boys and girls, of the workmen at this immense establish- of No. 23, Vol. XVI. SCIENTIFIC AMERICAN. It was tested tainable and the remuneration was sufficient to support the ment, are educated and trained in schools organized by M. Schneider. So far from the education which they receive putting the workman above his work, the contrary is the case; it enables him to do it more to the satisfaction of his employer, and to his own honor, and better for his own personal advancement.

The system of the instruction given at the Creusof schools is fully detailed in tables hanging on the walls of the Great Exhibition ; drawings of the habitations of the workmen, their churches, their haspitals, and their schools, are also exhibited.

"Statistical tables illustrate the progress and changes of the population : these are divided into two parts-the one showing the progress of their material welfare, their accumulation of property, and their consumption of food and luxuries the other showing the amount of attendance at schools, the relative statistics of individual success in these schools, and the subsequent rank attained by each pupil in the manufactories. From these we gather that the progress of education has always been followed by improved moral character and advanced social being; that the pupils who have most successfully availed themselves of the technical schools are those who have afterward risen to the highest ranks as foremen, clerks, superintendents, overseers and engineers, in the works themselves."

These tables also show "the organization of the schools, the programme of subjects taught, distribution of pupils' time, samples of their mechanical and mathematical drawings, samples of their hand and eye sketches, examples of writing and French composition, lists of their studies in religion, sacred history, French history and geography; studies in arithmetic, algebra, elementary geometry, and descriptive geometry; specimens of ornamental writing and map draw ing. These are for the boys. But the girls also are well educated, with the difference that for plain drawing and geometry are substituted needle-work and dress-making. They are also taught book-keeping." It was remarked this education -fully equal to that taught in most of our high schoolsdoes not put the workman above his work; and the magnificent display in almost any branch of heavy iron and steel manufacture placed by the Creusot works in the Exhibition. is as finely finished, both as regards accuracy and beauty of laid up under the edge of the boiler. The fire grates were finish, as it is possible to make iron and steel. Fully equal to that of the most ignorant and dextrous of the English workmen.

It has been intimated on more than one occasion, by a prominent political economist of this country, that it would not harmonize with the "American idea" for employers to manifest any interest in the welfare and advancement of their employes. We believe this to be ridiculous fallacy.

No doubt American mechanics will strongly object to be ostentatiously patronized by that spirit of vanity which is so often illustrated in founding educational and theological establishments, so as to afford a prominent place to display the name of the founder. But an employer who cannot manifest an interest in the welfare of those employed by him, and those depending on them, without offending that proper pride which belongs to any man who is good for anything, by ostentatiously patting them on the back, and doing good with a loud blowing of horns, shows at once that he is a mean fellow-even more stingy, in reality, than one who makes no pretensions.

The moment a man becomes an employer he assumes duties which it is wicked to shrink from ; duties scarcely less sacred than those due from parents to children. It is quite unnecessary to enlarge on these obligations, any one who cannot hide behind a three cent piece will appreciate them just as thoroughly as though they were placed before him in the largest type.

Where you find a man with a keen scent for gratitude, it is a pretty safe rule to set him down as "small potatoes, and few in a hill." To do good, to advance the welfare of others, to add to their happiness, is all the reward a noble nature cares for; and this seems to be the spirit which moves the manager of the Creusot Works.

If one cannot attempt to add to the means of enjoyment of others without the accompanyment of a brass hand, he had better, a good deal, not make the attempt at all.

THE TWENTY-EIGHTH STREET BOILER EXPLOSION.

This catastrophe which occurred Sept. 9th was so remarkable that it has attracted the attention of engineers and practical men throughout the country. The public, generally,

The iron is pronounced of good quality by all practical iron men. The man who has since bought it and cut it up, says it is the best iron he ever found in a boiler. All agree that the boiler was well made. These boilers, of the same size as this, have been tested both by the Metropolitan police inspectors and the steamboat inspectors, to 120 pounds to the square inch, and received their certificate to carry 80 pounds pressure of steam, and have carried that pressure for years. Many of them are now running, carrying 90 and 100 pounds to the square inch.

It was intended to carry 60 pounds pressure to the square inch on this boiler, and the safety valve was supposed to be set to blow off freely at that pressure. It had two steam gages-one in the fire room and one in the engine room. It did its work very easily, running all the time with the damper nearly closed and much of the time with the firedooropen. On the afternoon of the explosion it was not doing more than about half its ordinary work. The engine was running at the time of the explosion and had not been stopped. The boiler had never been known to foam any after the first two days, and it was working to the delight and admiration of the owner and scores of practical steam men who visited it.

The lower portion of the boiler stood in a vault, the arch over the vault coming up a little below midway of the boiler, there being about two inches space between the boiler and arch all around. The fire room was below the arch, and the engine room was above and at one end of it, and the gage cocks and water glass gage were above the arch on the back side of the boiler where the fireman could not see them when at his duties, it being intended that the engineer should have sole charge of the water. This was an arrangement of the engineer himself. It should be borne in mind that the same engineer and fireman had run there, for about four years, three horizontal boilers placed in this vault-the fireman having charge of the fire and water, and the engineer charge of the engine and the machinery generally through the establishment. The boiler stoud upon cast-iron legs that raised the bottom of it sixteen inches from the fire-room floor, which space was open on the front side half way around the boiler and stopped up on the rear side with a four inch brick wall about 20 inches above the floor of the fire room, and the firebox in the boiler was about 7 feet 4 inches high above the grate and contained about 180 square feet of heating surface of the most effective kind, the heat acting with nearly equal force upon every part of it. From the top of the fire-box the heat was conducted down to the bottom of the boiler through 135 tubes, 6 feet long and 21 inches outside diameter, and was conducted directly from the bottom of the boiler to the chimney, and the outside of the boiler was covered with hair felt all over to the very bottom.

The cylinder containing the tubes was 4 feet diameter and 6 feet long, hence would contain, without any tubes, 90 cubic feet of water. The tubes would displace 27 to cubic feet leaving the water contents of the tube cylinder $62\frac{1}{3}$ cubic feet, or more than two thirds as much as it would be if it had no tubes in it. The water spaces between the tubes and the shell would average about six inches thick. The water spaces around the fire-box were nowhere less than four inches thick. and would average full six inches and a half thick. The gage cocks were set to carry from fifteen to twenty inches depth of water on the crown sheet. In regular working order it carried over 1,300 gallons of water, or about 21 hogsheads, about one cubic foot to every four feet and a half of heating surface. The ordinary run of stationary tubular boilers carry one cubic foot of water to from five and a half to seven square feet of heating surface; railroad locomotive boilers, a cubic foot of water to from eight to eleven feet of heating surface; and steam fire engines a cubic foot of water to from thirty to thirty-two feet of heating surface.

The evaporating power of this boiler, as near as we can arrive at it, was about 470 gallons per hour. The quantity of water on the crown sheet about 315 gallons, as designed to be worked, hence it would take forty minutes to uncover the crown sheet, and about twenty minutes more to get the water down to the upper tube head, which would have to occur before the tubes could heat.

The upper ends of the tubes and all the upper portion of the fire box showed unmistakable evidence of having been over-heated. The lower tube head blew out taking the tubes with it, the head and most of the tubes remaining where the boiler stood, the tubes first coming out of the upper head. There were 135 two-and-a-half-inch tubes equally distributed over a fifty-two-inch head well expanded with good projec tions on each end outside of the heads, and if not over-heated would not have vielded at three times the pressure that other portions of the boiler was able to withstand.

by hydrostatic pressure to 115 pounds to the square inch. apprentice. It is not so now. To enter a good shop as an apprectice requires in most cases influence and the position is granted as a favor. The amount paid is rarely more than enough to liquidate board bills, if it is even so much, and the time required from three to five years. There are adequate reasons for this change. The apprentice must be furnished with good and valuable tools and his work is of as high a character as his increasing capabilities will warrant, not only for the purpose of advancing his interests but for the benefit of his employer. It is not surprising, therefore, that the first year or so of his apprenticeship proves, from breaking of tools and spoiling of jobs, unprofitable to the proprietor.

> Again, there is no adequate means to compel an apprentice to fulfill his contract with his employer. He may, soon as he deems himself competent to do work which brings higher pay, leave his shop and go elsewhere. Consequently, master machinists prefer to employ or dinary laborers for their rougher work and journeymen for the better quality. Under these circumstances we do not know how to advise you.

OFFICIAL REPORT OF PATENTS ULAIMS AND

Issued by the United States Patent Office,

FOR THE WEEK ENDING OCTOBER 1. 1867. Reported Officially for the Scientific Ame

PATENTS ARE GRANTED FOR SEVENTEEN YEARS the following being a schedule of fees --

Un filing each Caveat	611
Dn fling each application for a Fatent, except for a design Dn issuing each original Patent. Dn appeal to Commissioner of Patents	1
On insuing each original Patent	2
On appeal to Commissioner of Patents	2
In application for Reissne	30
On application for Extension of Patent	5
On granting the Extension	350
On filing a Disclaimer	310
On filing application for Design (three and a half years)	11
On filing application for Design (seven years)	1
Du filing application for Design (fourteen years)	3
In addition to which there are some amall	

of Canada and Nova Scotia pay \$500 on application.

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

69,298.—Foot REST.—Calvin Adams, Pittsburgh, Pa. I claim constructing a foot rest with the base, A, of suitable diameter for its support, and the rest, B. of convenient shape to form a rest for the of de-cannected by one or more columns, C C, substantially as shown and de-

69,299.—FENCE.—G. W. Adams. Rochester, N. Y. I claim the arrangement of the metallic stakes, P, double bracing wire, f, in connection with the bed plate, C, and the rails, R, of the fence, substan-tially in the manner herein shown and described and for the purposes set

69,300.-BROOM HEAD.-E. A. Alexander and H. C. Kellogg,

69,803. — MACHINE FOR MAKING SOCKETED REED PLATES. Chas. Austin, Concord, N. H. I claim the combination as wellas the arrangement of the guides, DI DI, the endless carrier, B, the presser, I, the rotary cutter, F, the vibratory frame G, and the adjustable cam. H, as described, the said cutter, F, Carrier, I, and cam. H, being provided with mechanism for operating them, substantially a described. I also claim the combination as well as the arrangement of the hopper, E. the guides, DI DI, the endless carter, B, the preser, I, the rotary cutter, F, the guides, DI DI, the endless carter, B, the preser, I, the rotary cutter, F, the guides, DI DI, the endless carter, B, the preser, I, the rotary cutter, F, the guides, DI DI, the endless carter, B, the preser, I, the context, Lee, TF, the violation mechanism for operating the carrier, the catter, and the cam, as explained. I also claim the adjustable cam, H, made substantially as described. I also claim the adjustable cam, H, and one or more presser, I, K, with the endless carrier, B, the guides, DI OI, the rotary cutter, F, the viole being to operate together, and provided with mechanism tor actu-ating the carrier, the cutter, and the cam, substantially as herein before ex-plained. I also claim the combination as well as the arrangement of two or any other suitable number of eage cutters, L L, and one or more pressers, I K, with the endless carrier, B, the guides, DI OI, the rotary cutter, F, the viole being to operate together, and provided with mechanism for actu-ating the carrier, B, the cutter, and the cam, substantially as herein before ex-plained. I also claim the combination as well as the arrangement of the two endless carriers, B, One or more of the trimmers of plane, the guides, DI Di the suites and the supper, E, the whole being to operate together, and provided with mechanism for actu-ter and the combination as well as the arrangement of the two endless (carriers, B, One or more side trimmers of plane, the guides, Di Di

alise the carriers, the cutter, and the carries dealines if as herein beine ex-plained. I also claim the combination as well as the arrangement of the two encless carriers, B M, one or more side trimmers or plane irons, U, the guides, D1 D1 R R, the reverser, S. the cutter, F, the vibratory irame, G, and the adjust-able cam, H, the carriers, cutter, and cam ocing provided with operative mechanism, substantially as described. I also claim the combination as well as the arrangement of one or more smoothers, V, one or more fluishers, W, the plane iron, U, the reverser, S, the endless carriers, B M, the guides, D1 D1, R R, the cutter, F, the vibratory frame, G, and the adjustable carriers, the cutter, and cam, substantially as de-scribed. ribed

scribed. Solutions the combination as well as the arrangement of the hopper, R, the guides, DI DI, the carrier, B, one or more pressers, I K, the rotary cutter F, the vibratory frame, G, the edge cutters, L L, the reverser, S, the guides, R R, the carrier, M, the face cutter, U, or the latter and the presser, T, also, their combination as well as their arrangement with one or more smoothers, y, or one or more finishers, W, the cacers and rotary cutter being provided with mechanism for operating them, substantially as hereinbefore specified.

69,304. — WARDROBE BEDSTEAD. — William R. Bagnall,

09,004. — WARDROBE BEDSTEAD. — William R. Bagnall, Chelses, Mass. I claim a binged oblong bed-frame arranged to swing laterally from a case, as and for the purpose described. I claim a swinging bed frame, combined with a surmounted wardrobe or bureau, or both, substantially as described. I claim a wardrobe or bureau, or both combined with a swinging bed frame having head and foot pieces swinging inwards, as and for the purpose described.

have also read the details with great interest. The statements, however, which have appeared in some of the news journals have been so inaccurate and confused that we deem it well to publish the facts as they could be ascertained by personal inspection. This boiler, which was eight feet diam eter at the bottom, six feet at the top, and fourteen feet and six inches high, and weighing five tuns, exploded about 4 P. M. on the 9th of September, at 258 West 28th street, ascending into the air nearly vertically, with a slight westerly inclination, described by those who saw it as appearing about the size of a nail keg, and falling into the rear part of the dwelling house 308 West 28th street, a distance horizon tally of about 450 feet. Two persons were killed where the explosion occurred-the engineer and fireman; and two children of Mr. Houseman, by its descent through his dwelling, and several others were injured.

This boiler was new, having been in use less than two months and a half, was built by Densmore & Black, of this city and was of the style known as the Densmore holler which has an excellent reputation in different parts of the country. It was illustrated and described on the first page

THE MACHINIST'S APPRENTICE.

Several communications asking information in regard to the trade of the machinist have been received. If we reply to one the answer will comprehend the inquiries of the others.

A correspondent from Iowa wishes to enter as an appren tice, a shop where locomotive and other engines, and machinist's tools are manufactured, or, at least, where engines are built, and desires replies to the following questions : "Can you recommend some such establishment where I could get in or you think I could? What is the period and what the terms of an apprenticeship? I wish a situation where the best of work is done and an opportunity is afforded the apprentice of becoming a thorough workman."

The time was-twenty five or thirty years ago-when the position of apprentice to the machinist trade was easily ob-

I claim a wardrone or bureau, or both combined with a swinging bcd frame having head and foot pieces swinging inwards, as and for the purpose described.
69,305. — CARRIAGE-SHAFT COUPLING. — Jesse P. Barrick, Massillon, Ohio.
I claim theptvoted or hinged stop, J, and spring, I, arranged in relation to the coupling, in the manner and for the purpose substantially as set forth.
69,306. — CARRIAGE BUTTON.— W. P. Batteman (assignor to himself and N. F. Mathewson), Barrington, R. I.
I claim the carriage button, as constructed, with the head eccentric to the body, and with a journal to project from the head, and with a screw and a prismatic base to its body, as described.
I also claim the carriage button, as explained.
69,307. — MACHINE FOR MAKING W AGON WHEELS.—Alonzo Beswick, Paris Richardson, Jr., and John W. Brown, Kelley, III. we claim the could and arrangement of the manner and for the purposes set forth.

oses set forth. a slao claim the auger frame, W, in combination with the screw, M, and e bar, H, operating substantially as described and for the purposes

69,308.—BRICK MACHINE.—Peter E. Bland, St. Louis, Mo.

