

The Western railroad of Massachusetts in a few months will complete its second track, so that when this is done an unbroken line of double track will extend from Boston to Albany.

During the year 1863 the production of petroleum in this country was nearly 4,000,000 barrels, over one quarter of this amount being exported. Many companies formed during the oil excitement in that year have since allowed their lands to be sold for taxes, seemingly resolved to spend no more in that country, but the productive localities are so continually changing that many of these farms may again be brought into market. A decided increase in the amount of petroleum exported this year as compared with last, is noticed. The excess thus far amounts to 3,126,674 gallons, or 78,161 barrels.

Recent American and Foreign Patents.

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

MACHINE FOR PREPARING AND REDUCING COCOANUTS.—John Gardner, Philadelphia, Pa.—The object of this invention is to prepare cocoanuts for the use of confectioners and others, and it consists in a horizontal revolving convex plate in which are placed, radially, a series of knives or cutters against which the cocoanut is pressed, and which cut it off in thin strips or ribbons. Immediately below this cutter-plate, is a series of radial arms which are made to revolve by the same crank which drives the cutters, but in the opposite direction, thereby dividing the strips or ribbons into very minute fragments. This invention also includes a device for removing the dark skin on the outside of the cocoanut.

FLOW WHEEL.—George Dodge, Kalamazoo, Mich.—This invention relates to a new and useful improvement in gage wheels for plows. The invention is applicable to all plows, but is more especially designed for those which are provided with iron beams.

CLAW BAR FOR DRAWING RAILROAD SPIKES.—Henry Jeffrey, St. Charles, Mo.—This invention relates to an improvement in the construction of a claw bar for drawing railroad spikes.

BELL.—Ezra G. Cone, East Hampton, Conn.—This invention relates to a new and useful improvement in bells, more especially in small bells, designed for doors, and commonly termed jingle bells.

ICE-CREAM FREEZER.—Wm. H. Skerrett, Cincinnati, Ohio.—This invention relates to an improved ice-cream freezer, and consists of a cylinder to hold the cream, disposed within another cylinder, of the same depth, in which the ice or freezing mixture is placed, the mouth of the cream cylinder being soldered in the bottom of the ice cylinder; both mouths are covered with wooden caps which may be made tight by an india rubber, or other packing, and screw brace or tie.

LUBRICATOR.—Henry Jarecki and Charles Jarecki, Erie, Pa.—This invention consists in a new and improved arrangement of parts whereby the oil is filtered or strained as it enters the reservoir or chamber of the lubricator, and whereby the quantity of oil to be discharged is governed or controlled by a plunger and valve.

MILK-CAN BOTTOMS.—Moses Wiles and Joseph C. Wock, Fort Plains, N. Y.—This invention relates to a new and improved method of constructing the bottoms of cans which are used for the transportation of milk, or dairy purposes, whereby they are rendered much more durable than when made in the ordinary manner.

STEAM PUMP.—Rudolph Schmidt, New York city.—This invention consists in constructing the steam and water cylinders in one and the same piece, forming two cylinders connected together, the piston and plunger of which are connected to and operated by one piston rod.

TABLE FAN.—W. A. McReynolds, Elkton, Ky.—This invention relates to an improved mechanism for operating a fan, designed more especially for keeping flies and other insects off from a table while meals are being eaten.

WASHING MACHINE.—James B. Coffin, Ashland, O.—This invention has for its object to furnish an improved washing machine, so constructed and arranged that the operator may stand erect and work the machine with both hands, and which will do its work quickly and thoroughly, whatever be the quality of the clothes being washed.

BROOM HEAD.—T. G. Packer, Mexico, N. Y.—This invention has for its object to furnish an improved broom head, simple in construction, easily filled, and which will hold the corn securely and firmly in place.

WINDOW SHADE FIXTURE.—L. A. Tripp, Middletown, N. Y.—This invention has for its object to furnish an improved fixture for window shades, by which the shade may be held at any desired elevation, and at the same time be free to be drawn down or to be run up, as may be desired.

WASHING MACHINE.—Miles S. Prentice, Rockford, Ill.—This invention has for its object to furnish an improved washing machine, simple in construction, easily operated, and which will do its work quickly and thoroughly, and without injury to the fabric.

