

STOVES—J. H. Wilkinson, of Concord, N. H.: I do not claim a ventilating stove or a stove for burning the gases by admitting oxygen.

What I claim is, first, The arrangement of pipe, K, within pipe, E, and damper, L, constructed and operating as and for the purpose described.

Second, I claim inserting the air chambers, J, J, constructed as described, in the linings of the fire-pot, for the purpose set forth.

Third, I claim the holes, m, m, in connection with the bed plate, O, provided with the arc piece, S, or their equivalents, for the purposes substantially as set forth.

MACHINE FOR MANUFACTURING SHOE PEGS—I. G. Worth, of Vassalboro', Maine: I do not claim the combination of a reciprocating knife, a fluted feeding roller and a mechanism for so operating both as to feed a peg block along with an intermittent motion, and cut pegs from it, as I am aware that such is the principle of the well-known Baldwin peg cutting machine.

But I claim an improved machine, consisting of a combination and arrangement essentially as specified, of a vibrating knife, or its equivalent, a bench or table, two fluted feed rollers and mechanism for imparting to such rollers intermittent feeding motions, in opposite directions, the same being productive of advantage in cutting blocks into pegs.

ELECTRO-MAGNETIC ENGINE—Frederick Yeiser, of Lexington, Ky.: I claim the employment of a series of balanced beams, F, with bars, G, arranged and combined with the magnets, C, frame, H, and rods, J, substantially as and for the purposes set forth.

[A notice of this improvement is given in another column.]

BUTTER WORKER—W. Bancroft (assignor to himself and H. M. Proctor), of Burlington, Vt.: I claim the combination of the roller, P, with the roller, J, and share, O, substantially as and for the purposes shown and described.

I also claim the combination of double geared shell pinion, D, with the basin, A, adjustable shaft, H, socket, E, L, and pinion, G, substantially as shown and described, so that by turning the screw, K, the shaft H may be raised or lowered, and the height of the roller, J, altered at pleasure.

[This invention consists in the employment or use of a rotating basin and corrugated adjustable roller, in connection with a share and guide roller, the whole being arranged to operate so that the butter may be thoroughly and expeditiously worked, and with great facility.]

MECHANICAL JACK—Amos Jones, (assignor to himself and S. M. Davis), of Lebanon, N. H.: I claim constructing an improved jack, by combining a doubly toothed shank, with a suitable head-piece, A, when the teeth of said shank are arranged in such a manner as to furnish the necessary fulcrum and catches for the operating lever, C, in the performance of its appropriate functions, as and for the purpose specified.

MACHINE FOR MAKING BEEF AND OTHER STAKES TENDER—Thos. W. Moore, (assignor to Elliot & Moore), of Plattsburg, N. Y.: I claim the combination of joint, g, lever, b, and the jaws, c and d, when the devices are so arranged that the jaws operate in relation to each other, substantially as and for the purpose specified.

CENTRIFUGAL GUN—C. B. Thayer, of Boston, Mass., assignor to himself and Charles Robinson, of Cambridgeport, Mass.: I claim the spiral groove, d, arranged substantially as specified.

In combination with the spiral groove, d, I also claim the space, e, and heel, h, at the extremity of each arm or aperture of the thrower, arranged and operating substantially in the manner and for the purpose set forth.

RE-ISSUES.

CONTINUOUS SHEET METAL LATHING SURFACE—John B. Cornell, of New York City. Dated May 18, 1856: I claim a closely united plaster, supporting metallic surface of substantially the shape described, when used in the construction of partitions, &c., which are designed to be fireproof and burglar proof.

OMNIBUS FARE BOX—J. S. Reeves, (assignor to J. B. Slawson), of New Orleans, La. Dated Feb. 23, 1858. I claim, first, The glass plates, i and f, as arranged in connection with the apron, m, in the manner substantially as and for the purposes set forth.

Second, Closing the passage to the drawer below from the chamber above by means of an apron operated by a spring, S, in the manner substantially as set forth.

REAPING MACHINES—C. H. McCormick, of Chicago, Ill. Dated Jan. 31, 1845: I claim the employment of the projecting ends of the reel ribs to effect the separation of the grain to be cut from that to be left standing in combination with a dividing apparatus, substantially as described, which effect a division of the grain to be cut from that to be left standing by forming an open space between the outer and inner grain for the ends of the ribs of the reel to act in, in which open space there is no reel post or other obstruction to prevent the free passage of the grain as it is brought back by the ends of the reel ribs to the platform of the machine, and by which means a separation of the inside grain to be cut from the outside grain to be left standing is made complete by the action and power of the reel, substantially as described.

REAPING MACHINES—C. H. McCormick, of Chicago, Ill. Dated Jan. 31, 1845: I claim the downward curve or bend, substantially as described, of the beams that support the cutting apparatus to facilitate the discharge of any clogging matter that may enter, as set forth.

DESIGNS.

CAN COVERS—John F. Bodine (assignor to himself and Wm. H. and J. Alfred Bodine), of Williamstown, N. J.

COOKING STOVES—R. Ham (assignor to Smith, Sheldon & Co.), of Troy, N. Y.

