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**United States Patent** [19]  
**Wei-Hwang**

[11] **Patent Number:** 5,718,090  
 [45] **Date of Patent:** Feb. 17, 1998

- [54] **PRESTRESSED CONCRETE TENSIONING SYSTEM**
- [76] **Inventor:** Lin Wei-Hwang, 7F-2, No. 95-8 Chang Ping Rd. Sec. 1, Taichung, Taiwan
- [21] **Appl. No.:** 669,051
- [22] **Filed:** Jun. 24, 1996
- [51] **Int. Cl.<sup>6</sup>** E04C 3/26; E04C 5/08; E04B 1/38
- [52] **U.S. Cl.** 52/223.14; 264/228; 264/229; 264/136 R; 264/122.6
- [58] **Field of Search** 52/223.1, 223.13, 52/223.14; 24/122.6, 136 R; 264/228, 229

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*Primary Examiner*—Carl D. Friedman  
*Assistant Examiner*—Yvonne Horton-Richardson

[57] **ABSTRACT**

A prestressed concrete tensioning system for a tensioning tendon in the construction of a prestressed concrete beam comprising an anchor seat and a prestressed tensioning device. The anchor seat embedded in one end of the beam and has spherical structure and inverse ratchet gripping device therein for adjustably holding one end of the tendon. The tensioning device has a hollow cylindrical housing including a hydraulic fluid chamber therein for slidably disposing a piston member in associated with a wedged surface grip means which are operated by hydraulic pressure for gripping and tensioning one end of the tendon, and a hemisphere concave in the forward end of the housing for engaging with the hemisphere convex of the anchor seat to obtain an universal joint effect. This disclosure is characterized in the prevention of shear and strength declination to the tendon and the risk to the ambient personnel. A supplemental tensioning device is provided to give greater flexibility to the prestressed concrete tensioning operation.

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4 Claims, 5 Drawing Sheets

