Queries.

[We present herewith a series of inquiries embracing a variety of topics of greater or less general interest. The questions are simple, it is true, but we prefer to elicit practical answers from our readers.]

1.—CHEWING GUM.—What are the ingredients and the quantity of each used in making rubber chewing gum; and what is the process of manufacture? Can any scientific reader tell me if the saliva, produced by chewing this gum, has any injurious effect on the system? Is it as injurious as tobacco? What effect has gum made from white resin, on the system?—C. B. S.

2.—MELTING RUBBER.—At what degree of heat will rubber soften, and how long will a piece of rubber, one inch square, stand pounding before wearing out? (I allude to such rubber as is used for wagon springs.) Can rubber be melted and poured, in a liquid form, into a mold? What is the process of preparing it for this purpose?—C. B. S.

3.—WIRE FOR ELECTROMAGNET.—Will some of your correspondents answer the following question: Is brass wire as effectual for winding electromagnets as copper?—C. E. S.

4.—RHUMKORFF COIL.—Can any of your correspondents tell me where I can obtain a Rhumkorff coil, and what will it cost?—C. E. S.

5.—HORSESHOE MAGNET.—If a horseshoe magnet is suspended so as to revolve freely, will its motion be retarded if the armature be brought near its poles?—C. E. S.

6.—ELECTROMAGNET.—How large an electromagnet is required to produce a spark?—C. E. S.

7.—SLAG FROM FURNACES.—I see by some remarks in the issue of September 2d that the slag from blast furnaces can be used for making blocks. Please inform me the process necessary for their manufacture.—E. H. J.

8.—ANNEALING CAST IRON.—Will some of your readers give me the process for annealing cast iron?—E. H. J.

9.—COAL BUCKET.—I handle 20,000 tuns of coal yearly by steam power. Is there any known substitute for the bucket, and is there any self dumping bucket now in use?—B. W. O.

10.—CHEAP LIGHT.—I work my vessels at night to save demurrage. What is the cheapest mode of obtaining a powerful light, and what does the calcium light cost per hour?—B. W. O.

11.—DOUBLE ACTING RAM.—In your paper of September 16th, page 186, under head of "Fountain," C. H., of N. H., speaks of a double acting ram. Will he be so kind as to say how it is constructed, or where the information can be got?—J. M.

12.—TEMPER OF STEEL TOOLS.—I notice in your columns dedicated to "Queries" and "Answers to Correspondents" that the general belief of experts is that the temper of tools cannot be drawn by immersion in hot water, or by a degree of heat less than the heat required for tempering. Will some of these persons explain why it is that the temper in steel knitting needles is lost after long usage, the said needles being exposed to no greater heat than may be induced by the friction of the needles while in use?—J. H. N.

13.—BUG DESTROYER.—I want to know what will destroy red spiders and green bugs or lice on plants.—G. W. B.

14.—COMBUSTION IN BOILER FURNACE.—Will G. A. T., in answer to A. H. G., on combustion in boiler furnace, be more explicit? Does he put the three eighth inch pipe around near the walls of the ash pit, and how far below the grate bars, and will it answer equally well for burning sawdust.—L. P. O.

15.—PARAFFIN CANDLES.—In making candles from refined paraffin, how can I keep the candles from becoming mottled or speckled?—J. K. S.

16.—GAS FOR TOY BALLOONS.—What gas is used for toy balloons, and how is it prepared? What amount of material would be required for inflating 100 of such balloons?—C. B. S.

17.—WELL.—I have a thirty foot well in a sandstone ledge in which the water a portion of the year gets very low. By digging deeper I think a better spring might be reached But I wish to save the expense and trouble of taking down the walls and excavating deeper. Is it feasible to drive a tube twenty feet, commencing at bottom of present well? Will some one having had experience in drive wells answer through "Correspondence" column?—De S.

Declined.

Communications upon the following subjects have been received and examined by the Editor, but their publication is respectfully declined:

BOILER EXPLOSIONS.—D. H. J.
CARPET PROBLEM.—A. D. B.
EXPLOSIVE WATER.—T. W. B.
FRICTION.—C. M.
LUSUS NATURÆ.—J. S. D.
PORTABLE BOAT.—O.
SEASONING LUMBER BY DRY STEAM.—R. G. B.
WATCH OPENER.—F. G. W.
ANSWERS TO CORRESPONDENTS.—F. H. O., JR.—H. B.

Recent American and Foreign Patents.

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

BOXES FOR SHOE BLACKING, POMADE, ETC.—This invention consists in so forming boxes of plate metal by striking up, that they shall not possess seams or angles for the adherence of the contained material, and have no sharp edge at the mouth to cut the brush; it provides a foot on which the box may not only be conveniently poised, but which may be used as a handle to the box. It is the invention of Geifert H. Wetjen, of New York city.

BENDING MACHINE FOR CLIPS, SCABBARD JOINTS, RAILWAY CHAIRS, ETC.—A very powerful machine has been invented for the above named purpose, by Mr. John Forbes, of Halifax, Canada, which evidently is capable of doing a large amount of excellent work. The nature of the invention forbids anything like detailed description in such a n ice as the present. The scope of the machine extends to many kinds of work other than those enumerated, and the invention will repay examination by those interested n machines of this kind.

BED SPRINGS.—Hull Chandler, of Bennington, Vt.—Semi-elliptic springs are placed upon the frame of the bedstead to support the ends of the slats. The lower end of each spring has a hook, bent down into a recess provided for its reception in the supporting plate. To the upper face of the spring is secured a transverse block, of semicircular form. The slat rests on this block, and can freely rock thereon, thereby giving more play and greater flexibility to the bed bottom. From the block projects a pin through a slot of the slat, to guide the same, and prevent it from falling off.

GRAIN DRYER.—Alfred J. Mason, of New Orleans, La.—To effect his object the inventor makes use of a combination of cold air induction and exhaust pipes, with a drying cylinder beater. By this combination the grain may be either heated or cooled, as desired, and, it is claimed, the apparatus is very efficient for drying and cooling grain, for expanding and contracting rice, etc., etc.

