## RECENT AMERICAN INVENTIONS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list :—

*Harness Saddle.*—This invention consists in constructing the saddle of two wooden bearings connected at their upper ends by a metal spring which is strengthened or supported by an elastic piece of wood, and having the upper surfaces of the wooden bearings grooved in such a manner as to receive the covering of the saddle. The object of the invention is to obtain a harness saddle which will adapt itself to the back of the animal, and fit snugly or properly thereon, without injuring the back of the horse in the least ; and at the same time admit of being manufactured at a comparatively low price, and form a superior piece of work for first-class harnesses. Robert Spencer, of Brooklyn, N. Y., is the inventor.

*Car Coupling.*—This invention relates to an improvement in the ordinary car coupling now in general use and which consists simply of a socket formed at the end of the draw bar and provided with a vertical pin which secures the link or shackle within it, the link or shackle forming the connection between the drawheads of two adjoining cars. This coupling, although possessing some disadvantages, has, on account of its simplicity, the small cost with which it may be constructed, and not being liable to get out of repair or become deranged by use, not been superseded by any of the more pretentious couplings hitherto devised. In many of the latter, advantages have been obtained not possessed by the old coupling, but, at the same time, they all have thus far proved to have some objectionable or impracticable feature which has served to prevent their general adoption. This invention consists in a very simple modification of the old coupling by which the link or shackle may be adjusted in the drawheads of two adjoining cars when the former are in contact, the shackle not requiring to be adjusted longitudinally in the drawheads by hand, as hitherto, when the cars are in motion. To effect this result the drawheads, or rather their sockets, are furnished with a slot extending around both sides in such a manner that the shackle may be inserted laterally in the sockets as well as longitudinally. The invention further consists in a simple means for perventing the casual detachment of the pins from the drawheads, whereby the usual chains are dispensed with. A. I. Ambler, of Milwaukee, Wis., is the inventor of this device.

*Device for Letting off Water from Pumps.*—The object of this invention is to provide simple and effective means for letting off water from pumps to prevent freezing. It consists in the arrangement of a screw rod provided at its lower end with a valve or stopper of cork or other suitable material, and passing down through a suitable case on the side of the pump stock in combination with a pipe emanating from the lower parts of the pump stock and communicating with the interior of the same, in such a manner that by means of said screw rod the pipe can be opened and closed at pleasure, and that when the pipe is open the water remaining in the pump is permitted to ooze out, and the freezing of the same prevented. Caleb G. Puckett, of Cerro Gordo, Ind., is the inventor.

*Submarine Carriage for Hauling up and Launching Vessels.*—This invention consists in constructing the carriage with a joint in such a manner that it may be shoved along on the bed of the river a greater or less distance beyond the lower end of the ways, so as to enable vessels to be floated over and upon the carriage and touch at a point near the upper end of the latter. The object of the invention is to avoid the difficulty hitherto attending the hauling up of vessels of heavy draught in shallow places or where there is not a sufficient depth of water to enable a vessel to be floated properly upon the carriage, and also to avoid the difficulty attending the launching of vessels in shallow water. A. O. Crane, of Hoboken, N. J., is the inventor of this device.

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VALUABLE ARMS.—One of the English vessels recently captured while trying to run the blockade, and brought to this city, had a number of rifles on board, and on examining them they were found to have no vents!


## ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING SEPTEMBER 2, 1862.

*Reported Officially for the Scientific American.*

**** Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

**36,328.—John Agate, of Cuba, N. Y., for Improved Machine for Holding and Filling Bags :**

I claim the bag holder and filler, constructed and arranged, substantially in the manner specified.

**36,329.—Francis Alger, of Boston, Mass., for Improvement in Fuzes for Explosive Shells :**

I claim, first, The construction and arrangement of a sliding time fuze, within the fuze case, so that the shell will be exploded by striking, substantially in the manner described.

Second, I claim the elastic packing ring, h, applied and operating substantially as described.

Third, I claim the washer, g, applied and operating substantially as described.

Fourth, I claim the arrangement of a hammer, fulminate and time fuze, substantially in the manner and for the purposes specified.

**36,330.—W. H. Babcock, of Homer, N. Y., for Improvement in Water Elevators :**

I claim the arrangement of the spring, K, projection, J, piece, U V, and pawl, E e, for operation with the loose crank and ratchet wheel, and frictional surface, P, substantially in the manner herein set forth.

**36,331.—A. C. Baker and John Van Dyne, of Hyde Park, N. Y., for Improvement in Car Couplings :**

I claim the yielding jaws, B B, with the transverse bars, D D, attached ; in combination with the shackle, J, and levers, E E, the latter being placed on the shaft, F, which is provided with the arms, G G, connected by the crossbar, H ; the above parts being used with or without the guides, I I, and fitted in or applied to the drawhead, A, as and for the purpose set forth.

[The object of this invention is to obtain a car coupling which will be self-engaging or connecting, and admit of being readily disconnected by the foot of the operator or brakeman, on the platform of either of the two cars which the coupling connects ; the parts being so arranged that the shackle of the coupling will always be retained in a horizontal position, or nearly so, in the drawhead, so as to insure as two cars approach each other, its entrance into the drawheadof the car which is not provided with the shackle.]

**36,332.—I. F. Baker, of West Yarmouth, Mass., for Improvement in Invalid Bedsteads :**

I claim, first, The arrangement of the rollers, C C', sheet, I, ratchets, D and D', and the interchangable bearings, b b', operating together, substantially in the manner and for the purpose herein described.

Second, I also claim the double pawls, F f, so arranged as to be self-supporting, substantially as and for the purpose herein set forth.

