Government, an account, however, being kept for the remuneration of the patentee. The power of the Crown has reference only to the granting of a privilege, and not to any right in the invention, having no knowledge of it, and it was very different from those grants where there was some prerogative right, or a presumed prerogative right, possessed by the Crown, such as a grant of a fair or market and franchises of that character. After referring to the sev eral authorities quoted by the learned Attorney General. he said:-

"If the case is to be de ermined with respect to considerations of public policy, how can any officer of the State rise up in his place and say it is public policy, in all cases of munitions and implements of war, to drive every inventor to foreign countries, because the inevitable result, if their lordships' judgment should be in favor of the Crown, will be to do

Mr. Bovill hit the nail square on the head; and we do not see how any sensible man can adopt any other view of the matter. The Lord Chief Justice, however, intimated that judgment in the case would be rendered in favor of the Crown, on the maxim, we suppose, that "the king can do no wrong."

RECENT AMERICAN PATENTS.

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

Grain and Grass Harvester.- This invention re lates to an improved sickle-driving mechanism, whereby a requisite speed may be obtained by a very compact arrangement of parts. The invention also relates to a novel manner of applying the seat to the machine whereby the weight of the driver is made to act in the most favorable manner towards balancing the machine and in assisting in elevating the finger bar. The inventiou also relates to a lever applied and arranged in such a manner, relatively with the draught pole, as to cause the outer end of the finger bar to be elevated when the inner end of the same has been elevated a certain hight. The invention also relates to a new and improved shoe arranged and applied in such a manner as to support the front part of the machine and partially sustain the finger bar so that it will run lightly over the surface of the ground, and at the same time serve to protect the pitman which drives the sickle. The invention further relates to a novel manner of attaching the finger bar to the main frame of the machine, whereby a strong and durable joint connection is obtained. Frederick Nishwitz, of Brooklyn, N. Y., is the inventor.

Arrow Projectile.-This invention consists in the application to a projectile of a telescope stem provided with wings in such a manner that when the projectile is prepared for use said stem can be contracted within the limits of the cartridge bag, but when the charge is fired, and as soon as the projectile leaves the muzzle of the barrel, the stem elongates by its own inertia and gives balance and steadiness to the projectile in its flight, thereby increasing the range, velocity, and also the certainty of striking the object fired at. The wings being secured to the tubular end of the stem do not interfere with the revolving motion of the projectile if the same is fired from a rifled barrel. The stem is secured to a cap which is perforated with holes, and from the outer surface of which rises a rim with an internal screw thread which screws on the inner end of the projectile, leaving a shoulder for the soft metal ring to rest on, in such a manner that when said cap, with the telescope stem contracted, is introduced into the cartridge bag, said bag can be readily filled with pow der through the perforations in the bag, and by screwing the projectile down into the rim of the cap, the edge of the cartridge bag is clamped between the soft metal ring and the shoulder of the cap, and no turther fastening is required for it. Capt, Thomas S. Orwig, 219 Broadway, New York, is the inventor.

Rotary Engine. - This invention consists in two revolving piston wheels connected together by cog wheels and placed concentrically in two adjoining cylinders in combination with a valve which occupies the channel leading from one cylinder to the other, and to which motion is imparted by concentric or other equivalent means, mounted on the shafts

of the piston wheels, in such a manner that said piston wheels and intervening valve are alternately acted upon by the steam passing through the channel connecting the two cylinders, and that by the action of the valve and Piston wheels one cylinder takes steam while the other exhausts, and vice versa. The cog wheels which gear the two shafts of the pistons together are eccentric, the same as the pistons, so that their circumferential speed corresponds with that of said pistons. John P. Eilis, of 22d. Reg. Wis. Vol. Inf., Nashville, Tenn., is the inventor.

MARKET FOR THE MONTH.

The peculiarity in the trade during the month of February is the absence of fluctuations in the price of gold and other commodities. The prices of the leading staples on the 22d, compared with those on the last Wednesday in January, were as follows:—

PI	nce Jan.	25.	Pric	e Fe	b. 22
Coal (Anth.) #2,000 fb \$12 0	00 @12	50		SI	4 00
Coffee (Java) # tb	17 @	38	47	60	48
Copper (Am. Ingot) # 154	15 @	46 }	44	@	45
Cotton (middling) # 15 8	34 (0)	85	83	@	81
Flour (State) # bbl \$9 2	20 (4) 9	70 \$	9 80	@1	0 40
Wheat # bush	Nomina	al.	2 50	60	2 80
Hay #100 b	0 @ 1	90		-	1 70
Hemp (Am.drs'd) # tun320 (00@390		00 00	@39	0 00
Hides (city slaughter) # 15 1		134	13	0	134
India-rubber # 15	12 (a 1	20		<u>@</u>	1 15
Lead (Am.) ₩ 100 b				1	3 00
Nails # 100 tb \$8 3	50 @ 9	00			8 50
Petroleum (crude) # gal	15 (0)	4.5			45
Beef (mess) # bbl \$19 0	00 @24	00 1	8 00	@2	4 00
Saltpeter # 15		30		_	30
Steel (Am. cast) # 15 1	19 @	34	19	@	34
Sugar (brown) W tb 1	16 @	22		(i)	20
Wool (American Saxony flee	ecel			_	
49 1b		10	90	@	1 10
Zluc 🏶 16 1		19			18
Gold		05			2 01



ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THE WEEK ENDING FEBRUARY 21, 1865.

Reported Officially for the Scientific Ameri

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required and much other in ormation useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific AMERICAN, New York.

-Horse Rakes.-Hubley Albright, Lewisburgh,

Pa.:
I claim, first, The arrangement of the teeth bars, II, and bent rod, E, the latter being attached to the axie, A, as shown, and in such a relative position with the rake teeth, i, to operate as and for the purpose set forth.
Second, The lever, F, in combination with the bars, II F L, and the prings, O, all arranged and for the purpose specified.

springs, 0, an arranged and for the purpose specined.

46,436.—Rotary Engines.— Wm. Avens and Frederick Fradley, Brooklyn, N. Y.:

We claim the wheel, A, with one or more sets of chambers, B, which are provided each with two channels, d. d', situated at opposite conners, in combination with ports, e', valves. J, and cylinder, b', all constructed and operating substantially as and for the purpose set forth.

[This invention consists in a wheel provided with two sets of chambers, to each of which access is had by two channels situated on the opposite ends of the chambers, and tapering off in opposite direc tions, in combination with a cylinder fitting closely to the circum ce of the wheel, and with valves which open and close the steam ports in such a manner that by admitting ers of the wheel a rotary motion may be imparted to the same in either direction, and by a simple movement of the valves the motion of the engine can be reversed at any moment.]

46,437.—Bomb Lance for Killing Whales.—Silas Barker,

16,437.—Bomb Lance for Killing Whales.—Silas Barker, Hartford, Conn.:
Iclaim, first, Thearrangement of the mode of separation of the ance head, C, and fuse tube, F, from the shaft of the lance, substantially as described.
Second, The arrangement of the adjustable hollow exploding lance head, C, in the manner and for the purpose substantially as herein set forth and described.

set forth and described.

46,438,—Adjustable Tool Holder.—Charles Petit Benoit,
Detroit, Mich.:
I claim the adjustable holder, B. swiveled in the end of the stock,
A, so axto adapt the tool for various kinds of work, substantially as
set forth.
Second, In combination with a tool-holder, constructed and mounted as above specified, I claim the washer, E, having grooved or
roughened surfaces, and employed in connection with the nut, C',
for retaining the tool-holder in position, as explained.

46,439.—Machine for Riving Hoops.—George J. Bentley, Michigan City, Ind.: I claim the combination of the grooved wheel, D, with the disce, I claim the latter being suspended in hanging bearings, substan-tially as set forth.

46,140.—Churns.—Edwin L. Bergstresser, Berrysburg,

Pa.: I claim the double-acting dashers, with the steam reservoir and pipe, arranged and combined as herein described.

46.441.- Brushes for Cannon.-Paul Birchmeyer, Syra-

cusse, N. Y.:
I claim as an article of manufacture an artillery sponge, constructed as described, that is to say, by laying a mat of horse borned-cattle hair around a central hollow stock or head, ard facing it by a wrapping wire into the spiral groove, the semi-ghobul end being made by looping in a portion of the mat, as described.

42.—West-feeding Device for Hair-cloth Looms.— John Blanchard, Pawtucket, R. I. Ante-dated Feb.

the improved feeder for a hair-cloth loom described, con-and operated substantially as herein specified.

46,443.—Leather and Process of Manufacturing the same.—Guiseppe Bottero, Boston, Mass.:
I claim the process above described, as well as the material or manufacture produced thereby.

46,444.—Street-lamp Posts.—Philip H. Branson, St.

LOUIS, MO.:

I claim as a new manufacture a lamp post, constructed in two parts, substantially in the manner and for the purpose herein set forth.

forth. Second, I claim the employment of the chipping strips, C''', sub-stantially as and for the purpose set forth.

