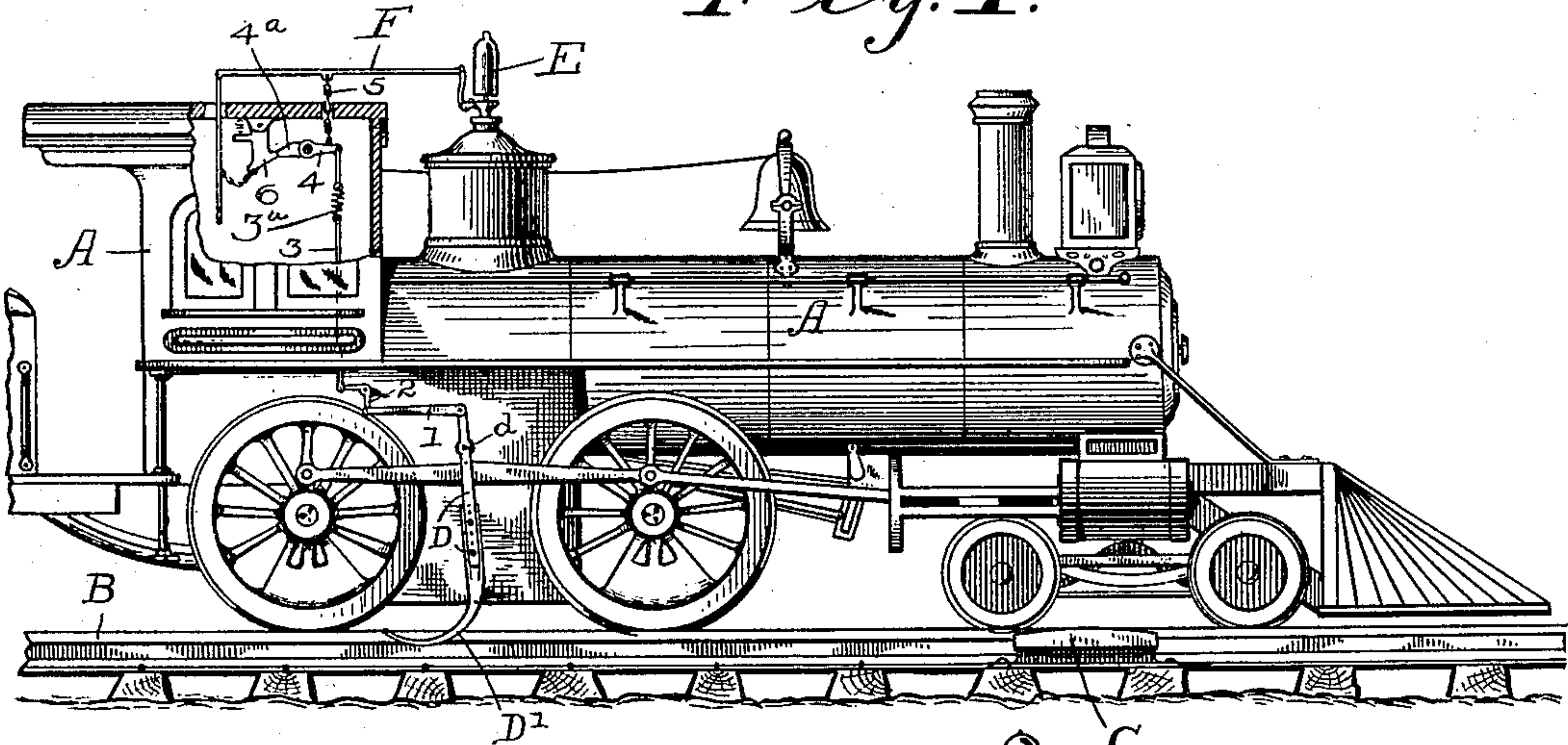


Fig. 2.

