

The terrible effects of carelessness are too apparent when steam boilers explode, and blow to the four winds of heaven all that a man has been able to accumulate in a lifetime of hard labor. See to it, then, you manufacturers, and you, engineers! that there are no half-way measures adopted; that no "penny wise and pound foolish" policy prevails; keep the boilers in the best possible repair and condition; buy none but the best fuel; hire only capable, conscientious, and sober men to oversee them; and the rate of insurance will be lower, higher profits will accrue, and steam power be rendered what in fact it is—an energetic, easily-managed, and economical servant.

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list:—

Port Stopper.—The immense weight of which it is necessary to make the port stoppers of iron clad, turreted, or other vessels intended to be invulnerable, to give them the requisite power of resistance to projectiles, has rendered them, as hitherto applied, extremely difficult of operation, owing to the great amount of power required to move them: and the methods of applying them hitherto adopted have rendered them liable to be so bound or disarranged by the blow of a shot as to render it impossible to operate them. The object of this invention is to obtain for a port stopper the requisite power of resistance, and yet enable it to be worked by the application of a very small amount of power, and to prevent its being seriously bound or obstructed in its action by any displacement or disarrangement which is likely to be produced by the blow of a projectile. With a view to accomplish the above object, this invention consists in the construction of the stopper in the form of a crank; also its arrangement to turn about an upright or nearly upright axis situated some distance within or behind and opposite, or nearly so, to the center of the port or embrasure; and further in the attachment of the bearings in which the journals or pivots of the port stopper turn, to supports which are detached from the wall of the turret or other defensive structure in the immediate neighborhood of the port. John Ericsson, of New York city, is the inventor of this improvement.

Registering Marine Log.—The object of this invention is to register the direction of the distances run by a ship or other vessel, as well as the distances themselves; and to this end it consists in the combination with an apparatus substantially like what has been heretofore known as the registering marine log, or "patent log" of a compass of peculiar construction, and an apparatus connected with the registering mechanism for dropping pellets into a compartment of the said compass whenever a certain distance has been made by the vessel to which the log is applied. Alexander Gordon, of New York city, is the inventor of this improvement.

Machine for Exercising the Human Body.—The object of this invention is to obtain a simple and efficient machine for exercising certain portions or members of the human body, designed more especially for the benefit of persons afflicted with dyspepsia, liver complaint, &c. The invention consists in the employment or use of a lounge provided with an adjustable section for the purpose of adjusting the patient in the proper and desired position, and using in connection with said lounge a pair of reciprocating pads arranged and operated in such a manner as to effect the desired end. Dr. Charles F. Taylor, of No. 153 Fifth Avenue, New York, is the inventor of this improvement.

Brewing With Malt.—It is understood by persons that in order to effect the dissolution and saccharification of barley-malt, a temperature of about 160° to 168° Fah. is required, and that when the temperature exceeds 170° the saccharifying property of the malt is killed and the malt is rendered useless. The starch of Indian corn or maize, however, cannot be perfectly dissolved at a temperature lower than that of boiling water, and the attempts heretofore made to treat barley malt and maize mixed together in the same mash tub have failed, because the temperature

required for the saccharification of the malt is not high enough to dissolve the starch of the corn, and very little benefit is derived from the use of the corn; or if the temperature is raised high enough to dissolve the starch of the corn, the barley malt is killed and the whole process a failure. These difficulties are overcome by the present invention, which consists in disclosing the starch of Indian corn and preparing the saccharified extract from corn mixed with barley malt, all in one and the same vessel, simply by sacrificing a small quantity of barley malt, or if desired the process may be executed in different vessels, and from 40 to 50 per cent of corn can there by be mixed with barley malt, and great economy effected in brewing malt liquors. Ludwig Haecker, of Altenburg, in the Kingdom of Hungary, is the inventor of this improvement, and further information may be obtained of Escher & Co., 9 Murray street, New York.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING DECEMBER 8, 1863.

Reported Officially for the Scientific American.

* * 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.

49,803.—Composition for Covering Hams.—Henry A. Amelung, New York City:

I claim a covering for ham or other meat, consisting of paper or cloth soaked in a solution made of the ingredients herein specified and mixed together in about the proportion and substantially in the manner described.

[This invention consists in the application to ham or other meats, of tissue paper or cloth soaked in a suitable solution in such a manner that all parts of the ham or other piece of meat are perfectly covered and protected against the injurious and decomposing influence of the atmosphere. This covering is much cheaper than that generally used, and by its use a great saving in the weight of the hams is effected.]

49,804.—Generating Gases for Heating and Illumination.—Jacques Arbos, Barcelona, Spain:

I claim, first, The formation of a gaseous compound, as hereinbefore described, and the mixing of the same with gas, arising from the distillation of coal, or from the decomposition of oils, resins, tars, or fatty bodies to manufacture gas suitable for lighting and heating.

