#### RECENT AMERICAN PATENTS.

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

Machine for Cutting Sheet Metal.-This invention consists in the use of two pairs of shears adjustable for any desired bevel and length, and applied in combination with a treadle or other suitable mechanism in such a manner that the bevel end from curved pieces of sheet metal can be cut with little loss of time and with perfect accuracy; it consists, further, in the application of adjustable gages in combination with the adjustable shears, in such a manner that the apparatus can be readily set for pieces of sheet metal of any desired width; it consists, finally, in providing the shears with crooks in the cutting edges, fitting one another in such position that by their action the pieces of sheet metal are notched at the same time the bevel ends are cut off, and each piece, when taken from the shears, is ready for soldering without requiring any further proposition. Hosea Low, of Waukon, Iowa, is the inventor.

Combined Hydraulic and Pneumatic Pump. This invention relates to a pump for raising water from deep wells or reservoirs, and is more especially designed for oil wells, mining purposes, etc. The invention consists in the use of an air pump in connection with a water receiver arranged in connection with valves and pipes in such a manner that water and other fluids may be raised from great depths by means more simple and less expensive than the force pumps now used for such purposes. G. M. Woodward, of New York city, is the inventor.

Steam Boiler .- This invention consists of certain improvements in the construction of vertical steam boilers, wherein a combustion chamber is employed, and the flues, both downward and upward, are made to pass through the water space, and wherein the upper parts of the apparatus are so arranged that the products of combustion and heated gases are made to superheat the steam in the steam space of the boiler. Thomas Main, of Green Point, N. Y., is the inventor.

Operating Slide Valves .- This invention consists in a novel mode of operating slide valves of steam engines, so that they may be made to cut off steam at any desired part of the stroke, and be also moved with a quick stroke, one of the features of the invention being the communication of the motion of the valve stem to the valve through a vibrating lever whose upper end, which is free, is made the fulcrum of the said lever. John B. Cochrane, of Brooklyn, N. Y., is the inventor.

### MARKET FOR THE MONTH.

During the month of May the price of gold fell from 150 to 130, and recovered to 137, most other values, of course, going down and up with it. The following are the comparative rates at the beginning and close of the month:-

Price April 26.	Price May 31. [
Coal (Anth.) \$\mathre{H}\$ 2,000 fb \$11 00	\$9 00
Coffee (Java) # 1533 @ 35	33 @ 36
Copper (Am. Ingot) # 1534 @ 36	30
Cotton (middling) # th50 @ 51	51
Flour (State) # bbl \$7 00 @ 7 90	\$5 85 @ 6 95
Wheat # bush 2 20 @ 2 50	1 90 @ 2 20
Hay ₩ 100 tb 1 32	1 00
Hemp(Am.drs'd) #tun 275 00@350 00	260 00@270 00
Hides (city slaughter) # 15. 8 @ 94	8 @ 9 1
India-rubber # lb	46 @ 75
Lead (Am.) # 100 tb 9 75 @ 9 87	8 25 @ 8 50
Nails #100 lb 7 00	5 50 @ 5 75
Petroleum (crude) #gal37 @ 37	35 1 36
Beef (mess) \$\mathre{\pi}\ \text{bbl \$12 00 @20 00}	10 00 @18 00
Saltpèter # fb 28	25
Steel (Am. cast) # 15 14 @ 22	21 @ 22
Sugar (brown) # 15 104@ 15	91@ 15
Wool (American Saxony fleece)	
79 tb	75 @ 77
Zinc # 15	12 @ 12 4
Gold 1 513	1 37
Interest	6 @ 7
	_

### MISCELLANEOUS SUMMARY.

COUNTRY readers, fond of toilette fineries, can per fume the water in which they wash by throwing violets into the pitcher, and letting them remain tor some hours.

THERE is a paper collar manufactory in Springfield Massachusetts, that turns out ten thousand dollars worth a day.

To Soften Ivory.—In three ounces of spirits of niter and fifteen of spring water, mixed together, put your ivory a soaking. In three or four days it will be soft so as to obey your fingers.

To dye ivory thus softened dissolve in spirits of wine such colors as you want to dye your ivory with. And when the spirit of wine shall be sufficiently tinged with the color you have put in, plunge your ivory in it, and leave it there till it is sufficiently penetrated with it, and dyed inwardly. Then give that ivory what form you please

To harden it afterwards, wrap it up in a sheet of white paper, and cover it with decrepitated common salt, crumbled by heat, and the driest you can make it to be; in which situation you shall leave it only twenty-four hours. - Ancient Work.

QUALITY OF MILK .- It is sometimes forgotton that the last gill of milk drawn from the cow's udder is the best part of every milking. Careful experiments made in England, (according to a report lately published), prove that the quality of cream obtained from the last cup taken from most cows exceed that of the first in proportion of twelve to one. The difference in the quantity also is considerable. Hence, a person who carelessly leaves one pint unmilked loses in reality as much cream as would be afforded by six or eight pints at the beginning, and loses, too, that part of the cream which gives the richness and flavor to the butter.

A NEW company for the manufacture of pocket cutlery has been formed at Rochester, Pa., under the title of the "Pittsburgh Cutlery Company," men comprising it are all practical English workmen. They will employ from forty to fifty hands, beside using all the most improved machinery.

If you have a lathe job to do, clean your lathe first, keep it clean while you are at work, and clean it when you get done. The lathe will last longer, the work will be better, and you will get a reputation for

THE owner of the McRae farm, 160 acres, lying east of the Coquette well has been offered and refused \$900,000 for it.



ISSUED FROM THE UNITED STATES PATENT-OFFICE FOR THE WEEK ENDING MAY 30, 1865. Reported Officially for the Scientific American

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 formation useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific AMERICAN, New York.

47,911.—Waxed-thread Sewing Machine.—Hosea P. Aldrich, Spencer, Mass., assignor to himself and George Jenks:

I claim, First, Heating the pressure pad and cloth plate of a sewing machine, or either of them separately, by steam or otherwise, for the purpose of preventing waxed thread from sticking thereto while passing through the machine, substantially as and for the purpose specified.

Second, Inclosing the tension wheel, or other tension device of a sewing machine, over which the waxed thread passes in a heated chamber or casing, for the purpose of preventing waxed thread which passes around it from sticking thereto, substantially as nerein described.

seving machine, over when the seving machine, over when the purpose of prevention of casing, for the purpose of prevention of the purpose of prevention of the purpose of prevention of the purpose of the search of the wax receptacle, D, the casing which contains the tension wheels, substantially in the manner and for the purposes specified.

Fourth, The combination with the wax receptacle D, and its steam chest, a, the pipes, G O K, hollow pressure pad B, and hollow cloth plate, C, substantially as and for the purposes specified.

10 2019 —Thread-waxing device for Sewing Machine.—

Thread-waxing device for Sewing Machine.—

Hosea P. Aldrich, Spencer, Mass., assignor to himself and George Jenks:
I claim, First, The combination of the wax-receptacle, A, with the water tank, b, water lacket, E, and chimney, C, substantially as and for the purposes described.
Second, Attaching the wax receptacle to the sewing machine by passing a rod through the hollow tube, I, which tube performs the function of a thread guide for immersing the thread under the surface of the wax, substantially as heren decribed.
Third, The combination of the tube, L, india-rubber plug, O, and screw, M, substantially as and for the purposes described.
Fourth. Making the india-rubber plug, O, convex at both its ends, in combination with socket of tube, I, and that on screw, M, substantially as and for the purposes set forth.
Fifth, The application to thread-waxing devices of the tube, L. when constructed as and for the purposes described.

-Shade Holder for Lamps.-Lewis J. Atwood, Waterbury, Conn.:
I claim, First, The combination of mortises and rivets or eyelet with the springs for securing the latter to the ring, as set forth.

Second, In combination with the springs for holding the lamp shade upon the chimney, I claim the ring formed of thin sheet metal, stiffened by corrugations running around it, for the purposes and as specified.

Third, I claim securing the exterior ring by projections from the springs, in the manner set forth.

47,914.—Compound for Removing Scale from Boilers.— Albert B. Auer, Babcock's Grove, Ill. Antedated April 27, 1865:

April 21, 1865:
First, I claim the compound herein described, composed of gum atechu, salt and saltpeter, substantially as and for the purpo-es pecified.
Second, I claim, in combination with a compound for removing oiler incrustations, the employment of flaxseed, as and for the purposes herein described.

poses herein described.

17,915.—Desk.—Frederick Baltz, New York City:
I claim the arrangement and combination of the levers, B C
D, with the desk and cover of the desk or table, and with the fix
ture, in such a manner that the opening or shutting of the cove
door will pull the desk outwards or inwards, substantially in
manner and for the purpose described.

manner and for the purpose described.

47,916.—Potato Digger and Separator.—John M. Bartlett, Harmer, Ohio:

I claim, First, The combination of the iron frame, A2, scraper, E, endless apron or chain, F, main shafts, G, spur wheel, H, with gearing, as stated, or their equivalent, by means of which the machine is made to dig and automatically separate potatoes, as set forth. Second, The platform, X, in combination with the clute, Y, and sacking device, X', in the manner and for the purpose set forth.

A 7,917.—Apparatus for Applying Paint to Stencil Plates.
—Caleb Bates, Kingston, Mass.:
First, I claim the apparatus herein set forth for applying paint or link to stencils, constituted and operated substantially as above de-

eribed.

