

Title (en)
SEGMENTED EXTENDIBLE BOOM.

Title (de)
SEGMENTIERTER AUSZIEHBARER BALKEN.

Title (fr)
MEMBRURES EXTENSIBLES A SEGMENTS.

Publication
EP 0043380 A4 19820713 (EN)

Application
EP 81900468 A 19801229

Priority
US 11017380 A 19800107

Abstract (en)
[origin: WO8102036A1] A longitudinally extendible, segmented boom structure includes a plurality of hollow, substantially V-shaped segments (10) which are pivotally connected to adjacent segments for storage. A series of load-bearing cables (134) extend through the segments for carrying loads. The segments have uniform cross-sections and progressively increasing lengths. Segments are stored in rolled-up form on a reel (12) by pivoting the segments to form a coil of nesting segments. Each segment has laterally extending side flanges (108) through which longitudinally extend the pre-tensioned load-bearing cables. The cables pass through the flanges on opposite sides of the boom segments for supporting vertical loads and resisting side loads on the boom. A second set of auxiliary cables (79) on the underside of the boom is automatically payed out as the boom is extended. The auxiliary cables prevent the extended segments from collapsing when inverted. The center point of the segment reel is adjusted in elevation to automatically feed boom segments at an optimum angle into a segment dispenser and boom support structure which has rollers thereupon for cooperating with corresponding lands and grooves on the segment flanges.

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IPC 8 full level
B66C 23/64 (2006.01)

CPC (source: EP)
B66C 23/64 (2013.01)

Citation (search report)
• GB 1053945 A
• GB 1154858 A 19690611 - WIDEGREN LARS HARALD [SE]
• GB 1141257 A 19690129 - THIOKOL CHEMICAL CORP
• DE 1199461 B 19650826 - EURATOM

Cited by
US10598153B2

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