

Business and Personal.

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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 This is for our information and not for publication.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.

(4455) J. F. M. writes: Will you please explain the art of decalcomania? A. Decalcomanias or chromo transfer prints are made by brushing thin plate paper with flour or starch paste. When dry the paper is treated with a solution of gum or gum and starch. When dry it is well rolled. The printing is done in this paper by lithography, but the colors are worked in reverse order, the transparent colors being printed first. Either the surface of the print or the copal on which it is applied must be brushed with copal varnish. Apply, and remove the paper by sponging.

(4456) H. W. S. says: When was the first railway introduced into the United States and England, and also who built the first locomotive and where did it run in America? A. Railways were introduced in England, September 27, 1825; in Austria, September 30, 1828; in France, October 1, 1828; and in the United States, December 28, 1829. The first locomotive which ran in America was built at Stourbridge, England, and was imported for the Delaware and Hudson Railroad.

(4457) G. M. F. says: What employment is considered to be the healthiest and what the most unhealthy, or in other words, what class of people live the longest? A. The average ages for a few occupations are as follows: Judges, 65; farmers, 64; clergy-men, 56; lawyers, 54; merchants, 51; tailors, 44; editors, 40; machinists, 36; teachers, 34; clerks, 34; operatives, 32.

(4458) B. C. W. says: A number of years ago I saw a table in your paper giving the average number of days of sickness that could be expected by people of average health at different ages. Can you give this table? A. At 20 years of age calculate on 4 sick days yearly; at 20 to 30, 5 or 6 days; at 45, 7 days; at 50, 9 or 10 days; at 60, 16 days; at 65, 31 days; at 70, 74 days.

(4459) B. C. S. says: Kindly give the height of the ten highest towers and steeples of the world. A. Eiffel tower 1,000 feet, Washington monument 555, Cologne Cathedral 511, Hamburg, St. Nicholas 473, Strassburg 468, Rouen, Notre Dame, 465, Rome, St. Peter's, 455, Cairo, large pyramid, 450, Vienna, St. Stephen's, 449, Cairo, second pyramid, 446.

(4460) W. A. R. asks how to give a bright brass wheel the appearance of old bronze. A. A simple way is to wash the article with vinegar, and expose it to the vapor of ammonia, and repeat this until satisfied, or boil it in a solution of copper nitrate, or immerse it in a solution of iron nitrate and hyposulphate of soda in 8 parts of water.

(4461) I. A. wants a very deep black, and has been informed that Frankfort black is the blackest of all. He cannot obtain it, and asks how it is made. A. It is made in Germany, from the vine branches and other refuse of the vine culture, like charcoal is made from wood. There is, however, a better black now, the aniline black, about which draughtsmen agree that it is the blackest black known.

(4462) B. M. wishes to know what is used to make woven textures unflamable. A. The best is to wash them in a solution of sodium tungstate, next to this is ammonium phosphate, also calcium acetate and calcium chloride, equal parts dissolved in twice their weight of water; also solution of alum, of borax, sodium sulphate, and boracic acid, or a mixture of the last four have been recommended, as preventing change of color, and not stiffening the texture after drying.

(4463) J. B. asks for the best mixture used to protect iron machinery exposed to the atmosphere. A. 1 part pulverized graphite, 1 part lead sulphate, and 1 part zinc sulphate, rubbed up together and mixed well with 16 parts of linseed oil varnish and then boiled, form a coating which no water will wash off, and provides a reliable protection for all kinds of oxidizable metals, in all kinds of exposure to weather.

(4464) R. S., of New York, asks the simplest way to test if the ground combination coffee consists of a mixture of different kinds of coffee only or contains adulterations, such as burned sugar. A. When he mixes the coffee with cold water, and lets it stand for half an hour, he will find the burned sugar at the bottom, while pure coffee will float on the top. He will find that most of the so-called combination coffees are in fact adulterated coffees.

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. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., OFFICE SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

July 12, 1892.

AND EACH BEARING THAT DATE.

