Recent American and Foreign Patents.

Improved Latch.

Edward Halsey, San Jose, Cal.—This invention consists in a pivoted and handled gravity latch, provided with a projecting pin or lug, and so attached to a gate adapted to swing in either direction laterally that, when the gate is being swung shut, said latch will turn on its pivot, and the pin or lug ride up one of the inclines of a striker plate, which is fixed to the post, and engage a notch formed therein.

Improved Seamless Rubber Nipple.

Charles B. Dickinson, Brooklyn, N. Y.—This invention relates to the seamless rubber nipples employed upon the mouth and neck of bottles from which infants are expected to suck some liquid nourishment, and consists in an improved construction whereby they may be more conveniently cleaned out by a swab, may be more quickly taken from the mold, and be able to shut out or exclude all passage way for the air when the child bites or closes its gums upon it.

Improved Process of Treating Natural Oils.

Julius Schubert, Parkersburg, W. Va.—This invention consists in combining, with a vessel in which oil is to be purified by the action of hot water, of a heating coil having an exit pipe for any steam that may be generated. This simple improvement enables the imparted heat to be restrained within a degree of temperature that will not injure the oil, while the impurities are precipitated with equal certainty.

Improved Car Coupling.

John Carpenter, of Mariner's Harbor, N. Y.—The coupling link engages with jaws on the ends of two levers. The drawhead is made in two parts. The levers extend back between the parts of the drawhead, and are held together by springs. The jaws lap past each other; but a space is left between the levers, in which is placed a spreading bar. This is on a horizontal rod, which passes through the drawhead. On the ends of the rod are levers, attached by square sockets, by means of which the rod and opener are turned for spreading the jaws and uncoupling the cars. The coupling link has springs, which allow it to be varied from the horizontal in either direction, up or down or laterally, as may be necessary, in entering the mouth of the opposing drawhead.

Machine for Burnishing the Edges of Boot and Shoe Soles.

Levi Hussey, New York city.—This is a machine for burnishing or polishing the edges of the soles. The improvement consists in a gage which may be adjusted according to the thickness of the sole, and held in position by a screw rod which works through a stand. A spiral spring takes up any slack of the screw, and always holds the gage evenly up to the polisher.

Improved Raker and Loader.

Samuel D. Muse, Monticello, Miss.—This is a rake on a wheeled truck, combined with a vehicle having a rearwardly tilting body, the former being movable within the body of the latter. The object is to provide a simple and efficient means for gathering pine straw to be used as a fertilizer.

Improved Reed Organ Attachment.

Simon B. Shoninger, New Haven, Conn.—A *voix celeste* stop draw connects with mechanism so as to slightly raise the bar of the octave coupler, so that when a key is pressed down it will slightly open a valve of the octave below, giving the reed just enough air to sound, but not quite on the same pitch as when the coupler stop is drawn out. The coupler bar is divided so as to operate both sections when the lower section is used, but enabling the upper to be operated singly.

Improved Car Coupling.

Gillman H. Ames, Fort Fairfield, Me.—In this invention, the drawhead is provided with an upper and lower chamber, in the upper one of which is a coupling bar having lateral projections which secure it to the drawbar. These projections work in slots in the sides of the drawbar, which have an upward and somewhat receding direction. The coupling bar within the head of the drawbar rests on hook-shaped feet. The slots in the drawhead, in which the projections on the coupling bar work, serve a fourfold purpose, namely: 1. They let the bar rise to allow the coupling bar of the opposite car to pass under the outer hook, the said hook immediately dropping down into the slot in the end of the approaching car. 2. They give the bar a tendency to draw downward, thus preventing the cars from being casually uncoupled. 3. They allow the draft to be raised to fit higher cars of the old style. 4. They give the bar a receding motion when it comes in contact with obstacles, thus breaking the force of the collision. In the lower chamber is a link, fastened by a pin, to adapt the same drawbar to be used with the ordinary drawbars.

Improved Stocking Supporter Clasp.

Rachel Eberle, New York city.—This invention applies specially to a catch which takes hold of the stocking, which catch is attached to the end of the supporting strap. Button holes in the top of the stocking are thus obviated.

Improved Sofa Bed.