69,308.—BRICK MACTINE.—Peter E. Bland, St. Louis, Mo. 1st, Iclaim the combination of movable plattens or followers, b, in a mold-bearing cylinder, B, revolving about a fixed central shat, H, with one or more uzed cams, k, upon said shaft, all substantially in the manner and for the purpose herein set forth. 2d, The combination of compressing plates, or plungers, G, with a revolving mold-bearing cylinder, B, when said compressing plungers have the within described reciprocating movements, and operate in unison with an intermi-tent movement of said cylinder, substantially as and for the purpose herein set forth. 3d, The combination of pletons, g, or their equivalents, with a revolving mold-bearing cylinder, B, and radial cam-actuated followers, b, in the molds thereof, when said bistons, g, have substantially the within-described recip-rocating movements, for the purpose herein specified.

4th, The combination of a ratchet wheel, W, or other equivalent device with the holl w shaft of a mold-bearing cvlinder, encircling a fixed centra shaft, H, all substantially in the mannar and for the purpose herein set

Shait, ff, all substations, in the substational forth. 5th, The combination of a rocking shaft, j, and pawl levers, w w, with pins or catches, i, on the revolving mold-bearing cylinder of a brick machine and with ratchet bars, 11, on a receiving car running beneath said cylinder for the purpose of imparting an intermitting forward movement to the car in unison with the intermittent revolution of the cylinder, all substantially in the man-ner and for the purpose brells set jorth.

purpose of intermittent revolution of the cylinder, all substantially in the man-ner and for the purpose herein set forth. 6th. The combination of finelined bars, r, with the frame of my improved brick machine, and with the coupling hooks or catches, o, of the cars run-ning through the same, for the purpose of automatically disconnecting the cars in their forward movement, substantially as herein set forth. 7th, The combination of a stationary transver e sweep bar, n, with a reyolv-ing mold-bearing cylinder, B, and movable followers, b, the ein, to effect a detachment of the molded material from the face of said followers after its discharge from the mold, substantially in the manner herein specified. 8th, The combination of altexhable mold frame, F, with a grooved or suitably framed revolving mold-bearing cylinder, B, substantially in the man-ner and for the purpose herein set forth. 9th, The combination of a rotary cylinder brick machine for the purpose of lubricating or dampening the sides of the mold transchial with the re-adjust-ing pins or pistons, gl, of a rotary cylinder brick machine for the purpose of lubricating or dampening the sides of the mold the of the aching or dampening the set forth. 10th, The combination of an adjusting plate, J, with the end of a fixed cen-

in set forth. 10th, The combination of an adjusting plate, J, with the end of a fixed cen-tral cam shaft, H, passing centrally through the mold-bearing cylinder, B, of a revolving cylinder brick machine, substantially in the manner and for the purpose berefin set forth. 69,309.—MACHINE FOR WEAVING BASKETS.—F. H. Brown

(assignor to himself, E. F. Peugeot, and H. Flersheim), Chicago, 111. Ist, I Claim a skeleton basket form, as and for the purpose set forth. 2d, The packing and forming device, F, or its equivalent, as and for the purposes specified. 3d, The guidepiece, M, constructed and operating as and for the purposes

4th, Cam, Z, in combination with the band, X, as and for the purpose specified. The flexible teeth, T, of the controlling band, as and for the purposes

th, The flexible teeth, T, or the control of the forth. forth. th, The holder, 3, in combination with rod, I, and cam, Z, as and for the set f

7th, The cam, G, in combination with the screw, C, as shown, and for the

The the cam, G. in combination with the screw, C, as shown, and for the purposes specified. Sta, The slide, etc., in combination with the packing and forming device, F, as and for the purposes set forth. 9th, In a basket machine, the oscillating standard, 4, in combination with the weaving device, as and/or the purposes specified. 69,310.—CANE STRIFFER.—J. C. Brown, Crawfordsville, Ind. I claim the cane stripper and cane cutter, herein described, when the same is considered as a whole device, and constructed in its said several, parts as a foresaid, and used for the purpose and in the manner substantially as set torth. 69,311.—HAT AND COAT RACK.—T. W. Brown, N. Y. City. I claim the arrangement of the lower curved or coat prong so as to stand obliquely with the larger, uoper, or hat prong, and the tastening plate, sub-stantially in manner as described. I also claim the trippronged hook as made with the hat prong and the two coat prongs, and with these latter arranged obliquely with respect to the fastening plate and such hat prong, and to project in opposite direct ons rel-atively to the latter, the whole being substantially as described and repre-sented. fog 312.—Mone or Expert on the purposet on the prong and the standard such the two is the latter, the whole being substantially as described and repre-sented.

sented. 69,312.—Mode of Embalming or Preserving Animal Sub-

STANDES.-L. Brunctij, Rovigno, Italy. I claim the method of and means for embabwing or preserving animal substances from detay, substancially as herein set forth and described. 69,313.-WOOD-BENDING MACHINE.-D. Catchpole, Geneva,

69,313.— WOOD-BENDING MACHINE.—D. Catchpole, Geneva, and J. Havens, Auburn, N. Y. ist, We claim the arrangement of the sliding bed, DI, lever, j, rod, r, press-er head, e, former block, B, and its clamps, and the wheel, W, substantially in the manner and for the purposes shown and described. 2d, The levers, th, former, rotating head, Q, and former, F, arranged and oper ating substantially in the manner shown and described. For the purpose of giving the vertical and lateral bends at the same time, as set forth. 3d, The arrangement of the levers, G, ploted to the sliding bed, D, in com-bination with the rollers, R, attached to the bed, D, as and for the purposes specified.

69,314.—CULTIVATOR.—Nathan A. Cates, Thorndike, Me.

by, 314.—CULTIVATOR.—Nathan A. Cates, Thorndike, Me.
lst, I claim the combination of the central beam, carrying the adjustable roller, the colter and the scraper, with the laterally adjustable. Deams, carrying the ridging and smoothing plows, the combination being and operating "bistantially as described for the purposesset forth.
21. The combination with the scrapers of the laterally adjustable plows, all constructed and operating is described.
33. The laterally adjustable furrow-turning and ridgesmoothing plows, constructed and operating as described.
44. The combination with the central beam and colter, of the clevis bracket and operating as described.
46. Staterally adjustable rough the claim of the clevis bracket and operating as described.
46. Staterally as described.
47. The combination with the central beam and colter, of the clevis bracket and operating as described.
48. Staterally as described.
49. Staterally as described.

and operating as described. 69,315.—ARCHITECTURAL PORCELAIN.—W. J. Cheyney, Wallingford, and E. F. Dieterichs, Philadeiphia, Pa. Antedat 20. 1867.

Infrord, and E. F. Dieterichs, Finiadelphia, Fa. Antecated september 20, 1867.
We claim, as a new article of manufacture, architectural porcelain, composed of cryolite, or its chemical equivalents, in combination with silicia and a metallic oxide, or an alkah, or both, pressed and cast in molds, and pressed or rolled as above set forth.
69,316.—PLATE PORCELAIN.—Waldron J. Cheyney, Wallingford, and E. F. Dieterichs, Fhiladelpbia, Pa. Antedated Sept. 20, 1867.
We claim, as a new article of manufacture, plate porcelain, composed of cryolite or its chemical equivalents, and silica alone, or cryolite, or its chemical equivalents, in combination with silica and a metallic oxide, or an alkali, or both, fused and cast on a table, and rolled or blown into cylinders, and cut and flattened, as above described.
69,317.—MANUFACTURE OF DRESS TRIMMINGS.—Waldron J.

and cut and flattened, as above described. 69,317.—MANUFACTURE OF DRESS TRIMMINGS.—Waldron J. Cheyney, Wallingford, and E. F. Dieterichs, Philadelphia, Pa. Weelaim, as a new manufacture, bugles, beads, or buttous, made of cryo-lite, or its chemical equivalents, fused with silica, worked substantially in the manner and for the purpose described.

10. Of the definition of duvidence, when we were substantiated with the manner and for the purpose described.
69,318.—ENAMEL TO BE APPLIED TO METALS, EARTHENWARE, ARTIFICIAL STORE, BTO.—W. J. Chepre, Wallingford, and E. F. Dieterrichs, Philadelphia, Pa. Antedsteid Sept. 19, 1867.
We claim, as a new manufacture, an enamel composed of cryolite, or its chemical equivalents, and silica fused together, substantially as above set

69.319.—PICKER STAVE FOR LOOMS.—Richard Collins, Chico-

pec, Mass. Antedated Sept. 14, 1967. I claim the combination of the cam, c, with the lever, a, and plate, d, sub-tantially as and for the purpose described. 9,320.—LOOM.—Jessie D. Cottrell, and George Draper, Milstantially as an 69,320.—Loo

69,320.—Loom.—Jessie D. Cottrell, and George Draper, Miltord, Mass. Ist, We claim the combination of the "let off" mechanism, two yarn beams, and a friction and equalizing apparatus, substantially as described. 2d, The "let off" mechanism, made and arranged with the friction equaliz-ing apparatus, eubstantially as described. 3d. Our improved arrangement of the two yarn beams, and the equalizing and friction apparatus substantially as described, the two beams under such an arrangement being placed close together, and the equalizing and friction apparatus being arranged outside of, rather than between them, as ex-ulatined.

plained. 4th, We also claim our improved friction and equalizing apparatus, or me-chanism, substantially as described. 5th, We also claim the arrangement of the gears, or r m, and l, constituting the "compound motion." 69,321.—STEP AND EXTENSION LADDER.—H. W. Covert, Ro-

dester, N. Y. I dester, N. Y. I dester, N. Y. I dester, B. having combined and arranged therewith, both lateral and rear braces, D C, in such a manner as to expand and brace when used as a step ladder, but fold compacily when used as an extension ladder, as herein set 69,322. -HARVESTER RAKE.-M. Crossman, Marengo, and P.

69,322.—HARVESTER RAKE.—M. Crossman, Marengo, and P. A. Spicer, Marehall, Mich. Ist, We claim the mode of suspending and tripping a series of revolving rakes or reels, and attached vibrating arms, by the use of an inclined track-way. H. in combination with the traversing roller, R., abutting pins, P. Inneed abutments, J. and tripping cam, K., connected, arranged, and oper-ated subtantially as herein described. 2d, Changing the highe of the plane of rotation, in rakes or reels, when so suspended by the employment of stepped faces. I, on the hinged abutments, J. in combination with the gritche lever, L as set torth. 3d, preserving the barallelistic described. Science and with the gritche lever, and with the platform of the machic, by or erbalanding and stopping said rake, and connecting it with its revolving central cap by the combined arrangement of the pracket arm, M, rod, N, link, O, and stop ears, S, subtantially in the man-ner hereit appendied. PLOWS TO WHEELED CA RIAGES.—Mar-shall S. Curtiss, Bradford, III. York City. I claim in combination with a hat stretching or blocking machine, the con-tinuous rubber cap, a spplied substantially as and for the purpose set source 69,372.—FLASK FOR CASTING inuous rubber cap, a, applied substantially as and for the purpose set for 1. 9,373.—FLASK FOR CASTING.—G. P. Sisson, Florence, Mass. I claim the bands, G and H, or either of them, in combination with a snap ask, and arranged to operate therewith substantially in the manner and for he purpose herein specified. . -Strawberry Ripener.—C.Jillson,Worcester, Mass. 69,346. ist, I (laim a strawberry ripener made of glass, to be used substantially as and for the purpose set forth. 2d, A strawberry ripener for supporting the fruit, and preventing the run-ners taking root about the stem of the plant, s btannially as set forth. 69.373.—JOURNAL BOX.—Le Roy M. Taylor and W. D. Fow-69:373.—JOURNAL DOX.—De Roy M. Taylor and W. D. Fou-ler, Washington, D. C. We claim the manner herein described of constructing the box, A B, in two halves, with the hinge, a e, and the turning plu, d, and locking devices, g h, the said construction admitting of a ready removal of the shaft, as well as giving reudy access thereto, all as set forth. 69,374.—WIND MILL.—John S. Thornton, Port Gibson, N.Y. 2d, A strawberry ripener for supporting the fruit, and preventing the run-ners taking root about the stem of the plant, s. bistantially as set forth. 69,347.—SADIRON HEATER.—James J. Johnston, Alleghany Iner herein specified.
69,323.—COUPLING PLOWS TO WHEELED CA RIAGES.—Marshalls. Curtiss, Bradford, Ill.
1st, I claim the curved and slotted arm, C, itsform and manner or adjustment between the ears, I, combined with the plow beam, B, substantially as and for the purpose set forth.
2d, the forward end of the plow beam, B, to have a lateral and verticai motion, substantially as set fort.
3d, The arrangement of the seat, F, in front of the crank axle, E, combined with lever, D, the whole botug arranged to set plow, B, in the ground, or 1 ft it out of the ground, as described and set forta.
69,324.—CHURN.—William Davis, Arrow Rock, Mo.
I claim the disks, D, shaft, a, diamond-shaped beaters, D' gears, a'b, and spring, B, in combination with the case, A A1, and the parts being constructed, combination of the driving segment gear and pinlon, with the respective pinlon and serment gear with which each alternately geomets when arranged to observe the descent of the plunger or piston, substantially as a second.
69,326.—CLUTCH FOR SUSPENDING HAT FORKS.—Wm. Dixton, and L Heath (assignors to themselves and T, P. Saunders), Adams, N. Y. We claim, 1st, The combination of the arms, A A1, spurs, J J, stock or frame, D, and L Heath (assignors to themselves and T, P. Saunders), Adams, N. Y. We combination with the above of the clasp, I, staff, h, latch or ratchet bar, F, catch, M, and spring, G, arranged and operating in the manner and for the purpose sectiford.
3d, The combination of the arms, A A1, pulpers, B b, ctock, D d, cord, C, ing, E, latch, F, spring, G, arranged and operating in the manner and for the purpose sufferd. city, Particle right in the state of the sta 18. Joint the fan wheels, E. F. rans, C. G. and arms, D. D., constructed and combined substantially as and for the purpose set forth. 24. The fan, G. n. combination with tams, C. C. arranged in relation to cach other substantially in the manner and for the purpose specified. 3d, The shaft, H, combined and arranged with wheels, F F and E E, substantially as and for the purpose described. 69,375.—HAY DERRICK.—Isaac Van Voorhis, Hillsboro, Pa. iclaim a portable self behavior dorwing described. forth. 69,349.—MODE OF TREATING SLAGS AND CINDERS FOR THE MANUFACTURE OF IRON.—Rudolph Keck, Clintonville, N. Y. I claim the within described process of reducing slags and cinders directly into wrought iron by subjecting them after they have been pulverized to the action of a separating apparatus and reducing the residuum in a puddling furnace or blooming irc, as set forth. 69,349.—CLOTHES DRYER.—Henry N. King and Austin G. Mason Adrian Mich. 69,348. 69.375. I claim a portable selt-balancing derrick consisting of one or more upright posts, with arms hinged on opposite sides, such arms connected with each other in the manner described and the whole operating substantially as and for the purposes aboveset for th. Mason, Adrian, Mich. We claim the construction and use of the four beaus, a e, b f, o g, and d h, the four slats, S S S S, and the brace, B, the whole constructed and operating substantially in the manner and for the purpose set forth. for the purposes above set form. 69.376.—MATTRESS.—B. F. Walton, Philadelphia, Pa. I claim a mattress or cushion containing curled hair or other equivalent. elastic stuffing material, combined with shavings or chips of cedar, for the substantially in the manner and for the purpose set forth. 69,350.—AXLE.—S. D. Littlefield (assignor to himself and Horatio D. Knight), Burhngton, Wis. 1st, 1 claim the beveled flanges, ecl, for covering the collar, E, and the nut, D, and protecting them from grit and sand, substantially as specified. 2d, The projections or lugs, XXI, for stationing the collars, d, temporar ly upon the skein, substantially as set forth. 69,351.—POULTRY DRINKING FOUNTAIN.—George H. Lomay, Bomerville, assignor to bimself and Richard D. Blinn, Lexington, Mass. 1 claim the combination and arrangement of the filing opening, e, and the recess, d, with the reservoir, B, and the trough A, such reservoir being pro-vided with a discharge opening, b, arranged as specified. I also claim the construction of the poultry drinking fountain with flat top to the reservoir, in combination with first filing optime, e, or the same and the recess, d, arranged in its bottom, asset forth. 69,352.—CLOD FENDER.—John Lowe. Lebanon, Ind. purpose specified, 69,377.—CAP -CAR BRAKE SHOES.-I. P.Wendell, Philadelphia, Pa. Ist, I claim the combination with a cast iron brake shoe for railroad cars, of pieces of wood, ndla rubber, or other suitable material, softer than the hon, substantially hat he manner here inbefore described and for the purpose above specified. 2d, The combination of the shoe. A, and stock D, by means of the groove, c, tongue, f, and cross key, E, substantially in the manner described and for the purpose set forth. 3d, The combination of the lug, i and arm, k, with the keys, E and E', sub-stantially as described and for the purpose specified. 33, The combination of the lug, I and arm, K, with the keys, E and E', substantially as described and for the purpose specified. 69,378.—ExCAVATING MACHINE.—E. H. Williams, Grand Meadow, Iowa, and D. R. W. Williams, Werner, Wis. We claim the construction and arrangement in an excavator, of the pres-sure belt, V, when the same is driven by friction caused by the ascending furrow slice, in the manner and for the pur ose herein described. , arranged in its bottom, asset forch. 352.—CLOD FENDER.—John Lowe, Lebanon, Ind. claim the device herein described, when the same is constru 69,352