**36,333.—A. W. Brinkerhoff, of Upper Sandusky, Ohio, for Improved Device for Husking Corn :**

I claim the herein described corn husker, composed of a clasp, H, and a hooking tooth, B, whether formed entire of one piece of metal or by combining the hooking tooth with a metallic, leather or other clasp or band, by any of the common modes of attachment, such as riveting and soldering, as and for the purposes set forth.

**36,334.—A. W. Brinkerhoff and A. T. Barnes, of Upper Sandusky, Ohio, for Improvement in Fruit Gatherers :**

We claim, first, In fruit gatherers the use of the metallic cap or upper jaw, C, with blade, B, and stop, S, substantially as and for the purposes described.

Second, In combination with the cap or upper jaw, C, blade, B, and stop, S, we claim the arrangement of handle, H, lower jaw, A, adjustable, actuating wires, W, and conductor, P, substantially as and for the purposes set forth.

**36,335.—A. W. Brinkerhoff, of Upper Sandusky, Ohio, for Improvement in Corn Planters :**

I claim, first, So constructing the main framework of corn-planting machines as that an additional framework, combining the seeding devices, shoes, attendant's seat and elevating lever may be placed and carried thereon, substantially as described and for the purposes set forth.

Second, I claim so combining with the main framework of corn-planting machines, an additional framework containing the seeding devices, shoes and attendant's seat—all of which are forward of the center of the wheels or ground supports—the whole supported and carried on the main framework, and so that said additional or upper framework may be either added or removed to or from the main framework without in the least degree disarranging any of their parts, substantially as and for the purposes set forth.

Third, I claim so constructing corn-planting machines as that the shoes or furrow openers, shall, at all times when relieved of the weight of the attendant, and without manipulation, be raised above the ground by the weighted lever, m, and there carried, as and for the purposes set forth.

Fourth, I claim so constructing corn-planting machines as that the weight of the attendant who operates the seeding mechanism, is necessary to, and will force the additional framework to which the shoes are attached, down upon the main framework, thereby causing them to penetrate the earth to a certain and uniform depth at all times, producing uniformity in the depth of planting, which may be varied as desired by notched slide, h, as set forth.

Fifth, I claim so constructing corn-planting machines as that the attendant or person who operates the seeding mechanism, may, by placing his feet upon the lower or main framework, and gradually rising, relieve the additional or upper framework of his weight, thereby allowing the shoes to rise above the ground for the purpose of turning at the ends of the fields, and passing over intervening obstacles, without the assistance of a second attendant, or the necessity of dismounting, as set forth.

Sixth, I claim, in combination with corn-planting machines supported mainly upon not less than two wheels and slightly upon the horses' necks, and with its seeding devices forward of the center of the wheels, and which are elevated automatically, a hinged or yielding joint in the rear of all points of support, as described and for the purposes set forth.

Seventh, I claim in seed-planting machines the automatic elevation of the shoes or furrow openers above the ground, for the purpose of passing intervening obstacles, turning around and transporting the machine from place to place, as set forth.

Eighth, I claim in combination with a corn-planting machine, wherein that portion of the framework containing the seeding devices is elevated automatically, and having its seeding devices forward of the center of the wheels, so connecting the parts between the main and additional framework, as that by simply removing the bolts at c c, Figs. 1 and 4, the additional framework may be removed, having the main framework perfect for marking the ground preparatory to planting, as set forth.

Ninth, I claim the weighted lever, m, or its equivalent, in combination with the additional framework, as and for the purposes set forth.

Tenth, I claim the weight, K, on lever, m, adjustable when used in combination with seed-planting machines, for the purpose of accommodating it to the amount of seed in the boxes, and varying weights of attendants, as set forth.

Eleventh, I claim in combination with corn-planting machines, the metallic plates, T T, constructed as described, forming a receptacle for the neck of shoe, S', the bearing for the shaft of cylinder, 4, and a ready and firm attachment for seed boxes, 30 30, as set forth.

Twelfth, I claim, in combination with corn-planting machines, the hounds, f f, when constructed as described, thereby saving all necessity for wood and bolts in their manufacture.

Thirteenth, I claim the combination and arrangement of cylinder, 4, with metallic base, 6 6, and metallic cap, 3 3, elastic cut off, 10 10, and dish or hopper, 21, as and for the purpose as set forth.

Fourteenth, I claim providing the face of cylinders of seed planters with oblique grooves, in combination with seed cells, substantially as described and for the purposes set forth.

Fifteenth, I claim the formation by seed-planting machines, of the double furrows, w w, Fig. 10, with the continuous scatterer, x, between them, as described, and for the purposes set forth.

Sixteenth, I claim the inverted v-shaped opening in the lower front part of shoe, S', or its equivalent, for the purpose of forming the double furrows and continuous scatterer, and to prevent the shoes from becoming clogged, as set forth.

**36,336.—A. W. Brinkerhoff and A. J. Failor, of Upper Sandusky, Ohio, for Improvement in Field Rollers :**

We claim applying directly to the centers of field rollers, as nearly as we possibly can, a single projection, cast in sections but forming one continuous marker when applied to the roller, and attached or held in place by screws or bolts, whereby they may be easily applied to the roller for marking corn ground, and as easily removed therefrom, leaving the roller in proper form for use on meadows or for preparing other ground when smooth surface is desired, substantially as and for the purpose set forth.

**36,337.—C. M. Bromwich, of South Boston, Mass., for Draught Attachment for Lamp Boxes :**

I claim the box, B, provided with an elevated chamber, C, in combination with a box, D, perforated at its upper and lower part, as shown at d c, and having a suspended box or deflector, E, within it, all arranged as shown, and used with or without the box, A, as and for the purpose herein set forth.

[This invention relates to an improved arrangement for admitting of the escape of air from the lamp box and the admission of the external air therein, whereby the supply of air to the flame of the lamp is rendered uniform or constant and the flame allowed to burn without any flickering.]

