

Pat. 9,751,732

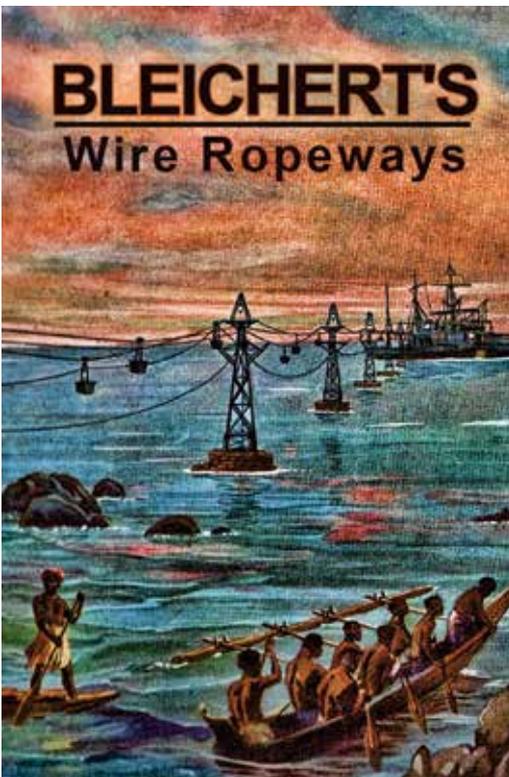
Figure 19: Crane-based lifting system with a load stabilizer or load position control mechanism mounted on a turn-table.

justor pulley 466. In addition, the adjustment cable 474 is installed looped around the pulley 472. Note that both the drum winch 470 and the traction winch 464 may be operated at the same time, to position the suspended container appropriately, that is both vertically and horizontally. This allows flexibility in the paths of movement of the load 30, so that the load is not constrained to a specific predetermined path. Also, the cable 468 may remain looped around the upper pulley 462 (e.g., tied to the tall structure 500 at the base), so that it can be quickly deployed when needed to

for lifting a load. Another advantage is that essentially the same size or type of drum winch 470 can be used for different height structures 500.

While the adjuster pulley 466 is floating or moveable, the pulley 472 (together with the other pulleys 467, 465 and the traction winch 464 and the drum winch 470) are secured to the vehicle as shown. As an alternative, the pulley 472 could be secured to a base of the structure 500 or to the ground nearby or to another relatively immovable object such as a crane ladder or crane boom as in figure 19. Note also that while figure 18 shows the pulley 472 being located to the left (or front) of the traction pulley 464, an alternative here is to secure the pulley 472 to the right (or behind the traction pulley 464).

The traction pulley 464, as well as the deflector pulleys 465, 467 (if needed), along with the drum winch 470, may preferably be secured to the vehicle that arrives at the area next to the base of the structure, for instance in the event of an emergency situation or other instance where the automated lifting of the load 30 is needed. The adjuster cable 474 may be pre-reeved around the following pulley system: the lower pulley 472 (and one or more additional such pulleys to achieve mechanical gain if needed), one or more deflector pulleys 465 (as needed for clearance for example), at least one adjuster pulley 464, and the drum winch 470. In this manner, the adjuster cable 474 need not be loose and need not be dragging on the ground or closing off some of the area between the vehicle and the structure to traffic. The vehicle on which such elements are installed (note that this may also include a floating vehicle such as a boat, especially where the structure 500 is an offshore oil/gas platform) may also be used to deliver the upper or top pulley 462 to the area next to the base of the structure 500. ■



In 1924, Germany's 'Adolf Bleichert & Co.' celebrated its 50th Anniversary. By the time of this occasion, the company had designed and built the world's record holding wire ropeways: Longest and highest elevation (Argentina); Length of system over water (New Caledonia); Steepest (Tanzania); Highest capacity (France); Northernmost (Norway); and, Southernmost (Chile).

Written by the great-great grandson of the company's founder, this book includes over 100 pictures and detailed engineering drawings that explore the legendary company's history, and several of its record-holding systems.

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