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LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

FOR THE WEEK ENDING JUNE 17, 1851.

To Mahlow Gregg, of Philadelphia, Pa., for improvement in Brick Machines.

I claim the rotating mould wheel, constructed as described, with a series of moulds in its periphery, and an annular plane outside of the moulds, and furnished with pistons arranged as described, for the purpose of discharging the bricks from the moulds, as set forth.

I also claim the mode herein described, of changing the position of the pistons by means of the bar attached to the horizontal presser, with its block and plate which are made to impinge upon the vertical plates, which are attached to the pistons for that purpose.

I also claim the combination of the hopper, horizontal presser, vertical presser, and hook rod, with the transverse horizontal lever and with the mould wheel; the whole being constructed and arranged in the manner and for the purposes described.

To H. W. Hayden, of Waterbury, Conn., for improvement in the construction of Dies.

I do not claim to be the first to construct a die with a lined surface, to deaden the metallic surface operated on, but I claim the application of a die, with a lined or corrugated surface, with the figure or pattern cut, or countersunk, so that the lined surface deadens the plate of polished metal, and leaves the polished surface of the figure untouched, for producing ornamental designs on polished metallic surfaces.

To Elias Young, of Cincinnati, Ohio, for improvement in Cooking Stoves.

I claim the cold air passages, substantially as arranged, to wit: having each an external aperture, near their upper part, on each side, beneath which projects a plate that carries the air to the centre of the stove, whence, by a second plate beneath the middle of the passage, it is again deflected to the outer ends of the passage, (thus counterbalancing the cooling effects at its entrance, whence it is distributed in hot blasts, to the fire.

To Wm. T. Barnes, of Buffalo, N. Y., for improvement in Wash Boards.

First, I claim fastening cloth, or its equivalent, on the board to prevent fine fabrics from slipping and from being torn or rubbed too much; but I do not claim lining the grooved washboard with india rubber, or other equivalent material.

Second, I claim hinging the washboard to the frame, for the purpose of holding the clothes while being washed, and at the same time allowing the board to be turned over, substantially as set forth.

To Ransom Cook, of Saratoga Springs, N. Y., for improvement in Augers.

I claim the form of the tips or cutting edges of boring implements, as described, that is, such tip commencing at the screw or centre point, and running nearly at right angles thereto, until about half way from the centre to the outer part of the boring implement, when it assumes a curve upwards, or towards the handle end of the instrument, which curve is continued until it is nearly semicircular, or until it turns within the periphery of the auger or bit, the curved edges being also under-cut or back-sloped, but without being confined to any particular angle of such back-sloping or under-cutting, as set forth.

To Rufus Ellis, of Northampton, Mass., (assignor to Wm. M. Chase, of Boston, Mass., for improvement in Knitting Machines.

I claim the arrangement of the needles in

the plane of the endless belt, instead of at right angles to it, in combination with the arrangement of the driving pinion and the projecting joints, &c., of the links of the belt on the outside of the belt, the belt being supported, and the whole being applied to the stitch hook, yarn guide, and presser, and made to operate together, and with the work hanging on the inside of the belt, substantially as specified.

To Chas. F. Brown, of Warren, R. I., for improved connection of Telescopic Masts and Spars.

I claim connecting and adjusting the several joints of masts, yards, and all spars constructed of telescopic tubes, or tubes fitting one within another by means of a screwed rod or screwed rods (two), nuts, female screws, and set screws, or their equivalents; the whole being inserted in and secured or attached to the tubes, and operating in the manner substantially as set forth.

[This is the fourth patent secured to Mr. Brown through our agency, during the past year, all of which have been illustrated in the "Sci. Am."]

To Seymour Carver, of Geneva, Ill., for improvement in machines for Dressing Shingles.

I claim the arrangement of the head block with the springs, cams, the rollers, and stops, for the purpose of passing the shingles between and out from the cutting cylinders, in combination with the arrangement for depressing the upper cylinder, while in motion, for the purpose of giving a taper to the shingle; the whole combined and arranged as set forth.

To G. S. Griggs, of Roxbury, Mass., for improvement in Ventilators.

