

## ENGINEERING INVENTIONS.

A boiler covering composition has been patented by Mr. William M. Suhr, of New York city. It is a fireproof and at the same time non-conducting boiler and tube covering, consisting of a solution of alum and soda, a mixture of hair or felt, asbestos fibers, mineral wool, cork and sawdust, and plaster of Paris, or other similar substance, mingled in certain proportions.

A rotary engine has been patented by Mr. William L. Tuck, of Bay View, Wis. It has a circular cylinder combined with a non-concentric block having recesses and steam ports, a piston having wings and radially slotted plates, within which the ends of the wings move, a slide valve, exhaust valves, manipulating lever, etc., the engine being designed to utilize the full force of the steam throughout the greater part of the revolution of the piston.

## MISCELLANEOUS INVENTIONS.

A head rest has been patented by Mr. George Phillips, of Tilford, Ill. It is a wire frame provided with a cushion for the head, with cords attached which are held by the feet to support the head rest at the desired inclination, the device being simple, light, and portable, for the use of tourists and others.

A cyclometer has been patented by Mr. Gabriel P. B. Hoyt, of Jamaica, N. Y. It is constructed to receive positive, intermittent, or stop motion, from a point, projection, or cogwheel arranged to revolve with the crank, and does not depend upon the force of gravity for its operation.

A duplex brick has been patented by Mr. James A. McAllister, of Frederick, N. B., Canada. It consists of two ordinary sized brick united by a connecting neck or web, the surfaces of the brick being indented on the upper and lower faces and ends to enable the mortar to obtain a firmer grip.

A brick burner has been patented by Mr. Bernhard Albers, of Conception, Mo. This invention consists in furnaces having interchangeable grates, the furnaces being arranged in pairs, each pair being connected by an arch in which there is a flue, said flue being centrally divided by a solid abutment or partition.

An edge trimmer for walks and beds has been patented by Mr. Thomas Akins, of Camden, N. J. Its construction is such that as the machine is moved along the edge of a walk the cutter trims the edge of the sod to the desired slope, and the plow or scraper loosens the sod and soil cut off and throws them into the middle part of the walk.

A coffee huller has been patented by Mr. Jose Guardiola, of Chocoma, Guatemala. In connection with the hopper and its casing are disks which revolve about two hundred times a minute, the berries being rubbed between projections of the casing and the disks and plates, whereby the hulls are broken and removed.

A wrench has been patented by Messrs. Johann and Patrick Ryan, of New York city. Its handle is in two parallel parts, one being a prolongation of the shank and having mortises, and the other part of the handle having lugs adapted to enter the mortises, the outer end of the adjusting screw being journaled in this part.

A cement for roofing has been patented by Mr. Eldridge J. Burchell, of La Fargeville, N. Y. It is made of coal tar, water lime, coal ashes, plaster of Paris, an oil solution, and a soda solution, mixed in specified proportions, which are variable somewhat, according to the uses to which it is to be put, and adding coloring matter as desired.

An anti-insect fabric has been patented by Mr. John P. Regan, of New York city. It is made by first steeping the fabric in a solution of tobacco and cascarilla bark macerated in benzine, then drying and steeping in tobacco, cascarilla bark, and hot water, the fabric to be used in trunk linings, etc., as a protection from moths or other insects.

A mode of re-enforcing tubular or hollow structures has been patented by Mr. Ebenezer Hill, of South Norwalk, Conn. In vessels exposed to high internal fluid pressures, this method consists in inclosing the vessels in a series of casings, each succeeding outer one charged with fluid, air, or gas of a less pressure than the one next within it.

A stencil has been patented by Mr. Geo. F. Gunther, of Louisville, Ky. It has a metal head piece with wire or rod extension on which letters or numbers may be slipped to form the print to be made, with other novel features, to facilitate the marking of packages with ink and brush by a readily changeable device.

A street lamp has been patented by Mr. Albert F. B. Hennig, of Denver, Col. The construction is such that the gas is automatically turned on by swinging up the bottom gate or door to introduce the torch or other light used for igniting the gas, and the improvement is one that can be applied on any gas lamp and on any burner.

A fire escape has been patented by Mr. Patrick Fogarty, of Milwaukee, Wis. It consists essentially of an elevator car supported by wires that pass over pulleys carried by arms that project from an adjustable bar that is secured within the window casing, with certain novel details of construction, to facilitate the escape of occupants from burning buildings.

A band cutter and feeding attachment for thrashing machines has been patented by Mr. James H. Sheldon, of Warren, Minn. It gives a brief review of the experience of Munich and other German cities in electric lighting, and in less detail that of several American and British cities, making out a case decidedly unfavorable to electricity. A contract was made with the gas company in 1863, for lighting the public squares and streets of Munich for 36 years. A strong disposition to repudiate the contract has called forth this report, in which the author maintains that both justice and self-interest should support the continuance and extension of the present system of gas illumination.

A rosette for harness has been patented by Mr. Ernest F. Pflueger, of Akron, O. This invention consists in means for securing the holding loop to the rosette frame more strongly, and is an improvement on

a former patented invention of the same inventor, the ends of the loop being, according to the present invention, embedded in a solid filling of solder.

