ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. William T. Quinley, of Golden Lake, Ark. It consists of combined pin and link holders, which may be set independently of each other, for coupling cars automatically, the ordinary pin and link being used.

A steam throttle valve has been patented by Mr. Augustus H. Morrison, of Mechanicsville, N. Y. It is for automatically regulating the flow of steam where, in a given operation or need, a varying amount is required, and the amount required controlling the operation of the valve, for which novel devices are provided.

A steam whistle has been patented by Mr. John Einig, of Jacksonville, Fla. The improvement consists of an extension contrivance of the lower end of the bell, to enable it to be shifted nearer to or farther from the nozzle to adapt it to high or low steam in the adjusting of the whistle for producing sounds most agreeable to the ear.

A car coupling has been patented by Mr. George J. Selleck, Jr., of Beetown, Wis. A lever is pivoted in the slot of the drawhead, a coupling pin being pivoted to the free end of the lever, and a lever is pivoted in the bottom of the drawhead, having its inner end weighted, the outer or front end being slotted, so that when the link is in the drawhead the coupling pin passes through the link and through the slotted end of the weighted lever, and is thus held in place.

A steam engine has been patented by Mr. Anthony Bollinger, of Zanesville, O. It has special constructions of piston, with separate steam and exhaust chambers, communicating with the steam inlet and exhaust pipes, the pipes or tubes being arranged to move with the piston and telescope the steam supply pipe; there is also a special arrangement of the valves and means for tripping them, the object being to make a simple and durable engine, which may be readily reversed, is easily operated, and economical in the use of steam.

MECHANICAL INVENTIONS.

A journal bearing has been patented by Mr. James M. Elliott, of Winnsborough, S. C. The cap of the journal box has an adjustable bearing block, and is provided with adjusting screws for setting it down on the journal; also with an adjusting screw and bearing faces for controlling the block laterally, the cap being permanently bolted down on the box.

A shingle machine has been patented by Mr. Charles A. Tarragon, of Portland, Oregon. It is made with sills having rails carrying rack bars with wheels, connected by a crossbar with each other, and engaging with gear wheels fixed to a shaft, so the rack bars are made to move forward and back evenly, spring pressed knives tapering the shingles according to tapered gauge bars, with other novel features.

A regulator for paper drying machines has been patented by Mr. Augustus H. Morrison, of Mechanicsville, N. Y. The invention consists in journaling one of the top rollers in one arm of a three armed lever, to another arm of which is attached a rod and tension spring, while to the opposite arm is connected the handle of a steam valve for regulating the supply of steam to the drying cylinders; there is also a bell for giving alarm if the web of paper breaks, with other novel features.

AGRICULTURAL INVENTIONS.

A harrow attachment for plows has been patented by Mr. Enoch C. Calvin, of Pinckneyville, Ill. An obtuse angled bar carrying teeth on its outer arm is so combined with a turn plow, another bar bent at both ends having teeth adapted to work rearwardly, as to form a harrow rigidly attached to the plow beam, to pulverize and level the soil, cutting down the high parts of the furrow slice and filling the low places.

A combined roller and seed planter has been patented by Mr. Julius F. Muenchow, of Plainview, Iowa. The rollers have their axles connected with the platform of the machine by a king bolt, the opening plows have standards with screw threads, and attached to the platform of the machine are seed boxes with discharge spouts, closed at their lower ends by valves operated by springs.

A fleece binder has been patented by Mr. Theodore C. H. Krueger, of Brady, Texas. It is constructed with a box attached to a supporting frame, and having inclined flanges upon its side edges, with hinged press boards and fingers operated by push bars, a cord, and a treadle, so the fleece can be compressed and held while being tied, a knife being so attached that all the twines of the bundle can be cut at a time.

MISCELLANEOUS INVENTIONS.