GRAIN BINDER.—Mr. Oliver Ross, of Bowens Prairie, Iowa, has invented a grain binding apparatus for attachment to reapers. The operator, in using this device, draws the band across the bundle, and places the end of the band in grab fingers. He then presses a lever which operates the mechanism which completes the binding and cuts the band. The invention possesses features of originality upon which eight claims have been allowed in the patent.

PIPE WRENCH.—Henry Wilson, of Tarr Farm, Pa.—The lower law of this pipe wrench is rigidly affixed to a handle. The other handle is pivoted to the handle having the fixed jaw, and forked at its upper end. The movable jaw is pivoted to the upper part of the same handle. A pin projects from the sides of the movable jaw through slots in the forked upper part of the pivoted handle. Whenever the lower end of the other handle is carried toward the handle, its forked upper end will swing the movable jaw with great power toward the fixed jaw for holding a pipe or other thing.

MACHINE FOR SPLITTING WOOD.—David Milliken, of New York city.—This invention consists in a novel arrangement, with a feeding trough, of splitting axes mounted on swinging arms, which are raised by a revolving wheel and accelerated in their fall by springs, in such manner as to be similar in action to the action of an ax wielded by hand. The invention also comprises a novel arrangement of apparatus for actuating a pair of feed rolls by one of the ax carrying arms, in such a manner that the feed rollers will not be actuated if the ax fails of entering the wood far enough to split it.

SOFA BED.—Julius Werner, of New York city.—This invention relates to a new sofa bed of peculiar construction, which, when contracted, will hardly be distinguishable from an ordinary plain sofa or lounge, while, when folded apart, it will form a comfortable and large bed. Double jointed head and foot rests hinged to the ends of the sofa back, and a combination of a pivoted seat with a hinged back, frame, and rests in a peculiar manner, are the features of the invention upon which the claims are based, and for which a patent has been obtained.

CARPENTER'S BENCH.—Friedrich Starke, of Dayton, Ohio.—This invention has for its object so to apply the vise to a carpenter's bench that it can be set against the side or end of the table, as may be found most convenient. Carpenters' benches are at present either provided with a vise at the end or side only, or with two separate vises, the former plan being insufficient for the several kinds of work to be performed, while the latter is too expensive and cumbersome. The present invention consists in swiveling the post in which the nut of the vise is held to a corner of the bench, so that the entire vise can thereon be turned to work against the side or end of the bench, as may be convenient.

RECOIL OBVIATOR FOR ORDNANCE.—Samuel F. Hawley, of Constableville, N. Y.—This invention has for its object to prevent the recoil of cannon and heavy guns; and consists in the application to their muzzles of counter-recoil chambers, which receive the direct concussions of the charges, and thereby counteract the effect of the air rushing into the barrels to fill the vacuum subsequent to explosion. To the muzzle of a cannon is secured an extension which continues the bore of the gun and forms an annular chamber around the bore. This chamber is open at the back, but closed in front, and its inner wall is perforated. The front is claimed to receive the concussion of the charge which escapes from the vent in rear, while the vacuum created by the explosion is supplied, before the effects of the concussion on the front of the chamber is spent, through the same vent, thus counteracting the ordinary effect of, and causing the cannon to remain stationary after, an explosion.

BAG HOLDER.—Oscar Barrett and Azzel D. Brooks, of Dartford, Wis.—This invention relates to a new device for holding bags open to be filled with grain, vegetables, or fruit; and consists in the use of a semicircular hoop, folded under the rim of the bag, and of three or more forked posts for supporting said hoop. The central post is vertical; the others, equidistant from it, are inclined forward. The three posts are slightly forked at their upper ends, so that they can be used to support the semicircular hoop. This hoop is placed against the mouth of the bag, and the latter then placed over it, so that when the hoop is placed into the notches or forks of the posts, it will serve to hold the bag in position, as shown. By this device bags can be expeditiously secured in place, and will be properly held open to be filled.

WAGON SEAT.—James B. Foote, of Hamden, N.Y.—This invention consists in suspending a wagon box seat from springs placed at the top of two standards, on which the said seat slides and by which it is guided. The ordinary square box of a road wagon, with strong wood posts rising up from the sides, one from each, and supporting a C spring at the upper ends connected by one of its ends, while the other end overhangs the outside and has a rod of iron, a chain and rod depending from it. These rods, which extend downward about to the top of the box, pass through the seat ends, and hold the seat by nuts, pins, or india rubber springs and nuts. Inside of the holes through the seat ends or arms for the rods, mortises are provided for the post, which pass through them and guide the seat in moving up and down, and prevent it from swinging. According to one plan the rods will have a number of holes to admit of supporting the seat higher or lower; but when the short rods and chains are used, the hight of the seat may be varied by hooking the chain upon the spring, which may have hooks capable of engaging any of the links.

HAY AND STRAW CUTTER.—John A. Cornish, Marshfield, Mo.—This invention relates to a hay cutter with which is connected a mechanism for keeping the hay always in contact with the feed roller, whether there be more or less in the box, and in which the feed roller is spirally fluted, and turned always at the right moment, by means of a bar rotating in a plane parallel with the axis of the roller and striking the sides of the spiral corrugations one after another.

AUTOMATIC GOVERNOR VALVE.—Joseph B. Potter, Conneautville, Pa.—This invention has for its object, first, to automatically regulate the flow of steam from a boiler to the steam chest of an engine, in such manner as to reduce the volume of the flow directly as the pressure in the steam chest: and, second, to equilibrate the pressure upon the governor valve from the steam chest by means of a counter spring, which yields when the flow of steam from the steam chest is momentarily checked by the arrival of the slide valve at the center of its throw, and the consequent closing of both ports and returns when the slide valve passes to either end of its throw, so as to open one of the ports, and by this alternate yielding and returning, maintains a continual oscillation of the governor valve, thus preserving the constancy of the pressure in the steam chest.

