

ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. George C. Thompson, of Darien, Ga. The under side of the mouth of the drawhead is curved and extended forward in a straight line with a mortise and slot, and the car coupling hook is pivotally supported, cords running in guides allowing of the coupling hook being elevated and the link released by a person on either side or the top of the car.

A suspension railway and car hanger has been patented by Mr. John A. Enos, of Peabody, Mass. It is designed to sustain a street passenger car from a point above its center of gravity, and yet allow the car to be close enough to the ground for passengers to get on or off, and consists of a novel construction of hanger track, with means for making the travel smooth and enable the car easily to climb grades. The same inventor has likewise patented a railway car adapted for this service, and a truck for elevated cars, both so constructed as to withstand the peculiar strains of this method of supporting the car.

AGRICULTURAL INVENTIONS.

A grain binder has been patented by Mr. David N. Green, of Commercial Point, O. This invention covers a novel construction and arrangement of parts for an improved grain binder especially designed for use with the Appleby grain binding harvesters, but also applicable to other harvesters.

A potato digger has been patented by Mr. Henry H. Lovejoy, of Cambridge, N. Y. Its construction is such that as the machine is drawn forward plows throw the weeds and soil into the furrows, and a digging hoe passes beneath the potatoes, fingers separating the potatoes from the soil and depositing the potatoes on the top of the soil ready to be gathered.

A cultivator and harrow has been patented by Mr. Dalton Walls, of Appleton City, Wis. This invention covers a novel construction and combination of parts so the machine can be readily guided and controlled by a plowman riding thereon or walking in the rear, and can be readily adjusted for use as either cultivator or harrow.

A revolving sulky hay rake has been patented by Mr. Samuel D. Collins, of Galion, O. A standard is pivoted to the rake head carrying catch springs for holding the latter in working position, and a bar with a forked rear end for tripping the rake head, the bar being connected at its forward end to a lever pivoted to the frame.

A potato digger has been patented by Mr. Sylvester W. Kelchner, of Fowlersville, Pa. As the machine is drawn forward, hooked prongs are made to scoop out the potatoes of a hill, discharging them upon grates where they are separated from the soil and passed to elevators, scrapers preceding the prongs, and scraping off the tops of hills, stalks, lumps, and rubbish.

A combined seed planter and fertilizer distributor has been patented by Messrs. Charles F. Zeigler and John D. Autley, of St. Matthew's, S. C. The hopper has a gauge slide with central extension on one end, a transverse lever pivoted about centrally to the extension, and pivoted at one end to a hinged support and at the other end to a rod connecting with a hand lever, in such manner that the discharge can be readily controlled or stopped.

MISCELLANEOUS INVENTIONS.

A wheelbarrow has been patented by Mr. Daniel J. Huckins, of Brooklyn, N. Y. This invention covers a clamp axle bearing for attaching the bodies of metallic wheelbarrows to their tubular iron handles, the bearing consisting of two parts and having bosses with a cylindrical bore to receive the axle journal.

A micrometer gauge for watchmakers has been patented by Mr. Elijah Clark, of Louisville, Ky. This device is calculated to show various measurements in an amplified degree upon a graduated disk, giving exact diameters of pinions, sizes of wires and wheels, and widths of mainsprings, with their tensions.

A cuff holder has been patented by Mr. Emil Smith, of Brooklyn, N. Y. It consists of two spring-operated plates pivoted together to form grasping jaws at one end, one of the plates having a headed stem on its outer face at its grasping end, to hold the cuff on the sleeve button on the wristband.

A book rest and holder has been patented by Mr. Henry F. Hendrix, of St. Louis, Mo. It is made of a piece of wire bent to form a crosspiece and two legs at the rear and two legs at the front, the front parts of the front legs being shaped to hold the leaves of the book.

A piston packing has been patented by Mr. Benjamin C. Waite, of Brooklyn, N. Y. It consists of a split packing ring adapted to be expanded by a spiral spring, a bolt passing through lugs near the ends of the packing ring, arranged so that the diameter of the ring can be reduced thereby as desired.

