

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.

Mold for Casting Shells.—This invention consists in the employment, for holding the core box, of a shouldered metal bush or sleeve applied in such manner as to support the core independently of the sand of which the mold is formed, and thereby prevent the displacement of the core in the mold and insure a uniform thickness of the shell in all parts. Andrew J. Eddy, of Brooklyn (E. D.), N. Y., is the inventor of this improvement.

Manufacturing Chenille.—The ordinary process of making chenille is by first weaving a web with the warp threads separated at intervals, next dividing the said web into strips by cutting the weft threads in the intervals of the warp and then twisting the said strips. That process is necessarily very slow owing to the unavoidable slowness of the weaving, and the object of this invention is to make a greater length of the fabric in a given time. This improved process of manufacture consists in taking what is called gimp, made by winding around two or more threads, placed side by side, the silk or other fibrous substance which is to form the weft or filling of the chenille, and passing the said gimp between the threads which are to form the warp or central core of the chenille, cutting the covering of the gimp in such a manner as to divide every coil, then drawing out the cords of the gimp and twisting the warp or core threads together. George Comings and Louis Mensing, of No. 50 White street, New York, are the inventors of this manufacturing process.

Machine for Cutting Files.—This invention consists in the employment of a cutter and hammer arranged to operate in connection with a bed on which the file blank is placed, in such a manner that all the parts will be operated by the turning of a wheel or crank, the blank being fed to the cutter and the cutter and hammer each actuated at the proper time to perform perfect work. The several parts are also so arranged that they may be thrown out of gear when necessary, in order to admit of the bed on which the blanks are placed being giggered back when one side of a file is cut, in order to cut another side or to commence operations on a new file. Seth Hoke, of Union City, Ind., is the inventor of this improvement.

Iron Vessels.—This invention consists in the construction of the hulls of vessels or fortifications of wrought and cast iron, by arranging two or more series of wrought-iron bars to cross each other, and uniting them by means of castings of suitable form produced by pouring the metal between the said bars, whereby is obtained at small cost a solid iron structure of great strength and impenetrability. B. T. Babbitt, of New York city, is the inventor of this improvement.

DISCOVERIES AND INVENTIONS ABROAD.

The following are some of the more useful of the foreign discoveries and inventions recently patented in Europe:—

Burning Limestone and Raising Steam.—A patent of rather a remarkable character has been taken out in England by W. Blackmore and H. Lamb. The nature of the invention consists in introducing common limestone into the furnaces of steam boilers with the fuel, by which process the lime is burned with the ordinary combustion, thus avoiding the employment of limekilns for burning stone lime. The inventors state that more steam is generated in a boiler with the same quantity of fuel mixed with limestone than in furnaces burning fuel exclusively. The limestone is first spread in lumps over the bars of the furnace and the fire is made thereon, then the fire is maintained by adding more fuel mixed with lumps of limestone.

Fastening Railway Chairs.—J. A. Ransom, of Ipswich, England, has patented a mode of fastening railway chairs with a combined iron spike and wooden tree-nail. The wooden tree-nails for this purpose are compressed, then drilled from the heads toward the points, but not entirely through them, to receive the metal spikes. These tree-nails derive greater holding power upon the chairs by the expansion of the metal after they have been driven in.

Protecting Skins and Furs from Vermin.—Dry skins, such as those of stuffed birds and animals, also furs, &c., are very subject to the attack of insects, by which they are soon destroyed. To prevent such injury to them P. W. Payras, of Paris, France, has taken out a patent for treating them with a mixed solution of the sulphate and chloride of zinc, of a strength marking 15° of Beaume's hydrometer, to which ten grains of arsenic are added to one quart of the liquid. The liquid is applied with a brush or sponge to the fleshy side of the skin, which is then hung up to dry. The presence of the arsenic may be dispensed with in moderately cold climates. The liquid is kept for use in a glass or porcelain vessel, but the most rapid mode of applying it is to dip the whole skin into the liquid, then hang it up to dry.