TOWEL STANDS—Nathaniel Waterman, of Boston, Mass.

Our Correspondence.

We have had many long letters on various subjects during the past week, and as we cannot insert them all in full, we will endeavor to give the pith of those which are likely to prove of interest to our readers. Two communications on dialling first meet our attention. G. W. Hildreth, of Lockport, N. Y., after having had a sundial for thirty-five years, and now possessing three, tells us that the one he considers preferable and best is constructed as follows:—The hour circle should be movable, and set by a scale, so that the dial will give true clock time. One of these scales he encloses to us; it contains the clock's variations for every day in the year, and is now pasted up in our editorial room. He also describes the manner in which he constructs his sundials, and we have no doubt he will give the same information to any of our readers who wants to make one,

and he adds a postscript stating that charcoal has been used for burns in his neighborhood for more than twenty years.

Thomas Russell, of New York, suggests that dials are only accurate when they are graduated to the exact latitude in which they are placed, and the tables which are given in books are only to be used as examples, so that by them any one can make the necessary alterations in the graduation of their circles to suit the latitude in which they live. In our large country this is necessary, as the time varies much, being one hour and a quarter between this city and St. Paul, Minn.

James Bird, of Plankville, La., gives us in a pretty and simple essay (which is written so pleasantly that you almost think a bird sang, rather than wrote it, and which he says is his first attempt), the reason why one little puff of steam separates from the main body issuing from a steam engine, and commences whirling in the air. It is because that small puff has a greater affinity for the air than the rest. says our songster. Try again, James Bird.

Ira Parke, of Hudson, Wis., prevents the moths from attacking his bee hives by mounting them on legs a little crooked, and placing these on little blocks during the warm weather. He also informs us that he had two hives, in one of which the bees were in a fine healthy flourishing condition, and the other was deserted by all save the queen and two faithful attendants. By changing their places, he got the bees from the strong hive to go into the poor one, and so equalized the number of bees in each hive for the winter, as the experiment was tried in the fall.

Dr. Hill, of Galesbury, Ill., objects to some remarks made by us on saleratus, and very truly observes that cooks do not understand the laws of chemical combination, and consequently overdoes the bread with saleratus. They also use much sour milk, and have to put a large quantity of saleratus in to neutralize its effect, so that we do not have simply the tartarate of potash which is common to wine as well as bread, but the lactate of potash which produces indigestion, sick headache, and other ills. The difference between us and the foreign wine drinker is, that they drink an acid tartarate, and we eat an alkaline or neutral tartarate or lactate, so that they are the "sour" set, and we are not "sweet," but "alkaline." Far better would it be if all foreign substances, except salt, were left out of bread and biscuits.

The clerk of Tiger Engine Company, of Haverhill, Mass., requests us to publish the fact that these ferocious animals on July 19th played as follows:—Fifty men drew water through three lengths of suction pipe up a rise of fifteen feet, forced it through two hundred feet of hose and one inch nozzle, five feet over a flag staff 183 feet 7 inches high, or from the water 203 feet 7 inches. This was remarkably good playing, and does the Tiger boys credit. The "machine" was built in 1851, by W. Jeffers, of Pawtucket, R. I.

Marking Ink for Linen.

Take nitrate of silver, eleven grains; rain or distilled water, eighty-five grains (say drops); gum arabic, twenty grains; carbonate of soda, twenty-two grains; liquor of ammonia, thirty grains. In mixing the ingredients, dissolve the gum in the water first, and then the soda—now dissolve the nitrate of silver in the liquor of ammonia. When the solutions are complete, mix the two fluids in a glass vessel, and boil them for a minute or so; when cold it is ready for use. A common oil flask is a capital vessel for the above purpose, provided the oil has been well cleaned out of it by means of strong soap and hot water. Though of glass, they may be placed on a clear fire, and water boiled in them without any fear of breaking. In marking linen with permanent inks, care should be taken that the fabric is perfectly dry, as this prevents the ink from running; and it is essential at all times to use only quill pens.

SEPTIMUS PIESSE.

Water Meters for Boilers.

In estimating the economy of any furnace, and the relative merits of various engines and boilers, sad mistakes are sometimes made, and the evaporator and consumer are mixed up in such a way that it becomes next to impossible to account for the steam which has been made. To remedy this, the *American Railway Times* suggests that a water meter be added to the boiler, and that the quantity of water which has gone into the boiler being thus accurately known, with little trouble and without any calculation, and the amount of steam consumed being measured by the indicator, the difference being known, would enable engineers to discover defects in their valvular arrangements of which they are now perfectly ignorant, and serve to show the working condition of the boiler. The indicator has done much for enabling the steam engine to be made more economical, and a water meter, simple, small and accurate, that could easily be applied to the feed pipe would be a valuable invention. This is certainly worth the attention of our inventors, and we would advise them to set their wits to work on the subject.

Rags.

