

Facts for the Ladies.

This is to certify that I bought a Wheeler & Wilson Sewing Machine, March 7, 1859, and it has been used with entire satisfaction by my daughter, who was afflicted with spine disease. It proved the best doctor I ever employed, for she not only regained her health, but has earned a living with it for herself and me ever since. Mrs. M. B. BALL. New York, Nov. 29, 1868.

Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notices exceed Four Lines, One Dollar and a Half per line will be charged.

Wanted by a business man—The agency, in Portland, of some useful invention. Address J. W. Lucas, Portland, Me.

Metallic Letters to put on Patterns; also, for numbering street doors and church pews. Allen & Brim, Seneca Falls, N. Y.

Lubricator for loose pulleys, in general use. Satisfaction guaranteed. The patent for sale. Address Box 31, 648 Broadway, New York.

Wanted.—Builders of Hoisting Machinery, suitable for a five-story factory, to send their descriptive circulars and price lists to S. N. Brown & Co., Dayton, Ohio.

The great scarcity of water in our large cities is mainly caused by the enormous quantity wasted, which can be prevented by using the Boston Safety Faucet (self-closing), the saving of water in one building in this city being over 200,000 gallons in three months. For sale by Joseph Zane & Co., 81 Sudbury st., Boston, Mass.

A Rare Chance. Terms Reasonable.—Foundry and Machine Shop to Lease, for a term of years, in Galveston, Texas, the best location in the South. Address M. L. Parry, Galveston, Texas.

Union Arm Chairs, for hotels, offices, piazzas, and all places. Best in market. Made upon honor. Send for circular. F. A. Sinclair, Mottville, N. Y.

Manufacturers of Power Hoisting Machines send price list and circular to Cooper, Jones & Cadbury, Philadelphia.

Business Opening. For Sale—Lease, machinery, etc., of a metal-perforating and gas-burner business, long established, in this city. Several valuable patents go with the business. Apply to C. Sullivan, administrator, 119 Broadway, New York, Room 19.

Wanted—Partner with capital to help patent and bring out two inventions:—Heater for Feed-water to Boilers, and improvement in Driving Pulleys. Address Box 238, Tidoupe, Pa.

Koch's Patent on shelving for stores is offered for sale—entire or State Rights. See illustrated description, Vol. XXI. No. 14, Scientific American, for particulars. Address Wm. & Geo. Koch, Cass Postoffice, Pa.

Wanted—A set of the best new machinery for converting standing trees into short, split firewood. W. H. H. Green, Jackson, Miss.

For Machine for cutting green corn for canning or drying, address F. Lewis or Isaac McLeellan, Gorham, Me.

To Manufacturers—For sale, a new 3-story stone building 60-ft. by 30-ft., with never-failing water-power. Facilities for shipping unsurpassed. Inquire of F. A. Sinclair, Mottville, Onondaga Co., N. Y.

Clothes Wringers of all kinds repaired or taken in part pay for the "Universal," which is warranted durable. R. C. Browning, Agent, 32 Courtlandt st., New York.

Wanted—Manager.—Wanted immediately, a manager for a Tube Works. Must understand the business thoroughly, and be capable of managing a large number of employees. References will be required. Address, stating where last employed. Lock Box 142, Pittsburgh, Pa.

Hot Pressed Wrought Iron Nuts, of all sizes, manufactured and for sale at moderate prices by J. H. Sternbergh, Reading, Pa.

For Sale—Cotton Planter.—The entire right of the King Cotton Planter—the only successful in use. Have been worked since the war, and given universal satisfaction. The machine is simple, strong, and can be built cheaply. Will sell at a low figure. Reason for disposing of it is want of time to give it proper attention. Address S. N. Brown & Co., Dayton, O.

Vols., Nos., and Sets of Scientific American for sale. Address Theo. Tusch, No. 37 Park Row, New York city.

Cold Rolled—Shafting, piston rods, pump rods, Collins patent double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa.

Automatic Lathes, for spools and tassel molds, made by H. H. Frary, Jonesville, Vt.

If you want the real oak-tanned leather-belt, C. W. Army manufactures it. See advertisement.

Peck's patent drop press. For circulars, address the sole manufacturers, Milo Peck & Co., New Haven, Ct.

Wanted—A contract for the manufacture of specialties, either hardware or tools. C. N. Trump, Machinist, Portchester, N. Y.

Man'rs of grain-cleaning machinery and others can have sheet zinc perforated at 2c. per sq. ft. R. Aitchison & Co., 845 State st., Chicago.

Wanted—To communicate with any party who has a practical knowledge of building and running a powder mill. Address "W," P. O. Box 5,692, New York city.

Send for a circular on the uses of Soluble Glass, or Silicates of Soda and Potash, fire and water-proof. Manufactured by L. & J. W. Feuchtwanger, Chemists and Drug Importers, 55 Cedar st., New York.

S. S. Pollard's celebrated Mill Picks, 137 Raymond st., Brooklyn.

Mill-stone dressing diamond machine, simple, effective, durable. Also, Glazier's diamonds. John Dickinson, 64 Nassau st., New York.

Leschot's Patent Diamond-pointed Steam Drills save, on the average, fifty per cent of the cost of rock drilling. Manufactured only by Severance & Holt, 16 Wall st., New York.

For solid wrought-iron beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Machinists, boiler makers, tanners, and workers of sheet metals read advertisement of the Parker Power Presses.

Diamond carbon, formed into wedge or other shapes for pointing and edging tools or cutters for drilling and working stone, etc. Send stamp for circular. John Dickinson, 64 Nassau st., New York.

