

RECENTLY PATENTED INVENTIONS.

Engineering.

Mr. J. M. Isenberg, of Mines, Pa., has patented a gripping device for cars for inclined railways, which is designed to grip the rails the moment the speed of the car exceeds a certain limit. This improvement can be applied to any car body or truck. It consists in a centrifugal governor operated by one of the car axles, and a grip which is set in operation by the governor as the limit of speed is reached.

Mechanical.

Mr. R. Baumann, of St. Louis, Mo., has patented a combination lock and electric alarm, which is adapted for doors, money drawers, etc. This is an ingenious union of a combination lock with a door latch and lock, and an electric device for giving an alarm whenever the door latch or lock is operated. The electric device is detachable, so that when desired the lock can be operated by authorized persons without giving an alarm.

Mr. Wm. J. Wright, of Cooperstown, Pa., has patented a stave trimming, jointing and planing machine, in which the billet is first trimmed in sizes to suit the character of the material, after which the billet is automatically fed into the machine through the various stages necessary to complete the stave, and as it progresses automatically controls and sets the cutting devices so as to cut both the bevel and form the bilge of the stave in exact proportions relative to the different widths of the billet.

Mr. M. A. Libbey, of South Berwick, Me., has patented an improved mechanism for propelling vehicles. This invention includes novel mechanism for applying the power to the axles of the vehicle, and for guiding it.

Mr. R. W. Welch, of Lexington, Neb., has patented a brake for baby carriages, for preventing the movement of the carriage whenever it is desirable that it should remain stationary. The brake consists of a clip attached to the carriage axle and a finger pivoted in the clip and adapted to fold down between the spokes of one of the wheels.

An improvement in shackle clawbars for drawing spikes and analogous uses has been patented by Mr. John H. Morgan, of Lebanon, Ind. The clawbar has a two-armed hook pivoted to it which is adapted to engage the head of a rail. The hook is capable of being swung around the neck of the clawbar, thus making the implement reversible.

Mr. J. L. Strahl, of Gloucester, Ohio, has patented an improved gauge for woodworking machines. This gauge is adapted for grooving, gaining, crosscut sawing, mitering, etc. It consists of a slide mounted in a suitable guide on the saw table or other woodworking machine, and provided with a graduated plate pivoted to the top of the slide.

Mr. J. Kirwan of Asbury Park, New Jersey, has patented an improved leather skiver. This machine is designed for skiving the edges of soles, or thinning welts to an even thickness throughout. This is a hand tool, which is adjusted before use so as to make a shaving of the desired thickness according to the leather to be operated upon. The tool is drawn around the sole, trimming the edge and at the same time thinning it, leaving the middle portion of the sole of the ordinary thickness. The depth of the cut made by the tool is regulated by an adjustable gauge.

A dust collector for grinding machines has been patented by Messrs. E. King & H. Geisenhoner, of Schenectady, N. Y. This device may be adapted to grinding machines of various kinds. It consists of an endless belt running over rollers, and carried in close proximity to the periphery of the emery wheel, the tool being arranged to receive motion from the shaft of the emery wheel, and in its travel is made to pass through a body of water, thus keeping it constantly moist, so that the particles thrown off in the operation of grinding become attached to the endless belt. These particles are washed off in their passage through the water.

Mr. A. B. Bonneville, of Allentown, Pa., has patented an improved conveyor designed for moving material that has been operated upon by a rotating calcining cylinder. The main difficulty heretofore experienced in conveyors for this purpose has been the melting of portions of the conveyor by the intense heat of the products of the furnace. This invention has obviated this difficulty by creating a draught of air through the conveyor tunnel, thereby not only cooling the calcined material, but preventing injury to the conveyor.

Mr. J. T. Turner, Sing Sing, N. Y., has patented an improved cotton gin saw, which consists of a disk, and a band of ribbon of greater width than the disk provided with teeth on opposite edges and secured to the periphery of the disk. By means of this construction the material is economized and the manufacture of the saw is simplified and cheapened.

Electrical.

Mr. F. Milliken, of New York City, has patented a metallic post. This post consists of longitudinal flanged segments connected at their flanged edges with rivets, bolts or studs, which form the ties between the two longitudinal portions, and also serve as rungs when it becomes necessary to climb the post.

