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F2H

(54) **Fastening rail-supporting members to railway sleepers**

(57) A device for insertion in an oversize and/or malformed hole in a wooden railway sleeper and for receiving a screwspike for fastening a rail-supporting member to the sleeper, comprises a shell which is internally screw-threaded and consists of two or more of part-shells held together. Each part-shell is in the form of a curved sheet extending part of the way around the axis of the shell and having at least one outwardly-turned longitudinal flange (2) which opposes any tendency for rotational movement of the device about the axis when the device is inserted in a hole in a wooden railway sleeper and a screwspike is screwed into the device.

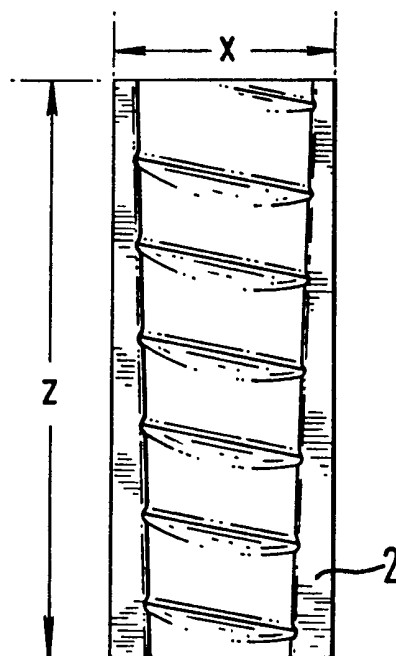


FIG. 1.



FIG. 3.

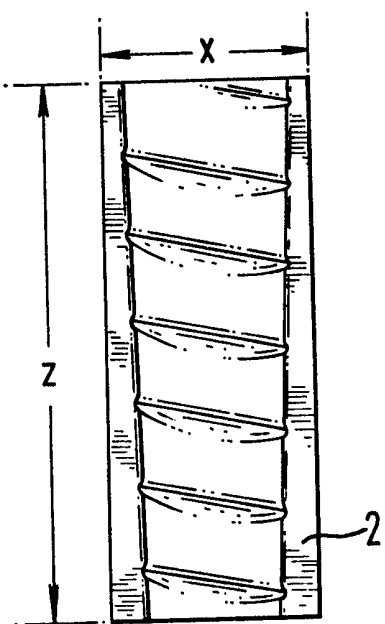


FIG. 1.

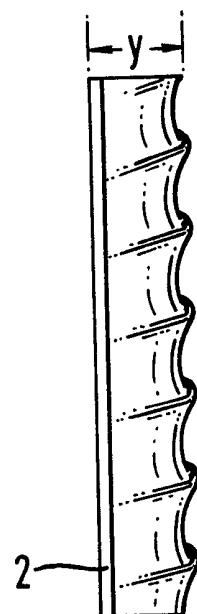


FIG. 2.



FIG. 3.

SPECIFICATION

Fastening rail-supporting members to railway sleepers

According to a first aspect of the invention, there is provided a device which is suitable for insertion in an oversize and/or malformed hole in a wooden railway sleeper and for receiving a screwspike for fastening a rail-supporting member to the sleeper, the device comprising a shell which is internally screw-threaded and consists of a plurality of part-shells held together, each part-shell being in the form of an arc extending only part of the way around the axis of the shell and having, at at least one extremity of the arc, an outwardly-turned flange which opposes any tendency for rotational movement of the device about said axis when the device is inserted in a hole in a wooden railway sleeper and a screwspike is screwed into the device.

According to a second aspect of the invention, there is provided a combination of a wooden railway sleeper having a hole in it extending downwardly from its top, a device according to the invention inserted in the hole, a rail-supporting member lying on the sleeper and a screw-spike passing through a hole in said member and into said device.

Preferably, the device comprises only two part-shells, each extending half-way around said axis. Whether it comprises only two part-shells or more, there is preferably an outwardly-turned flange at each extremity of each arc.

The part-shells are preferably made of sheet metal and the internal screw-thread is preferably imparted to them in a stamping operation. The internal passageway through the device preferably tapers, proceeding downwardly from the top of the device, to match conventional screwspikes. A bail or two or more bails preferably extends or extend around the assembly of the part-shells to hold them together.

An example in accordance with the invention is described below with reference to the accompanying drawings, in which:-

Figure 1 shows a front view of a part-shell, Figure 2 shows a side view of it, and Figure 3 shows a plan view of it.

