

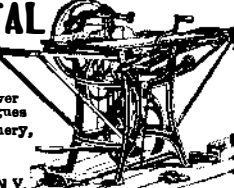
touched a bare place in a series arc line, the machine having on 56 lamps at 48 volts per lamp, and running at 9.6 amperes, one machine direct current, 104 volts, 120 amperes; one machine, series arc, T-H. system, 2,680 volts, 9.6 amperes, with slight grounds on each line. I was "knocked all in a heap," as the saying goes, and both hands badly blistered. A. The resistance of the human body is a very uncertain quantity. Sometimes it seems higher than at others in the same person. It certainly is not the same in different persons. It may vary from 10,000 ohms down to 300 ohms when the skin is moist. It is thought to average 2,500 ohms. If that was your resistance, you had about one ampere through you for a short time. It is not probable that you had so much current through you, and lived to tell how it felt.

(8157) P. S. asks: Can you tell me what the Edison wax records are made of, or of something that will answer in place of the above? What is the best mixture to fill a dry battery composed of? A. The composition of the Edison record cylinders has not been disclosed. There is nothing known which answers the purpose so well. Dry cells are filled with a mixture of sal ammoniac, water, plaster of paris, and often some material to keep the whole porous. Each kind probably has a different composition.

(8158) L. E. asks: Does the Toepfer-Holtz machine get its initial charge from the friction of the brushes which rub upon the buttons on the plates, or does the machine generate electricity as soon as the plates are revolved, regardless of any first charge. A. The friction of the tinsel brushes upon the metallic balls fastened to the revolving plate gives to the balls and the brushes charges of opposite kind. Thus the machine is made self-exciting. Otherwise a charge must be put upon the brush from some generator before the machine will start. Glass plates revolving in the air will not of themselves generate electricity.

(8159) G. P. F., Jr., asks: 1. Why does cream rise, being heavier than the remainder of the milk? A. Cream rises to the top on milk because it is lighter than the rest of the milk. Cream is an oil, and oil floats on water because it is lighter than water. The rest of the milk is water, with lime and other substances in it. It is, therefore, rather heavier than water. 2. Give an example of the affinity of chlorine for a metal. Would $Sb + 2Cl = SbCl_2$ be the proper answer. A. Yes. The question calls for a substance which combines directly with chlorine. Antimony, finely powdered, if sifted into perfectly dry chlorine gas, will combine very rapidly with it.

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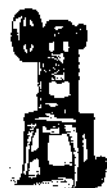


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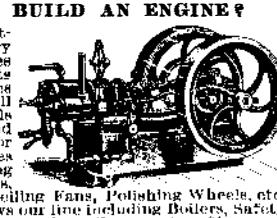
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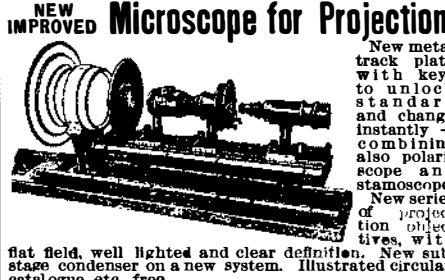