**36,338.—Hiram Burlew, of Lock Haven, Pa., for Improved Composition for Concrete Pavements :**

I claim the employment or use of a composition for paving, made of the ingredients herein specified, and mixed together in the manner and in about the proportion described.

[This invention consists in a composition of pine tar, gravel, sand, coal ashes and calcined plaster, mixed together so as to produce a compound which is free from smell, and which becomes, in a short time, perfectly hard and weather and water proof.]

**36,339.—G. F. J. Colburn, of Newark, N. J., for Improvement in Applying Reflectors to Lamps :**

I claim the mode herein described of applying reflectors to lamps, for the purpose specified.

**36,340.—A. O. Crane, of Hoboken, N. J., for Improvement in Sub-Marine Carriages :**

I claim a carriage or cradle for sub-marine railways, constructed of two or more parts, connected by hinges or joints, to operate as and for the purposes herein set forth.

**36,341.—Joseph Defossez, of Paris, France, for Improvement in Safety Lamps :**

I claim the pneumatic locking device, m n o, in combination with the oil reservoir, A, top plate, F, and chimney, D, all constructed and operating substantially in the manner and for the purpose herein shown and described.

[This invention relates to certain improvements in that class of lamps known as Davy's Safety Lamps, and it consists in the application to the cover of the lamp, of a peculiar locking device, in such a manner that neither the cover nor the wire-gauze protector can be removed, until, by the application of an air pump or other suitable means, the bolt of the locking device is withdrawn.]

**36,342.—John DuBois, of Williamsport, Pa., for Improvement in Dams :**

I claim, first, In a dam shoot which is operated by hydrostatic pressure beneath an apron, a divided apron having its parts hinged at the point of junction, substantially as and for the purpose described.

Second, In a dam shoot having a divided apron, I claim a fixed articulating joint at one extremity of the apron, in combination with a sliding joint at the opposite extremity of the apron, for the purpose set forth.

Third, I claim a dam shoot having an apron made in sections, H H', hinged together at their junction as at i, the lower section, H', articulating upon a fixed hinge, and the upper end of the section, H, traveling in a horizontal slot at the bottom of the flume, the whole being operated substantially in the manner and for the purpose described.

**36,343.—J. B. Easlam, of Bridgeport, Conn., for Improvement in Settees for Railroad Passenger Cars :**

I claim suspending the seat thereof from the same pivots upon which the back swings, and so connecting the arms of the seat and back with each other, that any desired inclination may be given to the former by the mere raising and lowering of the latter, substantially as described.

**36,344.—B. W. Fay, of Boston, Mass., for Improvement in Sweats for Hats :**

I claim the sweat herein described, prepared with an ornamental seam, g g, and secured to the hat in the manner substantially as set forth.

**36,345.—William Grange, of Augusta, Ky., for Improvement in Harrows :**

I claim the peculiar arrangement of the arms, c and c', outer rotating frame, A', and roller, E, in connection with the inner rotating frame, B', and roller, F, the two rotating frames being carried by and rotating concentrically in opposite directions upon the same central stem, C, as set forth.

**36,346.—William Gregg, of Philadelphia, Pa., for Improved Refrigerator :**

I claim combining a water cooler with a refrigerator so that the latter, in connection with its ice box, shall form the cover of the water cooler, the whole being arranged together so as to operate in the manner described for the purposes specified.

**36,347.—T. F. Griffiths, of Dansville, N. Y., for Improved Holdbacks for Carriages :**

I claim the employment or use of the clasp, C, and the hook, B, they being constructed substantially in the manner specified, and operating conjointly for the purposes set forth.

**36,348.—William Grover, of Holyoke, Mass., for Improved Gas Regulator :**

I claim the combination with the oscillating pipe, D, and its fulcrums, j j, of the inverted cup, E, and its arms, k k, in the manner herein shown and described.

I also claim the arrangement of the fulcrums, j j, within the mercury cup, h, as herein shown and described.

[This invention consists in combining the inlet and outlet chambers of a gas regulator by means of an oscillating siphon-shaped pipe, so applied as to form a means of communication through which the gas passes from one chamber to the other, and so combined with an inverted cup, and with basins of mercury, as to constitute the regulating valve.]

**36,349.—Jasper Hazen, of Albany, N. Y., for Improvement in Beehives :**

I claim the combination of the parts, A A, boxes, B B B and C C, adjustable bottom board, D, and bars, G G, in one hive as specified.

**36,350.—J. M. Hendricks, of Philadelphia, Pa., for Improvement in Hulling Machines :**

I claim, first, The two plates, D D', provided with teeth, as shown, one, D', being arranged to rotate on an adjustable shaft, E, and the other, D, fitted permanently in the case, C, with an elastic or yielding substance, formed of india rubber and cork, interposed between it and the side or plate, a, of the case, as and for the purpose specified.

Second, In combination with the plates, D D′, the blast fan, N, and reciprocating screen, O, placed within the box or case, M, and arranged in relation with the plates, D D′, to operate as and for the purpose herein set forth.

Third, The polisher or scourer formed by the rotating-toothed shaft, O′, placed within the box, N′, in combination with the screen, O, blast fan, N, and plates, D D′, arranged as and for the purpose specified.

Fourth, The rotating screens, Q T, placed one within the other in the case, R, in combination with the polisher, O′, reciprocating screen, O, blast fan, N, hulling plates, D D′, the latter being placed within the case, C, and the plate, D′, provided with the conical flanched feeder, F, projecting within the hopper, B, and all arranged to operate as and for the purpose specified.

[The object of this invention is to obtain a machine of simple construction which will hull and cleanse from all impurities, coffee, cotton seed and various kinds of grain, and also grind coffee and grain with the greatest facility, and perform the work expeditiously and in a thorough and perfect manner.]