The part-shell illustrated is one of two identical elongate part-shells which are to be assembled to make a complete shell and held together by two bails (not shown) extending around the shell near opposite ends of it. Each part-shell is made of sheet metal and is in the form of a semi-circular arc which extends half-way around the axis 1 of the shell. At each end of each arc there is an outwardly-turned flange 2 and the flanges of the two part-shells abut in the assembly of the two part-shells. The flanges are wider at the bottoms of the part-shells than at the tops so that

the internal passageway through the complete shell tapers, proceeding downwardly, to match the taper on a conventional screwspike. Grooves are formed in each part-shell in a stamping operation, possibly in the same relative movement of forming tools as is used to provide the arcuate shape and the flanges 2, these grooves being such that in the complete shell there is an internal screw-thread which matches the screw-thread on the screwspike.

When a hole, extending downwardly from the top of a wooden railway sleeper, is oversize and/or malformed, due for example to excessive wear having taken place, so that a conventional screwspike inserted in it would not be held sufficiently securely, the complete shell, with its bails, as described above may be inserted in the hole, with the wider ends of the flanges 2 lowermost and with the other ends also within the hole. Then a rail chair or baseplate may be placed on the sleeper, with a hole through it registering with the passageway through the shell, and the shank of a screwspike may be passed through the hole in the rail chair or base plate and screwed into the shell until the rail chair or base plate is held securely on the sleeper. The flanges 2 prevent rotation of the shell about the axis 1 during the screwing of the screwspike into the shell. This screwing action is accompanied by the two part-shells being forced apart, so that their ridged outer surfaces grip the wood, and the bails stretching and perhaps breaking.

For some screwspikes, the dimensions x , y and z of the part-shells may suitably be 30, 10 and 80 mm., respectively.

CLAIMS

1. A device which is suitable for insertion in an oversize and/or malformed hole in a wooden railway sleeper and for receiving a screwspike for fastening a rail-supporting member to the sleeper, the device comprising a shell which is internally screw-threaded and consists of a plurality of part-shells held together, each part-shell being in the form of an arc extending only part of the way around the axis of the shell and having, at at least one extremity of the arc, an outwardly-turned flange which opposes any tendency for rotational movement of the device about said axis when the device is inserted in a hole in a wooden railway sleeper and a screwspike is screwed into the device.

2. A device according to Claim 1 and comprising only two part-shells, each extending half-way around said axis.

3. A device according to Claim 1 or 2, wherein there is a said outwardly-turned flange at each extremity of each arc.

4. A device according to Claim 1, 2 or 3, wherein the part-shells are made of sheet metal.

5. A device according to any preceding claim, wherein the internal screw-thread has

been imparted to each part-shell in a stamping operation.

5 6. A device according to any preceding claim, wherein the internal passageway through the device tapers, proceeding down-wardly from the top of the device, to match conventional screwspikes.

10 7. A device according to any preceding claim wherein at least one bal extends around the assembly of the part-shells to hold them together.

15 8. A device which is suitable for insertion in an oversize and/or malformed hole in a wooden railway sleeper and for receiving a screwspike for fastening a rail-supporting member to the sleeper, substantially as here-inbefore described with reference to the ac-companying drawing.

20 9. A combination of a wooden railway sleeper having a hole in it extending down-wardly from its top, a device according to any preceding claim inserted in the hole, a rail-supporting member lying on the sleeper and a screwspike passing through a hole in said member and into said device.

CLAIMS

30 1. A device which is suitable for insertion in an oversize and/or malformed hole in a wooden railway sleeper and for receiving a screwspike for fastening a rail-supporting member to the sleeper, the device comprising a shell which is internally screw-threaded when the device is made and before any screw-threaded member is inserted in it and consists of two and only two part-shells which are not integral with one another but are held together, each part-shell being in the form of an arc extending half of the way around the axis of the shell and having, at at least one extremity of the arc, an outwardly-turned flange which opposes any tendency for rota-tional movement of the device about said axis when the device is inserted in a hole in a wooden railway sleeper and a screwspike is screwed into the device.

2. A device according to claim 1, wherein there is a said outwardly-turned flange at each extremity of each arc.

50 3. A device according to claim 1 or 2 in which each flange extends over the entire length of its part-shell.

4. A device according to claim 1, 2 or 3, wherein the part-shells are made of sheet metal.

55 5. A device according to any preceding claim, wherein the internal screw-thread has been imparted to each part-shell in a stamping operation.

60 6. A device according to any preceding claim, wherein the internal passageway through the device tapers, proceeding down-wardly from the top of the device, to match conventional screwspikes.

65 7. A device according to any preceding

claim, wherein at least one bail extends around the assembly of the part-shells to hold them together.

70 8. A device which is suitable for insertion in an oversize and/or malformed hole in a wooden railway sleeper and for receiving a screwspike for fastening a rail-supporting member to the sleeper, substantially as here-inbefore described with reference to the ac-companying drawing.

75 9. A combination of a wooden railway sleeper having a hole in it extending down-wardly from its top, a device according to any preceding claim inserted in the hole, a rail-supporting member lying on the sleeper and a screwspike passing through a hole in said member and into said device.

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