A. C. MILLS.

SAFETY ATTACHMENT FOR RAILROAD GATES.

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**1,356,302.** **Patented Oct. 19, 1920.**

Fig. 1.

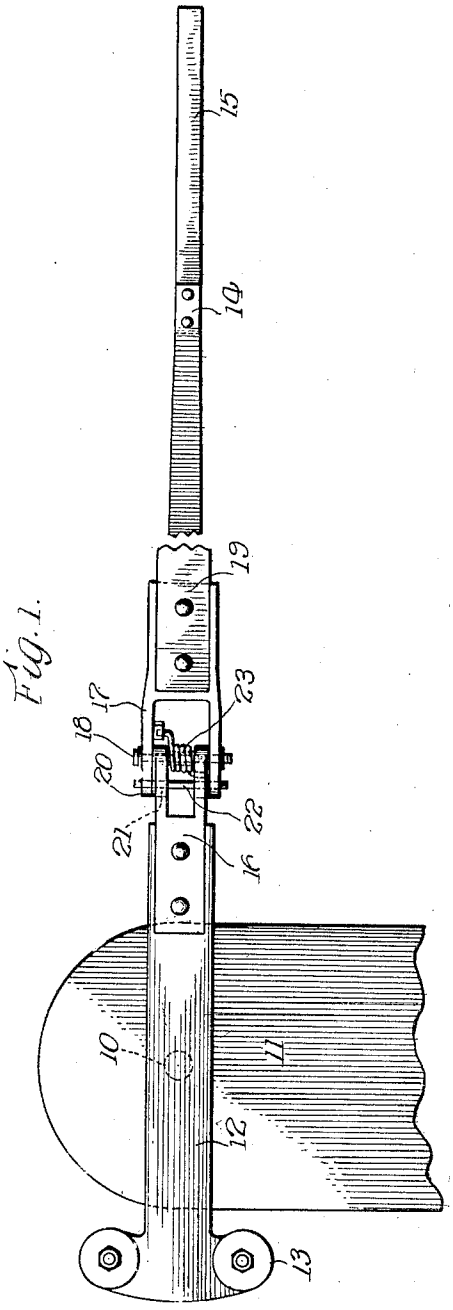
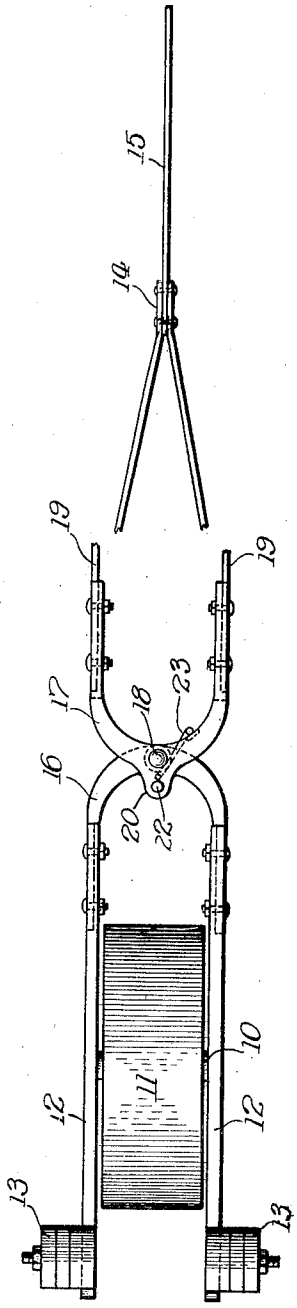



Fig. 2.




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# UNITED STATES PATENT OFFICE.

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## SAFETY ATTACHMENT FOR RAILROAD-GATES.

1,356,302. Specification of Letters Patent. Patented Oct. 19, 1920.

Application filed March 17, 1919. Serial No. 283,035.

*To all whom it may concern:*

Be it known that I, ANSON C. MILLS, a citizen of the United States, and resident of Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Safety Attachments for Railroad-Gates, of which the following is a specification.

My invention relates to gates and particularly to a novel safety attachment for railroad and similar gates.

An object of my invention, stated broadly, is to provide a gate, the oscillating arm of which is normally in the form of a rigid member but which is so constructed that in event of the application of a force to the extremity of the gate sufficient to cause its destruction, the arm will pivot at a point near its base and thereby prevent breakage. I am aware that gates have been constructed with this object in view, but in each thereof the construction has been such as to require the installation of an entirely new gate or gate arm when it is applied.

More narrowly stated therefore, my invention comprises a device of the character just described, which shall be adapted to be applied to the standard gates commonly in use with very little labor and without material change in the parts composing such gates.

