

Caterpillar band chain for tracked vehicles

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The invention relates to a caterpillar band chain for tracked vehicles according to the preamble of claim 1.

A rubber block chain is known from US patent 1,966,450.

10 The length of the rubber block is slightly less than the chain pitch. Screwed connectors are provided on the outside for connecting the rubber blocks. The connectors clamp hollow bolts in a rotationally fixed manner. These hollow bolts are vulcanized in the
15 rubber block.

A caterpillar band chain according to the preamble is known from EP-B1-0 410 216. Band sections are connected using steel articulating elements. The
20 articulating elements are themselves connected to one another using a steel bolt. The disadvantage with this is that the driving behavior of the vehicle is adversely affected by excessive imbalances on account of the articulated closing points.

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It is therefore an object of the invention to propose closing points for a caterpillar band chain with band segments, which closing points are designed to be as light as possible.

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The invention achieves this object in accordance with the characterizing feature of claim 1.

Advantageous refinements of the invention can be gathered from the subclaims.

5 The invention advantageously ensures that the expansion of the closing points in the direction of the band is very small and flexible on account of the rubber-mounted chain bolts. The chain can be easily mounted on or removed from the vehicle on account of the connectors. It is unnecessary to raise the vehicle.
10 The band chain is, as is customary with link chains, laid out on the ground and connected at the closing point or points once the vehicle has been driven on to the laid-out chain. The removal of the separable chain takes place in the reverse order.

15 There are further advantages in that the complexity in the mounting and removal of the chain on/from the vehicle is very low with low expenditure of personnel. The danger of accidents when mounting the band chain on
20 the vehicle is reduced because the vehicle does not need to be raised. Lastly, the storage and transport space is low because of the possibility of the band chain, which has a closing point or closing points, being rolled up. In the case of band chains with a
25 plurality of closing points, individual band segments can be exchanged directly on the vehicle in the event of damage.

An exemplary embodiment is illustrated in the drawing,
30 in which:

Figure 1 shows a sectional view of a closing point according to a detail I according to figure 2,

Figure 2 shows a caterpillar band chain having a closing point and

5 Figure 3 shows a section III-III according to figure 2.

According to figure 1, a closing point 3, 4 of a caterpillar band chain 1 comprises two connectors 10 having screws 11, a tube 6 which is vulcanized in the
10 basic body 12, a prestressed rubber mounting 18 and a bolt 20 which is pressed into the rubber mounting 18.

The closing points 3, 4 corresponding to figure 2 are, in principle, of identical design corresponding to the
15 design according to figure 1.

According to figure 3, the connector 10 clamps the two bolts 20, 21 of two band segments 15, 27 by means of the screw 11 with the thread 22. The bolts 20, 21 are
20 provided as round bolts, that is with a full circular cross section, so that there is no danger of a notch fracture due to flattenings or holes.

The closing point 3, 4 which is defined by the bolts
25 20, 21 and the connector 10 has a pitch 29. This is $1/3$ of the band segment pitch 31, which is defined by the distance between the guide teeth 32 and the distance between the driving cams 34 which are flush with them.

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The caterpillar band chain has running cams 36 vulcanized in on the ground side.

Patent claims

1. A caterpillar band chain (1) for tracked vehicles
5 and snowmobiles, comprising individual,
exchangeable band segments (15),
in which a band segment (15) has a rubber basic
body (2), which has inserts (5) which are
vulcanized in and can be loaded under tension,
10 and which are wrapped around a tie-rod (6) which
is fastened transversely in the basic body (2) in
the region of the closing points (3, 4) of the
band segments (15),
in which connectors (10) connect the tie-rods (6)
15 of two band segments (15, 27) to one another,
and in which the tie-rod comprises a tube (6),
characterized
in that the tube (6) has a rubber-mounted bolt
(20, 21), the bolts (20, 21) are rotationally
20 fixed by connectors (10), the closing point (3, 4)
- consisting of two tubes (6), the rubber
mountings (18), the bolts (20) and the connectors
(10) - lies within one chain pitch (31) and
is made flexible by means of the rubber mountings
25 (18).
2. The caterpillar band chain as claimed in claim 1,
characterized
in that the closing point (3, 4) - comprising two
30 tubes (6), the rubber mountings (18), the bolts
(20) and the connectors (10) - lies within one
chain pitch (31) and
is made flexible by means of the rubber mountings
(18).

3. The caterpillar band chain as claimed in claim 2,
characterized
in that the pitch (29) of the closing point (3, 4)
5 is approximately 30% of the pitch (31) of the band
segment (15, 27).
4. The caterpillar band chain as claimed in claim 2,
characterized
10 in that at least one steel tube (6) is vulcanized
in at the closing point (3, 4) on each band
segment (15, 27).
5. The caterpillar band chain as claimed in claim 4,
15 characterized
in that three steel tubes (6, 7) are vulcanized in
at the closing point (3, 4).