

No. 641,299.

Patented Jan. 16, 1900.

J. KELSO.
SAFETY DEVICE FOR CARS.

(Application filed Nov. 23, 1899.)

(No Model.)

Fig. 1.

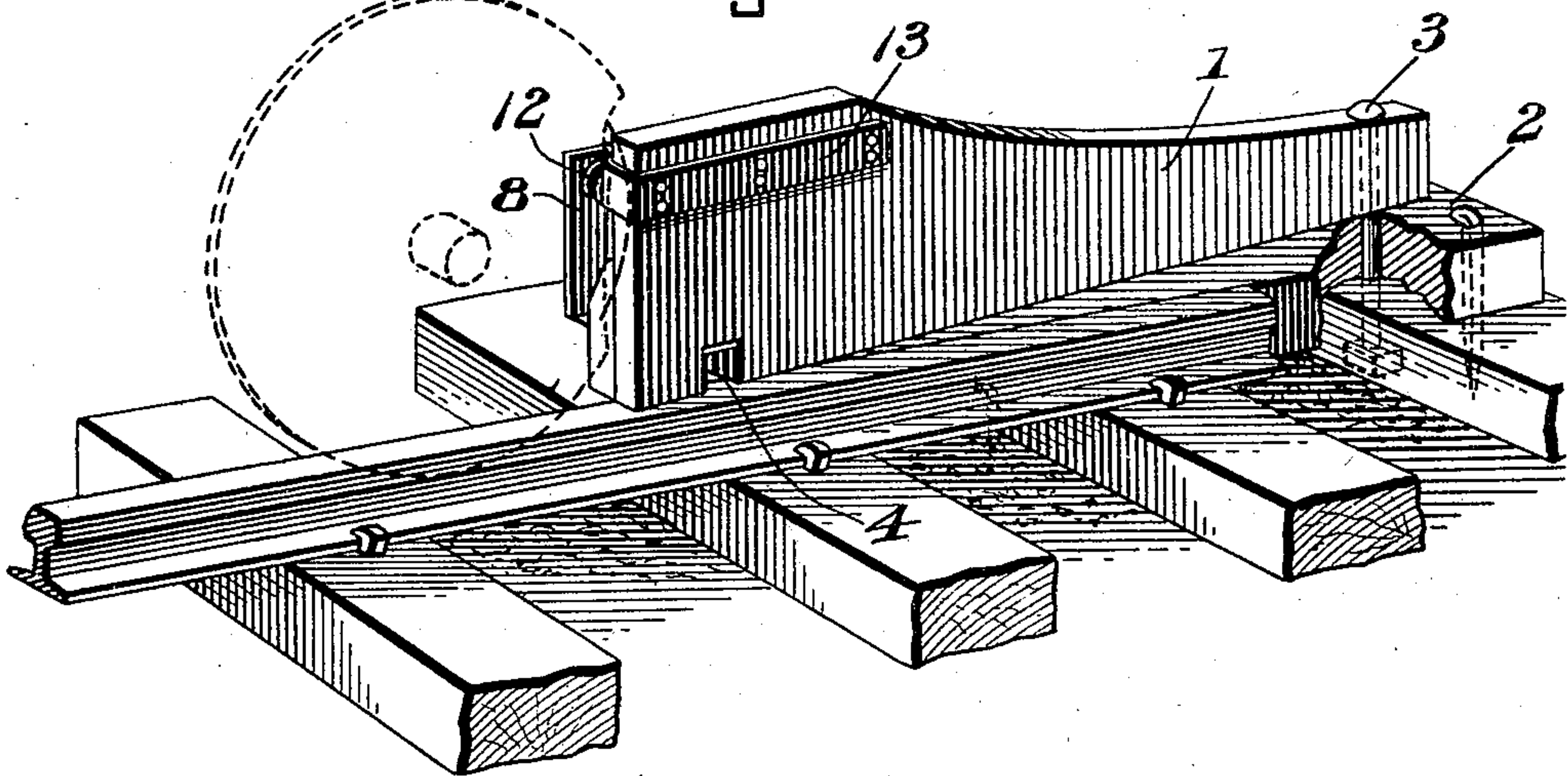


Fig. 2.

