Extensive, Rare and Beautiful

CABINET OF SCIENCE.

CATALOGUE

OF VALUABLE

PHILOSOPHICAL APPARATUS

BEING A COLLECTION MADE BY THE LATE

CHARLES N. BANCKER, ESQ.,

Embracing Articles and Instruments illustrative of every branch of Physics,

COMPRISING:

Mechanics, Hydraulics, Chemistry, Electricity and Galvanism, Electro-Magnetism, Optics, Light and its Polarization, Acoustics, Astronomy, Crystallography, Geology, &c.,

Suitable either for Public Instruction or Social Entertainment,

ON PRIVATE SALE.

ADDRESS,

JAMES A. BANCKER,

ADMINISTRATOR,

No. 312 SOUTH TENTH STREET,

PHILADELPHIA.

W. B. SELHEIMER'S Steam-Power Printing Establishment, N. W. cor. Fifth and Chestnut Sts.

INTRODUCTION.

An opportunity is now offered to the public, and especially to the Directors of Scientific Institutions and Colleges, to purchase the beautiful and extensive Cabinet of Philosophical Apparatus accumulated by the late Charles N. Bancker, Esq., of this city, and enumerated in the annexed Catalogue.

The list of objects, as will be seen, embraces articles and instruments, in profuse variety, for the elucidation of almost every branch of physics, illustrating progressive science up to a brief period before the decease of its indefatigable and cultivated collector.

In presenting a catalogue of the kind, it is impossible to convey, by description, an adequate idea of the quality of the instruments; but the workshops of Messrs. Jones, of London; of Soleil and Duboscq, of Paris; of Albert Bros., of Frankfort; of Smith & Beck, Zentmayer, and Hirschmann, attest the character of their construction, and the perfection of their finish.

In many of its parts the collection is familiar to the scientific gentlemen of the country, some of whom have

courteously extended their reliable endorsement. In the Optical Branch, and particularly as to the subject of the Polarization of Light, it is, perhaps, unexampled, and, in some respects, not to be reproduced.

The Abbé Moigno, a distinguished savant of France, and editor of the *Scientific Journal*, "Cosmos," whose opportunities for judging have been good, writes, (Vol. 14, 1859, page 557,) "We are in frequent *rapport* with Mr. Bancker, of Philadelphia, who is possessed of so great a fondness for the science of optics, that he does not permit a new apparatus to pass without making its immediate acquisition. His collection of optical instruments is certainly the most numerous and most brilliant that exists in the world. It embraces in itself more riches than all our cabinets of France, and perhaps of Europe united. And its venerable founder, whose zeal seems to grow with his age, does not cease to gather the freshest novelties. We exaggerate nothing when we estimate the optical treasure of Mr. Bancker at many hundred thousand francs."

Chief among the instruments of rare value stand the chef d'œuvre of M. Francois Arago, a grand interferential refractor, made by M. Soleil Pere, originally intended for the Polytechnic School at Cairo, and said to be unsurpassed.

Attention might be called to the quality and attractiveness of many other objects in the cabinet, such as Dove's

Polariscope, with combined microscopic and telescopic arrangement; Cook's Spectroscope, for the analysis of light; Zentmayer's, Smith & Beck's, and Oberhausen's Microscopes, with subjects innumerable; but, suffice it to say, that the purpose of their late possessor seems always to have been to obtain the best and newest productions.

A hope is entertained that Philadelphia may secure to herself this unrivaled collection; but it is offered, without reserve, to the scientific institutions of the country, being for the most part handsomely incased for transportation.

The desire is to make disposition of the cabinet as *a whole*, under which circumstance a very large abatement will be made from its actual value; but it may be so divided to suit separate purchasers, as to make several collections.

Proposals will be received, either in person or by letter, and exhibition afforded, on application to

JAMES A. BANCKER, Administrator,
No. 312 *South Tenth Street, Philadelphia.*

Extract from a letter of Professor Henry, President of the Smithsonian Institution, Washington.

"I am well acquainted with the collection of apparatus of my lamented friend, the late Mr. Bancker, of Philadelphia, and am free to say that with the addition of a very few articles that have been improved or invented within the last few years, it would be the most complete series of instruments that I know of for the illustration of the Phenomena and History of Physics.

The printed catalogue gives but an imperfect idea of the extent of the collection, since, in most cases, it only indicates classes of articles originally packed in one box, and not a continued number of separate articles.

To break up the collection and dispose of it piece-meal, would be a matter of much regret, since the value of the instruments is enhanced by the fact of them being part of series well adapted to the illustration of the order of the development of science."

Letter from Professor Henry Morton.

HOBOKEN, N. J., Nov. 11th, 1870.

JAMES A. BANCKER, ESQR:

MY DEAR SIR:—Through the kindness of your father I had frequent opportunity of examining his collection of apparatus, especially that portion relating to the subject of Optics, and I can thus say, from my own observation, that in extent and value it is equaled by none in this country. Besides illustrating the history of optical discovery and research during the present century, it contains numbers of the most valuable and efficient instruments, such as the Saccharimeter of Duboscq, the Polarizing Benches of Dove, Powel & Soleil, Microscopes by Zentmayer, Smith & Beck, &c., Telescopes by various makers, and complete sets of apparatus and objects for repeating the researches of Becquirel and Stokes on Phosphorescence and Fluorescence.

A catalogue, however, alone could give any idea of the extent of this collection.

Truly yours,

HENRY MORTON.

INDEX.

PAGE

Mechanics, Motion, &c., ... 1
Hydrostatics and Hydraulics, ... 2
Pneumatics, ... 4
Thermometers, Barometers and Hygrometers, ... 5
Electricity, ... 5
Electrical and Electro-Magnetic, ... 8
Voltaic, Electric and Thermo-Electric, ... 9
Magnetic, ... 10
Astronomical, ... 10
Dials, Hour Glasses, Compasses, &c., ... 11
Chemistry, ... 11
Chemical Apparatus, ... 12
Geometry, Stereometry and Crystallography, ... 14
Mineralogy and Geology, ... 15
Optics, ... 15
Microscopes and Microscopic Objects, ... 17
Microscopic Apparatus and Magnifiers, ... 18
Horizontoriums, Color Tops and Cards, ... 20
Polariscopes and Polarizing Apparatus, ... 21
Selenite Devices, Rhombs and Iceland Spar, ... 21
Various Crystals, Prisms, Presses, &c., ... 22
Newton's Rings, Iriscopes, Models of Crystals, &c., ... 23
Light and Polarization, ... 24
Magic Lanterns and Sliders, ... 27
Apparatus showing Undulatory Theory of Light and Sound, ... 28
Acoustics, ... 28
Stereoscopes and Pseudoscopes, ... 31
Stereoscopic Views, ... 33
Miscellaneous, Scales, Weights and Balances, ... 34

NOTE.

☞ *The inner column of numbers on the margin of the Catalogue is not for the purpose of enumeration, but has reference to a manuscript list of the contents in the cases, to aid only MR. WILLIAM McCONNELL, the Exhibitor, who, for many years, has most ably assisted in the care and arrangement of the Apparatus.*

CATALOGUE.

Mechanics, Motion, &c.

1 [1 A 1 B] A Case of Apparatus, Illustrating the Mechanical Powers.

2 [1 B] Another Case of Apparatus, Illustrating the Mechanical Powers; very finely constructed of wood and brass.

3 [2] A Case of Combined Mechanical Powers and Apparatus, Illustrating the Lever, Balance, Steelyard, &c.; beautifully constructed in brass.

4 [3] Mahogany Case, containing a complete set Smeaton's Pulleys, with Weight; very finely constructed in brass.

5 [4] Mahogany Case, containing Brass Model of Ferguson's Crane; elegant workmanship.

6 [5] Mahogany Case, containing Brass Model of a Crane; very finely constructed.

7 [6] Mahogany Case, containing Fine Brass Working Model of Pile-Driving Machine.

8 [7] Mahogany Case, containing a Set of Ferguson's Combined Mechanical Powers; handsomely constructed in brass.

9 [8] A Complete Brass Desaquillier's Friction Apparatus; fine workmanship.

10 [9] Mahogany Case, containing a Boxwood and Mahogany Archimedean Screw, illustrating the Inclined Plane.

11 [11] Mahogany Case, containing Fine Brass Model of Vince's Wedge Apparatus.

12 [12] Mahogany Case of Ferguson's Very Complete Wedge Apparatus, with Accessories; elegantly constructed in brass.

13 [13] Mahogany Chest, containing a Complete Whirling Table and Accessories, with Drawer, containing a great variety of Apparatus illustrating the Inclined Plane, Screw, Weights and Wedges, &c.

14 [14] 3 Unpainted Cases, containing Models in Wood of Arched Bridges, in Sections.

15 [15 1] Case of Sylphtrope Figures, to Revolve on Inclined Plane of Wet Glass.

16 [15 3, 4] 2 Boxes, containing 4 Gyroscopes.

17 [15 4] Globe Gyroscope.

18 [15 5] Brass Gyroscope, with Mahogany Stand.

19 15/6 Mahogany Case, containing an Elegant Brass Wheatston's Gyroscope.

20 15/17 Very Handsome Brass Gyroscope, of three Concentric Circles and Central Solid Disc, all revolving on different Axes within each other.

20 A 15/3x a 6x Foucault's Diagrams of the Gyroscope.

21 15/23 Silver Plated Odometer for Carriage Hubs, with three additional Mountings, for four Wheels.

22 16/A Mahogany Case, containing an Elegantly-constructed Set of Brass Friction Wheels and Pendulum Apparatus, illustrating Accelerated and Retarded Motion.

23 17 A Brass and Ebony Ritchie's Delicate Balance, Scale Pans, Weights, &c., in Mahogany Case.

24 25 Brass Working Model of Nero's Steam Engine, in Mahogany Case.

24 A 269 A brass High Pressure Spherical Steam Boiler, Lamp and Stand, for Steam Gauge.

25 26 Brass Working Model of Branca's Steam Engine, in Mahogany Case.

25 A 264 3 Wallaston's small Steam Tubes and Apparatus.

26 29 Card Board Model of the Thames Tunnel, with Book of Description.

27 30 Brass Sectional Working Model of a Steam Engine, in a Frame.

27 A 264/1 Small Brass Working Model of a Steam Engine, Oscillating Cylinder and Lamp.

28 34 Mahogany Case, containing a Top of Saxton, Loaded Tops and Tetotums for Theory of Motion.

29 38 Mahogany Frame and Grooved Curve, and Straight Groove, with two Ivory Balls, illustrating motion by straight and curved lines.

29 A 47/6 An Apparatus for Centripetal and Centrifugal Forces, with Sphere, Spheroid, Chain, Double Cone, Oblate Sphere, &c.

29 B 47/7 Inertia Apparatus, consisting of a Pillar with Elastic Spring, Colored Marbles and Disc.

Hydrostatics and Hydraulics.

30 41 Mahogany Case of Hydrostatic Apparatus, finely mounted in Polished Brass, Frame and Japanned Tin Trough.

31 42 Tin Japanned Model, illustrating Intermitting Springs.

32 43 2 Cases, containing brass mounted Hydrostatic Bellows, with brass and glass tubes.

33 44 Hydrostatic Paradox, being a large Glass Jar finely mounted in brass, with Piston, Plug, Lever, Scale and Weight, in Mahogany Case.

34 45 Tin Japanned Apparatus, with five apertures, showing flow of fluids at different heights.

35 46/1 Model of Archimedes' Pump, brass mounted with Glass Reservoir.

36 46/2 Glass Model of Archimedes' Screw Pump.

37 280 A Case containing 19 Spirit and Prismatic Levels, mounted and unmounted.

38 48 Glass Apparatus of various kinds, illustrating pressure of Fluids, consisting of Receivers, Syphons, Straight and Curved Tubes, some mounted in brass.

39 50 Variety of Glass Apparatus, consisting of Funnels, Tubes and Bulbs, some brass mounted, illustrating Hydrostatics and Pneumatics.

40 53 Glass (brass mounted) model of a Diving Bell.

41 54 Tin Japanned Perpetual Fountain, on principle of the Syphon.

42 55 1 Large Glass Jar, Balloon and Car, illustrating Hydro-Pneumatics.

43 55 2 2 Glass Jars, with Iodine, Ball and Tube, Stem and Stand, illustrating Hydro-Pneumatics.

44 56 A Complete Hydrostatic Balance, and all the Apparatus connected therewith; elegantly constructed, and mounted in brass, in Mahogany Case.

45 40 15 Coates' Hydrostatic Balance.

