

Recent American and Foreign Patents.

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

GOPHER TRAP.—William W. McKay, of Frankville, Iowa.—This invention consists in constructing a trap that may be inserted lengthwise into the burrow of the animal. In watching the habits of the gopher, it is observed that, in coming to the light or from his burrow, he always pushes earth before him, so that the common trap is sprung before he reaches it, or is prevented from springing by the earth which would be forced under the pan. This elongated trap prevents the first result, and the covering over the pan prevents the last. As the traps are carefully covered in the hole, the jaws are made to close past each other, so that earth will not be caught between them when the trap is sprung.

LAYING SHINGLES.—Sherman G. Castor, of Orwell, N. Y.—This invention relates to an improvement upon a method of laying shingles which was long since proposed, and which consists in securing the shingles by nails having enlarged heads, so that an air space shall be formed between the courses by reason of each course resting on the heads of the nails of the course below, or beneath it. This plan has, however, never been practically adopted, on account of the liability, evidently existing, of splitting or cracking the shingles in laying them, or by subsequent imposition of weight, in the form of snow or otherwise. Another important objection also exists in the want of any means of preventing snow, or even rain water, from penetrating upward between the courses of shingles, and thus finding access to or beneath the sheathing of the roof, and thus effecting more or less damage. To remedy these and other practical objections to said plan, the inventor employs strips of wood between the courses of shingles, and nails the latter thereto.

IMPROVEMENT IN CORN SHELLER TEETH.—Herman R. Rueter, of New Hope, Mo.—This invention relates to a new and useful improvement in teeth for corn shellers, whereby the ordinary corn sheller is, it is claimed, rendered more effective than heretofore. The tooth is made in two parts, one being the tooth proper, or part with which the corn comes in contact. This part is locked to the other, and the formation of the parts is such that a recess is left, within the lock, in which a spiral spring is placed. The tooth proper is made, by this arrangement, elastic, which allows it to give and conform to the size of the ear of corn. The teeth are placed in the machine so as to act together with inclined upper surfaces arranged to act as a screw to draw the cob through while taking off the kernels.

AIR BLOWER.—James W. Newcomb, of New York city.—This invention consists in a double acting blower of two flexible sides and ends, of leather or other like substance, two opposite rigid immovable sides, and a movable dividing plate or board at the center of the flexible part, moving back and forth between the immovable sides, alternately inflating and exhausting the spaces between it and the said immovable sides, the air being driven from both sides into branches leading to an exhaust pipe, which is alternately opened and closed to the respective sides by a valve moved by the shifting currents of air coming from the blower. It is claimed that this apparatus furnishes a very efficient blowing apparatus of great power. When the plate begins to move in one direction to exhaust one side and inflate the other, the valve is tilted over by the first part of the blast coming against it, opening the passage for the air arising from one side and closing the exhaust to the other.

PLow.—Richard J. Miller, of Sherman, Iowa.—This invention consists of a vertically swinging arm at the end of the plow beam, to the swinging end of which the whiffletree is connected, which arm has an eccentric pulley or a segment thereof connected to its axis; and a chain extends from said pulley to another on a hand lever near the rear of the plow in such manner that, by pulling the lever backward, the arm to which the whiffletree is connected will be forced downward, which will cause the plow to run shallower, and, by allowing the lever to swing forward by the action of the draft, the said arm will be raised by the draft and the plow caused to run deeper. A graduated notched plate and a holding pawl are provided, in connection with the lever to hold the latter in the required position.

IRON TELEGRAPH POLE.—Richard D. McDonald, of Jersey City, N. J., and Edward M. Cranford, of Marshalltown, Iowa, assignors to Richard D. McDonald.—The lower section of the pole or the part which enters the ground is provided with a winged supporting socket. The end of this section may be pointed or made sharp in any manner, so that it may be driven into the ground; or the end may be split, with the parts turned out in either direction, where a hole is made to receive the pole. This section is supported upon the socket by shoulders. In "planting" the pole this lower section is either driven into or placed in the ground, with the supporting socket around it, the top of which socket is designed to be at or near the surface of the ground. The second section of the pole connects with the first section by a slip joint limited by shoulders. The third and fourth tubular sections of this pole are of diminishing diameter from the base section up, and each is connected by a slip joint limited by shoulders. In the upper end of each of the lower sections is a recess, and on the lower end is a lug, which fits into the recess. By this arrangement the sections are prevented from turning, and are held in proper position. There may be bands around the ends of each section, which will come in contact at each end of the joint, if desired. These tubular sections are made of gas or steam pipe, and are banded to form the shoulders or enlargements. Rounds pass through holes in the pole for convenience in ascending and descending the pole. Arms for supporting the wires, with insulators thereon, are provided. In the top of the upper section there may be an insulator, with provision for supporting a telegraph wire. The pole being a tube, a conducting wire (one or more) may be carried down through it to the ground, and thus be secured from injury, transverse bars being arranged, with proper glass insulators, to guide the wire within the pole.

