

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.

Canal Propeller.—The object of this invention is to obtain a propeller adapted for canal navigation, which, besides possessing other advantages, shall be free from the principal objection to the screw propellers heretofore employed, namely, that of requiring the after-part of the boat to be of such lean form as to seriously impair its carrying capacity; and to this end it consists in the construction of a propeller with its blades arranged tangentially to circles concentric with a propeller shaft placed parallel with the length of the vessel and in its center, such blades being attached to a hub or disk in such a manner as to prevent the water from entering the propeller from the interior, that is to say, except by passing in an inward direction from between the outer edges of the blades, and to compel the discharge at the inner edges of the blades; it also consists in the combination with such tangentially arranged series of blades, of a conical surface, arranged concentrically within them, for the purpose of directing the water which is discharged from the center of the wheel, directly astern of the vessel. J. B. Root, of Brooklyn, N. Y., is the inventor of this improvement.

Ventilating Damper.—This invention relates to an improvement in that class of dampers for stoves, heaters, &c., which have ventilators combined with them in such a manner as to operate in conjunction with the damper to regulate the fire and at the same time afford a perfect means for ventilation. The object of the invention is to obtain a device for the purpose specified, which may be very economically constructed and operate in the most efficient manner. To this end the invention consists in having both the damper and regulator constructed on the slide-register principle, that is to say, with a perforated or slotted part sliding or working over a stationary perforated or slotted part. N. A. Boynton, of No. 60 Canal street, New York city, is the inventor of this damper.

Sewing Machine.—This invention consists in certain novel devices for extending the loops of the upper or needle thread on the under side or back of the cloth or other material to be sewed and carrying the under or locking thread through them. Also in a novel mode of combining the needle-operating lever with the said devices for extending the loops of the needle thread, and carrying the locking thread through them, whereby the operation of the said device is produced by the same crank or its equivalent, by which the movement of the needle-operating lever is produced. Also in a novel construction and arrangement of the feeding apparatus for feeding the cloth or other material in all directions, and in a novel mode of applying the needle in combination with such feeding apparatus to keep the planes of revolution of the feed wheel always at the same distance from the line of motion of the needle. F. W. Grote, corner Thirty-sixth street and Tenth avenue, New York city, is the inventor of this sewing machine.

Apparatus for Filtering Water.—The object of this invention is to obtain an apparatus for purifying or filtering water, which will operate continuously and be self-cleaning, and adapted for operation on a large scale for manufacturing purposes, such as the manufacture of paper and other articles in which a large quantity of pure water is required. To this end the invention consists, substantially, in the employment of an endless apron of felt or other fibrous material passing around a wheel, the periphery of which is formed of parallel rods placed a suitable distance apart, said wheel being placed in a box or reservoir of water, and the apron driven by a water wheel and cleaned by a revolving brush, the water passing through the apron into the wheel and discharged from the ends of the latter. D. N. Denman, of Milburn, N. J., is the inventor of this improvement.

Mode of controlling the launching of Vessels.—This invention has been more especially designed with a view to controlling the launching of iron war-vessels which, by reason of their great weight, require to have the blocks supporting their permanent launch-

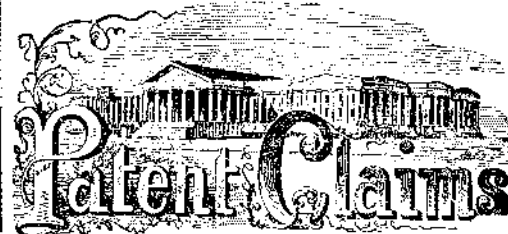
ing ways so close together that the men who remove the blocks from under the keel preparatory to the launch, cannot escape at the sides of the ways, but have to go all the way to the lower end before they can get out. It is also applicable to controlling the launching of other vessels. It consists in fitting the lower or permanent ways just below their faces with a transversely-arranged horizontal shaft provided with catches arranged to enter notches or mortises in the upper or sliding ways, for the purpose of holding the latter back while the blocks are being removed from under the vessel, and after they have been removed, the said shaft being operated by a lever for the purpose of withdrawing the said catches when all is ready for launching. T. F. Rowland, of Brooklyn (Greenpoint), N. Y., is the inventor of this device.

