Oct. 26, 1943. A. W. HERRINGTON 2,332,715

TRACTOR TRACK AND TRACK UNIT

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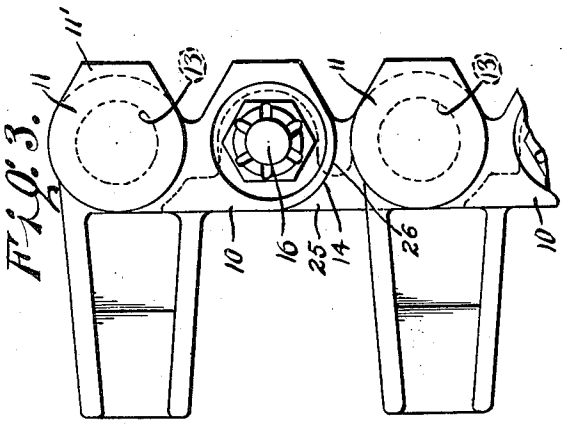


Fig. 3.

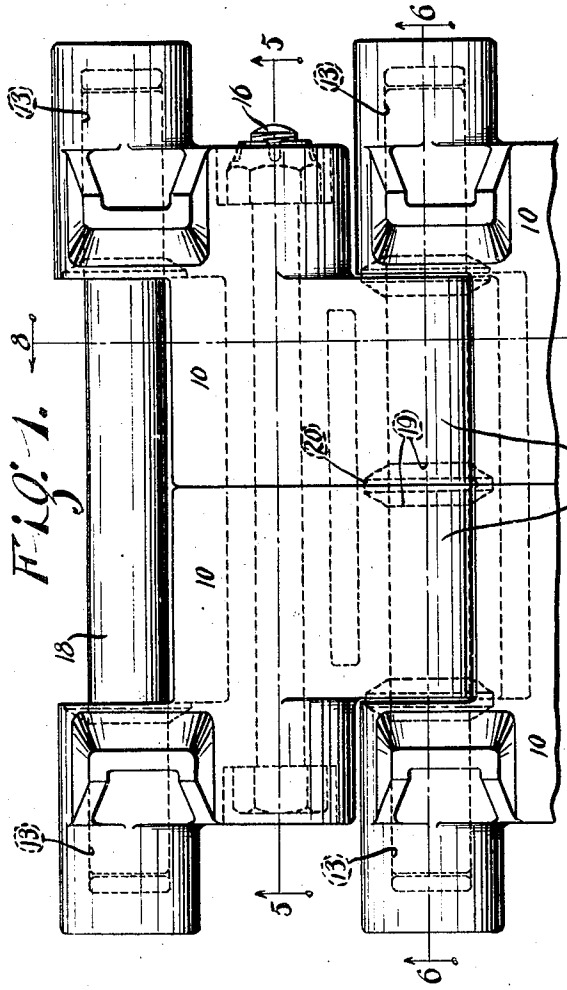


Fig. 1.

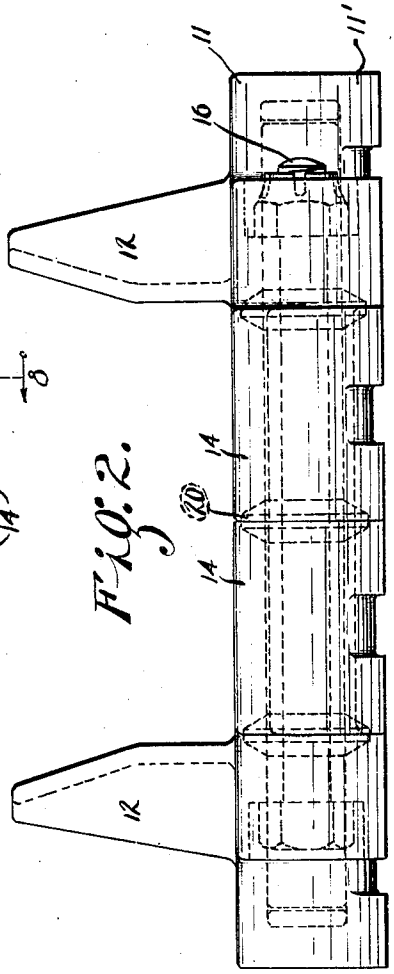


Fig. 2.

