ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. John P. Ketteringham, of Natchez, Miss. It has pivotal parallel coupling bars, with enlarged circular pivoted ends, and the link is made with a square body having central projections, with arrow headed ends, while there are other novel features, the whole designed to make a simple, strong, and effective coupler, which can be operated conveniently from the top, end, or side of a car.

A revolution or stroke counter has been patented by Mr. William Voit, of Magdeburg, Prussia, Germany. It is operated by the changes of pressure in the cylinder of the driving engine, the lever connections heretofore in use being dispensed with, and the connections between the counter and the cylinder being made by small pipes or tubes, and the whole apparatus being one that can be placed in a small box entirely closed, so that its operation cannot be interfered with by a stranger.

A metallic railroad tie forms the subject of two patents issued to Mr. Ellery C. Davis, of Crookston, Minn. The tie consists of two parallel bars with a channel between them, blocks fitting into the channel and having hook projections to fit upon the base flanges of the rails, bolts securing the blocks to the bars, so that the rails can be readily secured to the ties and will be held securely in place; provision is further made for recessed spacing blocks, and spikes and wedges adapted to the recesses, whereby the rails can be readily leveled when thrown out of level by the frost.

MECHANICAL INVENTION.

A take up and let off mechanism for looms has been patented by Mr. Matthew C. Williams, of Adams, Mass. The construction is such that with every beat of the lay the let off roller is revolved with a positive movement a fixed distance, to let off a given length of warp, and at the opposite end of the loom, by corresponding mechanism, the take up roller, with a positive movement, revolves the cloth roller to take up the slack of the cloth continuously.

AGRICULTURAL INVENTION.

A cotton chopper has been patented by Mr. John R. Rector, of Salado, Tex. It is a chopping hoe so made as to be readily applied to any ordinary cultivator, and not be liable to catch upon stumps or other obstructions, and not likely to bruise or otherwise injure the plants left for a stand.

MISCELLANEOUS INVENTIONS.

An ice creeper has been patented by Mr. Michael S. Weller, of Charlestown, W. Va. It has a pin supporting plate, adapted to be movably supported in the heel, whereby its pins may be projected out of or incased within the heel, with various novel features of construction and combination of parts.

A machine for making wire bale ties has been patented by Mr. William A. Laidlaw, of Cherokee, Kansas. This invention covers a compact and simply constructed machine, which is easily operated, and by which wire bale ties can be made with less labor and more rapidly than heretofore.

A car starter has been patented by Mr. Robert T. P. Allen, of Farmdale, Ky. It is a novel construction, providing mechanism for storing up the force represented by the momentum of the car when it is stopped, in such a way that, on starting, this force is exercised with a great leverage to start the car.

A coat has been patented by Mr. John G. Weimer, of New York city. It is closed in front and open at the rear, and has hand protectors and pockets covered by a shield, and is intended especially for the use of street car drivers and others who are exposed mainly from the front.

An annunciator has been patented by Mr. Charles H. Dowden, of Newark, N. J. It is so constructed that the signals disappear automatically after they have been exposed to view, and require no special manipulation by the operator to remove them, while the adjustment may be such that the signals will remain visible until they are shifted at the instrument.

A breeding calendar has been patented by Mr. John W. Snider, of Fairland, Ind. It has certain novel constructions and combinations of parts, whereby the calendar may not only be used as a changeable or perpetual one for ordinary purposes, but as a special one for breeding uses, and also in the hatching of the eggs of poultry or birds of different kinds.

A pants hanger has been patented by Mr. Andrew Flieger, of Portland, Oregon. It consists of a yoke provided with a central hook, and with two pairs of auxiliary hooks, whereby a number of pairs of pants may be hung upon a peg or hook not more than six inches in length, and no matter how long they are so suspended, they will not wrinkle or break.

A wrench has been patented by Mr. James G. Leslie, of Oregon, Ill. It has a fixed and a movable jaw, a locking lever, and various other novel features, being a simple and inexpensive construction, but adapted to gripe and turn square or round objects of various sizes, such as nuts and pipes, or shafts, and adapted also for use as a vise.

