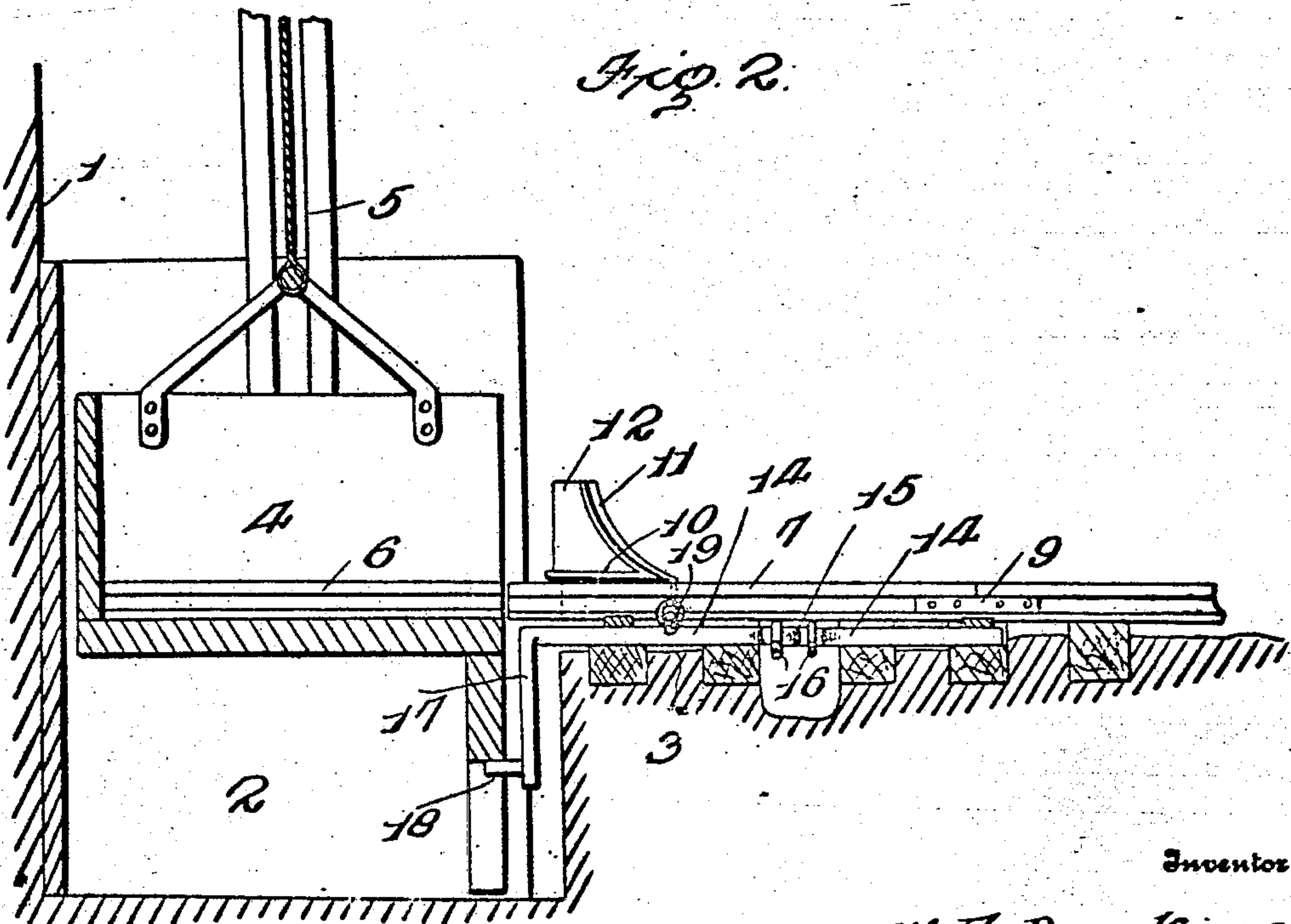
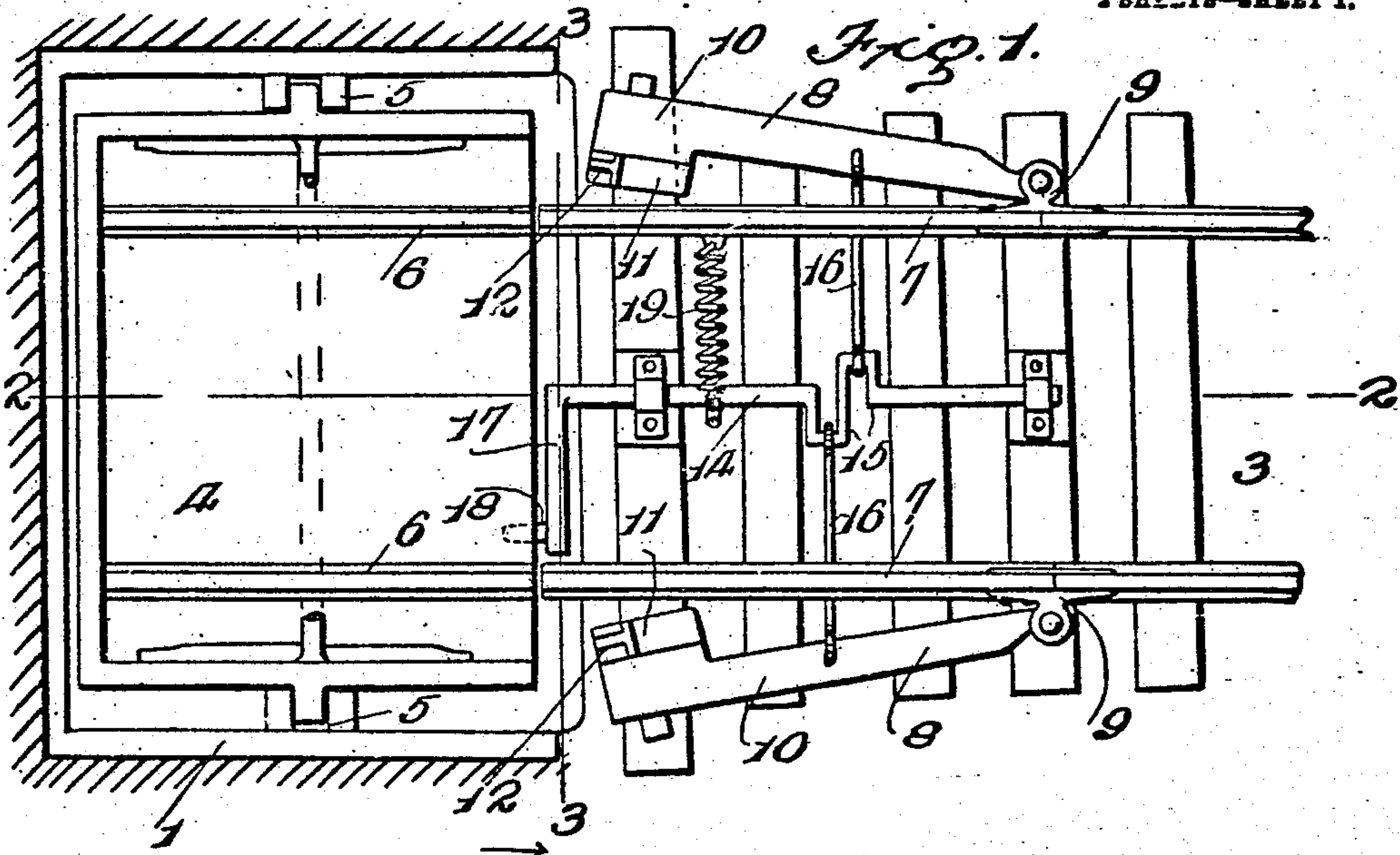


