E. KADDATZ.

SPREADING RAIL INDICATOR.

APPLICATION FILED OCT. 18, 1913.

1,106,876.

Patented Aug. 11, 1914.

2 SHEETS—SHEET 1.

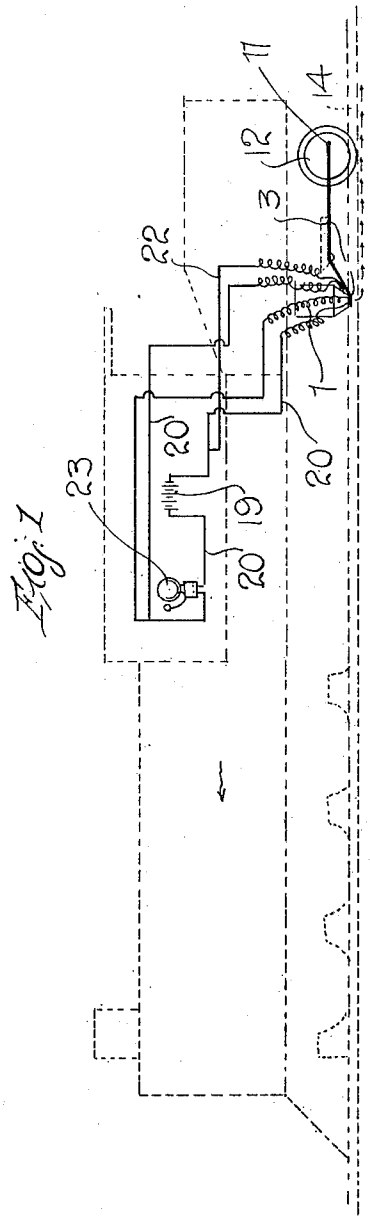

Fig. 1

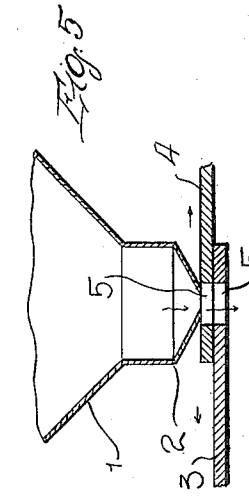

Fig. 5

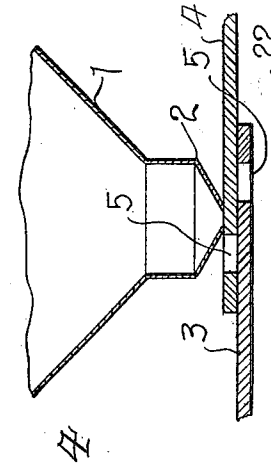

Fig. 4

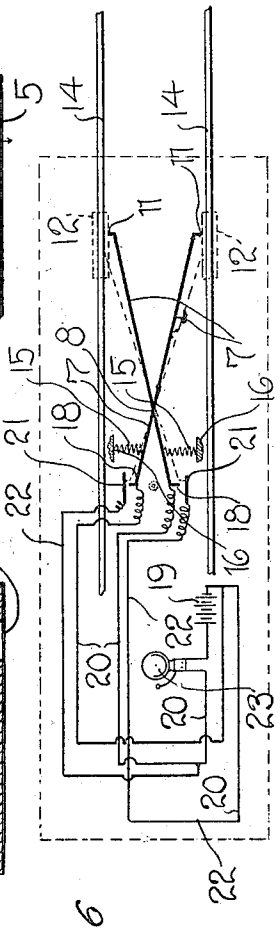

Fig. 6

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2 SHEETS—SHEET 2.