A gate latch has been patented by Mr. Louis S. Stoll, of Arcadia, Iowa. It consists of a bar or lever, two slotted and tongued plates, a spring and a catch plate with attaching screws and bolts, making a simple and inexpensive latch, which may be readily applied to new or old gates, and one which will effectively and automatically latch the gate when it is swung shut from either side of the fence.

A machine for printing samples on textile fabrics has been patented by Mr. William Mather, of Manchester, Lancaster Co., Eng. Its construction is such that thereby samples can be printed of designs from the engraved copper rollers without the necessity of first mounting the rollers on solid mandrels, thereby saving the great trouble and cost of readjustment for separate trials involved in present methods.

A hoe sharpener has been patented by Mr. Park D. Folkes, of Hays' Landing, Miss. It consists of a pair of jaws pivoted together, a whetstone or sharpening device secured along the inner edge of one jaw, and an anti-friction roller journaled on the other jaw, making a device which can be used on a large variety of tools, or to sharpen mowing machine knives without removing them from the machine.

A machine for hardening seamless felt boots and other hollow felt articles has been patented by Messrs. Walter P. and Nelson F. Hyatt, of Matteawan, N. Y. It has a solid mould with a recess of about the shape of the desired article, with a core which can be placed in the recess and vibrated therein, so that no subsequent stitching, finishing, or felting is required for firmly uniting the bats to complete the article.

A bridle has been patented by Mr. Robert Richardson, of Detroit, Mich. It has two bits, so arranged in connection with straps and rings of the head gear that in driving only one bit will ordinarily be used, but if this is not sufficient to check the horse, an extra tension on the reins will bring the other and smaller bit into the horse's mouth with a force sufficient to curb even the most restive and vicious animal.

A combined breast collar and saddle has been patented by Mr. Christopher G. Calo, of New York city. The saddle tree is made with end loops to receive the top strap, with upwardly projecting flanges to keep it in place, and with other novel features, whereby the use of the ordinary back saddles is avoided, and the harness is made lighter and less expensive to manufacture.

A process of ornamenting wall and other papers has been patented by Mr. William V. Wilson, of Jubilee St., Mile End, Middlesex Co., Eng. It is for producing a finish on previously printed papers, in imitation of silk, satin, or other fabrics, and consists in first coating the fabric with a varnish or compound of nitro-cellulose, and then embossing or frictioning the varnished surface.

An apparatus for electrotyping has been patented by Mr. William J. Ladd, of New York city. This invention relates to devices for suspending the moulds and forming the electric connection therewith in the decomposing trough, the currents being easily disconnected without removing the mould from the bath, there being an indicator to mark the time of deposit, and provision for preventing the deposit of metal on the back of the mould.

A garment lock has been patented by Mr. Anders Ponten, of New York city. It is a small device for conveniently securing coats, hats, umbrellas, and like articles, to supports in dining rooms, cars, and other places, to prevent their being taken by mistake, the lock having hooks to close upon the article, and cap plates for adjustment, so the lock cannot be opened until they are placed at the point at which the lock was set.

A jersey waist forms the subject of two patents issued to Mr. David F. Halsted, of Brooklyn, N. Y. This invention provides for such a construction of ladies' jersey waists that they will have the appearance of being worn over a jacket, and so that the fronts can be readily removed, washed, and replaced, the knitted garment having a space between its front edges and a separate woven fabric front having approximately the contour of the space, and detachably connected at its side edges to the front edges of the jersey.

A process of producing sulphite or bisulphite of sodium forms the subject of a patent issued to Messrs. William O. and William P. Crocker, of Turner's Falls, Mass. It consists in mixing sulphate of sodium with carbonaceous matter, roasting the mixture, leaching out the soluble part, evaporating to dryness, granulating the product, then heating it, and agitating it in contact with air or oxygen until incandescence ceases, and making it into a solution, with other details, by which sulphur and sodium are sufficiently oxidized to produce a practical wood reducing solution.

A process of making bisulphites has also been patented by the same inventors. It consists in suspending by agitation neutral sulphite of calcium in neutral sulphate of sodium solution, and then charging the mixture with sulphurous acid until decomposition has taken place, with other special details.

## NEW BOOKS AND PUBLICATIONS.

"The Present Condition of Electric Lighting" is the title of a report made for the Gaslighting Company of Munich, September 26, 1885, by Dr. N. H. Schilling, and republished in this country by Cupples, Upham & Co., of Boston. It gives a brief review of the experience of Munich and other German cities in electric lighting, and in less detail that of several American and British cities, making out a case decidedly unfavorable to electricity. A contract was made with the gas company in 1863, for lighting the public squares and streets of Munich for 36 years. A strong disposition to repudiate the contract has called forth this report, in which the author maintains that both justice and self-interest should support the continuance and extension of the present system of gas illumination.

