



PATENT SPECIFICATION

198,325

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COMPLETE SPECIFICATION.

Improvements in or relating to Vehicles Propelled by Endless Bands or Tracks.

I, ADOLPHE KÉGRESSE, of 53, rue Balard, Paris, France, French citizen, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improved means for supporting the endless band of vehicles which are propelled by an endless band or track.

The invention comprises in a vehicle propelled by an endless band, a connecting device arranged between the brackets carrying the supporting rollers for the said band and the chassis of the vehicle and comprising two superposed members each adapted to oscillate about a central pivot, the said two members being pivoted to the said brackets with which they form a jointed parallelogram, and the said central pivot pins being supported by parts connected to the chassis of the vehicle, the various joints being, if desired, mounted on elastic sleeves or sockets.

In the constructions in which the endless flexible band is supported by a train or set of rollers and pulleys pivoted to one of the axles of the vehicle, the said rollers and pulleys in their movement of oscillation about the axle describe, under the action of uneven ground, arcs of a circle having a radius equal to the distance of the roller or of the pulley in question from the axle.

The axle being necessarily arranged at a certain height above the rollers, it follows that a comparatively large longitudinal space must be available for the oscillations of the rollers.

On the other hand when striking an obstacle, either a hollow in the road or a projecting object, it very frequently happens that the arcs described by the

periphery of the rollers tend to intersect those described by the pulleys; this results in an interference with the running, because the extreme or end rollers then strike the adjoining pulley, or conversely. To avoid the said disadvantages, it is necessary to provide in the well known constructions a comparatively great distance between the end rollers and pulleys supporting the endless band to the detriment of the proper guiding of the band and of the general working of the vehicle chiefly when passing over obstacles. Moreover, in the known constructions, when the vehicles have to travel fast over hard ground, vibrations occur which result in damaging the best constructed mechanisms.

According to the present invention there is provided a coupling construction with oscillating levers for the rollers supporting the bands, which eliminates the disadvantages just mentioned.

Several embodiments of the invention are shown in the accompanying drawings.

Figure 1 shows in elevation, partly in section, one form of coupling, and

Figure 2 is an end view, half in cross-section on the line A—B of Figure 1.

Figure 3 shows in elevation, partly in section, a modified construction, and

Figure 4 is a cross-section on the line E—F of Figure 3.

Figure 5 is a front elevation of a further modification, and

Figure 6 is a plan of Figure 5.

On the axle 1 (Figures 1 and 2) of the vehicle is mounted a part 2 which is secured to the said axle by means of keys 3. The part 2 is provided with lugs 4 between which pass the suspension springs 5 of the train of rollers. The springs 5 are secured to members 6 which carry trunnion pins 7 fitting loosely into the lugs 4.

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Loosely mounted on pins 8 at the ends of the springs 5 are supports or brackets 9 provided with trunnion pins 10 about which are pivoted balance beams 11 which carry at their ends the supporting rollers.

Between the pins 8 and the springs 5 are arranged rings 12 of elastic or resilient material, and similar rings are also provided between the trunnion pins 10 and the balance beams 11.

Figures 3 and 4 show a modified construction of the coupling in which the lower spring of Figures 1 and 2 is replaced by rigid links, and two parallel springs are substituted for the upper spring.

To the axle 1 is rigidly secured a part 14 carrying three spindles or pins 15. About the upper spindle 15 are pivoted springs 16 arranged side by side or at a certain distance from each other, as shown in Figure 4. The two lower trunnion pins 15 form the pivots for rigid links 17, the other ends of which are pivoted at 18 to supports or brackets 19, the lower ends of which carry the trunnion pins 10 of the balance beams 11.

The working of the hereinbefore described arrangements will be readily understood:—

If one of the rollers rises, the corresponding supports 8 (Figures 1 and 2) will also rise along an oblique line approaching the vertical, since the axes of oscillation, are situated at a suitable distance from each other so as to form a jointed parallelogram.

