#### OUR TITLE PAGE AND INDEX.

We invite the attention of our readers to the beautiful title page printed on this number of the Scientific AMERICAN. It was designed by A. Lumley, and engraved by R. Ten Eyck, whose skill in the art is so well ettested in our columns every week. As a specimen of engraving on wood, and as a felicitous design, we doubt if a more superb thing of the kind was ever published. The center of the page is adorned by the figure of Minerva, expounding the laws of natural philosophy. In the upper view on the left are to be seen specimens of the unrivaled steamboats which ply on Long Island Sound and the Hudson river, and an ocean steamship; while on the right are shown those floating palaces of our western rivers, which furnish cheap and comfortable modes of transit. Below there is represented a perfectly correct view of the interior of the principal office of the Scientific American Home and Foreign Patent Agency, showing the various examiners, draughtsmen and clerks engaged in their professional duties. On the right of this interior view is represented a portion of the United States Patent Office at Washington, while on the left is shown an exterior view of the SCIENTIFIC AMERICAN Office, Park Building, this city.

The Index which we publish this week will, we doubt not, be highly valued by all those readers who have preserved their numbers for binding. As the first volume of the "new series" of the SCIENTIFIC AMERICAN contains about double the amount of letter-press given in any of its predecessors, within the same space of time, and as many attractive and valuable features of novelty are embraced in the reading matter, we deemed it incumbent on us to correspondingly enlarge and otherwise improve (by sub-divisions) the list of contents, which will be found more ample and comprehensive than any we ever previously published, and reflects much credit upon S. F. Cohen, our careful and competent proofreader, who collated the same.

Next week we shall furnish our readers with another full page engraving of over twenty-five practical working machines, illustrating almost every department of me chanism and engineering. Thus brilliantly do we close the first, and shall inaugurate the second, volume of the new series.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING DECEMBER 13, 1859.

[Reported Officially for the Scientific American.]

Pamphiets giving full particulars of the mode of applying for patents, size of model required, and much other information used ful to inventors, may be had gratis by addressing MUNN & CO. Publishers of the Scientific American, New York.

26,403.—Luther Adams, of Blanchester, Ohio, for an Improvement in Car Couplings:
I claim the combination and arrangement of the latch, c f, spring, b, and plates, h h', when constructed and made to operate substantially as described for the purposes set forth.

26,404.-Peter B. Baker, of Wall Hill, Miss., for an

Improvement in Cotton-seed Planters: claim the arrangement of the teeth, b b, in front of the drillner, C, and the scraper, G, secured upon the spring runners or es, E E, in combination with the seed drum, D, substantially in manner and for the purpose specified.

26,405.—Nelson Barnum, of St. Louis, Mo., for an Im-

proved Sash-fastener:
I claim the lever, H, the adjustable connection, G, and the springs, J and F, and bolt, I, or their equivalents, in combination with the yielding strip, B, for the purpose specified.

26,406.—A. R. Bartram, of Redding, Conn., for an Improvement in Running Gear of Vehicles:

I claim attaching the front axle, A, to the bolster, B, by means of the sleeves, b b, fitted loosely on the bolster and connected with the bar, C, which is attached to a circle-plate or any suitable swivel connection, between the said bar and axle—when said parts, substantially thus arranged, are used in connection with thills or a draft pole attached rigidly to the axle, A, for the purpose set forth.

26,407.—Alexander Beckers, of New York City, for an Improved Double Eye-piece for Optical Instruments:
I claim connecting a stereoscope or other optical instrument with
louble eye tubes, sight tubes, or eye pieces, each of which being
haped or turned of one piece in the form of an obliquely-intersected
and modded hollow cylinder, substantially in the mauner and for the
surposes as described.

26,408.—Elizabeth Bellinger, of Mohawk, N. Y., for an Improved Composition for Kindling Fire:

I claim the inflammable gum paste composed of Kaurie gum, camphor and wax in about the proportions stated, when combined with friction-match paste, placed on kindlers for fires, in the manner and for the purposes set forth.

26,409.—John H. Birdsell, of West Henrietta, N. Y., for an Improvement for Bolting and Cleaning Clo-

for an Improvement for Bolting and Cleaning Clover Seed:

I claim, first, Operating the bolts, A A, so as to impart to them an oblique alternately rising and falling nuotion, by means of the double crank, D E, guide rods, F F, arms, G H, and connecting rods, B B, or their equivalents, in the manner and for the purposes set forth: it being understood that I claim the above only when applied to bolting clover seed.

Second, I claim arranging a trough, I, provided with endless conveyors, J, as set forth, for the purpose of returning the unhalled seed or taillings to be again submitted to the operation of hulling, as described.

[This invention consists in giving the two bolts, when the man is inoperation, an oblique alternating motion, so that they will alternately rise and fall, keeping at the same time always parallel to each other, for the purpose of more effectually separating the cloverpods from the straw by giving to it a dropping motion, while at the same time it is propelled to the rear of the machine. It further consists in providing an endless conveyor so arranged that it will convey the seed which have not been effectually hulled back again to be submit-ted to the process, for the purpose of more thoroughly freeing it of its hulls.?

26,410.—William Blessing, of Jeffersonville, Ohio, for an Improvement in Seed-planters:
I claim the arrangement of the top portion of the distributor made with a semi-lunar opening and the recess under the covered portion of the said top, when the periphery of the top is made with the chaff openings, II, on either side of the reciprocating seed bar so that said bar, by its reciprocating action shall work out the chaff through the passages, II H, on either side of the seed bar and thus prevent choking the distributor.

26,411.-Jeremy W. Bliss, of Hartford, Conn., for an

Improved Striking Apparatus for Gongs:
I claim, first, Arranging the striking mechanism of a bell substantially within the hollow of the bell, when the wire which actuates that mechanism moves in lines parallel to the axis of the bell or nearly so, as described.

