

[54] SLINGS

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[56]

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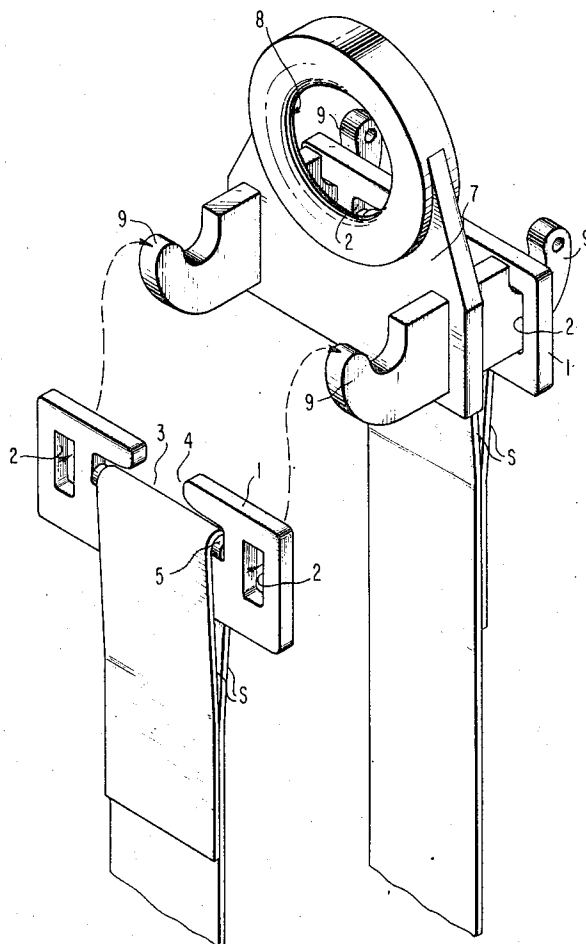
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ABSTRACT

An end plate for a cargo sling having a pair of apertures for engagement by the terminal block of a crane, and a slot between the apertures, said slot being open on its top surface to enable a loop of webbing to be engaged in the slot, said opening having a width less than the length of the slot.