Second, I claim the plate, I, for compressing the brush at the time receives paint or ink from the hopper, substantially as above de-ribed. (This invention consists in an apparatus for applying paint or ink

to stencil plates by means of a revolving brush, to whose surface the paint is applied from a hopper, the brush and hopper being carried upon a truck, which is made to travel over the stencil plates, and the brush being revolved by means of gearing which is con one of the shafts of the truck.]

47,918.—Coupling Conducting Wires.—G. W. Beardslee, College Point, Long Island, N. Y.:

I claim for effecting the insulating coupling or union of electric conductors, the combination of the metall. disks, or the equivalent shereof, on the conductors, the coupling tube and nut, or its equivalent, and the elastic plug interposed between the metallic discs and the coupling tube and nut, substantially as and for the purpose specified.

47,919.—Hay Spreader.—Horace Beers, Brookfield, Conn., assignor to Smith & Burham:

I claim the employment of the revolving head piece, D, provided with spirally arranged teeth, in combination with the supporting pieces, EP, and with the movable journal box, J, all arranged in the manner and for the purposes substantially as herein described pieces, E.F., and with the movable journal box, J, all arranged in the manner and for the purposes substantially as herein described and set forth.

I. Iso claim the arrangement and combination of the coil springs, L, platform, M, and lever, K, in the manner and for the purposes substantially as herein described and set forth.

substantially as herein described and set forth.

47,920.—Bridge.—John Boles, Jr., Boston, Mass.:
I claim the combination as well as the arrangement to: the lacing, b, with the truss composed of the posts, top and bottom chords, braces and vertical the roos, as specihed.
I claim the construction of the trus with the arrangement of the several curved braces, and the several curved counter braces divergent with respect to each other, as described, whereby the crossing thereof are increased from the top to the bottom chord, as specified, and in combination therewith I claim the two tension wires or cables, c.c., arranged as specified. 47,921.—Sorghum Evaporator.—Jesse Brockway, Oswe-

e1,321.—SOFFIUM EVAPORATOR.—Jesse Brockway, Oswe-go, Ill.: I claim, First, in combination with an evaporator, the heater, B, constructed and operated as and for the purposes specified, substan-lally as described.

Second, in combination with an evaporator, the damper, E, con-structed and operated as and for the purpose specified, substantially

structed and operated as and for the particle that it is a set forth.

Third, In combination with an evaporator having various compartments, the conductor C, when used as and for the purpose specified, substantially as set forth.

Fourth, In combination with an evaporator having various compartments, the gates, D, constructed and operated as and for the

aurpose described.

Fith, An evaporator, having sides that overlap the furnace upon which it rests, and extending down the outside thereof, for the purnoses specified, substantially asset forth.

poses specified, substantially asset forth.

47,922.—Piano-forte Action.—Stephen P. Brooks, Somerville, Mass. Antedated May 21, 1865:
I claim the combination of the hømmer arm, D, with the standard, C, and figlifter, F, in connection with the escapement on the rail, G, substantially as and for the purpose specified.
I also claim extending the hømmer arm through and in the rear of the standard, in connection with the back catch, H, for the purpose of holding the hømmer after the blow is struck, as set forth. I also claim pacing the back catch, H, in the rear of the hømmer arm, substantially in the manner and for the purpose specified.
I also claim the combination of the standard, C, upon the key lever, B, the hømmer arm, D, the fly lifter, F, with the button and spring the escapement, g, and the back catch, H, substantially as shown and described.

47,923.—Damper for Stovepipes.—H. C. Brown, Buf-

falo, N. Y.:

I claim the combination and arrangement of the annular disk, C, and hollow perforated cones, D.D. with the pipe, A, substantially as and for the purposes herein specified.

47,924.—Washing Machine.—Hiram Brown, Burton,

Onio:

First, 1c,aim the beaters. H, when constructed and arranged as herein specified, in combination with the ribs, F, for the purpose set forth

forth.

Second, I claim the slotted arm, H', in combination with the arm,

p. plate, n, lip, p', and key, l, when constructed and arranged in the
manner, substantially as and for the purpose set forth.

47,925.—Blasting Rock.—George C. Bunsen, Belleville,

III.: Telaim the application for blasting purposes of a visk, a, when used either with a cylinder, d, or support, c, or in combination with ooth cylinder and support, substantially in the manner and for the purposes specified.

purposes specified.

47,926.—Harvester.—Wm. H. Burkhart, Bucyrus, Ohio: First, I claim arranging the spring. I, so that it is pendant from near the reel shaft, upon the reel post, and so that it supports the puleys, 55, near the lower end of the reel post, in the manner and for the purpose described.

Second, The arrangement of the pendant spring, I, swivelling pulleys, 55, reel shaft, 3, pulley, 4, and driving chain or cord of the reel, in the manner and for the purpose described.

reel, in the manner and for the purpose described.

47,927.—White wash Brush and Handle Attachment.—W.
B. Burtriett, New York City, and J. P. McIntosh.
Brooklyn, N. Y.:
First, We claim securing a handle to a brush by means of a screw fastening, which is applied to the rounded portion, D. constructed substantially as described.

Second, The adjustable section, C, having a screw formed on it, in combination with a hemispherical slotted speed, D. and ferrule, B, substantially as described.

substantially as described.

47,928.—Die for Spike Machine.—Samuel Cameron,
Pittsburgh, Pa. Antedated May 17, 1865:
I claim the use of dies for spike machines made to overlap each
other, each having two convex operative faces at right angles to
each other, one such tace being horizontal and the other perpendicular, for the purpose of making spikes with flutedshanks, substantially as described.

Also the use of a removable clip for forming the point of the
spike, so constructed as hereinbefore described, as that its operative

face may be ground down from time to time whenever it may be necessary to dress off the head of the die, so as to compensate for the reduced length of the die, and thereby obviate the necessity of using new dies, when the head end of the die becomes worn, substantially as bereinbefore set forth.

Also the use of dies for spike machines, having plain operative faces for a short distance below the head of the spike, and convex operative faces elsewhere, for the purpose of making a fluted spike with the square neck, substantially as described.

[This invention has for its object to produce an implement for use by miners and those engaged in boring artesian and other wells, by means of which they can recover from the bottom of the bore bro-ken pieces of drills and other comparatively light objects.]

47,929.—Grapnel for Wells.—Jackson R. Carr, Ellem-ville, F. Y.:

ville, F. Y.: above set forth for recovering fragments of al and other retractory substances from the bottoms of wells tructed and operated substantially as described.

47,930.—Boot and Shoe Sole.—John Chilcott, Brooklyn, N. Y. Antedated May 19, 1865:
I claim as a new article of manufacture a compound sole, composed of an inner sole of leather and an outer one of india-rubber or gutta percha, united by sewing or other means, with a projecting margin of leather, consisting simply of a portion of the inner sole, substantially as berein set forth.

47,931.—Mash Tun.—John Chilcott, Brooklyn, N. Y. Antedated May 15, 1862:

A laborated may 19, 1002;
I claim the collecting trough or basin, C, strainer, d d, and gates or shutters, D D, in combination with each other and with the mash tun, substantially as and for the purpose herein specified.

47,932.—Slide Valve.—John B. Cochran, Brooklyn N. Y.:

N. Y.:

First I claim the combination of the valve stem, C, with the lever, G, whose lower end is pivoted to the back of the valve, and whose upper end is movable, so that the fulcrum, by means of which the valve is moved to and fro, is a movable one for each throw of the valve, substantially as above described.

Second, I also claim the combination of the rod, H, and its nuts, e a, operated as set forth, with the lever, G, substantially as described.

-Steam Generater.-Isaac E. Craig, Cleveland,

Ohio:
I claim First, The pipes, D and E, when in combination with the boiler and furnace, as and for the purpose herein set forth.
Second, I claim the blower, C, when in combination with the pipes, D and E, together with the boiler and fire-box, substanstantially set forth.

47,934.—Washing Machine.—Amory Davidson, Clinton

Mass:
Iclaim the sluts, JJ and KK, in the legs, GG, in combination rith the slaft, L, and wheels, PP, substantially as and for the purses described.

7.935.—Tack Driver.—Biram C. Davis, Herkimer, N. Y. Iclam, First, The descending incline plate, A, and guide, B, as shown and for the purpose described.

Second, I claim the driver. C, slide, D, bent arm, E, dividing slide, F, expanding dies, H H, the whole being arranged substantially as described and for the purpose, set forth.

47.936.—Steam Pressure Gage.—John Davis, Alexan-

',936.—Steam Pressure Gago.

dria, Va:
I claim, First, The pendulonsweight, J, when used in combination ith the steam pressure gage, and getting into the gage, the method ing unnecessary to describe, it being a well known one adopted all similar cases. These will be seen at the lower end indications f such packing.

Second, The combination and arrangement of the pendulous eight, J, piston, F, rock, G, cog wheel, M, sector, L, toothad wheel, bracket, N, friction roller, H', substantially upon the principle and in the manner as herein set forth.

I P Davis. Middleton, Conn.

