

## AMERICAN INVENTIONS ABROAD.

Foreign nations have not been slow to acknowledge the superiority of Americans in the arts and in inventing appliances by which the severity of labor is lessened, and the product of it cheapened. It is only necessary to mention the several machines with which the public are immediately familiar to prove this assertion; as, for instance, the sewing machine, the reaper, the milking machine, and numberless other devices of the kind introduced into foreign countries, in connection with which we have been happy to serve our patrons. We have before us the printed specifications of several American inventions which have been patented in England, through the Scientific American Patent Agency, and which have been favorably received there:—

## METHOD OF JOINING WOODEN BOXES.

Patentee: Wright Duryea, of New York City.—This patent covers a new method of making wooden boxes, whereby the several sections comprising the same are united by thin metallic strips, bent into any desired form, and inserted endwise into slots cut in the beveled ends of the stuff, so that they bind the whole fabric firmly together. A very ingenious device.

## RAILWAY JOINTS OR CHAIRS.

Patentees: Raymond French, of Seymour, Conn., and William Goddard, of Boston, Mass.—This arrangement consists in making lines of rail continuous and holding them together firmly, by shrinking the chair that the ends of the rail are received in, on to the rails themselves. By this method an exceedingly reliable and firm hold is obtained.

## PUMPS.

Patentee: Thomas Hanchrow, of Sacramento City, Cal.—This invention relates to the employment of inclined valve seats which do not permit the lodgement of any foreign substance on their surfaces, whereby their action would be impaired; also to the general arrangement of valves and bonnets of the same, with a view to convenience and ease of access to them.

## ARMOR PLATES FOR IRON-CLADS.

Patentee: Edward Cox, of Point Pleasant, Ohio.—The inventor has, in this instance, contrived a method whereby the several plates on the ship's side are combined together by a series of joints or tongues that lap over each other, thus strengthening the vessel. Two of these grooves and tongues are on one face of the armor plate and two on the opposite face, to allow of the interlocking of the edges of adjacent plates; these are similarly formed and arranged in rows, so as to break joint with adjacent rows.

## APPARATUS FOR RAISING OR FORCING WATER.

Patentee: Abel Brear, of Saugatuck, Conn.—This is a device for the above purpose, and consists of a series of pipes, arranged peculiarly with reference to one another. The water is raised by creating a vacuum in these pipes by the agency of steam or compressed air.

## BITS FOR BREAKING COLTS AND HORSES.

Patentee: A. L. Weymouth, of Boston, Mass.—The object of this invention is to produce a bit by which perfect control can be had over vicious beasts; to this end the bit is constructed with a central joint, that, by expanding with pressure, opens the mouth of the animal at the will of the driver, and effectually checks any unruly feeling he may have. The bit can be used either in connection with the ordinary one or separately, as desired, and must prove a very desirable appendage to a harness.

## SETTING ARTIFICIAL TEETH.

Patentee: David Steinberg, San Francisco, Cal.—In this plan the false teeth are set in a gold, platinum, or other metallic plate, by means of vulcanized rubber, whereby all soldering or riveting, by which the plate is liable to be warped, is dispensed with. The plate is prevented from oxidizing, and is also strengthened by the gum.

## MANUFACTURE OF WROUGHT-IRON ORDNANCE.

Patentee: David T. Yeakel, of Lafayette, Ind.—This patent relates to a method of forming guns out of a continuous sheet of metal, by wrapping the same about a mandrel; it was illustrated and described on page 325, Vol. VI (new series), of the SCIENTIFIC AMERICAN.

## FERTILIZING COMPOSITION.

Patentee: J. M. Gallacher, of Roxbury, Mass.—

This invention consists in the compounding of certain chemical agents together, whereby the productive properties of any soil which has been exhausted by injudicious farming can be invigorated.

## CHIMNEYS FOR LAMPS.

Patentee: Harvey Brown, of New York City.—This improvement consists in forming the chimneys so that they will be suitable for any kind of lamp, or for any sort of oil or liquid that requires a chimney to promote combustion. They are a combination of glass and metal, and appear to be exceedingly efficient and ornamental.

## SEPARATING VEGETABLE FIBERS AND EXTRACTING THE COLORING MATTERS THEREFROM.

Patentee: A. S. Lyman, of New York City.—This invention relates to the separation of the fibers of vegetable substances by whipping, beating or grinding them while exposed to the action of water, at such temperatures and at such pressures as may be advisable; and further relates to the washing out of the coloring matter, gum, &c., by changing the water while they are undergoing the processes above mentioned.

This long list is only a tithe of those inventions which are continually passing through our hands, the claiming of which we have successfully prosecuted abroad for American inventors and proprietors of patents. Nothing is more gratifying to the patriotism every lover of his country possesses, than the position which we are rapidly securing to ourselves abroad, of being the first nation on the globe in the variety and utility of our labor-saving machinery.

## 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.

**Clothes-drying Machine.**—The object of this invention is to obtain a simple and economical device to facilitate the hanging out of clothes for drying, and also to facilitate the taking of them down from the line when dried. At present, as is well known, clothes are taken from a basket and secured to the line, one piece at a time, with pins. They are also, when dried, removed from the line, one piece at a time. This is a slow and tedious operation in cold weather, and is attended with considerable trouble in windy weather—difficulties which, it is believed, are fully obviated by this invention. The invention consists in the employment of hangers or supplemental frames arranged in such a manner that the clothes may be applied to them in the house or under cover, where the washing is performed; the hangers or frames, with the clothes attached, being placed or suspended on suitable drying lines prepared to receive them. Charles Goldthwait, of South Weymouth, Mass., is the inventor of this device.