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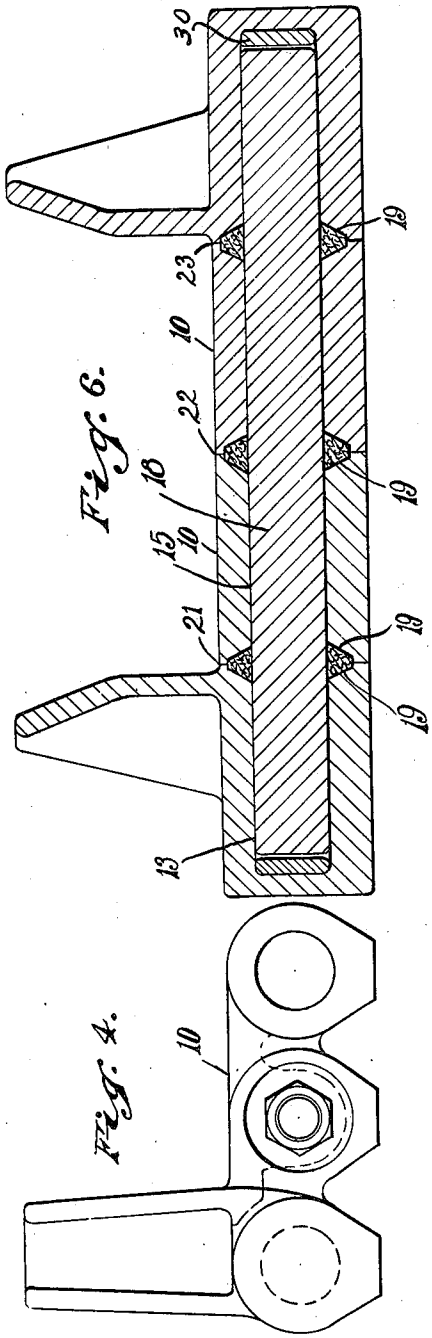


Fig. 6.

Fig. 4.

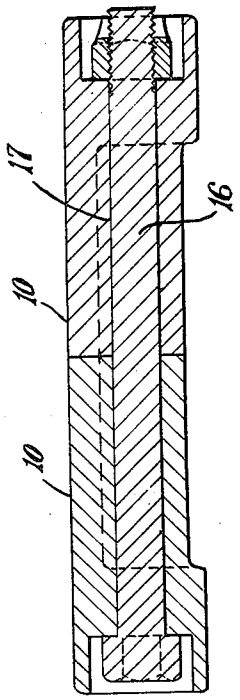


Fig. 5.

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Oct. 26, 1943. A. W. HERRINGTON 2,332,715

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Fig. 7.