In Figures 5 and 6, the pivot pins 15 of the springs 16, and the pivots of the rigid links 17 are mounted on a head 24 secured to the device 25 by which the pulleys 26 are connected to the axle 1 of the vehicle. The said head 24 is pivoted to the axle 1.

It will be readily understood that movements of the pulley 26 about the axle 1 will result in causing an oscillation about the axle 1 of the pivot pins 15 of the springs 16 and the pivot pins of the links 17; there is thus a constant connection between the positions of the device supporting the rollers and the corresponding positions of the pulley supporting the endless band.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a vehicle propelled by an endless band, a connecting device arranged between the brackets carrying the supporting rollers for the said band and the chassis of the vehicle and comprising two superposed members each adapted to oscillate about a central pivot, the said two members being pivoted to the said brackets with which they form a jointed parallelogram, and the said central pivot pins being supported by parts connected to the chassis of the vehicle, the various joints being, if desired, mounted on elastic sleeves or sockets.

2. A connecting device according to Claim 1, in which the said two members are constituted by leaf springs forming a connection between the said brackets and two pivot pins carried by parts connected to the chassis of the vehicle.

3. A connecting device as claimed in Claim 1, in which the said two members are constituted by a leaf spring or by two leaf springs mounted side by side, and by two links arranged one in front and the other at the back of the axle, and each having one end pivoted on a pin near the axle, and the other end pivoted to one of the said brackets.

4. A connecting device as claimed in Claim 1 in which both the said members are constituted by rigid pivoted links or levers.

