

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:—

Screw Tap.—The object of this invention is to provide for the tapping simultaneously of two opposite holes in the two tube sheets of a boiler, or in any other two pieces of metal or other material, at any distance apart, in such manner that the threads in the said holes shall be true to a common axis, so that a pipe or other piece may be screwed simultaneously into both; and to this end it consists in a tap with two heads, one or both of which are made adjustable lengthwise of the shaft of the tap, to bring them at the requisite distance apart; also in an arrangement of portions of the tap for the reception of two wrenches, in such a manner that in the tapping of the two holes simultaneously the shaft may not be subject to torsion. James Howell and David Birdsall of Jersey City, N. J., are the inventors of this tap.

Cable-protection for Iron-clads.—Circumstances may often arise when it is absolutely necessary for an iron-clad vessel to anchor under an enemy's fire; and in such case it is of course essential that the cable to which the anchor is attached should be protected from shot; this protection is now obtained in the iron-clads of the monitor class already built, by an anchor well, but that device is incompatible with the rate of speed now required for such vessels. This invention consists in constructing a hawse-hole in the armor shelf or through the wooden backing placed behind the iron armor, in such manner that it emerges below the water-line. It also consists in protecting the cable between the point where it comes out of the upper end of the hawse-hole behind the armor and the place where it passes below the deck to the anchor-hoisting apparatus, by means of an iron hood securely fastened to the deck. This latter protection is only required when the upper end of the hawse-hole is above the deck of the vessel. Isaac Newton, of No. 256 Canal street, New York city, is the inventor of this improvement.

Elevator for loading Locomotive Tenders.—This invention relates to a device for loading freight-conveying vehicles, whereby a great saving in labor and time is effected. The invention is more especially designed for loading locomotive tenders with wood or coal and cars with freight, but it may be advantageously used in many cases for loading other vehicles or carriages. The invention consists in the employment of a rising and falling tray, operated through the medium of pulleys and ropes, the latter being attached to a wheel provided with grooves so arranged that when the platform reaches the necessary or desired height, it will be automatically tilted to discharge its load. The invention also consists in the use of a division board arranged with the tray in such a manner that it may be conveniently adjusted for dividing the tray into two equal compartments when only half of a tray load is required to be dumped; and also be capable of being removed out of the way when not required for use. The invention further consists in a self-adjusting fastening to secure the swinging side of the tray in a closed state while the latter is being elevated, and admit of said side swinging open when the tray is tilted to discharge its load. R. D. Chatterton, of Bath, England, is the inventor of the above improvement. His present address is Cobourg, C. W.

Buffer for Railroad Cars.—This invention consists in having a wedge or a series of wedges attached to or forming part of the coupling bar of a car, and using in connection therewith a spring or springs and one or more levers arranged in such a manner that when the coupling bar is forced in by collision or otherwise, the wedges of the coupling bar will act against the springs through the medium of the levers, the fulcrum of the latter being so placed as to increase the resistance or power of the springs and render the latter very effective in resisting concussion; so much so that in case of two trains of cars coming in contact under ordinary speed, the momentum will be completely absorbed by the resistance of the springs and the cars prevented from being turned from the track either by the force of impact or by recoil. The invention further consists in using, in connection with the levers aforesaid, supplemental levers arranged with springs in such a manner as to form a draw buf-

fer in case of recoil, and still admit of the coupling bar being readily drawn out when required to be adjusted for use. R. D. Chatterton, of Bath, England, is also the inventor of this improvement. His present address is Cobourg, C. W.

Improved Wheeled Vehicle.—This invention consists in the employment of swivel bars or stirrups to which the axles of the front wheels are rigidly attached, in combination with the ends of the front bolster and the draught-pole, in such a manner that the troublesome jerking or throwing of the pole is obviated, and the wagon, in turning, preserves its original base, like a four-legged stool, whereas the ordinary wagon, when turning, approaches to a three-legged stool, and in that position is liable to be upset; also in the use of a double-coupling pin in combination with the reach and with a cross-piece on the hind hounds in such a manner that all twisting of the reach on uneven roads is obviated, and that by putting the coupling pin next the point of the hounds the wagon couples longer than a wagon of the ordinary construction; further, in the arrangement of a spliced bolster behind, with a suitable aperture in the middle in such a manner that the reach passes through the middle of the bolster in line with the axles, and that a piece of wood is on the under side as well as on the top of each axle, rendering the same stronger, lighter and more elastic than a solid axle and bolster of the ordinary construction. Lorenzo D. Brown, of Lafayette, Ind., is the inventor of this improvement.

Spring Bed-bottom.—This invention consists in the employment of oval or egg-shaped wooden slats made of hickory or other tough and elastic wood, and provided at each end with hooks made to hook over the end rails of the bedstead, and furnished with hubs or sleeves to fit over the ends of the slats in such a manner that each slat can be readily adjusted in its place or taken out, and that by the sieves the ends of the slats are protected from splitting. The invention consists also in the arrangement of a stop rail under the middle of the slats in such a manner that said slats are prevented from bending down beyond the limit of their elasticity, and in case they are subjected to a very heavy pressure, they are relieved from the strain by such stop rail. The inventor is A. C. Crondal, 706 Broadway, New York.

