

Catarrah Cured.

A clergyman, after years of suffering from that loathsome disease, catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death.

Patent Rights for Sale. Apparatus for building Concrete Buildings and Walls. County rights, \$50. State rights, \$500. See descriptive notice in SCI. AMERICAN, May 22, 1886.

Hodges' universal angle union makes pipe connection at any angle. Rollstone Machine Co., Fitchburg, Mass. Send for new and complete catalogue of Scientific Books for sale by Munn & Co., 361 Broadway, N. Y. Free on application.



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 This is for our information, and not for publication.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.

(1) G. C. asks: 1. Is there any way to find the length of belt by figuring? A. You can only compute the length of belts by knowing the distance of centers and adding to twice the distance the amount of lap for both pulleys.

(2) B. A. H. asks: 1. Is there any method of cutting and polishing petrified wood? A. Petrified wood and minerals can be cut and polished in the manner of lapidary work.

(3) G. S.—A solder made of equal parts of tin and lead melts at 368° Fah. You can burn the vapor of gasoline by saturating air with the vapor and passing it through a Bunsen burner.

(4) J. V. D. asks: How many cells of carbon battery, small size, will be required to light one Edison 6 candle power light? A. About 27 cells, arranged 9 in series and 3 in parallel.

(5) W. L. asks (1) how to remove the apparent greasiness on a wood blackboard. I have tried soap and hot water several times without any effect.

(6) Old Reader asks: Please give formula for making photographer's paste. A. Mix thoroughly 630 grains of the finest Bermuda arrowroot with 375 grains of cold water in a capsule.

cold, stir in well 375 grains of alcohol and 5 or 6 drops of pure carbolic acid. Keep in well closed vessels, and, before using it, work up a portion with a brush in a dish.

(7) H. M.—The money made at the various mints goes into circulation on the order of the United States Treasurer, as called for by the different banks and financial institutions.

(8) J. D. M. asks: 1. Why did the moon during the late eclipse have a brown or smoky look rather than a black? A. We do not know that the moon ever looked black during its total eclipse.

(9) S. R. T. asks a composition of a cement which will join glass plates to brass, and which will not be soluble in bisulphide of carbon.

(10) S. D. W. asks: 1. If gold was as cheaply obtained and as plentiful as brass, which, for its commercial and mechanical uses, would be of the greater value? A. The less oxidizable metal—gold.

(11) J. H. K. asks: 1. What is the best method of filling and darkening ash and oak for antique finish? A. Spon's "Workshop Receipts," first series, which we can furnish for \$2, gives very full information on the staining and finishing of woodwork.

(12) W. W. asks the distance from the center span of the Forth bridge to the shore, in England. A. There are two central spans, of 1,700 feet each, with central pier on the Scotch island of Inchgarvie.

(13) R.—For articles on curved ball in ball playing see SCIENTIFIC AMERICAN SUPPLEMENT, Nos. 410, 423, 410.

(14) W. W. has a petroleum engine, and wants to know how to burn off soot on the flues. A. It cannot be burned off. Open the rear end by taking off the plate, and scrape or brush off the soot.

(15) N. S. C.—Hard water is not always due to the same chemical element. You will find an interesting article on the Softening of Water in SCIENTIFIC AMERICAN SUPPLEMENT, 270, 187.

(16) H. W. W. writes: I have trouble in brazing my band resaws. I use brass and borax as a flux, but the heat required is so great that it burns out my irons and damages the saws.

(17) D. L. desires a cement for amber. A. Two surfaces of amber may be united by smearing them with boiled linseed oil, pressing them strongly together, and heating them over a clear charcoal fire.

(18) A. C. C. J. writes: I upset a jug of ink (the blackest copying ink, at that) on the end of a closed volume of Blackstone.

(19) Bath Tub writes: I want to paint a zinc bath tub white. Can it be painted so it will hold and be durable, and if so, how should the paint be prepared? I am informed there are no prepared paints for such purpose.

ing: 1 part copper nitrate, 1 part copper chloride, 1 part ammonium chloride, dissolved in 64 parts of water to which 1 part of commercial hydrochloric acid is added.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

February 21, 1888,

AND EACH BEARING THAT DATE.

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

Table listing various inventions and their patent numbers, including items like 'Acid distributing apparatus', 'Aerial navigation', 'Air brake', 'Alarm', 'Aluminum', 'Amalgamator', 'Anchor and oiler', 'Aquascope', 'Atomizer', 'Auger bits', 'Auger bits, die for making', 'Bag or satchel frame', 'Bar', 'Bars, machine for cutting scrolls', 'Bark, treating cinchona', 'Bark, treatment of cinchona', 'Battery', 'Beading cutter', 'Bearing, anti-friction', 'Bed bottom', 'Bed, hospital transfer', 'Bell, door', 'Bell, electro-magnetic', 'Belt, driving', 'Belts, fabric for driving', 'Binder, N. Hawkins', 'Bit', 'Bit brace', 'Block', 'Boiler covering', 'Bottle attachment', 'Bottle stopper', 'Bottle stoppers, machine for making wire fasteners', 'Bottle top', 'Box', 'Box stapling machine', 'Brace', 'Brake', 'Brake block', 'Bridle bit', 'Brush bodies, machine for boring', 'Brush making machine', 'Brushes, etc., apparatus for inserting and fixing the bristles of', 'Bustle', 'Button and fastener', 'Buttonhole stitching and barring machine', 'Buttonholes, barring', 'Cam, dwell', 'Can opener', 'Cant hook', 'Car coupling', 'Car coupling, Cowher & Numer', 'Car coupling, W. H. Dawson', 'Car coupling, I. Hazleton', 'Car coupling, C. R. King et al.', 'Car coupling, D. Schofield', 'Car coupling, J. F. Thornton', 'Car coupling, Thurston & Butterfield', 'Car, dumping, Hughes & Williams', 'Car heaters, brakes, etc., coupling and cut-off for steam and air pipes for', 'Car spring', 'Cars, track cleaning attachment for street, Peper & Sobinski', 'Card exhibitor', 'Card exhibitor, Valentine & Bailey', 'Carpet in rolls, device for securing the ends of', 'Carrier', 'Cart, road', 'Cartridge for firearms', 'Cartridge implement', 'Chain, drive', 'Chain, drive, B. A. Legg (r)', 'Chain, drive, B. Oborn', 'Chain for conveyers', 'Chain making machine', 'Churn', 'Cigar holder', 'Clasp', 'Clasp, D. F. Dalton', 'Closet', 'Clutch', 'Coaster, carrier, and ferrier, cable', 'Coat hook', 'Coffee pot', 'Coffin', 'Coffin, E. Bangs', 'Coffins, head rest for', 'Comb', 'Cotton gin', 'Coupling', 'Coupling, See Car coupling. Pipe coupling. Pipe well coupling. Thill coupling.'