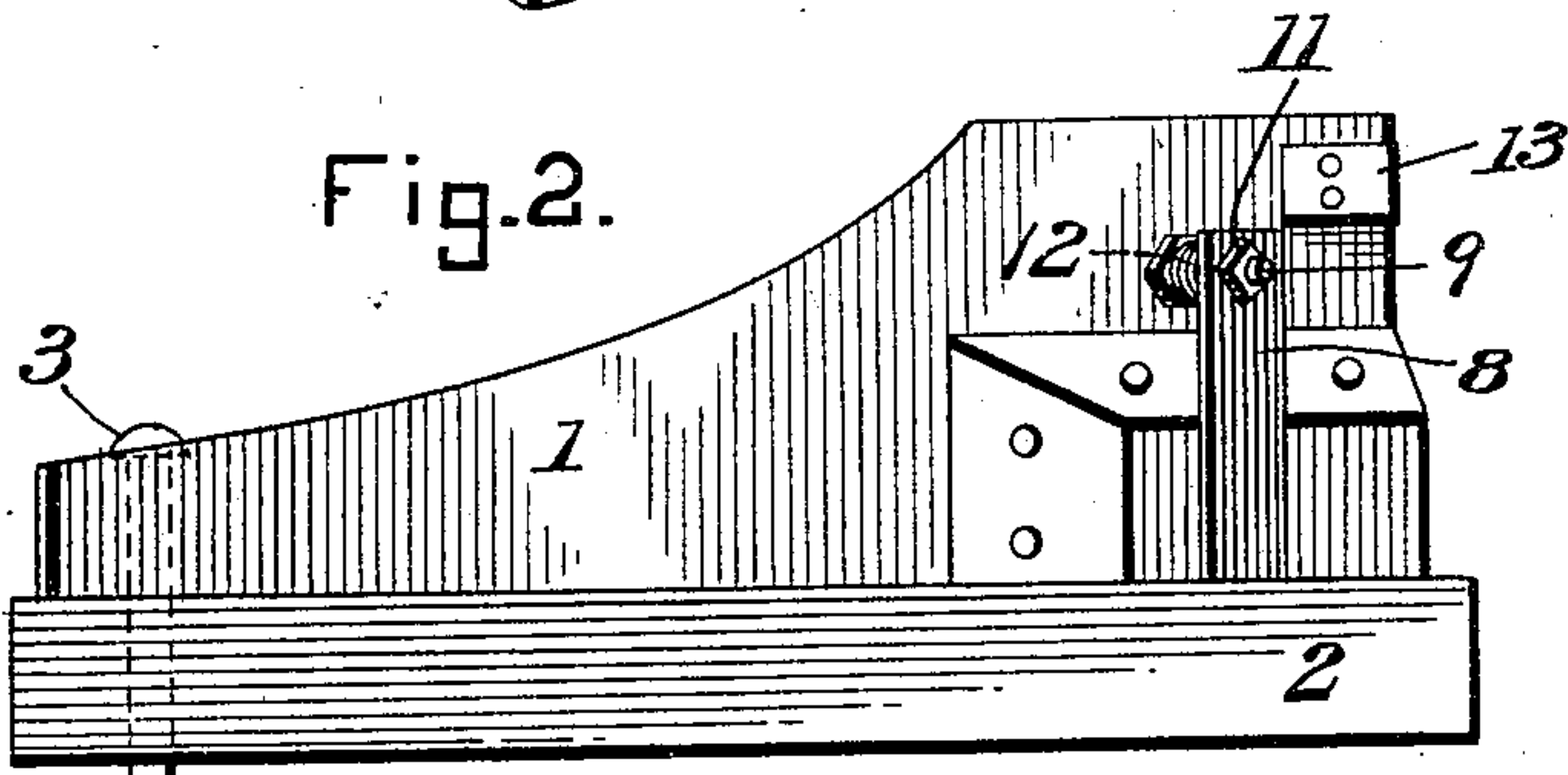


Fig. 3.

