

Shakespeare monument is at the end of the wall, and close by it is a splendid group of an Indian hunter and his dog. There are also statues of Morse and busts of Schiller, Burns, and Humboldt.

Work is still in progress, and every year finds new beauties added to New York's great breathing place. That it is appreciated by the people, the crowds which through every pathway on Sundays testify, suggesting indeed the thought that even this large expanse will ere long become too small, and another vast park will be needed to supply the want of our constantly increasing population.

#### NEW BOOKS AND PUBLICATIONS.

CASTLE'S UNIVERSAL INTEREST TABLES. New York: Root, Anthony & Co., 62 Liberty Street. Price \$2.

This is a neat leather case, containing three cards with interest tables printed on them. By manipulating the cards according to the printed directions, the interest on any sum for any length of time can be easily ascertained. Our book keeper has tested the tables, and he pronounces the system the neatest and quickest he has ever seen.

REPORT OF PROGRESS OF THE GEOLOGICAL SURVEY OF CANADA FOR 1871-'72. Montreal: Dawson Brothers.

GENERAL REPORT OF THE COMMISSIONER OF AGRICULTURE AND PUBLIC WORKS OF THE PROVINCE OF QUEBEC, for the Year 1871, and the Half Year ending June 30, 1872. Montreal: La Minerve.

The subjects of these two interesting and valuable reports are too large to be fully discussed in our columns; it must therefore suffice to say that the compilation of the books shows zeal and thorough research on the part of the officers of the Geological Survey and the Commissioner of Agriculture. Indications of thriving industries and a prosperous population are to be found throughout the agricultural report; and the cry is for more laborers, especially for farm hands.

Messrs. A. D. Mellick, Jr., & Brother, 6 Pine Street, New York city, have published an excellent book on the railway enterprises and real estate resources of New Jersey, which will be found valuable to all who think of locating near New York.

FLOWER OBJECT LESSONS, OR FIRST LESSONS IN BOTANY: A Familiar Description of a few Flowers. From the French of M. Emm. Le Maout. New York: William J. Read, 116 Fulton Street.

A little work likely to be useful to the teacher and interesting to the pupil. It is well suited for use in the well known *kindergarten* system, and will, we hope, help to popularize the knowledge of one of the most beautiful and accessible of scientific studies.

THE MYSTERY OF METROPOLISVILLE. By Edward Eggleston, author of the "Hoosier Schoolmaster," "The End of the World," etc. New York: Orange Judd & Co., 245 Broadway.

Here we have another pleasant, racy story of western life, from a writer who is thoroughly acquainted with the rough, hearty genuineness and the eccentricities of the border life in our States. Mr. Eggleston's fame as an original thinker and story teller was made by his first book; and the last work from his pen more than sustains his reputation. This story was written for *Hearth and Home*, wherein it first appeared.

DETAIL, COTTAGE, AND CONSTRUCTIVE ARCHITECTURE, containing Seventy-five Plates of Perspectives, Elevations, and Plans for Houses, Villas, Cottages and Country Houses. Published under the direction of A. J. Bicknell. Price \$10. New York: A. J. Bicknell & Co., 27 Warren Street.

This is a handsome and elaborate volume, containing some hundreds of designs for houses in all styles, with drawings of all the necessary details. The value of this book to persons intending to build, and to country builders in places where architectural talent is not readily available, will be well understood from its title; and the engraving and printing are such as to make it an ornamental volume, worthy of the admirable examples with which the book is filled.

#### Inventions Patented in England by Americans.

[Compiled from the Commissioners of Patents' Journal.]

From March 21 to March 27, 1873, inclusive.

BOOT PEGGING MACHINE.—J. H. Reed, Boston, Mass.  
BUNG AND BUNG INSERTER.—L. Van Laak, J. Gillespie, San Francisco, Cal.  
COTTON PRESS, ETC.—B. G. Martin, New York city.  
MAKING HOSE.—E. P. Richardson, Laurence, Mass.  
MIDDINGS SEPARATOR.—E. L. Lacroix, Minneapolis, Minn.  
MIDDINGS SEPARATOR.—G. T. Smith, Minneapolis, Minn.  
NEEDLE THREADING DEVICE.—G. P. Farmer, Brooklyn, N. Y.  
PRESSURE GAGE.—J. W. Stiles, New York city.  
SAWING MITERS, ETC.—J. H. Carpenter, Paterson, N. J.  
STEAM BOILER.—G. H. Babcock, Plainfield, N. J., S. Wilcox, Brooklyn, N. Y.  
TREATING FIBER.—W. Shedd, Boston, Mass.

