

(25) S. D. asks: What will clarify a solution of 5 lbs. of Irish moss, boiled in 20 gallons of water, long enough to extract the gelatin? I want to get rid of the small particles, which give it a cloudy appearance. A. Mix with clean paper pulp, place in a fine linen bag, and strain. The paper and gelatin should be mixed and well stirred together while the gelatin is hot and as liquid as possible.

(26) H. S. S. C. asks: Will a house 30 feet by 30, covered with tin and having a water conductor at each corner connected with the roof, each conductor being connected with the ground by a copper wire, be sufficiently protected against lightning without a lightning rod? A. The water conductors, not being in the form of a compact body of metal, would hardly be so good as a rod: but, if provided with a pointed rod at top in connection with each, extending about three feet high above the roof, and a like rod extending some distance into the ground at the bottom, they might be considered safe.

(27) O. A. W. asks: Is there a chemical that, when rubbed on the hand, enables one to handle red hot iron or melted lead with impunity? A. No; but if the hand be damp with perspiration, or slightly moistened, it may for an instant be dipped in melted lead or white hot melted iron without burning or discomfort. The moisture is thrown into the spheroidal condition, and presents an effectual barrier against the intense heat.

(28) W. M. M. asks: How is a bichromate battery made? A. It consists usually of a large glass jar having within it a cup of porous unglazed porcelain. The intermediate space, between the sides of the vessels, is filled with dilute sulphuric acid (1 to 20), and contains a sheet of zinc shaped so as to conform to the curve of the inner cup, which it completely surrounds. A stick of gas carbon is placed in the porous cup, and surrounded with a fluid made by adding strong sulphuric acid to a saturated aqueous solution of bichromate of potassa until the chromic acid begins to separate in flakes, it is afterwards diluted a very little in order to redissolve the precipitate. The proportion of the several ingredients in this mixture should be about as follows: to about 10 ozs. of bichromate of potassa in 1 gallon of water, add 1 pint of strong oil of vitriol.

(29) S. asks: Is the common arsenic of the drug stores the kind that can be fused with block tin? A. No, use metallic arsenic.

MINERALS, ETC.—Specimens have been received from the following correspondents, and examined, with the results stated:

W. Z. J.—No. 1 is blue clay. No. 3 is a piece of slate. No. 4 is a variety of steatite. No. 5 is basalt. No. 6 is a piece of bituminous shale. No. 7 is chalcopryrite (sulphide of copper). A smaller specimen numbered 8 is an agate. No. 2 did not arrive.—P. & B.—It is nodular iron pyrites.—B. M. R.—No. 1 is a limestone fossil, but has been so badly damaged that we cannot classify it. No. 2 is a piece of shale.—S. S.—It is a broken quartz crystal.—S. L.—It is partially reduced oxide of copper.—W. E.—The color on the window blind does not contain arsenic. It is an organic pigment.—C. C.—They are garnets, of considerable value when large and perfect.—J. A. C.—It is a bituminous shale, and might be used for heating purposes.—S. J.—The sand might, if properly screened, find a limited employment for scouring, grinding, and polishing purposes, as well as in the manufacture of glass and glazes.

S. G. C. asks: Is there anything which will restore drawing paper, which has become soft from age and use so that ink runs on it, sufficiently to ink on a few lines at a time when necessary?—O. S. says: Can you inform me what is the yield of oil to the bushel of peanuts, and what are the means of extracting the oil?—J. L. R. Jr. asks: Please tell me where the character \$ came from originally.

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects:

- On Weight on and in the Earth. By E. B. W.
On the Polarity of the Compass Needle. By D. Y. M.
On a Rope Swing. By J. S. P.
On the Monjolo. By C. J. W.

Also inquiries and answers from the following: A. S.—J. R.—J. A. P.—J. H. E.—C. C.—G. T. D.—J. M.—T. J. B.—J. McC.—W. B. P.—C. H. P.—H. H.—T. I. H.

