

INDEX OF INVENTIONS.

Acids, carrier for, F. H. Kalbfleisch.....	5185
Awls, crimping tools, &c., machine for rolling, H. A. Williams.....	5227
Axle boxes, art of producing wrought metal carriage, W. J. Parmlee.....	5190
Barrel or circular box, F. B. White.....	5172
Bart, portable, H. Calvin.....	5210
Bolts, dies for heading and squaring, J. B. Clark.....	5177
Boot and shoe wax thread sewing mechanism, G. W. Copeland.....	5216
Boots and shoes, G. W. Copeland.....	5238
" forming seams of, L. E. De Waru.....	5220
Box, C. C. Holman.....	5237
Bristle and fibre combing machine, G. Boeckh.....	5153
Brush, cloth and mop holder, C. B. Clark.....	5226
Buggy, top portable, P. J. Ayres.....	5251
Car axle lubricator, J. D. Imboden.....	5199
" trucks, G. W. Cook and E. H. Horsey.....	5203
Catamental sack, G. Mescom.....	5270
Cement pipes, wells and drains, J. Regan.....	5176
Children's carriages, H. C. Moody.....	5208
Churn power, J. Guest, jr.....	5157
Cider mill, H. Sells.....	5255
Coal ash sifter, T. Kane.....	5265
Coupling joint covering and tumbling rod, J. Harriman.....	5277
Crane, hydraulic, I. Hahn.....	5263
Crimping tools, awls, &c., machine for rolling, H. A. Williams.....	5227
Culinary apparatus, G. H. Bliss.....	5183
" boiler, I. C. Mayo.....	5232
Cylindrical objects, machine for holding, R. C. Gwathmey.....	5239
Drain, cement pipes and wells, J. Regan.....	5176
Drive chain, W. D. Ewart.....	5163
Electric battery, gravity, L. P. Brunelle and S. Mohr.....	5244
Fanning mill, W. W. and J. Lambie.....	5204
" " J. W. Johnson, C. M. Manville, S. W. Al- " " vard, E. E. Buffington, L. B. Rodgers, E. " " R. Myer, I. Vosbourg and G. F. Nichols.....	5182
Fatty matter from cereals, &c., A. Mambré.....	5168
Feather renovating machine, G. Kelly.....	5181
Fibre and bristle combing machine, C. Boeckh.....	5153
File and tool handle, W. R. Fonerty.....	5180
Fire escape, M. Duraud.....	5202
" extinguisher apparatus, D. Steele.....	5261
" kinder, J. Commins.....	5169
Flour, manufacturing middlings, R. S. Downton and J. A. Miller.....	5225
Forks and shovels, lifting attachment for, F. M. Gardner.....	5161
Framing and moulds to make wells, cement pipes, &c., J. Regan.....	5176
Freezing and refrigerating machine, J. Shirreff.....	5258
Gas carburetter, W. H. Reed.....	5231
" air blower for, W. H. Reed.....	5213
" illuminating, J. H. Sheldon.....	5154
" reports, process of cleansing, H. S. Wo.....	5219
Gelatine, extracting from salted fish skins, J. S. Rodgers.....	5259
Guitar head, H. W. White.....	5165
Harvester, H. A. Howe.....	5223
Harrow and land roller, combined, H. J. Yeargin and W. Keith.....	5192
Heating apparatus, steam, I. C. Richardson.....	5171
Hoop machine, A. F. Skidmore.....	5170
Horse, apparatus to prevent from jumping, G. H. Thomp- son, A. A. Mathews and M. O. Mathews.....	5155
" hay rake, W. F. Neal.....	5274
" power, F. N. and A. Bellefeuille.....	5266
Hydraulic elevator, T. Steblins.....	5189
Iron, steel, &c., manufacture, apparatus and compounds for production of, S. R. Smith and J. Simpson.....	5218
Jack, carriage painters, A. G. Rykert.....	5211
" hydraulic, E. Beddle.....	5171
Knitting loom, M. W. Westcott and C. L. Spencer.....	5215
Ladder, extension, R. Gilchrist.....	5158
Lamp chimney cleaner, S. S. Rickina.....	5205
Land roller, and harrow, combined, H. J. Yeargin and W. Keith.....	5192
Latch, locking, A. Worster.....	5273
Leather crimping machine, C. B. Long.....	5162
Lock hinge, C. B. Clark.....	5235
Lubricator, J. W. Reed.....	5213
Match box (paper) machine, L. H. Hamilton.....	5267
Measures, cloth, A. H. B. Blanchard.....	5201
Middlings, purifier, R. L. Downton and J. A. Miller.....	5224
Milk cooler, N. D. Martin and G. W. Seaver.....	5200
" " D. Gurnsey.....	5203
" and meat safe shelf, J. Nickerson.....	5222

