

## ENGINEERING INVENTIONS.

Mr. John H. Darragh, of San Francisco, Cal., has patented an improved rotary engine possessing certain novel features which cannot be clearly described without the aid of engravings.

Mr. Daniel E. Kelley, of Gaylord, Kan., has patented an improvement in car couplings, consisting in the employment of mechanism for operating or elevating the coupling pin, and for guiding the link into the approaching drawhead.

Mr. Lewis I. Hinkle, of Piedmont, Mo., has patented an improvement in the class of car couplings in which the drawheads are provided with a fixed horn or pin that projects upward from the front end thereof, and with which the link may engage automatically.

Mr. George H. Whitman, of Eureka Springs, Ark., has invented an improved boiler feeder. The object of the invention is to provide a feeder which shall act automatically to retain the water at a uniform height. It consists in a revolving feeder operated by the water and steam pressure to pass the water to the supply pipe.

An improved car coupling has been patented by Mr. Francis Griffin, of Greenville, Miss. The invention consists in a drawhead provided with a transverse pintle, on one end of which a hook plate is pivoted, the other end projecting from the side of the drawhead and forming a catch for the hook plate of the opposite drawhead.

Mr. George K. Hoff, of Philadelphia, Pa., has patented a car coupling formed of two drawheads, each made with a bevel ended projection upon one side of its end, a socket in the other side of its end, and a curved notch partly in its end and partly in the base of the projection, whereby the two drawheads can be locked together by a coupling pin.

An improved car coupler has been patented by Mr. John A. Müller, of Wadesville, Ind. The object of this invention is to avoid the necessity of the operator passing between the cars at the time of coupling, and the invention consists in coupling hooks hung to the drawheads by ball and socket joints, provided with levers for their operation from the top of the cars, or at one side from the ground.

The following car coupling improvement has been patented by Mr. S. Lewis Holmes, of Hillsborough, O. This invention consists of devices to hold up the coupling pin so that the link will enter, and then trip the pin from either side of the car and let it fall and secure the link; also a link lifting device whereby the link can be lifted up to enter and couple from the sides of the car. These improvements are applicable with slight alteration of form to the drawbars of any form in use.

An improved locomotive head light has been patented by Mr. Frank H. Talbot, of Rochester, N. Y. The invention consists in a certain arrangement and construction of transparencies and the frames which carry them, for indicating at the sides of the head light by the direct rays of the lamp the number of the train, the number of the section of the train, and the number of the locomotive drawing it, or other like information useful or necessary in the running of a railroad, each of the transparencies being separate, with provision for the removal of them or certain of them as required.

John Fenimore, of Orleans, Ind., has patented an improved automatic car coupler. The invention is calculated to facilitate car coupling and to remove the danger attendant upon this operation. It consists in the employment, in connection with a drawbar, of spring plates adapted to slide therein with their outer ends projecting beyond the forward end of the drawbar, and having apertures through them to register, with a transverse horizontal passage through the drawbar and a spring coupling plate or bar adapted to pass through the passage in the drawbar and the apertures in the aforesaid spring plates and having an operating lever.

Mr. James P. Davison, of St. John, Ill., has patented an improved car coupling. The invention consists in a drawhead provided with a swinging spring latch partially crossing the end opening of the drawhead from above, and in a spring hook latch partially crossing the drawhead opening from below, which lower spring latch is provided at its rear end with a tapering projection fitting into a notch in a disk mounted on a transverse shaft, which disk is provided opposite the notch with a segmental recess, into which a second disk passes, which is mounted on a transverse shaft provided with a handle, whereby the hook latch will be locked in position and cannot be lowered until the said handle is turned, whereby the disks will be turned, and will permit a movement of this lower hook latch.

## MECHANICAL INVENTIONS.

An improved window sash has been patented by Mr. William Heaps, of Walden, N. Y. The object of the invention is to provide a window sash which may be easily raised or lowered and locked securely in any desired position without the use of weights, cords, locks, or latches.