LIGHTERS FOR VESSELS.—Orrin H. Ingram and Donald Kennedy, West Eau Claire, Wis.—This invention has for its object to enable a vessel, built sufficiently strong to run in the swift currents of rivers during high water, to run during low water or in shallow streams, and is especially designed for use upon the Western and Southern rivers which are deep and rapid during part of the year, and very low or shallow during another part.

LOOP FOR BEARING CHAINS.—James Bird, New York City.—The object of this invention is to improve the means or devices now commonly used for supporting the shafts of a cart or other vehicle from the shoulders or back of a horse or other animal.

SLEIGH BRAKE.—W. A. Niver, Scott, N. Y.—This invention has for its object to furnish an improved brake for sleighs, which shall be cheap, simple, durable and strong, which can be attached to any sleigh, which when attached will be entirely out of the way, and which may be used either to retard the sleigh in going down hill, or to hold it in going up hill, so that the horses may have an opportunity to rest.

DAMPERS.—Edwin Cox and A. W. Potter, Monroe, Wis.—This invention relates to an improvement in stovepipe dampers, and has for its object the more effectually regulating the amount of heat passing into the flue and securing a more perfect draft, and consists of a series of conical segments fitting together in the form of a furnace, and when closed resting on a shoulder in the stovepipe. Each segment is provided with shoulder pieces in which are inserted pins connecting the segments together. The whole is operated by a bent lever and catch.

HORSE RAKE.—Levi W. Frederick, Gosport, Ind.—This invention relates to improvements in the construction of revolving horse hay rakes, wherein great simplicity and economy are combined with great strength and durability, producing an implement which is managed easily and works perfectly on any kind of ground, whether the surface is smooth or rough.

MUSKETO NET.—Mary L. Treadwell, New York City.—This invention has for its object the constructing of a frame for musketo nets in such a manner that it may be readily applied to and detached from a bedstead, chair, lounge, or other article, and be also capable of being taken apart or unjoined so that it may be placed in an ordinary traveling trunk without monopolizing much room therein, and carried without any inconvenience by families or individual travelers in making summer tours.

CULTIVATOR AND HILLING PLOW.—S. F. Seely, Sylvania, Ohio.—This invention relates to a new and improved cultivator and hilling plow, and the invention consists in a novel draft attachment so arranged that the line of draft may, by a simple adjustment of a slide, have such a direction relatively with the share and the wings, which are attached to it, that the device may be adopted for cultivating the soil, that is to say, taking out weeds, and pulverizing the surface of the soil, or adapted for hilling plants, and also be capable of being adapted to suit the width of the spaces between the rows of plants, without any adjustment of the wings or any part pertaining directly to the share.

DOOR SPRING.—Henry S. Frost, Watertown, Conn.—This invention consists in the combination of a spring, bars, and friction pulley with each other and with the door-frame and door, and in the peculiar manner in which the rear ends of the bars and spring are connected to each other.

LUBRICATOR.—Samuel Lemon, Hoboken, N. J.—This invention consists in arranging a rod with a valve upon it in a lubricating globe or vessel in such a manner that the quantity of oil which is allowed to pass to the bearing or journal can be regulated with the greatest exactness.

SELF-ACTING RAILROAD SWITCH.—Jas. McLaughlin Duncannon, Pa.—This invention relates to an improvement on the construction and arrangement of railroad switches, which consists in connecting elastic rails on a main and side track in such a manner that the wheels of a locomotive and car shall move the rails by springing them apart parallel with each other and thus connect the ends of the rails on the main and side tracks.

MARKER FOR SEWING MACHINES.—Miss S. F. Brown, Savannah, Ga.—This invention relates to a new device for automatically marking the width of tucks before sewing them, and consists in the use of a tubular pencil holder which is pivoted to a sliding rod or bar, and which is provided with a spring by which the pencil is held in any one desired position in the tube. By the adjustable plate, the width of the tuck is regulated, while the oblique or other position of the pencil is regulated by a spring which holds the pivot pin that connects the rule with the sliding plate in any desired position.

