

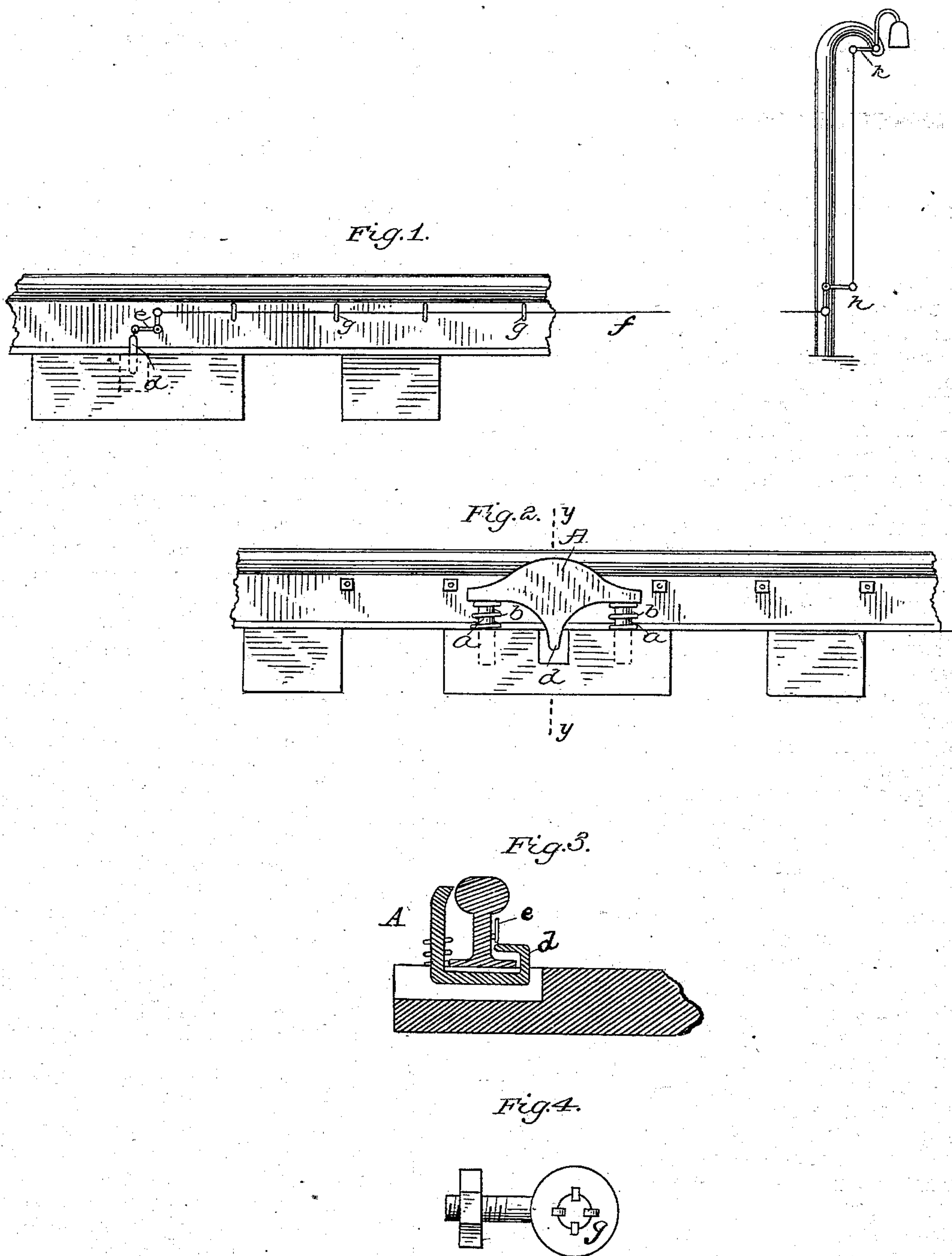
(No Model.)