#### Recent American and Foreign Patents.

##### Improved Shutter Fastener.

Ellen D. Anderson, Frederick, Md.—The invention consists in combining a telescopic lock bolt with two notched brackets, arranged one near the inside, rear, and bottom end of each shutter, whereby the shutters may not only be securely locked together against the weather strip, or back against the house, but may be "bowed" at various intermediate points, to afford a larger or smaller opening and a greater or less degree of light and air.

##### Improved Explosive Cartridge Pile Driver.

Henry Vogler, Baltimore, Md.—This invention consists in a novel mode of relatively constructing the hammer and anvil of that class of pile drivers in which a cartridge is employed and wherein powder is caused to explode and be converted into a highly expansible gas between the anvil and the hammer. The resistance of the latter enables it to drive the former with great force against the pile. By the present construction of hammer and anvil, much of the expansive power escapes and is lost unless the cartridge chamber is made very deep, while this increase in the depth causes the chamber to heat very rapidly, to often set fire to the cartridge, and thus to cause the hammer to stick in the anvil. The present invention entirely obviates both these evils, as the gases cannot expand except in the direction of and against the hammer and anvil, while the cartridge chamber can be made so shallow as not to heat the chamber sufficiently to set fire to the cartridge.

##### Improved Roll for Rolling Railway Rails.

John W. Cooper, Hubbard, Ohio.—The invention relates to modes of constructing rolls so as to shape a compound rail made of two sections and locked together by a groove on one, into which the upper edge of the other fits. The invention consists in the mode of constructing the roll grooves so that the larger section of rail is brought into preliminary shape and subsequently recessed on the under side of head to receive the upper edge of the lesser section.

##### Improved Pea Vine and Corn Stalk Gatherer.

Absolan B. Sharp, Labadieville, La.—This invention relates to a rake adapted especially for gathering pea vines, corn stalks, and other plants cultivated on ridges, and it consists in the provision of a revolving rake-head carrying a series of teeth of unequal lengths, which are so arranged in relation to each other that the teeth operate or rake both in the furrows and on the ridges, a hinged check plate being provided or combined with the rake for holding the teeth stationary until a load is collected by the same, when, through the medium of a hand lever and connecting rods, the

plate is disengaged from the teeth, for allowing the same to revolve to discharge the load.

##### Improved Nut Lock.

Edward Turner, Greensburgh, Pa.—This invention relates to that class of devices used to prevent nuts from being turned on their screw bolts by jarring or jolting, and thus allowing the latter to be loosened. The invention consists in one or more disks cut away on a portion of their circumferences sufficiently to allow a nut to be applied to or removed from its bolt, and of such a diameter between two opposite points of the curved part of their circumferences that the said curved part and the corners of the nut will rotate in circles that cut each other.

##### Improved Lamp Shade.

Wm. Simons, Charleston, S. C.—This invention consists of a shade formed of two like parts, approximating an ellipse in shape, and united at the ends so as to have the usual conical truncated form, and also leave notches in top or upper edge which adapt it to the fan-shaped frame of a lamp or gas burner. The two parts may be readily detached to adapt the shade for packing and transportation.

##### Improved Medicine Chest.

Wm. H. Cutler, Buffalo, N. Y.—The object of the invention is to provide an improved case for containing medicinal preparations (more especially that known as carbolate of iodine) and instruments for inhaling the same; and to this end an oblong rectangular wooden block is bored longitudinally with two parallel holes, one to contain the bottle, the other the inhaling instrument. The cover of the case is of sheet metal, provided with a thumb piece, and with flanges fitting in grooves formed in the longer sides of the block, at the open end thereof. The case is cheaper and more durable than paper boxes heretofore used for the same purpose, and is capable of resisting pressure or blows, and also dampness.