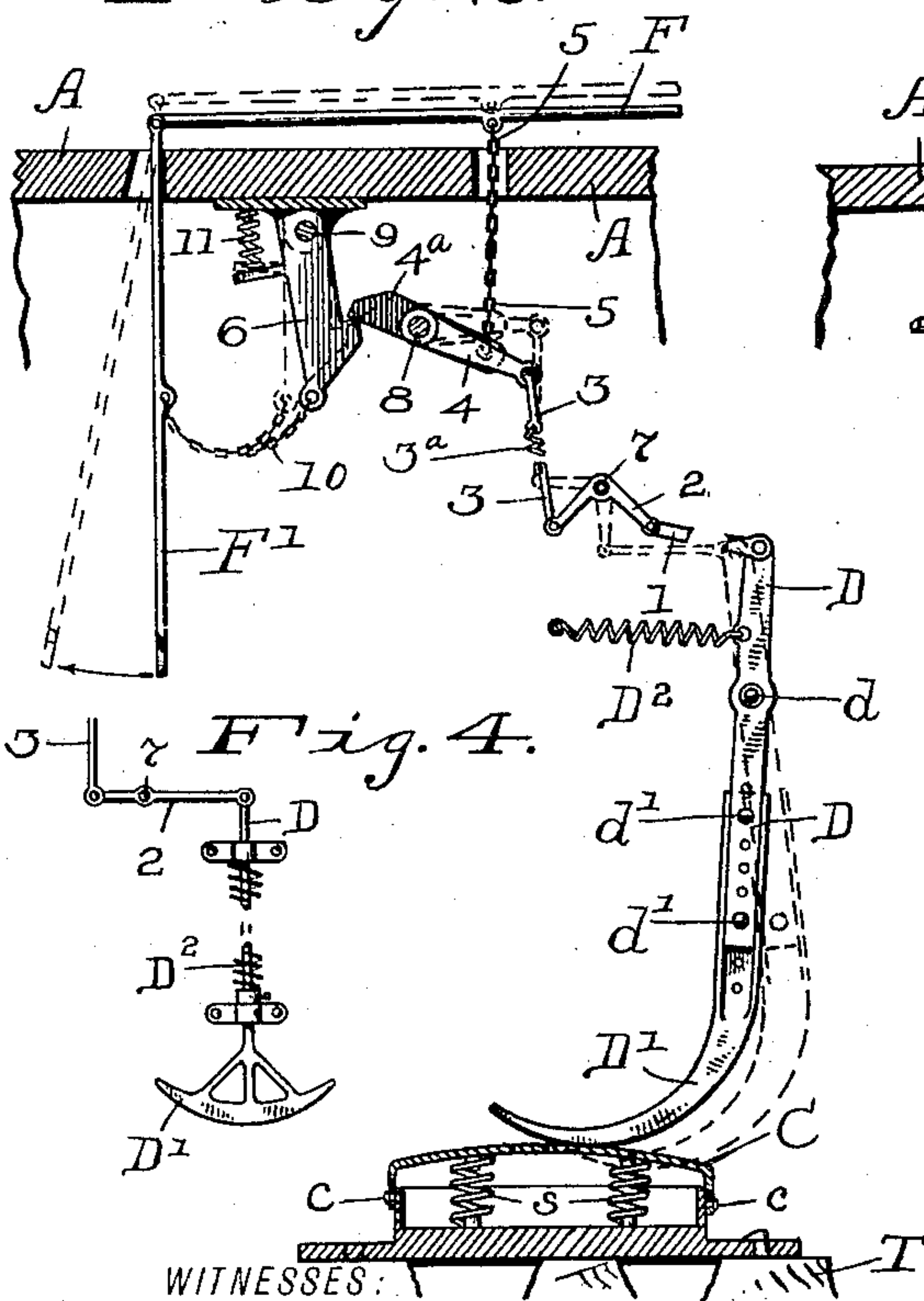


Fig. 3.

