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.

Machine for Drying Grain.—This invention consists in the arrangement of ledges or lugs projecting from the sides of the cast-iron beams which support cast-iron tiles to operate in combination with said tiles, in such a manner that they form a support of the same, leaving the upper surfaces of the beams flush with the upper surface of the tiles, and that by the action of the tiles the beams are prevented from springing, and a cheap and durable platform is produced; it consists also in the arrangement of semi-circular scoops, either rigid or adjustable and moving with their concave side toward that end of the platform over which the grain is to be discharged, in combination with a reciprocating carriage, in such a manner that said scoops, in going forward, stir and move the grain along toward the discharging end of the platform and in going back, the convex sides of said scoops in passing through the grain divert the same laterally and stir it without producing a backward motion of the same. Thos. C. Vice, of New Haven, Conn., is the inventor of this improvement.

Construction of War Vessels.—The prominent object in this invention is to protect a vessel from fatal injury by completely surrounding her vital parts with water. This may be effected either by introducing water into suitable chambers extending over the hull, or by settling the vessel in the water below the sailing draught, when she is to go into action. In practice it is preferred to embrace both methods, the deck being protected by completely covering it with water placed in covered tanks, and the sides by lowering the ship in the water. The lowering of the vessel is effected by the introduction of water into suitable tanks from which it is again expelled when it is desired to elevate the vessel to her sailing draught. The invention further consists in means for imparting steadiness to a submerged or partially submerged vessel, an improved construction of armor for partially submerged vessels, and a device for relieving water chambers of the expansive force caused by the entrance of a projectile. The inventor of this device is E. A. Stevens, of Hoboken, N. J., and the patent bears date January 13, 1863.

Beer-cooler.—This invention consists in the arrangement of a series of semicircular metallic troughs placed at certain distances apart, so as to leave spaces for the air to circulate in, and connected at their ends by similar transverse troughs, in combination with pipes passing through the center of said troughs and leaving a clear channel all around, in such a manner that if beer or other liquid is made to pass through the semicircular troughs and cold water through the pipes, the beer or other liquid is brought in contact with the cold sides of said water pipes in thin strata; and furthermore, the cold air is in contact all around the troughs and passes through between them, and thereby the cooling process is completed rapidly and with an apparatus of comparatively small dimensions. Valentine Haeffner is the inventor of this beer-cooler, and his address is Newburgh, N. Y.

Mode of Cleaning Boilers.—This invention consists in the employment, in combination with a mud well or receptacle below the fire surface of the boiler, of a brush worked by a rod passing through a stuffing-box, for the purpose of sweeping the deposit from over the fire into the well and thereby preventing the burning of the boiler. G. B. McDonald, of Louisville, Ky., is the inventor of this device.

Fulton and Napoleon.

In 1803, when Napoleon was in camp at Boulogne, Fulton wrote to him, offering his invention of the steamboat as a certain means of transporting troops to any part of the English coast without regard to the direction of the wind—an offer which that potentate was disposed to accept, but which, too diffident of his own judgment in so novel a matter, he referred to the Academy of Sciences, by which body it was ridiculed, although Fulton had conducted tolerably successful experiments at Havre and Brest in the previous year. Napoleon therefore gave no more attention to the subject. Fulton also constructed the first submarine boat, and made some experiments with it at Havre. In this he remained under water one hour with three companions, without any communication with the surface, and caused it to move through the water at the rate of a mile and a-half an hour. Such a vessel he also proposed to the French Emperor for destroying English war ships, but, like the steamboat, it was disregarded by Napoleon.

VALUABLE RECEIPTS.

