

(39) F. M. W. asks: Is there such an instrument as a night glass? A. The night glass (telescope), properly speaking, differs from the day glass only in the dimensions of its objectives and in some cases the use of an eyepiece of lower power.

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

T. A. H.—Nos. 1, 2, and 3 are sulphide of iron. No. 4 is sand containing sulphide of iron, oxide of iron, alumina, and clay.—D. S. V.—It is chlorite with felspar, and is of no value.—J. S. M.—The presence of the sand is probably due to the decomposition of certain silicates at the source of the spring, the finely divided silica being brought to the surface by the mechanical force of the water, and there deposited. It is not of sufficient purity to be of value even for glass making.—S. S.—The powder consists principally of sesquioxide of iron, together with a little alumina and sand. We found neither gold nor silver.—P., of Gold Hill, Nevada.—It is a clay containing lime. We do not think it contains any metal in paying quantities. A complete analysis would be required to determine all its constituents.—W. H. W.—It is galena, sulphuret of lead.—J. M.—The very small piece appears to be an artificial product. It contains a considerable percentage of copper.—J. McG.—A complete analysis of the beef did not detect any poisonous matter.—J. F. W.—No. 1 is mica schist. No. 2 is hornblende. No. 3 is chrysoprase-chalcedony, whose color is due to nickel. No. 4 is dolomite, a magnesian limestone. No. 5 is rutile—titanic acid. No. 6 is felspar mica. No. 7 is a variety of basalt. No. 8 is quartz. No. 9 is impure clay. No. 10 is granite. Nos. 11 and 13 are semi-decomposed granite. No. 12 is quartz. No. 14 is flint. No. 15 is clay containing iron. Nos. 16 and 17 are hornblende. No. 18 appears to be a specimen of chlorite, a silicate of magnesia. No. 19 is magnesian limestone.—E. E. Y.—It is a talcose rock containing sulphide of iron, which has gradually suffered partial decomposition; it is not valuable.—J. T.—It is an impure clay containing oxide of iron and sand.—A. W. S.—It contains, or has been in contact while heated with, sand or clay. The scoria consists of silicates of lime, alumina, and iron, together with caustic lime.—S. E. E.—No. 1 is hematite—an iron ore. No. 2 contains oxide of manganese.—No. 3 is hornblende.—R. C.—The yellow body is sulphide of iron. The white, carbonate of lime. The hard dark colored piece appears to be chalcedony. The fourth is a piece of scoria.—Cairo, Ill.—It is impure kaolin, a silicate of alumina.—The two specimens in match box, marked "Alpha" and "Clara," are quartz rock and hematite iron ore.

J. C. R. asks: In what year did the grasshoppers commence their destructive work in this country?—W. Z. R. and others ask: What is hair-tua, which you mention as a new size for cotton cloth?

COMMUNICATIONS RECEIVED.

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

- On the Accumulation of the World. By S. A. On Bevel Gears. By H. E. Also inquiries and answers from the following: W. F. W.—L. W. P.—B. T. K.—P. F.—H. H.—J. B.—W. W. C.—F. M., Jr.—W. D. K.—W. K. P.—M. A. G.—E. G.—P. S. K.

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 cast iron cannon? Who sells sensitive dry photographic plates? Whose is the best photographic apparatus for outdoor work? Who sells varnishes? Whose is the purest white lead?" 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 22, 1876, AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

Table listing various inventions such as Addressing machine, Alarm, fire, A. F. Eells, Auger, pest hole, L. R. Hitchcock, B ale tie, W. Wilkinson, Ba ngmanure, etc., J. B. Archer, Barrel, D. F. Bowker, rrel, spool, Keese et al.