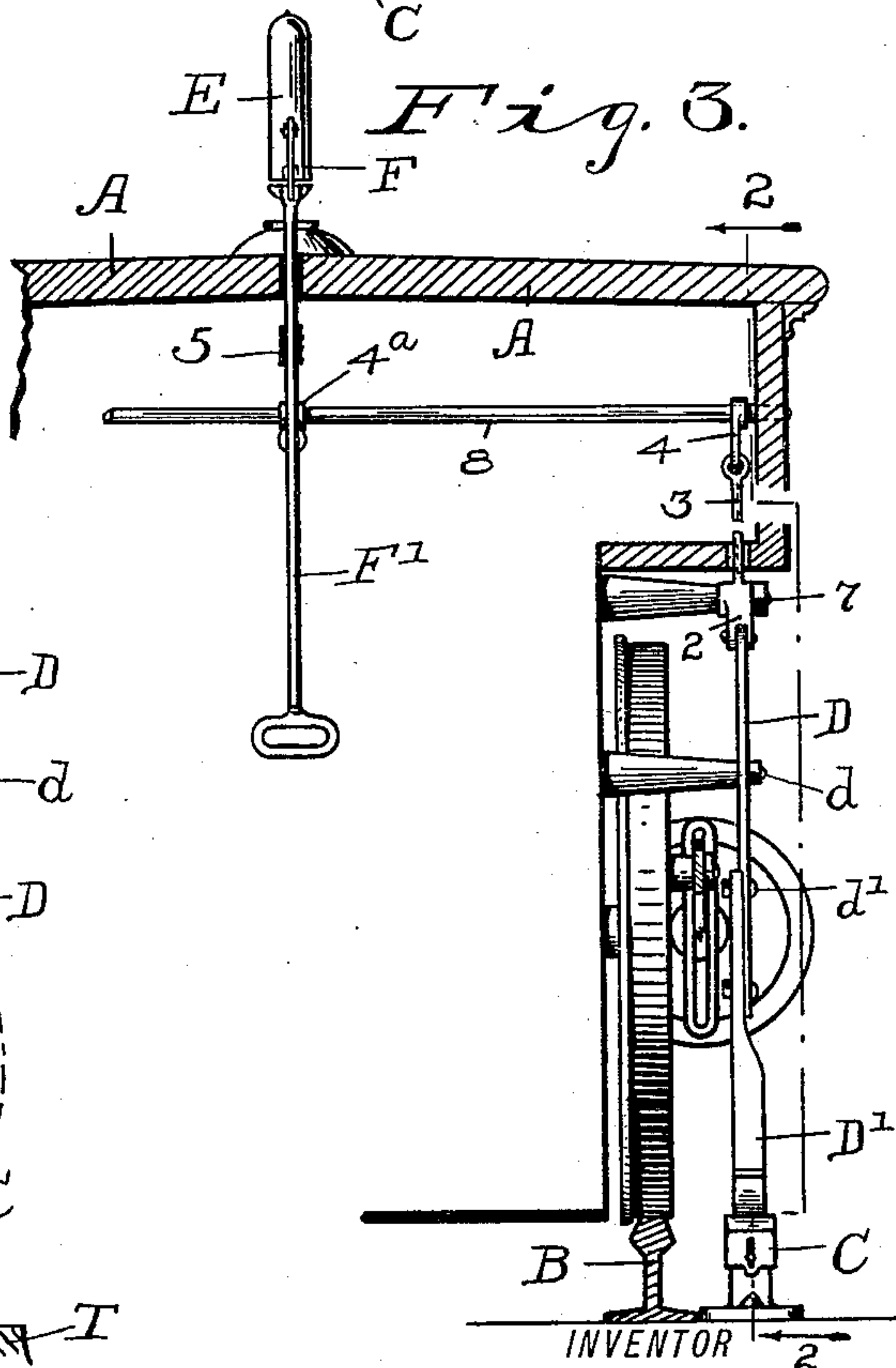
