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W. MORCK, P. KRICKAU & W. BOEHLE.

TRACK CLEANER AND OILING DEVICE.

(Application filed Mar. 13, 1900.)

(No Model.)

Fig. 1.

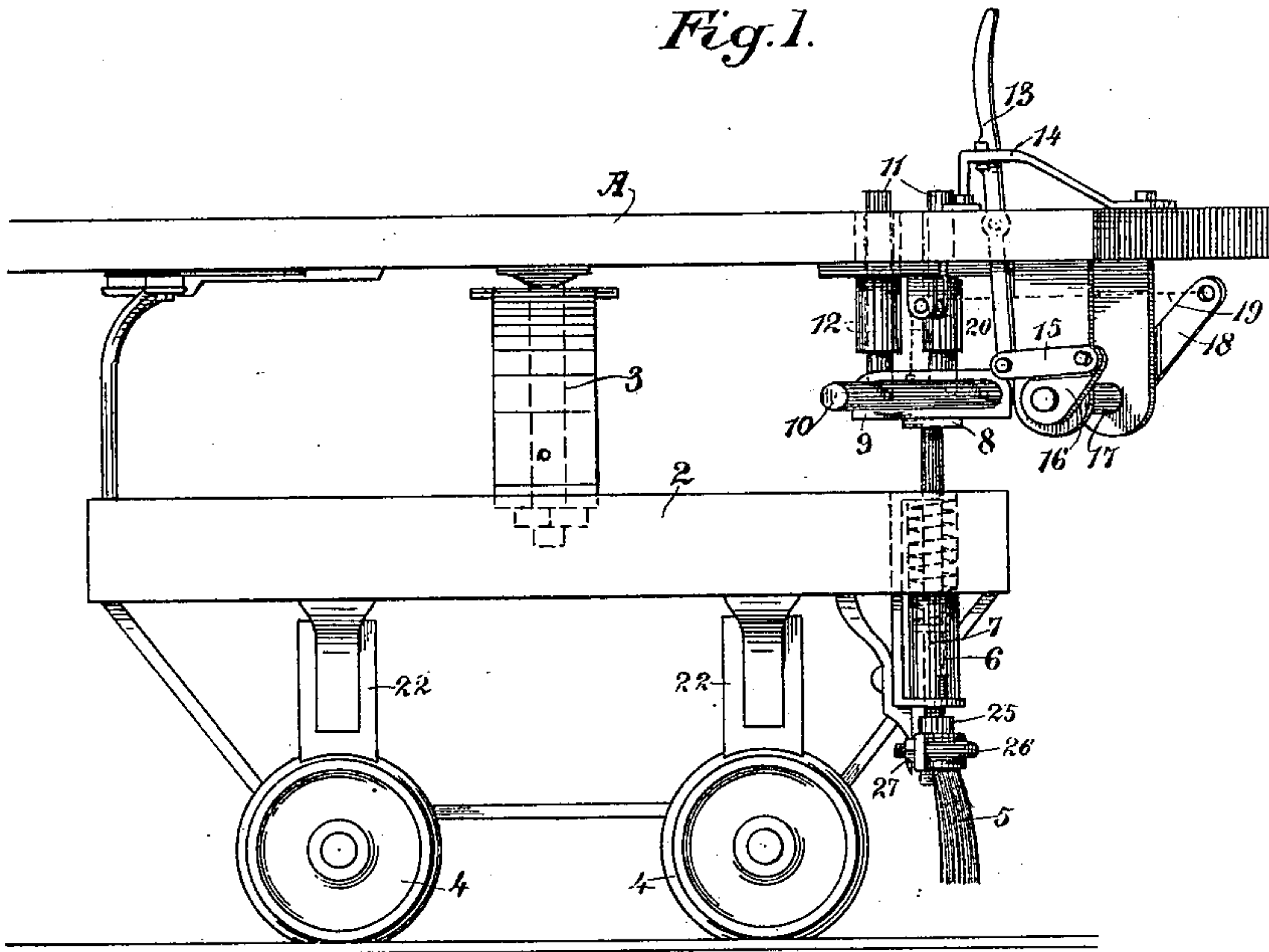


Fig. 3.