47.937.—Molding Core.—J. P. Davis, Middleton, Conn: I claim a skeleton arbor for green and cores, constructed with supporting plates, a a, and handles, C C, arranged as herein speci-

[This invention consists in a novel construction of a core-arbor for molding articles of cylindrical fo m, by the use of which one can make green sand cores, with branches of any shape.]

47,938.—Apparatus for Oiling Wool.—B. A. Earl, Media, Pa., and Henry Holcroft, Philadelphia, Pa: Weelaimthe combination of a box or reservoir, B, containing lubricating matenal, with a shaft. F, carrying a strip of wire gauze, or its equivalent, and having the within described movement imparted to it by the devices herein described or the equivalents to the same, for the purpose specified.

same, for the purpose specined.

47,939.—Metal Cans or Boxes.—Horace Everett, Philadelphia, Pa:
I claim a metal can or box having a body secured by a lapjoint the projection formed by which is arranged on the inside of the can as and for the purpose herein set forth.

47,940.—Line Wires for Telegraphs.—Moses G. Farmer. Salem, Mass., and Geo. F. Milliken, Boston. Mass: We claim as a new article of manufacture a telegraph wire, reinforced for the purpose of strength with a core or cover of iron or steel, the wire being made by drawing a compound bar of the two metals.

17,941.—Process for Treating and Compounding Marl.

—R. B. Fitts, Philadelphia, Pa:

I claim, First, The comployment of sulphurle acid, in combination with night soil, for acting upon the marl, substantially in the manner described, and for the purpose specified.

Second, I also claim in combination with the marl, night soil, and wid, treated as described, the addition of the saltcake, gas lime, and unimal charcoal, substantially in the proportions and manner described, and for the purpose specified.

47,942.—Gang Plow.—Philo M. Gilbert, Kewanee, Ill: Iclaim, First, The combination and arrangement of the plow beams, D. D. the counseling adjustable straps, I, and the removably lytted connection Z. with the to gue, O, as and for the purpose herein specified and described.

Second, I. claim the combination of the plow-beams. D.D. th

plyoned connection, Z. with the to gue, O, as and for the purposes herein spexified and described.

Second, I claim the combination of the plow-beams, D D, the jointed lever, I J. the supports, H, the lever, F, and the standard, E, arranged and operating substantially as and for the purposes specified and shown.

Third, The combination of the plow-beams, D D, the reciprecating beam, C, the rear support, N, and the tongue, O, pivoted to said beams, arranged and operating as and for the purposes shown and set forth

beams, arranged and operating see and set forth set forth. I claim the combination of the plow-beams, D. D., reciprocating beam, C. the axie, A. provided with the slots, a a, the bolts, b b, rack, c, pinion wheel, d, and lever, e, arranged and operating as and for the purposes specified.

as and for the purposes specified.

47,943.—Steam Brake for Rail Cars. Samuel N. Goodale, Cleveland, Ohio:
I claim, First, The arrangement of the steam evilider, B. placed within or beneath the center of each car, and having double piston heads. C. ?. with guide rods, E and E', attached to their rods for operating the brakes, G, substantially as specified.

Second, I claim coupling the pipes, I. by means of the hollow pistons, K, working through stuffing boxes, I', as described Third, I claim connecting the bollow pistons, K, by means of flexible tubes, as specified.

Fourth, I claim the arrangement of the pipes, I, and stop cocks, O, for the purpose specified.

the arrangement of the pipes, I, and stop cocks, e specified. 47,944.—Cloth-dotter.—Sylvanus S. Gould, Worcester,

I claim. First, The combination with the body,  $\bf A$ , of the valve rod, caps. C D, and valves, d b, substantially as and for the purposes

set forth.

Second, The combination with the caps, C and D, of the spring, a, and packing, b, substantially as set forth.

Third, The combination with the valverod, B, of the point, h, and supporting tube, c, substantially as set forth.

Fourth, Making the lower end of the valverod, B, with a series of grooves, f, for the purposes set forth.

47,945.—Stove Pipe Drum.—George D. Greenleaf, 3
Mile Bay, N. Y:
I claim the combination in heat radiators for stoves of the drum,

A, flues, a' a'' a''' a'''', arms, dd, and rod. D, substantially as and for the purposes set forth,

[Ih s invention relates to a new and improved heat radiator to be ed to stove pipes for the purpose of radiating the heat, which ould otherwise escape into the chimney.]

47,946.—Augers.—Charles Lee Griswold, Chester, Conn I claim the pointed floor lips, substantially as described.

47,947.—Fire Grates. — John Habermehl, Wheeling West Va:

West Va:

I claim, First, A fire space, C, above a fire grate, A, having its wall in the form of a section of a sphere, with its front edge in a plane not ined relatively with the fire grate, substantially as and for the burpose set forth.

Second, The semi-circular sliding damper, D, pivoted at its exremities to the forward part of the wall, b, and adjusted by the rod, s, substantially as and for the purposes set forth.

Toird, Constructing the fire grate, A, with curved bars arranged so as to form an inclined front, substantially in the manner as and or the purposes set forth.

This invention relates to a new and improved manner of forming walls of the fire space over or above the fire grate, whereby the t, which has hitherto escaped up into the chimney or flue, thrown or radiated into the room or compartment, while at the same time smoke, gases, and other products of combustion are allowed to pass up into the flue or chimney. The invention also re lates to an improvement in the construction of the grate, whereby ashes is not allowed to choke or clog up the same, and the grate allowed to throw out the heat much better than those constructe in the usual manner. The invention further relates to a new and improved damper or draft regulator for the purpose of regulating the draft as herinafter set forth.

47,948.—Manufacture of Silvered Glass Ware.—John W Haines, Somerville, Mass: I claim the stoppering of the hole on the bottom of double glass ware silvered with a metalic stopper, as herein described.

47,349.—Harness.—Emery E. Hardy, New York City:
I claim, First, The plate, A, constructed in the form and manner
shown, and connected to the other parts, as herein set forth.
Second, In combination with plate, A. I claim the blocks, B and
B, when so arranged as to form the channel for the strap, C, and
otherwise constructed as described.
Third, I claim the copper plate, E, when constructed and fastened
in place, as shown and described.
Fourth, I claim the stoted plate, e, screw, h, and nut, f, or their
equivalents, when constructed and arranged to operate as and for
the purpose set forth.
Fifth, I claim the method of securing the terrett, F, as shown,
whereby an open space or channel is left underneath it for the
strap, C,

whereby an open space or channel is left underneath it for the strap, C. Sixth I claim the self-adjusting back strap, when arranged to operate in connection with the other parts, as herein shown. Seventh, In combination with the strap, C, I claim the slotted plate, e, clamp, f and i, and screw, h, constructed and operating subs antially as described. Eighth, I claim the hook, C, provided with the square shank, U, and used in combination with the bolt, I', and crupper plate, t, as and for the purposes herein set forth.

77,950.—Hay Press.—Axel Hayford and Ambrose Strout, Belfast, Maine:
First. We claim the combination and arrangement of the follower, toggle lever, and two cords, with the capstan, in the manner substantially as and for the purposes set forth.
Second, The combination of the door, cateb bar, and a single button with the frame, when arranged substantially as and for the purposes set forth.
Third, The combination of the lever, R, the end lining, O, and wedged braces, F and O, with the box, B, substantially as described for the purposes set forth.

17,951.—Clothes Wringer.—S. S. Hemenway, Boston,
Mass. Antedated May 19, 1865:

I claim as an improvement on the clothes wringer, patented by
Sylvanus Walker, June 17, 1862,
The employment of the cross-slat, J, in combination with the deached groved sockets, D D, and screw bolts, E E, substantially as
set for h and for the purpose described.

47.952.—Churn.—Wm. Hosier, Washington Township.

Ind.:

I claim the foam-dash, h, in combination with the guides, x x, and ower dashes, w w, when said dashes are arranged as described and pperated by means of the devices attached to one half of the lid, e, is set forth.

11,503.—Crupper.—Frederic Howes. Boston, Mass.:
First, I daim combining with a crupper an extension-bar or
piece for the purpose of raising and supporting the tail of a horse,
as set forth.
Second, Making the supporting bar adjustable, so that it can be
set and held at any desired angle with the crupper, as set forth.
Third, The combination of the ratchet ring, extension bar and
spring-pall, as described.

47,954.—Wire Pointing Machine.—C. Jillson, Worces

47,954.—Wire Pointing Machine.—C. Jillson, Worcester, Mass.:
First, The combination with the adjustable stand, C, which supports the wire shaft, the swinging arm, Y, cu ter stand, I, and hanger or wire support, G, whereby the latter is connected wit. the cutter stand but moved laterally as the wire is fed forward, substantially as and for the purpose specified.

Second, Combining the cutting and holding devices in a wire pointing machine with the stand which supports the wire in such a manner that the machine can be used for simply pointing wire or for pointing and cutting off the pointed pieces, substantially in the manner described.

Third, The combination of the pivoted stand which supports the hollow wire staff with the sliding table, B, for the purpose of adjusting the taper of the wire to be pointed, substantially as and for the purposes specified.

Fourth, Securing the wire within its hollow shaft by application of a sotted eye piece, o, substantially in the manner and for the purposes specified.

Fifth, The combination of the cutter and stand for supporting the wire in a wire pointing machine in such a manner as that the cutter remains stationary during the operation of pointing the wire substantially as described.