ELEVATED BEDSTEAD.—D. Burnett, Bedford Station, N. Y.—The object of this invention is to so arrange bedsteads in apartments where room is to be economized, that the same may be completely concealed during day time, and whenever they are not used. The invention consists in suspending the bedstead by means of ropes or cords from the ceiling of the room in which they are arranged, the ropes passing over pulleys that are provided in the ceilings, so that by pulling the ropes the bedstead may be elevated to the ceiling and be fitted in a recess provided therein for its reception.

SPRING BED BOTTOM.—Samuel C. Jennings, Wautonia, Wis.—This invention has for its object to furnish a simple, cheap and efficient spring bed bottom.

MACHINE FOR CLEANING AND BLENDING FIBROUS MATERIAL.—Alphonse J. Loiseau, Philadelphia, Pa.—This invention relates to a new machine for dividing and separating from each other the fibers of woolen, cotton, flax, hemp or other fibrous material, for the purpose of cleaning damaged or soiled fibers without breaking or weakening the same and also for the purpose of blending and mixing the fibers of different colored materials, which can be done so completely, that, it will appear as if the fibers had been dyed with the color in which they appear, when discharged from the machine.

MACHINE FOR SHAVING AXES.—H. C. Reynolds, Manchester, N. H.—This invention relates to a machine, in which the blade of an ax, which is to be shaved is placed upon a reciprocating block, the lower surface of which is concave, and which rests upon a convex or stationary bed, the form of which is such that as the aforesaid block moves to and fro it will give such a motion to the ax, that the knife for shaving can be held almost stationary; the curve described by the ax under the knife being like that, which it is intended to impart to the surface of the ax.

SEWING MACHINE.—H. E. Froehlich, Easton, Pa.—This invention consists in the use of wire arms, which are laid over the spools for the purpose of holding the thread and preventing it from slipping; said arms being secured stationary to the machine.

BRICK MACHINE.—P. Hayden, Pittsburg, Pa.—This invention relates to a brick machine of that class in which the clay is pressed into a revolving mold wheel, is then carried in the same to the press, which consists of a vertical plunger and corresponding mold, between which the clay is pressed into the required shape, and is then carried by the wheel to an endless apron, whence the completely molded and pressed brick may be carried to the drying apparatus.

SLATE-PENCIL SHARPENER.—F. G. Bottner, Bridgeport, Conn.—This invention relates to a new device by which slate pencils can be easily and nicely sharpened and pointed; the device being small and substantial so that it cannot be easily destroyed by children.

SPRING BED BOTTOM.—Henry Doebele, Philo, Ohio.—This invention relates to a bed bottom, which is so constructed that it can be easily taken out of the bedstead to be cleaned and which can be taken apart for transportation whenever desired, and easily put together again. It can be adapted to single or double beds or lounges, as may be desired.

NUTMEG AND SPICE GRATER.—Louis von Froben, Washington, D. C.—The object of this invention is to enable the cook to use up the whole of the nutmeg without lacerating the fingers upon the grater.

CLOTHES HORSE RACK.—J. J. Newman, assignor to Erwin Wilson & Co., Middletown, Ohio.—This invention consists in attaching a hinged arm to a clothes rack, which extends horizontally when in use, and when not in use may be dropped by the side of the rack, so as to be out of the way.

SWING.—Aaron B. Nott, Fair Haven, Mass.—This invention consists in an improved swing, formed by the combination of the double rockers, with the upright supports and with the frame, from which the platform of the swing is suspended; in the combinations of springs with the double rockers, in the hinge, by means of which the double rockers are pivoted to each other, and in the combination of the brake with the horizontal frame of the swing, and with the central connecting bar of the supports.

SICK BED ATTACHMENT.—Norman Teal, Kendallville, Ind.—This invention relates to an ordinary bedstead of an adjustable bed bottom, which may be easily regulated to govern the position of the patient, and afford the means of ready access to his body when desired through the bottom of the bed. It consists in attaching the device to an ordinary bedstead.

WASHING MACHINE.—John F. Riggs and William M. Albin, St. Joseph, Mo.—This invention relates to a new and improved clothes-washing machine of that class which are provided with a reciprocating plunger to compress the clothes in the suds box, and by its action turn the clothes therein while compressing them, so that they will be acted upon alike and all thoroughly cleaned. The invention consists in the novel means employed for operating the plunger and in the arrangement of certain detail parts.

