12. Center of magnitude.
Of motion.
Of gravity.
13. Mechanical powers.
Levers.
False balance.
Steelyard.
Remarkable property of the lever.
Desaguliers's paradox.
Screw.
Wedge.
Pullies.
Inclined plane.
Axle and Wheel.
Compound engines.
14. Friction.
Its effects.
15. Methods by which friction may be diminished.
Wheel carriages.
Advantages.

16. Advantages and disadvantages
Of broad, narrow, low, high } wheels,
In surmounting, propelling } obstacles.
17. Descent of heavy bodies.
18. Rolling, Sliding } of bodies down inclined planes.
19. Pendulums.
Various kinds of them.
Center of oscillation
20. Observations on the motion of a Pendulum.
In a cycloid.
In small arcs of a circle.
In large arcs.
21. Curve of quickest descent.
22. Expansion of metals.
23. Methods of correcting the effects of heat and cold in the construction
Of
Clocks.
Of watches.
24. Collision of bodies.
Center of percussion.
25 Forces of bodies in motion.
Different opinions of philosophers on this subject.
Depths to which falling bodies sink
In clay,
sand,
snow,
&c.
26. Rotatory motion.
Center of gyration
27 Projectiles.
Gunnery.
&c.

Of Fluids.

28. Properties of fluids.
Their gravity in proprio loco.
Their pressure.
The experiments of Paschal and
Of others.
29. Center of pressure.
30. Hydrostatical paradox.
31 Mixture of fluids.
32 Sinking of bodies in fluids.
Floating
The loss of weight by immersion in
water.
33. Immersion of a solid in two fluids.
34. The specific gravity
Of Solids,
Fluids,
Compounds.
35. Chemical experiments by M. Kirwan on the Specific Gravities of Compounds.

Mathematical specific gravity.
Specific gravity by observation.
Increase of density in compounds.
The time required for this effect to take place.
36. The compound hydrostatical balance.
37. Method of determining the ~~capacity~~ magnitude of an irregular solid.
38. Method of determining the capacity of an irregular vessel.
39. Spouting of fluids.
The height to which the water rises.
The quantity thrown out in a given time in various circumstances.
40. Experiments to determine the nature and cause of the Vena Contracta.
41. Pressure of the air.
Torricellian experiments.
Experiment of M. Azout.
Combination of Fluids.
Pumps.

Ly—

Syringe.
Syphon.
Cohesion of polished plates.
&c.

42. Water barometer.
43. Observations on the height of the atmosphere.
44. Portable barometer.
Of measuring the heights of mountains.
——— depths of wells.
45. Opinions concerning the ascent of water in capillary tubes,
Hook,
Cotes,
Hauksbee,
Jurin,
&c.
46. Examination of the experiments on capillary tubes said to have been made
In the open air.
In vacuo.

47.

47. The attraction of the indefinitely small particles of matter for each other:
Examples,
In glass,
Water,
Mercury,
Cohesion of plain surfaces of bodies.
48. The height to which water is raised in any simple capillary tube.
49. Method of measuring exactly the Diameters of tubes.
50. Capillary syphons.
51. Elasticity of the air.
Combination of air and water.
——— of air and mercury.
Law by which air is rarified.
by which it is condensed.
Fountains,
Diving bell,
&c.
52. Air pumps.
Their construction.

Different

Different kinds of them.
Various contrivances for measuring the rarefaction of the air.
Experiments with rarified air.

53. Method of determining the capacity of the barrel of the air pump, and of the tubes, which form the communication between the barrel and the receiver.

54. The condenser.
Its construction.
Contrivance for measuring the degree of condensation.
Experiments with condensed air.

55. Sound in vacuo.
in condensed air.

56. Production of Factitious Airs by various chemical processes.
General properties of factitious airs.

57. Fixed air.
Chemical discoveries
of Black,
Priestley,

Ang

And others.

58. Nitrous air,
Discoveries
of Hales,
Priestley,
&c.

59. Nitrous air considered as a test of the purity of atmospherical air.
Eudiometers.

60. Nitrous air considered as a constituent part of nitrous acid.

61 Inflammable air.
Its production and
Specific gravity.
Sir Cavallons.

62. Of the phogistication of the air by various methods.

63. Properties of phlogisticated air.

64. Dephlogisticated air.
Discoveries
of Priestley,
Scheele,
&c.

65.

65 Production of dephlogisticated air
from Nitre,
Red precipitate,
Precipitates per se,
Red Lead,
Red Lead and Oil of Vitriol,
Purple Mineral,
Vegetables,
&c.

66. Of the constitution of the atmosphere.
Experiments
Of Scheele,
Lavoisier,
And others.

67. Methods of finding the specific gravity of elastic fluids.

68. Elastic fluids, which lose their form and properties upon the application of cold.
Steam,
&c.

69. The prodigious force of steam when confined and heated.
Steam engines.

70. Condensation of factitious airs by increasing the pressure.

71. Rarefaction of them by diminishing the pressure.

72. Rarefaction of them by the application of heat.

73. The ascent of smoke and rarefied air through chimnies.
Remarks on the construction of chemical furnaces for exciting the greatest heat.