Sixth, The combination of mechanism in a wire pointing machine in such a manner as to cause the wire that is being pointed to such a manner as to cause the wire that is being pointed to the standard which holds the wire to be pointed in a line parallel with the ways or base of the machine, substantially as a herion described.

Eighth, The combination with arm, F, of sliding hanger, G, for supporting the wire, substantially as set forth.

Eighth, The combination with arm, F, of anger, G, slotted arm, K, and guide, u, substantially as set forth.

47,955.-Machine for Pointing Wire.-C. Jillson, Wor-

cester, Mass.:
First, I claim in combination with the hollow wire shaft the extension grade frame, E. sliding block, G. and self-adjusting supporting eye, d., substantially as and for the purpose specified.

Second, The combination with the cutter, s, the supporting sleeve, 1, for adjusting and feeding the cutter as and for the purposes speci.

ed.

Third, The combination with the guide block, G, and supporting ye, d, of the yielding and self adapting weight, H, substantially as

eye, d, of the yielding and self adapting weight, H, substantially as set forth. Fourth, the combination with the arched frame, E, of the guide block, G, and supporting eye, d, as and for the purpose set forth. Fifth, The combination of the circular bed piece, P, and table, O, for supporting the cutter stand, R, substantially as and for the purposes set forth. Sixth, The combination with the able, A, of the bed piece, P, table, O, and operating lever, M, subs nitially as and for the purpose described.

poses described.

47,956.—Wire Cutting Machine.—Lewis W. Johanning,
Jr., San Francisco, Cal.:
I claim the combination and arrangement of the plank or platform, A, with the stationary cutter, C, vibrating cutter, D, cam lever, F L, curved guide, G, and gae, H, the whole constructed as described for the purposes set forth.

47,957.—Composition for Blacking Leather.—Paul W. Keating, Norwich, Conn.:
I claim the composition of metter of the ingredients, in the proportions and mixed in the mode above described.

47,958.—Shoulder Strap Slide.—George D. Kellogg,

I claim connecting the straps with each other at he point where they cross upon the back in the manner and for the purpose, substantially as set forth.

47.959.—Attaching and Detaching Tops of Vehicles.—
D. A. King and V. N. Gardner, Livingston, Ky.:
We claim the mode herein described of attaching the top of vehicles to the movable piece, d, resting on the false bottom, e, and subtained by the bearer, f, and with the movable piece, d, held in position by the buttons, K K, or their equivalents, all constructed and operated as above described, and for the pur poses set forth.

17,960.—Saddle Tree. — Adolph Koehler, Holyoke,

Mass.:

I claim casting the saddle tree in one piece with a recess, a, in its under side in connection with the plate, B, to fit in the recess, a, and naving the check rein hook, e, at its front end and the loop, b, to ecleive the breechen or back strain, at its near end, and the two figrews, D E to secure the saddle, C, and plate, B, to, the tree, subtantially as set forth.

17,961.—Jar for Oil Tools.—Robert H. Lecky, Allegheny City, Pa.:

I claim the use of the guides. E. and C. when used in connection with "jar" for oil tools, said gides being arranged and operating substantially as herein described and for the purpose set forth.

subs antiany as herein against and on the pulpose section.

47,962.—Sash Fastening.—Robert Lee, Cincinnati, Ohio:
I claim the a rangement of spring late, F, and catch, J, with their described or equivalent accesso les the whole being combined and operating to form a secure sash lock, substantially as set forth.

A7.963.—Furnace.—Joseph Leeds, Philadelphia, Pa.:
I claim connecting together the fire-chamber and the escape fine chamber of furnaces or stoves for air heaters, by means of the series of flat smoke or \$25 flues, C. C, the said flues being constructed and arranged substantially in the manner described and set forth, for the purpose specified.

47,964.—Tobacco Pipe.—Frederick Killer, Baltimore,
Md.:
I claim the above described smoking pipe as a new article of manufacture.

-Soldering Iron.-William K. Lewis, Boston, 17,965.—Soldering Iron.—William K. Lewis, Boston,
Mass.:

I claim a shield applied to a soldering iron in the manner, substanally as shown and described.

(This invention relates to a new and improved soldering iron de signed more especially for hermetically sealing cans, and similar purposes in which a small iron is generally used. The invention consists in the employment or use of a shield applied to the implement in such a manner as to prevent the radiation of heat there-from, and retard the cooling of the iron, or rather copper, as well as

I claim in evaporating liquids or fluids of any kind, the comuse of a tight or open botter, and an open circulating vat or the two connected by pipes so that the fluid may continuously or circulate through the boiler and through the vat or vats, su tigliy as and for the purpose herein described and represented

to protect the operator from the heat thereof.

Machine for Cutting Sheet Metal.—Hosea Low, Waukon, Iowa:

Waukon, lowa:

I claim, First, the camployment or use for this purpose of any single stationary frame or of two frames with the open ends pointed in the same direction, in either case, with two pairs of cutters, whether the frame or frames or the cutters be adjustable towards the working center, or the center adjustable toward to the cutters and especially if the cutters are so placed in relation to the center or swivel that a right line urawn through the cutting points of consistenced in the cutters will pass through the working center in any position of adjustment, substantially as berein set forth.

Second, The clamp, D, and radius bar, constructed in such a manner as to lengthen and shorten at the enter and the part that clamps the tin so formed as to pass your pair of cutters or between two pairs of cutters, in combination with any stationary frame of frames with one or two pairs of cutters and with or without the gages, substantially as and for the purpose described.

Third, The gage, k, provided with a longitudi al slot, I in combination with two objugue slots, m, in the squaring frame, E, constituted and operating substantially as and for the purpose especified.

Steam Boiler.—Thomas Main, Green Point, 47.968.

47,965.—Steam Boller.—Thomas Main, Green Point, N. Y.:

I claim the combination in a vertical steam boiler of the fire chamber, B, the enlarged combustion chamber, C, surmounting the said fire clamber and surrounded by the water space, the descending flues, f, and ascending flues, g, passing through the said water space, and the upper flue space, e, surrounding the steam dome, d, all as herein described.

all as herein described.

47,969.—Holsting and Lowering Weights.—William C.

McGill, Cincinnati, Ohio:
I claim, First, The mechanical movement composed of the parts, A B C E I and J, or their equivalents, the whole being combined and operating substantially as set forth.

Second, The combination of the spider, I. and annulus, J, constructed and operating as set forth.

structed and operating as set form.

47,970—Sorghum Evaporator.—J. H. Merrill, Quarqueton, Iowa:
I claim the pan, N, in combination with the evaporator D, the whole constructed and arranged as and for the purpose subsantially as herein set forth.

47,971.—Barometer.—Garret V. Money, New York City:
I claim the use of the new article of manufacture which I have
designated the "Fine Registering Barometer and Themometer."
made substantially as described and for the purposes herein before
set forth.

set forth.

47,972. Snap Hook.—Hermann Mund, Chicago, Ill.:

71,972. Snap Hook.—Hermann Mund, Chicago, Ill.:

71 claim a snap, D, for a hook provided with or composed of three arms, b c d, arranged with a spring, E, within the shank, B, and provided to the shank, in the manner substantially as and for the outpose set forth.

[This invention has for its object facility in opening the sn that it may be easily engaged with the strap or part designed to be connected with it, and also readily disconnected therefrom.

47,973.—Edge Plane.—Martin Newman. Unadilla, N. Y.: I claim the construction of an edge plane with the guard, c, and the diagonal knife, D, in combina. on with the sock, A, substantially as and for the purpose herein set forth.

y as and for the purpose networks.

74.—Hat.—Robert S. Nickerson and James Wallace,
Philadelphia, Pa.:
claim as an article of manufacture a hat made of cloth having
nessubstantially as de-cribed, and a perforated hat body. We

meshes substantially as de-cribed, and a perforated hat body.

47,975.—Combined Cultivator and Seeder.—C. Norwood, Bloomington, Ill.:

I claim the bars, E E provided with the seed boxes, H H, and rollers, G, and pivoted at their rear ends to pendants, F, at the back part of the farming, A, in connection with the bars, L L pivoted at their front ends to the pendants, M, at the front part of the farming, A, and provided at their rear ends with the coulter projections, D, and the forks, a\* and connected to the seed boxes, H, hy the links, Shoond. The arrangement of the bent pivot bars, I, I, seed boxes, H, H, and connecting bars, T, substantially as and for the purpose herein set forth.

[This invention relates to a new and improved machine for plantng and cultivating corn, and it consists in a peculiar constra and arrangement of parts, whereby it is believed that several advanbages are obtained over the generality of machines now employed for that pur ose.] 47,976.—Means for Feeding Wool and other Fibrous Material to Picking, Carding, and other similar Machines.—S. R. Parkhurst (assignor to Emily R. Parkhurst), Bloomfield, N. J:
I claim. First, The combination of a vibrating combwith a toothed cylinder for removing wool or other fiber and foreign substances from the teeth of said cylinder, and also cleaning the teeth of said comb, substantially as specified.
Second, I claim the combination of a feeding cylinder, b, vibrating comb, e, and burring cylinder, d, for the purposes and substantially as specified.

omb, e, and burring cylinder, d, for the purposes and substantially a specified.
Fourth, I claim the combination of a shell with the vibrating mp and toothed cylinder, d, for the purposes and substantially as

ified. th, I claim the heads, f.f., connecting bars, g., and eccentrics, in bination with the vibrating comb and cylinders, b and d., as set

combination with the vibrating come and cymbots, but, forth.