A patent has been obtained by Mr. Charles M. Dexter, of Sacramento, Cal., for a new and useful improvement in tuck folders for sewing machines. It consists in the peculiar construction of the tuck fold, and the object sought for is to facilitate the correct, rapid, and easy formation of tucks or plaits in cloth.

Mr. Oscar Rust, of St. Joseph, Mo., has patented a well-drilling machine in which the drill rod is operated by an oscillating lever connected thereto by a rope. The invention consists in certain improvements relating to the construction of the mast and the arrangement of the lever and its operating mechanism with respect to each other, together with other minor improvements.

A novel mechanical fan has been patented by Mr. Darwin S. Wright, of Macon, Ga. This invention relates to devices for communicating power to a fan, or a number of fans, for the purpose of cooling the

atmosphere in houses. It has for its object to provide a construction which shall be variously adjustable, in order that the fans may be arranged in different positions, according to convenience.

An improved bag filling apparatus has been patented by Mr. Charles L. Kelley, of New Vienna, O. The invention consists of a hopper so arranged upon a table that it may be raised and lowered at convenience. Attached to the opening at the bottom of the hopper is a funnel section consisting of two parts pivoted together in such a manner that they may be adjusted to any size and rendered capable of entering the smallest bags.

Mr. Arthur Felber, of Louisville, Ky., has patented a new and improved stop motion for button hole sewing machines. This invention consists of an arrangement of automatic stop mechanism for button hole sewing machines, whereby after setting a machine in motion the operator may turn his attention to another machine for setting that in motion, leaving the first to stop itself when the button hole is completed. This enables one operator to run two machines at the same time.

An improved car unloader has been patented by Mr. George W. Rolph, of Toledo, O. This invention consists of the details of construction of certain parts of a car unloader for discharging earth from flat cars over the side by means of a kind of scraper, to be operated by power from the locomotive drawing it along against guide rail, located upon one side of the car, the said scraper being drawn along the train from one car to another.

Mr. Charles W. Jones, of Lowell, Mass., has patented an improved carpet stretcher. The invention consists in a carpet stretcher of novel construction, which not only provides for stretching the carpet, but for holding it while being tacked to the floor. It also comprises a novel anchoring device and a swiveling stretching head capable of being set at different angles, to work in jogs or curved spaces of a room and in narrow places, the whole forming a light, simple, and durable device which may readily be operated by a single person.

Mr. William Klostermann, of Cologne, Minn., has patented an improvement in middlings purifiers. The invention consists in the combination of an inclined rotary drum provided with elevator strips on its inner surface, and a vibrating middlings distributor arranged therein; also in the combination, with a vibrating middlings distributor and an elevator drum surrounding it, of devices for creating a current of air in the distributor. The invention has other points of novelty which cannot be clearly described without engravings.

Mr. Walter P. Prall, of Colusa, Cal., has obtained a patent for an improved sulky hay rake. The invention belongs to that general class of hay rakes in which the draught attachment is made to co-operate with a lever in raising and dumping the rake, and the special improvement consists in the novel arrangement and combination of a certain jointed bar and lever in connection with the rake head and draught whereby the rake is unloaded and otherwise controlled, and also for the improvement made whereby more room is obtained for the collected hay, thus avoiding the upward pressure which causes the teeth to rise and pass over the hay without performing their intended work.

Mr. Edward Rowland, of Tiffin, O., has patented a new and improved seal lock. The invention relates to seal locks for car doors, and other analogous applications designed to prevent the surreptitious opening of the door. It is an improvement upon that class of seal locks in which the bolt section enters a chamber and is there retained by a spring catch, access to which spring catch is prevented by a glass plate which has to be broken before the spring catch can be removed to withdraw the bolt. The invention consists in the peculiar construction and arrangement of parts, and in the means of detecting the surreptitious breaking of the seal plate.