For sale by State or County the Patent Right for the best Cultivator in use. For terms address Isaiah Henton, Shelbyville, Ill.

Inventions Patented in England by Americans.

[Compiled from the "Journal of the Commissioners of Patents,"]

PROVISIONAL PROTECTION FOR SIX MONTHS.

2,423.—FURNITURE CASTER.—J. L. Woolf, St. Louis, Mo. August 13, 1869. 2,529.—MOTIVE POWER.—H. Call, Concord, N. H. August 25, 1869. 2,514.—HULLING APPARATUS.—J. F. B. Marshall and A. Jones, Boston, Mass. August 27, 1869.

2,547.—APPARATUS FOR REFINING LARD, ETC.—C. J. Everett, Highwood Park, N. J. August 27, 1869. 2,553.—TREATING CONGLOMERATES OF CAST IRON, ETC.—T. S. Blair, Pittsburgh, Pa., and F. Ellerhausen, Ellerhouse, Nova Scotia. August 28, 1869. 2,569.—MACHINERY FOR MANUFACTURING NAILS, BRADS, ETC.—E. L. Brundage, Middletown, N. Y. August 30, 1869. 2,570.—FURNACE.—G. G. Clarkson and J. L. Paige, Rochester, N. Y. August 30, 1869. 2,577.—WASHING MACHINE.—J. J. Grant, Philadelphia, Pa. August 30, 1869.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information from us; beside, as sometimes happens, we may prefer to address correspondents by mail.

SPECIAL NOTE.—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at \$10 a line, under the head of "Business and Personal."

All reference to back numbers should be by volume and page.

J. R. M., of Kansas.—To find the flow of water through a 2-inch orifice under a head of twenty-five feet, you must first determine the velocity of the flow per second, and multiply this by the area of the aperture. You will then have the theoretical flow per second, although this is subject to some variations consequent upon the shape of the aperture, and other considerations which must be taken into account. Assuming that the aperture is round and the diameter two inches, the velocity would be forty feet per second. The area of the orifice is 3.14 square inches, which, multiplied into the velocity per second in inches, will give the amount theoretically discharged in cubic inches, or 1507.20 cubic inches per second. Two thirds this will be the actual flow, or 1004.8 cubic inches per second, equal to 1.66 horse-power. To utilize this power economically we advise the employment of a small turbine. A good work for you to get on such subjects is "Silliman's Physics."

G. B. A., of Ohio.—Cotton cloth may be rendered nearly fire-proof by steeping it in a solution of alum and letting it dry. A better process is to starch it with starch mixed with phosphate of ammonia, a little more by weight of the salt than of the starch. Grind the dry starch and the salt together in a mortar, and then prepare the starch with the mixture in the usual way. After starching the cloth with this preparation, it should be rolled up in a dry cloth, and allowed to remain till nearly dry, and then ironed, using a little white wax to prevent the sticking of the iron.

H. B., of Tenn.—It takes just as much weight to pull down a balloon as it will carry up, and it is one of the most uneconomical of machines. It can only be advantageously employed where no other means of transportation are practicable. A balloon might be made to work in the manner you specify, and from the novelty of the thing passengers might be attracted. You are under a mistake as to the use of chairs on railroads. A rail placed on a tie without a chair, would soon be jammed down into the wood under heavy work. You should see and talk with some experienced railroad engineer.

J. F. J., of N. Y.—There is no doubt that the diving dress used by divers in submarine work, would have enabled people to have descended into the Avondale coal mine without danger of suffocation; but the dress is too heavy to be used in work unless partly sustained by the buoyant power of water. Besides the walls of a coal mine are very different things from water walls, and flexible pipes would stand a poor chance of maintaining their integrity in being sawed across their sharp angles.

G. L. B., of Mass.—The products of the combustion of all hydrocarbon oils are carbonic acid and water. The carbonic acid is formed by the chemical union of the carbon in the oil with the oxygen of the air, and the water is formed by the union of the hydrogen in the oil with the oxygen of the air. Ordinarily, the water, being converted by the heat into steam, escapes notice; but when a cold body, as a piece of iron, is held for a moment in the flame it condenses this steam and the water becomes visible. The theory of your friend is all wrong.

C. P. S. W., of N. C.—The white earth you send us is silicious lime, resulting from the remains of minute diatoms. Under the microscope the shells of the diatoms, covered with beautiful and delicate lines, are distinctly visible. We can have a sketch made of some of these shells, if you desire, at a charge of \$5. The earth will probably be useful as a polishing powder.

G., of Tenn.—The recipe for the hair composed of oxide of bismuth, spermaceti, and lard, recommended to you, will be as harmless as any other grease plaster provided the oxide of bismuth does not contain arsenic, with which it often is found mixed. As a hair renewer it is no better than barn yard manure or roadside mud.

J. S. C., of Me.—The sectional area of the horizontal flue leading from your boiler to the chimney, ought to be twenty-two inches in diameter instead of sixteen. No advantage would result from making the flues of chimneys taper towards the top. Horizontal flues ought to have from one fifth to one sixth more capacity than upright flues.

A. W., of N. Y.—We believe a fan to be a very uneconomical method of conveying the sawdust shavings, etc., from a mill to a fire room and cannot therefore advise it. We infer this from general principles, as we have not seen a fan used for that purpose. We are confident, however, that you will do better with the drag hitherto employed.

J. R. R., of Md.—We think salt as good as anything to pack eggs in for winter use. They should be kept in a dry cool room but not where they will freeze, and the package should be turned once a week to prevent the eggs from settling to one side of the shell.

