elv or successively within the influence of the magnets. and to make the influence of the magnets more nearly continuous, or less interrupted. A third improvement consists in the construction of the helices with flat cores arranged radially to the center of the wheel or circular series; and a fourth improvement consists in making the ends or poles of the magnets of such taper form, that their edges are radial to the center of motion. or so nearly so as to be always parallel with the edges of the cores of the helices at the time of their passing. The object of these third and fourth improvements is to make the change of polarity in the core of each helix more sudden and complete, and the electric impulse consequently stronger. A fifth improvement consists in an intensity regulator of novel character by which the quality of the current can be readily varied from high to low intensity, to adapt it to the particular duty required. The credit of these improvements is due to H. N. Baker, of Binghamton, N. Y.

BALANCING MILLSTOMES.

The object of this invention is to obtain a ready means hy which the revolving stone may be balanced while both in motion and at rest, and the parallelism of the faces of a pair of millstones always preserved. The "runner" or revolving millstone of a pair, when hung on its spindle, after completion, will be found in an unbalanced state, and the plan has usually been to balance the stone by inserting a piece of lead into its top at the light side of it. This plan of course, would balance the stone while at rest, but, when made to rotate the centrifugal force generated by its rotation and the position of the lead, which is above the point of suspension of the stone, causes the latter to be out of a state of equipoise, and hence the parellelism of the stones when at work is not preserved. Again, if the stone be balanced while in motion, but out of balance or state of equipoise when at rest, the unequal density or disposition of weight relatively with the point of suspension, will subject the spindle to considerable lateral strain, and it would be liable to heat and be injured by wear. In order to obviate these difficulties the inventor employs a band or strap, which encircles the "runner" circumferentially with a weight interposed between it and the side of the stone, the band and weight being in or about in a horizontal plane with the point of suspension of the stone, and the desired end is thereby obtained. This device has been patented to D. Fellenbaum, of Lancaster, Pa.

COTTON GINS.

This invention relates to an improved mode of feeding or presenting the seed-cotton to the action of the saws, rollers or other means employed for separating the staple from the seed. The object of this invention is to produce a uniform motion of the roll of cotton within the hopper throughout the entire length and circumference of the roll, and to support or so sustain the roll, that the portion in immediate contact with the saws or other lint-separating device will not be deflected by gravity, or other causes, so as to press upon said device, a contingency which is injurious, especially where saws are employed, as a "cutting" and "napping" of the lint is the result. The invention consists in the employment of a cylinder constructed of light wood or other suitable material studded with radial spikes or teeth, and placed logitudinally within the hopper, whereby the desired end is obtained. The patentee of this invention is H. L. Emery, of Albany, N. Y.

SELF-ACTING WASTE GATE.

This invention has for its object the preventing of the washing away of mill dams by freshets, and by such a means that it will be automatic in its operations, that is to say, self-acting, requiring no special manipulation, and therefore performing at any moment when required its proper function. To this end there is inserted in the mill dam, a gate frame, provided with a gate or gates of suitable dimensions to allow when open the full volume of water to pass through unobstructed, or nearly so, the gates being arranged in such a way that the water within the dam when reaching a certain hight, will by its pressure open the gate or gates and pass through, thereby relieving the dam of any undue pressure. This improvement was patented by Sidney Hudson, of Milford, Mich.

THINNING BOARDS.

This invention is an improved machine for planing boards to render them thinner, it is intended more

especially for carriage makers for reducing the thickness of boards to form panels for carriages. The invention consists in combining with a guide and gage box which nay be made light and portable, a plane stock carrying a curved plane iron, a feed roller for carrying the stuff up to the cutter, and an adjustible board by which the stuff may be nicely gaged so as to be cut as thin as desirable. The credit of this invention is due to Sharon Case, of Lumpkin, Ga.

ATMOSPHERIC PILE DRIVER.

This invention consists in furnishing the air-lock which is employed to form the cap of the pile in driving, with a supplementary air-lock so applied as to permit the discharge through it of solid matters which may have been taken from within the pile, while the water is excluded by an artificial pressure of air within the main air-lock and pile, without the necessity of opening the main air-lock to the external atmosphere. The inventor of this improvement is W. S. Smith, of Trenton, N. J.

TUCK AND PLAIT FOLDER.

This invention consists in a certain construction and arrangement of the parts of a tuck and plait folder. which provides for its adjustment in a very simple manner to perform the folding of tucks and plaits of various widths and at various distances apart, and for the easy introduction of the fabric to be folded. This improve ment was designed by Reuben Brady, of this city.

VEHICLES.

The object of this invention is to make a buggv casy of access from the rear, to avoid the wheels, in case of muddy weather, or an accident by falling under them, should the horse suddenly start. It consists in dividing the seat and box vertically through the middle, and hinging one or both to the floor of the buggy at the back end, said seat being furnished on its under side. with suitable steps which, when the seat is thrown back will serve for an entrance up into, or as a passage out of the buggy, when the seat may be returned to its former position. E. S. Wicklin and J. D. Weaver, of Carlinville, Ill., are the inventors.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING GEFTENDER 4, 1860

(Reported Officially for the SCIENTIFIC AMERICAN.]

Pamphlets giving full particulars of the mode of applying for putents, size of model required, and much other information use-ful to inventors, may be had gratis by addressing MUNN & CG., Publishers of the SCIENTIFIC ANREGAR, New York.

29,850.-H. N. Baker, of Binghampton, N. Y., for an

29,850.—H. N. Baker, of Binghampton, N. Y., for an Improved Magneto-electric Apparatus:
I chim, first, The employment, in a macueto-electric machine, of a number of helices in each wheel or circular series, proportioned to the number of magnetic poles in each circular series of magnets, as described, for the purpose specified.
Second, The arrangement of the helices of two or more wheels in spiral relation to each other, and for the purpose set forth.
Third, The construction of the helices of two or more wheels in spiral relation to each other, and for the purpose set forth.
Third, The construction of the helices with their flat cores, arraneed national we to be center of motion, substantially as and for the purpose specified.
Fourth, The intensity regulator, consisting of the wheel, F, plates, G G, coupling straps, m, and serves, j J, or their equivalents, combined substantially as described.
Fifth, Arranging the terminal wires of the helices to fass through the heliow rotary more in shaft on their way to the intensity regulator and pole changer, substantially as described.
Yen the helices that an an effective of the helices to fass through the heliow rotary more in shaft on their way to the intensity regulator and pole changer, substantially as described.