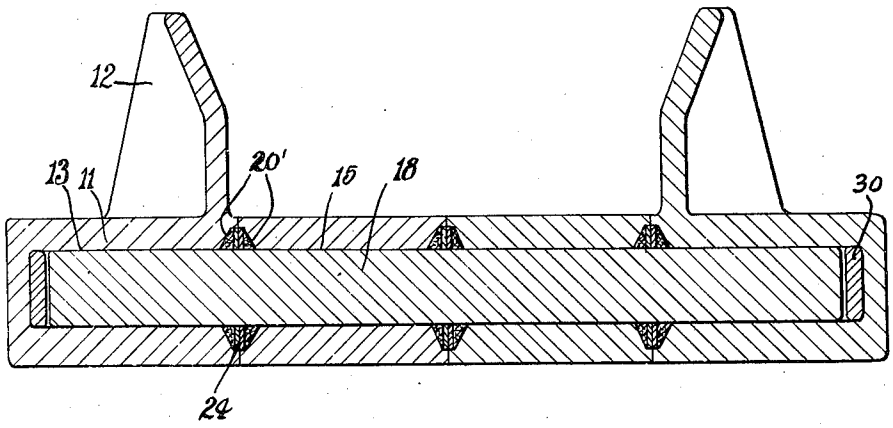
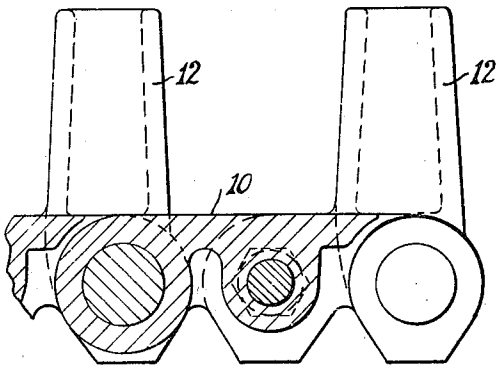


Fig. 8.



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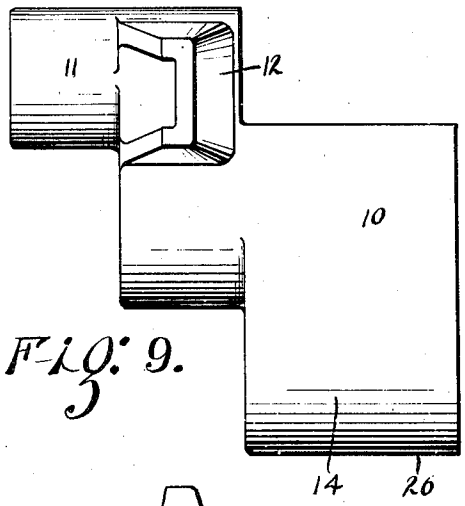


Fig. 9.

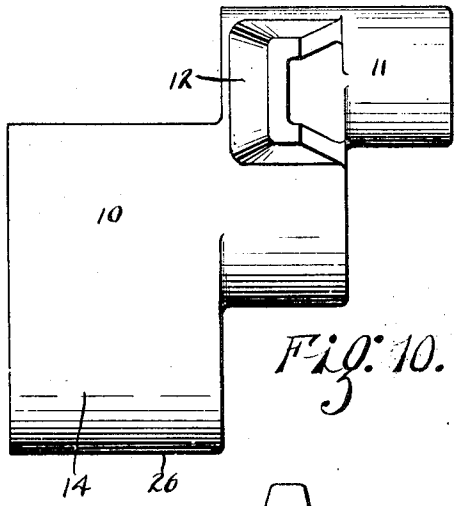


Fig. 10.

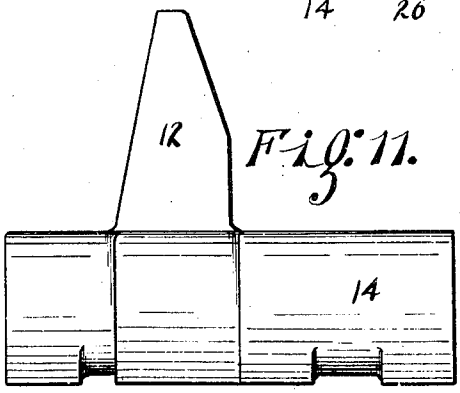


Fig. 11.

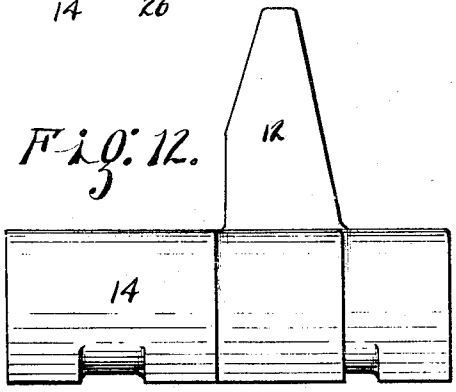


Fig. 12.

