40,354.—Steam Pressnre Regnlator.—Joseph Nason, New Yerk City:
I claim, first, The employment of the rotating coil, E, dense fluid, F, consection, I, leading from the vessel in which the pressure is to be regulated, and connection, K, leading to s damper or valve adapted to control such pressure, the several parts being arranged substantially in the manner and for the purpose herein set forth.

Second, I claim in connection with the above described rotating coil, the employment of the volute, J, or equivalent means of inducing a self-adjusting variable force opposing the pressure of the steam, substantially as and for the purpose herein set forth.

40,355.—Hoop Skirt.—Caesar Neuman, New York City I claim the employment of the self-adjusting waist-band, A, with elastic strips, a a', in combination with bustle rings, B B', provide with sliding clasps, b b', arranged in relation to the surps, a a', and tapes, D, in the manner and for the purpose substantially as shown and described.

[The object of this invention is to make the waist-band and the bustle-rings of a hoop skirt self-adjustable, according to the varying thickness of the body of the wearer.]

-Sawing Machine.—Sanford W. Northrop, Albany

40,356.—Sawing Machine.—Balliord w. Northiop, Assum, N. Y.:
I claim the arrangement of the recip rocating slides, B.B'. carrying the feed rollers, C. in combination with the rock shafes, D.D', arms, b', and set screws, c', and with the rod, E. connecting the cranks, d', the whole constructed and operating in the manner and for the purpose substantially as shown and described.

Also making the rod, E. adjustable to ward and from the center of the rock shafe, D, as described so that the motion of the slides, B.B', can be brought in any 'desired relation toward each other, and the timber cut in two or moreparts as specified.

Also the hand screw, F, in combination with the slides, B.B', and rock shaft, D, constructed and operating as and for the purpose set forth.

forth.

40,357.—Moulding Artificial Teeth.—James A. Pelton,
Middletown, Conn.:

I claim, first, The application of a mold substantially as above described to the for mation of a set of six front teeth, in one continuous, curvilinear block.

40.358 .- Watch .- Edward Favre Perret, Locle, Switzer land:

18101:
I claim so combining the seconds hand with the fourth or secon wheel that the seconds hand can be stopped and permanently held started at pleasure, without affecting the movements of the secon wheel, substantially as set forth.

wheel, substantially as set forth.

40,359.—Grain Drill.—O. M. Pond, Independence, Iowa:
I claim, first, The stationary lip, D', and hinged lip, D, in combination with the vibrating rake, I, arranged and operating as and for the
purpose specified.
Second, I claim the adjusting nut, C', bolt, B, spring, E, and nut, F,
in combination with the iever, G, arranged as and for the purpose de-

40,360.-Washing Machine.-Haskell Preble, Machias

Maine

maine:
I claim the arrangement of the sliding carriage, D, rod, E, ievers,
FG, and weight, H, with the pressure board, C, and cylinder, B, in
the manner herein shown and described.

(This invention consists in the employment or use of a rotatin fluted cylinder and a serpentine fluted pressure board arranged wit a weight, levers and connecting rod, in such a manner that the clothes may be subjected to agreateror less pressure as desired and cleansed thoroughly and expeditiously without the least injury.]

40,361.—Lamp Shade Snpporter.—Christian Reichman

(0.361.—Lamp Shaue Supporter.—Chinovan Arthural Philadelphia, Pa.:

As an improved article of manufacture I claim a lamp shade supporter with aprings, a' b', and projections, c. cut at one operation in single olece out of sheet metal and then bent in annular form with is code secured by the piece, f, and slots, ce, or other fastening which will admit of the expansion and contraction of the supporter obstantially as and for the purpose herein set forth.

[This invention consists in stamping or cutting the shade supporte in one piece out of a plate of sheet metal, and in such a manner that it will be straight when first cut, and be capable of being bent in the form of a circle or band and admit of being adjusted to the shade with the greatest facility.]

40,362.—Exploding Torpedoes, Mines, &c.—Swen Eskill Sanborn, Philadelphia, Ps.:

I claim, first, The employment oruse for the purpose of exploding torpedoes, &c., of an apparatus, aubasantially such as herein described, whe reby the time when the explosion will take place can be determined and adjusted beforehand with perfect accoracy.