I claim a ventilator as herein described, composed of two series or sets of curved slats, arranged one within the other, and running from the edge of the flue or other orifice, to a small circle or plate over the centre of the same, the whole forming a conical or globe-shaped ventilator, the spaces between the several outer slats being protected by the inner slats, having spaces or apertures between the two sets of slats, the only openings to said apertures being in an oblique or sideways direction, all as set forth.

To W. O. Hickok, of Harrisburg, Pa., for improvement in Regulators for the pen beam in Ruling Machines.

I do not claim to be the inventor of the flexible hooked regulator, attached to the pen beam, but I claim the pieces in combination with the hinge joints, arranged and combined substantially as described.

I also claim the sliding piece, the bearings, and the finger wheel, in combination with the other pieces, uniting by hinge joints, or in any other manner substantially the same, using, in the construction of the whole machine, any material adapted to the purpose of forming, as described, a pen beam regulator for ruling machines.

To Chas. Anderson, of Warsaw, Pa., for improvements in Revolving Boilers.

I claim lining the inside of that part of a revolving boiler which comes in contact with the fire or heat, with wire gauze, or cloth, or any perforated or pervious metal work, in the manner and for the purposes substantially as described.

[See engraving in No. 34, this Vol. Sci. Am.]

RE-ISSUES.

To Esther L. Larkin, Adm'x. of J. E. Larkin, deceased, of Ballston Spa, N. Y., for method of attaching augers to their handles. Originally patented Nov. 19, 1850.

I claim the handle made in two parts, one of which fits in a socket on the other, and carries a bolt screwed at its end, the said bolt passing through a hole in the auger shank, and screwing into a female screw, or nut, in the part on which is the socket, for the purpose of clasping or firmly holding the auger shank between the ends of the parts of the handle or stock, substantially in the manner described.

DESIGNS.

To J. G. Lamb, of Cincinnati, O., for two Designs for Stoves.

A bed of peat of the purest quality has been discovered within four miles of Saratoga, N. Y., covering about 60 acres. Excavations have been made to a great depth, without finding any bottom to the strata. It is said to be much cheaper and far superior to coal in its use for stoves or grates.

(For the Scientific American.)

Practical Remarks on Illuminating Gas.

[Continued from page 318.]

Air deprived of its oxygen, then, is unfit for respiration and cannot support combustion; therefore it becomes necessary to re-establish this important element, and remove the vitiated gases from the apartment; for this purpose a well arranged system of ventilation is highly important. By good management, any of the materials above enumerated, excepting tallow candles, can be burned without smoke; hence the products incidental to their combustion are not seen, nor are their effects immediately felt; they are therefore scarcely ever thought about, unless the apartment becomes over-heated and the atmosphere rendered insupportable.

The injurious effects and unpleasant sensations experienced in crowded or ill-ventilated rooms, is not so much caused by the heat, as the invisible gases which are evolved during combustion; for a high temperature can be borne without much inconvenience, provided the air be pure.

We have said that the products of combustion are alike, whether lamps, candles, or gas lights are used, but vary in quantity according to the relative proportions of light. This will explain why a gas burner, yielding light equal to twelve or fifteen candles, will warm a room more quickly than two or perhaps three candles; and this explains why the air in a room is heated, and otherwise unpleasant to the feelings, more quickly after gas lights are introduced than before. It must be known that the vitiated or deoxygenated air, together with the vapor and heated air, being lighter than the common atmospheric air in the room, ascends and collects in the upper part of the apartment, while the carbonic acid being of greater specific gravity than the air, descends and forms a strata at the lower part of the apartment, so that in order to ensure proper and thorough ventilation, openings should be made of ample capacity, according to the size of the room, and not only at the top of the apartment, whereby the impure air may escape but also at the bottom for the exit of the carbonic acid gas, which may accumulate in buildings tightly made; and where fire places are not used, a well arranged system of ventilation is highly important; and no system can be successful unless it provides for the altered circumstances at night, when shutters are closed, curtains are drawn, lights are introduced, and when a greater number of persons are assembled in the room than on ordinary occasions.

We are so much influenced by habit that it frequently usurps the authority of reason.

Thus, when the shutters are closed, the curtains drawn, the outside doors kept shut, and lights introduced—conditions which all conspire to make the room warmer than during the day, instead of letting the fire down, so as to accommodate it to these altered circumstances, it is generally trimmed afresh, and then the room is overheated.

