

New Inventions.

New Roofing Tiles.

A new and beautiful kind of ornamental roofing tiles have been lately invented in that land of tiles, Flanders. They are very ornamental and some shiploads of them have been sent to England, where they are very highly spoken of as being superior to slate, cheaper and can be made into every variety of shape and color, although blue is the principal color of those already manufactured. We think that these tiles, if they could be imported here cheap, would be better than tin or slate roofs, as they are represented by some of our European exchanges to be very strong, owing to the materials of which they are composed. It is to be hoped, however, that the artificial slate lately discovered at Sharon, Ohio, and patented by Mr. Blake, will soon be brought into profitable use, if it is all that has been represented, the price being only \$3 per 100 pounds. Its composition is, as analysed by Dr. Chilton, of this city:—magnesia 25, alumina 20, silex 20, black oxide of iron 10, sulphuret of iron 10, lime 10, carbon 5=100. It is therefore a good non-conducting substance and most excellent for roofing. It lies about 20 feet below the surface, and is a very singular deposit; it appears as if there had been an excavation in the rock about five feet deep over a space of three or four acres, and the space filled with this metal. When taken from the mine it has about the consistency of cold tallow, but an exposure to the air ten or twelve days turns it to stone. They are obliged to grind it when green, then grind it again, which leaves it fine enough to mix with the oils for use; after it is put on a few months it turns agam to stone, forming a complete stone covering to whatever applied.

Paper Folder.

A machine has been recently invented in Springfield, Mass., by Messrs. Crane, at their paper works, for folding newspapers and other printed matter. It is to be connected with a cylinder, or improved Adams press, so that the sheets come forth from the press folded in the required form. The invention is said to be simple and beautiful—being simply a rocking board which receives or catches the paper at the middle of the sheet and by a back motion folds it over. The inventors warrant it to fold 3000 papers per hour of any size, with the greatest accuracy.

Plumb Rule.

Mr. J. E. Carpenter, of Philadelphia, has invented a new plumb rule. The principle is an additional spirit glass on the side, which can be set plumb with a screw, in case of its warping or twisting. This spirit level has just been introduced and will grow into extensive use.

Fitzgerald's Cannon.

Mr. Fitzgerald, of this city, exhibited on Friday last his newly invented section cannon in front of the Merchants Exchange, Wall street. This cannon, as we have previously stated, is made of wrought iron in sections, to be taken apart and put together again so as to be easily transported over mountains, through swamps and uneven ground.

Atmospheric Churn.

The St. Louis papers allude to a new and singular churn, lately patented, and now exhibiting in that city. Butter is made by it out of fresh milk, and *without* the use of water. The principle consists in the introduction, by means of exceedingly simple machinery, of the atmospheric air into the body of milk.—The air, by its own action, produces the separation of the milk from the butter. The machinery is very simple and the principle undeniable, and the operation of churning can hardly be said to be labor at all. By this machine, an ordinary churning, it is said, can be made by a child of four years of age, and that

too without waiting for the cream to rise or the milk to sour. Butter is made in fifteen minutes from fresh milk, and the cost of the churn is not more than that of an ordinary one. It is an Illinois invention and has certainly the priority of the Irish Bishops, noticed a short time since in our columns. It is we believe constructed on the principle of the bellows, and the inventor is making his fortune out of it. We have seen butter made by the common rotary paddle churn in fifteen minutes, but never from fresh milk.

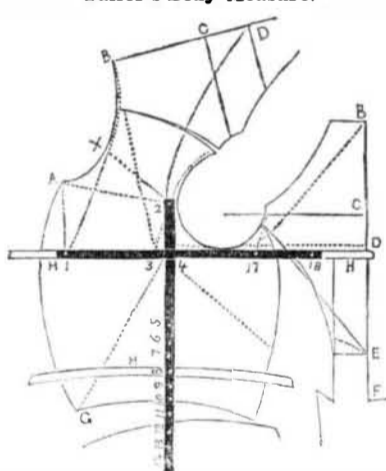
Improvement in Organ Pipes.

A new and valuable improvement in organ pipes has recently been made by Messrs. Boardman and Dutton, church organ manufacturers of Mount Vernon, N. H., who after much time and experiment, have succeeded in materially improving the tones of wooden pipes for organs, by a peculiar construction of the pipes at the thorax by which the volume of wind is perfectly equalized before striking that part producing the sound, giving in a single pipe a mellow, rich, powerful, and harmonious tone. The diapason alone is said to give the harmony of the full organ, rendering these superior to metallic pipes which they dispensed with altogether in their improvement.