Second, The notched disk, V, lever, W, arm, v, &pp. u, cam, Y, trigger, K, and hammer, I, in combination with a clock movement, constructed and operating in the manner and for the purpose substantially as set forth.

Third, The application of the notched disk, V, to the index hand,

onstructed and operating in the control of the notched disk, V, to the index hand Third, The application of the notched disk, V, to the index hand, moving on the dial plate, O, substantially as and for the purpose

(An engraving and description of this invention will be published in early number of the SCIENTIFIC AMERICAN.]

40,363.—Hoop Skirt.—Leopold Sanders, New York City: I claim the braids or cords, c, in combination with the clasps, D, the above parts being applied to the tapes, B, and all arranged as and for the purpose herein set forth.

This invention relates to a new and improved means for securing (almost related to a few and improve means to security the hoops of the skirt to the tapes, whereby a very firm and strong connection is obtained between the parts aforesaid and all shifting of moving of the same out of their proper relative position effectually

40,364.—Machine for Coating Oil Cloth.—Milo Sawyer, Cincinnati, Ohio:

I claim the application of an adhesive, elastic or tractive cylinder, which draws the cloth through the machine or under a scraper, for the purpose of coating cloth in long pieces, as herein above described, thus obviating the necessity of stretching it in frames, or cutting it is short pleces.

40,365.—Grain Drill.—S. C. Schofield, Freeport, Ill.:
I claim, first, The employment or use of the rods, h, attached to
the vibrating frame, E, and passing through the perforated plate, d,
and bottom of the seed box, D, the rods, h, being provided with
leathers, j, and all arranged to operate as andfor the purpose set

forth. Second, The arrangement and combination of the bar, G, with the bars, p, attached to it, standards, g, teeth or plows, H', lever, I, and bar, s, all arranged as shown, to admit of the adjustment of the teeth or plows, as set forth.

[This invention relates, first, to an improvement in the seed-dis tributing apparatus, whereby the seed is discharged in an uniform manner and in greater or iess quantity on a given area as may be required, and the distribution of the seed stopped entirely at any time at the will of the driver or operator. The invention relates, se cond, to an improvement in the arrangement of the plows or cover ers, whereby the same may be adjusted at any angle required to ob tain the proper depth of penetration, and also entirely elevated above the surface of the ground when required to be inoperative.]

40,366.—Heater.—Edwin Sprague, Alleghany City, Pa. I claim the arrangement of the pipe, e, register, o, chamber, x, pipe, y, receiving chamber, b, branch, j, damper, r, and vessel, t, the whole being constructed, arranged and operating substantially as herein described and for the purpose set forth.

40.367.—Cultivator.—R. H. Springstead. Constantine

Mich.: I claim the arrangement of the lever, C, sliding bar, F, its attached

teeth, H, and their hinged bar, E, with the hinged bar, I. its attached teeth, lever, h i, and standard, J, all in the manner herein shown and described.

and described.
I also claim the arrangement with the hinged bars, E I, axie, C, and wheels, B, of the guards, b c, all operating together in the manner berein shown and described.

(This invention consists in the arrangement of stay bars or guards extending from the ends of the frame outside of the wheels to the endsof the axles, in combination with braces running from the axles to teeth which run outside of the wheels, in such a manner that the wheels are fully protected from lateral obstructions, and at the same time the teeth are enabled to run close up to a fence or to a stump or any other obstruction on the side of the cultivator. The invention consists, further, in the arrangement of  $\kappa$  laterally sliding bar with two hingedteeth, in combination with a hinged vertically adjustable bar and suitable hand levers, in such a manner that the driver is enabled to adjust the plows in a lateral and in a vertical direction henever he finds it necessary to do so.]

40,368.—Lamp.—W. G. Sterling, Bridgeport, Conn.; I claim the combination of the skeleton bridge, II, with the tube, G, and also in combination with the disk, L, to operate substantially as described.

as described.

40,369.—Filter.—Charles Süssner, a citizen of Great Britain residing in the United States:

I claim the arrangement of the two filters or filtering chambers, CC, with reference to the inlet and outlet pipes extending therefrom and to the chamber, B, and its outlet pipe, d, in the manner and for the purpose substantially as set forth.