An improved rheostat designed for use in connection with medical batteries, but equally well adapted to other purposes within the range of the instrument, has been patented by Mr. J. C. Vetter, of New York City. This invention consists in an extensible and compressible cell provided with insulating sides and a conducting top and bottom, a screw for moving the top toward or from the bottom, and a powdered conductor or semi-conductor contained in the cell and adapted to be compressed so as to increase its conductivity, or released so as to increase its resistance, according to the requirements of the case.

Dr. R. L. Watkins, of New York City, has patented a device by means of which the position of a piece of metal in the body, such for example as a bullet, may be accurately located, and which is also used for testing the electric circuits. It consists mainly of a probe formed of two semi-cylindrical parallel bars connected by insulated rivets, and arranged to form a smooth needle. The two parts of the needle form the terminals of an electric circuit, which is completed through flexible coils and zinc and copper plates applied to the tongue. The zinc and copper plates, together with the fluids of the mouth, form a battery, so that when the circuit is closed on the metal touched by the probe, the effect of the current will be perceived by the tongue.

Agricultural.

Mr. K. Buland, of Linn Grove, Iowa, has patented an improved cotton planter, in which the runners may be readily adjusted vertically, and which may be used without the necessity of employing a marker. Means are provided whereby the depth of the furrow may be regulated at will.

Mr. F. C. Kriz, of Milwaukee, Wis., has patented an improved pitchfork, in which the fork is pivotally attached to the handle and supported in the position of use by a spring, the fork handle being furnished with stops which limit the movement of the fork.

Miscellaneous.

A novel liniment pad provided with detachable fastening tabs for securing it to the body, thus adapting the pad to be removed and recharged with liniment, has been patented by Mr. B. T. Jacobs, of Stapleton, N. Y.

An improved necktie fastener has been patented by Mr. M. N. Bailey, of New York City. It is made of a piece of wire bent into peculiar form and adapted for attachment to any necktie. This fastener is designed to take the place of the ordinary needle fastener commonly applied to scarfs and neckties.

Mr. John L. Easley, of New York City, has patented a lemon squeezer, which is so constructed that all the released juices of the fruit will be conducted to the receiving vessel, while the pulp is prevented from passing into the vessel. The invention consists of a conical lemon receiver provided with a series of ribs of different length, a flanged base having a concave upper face, and an upper surface provided with a series of concentric grooves for receiving the tumbler in connection with which the squeezer is used.

An improvement in the rigging of vessels has been patented by Mr. C. M. Hayden, of South Thomaston, Me. The object of this invention is to prevent the mast hoops from clinging to the mast when the sail is raised, and to cause all of the hoops to sustain an equal strain, thereby avoiding the danger of tearing the sail. The invention consists in connecting all the mast hoops together and with an attachment applied to the gaff bail.

SCIENTIFIC AMERICAN
BUILDING EDITION.

OCTOBER NUMBER.—(No. 60.)

TABLE OF CONTENTS.

1. Elegant plate in colors of an attractive cottage erected at Montclair, N. J., at a cost of \$2,800. Perspective elevation, floor plans, sheet of details, etc. Munn & Co. architects, New York.
2. Plate in colors of a residence recently erected at Hollis, Long Island, N. Y., at a cost of \$5,500 complete. Floor plans, perspective view, sheet of details, etc. Schweitzer & Deimer, New York, architects.
3. Engraving of a Pompeian house, as reproduced at Saratoga Springs, N. Y.
4. A suburban cottage at Chicago, Ill. Floor plans, perspective elevation, etc.
5. Perspective and floor plans of an attractive residence at Yonkers, N. Y. Cost \$10,325.
6. A Long Island cottage erected at a cost of \$6,500. Floor plans and perspective elevation.
7. Suburban residence at Short Hills, N. J. Cost \$10,000 complete. Perspective and floor plans.
8. Perspective and floor plans of an attractive residence at Chicago, Ill. Cost \$5,500.
9. Design for a club house. Perspective and floor plans.
10. A very handsome residence at Portchester, N. Y. Cost \$10,000. Floor plans and perspective elevation.
11. An attractive residence on 176th Street, New York City. Cost \$12,000. Mr. Alfred Taylor, of New York, architect. Perspective and floor plans.
12. Miscellaneous contents: Building in 1889.—The growth of cities.—Treatment of oak.—Examples of plumbing and drainage, illustrations.—Erslev's asphalt.—A new idea.—A new trimmer for pattern and cabinet work, illustrated.—Signor Brentano.—Concrete in France and Italy.—A new plan to supply Chicago with water.—Lignomur.—New gasoline engine.—Architectural Iron Works.—Standard expanding water conductors, eaves troughs, etc., illustrated.—A highly improved heating apparatus, illustrated.—The secret of cheap building.—Geometrical wood carving, illustrated.