29,851.-Jonathan Ball, of Elmira, N. Y., for an Im-

provement in Mode of Preparing Wood for Um-brella Sticks:

brella Sticks: I claim, first, The process of curing, consisting of the operations of curing, drying, digesting in hot water, drying again, souking in hot oil, and drying in hot air, performed in the order specified. Second, I claim, in combination with the described process of cur-inc, the drying of the wood simultaneously with or by the same oper-ation as the removal of the sap, substantially as described.

29,852.-I. S. Barber, of New York City, for an Im-

20,002.—1. S. DATDET, Of New York City, for an Improvement in Machines for Turning Ovals: I claim, first, Supporting the cutter shatts in radial self-adjusting arms in combination with the pattern, arranged substantially as shown, and this I claim whether the driving pulley have the same axis with the said arms or not. Second, I claim the movable and adjustable pattern guides, whereby various aizes shapes and widths can be cut from one and the same pattern.

29,853.-W. H. Barber, of Wolcottville, Conn., for an

Improvement in Seed Planters: claim the arrangement of the wheel, B. ratchets, F.G. clicks, f.F. ft, C. rockshaft, c. spring, e, honper, H. spring, h. slide, E, and res, IJ, as and for the purpose shown and described.

ground in which the seed is to be deposit d. It consists also in com bining the seed elide with a vertical fat spring passing through the center of the hopper in such a manner that by the action of said spring, the seed is stirred, and the filling of the seed cells facilitated.1

29,554.-Thos. Beach, of Freeport, Pa., for an Im-

29,554.—108. Iseach, of Freeport, Fa., for an Improvement in Steam Hammers: I claim so constructing and arranging the piston rod and hammer shaft of steam and atmospheric hammer, as that the hammer shaft shall pass into or through the piston rod made hollow to receive it, in order that the length of the hammer shaft, below the cylinder, may thereby be cavable of adjustment, without interfering with the length of stroke of the piston, substantially in the manner and for the purposes set forth.

29,855.-Benjamin Bogue, of Trenton, Iowa, for an

Improvement in Horse lowers: laim the arrangement of the frame, A, and the wheel, B, the in-il lead bars, a a, and the external lead and division bars, d, and bestantially in the manuer specified, for the purpose of applying spower internally and externally to the wheel, as is set forth. Tela รไ โคร e, subsi horsepo

29,856.-Reuben Brady, of New York City, for an Im-

provement in Tuck and Plait Folders: I claim the construction of the confining plate, H, when hinged to he lower plate, A, for the purpose and in the manner shown and de-cribed.

It is noted practice, the state of the state, if the second of the process of the state o

29,857.-C. D. Brewer, of Lewisburg, Pa. for an Im-

23, 357.—U. D. Brewer, of Lewisburg, Pa., for an Improvement in Machines for Dressing Millstones. I claim the use of the plate, N, when the same is made adjustable on the pickcarrier, D, by means of the slot, u, and serve bolt, V, or their equivalents, as described, and to operate in combination with the adjustable pawl, I, and lever arm, I, to enabe the operator to vary the force of the pick, without varying the feed of the carriage, B, as set forth and described.

29,858.-T. E. C. Brinly, of Louisville, Ky., for an Improvement in Plows:

Improvement in *l'lows*: I claim the arrangement on the standard, D, and beam, A, of the ledges, a b, and shoulder h, to admit of the attaching of the standard to the landside mold board and beam, as shown, in connection with the brace or rod, E, applied, substantially as and for the purpose act forth.

[This invention consists in a novel and improved way of attaching the standard of the plow to the moldboard and landside, whereby a very firm and durable attachment is obtained, and one that will admit of the standard being readily detached, if broken, and a new one adjusted in its place. The invention further consists in a novel arguing embed of a cutter and the method of attaching the same to the plow, whereby a firmandstiffcutter is obtained and the durability of the plow increased.]

29,859.—Thos. Byrne, of Baton Rouge, La., for an Im-provement in the Preparation of Flour: I claim the bringing of flour of wheat and other grains in contact with earbonic acid gas, artificially manufactured.

29,860.-Thos. Byrne, of Baton Rouge, La., for an Improvement in Mode of Applying Sulphurous Acid

provement in mode of Appying Summurous Acid to Cane Juice: claim a method by which I treat cane juices with subhurons acid gas and lime, or sulphurons acid sus and either of the earths, viz., baryta, masnesin, or strontia, so that no sulphite of lime, or sulphito of any of the above mentioned bases shall be formed in said cane juices, as set forth.

29,861.-Sharon Case, of Lumpkin, Ga., for an Im-

proved Machine for Thinning Boards: I claim the combination with a box. D, having an adjustable bot-tom operated by set screws, a a a, of the feed roller, G', arranged and made to operate as set forth, plane. A J, and presence roller, G, the whole being combined and arranged substantially as and for the purposes set forth.

29,862-C. T. Chester, of New York City, for an Im-

29,862.—C. T. Chester, of New York City, for an Improvement in Electro-Magnets: I claim, first, In combination with corres confined, so as to prevent the action of the currentlivough a surrounding helix from imparting motion to them. Helices wound on spools of hard rubbler or other suitable material surrounding the corres, and so arranged that the cores may be removed from them when requisite, substantially for the purposes set forth. Second, I claim holding, moving and adjusting the cores by means of the serve and apring, rubstantially as described. Third, Coupling and supporting the helical spools by the deuble rings, substantially as described.

29,863.-L. S. Chichester, of New York City, for an

Improved Sad Iron: I claim a smoothing iron having a hollow spiral self-ventilating handle, and the edges of its rubbing surface provided with a groove, and otherwise constructed or shown and described.

[The object of this invention is to render the smoothing iron or ose much more efficient than those of usual construction, by facilitating the rubbing and pressing operation to which the fabric is same time preserve all the facilities of the old ubjected, and at the iron in smoothing or ironing out the small folds in the fabric.]

29,864.—J. M. Cooper, of Pittsburg, Pa., for an Improvement in Revolving Fire-arms:
1 claim the use of a locking bolt, such as described, operated by the trigger, spring, and trigger working on a collar on the trigger around the trigger in, so as to prevent its action being interfered with by the presence of the front end of the wigger, projecting through the lock frame, and pressing against the circumference of the rotating cylinder, whereby when the trigger is not drawn back, and the puts are st rest, the cylinder will be situate between two of the inpile, such not upon or in front of any of them, thus wording in a great measure the danger of a projecting a section the the darger of the head of the manner of the solution that the end of the hanner will be situate between two of the inpiles, and not upon or in front of any of them, thus wording in a great measure the danger of a premature or accidental discharge. premature or accidental dischärge. " Also the arrangement of the trigger, hammer, and vibrating tooth constructed as described for the purposes described.