Mill stones, producing cold air round, G. Walling.....	5186
Mitting machine, S. Williams and G. H. Bryant.....	5214
Moulds and framings to make wells, &c., J. Regan.....	5176
Mowing and reaping machine, R. D. Robbins.....	5251
Nut, lock, L. C. Holland	5215
Oil tank, S. Webster.....	5195
Peat machine, A. E. Barthel and W. Smith.....	5271
Potato digger, H. Bolton.....	5178
Powder blasting, H. Courtelle.....	5218
Pump, ships, J. Brokenshire.....	5191
Quilting frame, A. Cornell.....	5275
Railway carriage draw bars and springs, R. D. Chatterton.....	5241
“ car coupling, L. Dill	5250
“ coupling, R. D. Chatterton.....	5228
“ car ventilator, E. E. Hargreaves.....	5252
“ rail support, S. L. Porter and D. Peck.....	5256
“ track lifting machine, C. Aldred.....	5247
Razor, F. Erdmanski	5240
Sand papering machine, J. Howe.....	5198
Saw mill dog, A. Cunningham.....	5184
“ roller hoistin apparatus for, J. “.....	5175
Seeding machine, J. S. Bogle	5217
Seed sower, J. W. Mann.....	5160
Sewing machine, G. Kallmeyer and E. Schmidt	5197
“ “ R. H. St. John	5216
Shaft coupling for cutters, P. Wood.....	5262
Shovel, coal, J. Edgar.....	5159
“ and forks, lifting attachment for, F. M. Gardner	5161
Skirt protector, H. M. Macdonald	5229
Snow Plough, J. D. Mann.....	5156
“ “ E. G. Graves.....	5233
Spark arrester, D. Hawkesworth.....	5260
Spinning machine, C. E. Mattison and G. W. Shaw.....	5268
Spirits and Sugar from cereals, &c., A. Mambré.....	5168
Steam boiler, J. H. Killey and W. Muirhead.....	5242
“ “ feeding apparatus of, N. Yagn.....	5257
“ engine, compound, F. Alden	5230
“ “ oscillating, G. B. Thurber.....	5276
Steel, iron, &c., manufacture, apparatus and compounds for producing, S. R. Smith and J. Simpson.....	5248
Stove, heating, A. Bettes.....	5264
“ pipe stones, machine for making, H. Wandby.....	5173
Straw cutter, D. Maxwell	5234
Street pavement, J. McBean.....	5194
Stump extractor, B. W. Thurman.....	5236
Sugar and spirits from cereals, &c., A. Mambré.....	5168
Threshing machine, G. S. Thompson.....	5221
“ “ gratu, F. X. and A. Bellefeuille.....	5249
Tag-plate for vehicle shafts, C. J. Riply.....	5188
Tumbling roll and coupling joint covering, J. Harriman.....	5277
Turbine water wheel, G. H. Jones.....	5212
Umbrella and parasol case, R. S. Galbraith and W. Snow.....	5190
Vapour burner, A. H. Watkins.....	5207
Vehicles, wheel fenders for, H. F. Eberts.....	5200
“ side spring, C. L. Fisher	5272
Violins, chin rest for, H. W. White.....	5166
Wagon axle, E. Balkema and H. Beumer	5269
“ dumping, F. & A. Harvey	5233
Washer, clothes, D. W. Rawson.....	5193
Washing machine, J. G. Martin.....	5187
Wells, cement pipes and drains, J. Regan.....	5176
Whistle tree, J. A. Mackinnon.....	5179
Wrench, pipe, L. Glynn.....	5164

INDEX OF PATENTEES.

Alden, Farrelly, compound steam engine	5230
Aldred, Robert, railway track lifting machine.....	5217
Alvord, Stephen W., J. W. Johnson, C. M. Manville, E. E. Burlington, L. B. Rodgers, E. R. Myer, I. Vosburg, C. F. Nichols and C. M. Dauley, fanning mill.....	5182
Ayres, Parley J., portable buggy top.....	5254
Balkema, Edward, and H. Beumer, wagon axle.....	5269
Barthel, Albrecht E., and W. Smith, peat machine.....	5271
Bellefleurille, Francois X., and Achille, grain threshing mill.....	5249
“ “ “ horse power.....	5266
Bettes, Alexander, heating stove.....	5261
Beumer, Henry, and E. Balkema, wagon axle.....	5269
Blidde, Edward, hydraulic jack.....	5174
Blanchard, Armand H. B., cloth measures.....	5201
Bliss, George H., culinary apparatus.....	5183
Brockel, Charles, fibre and bristle combing machine.....	5153
Bogle, James S., seedling machine.....	5217
Bolton, Henry, potato digger.....	5178