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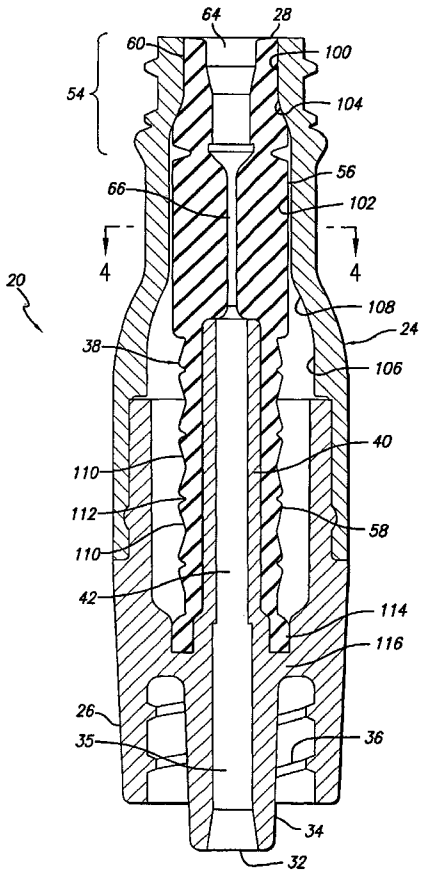
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(54) Title: NEEDLE FREE MEDICAL CONNECTOR WITH EXPANDED VALVE MECHANISM AND METHOD OF FLUID FLOW CONTROL



(57) Abstract: A needle free medical connector includes a housing with a first port and a second port. The connector also includes a piston element defining a fluid passageway between the first and second ports. The piston element is movable between flow and non-flow positions. The piston element has a compressible section having a variable inner width that forms a part of the flow path through the connector. As the piston is compressed to the flow position, the compressible section self-expands in width thereby maintaining or increasing the volume of the fluid passageway through the connector. The compressible section has a configuration permitting the continuous flow of fluid through its entirety.

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