46,445.—Variable Exhaust Nozzles.—Myron E. Brown, Buffalo, N. Y.:
I claim, first, Making a conical nozzle in two Parts or haives, the said haives being hinged at the base, and so constructed that they lap past each other, so that when expanded by being moved upon their hinges, the lapping parts will prevent any break or opening between the halv.s, substantially as de cribed and for the purposes set forth.

forth. Second, I claim the flange, C', projecting inwardly inside the noz-zle, for the purpose of breaking joints between the seat and base of the nozzle, and thus, by carrying the flange above the joint, prevent steam from escaping at the lottom of the nozzle, substantially as described.

46,446.—Tanning.—Church Burton, Union, Maine: I claim the tanning of hides and skins with evergreen boughs, such

46,447.—Revolving Hay Rakes.—Ezra Calderwood, Portland, Maine:

Portland, Maine:
I claim the combination with the thill, A', of the box, D, movable cap, c', and spring bolt. G, the latter engaging with the notched or recessed wheel, E, upon the rake head, all as herein described.
[This invention relates to a new and improved revolving rake, to

I me invention relates to a new and improved revolving rake, to be drawn either manually or by a horse, and it consists in a novel and simple means employed for holding the rake in working position, and which will aumit of being readily actuated to liberate the rake, so that it may revolve and discharge its load when necessary.]

46,448.—Machine for Cutting Pasteboard.—Elizur E. Ciarke, New Haven, Conn.:

Ciarke, New Haven, Conn.:

First, I claim the method herein described of cutting pasteboard, by combining with fixed cutters and revolving cylinder a mechanism for alsing and lowering the soid cylinder to and from the cutters at given intervals of space, to more or less or not at all indent the pasteboard, or to produce a through cut at pleasure, substantially as jet forth.

the pasteboard, of to produce a through cut at passett, tally as set forth.

Second, I claim combining in one machine two cutter bars, pro Second, I claim combining in one machine two cutter bars, pro vided with adjustable or fixed cutters, with two cylinders geared so vided with adjustable or fixed cutters, with two cylinders revolving in fixed bearings, while the other, actuated by suitable mechanism, is raised to or lowered from the cutters, as herein described. Third, In combination with adjustable or fixed collars and revolving cutter cylinder, I claim a cam cylinder, or wheel revolving in unison with the cutt reynder, and actuating it to more or less impling against the cutters at given intervals of space, substantially as set forth.

ing son with the cutt reynmer, and account in the cutter state of space, substantially as plage against the cutters at given intervals of space, substantially as set [orth.] I claim the combination with the cutters, cutter cylinder and cam wheel, a feed bar, actuated by the cam wheel, or any part, moving in unison therewith, in such manner as to feed the sheet to the cutters automatically and at proper intervals of time during the revolution of the cam wheel, to receive the threads of time during the revolution of the cam wheel, to receive the threads of time during the tween given points, substantially as set forth. Fifth, I claim the combination of the grooved and danged disk, with detachable cams and clamps and serow bolts to fasten the cams to the periphery or the wheel, substantially as set forth. Sixth, In combination with a machine for cutting pasteboard, I claim as diding and adjustable platform, a table for receiving the scored and cut sheets, the arrangement being such that the said table may be slid under the main cylinder, so as to admit of the operator approaching the cutters to adjust them, substantially as set forth.

crator approaching the cutters to adjust them, substantially as set forth.

Neventh, I claim the combination of the cutter-holder and sock, seventh, the properties of a vertical tongue and groove, with one or more horizontal guide tongues on the back of the stock, and fitting and sliding in a corresponding groove or grooves in the cutter bar, or the projecting stude or the cutter stock lapping over and under the cutter bar, together with a binding bolt passing through the central guide tongue, substantially as set forth.

Eighth, I claim the forked arm and grooved screw nut, working in combination with the inverted T-groove in the side of the cutter bars, with the binding screw bolts and nuts, substantially as described, for the purpose specified.

46,449.—Medical Compound.—Alfred P. Coryell, Janes-ville: Wis. Ante-dated Feb. 16, 1865: I claim the use of a compound made of the ingredients above specified, nixed together in about the proportion, and substantially in the manner settorth.

46,450.—Horse Hay Forks.—James A. Cowles, Chicago.

Ill.:

First, I claim the combination of the key or right-angled lever, f, with the bail pivoted at the eyes, p p, when said bail is located in the described situation, with the handle, c, and head, a a, as and for the purpose herein set forth.

Second, the combination of the head, a, handle, c, key or right-angled lever, f, catch, o o, and bail, in the manner and for the purpose described.

46,451. - Door Fastener. - Elliott H. Crane, Jonesville,

Mich.:

I claim the combination of the segmental latch piece, B, vibrating on a pivot within a slot of the plate, A, and actuated by the spring, C, by which the plate being fastened in position the closing door forcing back the latch piece, which is forced to return when the edge of the door has passed it.

[This is a pocket contrivance, designed for use wherever a convenient temporary door lock is wanted. The improvement relates to a peculiarity of construction, by which a spring bolt is emi in such a manner as to have an automatic action, so of closing the door the latter becomes locked. This is a device that verybody wants, for it can be instantly applied to any door, without

-Clothes Dryer.—Ephraim Culver, Shelburne,

Mass.:

I claim the combination of the slotted and movable arm, c, the movable brace, d, and hub, l, and the screw and nut, c, substantially as and for the purpose described.

46,453.—Fishing-line Sinkers.—Ebenezer F. Decker, Southport, Maine:
I claim as my invention the combination of the guard ring, the line, the swivel, the tinker and the arms, DB, the whole being arranged substantially as specified.

ranged substantially as specified.

46,454.—Plows.—John Deere, Moline, Ill.:
First, I claim the combination of the landside side, A, with the solid lurs, 3 33, and the perforated ear, 5, substantially as and for the purpose set forth.
Second, The lug, 3, cast on the landside, substantially as and for the purpose set forth.
Third, the guide and fastening ear, 5, in combination with the movable standard, substantially as and for the purpose set forth.
Fourth, The combination of the landside standard and mold board, by means and in the mapner substantially as described.
Fifth, The construction of the shear, C, with the perforated ear, 5, substantially as and for the purpose set forth,

46,455.—Soap-stone Stove.— Porter Dodge, Perkins-ville, Vt.:

First, I claim constructing and arranging the corner pieces. C, the won skeleton frame of a stove, so that they hold the soap-stone slabs and the outer open iron work, substantially in the manner described.

sados and the outer open from work, substantially in the manner described.

Second, In combination with the corner pieces, C, secured to the bottom of the stove, the top piece, D, for the purpose of holding both the corner pieces and the top slab, E, of the stove, substantially in the manner deccribed.

Third, The combination and arrangement of the inner linings, L, with the outer slabs, B, when constructed and applied substantially as and for the purpose described.

Fourth, The combination and arrangement of the Iron skeleton frame with the soap-stone sides, B, and top, B, inner linings, L, outer iron works, F, and stovepipe attachment, substantially as and for the purposes set forth.

46,456.—Car Seat Lock.—Arad Duncan and John M.

46,456.—Car Seat Lock.—Arad Duncan and John M. Zlegler, Aurora, Ill.:

I claim the combination of the bolt, E, pin, d, cam, D, spring, a, and barrel, A, when constructed and arranged as herein specified, so that when in its operative position the said bolt will project from its case, but be free to spring within the same in closing, and when reversed will be held within its case by the action of the cam and

This invention consists in the employment or use for a car-seat ock of a revolving bolt, secured in a round case, and provided with a projection, which, by traveling on an inclined plane or cam, as the bolt rotates, cause the cam to recede in such a manner that an or-dinary spring bolt or latch, with a round flanged case or barrel can be readily opened and closed by means of a key, which serves to impart to said bolt a revolving motion, and a lock is obtained which can be easily applied to a car seat, or any other article, simply by boring a hole large enough to receive the barrel, and securing the same by screws passing through suitable holes in its flanges.]

46,457.—Rotary Engines.—John R. Ellis, Co. F, 22d Regt. Wis. Vols:
I claim the revolving piston wheels, D D', which are placed eccentricully on shafts, C' and geared together by eccentric wheels, F'F', to operate in combination with the adjoining cylinders, B B', and intervening valve, E, substantially fin the manner and for the purpose herein shown and described.

pose herein shown and described.

46,458.—Scythe Fastenling.—Mose3 R. Flanders, Illon, N. Y.:

I claim the scythe fastening consisting of the heel guard, A, heeband, B, heel plate, E, and heel ring, C, when constructed and combined substantially as set forth.

46,459.—Magazine Fire-arms.—Valentine Fogerty, Boston, Mass.:

ton, Mass.:

I claim, first, The reciprocating grooved rack, D, suspended by cars, d, from a bar, b, and actuated by a rod, C, the said rack operating in combination with the grooved magazine, A g, to forward the cartridges, a a, as herein described.