A box handle for canes or umbrellas has been patented by Mr. Louis Steinberger, of New York city. This invention provides various methods, by means of a screw cap or hinge or other construction, whereby handles may be made convenient receptacles for small articles, such as matches, car tickets, pins, etc.

A baling press has been patented by Mr. Wilson Gardner, of Washington Court House, O. Combined with a box having slots, racks on opposite sides, and a rack below in vertical alignment with the slots, is a follower with hooked arms, pawls, and a lever, the whole making a convenient hand press for baling hay and straw.

A sash fastener has been patented by Mr. Franklin T. Davis, of Mount Vernon, N. Y. It has an upward projecting horn and lip on a bed plate attached to the lower sash, and a locking stud attached to the upper sash, in combination with a link or hasp and locking dog pivoted therein, the device acting automatically to lock the sash.

The manufacture of beta-naphthol sulphonic acid has been patented by Mr. Meinhard Hoff-

man, of Mainkur, near Frankfort-on-the-Main, Germany. This is a new color-producing acid, and the invention consists essentially in the preparation and utilization, by a novel method, of a new disulphonic acid of betanaphthol.

A pastry board has been patented by Mr. William T. Black, of Graham, Mo. This invention covers a box with a hinged cover, having on its upper surface cleats or ledges of the same height as the box, united by a handle piece extending lengthwise over the cover, making a combined dough board, mixer, and bread tray.

A clothes washer has been patented by Mr. George W. Crosby, of Good Hope, Ark. This invention covers an improved contrivance of roller beds in a tub, with a roller for working the clothes placed on the beds, making a machine that will also effectually squeeze the water out of the clothes after the clothes are drawn from the tub.

A check hook for harness has been patented by Mr. Franklin T. Davis, of Mount Vernon, N. Y. It is hinged or jointed, and combined with a spring that closes the hook for retaining the check rein, but permits the hook to yield when the horse bears on the check rein or bit, without danger of the horse becoming accidentally uncheckered.

A folding soap dish has been patented by Elizabeth Hull, of New York city. It is made to be hinged to plates attached to a bucket or other object, flanges supporting the dish in a horizontal position, while it is formed with a lip having a spring action for clamping the upper edge of the bucket, to hold the dish in a folded or vertical position.

A fire escape has been patented by Mr. Horace F. Neumeyer, of Macungie, Pa. It consists of an endless folding ladder in a casing with a drop door, there being electrically operated devices for releasing the ladder and at the same time giving the alarm on all floors of a building, with clockwork to regulate the movement of the ladder.

An opera chair has been patented by Mr. John M. Sauder, of Harrisburg, Pa. This invention covers a novel construction and mechanism of a chair, to adapt it to be readily folded and extended, so that the joints will work without bending when the seats are arranged in a curved line and the standards are not at right angles with the seat and back.

A school seat and school desk are likewise the subject of two patents issued to the above named inventor. The seat is so made that the seat arms are connected with the end frames, and there are various other novel features, whereby the seats can be readily folded and extended, and will be noiseless when in use. For a desk the end of the seat standard is made with a rounded recess, a curved slot and groove, a spring receiving recess, and the end of the seat arm is made with a rounded projection, making a firm and strong joint.

A baling press has been patented by Messrs. Frank S. Clark and Joseph A. Bachman, of Austin, Texas. It is especially adapted for baling cotton, and its construction is such that the vertical strain is all taken up by screw spindles, and is entirely a tensile strain, that part of the screw under strain decreasing as the operation of pressing proceeds, with various other novel features.

A movable dressing closet for sleeping cars has been patented by Mr. Adoniram J. Chandler, of Cincinnati, Ohio. It consists of a supporting frame carrying curtains, the frame being so arranged that it may readily be attached to or disconnected from the curtain rail of the car, so that the occupants may stand upright in the aisle and dress without being in sight of the other passengers.

A tire shrinker has been patented by Mr. William Lehmer, of Logansport, Ind. Combined with a base is a toothed band, and a sliding block in the base with which one end of the band is connected, there being a pawl or dog for drawing the toothed band taut around the tire, the device being readily adjustable for shrinking tires of different diameters.

