

ly assigned to members of a class in recitation; no two students need be given the same work. A large number of carefully arranged problems and some practical applications are given.

A PLAN FOR THE STUDY OF MAN. With reference to Bills to Establish a Laboratory for the Study of the Criminal, Pauper, and Defective Classes. With a Bibliography of Child Study. By Arthur MacDonal. Washington: Government Printing Office. 1902. Pp. 157.

It is difficult to say what Mr. MacDonal has accomplished in this book. He has collected a mass of information which is apparently not applied to any practical purpose. The pamphlet before us outlines the methods which are to be pursued in a laboratory which Mr. MacDonal would like to establish. The only thing for which we have to be thankful in the publication of this book at the government's expense, is a very good bibliography of child study.

CURVILINEAR MOTION. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 14.

MACHINES. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 14.

THE KINDLING POINT. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 14.

A STROKE OF LIGHTNING. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 16.

INERTIA. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 14.

WEIGHT. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. 1902. Pp. 16.

THE MOLECULE. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 13.

ENERGY: A CONSTANT QUANTITY. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. 1901. Pp. 15.

THE AIR. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. 1901. Pp. 15.

A BENT RAY OF LIGHT. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 15.

HOT ICE. A Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 14.

These are excellent little pamphlets describing the principles of physics in a way that is clear and easily understood as well as thoroughly scientific.

THE INDUCTION MOTOR. Its Theory and Design. Set Forth by a Practical Method of Calculation by Henri Boy de la Tour. Translated from the French by C. O. Mailloux, M.A.I.E.E., M.I.E.E. New York: McGraw Publishing Company. 1903. 8vo. Pp. xxvii, 200. Price \$2.50.

To American electricians this should be a welcome book, for it can hardly be denied that the induction motor has found its greatest development in Europe. Mr. de la Tour presents a complete study of the polyphase induction motor, and explains at length all the peculiarities of its operation without resorting to more than elementary mathematics. The reader will find a few new deductions and formulae, such as, for instance, those which enable one to estimate the magnetizing action of wave windings and those for determining the dimensions of the short-circuiting rings for rotors of the squirrel-cage type. Not the least valuable features of the book are the practical examples showing the material effect of the thickness of the air-gap on the value of the magnetic leakage factor.

COSMETICS. A Handbook of the Manufacture, Employment, and Testing of All Cosmetic Materials and Cosmetic Specialties. By Dr. Theodor Koller. Translated from the German by Charles Salter. London: Scott, Greenwood & Co. New York: D. Van Nostrand Company. 1902. Pp. vii, 262. Price \$2.50.

It has been the author's purpose to establish cosmetic technology on a rational basis. Since the cosmetic industry is mainly indebted to the researches of chemists for the advance it has made, it follows, as a matter of course, that the author has drawn upon their work largely for the information he has presented. The author has endeavored to give his reader an accurate knowledge of the materials of which cosmetics are to be made, as well as to point out the best and simplest methods of procedure.

RICERCHE D'AERONAUTICA. Estratto dalla pubblicazione in corso di stampa Il volo meccanico per A. Bertelli.

YUCCAE. By William Trelease, from the Thirteenth Annual Report of the Missouri Botanical Garden. With 99 plates. 8vo. Pp. 133.

SMITHSONIAN PHYSICAL TABLES. Second Revised Edition. Prepared by Thomas Gray. Washington: Published by the Smithsonian Institution. 1903. 8vo. Pp. 301.

GEOLOGICAL AND AGRICULTURAL REPORT ON THE GEOLOGY OF LOUISIANA. Containing Special Papers by Different Authors Based on the Work of Three Field Seasons, 1900, 1901, and 1902. Gilbert D. Harris, Geologist in Charge; Arthur C. Veatch, Asst. Geologist, and Jov. A. A. Pacheco, Asst. Geologist. Made under the direction of the State Experiment Station, William C. Stubbs, Director. 1902. Baton Rouge, La. 8vo. Pp. 288.

