

(No Model.)

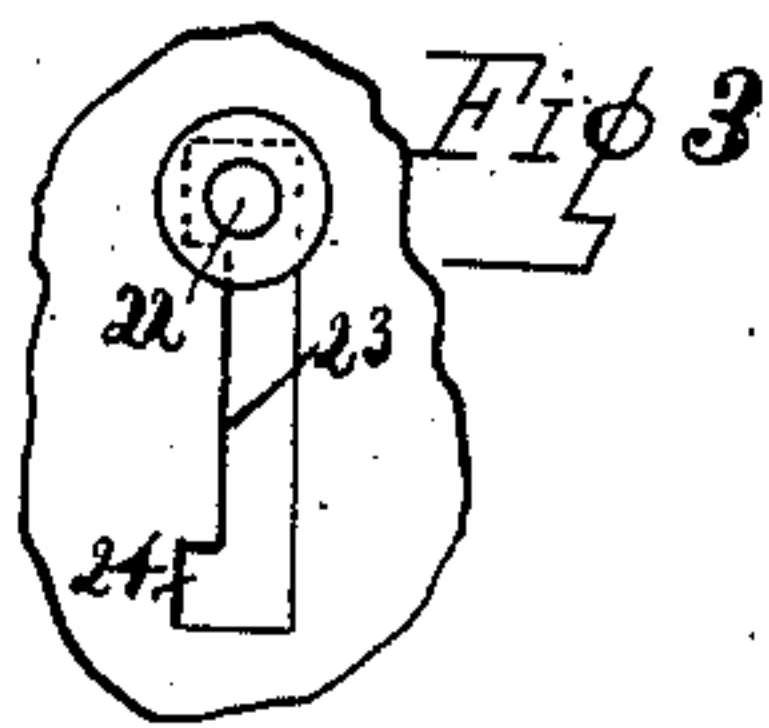
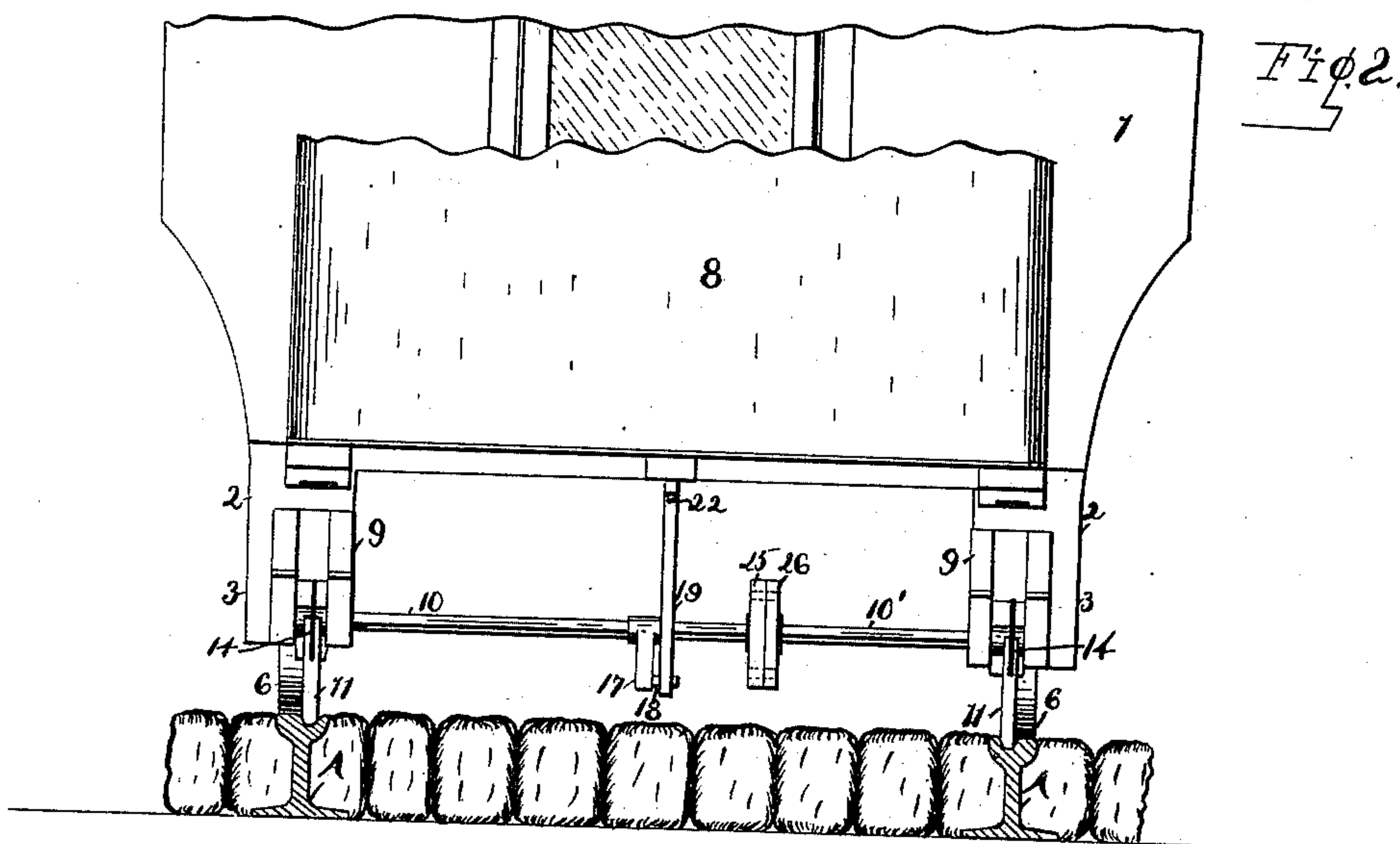
