ENGINEERING INVENTIONS.

Mr. David E. Grove, of Dallas, Texas, has invented a railway ditching machine for opening railway ditches and the removal of the dirt therefrom and loading it on flat cars. The machine is carried forward dium, a filtering medium composed of corundum in the upon the track, and is provided with a steam engine for form of a porous conglomerate, and having a hole operating the ditching machinery and loading the dirt. through the same provided with an elastic stopper.

Mr. Samuel A. V. Hartwell, of Valley Center, Kan., has patented an improved car coupling hav- point P. O.), N. Y., has invented a new combined warits inner arm being heaviest and resting upon the nect with a cage an instrument for imitating the callor is attached one end of a chain, the other end of which giving any other desired note or sound. is attached to a crank on a crossrod pivoted to the draw bar. The ends of the cross rod have crank arms formed upon them, so that the link can be guided from the side of the cars to enter the bumper head of an approaching car.

MECHANICAL INVENTIONS.

Mr. John S. Griffin, of Cleveland, O., has through them a loop formed on the end of the line patented a machine for making harrow teeth and other tools and implements by a drawing operation between rolls. It consists in revolving or rocking cams placed above and beneath the rollers and fitted for vertical

movement to insure a true taper on both sides of the blank An improved rotary cutter for mortising machines has been patented by Mr. William A. Decker. of Huntington, W. Va. The bit is provided with a shank projecting at right angles and slotted to receive end whereby the bit is securely held and can be readily

adjusted to cut a large or small mortise. An improved grinding mill has been pater.ted by Mr. George W. Wilson, of Lauesborough, Minn. The improvement relates to mills for cracking and flouring wheat and other grain, and it consists in the combination with the runner of rolls and drags in. serted in radial recesses in the runner between the rolls

the descent of elevator cars in case of breakage of the made for the escape of gases at the base of the nozzle. suspension rope has been patented by Mr. John Johnston, of New York city. It consists in stop-mechanism operated by a safety rope, combined with the balance stop mechanism will be operated. By this means the inventor dispenses with extra weights and insures the operation of the stop devices.

An improved flour bolting machine has preventing displacement. been patented by Mr. Ammi R. Smith, of Maroa, Ill. The invention consists in the combination of a separating reel, a return reel, and finishing reel, and suitable conveying devices connecting them, all arranged to first separate the bran, shorts, and coarse middlings from the flour and fine middlings, and then to spout the shorts and coarse middlings to the return reel, it being carried thence to the finishing reel.

Mr. Stephen O'Connell, of Billings, Montana Terr., has patented a wagon wrench formed of a rod having its upper part screw-threaded and provided with longitudinal grooves. On this rod one jaw plate is fixed and the other is loosely mounted to move up and down, it being guided in its movements by lugs passing into longitudinal grooves. A nut is loosely held in the movable jaw plate by a U-shaped frame or clip, so that by turning this nut the movable jaw will be moved to and from the upper end of the rod-that is, the jaws will be separated or brought together.

patented by Mr. Milton Wright, of Fort Valley, Ga., which consists in the combination with the downwardly tached to it, and the mould-carrying platform having two rack bars with adjacent teeth attached to its bottom, of for drawing the coolers at intervals, as required. a pair of gear wheels attached to the ends of a vibrating shaft, a sliding crossbar carrying the said shaft, and a lever pivoted to the crossbar, whereby the continnously-revolving stirrer-shaft can be made to move the mould-carrying platform in either direction.

has patented an improved chain pump in which the buckets are suspended from crossbars carried by two endless chains. The chains are drawn around wheels in one direction or the other, and the buckets dip into the water and are then raised. When the rising buckets reach the top of a box or trough at the top of the well, the upper inner edges of the buckets rest against the curved ends of guide rods, and as the chains continuously raise the buckets, the buckets will be tilted and will pour their contents into the trough

An improved hay or cotton press has been patented by Mr. Hiram Bankston, of Fort Smith, Ark.

MISCELLANEOUS INVENTION3.