And lastly I claim a rock-shaft arm arranged with reference to the bell, substantially as described, in combination with a slide, a swing catch, and a hammer wire and proper springs; the whole constituting a striking apparatus, substantially as herein set forth.

26,412.—John Broughton, of New York City, for an Improvement in Grinding Mills:

I claim, first, The double and reverse-acting conical grinding surfaces, B F, constructed and operated substantially as herein set forth.

forth.

Second, In combination with a revolving grinder and hollow case or drum, A. I claim the wings or fan blades, J, operating substantially as and for the purpose set forth

(This invention relates to certain improvements in metallic grinding mills, the class formed of a cone or frustum of a cone revolving within a co-centric and stationary shell. The object is to prevent the elogging and consequent heating of the mill, and at the same time obtain a perfect and rapid grinding operation with a very simple and economical arrangement of parts.]

26,413.—Peter M. Brown, of Carrollton, Ill., for an Improvement in Portable Fences:
I claim giving such a shape to the slots at each end of the sections of my improved fence that the said sections can be securely interlocked with each other by means of supporting posts of the within described shape in such a manner that the said sections can be either length end or shortened when they are put up for use, substantially as set forth.

26,414.—Isaac Y. Chubbuck, of Roxbury, Mass., for an Improvement in Fan Governors for Steam-engines:

I claim combining the main spindle, C, of the fan governor with the stem or spindle, B, of the valve, by means of a toothed are formed upon or attached to the extremity of the crank arm which carries the fan and a toothed sectrupon the valve stem, the said crank arm being attached to a sleeve fitted to the spindle, C, and the whole being otherwise arranged substantially as described.

[This invention consists in a novel mode of combining the spindle ernor with the stem of the regulating valve, whereby and valve are brought together in a very compact form, a fan governor without arranging the governor upon the valve spindle, and thereby tending to draw the said spindle out of truth and so interfering with the proper operation of the valve.]

with the proper operation of the valve.]

26,415.—Hezekiah Conant, of Willimantic, Conn., for an Improvement in Machines for Winding Thread on Spools. Patented in England June 22, 1859:
I claim, first, The combination, substantially in the manner set forth, of a traverse changer with right and left hand screws, and with nuts which are alternately in gear with such screws, the combination operating as a whole substantially in the manner and for the purpose described.

Second, I claim a traverse changer provided with successive steps or teeth, substantially such as is before described, and acting upon lips as set forth.

Third, I claim a stop motion, substantially such as is described, for causing the machine to come to rest when a spool is filled, in combination with automatic apparatus, substantially such as set forth, for regulating the length of motion and change of direction of motion, or a guide through which the thread is delivered on to a bobbin or spool. Fourth, I claim adjustable lips, substantially such as set forth, in combination with a traverse changer, whereby spools of different lengths may be wound by the use of the same traverse changer.

Fifth, I claim mounting the presser and thread guide directly upon or attaching it firmly to the traverse rod, as before described, and lastly, In combination with apparatus substantially such as de-

whereby the machine is cheapened and performed whereby the machine is cheapened and performed as a scribed, for governing automatically the motions of a thread guide claim a tension apparatus and stop motion which arrests the motion a machine when a thread breaks, substantially by the mode of operation and forth

26,416.—John B. Cornell, of New York City, for an Improvement in Sash Weights:

I claim, as a new article of manufacture, my improved metallic seshweight, the peculiarity of which consists in its having a series of annular grooves formed at suitable distances from each other, in the lower portion of said sash-weight, for the purpose set forth.

26,417.—Thos. R. Crosby, of Newark, N. J., for an Improved Machine for Wiring Blind Rods:
I claim, first, The use, in wiring machines, of the yielding mouth toloid the wire when being driven and formed, substantially as described.

sci bed.

Second, I claim the use of the adjustable slide, K, substantially in the manner and for the purposes described.

Third, I claim in said machines the use of the dog, V, in the end of the arm, E, substantially in the manner and for the purposes described.

outh, I claim the combination together of the driver, O, and the ling mouth formed by the rack, D, and plate, I, substantially as

described.

26,418.—R. Crowley, of New York City, for an Improvement in Needle Wrappers:
I claim the incision of the wrapper, as shown atdd, so as to expose the heads of the needles and produce a covering or flap, B, of the form shown, or equivalent form, as and for the purposes set for than described.

26,419.—Jonathan Cutler, of Chicopee, Mass., for an Improved Machine for Making Clasps:
I claim first, The sliding former, A, and the vibrating lever, B, in combination with the die and punches, in the manner de scribed.
Second, The reciprocating ring, C, to actuate the slide former, A, in combination with the revolving cam, D, and lever arm, I, and pin, M.

pin, M.
Third, The center spring pin, W, to press the blank down through
the die plate on the forming bed, Y, in the manner described.
Fourth, I claim the whole arrangement in combination, as an organized automatic machine, in the manner and for the purpose specified, substantially as set forth.

26,420.-O. H. Dennis, of Altona, Ill., for an Improve-

ment in Seeding-machines:
I claim the combination and avrangement of the cylinder, G, of cirulur cutters, 11, with the cultivating and opening teeth, e.e. and
rith the sowing cylinder, H, substantially in the manner and for the

with the sowing cylinder, H, substantially in the manner and for the purposes set forth.

1 also claim, in combination with the above, the arrangement of the loosely hinged harrows, N, in relation to each other, and to the frame of the machine, and in combination with the arms, P P, rackshaft, O, lever, Q, and catch, R, substantially as specified.

26,421.-D. S. Fancher, of Logansport, Ind., for an

Improvement in Stone-loading Wagons:

I claim, first, The inclined frame or bed, A', and the hinged drop, B, in combination with the friction rollers, c c, and the windlass, a b b, for the purpose set forth.

Second, I claim the receiving table, A, in combination with the clamps, E E D, substantially as described and for the purpose set forth.