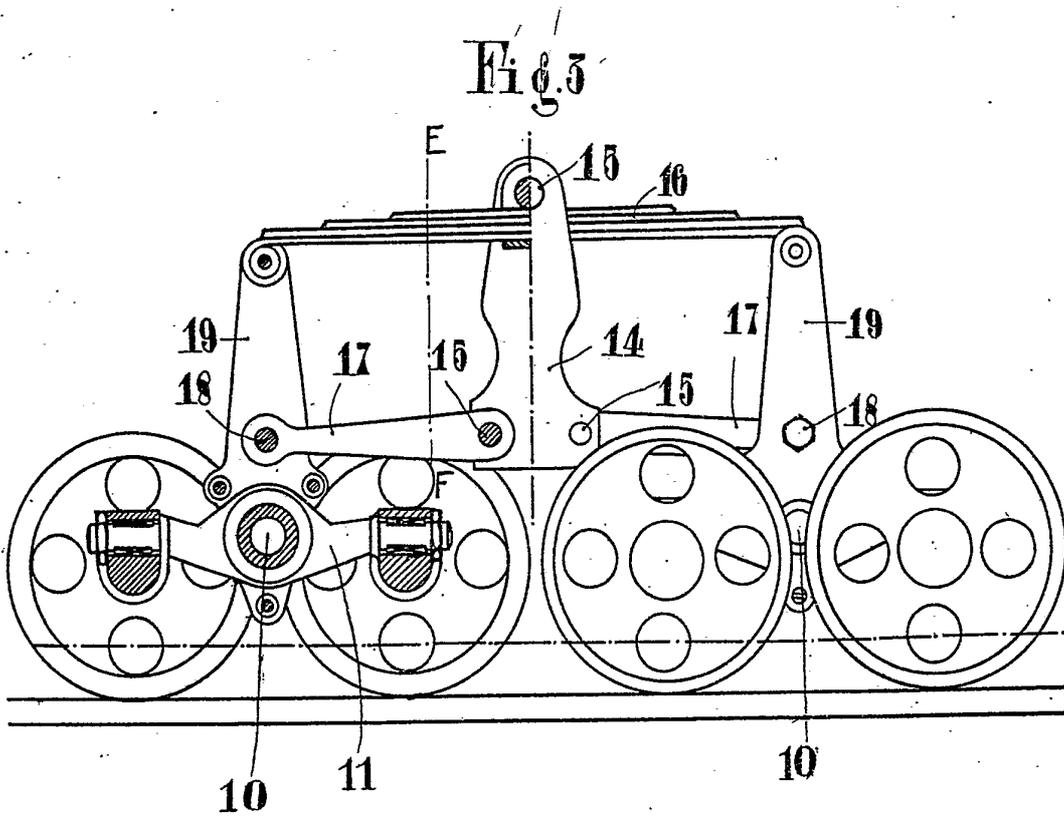
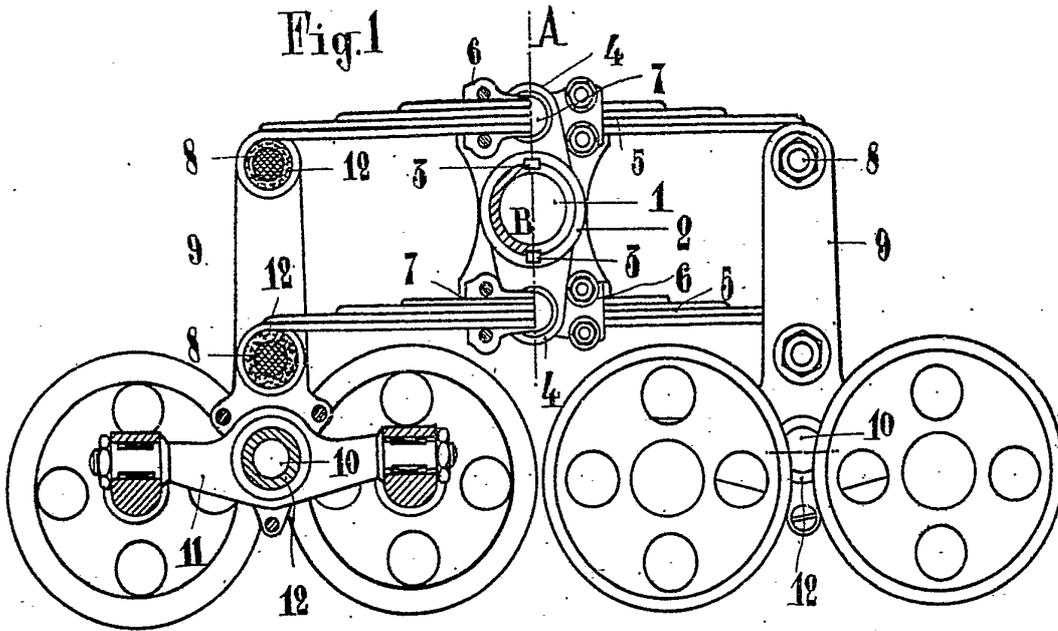
5. A connecting device as claimed in any of the preceding Claims 1—4 characterised by the pivot pins of the said members being mounted on a head pivoted to the axle of the vehicle and secured to a device by which the pulleys are connected to the axle of the vehicle.