Second, In combination with the above, I further claim the elongated holes, b, in the cars, d, to permit the vertical or lateral motion of the rack, as and for the object s, ectiled.

[This invention consists in certain improvements in the class of freezering known as "magazine guns" in which the cartridges are

fire-arms known as "magazine guns," in which the cartridges are moved up to and delivered at or into the breech of the piece auton atically in regular succession.]

-Sawing Machine.-Joseph Frey, Battle Creek,

doth.

46,461. Machinery for breaking Quartz, &c.—Eli P. Gardiner, New York City:
I claim, first, The combination and arrangement of the arms, D. hung upon centers at unequal distances from the faces, with the operating shaft, G. and cranks and shackle bars. Il II. the whole operating together in the manner and for the purposes described.

Second, I claim the combining and arranging and operating the sleves and trough with the reciprocating arms in the manner and for the purposes specified.

-Quartz Crusher.—Perry G. Gardiner, New York City

City:
I ckim, first, The combination and arrangement of the vibrating bush blocks, G and H, and the pillar blocks, D, operating In the manner and for the purposes described.

Second, I claim the combination of the bush blocks, double-joint and pillar blocks, with the boilow shaft and basin, acting in the manner and for the purposes described.

Third, I claim the manner of strengthening and supporting the iddes of the basin by means of the bands or straps, N, having their bearings in the ring or bush block, M, whereby support is given to the basin so that it can be constructed with less weight of metal than would otherwise be required.

Fourth, I claim the combination of the vertical shaft, I, the forked arm, K, and the inclined shaft or axle, L, with the basin whereby the progressive oscillatory but not rotat ing motion is given to the basin by the rotation of the vertical shaft, I, as described.

Fifth, I claim the combining and arranging of a rake, P, with the ball and to oscillate with the basin and shaft, for the purposes and in the manner described.

at the manner described.

46,463.—Dredging Machine for Harbors and Rivers.—
Andrew J. Gove, San Francisco, Cal.:
I claim the scoop or dredger, D, in combination with the scow, C, or other convenient vessel, the spars or braces, S S', the various lanyards and 'usy, and the combination weights, W W, substanstially as described, and for the uses and purposes as hereinbefore set forth.

set forth.

46,464.—Method of Uniting Rubber Rolls to Shafts.—
Wm. II. Grant, Winchendon, Mass.:

I claim the method of uniting rubber rolls to shafts substantially

46,465.—Car Coupling.—Philip I. Gross, Manheim Cen-

ter, N. V.:

I claim the frames, C, fitted on pivots at the front of the draw-bars, A, and provided each with a hook, E, attached to an arbor c, and also provided with a vertical rod, d, in connection with the pawls, H, attached to the pivoted frames, I, all arranged in connection with springs, to operate in the manner substantially as and for the purpose herein set forth.

purpose nerein set form.

166.—Impregnating Fibrous and Porous Materials—
Stuart Gwynn (assignor to Alfred B. Ely), New
York City:
elaim impregnating cloth, paper, or other fibrous or porous subless with the composition above described, for the purposes set

46,467.—Beehlve.—John ifarper, Hillsborough, Iowa: I claim the arrangement of the contribearers, A, stand, S, lighting board, B, and house, E F, when constructed substantially as de-scribed and for the purposes set forth.

46,468.—Harness Snap.—Horace Harris, Newark, N. J. Ante-dated Feb. 12, 1865.
I claim the extension of the spring, A, in combination with the knob, C, and the hook, B, for the purposes herein set forth.

46,469.—Laliroad Ticket-holder.—J. O. Harris, Ottawa, I claim the combination of the herein described plate, the socket or clasp, b b, and the spring or clasp, b'b', arranged and operating substantially as and for the purposes incein shown and set forth. 46,470.-Steam Engine.-Wm. Cleveland Hicks, New

York City:

I claim the combination and arrangement of steam machinery operating substantially in the manner herein set forth.

46,471.—Lamp.—James Ives, Mount Carmel, Conn.
I claim, first, A combined globe and chimney base or sea stantially as and for the purpose set forth.

Second, So suspending the lamp and a globe and chimney that the nowement of the lamp downward will cause an upward movement of both the chimney and globe, substantially as and for the purposes

tt forth.
Third, The rods, G G', passing through the base, D, substantially described.
Fourth, The combination of the rods, G G' and I I', with the stay and guard plate, H, base, D, lamp, A, and chains, J J', substantially a and for the purpose set forth.

46,472.—Window-sash Supporter.—Henry F. Jenks, Providence, R. I.:

1 10 vincence, R. 1.:
I claim the arrangement of the spring, D, the frame, C, and the cooked linger piece, E, constructed and operating substantially as

46,473.—Apparatus for the Manufacture of Illuminating Gas.—James Jennings, New-York City:
I claim the bench constructed substantially as described for the purpose specified.

purpose specified.

46,474.—Combined Thrashing Machine and Straw Cutter.—Daniel Kaufman, Boiling Springs, Pa.:

I claim the combination of the toothed cylinder, C, and toothed concave, D, arranged so as to be capable of being reversed in position, and provided with teeth bevied or sharpened at one side and broad or bunt at the opposite side, to form a combined fodder cutter and thrashing machine, substantially as set forth.

(This invention consists in the employment or use of a rotating cylinder provided with teeth beveled or brought to an edge at one

side, in combination with a concave provided with similar teeth and placed below the Cylinder, said parts being placed within a suitable box or case, and arranged in such a manner that the device may b changed from a fodder cutter to a thrashing machine and vice versa by simply reversing the position of the cylinder and concave.

46.475.—Friction Mechanism for the Warp Beam of Looms.—Orln Kenison and Andrew J. McClary, Lawrence, Mass.:

What we claim as our invention is the combination of the stationary bracket, M, the screw, N, and hook, O, or their mechanical equivalent or equivalents, with the lever, I, and the friction strap, F, when the latter are applied to the loom frame and the warp beam substantially as specific...

46,476.—Apparatus for Stirring and Cooling Lard.—Alexander G. Knapp, New York City:
I claim the employment or use, for the purpose of stirring and cooling lard, of the serpentine or spiral dashers, C C and D, constructed substantially in the manner herein shown and described.

46,477.—Apparatus for Inhaling Pure Air.—Benjamin I.

Lane, South Framingham, Mass.:

I claim, first, The construction of the reservoir, A, with a valve, a, and hand straps, b, substantially in the manner and for the purpose described.

I claim, first, The construction of the reservoir, A, with a valve, a, and hand straps, b, substantially in the manner and for the purpose described.

**Recond, The combination of adjustable elastic straps with the air revervoir, A, valve, a, substantially in the mainer and for the purpose described, whether the straps be the means of attachment to the body or other means for this purpose be employed.

Third, The combination of the mask, C, furnished with the three contrivances, it g h, or their equivalents, with the cock, p, and reservoir, A, furnished with the valve, a, all substantially in the manner and for the purpose described.

Fourth, The device, h, for allowing the wearer of the apparatus to inhale fresh external air when it is safe to do so, in combination with an air reservoir which has its air under control of a cock, p, substantially as and for the purposes set forth.

Fifth, The us, of one or more clastic straps, cc, applied to the flexible reservoir, A, for attaching the latter to the body, and also for keeping up the supply of air to the respiratory organs, substantially as described.

46.478.—Drilling Machine.—Isaac S. Lauback. New

46,478.—Drilling Machine.—Isaac S. Lauback, New York City;
I claim, first, Combining and uniting the two adjustable brackets, Q and W, by means of the adjustable connecting rod, r, fitted with one or more universal joints, the one of sand brackets to be combined with the driving head, and the other with the spindle head of the machine, substantially in the manner described for the purposes

ter, Lancaster, Pa.:

I claim the winged levers, E. E. held by pivots or hinges on the drum, in combination with the spring or springs, H, or their equivalent, for retaining them.

alent, for retaining them.

I also claim the eccentric lever, L, on its vertical shaft, F, for shifting it up and down, in combination with the slotted book, k, wedge, P, and rod or shaft, R, arranged and operating substantially in the manner and for the purpose specified.

James P. Long, Osage, Iowa:
I claim the combination of the seed cylinder, E, adjustable frame, P, ubes, L, and distributers, L', cultivator teeth, N, and roller, B, the several parts being arranged and operating as and for the purpose specified.

46,481.—Sash Fastener.—W. C. McGill, Cincinnati,

UHO: I claim the arrangement of the pair of gravitating latchers, E e e', and, F f, and of the operating crank, H G, the whole being formed combined and operating substantially as set for th.

46,482.—Rallroad.—Richard Montgomery, New York

16,482.—Hallroad.—Hichard Montgomery, New York City:
I claim, first, The use of corrugated iron beams in the construction of acrial railroads substantially as set forth.
Second, The use of that beams or bars of Iron for connecting the ends of the rails together and also forcounceting and fastening the columns of support to the cross ties in the manner and for the purpose set forth.

