

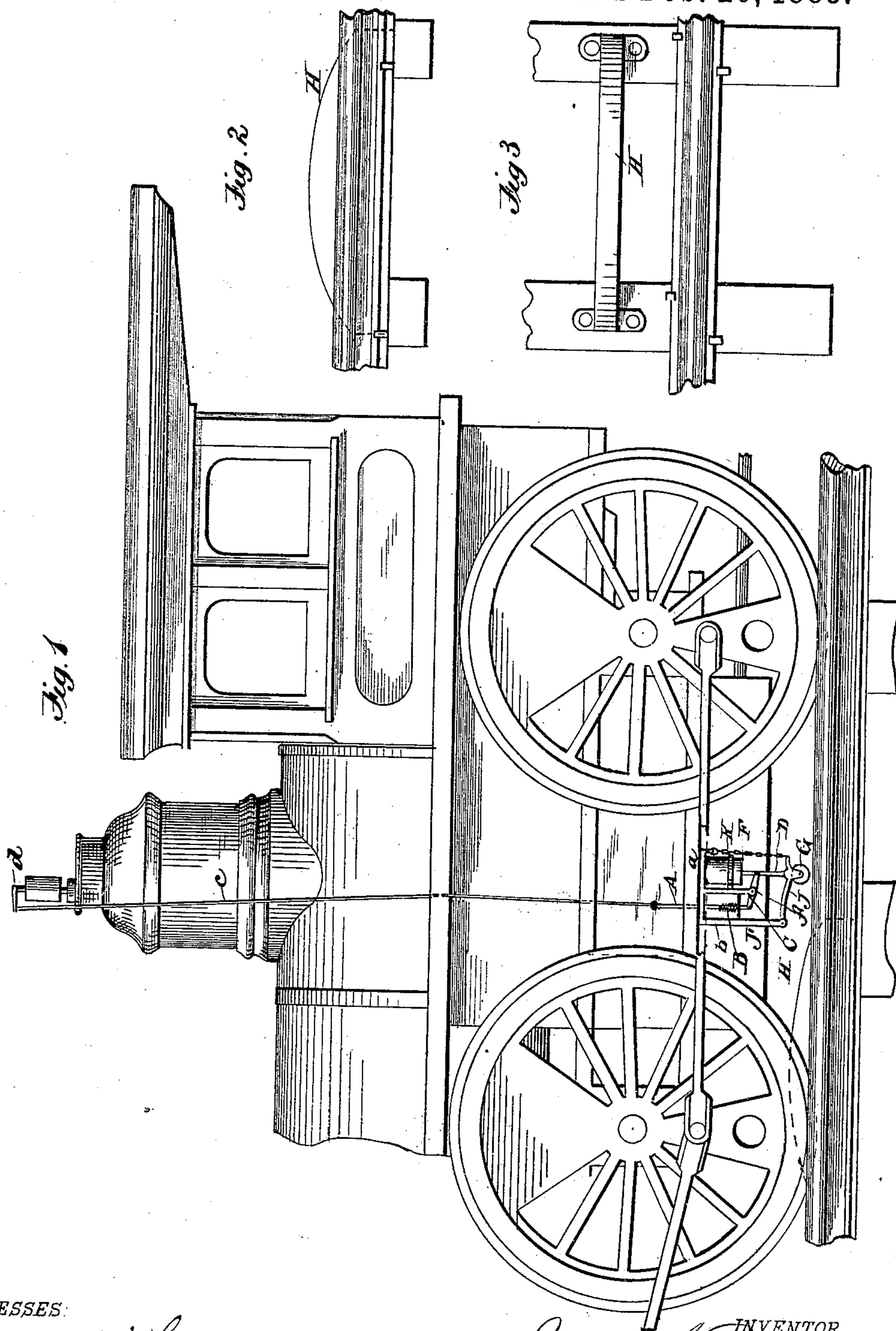
(No Model.)

2 Sheets—Sheet 1.

J. A. B. LOVETT.  
RAILWAY CROSSING ALARM.

No. 272,723.

Patented Feb. 20, 1883.



WITNESSES:  
W. H. H. Knight  
Harry Penhard.

