(No Model.) 2 Sheets—Sheet 1.

S. G. BURRELL.

AUTOMATIC RAILROAD GATE.

No. 462,300. Patented Nov. 3, 1891.

Fig. 1.

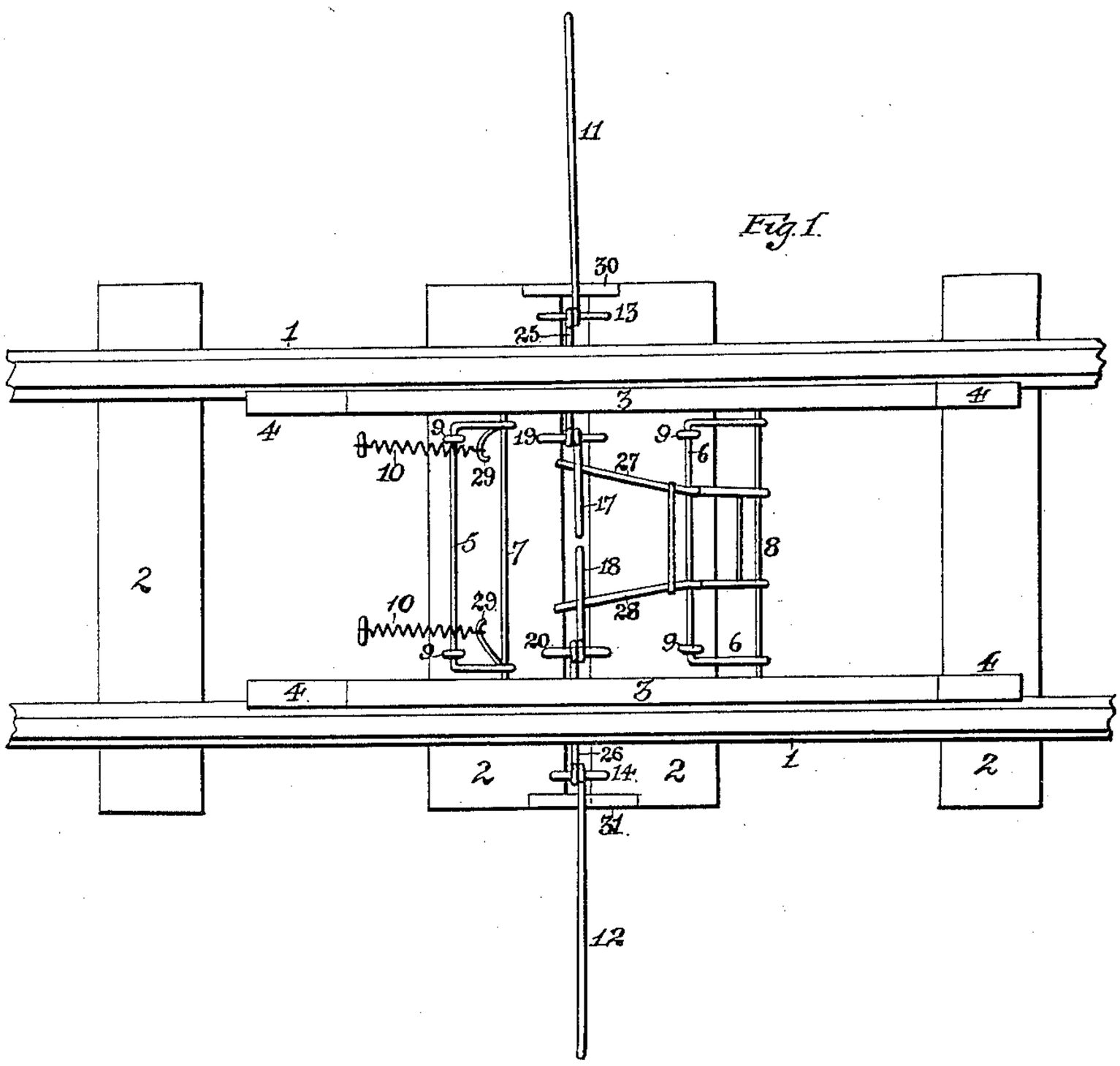
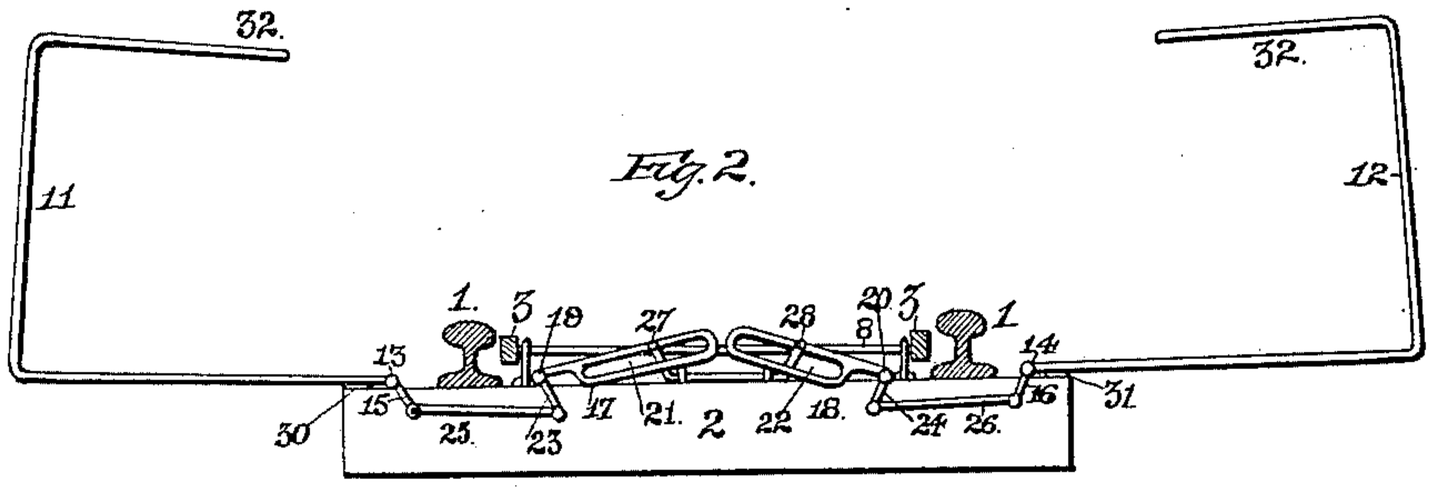