6 9,327.—ADJUSTABLE FRAME FOR STRETCHING HIDES.—Wil-liam Dunn, Newark, N. J. I claim the application of movable planks to a stationary frame, in the manner set forth, and worked by levers, as show, the planks divided in the middle, and connected by a hinge, or each plank in one continuous piece, and working independently of each other, thus adjusting itself to the formation of the hide, and stretching each part to its fullest capacity. 69,328 —CENTRIFUGAL APPARATUS FOR WASHING SUGAR.—

or the hide, and stretching each part to its fullest capacity. 69,328 — CENTRIFUGAL APPARATUS FOR WASHING SUGAR. George E. Evans, Boston, Mass. I claim, ist, The movable inner circular cylinder, or partition, B, in cen-trifugal sugar machines, either with or without foraminations, the same being capable of being statched without siteration of the centrifugal sub-means of a conteal of cylindrical socket, fitting upon a central conical or cylindrical shaft, substantially as described. 2d, Constructing the inner cylindrical partition, B, in centrifugal sugar machines of sheet metal, or any equivalent material, without foraminations or intersites, substantially as described. 3d, Operating the inner cylindrical partition, B, when made without for aminations, to make a wall of sugar by lifting the same after the rotation of the centrifugal has commenced. 69,329.—SELF-ADJUSTING LID SUPPORT FOR PIANOS, DESKS, wrc.—Charles T. Faber, New York city. 1 claim the adjuster for bridging the notch or stop which holds the prop or support for the lids of pianos, desks, and other similar articles of furniture, made automatic in its action by mean.substantially as described. 69,330.—RAILWAY TRUCK.—H. 15. Fornald, Dedham, Mass. 1 claim, ist, The circular truck, T, constructed as described, with hangers cast or fitted upon it, and extending above and below, substantially as set forth. 3d, the truck, W, with the hangers extending above and below, and pro-vided with slotted openings for the wheels, O o, a traverse opening to athait the axies.—Control circular opening in combination with the guides, L L, whattantially as described and set orth. 39, 310.—COMPOSITION OF MATTER FOR FIFLI G SAFES, AND FOR OTHER PURPOSES.—Samuel T. Fowler, Brooklyn, N. Y. L claim the use of sew dust, or its substitute, forthis purpose, in combina-

FOR OTHER PURPOSES.—Samuel T. Fow ler, Brooklyn, N. Y. I claim the use of saw dust, or its substitute, for this purpose, in combina-tion with any one or more of the plastic materials herein described, for the

69332 — HORSE RAKE.—Samuel Freet, Upper Strasburg. Pa. i claim the combination of the double acting lever, A, and the roller, B, with hooks, cc, the lever being attached to the roller, B, which is attached or fixed on the ends of the shafts, B, having in it two hooks, cc, to hold down the teeth when raking heavy hay, or heaping the same.

1 claim the combination of the double acting lever, A, and the roler, B with hocks, cc, the lever being attached to the roler, B, which is attached or thred on the ends of the shafts, B, having in it two hocks, cc, to hold down the teeth when raking heavy hay, or heaping the same.
69,333. —MAKING CARRIAGE BOLTS. —Samuel Frisbie and Andrew S. Upson, Farmington, Ct.
We claim the method substantially as herein described of making joints with heads and square necks, euch method consisting in enlarging or swelling that part of the rod which is to form the neck, and at the same operation forming a rulimentary or preliminary head thereon, and subsequently forming the square neck by squeezing, and the finished head by compression, the whole mode of manufacture being substantially as described.
69,334. —SHOEMAKER'S BENCH. —Benedict Gantner (assignor to himself and John Sporre), Tell city, 1nd.
1 claim, 1st. The combination of the treadle, C, strap, D, drum, a, and straps, e h, substantially as and for the purpose described.
2d, The combination of the treadle, C, strap, D, and ratchet, a', or their equivalents, substantially as and for the purpose described.
3d, In combination with the elements of the low colaims, I claim the clamp E, constructed as described, for the purpose specified.
5th, The friction device, k k 1, in combination with the groove, j, arranged and operating a losiantially as described.
6th, The doversible Key, k, in combination with the story, e.g., and shoulder, 182, substantially as described.
6th, The doversible Key, k, in combination with the story, e.g., and shoulder, 182, substantially as and for the purpose specified.
6th, The doversible Key, k, in combination with the shoulder, B2, for the purpose specified.
6th, The rollers, m, in combination with the shoulder, B2, for the purpose specified.
6th, The rollers, m, in combination with the shoulder, B2, for the purpose specified.</l

specified. + Sth. The removable cushion, G. and anvil, F. adapted to be applied sub-stantially as described, for the purpose specified. 69,335.—THREE WHEEL CARRIAGE.—John Gehr, Mercers-

Job, 000. — INREE W HEEL CARRIAGE.—John Gehr, Mercers-burg, Pa. I claim, 1st, Thering, B, working in the groove, al, of the wheel, A, and having the projections, bl bl, substantially as and for the purpose specified. 2d, The epring, D, bent in the form shown, attached to the wheel, A, by the bolta d, and Caring the Carriage at dl, substantially as and for the purpose described.

described. %d, The metallic guard, substantially as and for the purpose specified. 69,336.—GATE.—Riley James Gilbert, Hanover, Wis.

69,337.—FARM GATE.—Newton J. Glover, Wayeland, Ind.
69,337.—FARM GATE.—Newton J. Glover, Wayeland, Ind.
1°claim the double flanged roller, B, the pieces, A E H I P, and the brace N, in combination, substantially as described and set forth.
69,338.—MACHI E FOR C TTI G ICE INTO BLOCKS FOR STORTING. George B, Gruman, Ridgefield, Ct.
I claim the arrangement of the revolving circularsaw, C, adjusting trame, B, lever, D, in combination with the other attachments, in the manner here in described, and for the purpose set forth.
69,339.—POTATO DIGGER AND WEEDER.—George W. Hall, Triangle, N.Y.

69,364.—CARRIAGE STEP.—Charles Parker and Wm. Vogler, Ganterbury, N. H.
1st, 1 claim a vibrating carriage step operated by mechanism connected with the forward axle, substantially as described.
2d, The vibrating step, a, in combination with the fan shaped arm, d, levers, b b, and cross bar, c, substantially as described.
3d, The step a, provided with tian shaped arm, d, substantially as described.
69,365.—LOOSE JOINT BUTT HINGE.—Marshall Perry, New York City, assignor to h1 self and Geo. W. Gregory, Watertowin, N. Y. I claim a right or left hand hinge composed of two plates, one having a single pintle carrying knuckles, and the other maving two socketed pintle re-ceiving knuckles, one projecting from the top and the other from the bottom of said plate, but at opposite edges, substantially as and for the purpose set forth.
69,366.—BED BOTTOM — Thomas Baser Changeson UI (69,359.—POTATO DIGGER AND WEEDER.—GUIDIGE W. Hall, Triangle, N. Y. I claim, lst, A spade or spading fork, having a pivoted fulcrum or rest pro-vided with a swivel joint, substantially as and for the purpose set forth. 2d, A spade or spading tork, having a pivoted fulcrum or rest where the said fulcrum is solvestable on the handle of the spade or fork, and of adjust-able longth, substantially as described. St, A spade or spading fork, constructed as described, viz., with an adjust-able, pivoted swiveling fulcrum, as and for the purposes set forth. 69,340.—DOUBLE ROTARY HARROW.—George W. Hall, New Haven Mich.

24. A Shade or spading fork, constructed as described, viz., with an adjustable, pivoted swiveling fulcrum, as and for the purposes set forth.
29.340.—DOUBLE ROTARY HARROW.—George W. Hall, New Haven Mich.
I claim the combination of the bent rim, a, having teeth therein, sleeves, s, and x, center pin, c, and cross bar, 1, all constructed and arranged as and for the purpose described.
69.341.—DEVICE FOR PREVENTING HORSES FROM CRIBBING.—G. G. Hickman (assignor to bimself, Francis H. Wright, and John Criswell), Coatesville, Pa.
I claim the combination of the rubber part, or shield, A, w th the prong, B, surstantially as and for the purpose escribed.
69.342.—HARVENTEK.—Anthony Hillts, Jr., Springdale, O. I claim the quadrantal plate, C, when provided with stop, a, and perforations, i, i, in combination with bar. E, and tongue, A, operating in the manner and for the purpose described.
69.343.—MUSKETO FRA E FOR WINDOWS.—Augustine E. Horton, North Leominster, Mass.
I claim the employment of a non-conducting substantially in the manner and for the purpose described.
69.344.—SADIRON.—Arthur Y. Hubbell, Elmira, N. Y. I claim the employment of a non-conducting substantially in the manner and for the purpose set forth.
69.344.—SADIRON.—Arthur Y. Hubbell, Elmira, N. Y. I claim the emproyment of a non-conducting substantially in the manner and the proves et forth.
69.345.—PUIDLING AND OTHER FURNACE.—William Jeffries, West Brømwich, Eng. Patented in England, January 26, 1866.
154. Claim the Emproyment in purpose set forth.
79.345.—PUIDLING AND OTHER FURNACE.—William Jeffries, West Brømwich, Eng. Patented in the maxed with and great is to say, constructing the beds of the said furnaces and heating furnaces, and etail furnaces, substantially in the manner and ther reverberating furnaces used in the manufacture of iron and steel bereinbefore described, and illustrated in the accompanying drawing, that is to say, co

said several parts in manner and form as aforesaid and used for the purpose and in the manner and form substantially as set forth. 69,353.-HORSE HAY FORK .-- Joshua M. Mansfield, Water-

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town, N. Y. Ist. I claim the separately-pivoted curved links, C, in combination with the soluting bar, D, and hinged times, B B, arranged and operating substantially as and for the purpose described. 2d, The eccentrically pivoted cam lever, F, in combination with the spring eatch, E e, and rope, G, arranged and operating as and for the purpose spe-clifted. 3d, The arrangement of the arm, A' a, rope, G, and cam lever, F, substan-tially as set for th.

69,354.—WAGON SPRI G.—James McDuffie, Heller's Cor-

b) 504. — WAGON SPRI G. — James MCDuine, Heller's Corners, Ind.
 I claim the spring, A, in combination with the gibs and keys, B, and the bar, C, said sprinzs and bar being constructed in the manner and for the purposes lucruic described and setforts.
 69,355. — COOSING STOVE. — Matthias Mead, Lowell, Mass.

I claim the arrangement of the ducts, f f for conveying heated air through the bottom of the oven and distributing it through the discnarge pipes, g g, substantially for the purpose described and set forth. 69,356.—CARRIAGE POLE.—Christain K. Mellinger, Millers-69,356.—

(109) 500.— CARDINATE FORM.
 (110) Pa.
 I claim the plate, A, with its slots, b, and eye, a, forming the adjustable shackle for carriage poles, when arranged, constructed, and applied in the manner and for the purpose specified.
 (19) 357.— VENTILATOR FOR RAILROAD CAR.— Jos. M. Moore,

(69,507.- YEATHATOK FOR IVALIANCE CARE COLOR. 1. Index., Chicago, Ill. Ist, Iclaim the shaft, C, when provided with rods or dashers, a a, attached sp rally as described, in combination with windfans, D, located inside of the casing, substantially as and for the purposes described. 2d, The shaft, C, provided with the rols, a a, and fans, D, located and op-erating as described, in combination with the doors, G, and bath. B, substan-tion as exception.

Cashing, Substantially as and the the purposed described.
2d, The shaft, C, provided with the foris, a a, and tans, D, located and operating as described, in combination with the doors, G, and bach. B, substantially as specified.
3d, The perforated diaphragm or partition, E, in combination with the shaft, C, provided with rods or dashers, a a, and water bath, B, the whole constructed and operating substantially as specified.
69,358, —MACHINE FOR PRESSING HATS.—Monroe and Chas. H. Morse, Franklin, Mass.
We claim a series of des or molds combined with a movable or revolving steam chest to heat the same, so that by the movement of the steam chest either of said molds may be brought to the proper place to cooperate with the other parts of the machine without disconnecting the molds from the steam chest, substantially as described.
69,359.—CUT-OFF FOR WATER SPOUTS.—Henry W. Mosher (assignor to himself and Edward C. Dudley), Aurora, III.
1 cla m, ist, The shifting pipe, B, and the flange or collar, c, of the horizontal pivoted plate, C, writh a described.
2d, The combination of the skifting pipe may be moved horizontally in the art of a circle, substantially as described.
3d, The conducting spout, A, and the pivoted flate rom the cistern pipe to the escape opening, and yice Versa, substantially as described.
3d, The shifting pipe, B, substantially as described.
3d

, The filter, G, seated in the influx opening of the base plate, D, the pipe, B, and the pivoted plate, C, all arranged substantially as herem thed.

69.360,--WATER WHEEL.-John Mumma, Middletown, Ohio.

descriffed.
69,360. — WATER WHEEL. — John Mumma, Middletown, Ohio. Antedated Sept. 23, 1867.
ist, I claim the elongated concave buckets, S, terminating at their upper ends with the cap, V, constructed, arranged, and operating in the manner and for the purpose described.
2d, The Hoating Cylindrical gate, C, in combination with the floats, m, lever, B, and rods, D, arranged and operating substantially as described.
34, The Cylindrical rack or sorcen, H, in combination with the floats, m, lever, B, and rods, D, arranged to r the purpose specified.
40, The Cylindrical rack or sorcen, H, in combination with thutes, d, and rate, C, arranged as described for the purpose specified.
41, The combination of the ball gates, a, with chuces, d, operating substan-tially as specified for the purpose set forth.
5tb, The chute disk, I, with its packing ring, r, in combination with chutes, d, and annular diapinagm, K, arranged above the wheel a id its curb, J, all constructed and operating substantially as and for the purpose specified.
69,361.—VIEE.—J. HOWARD MUITAY, Trenton, N. J., assignor to himself and T.S. Murray and A. Jameson.
I claim the stationary Jaw of the vise with its shoulders, s', in combina-tion with the screw, B, and nut, E, the whole being constructed as and for the purpose described.
69,362.—AxLE.—Webster Nevins, Falmouth, Me.
1st, I claim the combination of the purposes hereinbefore described.
69,363.—CHUKN DASHER.—Maria A. Ober, Chazy, N. Y. I claim a churn dasher constructed as show and described.
69,364.—CAHRIAGE STEF.—Charles Parker and Wm. Vogler, Canterbury, N. H.
1 claim a vibriting, cartrigge step operated by mechanism connected

69,366.—BED BOTTOM.—I'homas Raser, Geneseo, Ill. I claim the boxing or customers, C, and polis, B B, in combination with the rubber bands and slats, D and E, as described. 69,367.—DEVICE FOR HEATING TIRES.—Charles H. Reno,

69,367.—DEVICE FOR HEATING TIRES.—Charles H. Reno, Barrington, N.Y.
I claim the chamber, A. pipes, C and D, and branch pipe, E, when made and used as and for the purpose herein specified.
69,368.—MOP HEAD.—Geo. W. Sanders, Springfield, Vt.
I claim the screw cam, e, and silde, d, or its equivalent, in combination with the jaw, c, constructed and operating substantially in the manner de-scribed and for the purpose specified.
69,369.—HITCHING DEVICE FOR WHIFFLETREES.—Henry and James M. Saunders, Oxford, Ohio.
We claim the apring bolts, C, incased therein with the cords, c, and pul-leys, d, when the same are arranged to operate as herein shown and de-scribed.
60,270.