A combined hammer and nail feeding device has been patented by Mr. Emmet Horton, of Dundee, N. Y. It combines a receptacle for carrying the nails, with a hammer head, an incline or duct for feeding the nails therefrom automatically by the swinging of the hammer, and a device for clamping or holding each separately delivered nail before setting and driving it.

A wagon jack has been patented by Mr. Daniel S. Wanamaker, of Ramsey's, N. J. The head block is raised and lowered by operating a lever cam, which is so formed that when the head block is fully raised the cam cannot be turned back by downward pressure, the head block also having four rests for the axle, to adapt the jack to be used with wagons having their axles at different heights from the ground.

An ore concentrating jigger has been patented by Mr. John S. Loder, of Leadville, Col. The construction is such that the ore is fed on a screen at the left hand end of the machine, and passes out at the right hand end, valves admitting water at suitable intervals to wash out the fine ore and sand that have passed through the screen, so the jigger can be fed and the ore removed without stopping.

An ant trap has been patented by Mr. William H. Thompson, of Luling, Texas. It consists of a trough embedded in the ground, so that its top is on a level therewith, and is made of tin or other metal bent inward around the top to form a flange, a tube projecting from one end of the trough into a box with a glass cover, into which the ants drop so they cannot escape, and are ordinarily killed by the heat of the sun.

A lock case has been patented by Mr. Henry B. Plumb, of Terryville, Conn. This invention relates to furniture locks adapted for insertion in an undercut mortise and for holding themselves in place without the use of screws or nails, and provides improvements therein to better adapt such cases to variations in the mortises, which may be constructed of the cheapest quality of iron that is rolled into bands or sheets.

An apparatus for making illuminating gas has been patented by Mr. Frederic Egner, of St. Louis, Mo. In combination with a generator are retorts, exhausters, hydraulic seal, and regulating valves, etc., for making a complete apparatus of any desired size, the invention being an improvement on former patented inventions of the same inventor, intended to make 1,000 feet of good permanent gas from about 11 1/2 pounds Pittsburgh slack coal, 1 1/4 pounds of coke, and 4 gallons of common naphtha, or its equivalent of crude petroleum.

Special.

A RAILROAD PRESIDENT'S VIEWS.

In these busy times, when city people have to go long distances, and are in too much of a hurry to walk, the street railway enterprise has risen to be one of the important interests of modern finance and industry. It requires shrewd and able men to manage it, and it generally rewards them with a prosperous distinction among the business men of the day. One of the most prosperous and best known of the New York street railway men is J. M. Reybert, Esq., who is President of the Houston, West, and Pavonia Ferry line. The man who achieves success in this street railway business does so at considerable outlay of brain and nerve power. Managing such an enterprise may look like easy work, but let those who think it so make trial of it. Mr. Reybert found no beds of roses in his way to prosperity, but by constant and severe attention to business fell into a state of invalidism which threatened to carry him off. He is now, however, restored to health and as busy as ever.

Our New York correspondent visited Mr. Reybert at the office of the company in East Tenth Street, and found him busy superintending the details of the business. Mr. Reybert cheerfully assented to the request that he should tell something about his experience of sickness and recovery.

"It was four or five years ago," said Mr. Reybert, "that I began to run down in health. It was partly owing to too close application to business and partly to the unwholesome atmosphere of the place in which I had to spend most of my time. I was taken with cold in my muscles, which soon assumed the form of rheumatism. I had a great deal of local pain distributed over various parts of my body, and wherever the pain came there came also black spots. Then rheumatism developed into sciatica. My pains were very great. The doctor told my wife that I never could be any better. This was a gloomy outlook for me. I was at my home in Newburgh-on-the-Hudson, trying to make the best of the situation. This was in June, 1884.

"I heard of Compound Oxygen, and sent for a 'Treatment.' Before it reached me I was taken down with rheumatism of the heart, a disease which is as dangerous as it is painful. My breathing was so oppressed that I felt as if with each breath I should choke. When I received the package containing the Compound Oxygen, I felt that I could hardly take its contents. Nevertheless, I tried. At this time my sciatica was very severe, with sudden aches shooting down the nerves of both legs.