W. E. DAWKINS.
 AUTOMATIC CAR STOP.
 APPLICATION FILED APR. 27, 1908.

899,245.

Patented Sept. 22, 1908.

2 SHEETS—SHEET 1.



Witnesses

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Inventor

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2 SHEETS—SHEET 2.

Fig. 3

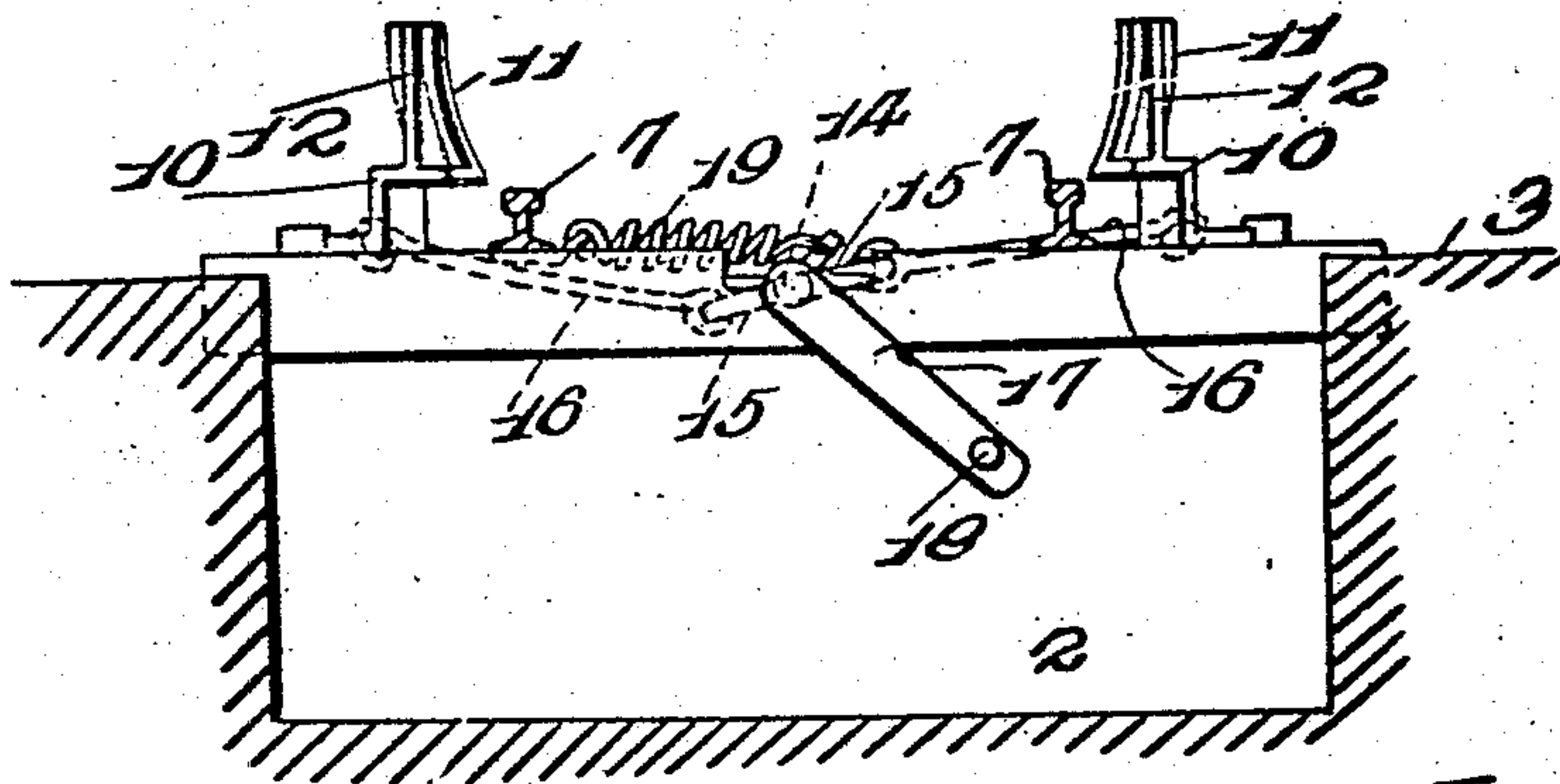


Fig. 4

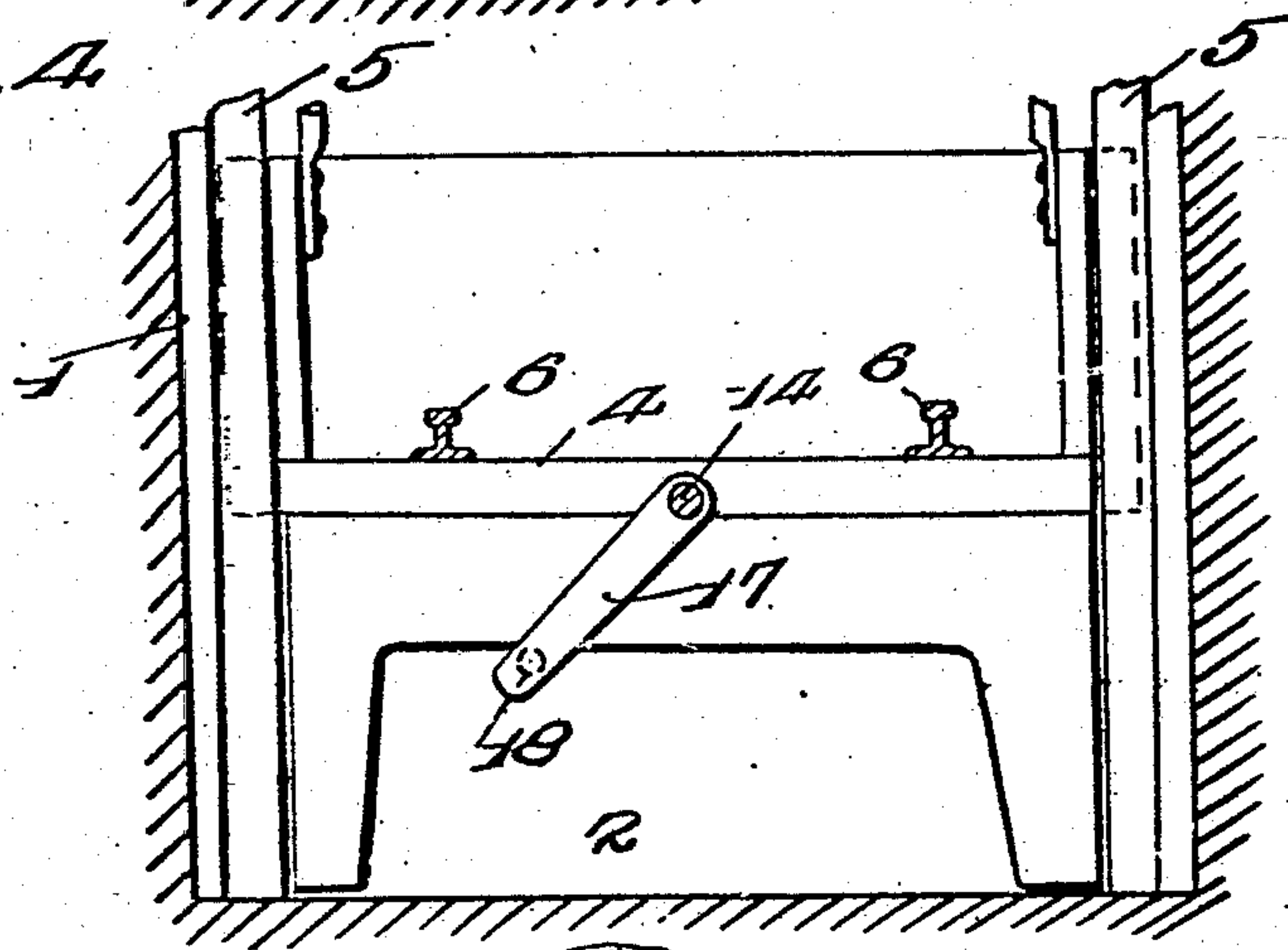
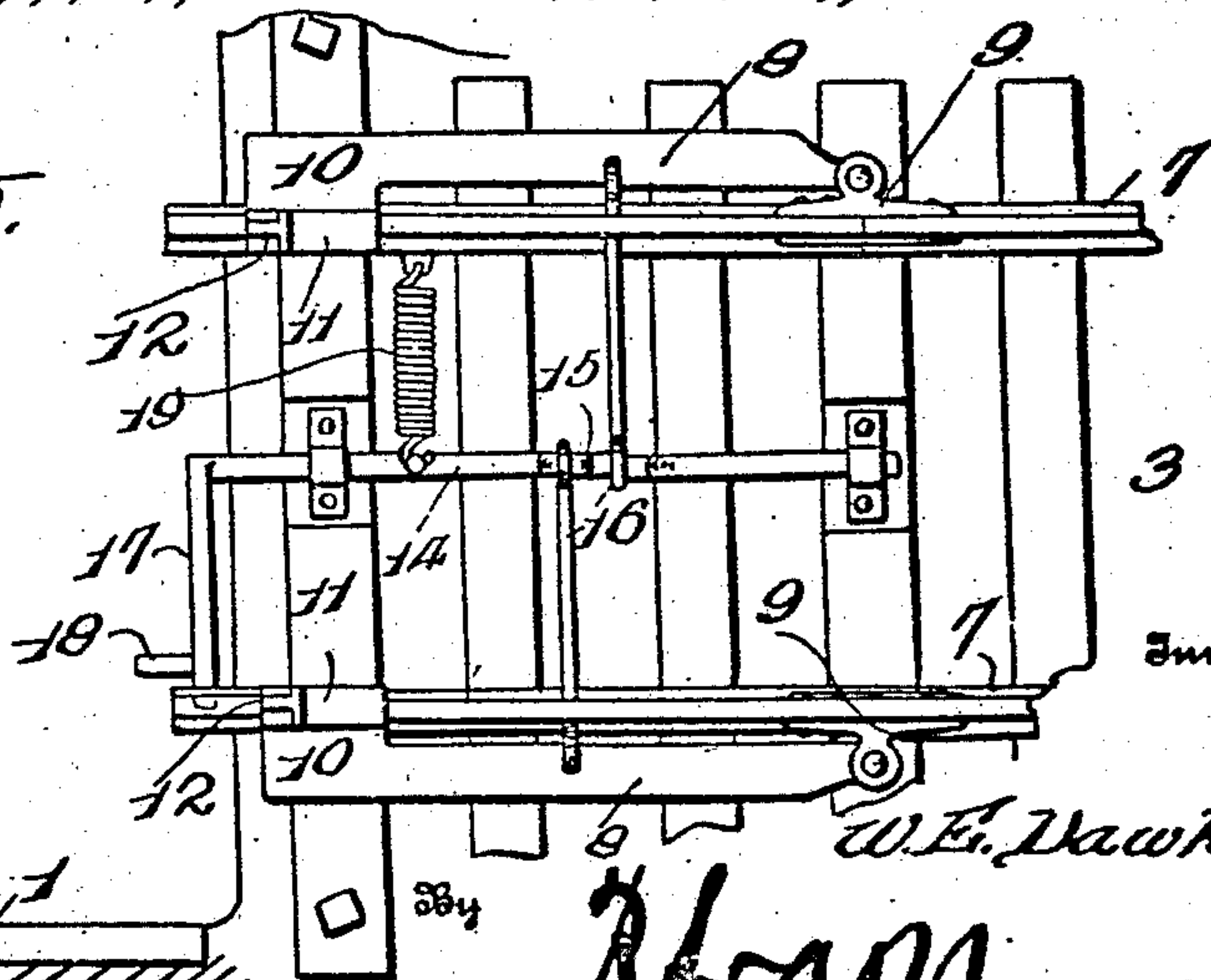