Sixth, I claim the combination of the burring cylinders, b, m, and strippers, l and n, with the feed cylinder, b, and vibrating com b, e, substantially as specified.

Seventh, I claim the combination of the burring cylinder, m, the stripper, b, the worker, q, and the carding cylinder, o, substantially as specified, whereby the stripper, p, transfers the fiber from the ourring cylinder to the carding cylinder, as set forth.

47,977.—Road Scraper.—Wm. Patterson, Salem, N. J: 47,977.—Road Scraper.—Wm. Patterson, Salem, N. J:
Lclaim, First, a road scraper, having its scraper proper, A, made
in the curved form and arranged obliquely to the line of draft as
described and set forth, the said scraper, A, being supported in its
place by means of arms, cl. c2, bent.ovenward behind, and hinged or
looped to the back of the said scraper, A, as described, so as to allow
the latter to tilt forward from its upright position before the arms
when required, as and for the purposes described.
Second, The arrangement of the adjustable notched lever, f, in
combination with the curved bar, C, and scraper, A, as and for the
purpose specified.
Third, The curved connecting bar, C, when arranged in combination with the tongue, D, and scraper, A, so as to be adjustable at its
connection with the said tongue, substantially as described for the
purposes specified.

urposes specified.

Fourth, The arrangement or the carrying wheels, E E, or their quivalents, in combination with the scraper proper, A, substantially in the manner described for the purpose specified.

47,978.—Glass Presser Feet of Sewing Machines.—Robt. E. Paterson, Jr., Philadelphia, Pa. I claim the glass presser foot, with the longitudinal recess, adapted to receive the edge of the guide plate, substantially as described.

to receive the edge of the guide plate, substantially as described.

47,1979.—Rolling Pin.—C. E. Phillips, Abington, Mass: Iclaim, First, forming a rolling pin, at one end or through its whole extent hollow, or with a suitable aperture or receptacle for receiving such implements as are generally used in the manipulation and ornamentation of pastry, etc.

Second, Combining with the rolling pin a removable handle which will also serve as a cutter as described.

Third, The combination and arrangement of the removable handle and cutter, ff, with the pastry smoother, h h Fourth, The combination of the rolling pin, a a a, nutmeg grater, c, and biscuit cutter, ff, as described.

47,980.—Horse Rakes. — Daniel Prest, Marlborough,

N. J: I claim the combination of the levers, E E, with the bar, D I claim the combination of the whole being arranged to operate ubstantially as herei∎described.

47,981.—Lathe Chuck.—William A. Reilly, Cincinnati, Ohlo:
I claim the above described lathe chuck, provided with the slide, H, arm, I, and slide, K, with the adjusting screws, M and L, substantially in the manner and for the purposes set forth.

47,982.—Hor:e Hay Forks.—R. Reynolds and Charles Young, Stockport, N. Y:

We claim, First, The toggle joint and lever DD, in combination with the linged jaws, BB; of the fork, A, constructed and operating in the manner and for the purpose substantially as herein shown and described.

in the manner and for the purpose substantially as herein shown and described. Second, The ring, C, when the same is arranged on one side of the center of the fork and operates in combination with the toggl afms, D D, and jaws, B B', substantially as and for the purposes seforth

[This invention consists in combining with two hinged tined jaw wo levers or toggle arms in such a manner that when said toggl arms are straightened out, the jaws are firmly closed, and a load o hay taken up by them can be hoisted up to any desired hight, and by a slight pull on one of the toggle arms they are thrown out of ine, and the jaws open to dump their load; and, furthermore, by the action of the toggle lever the operation of entering the fork in he hay is facilitated. It consists, further, in placing the ring which takes the hoisting rope out of the center of the fork and in sucn position in relation to the toggle arms and to the pivot connecting and the closing of the fork is facilitated.]

47,983.—Tube Sheet Cutter.—D. E. Rice and William Everett, Detroit, Mich:
We claim the sleeve, B. arranged to carry the cutters or tools in combination with the spindle, A. and feed wheel, C. or its equivalent, constructed and operating substantially as and for the purpose

lent, constructed and operating substantially as and for the purpose of the combination of the revolving rest, E. with the spindle, A. also the combination of the revolving rest, E. with the spindle, A. sleeve, B. and handwheel, C. constructed and operating substantially as and for the purpose described.

[This invention consists in the employment or use of a center that the control of the purpose described in combination with a point inserted in the end of a bore spindle in combination with a longitudinally sliding sleeve and cutter head, and with a bandwheel or other equivalent device, in such a manner that by means of the handwheel the cutters in the cutter head can be set up, while the center point turns in the center of the hole to be cut, and the ne cessity of first drilling a hole, so as to allow the center point to follow the longitudinal motion of the cutters, is avoided.]

47,984.—Sugar Press.—D. C. and L. S. Riggs, Omaha City, Na:

We claim the combination of the pressing box, F, base block, D adbottom wedge, I, constructed and arranged to operate substan ally as described.

of [This invention relates to a press intended for the purpose of separating molasses from crude sugar. Said press is cheap, durable, and easily operated, and it does its work perfect.]

-Car Coupling.-Henry M. Rulon, Monmouth,

47,985.—Car Coupling.—Henry M. Rulon, Monmouth, Ill.:
First, I claim the coupling pin, C. when constructed and operating substantially as and for the purpose set forth.
Second, The combination and arrangement of the coupling pin, C, the weight, D, and the draw head, A, when all constructed and operating as herein delineated and set forth.
Third, I claim the combination of the draw head, B, with the coupling pin, C, constructed, arranged and operating substantially as and for the purpose herein specified and shown.

47,985.—Apparatus for the Manufacture of Gas.—Silas C. Salishury, New York City:
First, I claim the combination of the washing and purifying chambers and automatic regulator, so that the gas passes through them in succession, a substantially as described.
Second, The arrangement of the washing and purifying chambers and automatic regulator described, so that they constitute one apparatus, substantially as and for the purposes set forth.
Third, The combination of the washing and purifying chambers and automatic regulator with the cooling chamber, substantially as and for the purposes set forth.
Fourth, The eombination of the cooling chamber, constructed substantially as described, with a retort for the production of fixed gas. Fifth, The perifying chamber, C, constructed substantially as described, and for the purposes set forth.
Sixth, The combination of the myvable vessel or gas receiver, d, with the faucet in the Supply pipe, 2a, connecting the vaporizer, 2,

and retort, 3, so as to constitute an automatic regulator of the supply of the vaporized products of the vaporizer to the retort, substantially as and for the purposes set forth.

Seventh, I also claim the combination of the movable vessel, d, with the stop cock of the air-supply pipe, so as to constitute an automatic regulator of the supply of air to the gas, substantially as described and for the purposes set forth.

Eighth, I also claim a washing chamber, constructed substantially as described; that is to say, of a vessel in the lower part of which is a conduit for gas, perforated with numerous small holes, so that the supply of gas is finely divided and compelled to enter the water in numerous small jets, substantially as and for the purposes set forth. Ninth, I also claim the combination of a washing chamber, so constructed with an apparatus for producing a current of air to cause the gas to more certainly be passed through the water, substantially as described and for the purposes mentioned.

Tenth, I also claim the combination of the cooling chamber, constructed as described, with the washing and purifying chambers, and also with the naphtha fountain, substantially as set forth, so that it can be used as a cooling chamber and also as a naphtha reservoir or chamber in the production of fixed or vapor gas, substantially as set forth.

47,987.—Corn Planter.—Matilda Saviers, Wyandott,
Ohio, administratrix of the estate of M. Saviers, deceased, and W. N. Ayres, Bristolville, Ohio:
We claim the re iprocating silde, K, provided with the projections,
d.d. arranged to work in relation with the perforated bottoms of the
seed boxes, J, in connection with the cam, M, bar, L, and spring, N,
all arranged substantially as and for the purpose specified.

[This invention relates to a new and improved marking device,
whereby the corn may be planted in check rows without previously
marking the ground. The invention also relates to an improved

marking the ground. The invention also relates to an improved mentaling the ground. The inventor also relates to an improved seed-dropping device and to an improved seed-covering arrangement, whereby the seed may, be dropped or planted with certainty by an automatic mechanism, and covered with earth in a prope

47,988.—Corn Sheller.—Frederick H. Schroeder, Bush-

nell, Ill.:
I claim the employment of the stop valve, S, provided with flexible langes, when constructed and operating substantially as herein decribed.

47,089.—Gang Plow.—Jacob Seibel, Manlius, Ill.:
I cla m the combination of the seat, I, fulcrumed at J; perforate I standard, M, the spring, K, provided with the pin, a, the lever, L, or its equivalent, for operating said spring and pin, the rod, N, and plow beams, P, arranged and operating substantially as and for the purposes herein specified and shown.

beams, P, arranged and operating substantiany as an acceptance posses herein specified and shown.

47,990.—Corn Planter.—Jacob Seibel, Manlius, Ill.:
First, I claim the combination of the cutters, x, and runners, P, arranged and operating substantially as and for the purposes herein shown and described.