74. Remarkable changes, which certain elastic fluids undergo, upon the application of considerable heat in certain circumstances.

75. Vapour of water } Forced thro' red-hot
of spirits of wine } tubes.

77. Products from the union of some elastic bodies.
Dephlogisticated air united with several sorts of inflammable air.

78. Observation on the properties, which several elastic fluids are supposed to communicate to bodies in a state of combination.

79. Chemical discoveries,
Relating to the nature of
Lime,
Alcalies,
Acids,
Various sorts of inflammable air,
The principle of inflammability or phlogiston.

80. The solution of Solids in fluids.
The nature of chemical affinity.

81. Cohesion of the particles of metallic substances.
Ductility of metals.

82. Mr. Monveau's experiments on the agreement between the chemical affinities, and the adhesive forces of mercury, and other metallic substances.
Probability of reducing the chemical affinities to calculation.

83. The velocities with which very light elastic spheres ascend during the solution of solids in fluids.

84. The effects
Of heat,
Cold,
And pressure,
upon their diameters.

85. The uncertainty of the mathematical computations on this subject.

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86. General observations concerning the existence of other fluids, or material substances, which have no sensible gravity, and are supposed to be the cause of
Electricity,
Magnetism,
Heat,
Light,
&c.

Elec-

Electricity.

87. History of Electricity.
88. Of Electrics,
and non-electrics.
89. Of conductors.
Non-conductors.
Insulation.
90. Light bodies.
attracted } by excited electrics.
repelled }
91. 2d Properties of bodies electrified by the
contrary powers.
1st Two kinds of electricity
92 Methods of producing the opposite electricities by the same electric.
93. Electrical machines
Various constructions of them.
Their uses.
94. Experiments made.
At the prime conductor,
At the rubber.
95. The Leyden phial.
96. An Electric plate,
Charged,
Discharged.
The velocity of electricity.
97. Different explanations of the
preceding experiments.
98. Particular experiments, which seem
favorable to the opposite theories.
99. Electrical batteries.
100. Electrometers.
101. Atmospherical electricity
A plate of air charged.
Thunder and lightening.
Electrical kite.
102. Utility of knobs } in preserving buildings from the effects
of points } of lightening.
103. Electrical experiments
In rarefied air,
In vacuo,
Luminous conductor.
Aurora borealis.
&c.

104. The electrophorus.
105. Use of electricity
In medicine,
In several important experiments in Chemistry.
Production of water.
Of nitrous acid.
Conversion of alkaline into inflammable air,
&c.

Magnetism.

106. History of magnetism.
107. General properties of the loadstone.
Armed magnets.
108. Communication of magnetism,
By the loadstone.
Iron bars,
Friction
Electricity.
109. Recent experiments on magnetism by Cavallo.
110. Poles of a magnet.
Magnetic meridian.
111. Deviation of the magnet.
Of the variation.
112. Dipping needle.
113. Mariner's compass.
Best construction of it.

114. Methods of making artificial magnets.
Combination of magnets.

115. Analogy between the powers of electricity and magnetism.

116. Uses of magnetism
In Chemistry
&c.

Heat.

117. History of discoveries concerning the causes and effects of Heat.
Opinions of Bacon,
Boyle,
Newton,
Boerhaave,
Black,
Wilke,
Irwin,
Bergman,
Scheele,
&c.

118. Obscurity of the cause.
Importance of the effects.

119 The most general effect of heat is Expansion.

120. Exceptions to the law of expansion.
Several phaenomena explained from the expansion of water in freezing.

121.

121. History of the invention of Thermometers.
Different kinds of them.
The air
Spirit of wine
Oil
Mercurial
} Thermometers.
Method of constructing thermometers.

122. Of the equable
unequable
} expansion of various substances.

123. The effects of heat in altering the specific gravities of bodies.
The weight of a cubic foot of water at different heats.

124. Particular quantities of expansion
of air
Mercury
&c.
} in a given temperature.

125. Of the fixed points of thermometers.

126. Graduation of thermometers, and Comparison of them with each other.

127. Methods of measuring the greater heats.
By Newton,
Black,
Wedgewood.

128. Variation of experiments from the computation by Newton's rule.

129. Heats of metals just beginning to melt.
Heats of mixtures of metals.

130. Insufficiency of thermometers to determine the absolute quantity of of heat in bodies.

131 Pyrometers.

132. The equilibrium
and transmission
} of heat.
Different powers of bodies in transmitting heat.
Observations on the quantities of heat lost or gained by bodies in given times.

Newton's opinion concerning the time that bodies of different magnitude take to lose their heat.

133. Transmission of heat.
Through rarified air,
Through a vacuum.

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134. Heat is excited by various causes.
Friction,
Collision,
Congelation,
Chemical mixtures,
Fermentation,
Electricity,
Solar rays,
Inflammation of fuel,
&c.

135 Fluidity.

Various degrees of heat necessary for the fusion of bodies.
Some bodies fly off in vapours before they are sufficiently heated for fusion.

Chan-

Changes which some bodies undergo by being melted.