Second, The apparatus for generating the gaseous compound, constructed and acting substantially as herein before described and illustrated in the accompanying drawings.

49,805.—Gas for Motive Power.—Jacques Arbos, Barcelona, Spain:

I claim, first, The production of a gaseous mixture composed of oxide of carbon of hydride of azote and of a small proportion of carbonic hydrogen, said compound being combined with air and used as motive power, in the manner hereinbefore set forth.

Second, The apparatus for generating the gaseous mixture to be used in the manner substantially as hereinbefore described and illustrated in the accompanying drawings.

Third, The generation of steam by the heating of water in the jacket of the cylinder of the said gas engine and in a boiler surrounding the furnace of the said gas generating apparatus, substantially as hereinbefore described.

49,806.—Snap Hook.—Samuel Babcock, Middletown, Conn.:

I claim the improved manufacture of a snap hook as made not only with its eye in one piece with its hook and with its tongue not only provided with lips to embrace the shank of the hook and form a joint therewith, but with a recess arranged substantially as described, and for the purpose of carrying a straight or leaf spring disposed within such recess, in manner as hereinbefore explained.

49,807.—Skate.—Wm. Bailey, Utica, N. Y.:

I claim, first, The construction of the clamps with the pendant lips, connected and arranged as I have described, and the mode of operating them which I have described.

Second, I claim the construction and use of the skate runner of the flattened form with the elevated edges spread apart for greater base, and for other purposes as described, in combination with the deep wooden stock with bearing sheaves as described, and for the purposes described.

Third, I claim the mode of fastening the runner to the wooden stock, by means of the dove-tail device at the toe, as described; and the heel pin passing directly through the runner at the heel, with head countersunk, in the manner described and for the purposes described.

Fourth, The whole being constructed, combined, and arranged substantially in the manner herein set forth.

49,808.—Telescope.—Wm. H. Baker, Marathon, N. Y.:

I claim supporting the lenses or their settings and diaphragm which compose the eye-piece of the telescope by means of a spring or springs, thereby making a fastening that may be more readily removed, and rendering the lenses less liable to work loose or be broken by the jaw or concussion to which they are exposed in use.

I claim the notch, C, in the setting of the object lens, in combination with the beam on the tube which holds the setting in and prevents it from working out by the recoil of the gun when it is fired.

I claim the spring clasp for holding the fore end of the telescope to the barrel of the gun.

I claim securing the disk, P, to the adjusting screw by turning the edge of the socket over the edge of the disk as described.

I claim fastening the telescope to the disk, P, by means of the ears, T, strap, S, and pin, R, in combination with the spring or springs, between the disk and telescope and between the telescope and strap, S.

49,809.—Lock for Fire-arms.—Wm. H. Baker, Marathon, N. Y.:

I claim in combination with a cock or hammer, having its main

pring rigidly attached to it as described, the swivel or link, F, provided with notches for the sear to hold the hammer at full or half cock.

I claim in a lock constructed as described, extending the arm of the sear or link through the lock plate, to make a connection between the sear and the cock.

60,810.—Railroad Journal Box.—O. Beecher & R. E. Rogers, Philadelphia, Pa.:

We claim, first, The oiling roller, K, frame, J, and weighted lever, M, or its equivalent, the whole being constructed and arranged within a journal-box and operating substantially as and for the purpose herein set forth.

Second, The partition, I, oil chamber, L, frame, J, and oiling roller, K, the whole being arranged substantially as set forth for the purpose specified.

Third, The annular flange, G, or its equivalent secured to or forming part of the wheel or axle, and arranged to project into the interior of the box, substantially as and for the purpose described.

Fourth, The annular flange, H, secured to or forming part of the wheel or axle and arranged in respect to the annular flange, E, of the box, substantially as and for the purpose herein set forth.

60,811.—Soda Water Apparatus.—J. H. Blaisdell, Boston, Mass.:

I claim in a soda apparatus the arrangement of one outlet for soda within another, substantially as described.

Also the arrangement around or adjacent to the soda outlet or outlets of the various outlets for sirups and other fluids, substantially as described.

Also the arrangement in a soda apparatus of a diaphragm, n, and disk, q, or the equivalent thereto, so as to act under pressure as described, to admit into two or more passages, and to shut off therefrom the soda supplied from a common source.

Also the formation of a chamber in a soda discharge pipe, so as to operate to check the velocity of the discharge under pressure, and to supersede the employment of the condensing bottle, substantially as set forth.

Also the condensed arrangement of outlets, so that while each is separate from the others, they are all within the compass of and admit of being discharged into an ordinary drinking glass, without removal thereof, from a fixed position.

60,812.—Harvester.—Virgil W. Blanchard, Bridport, Vt.:

I claim, first, The employment or use of a sliding shaft, E, one or two, provided with arms, H, in combination with two concentric circles of cogs, b, attached to the driving wheel, D, or to a wheel connected therewith for the purpose of varying the speed of the shaft, and throwing the same in and out of gear, substantially as set forth.

