

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.

Call for Telegraphs.—The custom now generally adopted in this country, in electric telegraphy, of reading intelligence by the sounds emitted by the instruments in their operation, has rendered it difficult, if not impracticable with the instruments at present in common use, to transmit intelligence with any degree of secrecy, because the instruments in all other offices or stations on a line of telegraph, besides that to which the intelligence is to be transmitted, operating in unison with the instruments at that station, produce the same sounds, and may be heard by other persons than the confidential operator, who may be familiar with the telegraphic alphabet. This difficulty has been, in a great measure obviated by means of the receiving instrument, which constitutes the subject matter of Letters Patent, No. 1,850, dated July 23, 1861; but it is essentially necessary that the several offices or stations on a line should have means of communicating with each other by sounds audible at some considerable distance from the instruments, so that the operator at one office or station may thereby draw the attention of another operator at any other office with which it may be desirable to communicate; to this end this invention consists in an instrument which may be termed the "silent message call," from which, though it is capable of calling the attention of the operator, messages cannot be read, because the electric pulsations produced in their transmission are too frequent for its action, but which, when the pulsations are less frequent, will act in accordance with them and thereby produce sounds sufficiently loud to be heard at a distance greater or less according to the strength of the electric currents, and which sounds will then be intelligible, and are intended to be used to call from one office or station to another. Alexander Bain, of New York city, is the inventor of this improvement.

Key for Electric Telegraphs.—Most persons practically familiar with the operation of the Morse telegraph instruments can read the intelligence by the sounds, not only from those instruments used for receiving the intelligence but from the key commonly used for its transmission, and hence it has been very difficult to preserve secrecy, not only at the offices or stations where the intelligence has been intended to be received, and through which it has passed, but at that from which it has been sent. The object of this invention is to render the operation of the key inaudible, or so nearly so as not to be heard by any one not in very close proximity to it; and to this end it consists in a certain construction of the key, whereby the surfaces of contact, by which the circuit is opened and closed, are caused to come together with a sliding instead of with a percussive action. The inventor of this improvement is Alexander Bain, of New York city.

Dresser Brush.—This invention is an improvement upon a dresser brush which has been in universal use for the last fifteen or twenty years, and by it a decidedly more valuable brush is produced at a less cost. By the original patent a considerable portion of the best part of the bristle was necessarily used in setting; by the present improvement a large portion of this part of the bristle is saved and consequently the quality of the bristle which comes in use for dressing purposes, is superior to that which is found in the brush made by the old method. The present invention relates to a simple device for holding the bristles for the purpose of dipping their butt ends in the pitch or cement used to secure the same to the blocks, and also to a peculiar manner of fastening the strips of wood between which the butt ends of the bristles are secured. Samuel Taylor, of East Cambridge, Mass., is the inventor and manufacturer of this brush.

Manufacture of Metallic Zinc.—This invention consists in submitting the oxide or other compound of zinc, either alone or mixed with coal or other carbonaceous matter used as fuel in charging the mufflers or retorts in which the reduction to the metallic condition is effected, to pressure or pressure and friction combined, whereby the material is brought to

a condition in which it is better adapted for the charging of the mufflers or retorts, that is to say it has imparted to it increased compactness and gravity, which enables the mufflers or retorts to be charged with a much greater quantity than when the material has not been so treated, thereby not only saving time in the process but wear and tear, and the breakages of the mufflers or retorts, which often occurs by cooling when charging, such breakage being a serious loss, as the mufflers or retorts are expensive. G. T. Lewis, of Philadelphia, Pa., is the inventor of this improvement.

Apparatus for working Ships' Pumps.—The principal object of this invention is to provide for the pumping of the bilge water from all parts of a vessel, whether on an even keel or careening over to one side or the other; and to this end the invention consists, first, in leading pipes from various parts of a vessel to one common air-tight chamber with which the pump is connected, thereby enabling the water to be drawn directly from all parts of the vessel by one or a set of pumps. Second, in the employment within such a chamber of a valve or valves, so applied under the control of a hanging weight as to cut off from communication with the said chamber such of the pipes leading from different parts of the vessel as may have their mouths left uncovered with water by the change of position of the vessel and to open to communication with the said chamber such of the said pipes as may have their mouths covered with water, thereby insuring the pumps drawing water while any remains in the vessel, and preventing them from drawing air while any water remains. F. R. Boettner, of Chicago, Ill., is the inventor of this pumping apparatus.

