

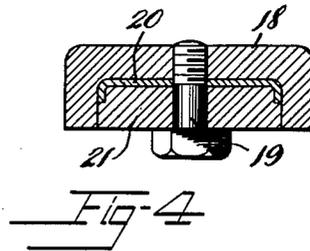
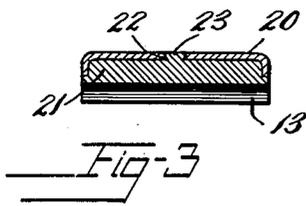
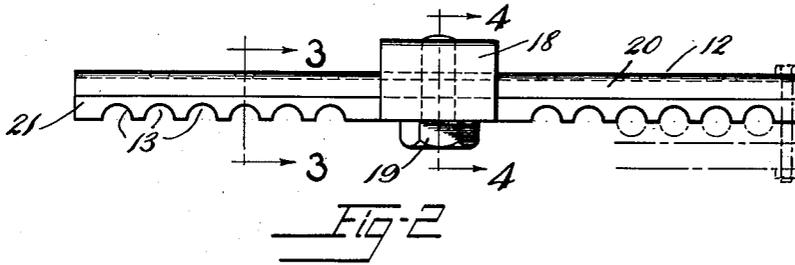
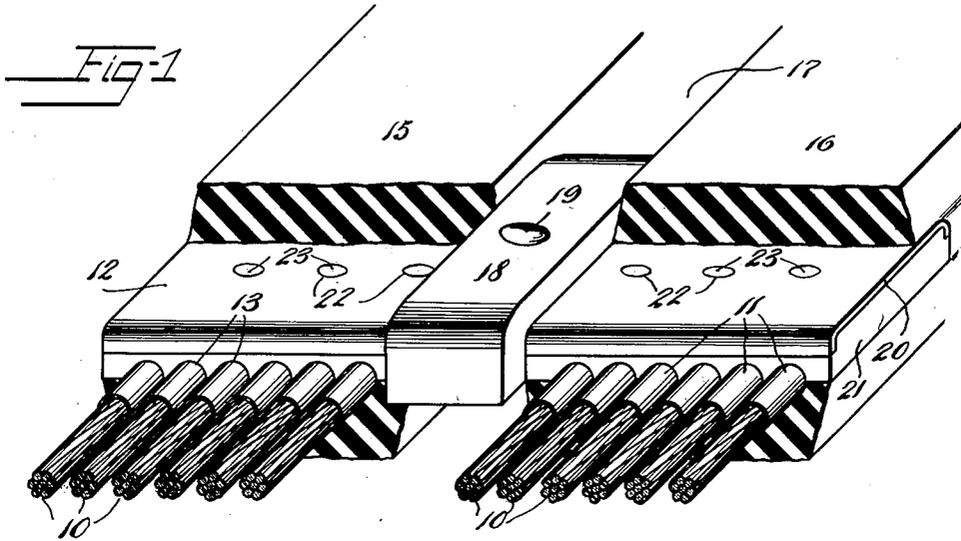
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TRACK FOR SELF-LAYING TRACK VEHICLES

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TRACK FOR SELF-LAYING TRACK VEHICLES

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10 Claims. (Cl. 305—10)

This invention relates to track for self-laying track type vehicles and is especially useful in the manufacture of track for vehicles such as tractors, excavators, farm implements, and military tanks.

The principal objects of this invention are to provide dimensional accuracy of parts with great strength and rigidity, to provide an improved cross-bar and especially to provide advantages resulting from a composite construction, and to provide for convenience of manufacture and economy of materials.

These and other objects will appear from the following description and the accompanying drawing.

Of the drawing,

Fig. 1 is a perspective view of a section of flexible track made in accordance with and embodying the invention, the body of the track being broken away and sectioned to show the cables and a cross-bar.

Fig. 2 is a side elevation of one of the cross-bars and the wear plate.

Fig. 3 is a cross-section of the cross-bar taken along line 3—3 of Fig. 2.

Fig. 4 is a cross-section taken along the line 4—4 of Fig. 2.

In accordance with the invention the cross-bars are constructed of sheet metal formed to provide a channel, and cast metal of lower melting point filling the channel and formed to the desired shape to space the cables. This combination of sheet metal in channel form and cast metal, which may be conveniently die-cast, makes possible an economical construction that satisfies also the requirements of strength and shape for this particular purpose.

Referring to the illustrative embodiment of the drawing, the track shown comprises a plurality of reaches 10 of metallic cables, each enclosed by a coating 11 of vulcanizable rubber-like cushioning material. The cable reaches extend in parallel relation in spaced-apart groups, and are held in spaced relation by a plurality of cross-bars having spacing grooves 13 across one face thereof and secured to the reaches of cable at intervals along the track by means of the intervening rubber-like material 11, which may be bonded to the cables and cross-bars to transmit driving stress by shear stress of the material. Bodies 15, 16 of vulcanized rubber-like material extend parallel to each other throughout the track and enclose the cable reaches and portions of the cross-bars. A longitudinal space 17 for accommodating sprockets or guides or both

separates the bodies 15, 16. Removable wear plates 18 of U-shape are mounted over the cross-bars in the space 17 and are secured to the cross-bars by bolts 19.