26,422.—J. W. Fawkes, of Christiana, Pa., for an Improvement in Steam Plows:

I claim, first, The arrangement of the clutch, r, levers, M.N. rod O, lever, br, and button or projection. cr, on the chain, Fr, whereby the chains, Fr, are wound on the pullers, e.e., of the shaft, E, and stopped automatically at the proper time for the purposes set forth. Second, In combination with the above, the brake, R, and pawl, d, when applied to the machine to operate simultaneously, as and for the purpose described.

the purpose described.

26,423.—Thos. B. Fogarty, of Charleston, S. C., for an Improvement in Gas Meters:

I claim, first, The combination with the water reservoir, B, and the revolving measuring a um, II, of an inclined feed whet, E, substantially as and for the parposes set forth.

Second, The arrangement of the overflow pipe, K, in combination with the water reservoir, meter chamber, and dry well, L, and pipe, N, in the manner substantially as set forth.

Third, The arrangement of the vater inlet, S R, substantially in the manner and for the purposes set forth,

(This invention consists, first, in the arrangement of an inclined wheel within a separate reservoir made by elongating the case of the meter; and in fixing upon the periphery of this wheel suitable buckets which shall alternately dip into the water contained in said reservoir, and convey the same into the main reservoir, thereby maintaining a correct water line under all ordinary circumstances, and effecting an equitable registration of gas. It consists, secondly, in preventing the meter from being overcharged; by the employment of a pipe extending up near the water line, and communicating from the supply reservoir to the bottom of the dry well in front of the meter, so that should any attempt be made to overcharge the reservoir, the water will escape through this pipe, and rise into the dry well and stop the flow of gas completely. Also, in a peculiar arrangement of the water inlet pipe, so that it will have no communication with the body of the meter.]

26,424.-A. M. Ford and C. W. Warner, of Jericho,

Vt., for an Improvement in Horizontal Water-Wheels:
We claim the construction and arrangement of the lifter, c, and band, d, asshown in Fig. 1, and of the buckets, a and b, combined in the manner and for the purposes substantially as set forth.

26,425.—Geo. Foster, of Brooklyn, N. Y., for an Improvement in Axles or Shafts:

I claim a shaft or axle cellular in its character, and composed of a scries of wrought iron rods, or tubes, cowered and held together by a casting cast upon the same, and forming the journal wheel, bearing section wheel and pulley.

26,426.—W. P. Goolman, of Dublin, Ind., assignor to himself and Saml. B. Morris, of Wayne county, Ind., for an Improvement in Mole Plows:

I claim, first, The lever, F, rigidly attached to a pivoted mole, R, in the described combination with the rack, F, the whole being constructed and arranged and operating substantially as and for the purposes set forth.

Second, The cam, D, in the described combination with the coulter, Q, and adjustable pivoted mole, R, operating substantially as and for the purpose set forth.

26,427.—Magnus Gross, of Washington, D. C., for an

Improvement in Preserving Flesh and Meats:
I claim the application of an air-tight apparatus of displacement to which hydrostatic pressure is applied, forthepurpose and in the manner set forth in the specification.

26,428.—Chas. Hadfield, of Brooklyn, N. Y., for an Improvement in Sticks for Exhibition Rockets:
I claim the rocket stick enclosing or in connection with a magazine of powder, in the manner and for the purposes set forth.

26,429.—H. Halvorson, of Cambridge. Mass., for an Improvement in Candle Molds:

I claim the combination with an outer tube, A, of the inner clastic slit tube, B, applied and operating substantially as and for the purpose set forth.

The set forth.

And in combination with the elastic tube. B, I claim the tip, c, of elastic or yielding material, applied and operating substantially as and for the purpose described.

26,430.—Ira Hann, of Hope, N. J., for an Improved

Washing Machine:
I claim the combination of the fixed rubber board, n, with the removable rubber, m, friction roll, presser carriage, 'a b, and operating lever, F B, and M, the whole arranged and operating as specified for the purposes described.

26,431.-J. S. Harbison, of Sacramento, Cal., for an Improvement in Bee-hives:

I claim placing the bee comb, known as worker cells, in a horizontal or nearly horizontal position, so that the cells shall be vertical or nearly vertical instead of horizontal, by the means, or their equivalents, substantially as set forth and represented.

[This invention consists in placing the bee comb, known as worker cells, in a horizontal or nearly horizontal position, so that t shall be vertical or nearly vertical, in order to facilitate the labors of the bees in making the green cells.]

26,432.-Wm. Hoffman, of Benicia, Cal., for an Improved Butler's Tray:

I claim, as a new article of manufacture, a single-handed butler's tray, furnished with a hinged, or pivoted handle, so as to be detached or wing out of the way, to facilitate the placing or removing of articlesupon it, and to economize room and space in carrying or stowing it away, as set forth and explained.

26,433.—J. B. Holmes, Jr., of New York City, for Improved Ratchet Pulleys for Blind Cords:

I claim the metallic bar, a, projecting from the window casing, and having teeth on the back thereof, in combination with the bridle pawl, b, passing around said bar, a, and carrying the pulley for the cord, as set forth,
I also claim this porcelain really, d, on the center-pin, 4 in combining and the part have described by a restartistic as set forth.

cord, as set forth,

I also claim the porcelain roller, d, on the center-pin, 4, in combin-ation with the bridle-pawl, h, and bar, a, substantially as set forth.

26,434.—A. H. Hook, of New York City, for an Im-

provement in Clamps for Metal Straps:
I claim the outer griper, a, and nail, e, for fastening the ends of bale and other straps, constructed substantially as and for the purposes set forth.

26,435. - Daniel Hughes, of Rochester, N. Y., for an

Improvement in Hoop Locks: chaim the case or box, A, having slots, a a, in two opposite sides, i provided with a clamp or jaw, B, arranged su stantially as and the purpose set forth.