A jar and fastening therefor has been patented by Mr. Herman Pietsch, of Flatbush, N. Y. The jar has flanges near its mouth, and the cover has grooves and a clamp, with hooks, a lug projecting outward on one hook for being grasped to spring that end of the clamp free in opening the jar.

A rubber spring has been patented by Mr. Frank E. Flagg, of New York city. It is made of rubber cord, with the ends wound and metallic ferrules placed thereon, the latter provided with connecting devices for holding the spring in place, making a simple and durable spring for iceman's rubber aprons, door bands, cage hangers, etc.

A water tight glove has been patented by Pauline W. A. Petersen, of Brooklyn, N. Y. It is made of waterproof canvas, leather, or rubber, with the tips of the fingers, the thumb, and palm provided with projections or ribs, so the thickness and strength of these parts are increased, and the friction surface of the glove enlarged.

A railway ticket has been patented by Mr. Charles J. Knapp, of Deposit, N. Y. This invention provides a specially devised coupon book for "thousand mile" railway tickets, to promote convenience in their taking up or punching, and to enable the holder to easily verify the mileage punched out by the conductor.

Business and Personal.

The Charge for Insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

Notes & Queries

HINTS TO CORRESPONDENTS.

Name 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 mail, each must take his turn.

Special Information requests on matters of personal rather than general interest, and requests for **Prompt Answers by Letter**, should be accompanied with remittance of $1 to $5, according to the subject, as we cannot be expected to perform such service without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Minerals sent for examination should be distinctly marked or labeled.

(1) W. H. S. H. asks (1) how Thorley's food is made. A. We do not know the composition of Thorley's food. It is a medicinal preparation, and in order to determine its constituents, it will be necessary to have it analyzed by some competent chemist or pharmacist. 2. How to make bluing? A. For bluing take 1 ounce of soft Prussian blue, powder it and put in a bottle with 1 quart of clear rain water, and add a quarter of an ounce of oxalic acid. A teaspoonful is sufficient for a large washing. 3. How to soften water. A. Hard water contains more or less calcium carbonate. The addition of lime will make it soft. See description of the process used in England on page 4306 of SCIENTIFIC AMERICAN SUPPLEMENT, No. 270. 4. How the different kinds of ink are made. A. SCIENTIFIC AMERICAN SUPPLEMENT, No. 157, gives numerous receipts for all kinds of ink.

(2) J. W. asks: 1. What would be the effect on coal gas to heat it just before it came to the burner? A. The effect of heating on the gas alone with an ordinary burner would not be beneficial for illumination? 2. Do you know of a flat flame tip that has been patented that does it? A. No.

(3) A. H. asks how to take smoke stains out of marble caused by the building being partially burned. A. We recommend the following: Take 1 oz. of ox gall, 1 gill of lye, 1½ tablespoonfuls of turpentine; mix, and make into a paste with pipe clay. Apply the paste to the spots, and allow it to remain over them for several days. Or take 2 parts of common soda, 1 part of pumice stone, and 1 part of finely powdered chalk, sift it through a fine sieve, and mix it with water, then rub it well over the marble and then wash the marble off with soap and water.

(4) F. H. S. says: My boy 20 months old is beginning to talk, and stutters terribly. What remedy can I use? A. No medicines will be of any service, but you should have the child examined by some good physician. Stuttering in children is often caused by something abnormal in the mouth or throat; cleft palate for instance, elongated or diseased uvula, a tumor at some point, etc. It is also caused by hearing some one else stutter; the remedy for this is of course to keep him away from the influence. If neither of these causes exist, you must wait; nothing can be really done to break the habit before the child is six to seven years old.