Fig. 2

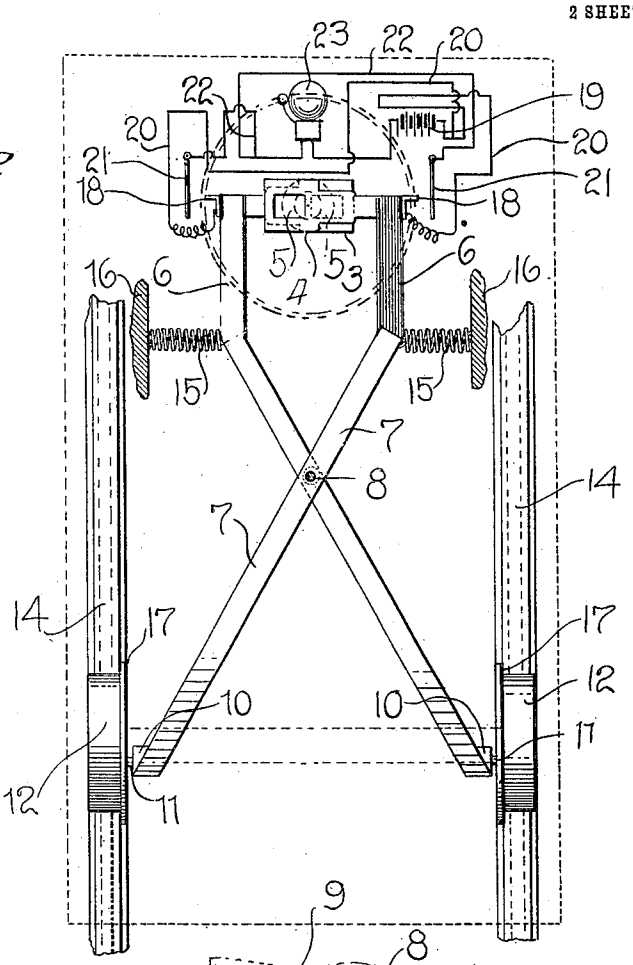
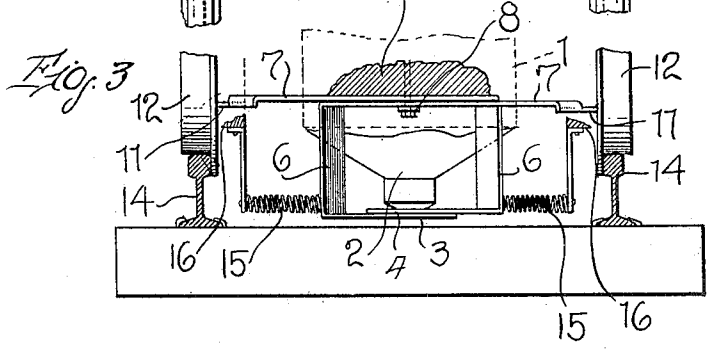


Fig. 3



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UNITED STATES PATENT OFFICE.

EMIL KADDATZ, OF ORTONVILLE, MINNESOTA.

SPREADING-RAIL INDICATOR.

1,106,876. Specification of Letters Patent. Patented Aug. 11, 1914.

Application filed October 18, 1913. Serial No. 796,039.

To all whom it may concern:

Be it known that I, EMIL KADDATZ, a citizen of the United States, residing at Ortonville, in the county of Bigstone and State of Minnesota, have invented certain new and useful Improvements in Spreading-Rail Indicators, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in indicators and has relation more particularly to a device of this general character especially designed and adapted for use in connection with railways and the object of the invention is to provide a device of this type of a simple and comparatively inexpensive nature having means of a novel and improved character whereby an indication is automatically given from a train passing over a track way at any point or points on such track way whereby the rails included therein have spread.

The invention consists in the details of construction and in the combination and arrangement of the several parts whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will be carefully defined in the appended claims.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a somewhat diagraphic view of an indicator constructed in accordance with an embodiment of my invention; Fig. 2 is a view in top plan of my improved device as herein embodied; Fig. 3 is a view in end elevation of the device as shown in Fig. 2; Fig. 4 is an enlarged fragmentary sectional view illustrating a certain feature of the invention, as herein disclosed; Fig. 5 is a view similar to Fig. 4 with the parts shown adjusted in a different position; and Fig. 6 is a diagraphic view illustrating in detail the wiring whereby a signal employed in connection with my invention, as herein disclosed, may be controlled.