69,370. -MACHINE FOR PREPARING PEAT FOR FUEL.-A. M

69,370. —MACHINE FOR PREPARING PEAT FOR FUEL.—A. M Sawyer, Athol, Mas.
1st, i claim the combination of an apparatus for grinding or disintegrating the peat, the endless apron, b, and the squeezing rollers, C and C', arranged substantially as described.
2d, The combination of the endless apron, b, the squeezing rollers, C and C', and the scraper, F, substantially as described.
3d, The scrapers, h, within the hopper, R, in combination with the series of molds substantially as described.
4th, A ranging the casms that work the pistons in and out, so as to be ad-juscable, as described, so that the movement of the pistons in the direction of the diameter of the mold wheel may be varied and thereby the compressing capacity of the mold be increased or diminished, substantially as described.
69,371.—HAT BLOCKING MACHINE.—Julius Sheldon, New York City.

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2d, The construction and arrangement of the two shafts, S s, with their pailers, in combination with the pressure belt, V, as here in described. Sd, The combination of the tightening pulley, L', frame, L, and pressure belt, V, in the manner and for the purpose enter forth. (69,379, — PILL MACHINE.—A. H. Wirz, Philadelphia, Pa. I claim so constructing the metallic or inclosine trame of pill machine end pieces of such frame, so that the sides thereof which form the bearing or ways of the movable part of the matched or inclusine trame of pill machine entral part and will not be deflected in part, for the purpose set forth. (69,300.—PICKER FOR LOOMS.—Edward Wright, Worcester, Mass. I claim the combination of the metal sheli, C, filling, D, and spring, E, or I claim, the combination of the metal sheli, C, filling, D, and spring, E, or I claim, ist, The within described and for the purpose set forth.

Mass. I claim the combination of the metal sheli, C, filling, D, and spring, E, or s equivalent, with the top of the picker staff, A, substantially as and for he purposes set forth.

-WATCH REGULATOR.—Henry L. and Edward J.

the purposes set forth. 69,381.—WATCH REGULATOR.—Henry L. and Edward J. Zahm, Lancaster, Pa. We claim the regulator, A, having an angular base resting on the operat-ing screw D, substantially as described. 69,382.—TREADLE FOR PROPELLING MACHINERY.—William C. Abbott, Niles, N. Y. I claim the combination of the treadles, LM, the straps, O P, the roller, Q, and crank, R. when said parts are constructed and arranged in relation to one another, substantially as set forth. 69,383.—ROTART ENGINE.—Moses L. Andrew, Cincinnati, O. 1st, I claim the combination and arrangement of the lipped and chambered wings, DD, grooved segmental pistons, E, and springs, F, for the purpose set forth. 31. The combination of the set screws. H, and springs, I, whereby to hold the collower, G, to the end of the piston, C, with a variable and classic press-ures. The accompany of the conjuct bayes M bearings N and ninch puts.

ure. 3d, The arrangement of the conical boxes, M, bearings, N, and pinch nuts O. for the purpose set forth 69,384.—HOISTING APPARATUS.—W. D. Andrews, N. Y. City

69, 384.—HOISTING APPARATUS.— W. D. Andrews, N. Y. OIY, I claim the use of two plain or grooved friction wheels of different diame-ters upon one shaft when the same are operated and driven by two similar friction wheels of different diameters on one driving shaft placed nearly parallel thereto, and so arranged that the speed and power may be varied by bringing into contact the larger wheel and smaller plnion or the smaller wheel and larger pinion, by means of the eccentric bearing as shown and de-scribed, or other equivalent device, for the purpose and object as stated. 69,385.—LETTER FILE.—Frederick Ashley, New York City. Antodeted Uneal 1987.

former, substantially as specined. 69,386.-ELLIPTIC SPRING BRACE -M. Barker, Humphrey, NY. 1 claim the arrangement of the brace of a CD, their outer ends secured to the center of the lower part of the sprinzs, A B, their liner ends secured to the vertical wheel, E. Divoted to the bottom of the wagon box, as herein described for the purpose specified. 69,387.—Hand SPINNING MACHINE.—Turner Barns, Greens-burg Ind

burg, Ind. burg, Ind. ist, I claim the arrangement of spindle, J, maintained in a given direction or bearing ithin the movable arm, H, by means of sliding rod, 1, and pit-man, 23, and stem, I. 24, In combination with elements of claim ist. I claim the arm, H. adapted for being advanced and retracted by weight, x, and treadle, Y, and their described or equivalent accessories, substantially asset forth. 69,388.—ERASEE AND LETTER OPENER.—G. C. Barney, Phil-ordenbia Pa

69,388.—ERASEB AND LETTER UPENER.—U. U. DATHUY, Fundadelphia, Pa.
Iclaim the blade, B, having convex and concave sharpened or cutting edges intersecting in a sharpened point, substantially as described, forming a combined eraser and letter opener.
69,389.—APPARATUS FOR RECORDING VOTES.—J. E. Beardsley, A. F. Boyle, E. M. Lewis, and M. A. Clancy, Washington, D. C.
1st, We claim the arrangement of the bars, F. with lacket and type: z, bars, O, with indicators, X, connected to bars, P. by the short bar, SJ, rode, b', and springs with angular bars', when used with the disks, C and D, and lever, N, in the manner and for the purposes herein specified.
2d, The dial plate, A, with its fance, A', and hands, 12, when arranged in combination with the drum, E, as constructed in the manner and for the purposes herein solor.
3d, The metallie disk, C, with its springs, W, and slots and provide with the radiating flatesprings, R, on its back, in the manner and for the purposes specified.

with the radiating has prings, as at the second sec

bination with the hollow shall, it, and ratcher a, as and for the purposed herein fully described. 6th, The arrangement of the clutch, K, with cones, q, and pawls, o o, in combination with the ratchets, p', spring shaft, and spring, if, plates, m1 m2, and cogs, s', in the manner substantially as and for the purposes herein specified.

m2, and cogs, 8', in the manner subsaminary assurements of the specified. The, The drum, E. with its rollers, f, band, g, and double catch, d2, when arranged and used in the manner and for the purposes herein specified. Stb. The disks, A B C D and G, with the drum, E, when constructed as specified with the voting devices and gearing for taking, counting, and printing the voter' names, in themanner' and by the operation substantially as herein fully set forth.

as herein fully set forth. 69,390.-APPARATUS FOR FILTERING AND PURIFYING SPIRITS. William F. Bearas, Mount Pleasant, N. Y. ist, I claim the rectifying vessel, h, provided with the oven flow pipe, p, supply pipe, e', perforated false bottom, m, and perforated head, n, between which the filtering material is retained, as and for the purposes set forth, d, I claim the percorated nade, n, formed with the movable sections, 1 and 2, held in place by the cross bar, i, nitted in the manner and for the purposes set torth.

69.391.—CHURN.—E. O. Bennett, Mt. Pleasant, Iowa

I claim the combination of the floats, G G, the inclined shaft, F, the per forated diap.ragm. H, with the driving machinery of a rotary churn dasher substantially as described.

69,392.—HEN'S NEST.—C. W. Blackman, Bridgeport, Conn 103,392.—HENS INEST.—O. W. Diachard, Diracopped of a box. A, provided with two doors, B B, hung on pivots, c c, and constructed each of two parts, b b, at right angles with each other and connected by cross rods, C C, all arranged to operate in the mannersubstantially as shown and described. 69,393.—TOOTH POWDER LOZENGE.—C. E. Blake, San Fran-

69,393.—TOOTH FOWDER LOZEAGE.—C. E. LARGE, S. C. Cal. cisco, Cal. I claim the making of tooth powder in the form of lozenges. 69,394.—ATTACHING THILLS TO CARRIAGES.—S. S. Bliss, New Bedtord, Mass. I claim, 1st. Securing the side irons. B B, when the same are constructed with solid conical bearings or centers. F F, to the thill, A, by means of clamp boits, D D, or in soy equivalent manner, substantially as described. 2d, The combination of the thill, A, side irons, B B, having solid conical bearings, F F, and clip iron, C, with its conical socket or seats, E E, when the same are constructed, arranged and operated substantially as described and for the purposes set lordi. B0 205 — I AASTWIG A WL.—C. K. Bradford, Lynnfield. Mass. 69,395.—LASTING AWL.—C. K. Bradford, Lynnfield. Mass.

09,390,—LASTING AWL.—C. R. Brauford, Lynnield. Mass. I claim combining with the stock or haadle, a, an eye-pointed awl, b, sub-stantially as shown and described. Also, in combination with such stock and eye-pointed awl, the spool chamber within the hadle, substantially as set forta. 69,396.—RESPIRATOR.—Robert Brayton and Samuel Curtis, Frequent Object.

69,390.—RESPIRATOR.—ROUGEL Diay on and sense of the purpose of the nort, Ohio. Ist, We claim the nostril tubes, b b, chamber, F, and mouth piece, c, in combination with the tubes, a s, and valves, d d', substantially as and for the purpose set forth. 2d, The box, A, and tube, E, in combination with the air chamber, F, substantially as set fortb. 3d, We claim a respirator so constructed that it may be connected to either the mouth or nose and so provided with inhaling and exhaling pipes and raily set in the mamer and for the purpose substantially as set fortb.

-Folding Seat for Carriage Bodies.-Richard F. 69.397

Brigg, Amesbury, Mass. I claim the combination and arrangement of the support, b, slotted inician late, d, and slotted upright support, c, substantially as described for the purpose herein set forth.

bur pose herein set forth. 69,398.—CLOTHES PIN.—R. G. Britton, Springfield, Vt.

69,406.—RINGING HOGS.—G. W. Clark, Frankfort, Ohio. I claim, 1st, The within-described apparatus consisting of the awl or plercing instrument, A B C, and the key or twisting instrument, E F G, con-structed and operated substantiality as and for the purpose set forth.
2d, The awl, A B C, when provided with a groove, b, and socket, b', sub-stantially as and for the purpose explained.
3d, The key or twisting instrument, E F G g, and hook, H, combined and operating in the manner and for the purpose explained.
69,407.—COAL ELEVATOR AND DISTRIBUTOR.—H. C. Clark and Robert B, Little, Providence, R. I.
I claim, 1st. A coal elevator which is arranged substantially as herein shown and described so that coal or other material can be raised from the hold of a vessel and discharged into any desired one of a number of tempo-ry compartments or pockets and be discharged runt the arecessary doors or traps, as set forth.
2d, The extension rails, G, when bing ed to the ends of the rails, F, so that

as set forth. 2d, The extension rails, G, when bing ed to the cads of the rails, F, so that they can be folded out of the way, substantially as set forth. 3d, The adjustable bolsters, o o, when arranged as set forth for the purpose specified.

bit, The adjustable bolsters, o o, when arranged as set form for the purpose specified. 4th, Therevolving trough, J, when arranged in combination with the rails, F, of an elevator and with the chambers, B B, substantially as herein shown and described. 5th, The revolving trough, J, when provided with trap doors, p, substan-tially as and for the purpose herein shown and described. 6th, The device for regulating the discharge of the coal or other material from the pockets or chambers, B, consisting of the screen or board, a, in Ombination with the hinged plate, d, and with the cord, e, all made and Operating substantially as and for the purpose herein shown and described. 7th, The folding extension, G, when made as set for tharranged in relation with the losterr, o, stationary track, F, and fielible revolving trough, J, all made and operating substantially as and for the purpose here-in shown and described.

(1) The second described.
(2) Alg. — TERRESTRIAL GLOBE.—G. P. Clarke, N. Y. City.
(3) Alg. — TERRESTRIAL GLOBE.—G. P. Clarke, N. Y. City.
(4) Isin the division of a sphere or globe into sections or zones, substantially as described and for the parposes set forch.
(2) I claim the division of a and application of the spring, I, in combination with the spindle, E E, the trunnions. F F, and the center zone, D, substantially as and for the parposes set forth.
(5) Alg. — HAND REAPER AND MOWER.—J. P. Cook (assignor to be a construction as the spring).

to himselt and John T. Campell, Rockwille, Ind. I claim a hand reaper or one designed for manual operation composed of a framing, A, having two reciprocating sickles, F f, attached and operated by eccentrics, or ther equivalents and suitable gearing simultaneously in opposite directions, substantially as shown and described. I further claim the adjustable yoke, B, in the framing, A, for the purpose specified.

peched. 39:410.—WATER WHEEL.—William Cooper, Hancock, Md. 1st, i claim the gates, G. operated through the medium of the circular late, 1, pivoted arms, H, and springs, J, all arranged substantially as and or the purpose; specified.

for the purpose; specified. 2d, The combination and the arrangement of the slotted arms, H, springs, J, plate, I, as and for the purpose; specified. 69,411.-STEAM SUPERHEATER.-L. R. Cornell, Flatbush, N. Y.

103,411.-DTEAM SUPERHEATER.-L. R. Cornell, r latousi, N. I. I claim the superheaster as described consisting of the parallel cylinders, A, divided into chambers, B2, by heads, B, and supported by means of the uprights, A2, said chambers connected alternately by mea sof the curved pipes, C, and connecting with the parallel condensing pipes, E, beneath each cylinder by means of the short pipes, D, as herein shown and set forth for the purpose specified. 69,412.-HOLDBACK.-J. C. Covert, Townsendville, N. Y. Updet the return of the baldback contents of control of the problem.

Iclaim the metallic holdback constructed as described consisting of the shaped strap, B, attached at its angle by a ring, c, to theneck yoke and at is ends by the snap hooks, b, to the rings, a, of the harness, as herein shown and described. its end

1.13 end by the shap notes, b, to the rings, a, of the narness as herein shown and described.
69,413.—METALLIC HAME TUG.—J. M. Curran and J. C. Baxter, Washington, D. C. We claim a hame tug having its body, A, formed of a single strap of metal with the eye, B, having the bin need or detachable plece, b, and its rear end formed for attaching the buckle, F, substantially as shown and described.
69,414.—AGUE MEDICINE.—F. M. Daniel, Athens, Ga. Iclaim a composition or medicine composed of the ingredients in about the proportions herein set forth and for the purpose specified.
69,415.—MUCHAGE POT.—Otis Dean (assignor to Robert W. Young). Richmond Va.

