

Cotton gin saw, W. M. Brown..... 500,600  
Cotton, treating, E. Anshel..... 500,732  
Coupling, band coupling. *See* Hame coupling.  
Hose coupling. Thill coupling.  
Cream separator, J. J. Berrigan..... 501,038  
Creamer, centrifugal, J. J. Berrigan..... 501,040  
Creamer, centrifugal, N. G. Williams..... 501,787  
Crimping machine, W. E. Frost..... 501,944  
Crusher, roller, J. McCully..... 500,536  
Cultivator, C. A. Aulser..... 500,845  
Cultivator, D. E. Barton..... 500,702  
Cultivator, C. T. Eldred e..... 500,873  
Cultivator, wheel, E. A. Couch..... 500,798  
Currents, method of and means for producing alternating, E. Thomson..... 500,630  
Curtain, heavy, J. J. Berrigan..... 500,001  
Cutler. *See* Band cutter. Bolt cutter. Weed cutter.  
Cyanides and ammonia, method of and apparatus for producing, T. B. Fogarty..... 500,661  
Cycle mud guard, C. E. Hadley..... 501,282  
Cycle pedal, dust proof, A. Perkins..... 500,943  
Cylinders, construction of, J. C. & W. Starley..... 500,536  
Dash, carriage, C. A. Behlen..... 500,248  
Dash, vehicle, C. A. Behlen..... 500,248  
Decks, device for operating the slides or rests of, J. B. Pooley..... 500,601  
Disinfecting machine, H. L. Bennett..... 500,734  
Disinfectator, M. E. Mosher, J. Hardt..... 500,622  
Display frame, W. O. Rogers..... 500,745  
Display rack, C. Frankel..... 500,378  
Display stand, M. Anthony..... 500,385  
Doll heads, apparatus for moulding, Vallee & Schultz..... 500,000  
Door, grain, J. Sheridan..... 500,365  
Dough-mixing apparatus, S. L. Hall..... 500,656  
Dresser, J. J. Berrigan..... 500,500  
Drapery book and pin, F. S. McKenney..... 500,744  
Draw-bar attachment, Walker & Bedford..... 500,728  
Drawer slide and extension support, V. R. Harvey..... 500,576  
Dressing apparatus, J. Price, Jr..... 500,513  
Dress shield, H. Mosher, J. Hardt..... 500,622  
Dress stiffener, machine for making, I. D. Warner..... 500,630  
Drier. *See* Laundry drier.  
Drilling machine, multiple, D. E. & L. E. Whitton..... 500,644  
Driving wheel, G. D. Munsing..... 500,628  
Dust collecting, H. M. Hies..... 500,628  
Dye red azo, Green, Lawson..... 500,761  
Dye, violet red, L. Lifschutz..... 500,811  
Ear piece, R. Seiffert..... 500,367  
Earthenware, liquid material for the manufacture of fine, J. Kilgebr..... 500,538  
Educational appliance, J. E. Von Tassel..... 500,539  
Electric fan, motor for alternating pulsating or intermittent, T. Duncan..... 500,004  
Electric ignitor, W. F. West..... 500,644  
Electric machines, brush boiler for dynamo, H. G. Relst..... 500,611  
Electric motor, J. MacHaffie..... 500,635  
Electric switch, G. E. Linton..... 500,919  
Electric welding, J. J. Berrigan..... 500,622  
Elevator gate, Lagerquist & Nelson..... 500,598  
Elevator safety device, N. V. Fitts..... 500,877  
Emery wheel, J. R. & A. M. Carpenter..... 500,556  
Engine. *See* Gas engine. Rotary engine. Steam engine.  
Engine, reversing gear, Whittington & Fishering..... 500,984  
Engines, combustion chamber for petroleum or hydrocarbon, Richardson & Norris..... 500,671  
Engines, oil-supplying device for hydrocarbon, Richardson & Norris..... 500,977  
Engines, rock arm for horizontal, E. J. Armstrong..... 500,844  
Enveloper, J. M. Cutler..... 500,600  
Feed roll, sectional, R. M. Gleason..... 501,009  
Feed water regulator, C. H. Gersting..... 500,577  
Fence post, J. B. Gowdy..... 500,688  
Fence post, C. H. Van Wagoner..... 500,688  
Fertilizer distributor and grain drill, L. I. & J. M. Bodenhamer..... 500,655  
Filter, J. H. Alb..... 500,637  
Filter and cooler, F. E. Cady..... 500,718  
Fire lighter, automatic, J. L. Cutler..... 500,929  
Fires draw, etc., device for making, C. B. Stuart..... 500,632  
Fireplace frame, H. G. Dawson..... 500,699  
Floor gate, H. H. Bathertor..... 500,870  
Fluid coupling, J. J. Bobsam..... 500,870  
Folding chair, coil reed, O. Tonkin..... 500,728  
Frame. *See* Awning frame. Display frame. Fireplace frame.  
Fruit picker, J. Swanburg..... 501,003  
Fuel, artificial, M. Nirdlinger..... 500,938  
Furnace. *See* Boiler furnace. Heating furnace.  
Furnace, J. T. Jenkins..... 500,848  
Furnaces, gas burner for boiler, C. T. Sican..... 500,728  
Gage. *See* Air measuring machine. Ring gage.  
Game, A. M. Grubbs..... 500,929  
Garage, J. C. & J. H. B. Arnold..... 500,008  
Garment supporter, D. H. Warner..... 500,635  
Gas burner, natural, W. G. Taylor..... 500,606  
Gas burner, self-generating, E. F. Smith..... 500,968  
Gas engine, F. Condoners..... 500,716  
Gas generator, J. Nolan..... 500,938  
Gases, Apparatus for analyzing process of obtaining and measuring, J. J. Berrigan..... 500,622  
Gate. *See* Bridge gate. Flood gate. Elevator gate.  