Protecting Iron Ships from Barnacles.—The perfect protection of iron ships from corrosion and the adherence of barnacles is a subject of very great importance, and it is engaging a great amount of attention in Europe at present. Various substances and compositions for this purpose have already been tried without effecting the object satisfactorily. It is well known that sheet copper and brass are a perfect protection to wooden vessels, and it was supposed that a paint containing copper would be equally effective in protecting iron, but it has been tried, it is said, with very adverse results. R. Griffiths, of London, the inventor of the adjustable propeller which bears his name, has lately taken out a patent for first coating the hulls of iron steamers with one or more courses of red lead paint, then with a coating composed of a mixture of tar, pitch and gutta-percha, then, while this is hot, he lays upon it perforated sheets of copper, which are thus cemented to the adhesive coating.

Improvement in Stereoscopes.—In order to neutralize the coarseness of objects seen through stereoscopic glasses, and also to produce peculiar effects, J. Hurst and J. Wood, artists, London, England, have secured a patent for applying tinted media in such a position that the direct or reflected rays of light falling on the front of the picture, may pass through the media without intercepting the vision. Such media are also applied for the passage of the rays of light on to the front of the picture, with other media at a short distance behind the picture, when the picture is transparent. This media may consist of tissue paper, gelatine, or glass; and by varying the tints very pleasing changes may be obtained at morning or evening, in summer or winter. Transparent, semi-transparent, and tinted media are also applied at a short distance behind the picture, to procure varied effects when the picture is transparent. They connect this transparent media by cords, so as to have intervals between it. They also use a lamp in some cases, with shades and lenses and media of different tints, to obtain the effects of sunrise, sunset, moonlight, and peculiar atmospheric appearances in their pictures.

What goes through the Post-office.

The outside world would be somewhat surprised, and a little amused, to witness all that is offered or goes through the Post-office Department as "mail matter." The absent soldiers are the recipients of all sorts of devices, tokens, presents, mementoes, and almost all kinds of utensils, as well as wearing apparel. Hats, caps, slippers, boots, gloves, mittens, stockings, drawers, shirts, writing utensils, photographs, locks of hair, boxes of pills, and all sorts of physic, liniment, &c. On Wednesday last, a woman appeared at the window of the New York post-office, with a small parcel of doughnuts, directed to an absent soldier; but on learning that the postage would amount to 48c., the kind lady concluded that, together with the risk of breakage, &c., they would be a dear morsel to the recipient.

HANDLING HOGS.—One can hardly form an idea of the rapidity with which hogs are disposed of in a large packing-house, without looking on, but the following notes will give some insight to the matter:—At the packing house of Messrs. R. M. & O. S. Hough, forty-six men and boys slaughtered and cut 2,023 hogs in 10 hours and 40 minutes. At the packing-house of Messrs. V. A. Turpin & Co., one cleaver-man cut up 947 hogs in 8 hours 35 minutes; 385 of them into prime mess and 562 into shoulders, hams, and short sides.—*Well's Chicago Express.*



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* * Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, 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.

37,378.—Lamp-lighting Device.—Norman Allen, West Meriden, Conn.:

I claim the combination of the chamber or receptacle, A, tube, B, and wick, C, all arranged substantially as shown and described to form a new and improved article for the purpose specified.

[This invention relates to a new and useful device for lighting coal-oil lamps and other lamps which are provided with chimneys, whereby it is rendered unnecessary to remove the chimney in order to light the lamp. The invention consists in having a tube connected with a reservoir or chamber which is supplied with alcohol, spirit gas or other similar volatile substance, the tube being provided with a wick and perforated near its end.]

37,379.—Copying Press.—J. H. Atwater, Providence, R. I.:

I claim a box copying press for the purpose of taking a copy of writing, and for the protection and safe keeping of the copying book, as herein described.

37,380.—Armor Plates for Ships and other Batteries.—B. T. Babbitt, New York City:

I claim having the bars, B C, made in wedge form and combined in the manner shown with the bars, A, and the cast metal filling, all as set forth.

37,381.—Truss.—J. T. Bartlett and E. E. Butman, Boston, Mass.:

We claim the arrangement of the two screws, D E, with the ball and socket of the pad and its arm, C, substantially as specified, the arm being applied to its spring by devices to admit of its adjustment, substantially as explained.

