

# Index

*Buildings are indexed by location. References to illustrations are in boldface type.*

- Aalto, Alvar, 276, 277–281, 332, 337 n. 5  
Abel, Carl Friedrich, 28, 29, 31, 32, 35  
Abel and Gutbrod, 304, 332  
Abramovitz, Max, 284, 287  
Académie Royale de Musique (Paris), 109  
Academy of Ancient Music (London), 40  
Accademia degli Immobili (Florence), 73  
Accademia Filarmonica (Verona), 83  
Acoustical clarity, 8, 17, 38, 57, 94, 178, 225, 243, 251, 258, 259, 260, 263, 271, 286, 289–290, 298, 304, 349 n. 23  
Acoustical echo, 94, 156, 158, 193, 238, 239, 260, 262, 263, 271  
Acoustical horns, 25, 26  
Acoustical intimacy, 17, 57, 217, 286, 290  
Acoustical Investigation and Research Organisation (AIRO), 294  
Acoustically coupled rooms, 100, 178  
Acoustical models, conceptual, 235, 251, 262  
Acoustical myths, 204, 219, 260  
Acoustical prediction, 205, 235, 243, 245, 351 n. 31.  
*See also* Reverberation calculation  
Acoustical quack cures, 245  
Acoustical ray diagram, 81, 193, 235, 237, 251, 262  
Acoustical resonating chamber, 94–95  
Acoustical troughs, 95, 112  
Acoustic “clouds,” 159  
Acoustics. *See also* Assisted resonance; Grazing incidence; Haas effect; Isacoustic curve; Noise; Reverberation; Sound; Spatial impression; Tone  
and arithmetical proportions, 219 (*see also* Pythagorean ratios)  
of building materials, 3, 13, 61, 64, 89, 94, 95, 108, 156, 187, 219, 250, 260, 298  
of cathedrals, 3, 9, 339 n. 22, 341 n. 20, 342 n. 9, 348 n. 7  
of cinemas, 260  
of circus tents, 349 n. 24  
and Classical period music, 17, 214  
of concert hall balconies, 217, 220, 250  
of concert halls, 8, 13, 15–17, 217, 219, 225, 236, 251, 258–260, 262, 289–290, 294, 298, 300, 348 n. 7, 349 n. 20 (*see also* individual halls)  
of domes, 94, 108, 112, 235  
early experiments in, 243, 245  
of glass palaces, 149, 152, 156  
of the open air, 3, 8, 152, 259 (*see also* of outdoor music pavilions)  
of opera house boxes, 73, 100, 101, 178, 192  
of opera houses, 8, 13, 73, 80, 83, 88, 89, 94–95, 100, 104, 108, 115, 178–179, 289–290 (*see also* individual opera houses)  
of outdoor music pavilions, 8, 259, 260, 294, 350 n. 29  
of Protestant churches, 9  
and relief decoration, 80, 88, 143, 250 (*see also* Sound diffusion)  
and Romantic period music, 17, 159, 214  
simulator, 350–351 n. 30  
and social demands, 73, 100, 101, 104, 303, 304  
and stage fright, 344 n. 1  
of stage houses, 178  
of theater balconies, 178  
and twentieth-century music, 258–259, 271  
variable, 16, 289–290, 294, 316, 349 n. 23 (*see also* Assisted resonance)  
Adam, Robert, 21, 339 n. 16  
Adelcrantz, Carl Fredrik, 75, 334  
Adler, Dankmar, 236, 238, 239, 242. *See also* Adler and Sullivan  
Adler and Sullivan, 238, 240–242, 243, 262, 300  
Akron (Ohio), Edwin J. Thomas Hall, 290  
Albano, Benedetto, 122, 124  
Albert, Prince Consort of Great Britain, 122, 156  
Aldeburgh Festival, 298

- Aleotti, Giovanni Battista, 8, 53, 73, 77, 78  
 Alexander III, tsar of Russia, 172  
 Alfieri, Benedetto, 80, 81  
 Algarotti, Conte Francesco, 83, 94  
 Amati, Nicola, 22  
 Amsterdam, Concertgebouw, 8, 17, 200, 214,  
     215–216, 218, 219, 286, 300, 330  
 Anacreontic Society (Dublin), 52  
 Anechoic chamber, 351 n. 31  
 Arne, Thomas, 48  
 Arup Associates, 178, 298, 299, 333  
 Assisted resonance, 16, 271, 289, 294, 344 n. 8,  
     350 n. 26, 350 n. 27, 350 n. 30  
 Aubertin, Granel, and Mathon, 262, 266–267  
 Auditoria, multiple-use, 15, 289. *See also*  
     Acoustics, variable
- Bach, Johann Sebastian, 9, 29, 57, 214, 349 n. 17  
     B-Minor Mass, 9, 140  
     *Passions*, 140  
     *St. Matthew Passion*, 9  
 Bach, John Christian, 29, 31, 32, 35  
 Bacon, Ernst, 257  
 Bad Kissingen, Assembly Rooms, 222  
 Bagenal, Hope, 3, 159, 271, 341 n. 11  
 Ballu, Théodore, 166  
 Banister, John, 26  
 Barberini family, 76  
 Barcelona, Palau de la Musica Catalana, 231  
 Barry, Edward Middleton, 122, 125, 165, 166, 335  
 Basel, Stadt-Casino, 219, 221, 330  
 Basile, Filippo, 172, 173  
 Baumann, L., 222  
 Bayreuth  
     Festspielhaus, **plate 11**, 8, 88, 115, 179, 186–187,  
         188–191, 192, 304, 335  
     Markgräfliches Opernhaus, **plate 6**, 86, 87, 88,  
         186, 334  
 Beazley, Samuel, 115  
 Beckford, William, 130  
 Beecham, Thomas, 159  
 Beethoven, Ludwig van, 64, 133, 140, 203, 214,  
     354 n. 17  
     *Coriolanus* Overture, op. 62, 247, 249  
     *Missa Solemnis*, 140  
     Symphony no. 3 (*Eroica*), 133, 258  
     Symphony no. 7, 65, 133  
     Symphony no. 9, 43, 133, 140  
 Bellini, Vincenzo, 100, 101  
 Belluschi, Pietro, 284  
 Bennett, Sir William Sterndale, 146  
     *The May Queen*, 146  
 Beranek, Leo L., 13, 286  
 Berio, Luciano, 315  
 Berlin  
     Deutsche Oper, 335  
     Grosses Schauspielhaus (Friedrichstadt-Palast),  
         193, 194  
     National Theater project (Gilly), 115, 116  
     Philharmonie (1888), 222, 224, 330  
     Philharmonie (1963), 300, 301–302, 303–304, 306,  
         333  
     Schauspielhaus am Gendarmenmarkt, 65, 67, 115,  
         117, 133  
     Schiller Theater, 193  
     Senderfreies Hall, 304  
     Singakademie (1812 project), 133, 134  
     Singakademie (1821) (Maxim Gorki Theater), 133,  
         135–137  
     Staatsoper, 86, 101, 105, 133, 334  
     Unten den Linden Theater, 175  
 Berlin Philharmonic Orchestra, 300  
 Berlioz, Hector, 16, 130, 132, 152, 156, 199, 209,  
     342 n. 4, 342 n. 6, 354 n. 13  
     *Benvenuto Cellini*, 122  
     *Requiem*, 156  
     *Symphonie Fantastique*, 129  
     *Te Deum*, 313  
 Berne, Kasino, 222  
 Bernini, Gian Lorenzo, 76, 77  
 Besançon, Theater (Ledoux), 112, 113–114  
 Bianchi, Pietro, 101  
 Birmingham (Alabama), Jefferson Civic Center,  
     290  
 Bizet, Georges, 171  
 Blondel, François, 89  
 Bloomington (Indiana), Indiana University  
     Auditorium, 260