45 A 277 4 Apparatus Exhibiting Hydrostatic Paradox.

46 A 58 1 Mahogany Case, containing a Fine Brass Condensing Syringe, with Jets, two Brass Wheels, Gilt Ball, &c.

46 B 58 2 Also a Case containing a Large Tin Japanned Air Fountain and Funnel.

46 C 58 3 A Large Tin Japanned Tray.

46 D 47 E And a Grotesque Figure and Jet Cone, all appertaining to the above.

47 57 Two Cases, containing two Glass Models of Barker's Mill, with Stand.

48 59 Numerous Straight and Curved Glass Tubes, various sizes, for Hydrostatic Experiments.

49 63 Case containing a Large Tin Japanned Fountain, and Receiver or Cistern.

50 64 A Montgolfier's Glass Model of a Hydraulic Ram, Reservoir, Pipe, Air Vessel and Jet.

51 65 1 An Apparatus of Marriott's, to show the Rise of Fluids under different densities, consisting of a Curved Tube, Stand and Scale.

Also an Apparatus Illustrating the Elastic Force of Fluids, consisting of a Glass Tube, Stand and Scale.

52 66 1 A very Fine Brass Mounted Glass Working Model of a Montgolfier Ram, with Tin Japanned Cistern, Tubes, Jet and Air Vessel.

53 66 2 A Long Glass Hydraulic Tube, Brass Ball and Mountings.

54 68 Apparatus to Illustrate the Rise of Water in Tubes, consisting of a Large Glass Jar, Mounted on Brass Stand, with Straight, Curved and Spiral Glass Tubes.

55 69 Case containing four Glass Hieros Fountains and other Tubes.

56 69 x A Japanned Metal Flower Vase Fountain.

57 71 3 Japanned Tin Model of Barker's Centrifugal Mill, with printed description.

58 71/4 Japanned Tin Model of Barker's Centrifugal Mill.
59 75/1 4 Glass Water Hammers.
60 75/2 A Large finely constructed Glass Water Hammer.
61 75/3 Case containing three very fine, large glass Water Hammers.
62 80/2 Case containing Hydrostatic Jars, with Graduated Jars, Jets, &c., to illustrate pressure of Fluids and Water Spouts.

Pneumatics.

63 71/5 Case of Statham's Steam glass Boilers and Governors for same, also, brass and copper Steam Power Boiler, Piston and Valve.
64 74 A Bacchus' and brass Wind Cask Apparatus: illustrating expansion of Fluid by Heat.
65 76 Case of Glass Tubes and Bulbs, exhausted Balls, Ether Jets and Capillary Tubes.
66 77 7 Metallic and Glass Air or Steam Valves and Discs.
67 81/2 2 Pulse Glasses and Stand, oscillating Bulbs.
68 81/1 Case containing a variety of Pneumatic Apparatus, such as Pulse Glasses, Thermometer Tubes, Marcet's Freezing Apparatus with Mercury Tubes, Oscillating Tube and Balls, &c.
69 71/1 A Fine French Glass Barrels, large size, Lever Air Pump, Brass Mounted, finished in the most durable manner, with Air Gauge.
70 72 A Large Mahogany Cabinet, with three drawers, containing an elegant Brass, Double Barrel Air Pump: very complete in all its appointments, with Receivers, Gauges, Hand Glasses, Bladders, Cylinders and Experimental Apparatus, made by W. & S. Jones, of London.
71 71/2 Case of Experimental Apparatus, for the Lever Air Pump, being Castles, Figures, &c.
72 73 A Glass Receiver surmounted with Figure Head and Pipe, to which is attached a Bladder, to illustrate the action of the Lungs.
73 80/1 Case containing a variety of large and small Glass Receivers for Air Pump.
74 80/3 Large Case containing ten various sized superior brass-mounted Glass Receivers, plain and graduated, for use with Air Pump.
75 80/4 2 Chevalier's Ether Balloon, Jets of Glass.
76 85 Case of Caoutchouc Bags with brass Stop-Cocks, and brass Connecting Tubes, plain and fancy Balloons, Metal Pipes, and fittings for inflation of Balloons.
77 89 2 large Balloons, with Fish to suspend.
78 228/2 Oval japanned metal Pneumatic Trough.
79 228/3 Oblong japanned metal Pneumatic Trough.
79A 40/14 A Clarke's Patent Blower, with Brass Cap and Tube as a Fumigator.

Thermometers, Barometers and Hygrometers.

80 $\frac{92}{1}$ An Oblong Frame or Case with Glass Door, covered with Wire-Work, containing a Combined Thermometer, Hygrometer and Barometer, and also a Self-Registering Thermometer, made by W. & S. Jones, London.

81 $\frac{92}{2}$ Another Oblong Case, with Glass and Wire Door, containing a Self-Registering Thermometer, and a Combined Thermometer, Hygrometer and Barometer.

82 $\frac{200}{1}$ Keith's Self-Registering Thermometer, by Jones, of London.

83 $\frac{93}{3}$ Case containing a variety of Thermometers, Hygrometers and Barometers, of various styles and quality, mounted in Wood and Metal, some very fine, viz: Two Combined Barometers and Thermometers, Two Circular Metallic Thermometers, Six Fine Metallic Barometers.

84 $\frac{93}{1}$ Small Case containing a Daniel's Hygrometer. 2. Two Metallic Mounted Sensitive Oat Thermometers, Two Glass Fahrenheit Thermometers, unmounted, for fluids, Box of Sensitive Oats as Hygrometers.

85 98 Crosley's Patent Registering Rain Gauge.

86 97 Brequet's Metallic Spiral Thermometer, finely mounted.

86 A $\frac{200}{5}$ A Chevalier's Thermometer, De l'Amour.

86 B $\frac{200}{3}$ A Millington's Air-Thermometer, and a Borhek's Wet and Dry Thermometer.

87 94 Case containing eleven Hygrometers, various qualities and styles, also, a Schonbein's Ozonometer, with directions for use.

88 $\frac{96}{1}$ Case containing a Photometer, a Pyroscope, and Leslie's Hygrometer and Differential Thermometers.

89 $\frac{96}{2}$ Case containing Marcet's Freezing Apparatus, several Differential Thermometers, and a condensing Mercurial Gauge.

90 $\frac{96}{3}$ 3 of Chevalier's Double Air Differential Thermometers, with two stands.

91 $\frac{90}{3}$ Very Fine Chemical Thermometer, scale to 600 degrees.

92 $\frac{90}{2}$ Chemical Thermometer, Mounted in Boxwood, scale 40 to 620.

93 $\frac{52}{2}$ Leslie's Atmometer.

94 $\frac{99}{3}$ Mason's Hygrometer, or Wet and Dry Thermometer.

94 A 3 Storm Glasses, and 1 Baroskop, all mounted.

Electricity.

95 $\frac{110}{1}$ An Electrical See-Saw, with beautiful Pith Figures.

96 $\frac{110}{2}$ Another Electrical See-Saw, with Pasteboard Figures.

97 $\frac{101}{1}$ Large stained Chest, containing a Nairns' Double Cylinder Electrical Machine, with great variety of Experimental Appointments; Coated Jars, Electrometers, Conductors, Discharging Rod, Insulated Stool, Clamps, &c.

98 101 An Extra Glass Cylinder for Nairns' Electrical Machine.

99 $\frac{101}{3}$ 2 27-inch Brass Conducting Rods.

100 $^{102}_{1}$ A Sixteen-inch Plate Glass Electrical Machine, mounted in Mahogany Frame, with Leyden Jar, Discharging Rods and Clamp.

101 $^{102}_{2}$ Insulated Stool, Mahogany, with Glass Feet.

102 ^{103} A Very Large Case with Two Drawers; containing a large collection of Electrical Apparatus, such as Leyden Jars, Exhausted Flasks, Mercurial Jars, Scintillating Jars, Receivers, Pith Balls and Figures, Electrical Table, Plates, Discharging Rods, Electrometers, Coated Balls, Glass Balls, Glass Cylinders, &c., making a perfect collection of Electrical Apparatus in great variety.

103 ^{104} Case containing a Singer's Combined Apparatus for Pneumatic Electricity, with Glass Receivers, elegantly mounted in brass.

104 ^{105} Mahogany Case containing a combined Electrical Apparatus, such as Exhausted Tubes, Insulated Stand, Leyden Jar, Fliers, Conductors and Electrometer.

105 $^{107}_{1}$ A Case of 10 Electrical Jars, plain and coated.

106 ^{108} 5 Etincellent plates of Glass, sprinkled with Tin Foil, to be made luminous by Electric Spark.

107 ^{109} 6 Glass Discharging Rods, plain and twisted, with three Brass Fliers, and two Stands.

108 ^{110} A Temple, with a Dome of Spiral Spangled Rods of Colored Glass, for Electrical Illumination.

109 ^{111} A Case of fourteen Etincellent Plates, with Pillars of Glass, and Brass Balls.

110 ^{51} Case of 34 Plates of Colored and Plain Crown Glass, various sizes.

111 $^{103}_{3}$ An Exhausted Tube, 49 inches long, brass mounted, for Electrical Machine and Air Pump.

112 $^{103}_{3}$ Another Exhausted Glass Tube, 22 inches long, brass mounted, for Electrical Machine and Air Pump.

113 $^{113}_{3\text{c}}$ A Three feet Sealed Glass Tube, for Frictional Electricity.

114 ^{106} A Case of 9 Jars, forming a Battery by 9 Conducting Rods and Chains.

115 $^{112}_{1}$ Glass Globe, revolving on a point between two Glass Pillars on a Mahogany Stand, also a Glass Gilt Receiver, to revolve on the point of a Universal Discharger.

116 $^{112}_{2}$ An Electrical Swing, mounted on a Mahogany Stand, with two Pith Female Figures, in Mahogany Case.

117 $^{112}_{3}$ Case containing a Volta's Battery of 6 Pistolets, a "Theatre de Pantimes," a Walnut Tin-Foil, Coated Base with four Glass Pillars, Brass Plate, and long Sliding Brass Rod.

118 $^{112}_{4}$ 2 Revolving Glass Electrical Crosses on Brass Stand and Mahogany Base.

119 $^{112}_{5}$ 2 Electrical Wind Mills, with Sails.

120 $^{112}_{6}$ Wagstaff's Revolving Wheel of Glass Spokes and Brass Balls, two Leyden Jars, between which the Wheel revolves.

121 $^{112}_{10}$ Case containing Articles for Electrical Experiments, as follows: 4 Sportsmen, 2 Horsemen, 2 Targets, Pidgeon House and 6 Pidgeons, and Mahogany Stand for Leyden Jar.

122 $^{112}_{9}$ Card Models to work by Electricity, viz: One of a Crank Pump, A Grist Mill, An Orrery and an Astronomical Clock.

123 112/11 3 Electrical Inclined Planes, and 2 Wheel Fliers to Ascend.
124 112/12 Case of various Wires, for Revolving by Electricity, with Stands and Accessories.
125 112/13 4 Glass Etincellent Plates, of different designs.
126 113/1 A Case containing a great variety of Articles for Electrical Experiments, Magnets, Pith Balls, Electric Fliers, Bologna Stone, Fancy Foils, Electric Wafers, Silk Ribbons, Tin Foil, Mortars and Balls, Feathers, Grotesque Figures, Metallic Cord, Amalgam, Chains, &c.
127 113/2 Another Case containing a great variety of Articles for Electrical Experiments, Numerous Pith Figures and Insects, Platina Points, Pith Balls, Electrical Dancers, An Electrometer Mounted Figure of a Man.
128 113/2 6 various Pith Figures, very fine.
129 113/3 Case of Articles for Electrical Experiments, Tin Foil, Catskin, Oiled Silk, Sealing Wax, Shellac, Sponges, Flannel, Gilders' Forceps, Gum Copal, Rubber, &c., two Tin Canisters, Iron Filings and Zinc Slips.
130 114 Cuthbertson's Electrical Balance and Quadrant Electrometer.
131 115 A Burnet's Complete Gold Leaf Electrometer.
132 116 A Cavallo's Multiplier, for measuring small quantities of Electricity.
133 120 A Case of Apparatus for Illustrating Forked and Sheet Lightning by Electricity, with Glass Clouds, very fine.
134 120/2 A Case of Apparatus for Electrical Lightning Experiments, two Churches, Tin Fire House, and Pyramid in Sections.
135 120/3 A Tin Fire Ship for Electrical and Hydrogen Gas Experiments.
136 124 Prepared Gilt Bladders.
137 129 A Box of twenty turned Brass Balls, different sizes.
138 130 4 Tin Foil coated Glass Plates in Frames, for Electrical Experiments.
139 134/2 4 Electrophorus, 9 and 12 inches.
140 134/1 Case containing a Planetarium, with Stand, Pillar and Coated Glass Table, Glass Balls, and a Mahogany Thunder House.
141 133 Singer's Phosphoric Apparatus.
142 135 Case containing a Volta's Lamp, in a finely finished Mahogany Frame, with accessories.
143 135/2 An Electrical and Galvanic Lamp, and Zinc Cone.
144 1 7 2 Tin Electrical Fire Ships.
145 139 A Wooden Water Trough with Faucet.
146 139/2 5 Japanned and Glass Fountains, with Condensing Syringe, for showing conducting power of water.
147 139/6 Faraday's Meshes on Metal Rings and Insulating Handles. 4 sets.
148 139/8 Platina Points, with section of Patent Corrugated Lightning Rod.
149 144 A Case of Zinc and Copper Plates and Foils.
150 146 Wollaston's Small Galvanic Trough Plates, and Platina Wire of Ignition.
151 148 4 Circular Glass Plates for Electrical Machine, two colored and two white, 16 in. diameter.