[This invention consists in placing within a metal case or box t rough which the ends of the hoop to be connected or secured toget er pass, a clamp or jaw, so hung and arranged within the case or box as to permit the ends of the hoops when the latter is around the bale, to be shoved one over the other through the case or box in order that the hoop may be snugly adjusted on the bale, and, when the ends of the hoop may be singify adjusted on the bale, and, when the cause the hoop are slightly drawn back under the expansion of the compressed bale cause the jaw to bind firmly on the ends of the hoops, so that the latter will be firmly secured in the case or box, and consequently locked or connected together. The invention is more especially designed to be applied to the hoops of cotton bales, but it may be applied to all metal bale hoops.]

26,436.—Peter Keffer, of Reading, Pa., for an Improvement in Boots:

I claim the above-described mode of making the leg of the boot, the leather being folded in front, and the crimp hammered in, instead of crimping in the usual way, and the ankle being completed by a single seam and one piece of leather, substantially as set forth for the purposes described.

26,437.-L. G. Kniffen, of North Salem, N. Y., for an

Improvement in Harvesters:

I claim constructing, as a whole, the shoe on which the cutter and finger burs are supported and adjusted in one piece, combining the guide-box, a, for the cutter bar, the receas, b, for the finger-bar, the slotted bracket, m, for the custor wheel to be attached to the vertical locking partion, d, or its equivalent, the vertical pivot or gadgeon, G, for the whole to be suspended or adjusted on, horizontally, to a position parallel with the inner side of the main frame, as set forth.

26,438.—G. A. Lathrop, of East Saginaw, Mich., for an Improvement in Metallic Window Blinds:
I claim the arrangement of the plate, A, with slots, a, slats or water-slates, c, and grooves, d, in combination with the slotted slide, B, substantially as and for the purpose specified.

[The object of this invention is to produce a shutter or blind that is at once simple, cheap, easily operated and fireproof, and it consists in combining with a metallic plate provided with suitable slots and water sheds or slats, a slotted slide in such a manner that the light may be admitted or excluded at pleasure.]

nay be admitted or excluded a pleasure.]

26,439.—J. H. Lec, of Camanche, Iowa, for an Improvement in Seed-planters:

I claim the arrangement of the bar, F., cord, J. rotary shaft K., sliding seed-box, G. bars, c. lever, B, and sliding axk, D, as and for the purposes shown and described.

[This invention consists ingiving the seed-box and parts immediately connected therewith an adjusting movement independently of the draught frame, so as to greatly facilitate the proper planting of the seed whether sown in drills or hills. The invention also consists in a novel means to assist or aid the turning of the machine.]

26,440.—Horatio Leon.urd and Henry Ryder, of New Bedford, Mass., for an Apparatus for Molding Candles:

We claim making the receiver or trough, E, separate from the body of the mold or series of molds, and so constructed and arranged as to operate therewith, substantially in the manner and for the purpose

forth.

e also claim the described improved mode of packing the lower
ce of the mold, viz., by means of a spring, a, furnished with rubor other proper elastic material, the same being arranged and
le to operate with respect to the said orifice, as set forth.

26,441.—Benj. A. Mason, of Newport, R. I., for a Machine for Cutting Railway Bars:
I claim, for giving to rails the form, substantially such as herein described, the combination of the sories of cutters, arranged in relation to each other, substantially as described.

26,449.-O. C. McCune, of Darby Creek, Ohio, for an Improvement in Corn Planters:

I claim the arrangement of the peculiarly formed rack bar rod, L, eat lever, M, pawl, N, ring. F, cam, c, and arm, d, as and for the urpose shown and described. purpose shown and described.

[This invention consists in placing in rear of the plow, used to form

[This invention consists in placing in rear of the plow, used to form the furrow in which the corn is deposited, a shovel, or coverer, and in operating the same by suitable connecting rods and levers, so as to cover the corn in hills, after being deposited in the furrow.]

26,443.—Chauncey Parmelee, of Wilmington, Vt., for

a Vegetable-slicer:

I claim supporting the front end of the adjustable plane of bottom, K, on the fixed bottom board of the hopper, so that it shall be stationary relatively to the gate, and arranging at the end of the plane, K, the mechanism for raising it.

I also claim the application of the board or partition, O, to the hoper and the adjustable platform, K, substantially in the manner and for the purpose as specified.

26,444. -Wm. H. Peckham, of Hoboken, N. J., for an Improved Spectacle Frame:

I claim connecting the end pieces, c c, of spectacle frames by the clasp sockets, d d, in the manner and for the purposes substantially as specified.

26,445.—Charles A. Seeley, of New York City, for an Improved Method of Protecting Frictional Electric

Machines from Moisture:

I claim enclosing an electrical machine in a covering or box, which is nearly or quite air-tight, and, by means of an absorbent moisture, preserving the air about the machine nearly uniformly dry.

I also claim the insulating covering or box, substantially as described and for the purposes specified.

scribed and for the purposes specified.

26,446.—Andrew J. Shepard, of Buffalo, N. Y., for an Improvement in Nut Machines:
I claim, first, Perforating the punch, e, as described, for the purpose set forth.
Second, The cutters, t and t', when constructed and arranged relatively to the dies, L and M, as described.
Third, The combination of the dies, L and M. with the water chambers, I and m, when arranged and operated substantially as described for the purpose set forth.
Fourth, The combination and arrangement of the punch, D (Fig. D, with the water chamber, 7, and openings, 8 9 substantially as and for the purpose described.

26,447.—Joel Y. Schelly, of Hereford, Pa., for an Improvement in Attaching Spokes of Carriage Wheels: I claim, first, The ferrule, D, when furnished with rings, a a, and applied in the manner and for the purpose set forth.

Second, The screw 18ttes, b, welled upon the inside face of the tire, in the manner and for the purposes set forth.

Tillrd, I claim the combination of (with suitable slots made in the inside face of the tire) the bott, e, key bott, g, and plate, h, all arranged in the manner specified for securing the tire rigidly in its place upon the wheel as stated.