### 36,351.—Joseph Hollen, of Fostoria, Pa., for Improvement in Knitting Machines :

I claim, first, The stitch-lifting levers, H H H, arranged around the end of the cam cylinder, g, so as to operate in combination with the needles, C, and presser, E, substantially in the manner described for the purpose specified.

Second, Giving to the needle cylinder, B, the periodic motions described by means of the forked plate, M, or its equivalent, operated by the cam cylinder, g, and spring, N, substantially in the manner described for the purposes specified.

### 36,352.—Alexander Irwin, of Pittsburgh, Pa., for Improvement in Engines for City Railroads :

I claim, first, The oscillating engines, F F, in a frame, E, suspended underneath the car bed, A, as shown, in combination with the heater, K, tanke, H H, and boilers, G G, all arranged and disposed in relation with the car bed, A, to operate as and for the purpose herein set forth.

Second, Constructing the tanks, H, with a series of compartments in connection with the valves, J, and rods, I, arranged therein as shown for the purpose specified.

Third, The sprinklers or jet discharges formed of the tubes, L, with perforated pipes, m, at their lower ends, when said tubes are connected and arranged with the tanks, H, and the wheels, B, for the purpose herein set forth.

[The object of this invention is to obtain a simple and compact steam car for street or city railroads, one in which the engines and driving mechanism will be so arranged or disposed as to cause each wheel to be subjected to an equal weight and not at all interfere with the room or space designed for passengers.]

### 36,353.—I. R. Lawrence, of Green Island, N. Y., for Improvement in Endless-Chain Horse Powers :

I claim the movable half circle or outside guide or guides, G, for the endless chain at the end of the machine, the machine being so constructed, substantially as herein described, that a lag, B, link, C, or roller, D, can be taken from and replaced in the endless chain at the circular end of the machine on removing the said half circle or outer guide or guides, G, without taking either the guard rail or guard rails, I, or the horse or horses from the machine.

I also claim the inclined tapered axles, L, cast on links, C, combined together and with the rollers, D, lags, B, and tracks, E F, substantially as herein described.

And I also claim the inclined tapered pivots, N, and corresponding sockets, P, cast in and upon links, C, combined together and with lags, B, rollers, D, and supporting rail, E F, substantially as herein described.

### 36,354.—A. S. Lyman, of New York City, for Improved Apparatus for Concentrating Milk :

I claim the combination of the rotating disks, g g, the continuous pan, B, and the air passage, c, substantially as and for the purpose herein specified.

### 36,355.—Alexander Moffitt, of Brownsville, Pa., for Improvement in Hubs for Vehicles :

I claim, first, The box, a, in combination with the part, b, and parts, c d e, with their appendages or flanges, substantially as described.

Second, The pins, p and q, with their fastening screws, p′ and q′, in combination with the holes in the lips of the cup-shaped flanges, d′ and f″, as described.

Third, The screw nut, d, and flange, d′, for tightening the disk, e, and flange, e″, upon the ends of the spokes.

Fourth, The screw nut, f, with its flauge, f′, and imperforate diaphragm, h, constructed in the manner and for the purposes specified.

Fifth, The semi-eliptical or semi-oval mortise, c′ and e′, constructed in the manner and for the purposes set forth.

### 36,356.—Prosper Monnet, of Lyons, France, for Improvement in Producing Aniline Colors :

I claim the within-described process of treating the hydrochlorates or other salts of aniline or toluidine with nitro-benzine, substantially in the manner and for the purposes specified.

[By this process a beautiful red, blue and purple color is produced. Messrs. Schneider & Heidlauff, of No. 21 South William street, New York city, are Mr. Monnet's agents in this country.]

### 36,357.—Prosper Monnet, of Lyons, France, for Improvement in the Manufacture of Aniline Colors :

I claim the within-described process of treating the red of aniline with methyline or wood spirit and nitric acid substantially in the manner and for the purpose set forth.

[By this process a beautiful violet-blue color of aniline is produced.]

### 36,358.—James Nichols, of Limestone, N. Y., for Improvement in Magazine Firearms :

I claim, first, The powder charger, Q, applied in combination with the rotating cylinder, C, and a magazine, P, substantially as herein specified.

Second, The bullet-feeding mechanism consisting of the plunger, S, double ratchet rod, S′, slide, T, dog, T′, link, 14, and lever, U, the whole combined and applied to the firearm in combination with the magazine, R, to operate substantially as herein specified.

Third, The frame, A B, attached rigidly to the stock and the frame, E F G H, attached to the barrel fitted together and combined by means of a yoke, G, and cam, I applied and operated substantially as herein described, to produce a longitudinal movement of the barrel or stock, the one relatively to the other.

Fourth, Combining the cylinder with the recoil shield by means of the zig-zag groove, h h i i, in the cylinder and the pin, j, in the recoil shield, such groove and pin serving both to stop the cylinder in its revolution and to detach the cylinder from the barrel in the longitudinal movement of the latter, substantially as herein specified.

Fifth, The elbow lever, N, carrying the revolving dog, n, and the cam, I, applied in combination with each other and with the cam, L, by which the longitudinal movement of the barrel is produced substantially as and for the purpose herein specified.

[This invention mainly consists in certain means applied to a firearm in combination with a rotating many-chambered cylinder, for the purpose of permitting and effecting the loading of the chambers with loose powder and bullets or shot from magazines attached to the barrel or forestock of the arm in front of the cylinder.]

### 36,359.—Robert Porter, of Philadelphia, Pa., for Improved Sheet-Metal Cans for Oils, Varnish, &c. :

I claim providing a sheet-metal can with drain grooves, d d, in its top plate, A, the said grooves leading directly from the periphery of the latter to its cork tube, B, and the said plate being slightly raised toward its said tube, substantially as described and set forth and for the purposes specified.