Messrs. George I. Blackley and John I. Nicholson, of Greenville, Tex., have patented an improvement in that class of couplings in which a vertically moving pin is employed in connection with a link of ordinary construction for the purpose of securing the cars together. It consists mainly in the combination, with a pin of special construction, having attached thereto a spring adapted to give it its downward movement, of a pivoted frame adapted to hold the pin in its elevated position against the action of the spring until the cars come together, and then to release the same in order that the coupling may be effected.

An improvement in car couplings has been patented by Mr. William L. Skelton, of Jacksonville, Ala. This invention is designed to effect the automatic coupling of the cars and to enable their ready uncoupling. This car coupling has an approximately triangular shaped coupling pin having a weighted lower end and an upward extension; the forward edge of the lower end rests in a notch or recess in the bottom of the opening of the drawhead. A crank lever is pivoted to the end of the car, and has one end resting against the upward extension of the pin, and its other end connected to a rod reaching to the top of the car. By means of this rod the coupling pin is operated.

A new stop motion for spoolers, twisters, and doublers has been patented by Mr. Alexander G. Brown, of Williamstown, Mass. The invention consists in the combination, with a rotating spool carrying spindle provided with a transverse rod or bar, of as many pivoted check levers as there are threads to be wound on the spool, which check levers are each provided with a loop through which a thread passes, whereby, when the threads are unbroken, the check levers will be raised, permitting a rotation of the spindle; but when a thread breaks the corresponding check lever drops, the transverse rod of the spindle strikes against the end of this check lever, and the spindle will be stopped immediately.

In carding machines where two, three, or more machines are arranged in one set, each of which works separately and independently of the other, and

unlike the English or longcarding machines, where more than one are combined, a continuous even feeding from one engine to another is required in order to obtain good results. To accomplish this is the object of an invention patented by Mr. Ernst Gessner, of Aue, Saxony, Germany. By the use of this improved machine an even and broad flat sliver of any breadth of the material carded in one engine is formed, and, carrying it to the next, deposit it upon the feed table and feed it to the licker-in of that engine, forming a constant connection and transfer of wool from one machine to the other, and laying the sliver upon the feed table of the second machine in such manner as to secure an even thickness of material from side to side of the feed table without ragged edges.

## AGRICULTURAL INVENTIONS.

Mr. William N. Smith, of Brookfield, Mich., has patented an improved separator for separating grain from chaff, and for cleaning all kinds of grains and seeds. The invention consists in a novel arrangement of a hulling cylinder and shakers of peculiar construction, which effect a thorough separation of the grain from the chaff.

Mr. Ezra Peak, of Westfield, O., has patented an improvement in wheel plows consisting in the combination of an axle having a crank extending rearwardly, a yoke extending vertically over the axle, a plow frame adjustably suspended from the axle, and the yoke and plow adjustably suspended from the frame.

An improvement in harrows has been patented by Mr. Laurens S. Wheeler, of Independence, Kan. This invention relates to harrows of two or more sections connected to work together as one, but having the advantage of adaptability to the uneven surface of the ground, which a single construction does not possess.

Mr. Harrison C. Lott, of Lexington, Ill., has patented an improved grain separator. The invention consists substantially of a grain separator constructed with a thrashing cylinder, a straw shaker, a separating table, a crank shaft, a shoe for receiving the grain when separated, a fan blower for removing the chaff, driving pulleys and belt. The invention consists in the adjustment of these parts one to another, in such a manner as to facilitate to the greatest extent the separation of the grain from the straw and chaff.

## MISCELLANEOUS INVENTIONS.

Mr. David J. Taylor, of Grinnell, Ia., has patented an improved dress chart for facilitating the draughting, cutting, and fitting of ladies' and children's garments.

An improvement in harness pads has been patented by Mr. Edward P. Waters, of Roseville, Ill. The invention consists in the combination, with the skirts and pad, of a loop piece through which the skirt passes, and by which it is held in place.