26,448.-G. B. Singeltery, of Greenville, N. C., for an

Improvement in Manure Drills:
I claim the arrangement of the plow, B, guide board, E, lifting bar, G, and rotating hopper or receptacle, D, as and for the purposes shown and described.

[This invention is designed for sowing cotton seed as a manure, either alone or mixed with guano or other fertilizer. The invention consists in the use of a bilge-shaped rotating hopper, applied to a plow in such a manner that the desired end is attained by a very sim ple and economical arrangement of means.]

26.449.—Stephen Stafford, of Carrollton, Mo., for an

20,449.—Stephen Stattord, of Carrollton, Mo., for an Improvement in Hemp-breaking Machines:
I claim constructing the brake with two disks and heads, and uniting said disks by means of rounds or slats armed with obliquely-set teeth, and arranged so that spaces shall exist between them, and they can be adjusted to give the teeth any required obliquity substantially as and for the purposes set forth.

The nature of this invention consists in constructing the brake with two disks or heads, and uniting them by means of longitudinal rounds or slats armed with obliquely-set teeth, and arranged so that spaces shall exist between them, and they can be adjusted to give the teeth any desired obliquity.]

26,450.—John F. Sterling, of San Francisco, Cal., for an Improvement in Watch Keys: I claim, as a new article of manufacture, a watch or door key with a hollow etemor pod, open at both its ends, so that anything getting into it that would obstruct its action will drop or be punched out through the open stem, as set forth.

26,451. - Euclid C. Thayer, of Providence, R. I., for an

LU, WOI. — EUGHA U. I Mayer, of Providence, R. I., for an Improvement in Belting for Pulleys:

I claim the manufacture of round belting by preparing the leather or other material in the mode described, and rolling and twisting the same in a spiral form with any required number of conical layers in the cylinder, either with or without a cylindrical space in the center of the belt, and cementing the layers in the process of manufacture, substantially as described.

substantially as described.

26, 452.—T. S. Underhill, of St. Johnsville, N. Y., for an Improvement in Beehives:
I claim, first, The arrangement of the movable frame, E, in combination with the stiding hive, A, and adjustable side, e, substantially as and for the purpose set forth.

Second, The arrangement of the adjustable boards, G H and D, placed on a frame, F, when said parts are constructed as described, and used in connection with the sliding hive, A, for the purpose specified.

26, 453.—Antony Welsch, of Chicago, Ill., for an Improvement in Hand Car for Railroads:

I claim the movable platform, and the attachment thereto of the crank and wheel, in the manner and for the purposes set forth.

26,454.—William Wharton, of Philadelphia, Pa., for an Improvement in Dispensing with Switches Railroads:

Railroads:

I claim the employment of a car wheel provided with one or mo treads in addition to the ordinary tread, upon either the outer or increice of said ordinary tread, and of the same or different diamet as said ordinary tread, in combination with salditional raised rail rails with a gnadual rise, either curved or straight, so placed that an of the said extent treads as desired shall be caused to run upon the thereby raising the car entirely clear of the ordinary track, and cat ing it to follow the direction of said raised rail or rails, wheth curved or straight, for the purpose of avoiding the necessity for raroad switches, arranged and operated substantially as set forth.

26 455 —W: Ulinary University of the car wheel provided with the necessity for raroad switches, arranged and operated substantially as set forth.

26,455.-William H. Worth and Leonard Finlay, of Canton, Mo., for an Improvement in Seed-planters: We claim the arrangement of the longitudinally-moving slotted late, N, vertical gate, L, sliding bar, G, open-ding lever, H, shoes, I, nd rotary colters, K, as and for the purpose\_shown and described.

[The nature of this invention consists in the arrangement of rotary cutters placed before the shoes for forming the drill, and hung upon a pivoted frame in such manner that they will conform to the irregular-ities of this surface of the ground in the operation of planting corn. It also consists, in connection with a reciprocating seed slide for depositing the seed in the shoe, in arranging a vertical gate, working in the heel of the shoe, and operated by means of a peculiarly-slotted piece fixed to the seed slide, so as to deposit the seed in the drill from the shoe at regular and required intervals along the line of the furrow; the corn being retained in the heel of the shoe until the lever is moved back ready to receive another charge of seed.]

is moved back ready to receive another charge of seed.]

26,256.—Henry Bell, of Clinton, Ill. (assignor to Fenton F'. Bogar and Joseph W. Tidball, of same place), for an Improvement in Seed-planters:
Iclaim, first, The arrangement and combination of the r ck shaft, J, cog segments, I, pinion, K, crank shaft, Q R, ratchet bars, H H', springs, S, feed slide, G, and discharge regulating valve, Q, when the same are arranged and combined in the manner set forth.

Second, In combination with the above, the arrangement of the treadle, V, and hand lever, U, together and on the same fulcrum, so that the feed slide can be worked either by the hand or foot, substantially as and for the purposes set forth.

Third, The combination with the foregoing peculiar arrangement of parts for dropping the seed, the arrangement of a b c d, for regulating the dealt of the furrow-openers, substantially as and for the purpose set forth.

purpose set forth.

26,457.—William Bellows, of Cincinnati, Ohio (assignor to himself and Charles W. Smith, of same place), for an Improvement in Re-vivifying Bone Black:
I claim, first, An improved apparatus for re-vivifying bone black, arranged and constructed as described.
Second, The finaning bottoms of the retorbs, a.g., when arranged and combined with the described apparatus for the purpose specified.
Third, The finanches, c.c., in combination with the retorts, a.g., for the purpose of allowing for expansion and contraction and replacing of retorls, as well as protecting internal heating surface, substantially as described.
Fourth, The chamber between flanches, c.c., and lower plates, d.d., when, for the purpose of preventing undue radiation of heat, and for the purpose of passing off the officative rases arising from retorts when said chamber is combined with flanches, c.c., and cover plates, d.d., for the purpose described.

