

## ENGINEERING INVENTIONS.

Mr. Lewis Larchar, of Marble Rock, Ia., has patented an improvement in snow plows which consists of top, middle side, and rearside wings in addition to the ordinary front scrapers; also, top chutes back of the front scraper for more effectually throwing off such portions of the snow as fail of being thrown off by the main scrapers, also such as are thrown over and fall back behind the main scrapers.

An improvement in log chutes has been patented by Mr. William Henry Barnum, of Reno, Nev. This improvement relates to chutes for moving saw logs. As usually constructed, they consist of bare poles which have to be kept well greased in order that the logs may be moved. This greasing is expensive, especially when the chute is extended a long distance, and the labor of keeping the chutes in proper condition is an additional expense. This invention consists in the combination of rollers with the ways of the chutes.

An improved interlocking bolt has been patented by Mr. Thomas J. Bush, of Lexington, Ky. These interlocking bolts are adapted to bolt two or more blocks, planks, or pieces of wood, stone, or metal, together, or to secure any object to or upon another, without the holes in which the bolts are placed being made entirely through to the surface opposite to that against which the nuts or bars are screwed upon the bolts, the bolts being formed without heads, and used with only one bar or nut.

An improved balanced slide valve has been patented by Mr. Clarence E. Biddison, of Rock Island, Ill. This invention consists in the combination of a slide valve having opposite partially cylindrical end portions or bonnets constructed to form receiving spaces for the exhaust steam, and a valve chest divided by the valve to form a central exhaust steam chamber and outer end live steam chambers, and sliding packing plates applied to the bonnets, whereby the valve is partially relieved from pressure bearing it down on its seat, and is exposed to equal end pressures.

## MECHANICAL INVENTIONS.

An improved stump puller has been patented by Mr. Newton P. Merchant, of Blaine, Mich. The invention consists in a frame carrying wheels, shafts, and levers for pulling stumps, the frame being mounted on an axle and on a runner.

Mr. John D. William, of Rising Sun, Ind., has patented an improvement in bell striking mechanism specially adapted for clocks, and it is designed to cause the striking of a bell capable of being heard miles distant by the action of a clock of small size.

Mr. John Wilber, of Gleason, Pa., has patented an improved churn power in which weights and springs are employed; and it consists in the peculiar construction and arrangement of gearing and levers by which the power given out by the falling weight or unwinding spring is utilized to the best advantage.

Mr. Thomas Donahue, of Terryville, Conn., has patented an improved padlock. This invention consists in certain novel features of construction in the class of locks known as the pin padlocks, the object being to obtain strength and durability.

An improved elastic packing for spinning spindlebolsters has been patented by Mr. Albert R. Sherman, of Pawtucket, R. I. The object of this invention is to prevent the vibration of the spindle and permit it, when revolving, to adjust itself to its true center of gravity; and to provide a more elastic and durable packing than the wool packing commonly in use, the latter being liable to become charred or burned by the friction of the spindle in the bolster.

An improved cotton elevator has been patented by Mr. Jordan F. Jones, of Laurel, N. C. This invention relates more particularly to elevators for lifting seed cotton in gin houses to the different floors; and it consists in the construction and combination of devices whereby the cotton may be taken from a wagon while on a pair of scales which weighs it, and be very expeditiously transferred, free from rocks and packing, on to any one or more of the upper floors of the gin house.

An improved roller bush has been patented by Mr. Patrick Browley, of St. John, New Brunswick, Canada. This roller bush is formed of a cup-shaped casing containing a series of anti-friction rollers, which are held in the casing by a screw ring screwed into a threaded opening in the cup-shaped casing, which ring is held from unscrewing by tap screws passed into the outer edge of the ring and the inner edge of the casing. The axle pin or pivot is passed through the circular space between the rollers, against which rollers it rests.

A novel index for watch regulators has been patented by Mr. Ferdinand A. Curpen, of Upper Sandusky, O. The object of this invention is to provide for the convenient and precise adjustment of the index hand of watch regulators. Heretofore the index plates have been marked with an arbitrary scale, which is not reliable on account of difference in watches, even in those of the same grade. To obviate the difficulty from such variations this inventor provides indexes specially arranged for each watch, the construction being such that the changes can be readily made.