J. L. R.—Nothing yet discovered is more effectual in retaining heat in vessels than thick coatings of loose felt. You can take a useful lesson from the Norwegian cooking apparatus, illustrated and described on page 161, current volume, of this paper.

S. S., of Conn.—You can use screws in making the model. The mineral you send appears to be mica schist, containing minute garnet specimens.

J. H. Keine.—We advise the use of plumbago (black lead) mixed with tallow for wooden cogs.

W. E. E., of R. I.—Ethereal phosphorus, so-called, is a simple solution of phosphorus in ether.

G. G. W., of Pa.—The information you seek will shortly appear in our columns.

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

COMBINED COTTON AND CORN PLANTER.—A. H. Wootton, Bartow, Ga.—This invention has for its object to furnish a simple, convenient, and effective machine, which shall be so constructed and arranged that it may be easily adjusted for use, for planting cotton seed or corn, as may be desired.

FRUIT JAR.—J. M. W. Kitchen, Brooklyn, N. Y.—This invention has for its object to improve the construction of fruit or preserve jars, so as to make them simpler in construction, and more convenient, reliable, and effective in use.

CURRY COMB.—John M. Baker, Marshfield, Ohio.—This invention has for its object to improve the construction of curry combs, so that when the

front teeth have become worn, the comb-plate may be reversed or turned half way around, causing the rear teeth to become the front ones, enabling the curry comb to be used much longer than it otherwise could be.

CORN HARVESTER.—John McLeish, Chicago, Ill.—This invention has for its object to furnish a simple, convenient, and effective machine, by means of which the corn stalks may be cut, the ears separated from the stalks and deposited in a suitable receptacle, and the stalks deposited in bundles or bunches upon the ground.

REVOLVING PLOW.—Wm. J. Dawson, Brookfield, Mo.—This invention has for its object to furnish a simple, convenient, and effective machine, by means of which cultivated land may be prepared for the reception of the seed thoroughly and well, and which may be operated with a comparatively light draft.

FIREPLACE HEATER.—R. D. McDonald, Jersey City, N. J.—This invention has for its object to furnish an improved open grate fireplace heater, which shall be so constructed and arranged as to utilize the heat that usually escapes into the chimney, economizing fuel and obtaining the advantages of a stove and open fire.

CHURNING MACHINE.—Samuel D. Lucas, Winterpock, Va.—This invention has for its object to furnish a simple and convenient churning apparatus, by means of which one or more churns may be operated at the same time, bringing the butter in a very short time and with a comparatively small amount of labor.

SICKLE GRINDER.—Henry Millard, York, N. Y.—This invention has for its object to furnish an improved machine for grinding, mowing, and reaping machine cutters, which shall be simple in construction, easily operated, and so arranged that the cutters may be ground all the way from point to heel.

REVOLVING DOUGH MIXER.—Thomas Holmes, Williamsburgh, N. Y.—This invention has for its object to improve the construction of the improved dough mixer, patented by the same inventor, June 15, 1869, and numbered 91,335, so as to make it simpler and less expensive in construction while doing its work equally well.

CULTIVATOR.—Isaac J. Morrow, Everton, Ind.—This invention has for its object to furnish an improved cultivator, which shall be so constructed and arranged that the amount of dirt allowed to pass to the plants may be conveniently controlled and regulated.

HAY AND GRAIN ELEVATOR.—John Dennis, Oswego, N. Y.—This invention has for its object to furnish an improved apparatus, by means of which an entire load of hay or grain may be raised to the upper part of a barn at one operation, thereby saving the labor and time required when it is pitched up or raised by the forkful.

COMBINED SOFA AND BED.—Wm. H. Schwalbe, New York city.—This invention has for its object to improve the construction of combined sofas and beds, so as to make them more convenient in use, and so as to better adapt them for use in the various places in which they may be required.

SPRING FOR WAGON TONGUES.—George Alexander, Romney, Ind.—This invention has for its object to furnish an improved attachment for the fore-part of a wagon gearing, by means of which the tongue may be supported at a greater or less elevation, as desired, so as to relieve the horses' necks from the weight of the tongue, and in a great measure protect them from the thrashing of the tongue when the wheels strike an obstruction.

COFFEEMILL.—Hermann von Holten, Hoboken, N. J.—This invention has for its object to furnish an improved coffeemill, which shall be so constructed and arranged as to force the boiling water through the compartment containing the ground coffee, which water extracts the strength from the coffee and flows thence into another compartment whence it is poured out for use.

PROCESS FOR PRESERVING EGGS.—John Longmaid, New York city.—This invention relates to a new and useful improvement in preserving eggs for market and use.

SEWING MACHINE.—M. C. Hawkins, Edinboro', Pa.—This invention consists in a novel manner of connecting the upper, or needle, with the lower, or shuttle shaft, by means of a pitman and loose crank, and in a novel manner of arranging and operating the take-up bar, and of combining it with the needle bar, so that it will operate in conjunction with the same.

ROCKING CARRIAGE.—A. Armando, New York city.—This invention relates to a new carriage, more particularly intended for children, and so constructed that it may be propelled by rocking motion, and that it will be rocked when propelled by other means.

RAILROAD STATION INDICATOR.—A. C. Rodgers, Fort Washington, Pa.—This invention relates to a new apparatus for displaying, within railroad cars, the name of the station which the car is approaching, or at which it has arrived. The invention consists of a system of levers and toothed wheels, by which intermittent rotary motion, in either direction, can be imparted to a drum, around which a belt or chain containing the names of the stations is placed. The apparatus is set in motion by a stop arranged on the track striking a lever suspended from the car.