29,865.-A. B. Crawford, of Piqua, Ohio, for an Im-

29,866.-G. W. Efner and S. A. Sperry, of Ann Ar-

Inprovement in Secu Fianters: I chaim the arrangement of the wheel, B. ratcheta, F G. clicks, F

29,867.-H. L. Emery, of Albany, N. Y., for an Im-

. . .

188

29,867.—H. L. Emery, of Albany, N. Y., for an Improvement in Cotton Gins:
I claim the employment or use, within the saw chamber, A, of a cotton gin of a rotating cylinder or shaft, C, provided with spikes or teeth, c, for the purpose specified, substantially as set forth.
I also claim the arrangement, as shown, of the cylinder or shaft, C, within the saw chamber, A, to wit: providing the shaft with journals, a, which are fitted in openings, b, of sufficient diameter to admit of a necessary degree of lateral play or movement of the shaft, as and for the purpose specified.
I turther claim, in connection with the journal opening, b, the disks or circular plates, D, attached to the shaft, for the purpose set forth.
O 900 - David Recip. of Dewnkyuer, Ohio, for an Improvement of the shaft, and the forth of the shaft, and the forth of the shaft, for the purpose set forth.

29,868.—Daniel Fasig, of Rowsburg, Ohio, for an Im-proved Feeder for Straw Cutters: I cluim the combination with shaft, F, of the fianges, c c, tooth, e, rackhandle, H, and rake, I, arranged and made to operate in the manner and for the purpose set forth.

This invention is a self-feeder for moving the strawor stalks to be cut up, to the cutters as they are operated. It consists in operating a rake, by a novel arrangement, so as to give to it an advancing movement up to the cutters at each revolution of the crank-shaft that operates the knife; and said movement can be regulated as pleasure, to cut the straw longer or shorter.]

29,869.-D. Fellenbaum, of Lancaster, Pa., for an Im-

provement in Balancing Millstones: I claim applying the weight, E, to the side of the revolving stor or runner, A, and in or about in a horizontal plane with its point, suspension, by means of a metal strap or band, D, or other suitab device, for the purpose specified.

29,870.-H. E. Fickett, of Glenn's Falls, N. Y., for an

Improved Clothes-dryer: laim the dryer, constructed substantially as described, in com-ion with the standard, F, and ribbed socket, G; the whole ar ed and operated as described and for the purpose specified. 26,871.-Luther Fogg, of Boston, Mass., for an Im-

26,871.—Lutner roug, of Doston, mass, ... an provement in Skates: I claim, first, The oscillating runner, being hinged to the stands projecting from the stock, substantially in the manner and for the purpose described. Second, I claim the extension plate connected to the strap, sub-stantially in the manner and for the purpose set forth.

29,872.-Albert Fuller, of Cincinnati, Ohio, for an Improvement in Hydrants: I claim, first The state

provement in Hydrants: I claim, first, The yielding valve, H, and waste valve, M, when combined, arranged and connected substantially as set forth, so as to permit the waste valve to operate alternating with the main valve, or remain inactive, at the option of the operator. Second, The described combination of pipe or barrel, E, serew nozzle, F, guides, e, and casneg, D; the said parts being construct-ed, arranged and operated as set forth, so that the hydrant may be removed boiliy by unscrewing from above, and again replaced, without disturbance of the ground and without undue exposure of its base.

29,873.-M. A. Furbush and George Crompton, of Worcester, Mass., for an Improvement in Power Looms:

LOOMS: We claim connecting the two hand levers of the belt-shipper, one on each side of the frame, by combining therewith the sliding rod connected with one, so as to move therewith, and provided with shoulders on each side of the spring handle, and with a bevel or in-clined plane, substantially as described, so as to enable the operator to stop or start the loom by one motion from either side of the frame.

the stop or start the loom by one motion from either start in frame. We also claim the single lever under the breast beam, and passing through and working in a mortise in the side frame, substantially as described, in combination with the trip lever and spring lever of the ahipper, substantially as described and for the purpose set forth. And, finally, we claim giving support to the warp beam by means of one or more intermediate wheel or wheels, or equivalent thereof, in combination with a standard or standards fitted thereto, substan-tially as described.

29,874.-P. G. Gardiner, of New York City, for an

29,874.—P. G. Gardiner, of New York City, for an Improvement in Cotton Presses:
I claim, first, The arrangement and combination of toggle joints and pavis, acting alternately on teeth or their equivalent, provided on a rod connected to the movable platen of a cotton press, and operating so as to move and suppl alternately said rod and platen at stated intervals, whether the motion of the platen be upwards or downwards, in the manner and for the purpose, substantially as decribed.
Becond, I claim the guide plate; M, provided with slots or guides, and operating the ends of the toggle joints and of the pawis, in the manner and for the purpose sub tantially as specified.
Third, I claim the evert, V, in combination with the fork piece, X, operated by the lever, Z, acting on eccentric grooves Y, attached to a wheel. W, in the manner and for the purpose specified.
Tourth, I claim the arrangement of the upper part, B', of the cotton box, with its movable sides and ends, for the purpose and in the manner substantially as described.
Third, I claim the combination of double toggle joints, working in reverse motion to each other, on teeth or notches attached to a rod fast to the movable platen, in combination with a guiding plate operated by a grooved can wheel, and in combination with pawis; the whole being arranged aud combined to work together in the maner and for the purpose, substantially as set forth and described.
29, 875.—R. J. Gatling, of Indianapolis, Ind., for an

29,875.-R. J. Gatling, of Indianapolis, Ind., for an

29, 57.5.—R. J. Gatting, of Indianapoits, Ind., for an Improvement in Hemp Brakes: I claim, first, The oscillating heaters, B and C (as shown in Figs. 1 and 9), when constructed, arranged and operating in the mauner and for the purpose substantially as specified. Second, I claim the cam, D, cam yoke, F, curved lever, G, con-necting rod, H, crank, S, rockshaft, K, lever, I, and connecting rods, L and R, treadle, P, and cord attached thereto, or their equivalents, when arranged and constructed substantially in the manner and for the numero set forth

29.876.-J. R. Gilbert, of Starkville, Ga., and S. R. Weston, of Dawson, Ga., for an Improvement in

Cultivators: We claim the arrangement of the handles, beams, hinged stand ards and hinged curved and notched braces, by which we are enabled to change the plow from a double beam adjustable cultivator plow to two single beam plows, substantally in the manner described.