(5) J. F. B. asks: What parts of glue and glycerine mixed together will give me a thin substance that, after drying, can be bent or doubled without cracking or breaking? A. You will have to use a composition similar to printers' rollers. An average composition consists of Cooper's best glue, 8½ lb.; extra sirup, 2 gal.; glycerine, 1 pint; Venice turpentine, 2 oz. Steep the glue in rain water until pliant, and then drain it well. Next melt it over a moderate fire, but do not "cook" it. This will take from 15 to 25 minutes. Then put in the sirup or molasses and boil three-quarters of an hour, stirring it occasionally and skimming off impurities rising to the surface. Add the glycerine and turpentine a few minutes before removing from the fire, and pour slowly. Slightly reduce or increase the glue as the weather becomes colder or warmer.

(6) L. W. asks 1. For the process for cleaning and curing tripe from the slaughter house to the market. A. In New York it is partially parboiled, but in some other places only washed with cold water before sent to market; it is generally cured by pickling in hot vinegar and spices, after cooking. 2. How is bay rum made? A. A cheap bay rum can be prepared by saturating a quarter pound block of magnesium carbonate with oil of bay; pulverize the magnesia, place it in a filter, and pour water through it until the desired quantity is obtained, then add alcohol. The quantity of water and of alcohol depends on the desired strength and quantity of bay rum. 3. What are a few of the best muscle and blood producing kinds of food? A. The question of nutritive foods is discussed elaborately in SCIENTIFIC AMERICAN SUPPLEMENT 186, under the title of "Food Physiology and Force," and in SCIENTIFIC AMERICAN SUPPLEMENT 124, as "Cost and Nutritive Value of Foods." 4. Are wild meat and game better than domestic? A. Not necessarily

(7) F. A. N. asks: 1. How would you go to work to put a good finish on a piece of black walnut wood with white wax or paraffine to take the place of varnish or shellac? What would you use to cut the wax to get it in a liquid state, and what proportion to mix it. Also what to color it with, so it would not show white in the pores of the wood? A. Wax and paraffine are both soluble in benzine or naphtha. You can make it of any desired thickness by using more or less naphtha. You can color with burnt umber or with asphaltum. 2. Also how to polish floors with beeswax? A. To prepare wax for polishing floors, 12½ pounds of yellow wax rasped are stirred into a hot solution of 6 pounds of good pearl ash in rain water. Keeping the mixture well stirred while boiling, it is first quiet, but soon commences to froth; and when the effervescence ceases heat is stopped, and there are added to the mixture while stirring 6 pounds of dry yellow ocher. It may then be poured into tin cans or boxes, and hardens on cooling; when wanted for use a pound of it is diffused in 5 pints of boiling hot water, and the mixture, well stirred, is applied while still hot to the floor by means of a paint brush; it dries in a few hours, after which the floor is to be polished with a large floor brush, and afterward wiped with a coarse woolen cloth. It is said that a coat will last six months.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

September 2, 1884,

AND EACH BEARING THAT DATE.