SAFE.—Joseph P. White, Savannah, Ga.—This invention consists in constructing the safe of an inner thick and strong shell of metal, and an exterior thin shell made of chilled iron, and having on its interior surface flint, emery, or any other substance which in drilling will generate sparks of fire to explode powder, with which a space between the two shells is to be filled so as to blow off the outer shell, to create alarm and to disable the burglars.

WATER WHEEL.—W. E. Hill, Renovo, Pa.—This invention consists in an improved arrangement of buckets, designed to cause both a direct and reacting application of the water; that portion of the buckets designed for the reacting application of the water being made adjustable by the action of springs to vary the discharge orifices, as the volume of water or the resistance of the wheel changes. It also consists in an improved arrangement of the gates, and also in an arrangement for packing the joints between the wheel and the scroll.

COTTON PRESS.—C. J. Weasely, Petersburg, Va.—This invention relates to improvements in cotton presses, having for its object an improved arrangement of means whereby the follower may be worked, both up and down, by the same operating lever, working in the same way; also a simple arrangement for varying the leverage, as the force required is greater or less; also an improved arrangement of the follower to facilitate filling the case.

RAILROAD CAR.—Perry Prettyman, Paradise Spring Farm, Oregon.—This invention relates to improvements in railroad cars, the object of which is to prevent them from running or being thrown off the track from any cause. It consists in the application to the car trucks of auxiliary axles and wheels so arranged that the said wheels will be suspended between an inward projecting portion or flange of the top of the rail, and a corresponding widened portion of the bottom of the rail, the upper flange of the said rail serving by its action on the auxiliary wheels to hold the cars from running off, and the lower flange serving for the track of the said auxiliary wheels, which receive and support the cars of the main axle brake.

OPERATING CHURN DASHER.—William Kegg, Lassellville, N. Y.—This invention relates to an improvement in the method of operating the dashers of butter churns of the old style, or where the dasher is attached to a rod or staff, and given a vertical reciprocating motion by hand, or by means of any other suitable power.

SELF-WINDING CLOTHES-LINE MACHINE.—W. A. Coventry, Paterson, N. J.—This invention relates to a new and useful improvement in an apparatus for automatically winding up a cord, or clothes-line.

SELF-CLOSING FAUCET.—A. Brinckmann, New York city.—This invention relates to a new faucet for water pipes and other purposes, which is to be self-closing, so that no liquid can be lost by accidentally leaving the faucet open. The invention consists in attaching a weighted lever to the spigot of the faucet which lever will always automatically draw the faucet closed, and which will also serve as a handle for operating the faucet.

HORSE POWER.—C. L. Drury, Rockingham, Vt.—This invention relates to a new horse power of that class in which the animal moves on an inclined plane or disk, and the invention consists in the arrangement of devices for adjusting the position of said wheel and in the application of adjustable

anti-friction bearings for the transmitting axle, as well as in the general arrangement and combination of parts.

TELEGRAPH APPARATUS.—David Flanery, New Orleans, La.—The object of this invention is to provide a portable telegraph apparatus comprising a "relay magnet," "key," "sounder," "local galvanic battery," and writing desk, all contained in a portable box which may be slung upon the shoulder by a strap, to be carried from place to place by the operator. Also, to provide an improved local battery specially adapted for a portable apparatus.

GALVANIZED IRON.—J. D. Grey, Pittsburgh, Pa.—This invention consists in preparing the iron, previous to galvanizing it, in a way calculated to provide a better article in point of toughness and appearance when finished, the zinc covering being disposed much more evenly and in large spangles over the entire surface of the sheet.

SIDE-SADDLE TREES.—Louis Triplett, Columbia, Ky.—This invention relates to improvements in the construction of side-saddle trees, and consists in forming the cantel belly, right horn, and spring, of one piece of sheet metal, and the "straining" and foundation of the seat of another piece in a way to produce an improved form and more economical construction.

BIT HOLDER.—Jacob Winkelhouse, New York city.—The present invention relates to a new and useful device for securing bits in their places by means of a slotted bolt and spring.

BROWNING AND MAKING COFFEE.—James Galloway, Chetoph, Kansas.—This invention relates to a new and useful improvement in the method of preparing coffee, whereby much time is saved, and the entire aroma is preserved.

TRACTION ENGINES.—C. C. Merriman, Brighton, N. Y.—This invention relates to an improvement in traction engines, and it consists in producing the traction by feet secured to revolving wheels.

THRASHING MACHINE.—Joshua Seip and Henry J. Schmeier, Macungie, Pa.—This invention relates to new and useful improvements in machines for thrashing and cleaning grain, whereby many of the objections to the old style of thrashing machine are obviated.

RAILROAD.—George V. Sheffield, and Jas. F. Coburn, Hopkinton, Mass.—This invention relates to new and useful improvements in railroads, having reference both to the rail and track, and the flange and tread of the wheel to run thereon.

WATER-CLOSET VALVE.—W. Smith, San Francisco, Cal.—This invention relates to new and useful improvements in valves for water closets, whereby they are rendered more useful and durable than they have hitherto been.

SELF-CLOSING TELEGRAPH KEY.—Joseph J. B. Frey, New York city.—This invention relates to a new and improved key for telegraphic instruments, whereby the circuit is always kept closed when the instrument is not at work, the key automatically closing when released from the pressure of the finger or hand.