REAPING AND MOWING MACHINE.—William F. Brabrook, South Hardwick, Vt.—This invention consists in attaching two sickles to the main frame of a reaping and mowing machine, in such a manner that the machine may be made to cut much nearer to stumps, stones, and other obstructions than usual, and allowed to conform to the inequalities of the surface of the ground much more perfectly than hitherto.

FILTER.—Alexander Fox, Poughkeepsie, N. Y. Patented July 30.—This invention relates to an improvement in filters for cisterns and other purposes, and consists in a divided box fitting into the bottom of the cistern or other reservoir, the said box being provided with a lid or cover having a hole through which the liquid to be filtered passes into the first compartment of the divided box. This, and all the other compartments save one, are filled with divers purifiers, as charcoal, sand, gravel, or the like, through which the liquid passes in succession, until it reaches the delivery compartment, whence it is pumped or drawn for use. The filter can be cleaned by merely reversing the stream and allowing the liquid to flow out from the first compartment by an outlet or tap provided for the purpose.

DOUGH AND BUTTER KNEADER.—Prince W. Robinson, New Bedford, Mass. Patented July 30.—This invention relates to an improved dough and butter kneader, and consists of a tray running on rollers in a frame, and of a corrugated roller, adjustable in bearings on said frame, operated by a crank.

MOP WRINGER.—Charles E. Wareham, Sedalia, Mo. Patented July 30.—This invention relates to an improved mop wringer, and consists of rollers, one of which is journaled in uprights and the other in a frame journaled in the same uprights, the whole set on a flooring running on casters.

EXTENSION NOTICE.

Charlotte B. Thompson, administratrix of John H. Thompson, deceased, James M. Thompson, and Hosea Q. Thompson, of Holderness, N. H., having petitioned for the extension of a patent granted to the said Messrs. Thompson, the 15th day of November, 1853, for an improvement in machines for trimming soles of boots and shoes, for seven years from the expiration of said patent, which takes place on the 15th day of November, 1867, it is ordered that the said petition be heard at the Patent Office on Monday, the 26th day of October next.

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; besides, as sometimes happens, we may prefer to address the correspondent 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 50 cents a line, under the head of "Business and Personal."

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

J. S. H., of N. H.—A solution of rubber is the best elastic and water-proof cement for cloth. The lightest colored varnishes are solutions of gum dammar or bleached lac. They are, however, not elastic.

F. G., of Ct.—Besides the invention of mirror and reticulated glasses, for which we have to thank the Venetians, the art of making glass beads was also first discovered in the glass houses of Murano, and is practised there at the present day on a very extensive scale. The small glass beads are fragments cut from pieces of glass tubing, the sharp edges of which are rounded by fusion.

J. C., of Ark.—To remove the disagreeable taste from new kegs, churns or other wooden vessel first scald them with boiling water then dissolve some pearlash or soda in luke warm water, adding a little lime to it, and wash the inside of the vessel well with the solution. Afterward scald it well with plain hot water before using.

A. W. H., of Mass.—The best varnish or paint for cloth contains as much pure linseed oil as can be got into it. The dried or oxidized film of linseed oil is nearly as elastic and tough as india-rubber.

H. M. S., of O.—Sulphur and rubber for vulcanized rubber are mixed by mechanical means. The proportions may be varied within pretty wide limits; a mixture of 2 sulphur with 3 rubber will answer well for hard rubber. The coloring matter for the dental rubber is vermilion.

J. B. A., of O.—"Is it economical, etc., to use rubber pipe to convey water 1000 feet to a fountain; head of water 20 feet?" We think not. The rubber pipe would need some such protection as wooden pipe; will deteriorate by use and give the water an unpleasant taste and odor.

W. B., of N. Y., has an iron 1-inch pipe 1200, feet long with 100 feet fall from spring to lower end of pipe. The water delivered is not enough. Can it be increased without enlarging the pipe? He has thought of putting a 3-inch pipe on 12 or 15 feet of lower end in place of the 1 inch. As the case is stated we see no remedy but an increase of the size of pipe for the whole distance. W. B. is probably aware that the angles in the pipe, and air resting in the upper parts of the bends, lessen the amount of flow.