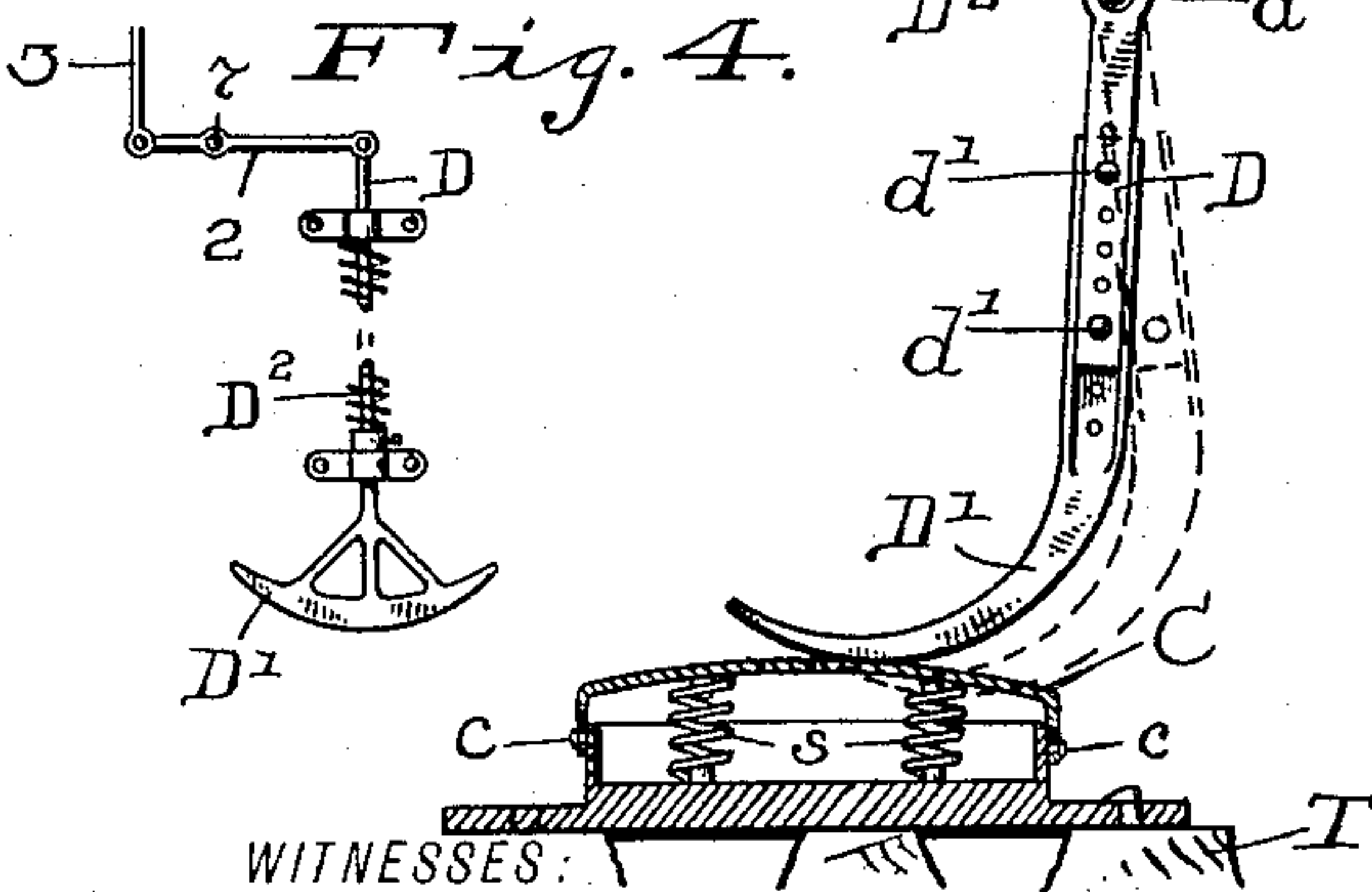


