Jan. 18, 1944. H. A. KNOX 2,339,273

TRACK SHOE

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Fig. 1.

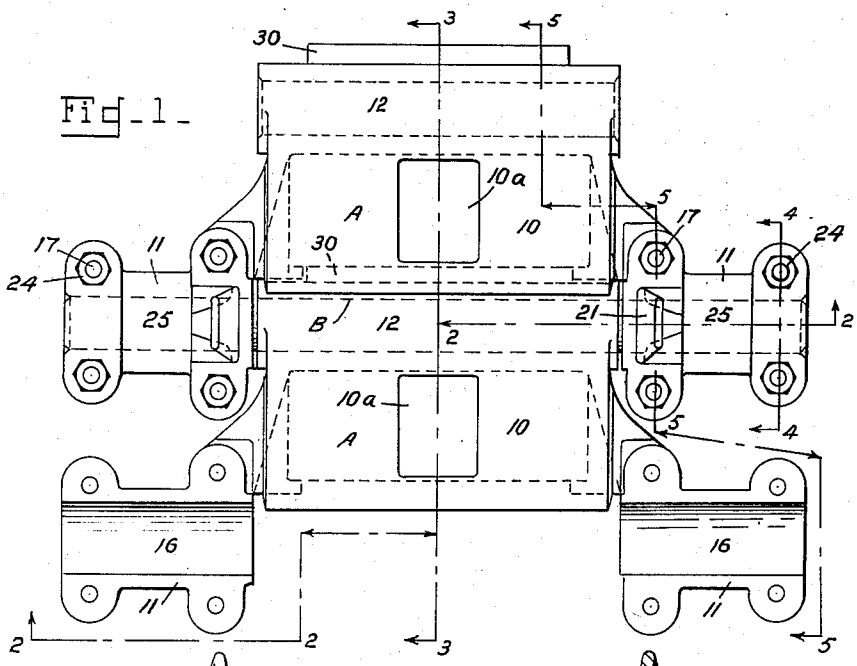


Fig. 2.

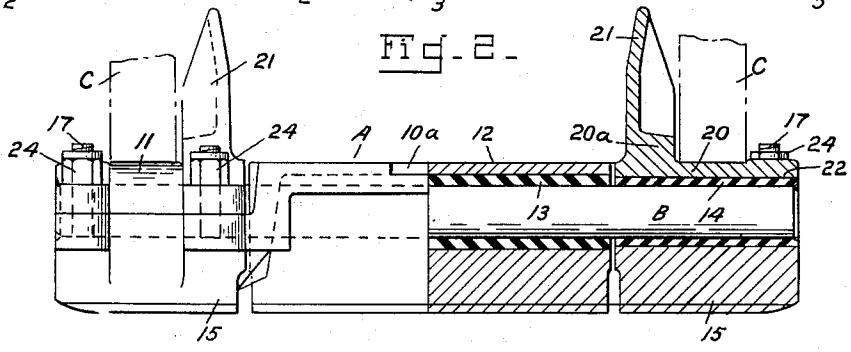
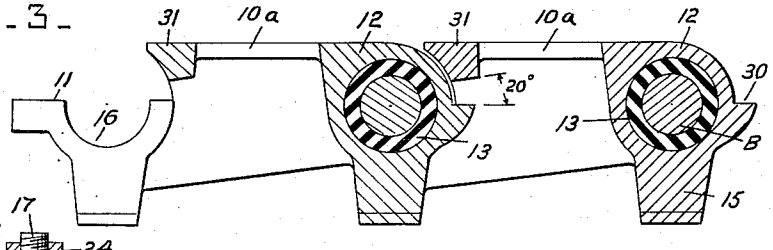


Fig. 3.



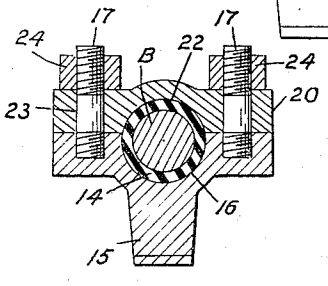


Fig. 4.