MACHINE FOR PICKING WOOL.—James Cate, Rumsey, Ky.—This invention relates to a new and useful improvement in machines for picking and cleaning wool.

HAME-BENDING MACHINE.—J. H. Preston, Jefferson City, Mo.—This invention relates to a new and improved machine for bending wooden hames whereby that operation is greatly facilitated.

EXTENSION TABLE.—Joseph P. Curry, Vincennes, Ind.—This invention relates to a new and useful improvement in extension tables, whereby they are made more convenient and useful than they have heretofore been, and consists in extending and contracting the table by means of a shaft, crank, and cords.

VAPORIZING FURNACE AND PANS.—L. Scott, Sinking Spring, Ohio.—This invention relates to a furnace and an arrangement of pans for boiling and vaporizing juice or sirup, in the process of working sorghum sugar or molasses, and for other purposes of a similar nature.

THRASHING MACHINE.—F. A. Geisler, Bristol, R. I.—This invention relates to new and useful improvements in machines for thrashing grain, and winnowing or cleaning it at the same time.

HAY FORK.—E. J. Fenn, Medina, Ohio.—This invention relates to new and useful improvements in forks for handling hay, and consists in operating two tines by means of a bar and lever.

COMPOUND FOR RESTORING DAMAGED TOBACCO.—Wesley A. Wright, Liberty, Va.—The object of this invention is to produce a substance for restoring the good qualities of moldy or decaying tobacco so that it will again receive as nearly as possible the qualities and appearance of fresh and good tobacco, for the purpose of preventing its loss.

STUMP EXTRACTOR.—T. W. Fay, Camden, N. J.—This invention relates to a new stump extractor, or stone and log lifter of that class in which the power is applied to a screw shaft by means of a nut. The invention consists in a new manner of supporting the nut to avoid friction, and in a novel manner of fastening the supports to the main plate and the shoes to the supports.

RAILROAD CAR HEATER.—Josiah E. Kline, Wheeling, West Va.—This invention relates to a new apparatus for heating railroad cars and for properly ventilating the same, and consists in the general construction and arrangement of parts for producing a fireproof and convenient heating attachment.

UNIVERSAL GUIDE FOR STAMP MILLS.—C. A. H. Rice and A. J. Van Doren, Central City, Colorado.—This invention relates to a new device for guiding the shafts of stamp mills, and consists in the general construction of parts, whereby the guide pieces are securely held and readily adjusted.

WIND WHEEL.—Charles C. Harris, Lafayette, Ill.—The object of this invention is to provide a simple and cheap wind wheel with self-adjusting wings, or brackets, capable of opening to the wind on one side and closing on the other. The invention also comprises an improved arrangement for transmitting motion from the said wheel, especially adapted for operating pumps.

LAMP.—H. Long, Kittanning, Pa.—This invention consists in an improved arrangement of means for conducting the wick through a reservoir of water after having taken up the oil, the said water reservoir being interposed between the oil and the flame so as to prevent generation of gas; also to prevent the contact of the flame with the oil in the reservoir.

CULTIVATING HOE.—John J. Ray and James R. Young, New Orleans, La.—This invention consists in the arrangement of a pair of scraping blades, of wood or metal, to work on the ground in an edgewise position in the form of two sides of a triangle, cut off at some distance from the apex, and connected by framing so that it will allow the said blades to work on each side of the row without disturbing the standing plants, the ends most widely separated being drawn foremost, together the earth and turn it up in a double ridge against the rows of plants. Near the bottom inside, the blades are provided with laterally projecting cutters to sever the weeds, and wheels are placed at the front end on which the frame may be tilted to be moved from one row to the other.

FLY BRUSHES.—Henry R. Robbins, Baltimore, Md.—This invention relates to a portable apparatus in which a brush or fan is made to oscillate by means of machinery for the purpose of driving flies from a table or bed, and creating, at the same time, a breeze.

HORSESHOE.—Capt. Charles Peillard, of the Empire of France.—This invention consists in dividing a horseshoe in two parts, of equal length, the division taking place at the middle, and the line of section being partly straight and partly circular, so as to form, at the extremity of one branch, a curved projection, and, at the adjacent extremity of the other branch, a depression of corresponding shape, by which the two branches are connected when nailed upon the hoof, without a hinge.

RESERVOIR BACK FOR COOKING STOVES.—Henry R. Robbins, Baltimore Md.—The object of this invention is to provide an attachment for cooking stoves, which will enable the cook always to have a supply of hot water on hand, the quantity and boiling temperature of which can be seen at a glance, without removing the cover of the boiler. At the same time, the construc-

tion and arrangement of the apparatus are such as to protect the back of the fire-pot from burning away, thereby rendering the stove more durable and less expensive, in the matter of repairs, than those heretofore introduced into general use.

LAMP SHADE.—R. W. Churchill, Bridgeport, Conn.—This invention relates to improvements in lampshades for application to the chimneys of kerosene and other similar lamps, having for its object to provide an improved construction and arrangement for shades made in sections for expanding and contracting, to vary the size of the shade.

HORSE HAY RAKE.—W. P. Ewing, Fancy Hill, Va.—This improvement in horse hay rakes is designed to provide a simple and efficient machine for attachment to a sulky, whereon the operator may ride while driving and attending to the rake, and it consists in a rake having one set of teeth, detachably connected to the sulky, and provided with suitable operating and governing apparatus.

HOISTING APPARATUS.—G. H. Kamnacher, Columbus, Ohio.—The object of this invention is to provide a cheap and simple portable hoisting apparatus for bricklayers and builders, for hoisting the building material, and it consists of a peculiar arrangement on a bench or "horse," of a large grooved hoisting wheel, a pair of balancing platforms, vertical guides for the same, and hoisting ropes.