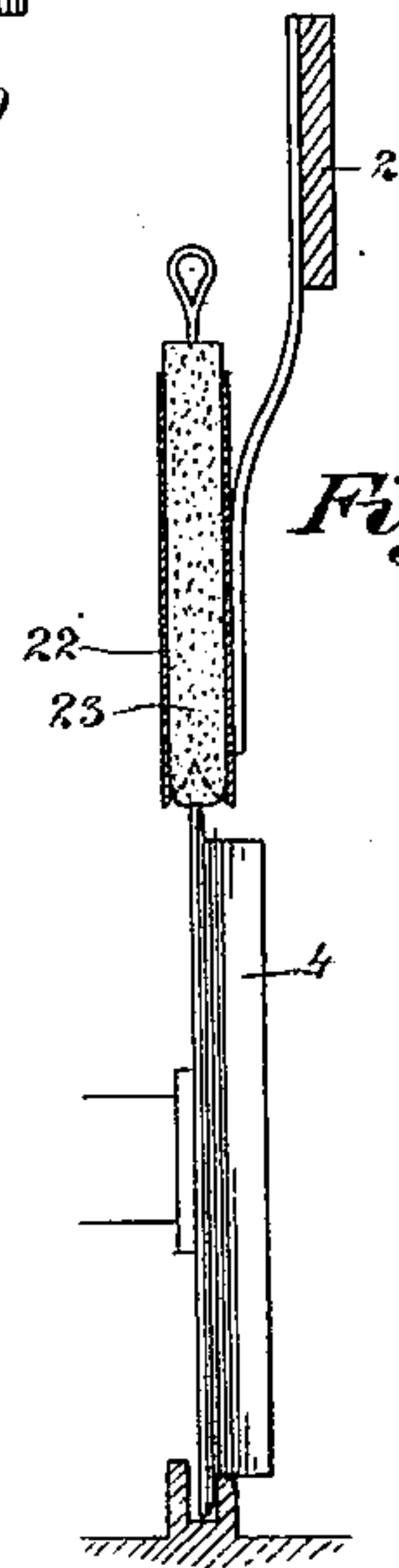
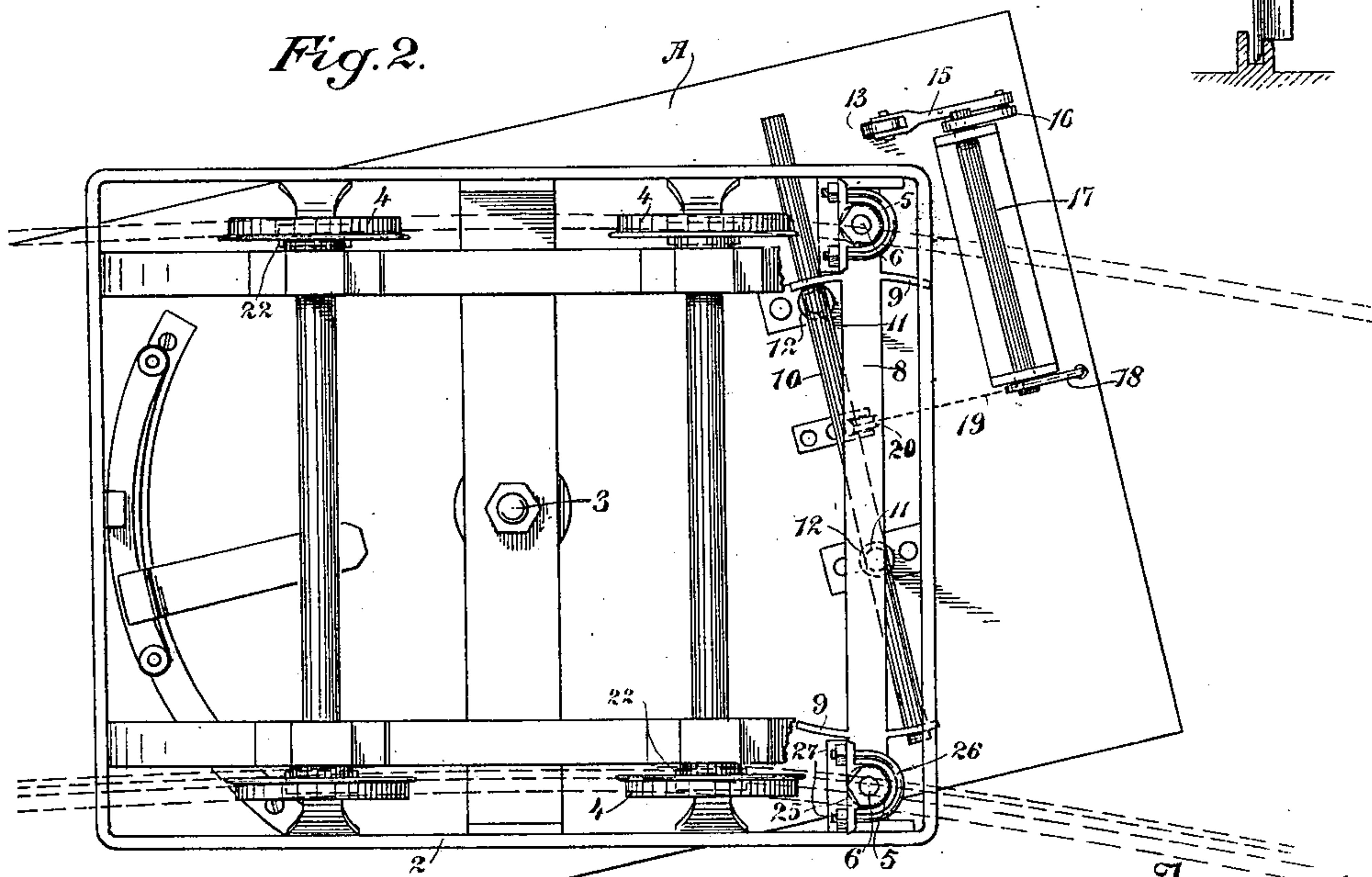