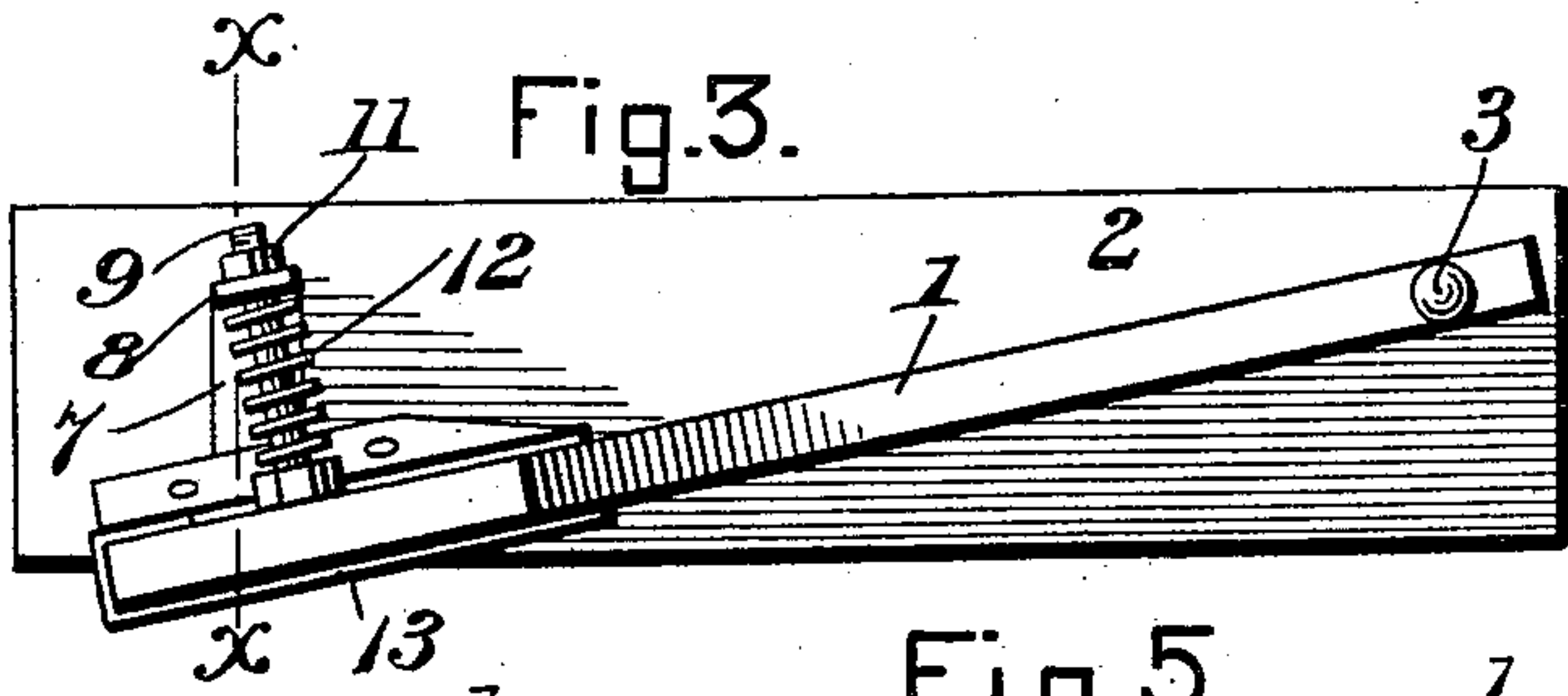


Fig. 4.