COMBINATION LOCK.—J. P. White, Savannah, Ga.—This invention relates to improvements in combination locks, consisting of a series of vibrating tumblers, notched at the ends for the reception of a lug on the bolt, when sliding back for unlocking, which are provided with auxiliary tumblers, to be acted on by a series of rotating cam disks worked by the key, to move the said tumblers for bringing the notches therein to the position coinciding with the lug on the bolt, to allow it to be retracted. These auxiliary tumblers are engaged with the others by spring dogs, when the bolt is at the locked condition, and the whole are suspended on the cam wheels, so that the notches do not coincide with the lug on the bolt, thereby preventing its withdrawal.

Official List of Patents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING SEPT. 21, 1869.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT OFFICE FEES: On each caveat... \$10; On filing each application for a Patent... \$20; On filing each application for a Reissue... \$20; On application for Extension of Patent... \$20; On granting the Extension... \$20; On filing a Disclaimer... \$10; On an application for Design (three and a half years)... \$10; On an application for Design (seven years)... \$15; On an application for Design (fourteen years)... \$20; In addition to which there are some small revenue-stamp taxes, Residents of Canada and Nova Scotia pay \$500 on application.

For copy of Claim of any Patent issued within 30 years... \$1; A sketch from the model or drawing, relating to each portion of a machine as the Claim covers, from... \$1; The full Specification of any patent issued since Nov. 20, 1866, at which time the Patent Office commenced printing them... \$1.25; Official Copies of Drawings of any patent issued since 1838, are consumptive of the cost of the price depending upon the amount of labor involved and the number of views. Full information, as to price of drawings, in each case, may be had by address in MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

- 94,934.—REVENUE STAMPS FOR CIGARS.—Anson Atwood, New York city. Antedated September 13, 1869.
94,935.—ALLOY FOR TUBING.—John S. Barden, Providence, R. I.
94,936.—ALLOY FOR MAKING WATER METERS.—John S. Barden, Providence, R. I.
94,937.—BOILER FEED WATER REGULATOR.—John S. Barden, Providence, R. I.
94,938.—WASHING MACHINE.—George W. Benton, East Pike, N. Y.
94,939.—FELTING MACHINE.—Job W. Blackham (assignor to himself and James H. Prentice), Brooklyn, N. Y.
94,940.—BRUSH.—Charles Boeckh, Buffalo, N. Y.
94,941.—BRUSH.—Samuel Brillinger, Clarence Center, N. Y.
94,942.—APPARATUS FOR EVAPORATING CANE JUICE.—M. S. Bringer, Ascension Parish, La.
94,943.—AXLE BOX LID.—John Bristow, Detroit, Mich. Antedated September 6, 1869.
94,944.—SIGNS FOR STREET LAMPS.—Erastus Caswell and Herman Lachmann, Chicago, Ill.
94,945.—SASH PULLEY.—Charles B. Clark, Buffalo, N. Y.
94,946.—SCRUBBER.—Charles E. Clum (assignor to himself and Moses C. Haskell), Troy, N. Y.
94,947.—MACHINE FOR CLOSING THE SEAMS OF METALLIC VESSELS.—E. T. Covell, Brooklyn, N. Y. Antedated September 13, 1869.
94,948.—PROTECTOR FOR STEMS OF BOATS.—Wm. P. Davis and Samuel Elwell, Jr., Gloucester, Mass.
94,949.—DOOR SPRING.—Frederick Dodge, Syracuse, N. Y.
94,950.—SURGE RELIEVER FOR CABLES.—John J. Emery, Owl's Head, Me.
94,951.—NECKTIE.—Franklin Field, Troy, N. Y.
94,952.—GRINDING MILL.—Morrison Foster, Cleveland, Ohio.
94,953.—PORTABLE FENCE.—Newton J. Glover, Waveland, Ind. Antedated August 31, 1869.
94,954.—WASHING MACHINE.—J. T. Greenwood, Beloit, Wis.
94,955.—COMPOUND FOR EMERY WHEELS AND OIL STONES.—N. B. Hadley and R. J. Costain, Northampton, Mass.
94,956.—MACHINE FOR DRESSING MILLSTONES.—J. B. Harris, Ottawa, Ill.
94,957.—MOUNTING LEASE RODS FOR LOOMS, ETC.—Wm. A. Hastings, Thornyke, Mass.
94,958.—TILE MACHINE.—Simeon Hawkins, Carmel, Ind.
94,959.—APPARATUS FOR EVAPORATING CANE JUICE.—L. S. Hereford, West Baton Rouge parish, La.
94,960.—BRAKE SHOE.—Amos A. Hotchkiss (assignor to himself and Wm. J. Qualey), Hannibal, Mo.
94,961.—ARGAND LAMP.—Andrew B. Howland, Titusville, Pa.
94,962.—HOLDBACK FOR CARRIAGES.—Thomas F. Kiff, Havana, N. Y., assignor to Elijah A. Simmons, Chatsworth, Ill.
94,963.—FIELD FENCE.—Edwin King, Dunkirk, N. Y.
94,964.—ADJUSTABLE HARROW.—John Kinhart, Athens, Ill.
94,965.—METALLIC BUTTON-HOLE OR CLASP.—Jeremiah R. Little, Jamaica Plains, Mass.
94,966.—HARVESTER.—Charles E. Mason, Elgin, Ill.
94,967.—DRYER.—Oscar F. Mayhew, Indianapolis, Ind.
94,968.—GAGE FOR TURNING BEVELS.—George W. Moore, Worcester, Mass.
94,969.—METHOD OF PURIFYING NITRIC ACID.—George M. Mowbray, Titusville, Pa.
94,970.—RAILWAY FROG.—James Patterson, Hornellsville, N. Y.
94,971.—ARCHIMEDEAN SCREW WATER ELEVATOR.—Wm. H. Plumb, New York city. Antedated September 8, 1869.
94,972.—CHIMNEY.—Peter Portois, San Francisco, Cal.
94,973.—STEAM ENGINE VALVE.—Elting Post, Boston, Mass.
94,974.—WEIGHING SCOOP.—David H. Priest, Watertown, and John R. Howard, Charlestown, Mass.
94,975.—ANIMAL TRAP.—Wm. N. Reed, Washington, D. C.
94,976.—SEWING MACHINE.—T. S. Reeve, C. D. Smith and H. L. Swartwout, Chicago, Ill.; said Smith and Reeve assign their right to said Swartwout.
94,977.—BASKET FOR GRINDING TILE.—Peter C. Reniers, Pittsburgh, Pa.
94,978.—STEAM GENERATOR.—S. T. Russell, Springfield, Ohio.
94,979.—SPRING SEAT FOR VEHICLES.—Samuel S. Simmons, Watonsville, Cal.