INVENTOR  
James A. B. Lovett  
per Edson Bros.  
Attorneys

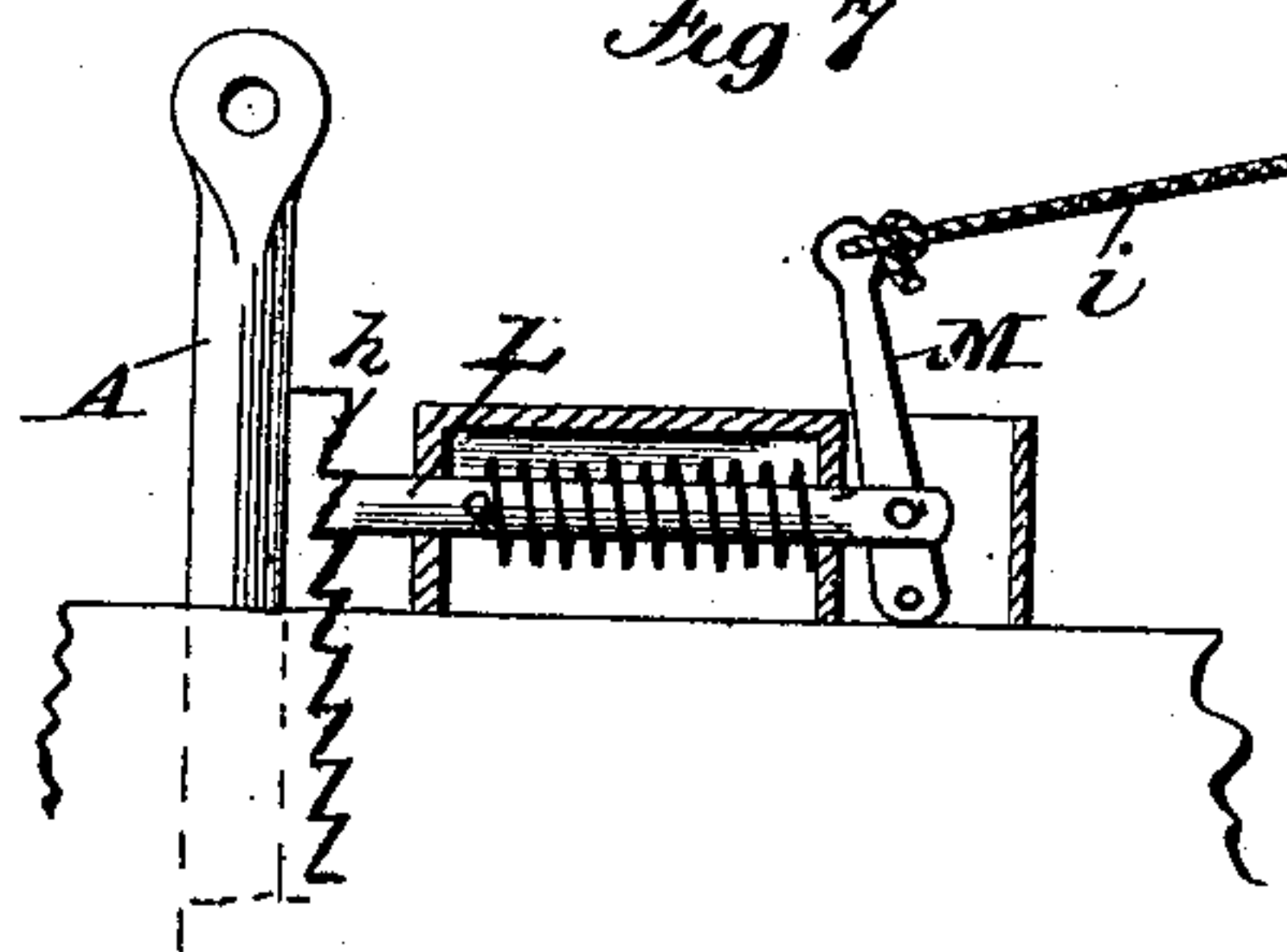
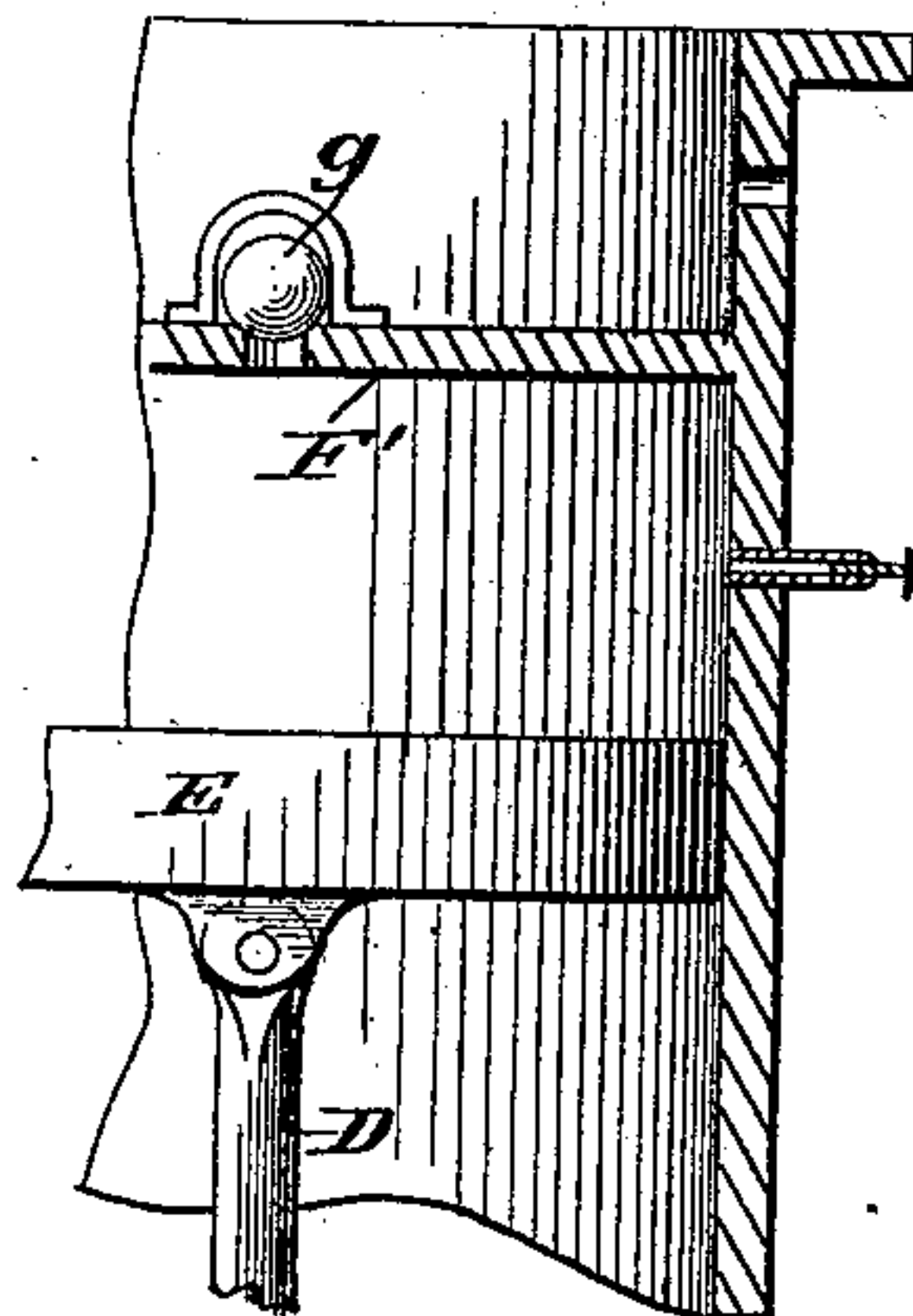