- Boccioni, Umberto, 347 n. 1  
 Boethius, 337 n. 2  
 Bologna  
   Teatro Comunale, 13, 89, 93, 94, 341 n. 7  
   Teatro Malvezzi, 89  
 Bolt, Beranek, and Newman, 286, 287, 290,  
   291–292, 349 n. 23, 350 n. 25, 350 n. 30  
 Bolton (Lancashire), Town Hall, 146  
 Bonn, Beethovenhalle, 308, 309, 333  
 Bononcini, Battista, 48  
 Bordeaux, Grand Théâtre, 104, 105–106  
 Boston  
   Music Hall (1863), 250, 330  
   Opera House (1909), 13  
   Symphony Hall, 214, 219, 235, 243, 249–251,  
     252–253, 262, 286, 289, 331, 346 n. 10  
 Boston Symphony Orchestra, 250  
 Botrel, 166  
 Boulez, Pierre, 316  
   *Poésie pour Pouvoir*, 316  
 Boullée, Etienne-Louis, 109, 110–111  
 Brahms, Johannes, 152, 199, 209, 258, 259  
   *German Requiem*, 140  
 Brandt, Karl, 186  
 Brant, Henry, 308  
 Bristol, Colston Hall, 332  
 Britten, Benjamin, 298  
   *War Requiem*, 349 n. 17  
 Britton, Thomas, 27, 338 n. 9  
 Broadcasting studios, 315, 352 n. 3  
 Broderick, Cuthbert, 146, 147  
 Bruckner, Anton, 152, 342 n. 9  
   masses, 140  
   Symphony no. 9, 141  
   *Te Deum*, 140  
 Brückwald, Otto, **plate 11**, 186, 188–191, 335  
 Brunel, Isambard Kingdom, 235  
 Brussels  
   Maison du Peuple, 230, 231  
   Palais des Beaux Arts, 231, 331  
   Philips Pavilion (World Fair), 324, 326  
 Bucharest, Ateneul Român (Atheneum), 222  
 Budapest  
   National Opera House, 172  
   Vigado Concert Hall, 222  
 Buenos Aires, Teatro Gran Rex, 348 n. 12  
 Buffalo (New York), Kleinhans Music Hall, 263,  
   331  
 Bülow, Hans von, 181  
 Burnacini, Ottavio, 83  
 Burney, Charles, 32, 49  
 Burnham, Daniel H., 243, 244, 331  
 Busoni, Ferruccio, 257, 348 n. 7  
 Buxton, Opera House, 178  
 Cady, Josiah C., 172, 174, 335  
 Cage, John, 325, 354 n. 16, 354 n. 17  
   *HPSCHD*, 325, 327  
   *Musicircus*, 325, 327  
   *Theater Piece*, 353 n. 10  
 Cahill, Thaddeus, 313  
 Calgary (Alberta), Jubilee Auditorium, 332  
 Cambridge (Massachusetts)  
   Fogg Art Museum (Hunt Hall), Harvard  
   University, 235, 243, 246, 247, 248, 345 n. 1  
   Sanders Theater, Harvard University, 247, 249  
 Caplin, Thomas, 52, 54, 329  
 Caracas, Aula Magna, 275, 332  
 Cardiff, St. David's Hall, 306  
 Caresale, Angelo, 96, 97, 106  
 Carlo-Emanuele III, King, 80  
 Carnegie, Andrew, 222  
 Carter, Edward J., 146, 342 n. 12  
 Caruso, Enrico, 271  
 Castellamonte, Conte di, 80, 81  
 Caudill, Rowlett and Scott, 290, 291–292, 333  
 Cavalli, Pietro Francesco, 77  
   *Scipione Africano*, 77  
 Český Krumlov, Castle Theater, 72  
 Chamberlin, Powell, and Bon, 276, 333, 337 n. 5  
 Charitable Music Society (Dublin), 52  
 Charles VI, Emperor, 86  
 Charpentier, Gustave, 171  
 Chavez, Carlos, 327  
 Chicago  
   Arie Crown Theater, 275  
   Auditorium, 236, 238–239, 240–242, 242–243, 300  
   Central Music Hall, 236  
   Grand Opera House, 236

- Orchestra Hall, 225, 243, **244**, 331  
 Stock Pavilion, 325  
 Temporary Opera House, Grant Park, 236  
 Chicago Symphony Orchestra, 239, 243  
 Chorin Monastery, 15  
 Christchurch (New Zealand), Town Hall, 306  
 Christina, queen of Sweden, 76, 77  
 Clark, Kenneth, 130  
 Clement IX, Pope, 77  
 Cleveland (Ohio), Severance Hall, 260  
 Cockerell, Charles Robert, 142, 143  
 Cole, Sir Henry, 157, 158  
 Collcutt, T. E., and Hollway, G. H., 175, **176**  
*Collegia Musica*, 57  
 Cologne, Gürzenich, 222  
 Concert halls. *See also* Acoustics of concert halls;  
   Auditoria, multiple-use; Tone, concert hall;  
   individual concert halls  
   amphitheater-shaped (*see* fan-shaped)  
   analogy with musical instruments, 219, 260  
   centralized, 22, 300, 303, 306, 345 n. 6  
   comparison with the phonograph, 251, 262, 263,  
     271, 275, 289 294, 298, 308  
   directed-sound, 251, 262–263, 346 n. 10  
   elliptical, 53, 158, **215**, 250  
   fan-shaped, 250, 276, 349 n. 20  
   heating and cooling in early, 28, 42, 52  
   horseshoe-shaped, 200  
   importance of narrow width in, 217, 251 (*see also*  
     Sound, lateral reflection of)  
   lighting of early, 32, 42, 43, 203, 208, 209, 214,  
     263, 294 (*see also* Opera houses, lighting of)  
   ratio of volume to seating area in, 286, 289,  
     339 n. 22  
   rectangular, 199–200, 205, 208, 209, 214, 217,  
     218, 219, 220, 222, 225, 250, 251, 262, 286, 306  
   reputation of, 13, 159, 200, 204  
   scale models of, 351 n. 31  
   semisurround, 217, 306  
   shoe box (*see* rectangular)  
   surround (*see* centralized)  
   vineyard-stepped, 303, 304, 306  
 Concert of Ancient Music (London), 38, 40  
 Conservatorio concerts, 65  
 Cornelys, Theresa, 29, 32, 35  
 Crane, Kiehler, and Kellogg, 275  
 Cremer, Lothar, 17, 300, 304, 351 n. 31  
 Crépinet, A. M., 166  
 Cromwell, Oliver, 25  
 Croydon, Fairfield Hall, 275  
 Cubist painting, 320  
 Cunningham, John, 200, 202, 222, 330  
 Cuvilliés, François, 21, 72, 88, 89, **90–91**, 334  
 Damrosch, Leopold, 222  
 Damrosch, Walter, 222  
 Dando, J. H. B., 43  
 Dart, Thurston, 8  
 Dauthe, Johann Carl Friedrich, **plate 3**, 62–63, 329  
 Debussy, Claude, 17, 324, 344 n. 2, 353 n. 11  
   *Pelléas et Mélisande*, 175, 230–231, 327  
 de Fleury, Charles Rouhault, 166  
 Delannoy, François-Jacques, 65, 66  
 Denver (Colorado), Boettcher Hall, 306  
 Derham, William, 243  
 des Esseintes. *See* Huysmans, J. K.  
 Detroit, Henry and Edsel Ford Auditorium, 275  
 Diderot, Denis, 80  
 Dissonance, 257, 258, 259, 271, 347 n. 6, 348 n. 7,  
   348 n. 8  
 Donizetti, Gaetano, 100, 101  
 Dresden  
   Hoftheater (1841), 158, 180, 181  
   Opernhaus am Zwinger, 88  
   Opernhaus (1878), 181, **184–185**  
   Palace Chapel, 4  
   Staatsoper, 95  
 Drottningholm Court Theater, 72, 75, 334  
 Dublin  
   Great Musick Hall, Fishamble Street, 49, 51, 52  
   Mr. Johnson's Hall, Crow Street, 52  
 Duc, Louis, 166  
 Dummy head recording, 351 n. 31  
 Dumont, Gabriel Pierre Martin, 108, 109  
 Dvořák, Antonin, 152, 199, 225