152 141 A Case containing a great variety of Electric and Voltaic-Electric Articles; such as Silver, Zinc, Lead and Brass, Platina, Tin and Steel Wire, Silver Chain, Steel Springs, Covered Metalic Cords, Plated Conductors, Glass Cylinders, Brass Cups, Volta's Mahogany Frame, Pepy's Apparatus or Universal Discharger, Decomposing Cups, Weights, &c.

153 142 A Cruicshank's Galvanic Battery of fifty pair of four-inch Plates.

154 140 DeLuc's Electric Columns, with suspended Pendulum, illustrative of Perpetual Motion.

155 145 Glass Apparatus, exhibiting Electric Light in Vacuo.

156 150 Case Containing a Variety of Electrical Apparatus, such as Jones' Thermo-Electric Battery, Compound Bar of Bismuth and Antimony, Spirit Lamp, Curved Revolving Magnet, Bar Magnets, Pillars, Stands and Rings.

157 151/2 Horse-shoe Magnet on a Mahogany Stand, with soft Iron Cylinder and Helical Coil to rotate, and two Conducting Rods.

158 152/1 A Set of Ampire's Single Rotating Cylinders with Brass Stand, Cylindrical Magnet and two spare Cylinders.

Electrical and Electro-Magnetic.

159 152/2 A Set of Double Rotating Cylinders, with Horse-shoe Magnet and brass Stand, and two extra Cylinders.

160 153/2 Sturgeon's Electro-Magnetic Globe, Delineated, Mounted.

161 153/3 A Delineated Three-inch Magnetic Globe—Mounted.

162 153/1 A Large Case containing a variety of Magnetic and Electro-Magnetic Apparatus, made by Davis, such as, Conducting Wires, Revolving Magnets, Reciprocal Engine Fly Wheel, Plated Conducting Handles, a Page's Revolving Armature, a Helix and Stand, Mounted Magnets, Electromes, Revolving Wire Frames, Apparatus for Analysis of Shocks, a Page's large Compound Magnet and Electrome, &c.

163 153/4 An Electro-Magnet, Mounted in Walnut Stand.

164 153/1, 2 & 3 3 Japanned, Copper and Zinc Galvanic Batteries, made by D. Davis.

165 153/6 A Mellonis' Thermo-Electric Battery of Bismuth and Antimony.

166 153/7 A Daniel's Sustaining Battery.

167 153/8 A Smee's Four Cells Platinized Silver Battery in a Mahogany Case, with Porcelain Cells.

168 153/9/1 A Groves' Compound Galvanic Battery of Platina and Zinc.

169 153/9/2 Extra Plates and Apparatus for Groves and Smee's Galvanic Batteries.

170 153/9/4 Copper and Zinc Electrodes and Conducting Wires, for Groves and Smee's Batteries.

171 153/10 A Smee's best Galvanic Battery, Twelve Cells, in Mahogany Frame.

172 153/11 A Palmer's Electrotype Apparatus.

Electric and Voltaic-Electric Apparatus.

173 143 1-2 2 Babbington's Batteries of Wedgewood Ware.
174 12. 153 6 Extra Cylinders for Groves' or Daniel's Batteries.
175 153 13 A Smee's Portable Battery of Tumblers.
176 153 14 Sturgeon's Electro-Magnetic Apparatus, called "Crowns."
177 153 15 2 Groves' Small Nitric Acid Platina Batteries, and two of Coope's Plumbago Nitric Acid Batteries.
178 153 16 A Case of Porous Cylinders and Cells for Voltaic and Thermo Batteries.
179 153 19 Mahogany Case, containing a Francis' Improved Electro-Magnetic Nitric Acid Battery.
180 153 20 A Davis' Electro-Magnetic Medical Machine, with accessories.
181 153 21 A Smee's Apparatus for Electro-Plating, Gilding, &c., with accessories.
182 153 22 Electro-Magnetic Revolving Fly-wheel.
183 153 23 Bunson's Pile of Fifty Elements.
184 153 24 A Palmer & Hall's Telegraph Register.
185 153 25 A Davis' Clock-work Electrome
186 153 26A A Rhumkorff's Coil Machine.
187 153 26B Ladd's Condenser, to use with Rhumkorff's Coil Machine.
188 153 26D 6 Geissler's Vacuum Tubes.
189 154 2 Davis' Rociprocating Bell Engine.
190 154 3 Case of Various Electro-Magnetic Apparatus, such as Helix and Stands, Vibrating Circles, Revolving Metal Discs, Electro-Magnets, Armatures, Shock Regulators, &c.

Voltaic, Electric and Thermo-Electric Apparatus.

191 154 1 A Large Case containing a great variety of Electro-Magnetic and Thermo-Electric Apparatus, such as, Watkins' Apparatus for Horse-shoe Magnet, Rotating Platina Wires, and Rotating Magnets, Rotating Metal Discs, Galvanometers, Bar Magnets, Rectangles of Bismuth, Copper, and Antimony, Compound Bars of Bismuth and Antimony, Horse-shoe Magnets, &c.
192 151 1 Mahogany Case of Marsh's Combined Voltaic and Thermo-Electric Apparatus, containing Zinc and Copper Plates, Conducting Wires, Bar and Horse-shoe Magnets, Compass, Revolving Magnets, Glass Cylinders, Iron and Steel Filings, &c.
192 A 2 Weights for Marsh's Apparatus.
193 157 A Babbage's Rotatory Apparatus to exhibit Magnetic Power of different Metals.
194 155 A Large Case containing a great variety of Electric and Thermo-Electric Apparatus.
195 159 A Watkin's Electro-Magnetic Apparatus, consisting of Stands with multiplying Wheels, Horse-shoe Magnets, Glass, Metal and Wooden Discs, and Bar Magnets.
196 160 Saxton's Electro-Magnetic Spark Apparatus or Battery, with Revolving Keepers.

197 [161] Mahogany Case of Marsh's Thermo-Electric Apparatus.
198 [162] A Sturgeon's Galvanometer, in Mahogany Case.
199 [163] Case containing a Sturgeon's Magnetometer.
200 [164] Mahogany Case, containing a Fine Six-inch Five-Barred Horse-shoe Magnet, handsomely Mounted.

Magnetic.

201 [165 2] An Extra Large French Horse-shoe Five-bar Magnet and Keeper, with suspended weight, mounted in a Walnut Arch.
202 [165 1] Mahogany Case, containing a Combination of Magnetic Apparatus, such as Horse-shoe and Bar Magnets, Bars of Iron and Steel, Magnetometer, Dipping Needle, Gimbal Compass, Magnetic Pointers and Spinners, Quadrant and Compasses in great variety, with accessories.
203 2 Elegant Three-bar Horse-shoe Magnets, and one single Bar Horse-shoe Magnet with Revolving Wheel-keeper.
204 [139 3] A Wheatston's Revolving Circle, to illustrate the velocity of Electric Light.
205 [78 3] Mahogany Box, containing a variety of Steel, Iron and Brass Chains, for Electrical and other purposes.
206 [134 2] 2 Marble Circular Slabs, one 9 inches and one 10 inches in diameter as Electrophorus.

Astronomical.

207 [170 1] A small Globe, illustrating the Sun's course in an Annual Revolution, mounted on a Brass Stand.
207 A A Four-inch Revolving Globe, mounted in Brass, and Mahogany Stand.
208 [171] A Mahogany Case, containing a very finely mounted Brass Orrery, superior workmanship.
209 [172] A Cometarium, with Rack Work Movement, in Mahogany Case.
210 [173] A Nine-inch Armillary Sphere, finely mounted on Brass Stand, with Compass Complete, in Mahogany Case.
211 [174] A Six-inch Equatorial Globe, finely mounted in Brass, and very Complete for Practical Problems, in Mahogany Case.
212 [175] A Ferguson's Eclipsarion, being a Mounted Six-inch Globe, on an Elegant Brass Tripod Stand, with accessories complete, and in Mahogany Case.
213 [176] A Set of Prior's Astronomical Diagrams.
214 [177 6] Blunt's Beauty of the Heavens, or Pictorial Display of Astronomical Phenomena.
215 [180] A Small Terrestrial Globe.
216 [179x] Projection of Globe on a Sphere, and Dissection of same on Plane Surface.
217 [181] Mounted 2½-inch Spheroid, on a Brass Stand, to illustrate the Procession of the Equinox, in Mahogany Case.
218 [182] A 10-inch mounted Spheroid, illustrating procession of the Equinox, beautifully made, in Mahogany Case.
219 [184 1] A Selenographic Twelve-inch Globe, representing a View of the Moon's Disc, finely Mounted on a Brass Stand, Mahogany Case.

220 177/5 Case containing 32 Astronomical Cards, called Uranias' Mirror, with Frame to Exhibit.

221 186/1 An Artificial Horizon with accessories, in Mahogany Case.

Dials, Hour-Glasses, Compasses, &c.

222 186/2 Another Artificial Horizon, in Mahogany Frame.

223 187/1 An Eighteen-inch Celestial Globe, mounted in Mahogany.

224 187/2 An Eighteen-inch Terrestrial Globe, mounted in Mahogany Stand.

225 188 2 Paper Globes for Inflation, one six feet, and one three inches diameter.

226 190/1 A Webster's best Orthochronograph, or Instrument to Rectify Time.

227 190/2 2 Movable Planispheres, showing the Position of the Heavens at any given time.

228 190/3 M. Foucault's Pendulum Apparatus, complete.

229 190 Mahogany Case, containing a variety of Dials and Meridian Instruments, &c., a Universal four-inch Brass Dial, a Vertical Cylindrical Dial, Brass-mounted Marine Compass and Sight, Two Cadran's Universal Dials.

194 A Pantochronometer, Portable Card Dial, Two Brass Universal Dials, Seven Compasses, various make.

197/2 Dent's Depleidoscope, or Meridian Instrument.

229 A 368 A Solar Compass.

230 A Superior French Copper Revolving Sun-Dial, mounted.

231 192/8 A Marble-mounted Dial, with Alarm Cannon.

232 197/Ix A Twelve-inch Tested Brass Dial, Latitude, Philadelphia.

233 191 Mahogany Case of eleven various Hour, Minute and Second Glasses.

234 2 Patent Atmospheric Clocks.

234 280/2 Brass Cylindrical Optical Instrument, for taking Angles.

234 A 280/A Lunette Geometrique, to measure heights.

280/3 Simm's Optical Square.

234 B 280/1 Ritchie's Compound Instrument, to be used as a Level, Sextant, Goniometer and Theodolite.

234 3 280/1 3 feet for Tripod Stand, in Ritchie's Instrument.

Chemistry.

235 203 Eades' Chemical Cabinet or Amateurs' Laboratory, an elegant Mahogany Brass Bound Case.

236 203/2 Case of Chemical Accessories, adapted to use with Eades' Cabinet.

237 204 A Mahogany Case and Drawer; containing a complete set of Chemical Apparatus.

238 206 A Mahogany Case of two drawers of Chemicals, 58 Vials.

239 208 A Mahogany Cabinet with drawers and sliding shelves, containing one hundred and thirty-eight Vials of Chemicals, with Scales, Weights, Glasses, Test Papers, and other accessories.

239 A 264/3 Case, containing a variety of Glass Syphons, Reciprocating Vase Apparatus, Curved and Straight Glass Tubes, &c.

240 210/1 A Guerney's Oxyhydrogen Blow-Pipe, complete.

240 A 210 A Mahogany Frame, or Lantern for deflagration, to use for objects examined by Microscope.

241 210/2 A Palmer's Improved Oxyhydrogen Blow-Pipe, complete.

242 210/3 A Brewster's Handsome Bronze Oxyhydrogen Gas Lamp, with Accessories.

242 A 210/4 6 extra Chimneys for Brewster's Lamp.

242 B 210/5 2 Ground Glass Globular Shades for Brewster's Lamp.

243 210/9 2 Copper Globular Lamps with Stands, and two Candle Brackets.

244 210/10 Green Japanned Lamp Stand, with two Brass Lamps and Shades.

245 210/11 A Cornelius & Baker's Brass Student's Lamp, with Shade and Chimney.