An Ingenious Counterfeit.

Before the war a certain kind of fine sheeting, made in New England by the Lonsdale (R. I.) works, was very popular, and extensively patronized by the Southern merchants. Since the war broke out they have been unable to get them. Among the merchandise captured on board of the British prize steamers off Charleston, trying to run the blockade, and brought to Philadelphia to be sold, was found a lot of goods made by the English manufacturers in exact imitation of the Lonsdale article, bearing a label which is a perfect counterfeit of the New England label, except that for Lonsdale is substituted the word "Lansdale." No such works exist in England, and the goods are palmed off as the American make, upon Southerners who have been for two years swearing that they would never wear Yankee goods if they could get any other. It seems that even their English friends are obliged to counterfeit the Yankee labels before they can get them to buy English sheetings.

HONORABLE EMPLOYMENT.—Let young men remember there is nothing derogatory in any employment which ministers to the well-being of the race. It is the spirit that is carried into any employment that elevates it or degrades it. The plowman that turns the clod may be a Cincinnatus or a Washington or he may be a brother to the clod he turns.

Magazines and other Publications received.

PRACTICAL NOTES ON THE STEAM ENGINE, PROPELLERS, &c. By W. H. King. Published by D. Van Nostrand, 192 Broadway, New York.

This volume is, as its title purports, a treatise on the steam engine and its details and management in general. The work is invaluable to engineers who desire to perfect themselves in their profession, and to all others who wish to become acquainted with the mysteries of the mechanical action of steam. Expansion valves and cut-offs, the study of the indicator, boilers, materials and the elements of machinery, are all treated on in separate chapters, and we can confidently recommend the book to persons of every grade of mental ability for the simple and unaffected style in which it is written. The publisher, Mr. Van Nostrand, has issued the work in very handsome binding and printed it with clear type on fine paper, so that it is a decided acquisition to any library, and a valuable addition to the scanty stock of standard mechanical works. The present is the fourth edition, and has been revised by J. W. King, C. E., U. S. N.

LEAVES FROM THE DIARY OF AN ARMY SURGEON. By Thomas T. Ellis, M. D. Published by John Bradburn, New York.

This book contains incidents of field, camp and hospital life—the author's experience beginning at Camp Washington, on Staten Island, in October, 1861, and ending with the removal of General McClellan after the sanguinary battle of Antietam. The book is very cleverly written and forms a very readable narrative, but it is marred by the discussion of matter upon which the people are divided in opinion and in regard to which the author might just as well have kept silence. The otherwise valuable character of the book is almost spoiled by this unfortunate admixture of matter. Price \$1.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING MAY 12, 1863.

Reported Official 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.

38,455.—Breech-loading Fire-arm.—Wales Aldrich, Cleveland, Ohio:

I claim, first, the wedge shaped body, D, rack, E, and pinion, F, in combination with the rigid spring, K, and slider, L, when these parts are constructed, arranged and operated substantially as and for the purpose specified.

Second, I claim the herein-described device for bringing the piece to a half-cock by the movement of the body, D, as set forth.

38,456.—Register for Horse Cars.—C. B. Angell, Coventry, R. I.:

I claim, first, the step, B, attached to the shaft, K, in combination with the lever, G, G', arranged and applied substantially in the mode described, for the purposes set forth.

Second, The combination of the gates, C, with the wheels, b, the racks, c, or their equivalents, with the beam, d, and the spring, l, arranged substantially as described for the purposes set forth.

Third, The mode of unlocking the beam, d, by the rod, h', combination with the lever, k, and arm, k', acting on the spring, l, or its equivalents, arranged substantially as described for the purposes set forth.

Fourth, I claim the lever, h, with its weight or spring, in combination with the lever, g, shaft, K, and levers, P and N', arranged substantially as described for the purposes set forth.

Fifth, The shaft, No. 7, in combination with its arms or cranks connected with the rack, and wheels, arranged substantially as described for the purposes set forth.