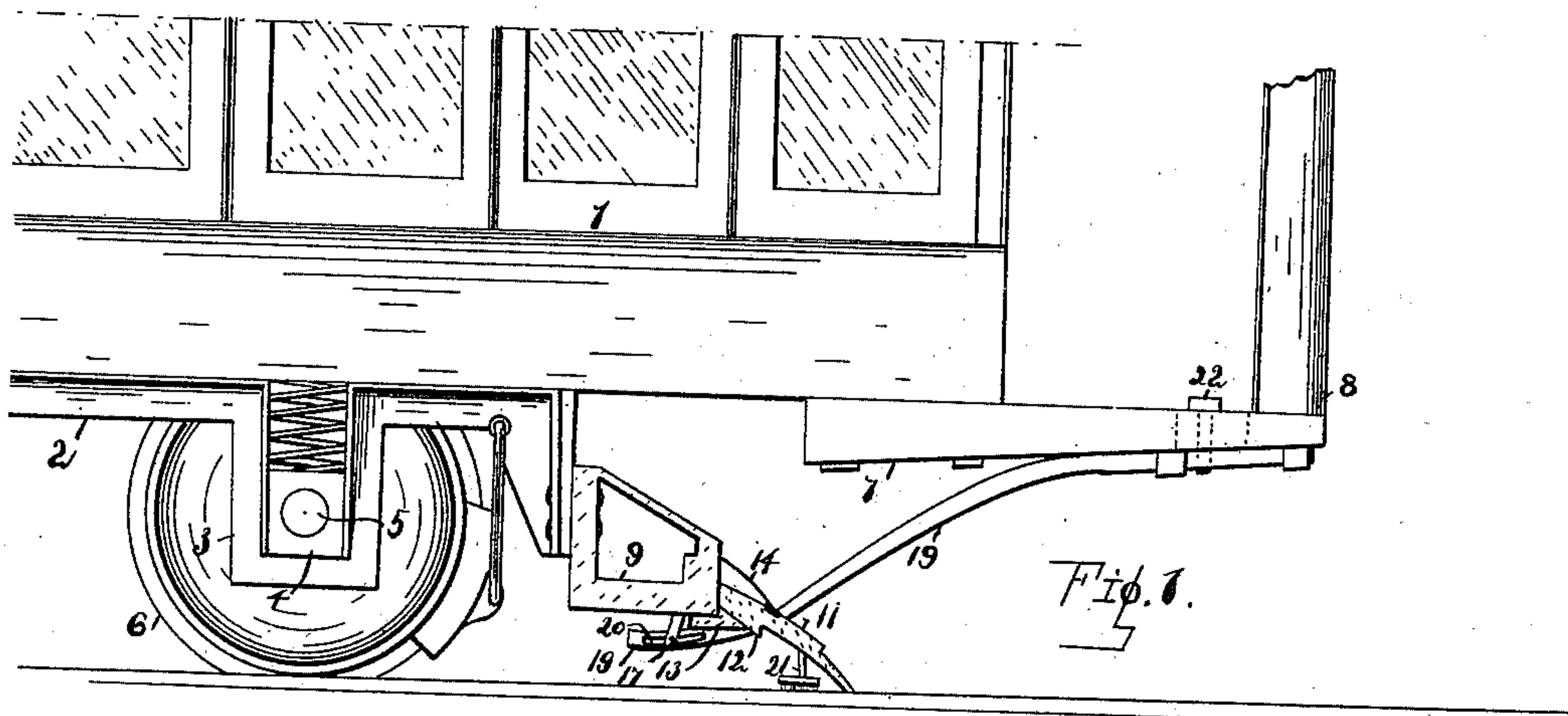
2 Sheets—Sheet 1.