Second, The employment or use of springs, G, G, applied to or connected with the shaft or shafts, E, in the manner shown, or in any equal manner for the purpose of equalizing the motion of the sickle, or causing it to operate smoothly without jars or concussions as herein set forth.

Third, The curved stay bar, T, attached to the bar, O, and shoe, P, substantially as shown; in combination with the roller, C, connected to the finger bar, S, as shown, and the cylindrical pin, w, by which the finger bar is attached to the shoe; all arranged as shown, to admit of the finger bar or sickle being raised and lowered, and to the same time serve to hold or retain the same in a proper working position.

Fourth, The connecting of the cylindrical pin, w, to the lever, U, by means of the chain, C, passing over and around the pulleys, F, in the bar, O, and around the pulleys, H, on the frame, A, and attached to the lever, U, for the purpose of raising the finger bar and sickle as set forth.

Fifth, Securing the bar, O, or staying the same in proper position by means of the roller, v, placed in the arm, Q, and fitted in the pendant frame, K, attached to the frame, A, substantially as herein described.

[The object of this invention is to obtain a grain and grass harvester which will be of light draught, admit of having a more or less rapid movement communicated to its sickle as occasion may require, be durable, free from all unnecessary friction in the operation of its working parts, and admit of having its finger bar adjusted with the greatest facility so as to clear obstructions which may lie in its path.]

60,813.—Railway Carriage.—Nahum Franklin Bryant, East Boston, Mass.:

I claim the combination of the sliding box, e, made either with or without the oil chamber and either a stationary or a moveable bearing, the housing f, and the axle, c.

And I also claim the combination of such parts and the check, H, arranged and applied to them so as to operate with them substantially as specified.

I also claim the combination of the moveable stopper, a, with the housing, f, and its check, H, the said stopper being for the purposes or to operate as specified.

I also claim the housing as made and provided with the packing groove, t, and packing, w, to encompass the sliding box, in manner and for the purposes specified.

I also claim the combination of the centralizer or lip, s, with the housing or truck frame, or carriage thereof, when the latter has its wheels so applied as to be capable of being adjusted by means of a wheel changing track to either of two tracks of different gages.

60,814.—Channeling Tool.—Albert Bottum, Bridgeport, Conn.:

I claim the combination of the straight cutter, A, and the arc-formed cutter, B, for cutting a score and a channel within it of the form substantially as herein specified.

[This invention consists in the combination of a straight cutter and an arc-formed cutter so arranged relatively to each other, that while the first cuts a score in the sole or other article the other cuts from within the said score a strip whose transverse section is of semi-circular or segmental form, thus producing a semi-circular or segment shaped covered channel.]

60,815.—Machine for making Nuts.—Orin C. Burdick, New Haven, Conn.:

I claim, first, A die constructed as described in two parts, a and b, and the said two parts combined with a moveable punch, L, and a fixed punch, N, to operate in the manner and for the purpose specified.

Second, The combination of the sleeve, i, punches, L and N, when the same are arranged in the manner described and combined with a die constructed as and for the purpose specified.

60,816.—Feeding Device for Saw Mills.—Victor H. Buschmann, Baltimore, Md.:

I claim, first, Applying the required pressure to the feed and guide rollers, by means of a single force acting equally upon opposite sides of both roller carrying frames, by mechanism constructed and operating substantially as described.

Second, Hanging or supporting the roller carrying frames constructed as described in such manner that while they will always preserve their parallelism to each other they are allowed to yield equally on each side of a central line and accommodate themselves to boards of different thicknesses, substantially as described.

Third, The use of adjustable bearings, i, or their equivalents, in combination with the roller frames, b, b, and pressure plates, g, constructed and operating substantially as and for the purposes described.

Fourth, A central weight or other similar force in combination with a guide applied and operating substantially as and for the purposes described.

60,817.—Construction of Buggies.—Jonathan H. Bye, Sterling, Ill.:

I claim, first, The combination of the thills, a, a, with the springs, b, b and c, c, for the purpose and in the manner herein described.

Second, The construction of the coupling, m, m, with the rear springs, s and r, the curved continuation, n, n, of the coupling, m, m, the beam, i, with its guides formed by l and f, and the flexible bar, h, substantially as set forth.

60,818.—Filter.—Anthony Chabot, San Francisco, Cal.:

I claim, first, Combining one or more porous tubes with a pipe, B, by means of a flange, a, on the pipe for the reception of one end of each tube, a cap, C, for the reception of the other end and a bolt, D, substantially as herein described.

Second, In a filtering apparatus constructed substantially as specified, I claim the herein described arrangement of chambers and passages for conveying the water to and from them, operating as explained to provide for the cleaning of the filters by reversing the flow of water through them without reversing or changing the position of the filter or filters.