RECENT AMERICAN INVENTIONS.

Firearms.—This invention consists in forming upon the muzzle of a musket, rifle or other gun barrel, or providing the same with a cutter or notched, toothed or otherwise roughened edge, for the purpose of cutting or breaking the cartridges, and so obviating the necessity of biting them. Invented by C. H. Bradley, of Westchester, Pa.

Evaporator.—This invention consists in the arrangement of two pans, one on the top of the other, in combination with a flue running alongside of the bottom of the upper pan, and consequently on the top of the lower pan, in such a manner that the heat passing through said flue serves to heat simultaneously the contents of the upper and those of the lower pan; also in the arrangement of two strainers in combination with three pans placed at different levels and divided into a number of compartments in such a manner that the juice in passing from one pan to the next succeeding one is strained and freed from curdles, bits of cane and other impurities that may be mixed up with it, while at the same time said juice is gradually boiled down so that the same passes off from the last compartment of the last pan perfectly clear and finished. Patented to O. N. Brainerd, of Marion, Iowa.

Let Off for Power Looms.—This invention, by T. H. and H. James, of Stockport, N. Y., consists in a certain novel and very simple mode of combining the whip roll with the weighted levers employed to produce friction upon the yarn beam, whereby the letting off of the yarn is controlled perfectly by the tension of the warp, and the said tension kept uniform, whatever may be the quantity of yarn on the beam.

Slide Valve.—This invention relates to the connection of the slide valve with a piston which is fitted to an open cylinder in the back of the valve chest, and upon which the pressure of the steam acts in opposition to its pressure on the back of the valve; and it consists in combining the valve with the piston by means of a roller attached to the valve, and a straight bar attached by a yoke to the piston. Invented by Jacob Martin, of Mound City, Ill.

Grading and Excavating Machine.—This invention relates to certain improvements in that class of grading and excavating machines in which a cutter or share is used in combination with an endless conveying apron for conveying the earth to a wagon or cart accompanying the machine, or for depositing the earth in ridges by the side of the excavation. The object of the invention is to render the cutter or share adjustable in such a manner that it may always be made to work in a perfectly horizontal position in a transverse direction, however much inclined the surface of the ground may be over which the machine is passing. The invention has also for its object the constructing of the endless conveying apron in such a manner that the earth will be readily discharged from it, and also so arranging the cutter or share beam that the cutter may be made to penetrate the earth at a greater or less distance, as may be required, and the cutter or share beam rendered capable of being adjusted horizontally in a longitudinal direction. Invented and patented by Albert Keith, of Lisbon, Ill.

Pulverizer and Amalgamator.—The object of this invention is to obtain a machine which will complete the process of pulverizing the ore, as it comes from the stamping mills, and during the process of amalgamating the same, so that a more perfect separation may be obtained of the metal from the ore than by the ordinary amalgamating machines. The invention is chiefly designed for separating gold from quartz, and to receive the pulp as it is discharged from the ordinary stamp batteries or stamping mills. The invention consists in the employment or use of a rotary or reciprocating pulverizer and amalgamator formed of a cylinder or semi-cylinder provided with grooves which contain balls or spherical crushers, and using in connection therewith a rotary hollow cylinder or drum, having an amalgamated inner surface, and so arranged as to receive the contents of the pulverizer and amalgamator and separate any particles of gold that might have escaped in passing through the pulverizer and amalgamator. The above invention is by James Burrell, of Central City, Colorado Territory.

Breech-Loading Gun.—This invention consists in the combination of a ring or open cap screwing on to a thread provided for it on the exterior of the rear portion of the body or barrel of gun, and a slide working in a mortise provided for it in the said ring or cap. The credit of this invention is due to T. C. Rice, of Cambridgeport, Mass., who may be addressed in care of H. N. Hooper & Co., of Boston, for further information.

Brush.—J. A. Fanshawe and J. A. Jaques, of Tottenham, England, obtained a patent, dated January 7, 1862, for an improved brush, the claim of which appeared in No. 4 of the current volume. This brush is specially adapted for washing the hands, for use in the bath and for other lavatory purposes. Its rubbing surface is made of soft india rubber in the form of a series of concentric annular edges or a continuous convolute edge. The back may be of the same material when flexibility is desired, or of hard india rubber when rigidity is desired.

NOTES ON FOREIGN INVENTIONS AND DISCOVERIES.

Chain Harrows.—A patent has been taken out by W. Baylise, of Wolverhampton, England, for an improvement in chain harrows, consisting in keeping the links fully extended by suitable strips of thin steel, which form springs like those used for hoop skirts. With the use and combination of such steel springs in a chain harrow it can be drawn obliquely across plowed fields, and it accommodates itself to all unevenness and inequality of the soil's surface.

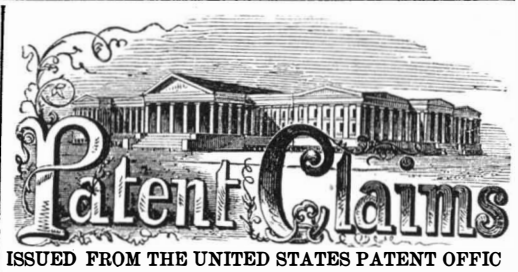
Bleaching Rags for Paper.—When colored rags are employed for making paper they are washed and reduced to pulp, then bleached with chlorine liquor. T. Gray, of Wandsworth, England, states, in a patent which he has received, that when colored rags are subjected to the action of dilute muriatic acid for several hours in a vat, before being placed in the bleaching liquor, in the usual way, that a superior bleaching effect will be insured.