William Livingstone, Springfield Store, N. Y., assignor to Denzer, Medicus & Co., New York city. This is a movable head piece of the sofa or lounge, which moves in suitable supporting slides on the main frame, and gives a rigid support to the hinged section when thrown open. The intermediate space between the head piece or back is provided with flexible bands, which are stored into a recess of the back and covered by a pivoted face piece.

Improved Washing Machine.

William Hilton, Agency City, Iowa.—Half bearings rest upon the journals of the roller. Upon guide pins attached to said bearings are placed coiled springs. The upper ends of said pins pass up through ends of a wooden spring, to the center of which is attached a guide pin, upon which is placed a coiled spring. The upper end of the pin passes through the center of another wooden spring, which rests upon the coiled spring, and the ends of which pass through slots of the standards. Several holes are formed in the standards to receive bolding pins, so that the tension of the springs, and consequently the pressure upon the clothes, may be regulated at will.

Improved Screw Press.

Cyrus W. Crenshaw, Athens, Ala., assignor to himself and J. M. Townsend, same place.—The screw has a semicircular groove. The nut also has a semicircular groove, instead of the usual thread, and, besides, has a circular spiral channel connecting each end of the spiral groove, which has a hollow spiral flange to provide for the passage. Balls, with which the spiral groove and the return channel are filled, form a continuous row on which the screw rolls, instead of sliding on threads, to lessen the friction. When the screw turns downward, the balls roll down into the channel and return to the top of the nut, those being forced down by the screw pushing those in the channel up to the top; and when the screw turns upward, the balls roll up in the groove and pass down in the channel.

Improved Quilting Attachment for Sewing Machines.

William B. Null, Blandinsville, Ill.—The quilting rollers are arranged in a beam, so that they can be readily lifted out of their bearings, and the hangers of that beam are so pivoted to the frame that the beam can be readily swung up to pass over the head of the sewing machine to allow of passing one of the quilting rollers under the armand behind the needle bar and presser. The friction is applied to the quilt rollers by the lever, tightening pulley, and belt, and the pulley has teeth working in holes in the belt, and also a dividing wheel on its axis to govern the shifting of the quilt on the rollers for graduating the spaces between the seams, by means of arms on the wheel, and a stop spring for arresting and holding the wheel.

Improved Needle Threader.

John M. Stamp, Washington, D. C.—The object of this invention is to provide a means of easily threading the needle of a sewing machine. It consists in the peculiar construction of a hook which passes through the eye of the needle and seizes the thread, the said hook being attached to a shank, which is of a size barely small enough to allow its passage through the eye, and the hook being so cut away on both sides as to reduce the thickness to that of a knife's edge, so that the thread will bend short and to a point around the edge, and also have room to flatten itself on the sides of the hook when passing through the eye of the needle.

Improved Cotton Scraper.

William Sandlin, Minden, La.—This scraper, the lower edge of which is so formed as to fit upon the colter of the plow, is provided with two lugs, one of which rests against the land side of said colter, and the other upon its upper side. The scraper is so formed as to guide the soil and weeds removed by it back to the mold board of the plow, along which they pass, and are covered by the soil. Upon the rear end is formed a shank, which extends up to the plow beam, and may be secured to it.

Improved Sun Dial.

David B. Scofield, Auburn, Oregon.—This is an adjustable, pivoted, graduated sun dial, having the upper edges of the meridional gnomon straight, and a northern face provided with beveled edges, and graduated to denote the time upon the face.

Improved Middlings Purifier.

John T. Wright, Richmond, Va., and Elkanah Bateman, Howardsville, Va.—This invention relates to certain improvements in middlings purifiers. It consists in the combination of a polygonal reel having bolting cloths of different degrees of fineness and ribs attached forming buckets with the diagonally set vanes of a fan by which a blast is made in the direction of the vent. It consists further in the arrangement of a suction fan and roof in the top of the casement and a compartment in the end of the same, whereby the lighter and more worthless particles of the middlings are separated from the heavier grains, and the latter left in a better condition for regrinding.

Improved Life Preserving and Diving Apparatus.

John P. Schmitz, San Francisco, Cal.—This invention relates to certain improvements in life-preserving and diving apparatus. It consists in the peculiar construction of a floating air receiver in combination with an elastic hose, and also in the combination with said elastic hose of sectional metallic tubes for the purpose of preventing the collapse of the hose when subjected to the pressure of the water.

