

No. 857,205.

PATENTED JUNE 18, 1907.

J. W. REED.
AUTOMATIC CAR STOP.
APPLICATION FILED APR. 8, 1907.

2 SHEETS—SHEET 1.

Fig. 2.

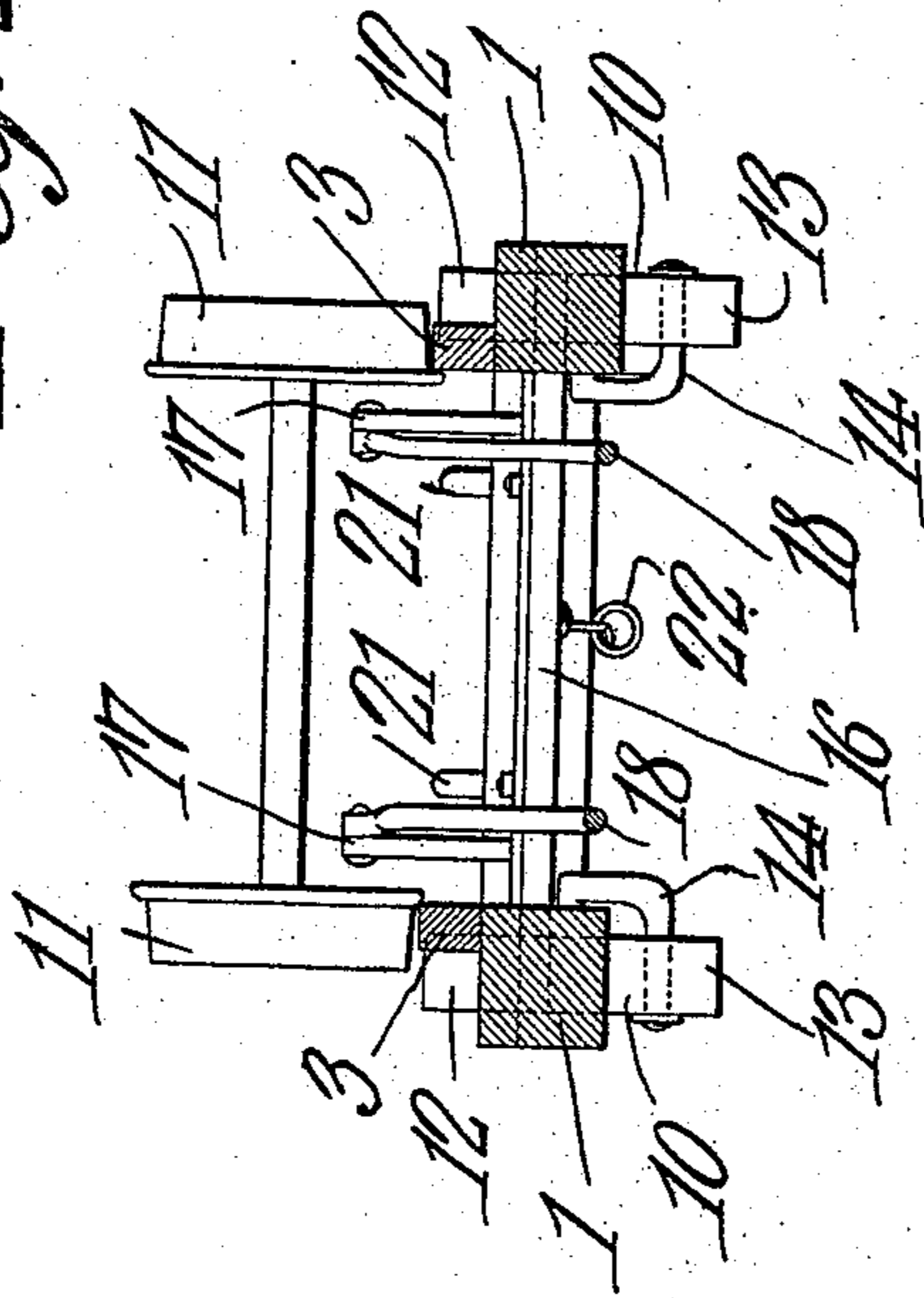
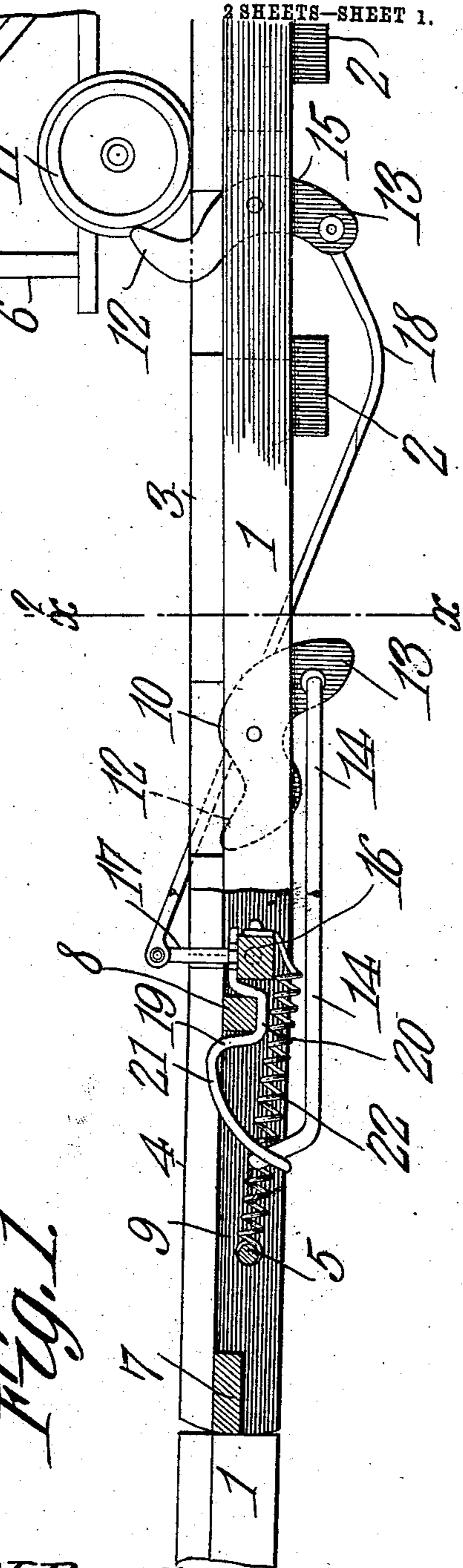