The advantages said to be derived from the invention, consists in the cheapness of their construction, the freedom of the wooden pipes from the expansion and contraction occasioned by the variation of temperature, to which the metallic pipe is subject, and the lightness and portability of the instrument, together with much less liability of injury in moving.—*Exchange*.

We believe that many of the old organs had reed pipes—not metal.

Tailor's Body Measure.



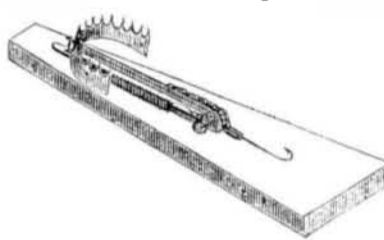
This is an excellent instrument, the invention of Mr. Charles W. Hanford, of Nunda, Livingston county, N. Y. It is for the purpose of taking the measure of persons correctly for cutting their garments, and experience has proven that it is most beautifully adapted for that purpose—superior to any thing ever before known or used, and beside it is simple, neat and cheap. It at once commends itself.

It is made of spring steel very thin; each piece is half an inch wide, with holes in them at the figures; the length can be varied from 12 to 18 inches, as best suits the person who uses it, only not to have the front and upper arms of the instrument longer than represented in the cut. When the measure is to be taken for a coat, the instrument is placed upon the person in the same manner as seen in the cut, being bent round the body and fastened by straps H H H, attached to it, so as to remain firm until all the measures are taken. The tape measure has a hook attached to the end of it to fasten at the different figures on the instrument. Commence measuring at B, top of the back, down to C, centre of back scye, to D, bottom of scye, to E, hollow of the waist, to F, length of waist, and then length of coat; then measure to A, (height of collar bone in front,) from figure 1, and then from figure 2, to B, (top of back,) from figure 1, and then from figure 3, from figure 2 over the shoulder to D, and across it to X, from figure 3 over the shoulder to figure 17, from figure 3 under the arm to D, and then to B, from figure 4 to E, at hollow of waist, and then to G, length of coat in front.

Having taken all these measures and enter-

ed them on the measure book, it will be a very easy matter to see how they are applied in drafting a coat, by tracing the dotted lines on the cut. The back can be made any shape desirable, only get the points at B C D E and F exactly, then draw a line from D, at a right angle with the back seam across the cloth and apply the instrument to the line as far forward as the measure from figure 3 to D requires, then draft the forepart as represented.

New Rat Trap.



This is a new rat trap which threatens destruction to all the old rats in our dominions, and if a rat gets out of its clutches, all we have to say is, that he is a lucky fellow—and more than bullet proof. This trap is as famous as one noticed in a foreign exchange: "Spring guns and man traps in this garden and the fellow that gets his foot into one it will break a horse's limb." The toothed jaw is represented in the cut as being held down which is accomplished by the bait rod or wire (known by the hook) having a small eye on the other end into which a nib on the forepart of the jaw passes and holds the jaw firm down. The jaw is attached to a strong rod having a spiral spring around it with its tension towards the hook, so that when a rat pulls on the bait on the hook, the eye slips off the nib of the jaw, and the jaw having a swivel joint it springs backward like a thunder clap nailing the rat to the counter for his impertinence.

These traps are only 50 cents apiece and sold at this office. Nobody should be without one if they want to have a real rat killed at a price not worth calling cost, considering its qualities.

Hollow Iron Piles.

The invention of Dr. Potts, of London, called the *pneumatic process* for sinking piles, has been applied with astonishing success to the sinking of tubular iron piles.