Mr. William Maynard, of New York city, has invented a filter, consisting of the combination, with a case or chamber, of a rigid porous filtering me-

Mr. James R. Barry, of Brooklyn (Greening a lever pivoted in the interior of the drawbar, bler and cage. The object of this invention is to conshoulder of a pivoted trip plate. To the trip plate cry of a bird or animal confined in the cage, or for

> Mr. Frank De Forest, of De Soto, Mo., has patented a fish hook. The invention consists of two its fireproof qualities hooks pointed in opposite directions, with their points arranged to stand near each other, and are held against being spread apart by the action of the water by the bait. The shanks of the hooks are looped or bent into eyes around a pivot, and their upper ends have passed

A novel ferrule for fishing rods has been patented by Mr. Thomas H. Chubb, of Post Mills, Vt. The invention consists in securing ferrules in place by connecting it with the tongue when it is wanted to sup forming an annular groove in the ferrule after it has been arranged in place, indenting the ferrule in the boltom of the groove, and then milling the surface of the groove

Mr. Francis A. Davis, of New York city, vented by positively acting mechanical devices, invention being more especially applicable to all kinds of waste pipes leading from dwelling houses.

An improvement in tuyeres has been patented by Mr. August Werner, of Leadville, Col. The patented by Mr. Joshua Draper, Jr., of Oxford, Ala. object of this invention is to prevent injury to the blast This eaves trough hanger is composed of a clasp with a pipe and blower from the backward pressure of gases hook on each side adapted to be bent over the edges of in the furnace; the invention consists in forming a the trough, and a flat tapering spike made in one piece and provided on their lower edges with inclined teeth. I flexible joint between the nozzle of the tuyere and the with the lower part of the clasp, and in the same hori-A reliable and effective means of checking blast pipe in such manner that provision shall be zontal plane therewith, to afford a bearing for the

by Mr. John J. Curry, of Plains, Pa. The invention of wall of a building. a bar provided with one or more ratchet teeth, and a weight, so that when the suspension rope breaks the bar provided with a pivoted lever engaging with the has invented a bell pull, which consists in a bell lever ratchet teeth and operating as a cam, each of the bars being provided at its outer end with a hook for engage-provided with a segmental ring thange upon its outer ment with the loop or eye of the hame and a bolt for

> A convenient and portable apparatus for roasting coffee, popping corn, or heating or cooking other substances, has been patented by Mr. Hugh P. Buffon, of Fort D. A. Russell, Wyoming Ter. The roaster consists of a long and a short cylinder, the latter sliding within the former, and provided with heads having central journals, the one serving both as a pivot and a handle for the head

A novel combined coal hod and sieve, patented by Mr. Alexander Watson, of East Pepperell, rying a guide rope, upon which a car is moved by means Mass., will sift ashes and separate them from the cinders without permitting the dust to spread, and without emptying the ashes into a separate vessel or receptacle. The invention is an improvement on the combined coal hod and sieve for which Letters Patent No. 243,018 were issued to the same inventor on the 14th day of June, 1881.

has been patented by Messrs. Cyrus T. Rayner and An improvement in brick machines has been Richard Stenhouse, of New Orleans, La. By means of this invention the cut-off of boneblack kilns used in sugar houses is operated by mechanism requiring but projecting end of a stirrer-shaft having a gear wheel at- little power. The invention consists in a regulating plate and a cut-off roller operated by an endless chain

An improved spring bed bottom has been patented by Mr. Upton Miller, of Mount Morris, Ill. The invention consists in the combination, with the springs of a bed bottom, of links attached to these springs, and to spiral rings between these springs, and Mr. Charles Whipple, of Leonardsburg, O., in chains connecting the springs of the pivoted head rest with the springs of the fixed part of the bed bottom

> A machine by which cotton or woolen yarn, silk, worsted, or other vegetable or animal fiber may be bleached, scoured, steamed, dyed, or dried in the cop or on the bobbin, has been patented by Mr. William Maybury, of Garnerville, N.Y. This obviates the necessity of reeling the yarn for these operations, as is now the practice, and saves the labor and waste of dyeing and bleaching the yarn in the skein.

