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(71) Applicant: **British Steel plc**
9 Albert Embankment
London SE1 7SN(GB)

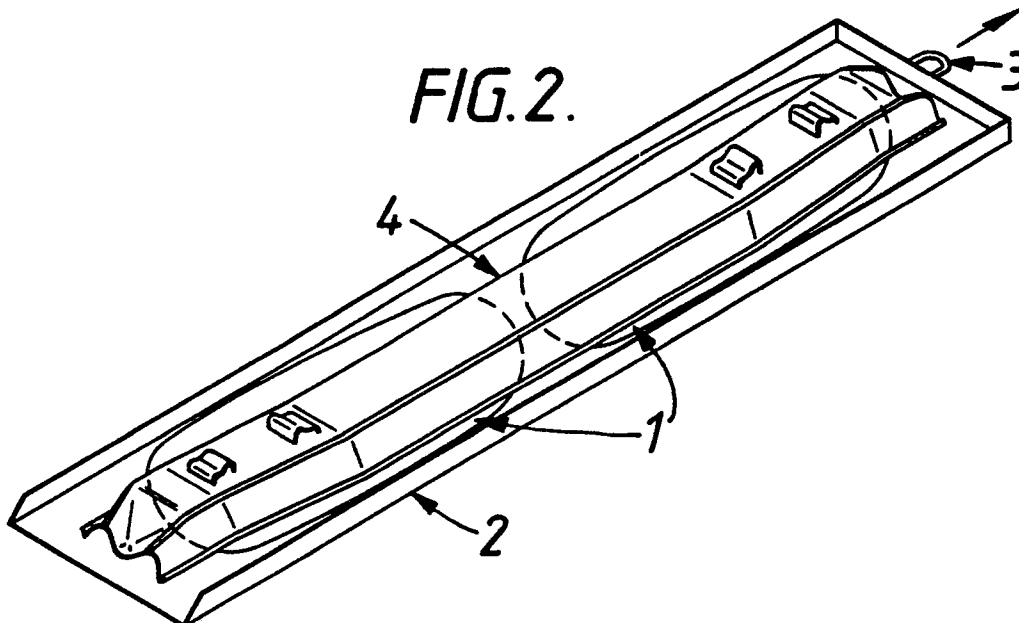
(72) Inventor: **Hodgson, William H**
Springbank Braithwaite
Keswick Cumbria(GB)

(74) Representative: **Broughton, Clifford David**
British Steel plc Patent Section 9 Albert
Embankment
London SE1 7SN(GB)

(54) **Laying rail sleepers.**

(57) In a method of laying channel-section rail sleepers one or more tubular ballast-filled bags (1) are disposed so as to nest within the channelled section and are sandwiched between the sleeper and an elongated tray (2). The whole assembly is dragged beneath the track on the tray to replace a sleeper previously withdrawn, the tray then being withdrawn from under the ballast-filled sleeper whereby to minimise any infill ballasting and subsequent tamping.

FIG.2.



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LAYING RAIL SLEEPERS

This invention relates to the laying of sleepers e.g. laying steel sleepers as replacements for those in wood or concrete. Hitherto, such references have involved the need for special tamping arrangements for ensuring that the additional ballast adequately 'fills' around and within the (channel-section) steel sleeper. It is an object of this invention to mitigate this need.

From one aspect this invention comprises a method of laying channel-section rail sleepers, in which one or more tubular ballast-filled bags are disposed so as to nest within the channelled section and are sandwiched between the sleeper and an elongated tray, and in which the whole assembly is dragged beneath the track on said tray to replace a sleeper previously withdrawn, the tray then being withdrawn from under the ballast-filled sleeper whereby to minimise any infill ballasting and subsequent tamping.

Preferably, two ballast-filled bags are used to minimise the risk of level irregularities and the bags are preferably laid on the tray with the sleeper, e.g. a steel sleeper, laid on top of it. The bag filling may be effected on site, and this may be achieved by drawing the bag, sealed at one end, over a firm tube, introducing ballast into the tube whilst upstanding on the tray and then withdrawing the tube from the bag and sealing the head of the bag. Two adjacent bags may be filled in this way in the manner of 'sausages' i.e. they may be interconnected by a tie instead of being separate entities.

In order that the invention may be fully understood one embodiment thereof will now be described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of the tray on which two ballast-filled bags have been sited; and

Figure 2 shows the channel-section sleeper laid over the bags ready for insertion in the track.

Referring to the drawings two ballast-filled bags 1 are laid on a steel tray or sledge 2 having upstanding edges on its sides and at one end from which a hook 3 extends. The bags may be of plastic netting and may conveniently have been filled on site by the method described above using a withdrawable tube.