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Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication.

References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all, either by letter or in this department, each must take his turn.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(2525) F. G. S., Denver, asks: Will you kindly give a few more particulars in Notes and Queries concerning the tests on Portland cement for anchoring bolts? What you consider the proper relation between bolt and hole, and also the correct way to mix the cement? A. For strong work use Lewis or split head bolts and wedge. Make the hole from 8 to 10 times the diameter of the bolt, in depth, and just large enough to enter the bolt with the wedge just entered in the split end. Fill the hole with Portland cement, quickly mixed with water, nearly as stiff as putty. Drive the bolt home with a mallet. Bolts set in this manner in brick walls, laid in cement, have been broken in a test to pull them out by a pull on the nut. For anchorage or side pull bolts, upset ends driven as above are very strong as used for guys. Make upset 1/4 larger than bolt. For holding down machinery the split bolt only should be used.

(2526) G. W. H. asks: 1. Is coal oil a distillation from coal? A. Possibly and quite probably. 2. Or is coal solidified coal oil. A. No.

(2527) F. W. P. asks: Can you give a treatment for baldness and falling out of the hair, superior to the usual tincture cantharides mixtures? A. We refer you to the SCIENTIFIC AMERICAN, Vol. 62, No. 9, page 135, for a treatment for the hair. Also to our SUPPLEMENT, Nos. 161, 416, 173.

(2528) O. K. A. asks for a receipt for making a nickel or silver plating suitable for iron or steel. A. For silver and nickel plating we refer you to our SUPPLEMENT, No. 310, and many others. Iron or steel must have a light deposit of copper before plating with silver.

(2529) H. E. C. writes: I would like to know if there is or can be put something in kerosene oil lamps that will put the oil in such a condition that it can only be ignited at the wick, or that the lamp cannot explode, either liquid or dry stat. A. There is no such substance. Materials for the purpose have been sold by unprincipled dealers through the country, but no faith should be placed in any of them.

(2530) S. P. R. writes for a receipt for a silica paint and a receipt for a fibrous and waterproof

paint. A. Ground silica has been mixed with white lead, but it is to be regarded as an adulterant. Asbestos mixed with oil and body (white lead) is the best approach to the latter that we can give.

(2531) F. W. L. asks: Can you tell a way to clean a steel engraving that has been wet and badly soiled? A. Soak in weak solution of hypochlorite of soda (Javelle water). Start with it weak and strengthen if necessary.

(2532) W. D. G. asks why wood gas is not more used and for references to any literature, books or papers, where its manufacture and value are treated of. A. Wood gas costs more than coal gas. It needs considerable purification or treatment of some kind, owing to the large proportion of carbonic acid gas. It is treated of in the recent works on the manufacture of gas, but except for special cases is a dead issue.

(2533) J. B. asks if it is practicable in connection with artesian well boring operations to fish up pieces of iron from the bottom of the bore with an electro-magnet. If so please give dimensions, form of magnet, size of wire and winding. Also what form of battery to use? A. An electro-magnet could be used for this purpose. The best form of magnet for the purpose would be an iron tube closed at one end with an iron core extending from the center of the closed end to the open end of the tube, leaving an annular space for the winding. Use No. 14 wire and a plunging bichromate battery with 6x8 inch zinc and carbon plates. 2. Would the magnet work if casing is in the bore and some water? A. Yes. 3. Would a permanent magnet answer as well? A. A permanent magnet might answer for small pieces. 4. Which is the stronger, malleable or common cast iron, and why? A. Malleable iron is much stronger than cast iron, being more of the nature of wrought iron or low steel. 5. Are malleable castings used in heavy machinery, and what weight is the heaviest of such castings you know of? A. Heavy malleable castings have been made. We cannot give weight. 6. Can you tell me what is the price of the phonograph, and could it be sent through the post? A. The phonograph is rented, not sold. It is too heavy for the mail. 7. Are there any books treating blacksmithing or forging? A. "Practical Blacksmithing," by M. T. Richardson. 3 vols. Price by mail complete \$3. 8. What book would you recommend for a new beginner in electricity? A. "Experimental Science." See our advertising columns.