136. Further observations concerning fluidity.
Theory of latent heat.
Quantity of heat which is absorbed by melting solids.
Quantity of heat which emerges from congealing fluids.
Of sensible heat of bodies during their
Congelation,
& fusion

137. Experiments,
Which seem to confirm this theory.
Slow melting of ice and snow.
Slow congelation of water.
Cold produced by the liquefaction of ice.
Heat produced by the congelation of water.

138. The latent heat contained
In melting bees' wax,
Melted spermaceti,
Melted metals,
&c.

139. The production of artificial cold by Ice and snow mixed with Nitrous acid
&c.

140. The congelation of quicksilver.
The precautions necessary to be used in order to determine its freezing point.

141. Production of heat by the crystallization of salts.

142. General Observations.
On the congelation of fluids, the crystallization of salts.

143. Vapour.
The manner in which elastic steams are produced.
The heat of boiling water.
Variation of this heat

144. Greater heats communicated to water by increasing the pressure.
Papin's digester.

145. The theory of latent heat applied to explain the production of vapour.

146. Quantity of heat which disappears during the formation of vapour.
Quantity of heat which emerges from condensed steam.

147. Unelastic vapours.
Various theories of
their production,
And ascent,
By Nieuwentyt
Halley,
Desaguliers
&c.

148. The solvent power of the air,
Dew,
Mist,
&c.

149. Method of determining the quantity of the rarefaction of water, when reduced to vapour.
Opinions of Gravesande,
Muschenbroek,
Nollet,
Leslie
Black.

150. Remarkable degree of cold produced by the evaporation of volatile fluids.
In the open air,
In vacuo.

151. The boiling point
Of water
Spirits of wine } in vacuo.
Ether

152. Congelation of water by the evaporation of ether.

153. The sensible heat of the air is diminished by rarefying it.

154. It is increased by condensing it.

155. The temperature of chemical mixtures,
where elastic fluids escape } during the process of combination.
Do not escape —

156. Another explanation of the melting of bodies and of the formation of vapour.

157. Methods of determining these capacities in several substances,
In Mercury,
Water,
Ice,
Iron
Sand
Factitious air,
&c.

159. Dr Crawford's theory.
Alteration of the capacities of bodies for containing heat.
By the addition } of phlogiston.
The separation
Metals,
Their calces,
&c.

160. Determination of the degree of the thermometer upon Fahrenheit's Scale, where the heat is nothing.

161. Animal heat.
Quantity of absolute heat in
Air inspired,
expired

162. Absolute heat
Of arterial blood,
Venous blood.

163. The temperature of animals that breathe.
— that do not breathe.

164. Power of animals to produce cold.
165. Morgan's objections to Dr Crawford's theory.
166. Variation of the capacity for containing heat in the same body at different temperatures.
167. Ignition.
168. Inflammation.
Nature of inflammable bodies.
Their residuum after combustion.
169. Further observations
Concerning the existence of phlogiston,
the Phlogistication of the air.
170. The facts adduced in proof of the
Doctrine of latent heat and the different capacities of bodies for containing heat, explained according to the opinion of an Intestine Motion and Vibration of the smallest particles of matter.
171. Probability of the truth of this theory.
172. From facts,
173. From reasoning.

Light. 6

174. History of the discoveries of the ancients on this subject.
175. Nature of Light.
Its velocity,
&c.
176. Light transmitted through small apertures.
Its density at different distances.
177. Rays of light.
Reflection } of them.
Refraction }
178. Laws of reflection,
of refraction.
179. Inclination of the rays when they cannot pass out of a denser into a rarer medium.
180. Observations concerning the causes
Of reflection,
Refraction.

181. Reflection of rays
From plane surfaces.
Curved surfaces.

182. Refraction of rays.
Through mediums terminated by
parallel surfaces,
Through lenses of various kinds,
Through prisms
Of glass
water.

183. Images.
Their position
And magnitude.

184. Of the eye.

185. Optical appearances according to
the different situation
Of objects and
Of the eye.

186. Construction and uses
of Telescopes
Microscopes } of various kinds.
The magic lanthorn.

187.

187. The solar image
Through various apertures,
Through lenses,
Through prisms.

188. Separation of light into rays of
different colours.
Experiments of Newton.

189. Mixture of artificial colours.

190. Important experiments by Mr.
Dollond.
Colour without refraction.
Refraction without colour.
Improvement of Telescopes.

191. Of the rainbow.

192. Colours of natural bodies.
Theory of Newton.
Experiments which illustrate the
theory.

193. Concentration of solar light
By large mirrors,
Lenses.

194. Recent application of these instru-
ments to some important purposes
in Chemistry.

195. Connection between
Heat and
Light.
Experiments of
Dr. Hook and
Others.

196. Light considered
As a component part of bodies.
As their phlogiston.

197. Morgan's observations on the light
of bodies in a state of combustion.
The colour of the electric spark.

198. Remarkable effects of light,
On vegetation
On the colours of bodies.

199. Observation on the reflection of light
and heat from
Metallic } mirrors.
Glass }

200. Separation of light and heat

201. Coldness of the higher regions of the
the atmosphere.