> A convenient and ornamental cabinet for

removed from the front surplus honey chamber slides areadjusted to close the holes through the honey board. With this arrangement bees cannot enter the comb frames from the brood chamber, and the bees in the frames will pass out through the passages in the bottom of the hive, so that the honey can be removed without disturbing the bees.

Mr. Willis B. Marvin, of New York city, has recently patented an improvement in fireproof safes consisting of a frame fitting over the edges of the walls and having a slot in it, through which the back plate may be inserted, the plate being afterward fastened to the frame by means of screws and rivets, rendering the safe stronger and more secure. The invention also includes improvements in the safe door, which improve

Mr. John J. Thomas, of Salt Lake city, Utah Ter., has patented a tongue support by which the horses may be relieved of the weight of the tongue of the wagon. It consists of a short lever located vertically in front of the axle and sand board, with a strong spring behind the lower end, the upper end having a rod or bar connected to it, and extending along over and beyond the evener, where a locking device is provided for readily port it.

An improvement in barbed wire fences has been patented by Mr. Frank M. Harris, of St. Charles, Mo. The object of this invention is to cheapen the construction of barbed wire fence by dispensing with a portemporarily residing in Hightstown, N.J., has patented tion of the posts ordinarily used. The posts are placed an automatic valve for opening and closing waste pipes a considerable distance apart-say one hundred feetthe fastening screw bolt, and has a lip upon its forward in such a manner that all escape of sewer gas is pre- | and a suspension system consisting of a catenary wire the supported by the posts to which the horizontal wires are all attached at regular intervals by vertical wires or strips, is substituted for intermediate posts.

> An improved eaves trough hanger has been trough, the spike being provided with a shoulder or A novel hame fastener has been patented by head, by means of which it may be driven into the

Mr. Charles L. Bates, of New York city, side and upon its inner side a bridge carrying a lever pivot having a cap plate screwed upon its outer end. Upon the pivot is placed a hub having a rigid arm and provided with holes to receive a pin attached to the handle arm, so that the said arms can be adjusted in different relative positions.

Mr. Charles A Schnell, of Troy, O., has patented a fire escape which consists of a hook combined with a pole formed of a series of sections provided with socket rings at the upper ends and with shoulders and catches at the lower ends; the hook carof a cord passing through a pulley on the hook. The hook is engaged with a window sill by means of the pole, the latter then being detached. The car is worked by means of a windlass to the wagon upon which the escape is moved about.

An improved chair which can conveniently be converted into a desk has been patented by Mr. An automatic cut-off for boneblack kilns | Vestal W. Woodward, of Indianapolis, Ind. The chair has a revolving seat, arm rests, and a movable back containing pigeon holes, and provided with a pivoted leaf covering the pigeon holes. The back is also provided with racks fitting in grooves in the side braces of the chair, and engaging with cog wheels on a transverse shaft provided with a crank. When the chair is to be converted into a desk, the back is moved from the chair by turning the crank, and the pivoted leaf is lowered to rest on the arm rests.

> A novel rein holder has been patented by Messrs. C. M. Howell and C. W. Burdick, of Lansing, Mich. This invention consists of a clip spring differing in form according to the form of the dash board to which it is to be attached, but adapted to attach to the dash board by clipping on to the top, the spring having a bar of suitable form attached to it so as to be supported a little above the top of the dash board, and extending each way along the dash board a suitable distance from the attaching spring. To this bar other springs are attached and supported over and along the top of the dash board, so as to pinch and hold the reins between them and the dash board when the reins are slipped under the springs.