(2534) C. H. R. asks what to put into sirup made from sugar, to prevent crystallization. A. Make your sirup from 35 parts water and 65 parts sugar and keep in a smooth surface vessel. It will not crystallize.

NEW BOOKS AND PUBLICATIONS.

THE AMATEUR PHOTOGRAPHER'S HAND BOOK. A manual of instruction for the amateur. By Arthur Hope. 151 pages, cloth. Price \$1.25. The John Wilkinson Company, publishers, Chicago, Ill.

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INDEX OF INVENTIONS

For which Letters Patent of the
United States were Granted

October 14, 1890.

AND EACH BEARING THAT DATE.

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

Acid proof retaining vessel, O. A. Enholm.....	438,312
Advertising device, G. Quarrie.....	438,179
Air purifying apparatus, B. S. Benson.....	438,404
Amusement apparatus, F. Hall.....	438,316
Animal trap, G. M. Andrews.....	438,131
Annunciator, A. F. Stanley.....	438,300
Ash ejector, steam, J. F. Pankhurst.....	438,173
Baby walker and protector, J. S. Irvine.....	438,478
Bag. See Telescoping bag.	
Baling press, A. A. Gehrt.....	438,540
Ball and socket joint for pipes, T. Fiesher.....	438,148
Bar. See Bracket bar. Car draw bar. Gate bar.	
Barrel stand, Pearson & Foster.....	438,486
Bathbuds, overflow and waste for, C. A. Blessing.....	438,465
Batteries, regulation and control of storage, S. C. C. Currie.....	438,145
Battery. See Galvanic battery.	
Bearing, anti-friction, J. N. Mileham.....	438,442
Bearing, ball, C. A. Lieb.....	438,320
Bed, folding, Anderson & Hansen.....	438,132
Bedstead, M. C. Scherer.....	438,244
Belt stretching machine, A. E. Ellinwood.....	438,286
Bicycle lock, M. Butler.....	438,526
Binder, temporary, M. Higgins.....	438,289
Bit brace, ratchet, J. Zirkelback.....	438,388
Block. See Fuse block. Pulley block.	
Blow pipe regulator, compound, E. W. Presbrey.....	438,488
Boat. See Center board. Ironing board.	
Boiler heads, unwelded lock brace strap for, J. B. Brennan.....	438,522
Boiler incrustation, electric means for preventing, Faunce & Cabell.....	438,579
Bolt. See Flour bolt. T-bolt.	

