Feb. 11, 1958 E. C. BAUER, JR 2,823,080

TRACTOR RAIL AND GROUSER PLATE ASSEMBLY

Filed June 22, 1955

Fig. 1.

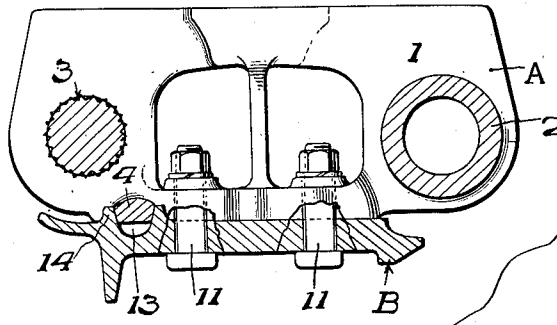
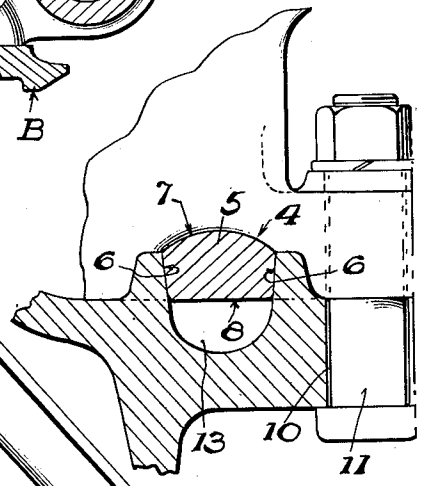


Fig. 3.



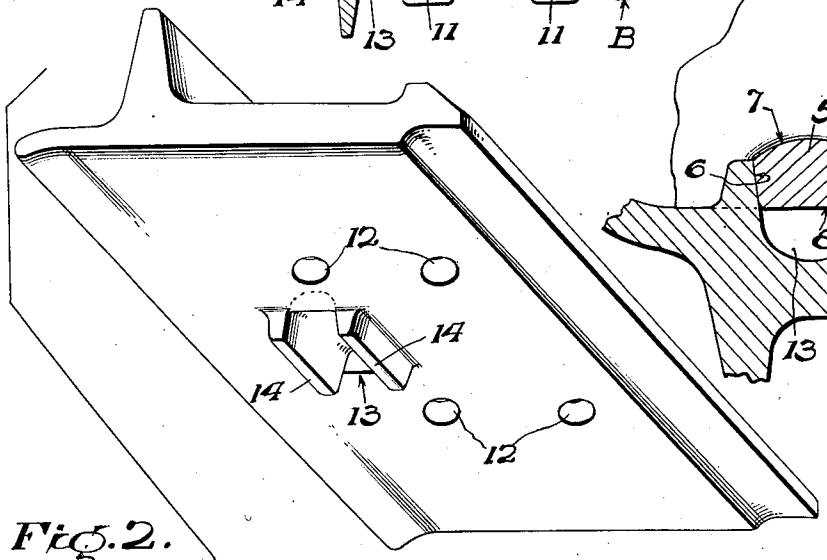
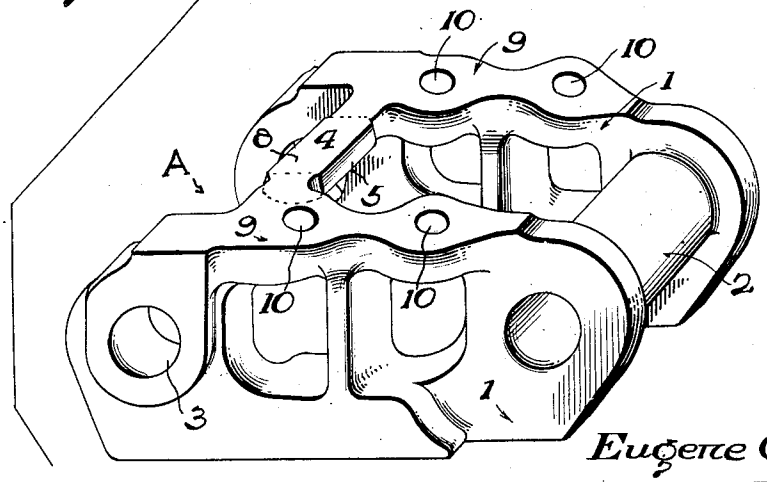


Fig. 2.



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TRACTOR RAIL AND GROUSER PLATE ASSEMBLY

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2 Claims. (Cl. 305—10)

This invention relates to an improvement in link units for tractor rails and the mating grouser plate.