26,458.—George H. Bronson of Cincinnati, Ohio (assignor to himself and David Millard, of same place), an Improvement in Hydro-carbon Vapor Appar atus:

Attis:
I claim the arrangement and combination of the zigzag folded surfaces extending over the projecting edges, F, with the projecting edges, E C C cc, &c., in each of the several cells or chambers of the impregnating apparatus, substantially in the manner and for the purpose set forth.

26,459.—Mortimer S. Harsha, of Sycamore, Ill. (assignor to himself, Rufus S. Sanborn and H. B.

Jones, of same place), for an Improved Churn
I claim an entirely stationary brake-dash, in combination with a
cream-receiver, made to rotate on a vertical or upright shaft, as described and for the purposes set forth.

26,460.—Thos. C. Hendry (assignor to himself, J. Dillworth and F. E. Askin), of Conyers, Ga., for an Improvement in Gravel Cars:
I claim the combination of the double Inclined bottom, D. D., and swinging 6,078, G. f., the latter being operated by the rods, H., bar, I. and lever, J, substantially as and for the purpose set forth.

[The object of this invention is to obtain a gravel car which may have its load readily discharged simultaneously from both sides, and which may be constructed in a strong and durable manner, at a reasonable cost.]

26,461.—Jas. W. Lawrence (assignor to himself, Henry Brewster and John W. Britton), of New York City, for an Improvement in Connecting Elliptic Springs to Vehicles:

I claim the manner of combining and securing the back axle and the elliptic spring, specifically as described.

26,462.—Charles Miller (assignor to George Ricardo), of New York City, for an Improvement in Sewing-

I claim, first, The combination with the shuttle driver, K, of the cleasing plate and lifter, g, as and for the purpose shown and described.

nd, The employment of a shuttle made of two springs, ij, in Culiar manner shown and described, in combination with the the peculiar manner s bobbin, 1, as set forth.

This invention consists in the employment, in combinatior with a feeding dog operating below or at the back of the material being sewed with a simple reciprocating rectilinear motion parallel with the surface of the material and a presser acting on the top or in front of the material to press it against or towards the teeth or face of the dog, of a plate, which may be termed a releasing plate, arranged on the same side of the material as the dog, and having a movement in a direction perpendicular, or nearly so, to the face of the material, for the purpose of lifting the material and keeping at released from the dog during the backward movement of the latter. The invention also consists in effecting the releasing movement of the said releasing plate by means of a wedge-like projection, or its equivalent, formed apon or carried by a shuttle driver.]

26,463.—E. R. Morrison (assignor to S. C. Hill), of Brooklyn, N. Y., for an Improvement in Shingle Machines:

Machines:
I claim, first, The arrangement of the knife, H, and projection, v, in connection with the reciprocating bed, substantially as shown, whereby the bolt is supported as the bed passes underneath it during the cutting or riving operation.

Second, The employment or use of the planers or knives, C C, operated by the plates, D D, bar, E, and ledge or projection, F, on the bed, G, substantially as and for the purposes described.

RE-ISSUES.

Isaac Rulofson (assignor to himself and Lemuel Harvey), of Penn Yan, N. Y., for an Improvement in Plows.

Patented March 1, 1859:
I claim moving and adjusting the beam, A, laterally upon the standard, B, by means of the head, L, and dovetailed connections, m and j,, or their equivalents, in such a manner that the line of draft or direction of the beam shall always remain parallel with the landside of the implement, substantially as and for the purposes shown and described.

Daniel R. Prindle, of Bethany, N. Y., for an Improvement in Boilers and Steamers. Patented Sept. 13,

1859:
I claim the construction and arrangements of the two sections, A and B, so that the section, A, may be used separately as a caldron, or both sections be securely united and employed as an enclosed boiler for generating steam, as specified.

I also chim the combination of the cylindrical or cylindroidal support and fire box, C, entirely open at the trp, with the uniting and supporting its nees. c f, of the spherical or sphere dark sections, A, B, constructed as described, so that, by presenting a thin edge only the finances, it allows the utmost facility of clamping and unclamping the sections, and of moving or adjusting the same, while it firmly sustains the boiler and shields the packing between the Hanges from the heat of the fircs, substantially as set forth.

I also claim the trough, F, formed by the tip projecting above the upper finance, f, for the purpose of containing water to protect the packing between the flanges from injury by heat, substantially as described.

John M, Lunquest of Criffe.

John M. Lunquest, of Griffin, Ga.. for an Improvement

in Pumps. Patented Nov. 1, 1859:
I claim the arrangement of two or more cylinders, BB, piston heads, CC, ball valves, a a, air-chamber, F, and valves, a' a', said valves being kept in position by proximity to each other and the sides of the chamber, F, substantially in the manner and for the purpose specified.

M Clintock Young, Jr., of Frederick, Md., for an Improvement in Harvesters. Patented Sept. 21, 1858; re-issued July 19, 1859; again re-issued Dec. 13, 1859:

1899:
I claim giving the rake the two described regularly succeeding axial movements over and across the platform of said machine, that is to say, an elevated curvillnear movement from rear to front over said platform and a horizontal movement from frontto rear upon or near to said platform, by the means substantially as described and for the purpose set forth.

## ADDITIONAL IMPROVEMENTS.

Ephraim Parker, of Marlow, N. H., for an Improvement in Clothes Pins. Patented Jan. 15, 1856:

I claim adding bits to the machine soas to bore the stuffatthe time it is being shaped and turned at the same operation.

I also claim, as above, the boring the stuffirst and then putting it upon a small mandrel which revolves, so that the work shall be turned and shaped to the right pattern and finished at each end upon its own center hole all at one operation.

I also claim the above improvements, as before set forth, or any equivalent, which substantially effects either of the above objects, by any other arrangements of mechanism or mechanical devices.

Wm. Sims, of Dayton, Ohio, for Improved Refrigerators.