##### Improved Chair.

Jacob Baughman and Bennet R. Chalk, Mt. Washington, Md.—The invention consists in improving the ordinary mode of applying spring backs to sewing machine chairs so that any old and ordinary chair may readily receive a spring back, and so that the back may be rigidly held at any point of adjustment.

##### Improved Carpet Stretcher.

David White, Normal, Ill.—This invention consists in applying a swiveled button and sustaining yoke to the jointed strips so as to lock the stretcher in any desired position and thereby enable the same person to do the stretching and tacking down.

##### Improved Umbrella Holder.

Abraham Oberndorf, Jr., Baltimore City, Md.—The invention consists in providing the lower end of an umbrella handle with means whereby it may be easily and conveniently hung to the vest or other part of the clothing.

##### Improved Brush Socket.

Philipp Wagner, Morrisania, N. Y.—The invention relates to the construction of a bridge for sheet metal sockets of brushes (mainly paint brushes), so as to secure strength and cheapness in the manufacture. The invention consists in the employment of ribs or corrugations on the side edges whose subjacent concavities receive the side edges of the socket.

##### Buoys and Stopping Leaks.

John W. Cooper, Hubbard, Ohio.—The invention consists in a flat, flexible, and inflatable bag secured to the gunwale, passing down the side of the vessel, up through certain tubes, and connecting with the deck, whereby said bag may be adjusted to cover a breach at any point in the side of the vessel.

##### Improved Cotton Picker.

Enoch Taylor, Memphis, Tenn.—This invention consists in brushes fixed to vertical cylinders and revolving inwardly so that the balls of one side of each stalk with which the rotary brush comes in contact will be deprived of the ripe cotton. It also consists in the arrangement of mechanism for operating the cylinder from the wheels and in guides that reach out from the side and in advance of the machine to catch, hold, and guide the cotton stalk up to the brushes.

##### Combined Adjustable Pinchers and Grappling Tool.

Simon B. Dexter, Mason city, Iowa.—This invention relates to a tool or instrument which may be used as a wrench, pinchers, or grapple for raising or carrying weights. The jaws, by means of a series of holes, are made adjustable to adapt them to articles of different size. A shank rod is connected by means of a fork on the end thereof, with the fulcrum pin of the pinchers. This rod extends back and passes into the handle, and on it is placed the wedge shaped slide consisting of two rods which pass through eyes at the ends of the pincher handles. At the back end of this slide is a screw which allows the handle or other appliance to be firmly attached to the slide. As this slide is moved back and forth on the rod, it will be seen that the handles of the pinchers and the jaws will be made to move nearer to or further from each other, the variations in this movement depending upon the angle of the slide rods with the shank rod. When any article is secured between the jaws, it is pinched or gripped by pulling upon the slide or handle, and is loosened therefrom by a contrary movement. This feature adapts the tool for grappling for articles in wells or under water, as well as for carrying heavy articles or hot pieces of iron in foundries and similar places.

##### Improved Composition Sidewalk.

Charles H. Howard, Batavia, N. Y.—This invention has for its object to construct a sidewalk or pavement without having to haul loads of stones, bricks, gravel, or other matter to the locality of the proposed walk or pavement, which matter is usually embodied in the composition of walks, and used in place of the soil originally there contained. After the grade has been established, the earth to a depth of three or four inches and to the width of the proposed walk is thoroughly worked over and made very fine. A quantity of magnesia and carbonate of baryta, mixed together, varying in proportion with the nature of the soil found on the ground, is introduced and mixed with the earth. After the chemicals above mentioned have been properly incorporated in the soil, silicate of soda (soluble glass) is added, and the earth then replaced in its bed and properly smoothed on the surface. When the mass is almost dry, it should be covered over with a coat of chalk and magnesia mixed in water glass. This walk is cheaper than stone, will not rot like planks, and can be very rapidly made.

##### Improved Artificial Stone.

Phylander Daniels, Jackson City, Mich.—The object of this invention is to furnish an artificial stone or pavement which combines strength and durability, and offers, by its fireproof qualities, protection against the danger arising from the too rapid spread of fire. The invention consists in the use of a solution of glue, isinglass, soluble glass, and concentrated ley, which is applied to a mixture of sand, Portland cement, and pummeled glass. This mixture is well dampened with the solution till it forms a pasty mass of the consistency of mortar; and may be formed and well tamped into molds, where it will soon harden, to be taken out and exposed to the air to dry. It may also be laid in the form of a fireproof pavement, or any other suitable purpose.