A machine for planing locomotive links and link blocks, has been patented by Messrs. Ernest Cockfield and John Howe, of St. Joseph, Mo. The invention consists of a combination of devices capable of attachment to an ordinary metal planer, whereby reciprocating motion of the planer table is made to impart a circular or curved motion to the holder that carries the link or block to be planed. This is accomplished by means of a connecting rod and a sliding quadrant lever, arranged for operation between the holder or rocking plate on which the link or link block is carried and the planer bed.

Mr. John H. Ferguson, of Dayton, Tenn., has patented an improved dump cart having a third wheel located between the shafts to carry the weight commonly supported on the back of the horse by the shafts, and contrived with hitching devices at the rear

by which to hitch on the horse so as to draw the loaded cart backward to the dumping place, together with hitching devices at the front end for hitching thereat after the cart is dumped to draw it forward to the loading place, and thus avoid the turning of the cart at both ends of the route, effecting considerable economy of labor, besides saving the deep cross ruts formed in the roadway by turning the carts, especially at the dumping place.

Mr. Patrick Slattery, of Charleston, S. C., has patented a baling press constructed with a frame, a head block, and a follower, with the ends of which are connected by clevises the upper ends of screws. Upon the screws are placed beveled gear wheels having threads in the inner surfaces of their hubs, and meshing into gear wheels operated by cranks and pivoted to sleeves placed upon the screws. The gear wheels and sleeves are held from moving up and down by blocks secured to the press frame.

## AGRICULTURAL INVENTIONS.

Mr. Martin McNitt, of Washington, Kan., has patented a combined harrow and corn planter. The improvement consists in various details which render the implement very easily managed and efficient.

An improved seed dropping attachment for check row corn planters has been patented by Messrs. Louis P. McGonigle and James H. Bigham, of Cato, Kan. This seed dropping attachment for planting corn in check rows has a spoke drive wheel, beveled gears, and a finger chain for tripping the seed valve. It will plant a field accurately in check rows.

Mr. Charles Scaff, of Bangor, Wis., has patented a hay loader which consists of a simple and efficient arrangement of guides, revolving rakes, and an adjustable inclined carrier upon a two wheeled hay rake, for attachment to the hind end of a wagon, to gather up the hay as the wagon and loader pass along over it and deliver it upon the end of the wagon to the attendant.

An improved sulky plow has been patented by Mr. Axel F. Bergqvist, of Fairfield, Ia. This invention relates to improvements upon the plow covered by Letters Patent, No. 234,743, November 23, 1880, granted to the same inventor, and it consists in certain novel features in the construction of the axle; and, in the combination with the lever for raising the plow out of the ground, of a spring adapted to assist the plow man when using the lever for this purpose; and various other improvements designed to increase the efficiency of the implement.

An improvement in sulky plows has been patented by Mr. Thomas T. Harrison, of Aubrey, Kan. This improvement in sulky plows consists of a joint in the tongue a little in advance of the axle on which the wheels are mounted, and about where the evener is attached, for allowing the tongue to swing, so that the horses may get about half way around square corners before the plow turns, together with stops by which the movement of the tongue on said pivot is limited to the required amount, the stops being changeable for allowing the tongue to be shifted in like manner on the pivot, either to the right or left hand.

Mr. John J. Morris, of Humboldt, Neb., has patented an improvement in cultivators designed for cultivating corn planted in what is known as the "listing process," which consists of plowing a wide furrow with adouble mould board plow, subsoiling the furrow, and planting the corn in the furrow of ten or twelve inches deep. The improvement cultivator is divided along the middle longitudinally, and jointed together, so as to allow the sides to rise at an angle of sixty to eighty degrees, according to the inclinations of the sides of the furrows, in which the corn is planted, so that the teeth will straddle the corn and pulverize the sides of the furrows, and provided with a chain for connecting and holding the parts at the angle required.

## MISCELLANEOUS INVENTIONS.

Mr. William C. Squier, of Kinmundy, Ill., has patented an eye wash consisting of the sulphate of zinc, oil of wintergreen, laudanum, oil of sassafras, sugar, and soft water.

