

PATENT SPECIFICATION



Convention Date (France) : March. 6, 1935.

452,264

Application Date (In United Kingdom) : Feb. 7, 1936.

No. 3824/36.

Complete Specification Accepted : Aug. 19, 1936.

COMPLETE SPECIFICATION

Improvements in Endless Tracks for Vehicles

I, ADOLPHE KEGRESSE, a French Citizen, of 48, Rue du Théâtre, Paris, France, 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:—

The effort to obtain high speed for endless track vehicles in which the running of the rollers takes place on metal, leads to the use for the supporting rollers of coverings or tyres of rubber in order to prevent the noise which is created by the running of a metal roller on a metal path in sections.

In flexible endless track vehicles the metal rollers running on a belt are obviously silent, but have the defect that the metal rollers when loaded beyond a certain amount and driven beyond a certain speed, very rapidly deteriorate the belt particularly when the machine is working on uneven ground; the mud and pieces of soil penetrate between the rollers and the belt and so into this latter and make it useless.

For this reason, the idea has for many years been tried of running the rollers alongside the endless band directly on the metal parts of the track. In this case, to prevent noise, the rollers have been covered with rubber as with the entirely metallic endless track vehicles.

Practice has shown that this solution was satisfactory in the two types of endless track referred to at comparatively low speeds. On very fast machines the rubber tyres of the rollers become excessively heated and become detached or deteriorated very rapidly.

It therefore appears advisable to seek to do away with this tyre and to cause the rollers with metallic rims to run directly on the metal plates of the endless track. This is what takes place on many vehicles with metallic tracks. The introduction of this construction, though simple, is restricted, as has been explained above, by the noise.

On closely studying the problem to be solved, it is found that the noise of a metal roller running on a metal path is produced principally by the passage of the roller from one metal plate on to the next one.

The present invention relates to a device which if not permitting the total suppression of this noise, at least deadens it to a large extent, this result being obtained by the interposition of pieces of resilient material between each two adjacent plates at the place of the running path of the rollers.

In the annexed drawing, by way of example:—

Figure 1 is a sectional view on the line A-B of Figure 2 showing the device in question applied to a flexible endless track with the roller running track on the outside;

Figure 2 is a sectional elevation on the line C-D of Figure 1;

Figure 3 is a plan view;

Figure 4 shows in section on the line E-F of Figure 5 the application of the device to a triple belt track;

Figure 5 is an elevation of this last track in section on the line G-H of Figure 4;

Figure 6 is a plan view.

In Figures 1, 2 and 3 the endless track is constituted in the known way, by a flexible belt 1 (Figures 1 to 3) fixed on metal plates 2 (Figures 1, 2) by means of bolts 3 and 4 which fix integral with the whole of the guide blocks 5 and the driving teeth 6 (Figures 1, 2 and 3).

The supporting rollers run on the marginal part 7 (Figures 1, 3) of the metal plates 2, on each side of the belt 1. These plates mounted so as to touch each other, carry at the level of the running path of the rollers and on each side of the belt recesses in which are placed pieces of resilient material 8 (Figures 1, 2, 3).

As will be seen from the figures, this piece 8 is held in place by the belt itself under which it partially engages.

It will be easily seen that, owing to this improvement, the load supporting rollers pass from one plate to the other, crushing to a certain extent the elastic buffer 8 which thus deadens the noise produced by the shock arising from the passage of the metal roller from one plate to the next one.

Figures 4, 5 and 6 show an example of applying the invention to an endless track with three belts 9, 10, 11 (Figures 4, 6) also mounted on metallic plates 12

60

65

70

75

80

85

90

95

100

105

110

(Figures 4, 5). Here the running paths of the rollers 13 are located between the central belt 9 and the side belts 10 and 11 (Figures 4, 5, 6).

5 This running path, according to the type of endless track shown by Figures 1, 2, 3, is separated between each metal plate 12 by a piece of plastic material 14 lodged in the plates 12 and flush with the surface of the running path of the rollers.

The pieces 14 and the corresponding recesses in the plates 12 are made sufficiently long for their extremities to engage under the belts 9, 10, 11 (Figure 4). In this way, the pieces 14 are held automatically in position.

20 Here, the recessing of the part 12 is shown on a single plate, whilst in the preceding type of endless track the piece of resilient material 8 (Figures 1, 2 and 3) extends over two adjacent plates. These two modifications attain the same result.

25 Instead of giving the plastic pieces 8 and 14 a rectangular section as shown on the drawing, they may be provided of half round, dovetail or other section.