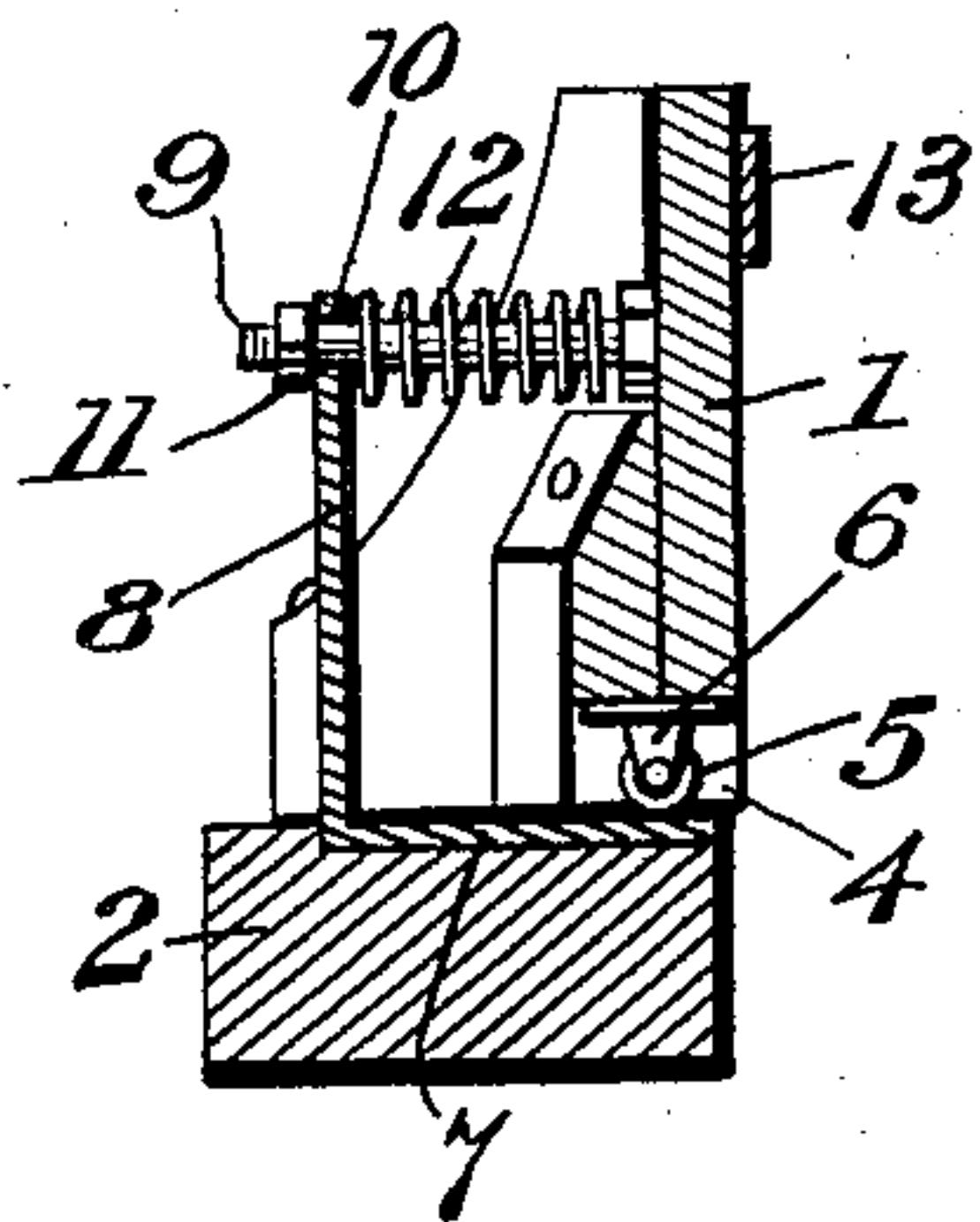
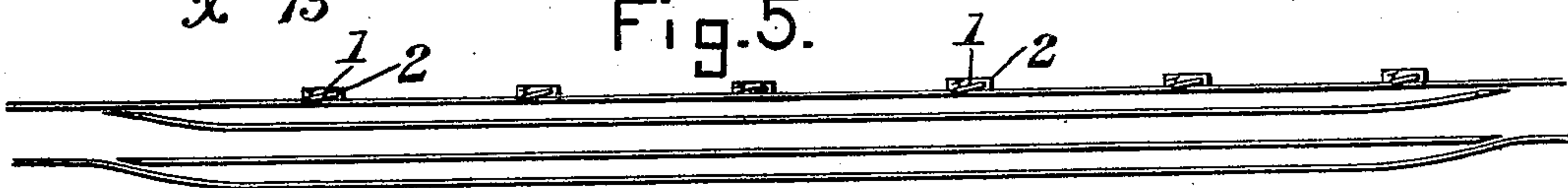


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES KELSO, OF MURRAY, ALABAMA.

SAFETY DEVICE FOR CARS.

SPECIFICATION forming part of Letters Patent No. 641,299, dated January 16, 1900.

Application filed November 23, 1899. Serial No. 738,088. (No model.)

To all whom it may concern:

Be it known that I, JAMES KELSO, a citizen of the United States, residing at Murray, in the county of Jefferson and State of Alabama, have invented a new and useful Safety Device for Cars, of which the following is a specification.

In mines and other places where railways are constructed on steep inclines or slopes great difficulty and loss of life and property are experienced by reason of the fact that the cables or ropes and the coupling devices connecting the cars or trucks therewith are constantly breaking, allowing the cars to rapidly descend the inclines or slopes. The result is that the cars are oftentimes demolished, long stretches of track are torn up, and frequently the operators are seriously injured or killed.

The object of the present invention is to provide what may be termed a "safety" device in the nature of an automatic catch which will operate to chock or block one or more of the wheels of a car in case of breakage of the cable or coupling and bring said car to a standstill immediately after the break occurs without giving the car time to gain any considerable headway or impetus. The safety device in no way interferes with the travel of the car on the track, as it yields automatically out of the path of the wheels, but instantly assumes a position in rear of a wheel as soon as a wheel has passed by it.

The detailed objects and advantages of the invention will appear in the course of the ensuing description.

The invention consists in a safety device for cars, embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims.

In the accompanying drawings, Figure 1 is a detail perspective view of a safety device constructed in accordance with the present invention. Fig. 2 is a side elevation of the same, taken from the opposite side from Fig. 1. Fig. 3 is a plan view of the device. Fig. 4 is a cross-section on the line X X of Fig. 3. Fig. 5 is a diagrammatic plan view showing the manner of applying the safety device to a road-bed.

Similar numerals of reference designate cor-

responding parts in all the figures of the drawings.