A separable button has been patented by Mr. Albert H. Graves, of Central City, Neb. It has a front plate with apertured or slotted rim, a slotted bottom plate, spring pressed bolts with thumb pieces, with other novel features, making a button which may be readily taken apart, and which, when put together, will be prevented from accidental separation.

An incubator has been patented by Mr. Clarence L. Wells, of Quincy, Ill. It has a lower heating section, an intermediate brooder section, and an upper tray section, there being a novel construction of air drum with upwardly extended flue and tubes, with appliances for regulating the heat and keeping the temperature as desired.

A mirror frame has been patented by Messrs. George Jones and Herman W. Trognitz, of Williamsport, Pa. It has a curved bar pivotally connected to the top and extending through a spring clutch adapted to hold it at any desired inclination, also a loose pivotal support at the bottom which will permit the mirror to be inclined and turned upon its axis.

A puzzle has been patented by Mr. Alexander W. Butterworth, of Poughkeepsie, N. Y. It consists of a square block, marked off into small squares, six each way, a hole or socket in the center of each small square to receive a peg, the puzzle being to so place six pegs that no two will be in the same or any line of squares or sockets.

A fifth wheel has been patented by Mr. Henry Hafker, of New York city. Combined with the upper and lower ring plates, with grooves in their adjacent faces, and opposite toothed ribs or racks, are two disks running in the grooves and connected by toothed shanks which engage the racks, being intended to give effective support to the body of the vehicle and allow it to be turned to either side with little friction.

A telegraph key has been patented by Mr. John M. Biggs, of Louisville, Ky. It has short and long arms, the former having a finger piece and the latter a contact point, combined with a switch and conductor for conveying the current from the switch to the stationary contact point of the key, the object being that a slight movement of the fingers shall produce a greater movement in the contact point of the key.

A device for closing openings in the hulls of vessels has been patented by Mr. John Speirs, of Jersey City, N. J. It consists of a special arrangement for clamping a plate or covering over the opening, having such form of brace bar and hook and angle bars that any suitable plate may be clamped over an aperture and the bar can be applied with dispatch and easily reversed when necessary.

A centerboard for vessels has been patented by Mr. David McFall, of New York city. This invention covers a novel construction and combination of parts in a centerboard rig, which allows the centerboard to be quickly set and removed, as sailing conditions and emergencies may require, and also allows the operation of the centerboard by a helmsman at the stern of the vessel.

A convertible street car has been patented by Messrs. Philip J. Smith, of Long Island City, and John F. McEvoy, of Brooklyn, N. Y. By a special construction, arrangement, and combination of parts, the sides may be raised to a position at the top of the car and lowered therefrom to close the sides of the body of the car, so that it can be easily converted into an open or closed car, as the season and weather require.

A combined note book holder and line indicator has been patented by Mr. Albert H. Merrill, of Sanford, Fla. It is for use by type writers and others, and consists in a board supported upon a standard or by attachment to the type writing machine, provided with a clamping device, combined with a line indicator and pawl and ratchet mechanism, for moving the line indicator down the page of the note book.

A gauge attachment for printing presses has been patented by Mr. Frederick F. Byington, of Oakland, Cal. It is for attachment to the platens of job printing presses, to fix the position of the cards or blank sheets, to cause them to properly register in receiving the impression from the type, and consists of curved spring bars, made tapering, combined with a special form of holder.

A lubricating compound has been patented by Mr. David L. McKenzie, of Winnipeg, Manitoba, Canada. It consists of animal fat, mineral oil refuse, slaked lime, and manganese, compounded and prepared in a specified way, to make a lubricator for car axle boxes and all sliding bearings, preserving for a long time its properties without decomposition or deterioration.

A door sill has been patented by Mr. Ezra H. Foster, of Fairmount, Minn. It is preferably formed of metal, its under surface being cored out by ribs to reduce weight, and it has a square shoulder to keep out water, with other novel features, being designed, in connection with a weather strip, to afford a tight joint, while being durable and presenting a neat appearance.

