

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

ATMOSPHERIC ENGINES.—Silas E. Tuttle, of Evansville, Wis.—This invention has for its object to furnish a simple, convenient, and effective atmospheric engine, so constructed that a partial vacuum may be formed in the cylinder by burning the oxygen of the air, causing the piston to be forced forward into said vacuum to make its stroke by atmospheric pressure on the other side of said piston. The two cylinders are open at one end and have numerous holes in the heads at the other ends to allow the air to pass through freely. The pistons work air tight in the cylinders. Valves are so arranged upon a cross bar, actuated by suitable mechanism, that when one of said valves is opened the other will be closed. A reservoir contains alcohol or some other suitable inflammable substance which is led through to the interior of the cylinders near their open ends. Wicks pass through the pipes from the reservoir to the cylinders. The pipes are provided with stop cocks to enable the flow of the inflammable substance through the pipes to be regulated or stopped, as desired. Air pipes, connected with the cylinders, near their open ends, admit air to said cylinders, which are opened and closed by the valves so arranged that one will always be opened as the other is closed. Lamps are placed just below the open ends of the cylinders and as close to them as is possible without having the valves in their movements interfere with the lamps. To the valve rod is attached a lever, to allow the valves to be opened by hand in starting the engine. By this construction, as each valve is opened, the flame from the lamp sets fire to the wick, which forms a vacuum in the cylinders as the valves are closed, and the atmospheric pressure forces the pistons forward alternately, and they thus keep up a constant motion in the shaft.

UPRIGHT PIANO.—Oscar Altenburg, of New York city.—This is an improved arrangement of the case or frame of an upright piano, which consists in hinging the face plate of the top to the case so that it can be folded down, and in providing it with a rib or device for the support of the music when thus folded down. The object of the invention is, first, to allow a convenient and full display of the action and a free escape of the sound waves; also, ready approach to the pins for tuning, and to dispense with the necessity of opening the top of the case, which may be used as a support for various articles.

FENCE.—Albert C. Betts, of Troy, N. Y.—This invention consists of a portable wire fence formed of longitudinal parallel lines and vertical pickets, the wires being fastened to the pickets by staples, and the pickets being placed at such distances apart as to prevent the wires from being forced apart by animals so as to pass through, and not so near as to interfere with rolling the structure thus formed up into a roll for convenience in carrying it from the factory or shop to the place where it is to be set up, or for removing it from place to place. The wires and pickets thus arranged and connected are made in sections of greater or lesser lengths, according to convenience in handling, and secured in position in the field by erecting the pickets upon the ground and fastening the wires or pivots to posts set permanently in the ground, a rod apart or thereabout, the said wires being secured by staples, which may be readily pulled out again to release the wires and pickets when the fence is to be removed. The inventor proposes to secure the wires to the pickets by machinery adapted to secure all the wires to one picket at once, the wires, pickets, and staples being fed or supplied to the machine in regular course, and thus to provide this part of the fence for market at a very cheap rate, so that the only labor required in the field will be the setting of the posts and securing the said wires and pickets thereto. Stakes driven in the ground will answer well for the posts, for the weight of the wires and pickets is not such as to require great strength.

FENCE.—John A. Stone, of Chapel Hill, Texas.—This invention relates to a new fence of very simple construction and claimed to be of great strength and durability. A series of posts is secured in the ground at a depth of from eighteen to twenty-four inches, and at distances apart about twelve inches shorter than the rails to be used. The rails are placed obliquely against the fronts and backs of the posts, and so that the ends of the rails between one pair of posts rest on the ends of the rails between the adjoining pairs. After the rails have been placed—say, to about half the height of the posts—false posts are, by means of wire bands, tied to the true posts, against that face of each with which the rails are in contact. The false posts reach from the ground to the height to which the rails are to extend, and serve to confine the latter in their positions. After the false posts have been secured, the remaining rails are applied. The height of the fence may be cheaply increased without the use of rails by having one or more strands of wire stretched between or through the posts. Such wire may, however, be dispensed with.

SLED.—John K. Reichert, Lancaster, Ohio.—The invention consists in avoiding the usual mortise in sled runners, which weakens and renders them liable to break, by making the standards, which support the cross-pieces of metal, and providing them with a socket at one end and a bifurcation at the other.

