

ENGINEERING INVENTIONS.

A hydrocarbon burner has been patented by Mr. Lewis B. White, of New York city. It is primarily for burning crude petroleum for steam boilers, and combines with the boiler a steam jacket with a retort, a tank, and steam jet apparatus for converting the residuum from the retort into spray, in a way that is intended to avoid overheating of parts of the burner.

A muffler for steam valves has been patented by Mr. Thomas E. Hill, of Rahway, N. J. It has such perforations and slots to retard and subdivide the steam that there will be little hissing and disagreeable sound, and the steam so acts as to raise the valve and permit the escape of steam, if desired, beyond the capacity of the boiler to generate.

MECHANICAL INVENTION.

An outlying tool has been patented by Mr. Robert A. MacKenzie, of New York city. It is a tool designed particularly for carpenters' use in the work of dressing doors and similar pieces of stuff to their frames, to secure a perfect fit without the necessity of frequently setting the door up in the frame to test it as the work proceeds, and for similar uses.

AGRICULTURAL INVENTIONS.

A corn sheller has been patented by Mr. Asahel H. Patch, of Clarksville, Tenn. It is so made that, the ears of corn being put in a hopper, and a crank turned, the teeth of a wheel cause each ear to revolve and carry it down, spiral ribs engaging the surface of the ear and controlling the speed while the teeth remove the kernels from the cob, the machine being simple, light, and inexpensive.

A derrick for loading and stacking hay has been patented by Messrs. Thor O. Thorson and Peter S. and Michael W. Peterson, of Elliott, Ill. It is adapted for use in connection with a hay wagon, and also for general use as a derrick, and may be operated either by hand or horse power, the invention covering improvements in the construction and combination of the several parts.

MISCELLANEOUS INVENTIONS.

A carpet stretcher has been patented by Mr. Charles R. Gincley, of West Chester, Pa. This invention provides an implement designed to stretch the carpet to place and there hold it by a tack carried by a magnetized plunger, arranged to be forced downward by a properly mounted lever.

A table has been patented by Mr. Harley A. Barnhart, of Adelphi, O. This invention relates to extension tables formerly patented by the same inventor, and provides that the extra leaves will have direct support from the floor by an independent leg, thereby making the table more substantial.

A fur skirt has been patented by Messrs. Phillip Weinberg and Louis Clark, Jr., of New York city. The invention covers a novel form of a garment to be supported at the waist, having a fly at the waist placket, and a waist band with an adjustable fastening, so that the garment will fit persons of different sizes.

An exercising machine has been patented by Mr. John A. Smith, of New York city. It is a device by which the operator can lift weights attached to a rope by pulling in any direction upon handles, the pulley over which the rope passes turning easily on a swivel, the weight to be lifted being readily adjustable.

A pencil sharpener has been patented by Mr. Thomas A. Henderson, of Natchez, Miss. Combined with a sliding and rotating pencil holder is a spring-supported plate having an abrasive surface, with other special features, whereby both the wood and the lead of the pencil may be rapidly reduced to the required form.

A hand sled has been patented by Mr. Herman Lindenberg, of Jersey City, N. J. This invention consists principally in providing the sled with a sliding bar having penetrating points for forcing the sled forward as the rider draws backward upon handles attached to the sliding bar, making a practical self-propelling hand sled.

A kneading machine has been patented by Mr. James F. Hughes, of Georgetown, Texas. Its construction is such that the flour, seasoning, etc., may be placed in a tray or receptacle, when the operator turns with one hand a crank arm rotating a rod in the receptacle, and with his other hand turns the receptacle in various ways until the dough is thoroughly kneaded.

A tank has been patented by Mr. Antonio O. y Ponce, of Brooklyn, N. Y. It is for water closets and similar uses, and, being connected with a water supply pipe, is intended to fill itself automatically and discharge any desired amount of water into the basin when the operator actuates a lever or arm controlling the basin discharge cup.

A piston packing has been patented by Mr. John W. Dudley, of Portland, Ore. Bevel faced split metallic rings are held between opposite fixed and movable heads of the piston, and an elastic packing placed within said rings, and tending to force them outward, making a simple and efficient packing, which may be readily tightened, and will have an elastic bearing.

A drag saw has been patented by Mr. Cornelius W. Wright, of Democracy, O. It is so constructed that U-shaped irons on the end of the beam engage the log, and prevent vibration during sawing, and as the saw travels through the log it can be adjusted to the depth of cut by a lever, so that it will constantly move substantially upon a level.

A draught equalizer has been patented by Mr. John L. Powles, of Goodland, Ind. This invention covers an arrangement of levers, yoke, and a chain, etc., especially adapted for four horses, though the number is not limited, and by which side draught will practically be obviated, and the draught apportioned to the animals according to the work and their strength.

A beer faucet has been patented by Mr. John Walsh, of New York city. It has a metallic stock and peculiarly fitted and readily inserted rubber tube, the whole being so designed, in various novel features of construction, that the liquid will be kept from coming in contact with the metal of the faucets and contaminated thereby.

