

(No Model.)

2 Sheets—Sheet 1.

J. H. MORSE.  
SAFETY GATE.

No. 417,740.

Patented Dec. 24, 1889.

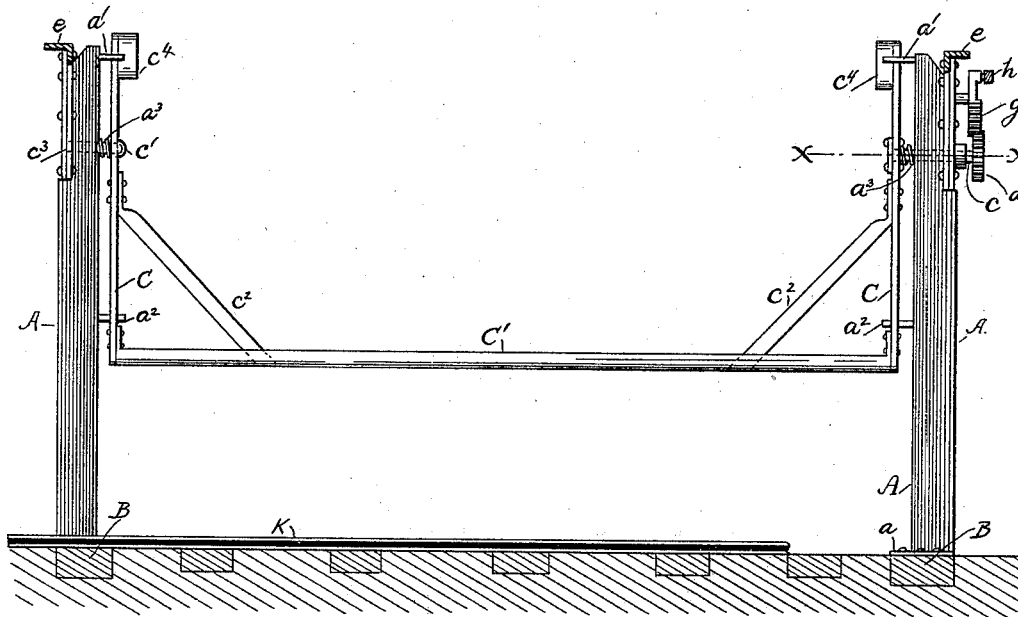


FIG. 1.

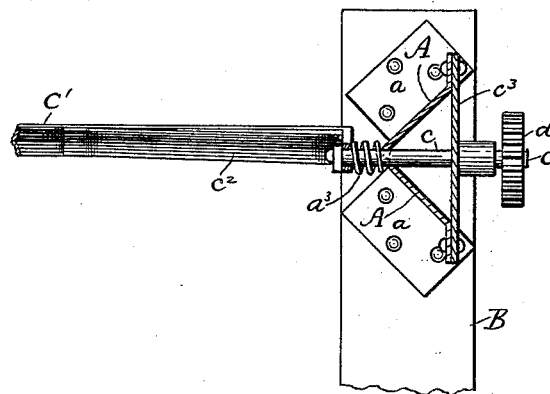


FIG. 2.

Witnesses:

J. Halpenny  
David Staring

Inventor:

John H. Morse  
By Knolly & Co.  
his Atty's.

(No Model.)

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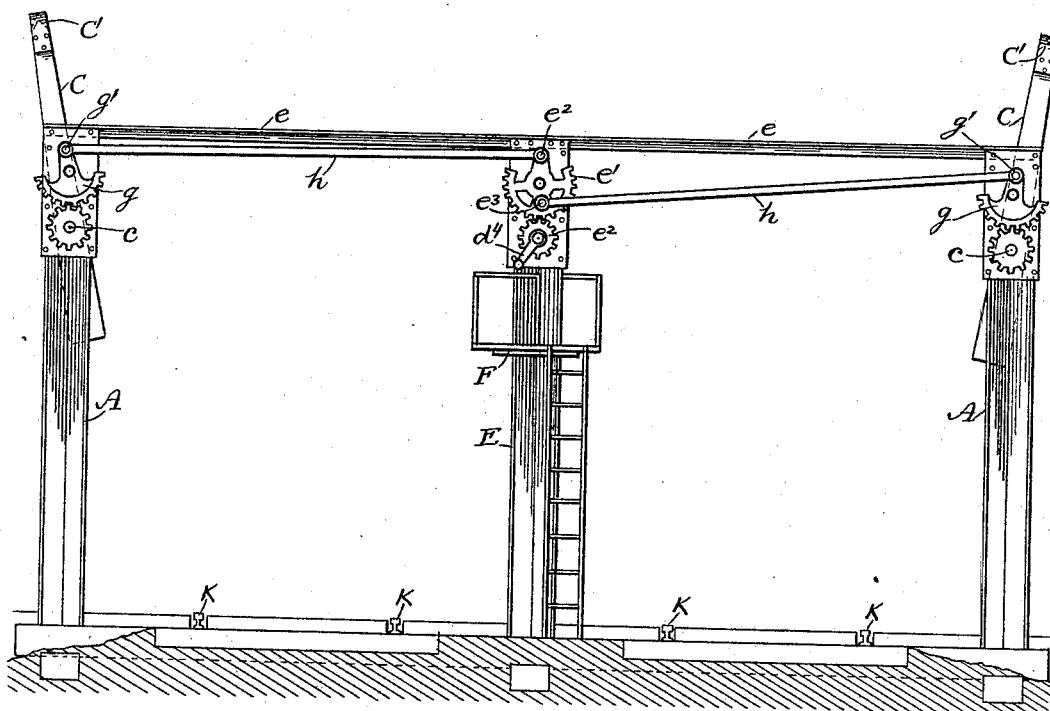


FIG. 3.