4 Claims, 6 Drawing Figures



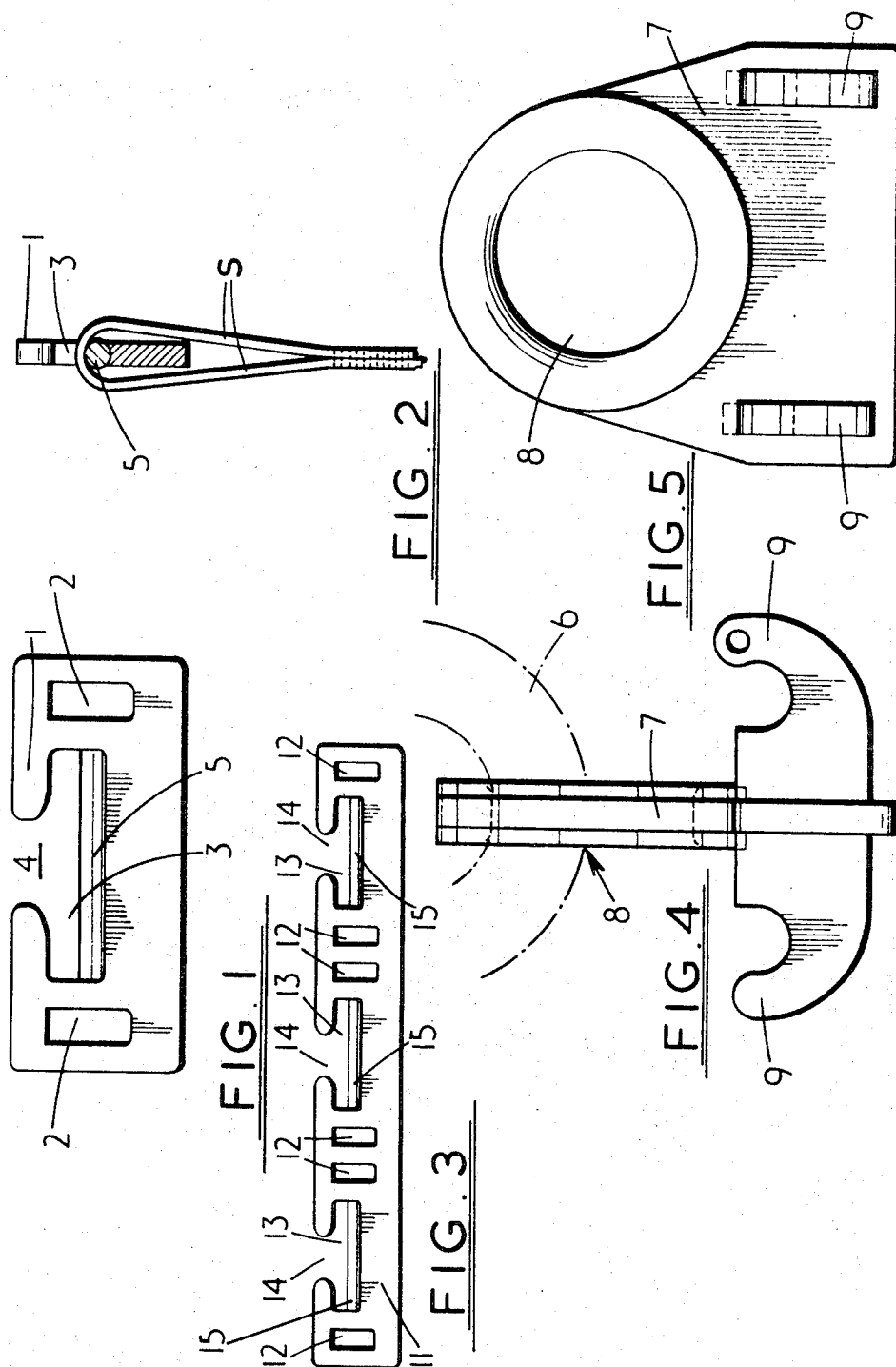
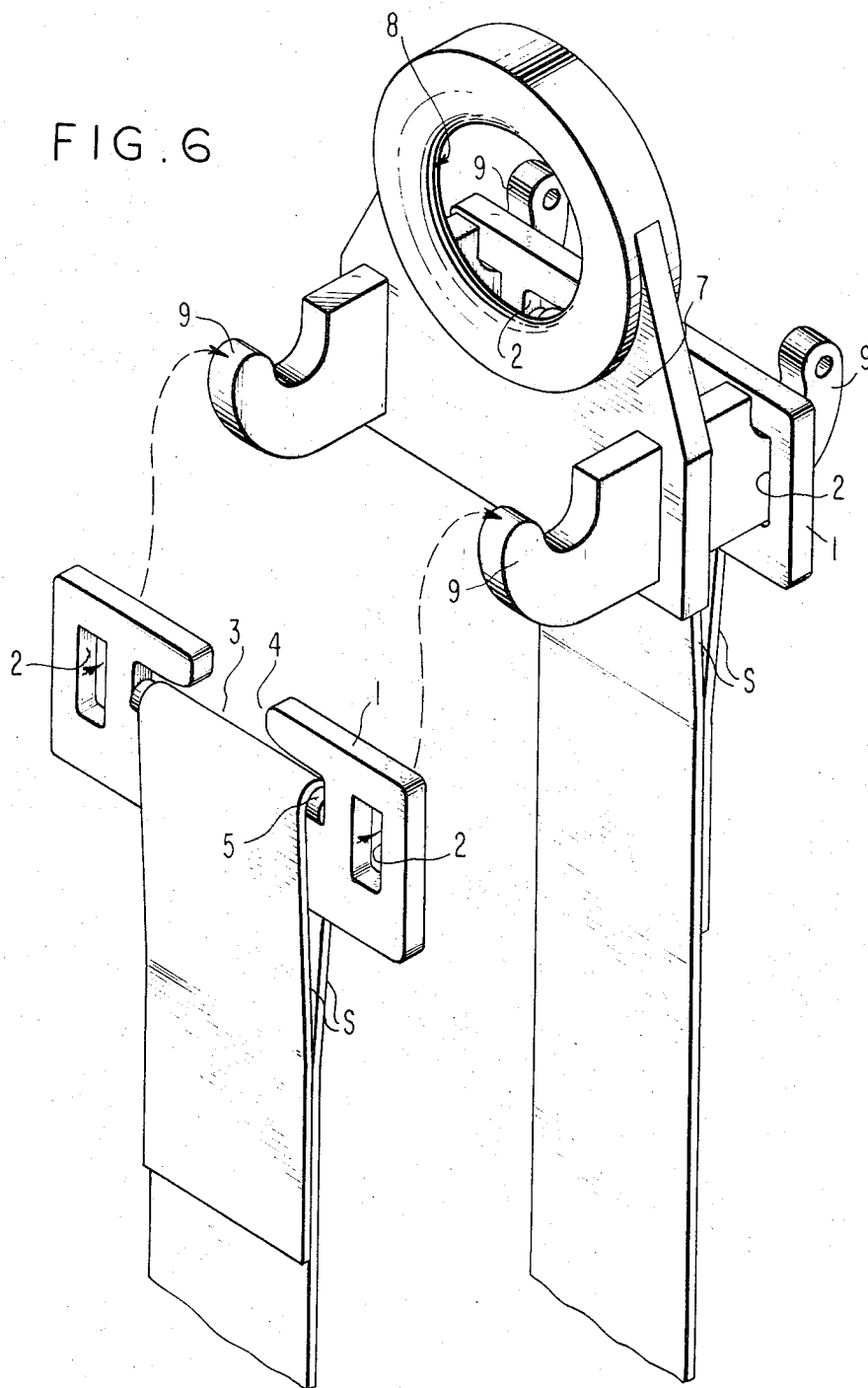