I claim also the movable diaphragms, cc', made to slide in the filtering chamber for packing or loosening the filtering material substantially as described.

40 370

tering chamber for packing or loosening the filtering material substantially as described.

40,370.—Machine for making Dough, Paste, &c.—Ebenezer Stevens. London, England. Patented in England Dec. 24, 1862:

I claim the dough-mixer hereinbefore described, composed substantially of prongs secured to a cranked axis or bar, so that it may be readily withdrawn from the dough when the axis is uppermost. I also claim the combination of a stationary frame to support the gearing by which the dough-mixer is worked with a removable mixing vessel, in such manner that the connection of the gearing with the dough mixer in the mixing vessel may be disconnected to permit the dough to be conveyed in the mixing vessel to any part of the bakery, substantially as herein set forth.

I also claim the combination of the dough-mixer with a flour hopper and flour agitators, or their equivalent, whereby the flour thrown in massinto the flour hop per is delivered gradually to the mixing vessel during the mixing of the dough, substantially as herein set forth.

I also claim the combination of the flour hopper and its agitators with variable slides to regulate the discharge of flour to the mixing vessels beneath, substantially as herein set forth.

I also claim the combination of the flour hopper and the mixing vessels with a dusting board between the two to distribute the flour into the mixing vessels, substantially as herein set forth.

I also claim the combination of the flour agitators, or other moving appurtenances of the flour hopper, with the dough-mixer, by a removable connection, so that the former may be thrown out of gear when the flour is exhausted, substantially as herein set forth.

I also claim the combination of the flour agitators, or other moving appurtenances of the flour hopper, with the dough mixer, by a removable connection, so that the former may be thrown out of gear when the flour is exhausted, substantially as herein set forth.

I also claim the combination of the dough-mixer with change gear-ming so that it may

orth.

I also claim the combination of the dough-mixer with duplex gear, it the two ends of the machine, so that an equal motion is communicated to bothendsof the dough-mixer simultaneously, substantially is herein set forth.

I also claim the combination of the driving spindles of the dough-mixer at the two ends of the machine with one shifting lever, so that nicer at the two ends of the machine with one shifting lever, so that lough-mixer, substantially as herein set forth.

I also claim the combination of a mixing vessel fitted with a mixer, which is also the forming a double bottom, to permit the temperature of the mixing vessel to be varied by the application of water or steam, unstantially as herein set forth,

aubstandially as berein set tortin,

40,371.—Furnace for re-burning Bone-black.—Gottfried

Thulemeyer, New York City:
I claim, first, The horse-shoe shaped retorts, C, arranged in the
furnace, A, in the manner and for the purpose substantially as herein
shown and described.
Second, The partition plate, E, when made whole or in sections, and provided with apertures, b, in combination with the retorts, C,
and furnace, A, all constructed and operating substantially as and for
the purpose set forth.
Third The arrangement of one or more series of retorts, C, between two fire-places, B B, in combination with the particular plate,
E, side flues, de, and end flues, f, all constructed and operating in
the manner and for the purpose substantially as specified.

40,372.—Manufacturing Tin Cans.—J. E. Vansant, Louisville, Ky.:

Ville, K.y.:

I claim the stationary and movable aws, A. C., provided with the cop clamp, D, and operated through the medium of the levers, E. G., truler to the combination with the former, H, all arranged to operate as and for the purpose herein set forth.

[This invention relates to a new and improved machine for manufacturing cylindrical tin cans, and it consists in the employment of a stationary and movable jaw, having a loop clamp attached to them the jaw being operated by a treadle and levers, the latter being provided with a weight and all arranged and used in connection with a

0,373.—Signal Apparatus for Railways.—Eugeni Vin-cenzi, Parma, Italy : I claim arranging and combi ning apparatus, substantially as here-nbefore described.