Improvement in Watches.—The object of this invention is to make watches and chronometers keep time with great exactness. The invention consists in the employment in a watch, chronometer or other time-keeper, as a substitute for the fixed stud commonly used for the support of the balance spring, of an elastic support, capable of vibrating in such a direction as to permit the spring, at each vibration of the balance, to have a movement lengthwise, or in such manner that its spires have a rotary motion. This support, is of spiral or convolute form arranged so that its spires, and those of the spring will open and close alternately at each vibration of the balance which will allow the spring to have the movement above mentioned at each vibration of the balance, by which means not only may the effects of expansion and contraction in length by heat and cold be counteracted, and the escapement be kept in beat by keeping the balance in a condition of equilibrium, and, if a curb be used, keeping the effective length from the curb-pins uniform, but its alternate vibration tends to make the opening and closing vibrations of the spring equal in time or isochronous; and, what is more important, the impulse which the spring has lengthwise at the outer end, where it has been formerly held by the fixed stud, increases the range of motion in the balance and consequently quickens it to make up time. By thus supporting the balance spring much of the variation in a watch may be prevented without any further attempt at compensation and a lighter mainspring may be used, and hence the wear of the teeth of the wheels is very greatly reduced. H. B. James, of Trenton, N. J., is the inventor of this improvement.

Propulsion of Vessels.—This invention consists in the arrangement of one or more screw propellers, each within a stationary cylindrical casing, in combination with peculiarly-constructed chambers in front and rear, whereby a column of water, of an area equal to that of the greatest submerged section of the vessel, is discharged at the stern of the vessel by the action of the propeller or propellers, and so any tendency to the formation of a vacuum astern of the vessel, and the consequent retardation of its progress is prevented. B. T. Babbitt, of Nos. 70 and 72 Washington street, New York city, is the inventor of this improvement.

Device for upsetting Tire.—This invention consists in giving to the keys which hold the tire down upon the anvil, beveled edges so that a slight motion of the tire, in a direction transversely to said keys, has a tendency to turn them edgewise, and to bring their edges down upon the tire with increased tightness, and that, by these means, a slipping of the tire under the keys during the operation of upsetting, is entirely prevented; it consists, also, in the employment of a tapering convex wedge or guide to go under the crook made in the tire for the purpose of assisting the operator in obtaining a uniform thickness in that part of the iron that has been or is to be upset; it consists, further, in the employment of one or more false anvils in connection with the regular anvil of the upsetting machine, in such a manner that the surface of the said anvil can conveniently be adapted to the tire or hoops of different diameters. M. P. Larry, of Windham, Maine, is the inventor of this improvement. Address Messrs. A. and A. J. Mosher, Portland, Maine, for further information.

The ancient English "yard" was a measure of length, based upon the length of the arm of King Henry I.



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38,366.—Breech-loading Fire-arm.—Louis Albright, Ottawa, Ohio.

I claim, first, The combination of the hinged and sliding breech-plug, E' E' or E' E', carrying the dog, hammer and main spring, the trigger, K, pivoted in the stationary stock, and the screw threaded and milled abutment, A', when the said parts are constructed, arranged and operated in the manner and for the purpose specified.

Second, I claim the knife, L, projecting laterally from and flush with the forward end of the hinged plug, E' E' or E' E', and acting to sever and remove the butt of the cartridge by the act of closing the plug, in the manner set forth.

Third, The hinged plug, E', having the sliding block, N, adapted to be retracted to allow the passage of the said plug, over a metallic percussion cartridge and to be closed automatically by the cocking and discharge of the hammer as and for the purpose set forth.

Fourth, The arrangement of hinged plug, E', hammer, H', slide, P, wad magazine, D, cap, R, and touch-hole, J, the whole being combined and operating together in the manner described.

Fifth, In the breech-loading arm above described, I claim the employment of the exchangeable hinged breech blocks, E' E' or E' E', for the use of different forms of ammunition, as explained.

38,367.—Device for Stopping Bottles.—Antoine Andre, Chicago, Ill.:

I claim a device for stopping bottles having in combination a screw valve, A, passage, f, channel, g, and funnel-shaped mouth-piece, C, all arranged and operating in the manner and for the purpose described.