It is well known that railroad gates are frequently broken, either by accident or intent, due to the increasing use of motor vehicles and the difficulty at times in stopping the same in order to prevent contact with the gates. The maintenance of the gates is a source of great and constantly increasing expense to the railroads and may to a large extent be avoided by the installation of the device here disclosed.

The invention will be better understood by reference to the accompanying drawings, wherein,

Figure 1 is a side elevation of a railroad gate constructed in accordance with my invention, the gate being shown in lowered or horizontal position, and,

Fig. 2 is a plan view thereof.

In the drawings it will be seen that the gate arm is mounted on a horizontal pivot 10, carried by a housing 11, which contains the actuating means. The gate, as commonly constructed, is bifurcated at its point of engagement with the housing, the two arms 12, 12, each having suitable counterweights 13, 13, thereon. The arms 12, extend in parallelism for a suitable distance and are thereafter bent inwardly and joined at 14, a single arm 15, being clamped between the ends.

My device comprises a pair of U-shaped members 16, 17, joined at their apices by a pivot 18. The free ends of the member 16, are securely bolted to the arms 12, while the free ends of the member 17, are securely bolted to the extensions 19. When in a horizontal position it will be seen that the outer end of the gate may swing on the pivot 18. However, this is not sufficient to provide an operative device as the gate arm must normally be rigid in order to make certain that when it is in an elevated position it will not swing or oscillate on the pivot 18. To that end I provide coöperating apertured lugs 20, 21, on the members 16, 17, the apertures in the lugs being in register when the gate is in its normal position. A wooden pin 22, is located in the registering apertures and serves to maintain the gate in its proper position under all circumstances except when an otherwise destructive force is applied to the free end of the gate arm. In that case the wooden pin will be sheared off and the arm will swing on the pivot 18. It is also desirable in order to avoid other dangers and difficulties that means be provided for returning the gate to such position that the free end thereof will not lie across the tracks as frequently the gate is broken just prior to the approach of a train. To that end I provide a coiled spring 23, mounted on the pivot 18, the ends of the spring engaging respectively the yokes 16, 17. This spring will be so disposed as to move the arm in a direction away from the track. If, under the circumstances described, the gate arm is moved to a position in which the arm does not lie across the track, the spring need not act to return the gate. Of course, an additional spring may be provided in order to move the gate in either direction if desired, but this is a complication which I prefer to avoid.

It will be seen that the important feature of my invention is in that it may readily be applied to gates of the existing standard form without modification therein. It is only necessary to remove the wooden mem-

bers from the metal arms 12, saw off a portion of the ends of the wooden members and insert my device in the gap thus formed.

It will be understood that the pin 22, may be constructed of any material which will readily shear under the proper conditions. It may be of metal of small section if desired and other means may be provided for maintaining a frangible connection at this point. This and other modifications are considered to be within the spirit of my invention.

I claim:

1. In a railroad gate, the combination of a standard, a pair of arms mounted on a horizontal pivot on said standard, a yoke joining said arms, a gate arm, a member fitting said gate arm and adapted to coöperate with said yoke, a pivot joining said member and yoke, and frangible means serving normally to maintain said pair of arms and said gate arm in parallelism, substantially as described.

2. In a railroad gate, the combination of a support or housing, a pair of counterweighted arms mounted on a horizontal pivot therein, a U-shaped member joining said arms at the end opposite to the counterweight, a gate member composed of two arms, a U-shaped member joining said arms, said U-shaped members being pivoted together, and a breakable pin adapted to maintain said gate member in proper position and to permit the same to swing upon the application of a destructive force thereto, substantially as described.

3. In a railroad gate, the combination with the gate arm of a pair of U-shaped members interposed therein, a pivot at the junction of said U-shaped members, and a wooden pin which serves to maintain the sections of the gate in parallelism during normal operation and which is adapted to be sheared upon the application of a destructive force to the free end of the gate, substantially as described.

4. In a railroad gate, the combination of a support, a gate member, said gate member being transversely divided at a point adjacent to the support, and a pair of U-shaped members interposed therein, said U-shaped members being pivoted together, a frangible pin in the connection between the U-shaped members, and a spring tending to return the parts to normal position when swung out of alinement, substantially as described.

5. In a railroad gate, the combination of a support, a gate member mounted thereon, said gate member being composed of metal arms at the point of mounting on the support and wooden arms at the terminal portion of the gate, and a pair of U-shaped members interposed in said gate, one of said U-shaped members being directly connected to the metal arms, and the other U-shaped member being connected to the wooden arms of the gate, a pivot at the intersection of said U-shaped members and a breakable pin in the connection, substantially as described.

Signed at Jackson, Michigan, this 11th day of March, 1919.

ANSON C. MILLS.

Witness:
G. B. HARRIS.