Main index table listing inventions and their page numbers, including Barrel stand, Bed bottom spring, Bedstead, Billiard chalk, Bluing, liquid laundry, Bobbin, C. Hardy, Boiler attachment, Boiler, culinary, J. Bevin, Boiler flue brush, J. H. Davis, Boiler furnace, steam, B. J. Hobson, Boiler compound, scale-removing, R. R. Taylor, Boiling apparatus, J. H. Corey, Bolts, etc., making, Le Blanc et al., Boot-lasting apparatus, D. Morey, Boot, moccasin, S. T. Hutchins, Bridges, etc., raising, Clark et al., Brooms, J. F. Lee, Jr., Buckle, P. Burns, Bung, W. W. Crooker, Bureau, J. Isakson, Burner, lamp, H. C. Scott, Butter worker, H. O. Mason, Candlestick, miner's, Quinliven & Linebarger, Cans, labeling fruit, J. Hinkley, Car axle lubricator, J. B. Flynt, Car brake pad, Russell & Shank, Car coupling, C. Derrick, Car coupling, A. Scoles, Car, discharging, J. W. McDonald, Car, refrigerating, J. A. Ayer, Car unloader, grain, G. M. Moulton, Car ventilator, W. Foglesong, Car wheels, casting, N. Washburn, Cars, feed trough for stock, Z. Street, Cars, etc., heater for, M. W. Hazelton, Cars, etc., ventilating, W. S. Andrews, Cartridges, capping, Burton et al., Cartridge cases, making, I. M. Milbank, Cartridge shells, testing, Salisbury & Wells, Chain, ornamental, S. Davidson, Chain, ornamental, J. L. Heeley, Chain, ornamental, P. E. Witherell, Chest protector, lady's, H. Hayward, Churn, L. Blust, Churn, J. Campbell, Cigarmoid, N. Du Brul (r), Clevis, spring, J. F. Chase, Cloid crusher and drag, H. Feenders, Clothes dryer, J. P. Howell, Clothes dryer, O. B. Lee, Clothes pounder, R. J. Pumphrey, Clothes wringer, F. Way, Cock, stop and waste, G. Veale, Jr., Coloring cotton and wool, Rice & Arnold, Cooler, milk, W. H. Hyde, Corset, C. A. Griswold, Cotton cleaner, A. J. Lee, Crackers, packing case for, J. Garneau, Sr., Cradle, wire, E. Rollert, Crib and table, M. C. Urquhart, Cultivator, J. C. Bannigan, Cultivator, C. L. Carter, Cultivator, D. C. Stover, Cutting index sheets, S. M. Simons, Dental foil, R. S. Williams, Dental plugger, Snow & Lewis (r), Dentist's vulcanizer, J. L. McDermut (r), Desk, writing, Keys & Taylor, Digger, potato, A. J. Nellis, Dividers, A. Gruber, Door fastener, J. D. King, Drawing board, S. James, Drill, rock, E. Winchester, Earth closet, J. W. Beyron, Earth closet, R. S. Williams, Earth pulverizer, J. M. Kendall, Egg box, G. W. Stevens, Electric machine, W. Hochhausen, Elevated way, H. W. Farley, Elevator and purifier, water, C. Hartzell, Elevator belts for buckets, F. H. C. Mey, Elevator, hod, W. Smith, Elevator, hydraulic, M. P. Higgins, Elevator tower, L. B. Sawyer, Elevator tripping bucket, coal, J. R. Fitzhugh, Embankments, forming, Swift & O'Neale, Engine, blowing, P. L. Welmer, Engine, steam, A. R. Crithfield, Engine balanced valve, J. Fairburn, Engine governor, J. D. Willoughby, Engine valve, steam-moved, A. J. Stevens, Fan, J. E. Young, Fare box, W. E. Prall, Fence, barbed, R. Ford, Fence wire, barbed, J. F. Glidden, Fertilizing, treating refuse for, J. Bonfield, Fiber, separating, J. B. Vogel, Fire arm, breech-loading, H. J. Altman, Fire extinguisher, J. H. Connelly, Fire place frame, Bargas & Bell, Fires in oil tanks, extinguishing, J. H. Connelly, Fishing, trolling hook