Third, The use of corrugated iron ralls in combination with corrugated Iron cross ties and corrugated iron columns of support in the construction of aerial railroads.

construction of aerial railroads.

46,483.—Coal Stove.—James Morrison, Jr., Troy, N. Y.:
I claim, first, The employment of a vertical grate and frame, I,
with the downward recess, E. and borizontal grate, o, therein in
combination with the dumping and vibrating grate, by in them an
ner and for the purpose substantial; as herein set forth.
Second, I claim the combination with a stove a grate so constructed and arranged that the clinkers or like draught obstructing mate
rial may be removed from any point or place at or just above its
surface without dumping said grate, in the manner substantially as
herein described and set torth.
Third, I claim the special arrangement and combination of the
iron ring, G', containing the air chamber, G, and communicating
with the fire at the sides of the fire chamber by means of numerous
small apertures with the there of a brick, K, and, K', surrounding
the fire chamber above and below the said iron ring in the manner
substantially as herein set forth.

46,484.—Jack for Pegging Boots, etc.—A. W. Moore, Stafford, Conn. Antedated Feb. 12, 1865:
I claim the employment of one or more cams. F. in combination with the holder, B. and the socket plate, A. arranged and operating substantially as and for the purpose described.

46,485.—Ejector for Oil Wells.—George M. Mowbray,

46,485.—Ejector for Oil Wells.—George M. Mowbray, Titusville, Pa.:

First, I claim in ejectors for elevating liquids and other substances from wells, the combination and arrangement of the following specified parts:—first, a pipe through which to force air down into a well. Second, a surface at the bottom of such pipe to res'st the air so f reed down, and give it an upward motion; and, third, the combination and arrangement of the plurality of pipes and passages, whereby to divide and distribute and conduct the air upwards, so that it shall act upon the oil or other liquids, and obstructing sustances in its ascent, substantially as described.

Second, I also claim the combination and arrangement of the above mentioned three parts, with an inclosing pipe, into which they are to be placed, and between the inner surface of which and the outer surface of the pipe through which air is to be forced down, the liquid to be elevated is to ascend.

Third I claim a bulb or inverted cup or nozele, B, of any suitable form, screwed or otherwise attached to or formed upon the blast pipe and provided on its upper surface with a plurality of apertures to deliver the air in attennuated form, substantially as set forth.

Fourth, In combination with the aforesaid pipe closed at bottom, and bulb. B, with a plurality of apertures, I further claim the cup, L admistable in the relation to the said bulb, substantially as and or the purposes set forth.

Fifth, In combination with the blast pipe, A, I claim the cup or bulb, B, baving upon its upper surface a plurality of perforations slits or tubes, surrounding the said blast pipes, substantially as and for the purposes set forth herein.

46,486.—Harvester.—W. Needham and J. Nelson, Rock-

.6,486.—Harvester.—W. Needham and J. Nelson, Roukford, Ill.:
First, We claim the construction and arrangement of a tubular rame substantially as and for the purpose set forth.
Second, The societs or clamps as shown in figures 456 and 9, in ombination with the tubular frame for the purposes specified.
Third, The gear frame, K', with the clamp, K, when constructed and combined with the tubular frame as described.
Fourth. The wedge washer, k, with serrated or notched faces in combination with the notched face, i', of the standard, and the totched face, j, in the clamp piece, b', as and for the purpose set orth.

forth.

Fifth, The wedge washer r, in combination with the spring seat, R, and the standard, R', in the manner and for the purpose set

Fifth, The wedge washer. I, in combination with the spring seat, R, and the standard, R', in the manner and for the purpose set forth. The clamp levers, H H', and clamps, h' h'', in combination with the stirrup, h, for the purpose specified.

Seventh, The levers, M, spring catch, g, rack, N, 'ulleys, m n, in combination with the rope or chain, I, and adjustable standard, P, for the purpose set forth.

Eighth, We claim in combination with the guard bar, E, provided with the wood center piece, P', attaching the guards as and for the purpose set forth.

Ninth, We claim the combination of the adhistable dividing runer, J, the scoket, P', and sleeve, I, when constructed and operating conjointly as and for the purpose set forth.

46,487.—Shirt Bosom.—John Nell, Clinton, Mass.:
I claim as a new article of manufacture the woolen shirt bosom herein before described, woven in single pattern, cut in the center and jointed at the edges all as specified.

[The object of this invention is to give an ornamental character and an elegant appearance to bosoms of woolen shirts, and it con-siss in making a woven or namented shirt bosom of woolen mate-rial or its equivalent, so that the woven shirt shall have an elegant and tasteful appearance in that part exposed to view whilst the ornamental part shall have also substantially the same qualities as the rest of the shirt, or of its body, whether that be woven, knitted or felted.]

46,488.—Harvester.—Frederick Nishwitz, Brooklyn, N. Y.:

N. Y.:

I claim, first, The combination of the stationary toothed plate. D, pinton, & F, avached to the ends of an arm, E, firmly keyed on the axle, C, with the pinion, G, on the collar, H, placed loosely on the axle and the lever wheel. I, also placed loosely on the axle and consected with the collar, H, all arranged to operate substantially as and for the purpose set forth.

Second, The lever, M, applied to the main frame, A, and in relation with the draught pole, N*, as shown, and connected to the finger bar, O, by a chain, f, all arranged to operate substantially as and for the purpose set forth.

Third, Connecting the finger har, O, with the main frame, A, by means of a joint composed of the semi-dircular recesses, g, in the pendants, P, and the semicircular projections, h, an the sides of the finger bar, O, substantially as described.

Fourth, The shoe, S, arranged and applied to the main frame, A, relatively with the pitman, N, and finger bar, O, to operate substantially as and for the purpose specified.

-Harness Saddle Tree.-Oliver B. North, New

16,489.—Harness Saddle Tree.—Oliver B. North, New Haven, Conn.:
I claim, first, A metallic saddle tree for harness, composed of the lockeys, cantel and seat, cast in separate pieces, and united together substantially in the manner and for the purpose described.
I also claim casting a stud upon the underside of the seat for the purpose of uniting said seat to the cantel without passing rivets or screws through, which interfere with and mar the plating or japaning as herein described.
I also claim uniting the check hook to the tree by passing the hank of the hook under the bow of the jockeys, and above the rame, and uniting it by the stud or pin, f, and the screw and nut, to b, or their equivalent devices substantially as herein described and represented

16,490.—Projectile.—Thomas G. Orwig, New York City: I claim, first, The telescopic tubes, gg, adapted to slide and rotate one within another, in the described combination with the ball, A, stem, f, and wings, h, h, all arranged and operating in the manner and for the purposes set forth. Second, The combination of the perforated cap, B, with the wing-ed telescope stem, E, soft metal ring, C, projectile, A, and carridge bag, D, constructed and operating substantially as and for the purpose described.

pose described.

46,491.—Heating Carving Table.—Samuel Patrick,
Galesburg, Ill.:
First, I claim a carving table which is provided with a series of
pans of varying depths that communicate with each other and also
with a boiler substantially as described.
Second, Distributing water of different temperatures through a series of pans by producing a circulation, substantially as herein described.

46,492.—Amalgamator.—C. C. Peck, Black Hawk, Col-

46,492.—Amalgamator.—C. C. Peck, Black Hawk, Colorado Ter.:

I claim, first, the pan, B, constructed in the form and style shown and described.

Second, A series of pans arranged to operate in the manner and for the purpose set forth.

Third, The spider, m, provided with the bearing, n, and arm, b, substantially as shown and described.

Fourth, The suspended platform A, arranged to vibrate vertically and longitudually as and for the purpose set forth.

Fifth, I claim so arranging an amalgamator pan as to give to it the three-fold motion substantially as and for the purpose set forth. 46.493.—Stock Feeder.—Thomas W. Pierce, Richfield.

Minn.:
I claim the shaft, F, mounted within the chest, A, in the manner secribed and provided with cups which by the rotation of the shaft re filled and dis harged, substantially as and for the purpose set

forth.
Second, I claim the spring, L, and knob, N, in combination with
the not hor recess, N, for bolding the shait, F, against rotation
when the feeding operation is suspended.

46,491.—Eye Water.—Mary Plke, Cornish, N. H.:

I claim an eye water or lotion, composed of the sulphate of sind, and chloride of sodium mixed together and dissolved in water about in the proportion herein set forth.

This invention consists in a mixture of sulphate of zinc, (white vitrol,) and chloride of sodium (rock salt), dissolved in water.]

46,495.—Roofing Composition.—Wm. L. Potter, Clifton

Park, N. Y.: I claim the use of pulverized slate rook for roofing, covering the sides of pulldings, boat decks, etc., as set forth and de ribed. 46,496.—Universal Timepiece.—W. B. Purdy, Hunting-

don, Penn.:

I claim the application of two or more sets of hands, as and be be and so forth, secured to a common center g, and operating in combination with two or more concentric dials, a b, etc., substantially as and for the purpose set forth.