Improved Lubricating Compound.

Charles F. Benedict, Richmond, Va.—This invention consists in a process of preparing a lubricating grease for car axle journals by first boiling oil or fatty matter until it loses its spongy appearance, next boiling the resultant in a solution of soda and carbonate of lime until it saponifies and thickens up, and finally passing it through a grinding mill: also in a new article of manufacture consisting of saponified axle grease or lubricant of a waxy consistency.

Improved Fifth Wheel.

Paul La Bell, Monroe, Iowa.—This invention relates to certain improvements in fifth wheels, designed to dispense with the use of kingbolts and perch plates, and make a neater finish. It consists in an upper plate having a flange bent around for the double purpose of forming a guide and a stop.

Improved Clothes Wringer.

Leander Becker and Stephen M. Smith, York, Pa.—This invention relates to certain improvements in the construction of wringer frames. The improved frame consists of three pieces: the piece forming the bearing of the lower roll, the piece forming the bearing of the upper roll, which is pivoted to the first piece, and a third centrally pivoted lever, at one end of which is a clamping screw for attaching the wringer to the tub, and at the other end a rubber spring that bears against the middle of the piece forming the bearing of the upper roll, by means of which arrangement the pressure of the rolls is regulated by the clamping screw.

Improved Pocket Book.

Gabriel Jasmagy, Brooklyn, N. Y.—This is a pocket book, the partition or pocket part of which is attached to the gussets by means of an interior lining of the latter, provided with as many projecting loops of a band or strip as there are partitions of the pocket book. These are drawn through slits of the lining, and pasted between the double partition walls.

Improved Machine for Mining Coal.

Michael Wright, Clinton, Pa.—In this device the stock will turn on its fastening screws, and the drill on the trunnions, so that a hole may be bored in almost any direction. The operating crank is made in two parts, so that it can be lengthened or shortened to adapt it to the strength of the operator. This machine is especially designed to be operated by hand, but other power may be applied.

Improved Car Axle Box and Lubricator.

John M. Brostius, Richmond, Va.—This invention consists in the journal gate with excisions at the lower end, and placing in the guide groove the triangular blocks or inclined strips, so that the gate does not require to be held by hand, wedge, or other device, but will rest in position until the journal is inserted in the box, and then rise as the journal is pressed inwards: also in forming a box or projecting plate on the inside of axle box, and at the end where the journal enters, so as to prevent the lubricant from being splashed out at the joint: also in making an annular recess or groove in the axle, and near the journal, for the purpose of receiving an elastic ring that serves to form a packing to prevent the escape of the lubricant, and to exclude grit and dirt from working into the axle box: also in making the piece that is intended to hold the lubricating fabric up to the journal of a single longitudinal metallic plate spring, so that it may be readily bent to accommodate itself to any inner conformation of axle box, be easily fastened by the screw in front, and be prevented from lateral play by a simple plate or cross bar which may have a turned-up end. In order to cause the lubricating fabric to slide readily with the journal in passing from one gage of road to another, it is attached to a piece or holder which is slotted, with subjacent dovetail tenon, and thus allowed to slide within the dovetailed groove or channel of the bent plate. It also consists in pivoting the latter on a cross pin in lugs of the spring, so that the fabric will automatically adjust itself to and bear always along the whole length of the journals.

Improved Railway Switch.

Nathan F. Carter, Orford, N. H.—The object of this invention is to cause the switch to be automatically shifted in advance of the engine by a device on the engine under the control of the engineer. The switch rails are connected to a switch bar, to which is applied a toothed rack, with which a segmental wheel gears to shift the switch rails forward and backward, the said wheel being geared with a toothed bar for being turned by it. This bar extends along the track each way from the switch a suitable distance for being worked by the locomotive, and it gears at each end with upright shafts. Each upright has an arm, with one of which a cam on the locomotive is to come in contact as it advances toward the switch to set the bar in motion for shifting the switch. The switch bar carries a locking bolt which drops into a hole immediately after the rails have been shifted to hold them fast while the cars pass, and arrangements are provided which afterward lift the bolt out and free the switch.

Improved Water Elevator.