### 36,360.—J. C. Osgood, of Troy, N. Y., for Improvement in Submarine Excavators :

I claim, first, An endless bucket or elevator dredging machine which is arranged to swing wholly upon a crane and operated thereupon, and is capable of being raised and lowered upon said crane, substantially as and for the purposes set forth.

Second, The combination with adjustable inclined ways, D, and the frame of the crane, B, of the device, o y, or its equivalent, substantially as and for the purposes set forth.

Third, So combining the bevel wheels, M N, and main upright of the crane with the shaft and pinion, L, through which the power is transmitted from the engine to the machinery in the crane, that said crane may be made to articulate in any desired direction without affecting or varying the working relation of said bevel wheels with the said shaft and pinion, substantially as described.

Fourth, The construction and arrangement of the crane, substantially as specified, so that the endless chain of buckets or elevators shall stand and discharge at a point higher than any other part of the apparatus, for the purpose set forth.

Fifth, In combination with the endless chain of buckets the manner of hanging the shute or trough so that it will adjust itself by means of the bolt under the hopper and the small crane, H, substantially as herein set forth.

Sixth, The manner of constructing the hopper with the reversing bottom in combination with the shute or trough for the purpose set forth.

### 36,361.—A. T. Peck, of Scott, N. Y., for the Improvement in Butter Tubs :

I claim, as an improved article of manufacture, a butter tub, firkin or box, constructed of wood and having a lining of mica, substantially as described.

[This invention consists in constructing a wooden butter tub or firkin, with a lining of mica, whereby many advantages are obtained on the ordinary wooden tubs or firkins now in general use.]

### 36,362.—N. W. Peebles, of Brunswick, Ohio, for Improved Clothes-Wringing Machine :

I claim the single spring, S, acting directly on the journals of the pressure roller, B, constructed and arranged in combination with the frame, A, and pressure roller, B, substantially as and for the purpose herein specified.

### 36,363.—David and John Pfouts, of Holmes County, Ohio, for Improved Pricking Martingale for Preventing Horses and Mules from Throwing or Breaking Fences :

We claim the combination of said pricking breast strap and the straps, E E, which hold the pricking breast strap to its place.

### 36,364.—John Oesterling, of Wheeling, Va., for Improvement in Snap Dragon :

I claim the diagonal slits as shown in Figures 1, 4, 5 and 6 of the drawings or the equivalents of said slits.

### 36,365.—C. G. Puckett, of Cerro Gordo, Ind., for Improvements in Drain Valves for Pumps :

I claim the combination of the box, f, screw valve rod, c, valve, b, and pipe, a, with the pump stock, A, in the manner herein shown and described.

### 36,366.—S. S. Putnam, of Dorchester, Mass., for Improved Curtain Fixture :

I claim the loose pivot, f, held in place upon the curtain rod by means of the flange, i, and cap, H, and controlled in its motions by the concealed spring, g, and pawl, k, the pawl engaging directly with the pivot or with a tooth attached thereto, substantially as set forth.

### 36,367.—F. J. Rebbeck and E. M. Davies, of Pittsburgh, Pa., for Improvement in Lamp Burners :

We claim the wick tube, D, provided with a hollow perforated cylinder, I, and encompassed by a case, K, having one or more openings, d, made in it and provided with a flanch, L, to receive the case or deflector, M, and draught chimney, N, when said parts are arranged to admit of the vertical sliding of either the wick tube or case so as to expose the upper end of the wick tube when necessary for the purpose of lighting or trimming the wick, and also to inclose fully the wick tube when the burner is in use, substantially as herein set forth.

[The object of this invention is to obtain a lamp burner, for burning coal oil and similar fluid hydrocarbons, which will admit of the wick being lighted and also trimmed when necessary without removing the glass draught chimney or detaching any of the parts of the burner.]

### 36,368.—Moses Reed, of St. Louis, Mo., for Improved Composition for Cleaning Painted Wood Work, Stone, &c. :

I claim the employment or use of a composition made of the ingredients above specified, mixed together in the manner and about in the proportions herein described.

[This invention consists in a compound made by mixing together pulverize pumicestone, sal soda and borax, for the purpose of cleansing painted work or stone work, to be used instead of soap and scrubbing brush.[

### 36,369.—Benjamin Rice, of Hastings, N. Y., for Improvement in Attaching Thills to Axles :

I claim the employment of the oblong eye, B, in combination with the steel head, a, loose box, E, spring, F, and pin, C, in the manner herein shown and described.

[This invention consists in having an eye of oblong elliptical form made at the end of the thill iron, and having a steel bearing therein, and also a loose box having a spring bearing against it to compensate for wear. The above parts being used in connection with a steel connecting pin and Babbett-metal bearing fitted in the yielding box, whereby a very strong and durable coupling is obtained, and one in which wear is fully compensated for. An engraving of this invention appeared on page 168 of the current volume of the SCIENTIFIC AMERICAN.]

### 36,370.—L. D. Roberts, of Cleveland, Ohio, for Improvement in Machines for Making Horseshoes :

I claim, first, The combination of the eccentric, C, mandrel, D, the primary and secondary arms, L L″, when operating conjointly in the manner and for the purpose set forth.

Second, I claim the cam lever, N, rods, o o, and spring, M, in combination with the roller, P, and arms, L L′, in the manner and for the purpose specified.

Third, I claim the arrangement of the cams, F F′, arms, I and I′, in combination with the bar, H, arm, J, and rockshaft, K, and arms, L L′, substantially as and for the purpose set forth.