In the practical details of warming, lighting, and ventilating apartments, we can follow no safer guides than natural processes.

Suitable allowances must be made, and some modifications are requisite, on account of variable conditions. But the most simple, efficient, and economical plans for securing comfort and health within doors, are those founded on the plainest intimations of what takes place out of doors.

The following result of an experiment by Mr. Rutter gives the temperature at the expiration of each hour; at different distances from the floor, the experiment was performed with one gas light.

5 feet from floor	10 feet from floor.
Commencement 62°	Commencement 64°
1st hour 64°	1st hour 70°
2nd " 66°	2nd " 74°
3rd " 68°	3rd " 77°
4th " 68°	4th " 78°
5th " 69°	5th " 78°
6th " 69°	6th " 78°

All the fittings such as pipes and cocks should be of the best materials and perfectly tight. Much injury is done by leakage.

GENERAL REMARKS.—Not unfrequently gas

consumers remark that their bills for gas are exorbitant, and it is with difficulty they can be convinced they have consumed as much as the faithful little instrument, the meter, indicates. Many severe deprecations have been put upon this instrument, and severe epithets have been poured upon gas companies and their agents, by consumers who do not understand the principles of the meter, nor take the pains of informing themselves, and who do not exercise discretion in the consumption of gas. The ease with which this ever-ready light is obtained, is a great accessory to its wastefulness, for by the mere effort of the will, it can be increased or diminished; so simple a thing is it to turn a cock, that it is often done in haste and without thought, and if opened more than is necessary, large quantities escape, and if more gas escapes than there is oxygen enough to support its combustion, it passes off unconsumed, and therefore wasted.

The methods of burning illuminating gas have, up to the present time, commanded but little attention from the great portion of those persons who daily use it, and a few practical remarks relative to its economical consumption may not be unworthy of the reader's attention. Many different varieties of gas burners have been constructed in this country as well as in Europe, each claiming to possess advantages over prior inventions; those which have been most commonly adopted in this section of the country are the Argand, the Batswing, and the Fish-tail burners. The former is considered as the best of those enumerated, not only as regards its light-giving qualities, but also for its more perfect combustion of the gas; it gives a cylindrical flame similar to the lamp of the same name, the gas being supplied to it through a ring perforated with small holes about 1-32nd of an inch in diameter. It is surrounded by a glass chimney, which forms an essential appendage to this description of burner, its use being to create a draft and direct the current of air through the flame. The slight noise which is sometimes noticeable with these burners is caused by the rush of air, created by the draft through the chimney. If the flame of an argand burner is turned up high, the air which rushes through the interior of the ring becomes decomposed before it can reach the air on the top of the flame, which consequently burns in one undivided mass, the result of which is, the gas is only in part consumed, and carbon is deposited abundantly. If we shut out a portion of the air by partially closing the apertures in the burner, we sensibly increase the amount of light, but at the same time we subject ourselves to the risk of a greater loss, as well as the injury which may arise from smoke; for should the pressure in the street mains be increased by the extinguishment of a number of lights in the city, we should then find our burners smoking, because by shutting out the air by partially closing the apertures, we had deprived them of the necessary amount of oxygen which they required for complete combustion. One cubic foot of carburetted hydrogen gas requires for its proper combustion and conversion into carbonic acid and water ten cubic feet of atmospheric air; an argand burner, with the flame about 2½ inches in height, consumes 3½ cubic feet of gas in one hour, and therefore requires for its perfect combustion not less than 35 cubic feet of air. The Batswing and Fish-tail burners are used without glasses, and are well adapted for the use of manufacturing establishments, street illumination, &c. The former has a narrow cut or slot through which the gas issues, and the shape of the flame is flat, much resembling a bat's wing; the latter has two small holes, so constructed that the two jets of gas intersect each other near the orifices from whence they issue; the flame produced is flat and not unlike the tail of a fish. These burners require much less attention than the argand, and, comparatively speaking, but a limited quantity of gas can pass through them, which renders them very desirable in manufactories where they are regulated by inexperienced workmen.

(To be Continued.)

Three hundred new houses were built in a few days, on the blackened ashes of San Francisco. It takes the Americans.