Edemon P. Le Blanc, Houma, La.—This invention consists of a series of buckets moving about in a circular channel below a horizontal wheel by which they are actuated. The channel at one side descends to a cavity, into which the water flows, and then rises to the place of exit for the water. The buckets are contrived so as to be raised off the bottom of the channel immediately after passing the exit, and lodged on the wheel, to be carried thereby without friction until they return to the point where they take the water again, when they are tripped and let fall again to the bottom of the channel. The machine is designed to afford a simple and cheap means of raising water short distances for irrigation, drainage, and the like.

Improved Parlor Cooking Stove.

E. Mortimer Deey, New York city.—This invention relates to improvements in parlor cooking stoves of the kind for which a patent was granted to same inventor July 16, 1872, being a fire grate with a top, which may be used for cooking, and may be converted into a self-feeding top, and a couple of ovens behind the grate, one being above another. The back plate rests on the front edge of the bed plate, and has corrugations in its front face which correspond with passages through the bed plate, over which is a register to open or close them at will, for causing the draft to pass down through the fire grate or through the back, as may be required. The upper oven may be readily removed for the application of a false top plate with pot holes in it for use in supporting cooking pots and the like. A pot hole in the top, and under the removable top, is fitted in a circumscribing groove for preventing the escape of gas,

Improved Device for Suspending Pictures.

Charles Mason, New York city, assignor to Carl Most, Greenville, N. J.—This invention consists of a suspension cord, which is passed through the side staples of the picture frame, and then through a hollow tapering socket to a tapering key with central and side perforations and grooved or ribbed surface. The ends of the cord are drawn through the central and side perforations of the key, and formed in a knot below, to be easily adjusted by drawing back the key, being then firmly locked in position in the socket.

Improved Picket Fence.

Robert H. McGinty, Moulton, Tex.—This is an improvement on the fence for which the same inventor obtained letters patent dated October 14, 1873. The posts are connected and supported at their top ends by wires. At certain distances are placed bracing posts in pairs, having their lower ends spread apart and their upper ends beveled and brought together, and fastened by bolts. The supporting wires connect with these bracing posts. Short stakes are driven into the ground, from which stay wires extend and connect with the bracing posts. The supporting wires cross each other between each two of the posts.

Improved Corn and Feed Mill.

Lauritz Meland, Iowa Falls, Iowa.—This mill is intended merely for grinding corn and feed, and is adapted to be driven by horse power. The operation is as follows: The grain is first cracked as it falls between cylinders at one end, and is carried against a blade and then pulverized between the cylinders and case, while, at the same time, it is gradually transferred to the discharge openings at the upper and lower sides of the chamber containing the cylinders. The latter have corresponding acute-angled spiral furrows and edges, and the blade projects up intermediately nearly or about to their middle.

Improved Crank.

William Henry Phillips, Bridgeton, N. J.—The end of this shaft is made to receive a round crank and a square crank. The crank is made in two parts. One part is fitted to the round portion of the shaft, and the other part is made open, so as to fit on and enclose three sides of the square portion. The open part will readily slide on the other portion sufficiently far to detach the open end from the square of the shaft. The motion of the open part is limited by a mortise and pin. The crank handle is also in two sections, one attached to one part and the other to the other, each being a semicircle, and forming an entire round handle when the shaft is being turned for elevating. There may be a spring to force the two parts from each other when they are not grasped by the hand. This crank may be used in perfect safety, as no serious accident can happen should the handle slip from the hand in elevating.

Improved Vehicle Spring.

Milton Newell, San Francisco, Cal.—This consists of the carriage body jointed at each end to arms of a transverse rockshaft, and also connected by a spring with an arm of the rockshaft at the opposite end in such a manner that the revolving action of the weight of the body on the rockshaft is opposed by the springs. An easy up-and-down motion is thus produced without any forward and backward or side motion whatever, and the apparatus employed is all of a simple and cheap character.

Improved Seed and Grain Drill.

Asa Canterbury, Gibson City, Ill.—In this seeder, there are sharp, deeply furrowing wheels and curved spouts to drill the grain, reversely curved spouts to drill the grass seed on the nearly filled furrow, and small blunt wheels that press the pulverized soil to and shallowly over the grass seed.

