

## INDEX

*(The numbers refer to the pages)*

- Absorption of light 55  
 Aether, equations for free 1  
     structure of 3, 121  
  
 Bessel's functions 35  
 Boundary conditions 17  
  
 Characteristics, differential equation  
     of 21, 118  
 Conjugate electromagnetic fields 5,  
     23, 126, 133  
 Convergence of series of elementary  
     solutions 42, 100  
 Coordinates, cylindrical 69  
     paraboloidal 98  
     polar 35  
     spheroidal 95  
     toroidal 104, 107  
     transformations of 28, 29  
 Corpuscle, first model of 114  
     second model of 127  
  
 Degree of wave-function 110  
 Dielectric sphere, scattering of waves  
     by a 44  
 Diffraction by a screen with a straight  
     edge 83  
     of electric waves 67  
     of sound 90  
 Discontinuity, surfaces of 20, 22, 90,  
     121, 140  
  
 Electric doublet 8, 119  
 Electric waves, propagation of 10, 11,  
     67, 73, 75  
     diffraction of 67, 83  
 Electromagnetic fields 4  
     conjugate 5  
     self-conjugate 5  
 Electron, field due to a moving 113,  
     140  
 Elementary solutions 35, 71, 100, 104,  
     105  
 Energy equation for a material medium  
     15  
  
 Faraday tubes 121  
 Flow of energy 5  
  
 Green's equivalent layer 19, 122  
     functions 142  
  
 Hamilton's equation 13, 21, 24, 123,  
     140  
 Hysteresis 16  
  
 Intensity of scattered light 54  
 Invariants 5  
 Inversion, generalised 31, 111, 112  
  
 Kirchoff's formula 140, 147  
     extensions of 140, 147  
  
 Laplace's equation 97, 107, 114, 119,  
     139  
 Legendre functions 38, 106  
 Light, absorption of 55  
     diffraction of 83  
     model of a source of 9  
     polarisation of 53  
     scattered 54  
  
 Magnetic oscillator 11, 119  
     vibrations 49  
 Material medium 14, 16  
 Multiform solutions of wave-equation  
     82  
  
 Obstacle, cylindrical 79, 80  
     small 51  
     spherical 44  
     spheroidal 96  
  
 Paraboloidal coordinates 98  
     mirror, reflection by 24  
 Poisson's formula 140, 147  
     wave-function 86, 138  
 Polarisation of light 53  
 Polynomial solutions of wave-equation  
     102, 111  
 Poynting's vector 6, 13

## INDEX

159

- Pressure of radiation 60  
 Projection of singularities from a moving point 127  
 Rayleigh's Radiation 51  
 Relations between various solutions 40, 68, 70, 72, 100, 103, 105  
 Residual blue 55  
 Röntgen rays 22, 54, 131  
 Screen, diffraction by a 83  
 Singular curves 123  
 Singularities, moving 115  
 Sonin's polynomials 99  
 Sound, diffraction of 90  
 Surface, Riemann 82  
 Transformations of coordinates 28  
 Transformations of electromagnetic equations 2, 139, 146, 149  
     wave-equation 31, 150  
 Velocity of light 2  
     of moving singular curves 123  
 Vibrations, free damped 49  
     electric and magnetic 49  
 Wave-equation 7  
     function 7  
     function of degree zero 113  
 Waves, propagation of, along a wire 75  
     over earth's surface 11, 67, 73  
     scattering of 44  
 Wedge, diffraction by a 87