FARE BOX.—John C. Schooley, New York city.—The patentee has contrived a fare box so constructed that not only the valves which prevent escape of the fare shall operate automatically, but the fare itself shall proceed on its course from the first or inspection chamber to a safe deposit chamber whenever the box is lowered or suspended by the handle in the most natural and easy way. When the box is again presented for a fare, the valves swing open as before.

CORN CRIBS OR HOUSES.—Commodore B. Clark, Pleasant Grove, Iowa.—This invention relates to an improvement in corn cribs or houses, intended especially for storing and preserving corn in bulk, and it consists in the peculiar construction of parts when combined in such a manner as to form a crib or house, from which the corn can be taken as desired for use with the greatest facility, and which shall serve to exclude both rain and snow, and noxious or destructive vermin or animals, and yet permit a thorough circulation of air through the body of corn.

CARTRIDGE BOX.—John Miller, U. S. A., Lexington, Ky.—The invention consists in the peculiar construction and arrangement of parts in a cartridge box whereby 40 rounds may be carried with convenience, and 50 in case of emergency, while ready access is always afforded to the single cartridges, and the rattle of screw driver against box is prevented by securing it within the box. This improvement seems to possess decided advantages over its predecessors, and will doubtless be appreciated by those acquainted with military accoutrements.

FENCE.—John McKnight, of Romulus, N. Y.—This is a new arrangement of the supports and fastening devices of a fence, which has for its object to facilitate the putting together of parts and their transportation, and thereby to reduce the expense of putting up a fence. The invention consists in the application to the fence posts of elbow supports for the panels, and in their combination with a face post and bolt for holding the panels in contact with the posts. The posts of the fence are firmly secured in the ground. The panels are made in suitable style and of the necessary or desired lengths. To the lower part of each post is fastened, by a bolt or pin, the upright part of an elbow piece or angle iron. The horizontal part of the angle iron has an aperture for the reception of the tenon formed at the lower end of a false post or face piece. From the upper part of each post projects a horizontal bolt or pin, through a slot in the upper part of the face piece. The ends of the panels are placed upon the angle irons either so as to overlap or abut against each other, and are then confined to the posts by the face pieces. Forked plates are slipped over the bolts in front of the face plates to prevent the bolt heads from cutting into the wood.

TOOL HANDLE FASTENING.—Alanson R. Sweat, of Harlan, Iowa, assignor to himself and B. B. Mastick, of same place.—The object of this invention is to provide ready and convenient means for fastening axes, hatchets, hammers, and similar tools on to handles, so that such tools may be readily removed in case of failure, and so that the handle itself will be greatly strengthened thereby. It consists in a combined key and wedge attached to a head plate. The handle is fitted to the eye of the ax or other tool in the ordinary manner, except that the handle shank is made narrower so that a space is left at the back of the eye for the key. The key

the wedge, and the head plate are made in a single piece of metal, and may be forged or swaged and made of malleable iron or other metal. The end of the handle is split in the ordinary manner, and the wedge is driven into the split with the key at the back of the handle. The key projects through the eye, which forms a support to the handle and allows the key and wedge to be driven out with ease. By this method the handle and ax or other tool is readily separated, and the handle may be changed from one tool to another as may be found convenient.

BUCKLE.—Robert F. Russel, of Hazleton, Pa.—This invention relates to buckles for harness and other purposes, where the ordinary tongue buckle cannot be used without annoyance or trouble. It consists in a metallic loop, and a slide, and a ring, constructed, combined, and arranged in a peculiar manner. The adjustment is made by pressing the end of the loop inward, thereby detaching a stop from the slide, and then slipping the slide from the loop, which allows the strap to be adjusted as may be desired. When the strap has been adjusted, the slide slips back toward the ring and is caught by a stop lug. The inventor does not limit or confine himself to the precise form or arrangement of the parts described, nor to any particular use or purpose for the buckle, but designs it for all the purposes for which it may be adapted.

GATE.—William H. Phillips, of Staunton, Ind.—As a vehicle approaches this gate, the driver guides the horses in such a way that the wheels may strike against the erect cranks and force them down. This operates mechanism to open the gate, and, at the same time, raises other cranks into an erect position, so that the driver, by guiding the horses so that the wheels of the vehicle may strike the erect cranks at the other side of the gate, may thus close the gate and, at the same time, raise the first named cranks ready for the next vehicle in whichever direction it may be moving.