5 Each cross-bar 12 comprises a channel element 20 of sheet metal, and a cast element 21 extending into the channel. The channel is preferably formed with countersunk openings 22 and the cast member is interlocked with the channel by dovetailed studs 23 integral therewith extending through the openings. The cast member may be formed in place by casting a metal having a lower melting point than that of the material of the channel against the hollow 15 channel of the channel member. This may be accomplished by employing the channel member as a chill in a green sand mold into which the molten metal for the cast member is introduced, or by enclosing the channel member in a metal 20 mold and forcing molten metal into the mold under pressure as in die-casting. If desired, the channel member may be tinned or coated with fluxing material to cause its surface to adhere to the cast metal.

25 A composite cross-bar of this construction requires little or no machining as the channel member may be formed accurately and the cast member, especially when die-cast, may be accurately formed with the cable-seating grooves 30 during the casting thereof. The construction provides a stiff strong back of sheet metal and accurately formed and spaced cable-seating recesses.

35 The channel member is preferably formed of steel and the cast member may be of metal capable of being die-cast such as alloys of copper, zinc, or aluminum. The wear plate 18 preferably extends about three sides of the cross-bar and assists in holding the members of the cross-bar in assembled relation. It may be removed and replaced when worn, by removing the tap 40 bolt 19.

45 As an optional construction, instead of utilizing open recesses to receive the cables as hereinabove described, each cross-bar may have an opposing member, indicated in broken lines in Fig. 2 which may be of a composite sheet metal and cast construction like the bar 12, which bar is formed with recesses aligned with the recesses 50 of the other member to provide apertures through the bar for accommodating the cables in a manner to restrain each cable entirely about its circumference. The arrangement preferably is such that the cable transmits driving force through shear stress of rubber-like material

provided between the cable and the cross-bar entirely around the cable.

Variations may be made without departing from the scope of the invention as it is defined by the following claims.

I claim:

1. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar comprising a metallic backing member and a facing of cast metal thereon having recesses in an exposed face thereof for accommodating the cable reaches, said facing including means integral therewith interlocked with said backing.

2. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar comprising a sheet metal backing member of channel form, and an element of metal cast within said channel and integrally secured thereto, said element having recesses in its exposed face for accommodating the cable reaches.

3. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar comprising a perforated sheet metal backing member of channel form, and a facing of metal cast within said channel in interlocked engagement with the channel through its perforation and having recesses for accommodating the cable reaches.

4. A cross-bar for securing to a tension structure in a self-laying track, said cross-bar comprising a sheet metal member having a facing of cast metal adhered thereon presenting a grooved exposed face of the cast metal for accommodating the tension structure.

5. A cross-bar for securing to a tension structure in a self-laying track, said cross-bar comprising a sheet metal member of channel form and a facing of metal cast therein and presenting a recessed face of the cast metal for accommodating the tension structure.

6. A cross-bar for securing to a plurality of cable reaches in a self-laying track, said cross-bar comprising a perforated sheet metal member of channel form having a facing of metal cast in the channel and in its perforation and presenting a face of the cast metal recessed at spaced-apart positions to accommodate the cable reaches.

7. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar for holding said cables in spaced-apart relation, said cross-bar comprising a sheet metal backing member having means for engaging a facing member and a facing member of cast metal interlocked with said engaging means, said facing member having recesses in an exposed face thereof for accommodating the cable reaches.

8. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar for holding said cables in spaced-apart relation, said cross-bar comprising a sheet metal backing member having channel means for engaging a facing member, and a facing member of cast metal interlocked with said channel means, said facing member having recesses in an exposed face thereof for accommodating the cable reaches.

9. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar for holding said cables in spaced-apart relation, said cross-bar comprising a sheet metal backing member having apertures therethrough for engaging a facing member, and a facing member of cast metal interlocked with said backing member through said apertures, said facing member having recesses in an exposed face thereof for accommodating the cables reaches.

10. In a track for self-laying track-type vehicles in which laterally spaced reaches of flexible cable extend along the track, a composite cross-bar for holding said cables in spaced-apart relation, said cross-bar comprising a backing member of wrought metal of channeled cross section having apertures therethrough for engaging a facing member, and a facing member of cast metal of lower melting point filling the channel of said backing member and engaged in said apertures to interlock the member, said facing member extending outwardly beyond the channel to provide an unenclosed portion having recesses in an exposed face opposite the backing member for accommodating the cable reaches.

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