Dec. 12, 1933. C. LÖSSL 1,939,313

REENFORCED CONCRETE SLEEPER

Filed Nov. 18, 1931

Fig. 1

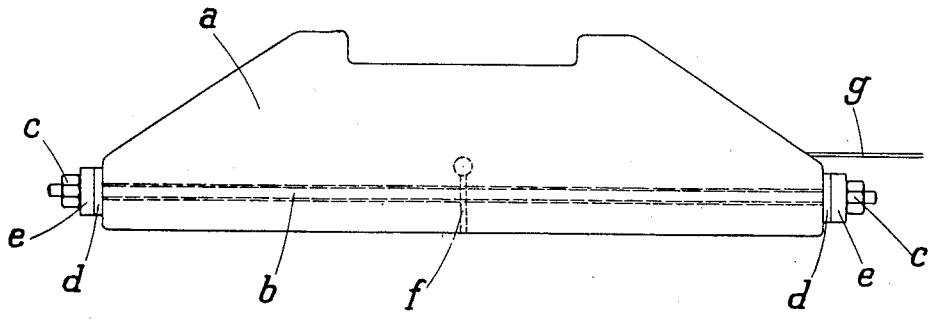
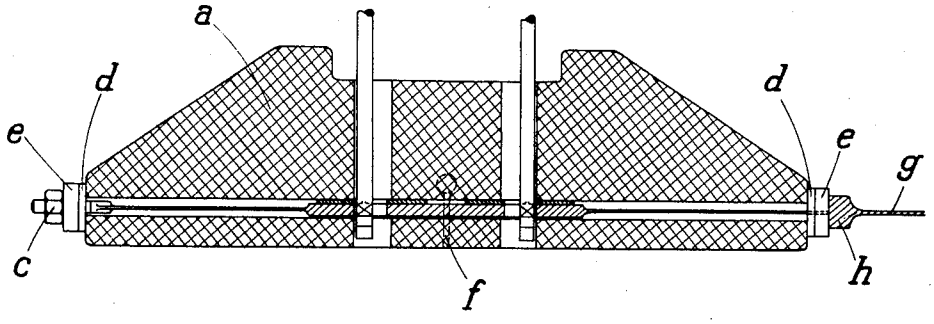


Fig. 2



Inventor:
C. Lössl
By: Marks & Clerk
Attys.

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REENFORCED CONCRETE SLEEPER

Carl Lössl, Munich, Germany

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3 Claims. (Cl. 238—117)

This invention relates to a transverse sleeper of reenforced concrete consisting of two reenforced concrete supporting members which are connected together by means of a gauge holder.

The object of the invention is to avoid or to diminish the tensile stresses in the lower fibres in the two concrete supporting members in order to avoid the formation of chinks at this part of the concrete supporting members.

According to the invention, a removable strut rod is inserted completely through each supporting member below the neutral zone, which rod is preliminarily stretched by nuts or the like engaging at both end surfaces of the supporting member. The preliminary tensioning is thus produced subsequently to the setting or hardening of the concrete member by means of a special strut rod which is not concreted in but is subsequently introduced into the hardened concrete supporting member.

In the present case, the lower portion of the reenforced concrete member is given a compressive stress which remains and which can fall to the value zero when the support is most heavily loaded.

According to the invention also the gauge rods connecting the concrete supporting members may be employed at the same time as strut rods for both supporting members, each end of the gauge rod which is constructed as a strut rod being locked when tightened up.

Preferably the supporting members are provided with a central slot extending upwardly from the lower portion to the zone of the neutral plane which, before the strut rod is tightened, can be filled with an elastic material as an intermediate layer.

Two constructional forms of the invention are illustrated by way of example in the accompanying drawing in which

Fig. 1 is a side elevation of a concrete supporting member constructed in accordance with the invention.

Fig. 2 is a vertical longitudinal sectional view through a modified form of the supporting member.

In the constructional form according to Fig. 1 the concrete supporting member *a* is provided in the lower part with a strut rod *b* passing through and arranged below the neutral zone of it, which, by means of the nuts *c* at its ends, is subjected to tension. Between the nuts *c* and the end surfaces of the concrete supporting member, resilient intermediate plates *d* and iron supporting plates *e* are provided. In the middle the concrete supporting member is provided in the lower part with a slot *f* reaching up to the zone of the neutral filament which facilitates the compression of said member by means of the strut rod. The gauge rod *g* is anchored in the concrete supporting member apart from the strut rod *b*.

In the constructional form according to Fig. 2, the ends of the gauge rod *g* are employed at the same time as strut rods. Between the end surfaces of the concrete supporting member and the tensioning nuts for the strut rod, resilient intermediate plates *d* and iron supporting plates *e* are again provided. The tensioning of the strut rod is effected by tightening the nut *c* on the outer side of the concrete supporting member, the collar *h* of the gauge rod bearing against the inner surface of the concrete supporting member. The concrete supporting member is again provided in the middle with a slot *f* in the lower part.

What I claim is:

1. A reenforced concrete sleeper comprising a supporting member, a removable strut rod passing through said supporting member below the neutral zone, and means bearing against the end surfaces of the supporting member for tensioning the strut rod to subject the supporting member to compressive stress in a direction at right angles to the rail.

2. A reenforced concrete sleeper as claimed in claim 1 characterized in that said means bearing against the end surfaces of the supporting member is constituted by nuts.

3. A reenforced concrete sleeper as claimed in claim 1 characterized by the provision of two of said supporting members, a gauge rod connecting said members and having the ends passed through the latter.

CARL LÖSSL.