246 211 A Case containing a variety of delicate Glass Chemical Apparatus, such as, Breathing Tubes, Blow-Pipes, Drop Tubes, Gas Pipes, Retorts, &c.

247 212 A Mahogany Case of various simple and compound Blow-Pipes.

248 215 Case containing a Wollaston's Scale of Chemical Equivalents, Brand's and Read's Scales, Bevan's and Woolgar's Sliding Rules.

248 A Kentish Slide Rule.

249 216 Mason's Gasometer for Sulphuretted Hydrogen Gas, and Scherr's Hydro-Platina Lamp.

250 217 A A Leeson's Condensing Syringe and Blow-Pipe.

250 A 217 B 2 extra Caoutchouc Bags for Leeson's Blow-Pipe.

251 218 Mahogany Case, containing three fine Glass, Platina and Asbestos Lamps.

252 220 A Mahogany Test Tube Frame and eighteen Test Tubes in drawer.

253 218/3 A Merryweather's Platina Spirit Lamp and accessories.

254 222 Case containing a great variety of Glass Eudiometers, and other Chemical Tubes.

255 223 Mahogany Frame graduated, with Cistern and five Tubes, for showing Expansion of Fluid.

256 224 Case of Flasks or Digesters, for Weighing Gas, Receivers, &c.

257 225 1-2 Case containing Florence Flasks, Decomposing Tubes, Bulbs, Specific Gravity Bottles, &c.

258 226 A variety of Wedgewood and Hessian Crucibles.

Chemical Apparatus.

259 227 Case of various Porcelain Tubes and Earthenware Retorts.

260 229/1 Mercurial Trough in parts, with Eleven Air Jars, different sizes.

261 229/2 1 dozen Conical Glass Receivers.

262 A case of twelve Mineralogical Tests.

263 230 Case containing a large Japanned and Brass Chemical Stand, Sliding Brass Stand and Table, Iron Stands and Rings, &c., for Chemical Experiments.

264 231 1-2 2 Black Lead Blast Furnaces, in parts.
265 232 2 Walker's Japanned Freezing Apparatus, Cavallo's Freezing Vessel, a Pepy's Balneo, Tin and Glass Baths and Cups.
266 233 1 Apparatus showing Expansion of Solids by Heat, consisting of Brass Stand with Ring and Turned Brass Ball, and Brass Lamp.
267 234 21 Black Wood and Cork Elevators for Chemical Jars.
268 238 A case of Danger & Griffin's Blow-Pipes, with Jets, Clamps, Caoutchouc Air Bags and Accessories.
269 239 A Copper Japanned Pepy's Gas Holder, with Funnel and Pipe.
270 240 Another Pepy's Japanned Gas Holder, with Funnel, Pipe and Conducting Tubes.
271 241 Knight's Leaden Fluoric Acid Gasometer, Pipe and Receiver.
272 242 Mason's Hydrogen Gas Generator.
273 243 A Hydrogen Platina Lamp, in Mahogany Case, with extra Cylinders.
274 A & B 244 1-2 Jackson's Hydro-Platina Lamp, with extra Syphons.
275 245 139 Large Case of Glass Tubes and Rods, various sizes, plain and colored, for Chemical and Electrical purposes.
276 247 1 A Clark's Philosophical Fire Works by Hydrogen Gas, in Mahogany Case.
277 247 2 A Clark's Chromatic Fire Fountain Cloud Apparatus, with Accessories.
277 A A Tin Jar, for use with above.
278 248 A Case of Professor Green's Chemical Cubes, illustrating the Atomic Theory.
279 250 Branci's Apparatus, illustrating the Conducting Power of Metals by Heat.
280 251 A Ferguson's Pyrometer, with Lamps, Thermometer, Bars, &c.
281 252 Case containing a variety of Glass Apparatus, such as Fountains by Compression, Photometers, Air Thermometers, Hydrostatic Funnels and Tubes, &c.
282 253 Case of two Gas Generators, Glass Jars for Acid and Zinc, Tubes, &c., also two Davy's Safety Lamps.
283 255 2 9 different Black Lead Crucibles.
284 256 Large Case of very fine Gas Bottles and Tubes, Digesting Flasks, Funnels, &c., in great variety.
285 257 Another Case of fine Glass Capillary Dropping Tubes, Thermometer Tubes, Bulbs, &c., for Expansion of Fluids, &c.
286 259 A Large Case of fine Glass Syphons, Globular Jars, Decanting Jars, Alembics, &c.
287 260 Case of Weller's Safety Tubes, Vapor Tubes, Marcet's Bulbs, &c.
288 261 Box of Prince Rupert's Drops.
289 262 Case containing a large number of Bologna Vials, various sizes.
289 A 264 2 A case of Danger's and other Areometers and Syphons.
290 264 4 Case of Specific Gravity Balls, different sizes and materials, with Stand and Hook.
291 265 2 Case of Brass Spheres, with Screw Stoppers, for Expansion of Ice, and Metal Plates for Expansion by Heat, with other similar apparatus.

292 266 3 Metal Vessels for Showing Radiation of Heat.
293 267 Large case of Metal, Glass and Porcelain Syphons, Funnels, Strainers, &c.
294 268/2 A Washing Trough.
295 270 A box of India Rubber Bags and Sheets.
296 271/1 Box of Twisted Glass Rods and Tubes.
297 271/2 Case of Pestles, Mortars, Evaporating Dishes, Tin and Japanned Trays, &c.
298 273 Small case of Various Dropping Vials, with Ground Glass and Perforated Stoppers.
299 274 12 Deflagrating Jars, and six Air Jars for Mercurial Troughs.
300 275 An Electro-Chemical Transfer Apparatus.
301 277/3 2 small Arterioscopes.
302 277/1 Large four feet Circulating Glass Fountain Arterioscope, in Case, with Glass Door.
303 277/2 A smaller Circulating Glass Fountain Arterioscope, in Case, with Glass Door.
304 265/1 Box of Apparatus for Chemical Experiments, such as Ladles, Soldering Tools, Trivots, Retorts, Forceps, Casting Cones and Moulds, various Tongs, &c.
304 A 2 Iron Conducting Rods for Retorts.
304 B 6 Leaden Conducting Tubes.
305 2 Iron Rods on Stands, with two Burnished Tin Reflectors.

Geometry, Stereometry and Crystallography.

306 281 Very fine set of German Silver Drawing Instruments, in Mahogany Case.
307 282 Another very fine set of Mathematical and Drawing Instruments, with Improved Beam Compass, in Mahogany Case.
308 283 A Jaurdis' Geometrical Pen Bar, Pillars, Arm and Sheath, with Cog Wheels for every variety of curve.
309 285/1 A two feet best Pantograph or Tracing Instrument.
310 285/2 An Agathograph, or Drawing Instrument.
311 278 Diagrams in Metal, illustrating the First Book of Euclid.
312 280/6a12 8 boxes of Models, in Glass and Wood, illustrating Stereometry, Geometry and Crystallography.
313 292 Case of Geometrical Solids.
314 294 Case of Glass Models of Crystals.
315 295/2 Case of fifty-three Wood Models of Crystals.
316 295/2 Case of Dupin's Geometric Stereometry.
317 295/3 Another case of Dupin's Stereometry.
318 295/4 Another case of Dupin's Stereometry.
319 295/8 Another case of Dupin's Stereometry.
320 295/6 Set of fine Wood Geometrical Solids.
321 295/5 Set of Holbrook's Geometrical Solids, in Mahogany Case.
322 295/7 Another set of Dupin's Stereometry.

Mineralogy, Crystallography and Geology.

323 300/2 Griffin's fifty-four Minerals for Analysis.
304 14 Specimens of Metallic Regulus.
300/3 20 Specimens of Minerals.
300/4 20 Geological Specimens.
324 305 Glass Model of Kohinoor Diamond, finely mounted.
325 306 Case of Hollow Glass Models of Crystals, (C. G. B.)
326 309 A Set of fifty-three Models of Jamieson Crystals.
327 310 150 Specimens of finest Italian and Grecian Marbles.
328 311 6 Boxwood Models of Crystals.
329 306/2 Hollow Glass Models for Plane Sections.
330 306/A 17 Hollow Glass Models of Crystals, (C. G. B.)
331 306/4 Another Set of Hollow Glass Models of Crystals.
332 313/1 A Case of forty Geometrical Models in Box-wood.
333 301 Mahogany Cabinet of four Drawers, containing Maw's Cabinet of Minerals, a neat collection.
334 302 Fine Mahogany Cabinet of eight Drawers, containing Maw's Cabinet of Geological and Mineralogical Specimens.
335 312 A most beautiful Mahogany Cabinet of Drawers, containing a complete and elegant set of Models of Brooks & Hauy's Crystals.
336 319/12 Case of Tarrant's Models of Fossil Remains.

Optics.

337 321/1 Model of the Eye, in Brass, on a Stand, with Lenses.
338 321/2&4 Cabinet containing a beautiful Ivory Model of the Eye, in twelve parts, and a Dissected Model of the Eye in Wax, anatomically correct, also a beautiful Dissected Wax Model of the Ear of a Child, six years old, three times the natural size.
339 321/3 A very superior Model of the Eye, in Rosewood, Ivory and Glass.
340 321/5 Box of Diagrams of the Eye and Ear, also Anatomical Charts of the same.
341 322 3 Glass Models of the Eye, with Silken Cords, representing Rays of Light, illustrating Natural, Long and Short Sight.
342 323/2 Optical Model of a Telescope, being 6 Lenses Mounted in Brass, on Mahogany Stand.
343 325/1 4 Models of the Direction of Rays of Light, the Lenses and Prisms represented by Colored Silken Cords.
344 325/2 3 Models of the Microscope, Single, Compound and Solar.
345 326/1 A 3½ feet Achromatic Telescope, with 4 Powers for Terrestrial and Celestial Objects, in Mahogany Case.
346 326/2 A very complete and beautiful Apparatus, by Schwerd, Illustrating Interference of Light, with numerous Accessories.
347 326/2 A Soliel's 2½ feet Achromatic Telescope, in Walnut Case.
348 326/4 A Soliel's Rochon's Double Image 2 feet Telescope.
349 326/5 A 2¼ feet Solar Telescope.

350 326/6 A Pritchard's Prism Telescope, for Frauenhoffer's Dark Lines of the Spectrum, with extra superior Prism in a Cap, from Munich.

351 326/6x A fine Munich Frauenhoffer's Prism, mounted, for Black Lines in the Spectrum.

352 326/7 A fine Lecount's Spectroscope.

353 326/8 A Day and Night Telescope, with two Slides, drawing forty inches.

354 226/9 A Parke's Astronomical Telescope, drawing twenty-six inches.

355 326/10 A very superior Crook's Spectroscope, with complete and finely-finished Accessories, with Book of Description, in Mahogany Case.

356 327/1 Large Case of Optical Apparatus, in great variety, as follows:
19 Kaleidoscopes,
3 Debusscopes,
5 Catoptric Telescopes,
2 Polemoscopes,
3 Pheusiotropes,
And numerous Accessories for Kaleidoscopes.

357 327/2 Case containing nine small Field Telescopes, and Clips for same.

358 328 Large Stained Case of Polyhedrous Lenses, Anamorphoses, Conical, Cylindrical and Pyramidal Mirrors, in great variety.

359 328/x Walnut Case, containing a great variety of Optical Apparatus, some very fine, such as Metallic Concave Reflectors and Mirrors, various sizes; Wheatston's Apparatus for Blood-vessels of the Eye, Darker's Improved Wheatston's Spectacles, several sets of Trachell's Migachromes, Helmholtz's Eye Mirrors, a number of very fine Transparencies, Soliel's and other Opthalmascopes, &c.

360 329 A Polyhedrous Lens and twelve Anamorphoses.

361 323/1 A set of six Lenses in a Ring, mounted on a Brass Stand, made by W. & S. Jones, London.

361 450/1 A Glass Globe as a Convex Mirror or Reflector.
A

362 331/1-2 Walnut Case, containing a large assortment of Lenses and Reflectors, in great variety, such as Cylindrical, Conical, Concave and Convex; Spherical, Hemispherical, Pyramidal and Hexagonal, in Quartz, Crystal and Crown Glass.

363 332 Case of Various Optical Apparatus, as follows:—Two Multiplying Telescopes or Magic Cameras, an Alexander's Graphic Mirror, a Combined Camera and Kaleidoscope, a Camera Obscura, and a Parlor Sketching Case.

364 333 Scioptic Ball and Socket, with eight Lenses and Reflector.

365 Artificial Eyes in great variety.

366 336/1 An Improved Camera Obscura, being a Mahogany Case with Lens and Mirror.

367 339 A Ground Glass Plate of Glass in Mahogany Frame.

368 339/6 A Chevallier's Camera Prism, mounted in brass.

369 339/7 Another superior Chevallier's Camera Prism, adapted as a Camera Obscura.

