

A. E. VAN RISTELL.
 AUTOMATIC SIGNAL WIRE COMPENSATOR.
 APPLICATION FILED MAY 26, 1910.

1,052,534.

Patented Feb. 11, 1913.

Fig. 1.

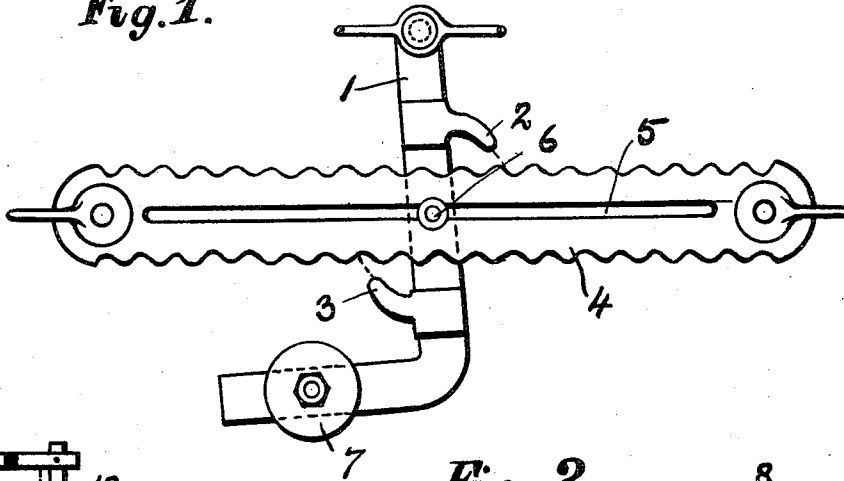
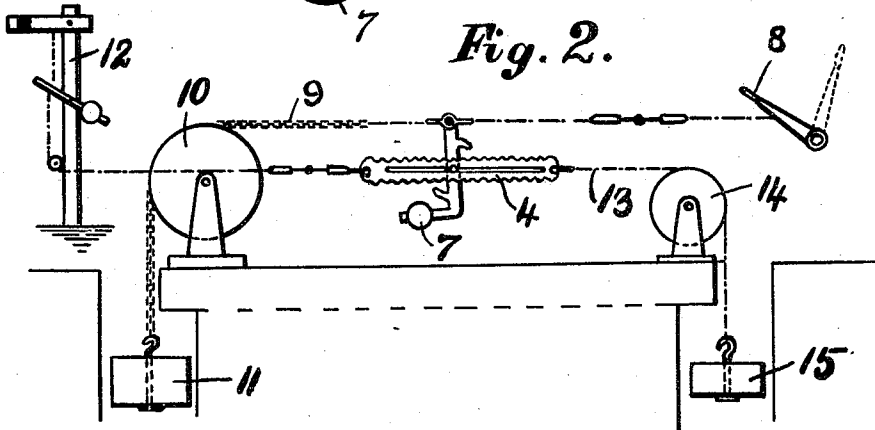


Fig. 2.



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AUTOMATIC SIGNAL-WIRE COMPENSATOR.

1,052,534.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed May 26, 1910. Serial No. 563,582.

To all whom it may concern:

Be it known that I, ALBERT EDWARD VAN RISTELL, a subject of His Majesty King Edward VII, Emperor of India, signal and interlocking inspector, East Indian Railway, whose post-office address is No. 1 Khasroobagh road, Allahabad, British India, have invented an Automatic Signal-Wire Compensator, of which the following is a full, clear, and exact specification.

This invention relates to a compensator for a signal connection of that type wherein a signal normally held at "danger" is moved to "safety" by means of a lever through the medium of tensioned chains, wires or the like attached one to the signal arm and another to an operating lever, said chains or wires passing in sufficiently close relation to each other in some point of their length as to enable an automatically adjustable connecting device joining together said chains or wires so that on moving the lever the signal will be operated. The automatic connecting device also serves as a compensator for variations in the length of the chains or wires due to changes in temperature, stretching and wear.

In the accompanying drawings a convenient form my invention may take is shown by way of an example.

In these drawings:—Figure 1 is a side elevation of the pawl lever and straight rack in the disengaged or "danger" position of the signal. Fig. 2 is a diagrammatic view on a smaller scale showing the connections of such apparatus with the cabin lever and signal.

Referring now to those drawings, the lever 1 carries two pawls 2 and 3 adapted to engage teeth on either side of the straight rack 4. A slot 5 is formed in the straight rack 4 in which a pin 6 is capable of sliding, such pin 6 forming the pivotal point of the lever 1. The lower arm of the lever 1 is bent at an angle and carries a weight 7 to keep the pawl lever normally out of engagement while the upper arm of such lever 1 is connected at one side to the cabin lever 8 (Fig. 2) its other side being connected by the chain wire, wire rope or the like 9 which passes over the pulley 10 to the weight 11. One end of the straight rack 4 is connected to the signal 12 while the other is connected by a chain wire, wire rope or the like 13 which passes over pulley

14 to the weight 15. The weights may be suitably proportioned according to the distance of the signal and signal weight, and may, for instance, be as follows:—weight on signal arm, thirty-one pounds; weight 11, sixty-two pounds; weight 15, twenty-five pounds; weight on lever 1, one pound.

When the cabin lever is pulled lever 1 rotates on its pivot and pawls 2 and 3 engage the teeth of straight rack 4, further movement now causes the lever 1 to move the straight rack with it. The signal is thus lowered. When the cabin lever is put back to normal position weight 11 causes the lever 1 to disengage the pawls 2 and 3 with the help of weight 7 and permits the straight rack to assume its normal position.

It will readily be seen that changes, variations and modifications may be made without departing from the general spirit of the invention. For instance, the teeth of straight rack 4 may be varied as found convenient. The functions of the weights may be performed by crank balance weights. The attachment of the cabin lever wire to the lever 1 may be made farther from the pivotal point than the attachment of the weight 11 to increase the leverage and to insure the preliminary rotation to cause the pawls to engage, or the attachment of the cabin lever may be made closer or at any suitable angle.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a signal apparatus, a signal proper, a flexible operating means connected at one end to said signal and weighted at its opposite end, a plate notched on opposite edges and having a central longitudinal slot included in the flexible operating means, a two armed lever pivoted in said slot weighted at one end and adapted to travel along said slot, an operating lever, a flexible operating means connected to said operating lever and to the unweighted arm of the two armed lever, an oppositely projecting fixed pawl on each arm of the said two armed lever adapted to engage in the notched edges of the plate when rocked by the operating lever, and retracting means connected to the unweighted arm of the two armed lever.

2. In a wire compensator, a straight bar having teeth on opposite edges and pro-

vided with a central longitudinal slot, a
pawl lever pivotally mounted in said slot
and adapted to slide therein, a signal, a
flexible connection from the signal includ-
5 ing said toothed plate and terminating in
a weight, an operating lever, and a weighted
flexible connection extending therefrom and
attached to the pawl lever causing the same

to engage the toothed edges of said bar to
operate the signal. 10

In witness whereof I have hereunto set
my hand in the presence of two witnesses.

ALBERT EDWARD VAN RISTELL.

Witnesses:

S. BALDWIN,
R. MILNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