40,374.—Water Elevator.-T. J. Wadleigh, Sutton, N. H.: 40,374.—Water Elevator.—T. J. Wadleign, Sutton, N. H.;
I claim the two drums, C. C. placed loosely on the shaft, B. connected by gears, as shown, and provided with levers, I I, in combination with the locking device for alternately connecting the drums to the shaft, the same consisting of the pivoted button and plate, H, and the shoulders or projection, I, at the inner ends of the drums. I further claim the particular man ner of operating the levers, I, to unlock or detach the drums from the shaft, B, to wit, by means of the spiral grooves, cc, in the drums, C, with the ropes or chains, d, working thereon, substantially as described.

working intereous, substantiary as described.

[This invention consists in the employment of a windlass provided with two loose drums, to each of which a bucket is attached by a rope or chain, said drums being provided each with a gear into which a or case, said unuse being provided with a lever; the above parts being used in connection with a locking device, and all arranged in such a manner that, by a continuous movement or rotation of the windlass in one direction, the buckets may be raised and lowered, the two buckets moving in opposite directions, that is to say, one be raised while the other is lowered, and the filled bucket, as it reaches its highest or culminating point, tilt edand deprived of its contents.]

49,375.—Heater.—Anton Weller, Albany, N. Y.:
I claim the series of contracted air passages, o'c c'c, formed and applied as seedided, when combined with the fire pot, A, hollow base, D, ash pit, B, chambers, E F, cylinders, H I, cap, J, and flue, G, all constructed, arranged and operating in the manner and for the purposes herein shown and described.

(This invention consists in arranging a cold-air or air-heating passage with a draught flue and fire chamber, of a stove or air-heating furnace in such a manner that a very efficient heat-radiating and air-heating stove are combined, and the greatest possible amount of heat obtained from a given quantity of fuel.]

40,376.—Gas Blow-pipe.—A. H. Wood, Boston, Mass. I claim the employment, in a gas blow-pipe, of one or more revoire for containing water or other volatile substance, and provails a means of heating the same, so as to produce vapor to chique with the gas and theme for the paragraph of inventity ng heat, substantisity as described.

I also claim the cap, F, provided with holes, f, and so arranged ss. control the admission of air through the holes, e, in the manner and for the purpose substantially as herein described.

40,377.—Paddle-wheel.—Leonard Ames, Wanbeck, Wis., and Melville Miles, Pepin, Wis., assignors to Leonard

and Meivine mites, 1 cp....,

Ames:
We claim a paddle wheel having its floats or blades constructed of a flat board, Cwith a series of parallel blocks, D, attached tolt at right angles to said blocks, beyond the board, being of wedge-shape in their transverse section, substantially as and for the purpose set forth. We further claim having theouter edge of the beards, C, rounded as shown at a, and also the outer and inner ends of the blocks, D, rounded as shown at bd, for the purpose specified.

40,378.—Sugar Evaporator.—David Beasley, Boone Co., Ind., assignor through mesne assignments to T. C. Bartle, Independence, Iowa:
I claim the combination and arrangement of the evaporating pans, B C D, and water dampers, E E E, for the uses and purposes substantially as set forth.

179.—Skirt Wire.—William Darker, Jr. (assignor to J. B. Thompson), Philadelphia, Pa.: 
lam skirt wire with a woren covering as a new manufacture, 
tantially as herein described. 40,379

40,380.—Field Roller.—Chester Dunham (assignor to himself and William Heston), Bedford, Ohio:
I claim the rollers, D D, fitted in frames, C C, attached to the box, A, or a saltable frame, as shown, in combination with the roller, H, attached to a box. G, or a suitable frame, which is connected to the frame or box, A, of the rollers, D, by an universal joint, E, all arranged as and for the purposes herein set forth.

[The object of this invention is to obtain a roller for rolling land which will conform to the inequalities of the surface over which it passes, and thereby perform its work in a more thorough manner than those previously constructed.]

40,381.—Curtain Fixture.—E. M. Judd (assignor to H. L. Judd), New Britain, Conn.:

I claim the pin, d. formed with the mortise, 1, for receiving the tape, and with the shoulder, 2, for securing the metallic end, c, to the roller, a, as specified.