The importation of rags for the purpose of papermaking is a great deal more extensive than most persons would imagine. During the year 1857 we imported 44,582,080 lbs., valued at \$1,448,125, and making 69,461 bales; 35,591 bales were from Italy, and more than one-third are entirely linen, the rest being a mixture of linen and cotton. About 2,000 bales were also imported from the free cities of Hamburg and Bremen. France prohibits the exportation of rags, and so does Rome; the few which we get from Ancona (a Roman province) being by special permission on payment of large fees. Prussia and Germany generally impose so high an export duty on rags as to stop the trade entirely. The exports from Alexandria and Smyrna are chiefly collected in Asia Minor by agents having license from the government, and the domestic demand must be supplied before any can be exported. It is the same with Trieste, where only the surplus is allowed to come away. The Trieste rags are collected all over Hungary. We are informed that New York and Boston receive the largest quantity, and the place that ships the most is Leghorn in Italy.

Origin of the Stocking Frame.

In the Stocking Weaver's Hall, London, there is a portrait of a man in the act of pointing to a stocking frame, and addressing a woman who is knitting with needles. The picture bears the following inscription:—"In the year 1559, the ingenious William Lee, A.M., of St. John's College, Cambridge, devised this profitable art for making stockings."

A cotemporary gives an interesting elucidation of this inscription. It appears that when the art of knitting stockings was yet a new thing in England, the Rev. Mr. Lee fell in love with a young woman, to whom he paid his addresses; and it so happened that whenever Mr. Lee came to see her she was knitting a stocking, and so intent was she upon her occupation that she gave little heed to the sugary talk of her lover. His desire for a wife soon changed into a malevolent determination to spoil her knitting forever, by inventing a machine that would supersede stocking-making by hand. He visited the lady as sedulously as ever, but his purpose was to learn the mystery of knitting, that he might contrive to do similar work with iron fingers. He observed that his mistress made the web loop by loop, but the round shape she gave the stocking from the four needles greatly embarrassed him. Pondering this great mystery on one of his visits, he found her knitting the heel of a stocking, and using only two needles—one holding the loop, while the other formed a new series. The thought struck him that he could make a flat web, and round it by joining the selvages. After three years' hard study, Mr. Lee was enabled to make a course upon the frame, but the formation of the heel

and foot embarrassed him greatly. Perseverance, however, conquered this difficulty at last, and his machine was finished. The fair knitter, whose shyness or coquetry resulted so strangely, endeavored to re-awaken M. Lee's passion for herself, but in vain. He had become so thoroughly engrossed by his invention that he had no sensibilities for anything else. He abandoned his curacy, shut his heart against affections, and wove stockings in his head from morning till night. The result was, that though he succeeded to the utmost in his invention, he died in Paris, in concealment, grief, and poverty. The same hall contains a portrait of Sir Richard Arkwright, whose stocking frame, considerably modified, is the one now generally in use.

Recent Patented Improvements.

The following inventions have been patented this week, as will be found by referring to our List of Claims:—

ELECTRO-MAGNETIC ENGINE.—F. Yeiser, of Louisville, Ky., has invented a new engine, in which electro-magnetism is to be the motive power. The invention consists in a certain system of balanced beams or frames carrying soft iron bars at each end, to be operated upon alternately by two series of electro-magnets in such a manner as to receive an oscillating motion, and having combined with them mechanism, through which their oscillating motion is caused to produce the rotary motion of a shaft.

ADAPTING ELECTROTYPE PLATES TO CYLINDERS.—The object of this invention is to print very rapidly from engraved electrotype or other plates. As the first step towards the accomplishment of this object, the inventor proposes to connect the surface of the plate to be printed from into a cylindrical form, that it may be made to rotate, and produce the impression on paper or other substance as the latter moves between it and another rotating surface. The first part of the invention consists in backing the plates with a flexible but inelastic, or very slightly elastic metal or alloy, and when thus backed winding them on the periphery of the printing cylinder by drawing and bending them between the latter and the periphery of the feeding and impression cylinder, so as to make them bear evenly and solidly upon every part of the printing cylinder, and securing them firmly thereto, by which means the plates are made, practically, as much a portion of the printing cylinder as though made of the solid metal of the cylinder. The inventor also applies what he calls a "clearing roller," in combination with the printing cylinder and the inking roller, to remove the superfluous ink from the surface of the plate after the inking cylinder has inked it. He also employs an endless band to clean and polish the surface of the plate between the engraved or sunk portions which produce the impression. The inventor of this valuable improvement is Frederick B. Nichols, of Morrisania, N. Y.

TUBES FOR CONVEYING SOUND.—The object of this invention is to collect an adequate volume of sound, and reflect the same through the tube in parallel lines of vibration, provision being made for properly reflecting the sound at the angles of the tube should any be required. This object being attained, sound may be transmitted through tubes much more audibly than by those of usual construction, as the lines of vibration are not, as heretofore, arrested in their progress and neutralized by reflection, in consequence of their zig-zag passage through the tube. It is the invention of R. G. Hatfield, architect, of this city.

EXCAVATOR.—This invention is designed for removing mud, sand, or gravel from within the holds of sunken vessels, and also any submerged articles desired to be raised. It consists in forcing a stream of water directly over the objects to be raised, or causing the stream to act at such spots that the sand will be washed away by the stream, and the article exposed and rendered accessible to submarine divers. Eli Brazelton, of St. Louis, Mo., is the inventor.