Fig. 5



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UNITED STATES PATENT OFFICE.

WILL E. DAWKINS, OF O'FALLON, ILLINOIS.

AUTOMATIC CAR-STOP.

No. 899,245.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed April 27, 1908. Serial No. 429,545.

To all whom it may concern:

Be it known that I, WILL E. DAWKINS, citizen of the United States, residing at O'Fallon, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Automatic Car-Stops, of which the following is a specification.

The object of this invention is an improved construction of means for preventing coal or other cars from running into the sump at the bottom of a mine shaft, and the invention consists in certain constructions, arrangements and combination of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a top plan view of my apparatus; Fig. 2 is a sectional view on the line 3—3 in Fig. 1; Fig. 3 is a transverse sectional view on the line 3—3 in Fig. 1. Fig. 4 is a view similar to Fig. 3 but looking in the opposite direction; and Fig. 5 is a top plan view of a portion of the apparatus showing the parts in different position from that shown in Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings the numeral 1 designates the shaft of a mine and 2 the sump thereof below the "diamond floor" or bottom 3 of the shaft. 4 designates the cage which is adapted to be raised and lowered in the shaft by any suitable hoisting means and which is movable in guides 5, the cage being provided with rails 6 which, in the lowered position of the cage register with the ends of the rails 7 on the floor 3.