40,382.—Covering for the Head.—T. S. Lambert, Peeks kill, N. Y., assignor to J. O. Wood, Southfield, N. Y. I claim the application within a covering for the head, or to an part of wearing appared, of sand paper, or its equivalent, substantially as and for the purpose described,

40.383

40,383.—Apparatus for Stretching Hat Bodies.—T. G. Oakley and W. R. Finch, Brooklyn, N. Y.: We claim the two blocks, B. B. attached to the pivoted arms, C. C. and operated through the medium of the cam. H. and spring, D. or heir equivalents. substantially as and for the purpose herein set

forth.

40,384.—String-bearing for Pianofortes.—R. A. Tooker
New York City, assignor to himself and W.B. Bradbury, Bloomfield, N.J.:

I claim the string bearing composed of a screw having its head slotted for the reception of the strings or strings and a screw thread, or
such slotted head fitted with a nut, for the purpose of securing the
parts of the head upen the string or strings, substantially as and for
the purpose herein specified.;

(This improved string-bearing, which may be employed at either or both ends of the string, and which serves the purposes of securing the string at a proper elevation for accurately regulating the length and direction of the vibrating portion of the string and maintaining proper distribution of the scale, consists of a screw having a thread on its stem or body, by which to secure it in the sound-board bridge or to the sound board itself without the use of the bridge, or in the wrest plank or wrest-plank bridge, and a slotted head having a screw thread on the exterior, for the reception of a nut by which to clamp the string or strings within the slot or slots, in such manner as to give them a firm and durable bearing both above, below and on both sides.

40,385.—Projectile for Fire arms.—O. G. Warren (assignor to Joshua Barnes), New York City:
I claim the combination of the false powder chamber and the hollow shot, to holdall the charge, and to sustain the greater part of the shock of the explosion, in the manner described.

40,38c.—Grinding and smoothing Shot and Shell.—Jarvis Williams (assignor to E. T. Trofitter), Boston, Mass.: I claim, first, The adjustable frame, F, provided with the concave rollers, G G, in combination with any suitable grinding or polishing wheel, D, sub-tantially as set forth and for the purpose described. Second, Making the rollers, G, in two parts, capable of turning in opposite directions, substantially as and for the purpose described.

# DESIGNS.

1,834.—Reel.—Emma C. Wooster; New York City.

1,835.—Plates of a Parlor Stove.—Isaac De Zenche (assignor to Bridge, Beach & Co.), St. Louis, Mo.

1,836.—Cooking Stove.—Isaac De Zenche (assignor to Bridge, Beach & Co.), St. Louis, Mo.

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On granting the Extension	
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On filing application for design, fo	unteen reare

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dependent upon the final resul.

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H. C. J., of N. J.—The lathe you speak of is a good one for the purpose for aught we know to the contrary.

O. T. B., of Pa.—Construct your boiler passages with

U. S., of Mich.-The typographical error in your article is not important, although we regret it, and are careful that no such irregularities occur.

A. S., of Vt.-We are not in possession of the information ou desire to obtain in regard to prices of barrel headings, profits, &c would require a great deal of time to obtain it, and we are not dis posed to undertake it. Harrison, of New Haven, manufactures a good portable grinding mill. We believe also that those made by the other parties named are good mills.

S. F. P., of Mass.—We do not know of any good ma

chine for cutting down standing wood, but if you want a sawing machine for cutting wood into lengths, you can procure one from F. J. Richmond, Ashford, Conn.

N. C. S., of U. S. A .- The idea of operating an engine by successive explosions of powder is not new. It is possible that the construction of your engine differs from those heretofore made, and if you desire, we can determine this question by an examination in Washington, upon receipt of the usual few of \$5. When you write to us againgive us your full address.

E. H. W., of Wis. - Such a work as you desire on hominy grain elevators has not yet been published

J. N., of Maine.-We do not know of any treatise or man ual published on book binding; we are pleased to see that you manifest a desire to keep up with the improvements of the day. Such a course cannot fail to result advantageously to you.

W. H. H. & Co., of Ohio .- To melt your zinc and prevent it from evaporizing, it being a very volatile metal, you should cover its surface, in the vessel in which it is melted, with soot or pulver-ized charcoal. To reduce the oxide of zinc to a metallic state it is mixed with one-eighth of its weight of ground charcoal, and dis tilled in an iron retort shaped like a kitchen round pot.

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