370 339/8 A Brewster's very superior Brass Mounted Conical Kaleidoscope.

371 339/9 A superior Field's Chromoscope, Metrochrome and Configurator, with accessories, complete.

372 339/10 Another very fine Field's Chromoscope on Brass Tripod Stand, with accessories, in Mahogany Case.

373 339/11 A very superior Field's Metrochrome, with Xanthometer, Cyanometer, Eruthrometer, &c.

374 339/12 A Field's Catoptron, with Accessories Complete, in Mahogany Case.

375 339/9x Large Case containing a Cyclorama for Panoramic Views, with twenty-five views for the same.

376 339/13 A Fine Mahogany Cabinet, containing a Talbot's Revolving Photometer or Measurer of the Intensity of Light and Color, very handsomely constructed and complete in all its appointments.

377 339/13x A three feet Perspective Box or Authorama, with Accessories.

378 339/19x A Wheatston's Apparatus, to illustrate the Duration of Impressions on the Eye, with handsomely colored objects painted on glass.

379 349/2 A Case, containing a great variety of Thaumatropes, with fine Mahogany Cased Instrument, for producing the revolutions.

380 339/24 A Brook's Optical Wheel Apparatus, with Revolving Discs, in a separate case.

381 339/25 A Fine Polished Mahogany Case, for Dioramic Views, by Negretta & Zambra.

382 339/26 A Gorham's Kaleidoscopic Color Top, with Revolving Colored Discs.

383 339/27 Another Gorham's Kaleidoscopic Color Top, of extra quality, with Accessories.

384 339/21 Ackerman's Photogenic Apparatus.

384 A 339/20 A Jones' Photogenic Apparatus.

385 339/22 West's Heliographic Camera, for Photographic Designs.

386 339/14 Case, containing a great number of Revolving Cards or Discs, by Faraday, Barker and others, with Revolving Machine and Accessories.

387 339/10x A Quadrangular Perspective Box, with Diagonal Reflectors and four Oval Looking Glasses at the sides.

Microscopes and Microscopic Objects.

388 340/1 A Compound Achromatic and Solar Microscope, made by W. & S. Jones, of London. A very superior instrument, with Polarizing Accompaniments, complete in all its appointments, with Lenses of High Power, and great variety of Microscopic Objects for the same; the whole in a handsome Mahogany Case.

389 340/2 A Mahogany Cabinet of Four Drawers, containing over one hundred Microscopic Objects, Mounted Lenses, &c.

389 A 340/2x A Varied Collection of Objects for Microscopic Experiments, such as Wollaston's, and Buron's Camera Lucidas, Press for Bending Glass, Micrometers, Live Boxes, "Chambre Claire," &c.

390 340/6 A Pritchard's Polarizing Microscope, with Object Glasses, Nicol's Prisms and other Accessories, finely mounted; the whole in polished Cedar Case.

391 340/17 The Society of Arts Prize Microscope, No. 2, mounted on a fine Bronze Stand, with Rack and Screw Adjustments, with varied powers and Accessories.

391 340/14 A Zentmayer's celebrated grand American Achromatic Microscope, with an Oberhaeuser & Hartnack Lens of very High Power, Tolle's $\frac{1}{8}$-inch Object Glass, and other Lenses of High Powers, three Eye Pieces, and various Accessories.

392 340/7 A Smith and Beck's Educational Microscope, with Object Glasses of one inch, two inches, one-quarter inch and one-eighth inch focus; Maltwood's Finders, and numerous accessories; all in fine Mahogany Case.

393 340/16 Box, containing a Small Microscope, powers thirty and sixty diameter, with two slides.
A Child's Microscope.
A Craig's Single Microscope.
And fifty-eight Microscopic Objects, various.

394 340/15 Soleil's Polarizing Microscope, with small Goniometer, plates of Mica and Quartz, Aragonite, Topaz and Spar Crystals.

395 340/18 A Smith & Beck's Student's Microscope, with Achromatic Lenses, and Accessories complete, with Wenham's Binocular addition combined, and 1½, $\frac{2}{3}$ and 4-10th Object Glasses, elegantly mounted on brass stand, and handsomely packed in a fine Mahogany Case.

396 342 A Lantern Microscope, to be used with Magic Lantern, consisting of Brass Cylinder, two Lenses, Sliding Spring Stage and Rack, 3 additional Lenses, Tube and Speculum, 12 Glass Mounted and 7 Boxwood Mounted Sliders of Objects, all finely packed in Mahogany Case.

397 343 The Lucernal Microscope, a Horizontal Mahogany Pyramidal Body fitting on a Mahogany Case, with Brass Stage and Slider Case for Objects, 6 Magnifiers and 33 Sliders Mounted in Wood and Ivory, together with complete assortment of Accessories.

398 340/3 An Argand Lamp with Condensing Lens, &c., for Microscope and Polarizing Apparatus, with Accessories.

399 340/4 Another Argand Lamp, for the Microscope, with Open Shade for Lucernal Microscope, Condensing Lens, extra Chimneys, Wicks and Mandrels.

Microscopes, Magnifiers, and Microscopic Objects.

400 340/5 Large Walnut Case, containing a great variety of Small Microscopes, Magnifiers, Coddington Lenses, Stanhope Lenses, Condensing Lenses, &c., among which are the following: A Gould's Microscope; Donne's Pocket Microscope; Microscope for Surgical Operations; Raspail's Microscope; Cylinder Revolving Microscope, with Objects; 3 small Single Microscopes; Smee's Optometer for Adjusting Spectacle

Glasses; a Veidoscope; a Polemoscope; 2 Gorham's Dioscopes; Mounted and Unmounted Lenses; Polyhedrous Lenses; Spectacle Glasses; and various Accessories for Microscopic purposes.

400 A Case of Reading Glasses, or Double Convex Lenses, Mounted in Wooden Frames, with Handles, viz: 1 7-inch, 1 6½-inch, 1 5-inch, 3 4½-inch, and 1 2½-inch diameter.

401 340 11 Case of Microscopic Apparatus and Objects, as follows: Animalcula Cage; a Parabolic Condensing Conical Lens; a Child's Camera; King's Universal Indicator; Condensing Lens and Stand; a quantity of Squire's Crystal Medium or Talc; 24 Microscopic Objects by Hartnack.

402 340 9 Box of 45 large and small Ground Glass and Polished Glass Cells, for Microscopic Objects, Square, Circular and Oval.

403 340 10 Case of Objects and Preparations, for Microscope and Polariscope, as follows: 4 Boxes Bromley's Square and Oval Thin Glass Sheets; 3 Boxes, each containing 12 Objects for Polariscope and 3 Boxes of Microscopic Objects, 12 in each box.

404 340 12 Morocco Case, containing 24 handsomely Mounted Objects, for Microscope.

405 340 13 Morocco Case, containing 32 handsomely Mounted Microscopic Objects.

Microscopic Objects and Apparatus.

406 2 Small Mahogany Trays, lined with Velvet, for use with Microscope.

407 340 11x Glass Case, with Mahogany Door, for use with Microscope.

408 340 8 Highley's Cabinet of Cements, contained in 6 Cut Glass Bottles, in Mahogany Case.

408 A Also, 6 additional Bottles of same, in separate box.

409 340 5 1-2 Walnut Case, containing a great variety of very fine Microscopic and Polarizing Objects, in Mahogany, Pasteboard and Morocco Boxes, as follows: Smith & Beck's Selection of 72 Objects; Sanderson's 30 Fossil Wood Sections, with Lens; 37 Microscopic Photographs; Topping's 36 Prepared Objects for Polarizing Microscope; Topping's 24 Miscellaneous Objects; 96 Miscellaneous Microscopic Objects; 48 Miscellaneous Transparent Objects for Microscope and Polariscope; 46 Objects, Fossil Preparations; 6 fine Test Objects; 26 Crystals; 42 Wood Sections: 12 Salts Crystals: 6 Pritchard's Crystals; 18 Fabrics; 2 Soleil's, Apophyllite Objects; 5 Injections; 24 Miscellaneous, with 2 Lenses; 16 Fish Scales and Fossil Shells; Sturgeon's Tablet; Photograph and 18 Pritchard's Test Objects; 13 Animal Preparations—in all 568 Objects; 30 Preparations, Crystallizations of Salts; 11 Specimens Fossil Infusoria; Glass for Slides; a Mother-of-Pearl Micrometer, and a small Portable Microscope.

Optical Instruments, Horizontoriums, Color Tops and Cards.

410 346/3 2 Essex's Horizontoriums, or Sciagraphicons.
411 346/1 & 2 2 Horizontoriums, in Frames.
412 347/1 A Color Top and Reflectors, for Composition of Colors.
413 347/2 A Bersole's Revolving Leaden Top, for the Decomposition of Colors, Walnut and Iron Stand; also, a Wooden Color Top and Handle.
414 A 14-inch Cardboard Color Top, or Revolving Disc and Handle.
415 291/36 An Apparatus illustrating Interference of Light, and exhibiting, by additional Apparatus and Screens, Chinese Fire Works; it consists of—
415 A 291/31 A Multiplying Wheel, in large Mahogany Frame, Lamps and Screens, and 5 13-inch Brass Discs.
416 291/55 A Goodchild's Trocheidoscope, showing Effect of Combinations of Colors, (2 cases.)
417 291/56 Another Goodchild's Trocheidoscope, very fine, (2 cases.)
418 291/14 Barker's Meteoroscope, an Optical Experiment.
419 351/1 Biot's Polarizing Apparatus, finely mounted and very complete, with Rhombs, Agate and Glass Discs, Black and White Glass Plates, Crystals and other Accessories, in Mahogany Case.
420 291/11 A Large Sciagraphicon, or Diagonal Illusive View.
421 351/5 A Godard's Polarizing Apparatus, with Accessories.

Optical Instruments, Polarizing Apparatus.

422 351/3 A Noremberg's best Polarizing Apparatus, with Accessories, very complete.
423 351/2 A Large Case, containing a varied and complete assortment of Apparatus for Polarization of Light—chiefly Biot's, Noremberg's, Dolland's, Herschel's, Brewster's and Airey's.
424 351/4 A Dove's Polariscope and combined Microscope, Terrestrial and Celestial Telescope, a beautiful and finely appointed collection of apparatus, complete in all its parts, handsomely packed in a Mahogany Case.
425 351/6 A Powell's Polarizing Apparatus, of Brass, with Professor Airey's Analyzers and Accessories; in fine Mahogany Case.
426 351/7x Soleil's Amicis' Improved Polariscope and Polarizing Microscope, with Illustrative Apparatus, very finely constructed, and in a Walnut Case.
427 351/7 Arago's Cyanometer and Polarometer, with Accessories complete, in Walnut Case.
428 351/8 Soleil's Apparatus for Chromatic Polarization, arranged for use by means of a window and darkened room.
429 351/8x Soleil's Improved Apparatus of Prof. Lloyd for Conical Refraction. Also, Soleil's Mitcherlich's Apparatus for the Dilatation of Crystals, with Accessories; in a Walnut Case.
430 351/9 A very finely appointed Soleil's Porte Lumiere, with Polariscope and Microscopic Additions in variety; Walnut Case.

Polariscopes, and Polarizing Apparatus.

431 $\frac{351}{9xx}$ W. & S. Jones Improved Polariscope of Prof. Dove, very beautifully arranged and accompanied by the finest Crystals, and elegantly constructed in all its details, in a fine polished Mahogany Case.

432 $\frac{351}{10}$ A large Case, containing a variety of Polarizing Apparatus.

433 $\frac{351}{9x}$ Soleil's Grand Polarizing Apparatus, the Frame 40 inches long, a large and very fine Polariscope, with complete and finely appointed accessories.

434 $\frac{351}{11}$ Case containing a great variety of Apparatus, incidental to Polarizing Experiments, such as Bundles of Colored Glass, Claude Loraines, Mirrors, Black Glass Mirrors, Obsidian Japanned Polarizing Plates, &c.

435 $\frac{351}{11x}$ Large Walnut Case, containing numerous Polarizing Apparatus, among which are the following: three Wheatston's Polar Dials, a Leeson's Goniometer, a Leeson's Crystallonometer, Wollaston's Goniometer, Glass Wedges, Bundles of Colored Glass, Chevalier's and Darker's Photometers, Claude Loraines, Selenite Devices, &c.

436 $\frac{351}{12}$ Mahogany Cabinet with Drawers, containing Polarizing Apparatus, in extraordinary variety, and of the finest quality and finish; chiefly Crystals, Tourmalines, Nicol's Prisms, Iceland Spar, Quartz, Rhombs, Mica, Plain and Colored Glass, &c., illustrating experiments by Brewster, Darker, Malus, Savarts, Lerebours, Arago and others.

Selenite Devices, Rhombs and Iceland Spar.