- Echo. *See* Acoustical echo
- Edinburgh  
 Music Hall, 200  
 St. Cecilia's Hall, 53, 54, 55, 329  
 St. Mary's Cathedral, 313  
 Usher Hall, 225, 228, 313, 331
- Edinburgh International Festival, 313
- Edmonton (Alberta), Jubilee Auditorium, 332
- Eisenhower, Dwight D., 284
- Eisenstadt, Haydn-Saal, 39, 55–56, 57, 329 n. 23
- Electronic music, 313, 315–316, 320, 324–325,  
 354 n. 17
- Elgar, Sir Edward, 140, 159, 225, 345 n. 2
- Elmes, Harvey Lonsdale, **plate 9**, 140, 141, 142,  
 143, 144–145
- Enlightenment, 108
- Environmental art, 325, 327, 354 n. 15
- Erickson, Arthur, **plate 14**, 290, 295–297, 333
- Eriksson, Nils Einer, 260, 331
- Essen, opera house project (Aalto), 276, 278–279,  
 337 n. 5
- Esterházy family, 55
- Eszterháza Castle, 55, 58  
 Great Hall, 56–57, 329, 339 n. 23  
 marionette theater, 56, 72  
 musician's house, 39, 56, 59  
 opera house, 56, 72, 74, 334
- Eugene (Oregon), Hult Center for the Performing  
 Arts, **plate 15**, 16, 294, 306, 307
- Eugénie, Empress, 166, 168
- Expressionism, 193, 300
- Fellner, Ferdinand, and Helmer, Hermann, 175,  
 192, 222, 223, 331, 344 n. 14
- Festival of Britain, 270
- Feszel, Frigyes, 222
- Film music, 343 n. 4. *See also* Music and cinema
- Fire precautions and fire fighting, 95, 112, 172, 175,  
 192, 203, 230, 340 n. 31
- Florence  
 Pitti Palace Theater, 73  
 Teatro Mediceo (Uffizi Palace), 73  
 Teatro della Pergola, 73
- Fontana, Carlo, 8, 77, 78, 79, 80
- Fonthill Abbey (Wiltshire), 130
- Förster, Ludwig, 205, 208
- Fowkes, Captain Francis, **plate 10**, 157–161, 330
- Franz-Josef I, Kaiser, 171, 208
- Frederick II, king of Prussia, 22, 86, 88, 101
- French Revolution, 101, 108, 112
- Fuller, Buckminster, 325, 354 n. 16
- Furtwängler, Wilhelm, 348 n. 7
- Futurism, 257
- Gabriel, Ange-Jacques, 104, 107, 108
- Gabrieli, Giovanni, 9
- Galli-Bibiena family, 80, 83, 84, 88  
 Alessandro, 84, 86, 87, 101, 334  
 Antonio, 13, 64, 84, 86, 89, 93, 329  
 Carlo, **plate 6**, 75, 84, 87, 88  
 Ferdinando, 83, 84, 86, 89  
 Francesco, 64, 83, 84, 85, 88  
 Giovanni, 84, 86  
 Giuseppe, **plate 6**, 84, 86, 87, 88, 89, 186, 334
- Gallini, Sir John, 35, 38
- Galuppi, Baldassare, 65
- Garnaud, A. M., 166
- Garnier, Jean-Louis-Charles, **plate 11**, 165, 166,  
 168, 168–170, 172, 179, 187, 335
- Geminiani, Francesco, 28
- Gendt, A. L. van, 214, 215–216, 218, 330
- Geneva, Salle des Nations project (Le Corbusier),  
 262, 264–265
- German, Sir Edward, 152
- Gesellschaft der Musikfreunde (Vienna), 208,  
 345 n. 4
- Giardini, Felice de, 28
- Gilly, Friedrich, 112, 115, 116, 179
- Ginain, P. R. L., 166
- Glasgow, St. Andrew's Hall, 219, 222, 330
- Gluck, Christoph Willibald von, 72, 96, 120, 203  
*Il trionfo di Clelia*, 89
- Glyndebourne Festival Theatre, 72
- Gothenburg, Konserthus, 260, 331
- Gould, Glenn, 313
- Gounod, Charles François, 171
- Granada, Manuel de Falla Center, 306
- Grazing incidence, 219, 304