This invention consists in the application of two or more sets of hands working on the same center in combination with a corresponding number of concentric dials in such a manner that by the everal sets of hands working on several dials the time of two or nore places of different longitude can be indicated simultaneously and each set of hands can be readily set to indicate the time of any

place on the globe independent of the remaining set or setal 46,497.—Skates.—Washburn Race, Lockport, N. Y.:
I claim the combination of the heel screw, c, hearing, a, and
f, with the bed, A, and runner, B, substantially as and for the
poses herein described. 46,498.—Bag Holder.—Robert Ramsey, New Wilming ton, Penn.:

Iclaim forming the expanding spring, A2, in one piece of meta-with the spreaders, A A', substantially as and for the purpose so

with the spreaders, A. A., and nut, E. employed in combination with the spreaders, A. A., and hooks, f.f., in the manner and for the object herein before stated.

Thomas Roberts Shelby, Ohio.

6,499.—Stove Drum.—Thomas Roberts, Shelby, Ohio.: I claim the cone end chambers or sections, E, and, E', annular chamber, D, and the lever, F', in combination with the tubes or pipes, m, and n, damper, B'', and drum when arranged and operating conjointly, substantially as and for the purposes set forth.

46,500.-Heat Radiator.-Herman Rugee, Milwaukee,

Wis.:

Wis.:

It is adjustable segment wings forming an inverted cone in combination with the crank, links or rods for adjusting the rings, substantially as shown and described.

orngs, substantially as shown and described.

16.501.—Machine for Holding Hubs while being Bored.

—Peter Schuttler, Chicago, III.:

First, I d sim the application of a screw ring, D, which is provided with clamps, c.c., to a holder, c. which is applied to a rotating haft, B, substantially as described.

46,502.—Harvester.—Jacob Leibel, Manlius, Ill.:

46,502.—Harvester.—Jacob Leibel, Manlius, III.:
I claim, first, the centrally arranged receiver, o, constructed as described in combination with the two endless agrons revolving towards the center of the machine, and depositing the grain in said receiver, substantially as and for the purposes specified and shown. Second, The platform, Q, provided with the space, I, when arranged in relation to the main frame and endless apron substantially as and for the purposes specified.

Third, Providing a harvesting machine with the raker's stand, P, and the builder's stands, R, and S, when arranged on the main frame of the machine near the center thereof, substantially as and for the purposes herein described.

for the purposes herein described.

46,503.—Rotary Photographic plate Holder.—Charles H. Shute, Edgartown, Mass.:

I claim the combination of the photographic dark slide, A, having an orifice, B, and slide, C, with the rotating box carrying the plate and pierced in its face with a scries of ojenings to correspond with the opening, B, as they are alternately exposed to it, the said box being rotated by a lever, by means of a pin working into a ratchet on the back of the lid, G, the, circle of the ratchet wheel being divided to correspond with the orifices in the face of the rotating box.

(The object of this invention is to facilitate the taking of severa different pictures upon one prepared or neutralized plate. By a very ingenious arrangement of parts the plate is made to rotate so as to bring successive portions before the lens. The invention is particularly applicable to ferrotypes.]

46,504.—Rivets.—John W. Smith, Boston, Mass.: 'Iclaim a rivet constructed with a recess in its end, substantially as and for the purpose herein specified.

46.505.—Tobacco Pipe Stem. —Thomas Smith and Henry

46,505.—Tobacco Pipe Stem.—Thomas Smith and Henry J. Brown, Detroit, Mich.:
I claim the combination of the stem, B. B., chamber, c. c., and tubes, D. E., and the cap, F., all constructed and operating substantially as and for thepurpose set forth.

46,506.—Construction of Ordnance.—Charles W. Stafford, Old Saybrook, Conn.:
First, I claim in combination with the cast main body, A, of a piece of ordnance, two or more bands (trunmon and reinforce) when secured and strengthened with longitudinally projecting tongue, r, and corresponding grooves, in the manner as herein represented. S. cond, I claim the combination of the trunnion band, it adapted to silp on over the breech, the flange, u, prejecting in ward from the said trunnien band, the shoulder, a, preventing is rward displacement of the trunnion band, and one or more reinforce bands, R, securing it against backward displacement substantially as herein described.

46,507.—Flexible Tubing for Illuminating Gas.—Wm. B. S. Taylor, New York City:
I claim the use and application of glue or glue composition in the tubing, substantially as described, for the purpose of making the flexible tubing gas tight, whether of cloth or rubber or other gum. 46,508.—Machine for Cutting Barrel Heads.—C. R. Tomp

kins, Rochester, N. Y.:
I claim first, The combination and relative arrangement of the rock shaft, P. and lever, K. with the upper and lower boxes, f and f', Tof the adjustable feed roller, d, substantially in the manner shown and for the purpose of producing a parallel adjustment of the said roller.
Second, In combination with the adjustable pawlarm, y, and rachet, a, the crank, J. and slotted connecting rod, R, substantially in the manner shown, and for the purpose of producing the intermittent feed as set forth.

509.—Coils for Steam Heating Apparat s.—John Tra-geser, New York City: elam, arst, The arrangement of the pipes, fi and k, whereby the alpipe, k, is allowed to expand or contract without injury to the

I claim, first, The arrangement axial pipe, k, is allowed to expand or contract without injury, said pipe, k, is allowed to expand or contract without injury, points as set forth. Second, I claim the T pipes, d and l, in combination with the coil, p, and couplings, whereby said coil can be twined up asspecified. Third, I claim the conleal ground couplings, applied substantially as specified to the coils of steam heating and builing apparatus, so that said coils will be kept steam tight at the joints and motion allowed for turning said coils up as set forth.

46.511.—Microscope.—William Wales, Fort Lee, N. J.: I claim the application of two or more back lenses or correcto in combination with the same microscope object glass construct and operating substantially as and for the purpose set forth.

[This invention consists in the application of two or more back enses or correctors in combination with the same microscope object glass, in such a manner that the angle of aperture left for natural reflected light is equal to that for oblique or angular light in contradistinction to the use of two or more front lenses which have to be changed and sbifted to be adapted to central and oblique light.

46,512.—Retainer for Window Sash.—John H. Weeks,

46,512.—Retainer for Window Sash.—John H. Weeks,
Philadelphia, Pa.:
Iclaim the combination of the lever, E. its knob, G, and arm or
projection, e, the spring, k, bolt, D, and Its lip, c, the whole being
constructed, applied to a sash, and arranged for John action as and
for the purpose herein set forth.

46,513.—Device for Equalizing the Delivery of Thread
from Shuttles and Spools of Sewing Machines.—
William Weitling, New York City:
I claim the application to the spool or bobbin in a shuttle or other
part of a sewing machine of a thread leader having a motion in the
arrof a citel, and constructed and operated substantially in the

46,514.—Apparatus for Softening the Gum of Adhesive Labels.—Benjamin Wilder, North Scituate, Mass.: I claim as my invention the apparatus, substantially as and for the purpose described.

purpose described.

46,515.—Apparatus for Distributing Fertilizers.—J. M. Wiltsie, Pittsiord, N. Y.:

I claim, first, The swinging self-locking ball or handle, B, applied and operated in the manner and for the purpose specified.

Second: The application of the bars. C, in distributors for lime and other fine fertilizers, to be used by hand, as shown and forthe purposes set forth.

Third Arranging the register plate, D, within the case as shown, and for the purposes described.

46,516.—Operating Ordnance on Gun Boats, &c.—William Lous Winans, Baltimore, Md.:

I claim mounting the carriage of a gun on a platform which is

connected with a plunger to be elevated by the admission of steam to the cylinder, substantially as described, in combination with the connection of the said platform with other plungers fitted to cylin-ders to regulate the descent of the platform and gun by the flow of water or other fluid, substantially as described and for the purpose specified.

water or other num, substantiany as described.
I also claim making the plunge's for regulating the descent of the platform and gun with a cavity in the lower end thereof to retain air, substantially as described, to act as a spring cushion to receive sudden and violent concussions, as set forth.
I also claim in combination with the mounting of a gun on a platform to be raised and depressed, the employment of a chassis connected with the platform and interposed between it and the carriage, and provided with wedges or the equivalent thereof to vary the clination of the chassis, substantially as and for the purpose specified

ed.

I also claim connecting the upper part of the carriage in which the
in is mounted with the lower part thereof by means of a a swive
combination with the classis connected with the movable platform
which the gun is raised to be fired, and let down to be reloaded
batantially as and for the purpose doseribed, whereby the gun can
turned to take any range desired, notwithstanding the platform

by reason of its connections can not le turned.
And I also claim in combination with the platform forraising and letting down the run, as described, the employment of sliding hatch ways so connected with the platform as to be operated by the motion of the platform, substantially as and for the purpose specified.

46,517.—Well Borers.—George L. Witsil and Edward Burke, Philadelphia, Pa.:

We claim, first, The cuployment of two or more augers in combination with a central upward discharging drill, substantially as described.

cribed.
Second, connecting the augers, A A a', to the drill collar, N, in ach manner that the augers can be rotated independently of the rill, or can be made to rotate the drill, at pleasure, substantially as

ril, or can be made to researched.