Black-drying apparatus, G. Engel 438,577
Boat, J. A. Smith 438,588
Boat leg supporter, H. G. Booz 438,406
Boots or shoes, blacking and burnishing, W. W. Crooker 438,470
Box. See Coin-actuated box. Electric wire distribution box. Folding box. Letter box. Slat box. 438,470
Boxes, machine for applying corner stays to, G. L. Jaeger 438,545 to 438,547
Brace. See Bit brace.
Bracket. See Scaffold bracket.
Bracket bar, extension, O. Schlueter 438,190
Bracket or shelf, B. B. Wright 438,280
Brake. See Air brake. Railway brake.
Brake, C. C. Reynolds et al 438,491
Brake beam, J. W. Baker 438,462
Brewing, apparatus for, W. J. Seib 438,527
Brick kiln, continuous, T. East 438,521
Brick kiln, B. C. Wickers 438,335
Bridge, iron, W. C. Haag 438,411
Brush, scrubbing, Ziv & Davis 438,218
Buckle, W. N. Rodgers 438,242
Burner. See Hydrocarbon burner. Petroleum burner. Vapor burner.
Burr, cylinders, device for straightening the teeth of, C. A. Goss 438,413
Butter jar, P. F. Lewis 438,439
Butter package, G. F. Smith 438,195
Button, J. H. Wells 438,428
Cable grips, automatic throw-off for, T. W. C. Cameron 438,449
Camera. See Photographic camera.
Can. See Oil can.
Car brake, D. Cronin 438,433
Car brake, M. Madden 438,481
Car coupling, E. A. Gallup 438,472
Car coupling, F. G. Beebe 438,151
Car coupling, A. C. McCord 438,275
Car coupling, E. F. O'Haver 438,143
Car coupling, F. P. Onzon 438,484
Car coupling, J. Ronk 438,238
Car covering, freight, W. W. Green 438,381
Car door guard, W. W. Conger 438,433
Car draw bar, C. A. Schrover 438,486
Car, electric motor, J. K. Shawhan 438,342
Car gearing, motor, O. C. Smith 438,197
Car replacer, J. McGary 438,568
Car sanding device, W. F. McCready 438,583
Car spring, W. W. 438,453
Cars, connection for the steam heating pipes of railway, P. McNany 438,351
Carbon filaments, manufacture of, T. A. Edison 438,299
Carbons, gauge for testing fibers for incandescent lamp, T. A. Edison 438,300
Card, J. F. Fox 438,149
Card repeating machine, Jacquard, W. P. Uhlinger 438,508
Carpet stretcher, J. L. Kingston 438,437
Carriage top support, child's, Jeteries & Grant 438,228
Carrier. See Truss carrier.
Cart, road, R. C. 438,345
Cart, road, R. D. Scott 438,498
Cartridge cases, utilizing electricity in the formation of metallic, M. W. Dewey 438,409
Cartridge shells, machine for boring, C. Raube 438,241
Case. See Eyclass case.
Caster, J. Thines 438,506
Caster, furniture, O. Pederson 438,276
Casting apparatus, H. H. Lloyd 438,553
Casting sash weights, device for, R. W. Barrett 438,137
Catalaminal sack, G. Fuller 438,537
Casting, machine for, W. P. Hopkins 438,323
Cells or retaining vessels, composition for, O. A. Enholm 438,313
Cells or retaining vessels, composition of matter for, O. A. Enholm 438,311
Centerboard for boats, yachts, etc., J. A. Squires 438,193
Chain. See Railway chain. Recting and folding chain.
Check hook, A. Loddell 438,380
Chopper. See Cotton chopper.
Chuck, lathe, N. E. Austin 438,135
Churn, J. L. Lancaster 438,165
Churn, J. W. 438,492
Churn closure, H. F. Batcheller 438,263
Churn closure, D. W. Curtis 438,284
Churn dasher, B. Fearin 438,535
Circuit closer, J. Geary 438,234
Circuit closer, T. Marcher 438,167
Circuit, interlocking, J. Chaise 438,344
Clasp. See Corset clasp.
Clevis, pivot, F. M. Foss 438,536
Clock synchronizer, A. Gipperich 438,344
Clocks, verge wire for, J. M. Miller 438,355
Clothes line prop, F. F. Altman 438,341
Clothes line, J. Young 438,215
Clothes rack for houses or exhibiting garments in stores, M. C. Adams 438,517
Coal cutting machine, P. Richards 438,446
Coal screening mechanism, E. B. Cox 438,527