[This invention consists in the employment of a screw valve fitting into a seat that is secured to the neck of a bottle in combination with a funnel-shaped mouth-piece, in such a manner that, by the aid of said valve, the communication between the interior of the bottle and mouth-piece can be effectually stopped, and that, on opening the valve, the contents of the bottle can conveniently be poured out, or, by the aid of the funnel-shaped mouth-piece, fresh liquid can be introduced into the bottle with ease and convenience.]

38,368.—Marine Propeller.—Benj. T. Babbitt, New York City.

I claim the combination with one or more screw propellers, of chambers, D H, cut structured substantially as herein specified for the purpose set forth.

38,369.—Apparatus for curing Caoutchouc.—W. R. Bagwell, Chelsea, Mass., assignor to the Union Elastic Goods Company:

I claim constructing the curing vat with a narrow area at the level of the contained fluid and with a movable partition, operating substantially as specified.

I also claim, also, combining a vitreous or other suitable rod or roll with the movable partition, and also combining such rods or rolls with the vat at its upper edges, substantially as shown.

38,370.—Ventilating Damper.—N. A. Boynton, New York City:

I claim the employment of the double-slotted flanged shell, C, in combination with the slotted projection, B, and slotted shell, A, the parts being constructed and operating together, substantially in the manner herein shown and described.

38,371.—Pipe Drainer.—Abram Brigham, Lawrence, Mass.:

I claim the cover, of the box, A, made hollow in the form of a circular tube or pipe with the underside perforated in order to distribute the water when it enters the drain, in combination with wire, P, and air valve, L, substantially as described.

Second, I claim the making the valve seats with a partition, T, between them, for the purpose herein set forth.

38,372.—Window-sash Supporter.—F. P. Catlin, Hudson, Wis.:

I claim, first, The combination of the arm or lever, K, and the weight, W, inserted in the casing, as described, with the rubber or other elastic substance, R, inserted either in the sash or in the lever, K.

Second, I also claim the lever, K, and weight, W, inserted in the sash, with the rubber or other elastic substance attached to either the casing or arm, K, substantially as and for the purpose described.

38,373.—Boot and Shoe.—D. N. B. Coffin, Jr., of Woburn, Mass.:

I claim the button-laced boot and shoe, as a new article of manufacture, the distinguishing feature of which consists of the arrangement of a series of buttons and a series of holes, eyelets, loops or studs upon the different parts which are to be drawn together and secured to each other; these buttons on the one part and holes, eyelets, loops or studs on the other, being arranged to receive a lacing, string or cord, alternating from one member of one series to one of the other, and vice versa, so that the unlooping of the string from one button loosens the loop upon the next, and unlooping one or more of the loops from their respective buttons, the fastening of the boot or shoe is loosened while the ends of the string remain fast, and such loops of the string may be looped on again, so refastening the boot or shoe, substantially as herein set forth.

38,374.—Tax Calculator.—C. D. Crane, Fort Wayne, Ind.:

I claim the permutation method of calculating applied to the calculation of taxes in the manner described in the specification, viz., first, by the printing of the taxes on the multiples of \$100 at each percent on a separate slip, so that the several slips may be arranged into any required series of per cents; and, second, the arranging of the taxes on the intermediate amounts between one and one hundred dollars, including the poll tax, on a separate sheet cut with appropriate apertures, so that they may, when necessary, be added to the amounts on the slips.

38,375.—Machine-shirred Ruffles.—C. O. Crosby, New Haven, Conn.:

I claim the mechanically-shirred ruffle described, as a new article of manufacture, whether the same be double or single, or either with or without a band or binding attached thereto, substantially as herein set forth.

38,376.—Washing Machine.—G. A. Dabney, of San Jose, Cal.:

I claim the combination of the oscillating concave and rubber, when used in connection with the oblique bars, f f, connected with the rubber by the cords, g' g', and the rubber arranged as shown to admit of having its pressure graduated at the will of the operator, as herein set forth.

[This invention relates to an improved clothes-washing machine of that class in which an oscillating concave of rollers is used in con-