CAR COUPLING.—Henry R. Robbins, Baltimore, Md.—This invention relates to a car coupling in which a tongue, pivoted in and projecting from one drawhead in order to connect two cars, enters a box placed within another drawhead, passes under and raises a pin that extends across said box, and passes through slots in the sides of the latter, said tongue being caught and held in the box by the falling of the aforesaid pin into a groove in the upper side of the tongue, the uncoupling being effected by raising said pin, through the instrumentality of a yoke connected with its ends, until it is clear of the groove in said tongue, when the latter may be withdrawn from the box.

FEED WATER HEATER FOR STEAM BOILERS.—John F. Taylor, Charleston, S. C.—This invention consists of a hollow chamber, called a "heater," provided with a number of tubes running transversely of it, and fitted crosswise of the interior of the smoke box, in front of and at a short distance from the tube sheet of the boiler, so as to be in the path of the unconsumed products of combustion in passing from the boiler to the smoke stack, whereby the heat thereof is utilized in heating feed water, the chamber receiving water from a feed pump at its bottom and discharging it at its top with the boiler.

MOLE TRAP.—G. W. Hardwick, Wyandotte, Ind.—This invention consists in a spring fork set over the tunnel in which a mole travels, and provided with a trigger against which the mole is compelled to press as he passes along.

DOOR FASTENER.—Warren A. Howard, of Dugway, N.Y.—This invention relates to portable door fasteners, which may be carried in the pocket and applied on the inside of a chamber. It consists in a bar with a claw, having a hole between the prongs thereof, combined with a shoulder, perforated in line therewith, and also perforated at right angles to the bar to hold the bolt of a portable door fastening.

SOFA BED.—Abraham Morris, of New York city.—This is a sofa bed which may be easily folded together to form a sofa, the invention consisting principally in pivoting the sofa seat and connecting it by rods to the extension bed frame, so that when the seat is turned outward it will at the same time extend the frame to support the outer half of the bed.

PICKET POINTER.—John W. Minor, of Middleborough, Mass.—The picket to be pointed is placed edgewise upon a beam with its end against a head block. A pivoted lever, carrying a cutter, is then made to face this cutter through the wood, the cutting being an arc of a circle. The pivot is adjustable, so as to give blunt or sharp points, and to accord with the width of the picket.

SAFETY ATTACHMENT FOR WATCH CHAIN OR GUARD.—Charles W. Mehrer, of New York city.—This is a device for attachment to a watch, to be carried in the pocket with it for preventing it, by means of hooks, from being picked out, said hooks being concealed in a case, and being thrust out into the clothing if the chain or guard which is attached to the protector be suddenly jerked.

TREADLE MOTION.—George K. Proctor, of Salem, Mass.—A double crank, the wrists of which are placed at right angles, is attached to the fly wheel of a sewing machine or other machine to be driven by the feet. The mode of attachment by means of a recrossed crank, screw threaded hole, and a plate, by which the improvement may be readily attached to the fly wheel of different sizes and forms of machines, constitutes the features of the invention.

BEE HIVE.—This hive is the invention of Edward D. Pugh, of Fort Plain, Iowa. It provides for frequent and convenient opening and closing to clean it of moth eggs and insects, without disturbing the bees; also for improved ventilation, for the better support of the combs, for the accomodation of young broods, and other essentials of a first class hive, the whole evidently being the design of a man thoroughly conversant with the habits of bees and the requirements of bee keepers.

WALL PAPER TRIMMING MACHINE.—Mr. Hubert L. Todd, of Corning, N. Y., has invented a machine for trimming wall paper, the use of which will obviate the tedious process of shearing off the blank edges by hand as heretofore done. The cutting is done by circular knives attached to rollers, between which the paper is caused to pass by winding it from one roller to another, the power being supplied through the medium of a crank attached to the journal of one of the knife bearing rollers.

POT COVER.—William Henry Barker, of Windsor, Can.—A stamped sheet metal pot cover of the ordinary kind, has a number of small holes made through it in one part near the edge, to admit of pouring off the contents of the pot without lifting the cover. A small lid is hinged to the upper side of the pot cover, to fall down over the holes and close them, so as not to allow the steam to escape while it is required that the pot be covered. Projections enter the pot to hold the cover from falling off when the pot is tilted to pour off the liquid contents.

WINDOW SCREEN.—Oscar F. Frost, of Monmouth, Me.—This is an improved construction of window screens, to facilitate their insertion in and removal from the window. It consists in attaching the mosquito bar to the frame or sides by a groove and tongue, and in attaching the frame to the window casing by means of keyhole slots and screws. The advantages are, that this screen is readily adjusted to the window and removed therefrom, and, when not in use, may be rolled up and laid away, taking up but little space and not liable to be damaged like the common screen.

BURGLAR ALARM.—Mary A. Holland, of Passaic, N. J.—This invention relates to improvements in the bell sounding and signaling apparatus employed with apparatus to be set in motion by the opening of windows or doors to sound an alarm, or with the bell pulls of hotels for signaling from the different rooms. It consists in an arrangement of apparatus whereby the bell may be sounded from any window without affecting the apparatus connected with the other windows or doors, or interfering with the efficient operation thereof.

CORN HARVESTER.—This machine, by a variety of ingenious devices, pulls the ears from the standing stalks, husks them and deposits them in a suitable receptacle attached to the machine, which is drawn by horses. The ears are pulled from the stalks by fingers placed at such a distance from each other that the stalks will pass between them, but the ears cannot. Should any of the stalks be drawn from the ground, they are seized by conical rollers, and pulled down through the fingers to tear off the ears, the latter being husked by passing between endless belts, carrying a system of claws or teeth, which strip off the husks. The machine is the invention of Madison Thorp, of Waterloo, Iowa.

