

| | |
|-------------------------------------|-----|
| How to Dry Plants..... | 254 |
| Hydro-carbons in Dynamite | 234 |
| Hints on Pastry Making | 253 |
| Household Parlour Conveniences * .. | 273 |
| How to make Raw Meat Palatable.. | 259 |
| High Pressure Valve * | 302 |
| Horticultural Buildings * | 361 |
| How Pebble Jewelry is Made * | 371 |
| Hints about Grinding..... | 366 |
| Homeless * | 308 |

I.

| | |
|--|-----|
| Interior of Royal Aquarium * | 4 |
| Improved Emery Grinding Machine* .. | 32 |
| India | 31 |
| International Exhibition, 1876..... | 453 |
| Iron clad Vessels..... | 50 |
| Incombustible Wood..... | 79 |
| Interesting Statistic | 126 |
| Improved Signal Locking Apparatus * .. | 144 |
| Improvement in the Manufacturing of Grain Cradle Fingers * | 150 |
| Improved Animal Trap * | 136 |
| Iron Front to Buildings | 148 |
| Improved Adjustable Almanac * | 150 |
| Improved Controlling Nozzle * | 184 |
| Improved Clay-grinding Mill * | 155 |
| Improvement of Shafts and Pulleys * .. | 219 |
| Improved Keg and Barrel Machinery * .. | 199 |
| Improvement in Fastening Pulleys | 219 |
| Incidents in the Lives of Naval Officers | 278 |
| Improved Chimney Cowl..... | 263 |
| Is the Earth Hollow?..... | 270 |
| Iron Wed Covering * | 340 |
| Industrial Democracy..... | 295 |
| Improved Tramway Cars * | 304 |
| Improved Lubricating Compound... .. | 310 |

K.

| | |
|---|-----|
| Japanese Carpenters' Tools * | 329 |
| Japanese Toilet Mirror at Centennial * .. | 341 |

L.

| | |
|---|-----|
| Low's Hand and Slide Lathe * | 17 |
| Lamp for Girard Avenue Bridge, Philadelphia * .. | 12 |
| Lectures to Little Folk 15, 77, 12, 123, 154, 209 | 218 |
| London Street Architecture * | 48 |
| Lieut-Cameron at the London Insurrection | 263 |
| Locomotives for the First Chinese Railway * | 324 |
| Lathes Exhibited at Philadelphia Exhibition * .. | 30 |

M.

| | |
|---|-------|
| Method for Extinguishing Fires at Sea * | 30 |
| Mechanical Drawing * | 25 64 |
| Mechanical Receipts | 51 |
| Monieriff Gun Carriages * | 76 |
| Morgan's Tuxer for Smith's Hearth * .. | 93 |
| Mysterious Fires | 86 |
| Multiple Drilling Machine * | 119 |
| Mouchot's Solar Engine * | 128 |
| Mammoth Engineering Project..... | 107 |
| Muchlge for Minerals..... | 122 |
| Miller's Improved Adjustable Almanac * .. | 157 |
| Mechanists' Receipts..... | 147 |
| Moisture in Walls and Buildings..... | 178 |
| Metal Casts of Natural Objects..... | 182 |
| Modern American Homesteads * | 206 |
| Mangling Belts..... | 203 |
| Muscle, Hold the Fort..... | 256 |
| " The Set of Sun..... | 288 |
| " A Polka..... | 332 |
| " Here 'twas we Met..... | 384 |
| " Cells, a Grand Rondo..... | 304 |

| | |
|---|-----|
| Monument of Englebert III. and John of Nassau * | 206 |
| Monster Machines..... | 335 |
| Mining Dial * | 304 |
| Management of Pet Dogs..... | 307 |
| Machinery Exhibited at Centennial..... | 295 |

N.

| | |
|------------------------------------|-----|
| Nalder's Thrashing Machine * | 141 |
| New English Patent Bill..... | 162 |
| New System of Illuminating * | 215 |
| New System of Plastering..... | 214 |
| Notes and Memoranda..... | 385 |
| Notes on Current Topics..... | 362 |
| Natural History * | 313 |

O.

| | |
|---|-----|
| Our New Volume..... | 10 |
| Overhead Apparatus for Lathes * 85 .. | 151 |
| One Hundred and Sixty-Ton Hydraulic Crane * | 148 |
| Ornamental Designs for Drawing Rooms * .. | 252 |
| Our Public Schools..... | 257 |
| Ornamental Leather Work * | 389 |

P.

| | |
|--|-----|
| Practical Hints to Painters..... | 271 |
| Profesional Practice in America... .. | 271 |
| Pin Factories | 326 |
| Pinker's Patent Hydraulic Boat Lowering Apparatus..... | 358 |
| Patent Horse-rake..... | 358 |
| Patent Office Publications..... | 367 |
| Polishing Wood Carving..... | 382 |
| Portable Engine, Philadelphia Exhibition * .. | 293 |
| Pride of Ignorance..... | 289 |

Q.

| | |
|-----------------------------|----|
| Queries and Answers..... | 54 |
| Quick Railroad Running..... | 47 |

R.