Mr. Gill W. Metcalfe, of Baltimore, Md., containing needles in papers for the use of retail shop-has invented an automatic cut-off for gas burners, to be The invention consists in the employment of a right keepers has been patented by Mr. Thomas Harper, of attached to gas burners for automatically turning off and left hand screw-threaded shaft or screw carrying Reddich, County of Worcester, England. A cabinet the gas, if from any accidental cause the gas should be nuts or crossbars, to which are appliedlevers fulcrumed is provided with receptacles for containing the pack-blown out or the flow stopped. It is an improvement nuts or crossbars, to which are applied levers furchance is provided with slides whereby the packages can upon articulated or pivoted bars or levers, constituting ages, and fitted with slides whereby the packages can isolated compound or toggle levers, which act be readily withdrawn one at a time. flame, and is held when expanded by the heat in a position where it strikes an $\, {\rm arm}$ on the gas cock, and holds the latter open against the tension of a spring or weight. and which bent bar, when it cools and contracts from the extinguishment of the flame, passes to a position where it releases the gas cock and allows the latter to close from the action of the weight or spring.

(OFFICIAL.)

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Letters Patent of the United States were

Granted in the Week Ending

November 7, 1882.

AND EACH BEARING THAT DATE.

Those marked (r) are reissued patents.

A printed copy of the specification and drawing of any patent in the annexed list, also of any patent issued since 1866, will be furnished from this office for 25 cents In ordering please state the number and date of the patent desired and remit to Munn & Co., 261 Broadway, corner of Warren Street, New York city. We also furnish copies of patents granted prior to 1866 : but at increased cost, as the specifications not being printed, must be copied by hand.

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upon a follower or plunger working in a chamber, to the upper edges of which are connected the hinged sides and ends of an extension of the said chamber. Above the aforesaid chamber is arranged a horizontally-sliding head block. A beater capable of operation by suitable means acts upon the contents of the press chamber to pack it previous to being compressed.

----AGRICULTURAL INVENTIONS.

Messrs. Marquis D. L. Hartley and James M. Hartley, of San Diego, Cal., have patented a single tree foruse in horticultural operations-such as the cultivation of trees. It may be used without liability of injuring the trees, as is the case with the ordinary single tree.

A boiler or feed steamer that may be applied to an ordinary stove or furnace, has been patented hinged choke muzzle combined with the main barrel, by Mr. Jesse H. McCandless, of Oxford, Ia. This boiler, on account of its triangular shape, has a broad bottom and a large extent of heating surface, and will boil water more rapidly and with less fuel than an ordinary kettle.

An improved draught equalizer has been patented by Mr. Philester G. Rowlee, of Hamilton, Mich. It is employed to work three horses abreast on a tongue or pole where two horses are used on one side of the tongue and one horse on the other side of the tongue, and by means of the device employed the draught will be equalized upon the three horses without perceptible side draught and upon the ordinary length of wagon torgue.

An improvement in gun barrels has been patented by Mr. Robert L. Stevens, of Albany, Oregon. This invention relates specially to shot guns for sports men's use, the object being to furnish a gun that can be readily changed for use at long or short range, as required, so that with one gun the user may obtain the same results as with two. The invention consists in a and fitted for instantaneous movement by connections operated at the stock.

An improvement in bee hives has been patented by Mr. Martin Van Ensley, of McMinnville, Ore-gon. This hive is made so that when honey is to be twhilereading or writing.

An improved desk, which can be adjusted in height and inclination, and on which a person can write very conveniently without bending forward, has been patented by Mr. Samuel A. Cummings, of Madison, The desk has a swinging or pivoted writing Wis. board provided at its upper edge with a bolt adapted to be passed into one of a series of apertures in a curved bar attached to an arm projecting from a box resting on the plate to which the writing board is pivoted This plate is mounted vertically adjustable on a standard secured to a flat base. The lower edge of the writing board can be brought very close to the body, and the legs and knees of the writer can be passed under the writing board, so that the person need not bend forward

Cotton cleaning machine, seed. W. O Coleman... 266,972 Cotton openers. sectional roll for, H. C. Gilman... 266,986 Curtain pole ring. S. Grom 267.194 Dairy apparatus, J. B. Marquis. 267237 Dental bracket, C. H. Gilbert. 267,186 Desk, office, C. H. Tyler. 267,041