SEWING MACHINE.—Frederick E. Decker, of Newark, N. J., assignor to Edward Simon & Brothers, of New York city.—This invention is a new and improved attachment to a sewing machine for turning the rough edges from the leather covering of round or oval satchel handle stock, at the same time they are stitched on by the machine, or as they pass from the needle when being sewed. It consists in a pair of grooved guiding wheels and a pair of rotary cutters, having operating gear arranged to be actuated by a pawl lever connected with the feed bar, to be moved by it for feeding the handle along at the same time that the feed plate of the machine is worked. Such adaptations of the rollers are made as may be requisite for trimming the rough edges from any work done on a sewing machine.

COTTON CHOPPER, SCRAPER, AND CULTIVATOR.—Frank A. Leonhard, of Columbia, Tenn.—This invention has for its object to furnish a simple, convenient, and effective machine for chopping, scraping, and cultivating cotton, so constructed that the supporting and cultivating rollers, while supporting the chopper at the proper elevation, shall be capable of adjusting themselves to any unevenness of the ground laterally. The claims cover an arrangement of rollers and scraper in connection with arms, whereby they are adapted to oscillate, as shown and described; also an arrangement of two sets of rollers and scrapers, and a vibrating chopper, in connection with a pivoted frame.

GRATE BAR.—Joseph A. Miller, of Providence, R. I.—The object of this invention is to so construct grate bars as to combine strength with lightness of metal, and large area of air space with narrow openings, and allow freedom to expand and contract with varying temperatures. A broad central bearing bar is connected with end pieces, to the sides of which are attached one or more sections, consisting of three (more or less) independent brackets, which brackets increase in size and width from the inner to the outer one. The top portion of each bracket is round, with a rib extending down, and diminishing in thickness, so that a great area of air space is allowed beneath the fuel, while the ashes and incombustible matter mingled with the fuel freely escape to the ashpit. Instead of casting the sections to the central bar, the sections or the brackets may be cast separately and hooked or attached in any manner to the central bar.

RAILWAY CAR TRUCK.—John R. Mestier, of Galveston, Texas.—The car axle carries the wheels in the ordinary manner. The journal box is made of halves, of which each contains a semi-cylindrical cavity for holding the end of the axle. Bolts serve to lock the halves of the box together. Within the halves of the box are placed, in suitable grooves provided for their reception, two semi-annular plates made of case hardened steel. They embrace a collar, which is placed upon and securely fastened to the axle, and also made of case hardened steel. The plates constitute a swimming journal for the axle, which, by its collar, has its entire bearing thereon. The collar has flanges at the ends to embrace the journal for the purpose of preventing longitudinal displacement. Each plate is held in place by a screw. The upper screw fitted through the upper half of the box, is tubular, and carries an oil reservoir at the upper end for lubricating purposes. The lower screw is fitted through the lower half of the box. A rubber washer is placed upon the axle and crowded, by a spiral spring, against the back of the journal box to entirely close the aperture in the same. The rubber prevents dust and impurities from entering the box, and does away with the packing heretofore used, and also with the expensive brass disks.

BURGLAR ALARM FOR WINDOW.—Mary A Holland, of Passaic, N. J.—This s an improvement in alarm attachments to windows for ringing bells when hey are raised; and it consists in an arrangement of apparatus for imparting a vibrating movement to a vertical bell supporting rack or frame, by means of a cam or notched plate on the window sash and a spring. Both the upper and lower sashes are to be caused to sound the alarm, and they are both provided with a set of apparatus for working it, and both sets of apparatus are connected to a bell crank at the top of the window frame. The cranks of the two sashes are so arranged that the cords or wires connecting them with the bell crank extend along the bottom of a groove formed in the window frame between the sash, so that no labor is needed to provide space for them, or at least not more than for slightly deepening the groove. This admits of readily applying the apparatus to windows already built.

LATHE FOR TURNING IRREGULAR FORMS.—Henry R. Hill, Nelson W. Twiss, of New Haven, Conn.—This invention relates to mechanism arranged, in combination with a slide lathe, for cutting or turning prismatic and other forms, intended more especially for turning or cutting stone columns, stone fence posts, balusters, etc., but applicable to wood, metal, and other material; and consists in the construction and arrangement of certain parts, consisting mainly, of a lathe carriage, cutter, cutter slide, spring, eccentric, and feathered shaft, whereby, by a change in the form of the cam, a variety of irregular forms are produced. The article to be turned constantly revolves with an uniform motion. and the position of the cutter, at every moment of time, is governed by the cam. At first sight it appears difficult to cut a perfectly flat surface on a revolving body, as a prism or a polygon, or to flute a column or other article; but as the revolving cam, which governs the cutter, may be of any form, the operation is made quite easy. For turning a taper, the tail center is moved laterally, as in ordinary lathes.

BRIDLE BIT.—Smith C. Boughton, of Waterford, N. Y.—This invention has for its object to furnish an improved driving bit, which shall be so constructed that it may be differently adjusted to meet the different faults of the animals to be driven, bringing the animal in every case completely under the control of the driver. By pulling upon the driving reins, the cheek pieces are forced against the horses' mouths, and the nose band acting as a fulcrum, the bits are thrown to the roof of the animal's mouth with great force, which, together with the side pressure of the cheek pieces, causes him to yield at once. When the nose strap is not used, the bits press upon the animal's lower lips, which, with the side pressure of the cheek pieces, forces the animal's mouth open, loosening his hold upon the bits. In another arrangement, pulling upon the driving reins forces the cheek pieces against the sides of the animal's mouth, and the bits against the roof of his mouth, but not with the same force as when the first arrangement is used. Still another will not compress the sides of the mouth, and may be used for ordinary driving. For a tender mouthed animal, the arrangement may be so adjusted as not to allow the bits to press with much force against the animal's lower lip when the reins are pulled upon, thus applying the pressure to the nose and relieving the tender mouth. Various other arrangements of the bits may be made, to meet special faults of the animal to be driven.

Inventions Patented in England by Americans.