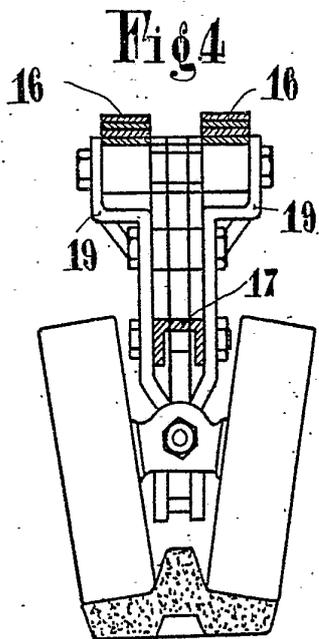
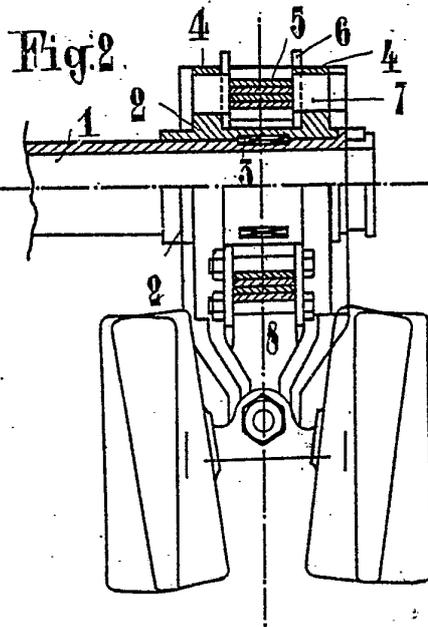
6. The device substantially as described and illustrated in Figures 1 and 2, or in Figures 3 and 4, or in Figures 5 and 6 of the accompanying drawings.

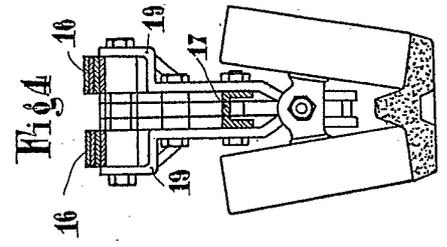
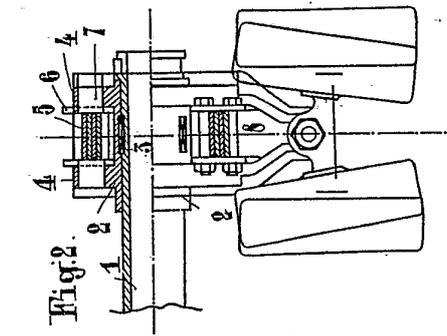
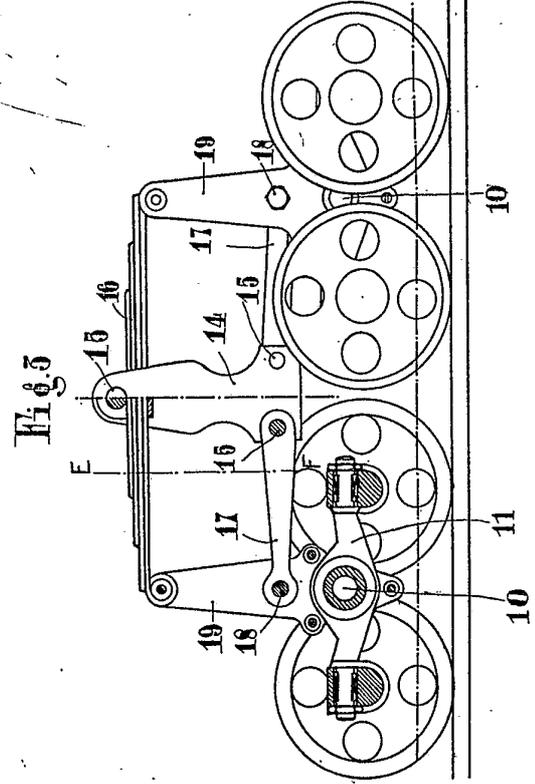
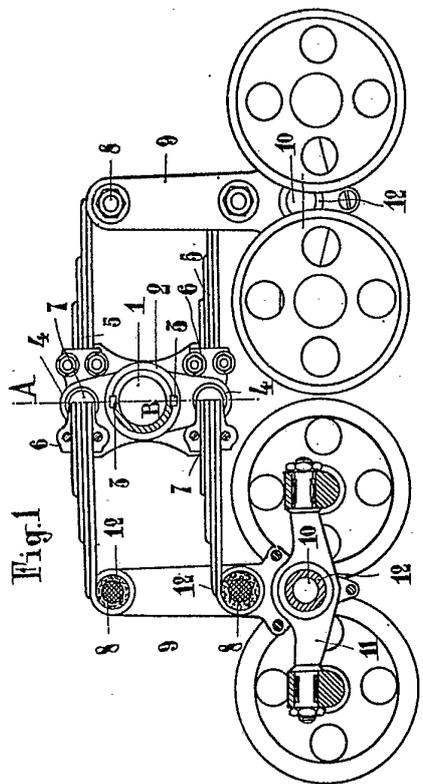
Dated this 22nd day of November, 1922.

