

## ENGINEERING INVENTIONS.

A snow plow has been patented by Mr. Thomas Y. Woolford, of Augusta, West Va. This invention covers an improvement in that class of plows having a revolving wheel in front, with peripheral cutters or scrapers that dig into the snow and remove it to either side, being mounted on a truck or car and propelled by a locomotive.

## MISCELLANEOUS INVENTIONS.

A washing machine has been patented by Mr. Albert M. Wilson, of Greenleaf, Kansas. This invention covers a novel construction and combination of parts in a machine designed to work easily and quickly cleanse the clothes, while being simple, inexpensive, and durable.

A dish washer has been patented by Mr. William D. Miller, of Florence, Mass. It consists of a bundle of connected links or rings of wire attached to a suitable rigid handle, whereby the washer may be conveniently and effectively used without putting the hands in water.

A nut lock has been patented by Dr. Aaron C. Vaughan, of Shane's Crossing, Ohio. It consists of a relatively thin spring nut having both the body of the nut and its thread curved, by bending the nut after threading, to clamp the bolt by its own elasticity just outside of the regular nut.

A folding fire blower has been patented by Mr. James M. McMeen, of Danville, Ill. It is made of two series of plates pivoted to a central strip, and connected at their outer ends to side strips carrying fasteners for engaging the jambs of the fireplace, the device being readily folded to occupy but little space.

A hat stretcher has been patented by Mr. Gustav E. Schellman, of New York City. Combined with an oval shaped divided main band, and a screw for adjusting its sections in or out, are independently adjustable outer curved wings to conform to the exterior of the sections, to make a hat conform to special or peculiar shapes of the head.

A leader for scarf neck bands has been patented by Mr. Michael D. Levy, of New York City. It is for attachment to the free end of the band of the scarf, for drawing the extremity of the band through the scarf, and consists of a long narrow body, flattened at one end and with hooks at the other end, with keepers for the points of the hooks.

A trousers stretcher has been patented by Mr. George H. Courten, of Baltimore, Md. Combined with a rectangular frame and a cross bar fitted to slide on its side pieces, are a stationary and a sliding clamp, with other novel features, designed to make a stretcher that is easily manipulated, inexpensive, and that will be all in one piece.

A tricycle has been patented by Mr. Patrick Gallagher, of New York City. It has a front guide wheel and rear driving wheels mounted on a light and strong iron framework, with a suitable seat, the machine being propelled by a crank handle mounted in arms pivoted to uprights on the frame and secured in position by adjusting bolts.

A guide for sewing machines has been patented by Mary E. Hunter, of Osborn, Ohio. This invention covers a novel construction of gauge plate, especially adapted for use in sewing straw braid, and which may be applied to any sewing machine, whereby the braid may be held easily to place, so it can be rapidly and accurately stitched.

A washing machine has been patented by Alois Mueller, of Neillville, Wis. It is a wash boiler and washing machine combined in one, the invention covering various novel features of construction and combinations of parts designed to make a machine very easy upon the clothes treated, while strong, simple, and convenient.

The manufacture of fibers of wood for spinning purposes forms the subject of a patent issued to Mr. Alexander Mitscherlich, of Freiberg, Baden, Germany. The wood is first boiled in a chemical solution, as sulphurous acid or bisulphite, the fibers then dried and softened in water, and afterward subjected to repeated mechanical pinching.

A detachable fire pan for stoves has been patented by Gertrude N. Howe, of New York City. It is adapted to be set in the top openings of stoves, ranges, etc., for building a fire only beneath the vessel to be heated, and thus avoiding the necessity of heating the whole stove, being of very simple and economical construction, and designed to be very convenient in use.

A foot rest for stools has been patented by Mr. Gustave La Barbe, of Roseland, Ill. It consists of a pair of clamps, an adjustable ear for varying the inclination of the foot rest support, and an arm hinged to the adjustable ear adapted to receive the board forming the support for the feet, which may be attached in any desired position, let down when not in use, or folded up out of the way.

A life buoy has been patented by Mr. Philip Hichborn, of the U. S. Navy, Washington, D. C. It is a float with torch attached, having a chamber for combustibles, and a breakable or detachable seal which normally closes the mouth of the chamber water tight, being held suspended at the side or stern of a vessel, to be instantly released and allowed to fall into the water when required for use.

A pump has been patented by Mr. Hiram J. Wells, of Nashville, Tenn. The cylinder has an air-valved outlet at its lower end, the cover having a valved tube or cylinder at its upper end, and the plunger having a tubular rod with a series of air inlets at its upper end and a valve at its lower end, the design being to purify and remove extraneous substances from the water as it is being pumped.

A door or other mat has been patented by Mr. Alanson Cary, of New York City. It consists of a series of connected corrugated parallel flexible

strips set edgewise, with their convex portions facing the concave portions of the adjacent strips, making a mat designed to be largely self-cleaning, and presenting a scraper-like rubbing surface for removing mud and dirt from boots or shoes.

A gate has been patented by Mr. Urban L. Shaw, of Westfield, Ind. It consists of a series of vertical strips or slats to which diagonal and parallel bars are pivoted in such manner that the gate may be opened by folding the parts up at one side, the construction being simple, while the gate will not be easily clogged by snow or ice, and cannot be readily raised by animals.

A wall heating system has been patented by Mr. John D. Parker, of Fort Riley, Kansas. A series of flues is formed in the walls, communicating with a furnace in the lower part of the building, so that the heat of the furnace may be communicated to the walls and thence through the building, there being grates in the apartments to regulate the temperature by supplying the remainder of the heat necessary.