##### Improved Harvester.

Thomas Y. Woolford, Romney, W. Va.—This invention belongs to the class of machines so constructed as to be adjusted for use as reapers or mowers, and as front cut or rear cut machines. To the outer end of the hub or central part of the drive wheel is attached a pulley to drive the reel when the machine is adjusted as a reaper. The main driving wheel revolves loosely upon the end of the axle and is made to receive the master wheel which is attached to the axle. The master wheel is made with an inwardly projecting rim, upon the outer surface of which are formed notches, upon which take hold spring pawls, attached to the inner side of the rim of the drive wheel. Upon the inner surface of the rim of the master wheel are formed teeth, into which mesh the teeth of the pinion wheel placed upon the end of the shaft. In the outer side of the gear wheel is formed a slot to receive a cross head formed upon the end of a shaft so that the said gear wheel may carry the said shaft with it in its revolution. By this construction, by moving the gear wheel inward sufficiently to remove it from the crosshead of the shaft, it will revolve loosely upon said shaft. The gear wheel is moved back and forth upon the shaft to throw it out of and into gear by a lever, which is pivoted to the frame and extends forward into such a position that it may be conveniently reached and operated by the driver with his foot. The shaft extends across the frame, revolves in bearings at-

tached to the side bars of said frame, and to it is attached a gear wheel, the teeth of which mesh into the teeth of the small gear wheel attached to the driving shaft. Another shaft is placed a little below and in the rear of the axle, and to its end is attached a balance wheel which serves also as a crank wheel for the bar that drives the sickle bar. The shoe, to which the inner end of the finger bar is detachably bolted, and the various parts connected with it, can be readily adjusted to adapt the machine for a front or rear cut.

##### Improved Clasp Button.

Andrew Flatley, Brooklyn, N. Y.—This invention has for its object to furnish an improved detachable clasp button for connecting the ends of collars. The invention consists in a clasp button provided with spiral wire fasteners upon the inner side of its two parts to adapt it to be conveniently attached and detached.

##### Improved Car Coupling.

Aaron K. Kline, Readington, N. J.—This invention is an improvement on the patent granted, to the same inventor, March 5, 1872; and consists in a drawhead having a rear piece backwardly inclined on its top surface to receive and hold the coupling rod when not in use.

##### Improved Bag Tie.

John Bannhr, Hempstead, and Daniel H. Rhoads, Baldwinville, N. Y.—This invention consists of two parallel plates connected together along one edge. A lever is pivoted to the connecting plate at one end and fastened to it at the other end by a hook. The string is fastened by passing it through a hole in each of the parallel plates above the connecting plate and under the lever. The latter is then pressed down upon the cord, drawing it down between the plates and wedging it fast, the lever being then fastened by the hook.

##### Improved Die for Forging Hoe Plates.

Lovell T. Richardson, Auburn, N. Y.—This invention relates to dies which are used in steam, water, or other power hammers for plating planters' hoes from the blanks before they are rolled out. Part of the face of the lower die is the arc of a circle transversely, and one fourth of its length is a flat or plane surface. The face of the upper die is beveled on its corners so as to leave a flat tapering surface.

##### Improved Waist Belt.

John H. Vogt and George Dietzel, New York city.—This invention consists of a waist belt for ladies' wear, which is woven of a fancy warp of silk cord for the front, a black or binding warp of gimp or strong thread for the body, fine silk warps for the borders, and a weft of gimp. The cord for the warp and the gimp for the weft are coarse and heavy, so as to produce a substantial article of a sufficient stiffness for a belt woven with open meshes.

##### Improved Fireproof Building Block.

William T. Van Zandt and Lucien A. Tartiere, New York city.—This invention consists in the use of asbestos and plaster of Pa. in combination with saw dust, coke dust, cinders, sand, or other suitable material, to form fireproof blocks or bricks for walls, roofs, ceilings, floors, and partitions, the material being made plastic with water and shaped in molds.