Gutta-Percha Cements.—D. McKay, of Oxford, England, makes a gutta-percha cement for uniting articles of leather, wood, paper, &c., by dissolving the gutta percha, cut in small pieces, in the bisulphide of carbon, exposed to the atmosphere. It has been customary to dissolve gutta percha and such resin gums in the preparation, kept in a close vessel, but by exposing it to the atmosphere during the period of action it absorbs some oxygen, and becomes more adhesive.

Preserving Railroad Timbers.—J. Cullen, of the North London Railway, has patented a composition for treating railway timber to preserve it. The composition consists of charcoal in fine powder, coal tar and quick lime sifted. The tar is heated in an iron vessel, then the charcoal and lime are added in equal quantities, making about ten per cent of the whole mixture. When it has boiled for one hour the timber may be immersed in it for a few minutes, then taken out and laid aside to cool. This composition may also be applied hot, with a suitable brush, as a paint for coarse boards, and for iron work laid in the ground or otherwise exposed, as it prevents it from rusting.

Improved Electrical Pile.—J. A. Calland, of Nantes, France, has obtained a patent for an electrical pile, in which he dispenses with the porous cell used in the Daniel and other batteries. His battery is thus described:—If a vessel of glass or stoneware be about half filled with a cold saturated solution of sulphate of copper, and pure water or weak salt brine, be then poured cautiously in on the top, the latter will remain separate from the former, and from that moment there will be a disengagement of electricity from the contact of these two liquids. A positive electrode connected with a wire is placed in the liquid at the bottom of the vessel, and a negative electrode in the top solution, and a galvanic pile is thus formed. The wire of the plate which is placed in the lowest solution must be coated with some non-conducting substance.

BUTTER IN WINTER.—You cannot get butter out of milk if there is none in it. Feed the cows well and thus secure good milk, and there is not much trouble in churning even in winter. Keep the cream in a warm room till it turns somewhat sour. Let the churn be scalded before pouring in the cream, so that it will be well heated through and not cool the cream. Let the cream be at a temperature of 65° to 76°, and there will not be much difficulty in making the butter come.



ISSUED FROM THE UNITED STATES PATENT OFFIC

FOR THE WEEK ENDING JANUARY 28, 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., Pub shers of the SCIENTIFIC AMERICAN, New York.

34,233.—T. K. Anderson, of Hornellsville, N. Y., for Improved Composition of Fuse or Slow Match for Igniting Powder Under Water:

I claim a compound consisting of the four-named ingredients, in or about the same proportions specified; prepared and used in the manner as and for the purposes set forth.

34,234.—Frederick Andriessen, of Alleghany City, Pa., for Improved Car Truck Regulator:

I claim the application of this self-adjusting regulator with the four leading poles, friction rollers, &c., (see letters A, B B, C C C C, D D D D D D D and E E E E of the drawings) to R R, locomotives and cars.

34,235.—C. H. Bradley, of Westchester, Pa., for Improvement in the Muzzle of Firearms for Cutting off Cartridges:

I claim providing a portion or the whole of the end, or muzzle, of a gun barrel with teeth, or otherwise rendering the same rough, as and for the purpose set forth and described.

34,236.—O. N. Brainerd, of Marion, Iowa, for Improved Evaporating Pans for Saccharine Liquids:

I claim, first, The arrangement of the pans, A and B, in combination with the flue, D, at the bottom of the former and at the top of latter, constructed and operating in the manner and for the purpose shown and described.

Second, The arrangement of the strainers, G H, in combination with the pans, A B C, constructed and operating as and for the purpose specified.

34,237.—J. S. Brooks, of Rochester, N. Y., for Improvement in Sad-Iron Heaters:

I claim an improved sad-iron heater, consisting of the pan, A, divided into separate compartments for each iron, with hinged falling lids, or covers, c d, so arranged that the removal of an iron from one chamber, will cause the lid or lids to fall over the adjoining one, substantially in the manner and for the purposes described.

34,238.—James Burrell, of Central City, Colorado Territory, for Improved Amalgamator and Ore Crusher:

I claim, first, A rotating or reciprocating pulverizer and amalgamator, B, when constructed with a series of circumferential grooves, a each of which is a provided with a ball, D, arranged as described.

Second, In connection with the pulverizer and amalgamator, B, constructed as described, the cylinder, H, provided with an amalgamated inner surface, and arranged to operate conjointly with B, substantially as and for the purpose set forth.

34,239.—J. M. Clark, of Lancaster, Pa., for Improvement in Apparatus for Feeding Mills:

I claim, first, The employment of the revolving cup, F, when adjustable, substantially as and for the purpose specified.

Second, The arrangement of the cup, F, the strap, a, and rim, E, secured and connected by means of clips, c c, substantially as represented.

Third, The employment of the stationary shield, G, used and for the purpose specified.

34,240.—J. W. Clark, of Springfield, Mass., for Improvement in Tools for Making Screws:

I claim the arrangement of the cutters, B C F, opening, c, segmental rim, d, and movable guide plate, G, in combination with the stock, A, as and for the purpose described.

The object of this invention is to construct a simple and effective tool for making screws from iron, brass or any other wire, and the invention consists in the arrangement of three cutters fitted into a common stock, which is provided with two guide openings or rests, one to fit the head and the other the shank of the screw, in such a manner that by the action of the first tool the wire is turned down to the size of the head, by the second to the size of the shank and by the third the point is rounded and the screw completed to receive the thread.]

34,241.—C. A. Codding, of Augusta, Mich., for Improvement in Cheese Presses:

I claim the employment of the adjustable bottom, C, constructed s set forth, in combination with the hoop or cylinder, A, and perforated plunger, B, arranged and operating as and for the purpose specified.