- 94,980.—NEEDLE THREADER.—Corelli W. Simpson, Bangor, Me.
94,981.—CARRIAGE SPRING.—Alfred E. Smith, Bronxville, N. Y. Antedated September 15, 1869.
94,982.—GAS MACHINE.—Andrew R. Spang and Daniel F. Sheaf, Dayton, Ohio.
94,983.—CLOTHES POUNDER.—Orrin J. Stickles, Canton, N. Y.
94,984.—FIREPLACE.—James C. Strong and Luther C. McNeal, Buffalo, N. Y.; said Luther C. McNeal assigns his right to said James C. Strong.
94,985.—MACHINE FOR PAINTING FLOOR OILCLOTHS.—C. W. Strout and Amos Wilder, Hallowell, Me.
94,986.—STOVEPIPE DAMPER.—Isaac Van Hagen, Chicago, Ill.
94,987.—BAG AND SHOE-STRING FASTENER.—John H. Weed (assignor for one half to George C. Thomas), Waterbury, Conn.
94,988.—DUMPING CART.—F. Hancock Williams, Washington, D. C.
94,989.—WAGON-TONGUE SUPPORT.—George Alexander, Romney, Ind.
94,990.—ROCKING CARRIAGE.—A. Armano, New York city.
94,991.—CURRY COMB.—J. M. Baker, Marshfield, Ohio.
94,992.—VELOCIPÈDE.—Robert J. Barr, Philadelphia, Pa.
94,993.—COTTON PRESS.—Charles J. Beasley (assignor to him self and Tappay, Lumsden & Co., Petersburg, Va.
94,994.—MANUFACTURE OF IRON AND STEEL.—Henry Bessemer, London, England. Patented in England, December 31, 1857.
94,995.—MANUFACTURE OF IRON AND STEEL.—Henry Bessemer, London, England. Patented in England, March 21, 1868.
94,996.—MANUFACTURE OF IRON AND STEEL.—Henry Bessemer, London, England. Patented in England, March 21, 1868.
94,997.—MANUFACTURE OF IRON AND STEEL.—Henry Bessemer, London, England. Patented in England, March 31, 1868.
94,998.—SELF-CLOSING FAUCET.—A. Brinckmann, New York city.
94,999.—WOOL-PICKING MACHINE.—James Cate, Rumsey, Ky.
95,000.—LAMP SHADE.—R. W. Churchill, Bridgeport, Conn.
95,001.—WATER CLOSET.—Geo. Conroy, New York city. Antedated Sept. 8, 1869.
95,002.—SELF-WINDING LINE MACHINE.—Wm. A. Coventry, Paterson, N. J.
95,003.—EXTENSION TABLE.—J. P. Curry (assignor to S. S. Burnet), Vincennes, Ind.
95,004.—BOX LOOP FOR CARRIAGE TOPS.—C. H. Davis, Syracuse, N. Y.
95,005.—REVOLVING PLOW.—William J. Dawson, Brookfield, Mo.
95,006.—HAY AND GRAIN ELEVATOR.—John Dennis, Oswego, N. Y.
95,007.—HAMES FASTENER.—M. L. Drake, Rockford, Ill.
95,008.—HORSE-POWER.—C. L. Drury, Rockingham, Vt.
95,009.—METHOD OF HEATING TAN-BARK LEACHES BY STEAM.—L. C. England, Philadelphia, Pa.
95,010.—HORSE HAY RAKE.—Wm. P. Ewing, Fancy Hill, Va.
95,011.—STUMP EXTRACTOR.—T. W. Fay, Camden, N. J.
95,012.—HORSE HAY FORK.—E. J. Fenn, Medina, Ohio.
95,013.—TELEGRAPH APPARATUS.—David Flanery, New Orleans, La.
95,014.—SELF-CLOSING TELEGRAPH KEY.—J. J. B. Frey, New York city.
95,015.—COFFEE ROASTER.—James Galloway, Chetoph, Kansas.
95,016.—THRASHING MACHINE.—F. A. Geisler, Bristol, R. I.
95,017.—MANUFACTURE OF GALVANIZED IRON.—J. D. Grey (assignor to himself and John Lippincott), Pittsburgh, Pa.
95,018.—WIND MILL.—C. C. Harris, LaFayette, Ill.
95,019.—SEWING MACHINE.—M. C. Hawkins, Eainborough, Pa.
95,020.—WATER WHEEL.—Wm. E. Hill, Renovo, Pa.
95,021.—REVOLVING DOUGH MIXER.—Thomas Holmes, Williamsburgh, N. Y.
95,022.—HOISTING APPARATUS.—G. H. Kamnacher, Columbus, Ohio.
95,023.—OPERATING CHURN DASHER.—William Kegg, Lassellville, N. Y.
95,024.—DOOR KNOB.—J. J. King, New York city.