09, \$10. — M OULDAGE I OL. — OULD Low Long and a series of the series of

69.416.—DYKES AND LEVEES TO RIVERS.—S. B. Driggs, New

for the purpose described.
69,438.—LAMP CHIMNEY CLEANER.—J. P. Howell, N. Y.City. I claim the lamp chimney cleaner with a fierlike jointed handle that will yield to the euryes of the glass, and covered with icoth or other suitable material in socie manner that such cloth may be readily applied or detached substantially as shown and described for the purpose set forth.
69,440.—WASHING MACHINE.—Richard Hubbard, Cadiz, Ind. Ist, I claim in combination with a revolving rubbing cylinder, E, the ad-justable washboard, C, and bands of elastic weebing, D, arranged to operate substantially as set forth.
20, The revolving cylinder, E, when constructed with buckets, El, and rub-bins surfaces, E2, substantially as set forth.
69.441.—BED BOTTOM.—H. L. Ashan, Plattsburg, N. Y. I claim the combination of the slats, C G with the narrow slots at each end for securing the bands, a a, th -t connect the slats to ther, by the boits, D D, whereby the slats are prevented from turning as herein specified.
69,442.—OULTIVATOR.—C. M. Jenne, Young A merica, III. 1 + I, I claim the arrangement with reference to the seat, u, of the boam, i, working mpon universal joints and provided with suitable shares and han-de, substantially as and for the purpose specified. 2 d, The pshare-stocks, n, pivoted to the beams, i, and furnished with stems, x, extending the slotted guides, e, substantially as and for the purpose poor specified.
3 the words, s, in combination with the charce the share, bash of the hour, bash of the words, s, pivoted to the beams, i, and for the purpose a specified, h, and York City. Iclaim, 1st, The metallic wall or core, when arranged in a curved, cor-regated, or zig-zag form, substantially as and for the purpose se. forth. 2d. The metallic wall or core constructed with lap jonts at the junction of the plates to compensate for expansion and contraction, and arranged at an angle to the horizon in combin⁴tion with the braces, D, sn bstantially as specified. dies, substantially as and for the purpose specified.
2d. Theshare stocks. n. privoted to the beams, i, and furnished with stems, x, oxtending through the slotted guides, e, substantially as and for the purpose specified.
2d. Theshare stocks. n. privoted to the beams, i, and furnished with stems, x, oxtending through the slotted guides, e, substantially as and for the purpose specified.
4d. The wedges, g, in combination with the inclined bars, f, rods, h, and beams, in word substantially as herein set forth.
4d. The wedges, d, in combination with the oblique bars, c, in such manner that the position of the sold bars may be changed to adjust the position of the beams, substantially as herein set forth.
4d. The wedges, d, in combination of the spring, G, toothed plate, F, bent lever, H, blate, E, rod, D, and loops or eyes, B and C, with each other and with the post, A, and rear end of the part, I, of the gate, substantially as herein shown and described and for the purpose set forth.
2d. The combination of the adjustable catch, V, with the lower edge of the parts, I, of the gate, substantially as herein shown and described, and for the purpose set forth.
3d. The combination of the catch plates, P, lever plates, S, spring, T, and and lever, U, with each other and with the post, R, and plate or bar, O, at addered and for the purpose set forth.
4d. — F ENCE. — Nelson .Johnson, Jasper, N. Y.
1st, I claim the ekseleton metallicosckets having either hollow or solid gudferons and otherwise constructed and operating substantially as described.
4d. — F ENCE. — Nelson .Johnson, Jasper, N. Y.
1st, I claim the skeleton metallicosckets having either hollow or solid gudferons and otherwise constructed and operating substantially as described.
4d. The combination of the battens, A2 As, strips as, post or stake, A4, pin as not or the purpose specified.
4d. The eloxis, as C, Clo C, having bevelled upper ed 69,417.—CAST STEEL.—Francis Ellershausen, Ottawa, Canada.

by,417.—UAST STEEL.—Francis Ellershausen, Ottawa, Canada. Patented in Canada, Sept. 14, 1867.
1st, I claim the furnace above described consisting of the retort, B, hearth plate, D, and lower fire chamber, A, when the parks are constructed com-bined and arranged in the manner above set forth and for the purpose speci-fied.
2d, The hearth plate, D, in a furnace containing the retort, B, and fire chamber, A, substantially as and for the purposes torth.
3d, The process of obtaining cast steal directly from Iron, or from Iron ore in connection with wrought iron, substantially as above described.
69,418.—INDEX_GAGE AND CALIPER.—D. F. Elmer, Spring-field, Mass.

09,418.—INDEX GAGE AND CALIPER.—D. F. Elmer, Spring-ised, Mass. 1st, i claim the cylinder, g, slotted and graduated as specified in combina-tion with the jaws, a s', dial plate, B, hand, c, and bolt, H, substantially as described. 2d, The combination of the graduated dial plate, B, with the cylinder, g, in the manner and for the purpose set forth. 3d, The jaws, a s', in combination with the slotted and graduated cylinder g, and bolt, H.

combination of the bolt, H, with the graduated cylinder, g, as

The combination of the bolt, H, with the graduated cylinder, g, as and for the purpose specified.
 69,419.—COFFINS.—T. B. Estep, Cincinnati, Ohio.
 1st, 1claim a coffin, whose joints are hermetically closed by means of cemented rubber strips, D, and sheet metal strips, E, the s une boling applied and secured su betantially as herein de cribed and set forth.
 2d, in combination with the rubber strips, D, and metal strips, E, I claim the angle iron, D d d'as and for the purpose explained.
 69,420.—COFFINS.—T. B. Estep and W. C. Hofferman, Cincinati, Ohio. Assignors to Thomas B. Estep.
 We claim a coffin whose upper edges of the body, A, are provided with for using a shere in described and set forth.
 (34,221.—MACHINE FOR COLLING SPRINGS.—J. W. Evans, N.Y. ist. Iclaim the rolying madrel. I. made canable of a sliding motion

incha-rubber gasket, E, the whole being arranged and operating substantial-ity as herein described and set forth. 69,421.—MACHINE FOR COLLING SPRINGS.—J. W.EVAUS,N.Y. ist, I claim the revolving mandrel, I, made capable of a sliding motion in direction of its length in combination with the spirally grooved roll, K, and serving to detach the spring when formed essentially as herein set forth. 2d, in combination with the sliding and revolving mandrel, I, the g ping dog, b, and spiral guiding collar, d, for operation on the wire of which the spring is formed substantially as specified. 3d, The sliding and revolving mandrel, I, with its locking dog, b, and band wheel or its equivalent, H, in combination with the spirally grooved routing roll, K, having formed in it a recess or otch, s, essentially as herein set forth.

69.422.—Looms.—Danl. K. Fretz, Cono, Iowa.

OCTOBER 19, 1867.

2d, The construction and arrangement of the pendant, B, spindic, F, and hollow screw key, C, as herein set forth for the purpose specified. 69,428.—BEEHIVE.—Edward Harrison, Springfield, Ohio. 1st, I claim the open bottomed cup, A in combination with a removable strainer, D, substatially as and for the purpose set forth. 2d, In combination with the open bottomed cup, A, the ring, B, for the purpose of readily applying or removing the strainer, D, substatially as and for the purpose set forth and described. 3d, A bee feeding apparatus which can be filled through the top, and from which, the feed can only be obtained through the bottom, so that it may be placed to cover an onlice in the top of the live and the bees enabled to feed while observing their natural inclination to cluster together, and so that it may be replenished with feed without removal or disturbance of the bees as set forth.

69,429.—Horse Collar.— J. G. Haymaker, Salem Cross

Roads, Fa. Itst, The catch, B, secured to plate, D, on one end of the collar and spring, b', in the opposite cand with or without the uin or entering plece, C, and hole, C', applied to the lower portions of a divided horse collar and locking them together substantially as described. 2d, The pin or entering plece, C, and hole, C', with or without the catch, B, and spring, D', applied in like manner and for 1 ke purpose substantially as described.

a described. 69,430.—CHAIR SEAT.—Geo. Heesen, Tecumsch, Mich. Iclaim as an improved article of manufacture a chair seat formed or con-structed of paper twine substantially as set forth. 69,431.—BECHIVE —J. H. Hendrick, Clinton, Ill. 1st, Iclaim the combination with the lower division. A, of the hive, and the door, C, and its adjuncts, substantially as set forth. 2d, The surplus honey boxes or drawers, H, constructed substantially as arranged substantially as described, with the upper division, F. 69,432.—HAY RAKER AND LOADER.—J. W. Henry, Pecatoni-ca, 111. The upper and lower frames. compased of the aprice France D. with

ca, 111. The upper and lower frames, composed of the nprights, E E and D D, with their endless aprons and shafts and drums, arranged with the rake, L, and rods, M M, insuch a manner that hay is carried up and emptied forward of the machine as and for the purpose set forth. 69,433.—FILTER.—Foster Henshaw, Washington, D. C.

69,433.—FILTER.—FOSTET HEISINGW, WASHINGTON, D. O. Ist, I claim the alternate sand and cone chambers eltiter with or without the removable coal chambers, g g, when arranged and combined with the head pieces and the perforated plates, e e and if, one or both substantially as described and for the purposes set forth. 2d, The said filter when provided with the extension pipe, h, as a syphon in connection with the water holder or tank when arranged and combined as act for the super control of the super sup

as set forth. 69,434.—SUSPENSION HOOK FOR HORSE HAY FORKS.—Edward

69,434.—SUBPENSION HOOK FOR HORSE HAY FORKS.—Ed ward Hicks, North Hempstead, N. Y.
1st, The hook constructed with its prong, e, situated at an angle to its shank. A, substantially as and for the purpose specified.
2d, The eye, A*, of the hook constructed with the angles or corners, a* b* e*, substantially as and for the purpose set forth.
69,435.—CHARR.—G. H. Hoagland, Port Jervis, N. Y.
Iclaim the seat frame and back, or either, secured to the side frames o the chair by means of metallic fastenings, e d, formor mortise and tenon locks, substantially as specified.
69,436.—LAMP.—Peter Hoffmann, Constableville, N. Y.
I claim the reserver, B. Provided with the tuber, or adapted to solide in or

1 claim the reservoir, B, provided with the tube, c, adapted to slide in or over the tube, a, for the purpose of pumping the oil from the reservoir, A, as herein a set forth for the purpose specified.
 2d, The combination of the reservoir, A, sliding reservoir, B, tube, a, sliding rabe, C, carrying the tubes, eo, spring, I, and valves, I and K, substantially as and for the purpose specified.
 69,437.—STEAM CAR BRAKE.—Thomas and Hatfield Hopper, Newscit, V. J.

69,437.—STEAM UAR BRAKE.—I HOMAS and Lawrence Leff, Newark, N. J. 1st, We claim the combination of the silding rods, A and D, with the pul-leys, C1 and C2, chains, B, and rope, G, when arranged to operate the brake levors, F. in the manner and for the purpose herein described. 2d, The sliding rods, D, and adjustable pulleys, C, when constructed and arranged in the manner and for the purpose herein set forth. 69,438.—CAM FOR LOOMS.—F. E. Howe, and Leonard Wash-burg Stafford Conn.

bur, Stafford, Conn. We claim the combination of the cam wheel, B, having the guide, b, guide, c, guide, e, and guide, f, with the lever, A, having the projections, a d and g, the parts and the whole being arranged and operating substantially as and for the purpose described. 69,439.—LAMP CHIMNEY CLEANER.—J. P. Howell, N. Y. City,

specified. 69.446.--King Bolt.-Enos A. Keasey, Ligonier, Ind.

I claim a king bolt made with a shoulder piece, b, and a projection, c, at the lower end forming a swivel joint with the clip, B, constructed and ope-rating as herein described. 69,447.--STRETCHER FOR PAINTERS' CANVAS.--Miner K. Kel-09,598.— ULOTHES PIN.—K. G. Britton, Springfield, Vt. I claim a clothes pin formed of the two wooden pieces, A.B. united by the pin, b, through the grooved circular projection, a, and the tongue, c. and provided with a spiral spring, b, between the ends. e'e', to close the ends, e e, arranged and operating as described. 69,399.—RATCHET BRACE.—William Brown, Hoboken, N. J. I claim the spherical ratchet, A, in combination with the sockete, c, and pawl, g, substantially as described. 69,400.—LIFTING JACK.—William Green, Holly, Mich. 1st, The combination of the lever. L. unfight nost. A. grooves a clin e' with the lay and picker stat, substantially as described. (69,423 — AIR PUMP.— Henry Getty, Brooklyn, N. Y. Iclaim the gage, K L M, cup, O P, coupling, I, having recess, Q, all ar-ranged to operate in connection with an air pump, as herein shown and de-50,440.—Dabben and Composed of the hinged sections, CDE, together with the brace, F, all combined and arranged as shown an idescribed. 69,449.—Corn PLANTER.—Joseph Krebs and August Johns, 69,400.—LIFTING JACK.—William Green, Holly, Mich. 1st, The combination of the lever, L, upright post, A, grooves, ee, lip, e', and guides, v v, with the dogs, b b', each laving the short projecting tooth, 1, and arranged and operating substantially as and for the purpose described. 2d, The litting jack above described consisting of the post, A, having the series of teeth, as ', the grooves, e e, lip, e', and guides, v v, in combination with the lever, L, having the dogs, b b', held in place by the springs, s s', and provided with the teeth, 11, all the parts being constructed, arranged and combinedsubstantially in the manner and for the purpose spcified. 69,401.—BELLOWS.—George Bushnell, Schodack, N. Y. An-tedated sep t.26, 1867. 69,424.—TELEGRAPH APPARATUS.—Elisha Gray, Oberlin, Obio 69,424.—TELEGRAPH APPARATUS.—Elisha Gray, Oberlin, Ohio 1st, I claim the commutator or pole changer relay, and key arranged to op-rate conjointly with the main and local circuits so that the operator at any point on the line can reverse the current over the same, from the main bat-tery in the manner substantially as set forth.
2d, The peculiar construction of the commutator when arranged with the line and local circuits for the purpose of obtaining the attraction and repul-sion of the direct and reverse currents by means substantially as a specified.
3d, The commutator with an electro magnet or vibrating core armature so arranged that its poles are between the poles of the electro-magnets and so connected with the line and local circuits, that when both are closed one magnet is attracting the armature and the other is repelling, in the manner substantially as set forth.
4th, The arrangement of the magnet, J, electro-magnets, CD, lever, H, and spring, K, combuned and operating conjointy in the manner and/for the purpose substantially as set forth. Masillon, Ohio, I claim an improved corn planter formed by the combination of the mark-ing plow, Y, adjustable covering plow, A1, roller, E1, lever, D1, and dropping wheel, T, with each other, said partabeling constructed, arranged and operated substantially asherein shown and described and for the purpose set forth. 69,450.—TELESCOPE.—William Kuebler and F. Seelhorst, tedated sep.28, 1887. icdated sep.28, 1887. i claim, ist, The combination of the several smaller bellows with the rod, operating substantially in the manner hereinbefore described. 2d, The combination of the bellows, E, with the chamber, F, valve, O, and ver, P, as hereinbefore set forth and described. 9,402.—ATCACHING THILLS TO VEHICLES.—Edward M. But-69,402. 69,451.-PROPELLER.—William Lawton, Green Point, N. Y. purpose substantially as set forth. 69,425. — WEIGHING ATTACHMENT TO FAUCETS.—L, C. Fisher and A. D. Holliday, El Paso, Ill. We casim the bar, L. with clutch, D, plate, E, bars, H and F, rods, c c, with springs, G G, and plate, A, the various parts constructed and operating in the manner substantially as and for the purposes set forth. 69,426.— GLASS WARE PRESSES. —Jonathan Haley, Camler, Croton Falls, N. Y. I claim the mibber cushion, I, or its equivalent, applied to the center pin of shaft couplings, substantially as and for the purpose described. I claim the combination of the arms, F, pivoted gear wheels, C, stationary internally too thed gear wheel, H, and gear wheel, D, with each other and with the driving shaft, E, and working slatt, C, substantially as herein shown and described and for the purpose set forth. shaft couplings, substantially as and for the purpose described. 69,403.—CARRIAGE WHEEL.—J. G. Buzzell, Lynn, Mass. I claim, ist, The swivelled spokes, B', when orimped to give them clas-ticitywith the coils, b', substantially as here a shown and described. 2d. The single spokes. B, their outer endswivelled to the rim, C. and their ends screwing into the hub and adapted to be turned to regulate the strain of the wheel, as herein set forth for the purpose specified. 3d, The single spokes, B, bild in the coils, b', as here in set forth for t e pur-meas mechanized. and nescribed and for the purpose set form.
 69,452.—DIRT SCRAPER.—Cyrus Little and Joel L. Little, Van Wert County, Ohio, and Reuben M. Dalbey, Springfield, Obio, assign-ors to themselves and Doty & Rawlins.
 1st, We claim the plates, G G, constructed as described in combination with the springs, e c, on the bar, C, in the manner and for the purposes set forth. bridge, Mass. I ARE I RESSES. —JURATIAN Haley, UAM-bridge, Mass. I claim a press organized substantially as described so that the bed and plumer have simultaneous movements relative to each other in approaching and ecceeding. with the springs, e c, on the bar, C, in the manner and for the purposes set forth. 2d, The rod, D, bar, C, and springs, e e, arranged in combination with the scraper, A: as constructed and for the purposesspecified. 69,453.—SEWING NEEDLE,—G. A. Lloyd and S. Fetlow, San Federating. Also the combination as a ranged of the cranks, connecting rods, movable bed and plunger-carrying crosshead for the purpose specified. 69,427.—WATCHES.—J. A. Harmann, New York City. 1st, I claim the key, C₁ constructed as described and adapted to screw into the pendant, E, substantially as described for the purpose specified. of the same not house interest and so that the very state of the removable ring, D, coiled 4th, The combination and arrangement of the removable ring, D, coiled swivelled spokes, B B, whereby the strain and elasticity of the wheel are adjusted, as herein set forth for the purpose specified. Francisco, Cal. We claim making the eyeso far from the rear end of the shaft that it will

carry the bight of the thread or twine through the cloth sewed when the needle is pushed through the cloth by the thimble or palm, substantially as

, We also claim diminishing the shaft of the needle from a little behind eye gradually to the rear end, both in width and thickness, substantially escribed

69,454.—MACHINE FOR FOLDING LEATHER.—Johnson Lom-

bard, Springfield. Me. 1st, i claim the table, B, hinged to the horizontal frame, A, as and for the purpose described.