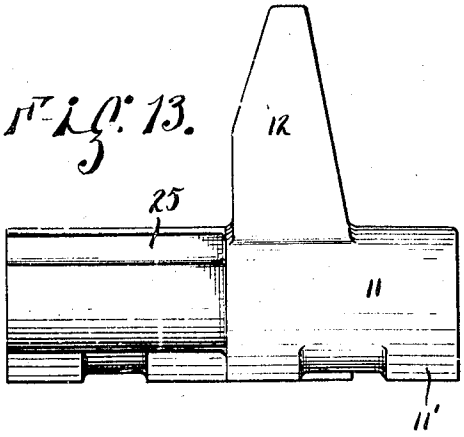


Fig. 13.

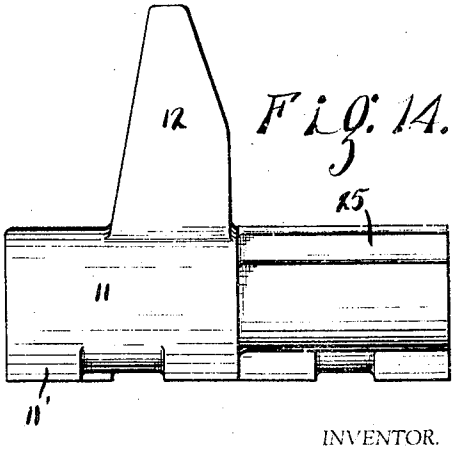


Fig. 14.

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TRACTOR TRACK AND TRACK UNIT

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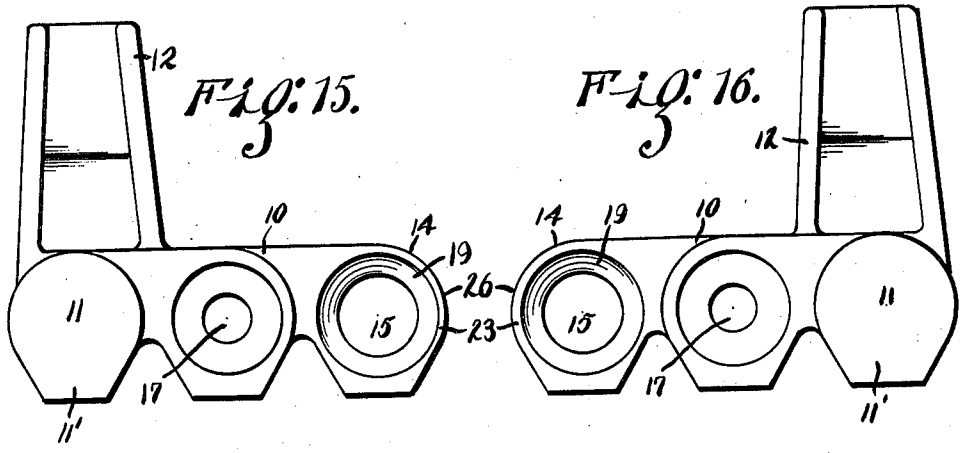


FIG. 15.

FIG. 16.

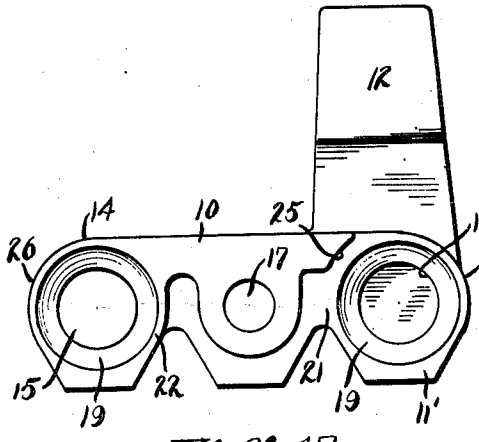


FIG. 17.