A game has been patented by Claes E. Tranchell, of Willmar, Minn. A circular flat disk has a handle at one side, and a recess in which a marble will rest, the disk having holes or apertures in a circle on its face, and one in the center, the game then being to hold the disk so steadily and truly that the marble may be made to roll by all the holes and around the one in the center back to the place of starting.

A windmill has been patented by Mr. Samuel S. Simpson, of Clay Center, Kan. It has floats that are rigidly connected to arms that are pivotally connected to supports carried by a hub fixed upon the crank shaft, the parts being so arranged that the arms carrying the floats may be expanded to throw the floats into the wind, or backward to cause them to present their edges to the wind.

A furniture pad has been patented by Mr. William H. Hertz, of Hazelton, Pa. It has a soft rubber top or outer portion, and a hard rubber base apertured to receive a fastening, and a driver for driving the screw or fastening into the article to which the pad is to be attached, the object being to make a pad to attach to the backs of chairs, sofas, etc., to prevent injury to walls.

A shutter worker has been patented by Mr. Thomas N. Lupton, of Winchester, Va. It consists of a curved parallel motioned bar, combined with and jointed to a swinging link, a crank arm of the same length as the link, and a handle for working the bar, with other novel features, to facilitate working the shutters of a window from the inside without hoisting the sash.

A skylight cover has been patented by Mr. James W. Shaw, of Baltimore, Md. Combined with the skylight are rails at the opposite sides and a cover inclosing the sides, ends, and top of the skylight framing, with rollers embracing the rails, the object being to provide a construction which shall protect the skylight from damage in case of fire, and from storms, etc., while being simple and inexpensive.

A valve has been patented by Mr. Owen L. Whiteman, of Haydenville, Mass. This invention relates to certain improvements in "straightway" or "gate" valves, and consists in the manner in which the gates are suspended on the carrier, whereby a rotating or rocking adjustment is obtained, each gate having a motion opposite to the other, in the same direction, the one a horizontal and the other a perpendicular rocking motion.

A gate has been patented by Mr. Geo. W. Walters, of Deer Lodge, Montana Ter. This invention relates to gates of that class which are lifted and slid across the roadway, and are operated by hinged lifting bars, which in turn are operated by pulling on cords attached to overhead levers to which the gate lifting bars are connected, and provides therefor a simple and substantial construction, in a gate that can be operated by a person in a vehicle or on horseback.

An axle and box for wheels has been patented by Mr. Louis Steinberger, of New York city. The inner surface of the box consists of two straight bearing surfaces of different diameters, and the bearing surfaces of the axle are made to correspond to the axle box, being smaller at the outer and larger at the inner end, by which a space is allowed for lubricating material, and the axle is strengthened at the inner end where it receives the most strain.

An electric temperature alarm and thermostat has been patented by Mr. William H. Stiegelmaier, of Geneva, N. Y. Combined with the mercury tube and case of a balance thermometer, an electric contact is carried by the tube, and adjustable contact points arranged in the back of the thermometer case, in position to be touched by the contact carried by the tube, to make and break the electric circuit by the rise and fall of temperature.

A combined lock and latch has been patented by Messrs. Simeon J. and John W. Hicks, of Chicago, Ill. The operating mechanism is inclosed partly within a cylindrical case and partly within the knobs arranged in connection with the latch, there being certain novel features involved, the outer knob being disconnected from the latch in a peculiar and novel manner, and the lock being arranged to be operated from either side of the door.

A bobbin winder for sewing machines has been patented by Mr. Henry Lefeber, of Philadelphia, Pa. It is designed for winding the bobbins of sewing machines while at work, without further attention from the operator than placing the bobbins in the winder and pushing a frame toward the drive wheel, the winding being stopped automatically when the bobbins are filled, and the winder being one which may be employed with bobbins for silk weaving or knitting, or winding coils of magnets, etc.

