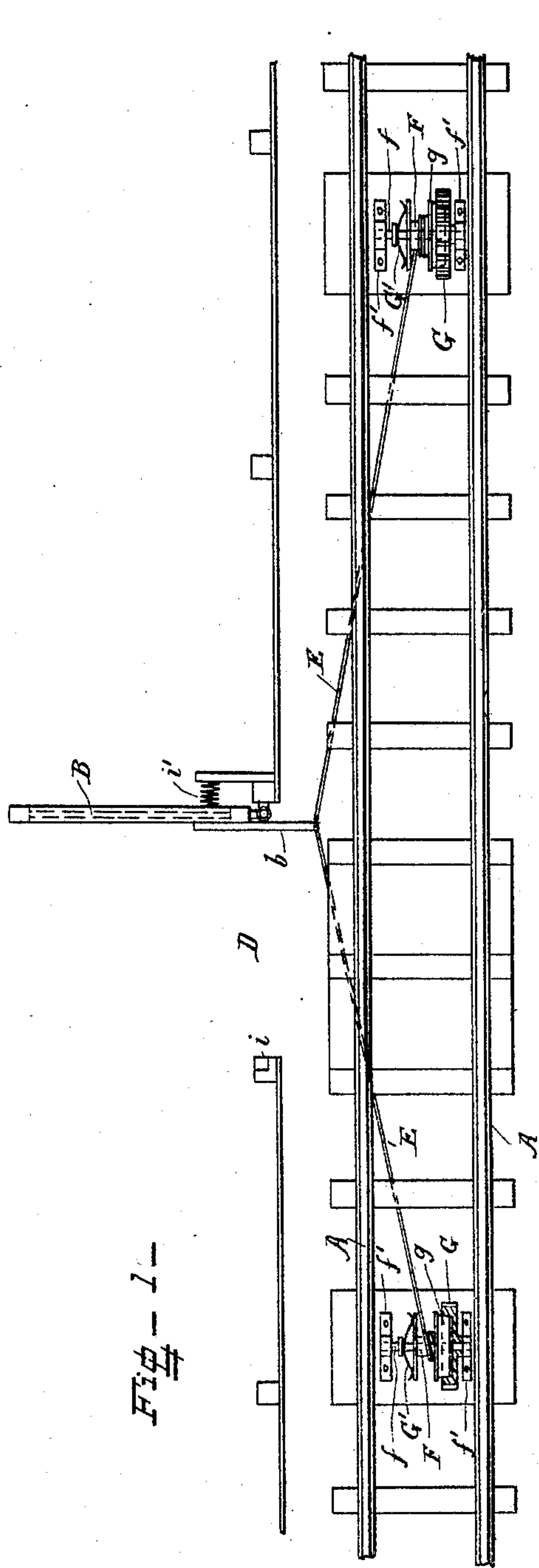


(No Model.)

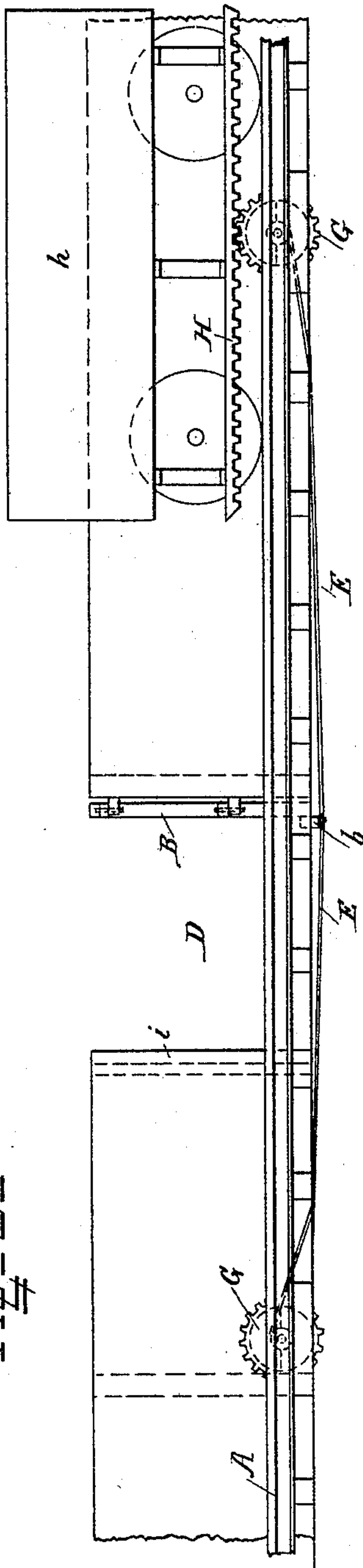
J. STECKER & F. G. NORDMANN.
DEVICE FOR OPERATING RAILWAY GATES.