Ga e, W. K. Mills..... 500,558  
Generator. *See* Gas generator. Steam generator.  
Glass. *See* Opera, field, marine, and other glass. Glass bottles. Finishing tool for, Sheldon & Lynn..... 500,939  
Glass decorating apparatus, J. Macher..... 501,011  
Grain binder, C. Colahan..... 500,728  
Grain binder, G. L. Phelps..... 500,600  
Grain drill, J. A. M. Tyler..... 500,728  
Grain splitting machine, J. Winter..... 500,728  
Gravel, J. J. Berrigan..... 500,622  
Guard. *See* Cattle guard. Hatchway guard.  
Cycle mud guard. Penholder guard.  
Guitars. Adjustable tail piece for, F. A. Ingersoll..... 500,558  
Gun. Breechloading, J. Rider..... 500,944  
Gun, carriage brake, F. J. Moore..... 500,944  
Guns. Hydraulic recoil brake for, A. Kampf..... 500,903  
Hame coupling, A. A. Parsons..... 500,501  
Hammer, forging, A. Sperl..... 500,377  
Hammock, J. Shinn..... 500,639  
Hand press, W. S. Kisinger..... 500,696  
Harness, J. N. Darr..... 500,866  
Harrow, J. J. Berrigan..... 500,622  
Harvestertension device, T. Sampson..... 500,777  
Hat, I. Shepard..... 500,936  
Hat, coat, and umbrella rack, E. W. Trout..... 500,622  
Hatchway guard, C. J. Reynolds..... 500,728  
Hay or hog rack, W. H. Long..... 500,928  
Hay stacker, J. J. Berrigan..... 500,622  
Heater. *See* Water heater.  
Heater fue register, W. H. Meyers..... 501,011  
Heating apparatus, G. L. Shorey..... 500,766  
Heating furnace, W. P. Winner..... 501,034  
Heel, M. Murray..... 500,817  
Hoidbac, G. C. Edmunds..... 501,000  
Hook. *See* Lacing hook. Whiffetree hook.  
Hoop fastening. Bal eel or other, E. W. Heazell..... 501,844  
Horse blanket strap, A. P. Russell..... 500,611  
Horsehoe, D. Gindold..... 500,898  
Horsehoe, Nalless, S. Pruden..... 500,944  
Hose coupling, Electric, J. B. Strauss..... 500,728  
Hose furnace, W. J. Seals..... 500,828  
Ice boat. Oar-propelled, G. H. Thacher..... 500,828  
Ice machine, G. F. Knox..... 501,004  
Ice shedder or shaver, T. Mabbett..... 500,922  
Induction coil. Coin operated, W. R. Pope..... 501,777  
Injector, F. Brunnauer..... 500,716  
Injector, F. J. Berrigan..... 500,622  
Instant. Fountain, E. C. Mayloy..... 500,902  
Insulating coupling, L. McCarthy..... 500,602  
Insulator. Conduit railway, G. E. Noyes..... 500,383  
Intersecting mitre, M. Gates..... 500,577  
Iron. *See* Sad iron. Soldering iron.  
Jack. *See* Lifting jack. Wagon jack. Screw jack.  
Jewel-setting machine, W. Rundquist..... 500,956  
Journal box, G. W. M. Bowen..... 500,719  
Keyhole guide, C. Taylor..... 500,977  
Knitting machine. Straight, W. T. Rowlett..... 500,936  
Lacing hook, W. B. H. Dowse..... 500,956  
Lamp. Electric, J. J. Berrigan..... 500,622  
Lamp. Electric arc, W. A. Turbayne..... 500,844  
Lamp. Electric incandescent, Burnett & Doane..... 500,844  
Lamp globe, Incandescent, T. B. Atterbury..... 500,844  
Lamp. Incandescent electric, W. E. Nickerson..... 500,671  
Lamp. Incandescent electric, Nickerson & Cary..... 500,671  
Lasting machine, J. T. Avery..... 500,544  
Lathe attachment, J. E. Richards..... 500,728  
Lathe, Metal turning, T. Coldwell..... 500,728  
Laundry drier, A. V. M. Sprague..... 500,822  
Leather skiving machine, A. J. Allen..... 500,383  
Lever. Land, W. Falcon..... 500,877  
Lighting arrester, W. A. Thacher..... 500,828  
Lighting arrester, C. S. Van Natta..... 500,728  
Lingolene or oil floorcloths. Manufacturing, J. C. Lyon..... 500,531  
Liquid goods. Receipts for carrying, G. Pe-  
Liquid storage device for removing sediment from bottoms of, Harder & Fox..... 500,744  
Lock. *See* Nut lock. Railway switch lock.  
Lock, G. E. Tyson..... 501,000

(5178) T. H. DeS. asks: 1. Will you kindly tell me how to make a spark coil? I am putting up in my bedroom an automatic electric gas burner and want spark coil for igniting gas. Kindly state of what the core should be made. A. No. 18; or No. 20 soft annealed iron wire. 2. Name diameter and length. A.  $\frac{3}{4}$  of an inch in diameter and 8 inches long. 3. What number (Am. w. gauge) of cotton-covered wire should the core be wound with? A. No. 18. 4. State the quantity of wire required for winding. A. Use enough of the magnet wire to make the depth of the winding about equal to the diameter of the core. This will probably require about 2 pounds.