29,877.-W. W. Golsan, of Autaugaville, Ala., for an Improvement in Cotton Cultivators:

I claim the arrangement of the cultivator point, L, and the cen-tral driving wheel, A, with the crank shafts, a s, the laterally-acting hoes, h h, and the uprights, F F, substantially in the manner and for the purpose set forth. 29,878.-W. W. Golsan, of Autaugaville, Ala., for an

Improvement in Seed planters: I claim the combination of cam wheel, c, agitating wheel, spring, e, and side, d; the whole being constructed and arranged the manner and for the purpose described.

29,879.-A. J. Graham, of Portland, Oregon, for an

29,879.—A. J. Granam, of Fortland, Uregon, for an Improvement in Locomotive Engines: I claim the arrangement of the yielding feet, F, and slides, E E, in combination with the double cranks, j j, rode, k k, and central shaft. G, as and for the purpose shown and described. I also claim the employment of the double-beveled collar, m, in combination with the shaft. G, and sliding pulleys, H H', as and for the purpose shown and described.

[This invention consists in arranging on sliding cross-heads. which

ected by suitable rods and links to a common crank axle, a series of Fielding toes or foot-pieces, in such a manner that, by ro-

tating said axle, the foot-pieces are alternately drawn forward and back on the ground, whereby a vehicle arranged in the proper relation to said foot-pieces is propelled on the ground.]

29, 880.-John Greacen, Jr., of New York City, for an Improved Device for Discharging the Smoke, Cin-

Inspire a Device for Discharging the Smoke, Cin-ders, &c., from Locomotive Engines: I claim the combination with smoke pipes or those, arranged to convey the smoke from the front to the rear of the train, of reversi-ble funnel connections, constructed and operating substantially as and for the purposes set forth.

29,881.—T. H. Green, of Fon du Lac, Wis., for an Improvement in Grain Elevators:
I claim the employment of the horizontally-revolving distributing spout, G, in combination with the bins, J, when the axis of rotation of said spout is arranged beneath the discharging mouth of the elevator, so that the grain may be conducted to any of the bin sthat are within the radius of the circle described by the outer end of the spout, G all as shown and described.
I also claim the combination of the revolving spout, G, shaft, F, and index lever, H, with the elevating device, B, substantially as shown and described.

[This invention consists in attaching to a grain elevator-head an

that an attendant in the lower part of the storehouse or mill may adjust said spout, and cause the grain carried up by the elevators to be deposited in any of a series of bins, as circumstances may require or as may be desired for the purpose of storage of the grain.]

29,882,-Joseph Harris, Jr., of Roxbury, Mass., for

an Improvement in City Railroad Cars: I claim the arrangement and construction of a car, when made in he manner and for the purposes described. the

29,883.-J. M. Hathaway, of New York City, for an

Improvement in Augers: I claim, first, The eccentrically-adjustable cutter, sliding on and held by the dovetail groove and tenon, as described. Second, I claim, in combination.therewith, giving a solid shaft or center to the auger, thus affording solid and sufficient metal upon which to form said tenon. Third, I claim extending the spiral upon such solid shaft the en-tire length, and making the edge of said spirals sharp, for the rea-ion even.

on given. Fourth, I claim (in combination) making the center screw or worn removable, as described, for the reason given.

29,884.—Homer Hecox, of Rutland, N. Y., for an Improvement in Sap Conductors: I claim, as an improved article of manufacture, a metallic sap-conducting tube, when made tapering in form and provided with a centrally-placed nose, b, and otherwise made as shown and de-served. This invention consists in constructing a sap-conductor or spile of

tapering metallic tube with a projection or nose on its upper side, so that the same may be driven firmly into the tree and that the bucket can be suspended from the conductor, thereby protecting the sap against the influence of the wind and keeping the bucket from tipping over.]

29,885.-M. W. House, of Cleveland, Ohio, for an Im-

provement in Harrows: T claim constructing a harrow of the respective parts represented in the accompanying drawings, when the said parts are combined with each other substantially in the manner set furth.

29,886.-Michael Hauseman, of Huntington, Ind., for

29,886.—Milchael Hauseman, of Huntington, Ind., for an Improvement in Corn-shellers: I claim the jawa, 1 and 2, the hinge joint by which they are united, the handle, 3, the broad extremities of the jaws or blades, with the flame projections, 45 6 7, and the corresponding flanges on the op-posite blade, the spring, 10, and the acparating stude, 9; the whole being constructed and airranged in the manner before described, and operated and operating a set forth and for the purpose stated.

28,887.-Sidney Hudson, of Milford, Mich., for an Improvement in Self-acting Waste Gates for Mill-dams:

I claim the combination with the pivoted gates, B C, of the justable counterpiece. G, bent lever, F, rod, E, and connecting li D, when all the parts are arranged and constructed to operate gether as and for the parpose shown and described.

29.888 .- J. J. Johnston of Alleghany, Pa., for a De-

25,000.—J. J. Johnston of Alleghany, Pa., for a I vice for Teaching Children: I claim the arrangement of the copy chamber, b, letter board letter case, a, and hexagonal blocks, with the letters of the alphal punctuation points and figures impressed on them; the whole be arranged and constructed in the manner described, and for the p pose set forth.

29,889.—Wm. S. Kimball, of Rochester, N. Y., for an Improvement in Wine Presses:
1 claim, first, The use of the perforated elastic apron, A, in com-bination with the rollers, R' R'' R''', in the manner and for the pur-pose substantially as described.
Second, I claim the use of the corded or enlarged edges of the apron, A, in combination with the grooved rollers (as shown in Fig. 4); the whole being arranged and operating in the manner and for the purpose substantially as set forth.

29,890.-J. W. Knapp, of Chester, N. Y., for an Im-

29,830.—J. W. Knapp, of Cuester, A. A., to an A., provement in Window-shutter Stands: I claim the two posts with thin spikes, b b, one post being station-ury and the other post jointed to a sliding piece, E, and prepared by an adjustable jointed piece, G; thewhole constructed substantially secribed and considered in combination, for the purposes set as de forth.