DAMMARA VARNISH.—"Gum Dammara," as it is called, is a resin not a gum. It is employed for making varnish by dissolving it in turpentine. The resin should be first well dried, for if it contains any moisture it will tend to make the varnish opaque. A common way to prepare it is to boil the resin in the turpentine in an open vessel; but if the resin is thoroughly dried, it will dissolve slowly in cold turpentine and form a clear varnish. A good way to prepare it on a large scale, is to use an enameled cast-iron vessel capable of containing about fifty pounds for making twenty-five pounds of the varnish. The dammara resin is put into the vessel in a solid state, the proper quantity of turpentine (five parts to four parts of resin) is then poured in, and the whole put upon the fire. As soon as the boiling begins, the water originally included in the resin is dissipated in the form of vapor, and the resin acquires a softer consistence. When all the water is expelled and the varnish boils quietly, the solution is completed, and the vessel may be removed from the fire. As long as traces of water exist in the varnish, its boiling is attended with a bubbling movement; but as soon as all the water is got rid of, the varnish boils quite quietly. When the varnish is prepared, it is poured through a fine wire sieve, and then allowed to settle sufficiently. If it be desired to give the varnish a tougher consistence, 2 or 3 per cent of good bleached linseed oil (not boiled with oxide of lead) must be added to it before boiling. This communicates great toughness to it.

ALLOY FOR JOURNAL BOXES.—Take seven and a-half pounds of pure copper and melt it in a crucible; then gradually add, in small pieces, ninety-two and a-half pounds of zinc; when this is melted and the two metals thoroughly mixed, the alloy is to be run into molds for journal boxes. A patent was granted May 1, 1855, for this alloy, to Thomas Forth, of Cincinnati, Ohio.

BABBITT METAL.—Take twenty-four pounds of copper and melt it first in a crucible, then add gradually twenty-four parts of pure tin and eight of antimony. Great care must be exercised in adding the tin to the copper. This composition is rendered softer by the use of a greater quantity of tin. It is first run into ingots, then melted and cast to form the journal boxes, &c.

FINE POLISHING POWDER.—Professor Vogel, of England, states that the finest powder for polishing optical glasses and fine metals, is made by calcining the oxalate of iron. It is superior to the common polishing powder for glass made of llxivated colcothar.

CONSOLIDATING CAST-STEEL.—Mr. J. M. Rowan, of Glasgow, proposes to consolidate cast-steel, or metal produced by the pneumatic process, by compressing it whilst still liquid or nearly so, whereby it is rendered much better adapted for subsequent processes.

A HARMLESS green for coloring confectionary may be made as follows:—Take thirty-two parts of saffron and infuse it in seven parts of water, to which add twenty-six parts of the carmine of indigo in fifteen parts of water. The yellow saffron and blue indigo when mixed form a beautiful green color, which will combine with sugar solutions.

A MOST excellent furniture paste is made by dissolving one part resin and one part beeswax in two parts of benzine.

REFINED glycerine is a very suitable lubricator for clockwork. It does not freeze in cold weather.

WITH respect to the impact of projectiles, Sir Howard Douglas has said: "No additional weight of projectile will increase the effect of its impact, the charge of powder remaining unchanged. The ignited powder is the primary force—not the shot."

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING JANUARY 20, 1863.

Reported Officially for the Scientific American.

*** 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.

37,427.—Oil Barrel.—R. N. Allen, Cleveland, Ohio:

I claim the herein-described oil barrel or cask in which the parts are constructed, combined and arranged in the manner and for the purpose set forth, the same being a new article of manufacture.

37,428.—Skate.—G. W. Ansley, Cleveland, Ohio:

I claim the arrangement of the spring, C, stem, E, pivoted or jointed to the runner, adjustable plate, H, and socket, D, substantially as and for the purpose set forth.

37,429.—Hay Rake.—Daniel Armel, Somerset, Pa.:

I claim the combination of the tread-lever, C, with the platform, A, seat, b, and arms, f' f'', substantially as and for the purpose described.

37,430.—Grain-sowing Machine.—J. Bergstresser, Berrysburg, Pa.:

I claim the shape and construction of the spiral scourer, B, with its projections, J, for scouring grain, substantially as described.

37,431.—Paper Shirt Collars.—C. K. Brown, Troy, N. Y.:

I claim a paper shirt collar having the parts at or around the button holes, d, therein, made thicker and stronger than the main portion thereof, by means of a piece or pieces, c, of thin muslin or other suitable strengthening material, pasted or otherwise cemented in or to the layer or united layers of paper constituting the main portion or body of the collar, substantially as here described.