WATER WHEEL.—Vincent M. Baker, of Preston, Minn.—This invention relates to an improvement in gates and gate mechanism for water wheels; and has for its object, by the improved arrangement, to gain larger spaces for water entrance and avoid unnecessary friction. The invention consists in sinking the gate rings, in a new form of flanged gates, and mode of connecting them, in such manner that the greatest pressure of water shall be on the inner end of the gate. This causes it to open and close more easily than it would if the pivots were placed in the center. The greatest pressure of water, being on the inner ends of the gates when closed, helps to open them, and the draft of water around the wheel when they are open helps to close them. Balls may be placed in a recess for the lower gate ring to rest on, by which the gate moves more easily. Two balls may be placed back of the segment that moves the gate rings, to remove the friction by hoisting. The gate thus made with straight inner face, beveled inner end, curved outer end, and with a flange at top and bottom, is claimed to be superior to other gates. On the straight inner face the water is conducted to the wheel in a straight line; hence less friction than there would be if said face was curved. Leakage is prevented by the flanges covering the joints between the rings and case when the gates are closed.

OYSTER STEAMER.—William A. Jones, Erie, Pa.—This is an improved steamer for steaming oysters, enabling the juice from the oysters to be preserved, so that it may be put back upon them when served. The steamer is made to be placed in the middle hole of the stove or range, like an ordinary kettle. It supports a vessel inclosed in another vessel which rests on an annular support. Below is a support for a vessel to catch the juice. A perforated plate receives the oysters to be steamed. A funnel shaped band conducts the juice from the oysters to a dish to preserve it, so that it may be poured back upon the oysters when served. The parts may be made large, so as to contain any desired number of sets of the attachments for use in hotels, saloons, etc., where several dishes of steamed oysters may be wanted at a time.

TRUSS.—Edmund P. Banning, Jr., New York city, assignor to "Banning Truss and Brace Company," of same place.—This invention relates to a new manner of securing the pad of a truss to the supporting plate, with the object of insuring stability of the pad during the motion of the body. It consists in the combination of a double slotted abdominal plate and a single longitudinally slotted hernia pad, held loosely together by set screws, thereby admitting of a rotary motion of the pad. The body of the patient is thereby enabled full freedom of motion, and will not displace the pad. This improvement is claimed to be of vast importance. It is maintained that it produces an absolute closure of the rupture, where, heretofore, with the ordinary trusses, every motion of the body, nearly, was followed by a greater or less dislocation of the pads.

BACK BRACES.—Edmund P. Banning, Jr., New York city, assignor to "Banning Truss and Brace Company," of same place.—This invention consists in a new arrangement of parts, more particularly in the method of the adjustable application of an up and down adjustable and partly flexible fulcrum for a back brace. The back bone brace is made of a flat spring of proper length, width, and thickness, and sufficiently powerful for the purposes to which it is to be applied. The spring is inclosed in a sheath or covering of suitable fabric. Its upper end carries a pivoted transverse piece of plate, to the ends of which the upper parts of the shoulder straps are secured. The lower ends of these shoulder straps are secured by links, or otherwise, to a short strap projecting from the sheath, or directly to said sheath. The straps contain buckles, or equivalent devices, for being lengthened or shortened, according to the figure of the patient. The upper plates, being pivoted, allow free side motion to the body without affecting the position of the spring. To the lower end of the spring is pivoted another transverse piece or plate, to which the body belt is connected. The pivoting of the piece offers the same advantage as that of the upper plates. The fulcrum of the brace is formed by two small metallic pads or plates, which are, by more or less flexible joints, secured by a transverse bar that slides on the spring. By means of a plate, secured or bolted to the transverse bar, the latter is transformed into a sleeve that embraces the spring, and can be vertically adjusted thereon. The pads can therefore be set up or down at will to fit the small of the back of the patient.