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[This Drawing is a full-size reproduction of the Original]

Fig. 5.

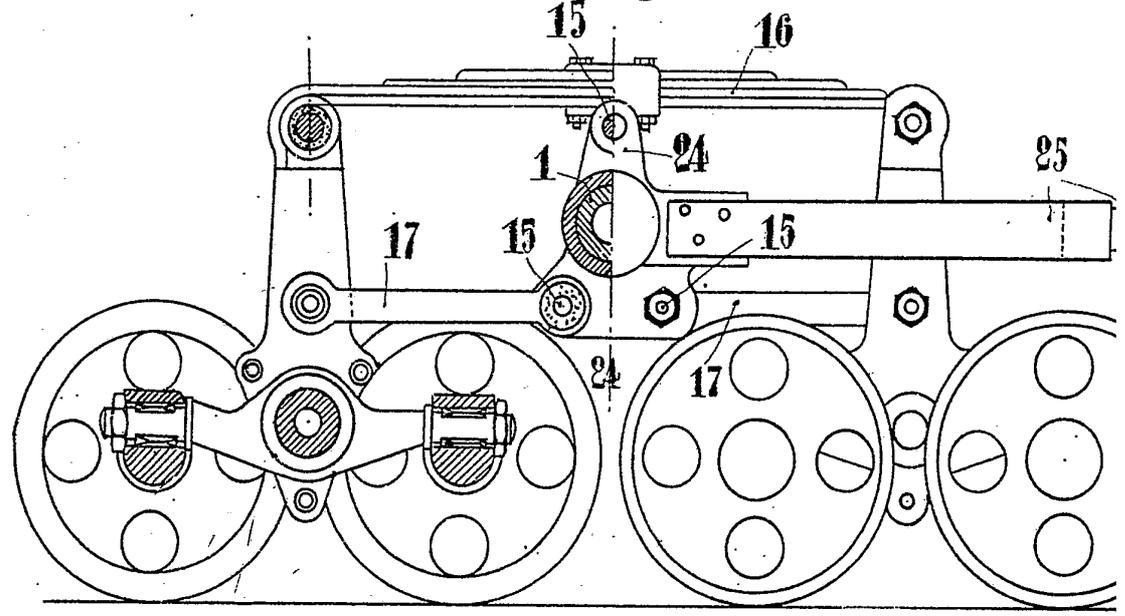
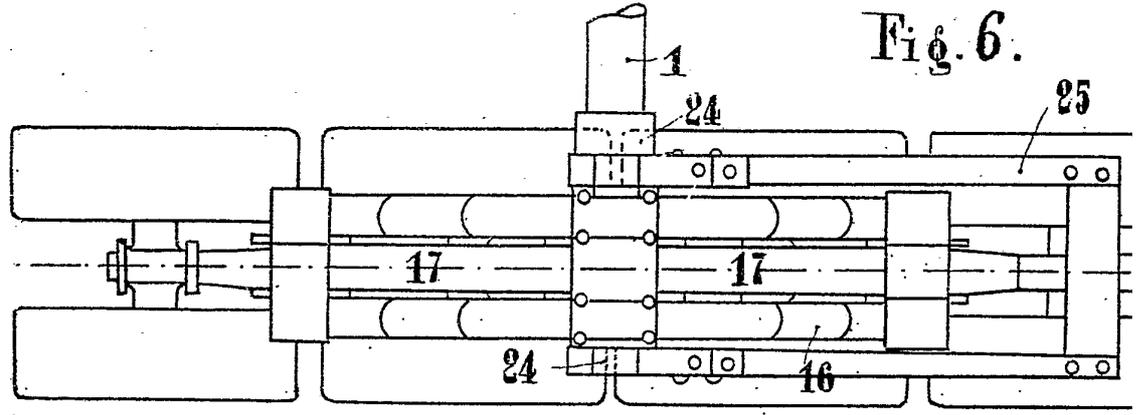


Fig. 6.