37,432.—Machine for Printing the Addresses on Newspapers.—J. A. Campbell, Milton, Canada West, formerly of Buffalo, N. Y.:

I claim, first, The combination of the levers, E K, bar, L, wheels, I J, sleeve, n, rack, M, sills, A, and a sliding bed-piece, B, whereby the machine is automatically advanced after each depression of the platten by devices independent of the chase.

Second, The combination with an addressing machine, substantially such as described, of the sills or ways, A A, and cross-pieces, a a, adapting the machine to fit over a common chase placed upon a common table and to be moved in a right line from end to end or from side to side of the said chase.

[The distinguishing characteristic of this machine is that it is adapted for use with a chase of common construction and of any size, the machine moving automatically over the type from name to name and being shifted from column to column as required.]

37,433.—Drilling and Screw-cutting Machine.—C. W. Coe, Corunna, Mich.:

I claim the combination of the gearing, D E H, with the screw, K, ratchet, M, adjustable pawl, N, shaft, I, cam, Q, and the moving or rising and falling jaws, S S', all arranged for joint operation, as and for the purpose herein set forth.

[This invention relates to a novel and improved arrangement of parts whereby a very simple and compact machine is obtained for the purpose of drilling and cutting screws, and one by which it is believed several advantages are obtained over those now in use.]

37,434.—Fence.—F. K. Cosgrove and Rudolph Westerman, Fort Wayne, Ind.:

We claim the arrangement of the bill-shaped ends, c, of the braces, B, in combination with chamfered edges of the mortises, d, in the battens, b b', and with gibs, e, keys, f, and anchor stakes, g, all constructed and applied in the manner and for the purpose herein shown and described.

[The object of this invention is to produce a fence that will suit nearly all kinds of localities and soils, one that can be conveniently and cheaply built by a person of ordinary mechanical skill, a portable or permanent fence which does not require the use of posts in its construction, which cannot be easily displaced by frosts or thaws, storms or floods, winds or animals running at large, and which is adapted, by its peculiar structure, alike for prairie as well as timber lands. An engraving and full description of this fence were published on page 80, present volume of the SCIENTIFIC AMERICAN.]

37,435.—Screw Nut.—Lyman Derby, New York City:

I claim the construction of a screw nut, substantially as hereinbefore described, and operating in the manner and for the purposes set forth.

37,436.—Apparatus for Burning Coal Oil for Heating Purposes.—H. W. Dopp, Buffalo, N. Y.:

I claim the distributing plate, A, with solid center, a, and generator, B, or their equivalent, so arranged that the vapor shall escape from one or more small orifices into the unconfined atmosphere, and be arrested by means of the solid part of plate A, or its equivalent, for the purpose of causing its combustion after it is thus arrested, sufficient heat being obtained thereby to keep up continuous vaporization, substantially as described.

I also claim the combination of the crank pin and the cam groove to obtain an up-and-down motion of the graduating valve, C, substantially as and for the purpose herein described.

37,437.—Churn.—J. B. Edgell, E. A. Alexander and H. C. Kellogg, Quasqueton, Iowa:

First, We claim suspending the dasher, F, from the top end of a vertical shaft, C, substantially in the manner and for the purpose herein shown and described.

Second, The arrangement of the central tube, b, fastened to the bottom of the tub, A, in combination with the vertical shaft, C, constructed and operating as and for the purpose herein specified.

[This invention consists in the arrangement of a tube of metal or other suitable material surrounding the vertical shaft, which is firmly fastened to the bottom of the tub and extending up above the surface of the cream in such a manner that the tub is entirely independent of said vertical central shaft, and it can be taken off or replaced whenever desired, without permitting any portion of the cream to escape.]

37,438.—Mode of Raising Sunken Vessels.—P. E. Falcon, Cohasset, Mass.:

I claim my improved process of raising sunken vessels by means of casks or contrivances of like character, the same consisting in arranging the said casks filled with water, on or within a vessel, and with their bungholes downward, as set forth, introducing an air conduit into the bungholes of the casks successively, and forcing air through such pipe and into each cask, and expelling the water of such cask out of the bunghole and with respect to the said air pipe substantially as specified.