34,242.—J. M. Connel, of Newark, and J. S. Hall, of Columbus, Ohio, for Improvement in Shells for Rifled Ordnance:

We claim, first, The explosive projectile made of two hollow parts, A A′ B B′, which are fitted together so that a space, C, exists between their facing ends, a b, and the part, A A′, having circumferentially segmental cavities, D, and the part, B B′, having angular cavities, E, beveled projections, F, and a beveled, continuous circumferential edge, G, and the whole being encircled and held together by a lead packing ring, H, in the manner and for the purposes described.

Second, Constructing the interior of one portion of the projectile with a front and rear rest or shoulder, c d, and arranging in or against the same an open-ended hollow tube, K, for the purpose of separating the contents of the chamber, J, from the igniting magazine, K1, substantially as and for the purposes set forth.

Third, In combination with the shoulders, c d, and tube, K, we claim providing a central opening, f, in the end, a, of the part, A A′, and a similar hole, g, in the end, b, of part, B B′, and arranging and igniting magazine, K′ K2, within the hollow tube, K, and in the openings, f g, in the manner and for the purpose described.

Fourth, The combination of a sliding, igniting magazine with the hollow explosive projectile, substantially as and for the purposes described.

34,243.—Ransom Cook, of Saratoga Springs, N. Y., for Improved Lunch Box:

I claim a lunch case, composed of the dishes, E E E, the vessels, F F, the driving cups, G G, the inner cover, C, its rib, D, with the case, A, and the cover, B, the whole constructed and arranged as set forth for the purpose specified.

34,244.—Simeon Coon, of Ithaca, N. Y., for Improvement in Window Sash and Setting Glass therein:

I claim my peculiar construction of window sash with loose munnions adjusted as described, and slots cut through the frame, for the purpose of admitting glass; all in combination with the method of securing the glass, as set forth in my specification.

34,245.—J. H. Duffield, of Glassboro', N. J., for Improvement in Cases for Railroad Tickets:

I claim the application to a ticket case, constructed in any suitable form, of the sliding spring stem, C, constructed and arranged to operate in combination therewith and the tickets contained, in the manner described and set forth, for the purpose specified.

34,246.—O. L. Edwards and Nelson Gabel, of Gratis, Ohio, for Improvement in Fences:

We claim, in the construction of portable fences, the combination and arranging of keys, b′ b″, d d, post, C and E, and rails, A, substantially as set forth

34,247.—John Ellis, of Detroit, Michigan, for Improvement in Carriage Gates :

I claim the extension, H, cap, K, latch, I, and connecting link, a, in combination with the ropes, M M′ when these several parts are constructed, arranged and operated as and for the purposes set forth.

34,248.—G. F. Evans, of Norway, Maine, for Improvement in Plane Stocks :

I claim my improved plane, having its body, A, its bearing plate, E, its screws, G G′, traversing nuts, H H′, and connecting rods, I I, constructed and arranged in relation to each other, and so as to operate together as set forth.

34,249.—S. W. Francis, of New York City, for Improved Pocket Match Box :

I claim the combination and arrangement of the box, A B, the drawer, C, the springs, F and I, and stopper, M, substantially as and for the purpose specified.

34,250.—T. J. Griffin, of Brooklyn, N. Y., for Improved Combined Camp Cot and Chest :

I claim the described combination of camp cot and chest, consisting of the three sections of mattress frame, D D′ E, hinged together so as to have the two former fold up compactly upon the latter, when not in use as a couch, the latter forming a tight cover for the chest, A, and a support or bedstead for the couch, the whole arranged to operate in the manner and for the purpose set forth.

[The object of this invention is to obtain a cot and chest combined in such a manner in one article as that the same can either be used as a cot or as a chest to contain the mattress and bed clothes, and also books and other articles required by officers and privates in camp.

34,251.—Hiram Grant, of Chicago, Illinois, for Improved Roofing Composition for Railroad Cars, &c.:

I claim the above-named composition matter or ingredients when prepared in the proportions and in the manner specified, and applied as stated.

34,252.—Florian Grosjean, of New York City, for an Improvement in Sheet Metal Spoons :

I claim corrugating the handle of spoons or forks made of single pieces of sheet metal with the central corrugation and outer bead combined substantially as and for the purpose specified.

34,253.—P. W. Hardwick, of Williamsburgh, Ind., for Improved Apparatus for Attaching and Detaching Horses to and from Carriages :

I claim the clamps as constructed, in connection with the plates or their equivalents, in combination with the spring, the whole being constructed, arranged and operated substantially as above set forth.

34,254.—J. J. Hayden, of Indianapolis, Ind., for Improvement in Metallic Roofing :

I claim, first, The combination in diamond sheet metal roofing, of the peculiar character described, of the upward and downward bent or curved points, S S′, substantially in the manner and for the purposes described.

Second, The combination of the diamond sheets, eave, side and comb, or saddle triangular pieces, and cleats, with the roof of a house, the said parts being constructed and applied in the manner and for the purposes described.

34,255.—T. H. and Henry James, of Stockport, N. Y., for Improvement in Power Looms :

I claim the arrangement of the elbow levers, I I, rods, H H, and the weighted levers, E, with the whip roll, G, straps, D D, and yarn beam, c, in the manner shown and described.

34,256.—Albert Keith, of Lisbon, Ill., for Improvement in Grading and Excavating Machines :

I claim, first, Constructing the endless apron, E, of a series of metal plates, H′, attached to rods, f, the ends of which are connected to chains, g g, and all arranged as shown, to admit of a certain degree of tilting of the plates, H′, as they pass around the pulley, F′, as and for the purposes set forth.