J. S. S., of Md.—For razor paste use jeweller's rouge or tin putty, and oil.

M. D. K., of Ky.—Watch dials are made of copper and enamel. The copper is brought into shape and the ingredients of the enamel, well ground together, are spread upon it in the form of paste. After baking in a muffle furnace, the surface of the enamel is ground and polished. The enamel is substantially the same as that used in iron culinary vessels.

C. T. D., of O.—Arnold's writing fluid is a mixture of sulphate of indigo and ordinary ink. It flows freely from the pen and at last becomes very black. On account of the large quantity of acid it contains, it is very destructive to steel pens, and for this evil we know of no cure. Arnold's ink has very properly gone out of fashion.

A. R. C., of Ill., writes relative to the uses and benefits of the rotary engine. He says he is not visionary, but believes that if the force exerted on the short crank could be applied to the periphery of a wheel there would be a great saving, and thinks he has discovered the means of applying this power. We do not agree with A. R. C. that there would be a saving of fuel and increase of power by applying the power exerted on the crank to the periphery of a wheel. The power exerted is constant, and is accounted for only by the effects produced. Whatever mechanical combinations are made to increase the initial power reduces it in proportion to the increase of friction by the addition of parts. The same power exerted on a crank or wheel of 24 inches radius is equal to, and no more than the same power exerted on a crank or wheel of 48 inches radius. The law is, whatever is gained in power is lost in space, or whatever is gained in ease of working is lost in time of working.

J. F., of Ill., inquires about the proper dimensions of a smoke-stack of a furnace for a steam boiler. The data and diagram sent are not sufficient for an opinion which might be practically valuable. Smoke stacks of from forty to sixty feet high should have an area of about one-sixth that of the grate surface. If the chimney is higher its area should be larger in proportion.

G. V. D., of N. J., asks what gives the red color to the water used in his steam boiler, which is collected in tanks fed from streams; the tanks being dug in blue clay. The red color is probably derived from oxide of iron in the clay or the beds of the streams which feed your tank. A convenient test for iron is that of dropping a few grains of tannic acid in a tumbler full of its water. If iron is present the water will become dark or black according to the amount of iron held in solution.

J. P. S., of Conn.—The curative properties of grindstone grit are probably to be accounted for by the presence of particles of iron, which is known to be a necessary constituent of the human body. It certainly is not due to the sand or the stone nor any other of its constituents.

T. W., of Pa.—All of the colleges of this state allow students to take a partial course of studies, and most of them have a special department of instruction in Civil Engineering. Among the latter we suggest that you address Columbia College of this city, and Union College at Schenectady.

D. H., of Mass.—The subject of "Old Style" is discussed on page 41. You will find the facts there stated substantially as you give them in your letter.

S. H. W., of Va.—You will find interesting facts concerning the distance shots have been fired on page 65, current volume. It is said that a Stafford projectile in experiments at West Point attained a range of 5 miles, with an elevation of the gun of 22 1/2°.

R. D. C., of N. Y.—The galvanizing of iron diminishes its tensile strength. The zinc penetrates the iron and to some extent destroys its fibrous character. The effect is most noticeable on fine wire.

Business and Personal.

The charge for insertion under this head is 50 cents a line.

For Sale Cheap.—Second-hand Barrel Stave Cutter and Jointer, full set of Shoe Peg Machinery, Portable Grist Mill, and new set of Pool Machinery. H. H. Frary & Co., Jonesville, Vt.

Pattern Letters and Figures to put on patterns for castings, etc., etc., are made by Knigt Brothers, Seneca Falls, N. Y.

Wanted the address of manufacturers of bronzed malleable iron castings. T. G. Packer, Mexico, N. Y.

A young man with a good education wishes employment by a Civil Engineer. Has had experience in field work, and is a good draftsman. Can furnish the best of references. Address "D," Post-Office box 539, Northampton, Mass.

Iron manufacturers are referred to the advertisement of P. Bright, in the advertising column of this paper. His announcement indicates something of importance to iron manufacturers and capitalists.