

RECENTLY PATENTED INVENTIONS.

Pertaining to Apparel.

SKIRT-SUPPORT.—MARGARET A. MCOUAT, New York, N. Y. This support is such as is worn by ladies for supporting the skirt at the waist.

RUBBER FOOTWEAR.—P. MACA. MAC-KASKIE, Tonopah, Nev. One of the purposes of the invention is to provide a rubber boot which will have ventilating openings in the foot-section thereof leading to channels which are conducted to the upper portion of a boot.

Of Interest to Farmers.

DRAFT-EQUALIZER.—F. LINDSTROM, Marquette, Kan. This equalizer comprises a horizontally-rotatable member mounted upon the tongue or draft-beam of the wheeled structure with which the improvement may be employed.

Of General Interest.

MOORING.—W. H. PEEK, United States Army. Submarine mines are usually anchored to float a fixed distance below the surface, and difficulty has been met in mooring the mines at the desired position.

SASH-FASTENER.—I. A. SHAW, Leavenworth, Kan. The invention is especially adapted for use in connection with sashes which open by sliding vertically in guide-strips.

Hardware.

PERMUTATION-LOCK.—O. KATZENBERGER, San Antonio, Texas. The object here is to provide details of construction for a lock, and more particularly to improve and simplify construction of the lock formerly patented by this inventor.

Heating and Lighting.

GRATE AND FIXTURES THEREFOR.—J. FERRACIOLI, New York, N. Y. The invention relates to improvements in grates intended especially for use in cooking stoves or ranges and to improvements for mounting the grate.

Pertaining to Vehicles.

MEANS FOR SIGNALING ON AUTOMOBILES OR THE LIKE VEHICLES.—E. BARBAROUX and G. BARBAROUX, Via Ospedale 1, Turin, Italy. In this patent the invention has reference to improved means for giving signals on automobiles or the like vehicles more readily and effectively than hitherto.

WHEEL.—I. W. GILES, New Bedford, and C. W. TEBBY, Fairhaven, Mass. This invention is an improvement in wheels, and especially in wheels designed for use on automobiles and the like wherein a cushioning and a strong traction effect is desired.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information.

"U. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 8237.—For manufacturers of electroplating outfits.

Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chaerin Falls, O.

Inquiry No. 8238.—For manufacturers of machines for making soapstone packing or braided cotton with powder inside.

I sell patents. To buy, or having one to sell, write Chas. A. Scott, 719 Mutual Life Building, Buffalo, N. Y.

Inquiry No. 8239.—For manufacturers of pressing machines for making tin toys.

The celebrated "Hornby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Machine Company. Foot of East 138th Street, New York.

Inquiry No. 8240.—For manufacturers of water wheels for irrigating purposes.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery tools, and wood fiber products. Quadriga Manufacturing Company, 18 South Canal St., Chicago.

Inquiry No. 8241.—Wanted, address of Shipman Steam Engine and Boiler Co.

Automobile experts are in constant demand at high salaries. Our seven weeks' course is the most thorough and practical, fitting men to drive, handle and repair day and evening classes. Special course for owners New York School of Automobile Engineers, 146 West 56th Street, New York.

Inquiry No. 8242.—For manufacturers of an apparatus used for cooling a refrigerator in place of ice.

Inquiry No. 8243.—For manufacturers of concrete shingle-making machines.

Inquiry No. 8244.—For manufacturers of clothes-pin machinery.

Inquiry No. 8245.—For manufacturers of charcoal machinery.

Inquiry No. 8246.—For manufacturers of sand brick-making machines.

Inquiry No. 8247.—For manufacturers of public rifle ranges, especially the glass ball and water jet device.

Inquiry No. 8248.—For address of Solar Furnace and Power Co.

Inquiry No. 8249.—For address of manufacturer of Benj. Keyes patent egg box or shipping carton.



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.

Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

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.