- Great Exhibition of 1851, 130, 149, 156. *See also*  
London, Crystal Palace
- Grieg, Edvard, 209
- Grimani family, 77
- Gropius, Martin K. P., and Schmieden, Heinrich,  
**plate 12**, 209, 210–213, 218, 330
- Grosses Konzert (Leipzig), 61
- Guépière, Philippe de la, 89, 92
- Guimard, Hector, 231
- Gye, Frederick, 122
- Haase, Johann Adolph, 88
- Haas effect, 350 n. 29
- Haiger, Ernst, 133, 138, 139, 140
- Halle, Burgtheater, 175
- Hallé, Charles, 200
- Hallé Orchestra, 200
- Hamburg  
Konzert-Saal auf dem Kamp, 57  
Musikhalle, 222  
Musikhalle (new), 16
- Handel, George Frideric, 27, 48, 49, 52, 72, 120,  
122, 214  
*Esther*, 27  
*Israel in Egypt*, 156  
*Messiah*, 49, 52, 143, 156  
*Royal Fireworks Music*, 43
- Handel Commemoration Concert, 32, 343 n. 15.  
*See also* Handel Festival
- Handel Festival, 32, 152, 156
- Hansen, Hans Christian, 205
- Hansen, Theophil Ritter von, 205, 206–207, 208,  
218, 330
- Hapsburg family, 86
- Hardy Holzman Pfeiffer Associates, **plate 15**, 294,  
306, 307
- Harewood House (Yorkshire), 21
- Harmony, rate of change of, 9, 258, 342 n. 9
- Harris, Cyril M., 286, 287–288
- Harris, Vincent, 146
- Harrison, Wallace K., 284
- Hasenauer, Karl von, 186
- Hausman, Baron, 166, 171, 208
- Hawkins, John, 235
- Haydn, Joseph, 9, 16, 17, 35, 38, 40, 55, 57, 64, 72,  
203, 214, 339 n. 28  
*The Creation*, 65, 143  
*La fedeltà premiata*, 72  
*L'infedeltà delusa*, 72  
masses, 56  
*Le pescatrici*, 72  
*The Seasons*, 65, 143  
*Lo speziale*, 72
- String Quartets op. 71 and 74, 38
- symphonies, 15, 56, 339 n. 23
- Symphonies 6–8, 56
- Symphonies 13, 31, 39, and 72, 56
- Symphony no. 45 in F sharp minor (*Farewell*), 57
- Symphony no. 57, 56, 57
- Symphony no. 67, 56, 57
- Symphonies 93–101 (*London/Salomon*), 35, 38, 56
- Symphony no. 94 in G (*Surprise*), 35
- Symphony no. 100 in G (*Military*), 38
- Symphonies 102–104 (*London/Salomon*), 16, 40,  
56
- Heathcote-Stratham, H., 219, 220, 300
- Helsinki  
Finlandia Concert Hall, 276, 280–281  
Kultuuritalo, 276, 277, 332
- Henry, Joseph, 245
- Henry, Pierre, 324
- Henry Wood Promenade Concerts (London), 146,  
230
- Henschel, Sir George, 205
- Herschel, William, 40, 339 n. 28
- Hertzberger, Herman, **plate 15**, 304, 305, 306,  
352 n. 37
- Hickford, John, 28
- Higginson, Henry L., 249, 250
- Hill, W., and Potts, E., 146
- Hiller, Adam, 61
- Hofmannsthal, Hugo von, 193
- Horta, Baron Victor, 230, 231, 331
- Houston (Texas), Jesse H. Jones Hall for the  
Performing Arts, 16, 290, 291–292, 333
- Hunt, Richard Morris, 246
- Huysmans, J. K., 165

- Illinois, University of, Assembly Hall, 325, 327  
 Initial time delay gap, 262. *See also* Sound reflection  
 Isacoustic curve, 236, 237, 238  
 Italian Radio, 315  
 Ives, Charles, 321  
   *The Earth and the Firmament, or Universe Symphony*, 324  
 Izenour, George C., 290, 291–292
- Jeita (Lebanon). *See* Stockhausen, *Stimmung*  
 Jerusalem, Binyanei Ha'Oomah, 275  
 Joachim, Joseph, 203, 205  
 Johnson, Russell, 290, 293  
 Johnson and Burgee, 286, 287–288, 333  
 Johnson and Foster, 284  
 Jones, Owen, 203, 204  
 Jordan, Vilhelm L., 282
- Kauffmann, Angelica, **plate 8**, 21  
 King's Musick, The, 25  
 Kircher, Athanasius, 25, 26, 81, 235, 237  
 Klenze, Leo von, 133  
 Knightly, T. E., 205, 228–229, 230, 330  
 Knobelsdorff, Georg Wenzeslaus von, 86, 101, 105, 133, 334  
 Knudsen, Vern O., 294, 349 n. 20  
 Kosten, C. W., 298  
 Kreisler, Fritz, 271
- Lachez, T., 245  
 Laloy, Louis, 327, 347 n. 5  
 Lamoureux, Charles, 250  
 Landon, H. C. Robbins, 40  
 Lasdun, Sir Denys, 351–352 n. 37  
 Lebensold, Affleck, Michaud, and Sise, 275, 332  
 le Brun, Napoleon E. H. C., 175, 335  
 Le Corbusier, 262, 264–265, 284, 324, 326  
 Ledoux, Claude-Nicholas, 112, 113–114  
 Leeds, Town Hall, 146, 147, 155  
 Leeds Music Festival, 146  
 Leipzig  
   Altes Gewandhaus, **plate 3**, 8, 17, 53, 57, 61, 62–63, 64, 200, 208, 209, 214, 329  
   Gewandhaus (concert hall), 306  
   Neues Gewandhaus, **plate 12**, 61, 200, 209, 210–213, 218, 250, 275, 330  
   Thomaskirche, **plate 1**, 9, 12, 57  
   Thomas-Schule, **plate 1**, 29  
   Three Swans Tavern, 61  
 Lennox (Massachusetts), Tanglewood Music Shed, 259  
 Leonardo da Vinci, 13, 14, 236, 337 n. 5  
 Licensing Act, repeal of, 120, 122  
 Liszt, Franz, 16, 43, 181  
   *Christus*, 140  
   *Faust Symphony*, 129  
   masses, 140  
 Littmann, Max, 8, 192–193, 193, 222  
 Littmann and Heilmann. *See* Littmann, Max  
 Liverpool  
   Mr. Lassell's Saloon, 200  
   Philharmonic Hall (1849), 155, 200, 202  
   Philharmonic Hall (1939), 263, 268–269, 331, 351 n. 32  
   St. George's Hall, **plate 9**, 140, 141, 142–143, 144–145, 146  
 Liverpool Music Festival, 140  
 Liverpool Philharmonic Society. *See* Royal Liverpool Philharmonic Society  
 Locke, Matthew, 9  
   *Psyche*, 120  
 London  
   Aeolian Hall, 203  
   Alexandra Palace, 149  
   Almack's Great Room, 32, 35, 39, 40  
   Argyll Rooms, 42, 42–43, 53  
   Barbican Arts Centre, 276, 306, 333, 337 n. 5  
   Bechstein Hall (*see* Wigmore Hall)  
   Carlisle House, Soho, 29, 30–31, 32, 35  
   Castle Tavern (Fleet Street), 27  
   Coliseum, 178  
   Crosby Hall, 43, 44–45  
   Crown and Anchor Tavern, 39, 40, 41  
   Crystal Palace, 32, 149, 150–151, 152, 153–155, 156, 181  
   Crystal Palace, theater for, 183  
   Dean Street Concert Room, 28  
   Dorset Garden Theatre, 120