37,382.—Steam Generator.—Edward and John Bourne, Pittsburgh, Pa.:

We claim the combination and arrangement of the short levers, T and K, and rod, W, with the elastic head, r, in the chamber, C, substantially in the manner and for the purposes as herein set forth.

We also claim assisting the safety valve to rise when necessary by means of the rod, W, acting against the lever, H, that holds the valve down for the purpose of enabling the steam to escape, as herein set forth.

37,383.—Pump.—F. S. Burt, Mount Pleasant, Iowa:

I claim the combination of the piston, D, and the slide valve, H, working in separate compartments, E G, in the pump chamber, A, in connection with the tube, B, and the water passage, I, in the side and top of the chamber, A, and the induction openings, g g g', in the side of the said chamber, all being constructed and arranged as and for the purpose herein set forth.

[This invention relates to an improvement in that class of pumps which are submerged and elevate the water to the top of the well through a tube. The object of the invention is to obtain a simple, efficient and economical pump of the class specified, and one that will not be liable to get out of repair or become deranged by use.]

37,384.—Boring and Squaring-off Cylinders.—J. C. Chapman, Charlestown, Mass.:

I claim the cylinder or cutter-head or stock, E, with eccentric, F, attached, in combination with the ring, G, placed on the eccentric, and having its periphery provided with pins, n, and the nut, B, fitted within the ring, and connected with the ring, G, through the medium of the slot or groove, m, and roller, l, the above parts being fitted on the arbor, A, as shown, and all arranged to operate as and for the purpose herein set forth.

I also claim the cylinder, H, with the eccentric, U, having the ring, T, fitted on its periphery, attached, in combination with the plate, J, provided with the toothed rim, Q, the screw shaft, O, gears, P P, and cutters-slides, K K, all arranged substantially as and for the purpose set forth.

I further claim the socket, W, when arranged with a slide, Y, containing the hole, v, for the center point as shown, but this I claim only when used with the implement or tools, herein shown and described.

[The object of this invention is to obtain an implement or device which may be applied to an ordinary turning lathe, and made to operate in the way of boring and squaring or facing off the ends of metal cylinders or other articles equally as well as the more pretentious and comparatively expensive machines which are now made for such purposes.]

37,385.—Machine for Manufacturing Chenille.—George Comings and Louis Mensing, New York City:

We claim the combination of a cylinder, H, and knife, L, with devices for conveying the gimp and thread, substantially as herein shown and described.

We also claim having the gimp arranged and carried upon cords, f, as herein set forth, so that chenille in pieces of any desired length may be produced, as set forth.

37,386.—Door Latch.—F. M. Crossett, Piermont, N. Y.:

I claim the loop, D, formed at the inner end of the latch, E, and provided with the beveled end or surface, c, in combination with the projection, d, on the sliding spindle, E, all arranged substantially as and for the purpose herein set forth.

[This invention consists in arranging the spindles of the knobs with the latch, in such a manner that the latch will be operated, that is to say, drawn within its case by a longitudinal sliding movement of the arbor instead of turning the same as hitherto.]

37,387.—Crutch.—H. G. Davis, New York City:

I claim an adjustable handle, E, constructed and arranged to serve in connection with the staff, as and so as to realize the advantages herein set forth.

37,388.—Molds for Casting Shells.—A. J. Eddy, Brooklyn, N. Y.:

I claim the metal bush or collar, H, constructed and applied in combination with the flask, B, bed-piece, A, and core bar, E, substantially as and for the purpose herein specified.

37,389.—Machine for Casting Bullets.—J. P. Driver, Marengo, Iowa:

I claim, first, The employment in casting bullets of an endless series of molds carried by one or more endless belts or chains, or connected together to form an endless chain, by whose movement around two drums the molds are opened and closed, substantially as herein specified.

Second, The combination with the endless series of molds, of a knife or knives applied substantially as herein described to cut off the sprues of the bullets.

Third, The roller, G, applied in combination with the endless