UTERINE SUPPORTER.—Edmund P. Banning, Jr., New York city, assignor to "Banning Truss and Brace Company," of same place.—The object of this invention is to construct a uterine support which will be light, cleanly, and under the complete control of the wearer, and which can be used in cases of anteversion, retroversion, or to relieve the bladder from all pressure by the displacement of the womb, by a reversal of the concave tip. The invention consists, first, in making the stem and spring of one V shaped wire, which, at its outer end, is adjustably connected with the supporting brace, while its inner end sustains a tip of suitable material for the support of the uterus or for its lateral displacement, this tip being concave, and by its reversal made adjustable for both ante and retroversion. The invention also consists in the use of a peculiar concave shaped tip, to be used in cases of anteversion.

VELOCIPÈDE.—David Martin, Harrisburgh, Pa.—This invention consists of an arrangement of propelling and steering apparatus for operating a four wheeled carriage by using both hands and feet. The four wheels have each a separate cranked axle, having two bearings inside the wheels upon the top of a T headed vertical arm, of a connecting bar or auxiliary axle, cranked downward to mount the connecting beam and operating gear as low as possible. The connecting beam is rigidly attached to the hind auxiliary axle, and to the front one by a saddle, fifth wheels, and a king bolt. The front cranked axles are each connected to a hand lever, pivoted on the top of a standard, supported on the auxiliary axles, and rising to a suitable height for being worked by hand by a person in a standing position, or nearly so, above the connecting bar. The double acting connections will, it is believed, cause a more uniform action of the force on the crank than a single connection will. The hind crank axles are connected to the cranked treadles, pivoted to the connecting beam by links, and the treadles extend forward under the seat, and a little in front of it where they have each a foot piece, mounted on a pivot, with a spring under it conveniently for being acted upon by the feet of the operator, partly sitting on the seat and partly standing on the treadles, and at the same time working the hand levers. The carriage is guided by mechanism, actuated by an oscillatory movement of the body. It is believed that a carriage constructed and operated on this plan, by which both the power of the legs and arms can be applied, being made light and with large wheels, may be propelled at a high rate of speed.

FIRE ESCAPE LADDER.—Carl Gustav Buttkerelt, Toledo, Iowa.—This ladder is composed of U shaped metallic sections, so connected that each side bar of one section embraces or is colled around the side bars of the next, which

thus allows the ladder to be packed in a small space or extended with great facility. The sections are connected so they can slide on one another, and be contracted into a small space, and a long ladder can be preserved in a box close to a window to be thrown out when needed. The rounds of the ladder are the middle parts of the sections, and may be enlarged, if desired, by having plates or steps secured to them. The ends of each section, colled around the upright parts of the next section below, may be extended out laterally, to form braces against and keep the ladder a desired distance from the wall. The ladder, if used as a fire escape, can be suspended by a pin from the inner side of the window. This pin may be readily drawn out, after the ladder has been used, by pulling on a cord which is suspended from it. Then, by an extension rod, the ladder may be held up to another window to assist in the escape of others.

LADDER.—George W. Willis, of Atchison, Kansas.—This invention relates to improvement in the class of ladders which are provided with an extensible foot or leg, whereby they are adapted to stand upon inclined or uneven surfaces. The lower end of one of the side bars of the ladder is sawn off, so as to make it shorter than the other. A rod or bar, which may be made tubular, if desired, to combine lightness with strength has upon it a foot, which may be the piece sawn from the side bar. The rod passes through and works up and down in keepers attached to the side of the shorter side bar. The rod has a knob or handle formed upon or attached to its upper end for convenience in raising or lowering it. Upon the outer side of the rod are formed teeth upon which a pawl takes hold to hold the said rod securely in any position in which it may be moved. The pawl is pivoted to lugs formed upon the keeper, and its engaging end is held against the teeth of the rod by a spring. The rod may be kept from turning upon the side bar by flanges or wings attached to it. By this construction the ladder can be readily adjusted to stand firmly upon an uneven or inclined surface.

GOVERNOR.—John S. Wren, of Fishkill-on-the-Hudson, N. Y.—Balls and links move a collar vertically in the governor shaft in the usual way. The collar carries a sleeve which revolves with the governor shaft. To the upper and lower ends of this sleeve are keyed bevel friction gears which act upon a bevel friction gear on the end of a horizontal shaft which controls the water wheel gate. When the speed is accelerated, the lower friction gear acts to close the gate, and when the speed slackens, the upper one opens the gate. When the speed is at the proper rate, neither gear acts.