1st, i claim the table, is, hinged to the horizontai frame, A, as and for the purpose described. 2d, The combination of rollers, c c', hung in the hinged side pieces. D D, the rollers, c c s, hung in the double standard, E, the roller, c, hung in the slide, g, on the table, it has a sing over all the rollers, the whole boing arranged and operating substantially as and for the purpose herein described. 3d, The slide, g, and the brake, m, in combination with the roller, c5, arranged and operating as described. 69,455.—(A TFE,—Christian Mack, Leipsic, Ohio. I claim the combination of part, B, latch and lever, H I, gate, a, triangular swinging and supporting frame, E F D, and postic d, arranged and operating in the manner as show and described and for the purpose set forth.

set forth. 69.456.—SASH LOCK AND STOP.—Donald D. Mackay, White-

bet Iordi.
69,456.—SASH LOCK AND STOP.—Donald D. Mackay, Whitestone, N. Y.
1st, I claim the spring catch, e, pivoted at its lower end, aliding rod, f, and knob, c', arranged in relation with the gpring rollers, a a', and the sais h. A. for operation anbetantially as set forth, the whole forming a combined sash at paral lock as described.
2d, The sliding bars b, furnished with rollers, a, and operated by spiral springs. c', as arranged and operating in relation with the sash, A, substantially as and for the purpose specified.
69,457.—FOLDING BEDETEAD.—S. H. Mapes, Almond, N. Y. ist, I claim attaching the slats, b, of each section to the rubber or elastic bands, c, which will be more or less stretched when the scations of the slats are to be connected together in the center, that being done by suitable hooks, i, substantially is a described.
69,457.—FOLDING BEDETEAD.—S. H. Mapes, Almond, N. Y. ist, I claim attaching the slats, b, of each section to the rubber or elastic bands, c, which will be more or less stretched when the sections of the alast are to be connected together in the center, that being done by suitable hooks, i, substantially in the manner and for the purposes efforth.
2d, The arrangement of the folding bedtead, with the enclosing case composed of the binged or swinging sections, s' and D, and the binged top, E, substautially as described.
69,458.—GOVERNOR.—T. B. McConaughey, Newark, Del.
1st, I claim the combination of notched levers, g g, with spiral spring, h, constructed as and for the purpose set forth.
2d, The governor, B, in combination with arms, e e, notched levers, g g, the spring, h, and lever, L, when combined with brake, S, in the manner and for the purpose destributily as here in set forth.
69,459.—MODE OF VENTILATING MILL STONES.—H. McEldowner, Dixon, III.
1 claim the spiral flange, C, at the inner side of the curb, B, in combination with the opening. Mc and for the purpose set

69,460.-WINDOW SCREEN.-James McFeely, North Woburn

Mass. I claim the perforated or slotted tank, D, reservoir, E, and spout, G, in combination with the frame, A, and screen, B, substantially as described for the purpose specified. 69,461.—TUCKING ATTACHM NT FOR SEWING MACHINES.—

69,461.— TUCKING ATTACHM NT FOR SEWING MACHINES.— John McNeill, New York City. Is:, I claim the combination of the creasing device, I, the pressure plate, E, the folding plate, F, the guide plate, G, and the forming plate, H, constructed as described, that by its mode of operation the plats or tucks of shirt rosoms or other garments shall be creased, folded and finished by sewing when at-tached to a sewing machine. 2d, In combination with the above the following plate, K, baving the end, m, doubled and turned in upon itself for forming the first or outside one of a set of platis or tucks constructed and operating substantia Ily as described. 69,462.—FENCE.—M. D. Messler, New Lebanon, Ohio.

694,462.— FENCE.—M. D. Messier, New Lebanon, Ohio. 1st, I claim the rods, E. having spirally shaped lower ends, their upper ends pent and secured to the upricht of a fence, substantially as described. 2d, The wires, d, forming the connection between the panels of a fence, constructed and arranged substantially as described. 3d, In combination with the above the pivoted cleats, as', secured and ar-ranged substantially as described. 69,463.—NEEDLE SETTER FOR SEWING MACHINES.—Thomas C. Michener, St. Louis, Mo. I claim the combination of the spring arms, B B', with the adjustable arm, A.Y, and the pointed needle guide, c, all arranged in the manner and for the parpose described.

purpose described. 69,464.—CAR COUPLING.—Daniel W. Miller and Michael Brestle, Jr., Middletown, Pa. 1st, We claim thesilding block, C, provided with pin or bolt, e, and con-structed withrecesses, o, (one or more) when said recesses are arranged at an angle to the herizon tal plane, substantially as and for the purposes set forth. 2d, The sliding block, C. and its pin, d, combined with the link, G, and sheath, A, all constructed arranged and operating substantially as herein set

69,465.—SHIFTING STEP FOR VEHICLES.—Edward Miller,

69,400.—DHIFTING DIEF FOR VERICES.
Milwaukee, Wis
1st., I claim an improved shifting step. A, formed with a hook or flange, a', upon its upper end, substantially as herein shown and described, and ior the purpose set forth.
2d, The combination of the hinged handle or top piece, B, with the step. A, substantially as herein shown and described, and for the purpose set forth.
69,466.—MACHINE FOR MILLING TWIST DRILLS.—L. B. Miller Jarsev City. N. J.

69,466.—MACHINE FOR MILLING 'I'WIST DRILLS.—L. B. Miller, Jersey City, N. J. Ist, I claim the spindles, D and E, one within the other revolving in a common bead and locked together by the spring bolt, b, in combination with a longitudinal feeding device having a diagonal adjustment, to a rotary milling tool or cutter substantially as specified. 2d, The arrangementand combination of the vertical slide, I, adjustable slide, T, intermediate sliding bar, V, and slotted eccentrie, R, for regulating the depth of cut, substantially as set forth. 3d, The cam or eccentric, V, elbow lever, W, and clutch. A', operated by the screw, b', for giving an irregalar depth of cut throughout the line or length there of, substantially as specified. 4th. The reversing carrier or spring borne clutch. D', in combination with the clutches, d', and schere in the set forth.

in set forth. 5th, The a having a lor

in set forth. 5th, The arrangement of the driving shaft, J, the work holding carriage having a longitudinal and swiveling motion as described and the burr or milling tool, A, substantially as specified. 69,487.—DOUGH KNEADER.—W. B. Morrison, Muskegon,

69,470.—Composition for Imitation Rubber.—J. B. New

brough and E. Fagan, New York City. We claim as a new composition stearme or margarine, and sulphur, gum copal, or other suitable material, so combined and in such proportions as to form a compound of the nature herein described.

form a compound of the nature herein described. 69,471.— WARPER AND DRESSER PLATE.—Ambrose J. Nich-ols, North Providence, R I. I claim the evelets, B, when placed in the holes in the copper, A, in such a manner as to turn loosely therein and allow the thread to wear equally upon all sides and prevent the formation of channels, as herein show n and dscribed. 69,472.—PICKER FOR LOOMS.—Bradf ord W. Nichols, Phœnix Willow R J.

circular holes, d. roller, a g. cam, F, and crank, G, constructed as described, for the pur pose specified. 2d, The projection, J, in combination with the crank, G, and cam, F, sub-stantially as described for the purpose specified. 3d, The fork head, E, provided with the shoulders, e, whereby it is held in position by means of the cam, F, as it enters the conveyor, D, substantially as described for the purpose specified. 4db, The combination of the fork head, E, conveyor, D, cam, F, crank, G, and projection, J, substantially as described. 5db, 480.—POTATO BAKER.—Adam Reid, Buffalo, N. Y. I claim a potato baker made to sit upon or in the pothole of a cooking stove, having an inner shelf, D, for the support of the articles to be baked, and adouble wall, forming an annular hot air chamber, A, with apertures, C, madethrough the inner wall, substantially as described. 69,481.—BULLET MAC INE.—C.H.Remington, Dubuque, Iowa. 1st, I claim the combination of the stildes, b b', actuated by the cams, a', the moving die, c, and the stationary die c', the punch, d, and the feeding silde, g, arranged and operating substantially as and for the purposes herein eacribed. 2d, The head block, k, the clamping jaw, ki, the sliding arm, k2, and slide

69,483.—GENERATING GAS FROM INDROCARDON LIQUIDS.— M. S. Richardson and E. A. Pond, Rutland, Vt, 1st, We claim in the manufacture of gas from hydrocarbon fluids, the method herein indicated of discharging air in a divided state into the body of the carbureting fluid, in such manner that the discharge of the said air may at all times take place at the same depth below the surface of the fluid, for the purposes set forth. 2d, The combination with the carbureter or tank for containing the hydro-carbon, of a float provided wich concentric compar.ments under the ar-rangement described, so that the air in passing from one compartment to an-other, shall be forced in a divided state into and through the body of the carbureting fluid, as set forth. 3d, The float herein described, the same consisting of a series of open bot-tomed concentruc chambers, communicating one with the other by means of tubes or pipes, and connected with the air supplying apparatus, substantially as set forth. 69,484.—SEEDING MACHINE.—Edwin Ritson (assignor to W. ealu the fluiu, 2d, The bon,

as set forth. 69.484.—SEEDING MACHINE.—Edwin Ritson (assignor to W.

69,486.—Combined Corn Planter and Plaster Dropper.

us, 400.—UOMBINED UORN L'LANTER AND L'ASTER DROPPER. —Henry Rodes, Clarence Conter, N. Y. 1st, I claim the combination with a planter, C, and plaster dropper, D, of a dropping arrangement that by a single movement shall open the one and close the other, substantially, and b/ce verse, as herein set forth. 2d, The especial combination and arrangement of the dropping apparatus, consisting of slides, E G, connected with the single arm, J, and operating in the manner and for the purpose herein specified. 3d, The combination of the sliding gage plug, n, with the slide plates, 11', ar-ranged as described, and operating in the manner and for the purpose speci-fied.

ranged as described, and operating in the manner and for the purpose spec-fied. 4th, The construction, combination, and arrangement of the draw bars, 1', stirrup, r, and connection, w, with the drill tooth, t, and coverer, v, as here-in set forth. 5th, The combination and arrangement of the elastic connection, ai, and the adjusting gage, bi, with the pivoted plaster tube, m, operating in the manner and for the purpose set forth. 6th, The arrangement of hoppers, C D, with dropping slides, E G, the rock shafts, E H, with connection, t, the cam androller, cs., and the draw bolts, 11, with stirrup, r, and connection, whe whole operating in the manner herein set forth. 69 487 — COMENNED HORSE RAKE AND HAY SPREADER —

111, with stirrup, r, and connection, w, the whole operating in the manner herein set forth.
69,487.—COMBINED HORSE RAKE AND HAY SPREADER.— Charles Rozers, Barker, N. Y.
1 claim the frame, C, arranged in rear of the axle, A, and supported by the castor wheel, c, in combination with the bearings, gla, and the head of a rake or tedder, substantially as and for the purpose specified.
69,488.—TRUNK.—Alfred V. Ryder, New York city.
1st, I claim in a trunk, the body of which is composed of three main portions or compartments, A B C, the front upper, or upper front one, A, of which is hinged as ta, and mane to open and close as described, constructing the front of the rear portion, B, ot a shelving or receding character relatively, to the dividing cut or cuts, b, substantially as and for the purpose or purposes herein set forth.
2d Hinging the front opper, or upper iront portion, when the same is arranged to open as described, relatively to the terming portion or portions of the trunk, at a point or in a line which is in advance of a vertical center, through the width of the trunk, essentially as subcified.
69,489.—GRAIN AND SEED CLEANER.—Jacob Sattison (assigned to balanded and here yanged in the width of the trunk, the point of the substantial structure of a vertical center, through the width of the trunk, when the same is a structure. ato, Making the straps operating the picker stants adjustable, substantially as described.
3th, The tripper arms, c d, on the treadle shatt, C, substantially as and for the purpose described.
69,516.—LOOM.—W. B. Walker, Salem, Iowa.
1st, I claim the construction and arrangement of the downward projecting arms, b b, slotted longitudinally in which the pickers, if, are bived and support ing the picker blocks, g c, which are mortised to receive and inclose the tapper ends of said pickers, as herein shown and described for the purpose effed.
2d, I claim the pickers, ff, one in the end of each arm or exterior of the lay with the projections or arms, d d, having a convex point and being concever from that to the main body of the picker, substantially as described and for the purposes set forth.
3d, The main springs, c with the outer end convex or bent up to work on the convex point of the origotion. d of the arms of the pickers, substantially as described and for the purpose set forth.
4th, The arrangement and combination of the p latforms, I l fastened on the top of the sides of the loom with and for the purpose, r, and elbows, s, to which the set springs are attached, substantially as described and for the purpose set forth.
5th, The cloth beam. 7, with the ratchets, 2 and 3, attached and the surface covered by cards or filled with pins, the spring, s", and pawls, 4 and 6, substantially as described and for the purpose set forth.
6th, The extra cloth beam or receiving beam on which the web will be received by the action of the blocks, A, with their projections, B and E, constructed and arranged anbstantially as and for the purpose set forth.
69,517.—WOODEN PAVEMENT.—C. G. Watterburry, N. Y. City, it, I claim the blocks, A, with their projections, B and E, I claim the movable strips, C, and bolts, D, substantially as and for the purpose set forth.
3d, In combination with the blocks, A, having projections, B and E, I cl

(9) 409.—(GRAIN AND SEED CLEANER. — JACOD SAUISOII (43-signor to himself and Ambrose Frayer, Ripley, Ohio. I claim the bolt, B, in combination with the shake sieves, M, conductors, N and O, when arranged and operated conjointly with a fan or blower, in the manner and for the purpose substantially as set forth. 69,490.—SHOE KNIFE.—Henry Sauerbier, Newark, N. J. I claim the sliding or adjustable guard or gage. C, provided with a lip, b, and turned up edge, in combination with the blade of the knife, substantially as and for the purpose hereinset forth. 69,491.—Stude KNIFE.—Henry Sauerbier, Newark, N. J.