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Fig. 5.

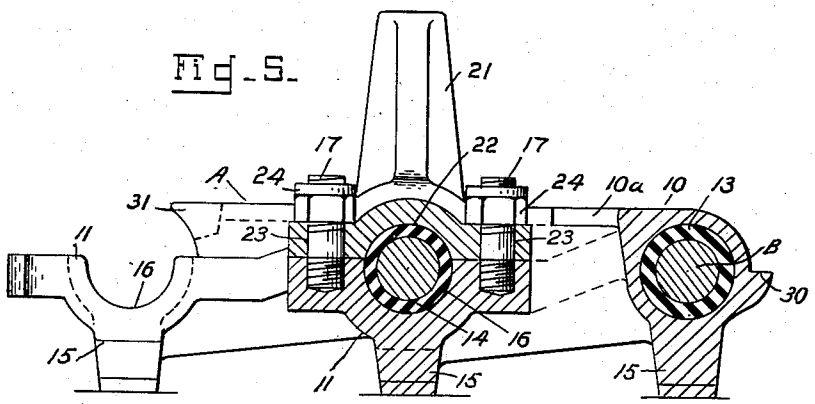


Fig. 6.

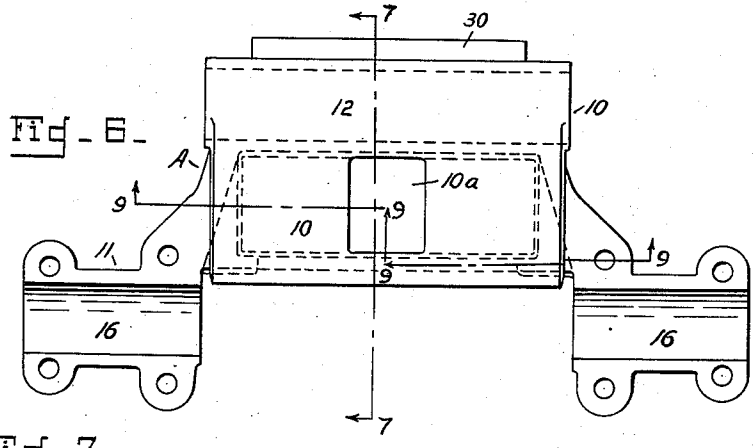


Fig. 7.

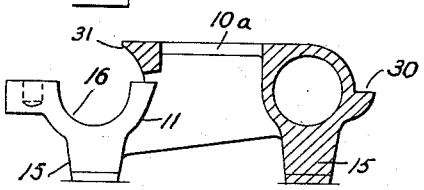


Fig. 8.

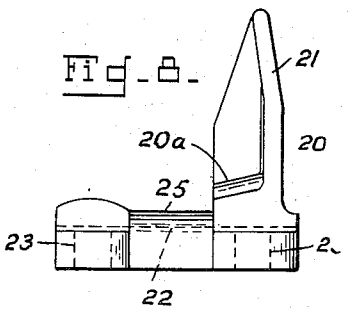
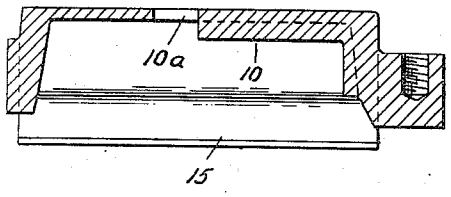


Fig. 9.



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UNITED STATES PATENT OFFICE

2,339,273

TRACK SHOE

Harry A. Knox, Washington, D. C.

Application August 2, 1941, Serial No. 405,159

3 Claims. (Cl. 305—10)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to a track for track laying vehicles.

An object of my invention is to provide a sturdy and novel mounting of a combination driving, guide and clamping member on the track end bearings which are adapted to hold a track link.

Another object of my invention is to provide a track having track shoes which might be readily disassembled and yet be of sturdy construction.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawings in which:

Fig. 1 is a plan view of two assembled track shoes of the lower flight of the improved track.