INDEX OF INVENTIONS

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June 30, 1903,

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing inventions with patent numbers and names of inventors. Includes categories like Accounts, Acetylene burner, Acid or other gas apparatus, Agricultural implements, Air pipe moisture and rust trap, Alarms, Amusement device, Amusement device, Armature, Ash shovel and sifter, Asymmetric conductor, Atomizer, Auger, Automobile chain boot, Baby jumper, Bags, Baling press, Ball and socket fastener, Basin plug, Bath tub seat, Bearing, Belt, Belt shifter, Belt strap, Bench, Binder knotter protector, Blind opening or closing device, Blind operating device, Boiler covering and making same, Boiler fire box, Boiler furnace, Boiler safety appliance, Boiler superheater, Bolster, Book cover protector, Book, manifold sales, Boots and overshoes, Bottle detector, Bottle filling, corking, and labeling, Bottle filling machine, Bottle, non-refillable, Bottle, siphon, Bottle tin foiling machine, Bottling apparatus, Bottling machine, Bowling alley, Box, Box making machine, Brake apparatus, Brew house apparatus, Brick machine transferring device, Broom and dusting utensil holder, Brush holder, Brush holder, Buckle, Building block, Burner, Burner, Button setting machine, Cabinet, automatic lift and drop, Calculator, Calendaring machine, Callipers and dividers, Camera shutter, Can, Cans for shipment, Canning goods, Cane, magazine torpedo, Car brake, Car brake attachment, Car brake, emergency, Car bumper, Car center sill, Car construction, Car coupling, Car door, Car door, Car draw gear, Car guard rail, Car, railway, Car window antifrosting attachment, Carbon compounds, Carpenter's gage, Carpet stretcher, Carriage, baby, Carriage spring, Carriage top valance, Cart, ash, Cart, double dump, Cement, apparatus for construction of buildings, Cement, composition of painting, Centrifugal machine, Chain book, watch, Chair, Cider press, Cigar box or similar receptacle, Cigar pipe, Cigarette cutting mechanism, Circuit breaker, Cisterns, etc., form for,

Table listing inventions with patent numbers and names of inventors. Includes categories like Clamp, J. Black, Clamp, J. W. Marshall, Clothes line clamp, Clutch, G. A. Edge, Clutch device, Coaster brake, Cock, time controlled gas, Coffin dam, Coin controlled apparatus, Coke conveyor, Coking kiln, Column and beam, composite, Comb, Composite material, Concrete making machine, Concrete structure, Condiment holder, Corn husking machine, Corn husking machine roller, Corn sheller, Corset, Corset, abdominal, Cotton handling machinery, Cotton picker, Crab shell cleaning apparatus, Crate, folding egg, Crayon molding machine, Crib, folding, Cuff holder, Cultivator and harrow, Curtain and shade support, Curtain hanger, Curtain pole bracket, Curtain stretcher lock and hinge, Cutting out press, Damper, fireproof, Decorative device, Dental engine, Dental forceps, Dental medicine receptacle, Dental plugger, Depilatory and making it, Detector, Detector bar, Diaphragm, device for protecting combination, Dimensioning apparatus, Distillers' wash, treating, Door check, liquid, Door lock and alarm device, Door, screen and storm, Draft equalizer, Dredger, W. H. Fulcher, Drier, Schoellhorn & Albrecht, Drum, heating, Dust pan, Dye and making same, Earth breaking apparatus, Eccentric, M. Toppliff, Egg case, Electric controller, Electric generator, automatic regulator for, Electric generators, automatic regulator for, Electric heater, Electric light shade and reflector, Electric machines, maintaining synchronous rotation of dynamo, Electric machines, means for maintaining synchronous rotation of dynamo, Electric meters, compensating friction in, Electric motor, Electric motor controller, Electric motor friction gear, Electric signal, Electric switch, T. O. Chouinard, Electric switch, I. G. Waterman, Electric switch, H. P. Ball, Electric motor, H. Rowntree, Electrical transformers, Electrode, Electrolytes, applying heat to, Electromagnet, Elevator mechanism, Elevator safety device, Engine igniter, Engraving machine, Engraving machine, Excavating mechanism, Exhibit frame for lace draperies, Extension table, Eyeglasses, Eyeglasses, pendent lens, Fan, foot power, Fans, electric motor for ceiling, Fans or other objects, oscillatory support for, Feed water heater, Feed water system, Feeder, calf, Feeding mechanism, Fence machine wire, Fence post, J. G. Wait, Fence post, S. F. Webb, Fence post, cement, A. P. Robertson, Fence, postless wire, M. H. Starling, Fence stay fastener wire, C. Kanavel, Fence wire staple, Fiber cutting machine, File and binder, paper, M. D. Kenyon, Filter, J. F. Wittmann, Filter, oil, B. L. Scott, Fire escape, Fire extinguisher, automatic, Fire extinguishing, Firearm, M. Goss, Firearm ejector, Firearm sight, Firearm, single trigger, Firearm, subcaliber, Fireproof construction, Fireproof floor, Fireproof floor construction, Fish cutting and cleaning apparatus, Float, electrical contact controlling, Flour and lard rubbing machine, Flour expander and cutter, Flushing apparatus, Flushing apparatus, Fly escape, window screen, Folding box, Folding carrier, Foot cleaner or door mat, Formaldehyde generating apparatus, Fruit, pressing, Fuel and making same, Fuel and making same, artificial, Furnace, See Boiler furnace, Furnace, G. T. Wyatt, Furnace controlling apparatus, smoke consuming, H. Kowitzke, Furnace firing machine, Furnaces, apparatus for feeding fine fuel to, Furrow opener attachment, Game apparatus, Game apparatus, Garment cleaner, Garment, nether, C. E. Taylor, Garment supporter, Gas burner, L. F. Knoderer, Gas burner, J. J. Johnston,