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Brake systems, cylinder pressure controller for, C. Gulland.....	671,418
Bridge, rigid suspension, A. V. H. L. Glueck.....	671,133
Brush, hair and scalp, H. H. Fox.....	671,047
Buckle, S. Ganz.....	671,336
Calcium carbide, apparatus for producing, Zimmerman & Prenner.....	671,008
Calculating machine, D. E. Felt.....	671,109
Camera, panoramic, P. N. Angsten.....	671,151
Can filling machine, J. R. Brown.....	671,392
Can forming and soldering machine, W. Rubin.....	671,237
Car body bolster, railway, O. M. Stimson.....	671,120
Car bolster, railway, O. M. Stimson.....	671,113
Car brake, E. G. Nicewaner.....	671,117
Car brake, railway, E. F. Meyer.....	671,113
Car, combination, G. Simpson.....	671,173
Car door, T. Young.....	670,944
Car, double hopper bottom, G. I. King.....	670,960
Car, fruit, Bollinger & Drago.....	671,178
Car loader, S. E. Kurtz.....	671,286
Car mover, S. E. Kurtz.....	671,285
Car switch operating device, street, J. C. Fair.....	671,210
Car, trolley, L. A. Brod.....	671,179
Carbonating device, C. H. Bangs.....	671,176
Carburetor, Barkdall & Woodward.....	671,042
Carburetor, F. K. Kurz.....	671,052
Carburetor, E. B. Gallaher.....	671,375
Carpet beating machine, G. F. Ricker.....	671,197
Carpet stretcher, P. Briggs.....	670,947
Carriage or chair, foldable roller, Peter & Kibler.....	671,027
Case, See Book or other case.....	670,937
Caster, furniture, C. H. McCauley.....	670,973
Cattle guard, H. W. Steinmann.....	671,361
Cattle guard, M. L. Whitehead.....	670,935
Ceiling scraper, Martell & Barton.....	671,037
Chains from cross iron, making, F. W. Wesner.....	671,037
Chains from cross iron, machine for manufacturing, F. W. Wesner.....	671,038
Chuck, A. Weather.....	671,252
Cigarette machine, N. Du Brul.....	671,417
Closet seat, H. D. Waters.....	671,360
Clothes drying apparatus, J. T. McLean.....	671,422
Clothes line protector and stretcher, J. W. S. Nycum.....	671,225
Clutch, G. F. Blakeslee.....	671,306
Clutch, friction, A. Leikem.....	671,219
Coal, apparatus for aerating and feeding powdered, A. A. Day.....	671,161
Cock, boiler blow off, B. T. Letts.....	671,220
Cock for steam engines, automatic exhaust drain, J. McGraw.....	671,291
Cold storage tank, W. J. Francke.....	670,955
Compound engine, A. J. Peet.....	671,386
Concentrator, E. G. Neighbor.....	671,116
Condenser, J. B. Gossman.....	671,211
Controller handle attachment, A. H. Armstrong.....	671,258
Converters, controlling rotary, S. W. Manger.....	670,289
Conveyer, T. A. Edisen.....	671,315
Conveyer, discharging device, endless, J. M. Dodge.....	671,268
Cooking utensil, Haws & Petersen.....	670,989
Cooling or condensing fluids, J. B. Miller.....	671,221
Coop, chicken, C. H. Canfield.....	671,329
Coop, feeding, C. V. Fite.....	671,015
Copying press, F. W. Nurenberg.....	671,070
Corn cutter, B. E. Poindexter.....	671,231
Cover for cooking utensils, E. F. Butler.....	671,063
Crate, J. J. Benson.....	671,204
Cultivator and planter, combined, J. T. Wright.....	671,040
Curling iron heater, G. F. Fiske.....	670,930
Dental chair head rest, G. Sibley.....	671,299
Derrick engine, J. V. Beekman.....	671,177
Distillation of petroleum, J. T. Davis.....	671,078
Door, J. W. Rapp.....	670,939
Door hanging gage, J. H. Stults.....	671,198
Door securer, D. B. Baider.....	671,260
Drum cup, nasal, E. G. Lechmann.....	671,346
Draft mechanism, P. Brown.....	671,267
Drum for reeving, J. W. Kemmer.....	670,958
Drill, J. Willmann.....	671,099
Dust from air, apparatus for separating, A. G. Warren.....	671,302
Dynamite, apparatus for making gelatin, E. E. Green.....	671,081