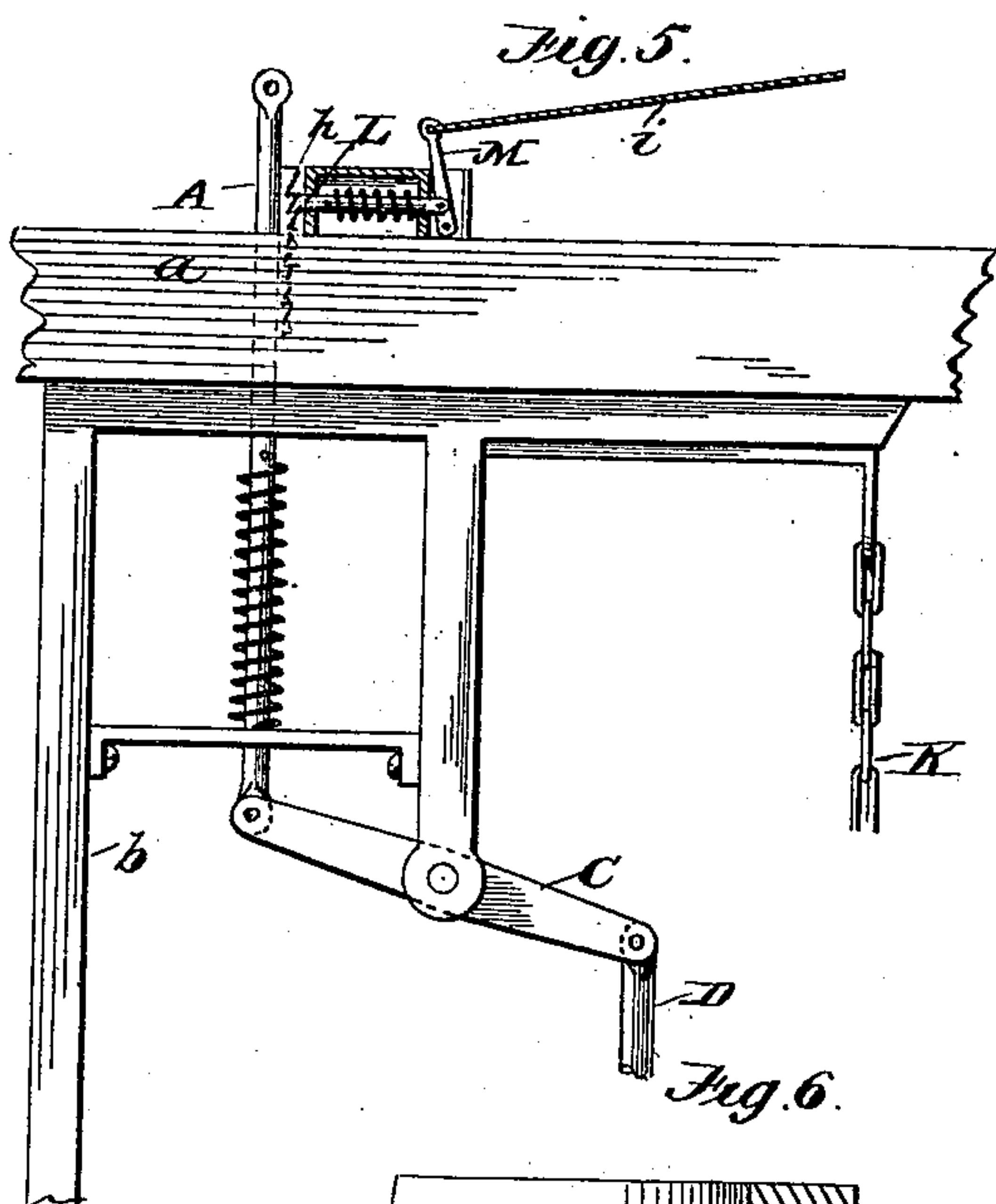
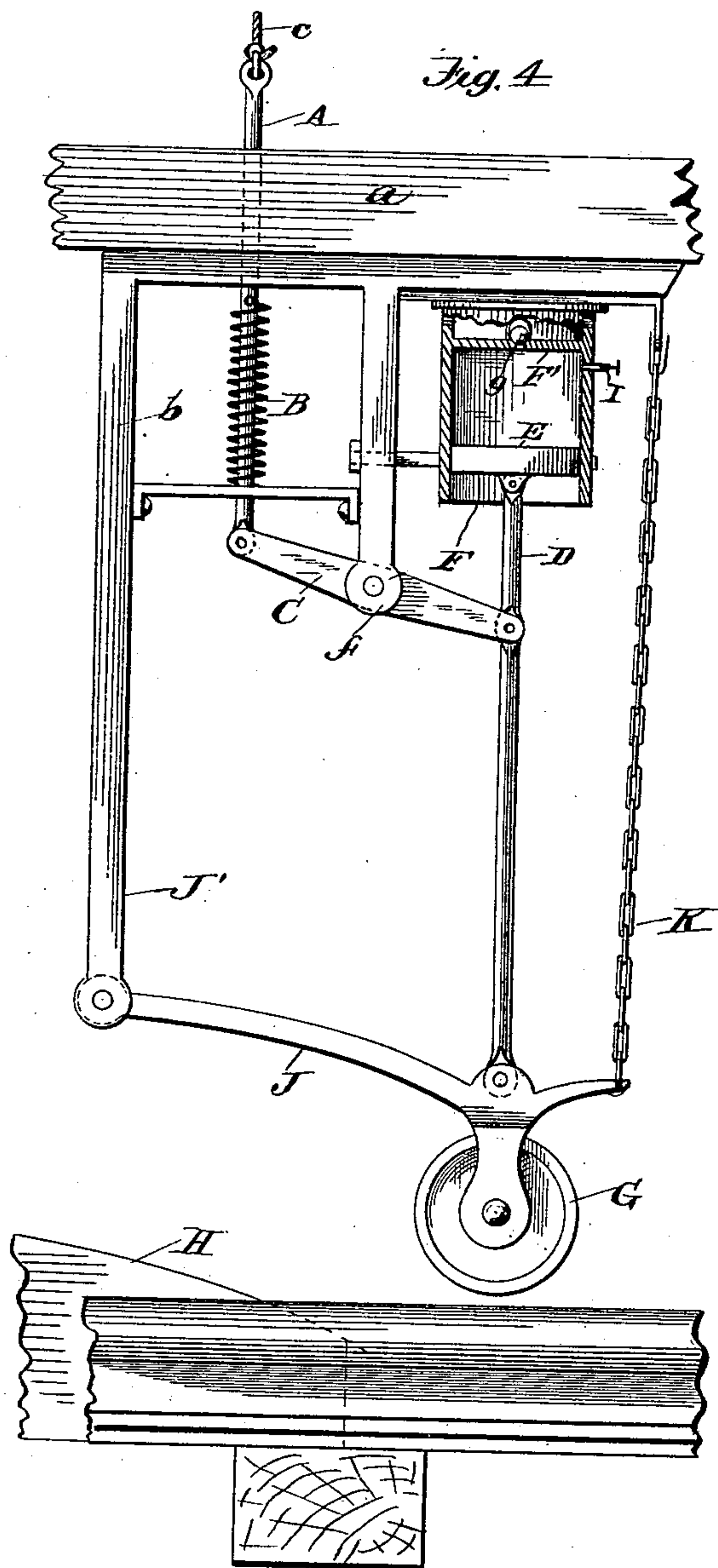
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J. A. B. LOVETT.  
RAILWAY CROSSING ALARM.