Second, Attaching the beam, A, to the oblique bars, O R, by means of joints or hinges, P Q, in connection with adjustable slide, M′, fitted on the perforated bar, L′, provided with a catch or lever, N′, and attached to the upright notched bar. I, all being arranged as shown, to admit of the adjustment of the beam, A, and cutter or share, B, in a transverse direction, as set forth.

Third, Supporting the front part of the beam, A, by means of a caster wheel, C, connected with an adjustable lever, E′, in combination with the wheel, J, which supports the back part of the beam, A, and is connected with the adjustable lever, K, all arranged as and for the waste of purpose specified.

34,257.—E. M. Luckett, of Philadelphia, Pa., for Improved Mode of Cleaning Snow from Railroad Tracks :

I claim the addition of a chamber over the dome of the steam boiler of a locomotive engine, and the introduction of a pipe to convey the waste steam to the rail, (as set forth in the drawing), which, with the aid of an improved snow shovel, will cleanse the rail from snow, frost and dirt, thus improving the speed of the engine, and turning the steam to a profitable account.

34,258.—Edward Lynch, of Buffalo, N. Y., for Improvement in Attaching Beds to Tents :

I claim, first, The arrangement of the beds, E E, the bars, D, strap, J, and the cords, H I, as and for the purpose specified.

Second, The employments of the slides, d d, with loops or staples attached, used in connection with the bars, D D, in the manner and for the purpose specified.

34,259.—Jacob Martin, of Mound City, Ill., for Improvement in Relieving Slide Valves of Pressure :

I claim combining the slide valve with the piston, D, by means of a roller, G, attached to the valve, and a bar, H, attached to the said piston, substantially as and for the purpose specified.

34,260.—Thomas Miles, of Philadelphia, Pa., for Improvement in Slinging Knapsacks :

I claim sustaining a knapsack upon the back and shoulders of the wearer, by means of a single strap and a single fastening, substantially as described.

34,261.—J. T. Minard, of Danbury, N. H., for an Improvement in Seats for Wagons and Sleighs :

I claim the peculiar construction of the adjustable seat, B, in combination with the movable seat, A, to a wagon or sleigh body, so as to form a single or double-seated wagon or sleigh, arranged as and for the purpose specified.

34,262.—William Morrisson, of Chadd's Ford, Pa., for Improvement in Combined Iron and Steel Plows :

I claim a mould board s for a plow composed of a steel face, and an iron back, made and united to the plow substantially as described.

I also claim, in combination with a permanent land side and a bar share, as described, a steel cutter that is united to the outside of such land side, and by a groove to the bar share, in such manner as to be adjusted thereon, as it wears away, as set forth and described.

34,263.—J. B. Prescott, of Waterford, N. Y., for Improvement in Breech-Loading Cannon :

I claim the arrangement of the adjustable bands and bars with the breech piece and shoulders, C, in the manner shown and described.

34,264.—T. J. Price, of Industry, Ill., for Improvement in Construction of Evaporating Pans for Saccharine and Other Juices :

I claim, first, An evaporator for saccharine or other juices having partitions, J, extending from side to side with openings at alternate ends, and secured by bolts or rivets between upturned flanges, a, of the bottom plates, all as before explained.

Second, The combination of the vertical flanges, a, horizontal lapping edges, a′, and painted canvas luting, n, all arranged and employed in the manner and for the purpose explained.

Third, The combined arrangement of the furnace, A, contracted throat, c, and guards, R, applied to the rear divisions of the pan, all as shown and described, and for the purpose specified.

34,265.—D. B. Ray, of Circleville, Ohio, for Improved Type-Setting Machine :

I claim constructing tubes, C C, or their equivalents with two branches or arms, M and M′, and a regulator, g, and its mechanism, substantially in the manner and for the purpose set forth.

Second, I claim the spirally curved or twisted tube, M, in combination with the main tube, C, substantially in the manner and for the purpose set forth.

Third, I claim arranging the tubes or their equivalents, like the radia of a circle.

Fourth, I claim the catch, t, for feeding out the type.

Fifth, I claim the spring, f, slide, x, and rockshaft, v, combined with the composing stick, S, substantially in the manner and for the purpose set forth.

34,266.—T. C. Rice, of Cambridgeport, Mass., for Improvement in Breech-Loading Ordnance :

I claim the combination of the slide, B, with the screw cap, C, and barrel, A, substantially in the manner shown and described.

34,267.—M. B. Riggs, of New York City, for Improvement in Guard Fingers for Harvesters :

I claim the bar, E, made either entire or in sections, and provided with the lugs, F, as described, when arranged in combination with the fingers and counter cutters in the manner and for the purpose specified.

34,268.—J. P. Rollins, of Cedar Rapids, Iowa, for Improvement in Shells for Rifled Ordnance :

I claim the combination of a sliding spring rod, F, projecting in front of the shell with a discharge nipple, e, formed upon a screw, D, inserted from the rear, all substantially as and for the purpose set forth.

[This invention relates to an improved device for effecting the explosion of a hollow projectile or shell by percussion.]

34,269.—W. J. Sage, of Steubenville, Ohio, for Improvement in Mode of Propelling Cars :

I claim the two drums or cylinders, D F, provided with the toothed rims, E G, with the pinions, C, of the axles, A, placed between them, as and for the purpose set forth.

[The object of this invention is to apply the propelling power to railroad cars in such a manner as to avoid the friction now produced by the weight of the cars on the axles of the wheels. To this end gears or pinions are attached to the axles of the wheels, which gears or pinions are fitted between toothed rims or drums, to which the power is applied.]