19419 as and tor the purpose nerein set form. 69,491.—SHOR KNIFE.—Henry Sauerbier, Newark, N. J. I claim the guard, C, having the lip, b, at its outer end, when provided with the beveled recess, c, resting against the blade, A, as and for the pur-pose set forth. pose set forth. 69,492.—CENTER BOARD.— John G. Saunders, Narragan-

69,492.—UENTER DOARD.— John G. Statust, J. Landing, set, R. I. set, R. I. last, I claim the raising and lowering of the center board, in an oblique direction, by means of an oblique slot or groove, and a fixed bolt, or their equivalents, arranged substantially as and for the purpose set forth. 2d, The rack bars, C. in combination with the pawis, c. and the center board, B, all arranged substantially as and for the purpose specified. 69,493.—WASHING MACHINE.—John Schermerhorn, Spring Grant Pa

Creek, Pa. Joint Construction of the boxes, D, of the square part, g, and the arm, d, with hooked end, e, for receiving the spring, f, in combination there-with, and with the rubber, B C, substantially as and for the purpose de-service.

which all with the function, B c, substantially as and to the purpose de-scribed and the function of the spring, f, adjustable boxes, D g d e, and cor-ruzated rollers, C, meshing with the corrugation of the rounded bottom of case, A, substantially as described, for the purpose specified. 69,494.—GATE— William Serviss, Sidney, Ohio. I claim the arrangement of the post, C, of the partial inclosure, relatively to the posts, a b, when provided with a hinged stop. F, whereby the gate is retained between the points, C a, of the inclosure, or may be opened at pleasure, substantially as set forth. 69,495.—WATER WHEEL.—Samuel Shive, Forks, Pa.

ist, I claim thewheel, A, mounted on the sliding frame, B, secured to the singed pulley frame, D, and operating substantially as described, for the proceeding of the second secure of the second seco

69,503.-FIRE- L RM TELEGRAPH.-J. H. Stevens, Boston,

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Mass. 1st, 1 claim the rheotrope, D, and reversing magnets, I, in combination with each other, when connected with and operated bysignal box, K, substantially as described. 2d, The arrangement and combination of the wires, M M, switches, B, and knobs, C, so as to include in or exclude from the circuit the rheotrope, D, sub-

2d, The arrangement and combination of the wires, M M, switches, H, and knobs, Cso as to include m or exclude from the circuit the rheotrope, D, substantially as and for the purpose described.
3d, The described comtination and arrangement of signal box, K, start magnet, E, rheotrope, D, with its springs, L, and wires, M, with switches, B, and reversing magnet, J, substantially as and for the purpose described.
69,504.—ODOMETER. — M. W. Stevens and E. H. Drake, B we claim the application of the odometer with the hub, B, and its journal, D, in manner as specified, in connection with the formation of such journal with a notch, x, and the application thereto, and to the odometer train, of a pliman, y, and approx, to operate the said train, substantially in manner and the application and arrangement of the cap or guard, v. with the resolution of the wheel hub on the axie journal, appendix, C. We also claim the gapment and the case, B, and it's hollow shant, C. We also claim the arrangement sand combination of the spring, z, and the case start that is part, with the train of geais sand serversfor operating the index arboy, g, as specified.
69,505.—FURNACE.—Wn. Stevens, Bloomington, III. ist, I claim the tube, B, and pipes, ii 1, arranged in the manner as specified, and uged for the purpose set forth.
2d, The arrangement of the chamber, D, perforated plate, G, in combination with the tube, E, and pipes, ii 1, arranged in the manner and for the purpose specified.
69,505.—FURNACE.—Wm. Stine, Elmore, Ohio.

69,506.—Stovepipe Joint.—Wm. Stine, Elmore, Ohio.

JO, JUL .- STUVEPIPE JOINT.- W m. Stine, Elmore, Ohio. I claim the perforated metallic ring for securing the joints of stovepipes and smoke stacks, provided with the central fange, a, a round its periphery, when constructed as described, with the ends upon both sides of the flange, t, of equal or of unequal diameters, substantially as herein shown and de-cribed.

69,507.—Washing Machtne.—T. B. Stout, Keyport, N. J. I claim the rubber, B, having a vibrating or self-rocking movement, and arranged and operating substantially as and for the purpose herein speci-

arranged and operating substantially as and for the purpose herein speci-fied. I also claim the wash-board, C, rocking, or self-adjusting sidewise, in com-bination with the rocking movement of the rubber, B, at right angles there-to, substantially as and for the purpose herein set forth. I also claim the adjustment of the washboard so as to bring its flutings or corrugations either parallel with or oblique to those of therubber, substan-tially as and for the purpose herein specified. 69,508.—SLEIGH RUNNER.—W. H. Stroup, Philadelphia, Pa. I claim the runners, A 41, hinge, C, and keeper, B, arranged in the manner and for the purpose specified. 69,509.—GATE.—A. Tandy, Columbia, Mo. I claim forming the upper hinge of a slot in the upper end of of the bar, C, and guide, E substatially in the manner herein shown and described and for the purpose set forth. 69,510.—WOOD MITERING MACHINE.—Robert F. Tomkins, New York city.

69,510.-WOOD MITERING MACHINE.-Robert F. Tomkins, New York city. I claim the adjustable sector-shaped rest blocks, B, having guide pieces, U, incombination with the guide wing, M, adjusted by means of these ts crews, P, in the slotted piate, K, and bearing the inclined cutter blades, N, and with the adjustable guide strips, R, substantially as described for the purpose specified.

specified. 2d, The adjustable grooved post, V, in combinaton with the cutter blades N, and rest blocks, B, as and for the purpose specified. 69,511.—CAR COUPLING.—Joseph Trent, Millerton, N. Y. I claim the combination and arrangement of the revolving buffers, B B1, buffer bars, D D1, blocks, G GI, springs, K KI, and rods, H H1, substantially as described for the purpose spucified.

as described for the purpose specified. 69,512.—Mop 11EAD.—John Troxel, Reedsburg, Ohio. Iclaun the arrangement of the heads, A, arms, B, levers, C and D, and Ink, E, these veral parts being constructed and operating in the manner and for the purpose set forth. 69,513.—SHEEP SHEARS.—Francis Van Doren, Adrian, Mich.

1st, I claim having two or more stationary guards or cutters, E E, and one movable cutter, A, on sheep shears, substantially as and for the purpose here-

1st, I claim having two or more stationary guards or cutters, E E, and one movable cutter, A, on sheep shears, substantially as and for the purpose herein shown and described.
2d, The movable cutter, A, in combination with two or more stationary guards or cutters, E E, and gazes, a b, all made and operating substantially as herein shown and described.
69,514.—SPRING BED.—Charles Van Dveck, Nashville, Tenn. I claim the combination of the three frames, C a b. mattresses, A I, all partice, J and the combination of the three frames, C a b. mattresses, A I, all partice, J and the combination of the three frames, C a b. mattresses, A I, all springs, D D and H, arranged substantial vas described.
69,515.—LOOM.—A. O. Very, Andover, N. Y.
1st, I claim operating the treadle shaft of looms by means of a direct action of the lay on a cam formed on a loose jacket on the treadle shaft, substantially as eaceribed.
3d, The spiral cam, G, on the loose jacket, F, on the treadle shaft, c, substantially as and for the purpose set forth.
3d, The roller plus, g, g, on the under side of the shuttle race, H, operating the cam, G, on the loose jacket, f, substantially as and for the purposes set forth.
4th, Making the straps operating the picker staffs adjustable, substantially as a described.

a described. Sthe, The tripper arms, c d, on the treadle shait, C, substantially as and for the purpose described.

apolis, Minn. 1st, 1 claim the arrangement of the plns, w v, with coil springs, when used in combination with breech blocks, C, as constructed in the manner set forth. 2d, The combination of the sliding bar, k, and hammer, E, with the block, c, and cannon A, for the purposes herein specified. 69,520.—Horse Collar FASTENING.—D. C. Westfall, Mifflin,

I claim the eyereis, b, when placed in the holes in the copper, A, in such a		00,00.—HORSE COLLAR PASTERING.—D. C. Westran, Himmi,
manner as to turn loosely therein and allow the thread to wear equally upon	1st, I claim thewheel, A, mounted on the sliding frame, B, secured to the	_ Pa.
all sides and prevent the formation of channels, as herein shown and dscribed.	binged pulley frame, D, and operating substantially as described, for the	I claim the horse collar fastening consisting of grooved hollow caps for re-
69,472.—PICKER FOR LOOMS.—Bradford W. Nichols, Phœnix	purpose specified.	ceiving and concealing the ends of the collar, forming a bearing for the
The second secon	² 2d, The hinged pulley frame, D, in combination with the whoel, A, con-	hames, and concealing in one part the spring sliding bar, f, which catches
Village, R.I.	structed and operating substantially as described.	over the beyel hooked projections of the other part when constructed and
I claim the combination of the picker of the picker staff and binder, b, with		operating as herein represented and described.
a raw hide case, a, the case having laps, h, projecting over the sides of the	69,496.—RAILWAY SWITCH.—Daniel Simmons, N. Y. city.	
staff, and a shoulder, i, in the hide, to hold the filling, g, in place, substan-		69,521.—Spike.—James A. Whitney, Jersey City, N. J. An-
tially as described.	1st, I claim the norizontal operating bars, G, upright bars, I, steams, h, and springs, i, arranged to upcrate in relation with each other, and with the	tedated, Sept. 26, 1867.
69,473.—PIPE AND BOLT CUTTER.—C. C. Parsons, Boston,	and springs, i. arranged to operate in relation with each other, and with the	I claim a notched, toothed, or servated spike constructed with a spiral or
	platform, fulerum, r, and the laterally projecting pins or stude, b*, of the	twisted portion, substantially as herein setforth.
Mass. Antedated Sept. 18, 1867.	lever heads, A*, substantially as and for the purpose herein set forth.	69,522.—SKATE.—Fridrek Wichehaus and Charles Rothe,
I claim a pipe or bolt cutter having two rotary disk cutters arranged to op-	2d, The combination of the locking pawls, d, and rods, d', with the switch	
erate substantially as set forth.	rails, C, and levers, D, substantially as and for the purpose herein set	Newark, N. J.
69,474.—REIN HOLDER.—Buel D. Pease, Madison, Pa.	forth.	We claim the elliptic heel button, f. firmly secured to the spring lever, E.
	69.497.—Bob Sleigh.—L. F. Skinner, Springvale, Wis.	which plays in the recess, d, between the rear standard, D, and the sole plate
I claim an improved rein holder formed by the combination of the frame,		B, and whose forward end drops into the rear end of the loot plate, A, in the
A, cam, B, and spring, D, with each other, substantially as herein shown and	I claim the hubs, a a a a, spokes, d d d d. forming the segment of a	manner and for the purpose herein described.
described and for the purpose set forth.	wheel when attached to runners, A A A A, in combination with axles, B B,	
60 475 Company W C Dool Whenling West Va	constructed as described, and operating as set forth.	69,523.—School Desk and Seat.—D. C. Wilson, Beaufort,
69,475.—CHURN.—W. C. Peck, Wheeling, West Va.	69,498.—BUTTER TRYER.—Wm. H. Sloan, St. Louis, Mo.	S. C,
I claim the detachable cream box, D, dashers, G, bar, B, cross bar, I, and	I claim the scraper, B, when provided with a handle, b, and a convex	I claim the school desk and seat constructed as described consisting of the
uprights, H, all constructed and arranged as herein shown and described.	I claim the scraper, B, when provided with a failure, D, and a convex	end frame, A B, framed into each other and held in position by means of the
	scraper piece, b2, as described and set forth.	top noard and shelf, the seatheing formed upon the timbers, B, secured to
69,476.—HARVESTER RAKE.—G. M. Peters, Granville, Ohio.	69,499.—STEAM GOVERNOR.—H. D. Snow, Bennington, Vt.	the front part of the frame, A, as herein shown and described.
1st, I claim the reciprocating rake carriage, I I', in combination with the		
re ciprocating slide, K, and chain, M. substantially as described.	I claim the arrangement of the revolving head, m, segment arms, p, and	69,524.—WATCHMAN'S REGISTER.—Adolph Witt, Cincinnati,
21, The rake head, J, pivoted to the reciprocating carriage, I I', in combi-	governor balis, in combination with the valverod and adjustments, u v, as	Obio.
nation with the reciprocating slide, K, operating as de cribed.	and for the purposes set forth.	1st. I claim in combination of the tubular centershaft. C c c', minute hand
3d, The arrangement of the ways or guides, H L, in relation to the platform	69,500.—Toy PISTOL.—Fisher A. Spofford, and Matthew G.	and stem, D D' d d', axial rod, E e, spring hour hand, K k, perforated dia 1
and in combination with the rake carriage and lifting slide, substantially as	Raffington, Columbus, Ohio.	plate. N n, shutters, O, and closing follower, R, the whole being arranged
described.	We along the tornistal consisting of a harrol open at both and g with the	and operating substantially as herein described and for the purpose specified.
4th, The combination of the reciprocating and lifting rake, J, and carriage		and operating substantianty as mercini described and for the purpose specified.
the combination of the recipiocating and inting rake, J, and carriage	aperture. E, opening directly into the barrel, near the breech, and having	2d, I also claim the combination of the hour wheel, F f, intermittent
I, ways or guides, H L, and endless chain, M, with the platform, G, substan-	the spring, h, located therein, as shown, with the piston, B. operated by the	wheel, H h, and spring, J, as and for the purpose set for th.
tially as described.	spring, C, and the trigger, D, arranged to release the piston by elevating its	3d, In combination with the seven described clements of the first clause, I
69.477.—Apparatus for Heating Water and Condensing	front end, all as herein shown and describe d.	further claim the spring belt crank, T tt', and rod, U u, for the objects ex-
STEAM Henry J. Phalen, Plantersville, Texas.	69,501.—ATTACHMENT FOR SCHOOL DESKS.—David J. Stagg,	plained.
I claim the arrangement of the pipes. D G, for the passage of the steam and		4th, I claim the combination of lever, W, cam, X, shatt, Y, spring, Z, and
of the water or other liquor, whereby the water or liquor is forced in the	New York city.	operating knob or handle, Y' or their equivalents for the purpose described
same direction as the current of steam, by which it is overtaken and with		and set forth.
which it mingles in a spray-like or other divided condition, substantially as	top supporting rail, c, and attached to the desk by means of the spring catch,	69,525.—SAW SET.—James C. Woodward, Franklin, Conn.
and for the purpose herein specified.	C, said frame adapted to fit in the slot, a, of the desk, substantially as de-	I claim the hammer-head, C, constructed as described provided with the
and for the part, which therein specified.	scribed for the purpose specified.	stem, K, fitting longitudinally into the outer or swinging end of the shank,
69,478PLOWMason Prentiss, Cambridge, N. Y.		B, and adjusted by means of the thumb screw, M, as herein set forth for the
I claim the a ustable shoe, D, applied to the curved rear part of the plow	69,502.—Combined Corn Planter and Cultivator.—J. F.	by shu adjustow by means of the thumb bolew, it, as needif set fortunor the
beam, A, substantially in the manner as and for the purpose set forth.	Sterett and C. M. J. Reynolds, Ottumwa, Iowa.	purpose specified.
	I claim the arrangement of the hopper, D, upon the beam, with the pipe, J,	2d, I also claim the set screw, Z, substantially as and for the purpose de
69,479.—Mode of Operating Horse Hay Forks.—A. J.	slides, H and a, bar, F, and the round of the handles, with its lever, G,	scribed.
Purviance, Keosaugua, Iowa.	and arm, E, the several parts being used and operating as and for the purpo-	69,526.—CUT OFF VALVE GEAR.—J. N. Wrigley and George
1st, I claim the conveyor, D, provided with the horizontal ribs, C C, having	as ant forth	Smith, (assignors to John N. Wrigley,) Newark, N. J.

We claim the cams, d d, on the wheel, H, the adjustable bar, K, the bell crank, J, and the rod. m, arranged and operating substantially as described for the purpose set forth.

254

69,527.—STEAM SAFETY VALVE.—J. N. Wrigley and George Smith (assignors to John N. Wrigley), Newark, N. J. 1st, I claim the construction and arrangement in the shell, A, of the stationary valve, B, movable valve seat, C, substantially as herein set forth for the purpose specified.
24, The construction and arrangement of the shell, A, stationary valve, B, movable valve seat, C, substantially as described for the purpose specified.
26, 500 Bocom , C, Stern, E, and lever, P, substantially as described for the purpose specified.