Fig. 2 is a sectional view on the line 2—2—2—2 of Fig. 1.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a sectional view on the line 4—4 of Fig. 1.

Fig. 5 is a sectional view taken on the line 5—5—5—5 of Fig. 1.

Fig. 6 is a top plan view of one of the track shoes with the pin and clamping members removed.

Fig. 7 is a sectional view on the line 7—7 of Fig. 6.

Fig. 8 is a side view of one of the end clamping members.

Fig. 9 is a sectional view on the line 9—9—9—9 of Fig. 6.

The track comprises a series of shoes A, constituting link members connected by means of link pins B.

The shoes are all identical and each one consists of a body 10, forming a rail and having a centrally located aperture 10*a* to reduce weight and to provide an opening for clearing mud and dirt. The body 10 has spaced bearings 11—11 on one of its ends and a single centrally located bearing 12 on the opposite end whose width is substantially equal to the spacing between the end bearings. When two shoes are assembled end to end, the bearing 12 of one shoe is adapted to fit between the spaced bearings 11—11 of the other shoe.

The link pin B has vulcanized thereto three rubber sleeves, one of which designated as 13 is disposed in the centrally located bearing and the other two 14—14 are disposed in the spaced bearings 11—11. The outside diameter of sleeve 13 is a little larger than the outside diameter of sleeves 14—14 so that when the link pin B is mounted on the track shoe frame, one of the end sleeves 14 might readily pass through the centrally located bearing 12 whereas the sleeve 13 is inserted in the bearing 12 by compressing the rubber sleeve 13 and it is thereby firmly held in place.

Cleats or "grousers" 15—15 are mounted integral with the body 10 and each cleat has a semi-cylindrical groove 16 forming the bearing 11 and adapted to receive and clamp one of the rubber sleeves 14. Each cleat 15 has four stud bolts 17 projecting therefrom towards the inside of the track.

A projection 30 formed on the outside of bearing 12 is adapted to coact with the body portion 31 of the adjoining link so as to limit the relative movement between adjoining link members.

Each member 20 serves the combined functions of a clamp, a guide for the wheels of the track laying vehicle and provides a driving member adapted to engage or be engaged by a sprocket C. Each member 20 has formed integral therewith the projection 21 which serves as a guide for the wheels of the track laying vehicle and a semi-cylindrical groove 22 adapted to receive and clamp the rubber sleeve 14. Four holes 23 in each member 20 allow passage for the stud bolts 17, and nuts 24 on bolts 17 serve to tighten the clamp proper. Each member 20 has a rounded portion 25 adapted to engage or be engaged by a sprocket C. The portion 20*a* of the wheel guide serves to take the side thrust of the sprocket C.

By virtue of the structure described the link pin B is held against free rotational movement in the end and center bearings and when either one of the adjoining shoes is flexed the resulting angular movement is accommodated largely through distortion of the rubber sleeves 13, 14—14.

I claim:

1. In a track for track laying vehicles, a clamping member having a semi-cylindrical groove formed therein and having a pair of coplanar surfaces adjacent to the groove, a guide mounted on the clamping member, said guide having its plane substantially perpendicular to the axis of the semi-cylindrical groove and to the coplanar surface.

2. In a track adapted to move on wheels and

be driven by a sprocket, a clamping member having a semi-cylindrical groove formed therein and having a pair of coplanar surfaces adjacent to the groove, a rounded portion on the clamping member adapted to engage the sprocket, and a guide mounted on the clamping member adapted to abut the wheels.

3. In a track-laying vehicle, a series of link members each comprising a body having two oppositely disposed spaced semi-bearing members, each member provided with a semi-circular groove, the space between said members being for the reception of a portion of the body of the adjoining link member, a link pin sleeve in the end of the body remote from said bearing members, a link pin in the sleeve with ends extending beyond said sleeve and having a resilient outer surface, a clamping member forming the other bearing member, and having a semi-circular groove matching with the groove in the companion member, and means for clamping the bearing members to hold the outer surface of the link pin in non-rotating relation to the bearing members.

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