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

Air cooling apparatus, E. H. Lynch 304,657
Alabastinne, etc., mixing and proportioning granular or plastic materials for, M. B. Church 304,615
Ash pan, J. H. Hart 304,643
Ax, Martin & Humbert 304,538
Axle lubricator, Rosensteel & Shallenberger 304,359
Axle lubricator, J. T. Young 304,483
Axle lubricator, car, Hitchcock & Greasby 304,324
Bag. See Paper bag.
Ball trap, J. J. King 304,654
Basins and sewers, connection between, C. I. Kane 304,653
Bed bottom, spring, S. D. Tuttle 304,678
Beehive, O. M. Foltz 304,419
Bicycle, W. Clemson 304,504
Bicycle saddle, G. W. Marble 304,334
Bit brace, J. S. Fray 304,519
Board. See Sign board.
Boiler for heating buildings, W. H. Byram 304,609
Boiler furnace, W. Lowe 304,332
Bolting reel frame, W. E. Gorton 304,682
Boot and shoe uppers, machine for moulding, G. H. Clark 304,502
Boot or shoe crimping machine, Fifield & Holt 304,517
Boots or shoes, seat beater for, G. Wunderlich 304,482
Bottle and jar stopper, W. W. Guptill 304,312
Box. See Camera box. Journal box. Paper box.
Box fastener, J. R. Sprague 304,369
Boxes, wire band for, H. Frank 304,308
Brace. See Bit brace.
Brake. See Vehicle brake.
Bread cutter, M. Schneider 304,459
Bridle overdraw loop, N. B. Le Blond 304,381
Brine, purification of, E. A. Mebus 304,341
Broom handle, whisk, T. P. Watkins 304,589
Brush, paraffine, H. C. Thomas 304,429
Buckle, trace, W. J. Butler 304,499
Buggy cover, E. Bradley 304,604
Burner. See Vapor burner.
Button attaching implement, M. H. McNair 304,541
Buzz, whistling, F. R. Hunt 304,648
Calendar, J. W. McIndoe 304,340
Camera. See Photographic camera.
Camera box, T. H. Blair 304,406
Can. See Oil can. Paint can.
Candy rolling table, J. W. & W. P. Kirchhoff 304,655
Car and freight transfer apparatus, R. H. Ramsey 304,562, 304,563
Car buffer, R. E. Ricker 304,668
Car coupling, J. W. Davis 304,412
Car coupling, D. L. Hays 304,427
Car coupling, W. Henry 304,429
Car coupling, J. B. Parent 304,551
Car coupling, W. T. Quinley 304,561
Car coupling, D. M. Reynolds 304,452
Car coupling, G. J. Selleck, Jr 304,461
Car coupling, C. B. Spencer 304,467
Car coupling and brake, J. H. Duffins 304,628
Car door mechanism for freight cars, grain, J. A. Hagan 304,683
Car draw bar, street, W. P. Hudson 304,326
Car draw bars, manufacture of railway, D. S. Wineland 304,391
Car replacer, R. H. Watterson 304,590
Car starter, J. C. Wood 304,393
Carriage step, J. Pendergast 304,555
Carrier. See Cash and parcel carrier. Trace carrier.
Cash and parcel carrier, W. P. Bigelow 304,491
Casting steel, F. K. Haffey 304,314
Chain, drive, H. H. Doubleday 304,625
Chain, drive, E. L. Howe 304,325
Chair. See Railway chair.
Chairs, attachable rocker for, W. Malick 304,435
Chandelier, oil and gas, S. Horowitz 304,645
Cigar and cigarette, J. McGovern 304,438
Cigar mould, H. Hilde 304,322
Cigars, apparatus for manufacturing, Moeller & Sierk 304,347
Cigars, manufacture of, H. Thoss 304,582
Circuits, apparatus for automatically opening closed, J. P. Tirrell 304,376
Clasp. See Snap clasp.
Cleaner. See Cotton cleaner. Cotton gin saw cleaner.
Cleat, F. M. Munroe 304,349
Clock, secondary electric, C. E. Barschig 304,595
Clock striking mechanism, S. M. Terry 304,580
Cloth, machine for chinchilla-finishing, C. H. Baush 304,402
Cock, hydraulic, A. Hallowell 304,316
Cock, relief and gauge, M. S. Cabell 304,610
Coils, rings, and similar articles, device for making, Grimmett & Cook 304,639
Combination lubricator, A. E. Barthel 304,289
Compound engine, M. Coryell 304,297
Concrete and other plastics and cements, apparatus for mixing ingredients of, C. Sooysmith 304,366
Copperas, apparatus for recovering, J. Lyons 304,333
Corkscrew, W. Crabb 304,299
Cotton cleaner and condenser, W. Jarrell 304,527
Cotton gin saw cleaner, R. M. Dorsey 304,304
Coupling. See Car coupling. Pipe coupling.
Crank pitman, shaft, M. W. Clay 304,410
Cravat holder, J. N. Proeschel 304,663
Cream from milk, apparatus for separating, W. Horner 304,644
Creamery or refrigerator, F. W. Moseley 304,348
Cultivator, M. O. Morehouse 304,543