

	PAGE.		PAGE.
Books, modernity of.....	513	Bridges, changing single to double track	8
Books, necessity for reading.....	521	Bridges, courses of instruction in.....	114
Books, writing of.....	512	Bridges, defects in highway.....	225
Borrow-pits.....	44, 45	Bridges, deflection of.....	379
Boston Elevated Railroad.....	589, 590	Bridges, depth for trusses.....	230
Boston Elevated Railway, Dr. Wad-		Bridges, design of compared with	
dell's work on.....	7	that of buildings.....	771
Botany, relations to engineering.	961, 966	Bridges, details of highway.....	226, 228
Bottom chords, stiffening of.....	311	Bridges, effect of overloading of.....	445
Box drains.....	21	Bridges, highway, causes of faults	
Boys, the admission of, to engineer-		in	213
ing schools.....	844	Bridges, highway, combination of	
Braced towers compared to solitary		builders.....	206, 214, 222
columns for elevated railroads.....	722	Bridges, highway, contracting re-	
Braced towers for elevated railroad,		form in.....	209
590, 659, 710		Bridges, highway, for governments	206
Bracing, between longitudinal		Bridges, highway, Japanese.....	71, 72
girders	735, 740	Bridges, highway, legislation respect-	
ing.....	610, 632, 740	ing	209, 210, 211
Brackets beneath cross girders on		Bridges, highway, list of faulty.....	212
elevated railroads.....	634, 733	Bridges, highway, methods of con-	
Brackets, lack of on Second Avenue		tracting for.....	205, 217, 218, 221
Elevated Railroad.....	738, 747	Bridges, highway, number of fail-	
Brackets on elevated railroads.....	733	ures	217
Branches of engineering, interde-		Bridges, highway, reform in	
pendence of	940	methods of designing.....	211
Breadth, necessity for in education,		Bridges, highway, rigidity of.....	225
88, 835		Bridges, highway, specifications for,	
Breadth of engineering education,		203, 205, 208, 238, 239	
importance of.....	939	Bridges, highway, state control of.....	213
Bridge builders' association, work-		Bridges, highway, use as a test of.....	216
ing of.....	233, 236, 237, 240, 247	Bridges, importance of rigidity in.....	447
Bridge building, state supervision		Bridges, live loads for railway.....	262
of	243, 250	Bridges, maintenance of.....	447
Bridge contractors' reliability.....	245	Bridges, members of highway.....	226
Bridge designing, experience in.....	789	Bridges, methods of scamping.....	773
Bridge designing, higher instruction		Bridges, panels for highway.....	230
Bridge designing, opinions upon.....	20, 204	Bridges, proportions of railway.....	27
in	945	387, 421	
Bridge design, reasons for discus-		Bridges, public officials unwilling to	
sion of.....	262	pay for good.....	240
Bridge design, the development of.....	453	Bridges, railway, state control of	
Bridge details, abandoned types of.....	453	building	225
Bridge engineer, course of study for		Bridges, styles of railway.....	261, 275, 376
Bridge engineer, education of.....	785	Bridges, suspension highway.....	227
Bridge engineer, first work of.....	786, 787	228, 229	
Bridge engineer, qualifications for.....	785	Bridges, types of trusses for high-	
Bridge, failure of railway.....	369	way	230
Bridge failures.....	206, 215, 218, 220	Broken stone, screening of.....	777
221, 243		Broken stone, use of.....	597, 677
Bridge failures, publicity of.....	244	Buildings, construction of.....	771
Bridge lettings.....	206, 214, 221	Buildings, design of steel.....	771
Bridge lettings, expense of.....	244	Buildings, for Mexico City, weight	
Bridge lettings, laws relating to.....	19, 222	of	802, 809
Bridge materials, specifications for		Buildings, the construction of, for	
Bridge scamping, prevention of.....	245, 246	Mexico	801
Bridge tenders, restricted to a few.....	245	Buildings, the floating of, in Mexico	801
Bridge trusses, abandoned types.....	453	Buffers, calculations for.....	553
Bridge trusses, highway.....	226	Buffers for Halsted Street Lift-	
Bridge washouts.....	234	Bridge	533, 547, 552, 564, 584
Bridges, appropriations for.....	223	Buffers, hydraulic capacity of.....	547
		Bush work	30