DRAWING KNIFE.—Albert M. Steele, of Danbury, Conn., assignor to himself and Frederick A. Hull, of same place.—The object of this invention is to render drawing knives more convenient for packing and carrying, not only for the manufacturer, but also for the mechanic in packing away his tools; and it consists in joints in the handle shanks and a mode of tightening the handles; the latter being arranged to fold over, to protect the blade, and admit of being packed in a small space.

RICE CLEANER.—David L. Geer, of Lake City, Fla., assignor of one third his right to Jesse Carter, of same place.—This invention has for its object to produce a machine whereby rice can be rapidly and thoroughly cleaned, after having been hulled in the ordinary manner. It consists in the employment of a shaft carrying projecting wings or friction blades within a stationary drum or cylinder, the motion of which causes the rice to circulate in the space around them, and by its own weight and pressure a friction is produced that cuts off the germs and membranous coatings or skin, producing what is called rice flour. When the process has been continued until the flour has been removed, the rice presents a flinty, white, smooth appearance. The breaking of the grain, so frequent with the use of the ordinary mortar and pestle, is prevented. The friction will also clear the rice of any hulls or chaff that may have adhered to it after the hulling process. In act, it is claimed that the machine may, if proper time is allowed, be used for hulling as well as cleaning.

PUMP.—Robert T. Smart and Robert T. Smart, Jr., of Troy, N. Y.—This invention consists of a double acting pump with a hollow piston rod, through which the water is discharged, the cylinder being fixed below—or it may be above—the water, in which both of the valves are arranged on the upper side of a plate in a hollow piston, in such a manner that they both close downward self actingly, irrespective of the direction in which the piston moves, and they retain the water above them in such manner that it cannot pass back to either chamber of the pump barrel, thereby avoiding the necessity of a stuffing box to keep the discharge tube full, so that there is no loss while the pump is standing still. In case the pump is to be used horizontally, the relation of the plate and the chamber and passages with the horizontal piston will be so changed that the plate will still be horizontal to hold the valves so as to close by gravity.

CARRIAGE WHEEL.—Charles W. Fillmore, Marengo, Ill.—This invention consists in a peculiar construction of hub and clamp, by which the ability of wheels to give way at the junction of spoke and hub is entirely obviated and prevented.

TELEGRAPHY.—William C. Barney, Washington, D. C.—This invention consists in a discovery by which the ground current of a telegraphic circuit may be utilized and messages repeated at the point from which they were sent without any additional expenditure of fluid or money. It also discloses the unvarying uniformity of the earth as a conductor, and its adaptation to be used under all conditions of the atmosphere.

PLow CARRIAGE.—Mark A. Melvin, Washington Court House, Ohio.—This invention pertains to improvement in the class of gang or wheel plows wherein a lever, rock shaft and connecting rod, are arranged to be operated from the driver's seat to cause the elevation or depression of the front end of the plow beam, for the purpose of governing the depth of furrow.

BELT TIGHTENER.—Louis Funke, of Champion Mills, near Belen, Territory of New Mexico.—This invention consists in a toothed segment for working the moving jaw of a clamp or belt tightener by gearing with a toothed bar, and being revolved by a hand lever or crank, so mounted in the said moving jaw that it can be readily lifted out of gear with the bar, to allow of moving the jaw away from the fixed one, and yet be properly maintained in gear with the said bar when required to force the movable jaw toward the fixed one for clamping anything between them, or drawing the ends of the belts together.

EXTENSION TABLE.—George H. Henkel, of Germantown, Ohio.—This is a new extension drop leaf table, which can be used either with a circular, oval, or extended top, as may be desired. The invention consists in the leaves so constructed that, when arranged at right angles with their position in an extension table, they combine with other leaves to form an oval table.