Coin-actuated box, J. W. Patterson 438,174
Coke, C. L. 438,373
Collar pad, horse, E. W. McClain 438,171
Combination lock, H. W. Masters 438,553
Commutator for dynamo electric machines, T. A. Edison 438,302
Cork extractor, J. F. Duffy 438,410
Corker, C. W. 438,492
Cotton chopper and cultivator, A. S. Harrell 438,153
Coupling. See Car coupling. Railway brake pipe coupling. Stovepipe coupling. Thill coupling.
Cricket, wicket, adjustable, F. K. Ward 438,392
Crude oil, justifiable sample & Namagast 438,483
Cuff holder, E. C. Drew 438,473
Cultivator, W. J. Roe 438,447
Curling iron, G. L. Thompson 438,295
Cut-out, automatic, G. W. Richardson 438,326
Cut-out, thermal, W. R. White 438,394
Cutting, cutting machine, L. Hirsch 438,374
Cutter. See Flue hole cutter. Sugar cutter.
Cyclorama, coin-controlled, B. S. Molyneux 438,170
Damping apparatus, W. T. Shaw 438,193
Dental tool, F. T. Van Woert 438,536
Designs in colors, producing raised, T. Benfield 438,337
Door hanger, E. A. Richards 438,557
Door hanger, J. C. Wands 438,530
Door hanger, sliding, A. B. Pullman 438,325
Doors, counterbalancing device for, J. J. Graves 438,425
Drum and damper, heating, G. G. Burton 438,297
Drum, printing, R. C. 438,374
Drying kiln, S. W. Peregrine 438,423
Dust collector, E. Bretney 438,523
Dye, blue-green, A. Herrmann (r) 11,176
Dyestuffs, manufacture of, Lauch & Krackeier 438,433
Eay trumpet, J. Boyd 438,519
Eyes, J. L. 438,379
Electric circuits, automatic safety cut-off for, G. T. Woods 438,530
Electric conductors, connector for, G. J. Brennan 438,400
Electric light shield, A. A. McCreary 438,419
Electric lighting system, T. A. Edison 438,301
Electric lighting, J. B. 438,372
Electric switch, Smith & Lyons 438,20
Electric wire distribution box, Eckert & Gregory 438,592
Electric distribution, system of, T. A. Edison 438,308
Elevator, R. C. Smith 438,338
Elevator guard, R. C. Taylor 438,254
Embossing, machine, P. J. Doherty 438,146
Embossing machines, machine for threading needles of, Saurer & Kobler 438,448
Engine. See Gas engine. Locomotive engine. Wind engine.
Engines, apparatus for regulating the exhaust for, J. C. 438,272
Evaporating apparatus, C. C. Peck 438,384
Evaporating apparatus, vacuum, H. S. Firman 438,266
Evaporating liquids, C. C. Peck 438,385
Evaporator. See Hot air register evaporator.
Extractor. See Cork extractor. Watchmaker's tool. 438,385
Eyclass case, J. W. Sanborn 438,363
Fabric cutting apparatus, weft pile, W. Gadd 438,538
Fabrics by means of a needle and looper, machine for making and attaching loops to the edges of, G. Rehmann et al 438,427
Feed, E. W. 438,352
Feed regulator, G. W. Hunt 438,377
Feed water heater for steam generators, C. H. Fish 438,287
Fence, G. J. Brown 438,402
Fence, flood, W. J. Vertrees 438,356
Fence, J. H. 438,352
Fence rails, coupling bar for wire, T. B. Tollefson 438,216
Fencing, G. P. Kishel 438,183
Ferrule, O. M. Smith 438,497
Ferrule plug and machine for making the same, O. M. Smith 438,498
File, E. W. Johnson 438,270
File, bill, W. D. Martin 438,352
File holder, E. W. Johnson 438,271
File or holder for letter or similar papers, P. Hartmann 438,154
File, temporary, A. Dom 438,374
Fire escape, E. W. 438,352
Fire escape, W. L. Dougherty 438,575
Fire escape, S. J. Grey 438,542
Fire escape ladder, C. F. Shain 438,387
Fire kindler, J. D. Pace 438,558
Fireplace, H. W. Lobley 438,319
Flour bolt, R. L. Hawkins 438,287
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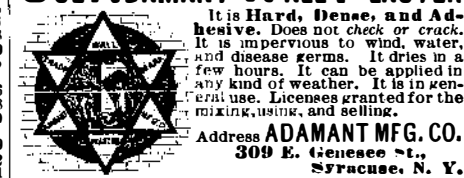
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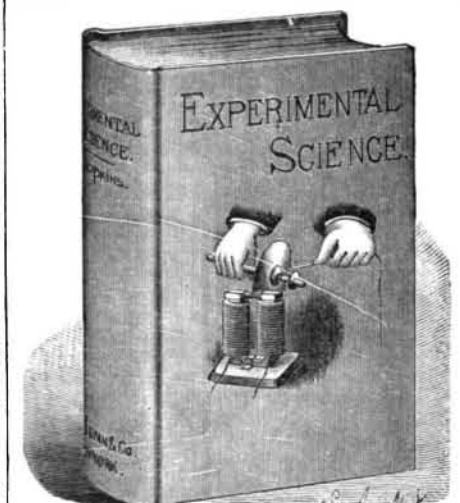
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