| | |
|--|-----|
| Rotary Printing Press * | 56 |
| Riggs' Patent Expansion Valve * | 57 |
| Rail-rolling Extraordinary..... | 51 |
| Rozin-oil Soap..... | 79 |
| Receipts..... | 127 |
| Royal Albert Bridge..... | 97 |
| Responsibilities and Duties of Architects..... | 129 |
| Rope Transmission in Mills..... | 119 |
| Rubber Pulleys | 210 |
| Rats | 222 |
| Rust Cement for Water and Steam Pipes..... | 8 |
| Receipts for Sick People..... | 313 |
| Returning Steam to the Boiler..... | 294 |

S.

| | |
|---|--------------|
| St. Gothards' Tunnel..... | 6 |
| Sharpening Edged Tools..... | 17 |
| Stereotype for Newspapers..... | 46 |
| Smoke Washing Apparatus for Chimneys..... | 51 |
| Sanitary Architecture and its Applications..... | 65, 115, 135 |
| Screw Propellers * | 67 |
| Six Horse Power Traction Engine * .. | 81 |
| Sterne's Railway Carriage Coupling .. | 83 |
| Strength of Iron Rail-joints..... | 78 |
| Stored Air as a means of Propulsion .. | 107 |
| Sterne's Universal Grinder * | 156 |
| St. Martin's Church..... | 135 |
| Street Architecture, Sweden..... | 163 |
| Steam Boiler Explosions in 1875..... | 166 |
| Submarine Engineering Apparatus * .. | 206 |
| Sinking of a Hotel into the Earth * .. | 270 |
| Scrap..... | 347 |
| Steam Reaping Machines..... | 350 |
| Stow and Burnham's Flexible Drill..... | 367 |
| Syres Reliance Pump..... | 304 |
| Statistics of Labour..... | 303 |

T.

| | |
|--------------------------------------|----|
| The Hercules Screw Propeller * | 14 |
| The 81-ton Gun..... | 10 |

| | |
|---|-----|
| Treasures..... | 31 |
| Tape Worm..... | 15 |
| The Duties of Architects..... | 10 |
| The Circular Rip-saw..... | 38 |
| The Castalia..... | 42 |
| Theory of the Nebulae..... | 50 |
| The Jumna Mu-jid..... | 36 |
| Town Hall, Victoria, B. C. * | 54 |
| To Coat small Nails with Tin..... | 50 |
| The largest Steam Hammer..... | 50 |
| To File on a Square Corner..... | 43 |
| The Phantasmagoscope * | 77 |
| The United Mill, Oldham, England * .. | 72 |
| The Royal Albert Bridge * | 97 |
| Trestle Bridge over Otter-Creek at Tilt-onburg | 116 |
| The Monument of Gaston de Foix * .. | 114 |
| The Paragon Mower * | 126 |
| Touling of Photo-transparences on Glass..... | 3 |
| The Testing and Strength of Materials..... | 142 |
| The Value of Small Savings..... | 160 |
| The Hexagon Column Furnace * | 80 |
| The City of Fires..... | 106 |
| The Flood at Ottawa, 1876 * | 106 |
| The Universal Tool Grinder * | 210 |
| The Great Dolwelym Cromlech * | 125 |
| Trade Mark Decision..... | 203 |
| The Largest Photographs in the World..... | 214 |
| The Family Friend..... | 241 |
| The Chironectform, or Angling Fish .. | 241 |
| The Darning Machine * | 253 |
| The National Gallery, Berlin * | 249 |
| The Centennial Exhibition Machinery * .. | 226 |
| Trimming and Punching Roofing Slatcs | 239 |
| The Family Friend..... | 241 |
| Tales for Boys..... | 243 |
| The Angling Fish..... | 248 |
| The Allen Governor..... | 265 |
| Tar Walks..... | 259 |
| Taste in Painting Machinery..... | 269 |
| To Blacken Brass..... | 270 |
| To Prevent the Skin from Discolouring after a Blow..... | 274 |
| The Poultry Yard * | 231 |
| Thorne and De Haven's Portable Mandril..... | 333 |
| The Pumpsometer * | 311 |
| The Crowned Grouse Pigeon * | 343 |
| The Strawberry Girl * | 343 |
| The Liverpool Gigantum (Puff-bull) * .. | 348 |
| The Traveller's Tree * | 345 |
| Torpedoes..... | 331 |
| The Dove Cot..... | 318 |
| The Strength of Hand-saw Blades... .. | 331 |
| The Jester * | 381 |
| The Public Works of Canada..... | 353 |
| The 100-Ton Gun..... | 382 |

U.

| | |
|-----------------------------------|-----|
| Useful Receipts for the Shop..... | 143 |
| Universal Emery Grinder * | 156 |
| Utilization of Slag..... | 266 |

V.

| | |
|-----------------------------------|-----|
| Vertical Engine * | 78 |
| Vertical Tube Ventilation * | 343 |

W.

| | |
|---|----------|
| Whiteside's Patent Spring Beds * ... | 96 |
| Why Portraits do not look like the sifter | 47 |
| Whale Artillery..... | 90 |
| Walls and Steven's Threshing Machine * .. | 87 |
| Wiswell's Construction and Ballast Car * .. | 116 |
| Women's Pavilion, Philadelphia * | 120 |
| Wood-carving * | 122, 188 |
| Walking * | 229 |
| Wood-working Machinery * | 243 |
| Wooden Pavements made successful in London..... | 270 |
| Weimer's Hot Blast Stove * | 336 |