An improved heater for dwelling houses has been patented by Mr. James B. Harris, Jr., of Geneseo, N. Y. This heater is especially adapted for use in some room in a house, as it will heat the room it may be placed in and also by steam pipes all the other rooms of the house.

Mr. John W. Wolcott, of Clyde, O., has invented an improved railroad time bulletin board. This relates to that class of bulletin boards which are provided with means for changing announcements as occasion requires. The invention consists in the peculiar construction and arrangement of parts.

Mr. Robert A. Carter, of Elizabeth, N. J., has patented a novel and interesting improvement in the manufacture of frames for eye glasses. The distinctive novelty of this invention lies in the construction of the metallic connections of spectacles, eye glasses, etc., by means of a turning process.

Mr. William M. Boyd, of Rushville, Ind., has patented an improved sulky provided with a tongue for hitching two horses thereto. It has a foot rack which is independent of the frame of the sulky, so that, together with a lever contrivance, the springs may be relieved to some extent of the weight when overloaded.

A patent has been obtained by Mr. Timothy W. Murphy, of Washington, D. C., for a new and improved horseshoe. The invention consists of a horseshoe with dovetailed and shouldered recesses for receiving calks of corresponding construction, and in securing the calks in position by means of screws having their heads countersunk in the shoe.

Mr. Charles A. Cooley, of New Britain, Conn., has patented an improvement in that class of electric arc lamps in which some of the exposed parts are insulated from the current. In this lamp accidental contact of a conducting substance with any portion of the lamp or frame will result in no diversion of the current operating the lamp.

Mr. Charles A. Cook, of New York city, has patented an improved drop handle for drawers, etc., which is of simple construction and can be manufactured at a low cost. The invention consists in a drop handle formed of a handle knob provided at its upper end with a U-shaped clip, which is pivoted to a U-shaped clip held in a cap on the front of the drawer.

An improved belt stretcher has been patented by Mr. Zarda Frost, of Kinmundy, Ill. This invention consists in a tool having a hook ended blade and provided with pivoted arms shaped to hold the buckle or the end of the belt. By means of this arrangement the two ends of the belt may be readily united.

A combined button lap and stay for garments has been patented by Mr. David W. Thompson, of Englewood, Ill. This invention relates to a combined button lap and stay for the openings in garments, such as the openings at the neck or sleeves of shirts, the openings in the front or sides of drawers and overalls, or for plackets, pockets, or other similar openings.

Mr. Jens H. Christiansen, of Mones Island, N. J. (P. O., Chester, Pa.), has patented a process of treating stalks and leaves of certain fiber producing plants, which consists in hackling or combing them

into strips, boiling the latter in an alkaline bath, next removing the gluten, and immersing the fiber thus obtained in a bath of boracic acid, soap, and glycerine.

An improved egg carrier for use in transportation has been patented by Mr. Charles D. Lewis, of Georgetown, Col. The invention consists of an elastic packing case, provided with a stall for each egg rigidly secured at its corners and to the bottom, forming one piece throughout. The sides and bottom of the partition are furnished with holes for purposes of ventilation and to lighten the carrier.

A new and improved combined pole tip and neck yoke clamp has been patented by Messrs. Francis W. Sibert and Stephen P. Hurd, of San Antonio, Tex. This invention consists in a combined wagon pole tip or socket and neck yoke clamp, which can be easily attached to and detached from the pole or neck yoke, and which, when in use, will be self-adjusting to the movements of the neck yoke due to the motion of the team.

An improved punch for marking cattle has been patented by Mr. August Tigniere, of Wichita, Kan. This instrument is composed of a pair of jaws operated after the manner of a punch, and a novel combination with the instrument of a series of removable dies for cutting letters or figures, whereby provision is made for using the same instrument for marking different characters.