In carrying out my invention, I provide two laterally swinging stop arms 8 that are hinged at one end to fish plates 9 secured preferably to the outer sides of the rails 7, each of said arms carrying at its rear free end an angular bracket 10 which is arranged to project upwardly and inwardly from the tread portion of the adjacent rail when the arm is moved in one direction. Each angular bracket 10 is formed with a curved buffer 11 reinforced by a web 12, it being understood that when the stop arms 8 are swung

inwardly towards each other, the buffers will extend over and above the rails in alinement with the tread portions thereof so as to effectually stop a car at the mouth of the sump.

In order to automatically swing the arms inwardly when the cage is raised above the ends of the rails 7 and to automatically swing the arms 8 in the opposite direction to clear the rails 7 when the cage is lowered in alinement therewith, I have provided a shaft 14 which extends longitudinally between the rails 7 and which is mounted for a limited or partial rotary movement about its longitudinal axis. The shaft 14 carries two oppositely disposed cranks 15 and links 16 are connected to the respective cranks at one end, and to the respective stop arms at their opposite ends. At that end which is nearest to the sump, the shaft 14 carries a radially disposed lever 17 provided at one arm with a pin 18 adapted to project into the path of the floor of the cage 4 so that the lever will be struck as the cage descends and the shaft rocked in a direction to swing the stop arms outwardly away from the rollers and from under the wheels of the car standing on the rails at the mouth of the sump, so that the coal can be passed onto the cage. In order to automatically rock the shaft 14 in the opposite direction upon the raising of the cage above the mouth of the sump, a spring 19 is secured to the rock shaft 14 or a weight may be employed for this purpose.

From the foregoing description in connection with the accompanying drawings, it will be understood that as the cage descends and arrives at the bottom of the shaft, the shaft 14 will be automatically rocked and swing the stop arms outwardly while as soon as the cage rises, the stop arms will be automatically swung inwardly and carry their buffers over the rails 7 so as to hold the car on the rails 7 at the mouth of the sump and effectually prevent the car from falling into the sump with the consequent damage, delay, and other loss which would be occasioned thereby. By the provision of my apparatus as hereinbefore described, it will be seen that the cars on the rails 7 can be moved up close to the mouth of the sump without any danger of falling into the sump, whereas heretofore without the invention they have been held back a considerable distance from the mouth of the sump as a measure of precaution and consequently much time has been

lost in moving the car to the cage after the cage has been lowered to the bottom of the shaft.

Having thus described the invention, what is claimed as new is:

1. The combination with a shaft having an entrance way, a car movable in the shaft carrying rails, rails positioned in line with the car rails on the ground adjacent to the shaft entrance, fish plates formed with apertures, swinging members pivotally secured to the fish plates, each of said swinging members being formed with their ends arranged to project over a rail and engage the wheels of a car, a rock shaft positioned centrally of the rails and parallel therewith, links connected with the rock shaft and the swinging members intermediate of their ends, said rock shaft being formed with a cranked end and a pin for said end and arranged to project downwardly in said shaft and be moved by the platform of a car.

2. The combination with a railroad track, comprising ties and rails therefor, of a plurality of fish plates formed with apertures,

swinging arms pivotally secured to the fish plates formed with raised ends arranged to ride the rails of the track, and means for moving said raised ends over the rails of said track arranged to be actuated by the vertical movement of a car in a shaft.

3. The combination with a railroad track comprising ties and rails therefor, of fish plates formed with apertures secured to outer sides of the rails, swinging members pivotally secured to the fish plates, each of said swinging members being formed with raised end portions arranged to be moved over the top of the rails and when so moved to act as buffers, means engaged by a vertically moving car for moving the raised ends of said swinging rails, and a spring for controlling said moving means.

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

WILL E. DAWKINS. [L. s.]

Witnesses:

DAVE ROBERTS,
ERNEST WARNER.