The endless tracks or rails used on earth-moving equipment and the like are provided with grouser plates for obtaining advantageous traction with the earth. According to present practice the grouser plates are attached by bolts to the earthward side of the links composing the track or rail. The bolts, therefore, absorb the full shearing stress between the grouser plate and the related link unit, and on occasion, due to the heavy duty required of the grouser plates, the bolts become sheared or broken and an otherwise busy piece of apparatus is laid up for repair.

One of the objects of the present invention is to provide a track link and grouser plate assembly wherein the elements thereof are mechanically interlocked in the direction of horizontally applied stress thereby to relieve the strain on the bolts and provide an additional safeguard against both failure and consequent withdrawal of the apparatus from service with loss of time.

Another object of the invention is to provide a simple and practical form of interlock between the link unit and the grouser plate which becomes effective by the mere placing of the parts together, and then placing the usual bolts or like fastenings in place.

With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the construction and arrangement herein described and illustrated in the accompanying drawings, in which:

Fig. 1 is a longitudinal sectional view through a link and its related grouser plate showing the interlock.

Fig. 2 is an exploded perspective view of an inverted grouser plate showing the means for interlocking with the complementary interlocking means on the inverted link.

Fig. 3 is a detail sectional view of the interlocking means on a larger scale.

Similar reference characters designate corresponding parts in the several figures of the drawings.

As will be observed from the drawings, the link unit is designated generally as A and the grouser plate is indicated as B.

The link A is of the general type illustrated in my Patent No. 2,743,140, dated April 24, 1956. That is to say, the link includes the opposite side members **1—1** connected by pin barrel **2** and having pin receiving eyes **3** at the end opposite the barrel. The side members **1—1** are connected by tie bar **4**. However, the tie bar of the present invention differs from that shown in the patent in the respect that its medial portion is of enlarged cross-section, as indicated at **5**, to provide the interlock with the grouser plate as will more fully appear.

The enlarged portion of the tie bar **4**, as illustrated, is provided with opposite wedge faces **6—6** the underside being preferably crowned or arched as indicated at **7** to provide additional metal for added strength in the zone of stress. The face **8** of the tie bar is preferably flat and in the same plane as the grouser plate engaging faces **9** of the link. Of course, it will be understood that variations in the cross sectional shape may be resorted to within the scope of the invention, so long as the tie bar is equipped with interlocking means which will properly cooperate with the mating portion on the grouser plate B.

The upper portions of the side members **1** are provided with bolt receiving holes **10** to receive the bolts **11** (Fig. 1) when the parts are finally assembled.

As will be apparent from Figs. 1 and 2, the grouser plate B is also provided with bolt receiving openings **12** which register with the bolt receiving openings **10**, and is also provided with a socket **13** formed by the spaced projections or wall elements **14—14** whose inner faces are preferably formed to match with the corresponding engaging faces **6—6** of the tie bar.

As will be seen from Figs. 1 and 3, when the link A and grouser plate B are secured together, the enlarged portion **5** of the tie bar **4** will enter the socket **13** and become wedged therein so that the grouser plate is connected with the link in a manner to resist relative horizontal movement between the two elements, and at the same time relieve the strain or stress on the bolts **11**.

It will also be observed that the link and grouser plate may be interlocked by simply placing them together in the normal relationship, and that the bolts **11** may be secured in place in the customary manner.

I claim:

1. A track and grouser plate assembly for endless track rails, including, a link unit having side members each provided in one edge with a pair of openings, a tie bar disposed transversely between and connecting the side members, a grouser plate also having openings for registering with the openings in the side members, bolts connecting the side members and the grouser plate through said registering openings, and spaced parallel transverse projections on the grouser plate to straddle the tie bar at a point between the side members to resist relative horizontal movement between the link and grouser plate and also relieve shearing stress on the bolts.

2. A track and grouser plate assembly for endless track rails, including, a link having spaced side members each provided in one edge with a pair of longitudinally alined openings, a tie bar disposed transversely between and connecting the side members to one side of each pair of said openings therein, said tie bar having a medial portion of wedge shape cross section, a grouser plate also having spaced longitudinally alined openings for registering with the pairs of openings in the side members, bolts connecting the side members with the grouser plate through said registering openings, and spaced parallel transverse projections on the machine side of the grouser plate located forwardly of and substantially between said longitudinally alined pairs of openings in the grouser plate to receive the medial wedge shaped cross section of the tie bar and thereby resist relative movement between the link and the grouser plate and also relieve shearing stress on the bolts.

References Cited in the file of this patent

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