(10081) H. A. says: A cask of water is placed on a pair of scales. It weighs 50 pounds. If a fish weighing 15 pounds (salmon) is placed in the water contained in the cask, will it raise the weight of the cask or not? It is argued by some apparently smart men, but I want to lay down your word to them as proof. I contend that the cask then weighs 65 pounds. A person weighs 140 pounds before dinner; does he weigh any more after a hearty meal, say of 1 1/2 pounds? It is generally contended here that he does not. I say he does. Who is right? A. If a cask full to the brim with water has a live fish put into it, as much water as the fish displaces will overflow. As a fish weighs the same as the water it displaces when floating in water, it follows that the cask full of water and fish weigh the same after the fish has been put into the water that the cask and water weighed before the fish was put into the water, that is, 50 pounds. If the cask was not full of water when the fish was put into it, and if no water overflowed when the fish was put into the cask, the weight of fish, water, and cask will be 65 pounds in the case you specify. The whole turns upon whether the fish is alive and whether the cask is completely filled with water. If a person is weighed after a meal, he will weigh as much more than he did before the meal as the weight of the food he has eaten. Common sense teaches this. If a person puts 1 1/2 pounds of food into his pocket and gets upon scales he will weigh 1 1/2 pounds more than without the food in his pocket. Write stomach in place of pocket, and you will have the same fact. Or put nails in place of the word food. It will be equally true.

(10082) J. A. H. asks: Will you kindly explain how voltmeters and ammeters can be read to 1-10 their divisions? A. A scale is usually read to a tenth of a division by estimating the fractional part in tenths with the eye. This is of course not accurate, but the best that can ordinarily be done. The error,

with experience, need not exceed a tenth. Sometimes voltmeters and ammeters are provided with shunts, which change the value of a division of the scale. Thus you can have a shunt made which will make one division have one-tenth of its present value. This will be much better than to estimate by the eye the fractional part of a division indicated by the pointer.

(10083) W. D. O. says: I would like to know the composition of the preparation with which the particles of carbon, in the carbon pencils for electric arc lamps, are held together; that is, the cementing substance. A. Arc light carbons, carbon plates for battery cells, and similar articles are made from coke. The higher grades are made from coke derived from the residue of petroleum stills. The crude material is dried, ground fine, and sorted into different sizes. The binding material may be a coal-tar product, or some other substance containing carbon, and which will be reduced to carbon by the heat of the furnace. These are thoroughly mixed, pressed into forms by hydraulic pressure, and afterward baked in a furnace. For a full description see SUPPLEMENT, No. 1237, price ten cents.

(10084) R. S. C. asks: Why, if known, does the skin of a chameleon change in color, in moving from an object of one color to one of another color; that is, why does its skin always assume the same color as the object it may be resting upon? A. One answer to the question, "Why does the chameleon change the color of its skin?" is that the chameleon has a better chance of life by reason of this protective resemblance to its surroundings. Those chameleons which had the largest range of change of color in the past have survived, and the capacity of change has been evolved in their descendants to a higher degree, so that all chameleons now living readily change the color of their skins to that of the bark of the tree upon which they at the time may be. They are thus protected from their enemies. There are many such adaptations of creatures to their habitat or environment. The polar bear, living among Arctic snows, is white. The tiger in the jungles is striped, as if painted to resemble rushes, reeds, or other stiff and straight plants. Many fish have backs of the hue of the sand or sea bottom upon which they lie. Nature has thus attended to the needs of her weaker children. Another answer might be that the effect of the color of the surroundings is to produce a change in the pigment in the cells of the skin, so that the color becomes like that of the surface upon which the animal is resting. In the chameleon this is comparatively rapid.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued

for the Week Ending July 10, 1906.