The manufacture of artificial leather or leather cloth forms the subject of a patent issued to Messrs. William V. Wilson, of Jubilee St., Middlesex Co., and Joseph Story, of Lancaster, Eng. It is for a new article of manufacture, a fabric coated with the residuum from a solution of mononitro-cellulose in acetate of amyl, in admixture with oil and a pigmentary matter.

A dental articulator gauge has been patented by Mr. Josiah B. Crist, of Hummelstown, Pa. It is a metal plate of elongated and tapered form, which has an arc bar with graduated marks, the device being adapted for measuring the approach of the gums when the mouth is closed, to indicate what length teeth are to be used, in putting in new ones, to preserve the comfort and symmetry of the mouth.

The manufacture of white lead forms the subject of a patent issued to Mr. William E. Harris, of New York city. Certain proportions of carbonate of soda and sublimed lead are well mixed in a tank with a due amount of water for about five hours; the top liquid having been drawn off, the lead is washed again with water, and afterward put in an evaporating furnace to finish its preparation.

A baling press has been patented by Mr. Joseph L. Gilbert, of Lebanon, Ore. The invention covers a novel arrangement of the baling chamber, and a novel way whereby the rope through which the power is applied is automatically locked in place when the power is relaxed; also in a new form of knottor adapted to operate on cords or wires held by a special kind of spools, with various other novel features.

An automatic attachment for stove or range dampers has been patented by Mr. Isaac A. Abbot, of Denver, Col. Combined with the damper is a vessel with trunnions, having brackets with slots for the trunnions to ride in, a piston and a spring, with a mechanism for establishing a connection between the damper and a piston, whereby the heat of ovens or other portions of a stove may be regulated.

A hose nozzle holder has been patented by Mary Lane, of Hot Springs, Ark. A turn table, with clamps for locking it in position, is mounted on a support, uprights projecting from the table, and a shaft journaled in their upper ends, to which the hose holder is secured, with a setscrew for locking the shaft in position, whereby the nozzle may be easily held for directing the stream in any direction.

A burglar alarm has been patented by Mr. Charles H. Dowden, of Newark, N. J. It consists of two sliding metallic buttons, each in a metallic shell attached to the window jamb, a metallic strip being on one edge of each window sash, with wires, each attached to a shell and connected with a battery, and a device for giving the alarm, which will continue to sound as long as the sashes are out of proper position.

A cop winding machine has been patented by Mr. George H. McCausland, of Philadelphia, Pa. The invention covers a novel construction and arrangement of parts of a machine, which can be readily adjusted to suit and wind fine, coarse, and all grades of yarn, it being possible to cop all kinds of yarn by simply changing the speed of a shaft and the up and down movement of a cross piece.

A wagon tongue has been patented by Mr. George W. Avery, of Fort Ransom, Dakota Ter. A socket is fitted to the end of the tongue, with a notched end in which the neck yoke ring is received, and a spring-acted bolt for closing the notch, a rod connected with the bolt extending nearly the whole length of the tongue, by which the neck yoke ring is securely held, or may be readily released by moving a handle at either end of the tongue.

A fence machine has been patented by Mr. Robert F. Deering, of Washington, Kansas. The machine is mounted on a frame, and has hollow twisting spindles, connected by gear wheels, each spindle having rectangular arms, each carrying a wire reel, there being a tension device, and various other special features combined in a novel way, for making a combined wire and picket fence of any desired height and length.

A sash balance has been patented by Alois Lang and Thomas W. Talbot, of Florence, S. C. A pivoted lever, with one end adapted to be connected with the object to be counterbalanced, has a spring connected to its opposite end, to adjust along the same near the fulcrum, so that when compressed it will exert the greatest force on the lever, the device being also applicable as a counterbalance for weights, or in gasometers, and for other purposes.

A vehicle spring has been patented by Mr. Edward Bowman, of Santa Cruz, Cal. The spring has slots in its ends, a socket with downwardly projecting pins, a wearing plate, and a clip for securing the socket to the axle, with other novel features, the arrangement being such that the heavier a vehicle is loaded, the nearer the center will be the bearing of the spring, the rigidity being increased according to the load.

A vertical draught attachment has been patented by Mr. George W. Wheeler, of Ogdensburg, N. Y. There is a series of transverse pivoted deflecting plates below the grate, links pivotally connecting the plates beyond their pivoted points, and a rod for adjusting the plates at any desired angle, the device being applicable to almost any form of furnace, in order to distribute the draught more equally throughout the length of the fire.

A process of and apparatus for manufacturing concentrated extract of cod livers has been patented by Messrs. James W. Stairs and John Craig, of Halifax, Nova Scotia, Canada. The apparatus com-

prises a steam-heated vat, evaporating pan, filter, and press, and the process is designed to make an extract soluble in water, and readily assimilated, which shall have all the valuable properties of cod liver oil without the fat or oil.

A check receiver has been patented by Mr. John Casey, of Jersey City, N. J. It is for receiving and holding checks of metal, celluloid, or other suitable material, as used in making payments of small amounts in many kinds of business, and holds a number of checks in view before they are finally discharged into a receiver, the invention being an improvement on formerly patented inventions of the same inventor in this line.