A novel climbing device has been patented by Mr. Anthony Ward, of Brooklyn, N. Y. This is a novel and simple device for climbing chains. It is applied to the foot and leg in the same manner as telegraph pole climbers.

An improved car coupling has been patented by Mr. William J. Dawson, of Lawrence, Kan. This is an ingenious automatic coupler applied to the ordinary drawhead and capable of coupling cars of varying height.

A novel ribbon and lace show cabinet has been patented by Mr. Lucien P. Lowry, of Aurora, Tex. This invention consists of a revolving reel carrying rolls of ribbon. The reel is placed in a case with glass sides and the various rolls of ribbon are brought in sight by turning the reel.

Mr. Johann T. Stoll, of Sacramento City, Cal., has patented a buckle for harness, which is efficient, ornamental, and cheap, and will not catch or retain the hair of the horse's tail. The tongue of the buckle is pivoted to the bar and provided with angular upward bend at the free end.

Mr. Joseph A. Widemann, of Basle, Switzerland, has patented a new spring for mattresses, upholstery, etc., which is of simple construction and is strong and durable. It is a one-piece middle coiled wire spring having both ends formed into rectangular or nearly rectangular frames by which they may be applied between the top and bottom slats.

Mr. James C. Titzel, of Allegheny, Pa., has patented a process treating vulcanized India-rubber for the production therefrom of a pure rubber, consisting in dissolving the rubber in turpentine and linseed oil, then adding sulphuric acid and washing, then adding caustic potash, then precipitating from the soapy mass the pure rubber.

A simple and inexpensive apparatus for illustrating the rotation of the earth on its axis and around the sun, the changes of day and night and the

seasons, and other phenomena connected with the movement of the earth in its path through the heavens, in a manner that can be clearly understood by youngest pupils; has been patented by Mr. John R. McCrery, Jr., of Sulphur Lick, Ky.

An improved device for holding spectacles in front of the eyes or for holding them when not in use, has been patented by Mr. Joseph A. Shone, of Salem, Miss. The invention consists in a hat rim or shade provided on the under side with hooks for holding the bows and lens frames of spectacles, whereby the spectacles can be held to the under side of the shade when not in use, or can be lowered upon the nose when they are to be used.

An improved saddle girth has been patented by Mr. Calvin Williams, of Big Valley, Texas. The advantage of this invention is that as the pad rests on the horse's belly at the usual point occupied by the ordinary girth, and the fastening straps radiate therefrom and connect with four different points near the front and rear of the saddle, the four straps embrace the roundity of the horse's belly, and thus prevent the saddle from slipping.

An improved organ case has been patented by Mr. Andrew Anderson, of Moline, Ill. This invention relates to the pedals of organs, and is designed for the prevention of injury to the bellows, sounding board, key pins, reed cells, or other parts of the interior of the instrument by the ingress of mice or other vermin, without affecting or injuring the sound or quality of tone of the instrument, and by means which add little or nothing to the cost of it, and are applicable to organs and other like instruments as now constructed.

Mr. Cyrus R. Furey, of Logansport, Ind., has patented a device for connecting the pole strap to the breast strap; the improvement consists in a contrivance of the slide by which the connection is fitted on the breast strap, calculated to render it more durable of itself and less wearing to the strap, also to retain it better in its proper position on the breast strap when hanging by one hook, also to facilitate the connection of the martingale.

Mr. James Camper, of Sagusche, Col., has patented an improvement in that class of spittoon holders in which the spittoon is inclosed in a box or case provided with a hinged lid and means for opening and closing it. The invention consists in the combination, with a spittoon box or case having a hinged lid, of a plate or arm attached to said lid and a vertical rod working in a tube or hollow standard attached to the box or case, and provided at its lower end with a lateral fork for engagement with the plate or arm.

An improvement in steam generators has been patented by Mr. Harrison Willis, of Brooklyn, N. Y. This invention relates to the class of boilers known as "coil boilers;" and it consists essentially in the combination with a coil, of a central pipe arranged to receive the steam and superheat it, the said pipe being fixed at its upper end and free to move at its lower end when expanded or contracted by variations of temperature, the valve and damper connections are controlled and operated by the expansion and contraction of the pipe.

