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4200, 600 Travis, Houston, TX 77002-2778 (US).

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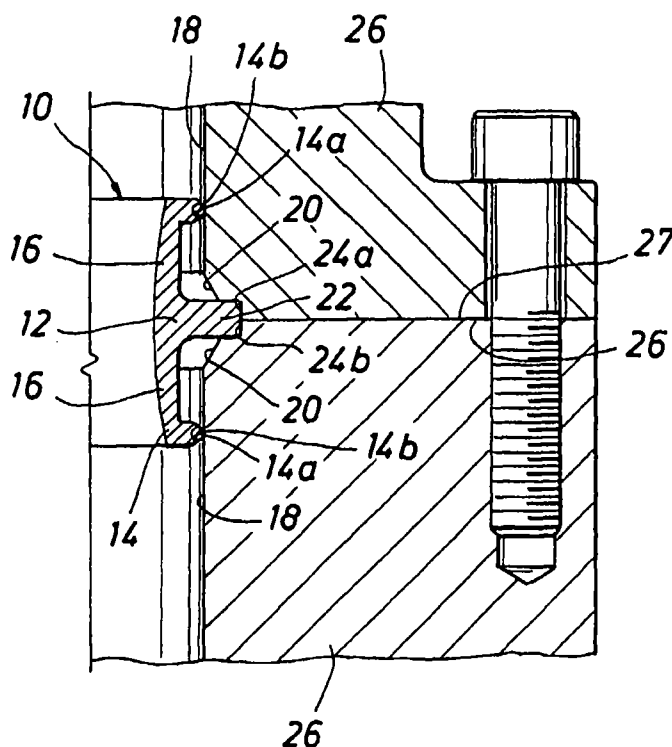
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200 East Randolph Street, Chicago, IL 60601 (US).(72) Inventors: **JANOFF, Dwight, D.**; 3719 Mission Valley
Drive, Missouri City, TX 77459 (US). **VICIC, John, C.**;
6411 Oak Masters Drive, Missouri City, TX 77459 (US).
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Spring, TX 77379 (US). **CRAWFORD, Neil, C.**; 19023
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(54) Title: METAL-TO-METAL SEAL WITH SOFT METAL INSERT



(57) Abstract: An annular metal-to-metal sealing system, for use in wellhead systems and having many other uses, has a metal member (17) defining an annular internal or external sealing surface (18) for which sealing is intended. An annular seal body (10) composed of high strength metal material is positioned in concentric relation with the annular sealing surface and is sufficiently flexible to become spring loaded, typically during assembly, for continuous application of a spring force. The annular seal body defines one or more annular seal retainer grooves each having an annular soft metal sealing insert (14a) therein, with a portion (14b) thereof exposed for sealing engagement with the annular sealing surface. The spring loaded characteristic of the annular seal body applies constant force to maintain the soft metal seal insert constantly energized sealing relation with the annular sealing surface and maintains effective sealing even when dimensional changes to the sealing surface occur due to temperature or pressure changes.

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