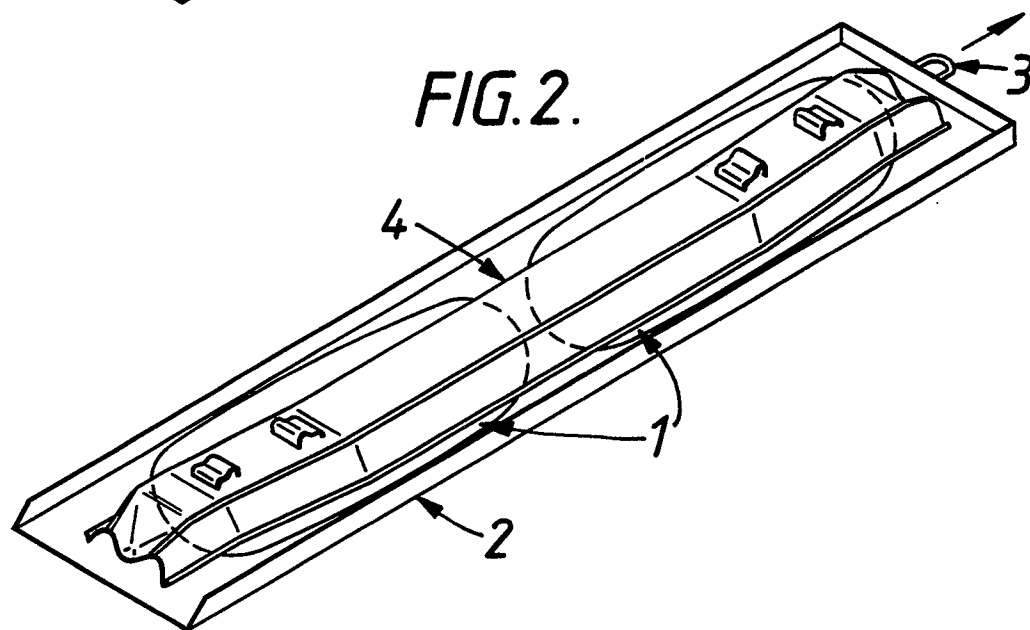
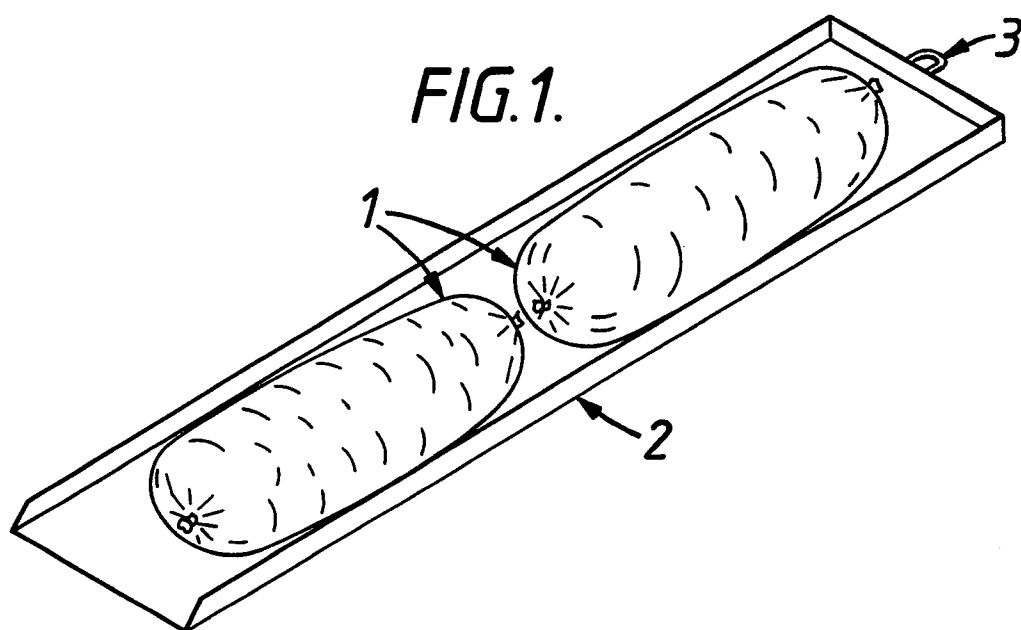
A channel section steel sleeper 4 is then laid over the bags (Figure 2) such that they nest in the channel.

This assembly is now ready for use in replacing old sleepers. In particular, the old wooden sleeper (say) is unbolted from the rails and pulled out sideways. The new assembly is then dragged through the opening thus created, the new steel

sleeper is bolted to the rail and the sledge is then pulled out from beneath, leaving the bagged ballast in situ. With the bags having been filled with sufficient ballast to fill the steel sleeper and make up any difference in height between the wood and the steel sleepers, the track only requires 'boxing-in' with loose fill ballast. Any future tamping will be regular and not special for steel sleepers.

Claims

1. A method of laying channel-section rail sleepers, characterised in that one or more tubular ballast-filled bags (1) are disposed so as to nest within the channelled section and are sandwiched between the sleeper (4) and an elongated tray (2) and in which the whole assembly is dragged beneath the track on said tray to replace a sleeper previously withdrawn, the tray then being withdrawn from under the ballast-filled sleeper whereby to minimise any infill ballasting and subsequent tamping.
2. A method according to Claim 1, characterised in that two ballast-filled bags are equidistantly spaced along the length of the sleeper.
3. A method according to Claim 1 or Claim 2, characterised in that the bag or bags are laid on the tray, the sleeper then being laid on top.
4. A method according to Claim 1 or Claim 2 characterised in that the bag or bags are laid in the channel or trough of the sleeper, the tray is then laid on top and the assembly inverted before introduction under the track.
5. A method according to any one of Claims 1 to 4, characterised in that each bag is filled by drawing said bag over a firm tube, introducing the ballast into the tube and withdrawing the tube from the bag and sealing same.
6. A method according to any one of Claims 1 to 5, characterised in that each bag is made from plastics netting.
7. A method according to any one of Claims 1 to 6, characterised in that the tray has upstanding edges on its sides and at one end.





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EUROPEAN SEARCH REPORT

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EP 89 11 1944

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	EP-A-0 314 035 (AKZO) * Column 6, line 17 - column 8, line 12; figures 1-8 *	1-6	E 01 B 1/00
A	---	7	
E	GB-A-2 211 876 (BRITISH STEEL) * Whole document * -----	1-7	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			E 01 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 19-02-1990	Examiner KERGUENO J.P.D.
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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