Fourth, I claim the jaws, U U, springs, V V, gages, S S′, and mandrel, D, on the eccentric, C, when arranged to operate conjointly in the manner and for the purpose specified.

Fifth, I claim the adjustable gages, S S′, with the movable slide, l, and adjustable clamps, n n, operating conjointly with the mandrel, D, and jaws, U U, as and for the purpose herein described.

Sixth, I claim the cam, G, lever, g, and spring, j, in combination with the shears or cutter, T, operating in the manner and for the purpose set forth.

### 36,371.—J. W. Schreiber, of New York City, for Improvement in Coal Oil Lanterns :

I claim the lamp, A, provided with a cylindrical rim or case, D, and a polygonal or corrugated flanch, F, in combination with the chimney, and the shirt or jacket, K, on or around the upper part of the latter, all arranged as and for the purpose herein set forth.

[This invention consists in constructing the body or fountain of the lamp with an external rim or case of cylindrical form, and also with a polygonal or corrugated flanch of such diameter that it may fit within the external rim or case of the lamp, between it and the body or fountain, and form circuitous air inductive passages through which the flame is supplied with air. These parts being used in connection with a draught chimney provider at its upper part with a jacket or skirt, all arranged in such a manner as to form a convenient and economical lantern for burning coal oil with a brilliant light.]

### 36,372.—Charles Seymour, of Laporte, Ind., for Improvement in Machines for Upsetting and Stretching Tires :

I claim, first, The frame, B, sliding bed plate, c, with its rack, D, sector, E, the stationary jaw, J, and adjustable jaw, K, when arranged to operate in combination with the eccentrics, G G G G, the said parts operating together in the manner and for the purpose set forth.

Second, I also claim in combination with frame, B, sliding bed plate, C, rack, D, and sector, E, the punch stock, H, punch 1, die stand, F, and die, N, when the several parts are arranged in the manner and for the purpose specified.

### 36,373.—Edward Shore, of Conshohocken, Pa., for Improvement in Knitting Machines :

I claim driving the stripper wheel of a rotary knitting machine, and if desired the landing and loop wheels by means of gearing from the main shaft of the machine, substantially as herein set forth for the purpose specified.

### 36,374.—A. J. Simpson and J. B. Currier, of Lowell, Mass., of Improvement in Lamp Burners :

We claim the flanch, G, having the cylinder, F, attached, the latter being fitted on the cone or deflector, D, as shown, so that it may turn freely thereon, and at the same time be prevented from being casually detached, in combination with the two openings, g h, made respectively in the cone and cylinder, all arranged as and for the purpose specified.

We further claim providing the flanch, G, with two curved slots, e e, and lips, c c, substantially as shown for securing the chimney to the flanch, and at the same time admit of the expansion of the chimney under the heat of the flame, as set forth.

[This invention relates to an improved lamp burner of that class in which provision is made for lighting the wick without removing the chimney from the burner; the device is a simple and efficient one for the purpose.]

### 36,375.—W. E. Smith, of Port Washington, Wis., for Improvement in Apparatus for Cleaning Wells :

I claim the box, A, attached to the extension shaft, E, and provided with the shovel or scraper, F, spur, I, and gate B, all combined and arranged to form a new and useful article or device, for the purpose specified.

[The object of this invention is to obtain a simple and efficient device by which wells may be thoroughly cleaned without persons descending into them, and thereby avoid much hard and disagreeable labor, and accidents which frequently occur in consequence of inhaling the poisonous gases within the wells.]

### 36,376.—Robert Spencer, of Brooklyn, N. Y., for Improved Harness Saddle :

I claim the combination with the bearings, A A, when constructed of wood, and covered with felt or other fabric, so as to do away with the usual method of stuffing, of the elastic metallic plate, B, and the elastic strip, C, or either of them, in the manner and for the purpose substantially as herein shown and described.

### 36,377.—Charles H. Waters, of Groton, Mass., for Improvement in Looms for Weaving Wire Cloth :

First, I claim the drawing-off of a shoot of filling wire, while the shuttle is in its box, substantially as described.

Second, I claim the holding of the shoot of filling wire, after it has been drawn from the bobbin, until it is drawn or thrown into the open shed of the warp by the shuttle, substantially as described.

Third, I claim the use of the fly shuttle, in throwing a shoot of filling wire after it has been drawn and held, substantially as described.

### 36,378.—Seth Wheeler, of Albany, N. Y., for Improvement in Links for Horsepowers :

I claim the supporting link, E, or its equivalent, applied to the studs or journals, C C′, for the purpose of distributing the weight or strain on both sides of the wheels, D D′, substantially as and for the purpose specified.

### 36,379.—S. A. Wheelock, of Charlton, Mass., for Improvement in Churns :

I claim the above described mode of operating churns when constructed and operated in the manner and for the purposes as above set forth and described.

### 36,380.—Joseph White and Angus Agnew, of Philadelphia, Pa., for Improvement in Coal Oil Lamps :

We claim the spreader, having in its top, a, an elongated opening and inclined or curved strips extending from the ends of the said opening to the upper edge of the wick tube, the whole being applied to the wick tube or cap of a coal oil lamp, as set forth for the purpose specified.

### 36,381.—W. H. Willard, of Cleveland, Ohio, for Improvement in Boots :

I claim one or more pockets constructed and arranged as described, in combination with the boot, for the purpose specified.

### 36,382.—A. I. Ambler (assignor to himself, R. N. Ambler and W. Martin), of Milwaukie, Wis., for Improvement in Car Coupling :

I claim, first, Providing the draw bars, A, with sockets, b, extending entirely through them from side to side, to admit of the lateral insertion of the link or shackle, C, as and for the purpose herein set forth.

Second, The keys, d, fitted in the lower parts of the pin, E, in combination with the slots, e, and recesses, f, in the draw bars, as and for the purpose specified.