29,891.-Julius Koch, of South Adams, Mass., for an

29,906.—John Osborn, of Mount Carmel, Conn., for an Improvement in Aqueducts: I claim, first, The arrangement of the valve chest, E, with valves, e e', in combination with the reservoir, A, B, pipes, C, D, and pipe, F, constructed and operating substantially as and forthe purpose set forth. Second, The arrangement of the swinging box, G, in combination with the valve stem, f, valves, e e', and reservoirs, A, B, constructed and operating substantially as and for the purpose specified. Third, The arrangement of the float, I, lever, m, valve, k, aper-ture, n, and valve, o, in combination with the two chambers, j', of purposes described. Fourth, The combination with the box, G, reservoirs, A B, and pipe, F, of the faucets, M and O, operating substantially as and for the purposes dest forth. [The object of this invention is to arrange an according to action Apparatus for Trimming Paper: I claim the combination of the box, E, provided with a flap, a, with the adjusta ble rotating cuting baard, H, and with or without the gage, G, substantially as and for the purpose set forth. [This invention consists in the use of a pressure box, operated by a screw or its equivalent, and provided with a flap or adjustable

oard, in combination with a pivoted cutting board and a gage board all so arranged that the desired work may be very expeditionsly and perfectly performed.]

29,892.-D. R. Lightner, of Bucyrus, Ohio, for an Im-

proved Spring Bedstead: I claim the arrangement of springs, C, batten, E, side rail, F, and elevating rack; the whole resting on the plank, A, across the middle of the bedstead.

29,893 .- Daniel Lombard, of Boston, Mass., for an

29,595.—Daniel Lombard, of Boston, Mass., for a Improvement in Machines for Polishing Rice: I claim the combination of the surfaces, a b and c, with stirrers, when all of these are covered with buckskin or other equivale yielding material, and are of the form and relative arrangement of scribed, operating together as specified to pollsh the grains of rice.

© 1860 SCIENTIFIC AMERICAN, INC

29,894.—Daniel Lombard, of Boston, Mass., for an Improvement in Machines for Scouring Rice: I claim the described arrangement and combination of stirrers and stationary surfaces, of the form described, acting together in the specified manner.

29,895 .-- Henry Marcellus, of Amsterdam, N. Y., for

29,895.--Henry Marcellus, of Amsterdam, N. Y., for an Jmprovement in Mowing Machines: I claim, first, The combination of levers, F and H, or their equiva-lents, a caster, or its equivalent, and a double-hinged main frame, for the purpose of raising, lowering and holding up both ends of the finzer beam, substantially as set forth. Second, In a mowing machine whose main frame and finger beam are rigidly connected, and are free to vibrate up and down trans-versely to and parallel with the path of the machine, supporting the driver's seat on the axle of the driving wheel in such manner that it will be unefforted by the latent libratery morements of the mein will be unaffected by the lateral vibratory movements of the frame or the turning of the main axle, substantially as describ main

29,896.-G. B. Markham, of Mead's Mills, Mich., for

an Improvement in Self-acting Floodgates: claim the arrangement of the fianges, b, and adjustable bar, s, stantially as specified, so that the size of the discharge opening i be regulated at pleasure.

[The object of this invention is to arrange the gates especially in shower, and to cause a break in the dam in such a manner that they are self opening as soon as the water reaches a certain high water mark, and that they let the water out before it does any damage.]

29,897.-W. D. Mason, of Jarratt's Depot, Va., for an

Improvement in Sowing Machines: I claim the combination of the rotating screws, F, with the hop-ers, D E, when the latter are divided at their lower part into com-artments, c, and chambers, d, substantially as and for the purpose specined. I further claim, in connection with the hoppers, D E, the rotating fan, L, and inclined board, M, as and for the purposes set forth.

[This invention consists in the employment or use of a rotating screw as a feeder or discharge device, to distribute the seed or manure from the hopper.]

29,898.—T. J. Mayall, of Roxbury, Mass., for an Im-provement in the Manufacture of Flexible Gas Tubes:

In the manufacture of fiexible tubes and other articles which are used for the purpose of conducting or retaining illuminating gas or other gaseous fluids, I claim the use of a vulcanizable soft india-rubber compound, containing gum shellac as an essential ingre-dient.

29,899.—Wm. McAllister, of Gerry, N. Y., for an Im-provement in Pressing Cheese: I claim, first, The application and use of the crevice hoop, Fig. 1, constructed and used as and for the purposes specified. Second, I claim the application and use of the head clothes speci-fied, the same being made and used as and for the purposes de-

scribed. 29,900.—John McKinney, of Lansing, Mich., for an Improvement in Railroad Car Couplings: I claim giving such a shape to the head of the spring-actuated shaft, P, and such a degree of strength to its spring that the flathead of the link, L. when placed within the buffer frame, will be so closely embraced between the said spring-actuated head and the draught pin as to retain said link in a horizontal position when unemployed, substantially as set forth. When the head of the spring-actuated shaft, P, and the draught pin, I bear the described relation to each other and the buffer frame, I also claim the vertical tube, G, which rises from the draught pin aperture in the upper plate of the buffer frame, and serves the pur-pose set forth.

e set forth

29,901.—Albert Moffet, of Bristol. Ohio, for an Im-proved Machine for Marking Waving Patterns: I claim the lever, M, sliding bar, O, and arm, S, arranged and operated in the manner and for the purpose specified. I also claim the moving fulerum, N, in combination with the con-necting rod, P', and wheel, P, operated as and for the purpose speci-fied nect

29,902.—J. A. Naylor, of Rahway, N. J., for an Im-provement in Extension Carriages: I claim the arrangement of the draw front, B, folding seat, G, and seat, F, substantially as described and for the purposes set forth.

29,903.-Stewart Neill, of Chillicothe, Ill., for an Im-

29,904.—W. T. Opie, of Scarboro', Ga., for an Im-provement in Cotton Presses: I claim the combination of toggle levers applied to the follower, and having friction rollers at their joints, as set forth, when these levers are acted upon by the arm. I, prevaing against their rollers, and extending them as described, and when said arm is itself operated by arm. J, connecting rods, K K, link and lever, M, as de-scribed and represented.

[This invention consists in applying power to the follower, which moved by means of a peculiar arrangement of toggle-joints, with friction rollers applied at their knees and joints, which are acted force up the follower rod with great force, and at the same time as rapidly as possible, the motion being given to the parts by horse or manual power, as it may be found most convenient.]

29,905.-E. W. Ormsbee, of Montpelier, Vt., for an Improvement in Apparatuses for Collecting Sap Improvement in Apparatuses for Collecting Sap from Trees: I claim the cover, 1, the ledges, 2 2, the spring, 3, hooked or bent at the ends, as described, and the points, 4 4, when the whole are combined and arranged with each other in the manner described and for the purpose stated.