2 Sheets—Sheet 2.

No. 272,723.

Patented Feb. 20, 1883.



WITNESSES:

W. H. H. Knight  
Harry Bernhard

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# UNITED STATES PATENT OFFICE.

JAMES A. B. LOVETT, OF HUNTSVILLE, ALABAMA.

## RAILWAY-CROSSING ALARM.

SPECIFICATION forming part of Letters Patent No. 272,723, dated February 20, 1883.

Application filed September 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. B. LOVETT, a citizen of the United States, residing at Huntsville, in the county of Madison and State of Alabama, have invented certain new and useful Improvements in Railroad-Crossing Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain improvements in signals for railroad stations and crossings; and it consists in the employment of a spring-rod connected to the steam-whistle of an engine or locomotive and to a jointed  
15 rod articulated or pivoted to a lever carrying a wheel or shoe adapted to ride upon a cam or elevation arranged alongside of the track-rails. Said spring-rod is adapted to be connected to a piston adapted to operate in an air-chamber, substantially as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side view of a portion of a locomotive embodying my improvement. Figs. 2 and 3 are  
25 detail views of the track and the cam or elevation upon which rides the shoe or wheel of the whistle-operating rod. Fig. 4 is a side and partly sectional view of my improvement. Fig. 5 is a detailed sectional view thereof with the whistle-  
30 operating rod operating in connection with a spring-bolt, under the control of the engineer, to prolong the sounding of the whistle. Fig. 6 is an enlarged detailed sectional view of the air whistle or chamber, partly broken away, employed when the spring-bolt engaging with  
35 whistle-operating rod is not used. Fig. 7 is a similar view, partly in side elevation, of the spring-bolt engaging with the whistle-operating rod, shown broken away.

40 In carrying out my invention I employ, in combination with the steam-whistle of an engine or locomotive, a spring-rod, A, passing up through the brace-bar *a* on the side of the engine, adjacent to the boiler, and down  
45 through the lower bar of a metal frame, *b*. Its upper end is connected by a cord, chain, or wire, *c*, to the steam-whistle *d*, and its portion within the frame *b* is acted on so as to be forced upward after being released from a depressed  
50 position by a spring, B, while its lower end is

connected by a walking-beam or centrally-pivoted lever, C, to the piston-rod D. The lever C is pivoted to a pendant, *f*, affixed to the brace-bar *a* of the engine. The upper end of the rod D, jointed where it connects with the lever C, is connected to a piston, E, moving in an air-chamber or cylinder, F, affixed also to the brace-bar *a*. A horizontal partition, F', having a ball or globe valve, *g*, is arranged within the air cylinder or chamber F, near its upper  
55 end, said valve being designed to allow the air to escape as it is compressed by the ascent of the piston, caused by the wheel or shoe G at the lower end of the rod D riding upon the cam or elevation H, secured to the ties along-  
60 side one of the track-rails. After passing the cam H, the valve I admits air slowly to the cylinder, and thereby gradually permits the return of wheel G to its normal position, causing the steam-whistle to sound during the said  
65 return. The lower end of the piston-rod D is also connected to a lever, J, pivoted to the lower end of a rod, J', also secured to the under side of the brace-bar *a*; or it may be formed in one piece with the upper horizontal part,  
70 with the pendant or bracket of the lever C, and by means of which the air-chamber is supported in position upon the brace-bar.

A chain, K, connected to the short arm of the lever J and to the under side of the bracket-casting, connecting the several parts integrally to the brace-bar *a*, is designed to keep the wheel or shoe of the piston-rod lever J sufficiently elevated to prevent it striking ob-  
80 structions or the rail-ties.

In lieu of or in combination with the air-chamber aforesaid, may be used an incased spring-bolt, L, arranged upon the brace-bar *a* of the engine, and adapted to engage teeth *h* on the steam-whistle-operating rod A, said bolt  
85 being controlled by the engineer by means of a cord or wire, *i*, connected to a lever, M, connected to the said bolt and pivoted to the bottom of its case, said rod or wire reaching into the engine-cab.

90 It is obvious that as the whistle-operating rod A is drawn down by ascent of the wheel or shoe G upon its cam, causing the blowing of the whistle, the bolt L will spring into the coincident notch between two of the teeth *h* of  
95 100

the said rod and effect the holding of the same until released by the engineer, thus prolonging the sounding of the whistle or signal of the approaching engine or train as it nears a crossing or station.

I claim and desire to secure by Letters Patent—

1. In a railroad crossing or station signal, the combination, with the whistle-operating spring bar or rod attached to a lever carrying a wheel or shoe operated by a cam or elevation arranged alongside one of the track-rails, of an air-chamber having two valves and a piston for prolonging the signal, substantially as and for the purpose set forth.

2. In a railroad crossing or station signal,

the combination, with the steam-whistle-operating spring-rod connected to a piston-rod, the latter being connected to a lever carrying a wheel or shoe operated by a cam or elevation arranged alongside one of the track-rails, of the air chamber or cylinder provided with air-valves, and having a piston to which said rod is affixed, substantially as and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES A. B. LOVETT.

Witnesses:

JNO. D. BRANDON,  
WM. C. WEAVER.