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[54] **SLAB LIFTER**

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[52] U.S. Cl. **405/230; 405/232**

[58] Field of Search **405/229, 230, 232, 233; 52/125.1, 742**

[56]

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[57] ABSTRACT

An apparatus for lifting and stabilizing a structural slab overlying the ground includes a base attached to the upper surface of the slab, at least one hydraulic cylinder vertically supported from the base and a slip clamp assembly attached to the piston rod extending from the cylinder. Piling segments are sequentially passed downward through the slip clamp and through coaxial holes in the base and in the slab, and are driven into the ground by the hydraulic cylinder to form a support column under the slab. A method for using the apparatus includes the lifting of the slab to the desired elevation by actuation of the hydraulic cylinder on the support column, injection of a low-strength fill material beneath the slab, distant from the piling hole, removal of the pile driving apparatus, severing of the final piling segment and joining a cap thereto, reinsertion of the final piling segment below the slab, and injection of a high-strength grout material through the piling hole in the slab to form a monolithic bulbous load supporting member which supports the slab, outwardly from the piling hole, on the driven piling.

15 Claims, 5 Drawing Sheets