Mr. John H. Seabury, of Hempstead, N. Y., has patented an improvement in faucets, constructed to discharge from the same nozzle either hot or cold water or other fluid, and it embraces a combination, with the barrel of the faucet having a taper seat and elongated or enlarged general delivery opening, the nozzle of the faucet, and hot and cold water inlets, of a taper plug provided with transverse passages through it for supplying either hot or cold water at different periods, or both hot and cold water at the same time, by simply turning the plug into different positions.

Mr. Artemas L. Dawson, of Elk Point, Dakota Ter., has patented an improvement in lamps. As usually constructed, lamp bodies or reservoirs are provided with a vertical rim or neck around the opening, and metal collars are secured thereon by means of plaster of Paris or other cement. Such neck increases the difficulty and cost of casting or moulding the lamp body, and the collars are liable to become loose and detached in consequence of the cement shrinking and falling out. To obviate these defects, the inventor combines with a neckless lamp body a metal collar and elastic packing, the latter two being turned over the edge of the lamp body so as to inclose it between them.

A new stirrup which can be used as a spur has been patented by Mr. Charles E. D. Parker, of Milen, Kan. The stirrup has a wire or strip pivoted to the inner shank, the lower end of this strip or wire being provided with prongs and the upper end being bent or inclined and passing into the stirrup loop, whereby when the stirrup is pressed against the side of the animal and the inner side is raised the upper end of the pivoted wire or strip will be depressed by the stirrup loop, and the prongs will be forced out of the guard frame at the side of the stirrup and can be used to speed the animal.

An improved tuiere has been patented by Mr. William H. H. Sheets, of Pittsburg, Pa. The invention consists essentially in providing a doubled walled tuiere with one or more double spiral channels or passages between the walls, said channels being formed by spiral partitions, commencing at the butt of the tuiere diametrically opposite each other, and communicating with each other at the nose of the tuiere, through which channels a stream or body of water is kept in constant and rapid circulation from the butt to the nose, and then back to the butt and out through a waste pipe, whereby the nose and entire body of the tuiere is kept at a comparatively low temperature.

Mr. Edmond L. M. Brochon, of Milan, Italy, has patented a process for extracting glycerine and salts from waters obtained in the manufacture of soap, which consists, first, in treating the cold waters with chloride of sodium, filtering, applying hydrochloric or sulphuric acid, and precipitating the insoluble matter with any of the well known coagulating agents, next heating to ebullition the clear liquid and adding milk of lime, then treating with bicarbonate of soda or potash, and applying hydrochloric acid,

[OFFICIAL.]

## INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

November 14, 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.