As disclosed in the accompanying drawings, 1 denotes a hopper of any ordinary or preferred construction and adapted to be supported in any manner as will operate with convenience beneath the body of a locomotive or below the tender thereof. The manner in which this is accomplished forms no particular part of my invention and a detail thereof is therefore believed to be unnecessary. The hopper 1 is provided with a discharge nozzle 2 adapted to be positioned in close proximity to the roadway over which the engine may travel and the discharge therethrough being controlled by the sliding valves 3 and 4 disposed with their extremities overlapping and being provided with suitable apertures 5 adapted to register when the valves are adjusted to bring such openings 5 below the discharge opening of the hopper. As herein disclosed, the valves 3 and 4 comprise inwardly directing arms formed on the forward extremities of the downwardly inclined portions 6 of the elongated members 7, such members being disposed in intersecting relation somewhat after the fashion of an X with their adjacent or overlapping portions pivotally united by a member 8 which is also adapted to engage a suitable supporting means, as indicated at 9 in Fig. 3, suitably carried below the engine or its tender. I also wish to state in this respect that the support 9 may be as desired and that its particular construction has no bearing whatever to my present invention, and for this reason it is thought that a further disclosure relative thereto is unnecessary. The opposite or rear end portions of the arms 7 are provided with the bearings 10 from each of which projects a stub shaft 11 adapted to have mounted thereon a flanged wheel 12 adapted to travel in the conventional manner over the rails 14 of the track way. In order to maintain such tension upon the arms 7 as to create a separation of the rear end portions of the arms 7, I employ in connection with each of such arms a retractile spring 15, one end portion of such spring being suitably anchored to the coacting arm 7 preferably at the junction of the portion 6 therewith, while the opposite end portion of such spring is suitably secured to any convenient element 16 carried by the engine. It might be well to state at this time that in referring to the engine I mean to include the conventional tender generally employed in connection therewith.

It is thought to be obvious that the tension of the springs 15 will automatically serve to maintain the flanges 17 of the wheels 12 in constant contact with the inner surfaces of the heads of the rails 14 irrespective of the

relative positions of such rails. The location of the openings 5, hereinbefore referred to, is such that when the rails of a track way are in proper gage the discharge 2 of the hopper 1 will be closed but should a spreading of the rails occur at any point along the track way, the resultant relative outward movement of the wheels 12 will cause such adjustment of the valves 3 and 4 as to cause the openings thereof to register beneath the discharge of the hopper 1, whereupon the material within such hopper, preferably of a colored sand or other free flowing material, will be deposited along the track way until the resultant relative inward movement of the wheels 12 causes the valves 3 and 4 to be adjusted to close such discharge 2 when the rails are at their proper gage. The deposit of the colored material which may be employed gives indication to the proper persons as to just what point there may be a spreading of the rails so that the same may be corrected without undue delay and thereby serve to reduce to a minimum the possibility of accidents which so often occur through an unknown spreading of the rails of the track way.

As herein set forth, I also disclose a means whereby a signal may be given to the engineer at the time the arms 7 are adjusted to indicate a spreading of the rails and, as herein embodied, I accomplish this result through the medium of the contacts 18 suitably secured to the outer or forward extremities of the portions 6 and in suitable connection with a source of electrical energy, as indicated by 19, through the medium of the conductors 20, which contacts are adapted to engage, upon the separation of the wheels 12, suitable terminals 21 also in communication with the electrical source 19 through the medium of the suitable conductors 22 in the line of which is interposed a suitable signal 23 herein shown as in the nature of a conventional electric bell although it is thought to be obvious that in lieu of an audible signal any conventional visual signal may be employed, such as a light.

From the foregoing description, it is thought to be obvious that an indicator constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the facility with which it is caused to give indication of the spreading of the rails of a track way at the time a train is passing thereover and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

1. An indicator for track ways including a hopper having a discharge, relatively movable arms, means for maintaining one end of each of such arms in constant engagement with the rails of the track way, and auxiliary arms carried by the other ends of the first mentioned arms and having their extremities in overlapping relation and serving to close the discharge from the hopper, such auxiliary arms being provided in their extremities with openings adapted to be brought into register with the discharge of the hopper upon movement of the first mentioned arms in one direction.

2. An indicator for track ways including a hopper having a discharge, relatively movable arms, means for maintaining one end of each of such arms in constant engagement with the rails of the track way, auxiliary arms carried by the other ends of the first mentioned arms and having their extremities in overlapping relation and serving to close the discharge from the hopper, such auxiliary members being provided with openings adapted to be brought into register with the discharge of the hopper upon movement of the first mentioned arms in one direction, electric signaling means, and means under control of the first mentioned arms for operating such signaling means.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

EMIL KADDATZ.

Witnesses:
FRED M. GEIER,
LUNA WOLFE.