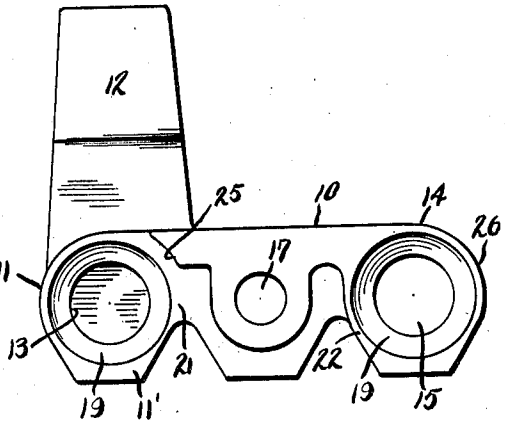


FIG. 18.

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Patented Oct. 26, 1943

2,332,715

UNITED STATES PATENT OFFICE

2,332,715

TRACTOR TRACK AND TRACK UNIT

Arthur W. Herrington, Indianapolis, Ind., assignor to Marmon-Herrington Company, Inc., Indianapolis, Ind., a corporation of Indiana

Application September 21, 1940, Serial No. 357,689

3 Claims. (Cl. 305—10)

The object of my invention is to provide an improved form of link, a multiplicity of which, pivotally connected in series, will form an efficient, long-lived, low-resistance endless track for vehicles of the track-laying type.

The accompanying drawings illustrate my invention.

Fig. 1 is a top plan of one complete link and part of an identical connected link embodying my invention;

Fig. 2 a side elevation of the part shown in Fig. 1;

Fig. 3 an elevation of one end of a link;

Fig. 4 an elevation of the other end of a link;

Fig. 5 a vertical section on line 5—5 of Fig. 1;

Fig. 6 a vertical section on line 6—6 of Fig. 1;

Fig. 7 a section, similar to Fig. 6, showing a modification;

Fig. 8 a vertical section on line 8—8 of Fig. 1;

Figs. 9 and 10, plans of two allochiral parts of a link;

Figs. 11 and 12, elevations of one end of the two allochiral parts;

Figs. 13 and 14, elevations of the other end of the two allochiral parts;

Figs. 15 and 16, elevations of the outer faces of the two allochiral parts; and

Figs. 17 and 18, elevations of the abutting faces of the two allochiral parts.

Each link is composed of two allochiral parts each comprising a platform 10 to receive the tire of the supporting wheels of the vehicle and the rims of the usual driving sprocket and idler. Integral with each platform, at an outer corner, is a lug 11 carrying a guard finger 12. Each boss is provided with a blind bore 13 open only at its inner end and the two bores are axially aligned, their inner ends being separated the widths of opposite ends 14 of the platforms 10, and said opposite ends are provided with aligned bores 15 capable of mating alignment with bores 13 of another link.

The two parts of each link are firmly united by means of a bolt 16 lying in bores 17 between bores 13 and 15.

Successively, links are pivotally connected by pivot pins 18 which extend through bores 15 of one link and project into the blind bores 13 of the adjacent link.

The open mouths of the bores 13 and 15 are counterbored to form coned annular pockets 19 in each pair of which packing 20 is mounted. This packing is preferably of one of the modern substitutes for rubber, unaffected by oils and grease and, either as a result of its inherent elasticity of compressing produced by bolts 16, closely hugs pins 18 in the areas of the vertical mating planes 21, 22 and 23 of the links.

The outer end of each lug 11, for about three-quarters of its vertical cross-section, is circular, while its lower portion is formed into a ground-engaging rib 11', as shown in Fig. 3. The upper edge of platforms 10, flanking lug 11 is an overhanging tip 25 the under surface of which is concentric with the bore 13, and the opposite edge of the platform is a convex surface 26 concentric with bore 15, so that, when two links are connected by pin 18, the end 26 of one link fits closely under the lip 25 of the adjacent link, so that the upper faces of the platforms of connected links form a substantially continuous surface upon which the associated wheels will ride. The projecting outer ends of lugs 11 serve as trunnions for engagement by the teeth of the associated sprocket wheel.

