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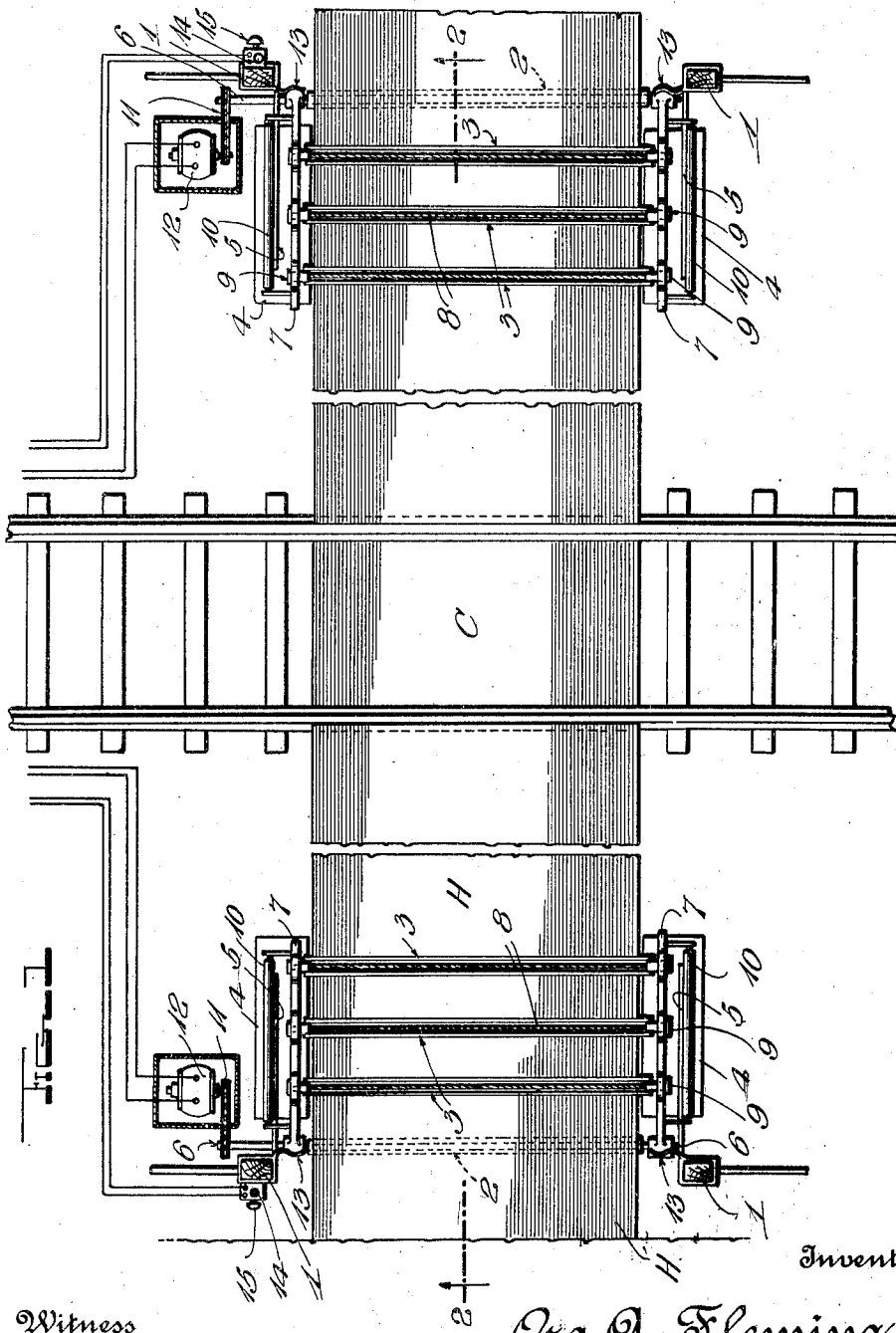
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SAFETY GATE

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2 Sheets-Sheet 1



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UNITED STATES PATENT OFFICE.

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SAFETY GATE.

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To all whom it may concern:

Be it known that I, ORA A. FLEMING, a citizen of the United States, residing at Lincoln, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Safety Gates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention aims to provide a simple and inexpensive, yet an efficient and desirable safety gate for use at railway crossings or other points along highways or the like, when it is desired to prevent travel thereon, for sake of safety or for other purposes.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawings.

Figure 1 is a top plan view showing two of the gates at opposite sides of a railway crossing, both gates being in their normally lowered positions.

Figure 2 is a vertical sectional view on line 2—2 of Fig. 1.

Figure 3 is a view similar to Fig. 2 but showing the gates raised.

Figure 4 is a vertical sectional view on line 4—4 of Fig. 3.

I have shown two of the improved gate structures disposed across a highway H at opposite sides of a railway crossing C, and as the construction of the two gates is the same, only one will be described and it may here be stated that one or more of the gates may be used at any desired location, as use of the invention is not restricted to railway crossings. For instance, each highway leading out of a city may be provided with one of the gates near the outskirts, and in case a criminal is attempting to escape from the city by automobile or other road vehicle, all of the gates may be raised to block his escape.