A mustard package has been patented by Mr. William P. Cray, of Brooklyn, N. Y. It is preferably made of glass, with a lid fitted upon it, combined with a sheet of lead and a sheet of paper placed between the lead and the contents of the package, the package being sealed at the edge of the lid by a strip of paper or other material secured by an adhesive substance both to the lid and the body of the package.

An apparatus for stopping and starting vehicles has been patented by Messrs. John J. Hooker, of Tideswell, Stockport, Derby County, and Herman Lescher and Robert G. Schwarz, of London, England. It consists of a spring barrel sliding on one of the wheel axles, with friction clutch and other gear, whereby power may be stored on descending hills and in stopping, and given out to the axle for propelling the car in starting.

A wire fence building apparatus has been patented by Messrs. John A. Hooton and Gilbert L. Wiard, of Clifton, Neb. This invention is designed to provide an inexpensive spool rack and connected tension devices by which the wires may be held and fed in pairs to the twisting device, and maintained at uniform tension to assure proper weaving in of the pickets, accomplishing the work with economy of time and labor.

An apparatus for casting traps has been patented by Mr. William M. Smeaton, of Camden Town, Middlesex County, England. It has a sectional core consisting of two movable sections at approximately right angles to each other, two hinged sections carried by one of the movable sections, while there are loose sections on the latter, with other novel features, for casting a complete trap for water closets, etc., in one piece, without seam or joint.

A well digging apparatus has been patented by Mr. William Lowman, of Marionville, Pa. This invention covers an improvement on a former patented invention of the same inventor, in apparatus for digging wells for water, oil, or gas, which may be quickly set up and taken down, is easily folded and carried by a single wagon, and in which the leverage is such that one man can operate the drill to sink wells with advantage and facility.

A process for reducing ores has been patented by Messrs. Theodore Michant, Pierre Connoy, and Frank J. Wiest, of Boulder City, Col. It consists in mixing the pulverized ores with a pulverized compound of stated proportions of feldspar, carbonate of lime, silica, carbonate of potassa, etc., and then subjecting the mixed mass to heat, the process being especially designed for desulphurizing auriferous pyrites and other sulphurous ores.

A right and left hand stop and waste faucet has been patented by Mr. William Briggs, of Brooklyn, N. Y. The faucet casing has two sets of pin-receiving apertures at right angles to each other in one end, surrounding the key bore, the key extending through such bore and having transverse projections on its projecting end, with other novel features, providing a means whereby one device may be made to serve as a right or left hand faucet.

A machine for puncturing sheet metal has been patented by Messrs. George F. Waelde and Herman G. Cery, of Brooklyn, N. Y. Combined with a table and reciprocating frame having a series of longitudinal slotted tool-carrying bars, are clamps sliding on the bars, and other novel features, making a simple and durable apparatus, especially adapted for puncturing the members of mouldings in sheets of iron or other metals.

A horse power has been patented by Mr. Allen Sampson, of Victoria, Texas. The machine has a tilting carriage, a lever fulcrumed on its frame being connected to the machinery to be driven, while weight boxes are held to the lever and travel on the carriage during its tilting movement, with mechanism for rocking the lever and thereby tilting the carriage, making a machine by or from which a cotton gin, grist mill, sawmill, etc., may be run.

A lamp wick has been patented by Mr. Adolfo S. Yanez, of Havana, Cuba. The wick tube has a supplemental open-ended mouth piece, to form longitudinally extending spaces between the tube and mouth piece, with spacing projections, and a granular filling is used on the top of the wick in the spaces, with other novel features, designed to produce a flame which will not easily become ragged or irregular from protracted burning, while the wick can be easily cared for.

A paper box has been patented by Messrs. John F. Diemer, of Elizabeth, N. J., and Paul E. Gonon, of New York City. It has a metallic bottom plate with side bends, metallic strips on its sides, a locking plate, and other novel features, making a box for filing folded papers, documents, etc., of which the parts can be conveniently shipped in folded condition, the invention being an improvement on a former patented invention of the same inventor.

A doubling winding machine has been patented by Mr. Alphonse Ryo, of Roubaix, Nord, France. Its construction is such that, by the oscillation of a vertically swinging frame or bracket, the axis of the yarn guides is raised and they are arrested at the same level by an adjustable stop bar, to throw their eyes well forward within reach of the attendant, to render easy the piecing up of the yarn, the invention also covering various novel features of construction and the arrangement of parts.

A machine for cutting key seats has been patented by Mr. George Benson, of Durham, England. It is for cutting key seats in wheels or pulleys, and is a reciprocating cutter in a frame having a slotted bed plate with adjustable clamps, and other novel features, being adapted to hold the saw or cutter to its work and automatically relieve it in its up stroke, to accurately adjust for the depth of cut, and provide for holding wheels of different thickness and diameter.

A regenerative gas furnace has been patented by Mr. Gottfried Pietzka, of Witkowitz, Moravia, Austria-Hungary. It is designed for reverberatory furnaces used for smelting pig metal, reheating, puddling, etc., the gas generators being at one end of the furnace and the regenerators having reversing valves and being connected with the ends of the furnace, the waste gases being passed through the regenerators, after which air is passed through them in connection with the gases from the generators.

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SEPTEMBER NUMBER.—(No. 35.)

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3. Perspective view and floor plans of a beautiful residence at Rochelle Park, near New York. Our engraving was made from a photograph taken specially for the SCIENTIFIC AMERICAN BUILDING EDITION.
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5. A Queen Anne cottage lately erected in Rochelle Park, near New York. Perspective and floor plans. Cost, five thousand six hundred dollars, complete.
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