

# United States Patent [19]

Clyburn

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[54] CEMENT INJECTION AND  
 INTRAMEDULLARY CANAL DRYING  
 SYSTEM

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[51] Int. Cl.<sup>6</sup> ..... A61B 17/56

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[57] ABSTRACT

An apparatus for use with a bone cement injection gun during pressurized injection of bone cement into the intramedullary canal of a bone prepared for implantation of a prosthetic device to facilitate continuous removal of fluid and blood products from, and simultaneous drying of, the interior surfaces of the intramedullary canal. An elongate tubular member having a central bore is installed on the nozzle of a bone cement injection gun and conducts bone cement through its central bore. A fluid flow passageway, isolated from the central bore, extends from the distal end to the proximal end of the tubular member. A fluid inlet at the distal end is connected to a source of vacuum and a porous absorbent pad surrounds a fluid inlet at the distal end of the tubular member. The pad is received in the intramedullary canal and swells when moisture is absorbed. A resilient generally conical-shaped pressurizing plug slidably mounted on the exterior of the tubular member forms a seal on the opening at the proximal end of the intramedullary cavity. Bone cement under pressure is injected through the central bore while fluid is drawn through the absorbent pad and the fluid flow passageway. The tubular member and injector gun are moved axially forward from the intramedullary canal as it is filled with bone cement under pressure, and fluid and blood products are continuously evacuated from the interior of the canal during the injection and pressurization of the bone cement.

6 Claims, 2 Drawing Sheets