- Exeter Hall, 155, 156, 200, 201, 203  
 Freemason's Hall, 40  
 Hanover Square Rooms, 17, 35–40, 36, 39, 42, 43, 56, 155, 329, 339 n. 22, 339 n. 23  
 Hickford's Rooms, 28, 329  
 Hippodrome (Talk of the Town), 178  
 King's Theatre, Haymarket, **plate 8**, 28, 32, 35, 38, 71, 120, **121**, 122, **123**  
 King's Theatre (Concert Room), 16, 39, 39, 40, 42, 43, 56, 65, 329 n. 23  
 Mitre Tavern (behind St. Paul's), 25  
 Mitre Tavern (Wapping), 25  
 National Theatre, 351–352 n. 37  
 Palace Theatre (English Opera House, D'Oyly Carte's Opera House), 175, 176  
 Pantheon, 32, 33–34, 35, 53, 130, 339 n. 16  
 Queen's Hall, 159, 204, 205, 225, 228–229, 230, 263, 330, 345 n. 9, 349 n. 17  
 Ranelagh Garden, **plate 2**, 43, 49, 50  
 Royal Albert Hall, **plate 10**, 156–159, 159–161, 271, 300, 330  
 Royal Festival Hall, 16, 270–271, 272–275, 275, 294, 298, 300, 331, 341 n. 11, 350 n. 27  
 Royal Opera House, Covent Garden, 122, 124–125, 165, 172, 335  
 Sadler's Wells, 49, 51. *See also* Medicinal wells, music at  
 St. James's Hall, 155, 203–205, 204, 225, 230, 300  
 St. Margaret's, Westminster, 9  
 St. Martin's Hall, 43, 46–47, 155  
 St. Paul's Cathedral, 11, 132, 270  
 Spring Garden concert room, 29  
 Spring Garden, Vauxhall (*see* Vauxhall Garden)  
 Steinway Hall, 203  
 Surrey Gardens concert hall, 146, 155  
 Theatre Royal, Drury Lane, 115, 120  
 Tottenham Street Rooms, 40, 41  
 20 St. James's Square, 21  
 Vauxhall Gardens, 43, 48, 340 n. 33  
 Vendu, 27  
 Westminster Abbey, 9, 10, 32, 155  
 Wigmore Hall, 203  
 Willis's Rooms (*see* Almack's Great Room)  
 Yorke Buildings, 27
- London County Council, 270, 331  
 London Symphony Orchestra, 159, 276  
 Los Angeles, Hollywood Bowl, 8, 259, 294  
 Louis, Victor, 104, 105–106  
 Louis XIV, king of France, 104  
 Louis XV, king of France, 104  
 Louis XVI, king of France, 104  
 Louis Philippe, king of France, 108  
 Ludwig II, king of Bavaria, 179–181, 186, 192  
 Lully, Jean-Baptiste, 86, 109, 327  
*Perseus*, 104  
 Lyon, Gustave, 262–263, 266–267
- McCunn, Hamish, 152  
 Mace, Thomas, 22, 24  
 McKim, Charles Follen, 250  
 McKim, Mead and White, 250, 252–253, 331  
 McLuhan, Marshall, 325, 354 n. 16  
 MacMahon, President, 168  
 Mahler, Gustav, 199, 259, 298  
 Manchester  
 Free Trade Hall (1856), 200  
 Free Trade Hall (1951), 332, 351 n. 32  
 Town Hall, 146, 148  
 Manelli, Francesco, *L'Andromeda*, 76  
 Mannheim, Kurfürstliche Oper, 86, 87, 101, 334  
 Mantua, Teatro Accademico (Scientifico), 89  
 Maria Casimira, queen of Poland, 76  
 Maria Theresa, Empress, 96  
 Marinetti, Filippo Tommaso, 346–347 n. 1  
 Martin, John, 132, 132, 342 n. 6  
 Martin, Sir Leslie, 270, 272–275, 331  
 Massenet, Jules Emile Frédéric, 171  
 Matcham, Frank, 178  
 Mathers and Haldenby, **plate 14**, 295–297  
 Matthew, Sir Robert, 270, 272–275, 331. *See also* Robert Matthew, Johnson-Marshall and Partners  
 Matthews, H., 245  
 Mauro, Gaspare and Domenico, 86  
 Maximilian I, Elector, 86  
 Maximilian II Emmanuel, Elector, 86, 89  
 Maximilian III Joseph, Elector, 88  
 Medicinal wells, music at, 49  
 Medrano, Giovanni Antonio, 96, 97, 106



- Melbourne, Victoria Arts Centre, 306
- Mendelssohn, Felix, 43, 64, 199, 200, 208, 214  
*Elijah*, 143, 146  
*First Walpurgis Night*, 143
- Meyer, Jürgen, 16, 55, 57
- Meyerbeer, Giacomo, 203  
*Les Huguenots*, 122  
*Le Prophète*, 122
- Milan  
 Studio di Fonologia Musicale, 315  
 Teatro Regio Ducale, 96  
 Teatro alla Scala, **plate 7**, 96, 98–99, 100, 172, 175, 335
- Minneapolis, Orchestra Hall, 286
- Monster concerts, 152
- Montaner, Luis Domenechi, 231
- Monteverdi, Claudio, *Mercurio e Marte*, 76
- Morland, Sir Samuel, 25
- Moscow, Tchaikovsky Hall, 222
- Motta, Carini, 94
- Mount Egcumbe, Earl of, 71
- Mozart, Leopold, 22, 49, 89
- Mozart, Wolfgang Amadeus, 9, 17, 28, 29, 30, 49, 64, 72–73, 83, 88, 94, 96, 120, 203, 209, 214, 325, 327, 354 n. 17  
*Così fan tutte*, 72  
*Don Giovanni*, 72  
*Idomeneo*, 72  
*Mitridate, rè di Ponto*, 96  
*Le nozze di Figaro*, 72  
*Seraglio*, 72  
*Die Zauberflöte*, 72, 94
- Munich  
 Cuvilliés Theater. *See* Residenz-Theater  
 Glas Palast theater project, 181  
 Herkulesaal, 332  
 Künstlertheater, 193  
 Monumental Theater project, 179–181, 182, 192  
 Nymphenberg Castle, 21  
 Odeon, 133  
 Prinzregent Theater, 192–193, 193  
 Residenz-Theater, 72, 88, 90–91, 334  
 Salvatorplatz opera house, 86  
 Tonhalle, 222
- Music  
 and cinema, 327  
 and national character, 344 n. 2 (*see also* Nationalism in music)  
 and painting, 17, 72–73, 289, 320, 321, 342 n. 6  
 and war, 349 n. 17
- Musical instruments  
 development of, 21–22 (*see also* Tone of musical instruments)  
 directionality of, 306
- Musical Society of Edinburgh, 53
- Musical Union Chamber Concerts (London), 300, 345 n. 6, 351 n. 33
- Music of the spheres, 337 n. 2
- Music societies, professional, 129. *See also* individual societies
- Mylne, Sir Robert, 53, 54, 329
- Naples. *See also* Conservatorio concerts  
 Teatro San Carlo, 96, 97, 101, 106
- Napoleon Bonaparte, emperor of France, 101, 108
- Napoleon III, emperor of France, 166, 168, 171, 208
- Nash, John, 42, 42, 53, 122, 123
- Nationalism in music, 140, 276. *See also* Music and national character
- Neoclassicism, 108, 109, 112, 179
- Neumann, Wilhelm, 186
- New York  
 Carnegie Hall, 219, 222, 225, 226–227, 289, 330  
 Italian Opera House, 15  
 Lincoln Center for the Performing Arts, 225, 284  
 Avery Fisher Hall, 286, 287–288, 289, 333  
 Juilliard School of Music, 284  
 Metropolitan Opera House, 284  
 New York State Theater, 284  
 Philharmonic Hall, 286, 287  
 Vivian Beaumont Theater, 184  
 Metropolitan Opera House (1882), 8, 172, 174, 335, 349 n. 21  
 Music Pavilion (World's Fair), 259  
 Radio City Music Hall, 349 n. 21  
 New York Philharmonic Orchestra, 225, 284, 286  
 Niccolini, Antonio, 96

