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(71) Applicant: **W. L. GORE & ASSOCIATES, INC.**
[US/US]; 555 Paper Mill Road, Newark, DE 19711 (US).

(72) Inventors: **BASHAM, Robert**; W. L. Gore & Associates, Inc., 551 Paper Mill Road, Newark, DE 19711 (US).
DUPUY, Nicole; W. L. Gore & Associates, Inc., 551 Paper Mill Road, Newark, DE 19711 (US). **LAROSE, Erik**; W. L. Gore & Associates, Inc., 551 Paper Mill Road, Newark, DE 19711 (US).

(74) Agent: **MILLER, Amy** et al.; L. Gore & Associates, Inc., 551 Paper Mill Road, P.O. Box 9206, Newark, DE 19714-9206 (US).

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(54) Title: A METHOD OF INSERTING A LUBRICANT FREE STOPPER INTO A LUBRICANT FREE BARREL OR A LUBRICANT FREE CARTRIDGE TUBE AND A SYSTEM FOR ASSEMBLING SAME

(57) Abstract: A method of inserting a lubricant free stopper into a lubricant free syringe barrel or lubricant free cartridge tube is disclosed. The method includes (1) inserting a stopper with a sealing rib into a placement region of a hybrid insertion device, (2) lowering the body of the hybrid insertion device into a syringe barrel or cartridge tube to a position located past the barrel flange or top of the cartridge tube while establishing a sealable connection with the syringe barrel or cartridge tube, (3) maneuvering the stopper past the distal opening of the hybrid insertion device using an insertion pin and deploying the stopper at a final position within the syringe barrel or cartridge tube under vacuum assistance, (4) fully retracting the insertion pin from the syringe barrel or cartridge tube, and (5) retracting the hybrid insertion device from syringe barrel or cartridge tube. The method is lubricant free or substantially lubricant free. The hybrid insertion device may be electropolished and/or extrude honed.



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