

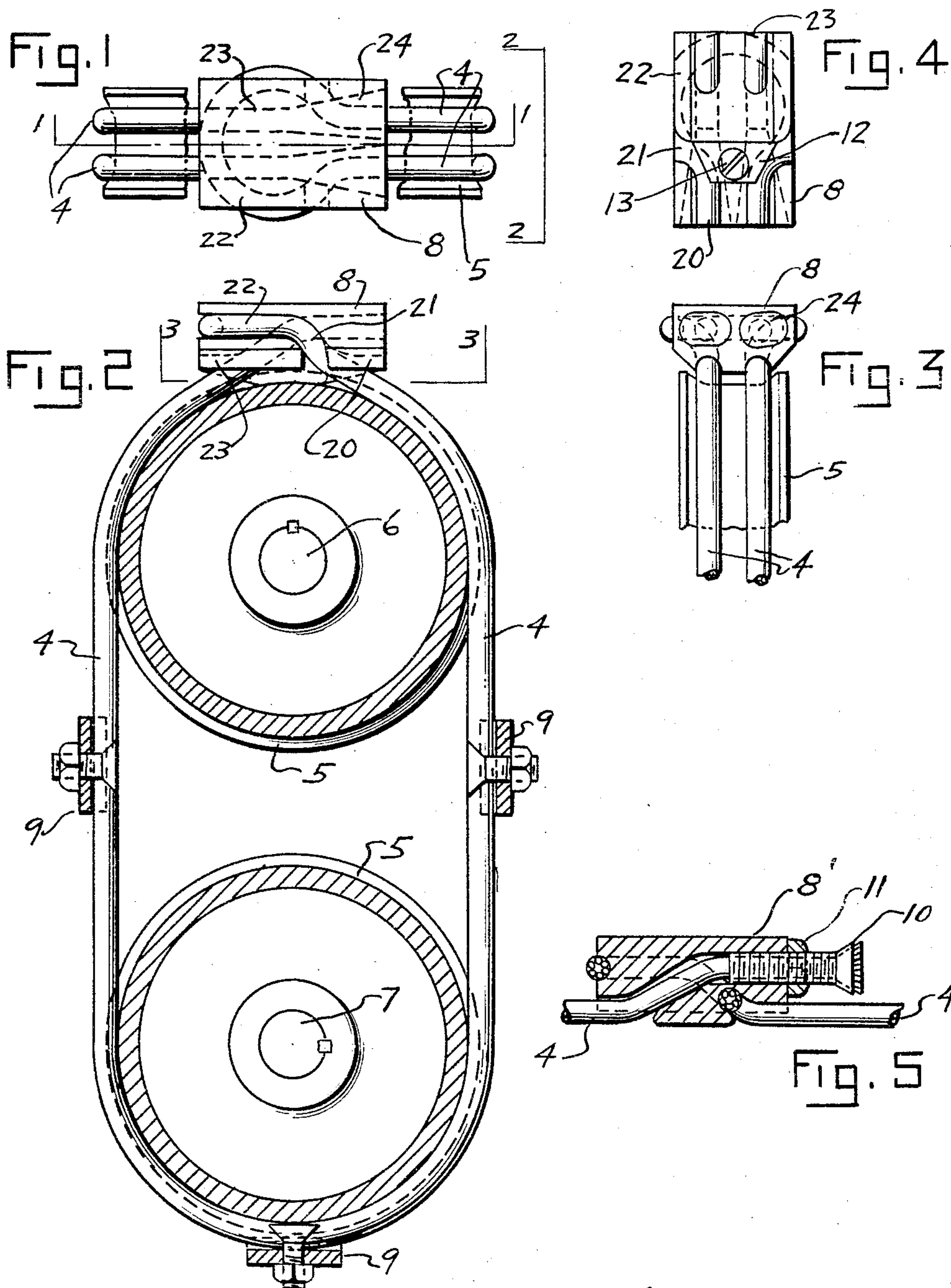
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DEAD-END ATTACHMENT

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## DEAD-END ATTACHMENT

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My device is a means for joining the ends of two or more lines of rope without splicing. These lines may be formed from a single rope or from separate ropes. My device provides means for looping wire driving ropes to avoid splicing thereby saving in cost and adding to the ease of making loops. It also permits the loops to be of short length and permits equalizing the length and stress in multiple lines of rope. My device also provides means for tightening the rope to take up the slack. By means of my device two or more lines of rope may be formed into endless loops. These lines are permitted to flex freely and to bear uniformly upon the tread of a sheave as the rope passes about the sheave.

For a further exposition of my invention reference may be had to the annexed drawing and specification at the end whereof my invention will be specifically pointed out and claimed.

In the drawing,

Figure 1 is a top plan view of my device with the sheave broken away.

Figure 2 is a vertical cross section on line 1—1 of Figure 1, some parts not being shown in section.