- Nietzsche, Friedrich, 186  
 Nikolaus I Esterházy, Prince, 56  
 Nikolaus II Esterházy, Prince, 56, 72  
 Nobile Società, 101  
 Noise, 257–258, 347 n. 5  
   pink, 343 n. 2  
   random, 351 n. 32  
   traffic, 270  
   white, 343 n. 2  
 Nolli, Giambattista, Plan of Rome, 83, 85  
 Nordwestdeutscher Rundfunk, 315  
 North, Roger, 21, 22, 25, 26, 27  
 Nottingham, Royal Concert Hall, 290, 293  
 Novosielski, Michael, **plate** 8, 40, 120, 121, 122, 329  
 Nüll, Eduard van der. *See* van der Nüll, Eduard
- Odessa, Opera House, 344 n. 14  
 Opéra-Bouffe (Paris). *See* Théâtre Italien  
 Opera house boxes. *See also* Acoustics of opera house boxes  
   social function of, 96, 100, 101, 104, 167, 178  
   stepped (*en escalier*), 83, 85, 86  
 Opera houses. *See also* Acoustics of opera houses;  
   individual opera houses  
   amphitheater-shaped (*see* fan-shaped)  
   architectural distinction from theaters, 71  
   bell-shaped, 83, 88, 89  
   fan-shaped, 115, 180, 187, 236, 304  
   heating and ventilation of, 236, 239  
   horseshoe-shaped, 77, 83, 96, 112, 115, 122, 171, 181, 193, 284  
   introduction of cantilevered balconies in, 175, 178 (*see also* Acoustics of theater balconies)  
   lighting of, 88, 115, 122, 175, 187, 238, 239 (*see also* Concert halls, lighting of early)  
   truncated circle-shaped, 104, 112, 115  
   truncated ellipse-shaped, 77, 80, 81, 83, 101, 108, 109, 115  
   U-shaped, 77, 88, 120  
 Orchestra galleries, 60  
 Orchestra pits, 95, 112, 115, 175, 187, 192  
 Osaka World Fair, West German Pavilion, 320, 322–323  
 Ott, Carlos, 284, 285
- Ottmer, Carl Theodor, 133  
 Ove Arup and Partners, 282  
 Oxford, Holywell Music Room, 17, 52, 54, 329  
 Ozawa, Seiji, 286
- Paderewski, Ignacy Jan, 225  
 Palermo, Teatro Massimo, 172, 173  
 Palladio, Andrea, 8, 77, 101  
 Paredes, José Garcia de, 306  
 Parigi, Giulio and Alfonso, 73  
 Paris  
   Conservatoire Concert Hall, 65, 66  
   Ecole des Beaux Arts, 108, 166, 250  
   Eiffel Tower, 324  
   Hall of Machinery (Exhibition of Industrial Products), 156, 157  
   Humbert de Romans, 231  
   IRCAM (Centre Georges Pompidou), **plate** 16, 16, 316, 317–319  
   Notre Dame, 9  
   Odéon, 112, 166  
   Palais Royal Opera House, 109  
   Place du Carousel opera house project, 109, 110–111, 112  
   Place de la Bastille Opera House, 284, 285  
   St. Denis, 3  
   Salle Favart, 166  
   Salle Feydeau, 165  
   Salle Pleyel, 262–263, 266–267  
   Salle Ventadour, 165, 166, 167  
   Théâtre Franconi, 156  
   Théâtre National de l'Opéra, **plate** 11, 165, 166, 168, 168–170, 171–172, 179, 180, 187, 276, 335  
   Théâtre National de l'Opéra Comique, 177  
   Théâtre des Nouveautés, 166  
 Paris Conservatoire Concerts, 345 n. 4. *See also* Paris, Conservatoire Concert Hall
- Parma  
   Teatro Farnese, 8, 53, 73, 76, 77, 78  
   Teatro Nuovo, 95  
 Parry, Sir Hubert, 152  
 Patte, Pierre, 80, 82, 95  
 Patti, Adelina, 238  
 Pavia, Teatro de' Quattro Cavalieri (Teatro Fraschini), 89

- Paxton, Sir Joseph, 149, 150–151, 153–155, 156, 181, 235
- Pepusch, John Christopher, 27, 49
- Pepys, Samuel, 21, 26, 48
- Peri, Jacopo  
*Dafne*, 73  
*Euridice*, 73
- Peutz, V. M. A., 316
- Peyre, Marie-Joseph, 112
- Philadelphia, Academy of Music, 175, 335
- Philharmonic Society. *See* Royal Philharmonic Society
- Phipps, C. J., 230
- Piano and Rogers, **plate** 16, 316, 317–319
- Piermarini, Giuseppe, **plate** 7, 96, 98–99, 335
- Pittsburgh, Carnegie Hall, 222
- Pleasure gardens, music in, 43, 48–49 *See also*  
 London; Paris
- Pleasure palaces, music in. *See* London: Alexandra Palace, Crystal Palace, Surrey Gardens
- Poelzig, Hans, 193, 194–195, 231
- Polivka, O., and Balšánek, A., 231
- Pompidou, President Georges, 316
- Prague  
 Národní Divadlo (National Theater), 172, 174  
 Neues Deutsches Theater (Smetana Theater), 175  
 Smetana Hall, 231  
 Stavovské Divadlo (Tyl Theater), 72
- Pratella, Balilla, 346 n. 1
- Professional Concert (London), 35
- Program music, 129, 353 n. 11
- Prokofiev, Sergei, 343 n. 4
- Proust, Marcel, 100
- Purcell, Henry, 9, 203  
*The Fairy Queen*, 120
- Pythagorean ratios, 3, 6, 337 n. 2
- Quantz, Johann Joachim, 22
- Queen's Hall Symphony Orchestra (London), 159
- Radiodiffusion Française, 315
- Rameau, Jean Philippe, 327
- Raumlichkeit*. *See* Spatial impression
- Rayleigh, Lord, 13, 245
- Reading, Hexagon Theatre, 294
- Rechter and Karmi, 275, 332
- Rechter, Zarhy, and Rechter, 275
- Reid, D. B., 245
- Reilly, Sir Charles, 143, 200
- Reinhardt, Max, 193
- Renton Howard Wood Levin Partnership, 290, 293
- Repton, George, 122, 123
- Reverberation, 13, 55, 94, 156, 187, 199, 217, 219, 225, 235, 238, 245, 249, 251, 258, 259, 262, 263, 271, 286, 290, 298, 344 n. 2, 344 n. 14, 346 n. 7, 348 n. 7, 350 n. 25, 351 n. 30  
 calculation, 235, 249–250  
 and development of harmony, 3  
 time, 9, 16, 17, 38, 40, 52, 55, 57, 64, 187, 208, 214, 217, 225, 247, 249–250, 251, 259, 289, 290, 294, 298, 316, 344 n. 2, 349 n. 23, 350 n. 27, 351 n. 31, 352 n. 32  
 variable (*see* Acoustics, variable)
- Richter, Hans, 186, 200
- Ries, Louis, 205
- Rio de Janeiro, Opera House, 181
- Ripple tank, 351 n. 31
- Robert Matthew, Johnson-Marshall and Partners, 294
- Rochester (New York), Eastman Theater, 260
- Rockefeller, John D., 349 n. 21
- Rock music, 320, 325
- Romanticism in music and architecture, 65, 122, 130, 133, 159, 193, 199, 276
- Rome  
 Teatro Aliberti, 83, 85  
 Teatro Argentina, **plate** 5, 80, 95, 101, 106  
 Teatro Barberini, 73, 76  
 Teatro dell' Opera, 178  
 Teatro Tordinona, 77, 78, 80
- Ronald, Sir Landon, 159
- Rossini, Gioacchino Antonio, 94, 100, 101, 120, 203  
*Semiramide*, 122
- Rotterdam, De Doelen Hall, 298, 306, 333
- Rotterdam Philharmonic Orchestra, 298
- Rowse, Herbert J., 263, 268–269, 331