F. KIEFEL.

AUTOMATIC TRACK CLEANING DEVICE.

No. 566,456.

Patented Aug. 25, 1896.



Witnesses

Inventor
Frank Kiesel

Harriet S Hood
Arthur E. Georgi.

By *his* Attorney

Ernest K. Hood

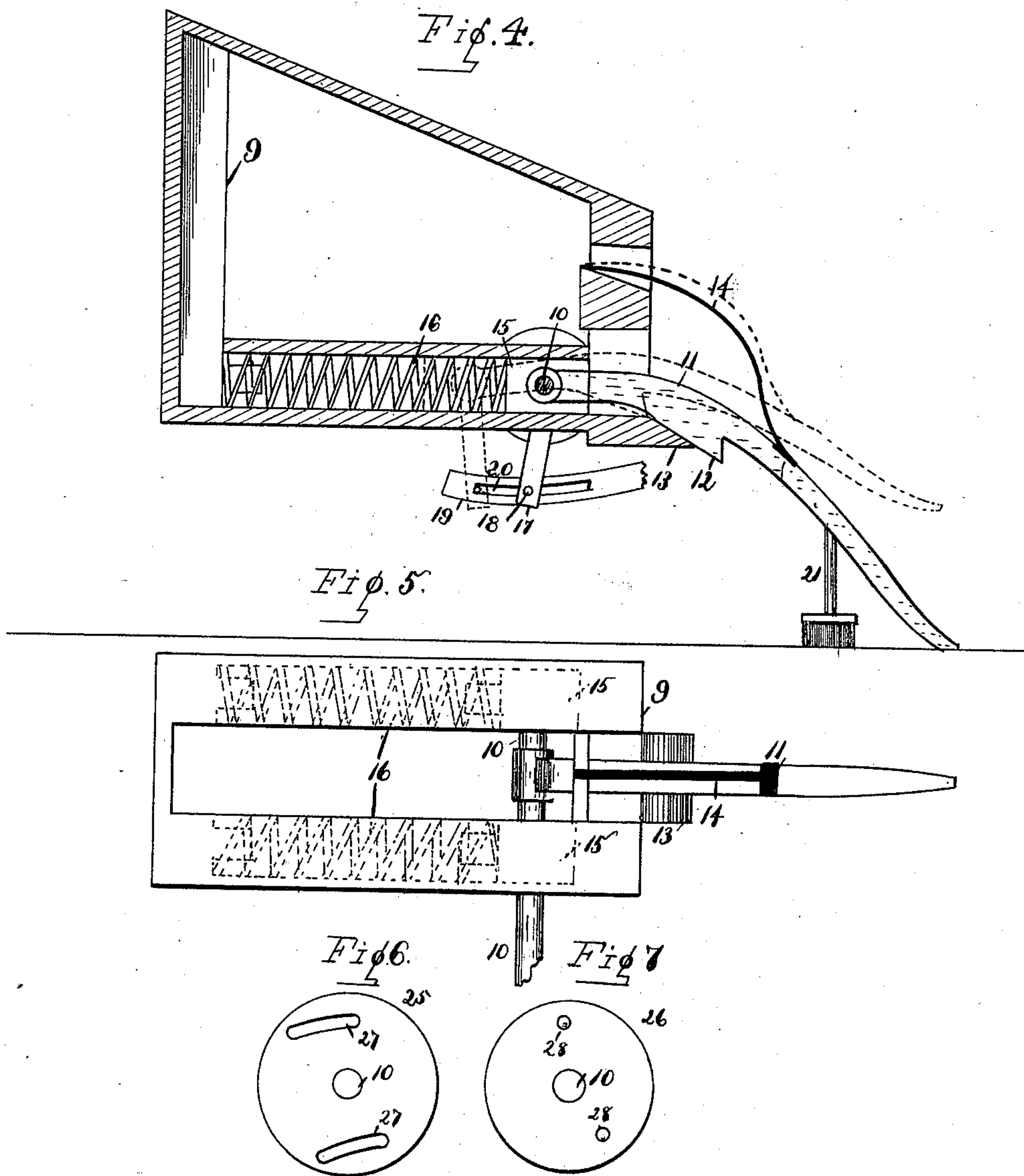
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UNITED STATES PATENT OFFICE.

FRANK KIEFEL, OF CINCINNATI, OHIO.

AUTOMATIC TRACK-CLEANING DEVICE.

SPECIFICATION forming part of Letters Patent No. 566,456, dated August 25, 1896.

Application filed February 24, 1896. Serial No. 580,398. (No model.)

To all whom it may concern:

Be it known that I, FRANK KIEFEL, a citizen of the United States of America, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Automatic Track-Cleaning Devices, of which the following is a specification.

In modern street-railroading the old T-rail has been supplanted by the V or grooved rail, and with the advent of the latter came the difficulty of keeping this groove in the rail free from dirt, &c.