**Defensive Armor for Vessels.**—This invention consists, principally, in the construction of defensive armor for ships and other vessels, of two series of plates, arranged parallel with the sides of the vessel with a space between them, and arranging within the said space, plates, tubes, scrolls or strips of metal set edgewise, so as to present themselves to the crushing force of projectiles, in such a manner as to form the equivalent of hollow columns in resisting such force, such armor making a cellular structure very strong in proportion to its weight, and when continued below the water-line, giving the vessel an additional degree of buoyancy to compensate wholly or in part for its own additional weight. It also consists in a certain mode of constructing the contiguous parts and joints of the outer plates, whereby the said plates are made to form boxes for the reception of the plates, strips, tubes or scrolls which form the inner cells or columns, and to protect the bolts which attach the armor to the vessel. R. H. Jewett, of Mount Sterling, Ill., is the inventor of this improvement.

**Revolving Fire-arm.**—This invention consists, first, in the employment, in combination with a cylinder frame opening by a movement on a hinge joint arranged in front and below the line of the axis of the cylinder, and with an axis pin secured to the barrel, of a spring latch so constructed and applied as to serve the two purposes of connecting and locking

the barrel with the upper part of the frame, and of securing the cylinder upon the axis pin when the barrel is disconnected from the upper part of the frame. It consists, secondly, in so constructing the spring latch and the hammer, that when the hammer is down it aids in securing the spring latch in its connection with the frame, and so aids in securely locking the barrel to the upper part of the frame.

It consists, thirdly, in so constructing the axis pin and applying the same in combination with the barrel or frame of the arm that, while remaining attached to the barrel or frame, it may be employed to expel from the chambers of the cylinder the cartridge cases, shells or other matter which may remain therein after firing the arm. And, finally, it consists in a certain mode of applying a detachable recoil plate in combination with the spring which keeps the revolving dog to its work, whereby the said plate, while allowing the dog to work through it, is made to aid the said spring in excluding from the lock any gases escaping at the rear of the cylinder in firing. J. C. Howe, of Worcester, Mass., is the inventor of this fire-arm.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING FEBRUARY 17, 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.

37,668.—Railroad Chair.—John Armitage, Troy, N. Y.:

I claim the combination of the fixed and hinged jaws, B E, and screw bolts, F I, with a base-plate, A, arranged substantially as and for the purpose set forth.

[This invention consists in constructing the chair with an adjustable or hinged jaw so arranged as to admit of a rail being removed from the chair and also fitted or secured in it without detaching the chair from the sleeper, thereby effecting a saving in labor and expense, and also avoiding the injury hitherto done to the sleepers in consequence of the repeated driving-in and withdrawing of spikes from the latter.]

37,669.—Galvanizing Wire.—George Bedson, Manchester, England:

I claim drawing the material in a heated state from the annealing oven directly into the cleaning bath, and thence, when galvanizing is to be done, directly into the bath of molten metal substantially as herein shown and described.

37,670.—Molding and Casting Pipe.—Benjamin S. Benson, Baltimore, Md.:

I claim, first, The annular flanged base-plate, D d, employed in the described combination with the annular plate, C, and constituting a seat to guide and hold the lower end of the core, as explained. Second, The detachable anchor, F f, constructed and applied substantially as described to prevent the deflection of the intermediate portion of the core.

Third, The shield, G, employed in the manner explained, to exclude sand, metallic oxide, or other foreign matter, and permit the entrance of the molten metal.

[This invention effectually prevents the deflection or displacement of the core, which, with molds in common use, is the chief cause of producing pipe of unequal thickness in different parts. A simple and ingenious device is also employed to prevent the entrance of sand, metallic oxide, or other foreign matter within the mold in the act of pouring, and all danger of flaws in the pipe is thus avoided.]

37,671.—Sash-fastener.—Samuel W. Bidwell, Hartford, Conn.:

I claim the double-pronged, swinging catch-piece, e, in combination with the perforated suspension plate, a; the whole constructed substantially in the manner hereinbefore described, and operating to lock both sashes of a window, as set forth.

37,672.—Horse Rake.—S. C. Brinser, Middleton, Pa.:

I claim the combination of the treadle, K, levers, J H, and connecting rod, I, constructed and arranged as specified, with a horse rake in which the draft is applied to the thills or bed, and the latter hinged to the rear and upper part of the axle; all as herein shown and described and for the purposes set forth.

[By this invention the action of the rake is rendered as nearly automatic as possible, the forward draught of the team being used to elevate and clear the teeth at the proper instant, and the weight of the driver serving to hold them down at other times. A slight motion of a lever serves to bring either of these opposing forces into controlling action so that the operator is entirely relieved of the labor of working the rake.]

37,673.—Boiler-feeder.—Theodore W. Burger, Jersey City, N. J.:

I claim the arrangement of the chambers, d e e, valve, B, and ports, h i, substantially as and for the purpose herein specified.

[This invention relates to that class of boiler feeders through which the water is fed into the boiler by gravitation through an opening, the height of which regulates the level to which it is supplied; and it consists in a certain arrangement of the chambers, valve and ports whereby the construction of such feeders is much simplified.]

37,674.—Machine for Shelling and Winnowing Corn.—Benjamin Clough, Natick, Mass.:

I claim my improved arrangement of the two grids, D E, and the