A photo-chronograph has been patented by Mr. John J. Higgins, of New York city. It has a graduated dial, in front of which revolves an arm carrying a light-reflecting surface, combined with a motor and slow calibrating wheel whose period of rotation bears a fixed relation to that of the arm, an audible signal being operated by the wheel, the device being to determine the period of exposure of any drop shutter, or make a permanent record from which the duration of the exposure may be determined.

A wire fencing picket has been patented by Mr. Joshua Horrocks, of Brooklyn, N. Y. The invention covers a novel construction of twisted wire pickets suitable for forming border railings for lawn and garden walks, but also available for other uses, the pickets being made in U-shape, and having eyes in the side parts of their bends, the eye of each picket being made of sufficient size to receive an arm of the adjacent picket, and being formed by spreading the strands of the wires at the desired point.

A self-locking wire picket forms the subject of an additional patent granted to the foregoing inventor, which covers an improvement on the above construction in that where the eye is made to receive a leg of the adjacent picket, by spreading the strands of the wires, a pin or other form may be inserted between the strands when they are being twisted together.

A fencing machine has been patented by Mr. George L. Sutton, of Platteville, Iowa. It is to make wire and slat or paling fences, and is so constructed that a crank shaft may be placed in position, and wires hooked into clutches thereon, when, by turning the shaft, the pairs of wires are spread to permit of the palings being woven into the proper position, the apparatus being simple and strong in construction, and such as can be operated by one man.

NEW BOOKS AND PUBLICATIONS.

ESOTERIC CHRISTIANITY AND MENTAL THERAPEUTICS. By W. F. Evans. H. H. Carter & Karrick, publishers, 3 Beacon Street, Boston, Mass.

As the author puts it, this work is intended to open to the student the realms of Christian theosophy. Mr. Evans believes that disease is due rather to a mental than a physical condition; in fact he says that "there is nothing in the body that has not had a prior existence in the mind or soul." He takes advantage of what we all believe in to a greater or less extent—the mysterious influence of mind on body—and tries to develop this into a system by means of which all our bodily conditions can be altered to correspond with some acquired state of the mind. So illness is simply a state in which we believe our bodies to be in an abnormal condition, and by a due exercise of will the mind may be brought into a state of healthfulness, which the body will soon fall in correspondence with. We believe we are well, and with a magic touch we are cured. The author makes frequent appeals in support of his theory to Scripture, Buddha, Plato, Swedenborg, and others.

Special.

A SOLDIER'S STATEMENT.

FLEMINGTON, N. J., Oct. 31, 1885.

DRS. STARKEY & PALEN. Dear Sirs:

I am sorry you felt it needful to ask "permission" to do a thing so obviously right, and a thing that I am myself doing at every favorable opportunity, viz., state for the benefit of other sufferers what Compound Oxygen has done for me.

You certainly and most cheerfully have my unqualified permission to use any information concerning my case that you have, or that I can give you, though I suppose you have about all there is.

What it did for me is so remarkable that it is with diffidence I tell the whole truth, except where I am well known.

You remember the cause of my trouble is that during the war, at the battle of Fredericksburg, a Minie ball went crashing through my spine lengthwise, passing, the surgeons said, as close to the spinal cord as it could and not sever it. Inflammation was only prevented by constant applications of ice, at Washington, for a month afterward. By spells since, and sometimes for about a year together, the suffering amounted to extreme agony, so great that insanity it seems must have been the result had I not been quieted with morphine, before I got the Compound Oxygen. The last "pull" I had (and I had them at intervals of about two years) ended with the use of Compound Oxygen, in the summer of 1882.

The day the Compound Oxygen came I was not able to sit up to have my bed made, so sat up in bed to inhale, and thought as I did so, "Sold again, this will amount to nothing."

However, determined to follow directions, I inhaled again in the evening, and instead of six doses of morphine that evening, as on the last evening before, I only took one small dose, and slept more than usual, and better. The next night took no morphine and slept good eight hours, and in less than two weeks walked (on crutches) a quarter of a mile at a time.