Third, The securing of the links or shackles, C, in the draw bars, A A, by means of the links, D, and bolts, C, when used in connection with the sockets, b, extending entirely through the draw bars from side to side, as set forth.

Fourth, Adjusting the draw bars, A, vertically at their outer ends to suit cars or platforms of different hights by means of eccentrics, cranks or their equivalents, placed on shafts, and having the draw bars resting on them, and operating or turned by means of cranks or gearing, as set forth.

Fifth, The combination of the sockets, b, links or shackles, C, and pins, E, all arranged in connection with the draw bars, A, as and for the purpose set forth.

### 36,383.—P. S. Boothby (assignor to J. W. Brooks and Warren Soule), of Biddeford, Maine, for Improved Fastening for Gaiter Boots :

I claim the clasp, B, with its connecting link, C, or its equivalent; to be used in connection with the cords, D and E, loop, G, and cording or raised edge, F F, constructed and arranged in the manner and for the purpose as specified.

### 36,384.—G. W. Lockwood (assignor to Horace Carpenter and Company), of New York City, for Improvement in Skeleton Skirts :

I claim the arrangement of the cords, C and D, relatively to each other and to the hoops, substantially as and so as to produce the effect above described.

### 36,385.—Franz Vester, of Pforzheim, Grand Duchy of Baden, assignor to Charles Wagner, of New York City, for Improved Device for Protecting the Soles of Boots and Shoes :

I claim the employment of the thin hardened plates or washers with rivets connecting them with the soles of boots and shoes, substantially in the manner and for the purpose set forth.

### 36,386.—C. W. Cahoon, of Portland, Maine, for Improvement in Lamps :

I claim the combination of the lamp head and handle, substantially as set forth.

I also claim the combination of the lamp head, handle and vibratable chimney holder, fitted with chimney fastenings, substantially as set forth.

I also claim the combination of the U-spring, chimney, fastening and tongue, substantially as set forth.

I also claim the combination of a corrugated air screen and deflector, substantially as set forth.

## REISSUES.

### 1,337.—M. Easterbrook, J. M. Wood and E. A. Brownson (assignees of said Easterbrook and Wood), of Geneva, N. Y., for Improvement in Machines for Peeling Willows. Letters Patent No. 34,201, dated January 21, 1862 :

First, We claim the employment or use in willow peeling machines, of two presser wheels, D and F, constructed and operating substantially as described, so as to produce a direct central pressure upon three sides of the passing willow.

Second, The projections, m, attached to yielding slides, i, which are fitted in a plate, L, between the bars, K, and arranged in relation with the wheels, D and F, to operate as and for the purpose specified.

Third, Also the combination of the presser wheels D and F, yielding scrapers, m, revolving brushes, M, and the discharging rollers, N arranged as and for the purposes specified.

1,338.—Henry Jenkins, of Brooklyn, formerly of Pottsville, Pa., for Improvement in Wire Fences. Letters Patent No. 6,106, dated February 13, 1849:

I claim, first, An iron fence or other article formed by the combination of woven wires and rods, with grooved bars surrounding the same and receiving the ends of the wires, in the manner specified and for the purposes set forth.

Second, I claim forming the surrounding metallic frame of a woven wrought iron panel, by the employment of two bars attached to each other, and bearing between them the ends of the wires or rods forming the wrought iron work, substantially as specified.

Third, I claim crimping straight wires or rods in opposite directions at the required distances apart, and weaving said wires or rods together to form meshes as set forth, whereby the general straight form of the wire is maintained except at the points where the wires cross, as specified.

Fourth, I claim crimping wires or rods at different or irregular distances along their lengths, in order that said wires or rods, when woven together, shall form open iron work with meshes of different shapes, substantially as set forth.

Fifth, I claim wires or rods crimped in opposite directions, and formed with bends between the crimps at right angles to them, and woven together as specified, whereby the crimps set into each other at the points of intersection, and the aforesaid bends regulate the shape of the meshes, as set forth.

Sixth, In combination with the iron work formed by wires or rods crimped and woven together, as set forth, I claim the rods twisted together, as specified.

1,339.—J. M. Allen, of Fredericktown, Ohio, assignee of Newman Silverthorn, of Prescott, Wis., for Improved Boot and Shoe Tip. Letters Patent No. 26,329, dated November 29, 1859:

First, I claim a tip as an article of manufacture formed into shape, in such a manner as to allow of its being applied and fastened to the toe part of the shoes or boots, by sewing or pegging it between the upper and the sole, substantially as herein before described and for the purposes set forth.

Second, A shoe or boot tip as an independent device and marketable commodity, formed of a material different from, and that will present greater durability and resistance to wear than that of which the shoe or boot to which it is intended to be applied is made, such tip being made of such permanent form as to lap over and under the toe part of the upper, and whereby it may be attached to the boot or shoe by securing it at its base between the sole and upper, and without sewing it to the upper; substantially as herein described.

Third, The production as an article of manufacture of a shoe or boot tip, made of such india rubber or gutta percha compound, as that when vulcanized it shall be of a more or less soft, flexible and elastic nature, or of any other material that will render it applicable to boots or shoes by sewing it in between the upper and the sole, substantially as herein set forth.

Fourth, The production as an article of manufacture of a shoe or boot tip, made of such india rubber or gutta percha compound, as that when vulcanized it shall be of a more or less hard or rigid nature, or of any other material that will render it applicable to boots or shoes by pegging it in between the upper and the sole, substantially as herein set forth.

DESIGN.

1,654.—W. L. Washburn, of Springfield, Mass., for Design for a Burial Case.

Out of the sixty-two patents reported above (the issue of a single week), TWENTY-TWO of the number were solicited through the Scientific American Patent Agency.

