

Grinding Chilled Iron Carriage Wheels.....	190
Drills and Drilling.....	190
Batman's Eclipse Lathe.....	193
Testing Iron and Steel.....	193
Lathrop's Ratchet Drill.....	196
Sheet Iron Shutters.....	197
How to Turn a Bale.....	209
Benefits of Good Tools.....	223
Improved Glazier's Tool.....	229
Ratchet Drills.....	229
Smelting Iron with Oil.....	230
Make Your Own Tools.....	243
Improved Elevator.....	248
Tube Wells for Large Supplies of Water.....	248
The Buckeye Hand Drill Press (Il- lustrated).....	249
Alloys of Iron.....	266
Use of Worn Out Files.....	266
The Blake Crusher.....	267
Cherry Heat Welding Compound.....	267
Gas Soldering Iron (Illustrated).....	268
Ship Building in Nova Scotia.....	268
Improvement in Horse Shoes (Illustrated)	264
Scoord's Ratchet Brace.....	289
Edge Moulding Machine.....	293
Grass Cutting Machine.....	296
Adkin's Sash Fastener.....	296
The de Bay Propeller.....	313
Cushing's Elevator.....	328
Cleanliness and Order in the Shop.....	325
The Steel Scale, New Use of.....	347
Pneumatic Clasps.....	352
Nothing Remains at Rest.....	393
The Electric Railway.....	363
Screw Cutting Machinery.....	363
Door Knob Attachments (Illustrated).....	376
Band Re-Saw, for lumber (Illustrated).....	381
Beard's Wrench.....	381
Ludlow's Brick Cases.....	388
Improved Car Coupling.....	392
The Stoner Automatic Scale.....	392
Nickums Improved Railway Switch.....	396
Improved Safety Nut.....	397
The Vice.....	400
Hand Power Band Saw.....	401
Skilled and Unskilled Labour.....	403

MISCELLANEOUS.

Accidents to Machine Hands.....	23
Dangers of Engine Driving.....	30
The Indicator (Illustrated).....	31
Brain Growth.....	37
Preparing Wheat for Grinding.....	38
Prospects of Trade.....	39
Horological Bureau, at New Haven, Conn.....	39
New Compound for Casts and Moulds.....	52
Misnamed Things.....	58
Glass Working.....	58
Elevators, their Danger.....	60
Chinese Porcelain Vase (Illustrated).....	72
Pearl Inlaying on Iron.....	83
Miscellaneous Items.....94, 107, 143, 198, 207, 211, 231, 270, 302, 378, 382	382
New Weighted Horse Shoe (Illustrated)	96
Improved Treatment of Cotton Fibre.....	119
Cements.....	123
Tempering Steel Springs.....	124
How Long We are to Live.....	127
The Feet in Winter.....	127
Address to the Mechanics of the Dominion.....	131
A Prevalent Popular Error.....	139
The Victoria Regia Surpassed.....	148
Frozen Meat from the Antipodes.....	148
Timber Culture.....	150
Floating Island.....	150
About Leap Year.....	151
Novel Mode of Preserving Reason.....	151

New Uses for old Tin Cans (Illustrated)	158
Mechanics' Institutes.....	181, 341
Animals or Plants.....	186
The Origin of Bog Iron Ore.....	187
Pyramids, Destruction of.....	187
A Novel Sledding Pen.....	192
Artificial Fuel.....	192
Paraffine.....	202
Blue Process of Copying.....	210
Weighing an Elephant.....	210
Prussian Patent Office, The.....	230
Mechanics' Institutes.....	245, 233, 234
Fifteen Puzzle, The.....	234
Strongest Man in the World, The.....	235
Boy and Tobacco.....	235
Bathing.....	239
French Bread.....	239
Cements for the Shop.....	249
Ancient American Grants.....	252
Skin Grafting from the Dead.....	253
Remarkable Surgical Operation.....	258
Force of Tree Growth (Illustrated).....	269
Caution in Eating.....	271
Constipation.....	271
One Hundred Years Under Water.....	271
A Monster Clip.....	271
How to Use Glue.....	274
Using Cements.....	275
Copper Mining in Newfoundland.....	258
Coal Dust Explosions.....	267
Employer, Hints to.....	277
Inventors' Follies.....	277
Beet Root Industry in France (Illustrated)	279
Eye Sight.....	287
Strikes, When Illegal.....	237
The Gwynfe Hammock Tent.....	289
Resin and Turpentine, Manufacture of Self Dumping Scows.....	302 305
Railway Accidents in England in 1879.....	306
The Canadian Exhibition of 1880.....	309
Peril of a Miner.....	311
Cements.....	315
How the Pyramids were Built.....	320
Starvation, Effect on the Blood.....	286, 287
Employers Liability Act.....	327
Tin Discoveries in Maine.....	359
Transfusion of Blood.....	363
Meat Bread.....	368
Protection of Forests.....	368
Skin Grafting from Sheep.....	368
Employer and Employed.....	374
Horse Shoeing.....	390
Cultivation of Vaccine Virus.....	395
Tasteless Cod Liver Oil.....	402
Utilization of Saw Dust.....	402

SANITARY AND PLUMBING.