69,528.—BOOTS AND SHOES.—B. C. Young, Boston, Mass. I claim a boot having buttons or knobs securely fast-ned to and projecting from the opposite outer surfaces of the leg near the top thereof, or in such position that by applying a fore finger under each button or knob, and a thumb to the inner surface opposite said button or knob, the boot may be securely grasped to pull it on the foot, substantially as set forth.

69,529.—HARVESTER.—Elijah Young, Fayetteville, Mo. 1 claim the adjustable disk, e4, in combination with the spring pa the ratchet, substantially as described and set forth. awl and

REISSUES.

2,767.-RAILROAD CHAIR.-John McMurtry, Lexington. Ky., 2,101.—ItalINOAD CHARC.—Joint Includitly, Dexington, Ky., assignee of J. A. Raebing and J. McMurtry. Patented Oct. 81, 1865. 1st, I claim a solid block of cast iron or steel of sufficient length to rest on two or more sleepers and constructed as described, in combination with a plate of iron or steel of like length, fitted on the opposite side of the rails and secured to said block and rails in the manner and for the purpose specified, 2d, I claim further a plate of iron or steel of such length that if will rest on two or more sleepers, in combination with a like plate fitted on the opposite side of the rails, both being constructed and connected as and for the pur-poseset forth.

suce of the two plates, in combination with said plates, substantially as and lor the purpose described.

2,768.-BREECH-LOADING FIRE-ARM.-Wm. H. Miller and Geo. W. Miller, West Meriden, Conn. Patented Dec. 26, 1865. We claim, 1st, The latch, E, arranged and operating in combination with 54,432.—HEAD BLOCK FOR SAW MILLS.—Simon F. Stanton

Advertisements.

The value of the SCIENTIFIC AMERICAN as an advertising medium cannot be over-estimated. In circulation is ten times greater than that of any similar journal now published. It goes into ABORATORY of INDUSURIAL CHEM-biet to Arts and Manufactures, Metallurgy, etc. Plans of Factories, Drawings of Apparatus, analysis and Com-mercial Assays. Informations on every kind of Chemi-cal Fabrications. Address Prof. H. DUSSAUCE, Chem-ist, New Lebanon, N.Y. 1* all the States and Territories, and is read in all the principal libraries and reading rooms of the world. We invite the attention of those who wish to make their business known to the annexed rates. A business man wants something more **FOREMAN WANTED IN MACHINE** SHOP, at the Bennington Machine Works, on or be-fore January 1st, 1868. The right man can have a perma-nent at mation, with good pay, and an interest in the busi-ness if required. One of the oldest and best concerns in the State: build Gunpowder and Paper Machinery: em-ploy about 20 hands in Machine Shop; business about \$100,000 per annum; Proprietors all mechanics. A ddress, immediately, for further information, O. & H. W. SCOTT. Bennington, Vt., Sept. 28, 1867. 10 H than to see his advertisement in a printed newspaper. He wants circulation. If it is worth 25 cents per line to advertise in a paper of three thousand circulation, it is worth \$2.50 per line to advertise in one of thirty thousand.

RATES OF ADVERTISING.	Dennington, V., Sept. 20, 1001.
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Back lage, for engravings\$1.00 a line. Inside Page40 cents a line. Inside Page, for engravings60 cents a line.	A. RULLMANN'S Medicamental Elixer, examined. ap- proved, and parented, by the United States Patent Office, and founded on 61 years experience An infallible remedy for stomach cramps, bowel com- plaint, diarrhea, billousness, intermittent fever, weak, sick, or disordered stomach, pain in the forehead, offen-
TINNER'S TOOLS-Good Second-hand set for sale. GEO. G. ATWOOD, GEDEVA, N. Y.	sive breath, itching piles, acrimony, worms, want of appetite, and all evils created by an unhealthy stomach; also a preventative and sure cure for cholera and sea sickness. Price \$1 per bottle. For sale at 643 Fourth avenue, New
THE MAGIC SCALE-A New Thing Send for Circular, H. MARANVILLE, Akron, O.	York. Druggsts, hotel keepers, and restaurants, allowed a liberal discount. Responsible agents wanted for every State in the United States. 161* LARGE SALE OF PUBLIC PROPERTY

BALLAUF, MODEL' MAKER, No. D. 414 Seventh street, Washington, D. C. Orders for Certified Duplicates of Patent Office Models and Original Models for Inventors. 16 13*

LARGE SALE OF PUBLIC PROPERTY. OFFICE OF ARMY CLOTHING AND EQUIPAGE. No. 18 STATE STREET New YORK, Oct. 4, 1867.5 WILL BE SOLD AT PUBLIC AUC-tion, at the Depot of Army Clothing and Equipage: No. 400 Washington street, New York city, on TUESDAY, the 22d day of October, 1867, commencing at 11 o'clock A. M., to be continued from day to day, the fol-lowing articles of Army Clothing and Equipage: 21.651 Woolen Blankets. 7.211 Rubber do. 5.058 Do. Ponchos. 63.45 Perged Bootes, pairs. 23.185 Hand-s'w'd Bootes, pairs. 23.6360 Hand-sewed Boots, pairs. 23.6360 Hand-sewed Boots, 54.40 Trowsers, horse. 105.990 Do. 400. Art. trimmed. 95 Do. Art. trimmed. 95 Do. Art. trimmed. 23.990 Domet Shirts. 134 Unif. Coats, Art. Misicians. 24.900 do. Art. Musici. 144 Eagles for Lt. Art. 25.900 do. Art. Musici. 144 Eagles for Lt. Art. 27.900 do. Art. Musici. 27.900 do. Art. Art. 27.900 do. Art. Musici. 27.900 do. Art. Musici. 27.900 do. Art. Art. 27.900 do. 27.9000 do. 2 WANTED—Correspondence with a gen-terest in erecting and running asplining factory on mod-erate scale. J. E. S., Evening Shade, Lawrence Co. Ark.

CAUTION.—Beware of Imitations of Wi () nans' Incrustation or Boller Powder. This article has been success. Illy used for 12 years past, and is now largely pirated. A positively harmless and reliable rem-dy for incrustations. H. N. WINANS, 11 Wall st., N.Y.

WANTED-SAW MAKERS-Two first-class workmen accustomed to work on "BIG OIR-CULARS," to whom good wages will be given, by FAILEY & SINKER, 16 21 American Saw Works. Indianapolis, Ind.

the face plate, b, oscillating breech plece, B, and catch, i, substantially as described. 24, We also claim the combination of the swinzing breech plece, striker, and detent, operating together as and for the purpose described. 36, We also claim the plate ejector, F, with its shoulders, stop, and finger, when hung loosely upon and constructed in its movement solely by the plyot pln of the swinging breech and moving around the same center with it and operated by the inserting of the cartridge and the swinging of the breech, in the manner substantially as described.

2,769.—PUTTING UP POWDERS, ETC.—Henry Sawyer, Rox bury, Mass. Patented Jan. 5, 1864. I claim a package or case which when made with distributing holes and filled, is cemented by the way or wafer, e, as set forth.

DESIGNS.

2,792.—TRADE MARE.—Thomes Bakewell, Pittsburgh, Pa. 2,793.—STATUETTE.—Hammatt Billings, Boston, Mass. 2,794.—SPOON HANDLE.—Luther Boardman and Norman S.

2,794.—SPOON HANDLE.—Luther Boardman and Norman S. Boardman, East Haddam, Conn.
2,795.—WATCH PLATE.-Alfre Gerard, Somerset county, N. Y.
2,796.—RANGE.—S. W. Gibbs, Albany, N. Y.
2,797.—TRADE MARK.—Stuart Guywn, New York City.
2,798.—SEWING MACHINE.—T. C. Page, Chicopee, Mass.
2,799.—WOVEN FABRICS.—William B. Weeden, Providence, B. K.

R. I.

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Application has been made to the Commissioner of Patents for the Reissue of the following Patents, with new claims as subjoined. Parties who desire to oppose the grant of any of these reissues should immediately address MUNN & Co., 37 Park Row, N. Y.

WHEEL MACHINERY,-ing Machines. Also, Improved Tenoning Machines, n entirely of Iron, easily adjusted to any size. Price & Address WM. BURLINGAME. Exeter, N.

the above, or any of my books sent by mail from postage, at the publication price. By My new Catalogue of Practical and Scien Books, complete to June 1, 1867, sent free of postag any one favoring me with his address.

HENRY CAREY BAIRD, Industrial Publisher, 406 Walnut street, Philadelph 16 1)

PAT ERASER

(assignee of J.M. and S. F. Stanton), Manchester, N. H. Dated May1, 1866. Application for reissue received and filed Sept. 19, 1867.

1000. Application for reissue received and filed Sept. 19, 1867. I claim the combination of the graduated notched gnide, R, and vibratory lever, Q, with its pawl and ratchet wheel, P and Q, or the equivalent thereof, for moving the uprights different and determinate distances by the simple movement of the lever, substantially as and for the purpose herein speci-fied.

Test of the formula of the purpose herein specified. I also claim the combination and arrangement of the purpose herein specified ouble set so fracks, b b b and c c, for moving the uprights by the turning of the shaft, E, substantially as herein set forth. I also claim the construction and arrangement of the shaft, E, sections, coupled by clutches, F F, which may be connected or disconnected at pleas-ure, substantially as and for the purpose herein set clied. I also claim the screws, J J, arranged upon the upright and operating substantially as and for the purpose herein set forth. I also claim the dog apertures in the uprights for the reception of hori-zontal dogs, substantially as described. I also claim the dog apertures or dogs, M M M, arranged and operated sub; stantially as and for the purpose herein set forth.

60,342.—TAP BORER.—W. A. Ives & Co., New Haven, Conn.,

assignees by mesne assignments of Silas S. Crocker, Maquoketa, Iowa. Dated Dec. 11, 1866. Application for reissue received and filed Sept.25,

I claim, 1st. A borer constructed from a plate curved so as to form a con-ical-shaped instrument, one edge projecting slightly above the other, the salient edge sharpened while the other forms a guide and the space between the two edges of the throat of the instrument combined with a gimlet point, whether the edge be spiral or straight. 2d, The volute-shaped tool with a sharpened salient spiral edge with or without the gimlet point, substantially as described.

IP NOTE .-- The above claims for Reissue are now pending before the Pat. ent Office and will not be officially passed upon until the expiration of 30 days from the date of filing the application. All persons who desire to oppose the grant of any of these claims should make immediate appli-cation to MUNN & CO., Solicitors of Patents, 37 Park Row, N.Y.

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Shap- made \$75.	FIRE-BRICK MANUFACTURERS I desire your correspondence (Interests concerned). Western Manufacturere correspondence preferred. Ad- dress J. A. BAUSMAN, Brick maker, Boonsboro, Iowa.
.н. 5 00 АС-	DUNHAM'S Improved Nut-Forging Ma- chine is unequaled in simplicity and durability, and the most perfect working machine in use. Rights for sale. Address [15 8*] GEO. DUNHAM, Unionville, Conn.
ever E OF Engi- ures, With	THE Excelsior Wind Mill and the Genuine Concord Axlessmanufactured by 15 26*] D. ARTHUR BROWN & CO., Fisherville, N.H.
with the To aper on, of con- tins of	A NVILS.—Peter Wright's Patent Anvils, 250 to 500 lbs. each, for sale very low. A PURVES & SON, 15 4] South and Penn sts., Philadelphia.
00. of pa- apter vash-	BELTING - One Roll (150 feet) 18-in. Double Leather Belting for sale low by A. PURVES & SON, 15 2] South and Penn sts. Philadelphia.
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Fur- Fur- od of aft-r some upon	COCK HERE!-Don't fail to send for Il- er. Agents are making from 15 to 30 dollars per day. Ad- dress HOB BINS, FRONTZ & 'O., Hughesville, Lycoming county, Pa. Patented Sept. 3d, 1567.
son's two e for VII. king	TILLE Foonomized and Power Increased by
mes; loro- ine; min- VIII. cut- tus;	H CARVALHO'S PAT. STEAM SUPFR HEATER. Guaranteed to remedy "priming," save a large percent- age officei, and turnish pure, dry steam, of any required temperature. Is easily attached to bollers, very durable, and pays for itself in a few months. Address HENRY W. BULKLEY, General Agent, 70 Broadway, N.Y. 18 12"
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n the Chap. Crip- ee of ntinc	2 10 " " second-hand. 4 5 " " with or without Generators. The above Engines, after a severe test as to power and econ ony, took the highest prize (Gold Medal.) at the Mechanics' Fair In Bosicoa, and medal at Fair of Ameri- can Institute, New York. Just the Engine to seend West or South, being easily packed in small spice, without danger of breaking. Address WM. BURLINGAME, Exeter, N. H.
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ER, Sells nple, tress	WANTED-AGENTS-\$75 to \$200 per month, everywhere, male and female, to intro- dnce throughout the United States, the GENUINE IM- PROVED COMMON SENSE FAMILY SEWING MA- CHINE. This machine will stitch, hem, fell, tuck, quilt, bind, braid, and embroider in a most superior manner. Price only \$18. Fully warranted for 5 years. We will pay

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16 2] American Saw Works. Indianapolis, Ind.	Musiciant. 40 824 Jackets, Cav. do.	Stewards.	10	U HOUSES of moderate cost. \$1 50 post-paid.	
DOUBLE MOTOR IN SAME SIZE , with	neers	44 Eagles for Lt. Art. caps.	EN MA	Geo. E. Woodward,	THE AMERICAN TURBINE WATER WHEEL, Patented by Stout, Mills, and Temple, pos-
same number of revolutions in the "Going Barrel." Reynole for Hunter style ; runs longer before it wears out of repair. Guaranced. Must be sold before explain-	26 Do. do. Ordnance. 316 Do. do. Art. Music. 227,11	8 Tulips, do. do. 12 Hat Eagles.		Publisher and Importer of CHITECTURAL BOOKS	WHEEL, Patented by Stout, Mills, and Temple, pos- sesses new and valuable improvements, and remedies de- defects which exist in all other Turbine wheels. Per cent of power guaranteed to be equal to any overhot wheel. For descrip the circulars address OLIVER & CO., 1*] Agents, 55 Liberty street, New York.
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MILLING MACHINES - Of Improved	Reg. 1,600 Brass Scales, N.C.S.,	Wreaths. 23 Knit Drawers. 20 Unif. Coats. Inft.,		Can make \$50 a week. Sample, wo styles for 40 cents. Address MORSE ERASER CO.,	Price only \$18. Fully warranted for 5 years. We will pay
rivalled convenience of adjustment. Also, Pipe Vises, with and without extra jaw, and Vises of all sizes tor	4,595) BrassScales, Sergt's,	Boys.		4 Library st., Philadelphia. Pa.	beautiful, or more elastic seam than ours. It makes the "Elastic Lock Stitch," Every second stitch can be cut
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All with Steel Screws, well fitted. Send for circular 16 6eo* C. W. LE COUNT South Norwalk, Ct.	24,999 Do. Handles. 378,04 19,992 Do. Slings 3,33	43 Common do. 27 Wall do. large.	IOAL ENGINEERING Shot	CHINGLEDNING- POLYTECHNIC DEPARTMENT of illopen Oct. ist, 1867. Applica- SCHOOL OF CIVIL AND MECHAN- lid be made to CHANCELLOR T, St. Louis, Mo. Tuition \$100	DARTIES Making or having a wood sur-
	9,666 Spa 1es, 2,69	Ten ts.	per jeun		DARTIES Making or having a wood sur- facing planer that works about 7 inches thick, ad- dress, with circular D. A. AELLEY, Pawtucket, R. I. 15 2*
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Samples sent on receiving twenty-five cents and a stamp. Address S. HODGINS & CO.,	Terms cash, in government fund and the balance before the goods a	ds; ten per cent down	Lathes, Chucks, Rests and	Also, Traverse Drills, Brass	ful information in regard to patents, new inventions and scientific subjects, with scientific tables, and many allustra- tions. 108 pages. This is a most valuable work. Price only 25 cents. Address MUNN & CO.37 Park Row, N. Y.
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