Sixth, The arrangement of the levers and rods, 12, 5, 4 and 3, in combination with the spring, 2, constructed substantially as described for the purposes set forth.

Seventh, The shaft, R and P', their cams, S and S'', their connections with the beam, d, or shaft, 7, arranged and applied substantially as described for the purposes set forth.

Eighth, The drums, Z and Y, constructed and placed as described for the purposes specified.

Ninth, The mode of throwing the drum out of gear by the action of the shafts, U' and V', and the levers, n n', and the parts connected therewith, arranged substantially as described for the purposes specified.

Tenth, The guides, m m', for the purposes set forth.

Eleventh, The combination of the levers, R and N', with the rods, S' and T, and their intermediate and appurtenant parts, arranged substantially as described for the purposes set forth.

Twelfth, The combination of the lever, P, with the springs, rod, wheel and hammer connected therewith, arranged substantially as described for the purposes set forth.

Thirteenth, The combination of the movable step, B, with the drums, Z Y, in connection with the gates, C, through the mechanical contrivances described, or their equivalents, constructed and arranged substantially as set forth for the purposes specified.

38,457.—Lantern.—J. S. and T. B. Atterbury, Pittsburg, Pa.:

I claim, first, applying a metallic reflector to a lantern surrounded with glass, substantially as herein described.

Second, Making the glass surrounding the lantern, or the lantern glass, the support for the reflector, substantially as herein described.

38,458.—Animal Trap.—G. T. Barker, Pittsfield, Mass.:

I claim the combination of the swing door, B, the buttresses or jamba, c, c, and the shelf with the entrance port, d, the whole being arranged and applied together substantially in the manner and so as to operate as specified, the bait being applied to the door.

And I also claim the improved swinging door, as provided, with the bait recess or chamber open in front, as described, or so made and provided with a lateral passage, as specified.

38,459.—Lubricating Composition.—August Bauer, Philadelphia, Pa.:

I claim the lubricating compound or grease produced as hereinbefore stated.

38,460.—Apparatus for working Ships' Pumps.—F. R. Boettner, Chicago, Ill.:

I claim, first, Leading pipes from different parts of a ship or other vessel to one common chamber, C, with which the pump or pumps or suction pipe of the pump or pumps is connected substantially as and for the purpose herein specified.

Second, The employment within such chamber, C, of a valve or valves, so applied in relation to suitably arranged ports in combination with the pipes leading from different parts of the vessel, and so controlled by an oscillatory movable weight as to open communication between such chamber and the pipe or pipes whose mouths are covered with the bilge water and to close communication between such chamber and the pipe or pipes, which, owing to the position of the vessel, have their mouths uncovered by the said water, substantially as herein specified.

38,461.—Machine for planing Oval Moldings.—Francis Brandon, Albany, N. Y. Ante-dated November 2, 1861:

I claim the arrangement with each other and with the pattern, K, and eccentrically rotating face-plate, e, of the self-adjusting cutter, j, and the adjustable cutter, J, the said cutters acting upon the work at right angles to each other, in the manner and for the purposes herein shown and described.

[The object of this invention is to obtain a machine by which heads and concaves or hollows may be turned or cut on the face of oval frames at one operation, the work being done expeditiously and in a perfect manner; the invention also admits of different-sized ovals being turned or cut with one and the same pattern.]

38,462.—Window-sash Fastening.—E. K. Breckenridge, West Meriden, Conn.:

I claim a spring window-fastener which has its pintle, C, provided with a projection or pin, h, and its case or tube, B, made in two parts provided with a slot, d, and shoulder or recess, e, as herein shown and described, so that the pressure of the sides of the orifice into which the tube is driven, will suffice to keep the parts together in working order without riveting or fitting, and so that the pintle, on being withdrawn and partially rotated, will remain withdrawn until it is rotated in a contrary direction, all as set forth.

[This invention relates to an improvement in that class of window-sash fastenings or stops which are composed of a pintle and spiral spring fitted in one or both stiles of the sash, and so arranged that the spring will force the pintle into holes made in the sides of the window frame, the holes being made in the latter at different points, so that the sash may be retained at a greater or less height, as desired.]