Witnesses:

J. Halpenny  
David Strong

Inventor:

John H. Morse.  
By Knidley & Pickens  
his Attys.

# UNITED STATES PATENT OFFICE.

JOHN H. MORSE, OF EVANSTON, ILLINOIS.

## SAFETY-GATE.

SPECIFICATION forming part of Letters Patent No. 417,740, dated December 24, 1889.

Application filed March 12, 1889. Serial No. 303,001. (No model.)

### *To all whom it may concern:*

Be it known that I, JOHN H. MORSE, of Evanston, in the county of Cook and State of Illinois, have invented certain new and useful  
5 Improvements in Safety-Gates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

10 Figure 1 is a longitudinal sectional view of a railway road-bed, showing the gates upon one side embodying my improvements. Fig. 2 is a sectional plan view in detail taken upon the line  $x x$ , Fig. 1; and Fig. 3 is a trans-  
15 verse sectional view of a railway-crossing, showing double gates and a raised platform for use in operating said gates in unison.

Like letters of reference in the different figures indicate like parts.

20 The object of my invention is so to construct railway safety-gates that all their working parts may be above ground and so simplified and arranged that they may be cheap and durable and not liable to be obstructed  
25 by accumulations of ice or snow.

With this end in view my invention consists in the combination of elements hereinafter more particularly described and claimed.

30 Referring to the drawings, A represents the supporting-posts, which are placed upon opposite sides of the street or road intersected by the railway and adjacent to the latter. Said posts are preferably constructed from  
35 angle-iron, as clearly shown in the drawings, and are provided with flanges  $a a$ , which are bolted to sills B, embedded in the ground.

Each gate consists of two metallic bars C C, which are trunnioned to the posts A A at  
40 or near the top, by means of trunnions  $c c'$ , said bars being arranged to move in planes parallel to those of the posts A A, and being connected to each other by means of a cross-bar C', long enough to extend across the  
45 street, which forms the gate proper. One or more additional bars may, if desired, be placed across parallel with or in other positions with relation to the bar C' to render the gate more

noticeable. Oblique braces  $c^2 c^3$  are also employed to impart to it the required stiffness. 50  
The posts A are made of a sufficient length and the gates trunnioned therein at points sufficiently high to permit all ordinary vehicles or objects to pass beneath the gate when  
55 elevated, as shown in Fig. 3. The shafts or trunnions  $c c'$  are attached rigidly to the bar C and are journaled in bearings formed in plates  $c^3$ , Fig. 2, which are riveted to the posts A A.

To enable said gates to be operated with  
60 ease, I prefer to attach counterpoise weights  $c^4 c^4$  to the protruding ends of the bars C. Preferably midway between the posts A A, which are upon opposite sides of the railway-tracks, I place a post E, to which may be  
65 attached a platform F for the gate-keeper. The post E is connected with the posts A A by means of bars  $e e$ . Loosely mounted upon a bearing secured to the post E is a gear  $e'$ , into which meshes a pinion  $e^2$ , operated by  
70 means of a crank  $d^4$ . Upon the gate-trunnions  $c c$  are attached pinions  $c^4 c^4$ , which mesh into segmental gears  $g g$ , mounted upon the posts A A. Wrist-pins  $g' g'$  upon the  
75 the gears  $g g$  are connected, respectively, with like wrist-pins  $e^2 e^3$  upon the gear-wheel  $e'$  by means of rods  $h h$ . Thus it will be seen that upon turning the crank  $d^4$  the gates are  
80 simultaneously moved in opposite directions through said gears and rods. Springs  $a^3 a^3$ , Figs. 1 and 2, are preferably interposed between the bars C C and the posts A.

The advantages of my improved gate are that it is simple, strong, and durable, easily  
85 constructed and operated, and is capable of being repaired, if necessary, without in any way interfering with the railway-tracks. It is, moreover, applicable for use at bridge-approaches, or wherever it is necessary to im-  
90 pede temporarily the passage of persons or vehicles.

Having thus described my invention, I claim—

The combination, with the trunnioned counterpoised gates mounted upon the posts A A,  
95 of the gears  $c c g g$ , gear  $e'$ , mounted upon

an intermediate elevated support, bars  $h h$ ,  
connected at one end with the gears  $g g$ , as  
shown, and connected with the gear  $e'$ , one  
at  $e^2$  and the other at  $e^3$ , and a crank and  
5 gear in operative connection with the gear  $e'$ ,  
whereby upon the turning of said crank said  
gates may be rotated in opposite directions,  
substantially as shown and described.

In testimony whereof I have signed this  
specification, in the presence of two subscrib- ing witnesses, this 7th day of March, 1889.

JOHN H. MORSE.

Witnesses:

D. H. FLETCHER,  
J. HALPENNY.