##### Improved Sample Fastener.

Charles Mason, New York city.—The object of this invention is to supply to the trade a device by which goods may be quickly placed on show cards or boxes, and taken off again, avoiding thereby the inconvenience of the present mode of applying them, and saving time and labor. The invention consists of a wire bent in triangular shape, with ends overlapping each other, and acting like springs, one end being applied to show cards or boxes, the other to the article to be exhibited.

##### Improved Wood Fence.

Daniel G. Temple, Farmersville, La.—This invention has for its object to furnish an improved fastening for securing pickets and other upright boards or planks to the horizontal bars of the fence. In putting up the fence, bolts are passed through bars midway between the pickets. A wire is passed through a hole in the head of the bolts or around a groove or neck formed upon said bolts. A second wire is passed along a bar upon the side opposite the pickets, and the ends of the bolts or spikes are bent down or clinched around the said wire.

##### Improved Toy Puzzle.

Benjamin F. Ellis, Newton, Pa.—This invention consists of a puzzle comprising two or more U shaped bows of wire, with a ring formed in each end, a cross bar for each bow passing through the rings, and having a similar ring at each end, the two being connected together by the large bow passing through the rings of the cross bar of the small bow. With these bows and cross bars is a large ring made in two semicircular parts, which in working out the puzzle is to be worked on and off the small bow through the rings and over the ends of the bows and cross bars.

##### Improved Window Sash Ventilator.

John C. Bates, Cold Spring, N. Y.—The invention relates to the well known mode of ventilating houses through air inlets and outlets in the window sashes, and consists in employing two slides, relatively apertured with respect to each other and to the sash bar, so as to admit either a direct or indirect draft.

##### Improved Rotating Hook for Sewing Machines.

Andrew Aird and John Aird, Troy, N. Y.—The object of this invention is to substitute for the present brush loop check, applied to the rotating hook of Wheeler & Wilson sewing machines, a device which does the same work with great regularity, rapidly, and security, avoiding the insufficient working of the brush check and the annoyance resulting therefrom. This invention consists in a reciprocating hook placed inside of the rotating hook and in connection with and regulated by a cam in such a manner that the loop is straightened and held until the rotating hook is near the needle ready to take up a new loop.

##### Improved Hose Port Holes for Partition Walls.

Henry Woodman, Boston, Mass.—This invention has for its object to furnish an improved device to enable the firemen to introduce their hose nozzles into a closed room and flood it to extinguish a fire without its being necessary to break into the room, saving much time, and preventing the fire from making so much headway. The invention consists in the box flaring in both directions. The mouths of the box are closed with doors hinged at their lower edges, which are provided with spring catch locks which can be opened upon the outer side only with a key, but may be unlocked from the inside by drawing back the bolt of the lock with a stick. In the partition are formed two or more holes, each of which is provided with a door, which doors are placed upon the opposite sides of said partition and are hinged at their outer edges to the sides of the box, and are provided with springs to hold them closed. When it becomes necessary to use the device the door is opened; one of the spring doors is then opened, a stick or other article is inserted through the hole in the partition, and the other door is opened by drawing back the bolt of its lock by means of a projection upon the inner end of said bolt. The nozzle of the hose may then be inserted through one of the holes in the partition. One of the holes in the partition may be used to look through while the hose nozzle is inserted through the other, the flaring mouths of the box enabling all parts of the room to be seen, and the stream of water to be directed to any desired point. When the room has been flooded, or the fire extinguished, the hose nozzle may be withdrawn and the door closed, the spring door closing itself as soon as the hose nozzle is withdrawn.

##### Improved Furniture Castor.

Cevreda B. Sheldon, New York city.—The invention relates to castors for furniture and other purposes, and is an improvement upon the subject matter of a patent granted to the same inventor, April 1, 1872, the general idea being unchanged from the device therein described, but the particular means by which the same is carried out being made much more simple and less expensive to the manufacturer as well as to the public. Its movable balls will, equally with those of the former patent, prevent sliding friction, and insure a distribution of strain, requiring, however, much fewer balls, and but one set of them, while the whole structure can be manufactured at considerably less cost.

##### Slatted Flexible Support for Mattresses and Car Seats.

Collin Pullinger, Philadelphia, Pa.—The invention consists in two thick nesses of cloth, or other flexible material, placed one upon the other and united together at suitable intervals to form pockets into which are placed wooden or other slats.