BLACKING BOX.—Hiram Smith, of Newton Mills, Hadonfield, N. J.—This invention has for its object to furnish an improved box for shoe blacking, so constructed that the blacking can all be removed with the brush, which will put out the bristles of the brush when removing the blacking, and which will keep its place wherever it may be placed while being used, without its being necessary for the operator to keep it in his hand. The body of the box receives the blacking and is made hemispherical in form. With this construction there will be no angles or corners for the blacking to get into, and where it cannot be reached by the brush. With this construction also the sides of the brush cannot come in contact with the edges of the box while removing the blacking, thus preventing the bristles from being cut by said edges. To the edges of the hemispherical body is attached the upper edge of a cylindrical case band or rim. To the lower edge of the rim is attached a bottom which is perforated outwardly, so that the burrs of said perforations may project outward, and thus serve as teeth to prevent the box from slipping around upon its support while being used. This same thing may be accomplished by forming teeth upon the lower edge of the rim. In this case the bottom need not be used. The cover is made and fits upon the top of the box in the ordinary manner.

INKSTAND.—John Charles Sparr, of Irondequoit, assignor to himself and Julius Schneider, of Rochester, N. Y.—When the inkstand, with its rack or without it, is overturned at right angles to its pivots, it will quickly right itself, being balanced to be vertically suspended. When the inkstand, with its rack, is turned in any other direction, the cover will slide down immediately and close the mouth of the bottle. When the latter is again in its normal position, the cover can be readily moved back to bring its circular aperture over the mouth of the bottle. The inkstand is balanced on pivots, and has a neck and is provided with the sliding cover above referred to.

ARTIFICIAL TEETH AND DENTAL PLATES.—Robert E. Burlan, Lewisburg, Pa.—In this case block teeth are first firmly secured to a platinum plate by a peculiar wire attachment, after which a porcelain body is packed over the wire and between the blocks, so that when properly packed there shall be a continuous although sectional block, presenting an artistic and natural appearance. This mode of mounting teeth is applicable in many kinds of work, or to various base plates.

ELECTROMAGNETIC RAILROAD SIGNAL AND SWITCH TENDER.—Hugh S. L. Bryan, Liberty, Mo.—This invention relates to an electromagnetic apparatus whereby the flags and lights of a signal stand or a railroad switch can be operated from a point at any distance therefrom, and whereby the flag, light, or switch in passing out automatically transmits to the operator the signal O K, and in passing in, the signal K O, by which signals the operator is informed that the flag, light, or switch is working properly.

FENCE.—Israel L. Landis, Lancaster, Pa.—The invention consists in a new way of putting up posts and rail or picket fences with wedge clamp metal, so that the panels may be detachable and used on different lines, the mortising of posts dispensed with and the cost of construction greatly reduced.

THRILL COUPLING.—Clement St. James, of Pittsfield, Mass.—This invention has for its object to improve the construction of an improved thrill coupling patented January 18, 1870, so as to make it simpler and less expensive in construction, more convenient in use, and more effective and reliable in operation; and it consists in the construction and combination of various parts of the coupling, as hereinafter more fully described. The combination, in a thrill coupling, of the axle, with clips, and an U shaped bar with one piece yoke plate, made up of two parts, constructed of different lights, so as to receive the said U shaped bar in a recess, formed by said yoke plate and the axle, are the features embraced in the claim.

WATCH CHAIN FASTENER.—William C. Edge, of Newark, N. J.—This invention provides a fastener for watch chains or guards, easy of attachment to and removal from the button hole of a vest or waistcoat and yet not liable to accidental detachment, and forming an ornamental termination or appendage of the watch guard, the means of fastening not being visible exteriorly. An S shaped or double hook, whose outer sections or arms are about half the length of the main inner section, is used. This hook is fastened to a curved bar secured in the under or flanged side of a button, which is ornamented on its top. The loop, for connecting the watch guard to the button, is swiveled to the hook. The hook is applied by first fitting the one end through the button hole or eyelet in the garment, then, by reversing the motion, carrying the central section, and finally the inner end through the same. Secure fastening of the stud, button, or chain, to the garment is thus obtained. This invention does away with the necessity of using the short end of common chains now required in connection with the ordinary bar.

CAP FOR BOOTS AND SHOES.—Benjamin F. Sage, of Beverly, N. J.—This invention relates to a new toe protector or cap to be applied to the worn ends of boots or shoes. The invention consists in the use of a flexible detachable cap or toe piece, which can be prepared as an article of manufacture and supplied to the market to be supplied to the wearers of boots and shoes, who can easily apply the caps themselves. The cap or toe piece is made of leather, rubber, or equivalent fabric, and has backwardly projecting side pieces. The side pieces have eyes or hooks at their ends. The boot or shoe to be supplied with such a cap or toe piece is provided with a screw or eye bolt in the soles on both sides, so that the eye or hook at the end of the cap may be secured thereto; or else the side pieces have hooks that may be forced into the sole, or between sole and upper to hold in the leather stitching. To insure greater strength, the wire or metal, of which such hooks or eyes are formed, may be extended along the under side of the cap.