Second, I claim the combination and arrangement of the cutters, x, the runners, P, join ed at the front end, the cross bar, N, standards, R, levers, H, cross bar, I, and standard, J, operating as and for the purpose delineated and set orth.

-Air-cooling Apparatus.-N. S. Shaler, Newport

Ky.:
I claim the apparatus, substantially as explained; that is, consist ing of the series of cells, the tortuous passage, and the propeller, of the equivalent thereof, arranged in manner and so as to operate as and for the purpose specified.

47,992.—Ambulance.—William Slatter, Allegheny City,

Pa.:
I claim attaching the thills to the underside of the axle, and bracing the thills and axle together by braces running from the center of the springs to the thills, constructed, arranged and operating substantially as herein described and for the purpose set forth.

47,993.—Boring Jar.—Joseph Slusser, Cincinnati, Ohio: I claim the mode of constructing a well-boring jat, of two pans of quarter round bars or sectors, conducted to each other by sleeves, and closing each other's interstices in the act of sliding together, substantially as set forth.

47,994.—Farm Gate.—Wm. F. Smelley, Vevay, Ind.: I claim the combination of the rack, H, with the pivoted truss, G, and gate, A B C F, substantially as and for the purposes set forth. 47,995.—Corn Harvester.—John W. Smith, Iowa Point

Kansas:
I claim, First, In combination with the sled runners, the movable platform, B, operated substantially in the manner described.
Second, Making said platform in two parts, with front end hinged to the main body of the platform, and arranged to move up or down the inclined plane, H, in the manner shown and described.
Third, I claim the rule, C, constructed substantially as described, and revolved by the pressure of the stalks upon its arms, when used in connection with the guides, for the purpose specified.

47,996.—Rotury Digger.—Henry Stanley, Troy, N. Y.: I claim, First, frae combination of the H-formed, g., with the tooth links, f, provided with lugs, h, a!l being constructed as speci-fied.

tooth inks, I, provided with lugs, h, a!! being constructed as specified.

Second, I claim having the ends of the teeth made of conical form when fitting into corresponding-shaped sockets in the links, substantially as described.

Third, I claim the lips, k, to prevent the turning of the teeth, substantially as described.

Fourth, I claim the employment of one or more intermediate shaft supporters, H, in combination with the chain rollers, substantially as herein described.

Fith, I claim the employment of the toothed segment, O, in combination with the wheels, L, substantially as described.

Sixth, I claim the combination of the lever by which the digging teeth are raised and lowered with the driver's seat, substantially as described.

Sixth, I claim the combination of the sever system and several substantially as teeth are raised and lowered with the driver's seat, substantially as described.

Seventh, I claim the pawls, S.T., in combination with the lever, R, and ratchet, Q, substantially as described.

Eighth, I claim the employ meet of a locking device, V, or its equivalent, in combination with the raising mechanism, substantially as and for the purpose described.

Ninth, I claim the employment of an adjustable driver's seat, in combination with one or more endless chains of digging teeth, substantially as described.

Tenth, I claim the combination of the cranks, N N, with the rear roller, substantially as described.

Eleventh, I claim the employment of the raising lever in combination with the segment or its equivalent, substantially in the manner herein shown and described.

Twelfth, I also claim the adjustable handle of the raising lever in combination with the value of the substantially as the substantially in the manner herein shown and described.

47,997.—Lathes.—John Stark, Waltham, Mass:
I claim the combination as well as the arrangement of the slicing contractor, D', and its operative mechanism, E and I, with the tubular arbor, A, and the clamp, C, having the cone, c, and being fixed to the arbor so as to operate therewith, substantially as described.

to the arbor so as to operate therewith, substantially as described.

I also claim the combination of the chamber, h, and the socket, e, with the tubular arbor. A, tubular clamp, and its confractor, b, provided with screws, Eand I, constructed, combined and arranged rubstantially set forth.

47,998.—Time Keeper.—James Stephenson, Canandaigua, N. Y.:

I claim, First, A detent consisting of a cylindrical block, D', formed with a rim, d, and adapted to operate in connection with a balance wheel, F, to regulate the escape wheel, substantially as and for the purpose set forth.

Second, I claim communicating motion from the detent to the balance wheel, and vice versa, through the medium of a segmental rack. E', and pinion, F', substantially as andfor the object specified, 47,999.—Exercising Machine.—T. P. Thorne New York

-Exercising Machine.-T. P. Thorpe, New York

City:
I claim the springs, P.P., or their equivalent, combined with the walking beam, marked, C. and the shaft, N, together with the post, B, for the purpose herein described.
I also claim the device as a new article of manufacture, as above described, for the purpose herein intended and described.

48,000.—Grate.—Wm. I. Towne, Newton, Mass.:
1 claim suspending the journals, b, of thegrate on rollers, d, substantially as set forth for the purpose specified.
48,001.—Sawing Machine.—A. E. and I. V. Warner, Norwalk, Ohio:
we claim the above described arrangement of the cross-cut and

circulars aws when operated substantially in the manner and for the purposes set forth.

purposes set forth.

48,002.—Artificial Arm.—Thomas Uren, New York City: I claim the art angement of the straps for severing the artificial arm to to the body and on the stump of the upper amp utated arm, withoutany strap p assing across the cheet, in combination with the wing of the upper artificial arm extending in front of the shoulder, substantially as and for the purpose specified. I also claim the means herein described for holding out the covering of the open part of the artificial arm at the junction of the upper and lower arm, and in combination therewith, substantially as and for the purpose specified.

the open part of the arthicial arm at the junction of the upper and lower arm, and in combination therewith, substantially as and for the purpose specified.

I also claim connecting the turning wrist piece with the fore-arm by a turning flute joint, in combination with the two cords attached to the cross-bar in the wrist piece, and hitched to the fore-arm and on opposite sides thereof, substantially as and for the purpose described.

I also claim the cord which is attached to the upper arm, and passes through the fore-arm and hand, and is attached to the thumb and foreinger, to open the thumb and fager by simply depressing the hand so as to bring the fore-arm in line or nearly in line with the upper arm, in combination with the cord to elevate the fore-arm and close the thumb and finger by a forward movement of the stump of the natural arm, substantially as and for the purpose described.

And I also claim, incombination with the hinged fingers, the employment of a cord or cords attached to the lingers, and which can be hickhed to a pin or the equivalent outside to hold the fingers is a partially cigated position, substantially as described.

position, substantially as described.

48,003.—Locking and Stopping Window-blinds.—Jekn Weitzel, Mott Haven, N. Y.:

I claim, First, The spring catch, E, and notched rod, D, applled, in combination with each other, with the stile, A, and with arms, C, or their equivaents, at one end of the slats, and operating substantially as herein specified.

Second, The piv otarms, C, each cast of one piece, with its respective pivot. c, and with a dovetail groove in one side, substantially as herein described, to enable it to be secured to the slat without nalls, screws, or other fastenings.

48,004.—Boring Machine for Artesian Wells.—George Washington Wicks, New York City:

washing off wicks, New 1 ork City;
I claim, First, The apparatus described, when constructed substantially as show, for imparting to the drill the alternate vertical and rotary motions, as described.
Second, Spurgear, c. with its rods or frame.vork and the slide piece, x, in combination with the tripper, D, and drill Z, operating together substantially in the manner and for the purpose described.

48,005.—Explosive Shell.—Lewis E. Williams, Peeks kill, N. Y.:

46,005.—EAPHOSITE CHAIR SHEET SHEET

contain explosive material, substantially as described.

48,006.—Drill for Boring Oil Wells, Etc.—D. H. Wiswell and George W. Shaw, Buffalo, N. Y.:

First, We claim the rotating frame, H, in connection with the cross-head, F, uprights, e.e. guides, r and m, pawl and ratchet, j j, substantially as herein described.

Second, Frame, H, in combination with pawl, N, and ratchet, M, all constructed and operating in the manner specified.

Third, An automatic rotating drill, constructed and arranged substantially as herein set forth.

48,007.—Sewing Machine.—August Wittneben, New York City:

First, I claim the employment and use of a revolving wheel, F, with internal camsacting through morable pins the lever, E, in the manner and for the purpose substantially as described.

Second, I claim the arrangement of the lever, E, moving on a universal joint and combination with the feeding pad, I, and operated by the wheel, F, and the spring rod, W, or its equivalent, in the manner as specified.

specified.
Third, I claim operating the needle bar, P, from the end of the lever, E, by means of the lever, M, and rod, N, in the manner substantially as

E, by means of the lever, A, and rod, N, in the manner substantially as set forth.
Fourth, I claim the arrangements of the plate, V, on the end of the lever, E, for the purpose of regulating the amount of feed, operating substantially in the manner specified.

Fifth I claim the application of the feeding pad above the material operated upon, when arranged and operated in the manner substantially sactestified:

Sixh, I claim the combination of the revolving ring, F, with internal cams, the pins, a b'c', lever, E, feeding pad, L, spring rod, W, the rod, N, and needle bar, P, when arranged and operating in the man ner and for the purpose substantially as set forth and specified.

and for the purpose substantially as set forth and specified.

47,008.—Street Steam Railway Car.—Joseph P. Woodbury, Boston, Mass.:

I claim, First, The combination of the geer wheels, C. C' (or cranks and ords, as shown in Figure 7), on the axies, E. E, with the crank shaft, Y. and pinnon, W, and verticut boiler, S, and anglies, U. W. when constructed and operating in the manner and for the purpose described.