- Royal Commissioners for the Great Exhibition of 1851, 156, 157
- Royal Harmonic Institution (London), 42
- Royal Liverpool Philharmonic Society, 200, 345 n. 4
- Royal Philharmonic Society, 43, 159, 230, 345 n. 4
- Russell, Charles Edward, 239
- Russell, John Scott, 235, 237, 238, 239, 351 n. 31
- Russolo, Luigi, 257
- Saarinen, Eero, and Associates, 284
- Saarinen, Eliel, 263, 331
- Sabine, Wallace Clement, 3, 13, 214, 235, 243, 245, 246, 247, 248, 249–251, 262, 289
- Sachs, Edwin, 172, 175
- Sacred Harmonic Society (London), 200
- St. Augustine of Hippo, 337 n. 2
- St. Petersburg, Court Opera House, 172, 173, 344 n. 14
- Saint-Saëns, Camille, 171  
*Danse Macabre*, 347 n. 5
- Sala, George Augusta, 171
- Salieri, Antonio, *L'Europa riconosciuta*, 96
- Salomon, Johann Peter, 35, 38, 40
- Salzburg  
Mozarteum, 222  
Neues Festspielhaus, 333, 335  
Salzburg Festival Auditorium (Poelzig), 193, 195, 231
- Salzburg Festival, 193
- San Francisco, Davies Symphony Hall, 306
- Santi, Francesco, 86
- Sarro, *Achille in Sciro*, 96
- Saunders, George, 71, 94, 95, 101, 115, 118–119
- Sax, Adolphe, 354 n. 13
- Scarlatti, Alessandro, 77
- Scarlatti, Domenico, 76
- Scene vedute per angolo*, 83, 340 n. 5
- Schaeffer, Pierre, 315  
*musique concrète*, 257, 315
- Scharoun, Hans, 300, 301–302, 303, 308, 333
- Schinagl, Marx, 86
- Schinkel, Karl Friedrich, 15, 65, 115, 133, 134–137, 140, 143, 179, 222
- Schoenberg, Arnold, 257, 258, 354 n. 17
- Schöffler, Nicolas, 324
- Scholer, Walter, 260, 261, 331
- Schroeter, Victor, 172, 173
- Schubert, Franz, 199, 214  
*Rosamunde*, 152  
Symphony no. 9 in C, 152
- Schultz, Theodore, 16, 350 n. 25
- Schulz, Josef, 172, 174
- Schumann, Clara, 43, 203
- Schumann, Robert, 152, 199, 214
- Schütz, Heinrich, 4
- Schwechten, Franz, 222, 224, 330
- Scott, Col. (Maj.-Gen.) H. Y. D., **plate 10**, 158, 159–161, 330
- Scott, J. O., 146, 148
- Seeling, Heinrich, 175
- Selva, Giannantonio, 101, 102–103
- Semper, Gottfried, 149, 156, 158, 172, 179–181, 182–185, 186, 192, 344 n. 14
- Semper, Manfred, 181
- Sfondrini, Achille, 175, 178
- Shaw, George Bernard, 230
- Shaw, Norman, 143
- Sheffield, City Hall, 146, 342 n. 12
- Sheffield Music Festival, 146
- Sibelius, Jean, 276
- Siccardsburg, August von. *See* van der Nüll and Siccardsburg
- Sighizzi, Andrea, 83, 89
- Sight lines, 13, 83, 94, 115, 175, 178, 179, 187, 236, 238–239
- Simson, Otto von, 3
- Smetana, Frederick, *Libuse*, 172
- Smirke, Sir Robert, 124
- Snape (Suffolk), Maltings Concert Hall, 298, 299, 333
- Soane, Sir John, 142, 341 n. 20
- Society of Gentlemen (London), 27
- Sound. *See also* Acoustics  
absorption, 95, 100, 152, 192, 217, 235, 247, 249, 260, 263, 289, 290, 294, 298, 316, 344 n. 1  
absorption by audience, 8, 100, 217, 219, 225, 258, 286, 289, 298, 303, 304, 339 n. 22

- cue-ball reflection of, 217, 219, 220  
 diffusion, 159, 187, 192–193, 205, 286, 316,  
     349 n. 20, 350 n. 25 (*see also* Acoustics and re-  
     lief decoration)  
 directional perception of, 251 (*see also* lateral re-  
     flection of)  
 focusing, 81, 115, 140, 205, 239 (*see also* Acoustics  
     of domes)  
 insulation, 203, 270  
 kinship with vision, 165, 321, 325, 327, 343 n. 1,  
     343 n. 2 (*see also* Music and painting)  
 lateral reflection of, 17, 38, 55, 178, 193, 251, 258,  
     276, 298, 300, 303, 304  
 reflecting canopy, 159, 271, 286, 290, 298,  
     350 n. 25  
 reflection, 8, 15, 40, 95, 112, 178, 187, 192–193,  
     199, 208, 214, 235, 237, 263, 271, 276,  
     289–290, 298, 303, 306, 316, 337 n. 5, 341 n. 11,  
     343–344 n. 7, 348 n. 7, 349 n. 20  
 reinforcement systems, 294 (*see also* Assisted res-  
     onance; Haas effect)  
 shadows, 250  
 velocity, 243, 262  
 Spatial impression, 15, 16, 40, 251, 276, 298,  
     338 n. 7  
 Spatial responsiveness, 338 n. 7 (*see also* Spatial  
     impression)  
 Speaking statues, 25  
 Speer, Rudolf, 209  
 Spohr, Louis, 22, 43, 203, 214  
     *Last Judgment*, 143  
 Stainer, Jacob, 22  
 Stanford, Sir Charles Villiers, 152  
 Stendhal, 72  
 Stern, Isaac, 225, 344 n. 1  
 Stockdale Harrison and Sons, 225, 228, 331  
 Stockhausen, Karlheinz, 308, 313, 315, 316, 320–321,  
     324, 322–323, 352 n. 5  
     *Gruppen*, 353 n. 6  
     *Kontakte*, 316, 353 n. 10  
     music house design, 321  
     *Musik für die Beethovenhalle*, 308, 309  
     *Musik für ein Haus*, 320  
     *Stimmung*, 324–325  
     *Tunnel Spiral*, 322  
 Stöger, Michael, 72  
 Stokowski, Leopold, 275, 294, 308  
 Stone, Edward Durrell, 275  
 Stradivari, Antonio, 22  
 Strauss, A. M., 260  
 Strauss, Richard, 129, 193, 199  
 Stravinsky, Igor, 258, 259  
     *Rite of Spring*, 258  
 Stuttgart  
     Court Opera House, 89, 92  
     Liederhalle (Grosser Saal), 332  
     Liederhalle (Mozarthalle), 304  
     Staatstheater, 193  
 Sugden, Derek, 298, 299  
 Suger, Abbot, 3  
 Sullivan, Sir Arthur, 152  
 Sullivan, Louis, 236, 239  
 Super-realist painting, 289  
 Sydney, Opera House, **plate 13**, 282, 283, 284, 306  
  