The safety device contemplated in this invention comprises, essentially, a catch-block 1, which for convenience is mounted upon a base 2, which may be either of metal or wood and which is secured upon the upper surface of a railway-tie adjacent to one of the rails thereof and preferably upon the outer side of the rail. The base 2 should be of sufficient height to bring its upper surface into the same horizontal plane with the upper surface of the ball or head of the rail in order that the catch-block may swing inward over the head of the rail, so as to project into the path traversed by the car-wheels.

The catch-block 1 is tapered toward one end and provided with an opening through which passes a pivot-bolt 3, which extends at right angles or perpendicularly to the plane of the road-bed. The opposite or free end of the catch-block 2 is provided with a mortise 4 in its lower edge, within which is arranged a supporting antifriction-roller 5, the said roller being journaled in a hanger 6, attached to the catch-block and rolling upon a track 7, consisting of the base or horizontal portion of an L-shaped bracket 8. The track 7 constitutes one arm of the bracket, and the other arm is extended vertically upon the outside of the catch-block and in parallel relation thereto.

Secured to the catch-block 2, at or near its free end, is a laterally-projecting bolt 9, the outer end of which extends through an opening 10 in the bracket 8 and receives upon its outer threaded end a retaining-nut 11, by means of which the throw or inward movement of the catch-block may be limited, the said nut striking against the outer surface of the bracket 8. A coil-spring 12 encircles the bolt and is interposed between the bracket 8 and the catch-block, the said spring exerting its tension to yieldingly press the catch-block inward into the path of the wheels of the car. In other words, said spring holds the free end of the catch-block in line with and just above one of the rails of the track, so as to block the rearward movement of the wheels in the event of the cable or coupling breaking. The catch-block 2 is also faced upon its outer side with a metal wear-plate 13, against which the car-

wheels strike and slide as the car is moved along the track, the catch-block being thus forced outwardly by the wheels and yielding to allow the wheels to pass by the same.

5 From the foregoing description it will be seen that I have provided a simple automatic catch for cars which is especially adapted for mining purposes where the cars are run upon inclines. It will also be seen that the catch-
10 block yields automatically as it is acted upon by the car-wheels and that it automatically springs inward behind the wheels after they have moved out of contact therewith. There-
15 fore should the cable or coupling break and the car start backward one of the wheels of the car will come in contact with one of the safety devices or catch-blocks and the back-
20 ward movement of the car will be immediately stopped. Safety devices constructed in accordance with the present invention are placed at intervals along the road-bed, the
25 frequency of the intervals being governed to a great extent by the pitch or steepness of the incline. In order to allow the cars after they
30 have been emptied to move backward to the starting-point without interference on the part of the safety device, it is preferable to lay two tracks, one of which is partially in-
cluded within the other, as shown in Fig. 5 of the drawings, at the same time providing
switches for moving the car to the desired track.

The catch-block may be entirely of metal, or it may consist of wood faced with metal.

35 From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood
40 that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

45 Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. An automatic safety device for the purpose specified, consisting of a catch-block
50 hinged on an axis perpendicular to the road-

bed, and mounted adjacent to the road-bed to swing horizontally into the path of the wheels of a car, and means for yieldingly urging the free end of the block into position to engage such wheel, substantially as specified. 55

2. An automatic safety device for the purpose specified, consisting of a catch-block; hinged at one end on an axis perpendicular to the road-bed, and free at its other end and mounted adjacent to the road-bed to swing
60 horizontally into the path of the wheels, and means for yieldingly urging the free end of the block into position to engage such wheel, substantially as described.

3. An automatic safety device for the purpose specified, consisting of a catch-block hinged on an axis perpendicular to the road-bed, and mounted adjacent to the road-bed to swing horizontally into the path of the wheels, and a spring arranged behind the catch-block
70 and adapted to urge the same yieldingly into position to engage one of the wheels, substantially as described.

4. An automatic safety device for the purpose specified, consisting of a catch-block hinged on an axis perpendicular to the road-bed, and mounted adjacent thereto to swing horizontally into the path of the wheels, a bracket located adjacent to the catch-block, a bolt attached to the catch-block and passing through said bracket, and a coil-spring encircling said bolt and interposed between the bracket and block, substantially as described. 80

5. An automatic safety device for the purpose specified, consisting of a catch-block hinged on an axis perpendicular to the road-bed, and mounted adjacent thereto to swing horizontally into the path of the car-wheels, a supporting-roller carried by the free end of said catch-block, and means for yieldingly
90 urging the free end of the block into the path of the wheels, substantially as described.

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

JAMES KELSO.

Witnesses:

WM. M. WALKER,
H. MCGEEVER.