437 $\frac{351}{13}$ A Mahogany Case, containing seven very superior Selenite Devices in Frames.

438 $\frac{351}{14}$ Selenite Device in a Frame, and four Selenite Discs, with Tourmaline Analyzer.

439 $\frac{351}{15}$ Case containing a large number of Selenite Devices, chiefly mounted in Frames, and a variety of Selenite Plates, viz: five boxes containing in all 55 Selenite Devices in Frames, 10 variously mounted Selenite Devices, together with numerous articles of a similar character, to be used in Polarizing Experiments.

440 $\frac{351}{16}$ Mahogany Case, containing a very fine assortment of Selenite Devices, Framed.

440 A $\frac{351}{15\,1\text{-}2}$ 13 Selenite Devices and Brass Plate for Selenite Films.

441 $\frac{351}{17}$ Mahogany Cabinet with three drawers, filled with a very large assortment of fine Rhombs and Plates of Iceland Spar, Tourmalines, Quarzt, Crystals, Hartnack's and Nicol's Prisms, Chevalier's Quartz Plates, Fluor Spar, &c.

442 $\frac{351}{11x}$ A Mounted Prism of Iceland Spar, on a Brass Stand.

443 $\frac{351}{18}$ A Case containing a large and very fine assortment of Prepared Crystals, mounted and unmounted, for the Polariscope.

444 $\frac{351}{19}$ Large Case, containing a numerous collection of articles for Polarizing Experiments, such as Crystals, Obsidian, Mica, Agates, Cork Models, Baryta Plates and Crystals, Stephanometer, &c.

Various Crystals, Prisms, Presses, &c., for Polariscope.

445 351 19x Dr. Young's Eriometer, with 4 Glass Sliders.

446 351 20 Mahogany Case, containing a large variety of Annealed and Unannealed Bars and Plates of Glass for Bending and Compression, also Presses for Bending and Compression of Glass; Freznel's, Soleil's and other Prisms and Crystals; Models of Crystals; and various Apparatus for Polarizing Experiments.

447 351 21 Another Mahogany Case, containing a large variety of Plates and Bars of Annealed and Unannealed Glass for Bending and Compressing; Geometrical Plate and Flint Glass, Figures; Prisms of Crown, Plate and Flint Glass of superior quality.

448 351 22 Large Case, containing a Diffraction Apparatus, Stand; Glass and Metal Discs; An Interference Apparatus, with Stand and Cylindrical Lens; also a very great variety of Soleil's & Delezenne's fine Glass Prisms, with numerous Brass Sliding Stands for the same.

449 351 23 Case containing a Graduated Arc for Refraction of Liquids, and 4 Plate Glass Prisms, various sizes.

450 351 24 1 A large Case containing a Babinett's Diffraction Apparatus, with great variety of superior Prisms of all kinds, illustrating Interference of light.

451 351 24 2 Grand Photogenic Apparatus of Duboscq & Soleil, available to illustrate all the Phenomena of Optics upon a Screen, by the aid of a Camera, Diaphragms, Mirrors, Lamp, and other appointments.

452 351 24 2x A Microscopic Arrangement, adapted to use with Grand Photogenic Apparatus of Duboscq & Soleil.

453 351 24 3 Duboscq's Electric Lamp, to use with Grand Photogenic Apparatus.

454 351 24 4 Guenard's Apparatus, and Haldat's Apparatus, for illustrating Images on the Retina of the Eye, and to exhibit the Spectres crossing each other.

455 351 24 5 Duboscq's Apparatus for Malus' and Huygen's Experiments in Optics, being a fine Sliding Brass Stand, with Reflectors, Prisms, Condensing Lenses, Crystals, &c.

456 351 24 7 Case containing Polyorama, with 2 Tubes as a Binocular Addition to the Grand Photogenic Apparatus, together with Diaphragms having different Openings and Plate for Window of Darkened Room.

457 351 24 7&8 Case of Chromatropes and a number of Views with Frames, also Newton's Mounted Discs, and 25 Tableaux, together with 2 Brass Mounted Concave Mirrors and Arms, all adapted to Grand Photogenic Apparatus.

458 351 24 9 A Soleil's Improved Saccharimeter, to Analyze Saccharine substances by means of their Optical Properties, handsomely constructed, and in a Mahogany Case.

459 351/24/10 2 15-inch Card Screens on a Brass Tripod Stand, to receive the Images when using with the Polyorama.

460 351/24/11 A Clockwork Apparatus, with a large and varied collection of Revolving Discs, Illustrating Theory of Complimentary and Accidental Colors.

461 351/25/1 Delezenne's best Goniometer, made by Soleil, in Mahogany Case.

462 351/25/2 A Babinett's Improved Goniometer, very fine make.

463 351/26 Large Case, containing Savart's, Arago's, Fresnel's and Soleil's very fine Prisms, Quartz and Lenses, with superior finished Brass Stands, for Experiments in Light and Colors.

464 351/27 Case of Soleil's Apparatus, Illustrating Newton's Rings, Complimentary Shadows, Fringes and Angles.

465 351/28 Case of Soleil's 2 Brass Stands, with Prisms and Lens for Projecting the Sceptre upon a Screen.

466 351/29 Mahogany Case, containing an Ohms' Apparatus, for Interference of Light, and Hoffman's Chromodot.

467 351/30 Case containing a variety of Apparatus, Illustrating Caustic Curves, Interference, Chromatic Attraction, Complimentary Colors, &c., chiefly Chromatic Cards, Ritchie's & Herschell's Photometers, Thomlinson's Perichromoscope, Brewster's Fringe Apparatus, &c.

468 351/30x Polished Plated Metal Curve, on Walnut Stand, Exhibiting Caustics by Reflection.

469 351/31 Large Case of numerous Apparatus, Illustrating Iridescence, Newton's Rings, &c., chiefly Lenses, Barton's, Saxton's and Luken's Iris Buttons, Cameos, Mother-of-Pearl, Polished Metal, Mica, Dichromatic Cards, Iriscopes, Breathing Tubes, &c.

Newton's Rings, Iriscopes, Models of Crystals, &c.

469 A 343 Glass Vase for Soap Bubble Experiments, with Appurtenances, Illustrating Iridescence of Light.

469 B 335/2 Black Circular Screen, 14 inches diameter, for Newton's Rings.

470 351/32 Case containing various Models of Crystals, Rhombs of Iceland Spar, Tourmalines, &c., and a variety of Apparatus illustrating the Laws of Polarization.

471 351/33 4 Wire Models, Illustrating the Axes and Sections of Crystals.

472 351/33x Mahogany Case, containing 2 Glass Models of Iceland Spar.

473 351/34 Case containing Godard's and other Models of Prisms, Crystals, Tourmalines, &c., in Glass, Metal and Cardboard, with Apparatus illustrating Undulations of Light.

474 351/35 Soleil's Quinquet Lamp, with Plated Reflector, on Brass Stand and Accessories.

475 351/36 2 Monochromatic Lamps, with Appointments.

476 351/37 2 Brass Mounted Concave Mirrors, with Brass Stands.

477 351/38 A Potter's Heliostat, with Watch Movement, on a Brass Stand, in Mahogany Case.

478 351/39 Soleil's Silberman's Heliostat, one of the most perfect of modern improvements, giving Latitude, Declination, Time, Date, &c., most accurately applied Chronometer work, with Book of Explanation.

478 A Box of Securing Apparatus for Heliostat.

Light and Polarization.

479 351/40/1 2 8 by 4-inch Framed Mirrors, hinged together for Multiplied Reflections.

480 351/40/2 2 18 by 15-inch Framed Mirrors, hinged together for Reflections, with Graduated Semicircle.

481 351/41 A 15-inch Mahogany Frame with Feet, square hole in centre, and a Screen same size, divided into squares 1-inch each, to illustrate the intensity of Light.

482 351/41x Apparatus and Polarizing Mirror Glass of St. Gobin, with Quadrant.

483 351/42 Soleil's seven Parallel Mirrors, with Brass Stand and Sliding Bar, a beautifully constructed Instrument, to recompose the Spectre of the Prism, and form again White Light; in Walnut Case.

484 351/43 2 Quadrangular Pyramidal Prisms, of Walnut, each divided into five sections.

485 351/43x Soleil's Improved Apparatus of Prof. Charles, for Abberations, Sphericity and Refrangibility, consisting of a Brass Sliding Stand and Sliding Stem, with large convex Lens, in fine Walnut Case.

486 351/45 A Hydro-Optical Illusion, by Mirror and Lens, in Japanned Cylinder.

487 351/48 Wheatston's Chromatic Polar Clock, in Mahogany Case.

488 351/50 Soleil's Improved Wheatston's Chromatic Clock, or Polarizing Time-keeper to be used as a Polariscope, very finely constructed in Brass, and in a Mahogany Case.

489 351/51 Walnut Case, containing a variety of Apparatus for Polarizing Experiments, such as Mitchernich's Polariscope for Fluids, Stokes' Prisms, and Dichromatic Colored Glass Plates, Hardinger's Apparatus to combine two sets of Perpendicular Waves of Light, and Apparatus to produce the dark lines or bands in the Spectrum.

490 351/52 Case containing a valuable and numerous collection of accessories for Polarizing Experiments, such as mounted and unmounted Nicol's Prisms, Canons of Quartz, cut and natural, mounted and unmounted, Polarizing Lenses, Double Refracting Prisms, Soleil's Kelimeter, Apparatus of H. Soleil for Circular Polarization, Fresnel's Prisms, Guerard's annealed and unannealed Prisms, Jamin's Photometer, Dove's Prisms, &c.

491 351/53 Another Case containing a great number of very fine Polarizing accessories, such as Selinite' Films and Devices, Nobert's Ruled Lines of the Spectrum, Polarizing Plates, Nicol's Prisms, Iceland Spar Prisms, Tourmalines, Quartz Prisms,

Brass Mounted Millimeter, Fresnel's Prisms, Guerard's annealed and unannealed Prisms, &c., also a Porte Lumiere Apparatus.

492 351 53 2 Stokes' Design on Paper, with Solution of Quinine, to illustrate Violet Rays of Spectrum.

493 351 54 1 Case of Various Polarizing Apparatus, chiefly Plates of Gypsum, Prism of Sulphuret of Carbon, Muller's Apparatus, illustrating Black Fringes, Apparatus for Experiments in Dichroism, &c.

494 351 54 2a1 Another Case containing a fine collection of Apparatus for Experiments in Polarization, such as Axometrical Projections for Fresnel's Theory of Light, Berr's Apparatus, illustrating Action of Light within Crystals of 2 Axes, 3 Spheres showing Theory of Propagation of Light.

495 351 53 1 Walnut Case containing a varied collection of Apparatus for Experiments in Light and Polarization, chiefly Soleil's Amber Prisms, Plates of Agate, Selenite Wedges, Glass Prisms, Calcerous' Iceland Spar, Frauenhoffer's Curved and Straight Ruled Lines, Coddington Lens, Foucault's Nicol's Prisms, Specimens of Nitre and Topaz, Dr. Donnes' Lactoscope, Hollow Quartz Prism and Brass Sliding Stand, Soleil's Lunette Magique, or Prisms of Total Reflection, Cubes of Glass, &c.

496 351 56 1&3 Muller's Strobeoscope, illustrating Undulatory Motion, in Box, with 2 Portfolios containing the Circular Card Discs.

497 351 57 Muller's 10 Card Board Models on Coloration, with Stand.

498 351 58 1 Chromatic Circles, illustrating Chevreul's Theory of Colors.

499 351 58 2 2 additional Sets of Chevreul's Chromatic Circles, and 2 Sets of 12 Chromatic Gamuts, and a Set of 6 Specimens of Digeon's Successive Impressions of Chromocalgographie Printing.

500 351 58 4 1 Volume, Journal La Lumiere, 1851.

501 351 58 5 Portfolio containing Chevreul's Illustrations of Solar Spectrum and Digeon's Circle and Solar Spectrum.

502 351 59 An Improved Anorthoscope with 12 Designs.

503 351 59x Another Anorthoscope, with 24 Designs in separate Case.

504 351 59xx 2 Sets of Magic Revolving Discs with Handles.

505 351 59xxx An Anorthoscope, 20 Designs, Handle and Screen.

506 351 60 A Becquerel's Phosphoroscope, very finely constructed in Brass, with Eight Crystals for same, and

506 A 351 60x A Mahogany Stand containing 5 Horizontal Tubes, containing Specimens for Analysis by Phosphoroscope.

507 351 60xx Case containing various fine Apparatus and articles for the Phosphoroscope, Quartz Prisms and Lenses, Mounted on Brass Stands, 2 Glass Troughs for Fluids, Case of 17 Specimens of Crystals, a Cube in Glass of Urane, &c.