34,270.—William Romans, of Columbus, Ohio, for Improvement in Locomotive Cars :

I claim, first, The manner, substantially as described, of adapting a locomotive and a car for direct connection with one another in such manner that all the connections of the locomotive are free to turn, independently of the car, and that the right of the front end of the car rests centrally, or nearly centrally, on the locomotive truck, and thus is made available for steadying the locomotive on the truck while the center of motion of the locomotive is transferred from the rear end to the center of the truck, all as and for the purpose set forth.

Second, Making the front bolster, G, and also the fender, F, removable, substantially as and for the purpose set forth.

Third, In combination with the construction and use of the devices, as set forth in the first claim, in the manner substantially as described, of arranging the valve rods, link motions and eccentrics, between the inner faces of the locomotive driving wheels and the outer sides of the locomotive truck frame, for the purpose set forth.

Fourth, So constructing and arranging the car and the rear truck, and connecting the same that the truck, while the car is resting upon it may be moved a greater or less distance toward the locomotive, and when thus moved shall be free to turn curves, substantially as and for the purpose set forth.

Fifth, The combination of the flanged plate, V′, of the rear truck, and the tubular projections, h, of the rear bolster, J, of the car, substantially as and for the purpose described.

34,271.—J. F. Scholfield, of Lawrence, Mass., for Improvement in Shuttles :

I claim the application of this device, made from either metal, or any other suitable material, to a weaver's shuttle for preventing kinks in the weft, while passing from the shuttle to the cloth, substantially as set forth.

34,272.—Joseph Short, of Boston, Mass., for Improvement in Knapsacks :

I claim, first, Arranging, disposing and attaching straps to and upon a knapsack, so that its top may be allowed to fall away from contact with the shoulders and spine of the wearer, for the purpose of ventilating the back and shoulder of the wearer, and at the same time cause a different set of muscles to be brought into action, in the manner substantially as described.

Second, I claim arranging and adapting straps to support and confine a knapsack to the shoulders and back of the wearer, so that it can be raised and lowered in a vertical line, or nearly in a vertical line, upon the back and shoulders of the wearer, and be held in the desired fixed position, on such line, at the will of the operator, in the manner substantially as described.

Third, I claim a combined neck and shoulder strap, having connections with a knapsack by intermediate straps, at points which are at or near the top and base of the knapsack, for the purpose specified.

Fourth, I claim the combination of the removable curved side walls, with the adjusting straps, whereby the body of the knapsack is adapted to the back and shoulders of the wearer in its different positions, as and for the purpose described.

34,273.—A. H. Silvester, of Boston, Mass., for Improvement in the Manufacture of Bootees :

I claim the bootee, constructed as described, with the adjustable fastenings, and whereby all the advantages are combined, as an improved new article of manufacture, for the purposes specified.

34,274.—L. E. Smith, of New Haven, Conn., for Improvement in Railroad Station Indicators :

I claim the combination of the box, rollers, curtain and springs, substantially as described and for the purpose set forth.

34,275.—Matthew Smith, of Pittsburgh, Pa., for Improvement in Steam Boilers :

I claim combining with the interior of a cylindrical boiler, a steam receiver or receivers, wholly or partially immersed in the water, and permanently held in such proximity to the bottom of the boiler as to produce a thin sheet of water between the receiver and the boiler, for the purpose as set forth.

Second, I also claim the combination of a steam receiver, by means of trunnions, with the interior of a cylindrical boiler, in the manner and for the purpose, as set forth.

Third, I also claim the combination of a blow-off valve or cock, with a steam receiver, in a cylindrical boiler, passing through the boiler and communicating only with the interior of the receiver, for the purpose as stated.

34,276.—D. W. Swift, of West Falmouth, Mass., for Improved Clothes-Wringing Machine :

I claim the springs, E E, constructed of steel of the form shown, when said springs are applied to the cylinder, A, of the frame of the device to form a support for the lower roller, G, and at the same time admit of the upper roller, G, being applied to them so that the springs will press said roller, G, on the roller, F, as set forth.

I further claim the guide pins, I I, when attached to the bar, H, fitted on the springs, E E, and placed in relation with the rollers, F G, as and for the purpose specified.

[This invention relates to an improved clothes-wringing device, of that class in which pressure boilers are employed, and which are secured to the edge or side of the washtub or vessel by means of a clamp.]

34,277.—Andrew Turnbull, of West Meriden, Conn., for Improvement in Lamps :

I claim combining with the tube, f, a spindle crank, i, snuffer or extinguisher, j, substantially as and for the purpose described.

34,278.—J. S. Whitehill, of Westchester, Pa., for Improvement in Running Gear of Wagons :

I claim the adjustable coupling pole, A, held by the king bolt, D, passing through the rear end of hounds, and circular plate, E, all in combination as described, and for the purposes set forth.

34,279.—William Wicken, of Muscoda, Wis., for Improvement in Grain Separators :

I claim operating the screens, D′ G, and giving them a reciprocating sliding movement through the medium of the bell crank, F, fitted in the shoe, C, and connected to the screens, D′ G, by means of the hook, E, and rod, k, and also to a stationary rod, j, the screens being operated by the movement of the shoe, C, all arranged in the manner described.

[This invention relates to a new and useful improvement in grain separators, whereby cockle and chess may be sifted and screened from the grain in a thorough manner.]