September 5 to September 11, 1871, inclusive.

[Compiled from the Commissioners of Patents' Journal.

CHILLED ROLLS.—G. G. Lobdell, Wilmington, Del.
FURNACE.—C. F. Pike, Providence, R. I.
FURNACE.—P. W. Mackenzie, Blauveltville, N. Y.
NAVIGABLE VESSEL.—B. T. Babbitt, New York city.
ORDNANCE.—H. Arden, Brooklyn, N. Y.
PICKLE FORK.—H. Laurence, New Orleans, La.
PREVENTING OXIDATION.—C. Godfrey, Dix Hills, N. Y.
PRINTING MACHINERY.—G. P. Gordon, Rahway, N. J.
PRINTING PRESS.—V. E. Mauger, New York city.
PRINTING PRESS.—V. E. Mauger, New York city.
STOPPER.—W. C. Street, New York city.

Official List of Patents.

ISSUED BY THE U. S. PATENT OFFICE.

FOR THE WEEK ENDING SEPTEMBER 26, 1871.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT FEES:

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119,215.—ROCK DRILL.—C. Bernard, Florida, Mass.
119,216.—STEAM WAGON, ETC.—W. C. Bibb, Madison, Ga.
119,217.—SEWING MACHINE.—J. L. Borsch, Philadelphia, Pa.
119,218.—FIRE ARM.—A. Burgess, New York city.
119,219.—LOCOMOTIVE ENGINE.—W. A. Carns, Malden, Mass.
119,220.—WATER WHEEL.—J. T. Case, Bristol, Conn.
119,221.—HORSE POWER.—R. J. Cheney, Petaluma, Cal.
119,222.—LAMP CHIMNEY.—M. H. Collins, Chelsea, Mass.
119,223.—SHAWL STRAP.—G. Crouch, Westport, Conn.
119,224.—PAPER PULP.—A. K. Eaton, Brooklyn, N.Y.
119,225.—GENERATOR.—J. Eberhardt, Conshohocken, Pa.
119,226.—LADDER HOOK.—S. D. Fish, Schuyler Falls, N.Y.
119,227.—GAS.—T. B. Fogarty, Brooklyn, N.Y.
119,228.—FEEDING MACHINE.—J. C. Gould, Oxford, N. J.
119,229.—SHEARS.—I. Grass, Sandusky, Ohio.
119,230.—CHAIR, ETC.—M. A. Hayward, Brooklyn, N.Y.
119,231.—BOLT CUTTER.—J. Johnson, Cochransville, Pa.
119,232.—SUCKER ROD.—D. Jones, Boston, Mass.
119,233.—TRUSS.—N. Jones, Syracuse, N.Y.
119,234.—CRIMPER.—M. R. Lemman, W. A. L. Kirk, Hamilton, O.
119,235.—SPINDLE.—T. E. McDonald, Trenton, N. J.
119,236.—FENDER.—W. H. Miller, Philadelphia, Pa.
119,237.—ANIMAL TRAP.—J. H. Mooney, G. A. Lloyd, San Francisco, Cal.
119,238.—TANNING.—W. Morris, Philadelphia, Pa.
119,239.—BLACKING.—J. H. Patterson, Glen's Falls, N.Y.
119,240.—BENDING WOOD.—S. Patterson, Berlin Heights, O.
119,241.—GRAIN BINDER.—A. Philippi, St. Lous, Mo.
119,242.—ACCELERATING GROWTH.—A. I. Pleasonton, Phil., Pa.
119,243.—FAUCET.—O. Salgee, Brooklyn, N.Y.
119,244.—WASHER.—J. H. Schmidt, Stockertown, Pa.
119,245.—DENTAL PLATE.—F. M. Shields, Sacramento, Cal.
119,246.—SEWING MACHINE.—D. M. Smyth, Orange, N. J.
119,247.—PISTON, ETC.—E. Sullivan, Mount Washington, Pa.
119,248.—PACKING.—E. Sullivan, Mount Washington, Pa.
119,249.—CAR HEATER.—B. D. Thompson, New York city.
119,250.—DISINFECTANT.—H. A. Tilden, New Lebanon, N. Y.
119,251.—FISHING ROD.—T. Tout, Cambridge, Mass.
119,252.—SALT.—A. C. Twining, New Haven, Conn.
119,253.—CAR SPRING.—R. Vose, New York city.
119,254.—CAR SPRING.—R. Vose, New York city.
119,255.—PROPELLER.—H. Waterman, Brooklyn, N. Y.
119,256.—RETURN BEND.—S. L. Wiegand, Philadelphia, Pa.
119,257.—GENERATOR.—S. L. Wiegand, Philadelphia, Pa.
119,258.—LOCK SPINDLE.—C. O. Yale, New York city.
119,259.—MOLDING PIPE.—W. D. Alford, Cuyahoga Falls, O.
119,260.—MOTIVE POWER.—J. N. Bethune, Warrenton, Va.
119,261.—CULTIVATOR.—D. Boggs, H. Rohs, Cynthiana, Ky.
119,262.—GAME TABLE.—E. Brunswick, Chicago, Ill.
119,263.—LATCH.—C. B. Clark, Buffalo, N.Y.
119,264.—AMALGAMATION.—A. B. Crosby, Greene, Me.
119,265.—WRENCH.—A. Cumberworth, Toronto, Canada.
119,266.—BLIND FASTENER.—G. K. Dearborn, Smithfield, R.I.
119,268.—WARDROBE, ETC.—O. L. and W. Gardner, Glen Gardner, N. J.
119,269.—LUBRICATOR.—J. Harper, New Haven, Conn.
119,270.—DAMPER.—W. B. Hayden, Columbus, Ohio.
119,271.—FASTENER.—A. Haye, Morrisania, N.Y.
119,272.—FLOWER POT.—A. D. Judd, New Haven, Conn.
119,273.—PICTURE NAIL.—H. L. Judd, Brooklyn, N. Y.
119,274.—WATER WHEEL.—J. C. Kelly, Groveland, N.Y.
119,275.—ADJUSTER.—L. B. Lathrop, San José, Cal.
119,276.—LOOM.—I. Lindsley, Pawtucket, R. I.
119,277.—LOOM.—I. Lindsley, Pawtucket, R. I.
119,278.—LOOM.—I. Lindsley, Pawtucket, R. I.