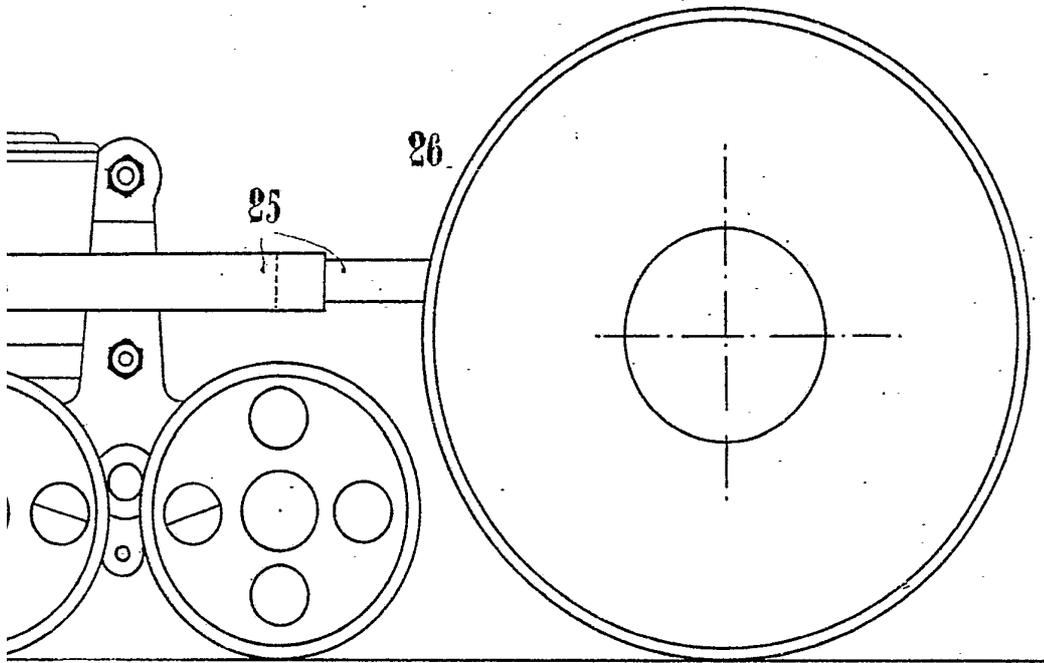
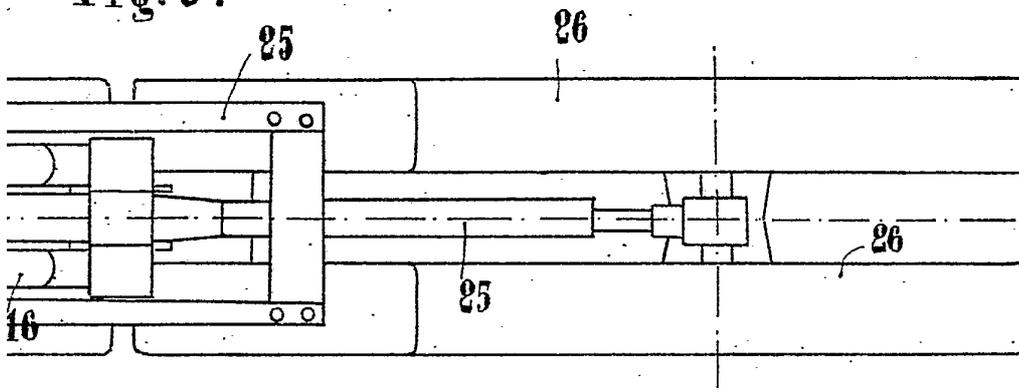


Fig. 6.