34,280.—G. K. Dearborn, of Abington, Mass., assignor to S. T. Tapley, of Chelsea, Mass., for Improvement in Heaters for Passenger Cars :

I claim the furnace for railway and street cars, constructed substantially as described, with the flues, K, and auxiliary flues, said furnace being arranged under the floor of the car, and operating substantially as set forth.

34,281.—Josee Johnson, of New York City, assignor to himself and John Ward, Jr., of Brooklyn, N. Y., for Improved Clothes Wringer :

I claim, first, The described metallic frame for a wringing machine, constructed in two parts, A B, the dividing line passing through the axis of the rollers, C D, and the sides being so formed as to partially inclose the said rollers, and serve as guides for the clothes, substantially as and for the purposes described.

Second, I also claim the recess, G, in each end of each of the parts, A and B, so made that when the parts, A and B, are placed together they formed an inclosed space for the springs, H, substantially as set forth.

34,282.—J. A. Hamer, of West Vincent, Pa., assignor to W. L. Paxson, of Philadelphia, Pa., for Improvement in Brick Moulds :

First, I claim the combination of the side pieces, A A, with their angular grooves, with the cross pieces, C D, double crank shafts, E E, and lifting pieces, f f f f, constructed and operated in relation to each other, substantially as described.

Second, The combination of the vibrating valves, h, with the sides, A A, and cross pieces, substantially as and for the purposes set forth.

34,283.—Wm. Peters (assignor to himself and R. B. Porter), of Baltimore, Md., for Improvement in Packing for Steam and other Engines :

I claim the packing described for steam and other joints, composed of asbestos and vegetable or animal fiber or material.

34,284.—H. T. Romertze, of Philadelphia, Pa., for Improvement in Automatic Car Coupling :

I claim the jaws, b b, the sockets, c c, the slots, i i, in combination with the releasing lever, d, spring, g, case or box, a, with the projections, h h, substantially as shown and described.

34,285.—D. M. Mefford, of Cincinnati, Ohio, for Improvement in Projectiles for Firearms :

I claim a projectile having a metallic head of smaller diameter than the bore of the piece with which it is intended to be used, and a shaft of wood or other light material, the greatest diameter of which fits the bore, or nearly so, when the parts are so formed and combined that the greatest diameter of the shot is in the rear of the center of the figure, and the center of the figure is in the rear of the center of gravity, substantially as shown and explained.

[This projectile consists of a wooden shaft of peculiar form, and a metallic head of smaller diameter. It obviates the necessity of rifling the gun, and been found, in recent experiments conducted by the ordnance board, to afford greater range and precision with a common smooth bore musket than are attainable with the Minié ball with rifles of the most approved construction.]

RE-ISSUES.

1,261.—St. John O'Doris, of Philadelphia, Pa., for Improvement in Fertilizers. Patented Dec. 24, 1861.

I claim the use of coal ashes as a basis for deodorizing, absorbing and retaining of animal vegetable and mineral matter, in solution or otherwise, when united in a fertilizing compound, substantially as set forth.

1,262.—Byron Densmore, of Sweden, N. Y., assignor to D. M. Osborne, of Auburn, N. Y., and A. W. Kirby, of Buffalo, N. Y., for Improvement in Harvesters. Patented Feb. 10, 1852 :

I claim, first, Hanging the driving in a supplementary frame, or its equivalent, which is hinged at one end by the main frame, while its opposite end may be adjusted and secured at various hights, or be left free as desired, whereby the cutting apparatus may be held at any desired hight for reaping, or be left free to accommodate itself to the undulations of the ground, substantially as described.

Second, The employment in a harvesting machine of a wheel, provided with a crank and lever, for the purpose of raising and lowering the outer end of the finger bar, to cut high or low, substantially as described.

1,263.—F. E. Sickles, of New York City, for Improvement in the Method of Opening and Closing the Valves of Steam Engines. Patented Oct. 19, 1844. Re-issued Jan. 1, 1861, No. 8.

I claim giving to each exhaust valve alternately, while the piston is at or near the end of the cylinder farthest from it, a large amount of motion as compared with the motion of the other exhaust valve at that time, so as to more freely exhaust the cylinder with less extent and greater ease of motion to the valves than has been done heretofore, substantially as described.

I also claim imparting these motions to the exhaust valve by means of a rocker interposed between the first motion from the engine and the valves, so that it will increase and diminish its leverage relative to each valve, while moving them, and thereby impart my improved motion.

1,264.—W. W. Wade, of Longmeadow, Mass., for Improvement in Sewing Machines. Patented Feb. 1, 1859.

I claim a driving shaft of a sewing machine, having cranks set at right angles to each other, or so approximating thereto as to overcome or avoid a dead center in the movement of the shaft, substantially as and for the purpose set forth, in combination with the treadles, H H, the driving pulley, N, and a device for preventing a retrograde motion of the shaft.

Second, I claim, in combination with a sewing-machine driving shaft, a ratchet device for preventing a retrograde motion when such device is caused to cease its action upon the shaft by means of friction induced between its parts by the forward revolution of the shaft, and is caused to come into action when a back thrust comes upon the shaft, constructed substantially as and for the purpose set forth.

1,265.—Henry Megeon, of Wolcottville, Conn., assignee of J. L. Baudelot, of Havencourt, France, for Improvement in Process of Cooling Beer and other Liquids. Patented Nov. 1, 1859. Ante-dated April 13, 1856.

I claim the process of cooling beer, by causing it to trickle in a thin film along one surface of metal, as specified, while such surface is kept cool by the passage in the reverse direction of water or other cooling liquid, in contact with the other surface thereof, substantially as and for the purposes specified.