119,279.—HORSE POWER.—J. Marshall, New Orleans, La.
119,280.—VISE.—R. Phillips, Boston, Mass.
119,281.—AXLE SHIELD.—B. F. Robbins, Harwich, Mass.
119,282.—POLISHING.—A. Saffer, New York city.
119,283.—SPINDLE BEARING.—J. H. Sawyer, Lowell, Mass.
119,284.—SEWING MACHINE.—A. Shattuck, Buffalo, N. Y.
119,285.—SEEDER, ETC.—W. D. Stroud, Oshkosh, Wis.
119,286.—DIE.—W. Terrell, Ansonia, Conn.
119,287.—LUBRICATOR.—S. Ustick, Philadelphia, Pa.
119,288.—LUBRICATOR.—S. Ustick, Philadelphia, Pa.
119,289.—WARDROBE.—H. Whittemore, Orangetown, N. Y.
119,290.—WASHSTAND, ETC. H. Whittemore, Orangetown, N.Y.
119,291.—POLISHING LEATHER.—L. Wolfson, Boston, Mass.
119,292.—FLAG HALYARD.—W. Albert, Brooklyn, N. Y.
119,293.—HANDLE STRAP.—A. Alexandre, New York city.
119,294.—LAND ROLLER.—W. W. Andrew, La Porte, Ind.
119,295.—HUB.—S. Atha, West Liberty, Ohio.
119,296.—WHIP STOCK.—H. W. Avery, Westfield, Mass.
119,297.—WAGON TONGUE.—C. J. Babcock, Rives, Mich.
119,298.—BATTERY.—L. Bastet, Tarrytown, N. Y.
119,299.—FIXTURE.—J. E. Baum, Philadelphia, Pa.
119,300.—WASH BOILER.—S. Bennett, Newcastle, Pa.
119,301.—MEDICAL COMPOUND. T. W. Bethel, Brooklyn, N.Y.
119,302.—COUPLING.—C. Bridgman, St. Cloud, Minn.
119,303.—CLOTH MEASURER.—T. M. Brintnall, Medina, Ohio.
119,304.—SHUTTER WORKER.—A. Brown, Boston, Mass.
119,305.—ELEVATOR.—G. W. Brown, New York city.
119,306.—WEDGE.—T. B. Brown, J. N. Dinsmore, Kendall's Mills, Me.
119,307.—BAG.—J. M., J. P., S. H. Bryant, Temperanceville, Pa.
119,308.—STEAM WAGON.—O. H. Burdett, New Athens, Ohio.
119,309.—CARRIAGE BOLT.—O. C. Burdict, New Haven, Conn.
119,310.—GENERATOR.—G. F. Burkhardt, Boston, Mass.
119,311.—CLOTHES PIN.—B. Burling, Whitehall, N. Y.
119,312.—BEDSTEAD.—S. S. Burr, Boston, Mass.
119,313.—PROJECTILE.—J. G. Butler, Fortress Monroe, Va.
119,314.—STEAM PUMP.—L. and T. E. Button, Waterford, N.Y.
119,315.—GOVERNOR. H. Camp, G. W. McIntosh, Rouseville, Pa.
119,316.—DESK.—W. C. Carter, J. P. Emery, Galva, Ill.
119,317.—DRILL, ETC.—T. A. Chandler, Rockford, Ill.
119,318.—FRAME.—H. Chatain, Washington, D. C.
119,319.—HINGE.—P. P. Child, St. Louis, Mo.
119,320.—HAY RAKE.—A. L. Chubb, Grand Rapids, Mich.
119,321.—FIXTURE.—H. Clayton, Lexington, Ky.
119,323.—LIGHTNING ROD.—A. Codington, Bound Brook, N.J.
119,324.—ICE SHAVER.—W. H. Collins, Boston, Mass.
119,325.—SEED DROPPER.—L. H. Converse, J. K. Welter, Springfield, Ill.
119,326.—STRAW CUTTER.—J. A. Cornish, Marshfield, Mo.
119,327.—VISE.—J. W. Coyne, Madrid, N. Y.
119,328.—WATER WHEEL. J. M., W. L. Cress, Taylorsville, Tenn.
119,329.—GAS.—D. Davison, New York city.
119,330.—TORPEDO.—J. C. Dickey, Titusville, Pa.
119,331.—CAR SEAT.—A. B. Dinsmore, Springfield, Mass.
119,332.—SLATE.—F. D'Ossone, Philadelphia, Pa.
119,333.—BOLT.—G. R. Dunn, Newark, N. J.
119,334.—EXCAVATOR.—J. M. Dunn, Erin, Miss.
119,335.—KEY BOARD.—W. D. Edgar, Ottawa, Kan.
119,336.—BEE HIVE.—J. C. Edwards, Cattleville, Mo.
119,337.—INSECT TRAP.—S. Endslow, Blain, Pa.
119,338.—WASHING MACHINE. J. P. Eshleman, West Salem, O.
119,339.—WHEELBARROW, ETC. H. J. Evans, Christieville, Can.
119,340.—FANNING MILL.—F. Eves, Fountain City, Wis.
119,341.—TRUNK.—H. S. Farley, Sing Sing, N. Y.
119,342.—WATER CLOSET.—B. G. Fitzhugh, Frederick, Md.
119,343.—STOVE GRATE.—C. O. Foley, Troy, N. Y.
119,344.—SEAT.—M. T. Glynn, J. L. Goodman, Boston, Mass.
119,345.—MARINE RAILWAY.—J. H. Gosline, Hampton, Va.
119,346.—COTTON PRESS.—G. W. Grader, Memphis, Tenn.
119,347.—LAMP POST.—J. W. Graham, Chillicothe, Ohio.
119,348.—TRUNK.—N. Groel, Newark, N. J.
119,349.—VENTILATOR.—G. B. Hall, J. Shaffer, Kansas City, Mo.
119,350.—SEWING MACHINE.—H. M. Hall, New York city.
119,351.—FAN.—W. DeLancey Hall, Memphis, Tenn.
119,352.—TEAPOT, ETC.—H. J. Hammond, Newburgh, Ohio.
119,353.—GRADING MACHINE.—J. F. Hanna, Momence, Ill.
119,354.—MOLE TRAP.—G. W. Hardwick, Wyandotte, Ind.
119,355.—LANTERN.—J. F. Harly, Kipton, Ohio.
119,356.—HARVESTER.—G. W. Harrison, Lansing, Mich.
119,357.—CARTRIDGE SHELL.—A. C. Hobbs, Bridgeport, Conn.
