



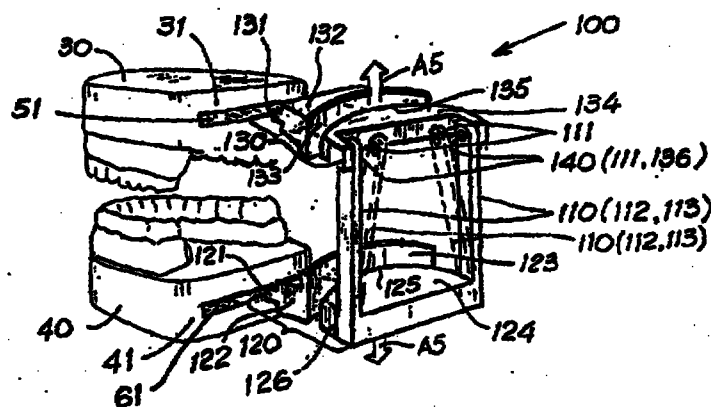
PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61C 11/00		A1	(11) International Publication Number: WO 96/39094
			(43) International Publication Date: 12 December 1996 (12.12.96)
(21) International Application Number: PCT/US96/06991		(81) Designated States: AU, BR, CA, JP, KR, MX, SG , European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 16 May 1996 (16.05.96)			
(30) Priority Data: 08/467,450 6 June 1995 (06.06.95) US		Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(71) Applicant: DENTSPLY RESEARCH & DEVELOPMENT CORPORATION [US/US]; Lakeview and Clarke Avenues, Milford, DE 19963 (US).			
(72) Inventor: HUFFMAN, Ronald, E.; P.O. Box 1328, Sapulpa, OK 74067 (US).			
(74) Agents: BIEBER, James, B.; Dentsply International Inc., 570 West College Avenue, P.O. Box 872, York, PA 17405-0872 (US) et al.			

(54) Title: **VERTICALLY RIGID DENTAL ARTICULATOR SYSTEM AND METHOD**



(57) Abstract

A dental articulator structure for use in registration of a pair of casts of a dental model which are positioned in an opposing and spaced relationship. The articulator structure includes at least one axially rigid support member having opposing ends from which multi-piece cast attachment members may be orthogonally attached. The at least one axially rigid support member and the orthogonally attachable cast attachment members being an articulator structure that locates the axially rigid support member substantially close to the back molar face of the opposing pair of dental model casts such that confronting translational movement of the dental model casts is prevented in a plane parallel to the axially rigid support member, especially confronting translational movement in a region where back molars may be missing in a dental model. The multi-piece cast attachment structure is formed having mating curved, partially spherical, surfaces that facilitate multi-directional alignment of the pair of opposing dental model casts. The multi-piece cast attachment structure may be formed as a tandem arrangement that includes a two-piece attachable alignment structure in combination with at least one spacer block that compensates for cast size differences and is attachable to the back face of a selected cast. In a preferred embodiment, the at least one axially rigid support member is formed as a U-shaped structure defining a pair of axially rigid support arms.