

AN ABATTOIR FOR NEW YORK.

A new abattoir, somewhat on the French plan, is now in course of construction at the foot of East 106th street, New York. It is intended to supersede the slaughter houses at present existing, which cause a great deal of sickness and mortality in hot weather among those who live in proximity to them.

The building, which is constructed of wood, is divided into three departments—the abattoir, legitimately so called, the size of which is 200 feet by 20 and 19 feet high; the pen for inclosing the cattle previous to killing, which is 200 feet by 40, and which is again divided into 20 smaller pens; and the fat-melting room, 120 feet by 20.

It is built facing the river, upon piles driven into the ground below high-water mark, and has a platform on the river side with gutters and gratings to carry off all refuse to below low water mark. It is well ventilated by a tower in the center of the room, and the appliances for draining the floor are admirable. The builder is Mr. G. A. Kingsland, Greenpoint. It will be ready for use by the first of September. The method of slaughtering the cattle is as follows:—

They are driven into the small pens, 50 in each, and one by one are taken into the abattoir and hoisted by their hind legs by a simple apparatus till the animal's head is just clear of the ground, when its throat is cut. After it is dead and has ceased to bleed, it is lowered, partly skinned, and rehoisted, when it is dressed and slid along two beams, for the purpose, to the other side of the room, where it is lowered by a crane into an ice boat and sent down the river to the retail dealers.

There are 20 hoisting apparatuses, one opposite to each pen, thus enabling them to slaughter as many as 1,500 bullocks in one day. The blood will be used for fertilizing purposes, the fat melted and sold, and all other matter drained off.

As this abattoir is only for large cattle, it is proposed to build one on the same plan for sheep and other small stock. It is to be hoped the retail dealers will take advantage of this place and hire the use of the apparatus, thus doing much toward improving the appearance and health of the city. It is high time that the filthy and dangerous custom of driving animals through our streets should be stopped. The Health Board has this power, and it would be speedily exercised but for the interference of political judges, who disgrace the bench.

Spontaneous Combustion of Coal on Board Ships.

The Committee of Lloyd's Salvage Association has issued the subjoined report upon this subject, which has caused the destruction of so many vessels:—

There are a great many opinions afloat relative to the cause of spontaneous combustion, some ascribing it to the chemical composition of the coal, others to the absence of ventilation, either natural or artificial, while others, again, consider it is caused by moisture.

First, As to the chemical composition of coal. Owners know that one kind of coal is more liable to heat than another, and some will not ship that which is dangerous, but others are less scrupulous and ship all kinds. This might be partially checked by obliging owners to deposit at the Customs an analysis of the coals sent by them; they would be afraid of having any fire traced to their coal. But a better method is suggested by Mr. R. Hunt, F.R.S., of the Museum of Practical Geology, in England. A machine has for some time been employed for washing away the iron pyrites or bisulphuret of iron from the small coal at the pit's mouth previous to converting it into coke. While the coal is in transit, the oxygen acts upon the bisulphuret of iron, and evolves great heat; consequently, if the iron pyrites were excluded, a great source of danger would be obviated. The cost is only about 6d. a tun for the washing, and would be amply set off by the lower rate of insurance consequent on greater security.

Second, As to natural ventilation. It is chiefly small coal which heats, there being room in large kinds for the air to circulate between the lumps, but as the Chilian consumer requires small coal for smelting purposes, the only remedy is for shippers to send as large coal as can be used.

Third, Artificial ventilation. Mr. Hunt proposes a method of securing this, but its efficacy has not yet been proved. It is to let down a pipe in the after part of the ship well into the coal, and to let down one in the fore part with the top communicating with the chimney of the cook's galley; this would produce an up draught and keep down the temperature of the coal.

Fourth, Moisture. Coals are in every way liable to get wet. At the pit's mouth they lay uncovered; in the wagons they are not in any way protected, the expense of tarpaulins being too great. While being shipped the hold is open to the weather, and at sea the hatches are frequently taken off, and the spray and sea air must necessarily damp them.

On the whole, the Committee commended to those connected with shipping coal that—

Coal of undue fineness or damp coal should not be shipped.

That a rod similar to those used in British ships should be used every 12 or 24 hours to ascertain the temperature of the coal.

That the proposition of Mr. Hunt for artificial ventilation should be tried.

That the coal should be washed previous to shipping.

"Gas for Less than Nothing."