508 351 63 Case containing Kobell's Stanroscope, with Nicol's Prism and Polarizer, and an Oppel & Hersimer's Stereoscope without Lenses, with Views and Designs for same.

509 351 71 2 of Ripka's Glass Tubes with Wire Gauze Diaphragms.

510 351 73 Muller's Polarizing Apparatus, to observe Polarized Light through Rays of different refrangibility, also Lenarmount's Apparatus, a Sliding Brass Stand, with Crystals, Discs and Lamp.

511 351/74 A very fine Babinett's Photometer, by Duboscq, in Cedar Case.

512 351/77 Arago's Grand Interference Apparatus, a very large and elegantly constructed Instrument, complete in all its appointments.

512 A 351/93 Another very large and handsomely appointed Apparatus, for Rotary Polarization, with valuable Accessories of the most complete and finest finish.

513 351/80 Dove's Apparatus of Rotation, 2 Mounted Revolving Discs and Multiplying Wheel, with 2 Nicol's Prisms and Quartz Plate.

514 351/81 The Phantascope or Phenakisticope, a Mahogany Base with drawer for the Objects, Multiplying Wheel, Glass Reflector and Objects, fine make.

515 351/82 Plateau's Phenakisticope, a Glass Disc about 14-inches diameter, and a Perforated Mahogany Disc same size, containing 4 Lenses, Conical Brass Tube, with Eye Glass, the whole Mounted on Bronze Tripod Stand and Brass Sliding Stem, with Tableaux, a beautiful Instrument.

516 351/83 An Improved Noremberg's Polarizing Apparatus, made by Duboscq, a very fine Instrument, complete in all its appointments, with additional Accessories.

517 351/84 Apparatus of Matieson, with Lenti Prisms, for Experiments on the Solar Spectre, superior Instrument.

518 351/85 A very large Wheatston's Reflecting Stereoscope, finely constructed of Black Walnut, with 2 Mirrors, having 2 Lenses attached and 16 large Views.

518 A 351/86 Another Wheatston's Grand Reflecting Stereoscope, Mounted on a fine Brass Stand, accompanied by a Box of 10 Views.

519 351/62 Helmholtz Telesterioscope or very large Reflecting Stereoscope, for Viewing Terrestrial Objects at a distance of several miles.

520 351/92 Mahogany Case, containing 37 Models of Crystals, relating to Optics.

521 351/94 An Amici Improved Noremberg's Polariscope, made by Duboscq, a very beautiful Instrument, complete in all its appointments, with additional Mounted Crystals.

522 351/95 An Apparatus for Absorption of the Colors of the Spectrum, finely constructed in Brass, by Dubosq.

523 351/96 An Apparatus for Projection of Crystals by Solar or Electric Light, Tripod Stand, with Sliding Brass Stem, on which is Mounted a large Brass Tube, with Object Glasses and Lens, made by Duboscq.

524 351/98 A Collection of 21 Greatly Magnified Photographs, in Natural History.

525 351/97 A Collection of 8 Greatly Magnified Photographs, Mounted and Framed.

526 351/2x A Black Glass Plate 12-inches square, in Mahogany Frame, for Polarization.

527 351/2xx A Plate of Obsidian, 9x12-inches, Framed in Oak, for Polarization.

528 354/4 A Ritchie's Photometer, with an extra Tube.

529 354/1 Another Ritchie's Photometer, in a Mahogany Case.

530 $\frac{354}{5}$ A Ritchie's smaller Photometer.
531 $\frac{339}{4}$ A Brass Mounted Lens, 15-inches Diameter, being a very superior Double Convex Lens, in a heavy Brass Swing Frame, and
532 $\frac{339}{5}$ A Mahogany Tripod Stand, to use with the Lens.
532 A $\frac{339}{13}$ 3 large 6-inch Diameter Long Focus Lenses, Mounted in a Semi-Hexagonal Frame, to be used with a large, 3-fold Paper Screen.

Magic Lanterns and Sliders.

533 $\frac{390}{1}$ Large Japanned Magic Lantern, with Argand Lamp and Reflectors, Condenser and Lens, made by W. & S. Jones, London.
534 $\frac{390}{2}$ McAllister's Improved Carpenter's Magic Lantern, with Argand Lamp, Lenses, Condenser and Reflector.
535 & 535 A&B $\frac{390}{5\&6}$ A very large and superior Trinoptric Magic Lantern, with Appurtenances complete, 2 fine Prisms and Convex Lenses, Condenser, Gas Bag, Iron Retort, Glass Gas Purifier, Metal and Flexible Tubes, &c.
536 $\frac{390}{2x}$ A Single, fine Mounted Lens, not Achromatic, adapted to use with Carpenter's Magic Lantern.
537 $\frac{390}{3}$ A Small Double Magic Lantern, for Dissolving Views, with Lenses and Condensers, 2 Lamps and Chimneys.
538 $\frac{339}{1}$ Several various sized Wooden Frames, for Screens, in Magic Lantern and other Experiments.
539 $\frac{390}{3}$ 4 very fine Cambric Muslin and Bishop's Lawn Screens, various sizes, for Magic Lantern and other Experiments.
540 $\frac{390}{9}$ A Small Magic Lantern, with Lenses, Condenser and Oil Lamp, and 36 Sliders, various subjects.
541 $\frac{390}{9A}$ 6 Walnut Frames, for Magic Lantern Sliders.
542 $\frac{390}{4}$ A variety of Apparatus, for Magic Lanterns and Solar Exhibitions, such as Mounted Mirrors and Frames, for Magic Lantern Tubes, and Window Screen Diaphragms, &c.

Magic Lantern Sliders.

543 $\frac{390}{3}$ 31 Astronomical, some movable.
544 " 13 Quadrupeds.
545 " 19 Botanical.
546 " 17 Botanical.
547 " 15 Miscellaneous.
548 " 13 Miscellaneous.
549 " 13 Humorous and Miscellaneous.
550 " 20 Humorous and Miscellaneous.
551 " 18 Humorous and Miscellaneous.
552 " 2 House That Jack Built.
553 " 24 Miscellaneous and Humorous, (some movable.)
554 " 12 Scriptural.
555 " 12 Scriptural.
556 " 21 Miscellaneous.
557 " 17 Astronomical.
558 " 56 Natural History.

559 $\frac{300}{3}$ 16 Astronomical—Mechanical.
560 " 2 Astronomical—Mechanical—(superior.)
561 " 10 Astronomical—Mechanical.
562 " 56 Humorous—Mechanical.
563 " 5 Geological.
564 " 10 9 Miscellaneous and 1 Chromoscope.
565 " 7 Chromoscopes.
566 " 11 Auroras and Water Spouts.
567 " 13 Lynch's Expedition to Dead Sea and 4 Miscellaneous.
568 " 22 12 Small Miscellaneous and 10 Small Mechanical.
569 " 29 Ideal Views of Primitive World and Views from Hogarth, with 2 Holders, (fine) and 1 Mechanical.
570 " 5 Miscellaneous, (fine.)
571 " Pamphlets on Magic Lantern.

Apparatus Showing Undulatory Theory of Light and Sound.

572 $\frac{423}{1}$ Prof. Powell's Undulatory Apparatus, for Rectilinear, Elliptical and Circular Motions of Light, Vertical Wires and Balls, and Eccentric Movement.
573 $\frac{423}{2}$ Wheatston's Apparatus for Exhibiting Undulatory Motion of Light, Brass Frame with Steel Rods and Ivory Balls, in Mahogany Frame
574 $\frac{423}{3}$ Young's Apparatus for Illustrating the Undulatory Theory of Light and Sound, 2 Brass Pillars supporting a brass double Frame, containing Movable Brass Rods, Forming Waves or Undulations, finely constructed.
575 $\frac{423}{4}$ Woodward's Model, illustrating the Undulatory Theory of Light by Different Curves in the 3 Prismatic Colors.
576 $\frac{423}{5}$ August's Apparatus for illustrating and exhibiting the Transversal, Longitudinal and Rotatory Vibrations.

Acoustics.

577 $\frac{425}{1}$ Marloy's Differential Sonometer, with two divided Scales, sounding the true and modified chromatic Gamut, with Weights and Cords, also, a Standard Diapason, making 512 vibrations per second, Sounding Box, &c.
578 $\frac{425}{2}$ A Large Case containing a great variety of Acoustic Apparatus, such as Mounted Steel Plates for Transversal Vibrations, Square and Circular Membranes of Vegetable Paper, Apparatus with movable divided Scale, Metallic Cords and Weights for Longitudinal Vibrations, Fine Tuning Forks, various sizes, a grand Monochord of Savart's to render the undulations visible to the eye, Marloy's Steam Whistle, Solid and Tubular Rods of Brass, Glass and Wood, for vibrations, various Violin Bows, Flutes of different kinds, Cane with Harmonica attached, Mounted Diapasons, with Sounding Case, Musical Sling, a Siren of Caignard, a Wheatston's Kaleidophone, Pipes with Valves and Stop Cocks, Metallic and Catgut Cords, &c.

579 425/3 Marloy's Bellows, a Table with Bellows below and Sounding Board above, adapted to receive all kinds of Tubes, for Acoustic Experiments.

580 425/4 Case containing a variety of Music Pipes or Flutes, Prismatic Tubes to illustrate vibrations, Cylindrical and Rectangular Tubes, various sizes, Cornets, &c.

581 425/4x A Reed, in a long glazed Portevent, the Tongue free.

582 425/4x 2 Reed Pipes for Cornets, glazed.

583 425/4x 2 Reed Pipes for Cornets, glazed.

584 425/4x 2 Reed Pipes for Cornets, glazed.

585 425/4x 3 Cornets for Pipes with Reeds.

586 425/4x 4 Cornets or Trumpets for Reed Pipes.

587 425/5 A large Case containing a great variety of Acoustic Apparatus, such as Pipes with Membranes for Vibrations, Flutes, various kinds and sizes, Wood and Metal Rods for Vibration, Savart's Apparatus for Transversal Vibrations, Mounted Plates for Vibrations, Membranes of different Materials, Single and Double Concentric Tubes, Ear Trumpets, Clock Bells or Gongs, &c.

588 425/5x An Oak Base with 4 Pillars, 3 Square Brass Plates and a Tube for Vibrations.

589 425/6 Large Case of various Acoustic Apparatus, viz: a 9-inch Gong or Bell Mounted on a Walnut Base, with Tubes for Vibrations, Concentric Double Tubes, a Turkish Spherical Bell, Triangle and Beater, an Elliptical Bell, a Clock Bell with fine Wheel Work for a Vacuum, Black Walnut Rattle, &c.

590 425/7 Large Case of Acoustic Apparatus in great variety, such as Tubes and Discs of Metal, Glass, Wood and Pasteboard, with Stand for same, Bars of different materials for Vibrations, Large Humming Top, &c.

591 425/8 A large Glass Bell Mounted on a Walnut Stand and Arch.

592 425/9 Case of various Acoustic Apparatus, such as several Wheatston's Kaleidophones, Lycopodeum, Jews-Harps, Ivory Dog Call, Mouth Harmoniums, &c.

593 425/10 An Æolian Harp.

594 425/10x Musical Glass Plates in Frame.

595 425/10xx Musical Glass Plates in Frame, 2 Octaves, 2 Mallets.

596 425/11 Case of Acoustic Membranes, various materials and sizes, Mounted in Frames.

597 425/12 A Glass Balloon, 10 inches Diameter, with Stem and Bell attached, with Stop-Cock and Air Pipe, to illustrate Sound in Vacuo.

598 425/13 2 large Pipes, varying between them a Demitone to show the mutual influence of 2 Pipes in Unison.

599 425/14 A beautiful 40-inch Æolian Harp.

600 425/15 A Serinette or Bird Organ of 8 Tunes.

601 425/15x Another Serinette or Bird Organ of 10 Tunes.

601 425/15xx An extra Barrel, 10 Tunes, for the Bird Organ of No. 601.
A

602 425/16 A very large Diapason, 15-inches in Height, in Metallic Alloy, Mounted on a large and very fine Sounding Case.

603 425/17 Savart's Apparatus for Communication of Vibrations, being five flat parallel Metallic Bars, united by a Vertical Axis at their centres, Mounted on a Stand.

604 425/18 An Instrument of Music of the Savages, called "Claque Bois," consisting of 8 suspended Wood Bars Sounding an Octave, Mounted on a Wooden Stand.

605 425/19 A Hollow Cylinder, Revolving on Pivots, between 2 Pierced Pillars, into which Air is to be forced by Bellows.

606 425/20 A collection of 96 Bird Calls, &c., to illustrate the Sounds of the Human Voice and that of Animals.

607 425/21 4 Organ Pipes, different Diameters.

608 425/21x Another similar Set of 4 Organ Pipes.

609 425/22 Case of various Acoustic Apparatus, viz: an Ear Trumpet, Dog Call, Flute, Æolian Pitch Pipes, Tuning Forks, Membranes, &c.