DEVICE FOR MOVING PIANOS.—Samuel D. Reynolds, Rochelle, Ill.—This is an improved device, the use of which will enable pianos to be conveniently moved. It consists of frames with wheels, which are used as follows: The piano to be moved is turned upon its rear edge upon the benches or horses in the ordinary manner, and the legs and treads are removed. The frames are then passed over the ends of the piano and secured by screws passing through the bars and screwing into the bottom of the piano. Longitudinal bars are then secured to the frames, and the piano can be easily and readily moved wherever desired.

HORSE SHOE.—Silas Sloat, Morgan, Ohio.—This invention has for its object to improve the construction of an improved horse shoe patented October 22, 1867. It consists in the construction and combination of various parts of the shoe, by which the rear parts of the shoe are held against the rear part of the hoof by a lever pressure, so as to hold the shoe firmly to its place. This construction also enables the shoe to be conveniently tightened as may be required. This construction also enables the shoe to be attached to and removed from the hoof, and does not require the front part of the leather band, referred to in the former patent, to be slit or made open.

CHURN.—Thomas J. Wilson, of New Lisbon, Ind.—A rectangular case holds the cream. It has a broad base, adapted to set on a table or bench, in which case is a dasher, consisting of a vertical stem, large horizontal arms, and smaller ones, and arranged perpendicular to each other, and a suitable distance apart vertically. The smaller arms are arranged at short distances from each other on the large ones, and perpendicular to each other, and have angular top and bottom sides, for dividing the cream readily in passing through it. These two sets of parallel arms, crossing each other in this manner, are adapted to agitate the cream in the most thorough manner, and alike throughout all parts of the case. The lower arms are notched at the ends and fitted with vertical guides, on the side of the case, to keep the dasher in proper position, and the stem is guided at the upper end by the cover, through which it passes. The cover is made in two parts, one of which covers about two thirds of the top, and is detachably fastened by a yoke and beam. The other part of the cover simply rests on the top of the case, and is provided with a cover for lifting off readily, to note the progress of the work.

CIGAR MACHINE.—Frederic C. Miller, Cincinnati, Ohio.—This is a new machine for pressing the filling of cigars in molds prepared for their reception, and has for its object to facilitate the rapid manipulation of the molds in order to provide for an economical and perfect production of the cigars. The molds are arranged in a circular track in considerable numbers, and therein moved, by proper novel mechanism, so as to be brought in a line with a table for filling, emptying, and refilling, and then moved around and kept under pressure until again brought in line with the table. The invention consists in the new manner of arranging the molds, and in the new mechanism for moving and detaining the same, which seems well adapted to secure the objects intended.

THRILL COUPLING.—J. Cugnier Racine, of Appleton, Wis., assignor to himself and M. H. Lyon, of same place.—This invention provides means for properly securing the bolts with which the shafts, thrills, or poles of carriages, wagons, buggies, or other vehicles are held in place. Usually the coupling bolts are secured by nuts, pieces of leather, or similar devices. This invention consists in holding the bolt by a pivoted plate, which is drawn against the bolt by a spring, and has projecting lugs or spurs at the sides, whereby it is prevented from swinging out of place.

REED ORGAN.—George Woods, Cambridgeport, Mass.—This invention consists of an arrangement of an additional wind chest reed and sounding box, such as is described in a patent issued to the same inventor, September 13, 1870, relatively to the common wind chest, whereby the apparatus for working the valves of the said attachment is simplified and improved. The invention also consists of a combination, of a sheet or web of India rubber coated cloth or other equivalent substance, with the sounding board of the additional wind chest for varying and improving the tones.