for, H. C. Brush, Furnace for assaying, T. M. Berge, Furnace gases, etc., purifying, Connelly et al. (r), Furnace, soldering, F. C. & C. E. Smith, Gage, carpenter's, C. H. B. Hutchinson, Gas and water pipe case, F. Jarecki, Gas apparatus, R. Dean, Gas, generating carbonic acid, A. Kayser, Gas burner, F. A. Seaver, Gas lighting, automatic, W. W. Hannah, Gas fixture, C. Y. Taylor, Gas, making, H. W. C. Tweddle, Gas purifier, P. Munzinger, Glassware, press for molding, J. Haley, Grate, J. R. Case, Gun stock, adjustable, A. Sherman, Harness saddle and check hook, P. Burns, Harrow, A. J. Upham, Harvester, Rawson, Thacher & Rawson, Harvester, corn, Hunt & Bryan, Harvester, platform adjustment, S. Noxon, Jr., Hay elevator, J. R. Fitzhugh, Hay tedder, W. C. Gifford (r), Health lift, H. H. Everts, Heater, fire place, S. Musser, Heater for cars, etc., M. W. Hazelton, Hoe, wheel, R. Vampill, Hoof trimmer, G. Greiner, Horse detaching device, M. V. B. Walker, Horseshoes, removing burr from, C. H. Perkins, Hydrant, J. E. Scanlan, Hydrant, L. L. Treman, Hydro-extractor, W. P. Uhlinger, Ice crushing machine, D. W. Low, Illuminating apparatus, F. Darracott, Indicator, punching, W. Welch (r), Indicator, station, C. O. Ficht, Injector, G. H. Little (r), Jack, lifting, H. A. Curtis, Jack, wagon, F. A. Cleland, Kettle, camp, A. A. Gervais, Kiln, brick, E. W. Bingham, Ladder, extension step, W. H. Bitter, Lamp collar, C. F. Spencer, Lamp lighting attachment, R. Biber, Lamp wick and burner, H. C. Scott, Land roller marker, W. V. Aldridge, Lathes, chuck for metal, A. B. Smith, Leather, tapering machine, J. & G. W. Settle, Leggings, F. L. Oakley, Levelling rod, G. L. Whitehouse, Loom temple, E. S. Stimpson, Marble, artificial, R. Guelton, Marble, polishing, D. C. Myers, Mill, fulling, J. Draper, Mop holder, Cubbage & Alexander, Musical instrument, Smith & Hamilton, Nail extractor, W. H. Tinker, Nail feeding machine, F. Toepfer, Nail plate feeder, F. A. Gleason, Nut lock, T. C. Conrad, Nut lock, D. Deshon, Nut lock, C. H. Everhart, Ores, etc., roasting, smelting, J. Duffey, Organ tremolo, read, H. L. Pierce, Overalls, Crocker & Sommerfeld, Pail, lard, J. Sears, Pails, machine for stripping, S. R. Henry, Paper bag machine, C. H. Morgan (r), Paper bag machine, S. E. Pettee (r), Paper, composition paste for fly, J. Ralston, Paper-folding mechanism, L. C. Crowell, Paper pulp, saving alkali in, S. Brown, Pavement, S. Baird, Peanut roaster, J. Esposito, Pen and pencil case, C. M. Johnson, Pipe molds, making, W. Smith, Plating machine, Robinson & Silsby, Plane, etc., tonguing, C. G. Miller, Planter and fertilizer, J. C. Fooshe, Planter, corn, Z. D. Waters, Plaster, seed, P. Kranz, Plastering tool, A. A. Howe, Plow, W. Stephenson, Plow beam, adjustable, J. Pentreath, Popcorn balls, forming, G. A. Blodgett, Power, transmitting, Williams & Carter, Press, cider, H. L. & S. M. Brown, Printed sheets, etc., receiving, J. D. Yost, Pulley or fly wheel clutch, R. A. York, Pump, J. S. Adams, Pump, G. W. Rhinehart, Pump, cattle, J. H. McConnell, Pump, chain, G. Blythe, Pump, chain, A. J. Purviance, Pump governor, J. S. Leas, Pump, steam, J. Cahill, Pump valve, W. H. Thomas, Pumping valve, for barrels, J. J. Lewis, Railway signal, electro-magnetic, Hall & Snow, Railway switch, W. E. Prall, Railway switch, link bar for, T. G. Armstrong, Rake, horse hay, H. H. Hatheway, Reel, twine, J. Clarke, Reflector, F. L. Senour, Refrigerator, J. F. Ferguson, Retort for distilling mercury, F. Gutzkow, Rolling rolls, roll for, W. Evans, Sash holder, E. B. Hill, Saw buck, P. W. Hardwick, Saw, hand, Disston & Shoemaker, Saws, tab for gang, H. Disston, Sawing machine, firewood, W. A. Hodgkins, Sawing machine, lath, J. W. Calkins, Separator, grain, R. M. Becker, Separator, grain, P. E. Merrihew, Separator, shavings, E. Brown, Settee, B. A. Osgood, Shaft coupling, R. Poole, Sharpening machine, McLaren & Coventry, Shelf, adjustable, E. C. Donnell, Shoe pegs, making, O. Abell, Sidewalk, T. Hyatt, Sleeve, metallic, G. Herring, Sink guard and cover combined, A. S. Hodges, Skate, J. A. Dodge, Sled, Brannock & Cleveland, Sleigh knee and beam socket, J. J. Cobb, Sling for packages, G. D. Stevens, Smoothing iron, self-heating, J. S. Hull, Solder-cutting machine, F. C. & C. E. Smith, Soldering furnace, F. C. & C. E. Smith, Spooling guide, G. Draper, Spooling guide supporter, J. B. Bancroft, Squaring tool, frame, J. Cleveland, Stamp, hand, P. Liebe, Steam or gas, absorbing noise of, T. Shaw, Stereoscope, Wilcox & Ryan, Stove, C. Baldwin, Stove pipe, G. Wright, Stove platform, M. De Yonge, Surveying instrument, W. Kuebler, Suspenders, J. B. Sharp, Tank, liquid-measuring, B. Williams, Teaching singing, G. N. Carrozz, Telegraph signal box, J. H. C. Watts, Telegraph, perforator, G. L. Anders, Tobacco cutter, J. G. Perry, Tobacco, making plug, C. Worley, Toy cannon, S. R. Hibbard, Trap, animal, C. R. Jenne, Tube-stretching machine, J. T. Connelly, Tunnel, subaqueous, J. C. Trautwine, Tweer, M. Lester, Tweer, I. S. Van Winkle, Type-writing machine, G. H. Morgan, Umbrella drip cup, Vincent & McKinny (r), Valve, balanced, L. H. Hall, Valve gear, G. A. C. Bremme, Valve, stop, C. Jenkins, Vehicle draft appliance, J. L. Mueller, Vehicle head block, Z. Fischesser, Vehicle hub, N. L. Holmes, Vehicle pole attachment, B. C. Bradley, Vehicle, trotting, A. Hitchcock, Vehicles, spring connection for, W. Evans, Velocipede, S. Gilzinger, Veneers, cutting, J. D. McEachern, Ventilator, valve, W. Lane, Wagon brake, Adair & Babcock, Wagon brake lever, J. S. Fullerton, Wagon, manure, J. W. Town, Washing machine, S. Lindsley, Water, purifying, M. Nolden, Water wheel, Rector & Black, Water wheel, R. D. Sayre, Weather strip, H. R. Parker, Wells, lowering brick into, J. Campbell, Windmill, J. H. Painter, Windmill, G. H. Wallace, Window scaffold, H. C. Traphagen, Window screen, A. B. Davis.

Table listing inventions such as Window screen, A. B. Davis, DESIGNS PATENTED, 9,449.—SHAWL PIN.—L. S. Beals, Astoria, N. Y., 9,450.—FOUNTAIN BIRMS.—J. W. Fiske, New York city, 9,451.—FOUNTAIN BASIN.—J. W. Fiske, New York city, 9,452.—CARPETS.—J. Hamer, Dutchess county, N. Y., 9,453.—CARPETS.—A. Heald, Philadelphia, Pa., 9,454.—BELFRY.—M. Hill, Philadelphia, Pa., 9,455.—JACKET.—G. F. Hollis, Boston, Mass., 9,456 to 9,462.—CARRIAGE STEPS.—D. A. Kimbark, Chicago, Ill., 9,463.—SHIRT FRONTS.—A. Plant, New York city, 9,464 to 9,472.—FABRIC.—R. Scott et al., Lawrence, Mass.

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