The object of my invention is to provide an automatic device which will by its own operation pass over immovable objects in or on the rail and will remove from the groove all dirt, &c., a device automatic in all of its functions and completely under the control of the motorman; and my invention consists in the device hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my device attached to a car; Fig. 2, a front elevation of the same; Fig. 3, a detail of the raising device; Fig. 4, a sectional elevation of one of the track-cleaners; Fig. 5, a plan of the same; Fig. 6, a detail of the compensating device, and Fig. 7 a detail of the same.

1 represents a car-body carried by a truck-frame 2, having box-supports 3, in which slide boxes 4, carrying an axle 5, having the usual flanged wheels 6.

Bolted to the forward end of the truck-frame are brackets 9, one directly over each rail. Mounted in ways in bracket 9 are boxes 15, adapted to slide against the stress of springs 16. Passing through these boxes is a shaft 10, carrying between boxes 15 a forwardly and downwardly projecting prong or cleaner 11, adapted to travel in the groove of the rail. The cleaner 11 is held in its downward position by means of pressure-spring 14, bearing thereagainst, and in its forward position by springs 16. The under side of cleaner 11 is provided with an inclined surface 12, contacting with and adapted to slide on an inclined surface 13, formed on bracket 9. In case prong 11 strikes an immovable object the bracket 9, being forced forward by the car-incline 13, slides on inclined portion 12 and raises prong 11 against stress of

the springs. Springs 16 relieve the prong from undue jar and also help to hold the prong in operative position. In rising, the prong is drawn slightly backward, thus clearing it from the immovable object. As soon as passed, springs 16 and 14 automatically return the prong to its operative position. A switch in a track or anything breaking the continuity of the slot in the rail is easily passed over.

One of each of the foregoing devices is mounted above each rail on the truck-frame, and shaft 10 is connected with shaft 10' by means of a slotted face-plate 25 and pinned face-plate 26. Plate 25 is provided with two parallel slots 27, adapted to receive pins 28 on plate 26. This arrangement allows independence of movement of each device to a limited extent. An arm 17 is mounted on shaft 10, and is provided with an extending pin 18, taking into a slot 20 in a sliding bar 19. The upper end of bar 19 is mounted in brackets secured to the under side of platform-stays 7. A headed pin 22 passes through a slot 23 in the platform-floor and into bar 19. Slot 23 is provided with notches 24. By moving the bar 19 forward the pin 18 is engaged by the end of slot 20 and shaft 10 is rotated. This rotation brings pins 28 into engagement with the ends of slots 27 and shaft 10' is also rotated, thus raising both prongs out of their operative position. They may be held in this position by moving pin 22 into notch 24. The slot 20 in bar 19 and slots 27 in plate 25 allow a limited sliding and rotary movement of each shaft 10 and 10', so that in case one prong strikes an obstruction it will pass thereover without raising its mate. Isometimes mount a brush 21 on prong 11, so as to brush the track after scraping. I find it best to allow some play of shaft 10 where it passes through boxes 15, so as to allow the prongs 11 to cant in going around a curve.

I claim as my invention—

1. In a track-cleaning device the combination of a bracket, a movable, forwardly and downwardly extending prong carried thereby, an incline on the bracket and an incline on the prong adapted to cooperate and raise the prong when it strikes an immovable object, substantially as and for the purpose set forth.

2. In a track-cleaning device the combina-

tion of a bracket sliding boxes mounted therein, a forwardly and downwardly projecting prong carried by said boxes, an incline on the bracket and an incline on the prong adapted
5 to raise the prong when it strikes an immovable object, substantially as and for the purpose set forth.

3. In a track-cleaning device the combination of a bracket, sliding boxes mounted there-
10 in adapted to slide against the stress of springs a forwardly and downwardly projecting prong carried by said boxes, an incline on the bracket and an incline on the prong adapted to raise
15 the prong when it strikes an immovable object, and a spring secured to the bracket adapted to press the prong in its downward direction substantially as and for the purpose set forth.

4. In a track-cleaning device the combination of two brackets each supporting a downwardly and forwardly projecting prong an inclined surface on each bracket, an inclined

surface on each prong adapted to cooperate respectively and raise the prongs if they should strike an immovable object, a connection between the prongs which will allow
25 a limited independent motion of each, and means for raising them concurrently substantially as and for the purpose set forth.

5. In a track-cleaning device the combination of brackets, 9, mounted on a truck-frame,
30 prongs, 11, carried by shafts 10 and 10' respectively, a plate 25, having slots 27 secured to shaft 10, a plate 26 having pins, 28, adapted to take into slots 27, an arm, 17, secured to
35 one of the shafts and connected with a slotted sliding bar 19, and means whereby prongs 11 will be raised by striking immovable objects substantially as and for the purpose set forth.

FRANK KIEFEL.

Witnesses:

ERNEST K. HOOD,
HARRIET S. HOOD.