LOW WATER ALARM FOR STEAM BOILER.—Linus Savage, Ashtabula, Ohio.—A lever is pivoted to some suitable support near its upper end, and, at its upper end, is connected with the feed pipe, or with a bar or plate, in contact with said feed pipe, by a connecting rod, which should be made adjustable to enable the alarm to be set as may be desired. To the side of the lower end of the lever is pivoted a small friction roller, upon which rests an arm or bar, pivoted at its lower end to some suitable support, and to which, near its upper end, is attached a hammer. The upper end of the arm rests upon a stop attached to or formed upon the side of the lever. A bell is suspended from some suitable support in such a position as to be struck by the hammer as it falls when the arm escapes from the stop. With this construction, while a supply of water is passing through the pipe, the pipe will be cold; but should the supply of water from any cause cease, the pipe will become heated and expand, and will heat and expand the bar or plate connected with the said pipe. This expansion, by means of the connecting rod, will operate the lever, and cause the hammer arm to slip from the stop, sounding the alarm. When the supply of water is again started, the water will cool the pipe, which will contract, and, by its contraction, draw the arm back to its place upon the stop, ready to again sound the alarm. In substantially the same way the expansion of the supply pipe, upon the failure of the supply of water, may be used for blowing a whistle, causing an explosion, or giving other alarms.

SAFETY WATCH POCKET.—Hermann Fritsche, Newark, N. J.—The object of this invention is to produce a safety watch pocket, which will be entirely reliable and prevent the fraudulent abstraction of the watch. The invention will first be fully described, and then clearly pointed out in the claim. A pocket is made of leather, or other fabric, of suitable size and shape. It is closed on all sides except on top, where it has a swinging flap, which can be opened and closed. The edge of the flap is lined with wire, which forms a projecting loop in the middle. This loop, catching over a pin that projects through the wire lining of the pocket proper, serves to hold the flap closed. The pin projects directly from the end of a spring which is fastened to the under side of the wire. A knob also projects through the lining, rests with its lower end on the spring, and will, when pressed upon, carry the pin down out of the loop and open the flap. When it is desired to guard against even this mode of opening the pocket, a slide can be moved by a projecting knob and fitted with its end into a notch of the knob. The latter can then no longer be depressed, and the pocket consequently not opened until the slide has been withdrawn from the knob. The pocket is provided with two wings, formed of V shaped wires, inclosed in the leather or fabric. The wires have prongs at their outer parts, which, as they are held out by the spring of the wires, will enter the fabric of the vest pocket into which the pocket has been put. The inner ends of the wires bear against the watch. While the watch is in the safety pocket, this pocket cannot be removed from the vest pocket, since the wires cannot be contracted to clear the prongs from the vest.

CONSTRUCTING BUILDINGS.—Andrew Derom, Paterson, N. J.—The object of this invention is to protect buildings that are in process of construction, or of thorough repair, and also the laborers, engaged at the work, from the inclemency of the weather. The invention consists in the use of a vertically adjustable cap or cover, which is placed over the walls to be erected, and gradually elevated as the walls go up, meanwhile keeping them, the flooring, material, and laborers always under roof. The advantages of this method of constructing buildings are manifold. Not only are the men kept in healthy condition, but also material is economized, and the application of artificial heat is made possible, whereby frost can be kept out and building in midwinter continued. The invention is equally applicable to the erection of new buildings as to the repair of such as are burned partly down.

GATE.—Garret S. Spragg and Gilbert Mott, Tabor, Iowa.—This invention consists of the combination of a rocking frame with a counterpoise and the gate, in that class of gates which are arranged to have the free end swing vertically and be held so by a counterpoise to swing clear of ice and snow in the winter, the said rocking frame being pivoted on the top of the gate post, and operated in such manner as not to be obstructed by freezing in the winter, and so as not to acquire readjustment if the post leans, as the cord and weight heretofore used to do. The weight is suspended so far from the post that they will not interfere with each other in case the post is pulled out of the vertical line by the gate, as they do when the weight is suspended from the pulley close by the side of the post. This apparatus works much easier than the cord and pulley, and does not draw the post with as much force as they do.

COMBINED POCKET KNIFE AND ENVELOPE OPENER.—Aaron S. Pennington, Paterson, N. J.—This invention consists in forming a notch in the division plate, between the several blades or springs of a pocket knife, so as to convert such division plate into an envelope opener. The edge of this plate has a notch formed in it, which produces a point and cutting edge that can be used as an envelope opener, the notch being placed either between the blades or at the back of the knife, between the springs. In either case, it is claimed, the combined knife and envelope opener will constitute a convenient and desirable article of manufacture.

BELT TIGHTENER.—Josiah W. Batcheller, Oregon, Mo.—This invention consists of a tightening pulley mounted in the end of a bar, which is fitted in a place for holding it so that it can be adjusted forward and backward, and the plate is arranged to be fastened to any suitable support to hold the tightening pulley in front of the belt. The invention is more particularly adapted for sewing machines. The ends of the plate are adapted to be fastened to the under side of the sewing machine table or other support by screws or any equivalent.