29.906.-John Osborn, of Mount Carmel, Conn., for

[The object of this invention is to arrange an aqueduct in such a manner that, by a simple and ingenious device, the head of the water passing through the aqueduct can be changed and the supply

29,907.-A. R. Park, of Columbia, Texas, for an Im-

29,907.—A. R. Park, of Columbia, Texas, for an amprovement in Seeding Machines: I claim a rotary seed-distributor, composed of drums, c., and longitudinal spiral strips, e. e, for distributing different kinds of seed, in combination with the reciprocating yielding apron. D, and a seed hopper, substantially as and forthe purposes set forth. [This invention relates to a machine for sowing seed broadcast in drills or in hills, and for sowing cotton, corn and all other kinds of

of water increased to suit circumstances.]

seed. It consists in arranging in the bottom of a seed hopper, which is furnished with a reciprocating yielding slide or agitator for the seed in the hopper, a shuft having cylindrical heads on each end that are provided in the seed cells, which heads are conn cted together by strips of metal ranning spirally around the shaft that forms long channels, which conduct seed from the hopper and deposit it into the ground.]

29,908.-Homer Parmalee, of Philadelphia, Pa., for

23,308.—momer rarmalee, of Philadelphia, Pa., for an Improvement in Molding Metal Pipes: I claim forming molds and cores for the casting of cylindrical objects of metal by means of the pipe, D, with its flange, e, when the said pipe and flange are caused to revolve in a chamber around any destred object to rise as the mold or core is being formed, and to im-part, by its weight, the desired solidity and number to the mold or core, as set forth.

29,909.—E. G. Pomeroy, of New York City, for an Improved Method of Converting Iron into Steel: I claim the conversion of iron into steel by its treatment in the molten state with the compound of potssh or other alkali, carbonate of lime, oxyd of manganese and charcoal, substantia ly in the man-ner specified.

[This invention consists in a very simple and cheap mode of con verting iron into steel.]

29,910.-Milo Peck and Charles Peck, of New Haven,

Conn., for an Improvement in Drop Presses: We claim the making and constructing of puppet heads to drop and other presses with cylindrical shanks, and fitting the same to any its between raised ledges, or their equivalents, substantially as described and set forth.

29,911.—August Pernot, of Chilton, Wis., for an Im-proved Machine for Sawing Shingles: I claim the arrangement of the reciprocating frames, B B, provided with rack bars, F F, and operated by means of the shaft, G, and bar, K, when used in connection with rocking tables, H H, the saw, J, plate, a, the clamp, c, and the bart, d; the whole being constructed, combined and operating in the manner and for the purpose specified.

29,912.—S. L. Pionnier, of New York City, for an Im-provement in Shipbuilding: Iclaim a ship or vessel constructed with the timbers in close con-tact, in combination with the wire or metallic supports running fora-and-aft and athwart ships, substantially as and for the purposes shown and described.

[The object of this invention is to increase the strength and the safety of seagoing vessels, and it consists in putting the ribeor frames of the yeasel in close proximity, and in binding them together by is technically called "room and space," or the distance between the frames 1

29,913.-B. S. Pringle, of Barnesville, Ga., for an Im-

25,915. — D. C. Integration of the second se

[This invention consists in using four legs, each having two feet, one being placed at the head, one at the foot and one at each side of the bedstead frame, which legs are pivoted to the rails, and the heed and foot less are so constructed that they may be lengthened and fixed at any desired point of adjustment, to raise or low the head of the bedstead.]

29,914.-J. W. Ramsay and Daniel Wilson, of Grafton,

Va., for an Improvement in Portable India-rubber Bathing Tubs: We claim au india-rubber bathing tub, provided with double sides, in connection with the screw valve, a, or its equivalent, and arranged substantially as and for the purpose set forth.

29,915.—G. G. Ray, of Boston, Mass., for an Improved Steam Reed Instrument: I claim the chamber, D, communicating with a steam boiler, and furnished with one or more orifices or slots, i, and corresponding reeds, m, substantially as described, for the purpose specified.

reeds, m, subtantially as described, for the purpose specified.
29,916.—John Revere, of Boston, Mass., for an Improvement in Sheathing Ships, &c.:
Iclaim the application to the inner surface of metallic sheathing of a ship, or other vessel, and with respect to the bottom of the vessel, as described and for the purpose set forth, of an ins lating material or composition of the character specified.
I also claim, in gombination with such an application of such an intensitie composition of such and for the purpose set forth, of a lating material or composition, extending it between the laps of the metallic sheets of such and for the purpose explained.

29,917.—Louis Schneider and J. A. Montgomery, of Williamsport, Pa., for an Improvement in Self-

we claim the self-acting **Draw-bridges**: We claim the self-acting **drawbridge described**, capable of being turned in either direction by **a passing vessel and closing itself** with a constant force from any position, in the manner substantially as set forth.

29,918.—G. C. Selfridge, of North Greenfield, N. Y., for an Improvement in Pumps:

for an Improvement in Fumps: I claim a pump constituted of an upper and lower chamber, the upper chamber being of one-half the area of the lower one in diau-eter, placed one above the other, having a solid piston moving in the upper and a valved piston moving in the lower chamber, both attached to the samerod and operating in combination with a fixed valve seat and its valves below the discharge orifice lying between the pistons, the whole arranged and working together in the manner and for the purposes set forth in the above specification.

29,919.-Thos. Sheehan, of Dunkirk, N. Y., for an International Converting Iron with Steel: I claim, first, The liquid composition consisting of the ingredients seed, compounded in or in about the proportions specified and de-ribed. Telai

scneed. Second, The compound for seelifying wrought iron made of the liquid composition and flour, in the manner and for the purposes set forth.

29.920.-H. C. Smith, of Clarksville, Ohio, for an Im-

provement in Mortising Machines: I claim the pitman, H e, link, I, and pin, d, operating in connec-tion with a re processing rotary cutter head, F, in manner substan-tially as and for the purposes set forth.

29,921.-W. S. Smith, of Trenton, N. J., for an Improvement in Driving Piles by Atmospheric Press

surce: I claim the supplementary air-lock, D, applied substantially as de-scribed, in combination with the main sur-lock, and serving the pur-pose specified.

29, 922.—J. M. Spencer, of Enfield, Maine, for an Improved Hand-mowing Machine: I sist the strangement of the series deuter, F, two sets of gears, K I, two cranked shafts, I L and the betts, G G (applied to such cuttar and cranks), substantially in manner and to operate as described.