No. 463,205.

Patented Nov. 17, 1891.



7-2-1



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH STECKER AND FRIEDRICH G. NORDMANN, OF LEXINGTON,
KENTUCKY.

DEVICE FOR OPERATING RAILWAY-GATES.

SPECIFICATION forming part of Letters Patent No. 463,205, dated November 17, 1891.

Application filed June 2, 1891. Serial No. 394,873. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH STECKER and FRIEDRICH G. NORDMANN, citizens of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Devices for Operating Railway-Gates; and we do hereby 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.

This invention relates to devices for operating railway-gates; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed, whereby the gate is opened and closed by the train.

This device is applicable to short mineral lines in mining districts, over which small trucks run by gravity, wire traction-ropes, &c., and for use in drifts and in mines and in all other places in which railways are used and to which it may be found adapted.

In the drawings, Figure 1 is a plan view of the devices, and Fig. 2 is a side view of the same.

A are the rails of the railroad, and B is a gate hinged to the gate-post C in the ordinary manner. The gate C closes across the roadway D, which crosses the rails A. In order that the gate may be closed by the train before the train reaches the crossing, the said gate is provided with a projecting arm b.

E is a cord, wire rope, or chain, which is connected to the end of the arm b.

F is a barrel mounted on the shaft f, which is journaled in the brackets f', secured to the road-bed between the rails A.

G is a toothed wheel journaled on the shaft f, and g is a friction-clutch which connects the toothed wheel to the said barrel.

G' is a spring which presses the halves of the friction-clutch together, so that the toothed wheel will revolve the barrel unless the rope E offers a considerable resistance.

H is a toothed rack secured to the under side of the truck h or to any other vehicle traveling on the rails. Each car is provided with a similar toothed rack, and all the racks

are arranged in line with each other, so as to form a continuous toothed rack. When a train comes to the toothed wheel, the racks gear into the toothed wheel and revolve the barrel, thereby winding up the cord or chain and closing the gate across the roadway.

A second barrel similar to the barrel F is mounted on a shaft f and secured between the rails on the other side of the gate from the first barrel. This second barrel is provided with a cord connected to the arm on the gate, and a friction-clutch is provided for connecting the barrel to a toothed wheel on the barrel-shaft exactly the same as hereinbefore described. When the train has passed over the crossing, the racks engage with the toothed wheel connected to the second barrel and thereby open the gate, at the same time partially unwinding the cord from the first barrel. The barrels may be arranged at any desired distance from the crossing, so that the gate may be closed before the train reaches the crossing.

When the gate is closed, it strikes against the post i, and the friction-clutch permits the toothed wheel to continue to revolve without turning the barrel and breaking the cord.

When the gate is thrown wide open, it strikes against a spring i', secured to an arm on the gate-post or to any other stationary support, so that the gate may be relieved from sudden shock.

The drawings show only one line of track and one gate adapted to be closed across the crossing by uptrains which approach the crossing from the right hand. The other line of track, which is not shown, is provided with a similar gate and operating mechanism, which parts are in all respects a duplication of the devices hereinbefore described; but the said other line is arranged for the downtrains, which approach from the left, and its gate is therefore turned in the reverse direction.

What we claim is—

1. The combination, with a gate provided with a projecting arm and fixed stops for the gate to open and close against, of a barrel provided with a flexible cord or chain connected to the said arm, a toothed wheel on the barrel-shaft, a spring-pressed friction-clutch

connecting the said wheel and barrel, and a toothed rack adapted to be secured to a traveling truck and to engage with the toothed wheel and operate the gate, substantially as
5 and for the purpose set forth.

2. The combination, with a gate provided with a projecting arm and fixed stops for the gate to open and close against, of two similar barrels situated on opposite sides of the gate
10 and provided with flexible cords connected to its arm, the toothed wheels on the barrel-shafts, the spring-pressed friction-clutches

connecting the said wheels and barrels, and a toothed rack adapted to be secured to a traveling truck and to engage with the toothed
15 wheels and operate the gate, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH STECKER.

FRIEDRICH G. NORDMANN.

Witnesses:

HERBERT H. T. JENNER,

PHILIP MAURO.