TABLE 4

	Liquid A		Liquid B		Bonding Strength To Dentin (kg/cm^2)	Fitness
Comparative Example 1 (Chemical polymerization Type)	p-toluenesulfinate	1.0 weight %	2-hydroxymethacrylate	30.0 weight %	12	e
	N,N-dihydroxyethyl-p-toluidine	1.0	2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]propane	30.0		
	Ethanol	98.0	Benzoyl peroxide	1.0		
			Ethanol	39.0		
Comparative Example 2 (Photopolymerization Type)	2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]propane			25.0 weight %	2	d
	2-hydroxyethyl methacrylate			25.0		
	Camphor quinone			0.5		
	Dimethylaminoethylmethacrylate			1.0		
	Ethanol			48.5		
Comparative Example 3 (Primer)	2-hydroxyethyl methacrylate			50.0 weight %	3	e
	Ethanol			50.0		
Comparative Example 4 (Photopolymerization Type)	1-ethyl-3-(3-dimethylaminopropyl)carbodiimide			0.05 weight %	5	e
	Di-2-methacryloxylethyl-2,2,4-trimethylhexamethylene dicarbamate			25.0		
	2-hydroxyethylmethacrylate			25.0		
	Camphor quinone			0.5		
	Dimethylaminoethylmethacrylate			1.0		
	Ethanol			48.45		
Comparative Example 5	(Photopolymerization Type)					
	1-cyclohexyl-3-(2-morpholinoethyl)carbodiimide			25.0 weight %	1	d
	2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]propane			40.0		
	2-hydroxyethylmethacrylate			33.9		
	1,2-benzanthraquinone			0.1		
	4-dimethylaminoethyl benzoate			1.0		

As can be seen from Tables 1–4, it is verified that the dental adhesive compositions containing the compounds having carbodiimides in their molecules show a strong bonding strength to the dentin in particular.

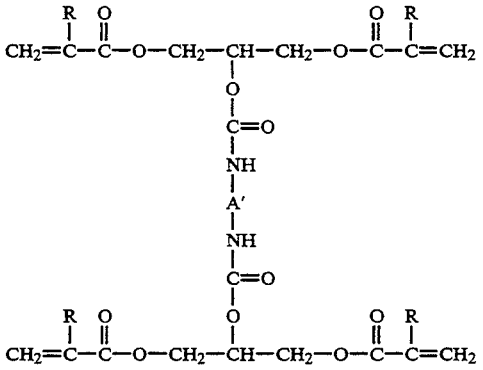
From observation of fitness done with human extracted teeth, it is noted that the resins are well bonded to the dent in with no gap between them whatsoever, which is a leading cause of secondary caries.

What is claimed is:

1. A dental adhesive composition comprising

(a) 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide

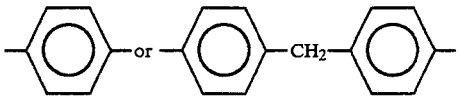
(b) at least one methacrylate or acrylate selected from the group consisting of methyl methacrylate, ethyl methacrylate, isopropyl methacrylate, 2-hydroxyethyl methacrylate, n-butyl methacrylate, isobutyl methacrylate, hydroxypropyl methacrylate, tetrahydrofurfuryl methacrylate, glycidyl methacrylate, 2-methoxyethyl methacrylate, 2-ethylhexyl methacrylate, 2,2-bis(methacryloxyphenyl)propane, 2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]propane, 2,2-bis(4-methacryloxydiethoxyphenyl)propane, 2,2-bis(4-methacryloxypropoxyphenyl)propane, ethylene glycol dimethacrylate, diethylene glycol dimethacrylate, triethylene glycol dimethacrylate, butylene glycol dimethacrylate, neopentyl glycol dimethacrylate, 1,3-butanediol methacrylate, 1,4-butanediol dimethacrylate, 1,6-hexanediol methacrylate, trimethylolpropane trimethacrylate, trimethylolethane trimethacrylate, pentaerythritol trimethacrylate, trimethylolmethane trimethacrylate, pentaerythritol tetramethacrylate, methacrylates and acrylates containing a urethane bond in their molecules, di-2-methacryloxyethyl-2,2,4-trimethylhexamethylene dicarbamate or its acrylate and compounds having the following structural formula:



wherein:

R, which may be identical or different from each other is H or CH_3, and

A is $-(CH_2)_6-$,



and

(c) a photopolymerization or a chemical polymerization initiator which chemical polymerization initiator is selected from the group consisting of the following combinations:

1) N-phenylglycine and benzoyl peroxide;

2) p-toluenesulfinate and benzoyl peroxide; and

3) p-toluenesulfinate, an aromatic tertiary amine and benzoyl peroxide.

2. A dental adhesive composition as claimed in claim 1, wherein said 1-ethyl-3-(3-dimethylaminopropyl)car-