Fig. 1.



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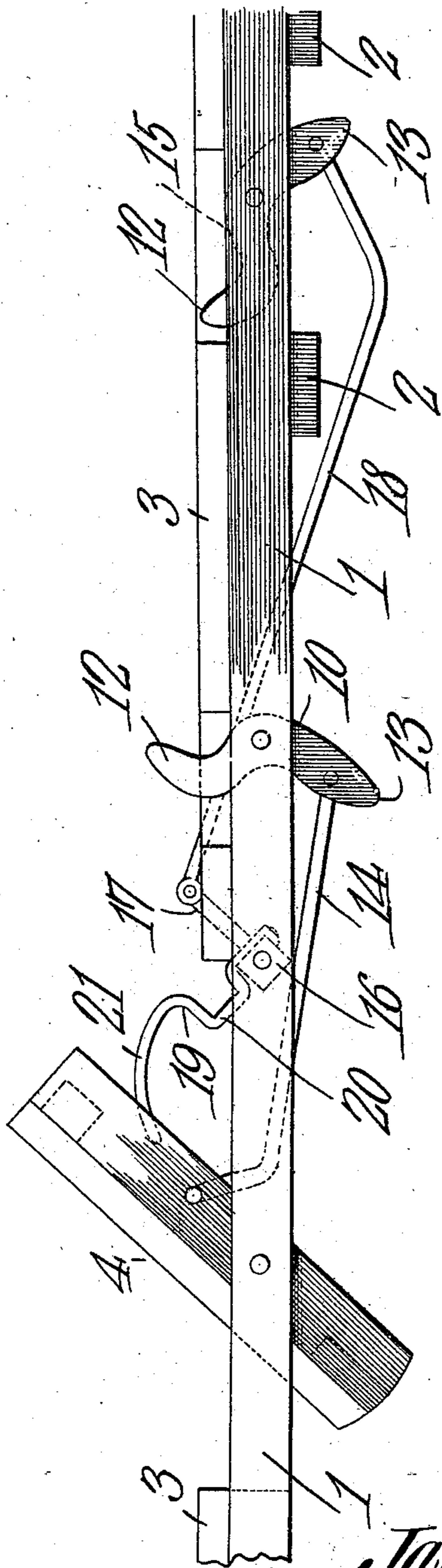
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2 SHEETS-SHEET 2.

Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES WILLIAM REED, OF BERWIND, COLORADO, ASSIGNOR OF ONE-HALF
TO JOSEPH COX, OF TABASCO, COLORADO.

AUTOMATIC CAR-STOP.

No. 857,205.

Specification of Letters Patent.

Patented June 18, 1907.

Application filed April 8, 1907. Serial No. 367,101.

To all whom it may concern:

Be it known that I, JAMES WILLIAM REED, a citizen of the United States, residing at Berwind, in the county of Las Animas and State of Colorado, have invented a new and useful Automatic Car-Stop, of which the following is a specification.

This invention has reference to improvements in automatic car stops, and its object is to produce means for preventing the cars approaching a tipple from crowding thereon when a car is already on said tipple and being dumped.

The invention consists essentially of a pivoted track section in line with a fixed track so arranged as to receive and support a car and to be moved through a vertical plane to a sufficient extent to dump the car thereon, after which this pivoted section or tipple is returned to its normal position and the empty car is allowed to pass on to another section of the track. Provision is made by means of suitable stops movable into and out of the path of the car wheels to engage the oncoming cars at a point sufficiently remote from the tipple to prevent these cars from crowding thereon and so interfering with the action of the tipple. In order to provide for such action of the stops, the tipple is connected on one side to stops sufficiently close to it to stop a car just before it is ready to pass upon the tipple, which stops are operated directly by the tipple, while another set of stops more remote from the tipple, are located in active position when the tipple is in inactive position ready to receive a car, and these last-named stops are released so as to move out of the path of an oncoming car when the tipple is moved to the inclined position to dump a car and at the same time throw the stops nearest the tipple into active position.

The invention will be fully understood from the following detailed description taken in connection with the accompanying drawings forming part of this specification, in which,—

Figure 1 is a side elevation, partly in section, of the improved car stop mechanism; Fig. 2 is a cross section on the line $x-x$ of Fig. 1; and Fig. 3 is a side elevation of the automatic car stop mechanism in a different phase of its operation from that shown in Fig. 1.

Referring to the drawings, there are shown two parallel side beams 1 mounted upon cross-beams 2 and illustrative of the elevated track supports approaching a dump. Upon these beams 1 are secured tracks 3 of any desired type, which tracks may be simple bars of rectangular cross section, as shown in the drawings, or may be of the ordinary shape used on railways.

One section 4 of the track and supporting structure is pivoted upon a crossbar 5 so as to be movable about said bar in a vertical plane, and this track section 4 is of sufficient length to receive a car suitable for conveying material from some distant point to be deposited at a point coincident with or adjacent to the track section 4. One end of such a car is indicated at 6. The track section 4 is provided with cross beams 7—8 and side beams 9 so that this section 4 may be located between the side beams 1, which may at this point be cut away sufficiently to receive the section 4. Pivoted in suitable recesses formed in the side beams 1 adjacent to one end of the movable section 4 of the track are stop levers 10, one adjacent to one track and the other adjacent to the other track, and the track rails 3 may be recessed at these points to receive the levers 10 so that their upper ends may be brought into line with the car-wheels, which latter are indicated at 11. These levers 10 are suitably shaped, and in the drawings are indicated as being in the shape of an elongated S, but, of course, they may be otherwise shaped as desired to perform their functions. The levers 10 are so located that while one end 12 may be moved into the path of its respective car-wheel, the other end 13 is normally below the lower edge of the respective side beam 1 of which the lever 10 has its end 13 connected by a rod 14 to the respective side beam 9 of the section 4 on the side of the pivot rod 5 which is nearest to the lever 10. Now, it will be seen that when the track section 4 is moved from a horizontal position, as shown in Fig. 1, to an inclined position, as shown in Fig. 3, each rod 14 will be so moved as to draw the end 13 of the lever 10 in a direction toward the inclined track section 4. This movement will cause the other end 12 of each lever 10 to move into an operative position where it will be in the path of a car-wheel 11. It will thus be seen that when