Table listing inventions with patent numbers and names of inventors. Includes categories like Gas burner, automatic, Gas burner heating attachment, Gas cut off, automatic, Gas engine, Gas meter, inferential, Gate, G. H. Smith, Gearing, compensating, Germicide generator, Girders or beams, cambering or straightening device, Gold extracting, Gold separator, Golf club, Governing and reversing mechanism, Governor, marine engine, Grain bin, Moulton & Witherspoon, Grain binder breastplate stripping device, Grain cleaner and distributor, Grain drier and cooler, rotary, Johnson, Grain drill, C. A. Hardy, Grain elevator and weigher, Grain separator, J. E. Mitchell, Grain treating apparatus, Grinding machines, steady rest for, Grinding or polishing machinery, Gun, breakdown, C. F. Lefever, Hair clamp, W. J. Koenig, Hammer, automatic, Hammer feeding device, Harrow, A. W. England, Harrow, J. O. Avery, Harvester, grain, G. L. Phelps, Harvesting machine, corn, Harvester machine platform supports, adjusting mechanism for, Hat bodies, machine for forming napped bats for, Hat body felting machine, Hat fastener, Hat forming block, Hay rake cleaner, Heater, Heddle bar, wear protecting means, Hinge, spring, Hog boring device, Hoist apparatus scraper attachment, Hoist controller, electric, Hoisting and conveying apparatus, Hoop, N. K. Bowman, Hose attachment, W. G. McKay, Hose coupling, J. P. Muehlebach, Hose coupling, Wischermann & Kolsch, Ice box or refrigerator, Igniter, electric, Igniter, electric, Mears & Aylward, Igniter generator, L. J. Le Pontois, Igniter generator, electric, Illuminating canopy, Index, W. H. Gilman, Indicator, T. J. McGrath, Induction motor, A. E. Averett, Insect catcher, Insulating system for electric transmission circuits, Insulator, high tension current, Internal combustion engine, Ironing board, Ironing table, Jack, Tuggle & Doering, Jar closure, Journal lubricator, Knitting machine, warp and weft, Knob alarm, door, Ladder, folding, Lamp, electric arc, Lamp, electric arc, Fleming, Lamp for constant potential circuits, electric arc, Lamp, gasoline, J. J. Flint, Lamp, incandescent vapor, Lamp rheostat, arc, Lamps, switch for double filament electric, Lantern frame and blank for making same, Latch, H. Edwards, Lathe, T. Craig, Lathe, S. C. Hill, Lazy tongs construction, Leaf holder for directories, Leather, making patent, Leather snipping machine, Leveling instrument, automatic, Lifting jack, Linotype machine, Liquid level indicator, Liquid purifying apparatus, Liquid separator, centrifugal, Liquid temperature regulator, Lister, S. H. Tinsman, Lock, L. Neiscl, Locomotive sanding device, Log conveyor, Loom, J. C. Brooks, Loom for weaving tufted fabrics, Loom shuttle checking mechanism, Loom take up motion, Loom thread parting mechanism, Lubricator, See Journal lubricator, Lubricator, J. H. Walker, Lunch box, Mash apparatus for decomposing brewers', Massage machine, Massaging instrument, Match safe, Medicine dropper, Metal bars, severing, Metal bending machine, Metal, leaching, Metal working machine, Metallic tie and rail fastener, Metalurgical furnace, Mill, H. C. Groves, Mixing device, L. E. Shinn, Molding basins, pressure apparatus for, Mills, Molding machine, Motor control system, Motors, collapsible vessel for atmospheric, Music leaf turner, Music leaf turner, Muzzle, grazing, Necktie shield, reinforced, Nest, trap, G. & W. Brand, Nut lock, G. J. Callahan, Nut lock, L. Esser, Nut lock, N. Newman, Nut lock, A. Scholer, Nut, locking, A. T. Hughes, Oil burner, fuel, T. E. Flaberty, Oil can, druggist's dispensing, Oil switch, H. P. Ball, Ordnance, gas check pad for breechloading, Ordnance, semi-automatic breechloading, Ore concentrator, Rogers & Hanson, Ores, leaching, Package, E. P. Beatty, Package tie, Jacobson & Trede, Packing stuffing box, Paper bags, the like, holder for piled slips or sheets of, Paper box, folding, Paper box gluing mechanism,

