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(54) **An atomizing nozzle assembly.**

(57) An atomizing nozzle assembly is provided having an outwardly diverging frustum of a cone shaped, deflector core (1) of wear resistant ceramic, a nozzle rim (8) of wear resistant ceramic encircling the core and coextensive with a downstream portion thereof to form a mixing zone (16) therewith for receiving liquid-to-be-atomized therein from an unobstructed passage (56) and atomizing fluid directing the liquid-to-be-atomized away from the core. The mixing zone leads to a nozzle orifice outlet (18). The core is mounted in a core holder (20) and is adjustable by a screw thread, in close proximity to the mixing zone, to adjust the width (W) of the mixing zone, and the liquid-to-be-atomized (e.g. a coal slurry fuel) and the atomizing fluid (e.g. air) are fed

along coaxial tubes (72,68) which are slidably mounted by glands (106) to accommodate differential expansions. With this combination it is possible to set the width of the gap between the deflector core and the nozzle rim even before the operating temperature is reached, because negligible changes in this width will occur due to differential expansions between the nozzle components. Furthermore, accommodating differential thermal expansions by the slidable glands avoids any damage occurring to the ceramic parts due to differential thermal expansion.

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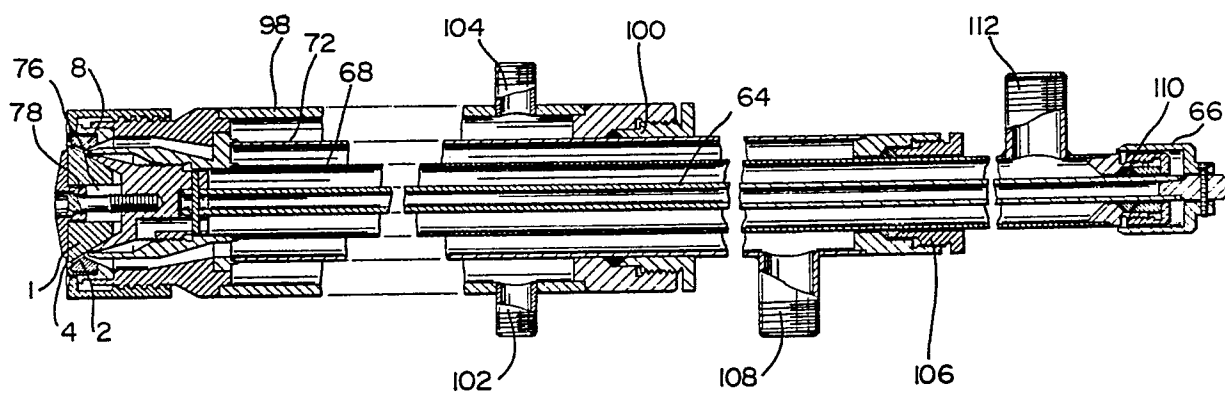


FIG. 1



DOCUMENTS CONSIDERED TO BE RELEVANT			EP 87310020.0
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.) X5
A	<u>EP - A2 - 0 128 805</u> (FORNEY) * Page 3, line 18 - page 8, line 23; fig. 1-3 *	1,4,6	B 05 B 7/04
A	<u>DD - A - 249 612</u> (VEB STRÖMUNGSMASCHINEN) * Totality *	1,4,6	
D,A	<u>US - A - 4 592 506</u> (CAPES et al.) * Column 2, line 39 - column 3, line 68; fig. 1,2 *	1,4,6	
D,A	PROCEEDINGS OF THE FIFTH INTERNATIONAL WORKSHOP ON COAL-LIQUIDS FUELS TECHNO- LOGY, 1985, Halifax K.A.JONASSON et al. "The NRCC Burner Assembly and Related Technologies: An Update" pages 364-378 * Pages 366-373,376,378 *	1,4,6	
			TECHNICAL FIELDS SEARCHED (Int. Cl.) X5
			B 05 B 1/00 B 05 B 7/00 F 23 D 11/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 30-11-1989	Examiner TSCHÖLLITSCH
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	