A pair of upright posts 1 are shown at opposite sides of the highway H, and a transverse metal pipe 2 is embedded in said highway adjacent said posts. A plurality of metal channels 3 also extend transversely of the highway at one side of the plane in which the posts 1 are located, said channels being embedded in the surface of the highway and being rigidly secured at their ends

to a pair of metal plates 4 which extend suitable distances along the edges of said highway. Metal braces 5 incline from the plates 4 to the posts 1 and are rigidly secured to said plates and posts so as to brace the latter, said braces also having an added function to be hereinafter set forth.

A rock shaft 6 passes through the pipe 2 and projects beyond the ends thereof, a pair of arms 7 being connected with and extended at right angles from the ends of said rock shaft. Horizontal cables, rods or other horizontal members 8 extend between the arms 7 and are connected with the latter as indicated at 9, and if said members be in the form of cables or chains, or other flexible devices, the connections 9 are preferably adjustable to take up any slack which may occur. The arms 7 are provided with portions which engage the braces 5 so as to hold said arms against inward movement toward each other, thereby preventing loosening of the members 8 and insuring that the latter shall move into the channels 3 when the gate is opened as seen in Figs. 1 and 2, said members being then in such positions that they will not be struck by the wheels of vehicles passing along the highway. In the present showing, the above-named portions of the arms 7, engaging the braces 5, are in the form of elongated rollers 10 suitably connected with the arms.

Any desired means may be employed for turning the rock shaft 6 to elevate the gate, but I have illustrated a sprocket and chain connection 11 between said shaft and an electric motor 12, the current for the motor being controlled in any desired manner. For instance, when the gate is used at a railway crossing, any well known or appropriate train-controlled switch may be employed to complete the circuit of the motor, causing it to turn the shaft 6, raise the gate, and hold it in raised position while the train is passing. Then, when the circuit is broken, the gate swings downwardly to its initial lowered position. This downward swinging is facilitated by a pair of spring devices carried by the upper ends of the posts 1, each of these devices being preferably in the form of a spring arm 13 suitably secured to the adjacent post and projecting into the upward path of the arm 7. When the gate is swung upwardly by the motor, the arms 7 strike the spring arms 13 and the latter therefore act as bumpers, and as long as the

gate is held in its raised position, said arms are held under tension. Then, as soon as the gate is released, the tension of the arms 13 comes into play to initially start the gate toward its lowered position, the lowering movement being completed by gravity.

I preferably mount a red light 14 and a gong 15 on one of the posts 1 and make provision for operating them a short time before the gate is to raise to its closed position, any well known means being employed for controlling said light and gong, as well as the motor 12 or any other operating means which might be provided for the gate.

When two of the gates are used at opposite sides of a railway crossing, they are preferably placed about thirty feet from the railway track, so that if a machine or the like should be caught between the two gates, there will be ample room provided at each side of the crossing in which it may stand while the train is passing. When used in the manner under consideration, both gates preferably swing outwardly away from the track when they are being raised. Thus, if a machine should fail to stop before the gate is reached, while said gate is closing, such machine will merely run up to some extent upon the gate or will possibly depress it against the action of the motor 12, instead of injuring said gate.

Excellent results are obtainable from the general construction shown and it may therefore be followed, but within the scope of the invention as claimed, modifications may of course be made.

I claim:—

1. A safety highway gate comprising a pair of posts for disposition at the sides of the highway, a rock shaft having its ends disposed at the lower ends of the posts, a pair of arms projecting from and connected to the ends of said rock shaft to be vertically swung thereby, horizontal members between and connected to said arms to form therewith a gate, and braces for the aforesaid posts disposed in planes parallel to the planes in which the arms are movable, said arms having portions engaging said braces to hold the arms against inward movement and consequently prevent loosening of the above-named horizontal members.

2. A safety highway gate comprising a

pair of posts for disposition at the sides of the highway, a rock shaft having its ends disposed at the lower ends of the posts, a pair of arms projecting from and connected to the ends of said rock shaft to be vertically swung thereby, horizontal members between and connected to said arms to form therewith a gate, and inclined braces for the aforesaid posts disposed in planes parallel to the planes in which the arms are movable, said arms having rollers engaging said braces to hold the arms against inward movement and consequently prevent loosening of the above-named horizontal members.

3. A highway gate comprising a pair of posts for disposition at opposite sides of the highway, a pipe adapted to be embedded transversely in the highway adjacent the posts, a pair of metal plates for disposition at opposite sides of the highway at one side of the plane in which said posts are located, metal channels secured at their ends to said plates and adapted to be embedded in the surface of the highway, inclined braces secured at their lower ends to said plates and at their upper ends to said posts and disposed in planes at right angles to the aforesaid pipe and channels, a rock shaft passing through said pipe, a pair of arms projecting at right angles from the ends of said rock shaft, and a plurality of horizontal members extending between and connected to said arms to form therewith a gate, said members being receivable in said metal channels when the gate is lowered, said arms having rollers engaging the aforesaid braces to hold the arms against inward movement toward each other.

4. A highway gate comprising a pair of posts for disposition at opposite sides of the highway, a gate pivoted at the lower ends of said posts for movement from a horizontal to a vertical position, means for moving said gate to a vertical position and a pair of spring devices carried by the aforesaid posts in the upward path of the gate, said spring devices acting as bumpers when the gate is raised and serving to start said gate downwardly when it is released.

In testimony whereof I have hereunto affixed my signature.

ORA A. FLEMING.