Patented Feb. 8. 1859:
I claim the arrangement, severally, of the escape pipe, G, in combination with the induction pipe, E, so as to operate conjointly therewith and in connection with a flue, K, substantially as and for the purposes set forth.

## EXTENSION.

Samuel Pierce, of Troy, N. Y., for an Improvement in Cooking Stoves. Patented Dec. 6, 1845; re-issued April 24, 1847; again re-issued July 31, 1847:

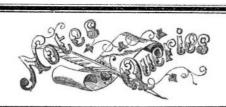
I claim making the top of the metal ovens of cooking stoves of fine brick, or other earth v substance, when this is combined with a stove in which the products of combinition from the fire-chamber pass first over the top of the oven, substantially as described, whereby the heat

in the oven is equalized and the vapors or gases evolved in the oven are absorbed and carried off, as described.

I also claim the arrangement of parts by which I supply the fire with heated air, said arrangement consisting mainly of the apertures in the front plate or doors and the plate, S, In front of which the air must descend on its passage to the grate bars: the heating of the admitted air has been attempted under other arrangements, and I limit myself in this particular, therefore, to the special combination of parts by which I attain this end.

And finally, I claimmaking the plate of that part of theoven which extends under the grate, in the manner substantially as described, and connected with a receptacle for ashes at the bottom for the purpose of discharging the ashes that full from the grate, as described, whereby I am enabled to heat this part of the oven more effectually and equally, and to avoid the burning out of the grates, as described.

-Out of the number of patents in the above list-sixty-all which were issued last week, Twenty-room of them were cases which were prepared and prosecuted through the Scientific American Pat ent Agency.



- E. P., of Conn.—Porcelain or china-ware is ornamented with metallic oxyds, which are ground up with a fusible flux, painted on the porcelain, then fused in a furnace and afterwards burnished with a proper tool. If it is required to gild with pure gold, a powder of the metal, obtained by grinding or by deposition from an acid solution, is mixed up with a flux of borax and some oil of lavender or turpentine, until it is of a creamy consistency, when it is put on the article by the artist with a hair pencil. It is now allowed to dry, then fused in a kiln at such a temperature as does not affect the porcelain, while it melts the metal and burn it into the porce of the article. When it comes out of the furnace. the part which has been gilded is of a dull dark brown color but by rubbing it with a burnishing tool, it soon shines with it usual metallic luster. A red color for porcelain is obtained from sub-oxyd of copper, a yellow from chromate of lead, and blue from the oxyd of cobalt or the "lapis lazuli." These are painted on like the gold, to produce the various shades and colors. The artists who decorate porcelain usually possess a very cultivated taste and great skill in forming figures, flowers, &c. Every patented article when practicable, minst be stamped with the date of the pater each omission subjects the seller of the article to a fine of \$100
- S. B., of N. J.-If your theory is correct regarding heric electricity always being minus, all the accidhave occurred to life and property from lightning must have been by upward strokes from the earth, not downward, as is genercrally supposed. And if, as you state, atmospheric electricity always descends silently in the rain drops, the electricity of the carthshould flow upwards by the same conductor; and as a consequence, we never should have any lightning at all. Write out your views and observations on the subject in an uncontroversial manner, and they will be in a better shape to go before the public.
- J. T., of Ind .- You say of Koch's mode of applying muscular power :- "This method of applying power is much the same as the old spring pole lathe. The bow-drill, and many other common machines, act upon the same principle. But the use of the renders it very convenient for many purposes, and I have wondered why it has not come into more general use and favor. If, however, it has been comparatively unknown in the improved form, and it has been comparatively unknown in the improved form, and therefore unused, the publication of the patent of Louis Koch may bring to notice its superior merits, if it possesses them; and we may have a score of new 'combinations' based upon it, some of which will doubtless prove very good and useful." If you will examine Mr. Koch's claim, you will find that his combination is
- W. A. K., of Mass.—To draw hollow wire in a tapering formfor blow-pipes, it must be drawn over a tapering or conical mandrel of the exact size which it is desired to make the tube. The metal will require to be heated forthis purpose, and the whole operation conducted with care.
- W. A. S., of Ohio.-We do not know where you car procure one of Buttelle's stitching machines.
- H. L. C., of N. J.-We cannot recommend any lamp as being perfectly safe for burning the explosive fluid composed of fourparts alcohol and one of turpentine by measure. The lamp to which you refer is a very good and safe one of the kind. Common burning fluid will not explode until it is generated into gas and mixed with six volumes of the atmosphere
- H. A. B., of N. Y.—Soft gold solder is composed of four parts gold, one of silver and one of copper. You can make it much softer by adding brass, but, in proportion as you add base metal, the solder becomes more liable to oxydize.
- H. M. Brown, of Richmond, Va., wishes to purchase the best machinery in use for making brooms.
- W. B. L., of Ill.-You state that you cannot get fresh plaster-of-Pavis to stick on the back of your mill-stone—that it always peals off when the stone is set in motion. The best way to make it stick upon the top of the old coat is to moisten the latter, which is left upon the stone, with clean hot water, then mix up the fresh plaster with warm water and pour it on, taking care to stir it, so as to displace any air bubbles that may prevent it adhering to the surface; and allow it to dry thoroughly before the stone is set in motion. We have been informed that pluster of Paris, made into a paste with dilute alum liquor, and applied quickly to mill-stones, makes a very adhesive and hard cement.

  T. C. R., of Wis.—The word "equivalent," in a claim,
- ite superfluous. By the decisions of the United States courts all claims cover equivalents.
- C. C. P., of Ohio.-You will find articles on crystals in most of the hand-books of chemistry, which will probably give you all you want to know on the subject. Draper's Chemistry and Porter's both treat of the subject. The subject of "fluids" is so broad and varied that, unless we know more definitely what you want, we cannot direct you where to find it.