Improved Machine for Bending Bolster Stake Irons.

Bernhard Jensen and Nicholas Huetter, Kenosha, Wis.—This is a machine for bending bolster stake irons in cold state, for farm, lumber, and other wagons. It consists mainly in the arrangement of a strong swinging lever with obliquely slotted end, and a bending roller pivoted to the main supporting block, which is firmly set into a vise. An adjustable main roller for bending (in connection with the lever end and a curved guide frame with side extending curved supporting part) the bolster stake irons by the different operations of the machine.

NEW BOOKS AND PUBLICATIONS.

A MANUAL OF METALLURGY. By William Henry Greenwood, Associate of the Royal School of Mines, England, F. C. S., etc. Volume I., containing Fuel, Iron, Steel, Tin, Antimony, Arsenic, Bismuth, and Platinum. Illustrated by Fifty-Nine Engravings. Price $1.50. New York: G. P. Putnam's Sons, Fourth avenue and 23d street.

The literature of metallurgy has long needed popularization, more on account of its diffuseness than its deficiency. Mr. Greenwood has succeeded, in the treatise before us, in condensing the labors of many writers more or less precise and authentic, into a handy book of reference, containing well digested information and trustworthy formulæ. The work is especially adapted for students, for whom it is intended, being Volume I. of No. 19 of Messrs. Putnams' Advanced Science Series.

THE INTERNATIONAL REVIEW. Published Six Times a Year. Volume I., No. 6. Annual Subscription, $5. New York: A. S. Barnes & Co.

We are pleased to observe that this serial maintains its uniform excellence. The issue now before us contains a thoughtful and original essay by Philip Gilbert Hamerton, a rising star in critical literature, as well as an exhaustive treatise on the iron resources of the United States by Professor J. S. Newberry, which we commend to the perusal of manufacturers and statisticians.

SURVEY OF THE WEST OF THE HUNDREDTH MERIDIAN. Report upon the Ornithological Specimens collected in 1871, 1872, and 1873. Catalogue of Plants collected in 1871, 1872, and 1873. Washington, D. C.: Government Printing Office.

THE HEATHENS OF THE HEATH, a Romance, Instructive, Absorbing, Thrilling. By William McDonnell, Author of "Exeter Hall." Price, in paper, $1; in cloth, $1.50. New York: D. M. Bennett, 335 Broadway.

EULOGY ON CHIEF JUSTICE CHASE, delivered by W. M. Evarts, before the Alumni of Dartmouth College, N. H. Price 25 cents. Hanover, N. H.: J. B. Parker.

ANNUAIRE DE L'UNIVERSITE LAVAL, POUR L'ANNEE 1874-75. Quebec, Canada: A. Coté et Cie.

Inventions Patented in England by Americans.

[Compiled from the Commissioners of Patents' Journal.]

From September 30 to October 15, 1874, inclusive.

BOILER WATER INDICATOR.—J. E. Watson, Louisville, Ky.
CLEANING SUGAR, ETC.—J. O. Donner, New York city.
CRUSHER, ETC.—T. A. Weston (of Philadelphia, Pa.), Birmingham, England
FLOOR CLOTH FABRIC.—H. B. Meech (of New York city), London, England
JOURNAL BEARING.—C. A. Hussey, New York city.
LAMP.—I. R. Forbes, New Orleans, La.
LOOM.—C. H. Chapman, Shirley, Mass.
LOOM.—L. J. Knowles, Mass.
LUBRICATING JOURNAL BOX.—C. T. Pierson, Ramapo, N. Y.
MAKING OXYGEN, HYDROGEN, ETC.—N. H. Edgerton, Philadelphia, Pa.
MUCILAGE BRUSH.—C. A. Hussey, New York city.
PENCIL CASES, ETC.—A. T. Cross, Providence, R. I.
PRINTING MACHINERY.—R. M. Hoe, New York city.
SEWING MACHINE EMBROIDERER.—R. M. Rose, Williamsburgh, N. Y.
STEAM PUMP, ETC.—E. Cope *et al.*, Hamilton, Ohio.
STEAM REGULATING VALVE.—J. E. Watts, Lawrence, Mass.
VARIABLE EXHAUST FOR ENGINES.—O. Stewart, East Cambridge, Mass.