MINERS' BOOTS AND SHOES.—George Latham and John Burton, of Jeddo, Pa.—The miner is compelled to work much on his knees, and to lie on his side during the process of working veins of coal. The toe and the sides of his shoes and boots, if not specially protected, soon wear out. Much of the time the miner is compelled to stand in water which holds mineral substances in solution, which are very destructive to leather. Boots and shoes for such hard service, to be durable, must be made different from those for ordinary wear. To accomplish this the inventors re-inforce the toe by a piece of strong leather sewed with the upper securely to the sole. This piece reaches up over the toe two inches, and extends back on each side, with diminished width, not less than one inch, except at termination, and is strongly secured to the upper. A re-inforce counter piece of sole leather at the heel is sewed with the counter to the heel, extending up in the middle of the heel three inches, more or less, and secured to the counter. A metallic plate is riveted to the counter piece and to the upper over the sewing, which not only makes the connection of the two parts strong, but protects the parts from wear when the miner lies on his side, as he frequently does in working veins of coal. The counter extends in a single piece around the heel, and is sewed and protected by the plate on each side. With shoes and boots constructed in this manner, it is claimed, the miner much better prepared for the hard labor which he performs than with boot gear of the ordinary construction.

SPRING BED BOTTOM.—Warret Owen and Stephen Harter, of Pierceton, Ind.—This invention has for its object to furnish an improved spring bed bottom, simple, comfortable, and not liable to get out of order, and so constructed as to be level when supporting the weight of the sleepers, and to tend to rise somewhat in the center when the weight is removed, and thus give the bed an appearance of being full. It is formed by a combination of side bars, wedges, longitudinal slats, cross bars, wires, or equivalent connections and short longitudinal bars with each other, by which the above named advantages are secured.

GIRDER FOR RAILWAYS.—Richard M. Upjohn, of New York city.—This invention relates to a new form of girders and supports for elevated and other railway tracks. Inverted T beams and channel beams are used, and formed of wrought iron, steel, or any other suitable metal. The channel beams may form one or more stories, according to the purpose or use which the girder is to subserv, and are placed on opposite sides of the vertical part of the T beams, so that the lower flanges of the channel beams rest on and are bolted to the base of the T beams, while their upper flanges are bolted to those of the beams resting on them, and so on. The several opposite channel beams are bolted together through the vertical part of the T beam, so that all are firmly bound together. The girder thus formed may be used in all positions, from a vertical to a horizontal, and for any purpose for which girders are employed, the size and weight of parts being varied to suit the conditions of location, etc. The girder is, however, specially adapted to form a support for the track of an elevated railway. In adapting it to this use, the vertical part of the T beam is extended above the channel beams, so as to form a ridge, and an inverted U shaped rail is laid or fitted on the same, and is bolted to the channel beams and the T beam in a suitable manner. The usual provision of slats is made in each length of girder, to permit the bolts to slide, for the expansion and contraction of the beams. Iron plates or tarred felt, sheet lead, or any other suitable material, for the purpose of preventing the transmission of sound from the girder when cars are passing over the track, may be used.

FUNNEL ATTACHMENT FOR LIQUID MEASURES.—Cornelius C. Jadwin, of Honesdale, Pa.—The inventor constructs liquid measures with a funnel instead of the ordinary lip, so that introducing the nozzle into the mouth of a jug, can, or bottle, the latter may be filled conveniently without employing the common funnel, which is usually more or less covered with fluids of previous delivery, and is likely to soil the hands. The improvement will be found specially adapted to measuring vessels for molasses, oils, varnishes, etc.

BOAT DETACHING APPARATUS.—Christian Quaritius, of Canarsie, N. Y.—This invention consists of a detachable connection of the hoisting and lowering pulley block tackle with the boat and stop chains in connection with the detaching bolts for pulling them out when the boat strikes the water, or just before, and a drum with a friction brake in the boat, whereon the bight of the "fall" rope between the pulley tackle is wound for paying off therefrom sufficient rope, under the control of one in the boat, to let it down by the friction brake. It is claimed that this arrangement has the advantage of being entirely under the control of the person in the boat, and the rope pays out alike for both ends, of necessity, so that there is no danger of either end falling before the other. Also, that the complete detachment of the boat is insured. This invention has been patented in several countries in Europe, and is highly commended for safety and simplicity of operation.