"When I tried the Oxygen, I was astonished to find that with a little practice I could inhale it freely. Yet for several days each inhalation would send pain to some old spot. The ache would continue for fifteen or twenty minutes, and then go away. Gradually I was free from these pains, and could inhale the Oxygen without difficulty or unpleasant result.

"Compound Oxygen brought me good sleep. I had previously been in the habit of waking two or three times in the night. Now I was restless. My sleep began to refresh me as it had not done before. I omitted to tell you that with my other disorders I also had dyspepsia. Sometimes this would distress me to such an extent that I did not care for company. It made my appetite poor, and the food I ate did me but little good. The Oxygen repaired my digestive organs, as it did everything else about me. I had also suffered from catarrh so badly that I lost the sense of smell. Well, this Oxygen is a very strange sort of thing, for it drove away the rheumatism and sciatica, it made my digestion so much better that I can now eat like other people, and it entirely cured me of catarrh. Once in a while, if I take cold, I have a little catarrh, but a few inhalations of Oxygen send it away. During all my use of this remedy I have received advice at the Compound Oxygen office, No. 148 Fifth Avenue, and have followed directions in the use of the powders there given me. I have found them of great benefit with the Oxygen and the Oxygennaqua."

"And as to your friends, Mr. Reybert? You have received so much benefit from this remedy that I suppose you have advised others to use it?"

"Yes. I have advised a good many, and I have heard that it has been of great advantage. One case I will mention—that of Mr. Samuel J. Holmes, of this city, a gentleman well advanced in years. He had long been troubled with asthma. He used the Oxygen for seven or eight weeks before it made much impression on him. Then, almost all of a sudden, it began to do its work. It did all we could have expected. It made him breathe freely, naturally, and without pain. He quotes it as a large success, just as I do.

"Yes, sir; you may put me down as a thorough believer in Compound Oxygen. I am not taking it now, except a little occasionally, because I am well and hearty. If I am sick again, give me Compound Oxygen. It is a wonderful restorer."

So say all who give it a fair trial. There are yet a good many people, chronic sufferers and others, who have not tried it. "It is never too late to mend." Write to Drs. STARKEY & PALEN, 1529 Arch Street, Philadelphia, for a valuable little treatise on Compound Oxygen. They will mail it to any address, and it may be of great use to you.

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

Clockwork wheel and pinions, brass or steel. Plumb & Webb, 289 Wash. St., Newark, N. J.

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Agents Wanted.—New household novelty; sells at sight; profits large. Rogers Novelty Mfg. Co., Cohoes, N. Y.

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The Knowles Steam Pump Works, 44 Washington St., Boston, and 93 Liberty St., New York, have just issued a new catalogue, in which are many new and improved forms of Pumping Machinery of the single and duplex, steam and power type. This catalogue will be mailed free of charge on application.

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Haswell's Engineer's Pocket-Book. By Charles H. Haswell, Civil, Marine, and Mechanical Engineer. Giving Tables, Rules, and Formulas pertaining to Mechanics, Mathematics, and Physics, Architecture, Masonry, Steam Vessels, Mills, Limes, Mortars, Cements, etc. 900 pages, leather, pocket-book form, \$4.00. For sale by Munn & Co., 361 Broadway, New York.

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Curtis Pressure Regulator and Steam Trap. See p. 350.

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Iron and Steel Wire, Wire Rope, Wire Rope Tramways. Trenton Iron Company, Trenton, N. J.

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Steel name stamps, 15 cts. per letter; steel figures, \$1 per set. F. A. Sackmann, 1093 First Ave., Cleveland, O.

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NEW BOOKS AND PUBLICATIONS.

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This holiday book for young people tells the story of a dozen little girls who spend a very merry day together. Verse and picture relate their various adventures, and the funny circumstances which reduce their number, one by one, until but a single little girl is left. Tired and sleepy she goes to bed, and calls them all back again in her dream. It will delight the little people, and will interest the older readers as well, for Miss Lathbury's drawings of child life are quite pleasing, and have frequently sufficient artistic merit to make them worthy of attentive study.