610 425/24 Case of various Acoustic Apparatus, such as Ear Trumpets, Castinetts, Mouth Pieces for French Horn, Trumpet and Clarionette, Slips of Wood Sounding the Gamut, &c.

611 425/28 4 Diapasons, separately Mounted on four Sounding Boards, different sizes, giving perfect accord.

612 425/30 Case of various Acoustic Apparatus, chiefly Ear Trumpets, Grotesque Vibrating Figures, Artificial Tympanum, Tissues, various kinds.

613 425/26 4 Organ Pipes, with Stopper or Plug.

614 425/23 Hopkins' Apparatus, illustrating Interference of Sound, a Compound Hollow Mahogany Tube, branching into 2 Pipes.

615 425/25 Metallic Ear Trumpet.

616 425/27 4 Organ Pipes, different sizes, closed by Stoppers, giving same accord.

617 425/29 An Acoustic Apparatus with 2 Hydraulic Pistons and 2 Glass Tubes, different diameters, closed with Stop-Cocks, finely Mounted in Walnut Stand, with extra Tubes.

618 425/38 Schulze & Sons' beautifully constructed Undulatory Apparatus, consisting of Mahogany Frame with Wires and Balls of Ivory, Cog Wheels and Handle, illustrating Simple and Compound Waves.

619 425/34 An Apparatus for Experiments, showing Longitudinal Vibrations of Rods, being a Walnut Frame supporting a Brass Rod and Swinging Ivory Ball, with various Accessories.

620 425/33 Organ Pipe 28 inches in length.

621 425/35 Schaffgotsch's Acoustic Apparatus, showing effects of Vibrations of Sounds on Flames, very fine and complete Apparatus, substantially constructed in Oak, with Tubes different sizes and Materials, Branch Pipes, Burners, Gas Bag, Platina, Diapason, Organ Pipes, &c.

621 A 425/35 6 extra Glass Tubes, different sizes, for above.

622 425/36 Kœnig's Optical Acoustic Apparatus, an Oak Base 18 inches square, with Pillar supporting a Telescope and Object Glass, with Mounted Perpendicular and Horizontal Diapasons, rendering Vibrations Visible to the Eye.

623 425/37 Lissajous' Optical Acoustic Apparatus, consisting of 6 Diapasons with Mirrors, Mounted Telescope, a superior Argand Lamp and Accessories, and 4 Stands, the Apparatus showing Vibrations of the Tuning Forks by Reflection on a Screen.

624 425/40 An Apparatus to explain the Undulatory Movement of Sound, being a Case 42 inches long, in which to Revolve 3 Cylinders with Undulatory Curves marked thereon.

625 425/44 A Series of 30 Acoustic Drawings, produced by Helmholtz's Apparatus, with the use of the Human Voice.

Acoustic and Undulatory Apparatus.

626 425/43 An Apparatus consisting of a long Wooden Frame, in which is placed a Frame with curved or undulatory surface, for the reception of a series of Wires tipped with Glass Beads.

627 425/42 An Apparatus to explain the propagation of Light, consisting of a Case 43 inches long, and 38 Balls or Beads moving in circles on Wires, by means of a curved Rod or Bar and Winch.

628 426/41 An Undulatory Apparatus to explain the interference of two systems of Undulations, consisting of a Case or Frame 56 inches long, in which are 89 various sized Wires with Beads, and 6 long Bars having different series of Undulations on their surface.

629 425/39 A Grand Undulatory Apparatus, to explain undulations of Liquid Bodies, the Case being 52 inches long with 19 Glass Beads mounted on Movable Wires, and by means of a Winch producing Undulatory Waves.

630 425/31 Scott's Phonautograph, a very large and fine Apparatus made by R. Kœnig of Paris, for experiments in Phonics, consisting of an Oak Base 32 by 28 inches, on which are 2 Iron Supports, sustaining a Revolving Hollow Brass Cylinder, with Steel Helix Axle, mounted Diapason and Chronometer with Pointer and other accessories.

630 A Also a large Plaster Mortar or Insonorous Vessel, vibrating between 2 Iron Supports, together with all the necessary appointments.

631 425/32 Seebeck's Screen Apparatus, made by Kœnig of Paris, an Oak Base with Wheel and Axle, and 6 various sized Discs having Circles of Perforations, with Glass Pipes and India Rubber Tubes.

Stereoscopes and Stereoscopic Views.

632 939/1 A Becker's Patent Revolving Stereoscope, of highly finished Black Walnut, with Revolving Chain for Pictures.

633 Rosewood Box Stereoscope.

634 Mahogany Box Stereoscope.

635 Mahogany Box Stereoscope.

636 An Open Japanned Stereoscope.

637 Silver Spectacles Stereoscope.

638 Mahogany Open Folding Stereoscope.

639 Mahogany Open Folding Stereoscope, with Mirrors and Prisms.
640 Mahogany Folding Stereoscope, with Sliding Diaphragm.
641 Walnut Box Stereoscope with Gothic Lenses mounted on a Stand, and 20 views.
642 Mahogany Box Stereoscope and Colored Glasses for Grooves.
643 Walnut Box Stereoscope.
644 Lacquered Metallic Stereoscope, in form of an Opera Glass.
645 Walnut Box Stereoscope.
646 Mahogany Box Stereoscope, Square Lenses.
647 Revolving Phenakisticope, with Stereoscopic Attachment.
648 Very fine Polarizing Prismatic Stereoscope, with Nicol's Prisms and Plate, and 2 Views.
649 A fine Zebra Wood Stereoscope, with Leather Tubes, movable.
650 A Morocco Cabinet Stereoscope, containing 12 fine Glass Views.
651 A very fine Smith & Beck's Achromatic Stereoscope with Mirror, handsomely mounted, and in elegant Walnut Case.
652 A Pasteboard Box Mechanical Stereoscope, with 12 Movable or Animated Pictures.
653 A Smith & Beck's very fine Patent Achromatic Mirror Stereoscope, in handsome Morocco Case with 12 views.
654 Japanned Metal Single Prism Stereoscope.
655 Walnut Frame Open Stereoscope, with Square Lenses.
656 Duboscq's Second Largest Pseudo-Stereoscope, with 2 views.
657 Walnut Square Reflecting and Refracting Stereoscope, 6 pair of objects.

Stereoscopes, Pseudoscopes, &c.

658 Rosewood Box Stereoscope, Lenses in Ivory Tubes.
659 Japanned Box Stereoscope, fine finish.
660 4 Portable Folding Stereoscopes.
661 Walnut and Brass Box Stereoscope, with Eye Shade and Square Lenses.
662 Fine Walnut Portable Open Stereoscope, Square Lenses, in handsome Walnut Cabinet.
663 The London Stereoscopic Society's fine Stereoscopic Camera, with Achromatic Lens, finely Mounted, and Accessories.
664 Duboscq's Panoramic Stereoscope with Tableau and Mirrors.
665 Wheatston's Reflecting Open Stereoscope with Mirrors, by Duboscq.
666 Wheatston's Original Reflecting Stereoscope.
667 Duboscq's Improved Wheatston's Reflecting Stereoscope.
668 Square Morocco Stereoscope, with Revolving Chain for 24 Pictures, 4 Lenses.
669 Portable Folding Rosewood Stereoscope, with Square Lenses.
670 Opera Glass Binocular Stereoscope.
671 Double Pocket Eye Glass as a Stereoscope, and a very fine Turtle Shell Frame Eye Glasses as a Stereoscope.
672 A large Duboscq's Stereoscopic Pseudoscope of Prismatic Lenses by Reflection and Refractions.
673 Duboscq's Grand Stereoscopic Pseudoscope, with Reflecting Prisms.

674 Prisms Mounted for Stereoscopic Pseudoscope.
675 Finely constructed Brass Frame, Pseudoscope with Electrotype Plate.
676 Ebony Frame Pseudoscope.
677 Pseudoscope Mounted as an Opera Glass.
678 A Stereoscopic Phenakisticope or Bioscope, with Reflectors and 2 large Circular Tableaux.
679 3 Objects in Relief for Pseudoscope.
680 Metallic Frame Pseudoscope.
681 Very fine Metallic Frame Pseudoscope.
682 Various objects in Relief, for use with Pseudoscope.
683 Paper Lamp Shade, Mounted with Photographic Views.

Stereoscopic Views.

684 12 Very fine glass Views in Switzerland.
685 24 Daguerreotype Views, Natural History, 2 boxes.
686 12 Daguerreotype Views, various.
687 10 Daguerreotype and Glass Views, Crystal Palace, London.
688 10 Daguerreotype Views, various.
689 12 Daguerreotype Views, various.
690 24 Glass European Views, in 4 boxes.
691 24 Daguerreotype Views, various, in 2 boxes.
692 12 Very fine glass European Views, various.
693 72 Various European Views, 3 boxes.
694 11 Various American Views, glass.
695 7 Views of Buildings in Philadelphia, glass.
696 16 Various European Views, glass.
697 22 Various European and American Views, glass
698 13 Niagara Views, glass.
699 19 Various European Views, glass.
700 12 Various European Views, glass.
701 12 Various European Views, glass.
702 14 Daguerreotype Views, various.
703 39 Various European and American Views, glass.
704 25 Views of the Holy Land, glass.
705 25 Views in Egypt and Nubia, glass.
706 14 Large size Halyotypes and glass Views in Europe.
707 3 Panoramic Views in Europe, large size.
708 21 Various European and American Views, glass, 2 boxes.
709 7 Fine glass European Views, each 9x17 inches.
710 430 Various Stereoscopic Diagrams, 6 boxes.
711 25 Interior of Churches.
712 18 Views of the Moon, 16 paper and 2 glass.
713 36 Views in Egypt and Rome.
714 20 Views in Canton, China,
715 64 Views in England, Ireland, Scotland and Wales.
716 84 Various fancy Views.
717 100 Views in Europe.
718 14 Relics of Sir John Franklin's Expedition.
719 60 Various fancy Views.

720 72 American Views
721 15 Various Transparent Views
722 83 European Views.
723 75 European Views.
724 24 Natural History.
725 100 Card Photographs of Distinguished Persons.
726 34 European Views.
727 46 European Single Views, large size.
728 45 Outline Views for Stereoscope.
729 8 Daguerrotype and Glass Views, various.
730 56 Outline Diagrams for Reflecting Stereoscope.
731 3 Views, 2 in Small Frames or Cases.
732 3 Volumes Stereoscopic Magazine, bound.
733 1 Volume, "Teneriffe or Specialties of a Residence above the Clouds," illustrated with Photo-Stereographs.
734 1 Volume, Moigno and others, on the Stereoscope and Pseudoscope.
735 1 Collection of Pamphlets, (unbound,) treating on Stereoscope and Pseudoscope.
736 1 Stereoscopic Album of 24 Views.
737 5 Parts of Photographic Sunbeam, a Magazine.
738 1 Volume, (bound,) Photographic Art Journal, 1859.
739 16 Views in Europe, printed from Photographs by the Patent Photo-Galvano-Graphic Process, (in large portfolio.)
740 7 Large Photographic Views, Battle-field of Gettysburg, in portfolio.

Miscellaneous.—Scales, Weights and Balances.

741 $\frac{214}{16}$ Herper's American Gold and Silver Counterfeit Coin Detector.
742 $\frac{214}{2}$ Moore's Half-Eagle Balance.
743 $\frac{214}{14}$ American Gold and Silver Counterfeit Coin Detector.
744 $\frac{214}{1}$ A Set of Small Steel and Brass Scales, and Weights in Drachms, Scruples and Grains, &c.
745 $\frac{214}{3}$ Francis' Decimal Weights, 1 to 480 Grains.
746 $\frac{214}{4}$ Four sets of Weights, Avoirdupois, Troy and Apothecary.
747 $\frac{214}{11}$ A Small Spring Balance.
748 $\frac{214}{15}$ A Larger Spring Balance.
749 $\frac{214}{7}$ Dampier's Geometrical Balance.
750 $\frac{214}{13}$ Fine Brass Letter Balance, with Weights.
751 $\frac{233}{2}$ Two pair Small Silver Plated Scales, and finely finished Brass Stands for same, in Mahogany Case.
752 $\frac{15}{6}$ An Amateur's Portable Lever Printing Press, with Galley, Chase, Box of Ink, Composition Inking Roller, and a Distributing Tray, (known as Cowper's Parlor Printing Press,) in a Mahogany Case. Accompanied by a
753 B $\frac{15}{8}$ Mahogany Type Case of Four Drawers, containing an Upper and Lower Case Font of Type, Figures, &c., with a proportionate supply of Lead and Brass Rules, Reglet, Furniture, Side and Foot Sticks, Quoins, &c.

LUMEN ACCIPI ET IMPERTI