Some of the English papers are parading paragraphs under the above heading, which assert that a Mr. Russell manufactures a gas from worthless vegetable substances which leave a valuable residuum; that the gas is of very superior illuminating properties, and by a simple apparatus can be made by any family, etc. The *Journal of Gas Lighting*, says:—

"From inquiries we have made, it appears that Mr. Russell's gas is manufactured from cocoa-nut shells, and that a high value is attributed to the residual charcoal. The process is by no means novel, for as long ago as Feb. 12, 1829, Edward Heard patented 'Improvements in illumination, or producing artificial light,' and cocoa-nut shells were one of the substances from which he proposed to manufacture his gas."



ISSUED FROM THE U. S. PATENT OFFICE
FOR THE WEEK ENDING AUG. 7, 1866.

Reported Officially for the Scientific American.

37 Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required, and much other information useful to inventors may be had gratis by addressing MUNN & Co., Publishers of the SCIENTIFIC AMERICAN, New York.

56,871.—PUMP.—M. J. Atthouse, Waupun, Wis.

I claim the inserting of a glass, stone, or metallic tube, or lining, into the barrel of a wooden pump, and firmly holding it there by means of rubber, or other elastic rings, in the manner and for the purpose heretofore set forth.

56,872.—BRIDLE BIT.—Stephen D. Arnold (assignor to himself and W. F. Arnold), New Britain, Conn.

I claim the combination of the tube bit, a, with the clasp, d, ring, c, constructed and arranged substantially as and for the purpose described.

56,873.—ANCHOR STOPPER.—George H. Babcock, Providence, R. I.

First, I claim, in anchor stoppers, the employment of a rotating tumbler, B, adapted to receive the link, C, or its equivalent, on a point or points lying in, or nearly in, the axis of rotation, substantially as and for the purpose herein set forth.

Second, I also claim combination with the rotating tumbler, B, sliding rod, D, substantially as and for either or both the purposes above specified.

Third, I also claim, in combination with the rotating tumbler, B, the stationary mousing piece, a', substantially as and for the purpose herein set forth.

Fourth, I also claim an automatically-locking anchor stopper, consisting of the rotating tumbler, B, the sliding rod, D, or equivalent device, and mousing piece, a', substantially as herein described.

56,874.—COAL SCUTTLE AND SIFTER.—C. L. W. Baker, Hartford, Conn.

I claim as a new improved article of manufacture, the scuttle, a, sifter, d, when constructed and arranged substantially as and for the purpose as described.

56,875.—SIDE SADDLE.—Clara A. Bartlett, Oakland, Cal.

I claim a side saddle, having one of its horns arranged thereon and attached thereto, so as to be operated substantially in the manner described and for the purpose specified.

56,876.—WASHSTAND AND DESK.—D. W. Bashore, Erie, Pa.

I claim the arrangement of the water-heating tank, B, with the other two tanks, C and D, in a washstand, and the construction of the waste-water space, E, to adapt the stand to use as a writing desk, as specified.

56,877.—CRUSHING, ROLLING, AND KNEADING MACHINE.—Caleb Bates, Kingston, Mass.

First, I claim the swinging bars, c, c, provided with the reversible bars, e, e, containing the rollers, G, H, and arranged as shown to admit of either roller, G, H, being used as the nature of the work may require, substantially as and for the purpose set forth.

Second, The slides, I, I, in combination with the spring, F, and screws, E, as and for the purpose set forth.

Third, The perforated receptacle, J, applied to the bars, c, c, in combination with the reversible bars, e, e, and rollers, G, H, substantially as and for the purpose specified.

Fourth, The combination of the receptacle, A, provided with a curved bottom, in combination with the bars, c, c, rollers, G, H, and swinging bars, c, c, all arranged to operate substantially in the manner and for the purpose set forth.

56,878.—GANG PLOW.—William Battell, Quincy, Ill.

First, I claim the attaching of the axles of the wheels, B, B, of the machine to the rear parts of the bars, c, c, the front ends of which are attached by hinges, a, to the front part of the frame, A, in connection with the segment bars, D, attached to the rear parts of the bars, c, and the levers, E, E, attached to the bars, D, all arranged substantially as and for the purpose specified.

Second, The arrangement of the curved bars, L, attached to the plow beams by links, M, guides, N, with rollers, J, fitted in them, and the levers, O, all arranged to operate substantially in the manner as and for the purpose herein set forth.

Third, The construction of the clevises, H, as shown and described, to admit of the adjustment of the plow beams, as set forth.

Fourth, The thimbles, g, provided with the set screws, h, in combination with the clevises, H, rod, I, and adjustable stays, Q, substantially as and for the purpose set forth.

56,879.—TWEER.—John Bayliss, New York City.