Table listing various inventions and their patent numbers, including items like 'Coupling and brake, combined', 'Cradle, Duffy & Reiling', 'Crate, berry or fruit', 'Cuff holder', 'Cultivator, Glidden & Vaughan', 'Cultivator, E. P. Lynch', 'Cultivator, Schermerhorn & Jury', 'Current transformer, alternating', 'Curtain pole, adjustable or extension', 'Curtain pole covering', 'Curtain pole, upholstered', 'Cutter, See Beading cutter. Feed cutter.', 'Decoy duck', 'Dental engine', 'Dish washer, Stevens & Caunter', 'Display frame, L. Strauss', 'Door, L. S. Enos', 'Door mat, S. L. Cohen', 'Doubling and splitting machine, chained yarn', 'M. Johnson', 'Drier, See Brick drier.', 'Egg preserver, Ford & Delbridge', 'Electric lights, manufacture of incandescent', 'T. Mace', 'Electric machines, core for dynamo', 'Electric energy, transformation and distribution of', 'Emulsifier', 'End gate', 'Engine, See Dental engine. Power engine.', 'Engine dash pot, steam', 'Excavating bucket', 'Excavator, J. S. Whitcomb', 'Feed cutter, E. W. Rider', 'Fence, O. D. Hearn', 'Fence machine', 'Fender, See Horse rake fender.', 'Fifth wheel, vehicle', 'Filtering beer', 'Fire alarm systems, conductor for electrical', 'Firearm, breech-loading', 'Firearm sight', 'Fire and burglar alarm', 'Fire escape', 'Fire extinguisher', 'Folding mosquito net, tarlatan, and other piece goods', 'Forges, driving mechanism for', 'Frame, See Bag and satchel frame. Display frame.', 'Fuel composition', 'Furnace, See Hot air furnace. Smoke consuming furnace.', 'Furniture, seat or back fastening for', 'Gauge, See Rafter gauge.', 'Galvanic battery', 'Galvanic battery, Walter & Marsh', 'Gangway, stock', 'Garment stay', 'Garment supporter', 'Gas, apparatus for the manufacture of', 'Gas mains, means for detecting leakage from', 'Gas or vapor, device for generating and burning', 'Gases, apparatus for mingling and combining', 'Gate, See End gate.', 'Gate, W. R. White', 'Gatespring', 'Glass holder', 'Goods, stand for displaying', 'Governor, steam engine', 'Grading and ditching machine', 'Grain binder', 'Grain binder, C. B. Withington', 'Grate bar', 'Grater', 'Gun carriage', 'Gun carriage, recoil cushion for', 'Guns, extractor mechanism for breech-loading', 'Hame fastener', 'Harrow', 'Harvester, clover, Thomasson & Pence', 'Hay carrier', 'Hay press', 'Hay unloader and stacker', 'Heating retorts and muffles, apparatus for', 'Heel forming and attaching machine', 'Hinge, gate', 'Holder, See Cigar holder. Cuff holder. Glass holder. Pen holder. Pillow sham holder. Tag holder.', 'Hook, See Cant hook. Coat hook.', 'Hoop for trundling', 'Horse detacher', 'Horse rake fender', 'Horses, throat protector for', 'Horseshoe machine', 'Hose nozzle', 'Hot air furnace', 'Indicator, See Oil tank indicator.', 'Injector, C. E. Randall', 'Injector, steam', 'Instrument, combination', 'Iron, See Tailor's charcoal iron.', 'Jack, See Lasting jack.', 'Jack spool', 'Key, See Pulley key. Telegraph key.', 'Knife handles, machine for making hollow metallic', 'Lamp fixture, incandescent electric', 'Lasting jack', 'Lathe for turning irregular forms', 'Leather splitting machine', 'Leather splitting machine, S. Ross, Jr.', 'Leather splitting machine, G. L. Tyler', 'Letter box, alarm', 'Lever power engine', 'Liquids in vacuum pans, treating', 'Lock, W. H. Taylor', 'Locomotive exhaust apparatus', 'Lubricating composition', 'Mail matter, machine for marking', 'Mailing machine', 'Mat, See Door mat. Rubber mat. Wire mat.', 'Metallic bodies, die for forming hollow ornamental', 'Metals with aluminum, combining', 'Motion, device for converting', 'Motor, See Petroleum motor. Rotary motor.'