HINTS TO CORRESPONDENTS.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. The address of the writer should always be given.

Enquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who makes machines for pressing stove blacking? Who sells electric telegraph apparatus? Who sells propeller wheels? Who makes cast steel bells? Who makes labeling machines?" All such personal inquiries are printed, as will be observed, in the column of "Business and Personal," which is specially set apart for that purpose, subject to the charge mentioned at the head of that column. Almost any desired information can in this way be expeditiously obtained.

[OFFICIAL]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

August 8, 1876,

AND EACH BEARING THAT DATE.

(Those marked (r) are reissued patents.)

A complete copy of any patent in the annexed list, including both the specifications and drawings, will be furnished from this office for one dollar. In ordering, please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row, New York city.

Table listing inventions with names and numbers, including: Acid, making hydrated sulphurous, W. Maynard. 180,901; Aerometer, C. Godfrey. 180,760; Air-compressing machine, J. Sturgeon. 180,938; Animal-weaning bit, Ingersoll & Fisher. 180,885; Anvil vise, J. Bolt. 180,834; Auger, earth, C. D. Pierce. 180,787; Auger, earth, W. Poole. 180,920; Bag holder, E. G. Bates. 180,826; Bale tie, W. S. Davis (r). 7,252; Bale tie, D. C. Lowber. 180,897; Bale tie lock, D. Olmsted. 180,910; Bale-tying attachment, S. D. Purdy. 180,788; Ball and socket support, H. Howson. 180,881; Bank guard protector, V. E. Campbell. 180,843; Barrels, making, T. M. Healey. 180,815; Bed bottom, spring, J. R. Newman. 180,909; Bedstead, extension, R. Rigl. 180,927; Bedstead, invalid, F. E. Sawyer. 180,935; Bedstead, sofa, J. A. Bigger. 180,829; Bending machine, P. A. Whitney. 180,810; Beveling machine, plate, Pedder & Abel. 180,915; Binder, temporary, F. Guicheteau. 180,871; Binder, temporary, E. M. Phillips. 180,727; Bit stock, W. F. Curtis. 180,850; Blooms, compressing, W. Sellers. 180,798; Boat coupling, automatic, T. D. & G. E. Husband. 180,883; Boats, etc., propelling, N. P. Ingalls. 180,848; Boiler, fire and tubular, A. J. Stevens. 180,959; Boiler, steam, Galloway & Holt. 180,863; Boiler, feed water heater, M. W. Hazelton. 180,876; Boot soles, channeling, S. Henshall. 180,714; Boot upper, J. Mohan. 180,779; Boot, instep supporter, R. Ames. 180,819; Boots, forming stiffeners for, W. C. Wise. 180,978; Boring machine, P. H. Wilm. 180,976; Bottle washer, W. Scherenberg. 180,937; Brick machine, Seymour & Davis. 180,941; Brick and mop handles, S. J. Mather. 180,723, 180,724; Brush-holding stopple, F. A. Reichardt. 180,926; Building block, F. Schaffer. 180,794; Burner, lamp, H. A. Chapin. 180,753; Car axle lubricator, W. H. Wright. 180,980; Car brake, S. G. Smith. 180,802; Car coupling, J. Raddin. 180,728; Car door, grain, R. Brydon. 180,699; Car seat, J. Bryant. 180,751; Car starter, E. Salomon. 180,792; Car ventilator and dust deflector, A. B. Childs. 180,844; Car wheel, W. McConway. 180,725; Car, engine frame, W. D. Scott-Moncrieff. 180,906; Cartridge, H. C. Bull. 180,840; Cartridge, dial feed, G. E. Bradley. 180,746; Casting, mold and core for, H. and F. Tank. 180,807; Cattle, food for, J. Spratt. 180,913; Chain, drive, E. M. Morgan. 180,907; Chain swivel clamp, V. Draper. 180,855; Chandelier, drop light, Thackara & Plaisse. 180,961; Cheese cutter, H. S. Jones. 180,888; Churn dasher, M. L. Traver. 180,968; Churn power, S. Weaver. 180,737; Clay retorts, carriage for, W. D. Cliff. 180,845; Clock lock work, Marcy & Kissum. 180,899; Cloth-finishing machine, C. S. Davis. 180,705; Clothes stick, D. B. Pond. 180,919; Coal, mining, P. Sheldon. 180,799; Coal screen, P. Shannon. 180,943; Collar, sample card etc., A. Hellenberg. 180,879; Corn drill, D. R. Groves. 180,870; Corpse cooler, C. A. Bretz. 180,885; Corset spring, T. M. 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Laughhead. 180,893; Feed cutter and grinder, H. G. Fritz. 180,822; Fifth wheel, E. J. Lucey. 180,772; Filter, K. K. Cruit. 180,818; Fire arm, breech-loading, A. Spellerberg. 180,803; Fire extinguishers, A. A. Murphy. 180,782; Fireproof building, M. A. Burnham. 180,752; Fork, fodder, W. M. Scotten. 180,940; Furnace for blanks, J. W. Bonta. 180,698; Furnaces, steam, D. N. Melvin (r). 7,253, 7,259; Furnace, hot air, O. N. Hart (r). 7,254; Furnace, laundry, G. W. Robertson. 180,791; Furnace, roasting ore, H. H. Eames. 180,856; Furnaces, etc., lining puddling, M. E. P. Audouin. 180,822; Gas, generating, I. N. Stanley. 180,955; Gas generator, carbonic acid, O. Zwietsch. 180,982; Gas globe with prisms, F. S. Shirley. 180,800; Gas lighting, electric, A. L. Bogart. 180,833; Gas trap, sewer, J. M. Falk. 180,859; Gate, farm, D. C. Bacon. 180,823; Gate, farm, W. W. Gift. 180,866; Glass furnace, W. Pountney. 180,923; Glassware, making, L. Wagner. 180,970; Grain drill, J. D. Jones (r). 7,255; Grain grills, making, F. Schumacher. 180,797; Grain, machine for drying, A. W. Roper. 180,931; Grave cover, G. W. Arnold. 180,821;