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

Table listing inventions with names and dates. Includes: Adjustable seat, Biggs & Fairchild; Air ship, B. F. Barnes; Alarm, See Thermal alarm; Time alarm; Amalgamator, Connors & Eddy; Angle finish for rooms, A. D. Ellis; Animal power, J. Dick; Arch, fireproof floor, P. M. Bruner; Articles, construction of legged, Harman & Eaton; Asphalt blocks, forming, S. McCarter; Atomizer, T. E. Ogram; Auger, G. L. Savage; Automatic sprinkler, K. W. Newton; Awning, B. Brooks; Axle lubricator, J. W. Woodhouse; Baking pan, S. L. Kelly; Basin, catch, E. F. St. John; Baskets, means for securing coverings of netting; Bed, folding, G. W. Rodecap; Belting, woven fabric for machine, J. Oldfield; Bench hook, C. J. Kempf; Bicycle, L. C. Jaquis; Bicycle, D. L. Thorp; Bicycle, T. C. Cabie; Bicycle exhibiting device, C. W. Munson; Bicycle seat support, W. A. Elmore; Bicycle support, T. B. Marshall; Bicycle wheel, G. G. Boswell; Bit, See Bridge bit; Curb bit; Black ash dissolver, Newhall & Hamilton; Blank feeding mechanism, F. H. Hardman; Blind, window, W. Z. Brown; Block, See Printing block; Blower, powder, W. J. Evans; Boat, J. Savage; Boiler, See Steam boiler; Water tube boiler; Boiler attachment, range, W. S. Clark; Boiler fire box, W. McCombie; Boot upper, O. Baker; Bottle, stop, C. F. Lofranco; Bands, G. L. Rands; Box, See Wood and coal box; Box, A. Ames, Jr.; Box lid support, C. B. Struble; Brake, See Car brake; Brake adjusting device, A. Rauh; Brake shoe, J. G. Wharton; Brick machine, W. Burkman; Brick, paving, D. Lance; Brick press, S. McCarter; Brick bit, J. W. James; Bucket, dinner, W. F. Janeway; Buckle, D. L. Smith; Building front, A. Brunkhorst & Co.; Butter, manufacture of, W. Cole; Cable conduits, automatic trap for, Bishop & Bell; Cable grips, lifting mechanism for, Bishop & Bell; Calculating machine, W. M. McCafferty; Camera, See Photographic camera; Camera shutter, Blair & Kelley; Car brake, F. A. Baier; Car, burglar proof, J. Beermaker; Car coupling, D. L. Barnes; Car coupling, D. Bellon; Car coupling, W. Dueding; Car coupling, C. A. Gould; Car coupling, A. B. Luther; Car door, grain, S. W. Grosh; Car locker, J. E. Dempsey; Card, envelope, R. Sinn; Carriage coupling, N. D. Chapman; Cartridge loading machine, J. H. Layman; Carving machine, J. Rohmann; Case, See Filing and supply case; Show case; Cash indicator and recorder, M. Leahy; Casks, broaching device for, G. Gabb; Cattle, suppressing horns in, J. March; Chair, See Combination chair; Dental chair; Cheese vat, L. Meyer; Chill plate for flasks, F. Marty; Chromatic pitch pipe, C. H. Congdon; Clamp, W. B. Seward; Clamp for fruit jar caps, etc., C. E. Thomas; Claw bar, J. W. Fry; Clock, alarm, C. D. Brown; Clock case, W. T. Ames; Clutch, rope, Bennett & Adams; Cob pipes, compound for filling, A. C. Bauscher; Cock for casks, E. Cremer; Cock, stop, C. F. Lofranco; Collar and cut cabinet, H. Caspar; Collar fastener, horse, J. Himmelsstein; Coiler yokes, separable coupling for, N. J. Johnson; Combination chair, W. H. Tuttle; Combination lock, W. H. Thompson; Combustion, total, E. A. Erb; Cooling milk, meat, vegetables, etc., device for, Smart & Cheatham.

Table listing inventions with names and dates. Includes: Copying press, D. Healy; Core barrel, collapsible, F. Chambers; Cornet, convertible, J. Vivien; Cotton, machine for handling, cleaning, and distributing seed, R. S. Munger; Coiler, P. B. Storer; Coupling, See Car coupling; Carriage coupling; Thill coupling; Cover holder for tea kettles, etc., J. Musgrove; Crane, overhead traveling, J. R. Morgan; Crate, fowl, F. W. Ewert; Crusher, See Ore crusher; Cuff holder, H. E. Snow; Cultivator, A. Ellis; Cultivator, G. Moore; Cup, See Paint and varnish cup; Cups, mugs, etc., drinking attachment for, J. S. Curbit; Curbit, ornamental, W. James; Cut-out switch, W. B. Cleveland; Cutter, See Meat cutter; Paper cutter; Stalk cutter; Damper operating mechanism, time, O. Briggs; Dental chair, W. H. Gilbert; Dental chair, A. P. Gould; Dental chair, B. M. Wilkerson; Dental tool, E. C. Moore; Dental vulcanizer, J. Johnson; Desk, M. J. Hafgar; Disinfecting apparatus, C. B. 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Austin; Firearm, breech-loading, D. S. West; Firearm, lever, R. F. Foster; Fire escape ladder, D. W. Hart; Fire escape ladder, J. Boden; Fish hook, W. H. Hunter; Fishing apparatus, I. Dunham; Fishing reel, E. B. Porter; Flooring, wood block, T. Charteris; Fuses, cleaning tool, Shostak; Fruit, S. E. Ball; Fruit jar, C. D. Thomas; Furnace, S. R. Smythe; Furnace for reducing metals, H. S. Blackmore; Furnace valve casing, J. D. Swindell; Furniture, stool, W. C. Cogger; Gas meter, R. F. Foster; Garbage receptacle, E. B. Merritt; Garment stay, D. Grotta; Gas and petroleum motor, B. Stein; Gas apparatus for the manufacture of, Coze & Lencaus; Fuel, J. M. Bailey; Gas or lamp lighter, R. J. G. Corner; Glass battery jar mould, J. Gayder; Gold from pulverized ores, etc., machine for extracting, T. C. Simonton; Grain binder, E. C. Grandall; Grate, W. Whitworth; Grate bar and feed water heater, combined, H. D. Wendt; Grinding wheel attachment, J. H. 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Spoon, W. W. Berry.....	21,698
Spoon, etc., G. L. Crowell, Jr.....	21,700
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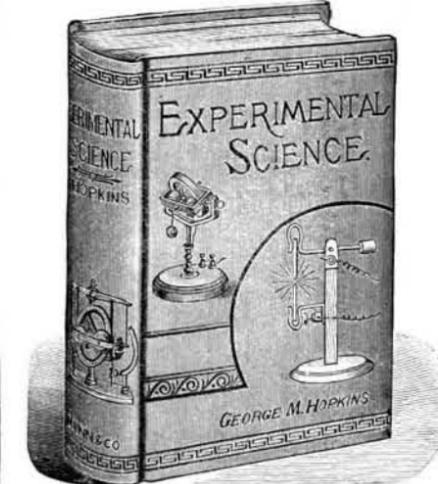
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