BOB SLED.—John Wampach, of Shakopee, Minn.—The tongue and the front beam of the forward bob sled are connected together by a chain, the object of which is to apply the draft directly to the beam instead of through the runners, as heretofore, and to do it in such manner as to allow the runners to vibrate freely as much as required without twisting or cramping the connecting device, as it would be if a rod or any rigidly arranged connection was used. The reach which connects the two bolsters is made in two parts jointed together, so that they may work vertically and horizontally, to allow the bobs to work more freely in running over uneven ground. T bars are used to strengthen the connection of the knee posts with the braces and for further strengthening the knees in the lengthwise direction of the sleds, in which they are exposed to very great strains.

MACHINE FOR CUTTING STAVES.—Adam Cook, of St. Clair Borough, Pa.—This invention consists in the adaptation of an improved cutter to stave machines, by which better means for adjusting the height of the cutter and securing it in place are attained. There has also been made an improvement in the method of holding the plate which carries the guides to the frame so that this plate may be adjusted nearer to the cutter as the guides wear away. This mode of securing the cutter also admits of its more ready removal than the common mode does.

HEATING STOVE.—William H. Landon, of Princeton, Canada.—This invention consists of a combination of an interior fire shell and a damper with that class of stoves comprised mainly of a horizontal elliptical shell with its major axis in a vertical plane, in such manner as is claimed to greatly economize the heat. It also consists of a novel arrangement of ventilating damper. The stove is composed of two end plates of cast iron, of an oval form, the front one having an extension forming a hearth and ash pit, and near the bottom of the hinder one is an opening for a ventilating damper, and also for removing any ashes which may be deposited within the hot air space. On the inner side of these plates, near their edges, a groove is formed in the casing to receive the outer shell, which is made of Russia or other suitable sheet iron. Within the latter there is another parallel groove, extending about three fourths the distance around the stove, to receive the inner shell or fire plate. The space between the shells, which is called the flame flue, is about two inches, more or less. The inner shell or fire plate commences about the center, vertically, of one side, and, curving downward under the fire chamber, upward along the opposite side, terminates at the center of the top, where it is made, by means of a sharp reverse curve, to touch the outer shell, and also to divide the pipe hole into two equal parts. A semicircular damper is placed here, with its crank shaft lying parallel with and touching the top of the fire plate, outside the pipe. This damper, turned in one direction, closes the direct communication between the fire chamber and smoke pipe, and forces the flame into the flame flue and around the shell. When turned in the other direction, such connection is direct, and a strong draft is obtained for kindling the fire or quickening the combustion. The ventilating damper is cast upon a shoe which fits the curve of the shell, on which it rests, and keeps the damper in position.

FERTILIZER.—James Fox and Andrew Fox, of Avoca, N. Y.—An ordinary farm wagon has one of the wheels provided with a belt rim. A long hopper or trough, such as commonly employed on machinery for sowing plaster, is provided with an agitator, a pulley for driving it by a crank, said pulley being worked by a belt, driven by the rim of the wagon wheel, and the crank being connected with said pulley by means of a disk and a shaft. The trough is suspended from the box of the wagon at the under side between the wheels transversely by means of balls, hooked rods and a cross bar, resting on the top, and extending across it and beyond the sides at each end. The hooked rods pass up through holes in the cross bar, and are held by nuts at the top. The trough is provided with pieces on the top, to be held snugly against the bottom, for steadying it; or the said pieces may rise up between or outside of the side boards, close to them, as preferred. In addition to the central vertical rods of the agitator, bent V shaped rods work near the surface of the sides of the hopper to prevent the plaster clogging them; the said ends being connected to the said sides at the upper ends, and operated by suitable mechanism. The trough is provided with a slide at the bottom for regulating the feed, said slide being provided with screws for working it.