1,266.—Henry Migeon, of Wolcottville, Conn., assignee of J. L. Baudelot, of Havencourt, France, for Improvement in Apparatus for Cooling Beer and other Liquids. Patented Nov. 1, 1859. Ante-dated April 13, 1856.

I claim directing the trickling liquid to be cooled from the bottom of one pipe to the next below it, by means of a downward projection, substantially as described, whereby the distribution of the liquid to be cooled is more uniformly maintained, and the contact thereof with the whole cooling surface secured, as set forth.

Also a trough with perforations for supplying the liquid to be cooled, when combined with a screw or perforated receptacle within said trough, for detaining any foreign substance, or for equalizing the distribution in said trough of the liquid to be cooled, as specified.

1,267.—Henry Migeon, of Wolcottville, Conn., assignee of J. L. Baudelot, of Havencourt, France, for Improved Apparatus for Cooling Beer and other Liquids. Patented Nov. 1, 1851. Ante-dated April 13, 1856.

I claim a cooling apparatus for liquids, composed of a vertical range of pipes, passing one liquid successively from the lower to the upper pipes in said range, in combination with the perforated trough, d, or its equivalent, supplying the other liquid, which trickles over the surface of said range of pipes, as set forth.

New Publications.

NEW STORIES.—Published by F. A. Brady, No. 24 Ann street, New York.

"Tom Tiddler's Ground, a Christmas and New Year's Story," Charles Dickens; "The Broken Engagement, or Speaking the Tru for a Day," by Mrs. Southworth, have been sent to us by the above-named publisher.

PATENTS FOR SEVENTEEN YEARS.

The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from $30 down to $15. Other changes n the feesare also made as follows :—

On filing each Caveat	$10
On filing each application for a Patent, except for a design	$15
On issuing each original Patent	$20
On appeal to Commissioner of Patents	$20
On application for Re-issue	$30
On application for Extension of Patent	$50
On granting the Extension	$50
On filing Disclaimer	$10
On filing application for Design, three and a half years	$10
On filing application for Design, seven years	$15
On filing application for Design, fourteen years	$30

The law abolishes discrimination in fees required of foreigners, excepting reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patentsystem (except in cases of designs) on the above terms.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN ; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submitit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of $5, accompanied with a model or drawing and description, we have a special search made at the United States Paten Office, and a report setting forth the prospects of obtaining a Patea &c., made up and mailed to the Inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & Co No. 37 Park-row, New York.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters, &c.

Caveats.

Persons desiring to file a Caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The government fee for a Caveat, under the new law, is $10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

Foreign Patents.

We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of Patents to Inventors. Any one can take out a Patent there.

Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park-row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered.

Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.

TO OUR READERS.

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.

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

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 issued since 1836, to accompany the claim, on receipt of $2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

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.

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.

Notes and Queries

J. L. E., of Pa.—Warren's elements of geometrical drawing, noticed in our last, is very suitable for you to commence with. After going through it you should use a more elaborate treatise on mechanical drafting.

P. M. M., of Mich.—We do not recollect any such apparatus as you mention for registering the pressure of steam, but such an apparatus has been used for registering the pressure of the atmosphere and what would register the one would register the other. The patent law makes no distinction between one elastic fluid and another in such a case, and therefore the most you could claim in a patent would be your particular apparatus.

T. C. R., of Wis.—Projectiles for cannon and also for small arms have been made with finely-grooved surfaces for the purpose of obtaining a rotary motion in their discharge from smooth bores.

G. P., of N. Y.—Your skate improvement appears to be new and patentable. You can easily determine its practical value by a trial.

J. R., of Wis.—The *Architect's and Mechanic's Journal* is extinct.

J. G., of Conn.—By increasing the temperature of your electro-gilding bath you will obtain a deposit of a deeper shade. By moving the articles to be gilded back and forth in the bath, you can also change their color from a brass yellow to a red shade.

J. S., of Ind.—Your plan for propelling ships by means of balloons is one of bold novelty, but we think wholly impracticable. You propose to have the balloon attached to the ship by a line long enough to allow the balloon to rise till it should find a current blowing in the right direction. The constant current from the West is usually found at the hight of about a mile and a half. This would require a hawser too long for practical use.

C. E. F., of Mass.—We are not acquainted with any method of removing the gilt bands from china cups and saucers without injuring them for use and display.

C. S., of Conn.—It is extremely difficult if not absolutely impossible to get all the water out of wood by mere seasoning. We have no doubt that the water which exuded from your sticks was simply expelled by the heat; and was not formed by the combustion of hydrogen.

E. G., of Mass.—You can easily arrange a weight to drive a small machine. The frequency with which it will have to be wound up will depend on the power required to drive the machine, and the size of the weight. A pendulum will regulate the speed of a machine with great precision; but it can add nothing to the power.

L. K., of Ky.—Several correspondents have enquired of us where large plate springs can be obtained. We now understand that Messrs. Hanibal Green & Co,, of Troy, N. Y., can supply such springs.

K., of N. Y.—If you desire to obtain assistance in securing a patent for your mode of preventing dew from forming on show windows, you had better advertise for it in this paper.

P. W. A., of Ohio.—Government has no standing offer for a new motor. The cost of a patent is not affected by the value of an invention. We will send you one of our pamphlets of advice and a circular about foreign patents.

J. D. J., of Pa.—We are not acquainted with any one engaged in the manufacture of oil barrels. Perhaps some manufacturer who sees the notice will advertise them in our paper.

J. S., of Iowa.—The only and best mode of charging a fluid with carbonic acid gas, is by confining the fluid in a tight vessel and admitting the gas to it in the same manner that soda water is charged. Saleratus is made by conveying carbonic acid gas from a furnace having a clear anthracite coal fire, into a close chamber filled with shallow pans on shelves containing the ground soda, which absorbs the gas. The carbonate of soda and potash are neutral salts.