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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AUTOMATIC RAILROAD GATE.

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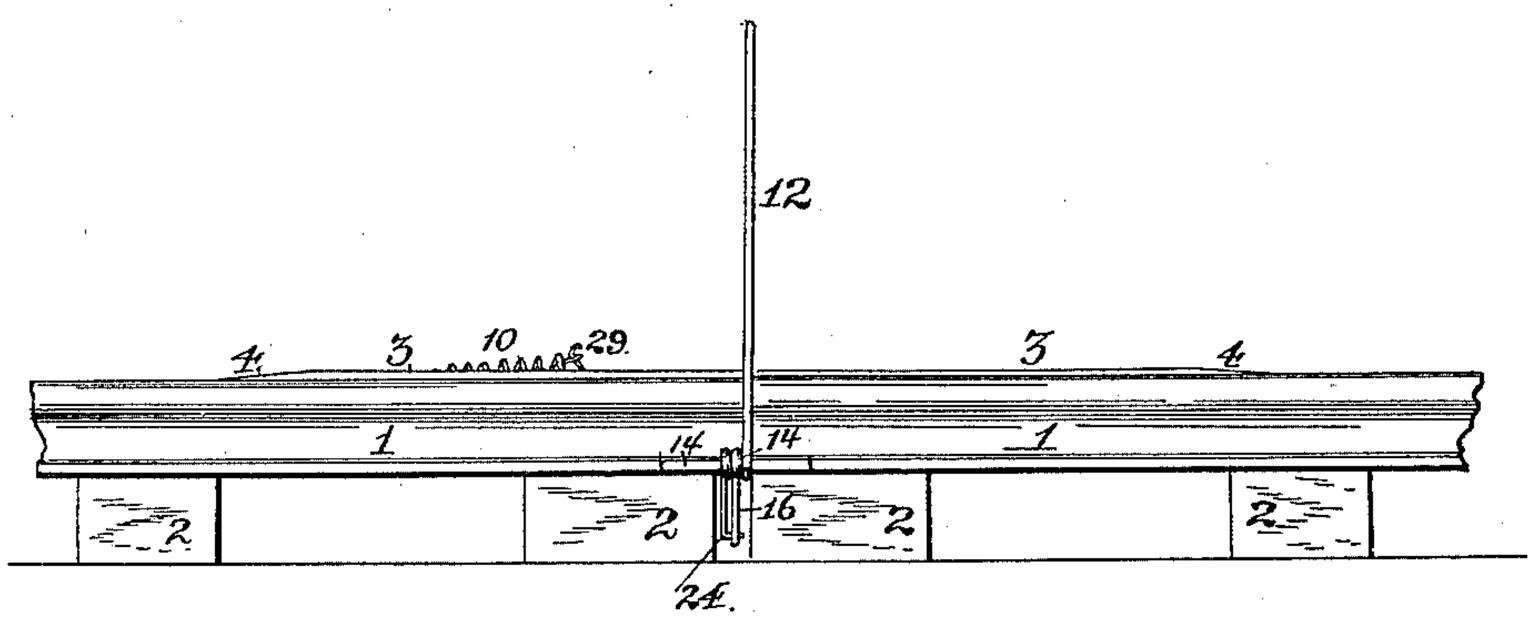
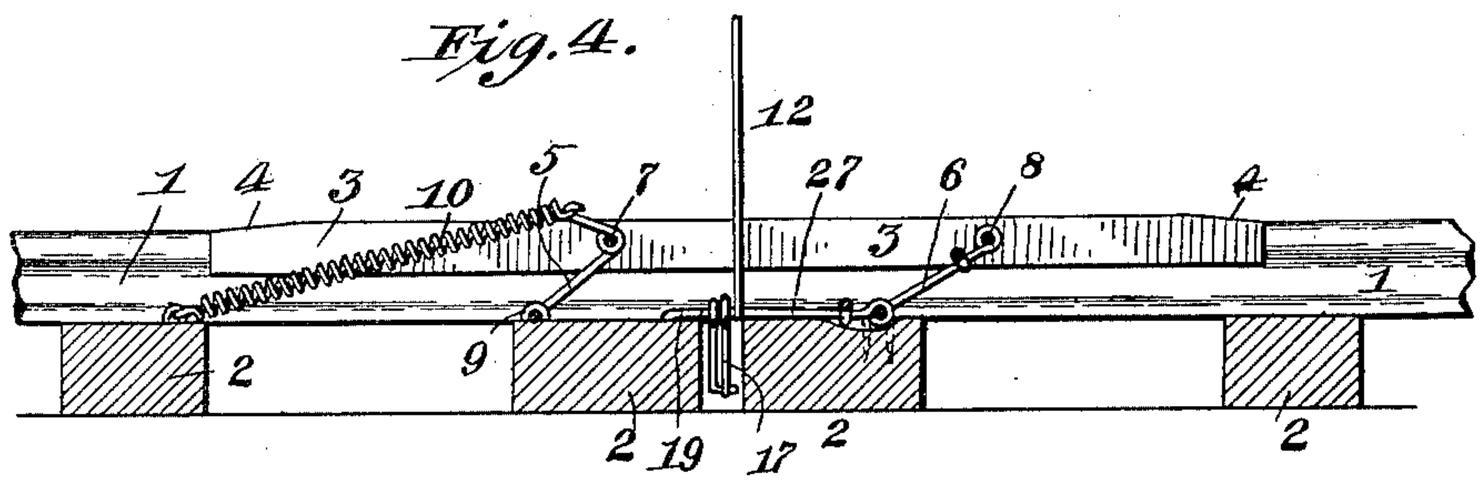


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

SPEER G. BURRELL, OF PENN HALL, PENNSYLVANIA.