Third, The center drill point, C, plowing cutters, B B b, collar, N, and the right and left twisted elevators, A A a', combined and operated substantially as herein described.

Fourth, Feeding the augers down to their work by means of right and left screws, p p' p p, applied and operating substantially as dewrifted.

and lettscrews, p p'p p, applied and operating substantially as described.

46,518.—Preparing Barrels to Hold Oil, Petroleum, &c. —Henry Wurtz, New York City:

1 claim, first, The introduction into the poresof wood and other porous materials, when used as materials for barrels or other vessels for holding oils, of aqueous solutions of deliquescentsalts, as above set forth.

Second, The subsequent superficial application to such substances or agents which convert the deliquescent salts into insoluble compounds, as above set forth.

Third, The inctinod of preparing barrels and other vessels composed of wooden staves bound by hoops for holding oils by filling them with deliquescent salts into insoluble compounds, as above set forth.

Fourth. The prevention of the corrosion of from hoops, nails and other iron fastenings of barrels and other vessels for holding oils when impregnated with solutions of deliquescent salts by adding to such solutions sucrate of line, as above set forth.

Fifth, The application to the internal surface and between the joints of barrels and other vessels for holding oils of a paste composed of deliquescent saline solution combined with come substance of a gelatinous, glutinous, mucilaginous, farinaceous, gummy or starchy nature as above set forth.

46,519.—Ticket Holder.—Varnum G. Arnold, Boston,

nature as above set forth.

46,519.—Ticket Holder.—Varnum G. Arnold, Boston, Mass., assignor to himself and Chas. G. Bird, Roxbury, Mass.:

I claim a holder or case for passage tickets, constructed with a delivery duct, in combination with an aperature, A. in the side of the same, for delivering the tickets one by one by the action of the thumb, substantially as herein described, for the purpose specified.

humb, substantially as herein described, for the purpose specified.

6,520,—Roasting and Desulphurizing Ore.—Hezekiah Bradford, New York City, assignor to Horatio Bogart. Ante-dated Feb. 16, 1865:

Freating metallic ores in a finely divided or pulverized state, in a hamber with jets of superheated steam, or heated air, or both, ointly forced through thecharge, substantially as and for the purposes specified.

Second, I claim retaining the fine particles of ore that pass off from the ore chamber with the steam air or gases, by passing the same not or through a pipe into a vessel or reservoir of water by the oressure of the air gas or steam, substantially as set forth.

6,521.—Milling Machine.—Joseph R. Brown (assignor

46,521.—Milling Machine.—Joseph R. Brown (assignor to Brown & Sharpe), Providence, R. I.:
First, I claim the combination of the elevating knie, H, the sliding plate, E, the swivel plate, L, and sliding carriage, G, with the revolving cutter head, constructed and arranged to operate substantiality as elevation.

volving cutter head, constructed and artificially as described.

Second, The arrangement of the center spindle, b, or its equivalent, with the devices which actuate and govern the movements of the same, in combination with the silding carriage, G, and the devices by which it is operated, so that the two mechanisms may operate cither separately or conjointly, substantially in the manner

rate curie: separately a construction of the lescribed.
Third, I claim the arrangement within the center head, F, of the swinging block, R, or its equivalent, and the revolving spindle, b with the devices which operate the same, substantially as described, for the purpose specified.

with the devices which operate the same, substantially as described, for the purpose specified.

46,522.—Machine for Cutting Pasteboard for Boxes.—
Elizur E. Clarke (assignor to Franklin N. Clarke),
New Haven, Conn.:

I claim the method of holding and adjusting the cutter without the employment of the cutter stock, by combining with the cutter bar, having two side grooves and one tap groove, a cutter holder slotted or grooved vertically for adjustment of a binding toolt, and horizontally-sliding cross or Tatud, together with the horizontally-sliding cross or Tatud, together with the horizontally-sliding form and collar screw, for the vertical adjustment of the cutters, substantially as set forth.

I also claim the attachment to the cutter bar of the parallel or horizontal beam or cap, set at a distance apart, to admit of the groove of the screw nut, in combination with grooves in both the said cutter bar and beam, to admit of the collar of the screw nut, the whole being avanued for operation substantially as set forth.

I also claim the mode herein described of locating and holding a rule or scale in its proper relation with respect to the cutter, by continuing with the cutter bar and uprights, brackets or the equivalents thereof, in the manner substantially as hereinbefore shown and defended of the collar of the screw nut.

scribed. 46,523.—Grain Drill.—J. W. H. Doubler (assignor to himself and John E. Wynne), Warren, Ill. Ante-

himself and John E. Wynne), Warren, III. Ante-dated Feb. 6, 1865:
First, I claim the hollow drills, F G, constructed, arranged and op-rating as and for the purposes herein specified and shown.
second, I claim the combination of the drills aforesaid with the djustable bar, II, and lever, g, arranged and operating suostan-lally as and for the purposes shown and described.
Third, In combination with the above, I claim the parallel bar, L, and the chains, p, arranged and operating as and for the purposes set forth.

the chains, p, arranged and open and electronic leaf forth. Fourth, I claim the curved arms, J, provided with the slot, J, and et screw, k, arranged as and for the purposes specified.

Fifth, I claim providing the spiral distribution, D, with the severa locarings, ff, so as to divide the same into separate compartments substantially as and for the purposes herein delineated and set forth.

substantially as and for the purposes here in define are and set forth.

46,524.—Carriage Wheels.—Joseph Goodman, Blackfriar's Road, Eng., assignor to Charles P. Button,
New York City:
Iclaim the disk, I, with conical central bars, J, in combination
with the grooved disk, L, and its'eentral openings, a, and with the
spokes, G, and felly or tire, D, constructed and operating substantally as herein described, so that by screwing the two plates together
the spokes are forced out to a uniform distance from the center and
securely clamped.

[This invention consists in the employment or use of a disk, with cal central borc, in combination with a grooved plate and its central opening, and with the spokes and felly or tire of a wheel, in such a manner that by screwing the disk and plate together the spokes are forced out to a uniform distance from the center, and securely clamped, and the felly or tire is equally strained throughout the whole circumference and brought in the position of a true circle.

46,525.—Mosaic Toy Block.—Thos. Geo. Harold (assignor to himself and Nelson Stafford), Brooklyn, N. Y.:
I claim a series of square or cubical blocks, whose surfaces are colored in triangular forms, as and for the purposes specified.

46,526.-

16,526.—Tuyer.—John R. Harrington (assignor to Agnes V. Harrington), Brooklyn, N. Y.:
In combination with the box, A, provided with the projection, a, and tube, a3, I claim the back, B, provided with the tube, b3, when the same shall be combined and operated in the manner and for the surpose specified.

46.527.—Gas-heater or Blow-pipe for Heating Solder-

527.—Gas-heater or Blow-pipe for Heating Solder-ing Irons.—Edwin A. Leland (assignor to Radeliffe B. Lockwood), New York City: claim the new article of manufacture, consisting of a gas furnace olow-pipe, constructed substantially in the manner described, for purpose of heating soldering tools, and for other similar pur-

16,528 -Coat and Hat Rack.-Samuel Macferran and 46,528.—Coat and Hat Rack.—Samuel Macferran and Stephen Ustick (assignors to Samuel Macferran), Philadelphia, Pa.:
We claim the combination of the segmental or elliptical bar, A, the hook, B, the bracket, C, and hook, B', substantially in the manuer described and for the purpose above set forth.

de,529.—Spring Horse.—Henry F. Metzler (assignor to himself and Thos. G. Cowperthwaite,) New York

City:

I claim the manner in which the standards are arranged, combined, operated and adjusted relatively to their several parts and to the horse baby-tender or chair, whereby the several motions as described are obtained.

46,530.—Roving Frame.—Thomas Mayor, Pawtucket, R. I., assignor to George Chatterton, Providence, R. I.

I claim the construction and mode of arranging the bolster with the spindle and the transverse rail or its equivalent, substantially as described for the purpose specified.

Lock.—Lyman F. Munger, Rochester, N. Y., signor to himself and Walter K. Marvin, New

46,531.—Lock.—Lyman F. Munger, Rochester, N. 1., assignor to himself and Walter K. Marvin. New York City:

I claim, first, The combination in a lock case of frictional key tumblers, boilt and fence tumbler, together with the follower or lever to actuate the same under the arrangement herein described, so that both the said key tumblers and boilt when actuated shall move in planes parallel to each other, substantially as set forth.

Second, In combination with horizontally shaling key tumblers and double-gated boilt. I claim the double-acting fence tumbler operating as described, so as to lock the boilt whe her shot out or withdrawn, substantially as set forth.

Third, The method herein described of operating the key tumblers by forming a cam groove in the fence tumbler, in combination with a pin passing through and projecting from the said key tumblers, the whole being arranged for operation substantially as set forth.