BLACKWOOD'S MAGAZINE. Published by Leonard Scott & Co., Gold street, New York City.

The last number of this able periodical contains the "Chronicles of Carlingford" continued, and a most able essay by Bulwer "On the Moral Effects of Writers." Several other articles are very interestnig, especially a review of the ten years' rule of Louis Napoleon.



## Notes and Queries

J. K., of Ind.—You can unite water and oil permanently by heating the mixture and adding a little soda or other alkali. This will combine with the oil to form soap, which will be dissolved in the water.

J. W. H., of Iowa.—The small piece of grit which you have sent us, is a mixture of clay and a little silica colored yellow with the oxide of iron.

D. B. J., of Ohio.—We have no reliable information in regard to the air engine which is said to be in progress in Russia. Ordinary inventions made abroad are often much magnified in their passage across the ocean.

H. C., of Mass.—White iron is supposed to contain less carbon than any other pig iron. It is unfit for casting, as it is sometimes so thick when melted, as to be incapable of running into molds. It is very brittle, but while it may be very easily broken by the blow of a sledge hammer, it is so hard that it can with difficulty be cut with a cold chisel. Its fracture is silvery white, shining, and smooth in its texture. When the color of pig iron is a uniform grey it is a sign that the metal is tough, if it has also a high metallic luster.

J. R., of Ohio.—Your description of your machine that actually flies will appear next week

E. N., of Mass.—Wood does not rot when immersed in water, nor, with the exception of occasional dry rot, when kept in the dry air. Neither does it decay when kept at a temperature below the freezing point of water, but in moist warm air its decay is most rapid, and this seems to have been the situation of your timbers.

S. G. A., of N. F.—There is no city in America supplied by water through pipes where the pressure of the water is applied to drive wheels, and operate cranes on docks to load and unload vessels. Small turbine wheels may be built to be applied for such purposes by several of our millwrights. In Newcastle, England, water power is employed to operate cranes through hydraulic piston engines. Any city like St. Johns, N. F., which has such a pressure of water in the pipes, as 240 pounds on the square inch, may have manufactories driven as well as vessels loaded and discharged by hydraulic power. We are not acquainted with any machinist who will build engines similar to those used in Newcastle.

J. D., of C. W.—Machines were used for cutting grain by the ancient Gauls before the Christian era. A rotary grain reaper was tried in England in 1779, and one in Scotland in 1806 by Mr. Gladstone, of Castle Douglas. In 1815, the Highland Society of Scotland awarded Mr. Smith, of Deanstown, a prize of fifty guineas for the successful exhibition of a rotary mowing machine, which was found very effective in cutting the grass on smooth lawns. It was drawn by two horses, and cut an acre of grass, on one occasion, in one hour. A patent was granted in 1805 to Samuel Adams for the first American reaping machine. You will find an illustrated history of reapers in Vol. X. (old series, 1854,) SCIENTIFIC AMERICAN.

W. H., of L. I.—Your account of the manufacture of menhaden oil is crowded out this week but will appear in our next number. These descriptions of the mode of conducting any manufactures or other operations are always acceptable.

### Money Received

At the Scientific American Office on account of Patent Office business, from Wednesday, Sept. 3, to Wednesday, Sept. 10. Persons having remitted money to this office will please to examine this list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or express.

H. A. H., of N. Y., $25; W. L. L., of Mass., $15; B. & S. & J. M., of Pa., $15; G. & H., of Ill., $15; R. H. J., of Ill., $15; J. McN., of Pa., $15; J. B. R., of N. Y., $25; W. H. K., of Mass., $50; D. H., of N. Y., $10; J. B., of N. Y., $22; J. J., of N. Y., $15; P. J. B., of Pa., $25; L. F. H., of N. Y., $15; J. W. G., of Mass., $25; J. J. H., of Ky., $15; C. W. C., of Mich., $15; H. & A., of Ill., $15; J. & S., of Ill., $20; A. T. F., of N. Y., $30; C. & P., of Conn., $25; G. D. H., of Ill., $25; A. Y., of Ohio, $25; E. S., of N. Y., $15; H. S. R., of N. Y., $25; G. T., of Mass., $25; C. G., of Mass., $15; N. R., of N. Y., $25; J. B., of Ind., $25; A. J. B., of Iowa, $20; H. & D., of Iowa, $45; H. N. G., of N. Y., $20; R. R., of N. Y., $20; N. Z. P., of Ill., $20; W. T. S., of Mo., $20; S. R. S., of Ohio, 20; I. M. B., of N. J., $20.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from September 3 to Wednesday, September 10, 1862:—

I. R. P., of N. Y.; T. F. R., of N. Y. (2 cases); T. H., of N. Y.; W. F., of R. I.; H. A. H., of N. Y.; W. & F., of W. T. (2 cases); F. G., of Mich.; P. J. B., of Pa.; J. W. G., of Mass.; A. Y., of Ohio; C. P., of Conn.; G. D. H., of Ill.; J. M. D., of N. Y.; G. T., of Mass.; N. R., of N. Y.; H. S. R., of N. Y.; H. & D., of Iowa; J. B., of Ind.

### TO OUR READERS.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a *bona fide* acknowledgment of our reception of their funds.

INVARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on design patents when two good drawings are all that is required to accompany the petition, specification and oath, except the government fee.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and inclosing $1 as fee for copying. We can also furnish a sketch of any patented machine issue since 1853, to accompany the claim, on receipt of $2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

NEW PAMPHLETS IN GERMAN.—We have just issued a revised edition of our pamphlet of *Instructions to Inventors*, containing a digest of the fees required under the new Patent Law, &c., printed in the German language, which persons can have gratis upon application at this office. Address MUNN & CO.,
No. 37 Park-row, New York.