FIG. 6



This invention relates to slings used, for example, in supporting such articles as pipes from cranes, hoists or other lifting appliances and, to end plates used in combination with such slings.

One type of previously proposed sling comprises a length of webbing with an end plate at each end thereof. Each end plate has an aperture at the top of the plate to enable the plate to be attached to a crane or hoist and a closed slot below the aperture extending transversely of the end plate. In use, a pipe or other article to be supported by the sling is cradled in the webbing with both end plates supported by the crane or hoist.

To manufacture such slings, each end of a length of webbing is passed through the slot in one of the end plates, doubled over and then stitched to the remainder of the webbing with the end plate in position to form a closed loop thereby permanently securing the end plate to that end of the webbing. Since the end plates are required to withstand considerable forces, it is necessary to construct them very robustly and, as a result, they are heavy and difficult to manoeuvre during the subsequent stitching operation.

According to the present invention there is provided a sling for use in supporting articles from a crane, hoist or other lifting appliance said sling comprising a length of webbing formed at each end thereof into a loop passing through a slot in a respective end plate adapted for attachment to a terminal connectible to the lifting appliance, said slot being provided on its longitudinal side opposite to that against which the respective loop abuts when the plate is in use with an opening through which the loop can be maneuvered for attachment to or detachment from the plate.

In one embodiment, a single slot is provided and the attachment or supporting means comprises a pair of apertures, one on each side of the slot.

In another embodiment, a plurality of slots are provided for a plurality of lengths of webbing and the attachment or supporting means comprises a plurality of apertures alternating with the slots.

An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

FIG. 1 is an elevation of an end plate for a sling, according to the present invention;

FIG. 2 is a sectional view of the end plate of FIG. 1 with a loop of webbing attached,

FIG. 3 is an elevation of a modification of the end plate of FIG. 1,

FIG. 4 is a side view of terminal block and crane hook suitable for lifting the end plate of FIG. 1,

FIG. 5 is a front view of the terminal block in FIG. 4, and

FIG. 6 is a perspective view of the assembled end plates, sling, and terminal block.