29,923.-H. D. Stover, of New York City, for an Im-

29,923.—H. D. Stover, of New York City, for an Improved Planing Machine: I claim, first, Constructing that partof the dogsing apparatus, E', carrying the dogs, F', with adjustable and variable inclined planes, J', pressing against pine or surfaces, A, attached to the platens, J, so that any desired pressure by the adjustable planes, J, may be given, both to press the dogs forward into the lumber and hold them securely down to the platen by the turning of a single screw, H', essentially in the manner described. Becond, The combination of the downward drawn guide bar, C', with the dogs, F', crossbar, L', and revolving nut, G', substantially in the manner and for the purpose set forth. Third, The semployment of the curring, beveled on their outer surface and Parallel to the axis of the cutting edges being in the surface of a cylinder whose axis is coincident with the texis of motion, so as to impart a drawing stroke, substantially as set forth.

face and perallel to the axis of the cutter head; the cutting edges being in the eurface of a cylinderwhose axis is co-incident with the axis of motion, so as to impart a drawing stroke, substantially as set forth. Fourth, The combination of the cutting cylinder, U3, formed with recesser, and pressure edge, v, with the peculialy-constructed enters, V3, and the devices by which they are adjusted upon the cutter head and secured thereto, substantially as specified. Fifth, So co structing, arranging and combining the parts consti-tuting thar roll feed, i.e. the shaft, X', they are adjusted upon the disconnected; and by the raising of the rolls, the feed is connected with the platen, its and the platen feed, i.e., shaft, X', lever sleeve, P3, srms, R4 and S3, and pinions, P5 and Q2, that, by the act of low-ering the rolls to be need, its feed is connected and the platen feed disconnected; and by the raising of the rolls, the feed is connected with the platen, substantially as set forth. Sitch, Making the platen in two parts, B and C, with a ball, F, between, so that the top part may be tipped universally and secured by straps, n, or otherwise, in any position, so that a plece may be planed level and parallel in thickness, or tapering, as set forth. Seventh, So constructing the feed roll Dorace, R', that they carry the pressure within them, so as to be invariable under any elevation of feed roll, substantially as described. Eighth, I also claim the feed rolls, O' and O2', their frame, Q', and the platen orrest, B6, firmly affixed thereto, and to come under the cutting cylinder when in use if desired; as as a to always be level and on a line with top of the lower feed roll, O2, with or without matching cutters, 3, as set forth. Ninth, I also claim rollers, B4, connected adjustably to the bed-piece, A, to wholly sustain and guide the movable platen. B and C, or in connection with tracks, N', so as to receive the weight of the easy movement of platen when carrying loads, as set forth. Tenth, I also claim rollers, B4

29,924.—J. C. Teague, of Center Hill, Miss., for an Improvement in Cotton Scrapers: I claim the arrangement and combination of the ast iron box, G, with inclined bottom and balanced sides, bar, C, for attaching to the beam and movable weights, to i crease or diminish the weight of the scraper and keep it balanced, substantially as specified.

29,925.-W. D. Thomas, of Morristown, Vt., for an Improvement in Furnaces:

I claim the laim the arrangement of the side flues and dampers relatively e pan, as and for the purpose set forth.

29,926.-W. H. Towers, of New York City, for an Im-

19,926.-W. R. LUNCH, proved Broom: I claim the broom constructed of broom-corn and strips of cane of eeds, substantially as described, as a new article of manufacture.

29,927.-N.K. Wade and Joseph Kaye, of Pittsburgh,

Pa, for an Improvement in Car Wheels: We claim the use of arms or spokes of wrought iron, or other flexi-ble material, of single or double curvature, and so placed in the hub and rim as to afford a lateral brace, substantially as set forth and shown in the accompanying drawings.

29,928.-Maximilian Wappich, of Sacramento, Cal., for an Improvement in Cotton Presses: I claim the ratobet frames, f f, and pawls, 6 6, acted on by the rol-er, e, and fluted wheel, c, as and for the purposes specified.

29,929.—E. P. Whitney, of Westfield, N. Y., for an Improvement in Locks:
I claim the construction of the latch, C, with double projections, d and f, so that the lock may be used as a right or left hand lock, as desired, by merely turning the latch, O; all as shown and described.

[The object of this invention is to render locks and latches capable out being inverted, be applied to a right or left hand door.]

out ceing inverted, be applied to a right of left hand door.j
29,930.—D. H. Whittemore, of Lynchburg, Va., for an Improvement in Hay and Straw Cutters:
I claim, first, So arranging the feed teeth, M. M. &c., upon a re-volving cylinder or flanges, that said cylinder or flanges will, while revolving with the half of said teeth, both draw the feed forward, and in passing by a stationary knife, cause it to be cut off substan-tially as described.
Second, I claim combining with said cylinder, the spring board, G. in the manner and for the purpose m batantially as set forth. Third, I claim combining with said cylinder and sp ing board, the stationary knife, O, substantially as described.

29.931.-E. S. Wicklin and J. D. Weaver, of Carlin-

23,331.—E. S. WICKIII and J. D. Weaver, of Carlin-ville, Ill., for an Improvement in Carriages: I claim a buggy seat, divided or not, hinged to the back end of the foor of the buggy and furnished with stepping boards on its under side, substantially as set forth, so as to serve the two-fold purpose of a seatandas steps by which to enter or leave the buggy from be-hind.

29,932.-C. A. Wilson, of Cincinnati, Ohio, for an

19,932.—C. A. Wilson, or Uncinnati, Unity, for an Improvement in Steam-heating Apparatus: I claims tubular radiator communicating at bottory with a st an sipe, A, and its upper and free end discharging into the atmosphere hrough an aperture guarded by an automatic valve; the whole being constructed and operating substantially as and for the pur cost at fourth.

29,933.—David .Wooster, of Seymour, Conn., for an

Improvement in Lightning Rods: claim, first, Firmly scening Rods: claim, first, Firmly scening together the ends of the rod, A, and sleeve, B, by means of the grooves, c , as described. econd, I claim the treble jointed piece, F, when ma e out of at metal substantially as described.