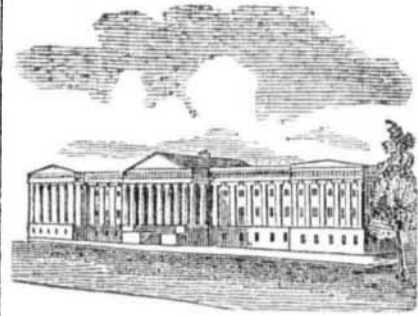
A hollow iron pile is placed upon the surface through which it is required to be sunk, and by means of an air pump a vacuum is produced. This having been effected, the sand, shingle, &c. rush in and the pile descends by its own weight. The water, sand, &c. is then discharged by pumping, a fresh vacuum is formed and the pile sinks further and further. This invention is doing wonders on the other side of the Atlantic. More has been done in one hour by the air pump and hollow iron tube than has been done in one day by the old system of wood pile driving.—This invention is well adapted for the foundations of bridges, and it is to be hoped that many of our engineers will take the hint about new improvements, and not be like the dark minded rulers of this ancient city, who might keep our streets wet and free from dust all the time with Croton water, but allow them to be watered by the oldest fashioned rickety machines of travelling water casks that ever were invented, nice subjects for ancient museums and antiquarian devotion.

New Materials for Paving.

Take 70 parts of dry peat and 30 parts of pitch or coal tar and mix them well together. After being allowed to rest for a few hours, it is put into an iron pot and boiled for three hours. Ten per cent of the oxide of iron is then added along with a considerable quantity of fine mud and sand well mixed and while the composition is hot it is moulded into slabs or blocks, which soon become very hard and excellent for paving.

Massey's Grain Drier.

As the time is now approaching when large exports of grain must be made to Europe owing to the undoubted appearance of failure in the potato crop, our exporters should be getting their Grain Dryers ready, and we would call attention to Massey's Grain Drier, an engraving of which appeared in No. 32 this volume Scientific American. The inventor has removed from Providence, R. I. to this city, and he will sell on reasonable terms.



LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending June 20, 1848.

To Louis Wertz, of Chambersburg, Penn., for improvement in Water Wheels. Patented June 20, 1848.

To John H. Tower, of Kirkland, N. Y. for improvement in Kilns for Drying Grain. Patented June 20, 1848.

To Dummer Pattee, of Ypsilanti, Michigan, for improvement in Cultivators. Patented June 20, 1848.

To John Booth, of Mobile, Alabama, for improvement in Brick Presses. Patented June 20, 1848.

To John C. Emery, of Concord, N. H., for improvement in Sofa Bedsteads. Patented June 20, 1848.

To John Romans, of Romansville, Penn., for improvement in Straw Cutters. Patented June 20, 1848.

To Stephen C. Parkhurst, of West Bloomfield, N. J. for improvement in Carding Machines. Patented June 20, 1848.

To R. L. and B. F. Stevens, of New York City, for improvement in increasing the speed of Vessels. Patented June 20, 1848.

To M. Hemphill and B. H. Knox, of Washington, Ohio, for improvement in Water Wheels. Patented June 20, 1848.

DESIGNS.

To Robert Wood, assignee of William Hamilton, of Philadelphia County, Penn., for Design for Pier or Centre Tables. Patented June 20, 1848.

To Robert Wood, assignee of William Hamilton, of Philadelphia County, Penn., for Design for Ornamental Brackets. Patented June 20, 1848.

INVENTOR'S CLAIMS.

Paper Hangings.

Russell H. Hawes, of Worcester, Mass.—Improvement in Printing Paper Hangings.—Patented April 18, 1848. Claim.—Having thus fully described my machine, what I claim as my invention, and desire to secure by letters patent, is combining the carriage with the coloring apparatus, as described, so as to apply the color roller only once over the surface of the block at each impression, as described. I also claim drawing the paper through, by the border, as described, by pinching it between the rings and wheels or by an analogous device so as exactly to regulate the length drawn through and not mar the printed portion, as herein set forth in the first part of my description. I also claim the employment of expanding rings, constructed substantially as above described, for the purpose of regulating the length of paper to be drawn through to suit the pattern to be printed.

Balance Valves for Steam Engines.

William B. Hill, of Grand Rapids, Michigan. Improvement in Balance Valves for Steam Engines. Patented April 25, 1848.—Claim.—I claim as my invention the tubular construction of the double puppet valve, for the purpose of conducting the steam through said tubes to the lower or opposite valves on its passage to or from the cylinder, substantially as set forth, instead of passing round them in the usual way.

Gutta Percha and Caoutchouc.

C. F. Durant, of Jersey City, N. J. For improvement in dissolving and softening Gutta Percha and Caoutchouc. Patented April 25, 1848. Antedated Oct. 25, 1847. What I claim as my discovery and invention, is the application of perchloride of formy, or otherwise known as chloroform, to soften and dissolve gutta percha and to soften and dissolve rubber.