Electric energy, metering, W. C. Fish.....	671,273
Electric heater, A. R. Leask.....	671,139
Electric light circuits, automatic protecting and detecting device for, H. Etheridge.....	670,986
Electric light shade holder, R. O. Pease.....	671,195
Electric lighting system, J. A. Mesroff.....	670,994
Electric meter, E. J. King.....	671,282
Electric metering system, W. C. Fish.....	671,272
Electric motor controllers, contact finger for, F. W. Garrett.....	671,079
Electrically controlled switch, E. M. Hewlett.....	671,278
Electromagnetic brake, Voigt & Kusterer.....	670,426
Elevator, C. W. Baldwin.....	671,156
Elevator, safety, J. W. Brooks & Co.....	671,411
Elevators, automatic stop for electric, A. Cowperthwait.....	671,106
Elevators, separating head for pneumatic, J. B. Schuman.....	671,402
End play device, A. D. Lunt.....	671,287
Engine, N. Curtis.....	671,394
Engine cylinder, jacketed explosive, Fischer & Otto.....	671,275
Engine vaporizing device, gas, J. L. Ash.....	670,945
Engine, electric motor for, J. L. Ash.....	670,946
Engines, incandescent igniting device for gas, Thwaite & Menforth.....	671,359
Engraving machine, C. W. Pashley.....	671,092
Engraving machine, H. M. Albee.....	671,174
Explosion engine, steam generating, L. Renault.....	671,236
Eyeglasses, H. Griffith.....	670,988
Fabric, making mixed, L. Kieck.....	671,959
Fall board and music desk, C. F. Reeps.....	671,234
Faucet, C. L. W. Bece.....	671,153
Faucet, or tapping bung for tapping beer, etc., J. W. Kinsey.....	671,321
Feed water regulator and low water alarm, C. L. Mild.....	671,323
Feeder, automatic boiler, R. J. Flinn.....	671,374
Fence, R. W. Jackson.....	671,021
Fencing, wire, E. F. Shellberger.....	671,151
Fifth wheel, C. G. Burdick.....	671,328
Filter, M. Ruthenberg.....	671,003
Filter, J. H. Jewell.....	671,023
Filtering apparatus, oil, W. F. Warden.....	671,098
Fire engine and hose carriage, electric, Whittleck & Harrison.....	670,943
Fireproof construction, W. White.....	671,199
Fires, extinguishing, F. Shuman.....	671,240
Fish dressing machine, G. Merkle.....	671,421
Fish grapple, J. P. Penneck.....	671,294
Fishing line guide attachment, J. P. Lenhardt.....	670,961
Flax working machine, L. H. Schneider.....	671,034
Floor covering and manufacturing same, P. Dalley.....	671,184
Flushing apparatus for low down closets, E. C. Mankin.....	670,934
Folding box or crate, W. Davy.....	671,313
Forceps, ligatin, L. Gibson.....	671,337
Form attachment, A. J. Colburn.....	671,393
Form, bust, E. H. Wright.....	671,257
Fruit gatherer, J. C. Schreder.....	670,940
Fruit picker, T. Faurest.....	670,953
Fruit picker, J. W. Gilbreath.....	671,189
Fruit picker, E. Bevan.....	671,205
Furnace, J. B. J. Layton.....	671,322
Furnace gas burner, C. F. Allen.....	670,979
Fuse, electric, W. L. R. Emmet.....	671,271
Game, tunnel mepin, W. Senzer.....	671,172
Garment fastener, W. F. Schmidt.....	671,298
Gas burner, J. M. Naughton.....	671,115
Gas engine or motor, G. L. V. Chauveau.....	671,160
Gas generator, acetylene, G. W. MacKenzie.....	671,087
Gas lighting pipes, production of automatic, P. Lehmann.....	670,933
Gate, Railway crossing gate.....	671,100
Glass blowing machine, B. M. Aslakson.....	671,175
Glass rolling apparatus, L. Appert.....	671,322
Glove for cleansing, polishing, etc., J. T. Rowand.....	671,296
Glutinous article and making same, composite, W. Painter.....	671,230
Glutinous compounds, making, W. Painter.....	671,229
Grain separator and cleaner, B. Best.....	671,043
Grain shaking machine, W. Russell.....	671,033
Grease extracting apparatus, J. Delattre.....	671,131