The relative angular movement between two adjacent links is comparatively small and may be within the elastic limit of the packing but, in order to avoid disrupting the packing, it may be desirable to form each packing as two mating rings 20', 20' (Fig. 7) with a pair of thin metal washers 24, 24 therebetween.

A mating pair of link elements having been bolted together by a bolt 16, and pin 18 and associate packings 20 having been placed in bores 15, the blind bores 13 of the next mating pair of link elements are sleeved over the projecting ends of pin 18 and the link parts are connected by their bolt 16. This operation is repeated until the requisite number of links are assembled with the final link connected to the initial link.

The pivoted action of each link relative to the next adjacent link takes place about pins 18 and, as bores 13 are closed at their outer ends, no dirt can enter these bores at the ends of the pins and no means, other than the clamping bolts 16, are required to retain pins 18 in place. The packings thoroughly guard the bores 13 and 15 against entry of grit and mud at points intermediate the lengths of pins 18.

In order to avoid the possibility of the ends of pins 18 wearing through the blind ends of bores 13, a hardened thrust button 30 may be interposed between each end of pin 18 and the bottom of bore 13.

I claim as my invention:

1. An endless track, for track laying vehicles, composed of a plurality of links each of which is composed of two allochiral pieces, each of which comprises a main-body platform provided

at one corner with a projecting lug having a blind bore having its only open end adjacent the main body and spaced from the inner longitudinal edge of the main body a distance substantially equal to the width of the opposite end of the main body and its outer end closed by material integral with the main body, said main body having, adjacent said opposite end, a transverse bore axially alignable with the bores of the projecting lugs of a similar link, said main body having intermediate transverse alignable bores, said several bores having their open ends counterbored, and said main body having intermediate transverse alignable bores, a bolt mounted in said last-mentioned bores and uniting the two allochiral pieces, a pivot pin mounted in each pair of second-mentioned bores with its opposite ends extended into the aligned bores of the adjacent link, and an annular packing mounted in each mating pair of said counterbores.

2. A link for endless tracks of motor vehicles, said link comprising two allochiral parts each having a wheel-supporting platform defined at its inner side by a vertical surface abuttable upon the similar surface of its fellow and transversely perforated by a bolt-receiving bore piercing said surface, and each having at the outer corner at one end a transverse lug the inner vertical face of which is outwardly spaced from said abuttable surface and provided with a transverse pivot-pin-bore closed at its outer end, and each having at its opposite end a transverse bore alignable with a closed bore of a companion link, a pivot pin mountable in said last-mentioned transverse bores and the closed bores of a companion link, the combined widths of said opposite ends of the link parts being less than twice the outward spacing of the inner end of one of said lugs from the adjacent abuttable vertical surface, and a bolt extending through the said bolt-receiving bores and firmly clamping said abuttable surfaces upon each other.

3. A link for endless tracks of motor vehicles, said link comprising two mating parts each having a wheel-supporting platform defined at its inner side by a vertical surface abuttable upon the similar surface of its fellow and transversely perforated by a bolt-receiving bore piercing said surface, and each having at the outer corner at one end a transverse lug the inner vertical face of which is outwardly spaced from said abuttable surface and provided with a transverse pivot-pin-bore closed at its outer end and each having at its opposite end a transverse bore alignable with a closed bore of a companion link, a pivot pin mountable in said last-mentioned bores and the closed bores of a companion link, the combined widths of said opposite ends of the link parts being less than twice the total spacing between the inner ends of said lugs, and a bolt extending through the said bolt-receiving bores and firmly clamping said abuttable surfaces upon each other.

ARTHUR W. HERRINGTON.