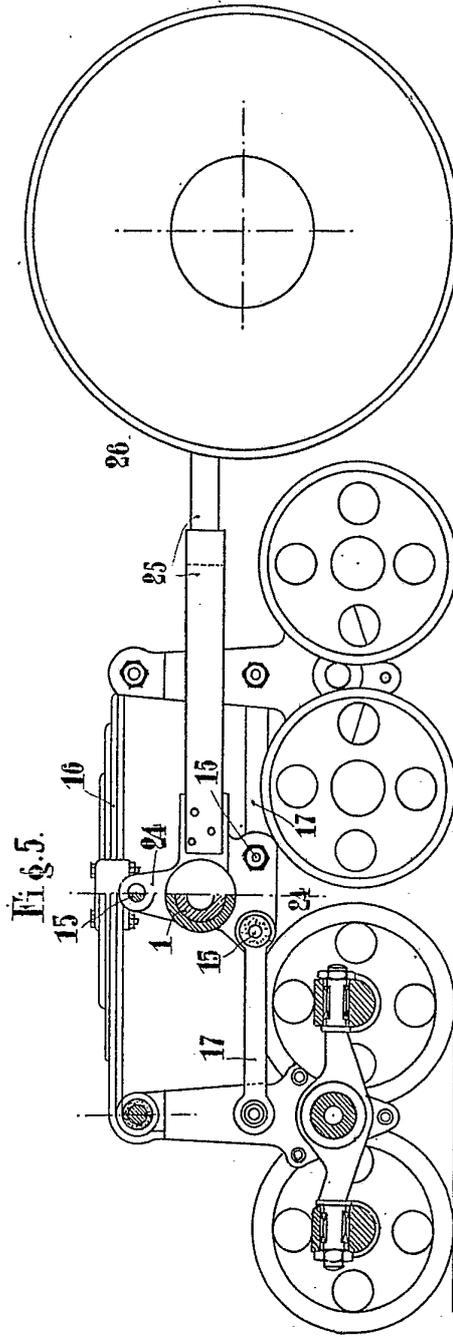


Fig. 5.

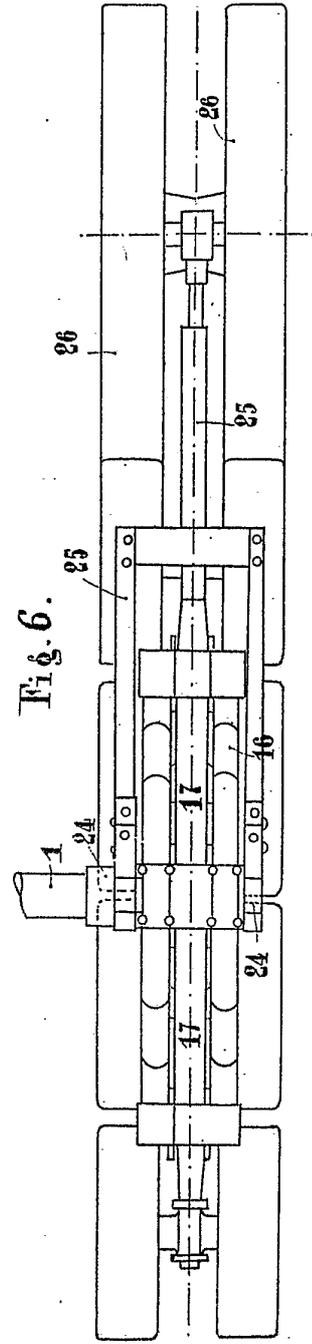


Fig. 6.

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