Table listing inventions with names and numbers, including: Hammock stand, Richardson & Fuller. 180,729; Harvester, E. H. Gammon. 180,759; Harvester, H. L. Stroock. 180,805; Hatbinding, Starr & Whiting. 180,954; Hay loader, J. L. Mathews. 180,900; Heater, feed water, W. Wickersham. 180,813; Heater, soldering iron, J. H. Whittling. 180,811; Hogs, moving and cooling, P. L. Groot. 180,712; Hoof parer, O. Rogers. 180,731; Horse detacher, A. M. Barker. 180,825; Horse power, R. W. Benedict. 180,828; Horseshoe, G. Smith. 180,950; Hose coupling, W. A. Caswell (r). 7,251; Hose nozzle, fire, J. V. Reed. 180,790; House, portable, West & Smalley. 180,975; Hydrant, C. H. Moore. 180,780; Hydrant, fire, J. Birkinbine. 180,890; Jewelry, articles of, Hayward & Carpenter. 180,764; Knitting latch needle, J. Pepper. 180,785; Ladder, W. Small, Jr. 180,733; Ladder, fireman's, J. A. Groshon. 180,761; Ladle, etc., C. P. Housum. 180,766; Lamp extinguisher, M. Wagner (r). 7,256; Latch, gate, C. S. 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Freeman. 180,861; Printing, autographic, T. A. Edison. 180,857; Printing press cutting cylinder, S. D. Tucker. 180,966; Propellers, raising and lowering, B. Mitchell. 180,778; Pump, W. S. & E. Bunt, Jr. 180,831; Pump, Mayer & Wirtz. 180,774; Pump, ship's, Eells & Loud. 180,757; Pump, steam, Cope et al. 180,701; Punching machine, feed, L. Prahar. 180,824; Quilting frame, F. McKenna. 180,905; Radiator, Curtis & Thompson. 180,755; Radiator, steam, J. K. Abbott. 180,763; Radiator, steam, Crane & Abbott. 180,816; Railway rail joint, Waddell & Finger. 180,969; Railway switch, F. C. Middleton. 180,777; Railway switch, J. C. Welr. 180,974; Railway track broom, M. C. Isaacs. 180,717; Rivets, M. Bray. 180,747, 180,748; Rolling sucker rod joints, L. Rogers. 180,950; Safe, provision, G. McIntyre. 180,904; Salt, making solar, T. R. Timby. 180,962; Sash fastener, J. S. Heacock. 180,877; Sash fastener, F. J. Hoyt. 180,716; Sash fastener, T. Thorn. 180,959; Saw set, C. 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Pepler. 180,916; Stove, coal oil, N. H. Sherburne. 180,946; Stove pipe thimble and register, C. Pettit. 180,917; Suspenders, F. C. Wright. 180,981; Suspenders, button strap for, J. B. Sharp. 180,942; Table, chair, and walking stool, W. C. McGill. 180,775; Table, ironing, N. Nelson. 180,908; Table leaf support, J. D. Alvord. 180,740; Telegraph, duplex, T. A. Edison. 180,858; Telegraph key, J. O. Byrns. 180,839; Telegraph, printing, J. H. Bunnell. 180,700; Tobacco machine, J. F. Quesada. 180,789; Tobacco, stemming and cutting, J. P. Smothers. 180,951; Tools to be ground, applying, Walker et al. 180,971; Toy target, C. Robinson. 180,929; Trace fastening, L. Hartson. 180,762; Trap, animal, D. & T. Davis. 180,852; Trap, animal, J. W. Wilson. 180,977; Trap, mole, E. T. Transou. 180,964; Tray, child's, J. W. Stitche. 180,804; Treadle, M. A. Benjamin. 180,743;