INDEX OF INVENTIONS
For which Letters Patent of the United States were Issued for the Week Ending

APRIL 2, 1901,
AND EACH BEARING THAT DATE.

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

Abbrading mechanism, J. M. Nash.....	671,114
Acid suit and making same, sulfenic, L. O. Helmers.....	671,135
Adding machine, W. G. Swan.....	671,152
Air brake safety appliance, A. Cowperthwait.....	671,207
Air brakes of railway trains on derailment, device for automatically applying, Lakerda & Nikolajeff.....	671,218
Air compressor, G. S. Binckley.....	671,044
Alarm, See High or low water alarm.....	671,350
Alarm system, J. H. McCracken.....	671,376
Album, roller, E. W. Grant.....	671,246
Anchor, F. Stuth.....	671,341
Ant trap, J. Inman.....	670,998
Atomizer, S. F. Patterson.....	671,345
Automatic switch, J. V. Lacey.....	671,214
Automobile, S. C. Judd.....	671,036
Automobile driving mechanism, W. Van Wagener.....	671,112
Axle and bearing, vehicle, P. B. Mathiasen.....	671,014
Axle, vehicle, J. P. Council, Jr.....	671,058
Baby walker, R. Resetar.....	671,180
Ball band fasteners, turning tool for, D. M. Campbell.....	671,091
Balling press, R. R. Pace.....	671,196
Ball and socket fastener, A. F. Raymond.....	671,065
Band stretcher, G. F. Farrar.....	670,978
Barrels, etc., apparatus for handling, C. W. Young.....	670,950
Basin maker, C. J. Steneham.....	671,068
Bearing, anti-friction, S. S. Evedand.....	671,168
Bed bottom attachment, J. Hoey.....	671,233
Bed, W. McMill.....	671,146
Bed, folding, A. Russell.....	670,957
Bed spring, D. J. Powers.....	671,019
Bell ringing device, J. J. Pursley.....	671,030
Bicycle crank hanger, F. I. Johnson.....	671,295
Bicycle drive gear, L. Hausmann.....	671,049
Bicycle frame, J. Ralton et al.....	671,404
Bicycle luggage carrier, O. P. Petersen.....	670,942
Bicycle steering device, J. H. Graham.....	670,995
Block signal system for railways, electric, H. Shoemaker.....	671,016
Boat, folding, H. E. Traub.....	671,163
Boat hulls, construction of, J. W. Moore.....	670,993
Boiler, See Water tube boiler.....	671,011
Boiler bottoms, protector for sheet metal, J. McKnight.....	671,171
Boiler coupling, steam, E. S. Clark.....	671,395
Boiler furnace, steam, J. O. Morris.....	671,347
Boiler stand, adjustable, E. Hayward.....	671,003
Boiler tube cleaner, Fersyth & Bell.....	671,016
Bolting machine, gyratory, H. C. Malsness.....	671,147
Bolting pin, L. S. Bacon.....	671,041
Book, combined poll and tally sheet, J. T. Gale.....	671,147
Book cover, C. H. Bailey.....	670,993
Book or other case, sectional, E. D. Robbins et al.....	671,011
Root or shoe cleaner, N. M. Powell.....	671,171
Bottle, J. H. Matthes.....	671,293
Bottle closure, C. Carr.....	671,309
Bottle, mangle, W. S. Russell.....	671,412
Bottle stopper, J. & J. A. Butkus.....	670,992
Bottle stopper, W. J. Cunningham.....	671,193
Bottles, machine for wiring corks of, R. M. & C. E. Chambers.....	671,164
Bottles, opener for internally stoppered, Lemax & Tomlinson.....	671,409
Box strap, C. W. Mitchell.....	671,133
Brake, E. M. Fraser.....	671,133
Brake, H. L. F. Trebert.....	671,409

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