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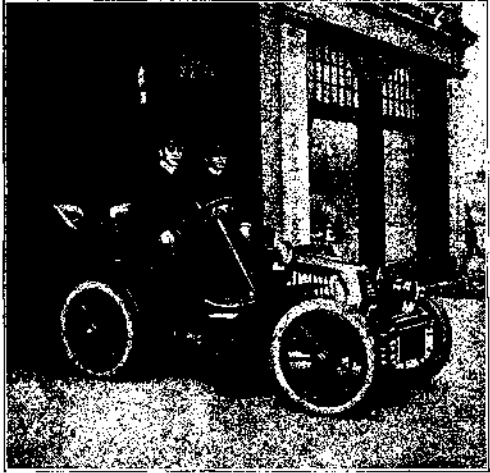
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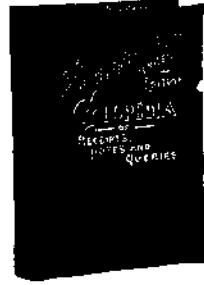
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 Grease and harness dressing, oleaginous compound used as an axle, J. W. Russell 40,696  
 Hair tonics, M. E. Ellis 40,683  
 Hats, certain named, C. W. Dempster & Co. 40,659  
 Lamp chimneys, G. A. Young 40,699  
 Leather and leather and canvas shoes, Hirschman Shoe Co. 40,690  
 Measuring tapes, Keuffel & Esser Co. 40,663  
 Medicine for the cure of nervous diseases, L. R. Williams 40,674  
 Medicine to prevent seasickness, W. Fred. Steinmetz Co. 40,673  
 Medicines for certain named diseases, G. E. Dunton 40,704  
 Metal art novelties, cast, spun, or pressed, National Lead Co. 40,698  
 Milk, malted milk, and food-product milk, Borden's Condensed Milk Co. 40,692  
 Nettings, fish, American Net and Twine Co. 40,661  
 Oats, rolled, Jacob Beck & Son 40,687  
 Oil, codliver, P. Devold 40,681  
 Paint, J. G. Newcomb 40,711, 40,712  
 Paint, certain named, Muralo Co. 40,710  
 Paper and envelopes, writing, Marcus Ward Co. 40,702  
 Papers, certain named, Keuffel & Esser Co. 40,666, 40,667  
 Paper, photographic printing, Eastman Kodak Co. 40,701  
 Papers, carbon, Mittag & Volger 40,703  
 Papers, certain named, Keuffel & Esser Co. 40,666, 40,667  
 Periodicals, Arkell Company 40,662  
 Plows for certain named purposes, A. B. Farquhar & Co. 40,717  
 Powder for horses, cattle, and poultry, condition, R. Stoddard 40,670  
 Remedies for diseases of the skin and scalp, A. F. Richardson 40,679  
 Remedies for kidney diseases in tablet form, Wells & Richardson Co. 40,675  
 Remedy for certain named diseases, I. L. Rosendorf 40,677  
 Remedy for certain named venereal diseases, H. W. Dicker 40,678  
 Remedy for stomachic disturbances, Kalle & Company 40,680  
 Remedy, uric acid, L. S. Nicholson 40,676  
 Seeds, bird, J. W. Whittall & Co. 40,686  
 Smoke, liquid extract of, Hison Remedy Co. 40,684  
 Steel, tool, Braeburn Steel Co. 40,716  
 Surveying instruments, Keuffel & Esser Co. 40,664  
 Syrup for beverages, flavoring, W. H. Beasley 40,708  
 Tea, A. A. Pozzi 40,693  
 Tooth wash, tooth powder, and tooth paste, E. F. Morris 40,685  
 Type casting and composing machines and supplies therefor, Lanston Monotype Machine Co. 40,715  
 Veterinary medicine to be used internally, G. R. Bigler 40,671  
 Wash for tender or sore feet, W. J. Govan 40,682