- G. E. S., of Pa.-We can see no reason why a concentric is not as good as an eccentric fan. We suppose you intered to employ it for a blower. We therefore advise you to be careful in so constructing it that the air will not escape backwards over the points of the wings. The "Dimpfel Blower," which has a rotating case, prevents this back-lash of air, and it is therefore an excellent apparatus.
- E. C. J., of Ill.—The amount of gas required to raise 75 pounds 200 feet high, depends on its temperature, and it can be compressed indefinitely according to the pressure to which it is subjected. We have no objection to your using our recipes as you
- J. A., of Mass.-Exhaust steam may be conveyed into water so as to prevent the noise; this is frequently done.
- W. A. S., of Ill.-The price of large plate glass, 5x10 feet and 1/2 of an inch thick, is from \$2 to \$2.50 per square foot. Schanck & Downing, No. 45 Chambers-street, this city. have a plate 9 feet 2 inches by 14 feet 2 inches, which they will sell for \$500. It is said to be the largest in the country.
- B. C. S., of Tenn.-For a small gymnasium, the first thing required is a ladder, to be suspended over the boys' heads for thing required is a ladder, to be suspended over the boys' heads for them to swing on by their hands. The next most useful articles are a set of dumb bells, and next to these a pair of ropes, with iron rings at the ends, for swinging by the hands. You will find that this simple apparatus will give most of the gymnastic exercises. But if you want to enlarge, add, in the order named, parallel bars a climbing pole, weight and pulley, and stufied bag for fist exercise.
- J. J. S., of N. Y.—We are not aware that the heat conducting power of india-rubber or gutta-percha has been measured it is small, however, we should think smaller than that of marble or any of the substances in your list.
- D. J. S., of N. Y .- Your letter, regarding the strength of wrought-iron beams, will be answered in our n

#### Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Dec. 17, 1859:-

D. B. S., of N. J., \$10; H. & J., of Ohio, \$30; J. V. T., of Ill., \$25; S. W. R., of Mich., \$25; A. H. C., of Wis., \$20; G. & G. N. M., of Conn., \$30; N. A. P., of Tenn., 25; J. W. M., of Mass., \$25; P. C., 5. w. R., of Mich., \$25; A. H. C., of Wis., \$20; G. & G. N. M., of Conn., \$30; N. A. P., of Tenn., 25; J. W. M., of Mass., \$25; P. C., of N. Y., \$45; H. M., of N. J., \$30; F. & M., of Mass., \$25; P. C., of N. Y., \$30; E. M., of N. Y., \$10; J. & L.. of Pa., \$30; J. B. M., of N. Y., \$30; E. M., of N. Y., \$10; W. S. K., of Conn., \$30; G. & R., of Mass., \$17; E. A. S., of Pa., \$30; J. B., of N. Y., \$25; S. C. H., of N. Y., \$35; G. E. H., of N. Y., \$10; R. C. H., of N. J., \$30; T. C. R. of Wis., \$35; B. D. & Co., of Pa., \$25; J. G., of Ga., \$30; L. B. D., of Wis., \$50 M. P. W., of R. I., \$25; E. B., of N. Y., \$30; J. D. M., of Ind., \$30; O. H., of N. Y., \$30; W. E. B., of N. Y., \$20; J. D. M., of Ind., \$30; J. A. C., of C. W., \$30; R. H., of N. Y., \$25; G. McK., of Ill., \$30; J. M. L., of R. I., \$25; R. M. C., of Mich., \$25; H. H., of N. Y., \$30; P. Ver V., of N. Y., \$25; G. C. D., of Ohio, \$15; H. L. B., of Ill., \$30; R. S., of Conn., \$20; T. B. & Co., of Va., \$25; C. V. L., of Texas, \$35; V. M. B., of Pa., \$25; G. C. L., of V., \$30; J. W. D., of N. Y., \$30; J. W. D., of N. Y., \$30; J. W. D., of N. Y., \$30; J. R. S., of Conn., \$30; B. & W., of Pa., \$30; W. S., of N. Y., \$30; G. R., of N. Y., \$35; L. P. M. of N. Y., \$30; J. H. M. P., of Moo, \$35; C. & L., of N. Y., \$30; G. R., of N. Y., \$35; L. P. M. of N. Y., \$25; S. F. Van C., of Cal., \$35; I. H., of Ind., 25; H. R., of Mass., \$100; I. W., of Maine, \$30; L. F., of Mass., \$30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Paten Office during the week ending Saturday, Dec. 17, 1859:—

S. W. R., of Mich.; B. D. & Co., of Pa.; J. S. L., of Pa.; S. F. Van C., of Cal., J. W. M. of Mass; P. Ver V., of N. Y.; R. H., of N. Y.; T. B., of N. Y.; G. K., of N. Y.; J. V. T., of Ill.; J. D. M., of Pa.! R. S. of Conn.; H. & V., of N. Y.; W. H. McN., of N. Y.; N. A. P., of Tenn.; C. B. W., of N. Y. (3 cases); J. B., of N. Y.; J. M. L., of R. Helin, G. B. W., of N. Y.; R. M. C., of Mich.; V. D., of N. Y.; V. M. B., of Pa.; L. B. D., of Wis. (2 cases); B. & A., of Pa.; A. B., of N. Y.; P. A. C., of C. W.; J. P. M., of Ind.; J. H., of Ill.; G. B. L., of N. Y.; I'

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Consultation may be had with the firm, between NINE and FORE

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Patents secured to American cruzeus are procured chiefund Agency.

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The anaexed letters from the last two Commissioners of Patents we commend to the perusulof all persons interested in obtaining Patents:—

The annexed letters from the last to a commissionary we commend to the perusulof all persons interested in obtaining Patents:—

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Yours, very truly.

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Messers. Munn & Co..—It affords me much measure to hear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents while I had the honor of holding the office of Commissioner. Your business was very large, and your sustained (and, I doubt not, justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements. Very respectfully.

Your obedient servant, J. Holl, Communications and remittances should be addressed to

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