119,358.—TOY.—E. V. B. Hoes, Green Bay, Wis.
119,359.—COUPLING.—C. L. Horack, Hastings, Minn.
119,360.—LOCKING NUT.—J. M. Horton, Milwaukee, Wis.
119,361.—CLOD BREAKER, ETC.—H. H. Hull, Bergen, N. Y.
119,362.—MOTIVE POWER.—J. B. Hunter, Ashley, Ill.
119,363.—PROPELLER.—H. Jackson, Brooklyn, N. Y.
119,364.—VALVE.—J. Jonson, New York city.
119,365.—MELTING COPPER.—J. Kintz, West Meriden, Conn.
119,366.—BEE HIVE.—A. H. Klepper, Muscatine, Iowa.
119,367.—COTTON PRESS.—J. B. Knight, New Orleans, La.
119,368.—SLATE FRAME.—W. Knight, Covington, Ky.
119,369.—HARVESTER.—J. Lamburn, Boundary, Ind.
119,370.—HOLD BACK.—J. A. Lannert, Cleveland, Ohio.
119,371.—WHIFFLETREE.—J. A. Lannert, Cleveland, Ohio.
119,372.—FENCE.—H. Latshaw, McKnightstown, Pa.
119,373.—WASH BOILER.—G. J. Leach, Rome, N. Y.
119,374.—LATCH.—J. H. Lee, Marshall, Texas.
119,375.—FILTER.—R. M. Linn, Lookout Mountain, Tenn.
119,376.—EARTH CLOSET.—J. M. Loewenstein, N. Orleans, La
119,378.—STOP VALVE.—H. G. Ludlow, Troy, N. Y.
119,379.—TRUSS PAD.—J. B. Marsh, Brooklyn, N. Y.
119,380.—ELEVATOR.—I. Mayfield, Mayfield, Ky.
119,381.—CALENDER.—W. McAdams, Newton, Mass.
119,382.—SADDLE.—W. B. McClure, Alexandria, Va.
119,383.—THREAD CUTTER.—J. J. McLoughlin, Nashville, Tenn.
119,384.—WRINGER.—C. V. Mead, Trenton, N. J.
119,385.—BUTTER WORKER.—P. P. Meredith, Stevensville, Mon.
119,386.—GUN LOCK.—A. Miller, Daleville, Ala.
119,387.—CHURN.—H. H. Montgomery, Greensburg, Ind.
119,388.—DROP PIPE.—G. C. Morgan, Chicago, Ill.
119,389.—INSECT DESTROYER.—D. G. Mosher, Mosherville, Mich.
119,390.—DESK.—H. Mott, Troy, N. Y.
119,391.—BILLIARD CUSHION.—J. Murphy, New York city.
119,392.—WHISTLE.—A. Neuhausen, Wheeling, W. Va.
119,393.—BENDING WOOD.—H. Ocorr, Sheboygan, Wis.
119,394.—ARTIFICIAL STONE.—J. O'Friel, Brooklyn, N. Y.
119,395.—TOOL HEAD.—S. W. Paine, Williamsport, Pa.
119,396.—WASHING MACHINE.—J. H. Palmer, Yonkers, N. Y
119,397.—HARROW.—D. A. Parkman, Union City, Tenn.
119,398.—HARROW.—J. M. Payne, Benton, Ill.
119,399.—WASHER.—H. W. Pell, Rome, N. Y.
119,400.—EQUIPMENTS.—W. H. Penrose, Fort Lyon, Col.
119,401.—ELEVATOR.—F. B. Perkins, Boston, Mass.
119,402.—NAIL.—C. H. Perkins, Providence, R. I.
119,403.—ALARM LOCK.—C. E. Pierce, New York city.
119,404.—CULTIVATOR.—W. M. Pitts, Holden, Mo.
119,405.—GOVERNOR.—J. B. Potter, Conneautville, Pa.
119,406.—TEMPERING.—H. H. Ray, Arena, Wis.
119,407.—HEEL.—C. A. Read, Bridgeport, Conn.
119,408.—WAGON SEAT.—J. L. Reed, Hastings, Mich.
119,409.—COUPLING.—H. R. Robbins, Baltimore, Md.
119,411.—SEED PLANTER, ETC.—J. Sample, Franklin Co., Miss.
119,412.—JOURNAL.—J. Sault, South Manchester, Conn.
119,413.—CEMENT.—D. O. Saylor, Allentown, Pa.
119,414.—CLAMP.—A. Schmackers, Cincinnati, Ohio.
119,415.—HORSESHOE.—R. Seiffert, Chicago, Ill.
119,416.—COUPLING.—G. C. Sherman, Chicago, Ill.
119,417.—FIFTH WHEEL, ETC.—E. W. Silsby, Ottumwa, Iowa
119,418.—HOE.—Z. B. Sims, Bonham, Tex.
119,419.—STEEL PLATE.—W. W., D. D. Skinner, Des Moines, Iowa.
119,420.—WAGON HOUND.—F. Smith, Tiffin, Ohio.
119,421.—GATE.—B. Snyder, Clinton, Wis.
119,422.—BURNISHER.—V. K. Spear, Lynn, Mass.
119,423.—PLOW, ETC.—W. W. Spear, Allegheny city, Pa.
119,424.—WATER WHEEL.—B. Stetson, Uxbridge, Mass.
119,425.—TILLER, ETC.—J. W. Strange, Bangor, Me.
119,426.—BOILER COMPOSITION.—C. A. Sweet, Ripon, Wis.
119,427.—VALVE.—J. F. Sweet, Cedar Rapids, Iowa.
119,428.—HEATER.—J. F. Taylor, Charleston, S. C.
119,429.—KNOB.—N. Thompson, Brooklyn, N. Y.
119,430.—PULLEY, ETC.—N. Thompson, Brooklyn, N. Y.
119,431.—COUPLING.—E. M. Van Hoesen, N. H. Brown, Syracuse, N. Y.
119,432.—WASHING MACHINE.—J. Varney, Batavia, Ill.
119,433.—PLOW.—J. C. Vertrees, Gallatin, Tenn.
119,434.—STOVE COVER.—J. V. Vrooman, Schenectady, N. Y
119,435.—TRAP.—W. I. Webb, Phila., Pa.
119,436.—STILL.—E. Werner, Canton, Ill.
119,437.—MOTION.—H. F. Wheeler, Boston, Mass.
119,438.—GATE.—F. Whitaker, Bel Air, Md.
119,439.—BRUSH.—G. Willett, St. Albans, Vt.
119,440.—BRUSH.—G. Willett, St. Albans, Vt.
119,441.—OIL CAN.—G. D. Winchell, Cincinnati, Ohio.

