

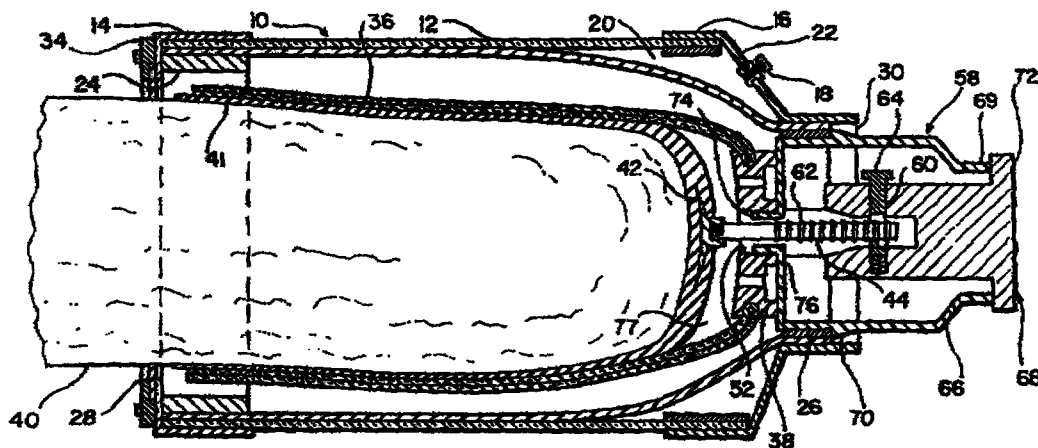


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(54) Title: **PROCESS AND APPARATUS FOR MAKING PROSTHESIS SOCKET** ✓

(57) Abstract

The combination of compression pressure casting or molding a preformed, moldable, hardening socket material (36) and applying tension to a residual limb (40) in a distal direction while the socket material is curing results in forming a definitive socket that fits well to the residual limb after curing without substantial rectification. Pressure relief formations (90), socket coverings (92, 94), and a prosthesis coupler (38) may be compression molded simultaneously with the socket. A pressure casting system includes a pressure chamber (20), a compressive pressure applying membrane (22), a tension reacting system (58) for producing a resultant axial tension in the residual limb within the socket material during forming and hardening of the socket, and optionally a load cell (84) to monitor or indicate the tension force during molding. The socket material includes a preformed tubular sleeve like reinforcement web of fibers pre-impregnated with an uncured preferably water activatable, moldable, hardening resin material, with an integrated prosthesis coupler at one end.