29.934 .- G. W. N. Yost, of Yellow Springs, Ohio, for

an Improvement in Cultivators: I claim the arrangement of sockets, b, with beam, A, and stand-rds, a-the whole being constructed as and for the purpose de-cribed. scrib

paper bags.] A. M. Mace, of Springfield, Mass., for an Improvement in Vapor Lamps. Patented June 22, 1858: I claim, first, Combining the cap or heat retainer, H, with vapor-izing tubes or retorts constructed substantially as described, when soarranged over the ame as to operate in the manner set forth. Second, I also claim the combination of the h at retainer, H, and vaporizing tube, connected substantially as described, with the elevated reser oir; the whole arranged and operating with respect to the value, C', and burner, K, as set forth. Third, The synhonic vapor or gas generating tube or retort, B A, or its equivalent, whereby the material from which the gas is gene-rated is carried over or above the fame of the gas or vapor burner and subjected to the heat of the fame is sing theretrom, and con-reted into gas or vapor, substantially as set forth. 35.—J. F. Hall, of Bangor, Maine, assignor to him-self and G. L. Kelty, of New York City, for an Improved Curtain Fixture: 29,935

I claim constructing the spool in two parts, one of which is affixed the rol, and the stem of the other plays into the end of the roll,

© 1860 SCIENTIFIC AMERICAN, INC

This investion consists in forming the puller spool around which the cord that regulates the movement of the curtain roller is woundin two parts, the stem of one playing through a hole in the center of the other ; this allows an end play to the spool.]

and is acted upon by a spring to push it out, thus keeping one of the fanges always in contact with the end of the roll, as set forth.

1.89

29,936.—Justus Ask (assignor to himselt and J. H. Case), of Lyons, N. Y., for an Improvement in the Construction of Dental Chairs:

the construction of Dental Chairs: I claim the combination of the fixed screw, F, nnt wheel, G, and its spurtenances, movable seat, D, and frame, A, arranged and operating substantially in the mannerand for the purposes shown and described. I also claim the arched supporting frame, A, with the seat frame, B, hinged thereto, in combination with the adjusting lever, J, and bail, K, arranged and operating substantially as and for the purposes set forth.

et forth. I also claim the supplementary seat arms, S, substantially as and or the purpose described. I also claim the bellows formed diaphragm, R, in combination with he movable seat and frame, B, substantially as set forth. the

the movable seat and frame, B, substantially as set form. 29,937.—A. F. Hines. (assignor to himself and B. A. Kidder), of Washington, D. C., for an Improve-ment in Seed Planters: I claim the arrangement of two reciprocating valve slides, D F, the s fraces of which are smooth and without recesses or perfora-tions, in combination with an arrm, E, lever, L, and spout, B ; valve working through an aperture, C in the side of the spout, while the other valve, F, works in contact with the under face of the spouts—constructed in the manner and for the purposes set forth.

29,938.-J. M. Long (assignor to himself, Peter Black

29,938.—J. M. Long (assignor to himself, Peter Black and R. Alstatter), of Hamilton, Ohio, for an Im-provement in Harvesters: I claim lever, I. toothed silde, c. bar, f. band, . and traces, g. g. constructed, arranged and operating substantially as described in connection with draft pole, A.

29,939.-F. A. Pratt (assignor to himself and G. S. Lincoln & Co.), of Hartford, Conn., for an Im-provement in Device for Stopping and Changing Motion:

I claim t the combination of the levers or clamps, e, disk or collar, ntially as and for the purpose described. Second, I claim the application of a wedge collar, J, or its mechani-cai equivalent for the purpose of operating the said levers or clamps, e, as described.

29,940.—J. H. Reed, of Penn Township, Pa., assignor to himself and L. J. Crans, of Clearfield Borough, Pa., for an Improvement in Machines for Cleaning Buckwheat, &c.:

I claim one cylinder revolving in another, the inneror revolving cylinder so gruoted that while conducting the buckwheat or other grain from the place of feeding to the place of discharge the grain shall pass through a regularly diminishing space and thus be accur-ed or cleaned, as above set forth.

29,941.-August Schmidt (assignor to himself, Charles Schmidt, Edward Schmidt (assignor to finisch, Charles Schmidt, Edward Schmidt and Herman Schmidt), of New York City, for an Improvement in the Mode of Making Gas from Wood: laim the manufacture of illuminating gas from wood by the serve processes set forth.

29,942.-George Williamson (assignor to L. S. Goble

3.3.3.2. George Williamson (assignor to L. S. Goble and H. E. Richards), of Newark, N. J., for an Im-proved Machine for Chamfering Veneers: I claim the combination of the adjustable ways, B B, the frame, C, spring clamp, D, and spring, m, substantially in the manner and for the purposes described.

RE-ISSUES.

M. A. Dietz, of Brooklyn, N. Y., for an Improvement in Lamps. Patented Sept. 8, 1858: I claim an air chamber in combination with the chamber formed by the concavity of the deflector of a lamp top, substantially as de-scribed.

by the concevity of the deficience of a main top, substantially as de-seribled. I also claim the combination of an air chamber for supplying air to the interior of the cone with openings for the admission of air on the outside of the cone, between the latter and the inside of the chimners, substantially as set forth. I also claim forming a communication between the oil chamber and the cone chamber, o, by means of openings in the shell of the lamp top, substantially as described for the purpose set forth.

E. W. Goodale, of Clinton, Mass., for a Machine for Making Paper Bags: Patented May 29, 1855: I claim, first, Cutting off the paper from a continuous roll, in a machine for making bass, by a cut of such form that when a bag is completed, one side of the mouth is canced, by the form of said est, to project beyond the other side, substantially as represented in Fig. 12, to afford facility for opening the bag and to form a flap for closing the mouth.

To project beyond the other side, substantially as represented in Fig. 12, to should facility for opening the bag and to form a flap for closely angular or irregular form near the point, for the purpose of cutting out, each by a single cut, the whole piece necessary to leave the lap on one side of the bag, substantially as represented in Fig. 4 and 10. Third, Hanging the movable blades. J' J' of the said shears on shafts or pirots, j i, perpendicular to their faces, for the purpose of allowing them to cat slightly across the fixed blades by a slight lateral movement which they receive simultaneously with the movement usually given to shears, substantially as described Fourth. The intermittently rotating folder arranged and operating apron, L, after the cutting and pesting operations, and to support or partly support them until the creaser come into their operative positions, and afterwards to fold them over the creasers. Fifth, The combination of the side lappers, N N, and the folding stands, d d, substantially as described, that is to say, the stands the folding and lapping operations, and to support to partly support the support the bag piece and the folding stands in such a manner as to be capable of failing over those between them, and the lapping injecces being standed to the said fold-ing stands in such a manner as to be capable of failing over those thereave which are support by the folding stands. This I claim irrespective of any manner of operative the lappers, and whether the folding stands have the later an movement described or are sta-tionary. Bixth, The toothed roller, T, hung in a frame, T', from the axie

itionary. Sixth, The toothed roller, T, hung in a frame, T', from the axle of one of the pressing and delivery rollers, and operating substan-tially as described, to commence the removal of the bags from the

asers. eventh, The general arrangement and combinatiou of the several king parts of the machine substantially as described.

[This re-issue embraces an important claim in the man facture of