WINDOW SASH SUPPORTER.—Ralph L. Young, of Topeka, Kansas.—The window frame has boxes on each side. Spiral springs are securely attached to the frame at the top of the boxes at their upper ends, and to guide blocks at their lower ends. The inner portion of the boxes is slotted, and a portion of each of the blocks projects through the inner portion of the boxes and into the sash grooves. This portion engages with the sashes by entering a recess or cavity therein. The outer portion of the boxes is grooved, and the blocks have shoulders by which they are kept in the slots and grooves as the sashes are worked up and down. This arrangement is very simple and cheaply made. The springs are claimed to be much more durable than cords, and they work noiselessly.

[OFFICIAL.]

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DESIGNS PATENTED.

5,705 and 5,706.—CARPETS.—M. Blatchford, Halifax, England.
5,707 to 5,719.—CARPETS.—A. Cowell, Kidderminster, England.
5,720.—CARPET.—J. C. Johnston, Scarborough, N. Y.
5,721 to 5,723.—CARPETS.—H. S. Kerr, Philadelphia, Pa.
5,724.—OIL CLOTH.—J. Meyer, Lansingburgh, N. Y.
5,725 to 5,727.—OIL CLOTHS.—J. H. Park, Burlington, N. J., Byerly Hart, Philadelphia, Pa.
5,728.—TYPE CASE.—A. H. Bailey, Somerville, Mass.
5,729.—TYPE.—C. E. Beyer, West Roxbury, Mass.
5,730.—CLOCK FRONT.—N. Muller, New York city.
5,731.—BIRD CAGE.—G. R. Osborn, B. A. Drayton, New York city.
5,732 and 5,733.—CHANDELIERS.—F. R. Seldensticker, West Meriden, Conn.

TRADE MARKS REGISTERED.

712.—GRN.—Adams, Blake & Taylor, Boston, Mass.
713.—TICKINGS, ETC.—Amoskeag Manufacturing Co., Manchester, H. H.
714.—PAINTERS' LEAD.—Boston Lead Company, Boston, Mass.
715.—ESSENCE OF GINGER.—F. Brown, Philadelphia, Pa.
716.—COTTON FABRICS, ETC.—Hamilton Woolen Co., Southbridge, Mass.
717 and 718.—HAIR NETS.—A. G. Jennings, New York city.
719.—SHIRTINGS, ETC.—Langdon Manufacturing Co., Manchester, N. H.
720.—TEA.—E. Pavenstedt & Company, New York city.
721.—ROOFING MATERIAL.—New England Felt Roofing Co., Boston, Mass.

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APPLICATIONS FOR EXTENSIONS.

Applications have been duly filed, and are now pending, for the extension of the following Letters Patent. Hearings upon the respective applications are appointed for the days hereinafter mentioned:

20,685.—REPAIRING CAST IRON CYLINDERS.—S. Falkenburg. June 5, 1872.
20,686.—SEWING MACHINE.—A. F. Johnson. June 5, 1872.
20,571.—DOOR LOCK.—J. R. Marston. May 29, 1872.
20,616.—FURNACE.—G. Bantz. June 5, 1872.
20,678.—RESTORING VULCANIZED RUBBER.—F. Baschnagel. June 5, 1872.
20,989.—PLATE FOR SAFES.—I. S. Cady. July 10, 1872.
20,685.—RIVETING MACHINE.—P. B. Tyler, W. Jones, B. Lathrop. June 5, 1872.
20,679.—VAULT COVER.—E. L. Brown. June 5, 1872.
20,622.—CAR SEAT, ETC.—S. C. Case. June 5, 1872.
20,631.—EVAPORATING PAN.—D. M. Cook. June 5, 1872.
16,037.—POWER LOOM.—A. Smith, H. Skinner. May 6, 1872.

EXTENSIONS GRANTED.

19,638.—FLOATING ANCHOR, ETC.—J. Humphries, Washington, D. C.
19,654.—TRIMMING MACHINE.—M. H. Semple, Lowell, Mass.
19,767.—SPRING TESTING MACHINE.—P. G. Gardner, New York city
19,626.—PHOTOLITHOGRAPHY.—A. G. Butman, Boston, Mass.
19,619.—PLANING BLIND SLATS.—C. Carlisle, Woodstock, L. Worcester Brattleborough, Vt.
19,644.—SAWING MACHINE.—H. L. Low, Galena, Ill.
19,770.—DOLL'S HEAD.—L. Greiner, Philadelphia, Pa.