Device for cleaning Guns.—This device consists of a cylindrical plunger which has its periphery composed of india-rubber or other soft elastic material, coated with, or having incorporated into it, emery or other scouring or polishing material, and which is fitted with a screw and nut, by which it may be expanded circumferentially to make it fit as tightly as desired into the bore of the arm; and is furnished with a screwed socket, by which it is screwed to the ramrod when the gun requires to be cleaned. P. F. Carr, Company B, 14th Regiment of Indiana Volunteers, is the inventor of this improvement.

NAVY COMMITTEE TO EXAMINE INVENTIONS.

The following gentlemen constitute a permanent committee appointed by the Navy Department to examine new inventions pertaining to naval warfare:—

C. H. Davis, Rear Admiral and Chief of Bureau of Navy.

Professor A. D. Bache, Superintendent of the U. S. Coast Survey.

Prof. Joseph Henry, Secretary of the Smithsonian Institute.

Brigadier general J. G. Barnard, Lieutenant-colonel of Engineers.

Joseph Saxton, Assistant Superintendent of Weights and Measures, U. S. Coast Survey.

The head-quarters of the committee are in Washington; and all communications should be addressed to the chairman, Admiral Davis.

THERE is no article of merchandise that has advanced more steadily since the war commenced than iron. Within a short time there has been another advance of fifty cents per keg on nails, and ten dollars per ton on iron. This makes an advance, within the past thirty days, of one dollar per keg on nails, and twenty-five dollars per ton on iron. Some statistics of the consumption of iron and steel in this country, since the war began, would afford valuable information.

MISCELLANEOUS SUMMARY.

TEN THOUSAND DOLLARS FOR A SUBSTITUTE FOR IVORY.—The well-known billiard-table makers, Messrs. Phelan & Collender, of this city, announce their willingness to give \$10,000 for a suitable substitute for ivory, to be used in the manufacture of billiard-balls. This statement appears in the *Tribune* of the 11th instant, and the prize is well worth striving for; it is not often that such a liberal reward is offered for the discovery of a new and useful material. The great cost of natural ivory at the present time, owing to the high rates of exchange and its scarcity in general, is sufficient to warrant extensive experiments; for, should a substitute capable of being used for billiard-balls be found, it will not be confined to them, but will be available for a great variety of purposes. Years ago, when a substitute for leather was called for, a number of very good articles for certain purposes were brought forth, and we doubt not that, as in the case just mentioned, the artificial ivory will soon be forthcoming.

ENGLISH Toryism is up in arms at the proposition to introduce the decimal system of weights and measures into England. This proposition, which was earnestly urged upon the general consideration of Christendom at the recent National Congress, in Berlin, and on which the Hon. S. B. Ruggles, who represented the United States in that Congress, prepared a careful report, has been brought before the House of Commons by Mr. Ewart. The Tory organ in the weekly press of London, the *John Bull*, denounces it as "absurd and impudent," and as "an idea which could only enter the heads of dunces, Whigs, and revolutionary tyrants."

THE metal-tipped shoe (originally patented through the Scientific American Patent Agency) is one of those small-sized inventions that possess intrinsic merit. We have bought such shoes for our children, and we are prepared to say that one pair of metal-tipped shoes are worth three pairs of shoes without tips. We doubt not that the inventor has realized a handsome sum as the reward of his ingenuity—a remark that holds equally good in regard to thousands of meritorious inventions which, to ordinary minds, seem to possess little or no value.

INNUMERABLE letters from parties interested in mining operations have been sent to us since we published a paragraph on page 395, Vol. IX, stating that Mr. Alexander Rabe, editor of the *Hamburger Gewerbeblatt* could induce miners to come to this country, provided they were sure of employment. We have no doubt that Herr Rabe will fulfill his promise, but their better way would be to address him as above, at Hamburg. We can do nothing ourselves.

DR. JOHN CHAPMAN, a celebrated English physician, is now engaged in making important experiments, connected with the cure of epilepsy, and other diseases of the nervous system, by the external application of ice and hot water, in rubber bags, to various parts of the spinal cord; acting thus on the sympathetic nerve, and, through it, upon the most important and vital portions of the body.

ENGLISH papers mention a case of poisoning of which a young man was the victim, he having drunk cider made in a mill repaired with lead. This metal is a dangerous one to use in connection with food or drink, and repeated experience of its results should be a warning against its further employment for such purposes.

OYSTERS are among the most healthful, and nutritious of all the articles furnished for the table. When fresh, they are probably most nourishing when eaten raw; but they should not be "bolted down," as is the custom of some who love this bivalve. They should be thoroughly masticated, or, in other words, made to feel the teeth.

A GERMAN statistical writer remarks that the invention of the sewing machine has enabled one woman to sew as much as a hundred could sew by hand a century ago; but, he continues, one woman now demands as much clothing as a hundred did a century ago—so that the situation is not so much changed after all.

HOW FAR CAN A GONG BE HEARD?—The great gong upon Colt's factory, which sounded continually till the building was burnt down, was heard distinctly at Willimantic, a distance of 27 miles.