**LABELS.**

"Adams' Kitchen Spice Bags," for spice bags, J. L. Adams 10,134  
 "Antiques," for antiques, J. Fay 10,135  
 "Belle of Japan," for tea, Firm of W. J. Buttfield 10,148  
 "Blome's 34," for cigars, H. Hokias & Sons 10,153  
 "Dr. Boston's Catarrh Cream," for medicine, L. P. A. Dorion 10,142  
 "Dr. Yaentzer's Cough Sure Remedies Always Cure," for medicine, I. J. Rigelhaupt 10,143  
 "Edison Records Echo All Over the World," for phonograph records, National Phonograph Co. 10,136  
 "Empress Grand," for cigars, Schmidt & Co. 10,154  
 "Face Ease Elnore," for skin food and massage cream, G. Fixon 10,146  
 "Gov. Bob Taylor," for cigars, Fabian & Chases 10,156  
 "J. Gilbert Holland," for cigars, G. B. Henschel Mfg. Co. 10,155  
 "Mann's Vegetable Canker Cure," for medicine, T. Dyer 10,144  
 "Millionaire Punch," for punch, J. C. Maloney 10,151  
 "Morro Castle Habana," for cigarettes, Calixto Lopez & Co. 10,158  
 "Morro Castle Habana," for cigars, cigarettes, and manufactured tobacco, Calixto Lopez & Co. 10,157  
 "Neptune's Spa," for mineral water, White Sulphur Springs Co. 10,150  
 "No-pa-ine," for medicine, M. T. Fulcher 10,140  
 "Pink of Perfection," for water, Bonita Water Co. 10,149  
 "Pratt's White Mountain Spruce Pine Tolu and Honey," for medicine, Royal Queen Remedy Co. 10,141  
 "Sugar of Milk," for infant food, Lehn & Fink 10,145  
 "The Lion Dry Battery," for dry battery cells, Lion Dry Battery Co. 10,139  
 "Union," for wearing apparel, Standard Mfg. Co. 10,133  
 "Universal Zonophone Record," for sound records, Universal Talking Machine Manufacturing Co. 10,137  
 "Universal Zonophone Record," for sound records, Universal Talking Machine Manufacturing Co. 10,138  
 "Victoria," for tea, Acker, Merrill & Condit Co. 10,147  
 "Ye Olde King Cole Rye," for whisky, W. G. Cole 10,152

**PRINTS.**

"A Popular Brand," for tea, Firm of W. J. Buttfield 754  
 "Bon Ami," for tea, Firm of W. J. Buttfield 753  
 "Cream of the Crop," for tea, Firm of W. J. Buttfield 748  
 "Crescent Chop," for tea, Firm of W. J. Buttfield 746  
 "Gold Anchor," for tea, Firm of W. J. Buttfield 751  
 "Golden Tips," for tea, Firm of W. J. Buttfield 749  
 "LaGrange Diuretic Mineral Water," for mineral water, P. L. Schirmann 756  
 "Right Label," for rye whisky, Furth Company 757  
 "Russian," for tea, F. H. Sprague Co. 759  
 "Sterling Merit," for tea, Firm of W. J. Buttfield 752  
 "Sure Winner," for tea, Firm of W. J. Buttfield 750  
 "The Vulcan," for steam shovels, Vulcan Iron Works Co. 758  
 "Triumph," for tea, Firm of W. J. Buttfield 747  
 "Uncle Sam," for tea, Firm of W. J. Buttfield 755

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