Table listing inventions with names and numbers, including: Turnstile, electric register, R. J. Sheehy. 180,944; Umbrella, G. B. Kirkham. 180,719; Umbrella runner, H. S. Frost. 180,710; Umbrella support, A. H. Adams. 180,818; Umbrellas, ferrule for, H. S. Frost. 180,709; Universal joiner, E. E. C. & E. W. Strange. 180,735; Valve, safety, C. H. Thompson. 180,960; Vehicle running gear, M. T. Jackson. 180,886; Vehicle spring, C. B. Koon. 180,720; Vehicles, brake for light, Appel & Rothenberger. 180,820; Ventilating buildings, M. A. Burnham. 180,841; Ventilating buildings, F. Greaves. 180,868; Wagon for delivering coal, A. Iske. 180,769; Wagon spring attachment, R. & J. Doty. 180,854; Wash bench, H. C. & F. L. Paine. 180,784; Wash bench, P. E. Rudel. 180,932; Wash bench and ironing table, W. J. Lake. 180,892; Washstand, W. H. Zinn. 180,814; Washing and wringing machine, T. H. Patee. 180,914; Washing machine, G. Brooks. 180,750; Washing machine, J. M. Curtice. 180,849; Washing machine, A. D. & A. N. Ferris. 180,860; Washing machine, boiler, G. A. Starkweather. 180,734; Watches, etc., stem winding, H. Abbott. 180,739; Wells, packing and steaming oil, M. Harold. 180,873; Wheel tire, G. Cornwall. 180,847; Whip socket, J. J. Schafer. 180,936; Windmill, H. W. Bolender. 180,744; Wire-bending machine, E. I. Braddock. 180,745; Wringer, R. C. Browning. 180,837; Yoke, neck, C. F. Whipple. 180,812;

DESIGNS PATENTED.

- 9,433.—TYPE.—J. M. Conner, New York city.
9,434.—BRACELETS.—I. Rice, New York city.
9,435.—ASH BOXES.—A. Schmitt, Williamsburg, N. Y.
9,436.—FINGER RING.—A. V. Moore, Hackensack, N. J.

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