I claim the tweer, A, consisting of the water chamber, B, connecting pipes, D, E, water reservoir, C, elbow pipe, H, air chamber, I, and pipe, J, and having an opening, G, combined and operating substantially as and for the purpose represented and described.

56,880.—GRAIN CLEANER.—C. F. Baylor, Clinton, N. Y.

I claim the arrangement of the wheel, H, with its groove, h, lever, F, screen frame, D, with its screens, b, b', as described, pressure roller, H, and rollers, C, C, constructed and operating in the manner and for the purpose herein specified.

56,881.—PRIVY-SEAT COVER.—William Beach, Philadelphia, Pa.

I claim the cover or lid (B), hinged to the underside of the privy seat, and operated by means of a treadle, substantially as and for the purpose described.

56,882.—LAST.—W. L. Beardsley, Binghamton, N. Y.

I claim placing the bolt and spring in the body of the last in combination with the position of the vertical opening, D, through the heel of the instep block, and the mode of unlatching and detaching said block, as described.

56,883.—STAVE-CUTTING MACHINE.—John Bell, Lancaster, N. Y.

I claim forming the knife with a bevel on the upper side, and combining the knife, when so constructed, with the frame, A, and reciprocating bolt hopper, substantially as and for the purposes set forth.

56,884.—TOOL FOR HOLDING AND DRIVING STAPLES FOR WIRE FENCES.—Albert C. Betts, Troy, N. Y.

I claim a device for holding staples for the convenience of driving the same, composed of a case in which the staples are placed, a slide and spring, and a sliding bar which is actuated by a hammer for driving the staples, all being arranged substantially as shown, so that when one staple is driven by striking the bar and the latter is moved back, a succeeding staple will be adjusted or thrown in line with the bar for the purpose of being driven, as set forth.

I also claim the placing of the sliding bar, G, in a hinged cap, F, arranged with the case, A, so that when said cap, F, is opened the bar, G, will be out of the way and the end of the case left open for the ready insertion of the staples.

56,885.—DIE FOR SWAGING PISTOL FRAMES.—Charles E. Billings, Windsor, Vt.

I claim the cutting dies herein described, for forming pistol and rifle frames; formed with cavities, c, c, and otherwise constructed as specified.

56,886.—ELECTRIC TELEGRAPH.—John Blackie, New York City.

I claim the construction and application of a switch to a line connecting two batteries, in such a manner that the electric current between the batteries may be reversed or transferred from one to the other of the poles of said batteries at will, whereby the batteries shall be made to neutralize each other, and thus remain dormant for the time being, substantially as set forth.

56,887.—FLOUR BOLT.—J. C. Blythe, Perry, N. Y.

I claim the combination of the partitions, E, and hoops, D, either or both, with the arms, B, ribs, C, and cloth of a flour bolt, when the said parts are constructed and arranged substantially as herein described and for the purposes set forth.

56,888.—HORSE SHOE.—Gustave Bonnet, New York City.

First, I claim the peculiar shape of my shoe, as shown in Fig. III.

Second, I claim the rubber band, F, in the combination, and for the purposes specified.

Third, I claim the combination of the shoe with the clamp, D, the hooks, E, E, and the band, F, as and for the purpose specified substantially.

56,889.—TAPPING BARREL.—William Boynton, Auburn, N. Y.

First, I claim the solid plug, F, for shutting off the contents of the cask, as above set forth.

Second, Closing the end of the faucet, G, by means of a solid plug and projecting therefrom the tenon, J, for the purpose above specified.

Third, The apertures in the thimble, A, marked 1, 2, and the corresponding apertures in the screw portion of the faucet, H, marked 4, 5 and 6, when used as and for the purpose specified.

56,890.—BREECH-LOADING FIRE-ARM.—Isaac Bradley, Hartford, Conn.

I claim the arrangement of the spring slide, I, in the stock, A, operating with the breech piece, G, provided with the lug, M, in the manner and for the purpose herein specified.

56,891.—STOVE-PIPE DAMPER.—R. Moss Breckenridge, West Meriden, Conn.

First, I claim the rod, A, combined and arranged with the damper plate, C, substantially as and for the purposes herein set forth.

Second, The spring handle, B, at the upper part of the rod, A, combined with the rod, A, and damper plate, C, substantially in the manner and for the purpose herein shown and described.

56,892.—BODY CONFORMATORS.—S. O. Brigham, San Francisco, Cal.

I claim an apparatus or implement for the cutting and fitting of ladies' dresses and other garments, which when applied to the person will adjust itself thereto, and is provided with any suitable means for indicating the line or lines of the seams for the garment to be cut, substantially as herein described.