AND EACH BEARING THAT DATE

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

Table listing inventions and their patent numbers, including items like Abdominal supporter, Accumulator controller, Adding machine, Advertising lantern, Air brake governor, Air compressor, Alcoholic spirits, Alloys, Ammonia from gases, Anchor, Animal releasing device, Anode support, Apartment closure, Auger bit, Automatic sprinkler, Automobile climber, Automobile fender, Automobiles or the like vehicles, Axle, Bag, Barrette, Barrel, Basket making machine, Battery, Battery plate separator, Bearing, Bearing, self-adjustable journal, crank, and axle, Bed, Bed bottom, Bed folding, Beds, Bedstead, Belt, Belt replacer, Belt tightener, Blinder, Blinder frame, Blinder, temporary, Block machine, Block signal system, Bobbin spring, Bobbers and furnaces, Boots or shoes, Boring machine, Bottle, Bottle, multiple compartment, Bottle, non-refillable, Bottle, non-refillable, J. A. Pfeiffer, Bottle, non-refillable, W. H. Young, Bottle, non-refillable, Kinigold & Ferguson, Bottle, non-refillable, G. Evanovitch, Bottle stopper, Box fastener, Boxes, apparatus for operating covers of lock, Bracket, Brake, Brake cylinder, Brewing soy.