H. G., of Mass.—The solid contents of a cylindrical vessel, the circumference of which is 36 feet and hight 9 feet four inches is equal to 962.57 cubic feet, and the contents of a square vessel each side of which is 9 feet and in hight 9 feet 4 inches is 756 cubic feet.

D. P., of Mass.—You might obtain a patent on your addition to Jone's showing that your patent would be subject to his—that is to say, you would be compelled to make some arrangement with him before you could use his. If it can be shown that your addition to Jone's spring proves of any advantage, we think a patent should be granted for it.

G. R. J.—A wind-mill does very well for pumping water, but for driving a saw it is very unsatisfactory from its inconstancy. If you object to steam perhaps an air engine might answer your purpose.

C. W., of N. Y.—The London *Quarterly Review* attributes the introduction of iron clad war vessels to Robert L. Stevens, of Hoboken, N. J. The origin and earliest date of chambered and centrally perforated projectiles we presume it would be impossible to determine.

W. B., of N. J.—We do not believe that you will find anything better or cheaper than wood for the ball on the carpenter's brace. India rubber is worth about 70 cents per pound, and gutta percha is expensive.

F. N. B., of Wis.—If your boiler is of very good iron it ought to resist a tensile strain of about 60,000 lbs. to the square inch of sectional area ; which would give 3,000 lbs. for each lineal inch for a thickness of .05. The steam in a boiler one foot in diameter would exert a tensile strain on each lineal inch equal to 12 times the pressure per square inch. So your boiler ought to bear a pressure of 250 lbs. to the square inch ; making no allowance for the weakness from riveting.

J. M. K., of Conn.—A musket ball fired vertically from the earth, would fall with the same velocity that it had in its ascent, were it not for the resistance of the air ; but in consequence of this resistance it falls with less velocity.

SPECIAL NOTICE—FOREIGN PATENT.—The population of Great Britain, is 30,000,000; of France, 35,000,000 ; Belgium, 5,000,000; Austria, 40,000,000; Prussia, 20,000,000; and Russia, 60,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, while business is dull at home, to take advantage of these immense foreign fields. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. Nearly all of the patents secured in foreign countries by Americans are obtained through our agency. Address Munn & Co., 37 Park-row, New York. Circulars about foreign patents furnis hedfree.

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, Feb. 5, 1862:—

B. B., of O., $15; C. E. S., of Wis., $10; P. J., of N. J., $15; A. J. K., of N. Y., $15; M and T., of N. J., $15; J. H., of L. I., $15; P. D., of Mich., $20; A. D., of N. Y., $15; T. and L., of N. Y., $12; H. G., of N. Y., $15; F. G. L. S., of Wis., $25; C. C. C., of Mass., $30; S. H. N., of Iowa, $15; R. W. G., of Me., $15; N. B., of Ky., $20; J. F. D., of N. Y., $$45; S. J. T., of N. Y., $20; S. G. B., of Conn., $35; H. W., of Vt., $60; A. J. K., of N. Y., $25; C. W., of N. Y., $25; O. R. B., of N. Y., $25; L. B. C., of Conn., $30; A. McG., of N. Y., $25; D. M., of N. Y., $30; E. and G., of Mass., $40; L. K., of N. Y., $15; J. H., of N, Y., $25; M. and A., of Wis., $650; E. C. H., of N. H., $10; O. S., of O., $15; T. S. B., of N. Y., $25; E. C., of N. Y., $15; H. W., of Cal., $15; G. L. S., of N. Y., $25; S. A. B., of R. I., $15; J. W. S., of N. Y., $50; O. E. M., of Ill., $20; F. X. M., of N. Y., $45; G. and P., of Ill., $20; D. L. M., of N. J., $20; J. J. H., of Ky., $20; R. and H., of N. J., $12; H. N., of N. Y., $25; L. P. W., of N. Y., $25; J. P., of N. Y., $25; J. M. H., of Va., $15; B. and S., of N. Y., $25; G. B. O., of N. Y., $15; J. B. L., of Conn., $60; W. B. B., of Mich., $20; W. T. of N. Y., $15; H. S., of England, $40; N. G. C., of N. Y., $25: A. H., of Wis., $15; C. W. I., of N. Y., $15; H. G., of Mass., $15; G. F. J. C., of N. J., $15; S. H., of Ind., $20; T. W., of Ill., $45; B. T. B., of N. Y., $20; W. H. B., of R. [illegible]20; G. B. D., of Ill., $20; J. L., of Mich., $45; C. H. C., of N. Y., $25; S. P., of Del., $25.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Jan. 29 to Wednesday Feb. 5 1862:—

S. G. B., of Conn.; B. and S., of N. Y.; S. P., of Del.; P. D., of Minn.; H. N., of N. Y.; T. S. B., of N. Y.; C. C. C., of Mass.; R. and H., of N. J.; O. R. B., of N. Y.; A. McG., of N. Y.; L. B. C., of Conn.; N. G. C., of N. Y.; J. B. L., of Conn.; C. H. C., of N. Y.; G. S. L., of O.; J. A. W., of N. Y.; W. T., of Mich.; L. P. W., of N. Y.; F. G. L. S., of Wis.; E. and G., of Mass.; G. L. S., of N. Y.; R. H. J., of Ill.; C. W. H., of Conn.; J. H., of N. Y.; C. W., of N. Y.; S. J. D., of Ky.; A. J. K., of N. Y.