46,539.—Rreech-load ng Fire-arms.—Joseph Ridder, New-Lorente.

the whole being arranged for operation substantially as set forth.

46,532.—Breech-load ng Fire-arms.—Joseph Rider, New-ark, Ohio, assignor to himself and E. Remington & Sons, Ilion, N. Y.:

I claim, first, Combining with a hammer that is hung upon the side of the arm, and moves at right angles to the bore of the gun, a now or projection, which, shooting into a mortise through the barrel, forms a breech piece, substantially as and for the purpose described.

scribed.

I also claim combining with such a hammer, or the projection thereon, a pivoted trigger or lever, for striking or impinging upon the cartridge, and thus explode it simultaneously with the closing of the arm, substantially as herein described.

of the arm, substantially as herein described.

46,533.—Steam Boiler.—E. B. Sintzenich (assignor to himself and Joseph Hall), Rochester, N. Y.:

I claim, first. The arrangement of the water flues centrally within the horizontal fire or combustion flues of marine boilers, as slown, and for the purposes set forth.

Second, The combination and relative arrangement of the manhole, D, with the horizontal return fire or combustion flues and thick water flues, the latter having their front ends connected with the water space surrounding the combustion chamber, I, substantially as shown and described, and for the purpose herein set forth.

as shown and described, and for the purpose neresh sectors.

46,534.—Shade-holder for Lamps.—Cornelius St. John
(assignor to Roscoe G. Turner, assignor to Charles
C. Beers), Boston, Mass.:
Iclaim the spring support, C in combination with a socket, D, operating substantially in the manner and for the purpose set forth.

a ciaim the spring support, C, in combination with a socket, D, operating substantially in the manner and for the purpose set forth.

45,535.—Means for Applying Heat and Cold in the Treatment of Diseases.—John Chapman, M. D., Somerset street, Putnam square, London, Eng.:

I claim the manner of applying heat and cold, solds or fluids, by means of "spine bags," composed of india-rubber or other waterproof fexible material, when said bags are divided into two or more cells or compartments, whether such cells or compartments are formed by the pressure of clamps upon the exterior or by the use of one or more interior partitions.

I also claim spine bags for making hot applications, when such bags are composed of two or more tubular compartments.

46,536.—Furnace for Burning Gas.—Carl Schinz, Offenburg, Grand Duchy of Baden:

I claim, first, The employment or use of the gas splitter, G, with two or more tuveres, k, in combination with the generator, C, air operating in the manner and for the purpose substantially as herein specified.

Second, The employment or use of two or more air uyeres, i, in combination with the channel, k', rising from the generator. C. and

inlet, i, and combustion nuc, v, vi is a square and combustion nuc, v, vi is a square and continuous pecified.

Second, The employment or use of two or more air tuyeres, i, in combination with the channel, F, rising from the generator, C, and with the combustion flue, o, or its equivalent, constructed and operating substantially as and for the purpose set forth.

Third, The employment or use of two or more combustion flues, o, proportioned according to the rules above specified, and arranged in combination with the gas channel, F, and air channel or channels, substantially in the manner and for the purpose set forth.

Fourth, The application of a window, J, in front, and one or more loopholes, q, in the rear of the combustion flues, o, substantially as and for the purpose specified.

The object of gas-burning furnaces and stoves is to obtain the

(The object of gas-burning furnaces and stoves is to obtain the largest possible useful effect of the fuel. This purpose is effected because this system offers the means, 1, to produce the dry products of distillation obtained from the fuel more regularly than the direct businessing the effect a complete combustion of all the combustible materials; 3, to commingle the oxygen of the atmospheric air and the combustible materials in the proper proportion, and consequently neither a surplus of combustible gases nor of air exists. and the maximum effect of initial temperature resulting from the products of combustion is obtained. I

RE-ISSUES.

RE-ISSUES,

1,875.—Automatic Grain Binder.—Robert D. Brown,
Covington, Ind. Patented April 7, 1863:
First, In combination with a cradle, B of any suitable construction, I claim the arms, C C', attached to shafts, c c, geared together
by wheels, c, and robated at proper intervals by a cogged segment,
cs, to clevate the arms, C C', and carry the band around the compressed favel.

Second, The combination of the cam wheel, c2, with the arms, C
C', for securing the band in the jaws, c4.
Third, In combination with the arms, C C', constructed and operating substantially as herein described, I c laim the employment or
use of two pairs of griping or twisting jaws, D D, attached by separate pivots, d d, to a common journal, D', and operating substantially as and for the purpose set forth.
Fourth, Driving the iaws, D, by the shaft, E, working within the
hollow journal, D', in the manner explain ed, to compress the said
aws with force corresponding with that required to rotate them.
Fifth, The combination of the spring stop, k2, cam i2, and wheels,
I and K, when the said parts are constructed, arranged and operated in the manner and for the purposes herein specified.
Sixth, The tucking hand, f, advanced and rotated substantially as

described for the purpose of tucking the twisted ends under the band. Seventh, Holding the band against the pressure of the tucking band by means of the claw, f, or its equivalent, substantially as de-

eribe.

Eighth, The combination and arrangement of the shafts, F F',
rokes, f2, pinions, f3 f4, guides, II, and segment racks, h, to impart
the required motion to the tucker, f, and claw, f1, substantially as

set forth. Ninth, The arm, G, provided with a cogged segment, g³, and employed to advance the shafts, F F³, intermittently, in the mannor and for the purposes explained. Tenth, The segment co wheel, I l l³, constructed as described, in combination with the twisting jaws, D, and tucker, f, or their equivalents.

combination with the twisting jaws, D, and tucker, I, or their equivalents.

Elementh, The arm, L, or its described equivalent, for casting the finished sheaf, substantially as explained, when used in the described control of the project table, N or N2, or other suitable respectively. The curtain P or P2, operated by the salling and rising of the table, N or N2, in manner substantially as and for the purposes set forth.

Thirteenth, The mode of combining the worm, s2, and slotted disk, O, or any substantially equivalent devices, for counting the number of sheares to be deposited in each heap, with an automatic binding machine, substantially as berein described.

Fourteenth, The combination of the sheaf-holder, B B', or equivalent device, with rotating griping jaws for twisting the band, and the tucking hand and holder, as described.

1876—Raking Attachment to Harvester.—Robert D.

the tucking hand and holder, as described.

1,876.—Raking Attachment to Harvester.—Robert D.

Brown, Covington, Ind. Patented April 7, 1863:
I claim, first. The continuously revolving rake, B. carried forward over the platform and back beneath the same by means of driving chains, botts, or their equivalent, and elevated to its working position during its forward motion and retracted in passing beneath the platform by means of the crank and D, or its equivalent, working in a slot for the purposes specified.

Second. The intermittent cradle, F f, operated as described, in combination with the continuously revolving rake, B, for the purposes set forth.

poses set forth.

1,877.—Steam Engine.—Fred'k P. Dimpfel, New York
City. Patented July 1, 1851.

claim, first, The means herein described for connecting the
steam pixton of a steam engine with the crank thereof, said means
consisting of a piston rod, fixed crosshead, side bars, forked connecting rod and belts, or the equivalents thereof, the several devices
being arranged and operating substantially as herein set forth, in
such manner that the crosspicco of the connecting rod which is
placed transversely to the crank shaft shall be on opposite sides of
the axial line of said shaft at opposite extremities of the stroke of
the piston.

the axial line of said shaft at opposite extremities of the stroke of the piston.

Second, The forming of the eduction and induction chambers in cylinder heads of steam engines, and furnishing them respectively with supply and exhaust valves, substantially in the manner and for the purposes described.

Third, The forming of two steamchambers in one or both heads of a steam engine cylinder in combination with induction and eduction steam pipes, and with puppet or other valves, in such manner that a large portion of the steam shall be saved which is lost or wasted in the nozzles or steam ways of engines as ordinarily constructed, aubstantially as described.

Fourth, The removable chambered cylinder head, in combination with the extension chambers, up and steam pipes, r.r. connected to the latter, substantially as and for the purposes described.

Fifth, The manner, substantially as described, of applying the induction and eduction valves with their respective chambers to steam cylinders, for the purpose set forth.

1,878.—Condenser.—Wm. A. Lighthall, New York City.

, 1878.—Condenser.—Wm. A. Lighthall, New York City.
Palented Dec. 17, 1861:
I claim securing the packing rings, C, or their equivalents or subtitutes, as herein described, in the apertures. B, in the head sheet,
A, around the ends of the tube B, b, without the use of a follower or
ther analogous mechanical device or arrangement, as herein set
orth.

1,879.—Portable Water Condenser.—Wm. A. Lighthall,
New York City. Patented July 29, 1862:
I claim, first, The combination of the tank, N, filter, B, condenser,
and heater, G, when arranged in relation to each other in the
manner and for the purposes perein set forth.
Second, The construction of the case of the condenser, F, with
spaces above and below the series of tubes, K, as and for the purposes set forth.