REISSUES.

4,567.—WHEEL.—J. R. Baird, Vincennes, Ind.—Patent No 117,142, dated July 18, 1871.
4,568.—STOVE.—M. A. Boughton, Norwalk, Conn.—Patent No. 113,842, dated April 18, 1871.
4,569.—AUGER.—J. Swan, Seymour, Conn.—Patent No. 116,509, dated June 27, 1871.
4,570.—WRINGER.—W. Whitney, Winchendon, Mass.—Patent No. 33,861, dated December 3, 1861.
4,571.—GLASS MOLD.—W. C. King, Pittsburgh, Pa.—Patent No. 114,569, dated May 9, 1871.
4,572.—LAMP.—C. B. and S. Mann, Baltimore, Md.—Patent No. 114,954, dated May 16, 1871.

DESIGNS.

5,276.—CAN.—J. J. Bockee, Jr., New York city.
5,277.—CIGAR BOX.—A. Lis, Covington, Ky.
5,278 & 5,279.—CARPET PATTERN.—W. McCallum, Halifax, Eng.
5,280 & 5,281.—CARPET PATTERN.—D. Paton, New York city
5,282.—FRAME FOR SEAT.—H. M. Sherwood, Chicago, Ill.
5,283.—KNITTED FABRIC.—J. Taylor, Phila., Pa.
5,284.—ICE PITCHER.—G. Wilkinson, Providence, R. I.
5,285 & 5,286.—STAND.—A. Wunder, New Haven, Conn.
5,287.—BRACKET.—A. Wunder, New Haven, Conn.
5,288.—FASTENER.—P. Bradford, New Haven, Conn.
5,289 & 5,290.—ORGAN CASE.—L. K. Fuller, Brattleborough, Vt
5,291.—TROLLING SPOON.—J. H. Mann, Syracuse, N. Y.
5,292.—FRUIT BOX.—J. Sherman, Burlington, N. J.
5,293.—PIANO FRAME.—J. Whitney, Boston, Mass.
5,294.—LIFTER.—E. B. Wilbur, Raynham, Mass.
5,295.—DOOR BOLT.—A. Wunder, New Haven, Conn.

TRADE-MARKS.

446.—LINIMENT.—W. H. Adams, F. A. Young, Bangor, Me.
447.—MEDICINE.—Atchison & Bro., Frankfort, Ind.
448.—MEDICINE.—Dunn & Co., London, England.
449.—LEATHER.—Eagle Works, Chicago, Ill.
450.—PLASTER.—C. W. Massonneau, Red Hook, N. Y.
451.—CORN SALVE.—J. McKee, New Orleans, La.
452.—MEDICINE.—J. Scott, New York city.
453.—MEDICINE.—Thompson, Steele & Price Manufacturing Company, Chicago, Ill.

EXTENSIONS.

ELASTIC GORE CLOTH.—C. Winslow, Lynn, Mass.—Letters Patent No. 17,950, dated August 4, 1857: reissue No. 492, dated September 15, 1857.
CUPOLA AND OTHER FURNACES.—P. W. MacKenzie, Jersey City, N. J.—Letters Patent No. 18,051, dated August 25, 1857; reissue No. 1,403, dated February 10, 1863; reissue No. 1,843, dated December 27, 1864.
APPARATUS FOR SUSPENDING EAVES TROUGH.—J. A. Watrous, Green Spring, Ohio.—Letters Patent No. 18,113, dated September 1, 1857.
MOWING MACHINE.—G. C. Dolph, West Andover, Ohio.—Letters Patent No. 18,141, dated September 8, 1857; reissue No. 904 dated February 21, 1860.
EXTENSION GAS TUBE.—C. Monson, New Haven, Conn.—Letters Patent No. 18,154, dated September 8, 1857.
CULTIVATOR.—C. H. Sayre, Utica, N. Y.—Letters Patent No. 18,073, dated August 25, 1857.
SEPARATING ORE.—T. J. Chubb, New York city.—Letters Patent No. 18,038, dated August 25, 1857.
TYPE SETTING AND DISTRIBUTING MACHINE.—H. W. Alden, New York city.—Letters Patent No. 18,175, dated September 15 1857; reissue No. 3,572, dated July 27, 1869.