A Principle Wanted.....	2
Sanitary Reform.....	22
Sanitary Items.....	55, 74
Sanitary Science Applied to Work- shops.....	75
Common Defects in House Drains (Illustrated).....	75
Treatment of Diphtheria.....	95
Bare Brick Walls, their Influence on Health.....	90
Noxious Vapours and Smoke.....	106
Drainage for Health.....	108
Microscopic Discovery of Malarial Polson.....	122
Sewer Gas and Disease.....	125
House Drainage and Sewerage.....	134
Materials and Methods of Disinfection.....	194
New Smoke Preventor and Ventila- tor (Illustrated).....	204
Danehell's Filter (Illustrated).....	204
A New Ventilator (Illustrated).....	205
The Ventilation of Sewers.....	206
Public Apathy about Hygiene.....	209
Hints on the Use of Disinfectants.....	215

Plumbing Regulations in Montreal (Illustrated).....	223
The "Victor" Filter (Illustrated).....	229
Ventilated Hopper Closet (Illustrated).....	232
Efficiency of Water Traps.....	250
Sanitation.....	252
The Princetown Disaster (Illustrated).....	251
A New Water closet.....	256
House Drainage.....	282
The New German Preserving Fluid.....	286
Bacteria in the Air.....	290
Traps in House Drains.....	294
Impure Drinking Water.....	324
Very Wonderful Plumbing Work.....	338
Portable Bath Tub.....	339
Traps on Main Drains.....	350
Improved Sewer Gullies.....	393

SCIENTIFIC.

Scientific Food for Thought.....	3
Study of Physical Science.....	6
Reynier Electric Lamp.....	13
Prehistoric Man in Moravia.....	34
A New People.....	35
Petroleum as Fuel.....	36
Practical use of Science.....	36
Gelatine Negatives.....	39
Electricity as a Motive Power.....	58
The Moon's Shape.....	78
Singular Lightning Stroke.....	78
Action of Ammonia on Brass.....	78
The Problem of Solar Radiation.....	79
Dentophone, The.....	86
Prof. Tyndall's Latest Word.....	102
Antiquity of our Earth.....	102
Marvels of Man.....	102
Polarisation of Light, Recent Re- searches in.....	103
Incombustible Wood.....	199
Disease Germs.....	104
Deep Sea Soundings.....	106
The Great Iowa Meteorite.....	108
The Vastness of Time.....	148
Popular Confidence in Scientific Dis- covery.....	151
Instinct, the Result of Inherited Ac- tions.....	154
Transmitting Colors by Telegraph.....	154
The New Meteorite.....	155
Hydrogen as a Conductor of Heat.....	155
Sun, Remarkable Explosion in.....	185
Sun, Nature and Magnitude of.....	188
Why the Sky Appears Blue.....	187
The Andri-Brougham Electric Lamp.....	200
Prof. Huxley's Introductory.....	218
The Coming Comet.....	219
Lesson in the Use of the Blow Pipe.....	232
A Fossil Sea Serpent.....	235
Ant Battles.....	235
Rotary Steam Engines.....	236
Progress in Science and the Arts.....	238
The Electric Light in Factories.....	238
Popular Astronomical Error.....	239
The Fossil Man.....	243
Scientific Items.....	236, 154, 106
Why the Needle Points to the North.....	263
Thermometric Bureau, The.....	290
Progress in Science and the Arts.....	298
Astronomical Observations at great Elevations.....	306
Topophone.....	304, 359
Changes in the Earth's Figure.....	315, 319
Nevada's, Natural Phenomena.....	316
Basin's Submarine Observatory.....	316
Terrestrial Magnetism.....	319
Artificial Diamonds.....	322
Disastrous Hurricanes.....	322
Color Blindness.....	323
Progress in Science and the Arts.....	366
Practical Value of Science.....	374
Method of Precipitating Rain Falls.....	384
The (Bath) Recent Comet.....	394
Currents of the Pacific.....	395
The Hercules Beetle (Illustrated).....	403