Like most of all who get up feeling "so good," but whose judgment is as feeble as the body, I would overdo and get down, but I would get up almost as soon. These downs and ups covered a space of perhaps three months, since which time I have not been confined to the bed nor house for a day; but, of course, an injury so great is a permanent one; of such nature is the injury, that at times (more likely after a spell of writing) any person standing close to me, when I turn my head slowly, can hear a grating sound similar to that produced by rubbing a knife on a whetstone. Of course such a mangling and tearing of the nerves centering (do they not?) along the spine, leaves me in a constantly enfeebled condition; but when the brain feels strained, and the nerves sensitive, a few days' use of the Compound Oxygen brings back (has every time so far) an increase of vitality, and all the health that can be put into a body that has been so harshly handled, and much more than you doctors encouraged me to hope for when I asked your advice concerning it. I regard Compound Oxygen as nature's strong right hand for repairing bodily waste and damage. Yours truly, REV. J. C. SUNDERLIN.

FLEMINGTON, N. J., Sept. 20, 1886.

DEAR SIRS: I remain comparatively comfortable. The "house I live in" is shattered and torn, and as it is impossible to tear the whole house down, I have to do the next best thing, viz., to "strengthen that which remains" as well as I can and my resort has constantly been, since the first remarkable experience with it, to Compound Oxygen.

In the use of this auxiliary of nature there is no remarkable shock of any kind given to the system.

I am now satisfied more than ever that the ABSENCE of such shock or thrill to the system is just precisely what should be.

Nature, in all her normal and healthful operations, works silently and quietly, and if measured by the moment, or perhaps even by the day or week, would be found almost imperceptible in her progress.

If we had not been sustained all our lives by breathing the atmosphere which surrounds us; who would believe in the seeming nonsense of breathing? It seems a mere nothing that we inhale and exhale fifteen or twenty times a minute, and yet we are dependent upon it for life. We could not endure its privation for five minutes, and yet that atmosphere can be so contaminated, and without arresting the attention of one of the senses, that it would not support life for twelve hours.

Such are the subtile influences which should be thought of, by those who have an idea that this remedy (Compound Oxygen) is not efficient simply because it is tasteless.

How foolish (?) to swallow down the tasteless draughts of limpid spring water, but how long could life be sustained without that tasteless beverage?

The glorious light of heaven comes to us in a quiet way, yet who can compute the actual uplifting power of the sunlight for one day in our hemisphere? The tons and tons of water and other material, in the form of grains, grasses, and fruits, actually lifted up from the earth by the quiet influence of the sun? Just such are the silent influences, though mighty forces, which are daily busy building up our physical structure, the mysterious temple which is so beautifully adapted for our dwelling place here a little while.

In connection with such thoughts I can easily apprehend, though I may not fully comprehend, any more than I can how the light accomplishes all its wonders, how this beautiful but potent vitalizer of the human body should so efficiently do its work.

It might be interesting to me to know (though not more useful) how the Compound Oxygen brings me a quiet, restful feeling that induces sleep, and puts nature in a condition where all her forces can be employed repairing damages; but though I may not know how the sunlight silently lifts, and colors, and improves all nature; may not know how the silent forces of attraction hold all things in their places; may not understand all the laws controlling the subtile operations of vitalization, and so not know how this sweet vitalizer and restorer of nature (Compound Oxygen) does its work; it is sufficient for me to know it does.

There must be the same patient, restful waiting for this that there must be for the natural growth of anything else, and then there will be the same rejoicing in the blessed realization of healthful happiness.

I am still as well as could be expected, taking the Compound Oxygen when the wheels of life show signs of friction, and need to run easier. But when, after an interval without it, I begin to take it, I generally sleep a little better the first or second night, and it is not like sleep induced by narcotics. Without it I have reason to believe I should not now be alive. Yours truly,

J. C. SUNDERLIN.

To learn "what Compound Oxygen is—its mode of action and results" send your address to DRS. STARKEY & PALEN, 1529 Arch Street, Philadelphia, Pa., and you will receive free, by mail, a work of two hundred pages, giving an interesting statement in regard to this simple remedy, with a large number of cases of cures by its use.

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