Second, The combination of the friction clutches, M. M. N. M. with one or more pinnons, B and L, and geer wheels C' C' and K' K', in the manner and for the purpose set for the purpose berein described.

Set of the purpose set for the purpose berein described.

The combination and the purpose herein set forth.

Fifth, nomen are and for the purpose herein set forth.

Fifth, the manner and for the purpose herein set forth.

-Air Pump.—G. M. Woodward, New York City:
the air pump, D. provided with adjustable or reversible valves,

\*\*santially as described.\*\*

48,010.—Compressing Cartridges around Bullets.—John S. Adams, Taunton, Mass., (Assignor to himself and William C. Dodge, Washington, D. C.):

I claim the paws or levers, C, and D, constructed and operating substantially, as and for the purpose herein set forth.

Second, Connecting the jaws, C, and D, by the arm, a a, and strip E, or their equivalcula for the purpose of securing a positive uniformity of the purpose of securing a positive uniformity of the property of the purpose of securing a positive uniformity of the purpose of the purpose of securing any lateral movement of the jaw, C, and prevent it from being bent laterally by operating the handle. Fourth, The cartridge case rest, n, to ensure the union of the ball and case on the same axial line.

Fifth, The adjustable plug, H, arranged as described for the purpose of day king the machine to bullets of different lengths.

Sixth, The stop pla, e, in combination with the recess or siot for limiting the movements of the jaws, C, and D.

Seconth, The washers, i, in combination with the jaws and face plate, B, as and for the purpose set forth.

A8,011.—Air Injector.—J. A. Bassett. and O. C.

48,011.—Air Injector.—J. A. Bassett, and O. C. Smith, Salem, Mass., (Assignors to Oliver Bennett, Boston, Mass.):

Vectaim the injection of airthrough adjustable openings constructed as described, into and through burning fuel, by means of the force of a jet of steam used direct from the boiler, or superheated asmay be required.

[The object of this invention is to enject air into and through the ignited fuel of a furnace, by means of the force of jets of ordinary or super-heated steam through adjustable openings.]

heated steam through adjustable openings.]

48,012.—Boring Wells.—William H. Bechtel (Assignor to himself and B. H. Bartol), Philadelphia, Pa.:
I claim the use, substantially as and for the purpose described, of elliptical or rowal cog wheels, in combination with a well perfug bur or rape, and with the mechanism described or the equivalent to the same, for seizing and releasing the said bar or rope.

48,013.—Bridge.—John Boles, Jr., (Assignor to G. W. and F. Smith), Boston, Mass.:
I clim the combination of the series of arch connections, a a a, the straight braces and counter braces, and their chord or chords, the whole being arranged substantially as set forth.
I also claim the combination of the series of diagonal upright struts, E.E. with the system of braces and counter braces and their chords, the whole being arranged substantially as specified.

48,014.—Cutter for Bread, Meat, Etc.—Dablel Campbell,

48,014.—Cutter for Bread, Meat, Etc.—Daniel Campbell, of Elizabeth, N. J., (Assignor to Henry Seymour,

New York City.)
I claim, First, The application of the knife, D, to parallel oblique slot

C. C., in a frame, B., in connection with the lever, F., attached to the knife and frame, B., all arranged to operate substantially as and for the pur-

sees of forth slide, K, arranged in connection with the knife, D, lever pawl, I, and rack, e, on carriage, G, to operate substantially in the anner, as and for the purpose herein set forth.

J, pawl, I, and rack, e, on carriage, G, to operate substantially in the manner, as and for the purpose herein set forth.

48,015.—Manufacture of Water Proof Fabrics.—Thomas Crossly, Bridgeport, Conn., (Assignor to American Water Proof Cloth Company, Brooklyn, N. Y.):

I claim as a new manufacture, a fabric formed by the combination of a coarse, textile material for a base, with a finer textile material or with fibrous material in the form of a bat or felt, a face, united by a coating or sheet of india rubber or other gum, or compounds thereof, in the manner and with the result, and for the purposes set forth.

I also claim as a new manufacture the fabric having a back or base of fax, cotton, jute, wool or other textile material, coated or covered with a sheet of India rubber or other vulcanizable gums, or the vulcanizable compounds thereof, and having a face of fibrous substances in the form of a bat or felt. or of other textile material, combined and united by pressure and by the vulcanization of the gums, and dyed and printed, or colored, or stamped, or embossed, for the purposes and in the manner described and set forth.

48,016.—Paper Collar.—William L. Duff, Quincy, Ill.,
(Assignor to Henry C. Banks.):
I claim a collar having its lower part slitted, so that portions at the
back will pass outside of the cravat in the manner and for the purpose
substantially as set forth.

48,017.—Pipe Tongs.—Samuel F. Gamage, (Assignor to himself and N. M. Dow), Boston, Mass.

I claim the solid screw and fulcrum, designated respectively by the letters, fg h i, as operated by the milled aut, E, applied and arranged in he opening and slot in the stationary jaw lever, substantially in the manner and for the purposes above specified.

48,018.—Self-Centering Punches, Antedated May 16, 1865.
—Samuel Z. Hall, Camden, N. J., (Assignor to himself and George Mott), Hoboken, N. J.:
I claim, First, The arrungement of the guide socket, F, which contains the center punch within a hinged frame, applied in combination with the box, or its equivalent, which contains the centering clamp, substantially as and for the purpose herein set fortb.

Second, The arrangement of the guide socket within the said hinged frame to provide for its adjustment substantially as herein described to suit the thickness or depth of the head of a belt or other headed article,

48,019.—Globe Stove.—George W. Herrick, Stuyvesant, N. Y., (Assignor to Samuel W. Gibbs), Albany, N. Y.:

I claim the drop-door, C, in combination with a foot-rest, B, when applied to a globe stove, in the manner substantially as and for the purpose herein set forth.

[Thisinvention consists in combining a drop-door with a foot-rest, it uch a manner that the foot-rest will serve as a support for the door when the latter is open, and prevent the breaking of the hinges of the doo when the latter is opened or allowed todrop

48,020.—Coal-Hod, Ash-Sifter, and Slop-Pail combined.
—Charles Jones, (Assignor to himself and Charles Hodges), Brooklyn, N. Y.:

I claim the pail, A, provided with the cover, C, in combination with the sifter, D, constructed substantially as shown and connected when in use, to the cover, C, by an upright passing through the cover, or an equivalent means—all being constructed of sheet-metal and arranged to form a combined coal-hod, slop-pail and ash sifter, as described.

,021.—Copying Press.—Phineas Lawrence and George Jeffereys, (Assignors to themselves and Benjamin Lawrence), New York City.:

We claim a copying press formed with a cam lever to act upon the forer in combination with the ratchet and pawl for the purposes and as celled.

8,022.—Casting Shot and Shell.—Thomas J. Lovegrove,
(Assignor to himselfand Henry Baldwin, Jr.), Philadelphia. Pa.:
I claim casting shot and shell in a spherical mold, and afterwards roting said mold on a concave or dished surface, substantially in the
sander described, for the purpose set forth.
I also claim the combination of a rotating concave table having a raised
nical center with a spherical mold rolling freely thereon as described. 48,022.

8,023.—Rose for Door-Knob.—Milton V. Nobles, Ro-chester, N. Y., (Assignor to himself and John C. Nobles), Rushford, N. Y.: I claim in combination with the screw sleeve and hub, the pin, gib, or sey, e, for holding the two firmly together when adjusted, substantially a described.

48,024.—Fastening Door-Knobs to their Shanks.—Milton V. Nobles, Rochester, N. Y., (Assignor to himself and John C. Nobles), Rushford, N. Y.:

I daim as a fastening for door-knots and shanks, the combined use of the turning sleeve, catch, and check-pin, with the bub and shank of the knob, substantially as and for the purpose described

48,025.—Fastening Door-Knobs to their Shanks.—Milton
V. Nobles, Rochester, N. Y., (Assignor to himself
and John C. Nobles), Rushford, N. Y.:
I claim as a means of fastening a door-knob to its shank, the combined
see of a split sleeve, and a ring, or ordinary rose plate, with the hub and
shank, substantially as herein described and represented.

48,026.—Drill for Oil and other Wells.—William G. Oliver, (Assignor to himself, Samuel O. Bigelow, George H. Rendel, and David P. Benson), Buffalo, N. Y.:

I claim an expansion drill, consisting mainly of the drill stock, A, hinged drill pick, D, and connecting bar, B, and operated by a vertical up and down motion thereof for the purposes, and substantially as herein along the purposes.

1 also claim the bottom section, E, in combination with the drill stock A, for the purposes and substantial as described.

48,027.—Tool.—A. W. Park, (Assignor to himself and C. J. Winters), Norwich, Conn.:

I claim the implement above shown, comprising combined hammer claw, monkey-wrench, socket-wrench, and screw-driver substantially as

[This invention consists in a combination in a peculiar manner of several different tools so as to join in the same implement a ham mer, a claw, a screw-driver, a socket-wrench and a monkey wrench the whole implement consisting of only two pieces and a nut by whichsaid pieces are connected to and adjusted with each other.]