Alarm. See Burglar alarm. Feed water alarm.	
Alum. manufacture of, P. & F. M. Spence.....	267,610
Amalgamator, R. T. Bishop.....	267,396
Ammonia and animal charcoal, process of and apparatus for the manufacture of, J. G. Macfarlan.....	267,550
Animal trap, B. Greig.....	267,518
Auger, post, J. C. & M. A. Branch.....	267,483
Axle box, car, J. Eisele.....	267,537
Axle, vehicle, E. Firth.....	267,413
Axle, vehicle, O. C. Mehurin.....	267,579
Axles, machine for turning carriage, W. Beers.....	267,480
Bar. See Saddle bar.	
Battery. See Galvanic battery.	
Bearings, composition for, R. M. Rose.....	267,594
Bed bottom, spring, Field & Reese.....	267,412
Bed clothes fastener, A. Cox.....	267,498
Bed spring, T. O'Brien.....	267,576
Bedstead, wardrobe, I. R. Van Slyke.....	267,384
Belt gearing, E. Woolson.....	267,391
Belt stretcher, Z. Frost.....	267,512
Berth, self-leveling, J. H. Milligan.....	267,360
Bevel and gauge, J. S. Thornburg.....	267,381
Binoides of barium and calcium, manufacture of, C. Marchand.....	267,551
Bit and countersink, A. O. Revenaugh.....	267,560
Block signal mechanism for railways, automatic, J. A. Millholland.....	267,561
Board. See Ironing board. Railway time bulletin board.	
Boat lowering and detaching apparatus, M. Bourke.....	267,322
Boiler. See Vertical boiler.	
Bolt. See Car door bolt. Flour bolt. King bolt.	
Bolt, J. P. Black.....	267,399
Book, scrap, G. E. Shepard.....	267,604
Boot and shoe strap protector, C. W. Elliott.....	267,506
Boot or shoe, J. Popham.....	267,652
Bottle locking device, E. P. Bray.....	267,484
Bottle stopper, J. M. Lewin.....	267,650
Bottle stopper, mucilage, S. M. Bixby.....	267,397
Bottling beer under pressure, J. C. G. Hüpfel.....	267,349
Box. See Axle box. Music box.	
Box nailing machine, H. Messer.....	267,359
Bracelet, E. F. Presbrey (r).....	10,239
Bracelets and other chains, slide for chain, J. Herzog.....	267,526
Bracket. See Curtain roller bracket.	
Brake. See Wagon brake.	
Brick machine, W. Andrus.....	267,392
Brick machine, L. B. Kennedy.....	267,542
Brick mould washer, G. Partridge.....	267,365
Broiler, meat, C. T. Hurd.....	267,535
Broom, M. B. Montgomery.....	267,444
Bucket, sap, J. Smead.....	267,374
Bung, vent, A. E. Schatz.....	267,598
Burglar alarm, R. G. Dudley.....	267,503
Burner. See Lamp burner. Petroleum burner.	
Vapor burner.	
Butter, manufacture of artificial, H. R. Wright.....	267,637
Butter package, J. Tomlinson.....	267,616
Button attaching machine, A. W. Ham.....	267,342
Button fastening apparatus, L. Goddu.....	267,340
Button or stud, G. E. Adams.....	267,315
Button to garments, machine for attaching, G. W. Prentice.....	267,587
Can. See Oiling can. Sheet metal can.	
Can washing machine, J. O. Hawthorn.....	267,524
Candlestick, A. Rix.....	267,490
Candy whistle and mould for manufacturing the same, G. M. Mills.....	267,563
Car coupling, G. I. Blackley et al.....	267,321
Car coupling, J. P. Davison.....	267,645
Car coupling, D. M. Harris.....	267,314
Car coupling, S. L. Holmes.....	267,531
Car coupling, J. H. McLeary.....	267,554
Car coupling, W. L. Skelton.....	267,608
Car coupling, J. A. Walker.....	267,621
Car coupling link, A. W. Palmer.....	267,453
Car door bolt, sliding, W. Johnson.....	267,539
Car, fruit and produce railway transportation, J. F. Maxwell.....	267,356
Car platform, R. A. Cowell.....	267,330
Car spring, G. F. Godley.....	267,341
Car, stock, J. M. Holden.....	267,580
Car unloader, G. W. Rolph.....	267,593
Car wheel and axle, G. W. Fairman.....	267,508
Cars, tool holder for, Harnes & Doyle.....	267,522
Carding machine feeding mechanism, E. Gessner.....	267,513
Cards, etc., apparatus for automatically displaying show, C. W. Johnson.....	267,558
Carpet fastener, J. A. Wilmot.....	267,590
Carriage motor spring, P. Quinn.....	267,589
Cartridge primer, T. R. Martin.....	267,552
Case. See Show case. Toilet case.	
Caster, A. Thompson.....	267,380
Casters, tool for inserting, A. Thompson.....	267,379
Check, baggage, E. J. Brooks.....	267,486
Chimney cowl, W. S. Beebe.....	267,479
Churn, R. R. Coffey.....	267,496
Churn, R. A. Preston.....	267,368
Clock movement, alarm, W. L. Upson.....	267,619
Clothes pounder, J. Mowery.....	267,571
Coach, H. F. Stabmer.....	267,376
Cock, gauge, L. B. Fulton.....	267,416
Collar, W. Christopher.....	267,494
Condenser and tender, combined steam, H. S. Saroni.....	267,463
Cooling and warming the body, feeding device for pipes for, J. Leiter.....	267,435
Corset, T. S. Gilbert.....	267,514
Cotton cleaning machine, J. N. Davis.....	267,501
Coupling. See Car coupling. Thill coupling.	
Cover, vessel, Hayden & Arnold.....	267,345
Creamer, J. P. Stabler.....	267,611
Crusher. See Stone or ore crusher.	
Cup. See Oil cup.	