30 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. Noise-suppressing device for endless tracks wherein the rollers run on metal plates connected by a flexible belt or belts, characterised by the interposition of pieces of resilient material between each two adjacent plates at the place of the running path of the rollers. 35

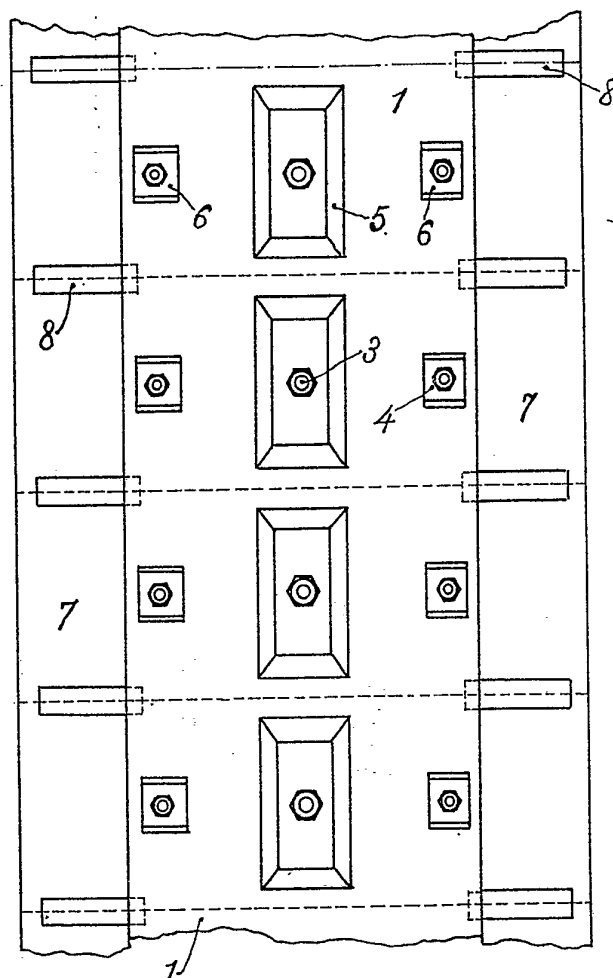
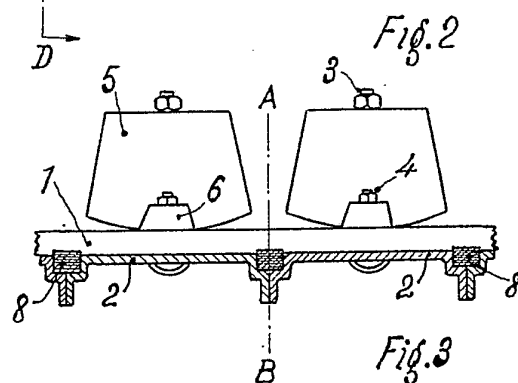
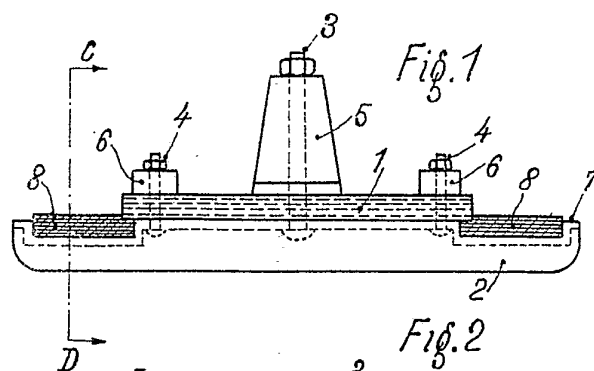
2. A device as claimed in claim 1, wherein one of the ends of the piece of resilient material or both ends of the said piece project beneath the endless belt or belts of the track which thus serve to retain them. 40

3. A device as claimed in claim 1, wherein the pieces of resilient material have a section such that they are held in their recesses. 45