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM MORCK, PETER KRICKAU, AND WILLIAM BOEHLE, OF OAKLAND,
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TRACK CLEANER AND OILING DEVICE.

SPECIFICATION forming part of Letters Patent No. 659,408, dated October 9, 1900.

Application filed March 13, 1900. Serial No. 8,497. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM MORCK, PETER KRICKAU, and WILLIAM BOEHLE, citizens of the United States, residing in Oakland, county of Alameda, State of California, have invented an Improvement in Track-Clearing Devices; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to devices for clearing the tracks of railway-cars of obstructions; and it consists of the parts and the constructions and combinations of parts hereinafter described and claimed.

Figure 1 is a side elevation of the front part of a car. Fig. 2 is a bottom view of the same. Fig. 3 is a vertical section through the lubricating device.

Street-railway and other cars are ordinarily mounted upon trucks, one of which is placed under each end of the car, and the truck-frames are swiveled, so that they may turn freely in passing around corners while the longer body of the car moves in a different curve. For this reason it is difficult to make any connection between an adjustable track-clearer which is carried upon the car-truck and the car-body, which is movable transversely independent of the truck.

In our invention, A represents a car-body. 2 is a truck-frame, and 3 represents the swivel pin or bolt which connects the car-body with the truck-frame and about which the truck-frame is turnable independent of the movement of the car-body. This truck-frame is mounted upon the usual wheels, as 4, and upon this frame, in front of the forward truck-wheels, are brushes or track-clearers 5. These brushes may be made of stiff wires or otherwise suitably constructed and are adapted to clear the track of any obstructions, and particularly to clean out dust and obstructions which accumulate between the main rail and the guard-rail on curves. The shanks 6 of these brushes are slidable in vertical guides 7, and there being two brushes, one for each rail, the upper ends of the shanks are connected, as here shown, by a transverse bar 8, so that they may be raised and depressed in unison. Upon this bar are the slotted arcs or segments 9, fixed at a sufficient distance

apart. The slots are horizontal, and the ends of a transverse bar 10 pass through these slots. This bar 10 has upwardly-extending stems 11, which move in guides 12 upon the body of the car.

13 is a lever fulcrumed upon the car, and 14 is a rack with which the lever may be engaged. This lever is connected by a link 15 with a rocker-arm 16, fixed upon the horizontally-journaled shaft 17, parallel with the bar 10. Upon the inner end of this shaft 17 is another rocker-arm 18, and a flexible chain, wire, or other connection 19 has one end fixed to this rocker-arm, and, passing over a guide-pulley 20, journaled upon or attached to the car-body, the flexible connection has its other end fixed to the horizontal bar 10. By these or equivalent connections the movement of the lever 13 can be communicated, so as to raise the bar 10, and with it the segments through which it passes, and the bar 8, carrying the brushes.

When the lever is released from the rack, the brushes may be allowed to drop by gravitation; but we prefer to employ springs which surround the shanks or stems of the brushes and are compressed when the brushes are raised to act to force the brushes down with sufficient pressure. As the brushes, their connecting-bar, and the segments 9 are carried upon the truck it will be manifest that they partake of the movements of the truck, and particularly in turning corners, while the bar 10, which engages the segments and the parts connected with it, being carried upon the car-body, will have a different center movement, and provision must be made for the varying movements of these parts. This provision is the extension of the shaft through the slots or channels in the segments, which allow it and the segments to move transversely and independent of each other without being disengaged, because the shaft is long enough to maintain the parts and connections, although it may slide to a considerable distance to one side or the other through these segments.

It will be manifest that crank-arms or equivalent horizontally-movable connections may be interposed between the bar which connects the brush-shanks and the bar which is con-

connected with the actuating-lever, so as to allow the two to have an independent horizontal movement, while at the same time providing so rigid a connection that the brushes
 5 will be raised by the movement of the lever. When these brushes are depressed, they sweep any obstructions from the track, and particularly upon curves, where they are liable to accumulate between the main and the guard
 10 rails. In order to still further relieve the friction of the wheels in passing around the curves, we have shown a device by which the flanges of the wheels may be lubricated. These flanges are subjected to a great deal of friction, particularly in passing around the curves which
 15 occur so frequently in street-car tracks, and it has been found necessary to keep men especially employed to frequently oil the rails at these curves.