H. H. LIEMKE.

SIGNAL AND ALARM FOR RAILROAD CROSSINGS.

No. 271,876.

Patented Feb. 6, 1883.



Attest:

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# UNITED STATES PATENT OFFICE.

HERMAN H. LIEMKE, OF ST. LOUIS, MISSOURI.

## SIGNAL AND ALARM FOR RAILROAD-CROSSINGS.

SPECIFICATION forming part of Letters Patent No. 271,876, dated February 6, 1883.

Application filed April 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN H. LIEMKE, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful  
5 Improvement in Signals and Alarms for Railroad-Crossings; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improved alarm and signal  
10 for railway-crossings and like sidings where it is necessary to sound or exhibit an alarm or signal in advance of the approaching train.

Heretofore various kinds of signals have  
15 been devised for this purpose. My object is to provide a signal which shall be inexpensive and simple in its construction, so as not to be likely to get out of order, and to act with certainty in the transmission of the signal or  
20 alarm.

The various parts and combinations which constitute my invention are hereinafter fully described, and shown in the accompanying drawings, in which—

25 Figure 1 represents a rail in side elevation, with the transmitting apparatus attached, and with the signal also in side elevation. Fig. 2 is a side elevation representing the opposite side of the rail shown in Fig. 1. Fig. 3 is a  
30 section on line *y y* of Fig. 2; Fig. 4, a separate view of the eyebolt.

At a suitable distance from the crossing or other point where the signal is to be given I place a piece, A, which is to receive motion  
35 from the wheels of the passing train. This piece may either be set in a recess in the rail or located by the side of the rail sufficiently low down to receive motion from the wheel-flanges. It is provided with guiding-pins *a a*,  
40 which play in holes in the bed-piece, so as to permit the piece A to have only vertical motion. Upon the pins *a a*, and between the ends of the piece A and the bed-piece, I place stout springs *b*, which serve to keep the piece  
45 slightly elevated, and to return it to position after being depressed by the weight of the wheel passing over it. The piece A extends below the rail, being located, as before intimated, either in a recess in the rail or upon  
50 the inner side of it. It is provided with an arm, *d*, which extends under the rail, and is

connected by a link to a bell-crank lever, *e*, pivoted upon the rail, or upon some suitable standard by the side of it. The upper end of this bell-crank lever is connected to a wire, *f*. 55 This wire runs along close to the web of the rail through eyebolts *g*, provided with suitable friction-rollers, the shanks of which pass through the web of the rail, and are held by nuts on the opposite side. These eyebolts are  
60 sufficiently near together to properly support the wire which by means of them is held close to the web and under the head of the rail, where it is securely protected and entirely out of the way. The wire extends to the point 65 where the alarm is sounded. At each point is set a post supporting a suitable bell. The wire is connected to a bell-crank lever, *h*, the horizontal arm of which is connected to another bell-crank lever, *k*, which supports the  
70 bell. Any other suitable means for connecting the wire to the bell may be substituted for those shown. In addition to the sounding of the bell, motion of the wire may be made to exhibit a signal for additional security. 75

It will be apparent that the piece A will be subjected to the action of all the wheels on one side of the passing trains, and will be vibrated up and down by each wheel, and thus a continuous ringing be kept up while the train  
80 is passing over the piece A. The shape of the piece A is specially adapted to receive a blow from the wheel, being formed upon a curve.

The bell may be covered by a roof to shelter it from the snow and ice, if desired. 85

Having thus described my invention, what I claim is—

A railway signal and alarm consisting of the piece A, supported upon guiding-pins and adapted to be depressed by the wheel of the  
90 passing train, the bell-crank lever *e* and arm *d*, the wire *f*, and the eyebolts *g*, attached to the web of the rail, and the bell connected to said wire, the parts being combined and operating substantially as described. 95

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERMAN H. LIEMKE.

Witnesses:

F. L. MIDDLETON,  
WALTER D. MALDRON.