95,025.—FRUIT JAR.—J. M. W. Kitchen, Brooklyn, N. Y.
95,026.—RAILROAD CAR HEATER.—J. E. Kline, Wheeling, West Va.
95,027.—LAMP.—Henry Long, Kittanning, Pa.
95,028.—PROCESS FOR PRESERVING EGGS.—John Longmaid, New York city.
95,029.—CHURN.—S. D. Lucas, Winterpock, Va.
95,030.—FIREPLACE.—R. D. McDonald, Jersey City, N. J.
95,031.—CORN HARVESTER.—John McLeish, Chicago, Ill.
95,032.—TRACTION ENGINE.—C. C. Merriman, Brighton, N. Y.
95,033.—MACHINE FOR GRINDING MOWER & REAPER KNIVES.—Henry Millard, New York city.
95,034.—MACHINE FOR WINDING BOBBINS.—F. H. Morrill, Philadelphia, Pa.
95,035.—CULTIVATOR.—Isaac J. Morrow, Everton, Ind.
95,036.—COMPOSITION FOR USE IN FIRE EXTINGUISHERS.—J. M. Mutterse and H. G. De Valory, Guerande, France.
95,037.—MACHINE FOR BENDING WOOD.—H. H. Nichols (assignor to P. S. Whitcomb), Keeseville, N. Y.
95,038.—MEAT-CUTTING MACHINE.—August Nittinger, Jr., Philadelphia, Pa.
95,039.—EXTRACT OF MADDER FOR DYEING AND PRINTING.—Alfred Paraf, New York city, assignor to Edward Sabine Renwick, trustee.
95,040.—PROCESS FOR PRINTING COLORS ON TEXTILE MATERIALS.—Alfred Paraf, New York city, assignor to Edward Sabine Renwick, trustee.
95,041.—RAILWAY RAIL CHAIR.—D. C. Pierce, Washington, D. C. Antedated Sept. 8, 1869.
95,042.—MACHINE FOR BENDING WOOD.—J. H. Preston, Jefferson City, Mo.
95,043.—RAILWAY CAR TRUCK.—Perry Prettyman, Paradise Spring Farm, Oregon.
95,044.—CULTIVATING HOE.—J. J. Ray and J. R. Young, New Orleans, La.
95,045.—GUIDE FOR STAMP MILLS.—C. A. H. Rice and A. J. Van Doren, Central City, Colorado. Territory.
95,046.—RAILROAD STATION INDICATOR.—A. C. Rodgers (assignor to himself and Lewis Shaffer), Fort Washington, Pa.
95,047.—STRAW CUTTER.—J. H. Ryland, Baltimore, Md.
95,048.—SOFA AND BEDSTEAD.—William H. Schwalbe, New York city.
95,049.—PAN AND FURNACE FOR EVAPORATING.—Lewis Scott, Sinking Spring, Ohio. Antedated Sept. 10, 1869.
95,050.—COMBINED THRASHING MACHINE AND SEPARATOR.—Joshua Seip and H. J. Schmeier, Macungie, Pa.
95,051.—RAILWAY.—G. V. Sheffield and J. F. Coburn, Hopkinton, Mass.
95,052.—SAW.—Joseph H. Smith, and Elijah G. Peckham, Toledo, Ohio.
95,053.—NICKEL-FACED TYPE.—Luther L. Smith, Brooklyn, N. Y.
95,054.—SLOW-CLOSING VALVE FOR WATER CLOSETS.—W. Smith, San Francisco, Cal.
95,055.—SIDE-SADDLE TREE.—Louis Triplett, Columbia, Ky.
95,056.—COFFEEPOT.—H. Von Hoften, Hoboken, N. J.
95,057.—ROTARY MECHANICAL POWER.—A. G. Waterhouse, San Francisco, Cal.
95,058.—COMBINATION LOCK.—J. P. White, Savannah, Ga.
95,059.—SAFE.—J. P. White, Savannah, Ga.
95,060.—BIT HOLDER.—Jacob Winkelhouse, New York city.
95,061.—MINING PUMP.—Hiram Wolf (assignor to himself and A. D. Wolf), St. Louis, Mo.
95,062.—COMBINED CORN AND COTTON PLANTER.—A. H. Wootton, Bartow, Ga.
95,063.—COMPOUND FOR RESTORING DAMAGED TOBACCO.—Wesley A. Wright (assignor to himself and William C. Trowbridge), Liberty, Va.
95,064.—COATING IRON FOR THE FRONTS OF BUILDINGS, AND FOR OTHER PURPOSES.—John Alexander, Greenpoint, N. Y.
95,065.—EXPANDING MANDREL.—D. L. Allen, Williamsport, Pa.
95,066.—HEARSE.—Edwin Allen, Norwich, Conn.
95,067.—MARKER FOR SEEDING MACHINES.—George Armstrong, Elmira, Ill.