the track section 4 is in the horizontal position the stop levers 10 are both inactive, while when this track section 4 is inclined the stop levers 10 are moved thereby to an active position so that a car approaching the track section 4 or tipple will be stopped at this point until the tipple is again in a horizontal position so that the car which has been thereon and has been dumped may be moved off on to the succeeding track section and the next loaded car may be pushed on to the said tipple.

Now, in order to prevent cars more remote from the tipple from moving toward the same when the stop levers 10 are in the inactive position, there is provided another set of stop levers 15 similar to the levers 10 and having like upper ends 12 and lower ends 13. Pivotaly mounted in the side beams 1 at a point about coincident with the end of the track 3 adjacent to the tipple 4 is a rock bar 16 upon which are secured projecting rock arms 17 connected by links or rods 18 to the ends 13 of the stop levers 15. The rock bar 16 is also provided with latch arms 19 having a portion 20 adjacent to the rock bar 16 bent into shape to receive the crossbeam 8 of the tipple, and beyond this portion 20 the latch arms 19 are bent into guiding cam extensions 21. The rock bar 16 is under the constraint of a spring 22 connected at one end to said rock bar 16 and at the other to the pivot rod 5 of the tipple 4. The tendency of this spring is to rock the bar 16 on its pivots in a direction to elevate the cam ends 21 of the latch arms 19 and at the same time to move the stop levers 15 into the inactive position shown in Fig. 3. The position of the parts just described is only possible when the tipple is in the inclined position, for when it is moved to the horizontal position the cross beam 8 engages the cam extensions of the latches 19 and causes the rock bar 16 to move on its pivots in a direction against the action of the spring 22 until the cross beam 8 is dropped into the portion 20 designed to receive it. Under these conditions the latch arms 19 have been forced downward to rock the bar 16 so as to move the ends 12 of the levers 15 into active position in the path of the wheels of an oncoming car. These levers 15 are sufficiently remote from the tipple 4 to lock all the cars approaching the levers 15 except one car which, when the tipple is brought to the horizontal position, is released by the levers 10 and permitted to move on to the tipple ready to be dumped.

When the dumping operation takes place the cars more remote from the tipple are released by the levers 15 but are then caught by the levers 10; and when the tipple is again brought to the horizontal position all the cars except the one immediately adjacent to the levers 10 are again locked by the levers 15. Thus it will be seen that but one car at a time can approach the tipple, and this alternate locking and unlocking of the cars one at a time is entirely automatic and can only operate as the tipple is moved. Thus there is no danger of the oncoming cars crowding on to the tipple and so causing trouble or damage.

I claim:—

1. An automatic car stop comprising a line of track, a tipple included therein, stop levers movable into and out of the paths of cars on said track, direct connections between said levers and the tipple, other levers also movable into and out of the paths of cars on said track and located at a point more remote from the tipple than the first set of levers, a rock shaft connected to said second set of levers, a spring tending to hold said rock shaft in a position to maintain the second set of levers in inactive position, and cam latches on the rock shaft in the path of the tipple for moving the second set of levers into active position.

2. An automatic car stop comprising a line of track, a tipple included therein, stop levers adjacent to said tipple and movable into and out of the path of cars on said track; direct connections between the tipple and the stop levers, another set of stop levers more remote from the tipple than the first set, a rock shaft, connections between the same and the second set of stop levers, a spring connected to said rock shaft and tending to move the same in a position to maintain the second set of levers in inactive position, and latch arms having locking sections to receive a portion of the tipple and other cam sections constituting continuations of the locking sections and arranged to be engaged by the tipple when moved from an inclined to a horizontal position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES WILLIAM REED.

Witnesses:

EDWARD DERR,
EDMOND KANE.