Figure 3 is a fragmentary vertical side elevation on the line 2—2 of Figure 1.

Figure 4 is a bottom view of my device, and

Figure 5 is a vertical cross section through a modified form of my device.

In the embodiment of my invention, chosen for illustration in the drawing, my device is shown as consisting of a plurality of lines 4 of wire driving rope. These lines may be formed from a single rope or from two or more ropes. My improved device consists of a dead-end attachment 8 which provides means for joining the ends of the lines of rope into endless loops without splicing. This is an exceedingly desirable feature as splicing is a costly and difficult operation, especially with wire ropes.

The dead-end attachment 8 has on its lower surface a plurality of grooves 20 of suitable cross section to permit the lines 4 to flex freely therein. As is best seen in Figure 2, grooves 20 connect with passages 21 which lead away

from the lower surface of attachment 8 and connect at their upper ends with a passage 22 in the opposite end wall of the dead-end attachment. The passage 22 may be in the opposite end wall or may be in the same end wall as the passages 20 or the passage 22 may lead parallel to the passages 20 in the same end of the attachment 8. There are also provided in the bottom face of attachment 8 passages 23 which are also of such cross section that lines 4 are free to flex therein. Passages 23 connect with enlarged passages 24 which lead out of the opposite face of attachment 8 or which may be doubled back and lead out of the same end face of attachment 8 from which passages 24 lead. In other words passages 24 may open out of the end face above grooves 20 or may open out of the opposite end face above grooves 23 in which case the grooves 24 are U-shaped in vertical cross section. Passages 24 form a convenient means for fastening ends of lines 4 so that the lines are anchored in the attachment 8. The ends of lines 4 may be clamped, bolted, zined or socketed in attachment 8. The ends of lines 4 may be rigidly attached to attachment 8 but are preferably fastened so that the ends of the lines are movable out of passages 24 but are fixed against movement from passages 24 into passages 23.

As is best seen in Figure 4 there may be provided on the bottom of attachment 8 adjacent passages 21 a throat piece 12 which overlies passages 21 to a certain extent and which serves to retain the lines 4 in the passages 21 should any slack occur in these lines. Throat piece 12 is attached to attachment 8 in any convenient manner as by a screw 13.

A modified form of attachment of the ends of lines 4 to attachment 8' is shown in Figure 5. This modified form of attachment permits adjustment of the lines 4 to take up the length of these lines and to equalize the stresses in the lines. These connections consist of sockets 10 to which the ends of the lines 4 are either fastened or so arranged as to be immovable through the sockets 10. Sockets 10 have threads on their outer surfaces with which cooperate nuts 11. These nuts serve to adjust the sockets 10 and there-



fore the ends of lines 4 relative to the attachment 8'.

In Figure 2 the lines 4 are shown as formed into endless loops by means of the dead end attachment 8. These loops pass over sheaves 5 which are mounted on shafts 6 and 7 respectively. The lines 4 may, if desired, be connected together at various points by rope grips 9, to keep them spaced apart.

10 I do not intend to be limited in the practice of my invention save as the scope of the prior art and of the attached claims may require.

I claim:

15 1. A dead end attachment for ropes comprising a body having grooves therein which permit free flexing of a rope in the grooves, means connected to a pair of said grooves for attaching a loop of rope to said body, and  
20 means for attaching a plurality of rope ends to said body.

2. A dead end attachment for ropes comprising a body having grooves therein which permit free flexing of a rope in the grooves,  
25 a groove connected to a pair of said first mentioned grooves for attaching a loop of rope to said body, and means for attaching a plurality of rope ends to said body.

3. A dead end attachment for ropes comprising a body having grooves therein which permit free flexing of a rope in the grooves, means connected to a pair of said grooves for attaching a loop of rope to said body, and flared openings connected to a pair of  
35 said first mentioned grooves for attaching a pair of rope ends to said body.

4. A dead end attachment for ropes comprising a body having grooves therein which permit free flexing of a rope in the grooves,  
40 means for attaching a loop of rope to said body, openings connected to a pair of said first mentioned grooves, screw sockets in said openings for receiving a pair of rope ends, and nuts on said screw sockets for adjusting  
45 said rope ends relative to said body.

5. A dead end attachment for ropes comprising a body having grooves therein which permit free flexing of ropes in said grooves, a groove connected to a pair of said first mentioned grooves for attaching a loop of rope  
50 to said body, a throat piece attached to said body so as to hold a rope in the connection between said first mentioned and said last mentioned grooves, and means for attaching  
55 a plurality of rope ends to said body.

6. A dead end attachment for ropes comprising a body having grooves in one face thereof which permit free flexing of a rope in the grooves, a groove in another face of  
60 said body from that containing the first mentioned grooves and connected to a pair of said first mentioned grooves for containing a loop of rope on said body, and means for attaching a plurality of rope ends to said body.