48,028.—Stave-Cutting Machine, Antedated May 26, 1865.—M. Randolph, St. Louis, Mo., (Assignor to himself, J. Paddock, and Prescott and Burnett), St. Louis, Mo.:

I claim, First, The employment of the plungers, d d, racks, dd, and gear-wheels, ff. or their subs antial equivalents, in combination with the cutter frame, D, for the purpose of removing the cut staves and depositing them under the jointers substantially as herein specified and represented.

postang attent under the jointers substantially as nerein specified and represented.

Second, I claim the arrangement and combination of a double-jointer.

Second, I claim the arrangement of operate in such manner as to complete the jointing of both edges of the stave, at the same time, substantially as herein set forth and described.

Third, I claim operating the jointer, gg, in harmony and conjunction with the culter-frame, D, so that the staves may be cut and jointed without removal from the machine, substantially in the manner herein set forth and specified.

Fourth, The combination of the cutter heads, m m, withthe conveyors, and, constructed and arranged to operate as and for the purposes set forth.

forth.

And Fifth. The combination and relative arrangement of the cutter.

Frame, D, jointer, g g, cutter heads, m m, and conveyors, n n, all being constructed and adjusted to operate conditive substantially as and for he purposes herein set forth and specified.

48,029.—Horse Hay Fork.—Rensselaer Reynolds and Charles Young (Assignors to Rensselaer Reynolds), Stockport, N. Y.:

I claim First, The trigger, D, provided with a lip, e, and applied in combination with the toggle arms. B B', and two hinged gripping jaws, A A', in the manner and for the purpose herein shown and described. Second. The hand-lever, C, attached to the arm, B', and applied in combination with the jaws, A A', and toggle arms, B B' in the manner and for the purpose set forth.

[This invention relates to certain improvements in that class of hay-forks which appears with two bined laws in combination with toggle

forks which operate with two hinger jaws in combination with toggle arms, in such a manner that, when the toggle arms are straightened out the jaws are firmly closed, and a load of hay taken up by them can be hoisted up to any desired hight, and, by a slight pull on one of the toggle arms, they are thrown out of line, the jaws open, and the hay is

dumped.)

48,030.—Amal amator.—H. H. Scoville (Assignor to himself and E. C. Preble), Chicago, Ill.:

I claim, First, Projecting eachbucket on a scroll, from the discharging eye or hub of the exial shaft, substantially in the manner and for the purpose described.

Second, The arrangement of the chamber, f. and screw, d. or ther equivalents, at the discharge of the escroll chamber, substantially in the manner and for the purpose described.

Third, The cylinder, f. and screw, d. constructed and working together, substantially in the manner and for the purpose described.

Fourth, The mode of attaching the screw to the machine for submerging the quartz, substantially as herein described.

Fifth, A machine which discharges the quartz from its scroll submerging chamber directly into its screw conveying chamber, substantially as and for the purposes herein described.

(Assignor to James S. Mason & Co.), Philadelphia,
Pa.:
I claim connecting the two ends of the strip, A, by forming on one end
of the same the lips, a, and in the other end the slots, b, through which
the said lips may be passed, and then bent down to one side or the other,
substantially as described.

48,032.—Cotton Gin.—John Stevens (Assignor to himself and Theodore Bowrne), New York City:
I claim the combination of the large cylinder, B, small roller, D, recip rocating plate, G, feed board, L, doffer plate, J, and pressure roller F all arranged and operating substantially as and for the purposes seforth.

n.

33.—Means of Closing Ship's Deck and Side Lights.

Edmund B. Vannevar (Assignor to E. B. Vannevar & Co.), Boston, Mass.:
claim the hinged staple, G, provided with an adjusting screw, H, tructed substantially as described, and used for the opening and ing of deck and side lights for vessels.

-Safety Tackle.-Plerre Joseph Jamet, Paris.

8,034.—Safety Tackle.—Plerre Joseph Jamet, rais, France.
I claim, First, The construction, substantially as herein described, of a afety tackle for the purpose of holding or maintaining weights in susension during the intervals of pull.
Second, I claim the scillating frame or block under the arrangement escribed, so that the pully or sheaves, together with the rope or cord, erform the function of brake in connection with the cross-head of the ook, substantially in the manner hereinbefore set forth.
Third, The movable cam lever or catch, whether operated by the rope rotherwise, under the arrangement described, so as to prevent brake ction, in the manner and for the purpose set forth.

action, in the manner and for the purpose set forth.

48,035.—Photo-electrotype.—Wm. A. Leggo and Geo.
E. Desbarats, Quebec, Canada:

Weclaim the within described process of producing upon the surface of any transparent picture, drawing, or manuscript, by the action of light a mold capable of yielding a cast in plaster or other suitable material substantially in the manner and for the purposes herein set forth.

### REISSUES.

1,976.—Base Burning Stove.—Dennis G. Littlefield, Albany, N. Y. Patented January 24, 1854. Reissued Nov. 19, 1861; again, August 26, 1862; again, March 3, 1863; again, Nov. 8, 1864; again, Feb. 28, 1865: I claim the combination of a reserve fuel supplying cylinder, a separate fire pot, a chamber to receive the products of combustum, and an exhausting exit flue, substantially as and for the purposes described.

.—Straw Cutter.—Warren Gale and B. B. Belcher Chicopee Falls, Mass., assignee of Warren Gale. Patented, Dec. 18, 1860:

Patented, Dec. 18, 1860:

I claim, First, The arrangement of the knife pivot upon a stepor carrier, so as to produce angular and distance adjustments of the knife to the cutting edges of the stationary blade, or mouth piece, whether the carrier is in one piece with, or attached immediately to the mouth piece, or is separate therefrom.

Second, I claim also the combination and arrangement of the carrier, C, and fianch of the pivot, G, provided respectively with the longitudinal slot, and with the boit hole, b, and transverse slot, c, for producing the adjustments desired, substantially as herein specified.

1,978.—Horse Rake.—Ariel B. Sprout, Hughesville, Pa. Patented November 25, 1862:
I claim sustaining the weight of the gang of curved metallic teeth which are united to a common rake head arranged behind the axie upon such a point of their length that they shall be balanced or nearly so upon a bar which is free to rotate with them, and which is independent of the draught devices, substantially as described.

### DESIGNS.

2.072.—Boiler Lid.—John L. Hadden, Philadelphia, Pa 3—2,077.—Carpet Pattern.—Flemir J. Ney (assignor to the Lowell Manufacturing Company), Lowell,

2,078.—Lemon Press.—Isaac Townsend, Philadelphia. Pa.

## TO OUR READERS.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and 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.

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

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

MODELS are required to accompany applications for Pat entsunder the new law, the same as formerly, excepton design pat ents, when two good drawings are all that are required to accompany cification and oath, except the Gov

# **S**ATENTS

GRANTED

## 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
new inventions in the United States and in all foreign countries during
the past seventeen years. Statistics show that nearly ONE-TRIRD of all
the applications made for patents in the United States are solicited brough 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 eventeen years' experience in pre-paring specifications and drawings for the United States Patent Office, the proprietors of the SCIENTIFIC AMERICANiare perfectly con versant with the preparation of applications in the best manner, and the transction of all business before the Patent Office; but they

A

MESSES. MUNN & Co.:—I take pleasure in stating that, while I held the office of Commissioner of Patents, More train one-fourth of all the Science of the Office CAME THROUGH YOUR HANDS. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the office, a marked degree or promptness, skill, and fidely to the interests of your employers. Yours very truly,

take pleasure in presenting the annexed testimonials from the three

last ex-Commissioners of Patents.

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 appented to the office of Postmaster-General of the United States. Soon after entering upon his new duties, in March, 1859, he addressed to us the

connections and it is not connected by the results of the second connected by the second connection connections.

Hon. Wm. D. Bishop. late Member of Congress from Connecticut, succeeded Mr. Holt as Commissioner of Patents. Upon resigning the office he wrote to us as follows:

Mrssrs, Munn & Co. —It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business on inventors before the Patent Office was transacted through your agency; and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy.

Very respectfully, your obedient servant, w. M. D Bishop.

### THE EXAMINATION OF INVENTIONS

Persons having conceived an idea which they think may be patent ble, 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 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 18

ventors throughout the country, Messrs. MUNN & CO. would state that they have acted as agents for more than TWENTY THOUSAND inventors! Infact, 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 patm most flattering testimonials for the vices rendered them; and the wealth which has inured to the individ uals 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 they 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 "iberalterms.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The service which Messrs. MUNN & CO. render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there; but is an opinion based upon what knowledge 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 Branci Office of Messrs. MUNN &.CO., corner of F and Seventh streets, Washington, by experienced and competent persons. Manythousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursuo Address MUNN & CO., No 37 Park Row, New York.

# THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patente who are about erecting extensive works for manufacturing under heir patents, should have their claims examined carefully by com-petent attorneys, to see if they are not likely to infringe some exist ing patent, oefore making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is alwayssettled upon in advance, after knowing the nature of the in vention and being informed of the points on which an opinion is so licited. Forfurther particulars address MUNN & CO., No. 37 Park Row, New York.

The Patent Laws, enacted by Congress on the 2d of March, 1861 are now in full to 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 cepting natives of such countries as discriminate against citizen the United States-thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners, except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

### CAVEATS.

Persons desiring to file a caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention; the Government fee for a caveat is \$10. A pamphlet of advice re-