20 In Fig. 3 we show a casing 22, mounted upon the truck-frame, having the lower end opened and made V-shaped, so as to extend down on each side of the wheel-flange. This casing is open at top and bottom, and within
 25 it is fitted a heavy felt or other absorbent pad 23, which, being saturated with the lubricant, is inserted into the casing and pushed down until its lower edge, passing into the groove or channel at the lower open end, will press
 30 upon the flange of the wheel, and as the wheel revolves it will be kept constantly lubricated by this contact and the friction caused between it and the track will be very materially modified. The absorbent substance may have
 35 a handle by which it can be easily removed from the casing and again saturated or by which it can be adjusted to contact properly with the flanges of the wheels.

It is desirable to adjust the brushes independently of their shanks, and we have therefore shown the brushes fixed in heads 25,
 40 which are slidable upon the shanks 6. Set-screws or clamps serve to secure the heads to the shanks. In the present case we have shown strap-bolts 26 surrounding the heads
 45 and bars extend across the opposite sides of the shanks, against which they are pressed and caused to grip by nuts 27, screwed upon the ends of the bolts, which pass through
 50 holes in the bars.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a car and in combination with the
 55 truck and the body thereof, brushes having shanks slidable in vertical guides on the truck, a transverse bar connecting the shanks of opposite brushes, a second transverse bar carried by the car-body and a loose connection and guide between this bar and the first-named one, and means whereby the second-named bar may be raised and lowered to raise
 60 and lower the first-named bar and its brushes.

2. In a car and in combination with the
 65 wheel-frame and body thereof, brushes having shanks slidable in vertical guides, and springs by which they are normally depressed

into contact with the rails, a lever mounted upon the car-body and automatically-adjustable mechanism intermediate between it and
 70 the brush-shanks whereby the latter may be raised.

3. In a car and in combination with swivel-trucks which are turnable independently of the turning movement of the car-body,
 75 brushes having spring-pressed vertically-guided shanks carried upon the truck-frames and normally forced into contact with the rails in front of the wheels, a connection between each pair of brushes whereby they may
 80 be raised or depressed simultaneously, a transverse bar and means whereby it is vertically guided on the car-body said bar connected with and having its ends guided by the said connection a lever fulcrumed upon the
 85 car with a retaining-rack, connections intermediate between the lever and the said bar whereby the brushes may be raised or depressed while the truck swivels independently.
 90

4. In a car, trucks having vertical swivel-bolts upon which the ends of the car are supported and by which the trucks and car-body are independently turnable, brushes having
 95 spring-pressed vertically-guided shanks mounted upon the truck-frames in front of the forward wheels thereof, and a bar connecting the brush-shanks so that they are movable in unison, a second transverse bar carried by the car-body and connected with
 100 and guided by the first-named bar, a lever fulcrumed upon the car-body, a rack with which it is engageable, a counter-shaft having rocker-arms with one of which the lever is connected, and a flexible connection between
 105 the other rocker-arm and the second-named bar.

5. In a car a body, trucks upon which the ends of the car are supported by swivel-joints whereby the trucks are independently turn-
 110 able, vertically movable and guided spring-pressed brushes having the upper ends of their shanks connected to move in unison, slotted segments fixed upon the transverse connecting-bar, a lever fulcrumed upon the
 115 car-body and a rack with which it engages, a rock-shaft having arms one of which is connected with the lever and the other is connected with a vertically guided and movable transverse bar, said bar having its ends projecting through the slots in the segments and
 120 freely movable with relation thereto.

6. In a car, trucks by which the ends of the car are supported, and swivel-pins or king-bolts about which they are turnable independ-
 125 ently, brushes having spring-pressed vertically movable and guided shanks connected at their upper ends to move in unison and having horizontally-slotted segments fixed thereto, a bar the ends of which pass through
 130 and are freely movable in the slots of the segments, vertical stems fixed to said bar and guides in which said stems are slidable, a lever fulcrumed upon the car-body, a rack with

which it engages, a journal counter-shaft having rocker-arms, one of which is connected with the lever and the other by a flexible connection with the horizontal bar whereby the
5 latter may be raised or depressed by the movement of the lever and its movement communicated to the brush-carrying shanks through the independently-movable slotted segments.

In witness whereof we have hereunto set our hands.

WILLIAM MORCK.
PETER KRICKAU.
WILLIAM BOEHLE.

Witnesses:

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HENRY WETTSTEIN.