 Tacca, Ferdinand, 73  
 Tartini, Giuseppe, 22  
 Taut, Bruno, 141  
 Tavern concerts. *See* Leipzig; London, for individ-  
     ual names  
 Tchaikovsky, Peter, 209, 225  
 Tel Aviv, Frederic R. Mann Auditorium, 275, 332  
 Telemann, Georg Philipp, 57  
 Telephone concerts, 313  
 Telstar, 313  
 Tennyson, Alfred, Lord, 152  
 Teodoli, Marchese, **plate 5**, 80, 106  
 Theater-in-the-round. *See* Concert halls,  
     centralized  
 Théâtre Italien (Opéra-Bouffe) (Paris), 112, 166, 167  
 The Who, 325  
 Thiersch, Friedrich von, 222  
 Thomas, Theodore, 239, 242  
 Tone  
     of concert halls, 205, 214, 251, 259, 271, 286, 289,  
     290, 298, 351 n. 32  
     of musical instruments, 21–22, 347 n. 6  
     of orchestras, 187, 192, 199, 347 n. 6  
 Torelli, Giacomo, 77

- Toronto  
 Massey Hall, 225, 330  
 Roy Thomson Hall, **plate 14**, 290, 294, 295–297, 306, 333, 350 n. 25  
 Toronto Symphony Orchestra, 290, 294  
 Tron family, 76  
 Turin, Teatro Regio, 80, 81, 94, 95  
 Tuthill, William B., 225, 226–227, 330
- Upham, J. B., 245  
 Utrecht, Muziekcentrum Vredenburg, **plate 15**, 304, 305, 306  
 Utzon, Jørn, **plate 13**, 282, 283, 284
- Vanbrugh, Sir John, 120, 341 n. 20  
 Vancouver, Queen Elizabeth Theatre, 275, 332  
 van der Nüll, Eduard, and Siccardsburg, August von, 171–172, 186, 335  
 Vanvitelli, Luigi, 96  
 Varèse, Edgard, 315–316, 324  
*Intégrales*, 316  
*Poème électronique*, 324  
 Vaughan Williams, Ralph, Symphonies 4 and 5, 349 n. 17
- Venice  
*ospedali*, **plate 4**, 65, 66  
 San Marco, 7, 9, 100  
 Teatro La Fenice, 101, 102–103, 172  
 Teatro Novissimo, 77  
 Teatro San Cassiano, 76  
 Teatro San Moise, 77  
 Teatro SS Giovanni e Paolo, 8, 77, 78
- Verdi, Giuseppe, 100, 120  
*Requiem*, 100  
*Rigoletto*, 122  
*Il Trovatore*, 122
- Verona, Teatro Filarmonico, 83, 85, 86  
 Versailles, opera house, 104, 107, 108  
 Vicenza, Teatro Olimpico, 8, 77  
 Victoria, queen of England, 122, 146, 158, 161  
 Vienna. *See also* Gesellschaft der Musikfreunde  
 Burgtheater (Hofburg), 172, 186, 205  
 Burgtheater (Michaelerplatz), 72  
 Cortina opera house, 83  
 Freihaustheater, 72  
 Kaiserliches Theater, 88  
 Konzerthaus, 222  
 Musikvereinsgebäude, 205, 206, 208  
 Brahmsaal, 208  
 Grosser Musikvereinsaal, 17, 200, 205, 206–207, 208, 214, 218, 219, 275, 286, 330  
 Redoutensaal (Hofburg), 64, 64, 329  
 Rietplatz opera house, 83  
 Ringstrasse, 171, 186, 205  
 Spanish Riding School, 65  
 Staatsoper, 171–172, 186, 205, 335  
 Vienna Philharmonic Orchestra, 208  
 Villanueva, Carlos R., 275, 332  
 Vinuela, J. M., 306  
 Viollet-le-Duc, 130, 131, 166  
 Viotti, Giovanni Battista, 40  
 Vitruvius (Marcus Vitruvius Pollio), 235  
 Vivaldi, Antonio, 65, 83
- Wagner, Cosima, 181, 186  
 Wagner, Richard, 8, 16, 43, 88, 165, 179–181, 186, 188, 192, 193, 209, 258, 327  
 ideas on theater design, 112, 133, 140, 179, 181, 187, 192  
*Parsifal*, 327  
*Der Ring des Nibelungen*, 165, 179, 186, 192  
*Siegfried's Death*, 179  
 stage sets of, 192  
 Wagner, Wieland, 192  
 Wagner, Wolfgang, 192  
 Wailly, Charles de, 112  
 Walpole, Horace, 32, 43, 108, 339 n. 16  
 Walter and Weeks, 260  
 Walters, Edward, 200  
 Walton, William, *Portsmouth Point*, 258  
 Washington, D.C., John F. Kennedy Center, 286  
 Waterhouse, Alfred, 146  
 Watson, F. R., 259, 260, 262  
 Weber, Carl Maria von, 43, 203, 214  
 Webern, Anton, 257, 348 n. 7  
 Weimar, Hoftheater, 193  
 Wellington (New Zealand), Michael Fowler Centre, 306

- Weltzien, Victor von, 209  
West Lafayette (Indiana), Edward C. Elliott Hall  
of Music, Purdue University, 260, 261, 331  
Westmacott, R., 43, 46–47  
Whispering galleries, 235  
Wiesbaden, Assembly Rooms, 222  
Wilhelmine, margravine of Bayreuth, 86, 88  
Wood, Henry, 146, 159  
Wren, Sir Christopher, 9, 120, 142  
Wright, Lloyd, 294  
Wyatt, Benjamin, 115, 120, 341 n. 19  
Wyatt, James, 32, 33–34, 53, 130, 339 n. 16  
Wyatt, Samuel, 32, 33–34
- Xenakis, Iannis, 308, 324  
*Metastaseis*, 324  
*Terretektorh*, 308
- Ybl, Miklós, 172
- Zappa, Frank, 325  
Zitek, Josef, 172, 174  
Zürich, Grosse Tonhalle, 222, 223, 331