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(54) **ENHANCED DUAL BARREL SYRINGE ENCLOSURE WITH ROTATIONAL DETACHMENT SYSTEM FOR SIMULTANEOUS IRRIGATION AND ASPIRATION IN ENDODONTIC PROCEDURES**

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See application file for complete search history.

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(57) **ABSTRACT**

A dual barrel syringe assembly includes first and second cover components, a first barrel and a first plunger in fluid communication with one another, a second barrel and a second plunger in fluid communication with one another, a tip piece connectable to the first and/or second cover components, a trigger rotatably coupled to at least one of the first and second cover components, and a mechanism connecting the trigger to the first and second plungers, the mechanism being configured to move the first and second plungers in an opposing synchronous manner in response to a rotational movement of the trigger. A method of using the dual barrel syringe assembly includes inserting first and second needles of the tip piece in a root canal of a patient and squeezing the trigger to release a sterilizing fluid in the root canal.

**13 Claims, 7 Drawing Sheets**