Mr. Henry Bell, of Baltimore, Md., has patented an improvement in filtering funnels which are provided with vent tubes. The invention consists in the novel construction of the funnel and combination therewith of a vent tube. This funnel has an annular projection around the brim, on which is placed an elastic band to protect the funnel against breaking by contact with other things.

Mr. Eugene W. Humphreys, of Salisbury, Md., is the inventor of an improved fruit basket for which he has obtained a patent. It relates to that class of fruit baskets or boxes which are made of veneer or thin sheets of wood cut and creased so as to be folded to constitute a basket adapted to hold berries or other small fruit, which baskets are designed to hold a definite quantity of fruit and be packed in crates for shipment.

Mr. Kasson Freeman, of Grand Rapids, Mich., has patented an improved surveying instrument, the object of which is to dispense entirely with the services of the chain and chainmen. The invention consists in the employment of a compass or transit instrument provided with a micrometer sight and a cross, and with a registering table having micrometer sights and a staff detachably secured to a tripod, whereby the employment of a chain becomes unnecessary.

Mr. Edward T. Wolcott, of Kenosha, Wis., has patented an improved and novel wire mattress which is designed to prevent the bed from sagging in the center. The invention consists in elastic supporting springs stretched diagonally across the mattress frame from corner to corner immediately under the mattress, so as to provide an extra amount of strength at the center of the mattress at the point where the greatest weight rests.

An improved chemical fire extinguisher has been patented by Mr. Daniel Parham, of Tyngsborough, Mass. This invention consists of a gas supply and distributing apparatus in which weights suspended or supported by cords of combustible material are adapted, when the cords are burned, to fall and act upon certain parts of the apparatus to generate and distribute the gas to the locality of the fire for the purpose of extinguishing it.

Mr. Franklin Pierce, of New York city, has patented a hod elevator constructed with a frame having a vertically moving crossbar, provided with hoisting hooks and supported upon eccentrics, whereby the hods can be lowered to bring their handles into contact with the elevator platform and free the hods from their supporting hooks. To the lower part of the main frame is attached an auxiliary frame, to keep the hod handles in nearly a vertical position while the hods are being elevated.

An improvement in making boxes and baskets has been patented by Mr. John Howenshine, of Chatanooga, Tenn. The object of this invention is to facilitate the manufacture of boxes, fruit baskets, measures, and like articles which are made of sheets of wood, pasteboard, leather, metal, or other suitable material. The invention consists in a folding box made of a folding side blank provided at the ends with hook lugs, which, when the box is completed, pass into apertures in a bottom blank, which is passed within the folded side blank from the bottom.

An improved tobacco drier has been patented by Mr. James H. Fizer, of Millersburg, Ky. This invention relates to an arrangement of heaters, whereby the room for hanging tobacco to dry in the barn is economized; and it consists in arranging the heaters at about equal distances on the barn floor and running the pipes in couples direct from the heaters to chimney pipes in the sides of the barn, said chimney pipes extending above the roof of the barn at some distance from its side to insure safety fire. This is an important feature, as many farmers know by experience. This improvement permits the sweating to be done in cool weather. The steam softens the air and effects the sweating in a short time, so that the tobacco thus treated is equal to one-year tobacco. The tobacco treated by this process is always sweet.

An improvement in upholstered chairs, sofas, etc., has been patented by Mr. William E. Buser, of Chillicothe, O. The invention consists in providing a chair or other frame with an upholstering frame, which is secured inside the frame in such manner as to form an offset or projection therefrom, and stretching the upholstering fabric over said inside frame, in direct contact therewith and securing it in said position, whereby the upholstered work shall be supported in relief from the main frame within the margin formed by the exposed woodwork of the side bars without the use of moss, rolls of tow, rubber strips, or other expedients commonly employed for building up the edges, the object being to provide an inexpensive article of furniture which shall have all the advantages of the more costly upholstered class.