Fig. 4.



F. W. Koerner.
J. A. Walsh.

Henry C. Mustard,
BY
Chester Bradford.
ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRY C. MUSTARD, OF WEST POINT, INDIANA.

AUTOMATIC DEVICE FOR OPERATING WHISTLES.

SPECIFICATION forming part of Letters Patent No. 592,015, dated October 19, 1897.

Application filed June 29, 1897. Serial No. 642,805. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. MUSTARD, a citizen of the United States, residing at West Point, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Automatic Devices for Operating Whistles, of which the following is a specification.

The object of my said invention is to produce a device which shall operate a whistle at a predetermined point.

It is especially applicable to locomotives, on which, by its use, the whistle will begin to sound at a predetermined distance from a danger-point, such as a crossing, and will continue to sound until purposely disengaged by the fireman or engineer, thus insuring that a warning shall be given as long before the locomotive passes such a point as may be deemed proper, and also insuring a continuous sound as long as may be desired.

An apparatus embodying my said invention, as applied to locomotive-engines, will be first fully described and the novel features thereof then pointed out in the claim.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters and numerals of reference indicate similar parts, Figure 1 is a side elevation of a locomotive provided with apparatus embodying my said invention; Fig. 2, a detail view, on a considerably enlarged scale, illustrating the construction more clearly, as seen from the dotted line 2 2 in Fig. 3; Fig. 3, a transverse sectional view showing another view of said apparatus, and Fig. 4 a detail diagrammatic view illustrating an alternative construction.

In said drawings the portions marked A represent the locomotive; B, the railway-track; C, a strike located alongside said track; D, a bar or lever mounted on the locomotive and adapted to be operated by said strike; E, the whistle, and F the rod for operating said whistle.

The locomotive, track, whistle, and rod for operating the same of course are or may be of any usual or desired construction, and, not being peculiar to my present invention, will not be further described herein, except incidentally in describing said invention.

The strike C is of a suitable form to oper-

ate the bar or lever D. In order that it shall have a yielding character, so that the jar of the contact shall not be too violent, I prefer to make it of two parts, the upper or main part being supported on springs *s* upon the lower part, which in turn is secured upon the ties T, as best shown in Fig. 2. The said upper part is preferably slotted, and the slots pass over pins *c* upon the sides of the lower part, which sides are inclosed by the edges of the upper part. The pins and slots connect the two parts together, while permitting a vertical movement of the upper part upon the lower part, as will be readily understood.

The bar or lever D is shown in the principal views as pivoted at *d* to the side of the fire-box of the engine. It may be mounted in any desired manner which will enable it to operate the whistle when properly moved. It has a foot or "float" D', which comes in contact with the strike C. This foot or float is so connected to the lever proper as to be adjustable in relation thereto, so that exactly the desired amount of contact between said foot or float and the strike C can be secured. The lever D is returned to position after the strike has been passed by a spring D², attached thereto and to some suitable point on the locomotive. There is shown running from the top of this bar or lever a link 1, connected to a lever 2, whose other end is connected to a rod 3, which in turn is connected to a lever 4, which is connected, through a link or chain 5, to the whistle-actuating rod F. A detent 4^a on the same shaft or pivot with the lever 4 is adapted to engage with a catch 6, and said catch is normally held forward by a spring 11. The bell-crank lever is pivoted at 7, the lever 4 at 8, and the catch 6 at 9, as best shown in Fig. 2. The link 3 has a spring 3^a formed therein, and this serves to take up some of the force of the movement and prevent too violent a pull on the whistle-rod. The usual handle F' is connected to the end of the rod F, by which the whistle may be sounded in the usual manner by hand by the fireman or engineer, and also, through the chain or link 10, be used to disconnect the catch 6, said catch being normally held into engagement by the spring 11.

The operation is as follows: When the locomotive in its course has reached the strike

C, it operates the bar or lever D, which, through the various connections, pulls on the whistle-rod F and sounds the whistle. It at the same time raises the end of the detent 4^a, so that
5 it engages with the catch 6, and thus the whistle is held open and continues to sound until said catch is drawn out of engagement with said detent 4^a. The pivot 8 to the lever
10 4 is preferably in the form of a shaft or rod extending entirely through the cab for convenience in making the connections, as the rod or lever D should be at the extreme one side of the locomotive, while the rod F and its handle F' should most conveniently be in
15 the center, as shown.

Obviously, many other arrangements of rods, levers, and links might be employed to accomplish the same result and the pivots and connections be located to suit the arrangement adopted without departing from my invention. I have shown one such arrangement
20 in Fig. 4, in which bar D is mounted in slides instead of on a pivot, while the lever 2 is straight instead of angular, and the link 1 is
25 dispensed with.

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

The combination, in an automatic apparatus for sounding locomotive-whistles, of a strike positioned adjacent to a railway-track, a rod or lever suitably mounted on the locomotive and adapted to come in contact with and be operated by said strike, the whistle connections running from said rod or lever
30 and adapted to operate said whistle, a detent carried upon a rock-shaft or pivot forming part of said connections, and a catch positioned adjacent to said detent and adapted to engage therewith, whereby the whistle may
35 be held continuously open until purposely closed, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at West Point, Indiana, this 19th day of June, A. D. 1897.

HENRY C. MUSTARD. [L. S.]

Witnesses:

J. C. SHIGLEY,
ISAAC WAGGONER.