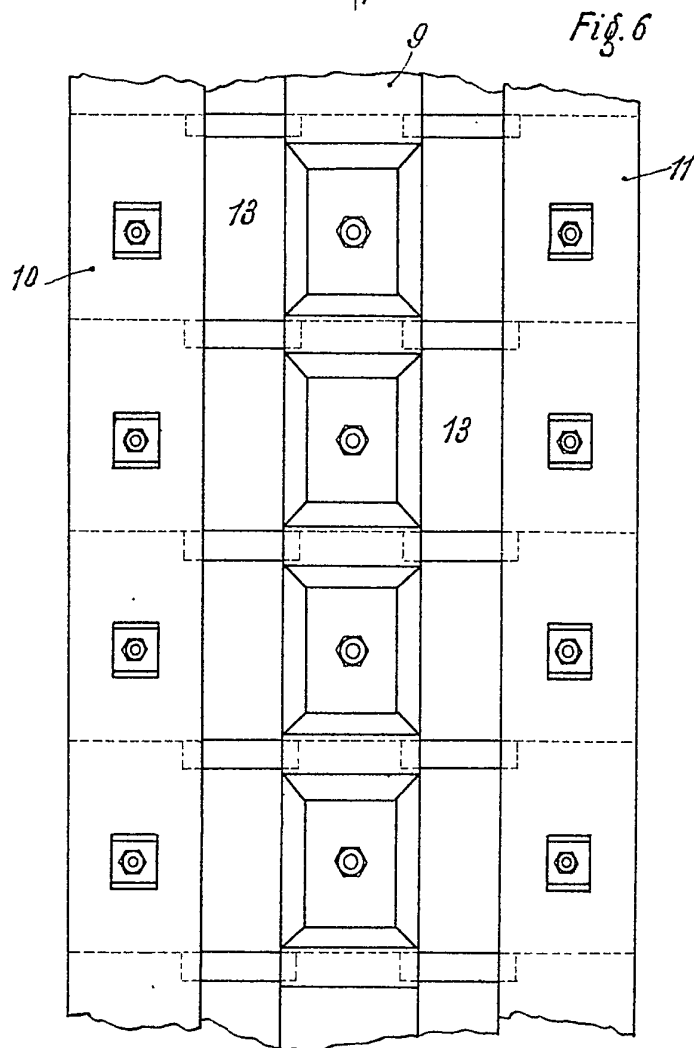
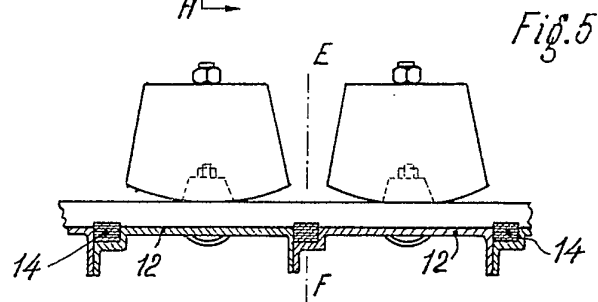
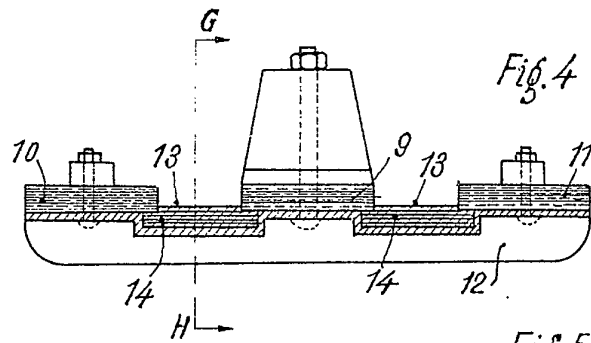
4. Endless tracks for vehicles, substantially as described or substantially as shown in the accompanying drawing. 50

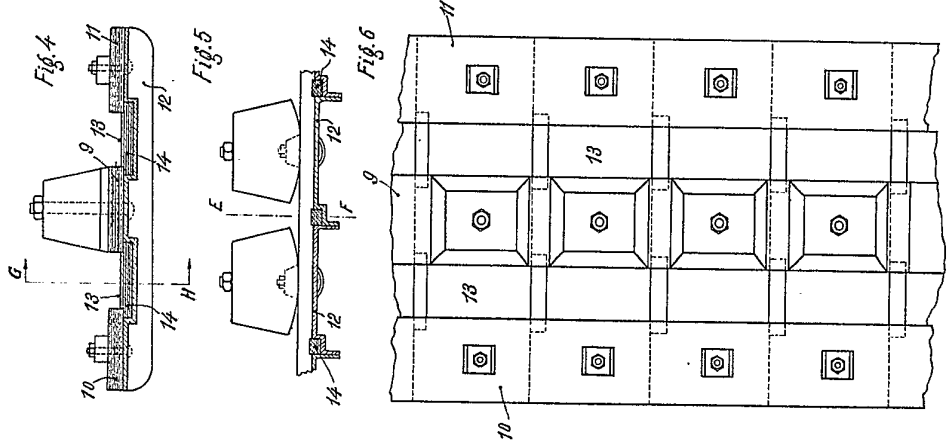
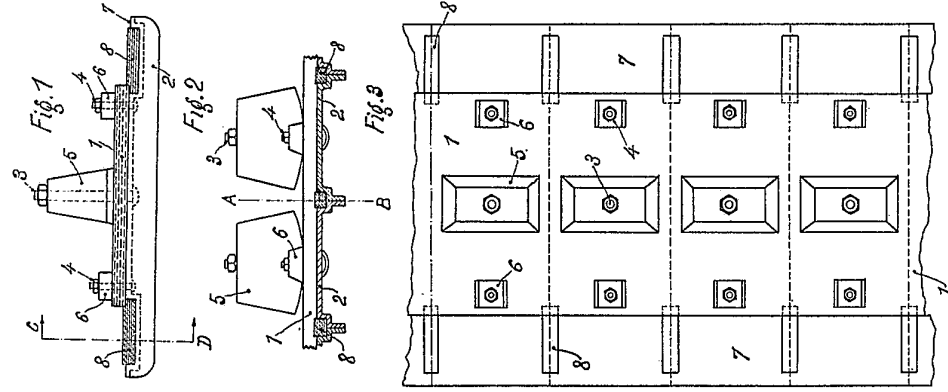
Dated this 7th day of February, 1936.

Adolphe Kegresse,
Per BOULT, WADE & TENNANT,
111/112, Hatton Garden,
London, E.C.1,
Chartered Patent Agents.



[This Drawing is a reproduction of the Original on a reduced scale.]





[This Drawing is a reproduction of the Original on a reduced scale.]