## Special.

## LOTTA—PHILADELPHIA'S FAVORITE.

It was always a marvel to the amusement-loving public how Lotta could be so sick that the Chestnut Street Opera House, Philadelphia, was compelled to be closed for one week, about two years ago, and that at the end of that time she was well enough to resume her play of "Nitouche." More than this, it was noticed that her voice had acquired fresh volume, and in "Nitouche," which is a singing play, she could be heard in ensemble as well as in solo. Among all the gifted ladies who adorn the stage, Lotta is decidedly the pet and favorite. Her intense vitality, her beauty, and the versatility of her talents draw all classes to see her. She has been on the stage since her eighth year, and in all that time the breath of scandal has never once assailed her. She is a phenomenally devoted child to her mother, in whose society she is found at all times. Can it be wondered that this little lady returned so soon to her labor at the Opera House, when we remember that this speedy restoration was due to the inhalation of Compound Oxygen? A press correspondent writes: "It was at the residence of Mrs. James H. Heverin, of Delancy Place (wife of the eminent counselor), that I obtained a brief interview with Lotta in reference to the treatment of Drs. Starkey & Palen, which prevented her a great pecuniary loss. The little comedienne was spending the day there, and as she answered my card she came bounding into the parlor, throwing herself into a luxurious armchair, and as soon as the formalities of a visit were complied with, I at once broached my subject.

"I hear you have tried Compound Oxygen treatment, Lotta?"

"Oh, yes! You remember the terrible sore throat I had two years ago—that it baffled the skill of my New York physicians? After burning my throat and positively prohibiting my appearance before an audience for an unlimited time, I was promised great things if I would try the 'Oxygen,' so I immediately came to Philadelphia and put myself under the care of Drs. Starkey & Palen."

"Did you experience relief immediately?"

"It was evident from the first inhalation that I had done the right thing, for it seemed to bring the whole trouble under immediate control."

"Then you do not favor burning the throat or any of the methods usually resorted to?"

"No. I think it a harsh and cruel treatment, and it cannot be long before Compound Oxygen will come to the rescue of all the profession."

"Drs. Starkey & Palen claim that the health obtained by the Compound Oxygen treatment is as genuine and permanent as one's original health. Does your experience confirm that opinion?"

"Yes, it most certainly does. I have not been sick an hour since I used the oxygen. My mother has also been greatly benefited by the use of the Oxygen, and is as great an enthusiast as I. It seems to invigorate the whole constitution, and imparts fresh life to every part of the body. In my profession I am always studying from nature. I observe the expressions, gestures, and ways of the various people with whom I meet, and find that my power of observation has grown more acute and discriminating since my treatment with the Oxygen. In the voice alone there is a most perceptible gain. Long and sustained notes have become easy; and whether talking or singing, I find it now no labor. Persons who sing or talk much on stage or platform feel a certain amount of exhaustion at the end of the season, and to them the use of the Compound Oxygen would be of great value. I wonder these gentlemen have not brought it to the notice of the acting profession before. It is just what we all need."

"Do you think it would have the same effect on the system as change of climate?"

"Yes, and without the disadvantages of long journeys in pursuit of health, such as the loss of home comforts and the interference with regular business pursuits."

"Did you have any unpleasant sensations while taking the Oxygen?"

"No; on the contrary, the sensations were pleasant."

"Do you give your full consent to make this interview public?"

"I certainly do. You are at liberty to say I said so."

Miss Lotta is one of the busiest little ladies in the world. Her engagements are continuously requiring her presence in the cities each season. She owns theaters and real estate in America and Europe and large tracts of wooded land in the Northwest; indeed, she is one of the wealthiest ladies of the stage. Lotta is modest about her own merits. She believes the test of talent is public appreciation. Surely no one has passed this test with greater eclat than this gifted lady, who is still young and fresh. Now, if the Compound Oxygen can bring back to the stage each year this favorite and pet, in prime health, the public can but thank Drs. Starkey & Palen. Any who may desire to know more of the treatment of which so kindly words are spoken should write to the office of the physicians, 1529 Arch Street, for the literature on the subject, which is mailed free to all applicants.

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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.

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you must invent twenty, but truth can never be strengthened by bolstering. The testimony of every lady who has used Dr. Pierce's "Favorite Prescription" for nervous debility and female weakness carries conviction with it. The facts are stated in such a way that no one can doubt them. All those peculiar pains and sinking sensations which ladies suffer from can be overcome by means of this wonderful preparation. If you are a sufferer from female weaknesses, don't fail to employ it.

Wanted—To correspond with a practical door, sash, and blind maker; one who would be fully competent to take full charge of a factory and could give correct estimate of machinery needed, cost of manufacture, probable demand and margin. One that could take an interest would be preferred. Address Mr. H. H. Durkee, 48 Broad St., New York.

Plumb & Webb, Newark, N. J., clockwork, wheels, pinions, worms, and small gearing to order a specialty.

Wanted.—A Mechanical Draughtsman wanted to go West. One acquainted with wood working machinery preferred. Steady employment to a sober and industrious man. Address, with full particulars, stating wages expected, etc., "Western," P. O. Box 773, New York city.

For Sale.—A Patent Boiler Flue Cleaner. A bonanza, Louis Duennisch, Sandusky, Ohio.

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Emery Wheels of unusually superior quality for wet grinding. The Tanite Co., Stroudsburg, Monroe Co., Pa.

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