AUTOMATIC RAILROAD-GATE.

SPECIFICATION forming part of Letters Patent No. 462,300, dated November 3, 1891.

Application filed March 23, 1891. Serial No. 386,075. (No model.)

To all whom it may concern:

Be it known that I, SPEER G. BURRELL, a citizen of the United States, residing at Penn Hall, in the county of Centre and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Railroad-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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Figure 1 is a top plan view of a device embodying my invention. Fig. 2 is a transverse sectional view. Fig. 3 is a side elevation, and Fig. 4 is a central longitudinal section.

My invention relates to automatically-operating gates.

The object of my improvements is to provide a gate at a railroad-crossing which will be automatically opened by the approach and movement of the train itself, and will be held open until the train has passed through.

For these purposes my invention consists in the following construction and combination of parts, which will first be fully described in detail, and the features of novelty then set forth in the claim.

In the drawings, 1 represents the rails of a railroad-track.

2 are the ties or sleepers.

3 are suspended rails having a vertical and endwise movement along the inner sides of the main rails 1.

4 are the beveled ends of the rails 3.

5 and 6 are swinging pivoted bars or frames supporting the cross-bars 7 and 8 between the inner rails 3, upon which the said rails are hung.

9 are the pivotal points upon the ties 2, at which the swinging bars or frames are hung at their lower ends.

10 represents springs of a suitable design, attached at one end to the ties and at the other to one of the swinging frames and having a constant tendency to throw the inner rails 3 upwardly.

11 and 12 represent the double gates.

13 and 14 are the hinges or pivotal points of the gate, one on either side of the track or road-bed.

15 and 16 are short downwardly-projecting arms upon the gates below the hinges 13 and 14.

17 and 18 are two bell-crank or right-angled levers arranged within the rails.

19 and 20 are the hinge-shafts of levers 17 and 18, secured between two ties 2, upon which they oscillate in a similar manner to the hinge shafts or rods 13 and 14.

21 and 22 are slots formed on the inner ends of the levers 17 and 18, which end slots lie substantially in a horizontal plane when in the normal position.

23 and 24 are downwardly-projecting arms of the levers 17 and 18.

25 and 26 are pivoted links connecting the short arms 15 and 16 of the gates with the arms 23 and 24 of the levers 17 and 18.

27 and 28 are two horizontally-lying arms, the outer ends of which project through the slots 21 and 22, their inner ends being rigidly connected to and forming part of the swinging frame 6.

29 are rigid extensions of the frame 5, to which the springs 10 are attached.

30 and 31 are stops on the ties 2, which limit the backward movements of the gates.

The forward or closing movements of the gates are limited by the inner vertical bars 32 thereof coming in contact with the ties 2. The shape of the gates may be as shown, or of any other desired and suitable type.

The action of my improved gate is automatic. The flanges of the wheels of the approaching train strike upon the inner rails 3 3 and depress them and with them the swinging frames 5 and 6. This movement causes the projecting arms 27 and 28 to swing upward within the slots 21 and 22 of levers 17 and 18, raising the slotted levers and pulling the arms 23 and 24 of said levers 17 and 18 inwardly. The inward motion of these arms pulls upon the links 25 and 26, causing an inward motion of the short arms 15 and 16 and a correspondingly upward and outward movement of the gates 11 and 12 until they are perfectly clear of the road-bed for the free passage of the train. After the wheels of the train have passed over, the springs 10 act, as

will be well understood, to throw the rails 3 3 upward again and the gates into a closed position across the track again.

I claim—

In an automatic railroad-gate, the combination of the suspended rails, a swinging frame supporting said rails, pivoted or swinging arms rigidly connected to said swinging frame, slotted levers pivoted to the road-bed, within which said swinging arms operate, gates pivoted upon the road-bed, link connections between the gates and slotted levers, and a spring connected with said supporting-frame for normally swinging it and the suspended rails upwardly.

In testimony whereof I affix my signature in presence of two witnesses.

SPEER G. BURRELL.

Witnesses:
ROBT. F. HUNTER,
L. A. SCHAEFFER.