A brick machine has been patented by Mr. William Thaison, of Austin, Texas. The mould wheel has six, eight, or more radial mould cavities, in each of which is fitted a plunger, and for each revolution as many bricks are made as there are cavities, the cavities and plungers being shaped according to the shape of the bricks desired, the invention covering various novel features in a machine which will occupy but little space and produce a large number of bricks in a short time.

An apparatus for preparing wood and other fibrous material for conversion into pulp has been patented by Mr. Franklin B. Erwin, of Elkhart, Ind. This invention relates to apparatus in which sulphurous acid is used in treating the fiber, and covers a method of producing the acid in the digester under pressure, there being in connection with the digester a furnace for burning the sulphur, a pump for drawing the fumes from the furnace and forcing them into the digester, means for producing a circulation, and various other special features.

Special.

NEW YORK CITY—THE EXPERIENCE OF MR. HETTRICK.

There was a time in the history of New York when the whole provision business of the city centered in Washington and Fulton Markets. These markets were queer old collections of tumble-down sheds, and, to speak as mildly as possible, were not an ornament to the city. They have within a few years been rebuilt, and are now spacious and elegant. But much of the provision business has scattered itself around town among the stores of the green-grocers, and a great deal of it has gone to certain new markets which have been built up-town. One of the most elegant of these markets is the "Central," at Broadway and Forty-eighth Street. For convenience and for perfect cleanliness it is a model market. Passing through it we find, among the butter and produce men, Matthew Hettrick, Esq., one of the largest dealers in butter and cheese in the city. Mr. Hettrick has grown up in the business, and is thoroughly familiar with every detail of it.

Although Mr. Hettrick had long been a prosperous butter merchant, he was for many years severely annoyed with catarrh, bronchitis, and dyspepsia. A combination like this is enough to make any man miserable.

To our New York correspondent, Mr. Hettrick gave an account of his diseases and his recovery.

"For twenty-five years I had a great deal of trouble with my head and throat. I had both catarrh and bronchitis, which were not only annoying, but very painful. I was treated by the regular doctors, and by specialists who gave their whole attention to these diseases. But neither the regulars nor the specialists did me any lasting good. I must have inherited these diseases, for two brothers of mine also had them, and died of them. I am nearly sure that one of these brothers could have been saved, had he taken in time the remedy which has now restored me to health."

"And may I ask what that remedy is, Mr. Hettrick?"

"It is what they call Compound Oxygen. About a year ago I heard of this—I had seen it advertised. First, I sent to Philadelphia for it—the headquarters. Then I found they had an office here on Fifth Avenue—No. 148—and I got a treatment or two there, together with a good deal of advice from the physician in charge. Did it do me good? Well, you see me now; you ought to have seen me before I took this Compound Oxygen. My catarrhal discharge was very profuse. My voice was hollow. I was suffering about equal distress from the catarrh and the bronchitis, and added to these was the distress of the dyspepsia. Every little cold I caught would make me worse. I am exposed to a great deal here in the market, where I spend much of my time. There are draughts in all directions, and in raw weather, when doors are constantly opening and shutting, it is enough to give a well man consumption or pneumonia."

"Three days after I began to inhale Compound Oxygen my voice became better, and I was much encouraged by seeing that there was a chance for me to mend, generally. I was surprised and gladdened to see how soon the Oxygen did its work on the catarrh. It was not a mere drying up of the discharges. That I had had before, by the aid of some of the specialists; but let me tell you what a man needs who has catarrh. He wants all the organs of his head and throat put in such healthy condition that the discharges don't come. That is what Compound Oxygen did for me. I can't account for it except on the theory that this remedy strengthened and built up my whole system. It certainly helped me out of all these three troubles together, and at about the same time—catarrh, bronchitis, dyspepsia. My recovery was steady; I was gaining all the time. Sometimes, if I caught cold, I would lose a little, but I always gained more than I lost, and so I went on until I got to where you see me now."

"Well, Mr. Hettrick, you now look like a perfectly well man."

"That is exactly what I am, abating only a little for wear and tear, and considering what I endured for so many years. Once in a while I find I have a little catarrh left, and sometimes I feel a little inconvenience from an attack of indigestion. But these things are trifles compared with what I used to suffer. My general health is very good. I can stand all the duties of my business. I can bear exposure to the weather. I eat pretty much what other folks eat, and I have a fair appetite; and I think people who see me would not take me for a man who had been sick."

A remedy which can thus drive out such a three-fold combination of twenty-five year old disorders as catarrh, bronchitis, and dyspepsia is something of which every invalid ought to know. Compound Oxygen works such wonders that all people, sick or well, should read the interesting little brochure about it which is published and mailed free of charge by Drs. Starkey & Palen, 1529 Arch Street, Philadelphia. Also several other works on chronic diseases.

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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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Railroad Engineer's Transition Curves. A simple and rapid method for laying out. By B. H. Hardaway. With transit book combined. Price, \$2.00. E. & F. N. Spon, 35 Murray St., N. Y.

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