Table listing inventions and their patent numbers, including items like Brick press, Brooder hover, Brooders, mirror attachment for, H. H. Blackman, Broom, R. J. Ellis, Broom holder, J. D. Mack, Brush, shaving, E. A. Farron, Buckle, E. M. Hoagland, Buckle, W. D. Flynn, Buffer, S. M. Goldberg, Burglar and fire alarm, Goresline & Cramer, Butt book, E. O'Brien, Button, collar, W. L. Fross, Cake cutter, E. Stumpf, Calculating machine, J. Vernebrun, Calendar, D. T. Kendrick, Callipers, J. F. Haworth, Cane carrier, feeder, G. D. Von Phul, Canning, apparatus for preparing fruit for, W. J. Latchford, Car brake, railway, P. P. Hatcher, Car coupler, P. D. Serrurier, Car draft rigging, I. A. Rande, Car end sill, S. Otis, Car fender, R. C. Layton, Car door operating mechanism, A. Campbell, Car heater, electric, H. W. Buck, Car mover, L. Ehrlich, Car, railway, A. E. Ostrander, Car seat, Kilburn & McConnell, Car seat, F. K. Fassett, Car signal circuit, electric, W. Lintern, Carbureter, T. McCormick, Carbureter, gas engine, T. L. & T. J. Sturtevant, Carriage, child's folding, G. H. Pond, Carrier, See Game carrier, Carton, Howe & Davidson, Cash register, E. S. Smith, Casket handle, E. R. Sargent, Castrating appliance, T. Heath, Cellulose of wood into fermentable sugar, converting, A. Classen, Cement manufacturing apparatus, C. Ellis, Cement structures waterproof making, G. H. Liebau, Chain hook, G. Keenin, Check distributor, individual, J. T. Hicks, China kiln, J. C. Hinz, Churn cover, A. D. Matterson, Clock, M. Wortmann, Clock, alarm, W. E. Porter, Clock, electric, R. L. Hight, Clutch, C. A. Fisher, Clutch mechanism, W. P. Jacobs, Clutch mechanism, S. J. Davis, Clutch, safety winding, C. Johnson, Computing mechanism, J. A. Smith, Concrete casings, fittings for, P. A. Koetitz, Concrete construction for buildings, reinforced, C. P. Weeks, Concrete pile, reinforced, W. H. Healy, Concrete, reinforcing truss for, E. B. Jarvis, Concrete sectional conduit, reinforced, Keenan & Tobin, Condenser, C. L. Heisler, Condenser and making same, M. K. McGrath, Conduit coupling, W. W. Carpenter, Conduits, making hermetically sealed, A. S. Dixon, Confetto cannon, R. Kileman, Controller, H. E. White, Conveying system, R. B. Green, Cooky mold and cutter, F. A. Lohmann, Cooler and drier, A. W. French, Corn husking machine, Green, H. Olmer, Corner stay, H. H. Dewey, Corset, B. Kull, Cotton bolting, cleaning, and ginning machine, J. M. Gardner, Cotton compressing apparatus, W. M. Holmes, Cotton gin, W. F. Overmyer, Couch, reclining, J. Flinnell, Coupling locks, device for operating, L. Parish, Crossover, removable, C. B. Ryan, Cultivator shield, H. Ver Heul, Cup holder, communion, C. P. Harris, Cupboard, folding, R. C. Russell, Current director, J. F. McElroy, Currents in spark coils, vibrating mechanism for interrupting, J. O. Heinze, Jr., Curtain, J. C. Atkin, Curtain and shade holder, combined, E. F. Luetschau, Curtain, texture, P. Lauther, Curtain pole, J. B. Kram, Curtain pole, A. J. Mapel, Curtain stretcher, J. Booth, Cushion, H. S. Hale, Damper regulator, C. P. Geritz, Dash foot and toe rail support, vehicle, P. E. Ebrenz, Deraller, Linn & Patrick, Desk, J. A. Peterson, Desk, foldable, N. W. Selander, Display rack, J. H. Best, Distance instrument, W. Laska, Door, sliding, J. S. Schlosser, Doors, controlling switch for motor operated, J. W. Kellogg, Doors, lock setting gage for, A. Schrock, Draft appliance, B. E. Barney, Draft appliance, C. M. Thompson, Draft equalizer, F. Lindstrom, Drawer slide, J. Beaudet, Drawing in errors, device for correcting, H. D. Colman, Dressing and conveying apparatus, Knox & Ferris, Drier, See Grain drier, Duck call, P. S. Oit, Dust gage, J. S. Patten, Dust receptacle, C. D. Williams, Eccentric, E. J. Spencer, Electric furnace, F. T. Snyder, Electric furnace, J. F. Hammond, Electric machine, dynamo, P. Boucherot, Electric switch, C. F. Black, Electric switch, E. B. Jacobson, Elevator safety apparatus, A. V. A. McHarg, Elevator well door, W. J. Fletcher, Embroidering machines, shuttle driving mechanism for, Salzer & Walther, Emulsifier, C. A. Janson, Engine speed and spark regulating device, explosive, T. Van Tuyl, Engine vaporizer, hydrocarbon, C. F. Pearson, Engines, device for preventing back firing in explosive, G. Holloway, Excavating and conveying system, E. B. Merry, Excavating apparatus, R. B. Page, Excavating machine, C. Kerr, Excavator, W. E. Magie, Exhibition hat case, H. Hefty, Eyeglass attachment, H. B. Wood, Eyeglass guard, W. G. Hahn, Eyeglass guard, L. A. Hines, Face shield, J. H. Ash, Fan, electric, A. F. Becker, Farm gate, C. H. Hunt, Feed bag for live stock, O. F. Garretson, Feeder, gravity boiler, W. A. Moffat, Fence and other post, E. M. Bunce, Fence fabric, wire, T. Litwiller, Fence tie, wire, R. Lake, Fender, W. S. E. Sevey, Fertilizer spreader, J. H. Jensen, Fibrous materials, apparatus for separating oil or grease from, N. C. Lane, File, document, C. A. Phelps, Fire alarm system, Beane & Bennett, Fire escape, J. Dodge, Fire escape, portable, H. H. Barsalon, Fire extinguisher, H. E. Safford, Fireproof door, E. B. Tonnen, Fish hook, C. M. Curtis, Floor, T. Cantwell, Fluid meter, F. Lambert, Fly trap, F. Klounitzer, Folding and other machines, frame construction for, C. A. Sturtevant, Foot warmer, C. Schaefer, Fruit syringing machine, L. P. Graham, Funnel, G. N. Haskell, Furnace charging apparatus, blast, Ford & Parks.