Referring now to FIGS. 1 and 2, an end plate for a sling comprises a substantially rectangular metal plate 1 having a pair of spaced apertures 2 therein, one aperture being located adjacent each end of the plate. An elongate slot 3 is formed in the plate 1 between the apertures 1 and 2, the slot 3 extending longitudinally of the plate 1. One side of the slot 3 has an opening 4 therein whose width is less than the length of the slot

3. A rounded metal bar 5 extends along the base of the slot 3.

In the manufacture of a sling incorporating a pair of such end plates, the edges of ends of a length of webbing S (FIG. 2) are turned and stitched to reduce the width thereof, then each end is turned over and stitched to the remaining portion of the webbing to form a closed loop. One end plate is passed into each closed loop and an edge of the loop is manoeuvred into the slot 3 in the plate through the opening 4. The other lateral edge of the loop is forced through the opening, so that the closed loop passes through the slot, and adopts the position shown in FIG. 2, the bar 5 serving to prevent damage to the webbing S.

A terminal block suitable for connecting the end plate at each end of the sling to a crane hook 6 is shown in FIGS. 4 and 5, and comprises a plate 7 having an aperture 8 therein to accommodate the crane hook 6 and a pair of spaced terminal hooks 9 on each side of the plate 7.

In use the webbing S is passed around an article to be lifted and the aperture 2 in the end plates are engaged with the terminal hooks 9 of the terminal block attached to the crane hook 6. The webbing S abuts at each end against the bar 5 at that side of the slot 3 opposite to that in which the opening 4 is provided so that there is no risk of the loop being pulled out of engagement with the plate through the opening 4 during use.

Replacement of the webbing S can be effected relatively easily on site, if required, merely by detaching the existing webbing from the end plates and forcing a new length of webbing into position. This represents a distinct advantage over existing slings which, apart from being more difficult to manufacture, have to be returned to the factory for replacement of the webbing.

In the case where heavy and/or long articles are to be lifted, it is necessary to employ a sling having a number of lengths of webbing attached together in side-by-side relationship. In such cases, an end plate as shown in FIG. 3 is employed and comprises an elongated rectangular metal plate 11 having three pairs of apertures 12 with a slot 13 with an opening 14 between each pair of apertures 12. A bar 15 is provided in the base of each slot 13.

A terminal block similar to that shown in FIGS. 4 and 5 is used for end plates of the type shown in FIG. 3 except that three pairs of terminal hooks are provided on each side of the apertured plate of the lifting hook.

FIG. 6 illustrates the complete assembly of two end plates as shown in FIG. 1 joined by a sling or webbing S and hung on hooks 9 of a terminal block as shown in FIGS. 4 and 5.

It will be manifest that end plates may, as an alternative, be provided with two or more than three slots and pairs of apertures depending upon the number of lengths of webbing to be employed.

What we claim is:

1. A sling assembly for use in supporting articles from a crane, hoist or other lifting appliance, said sling assembly comprising a length of webbing formed into a loop at each end thereof, an end plate associated with each loop, a slot in each end plate having one longitudinal side against which the respective loop abuts when the plate is in use and another longitudinal side interrupted by an opening through which the loop can be maneuvered for attachment to or detachment from the plate, a terminal block comprising a plate having an ap-

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erture therethrough for connecting said terminal block to a lifting appliance, and terminal hook means extending from each side of said plate, and apertures in each end plate at each end of the slot for attachment to the terminal hook means.

2. A sling assembly as claimed in claim 1, wherein each end plate comprises a plurality of said slots engaging with end loops of a plurality of lengths of webbing.

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3. A sling assembly as claimed in claim 1, wherein said one longitudinal side of the slot is defined by a rounded bar.

4. A sling assembly as claimed in claim 1, wherein said terminal hook means comprises a pair of spaced terminal hooks extending from each side of said plate.

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