880.—Naval Ram for the destruction of the Enemy's Ships.—Charles Perley, New York City. Patented Feb. 24, 1863; first. In combination with a horn or ram capable of being proted from or drawn into a vessel below the water line, I daim a vessel or gates to close the orifice when the same is removed. as celled.

valve gate or gates to clues the orlice when the same is removed, as specified.

Second, I claim a cutting edge provided at the end of a horn or ram to prevent the same glancing off when striking diagonally against an opposing vessel, as set forth.

Third. In combination with a movable horn or ram, I claim a weight or mass of material employed behind sid horn or ram, but separate from the vessel itself, and acting to drive the horn into the vessel to be destroyed, substantially as set forth.

1,881.—Machine for Cutting Files.—Milton D. Whipple (assignor by mesne assignments to the Whipple File Manufacturing Company), Cambridge, Mass. Patented Oct. 7, 1856.

I claim feeding the blank forward and rotating it upon its axis as the cutting proceeds, when it is operated upon by the vibrating cutters in the manner substantially as herein set forth.

I also claim supporting one end of the blank in a socket that is free to move with it and to accommodate itself to blanks of various lengths, substantially as set forth.

I also claim, in combination with a round blank that is rotated for the purpose described, operating upon the blank immediately beyond its point of support, in the manner and for the purpose substantially as herein described.

I also claim the method herein described of operating the cutters by means of the wipers, b, and the springs, A2 and Z, whereby the force of the blow is diminished as the size of the blank decreases, as set forth.

est forth.

I also claim forming the cutters of circular disks, or of portions thereof, in the manner and for the purpose substantially as herein

DESIGNS.

2,032.—Agricultural Furnace.—Merritt Peckham, Utica N. Y..

2,033. – Spoon and Fork Handle. – Julius L. D. Sullivan, Somerville, Mass.:

TO OUR READERS.

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

MODELS are required to accompany applications for Patants under the new law, the same as formerly, except on design patonts, when two good drawings are all that are required to account ecification and oath, except the Government fee.

RECEIPTS .- When money is paid at the office for sub scriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the Crst paper a broade acknowledgement of our recept on of 'heir

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



FOR SEVENTEEN YEARS. MUNN & COMPANY,

In connection with the publication of the SCIENTIFIC AMERICAN, have act-

ed as Solicitors and Attorneys for procuring "Letters Patent" for the Grandow in the United States and in all foreign countries during en years. Statistics show that nearly ONE-THIRD of all the applications made for patents in the United States are solicited through this office; while nearly THREE-FOURTHS of all the patents taken in fereign countries are procured through the same source. It is almost needless to add that, after seventeen years' experience in preparing specifications and drawings for the United States Patent Office, the proprietors of the SCIENTIFIC AMERICAN are perfectly conversant with the preparation of applications in the best manner, and the transaction of all business before the Patent Office; but they take pleasure in presenting the annexed testimonials from the three ast ex-Commissioners of Patents.

MESSES. MUNN & CO.:—I take pleasure in stating that, while I have office of Commissioner of Favents, more than one fourth all. The business of the office confidence thus indicated has be fully deserved, as I have always observed, in all your intercourse we the office, a marked degree of promptness, skill, and fidelity to interests of your employers.

Yours very truly, mptness, skill, and fidelity to t Yours very truly, CHAS, MASON.

Judge Mason was succeeded by that eminent patriot and statesman. Hon. Joseph Holt, whose administration of the Patent Office was so distinguished that, upon the death of Gov. Brown, he was appointed to the ollice of Postmaster-General of the United States. Soon after entering upon his new duties, in March, 1859, he addressed to us the following very gratifying letter.

Massrs. Munn & Co.:—It affords me much pleasure to bear testlabout to the able and efficient manner in which you discharged your amies as Solicitors of Patents, while I had the honor of holding the since of Commissioner. Your business was very large, and you say amed (and I doubt not justly deserved) the reputation of energy, marked ability, and uncompromising disellity in performing your professional engagements.

Very respectfully, your obedient servant,

J. Holt.

n. Wm. D. Bishop. late Member of Congress from Connecticut, seded Mr. Hoit as Commissioner of Patents. Upon resigning the

succeeded Mr. Hot as Commissioner of Patents. Upon resigning office he wrote to us as follows:

MrssRs. MUNN & CO.:—It gives me much pleasure to say that, ing the time of my holding the office of Commissioner of Paten very large proportion of me business of inventors before the Patent of the was transacted through your agency; and that I liave found you faithful and devoted to the interests of your clients, as as eminently qualifies be perform the duties of Patent Attorneys:

skill and accuracy. Very respectfully, your obedient servant, W. D. Bissk.

THE EXAMINATION OF INVENTIONS.

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

As an evidence of the confidence reposed in their Agency by inventors throughout the country, Messrs. MUNN & CO. would state that they have acted as agents for more than TWENTY THOUSAND inventors. In fact the publishers of this paper have become identified

inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of inventors and patentees, at home and abroad. Thousands o inventors for whom they have taken out pat ents have addressed to them most flattering testimonials for the services rendered them; and the wealth which has inured to the individuals whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions or dollars! Messrs. MUNN & CO. would state that the never had a more efficient corps of Draughtsmen and Specification. Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the quickest time and on the most "beral terms.

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The service which Messrs, MUNN & CO, render gratuitously upo xamining an invention does not extend to a search at the Paten Office, to see if a like invention has been presented there; but is an opinion based upon what knowledge they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5, accompanied with a model, or drawing and description, they have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a patent, &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through the Branch Office of Messrs. MUNN & CO., corner of F and Seventh streets, Washington, by experienced and competent per sons. Many thousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursue Address MUNN & CO., No 37 Park Row, New York.

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Persons who are about purchasing patent property, or patenteewho are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by com oetent attorneys, to see if they are not likely to infringe so ing patent, oelore making large investments. Written op the validity of patents, after careful examination into the facts, car be had for a reasonable remuneration. The price for such services in always settled upon in advance, after knowing the nature of the in vention and being informed of the points on which an opinion is so licited. For further particulars address MUNN & CO., No. 37 Park

now in full fo ce, and prove to be of great benefit to all parties who are concerned in new inventions.

The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners, except the Canadians, to nussian, opanisal and in other foliagies, except the Camazina, openion all the privileges of our patentsystem (except in cases of designs) on the above terms. Foreigners caunot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

CAVEATS.

Persons desiring to file a caveat can have thepapers prepared in the shortest time by sending a sketch and description of the invention.

The Governmentfeefor a careat is \$10. A pamphlet of advice re-

garding applications for patents and caveats is furnished gratis, on application by mail. Address MUNN & CO., No. 37 ParkRow, New

REJECTED APPLICATIONS.

Messry. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of references. models, drawings, documents, &c. Their success in the prosecution of the cution of rejected cases has seen very great. The principal portion of their charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prose

cuted, are invited to correspond with MUNN & CO., on the subjecting a brief history of the case, inclosing the official letters, &c.

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Messrs. MUNN & CO., are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancery iane. London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperenniers, Brussels. They thing they can safely say that THESE-FOURTING of all the European Patents secured to American citizens are pro cured through their agency.

Inventors will do well to bear in mind that the English law does no imit the issue of patents to inventors. Any one can take out a pat-

Circulars of information concerning the proper course to be pu in obtaining patents in foreign countries through MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c. may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention susceptible of one; or, if the invention is a chemical production, he mustfurnish samples of the ingredients of which his compo musturnish 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 pre-paid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by a draft on New York, payable to the order of Messrs. MUNN & CO. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but foot country can usually purchase New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter reg tered by the postmaster. Address MUNN & CO., No. 37 Park Ro

Patents are now granted for SEVENTERN years, and the Government fee required on filingan application for a patent is \$15. Other changes in the fees are also made as tollows.—

On filing each Caveat	\$10
On filing each application for a Patent, except for a deal	gn. \$15
n issui ne cach origina l Patent	_ ⊈ ∙x∩
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 a Disclaimer	\$10
On filing application for Design (three and a half years).	\$10
On filing application for Design (seven years)	\$15
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Having access to all the official records at Washington, pertaining to the sale and transferof patents, MESSRS. MUN N& CO., are at all times readyto make examinations as to titles, ownership, or assignments of patents, Fees moderate.

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Inventors who come to New York should not fail to pay a visit to he extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged in the world.

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speculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their

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Many valuable patents are annually expiring which might readily be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suitered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of procedure in order to obtain a renewed grant. Some of the most valuable grants now existing are exacted pract. Some of the most valuable grants now existing are exacted potents. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give ninety days, notice of their intention.

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Parties sending models to this office on which they decide not to Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot engage to retain models more than one year after their recept, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining

within one year arter sending them to us, to insure their obtaining them. In case an application has been made for a patent the model is in deposit at the Patent office, and cannot be withdrawn. (I 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 oh

unications and remittances by mail, and models by expr (prepaid) should be acdressed to MUNN & CO. No. 37 Park Row, New