

## NEW INVENTIONS.

## Improvement in Slat Doors.

Mr. William Rippon, of Providence, R. I., has taken measures to secure a patent for an improvement in doors. The invention deserves the attention of that numerous and intelligent body of our citizens, "the carpenters." Its nature consists in the arrangement of loose adjustable slats in grooves, along the front, top, and back edges of the door; all these slats have spiral springs attached to them. The springs are for the purpose of adjusting said slats by the circular edges of the door as it is being thrown wide open, in either direction, in or out. These are vertical slats arranged and working in grooves along the front edge of the door, and have attached to their top and bottom ends, horizontal connecting links, which connect the slats to horizontal rods united together by a vertical one, and working on fulcrum pins, passing through their centres. By means of these levers, springs, &c., the loose vertical slats, when the door is being opened or closed in either direction, are, by the friction of the circular edge of the door, made to move horizontally back and forth in vertical longitudinal grooves cut in the frame of the door, and thereby allow of the door being opened in both directions, inwards and outwards. When the door is shut these slats spring or adjust themselves along the edges of the door, and keep the wind from passing through the crevices, which are left between the top, front, and back edges of the door. They also keep the door firmly locked in its place when shut; the door cannot be opened without force being applied to the rods to operate the springs of the slats. The horizontal slats turn loosely on hinges, which are fixed to a cross piece, turning on a rod secured in the frame of the door. To the sides, near the back end of this cross-piece, a cord and weight is attached. The cord and weight, with the spiral springs, operate on the cross-piece and horizontal slats, in a similar manner, when the door is being thrown open, as the levers and springs before described operate on the vertical slats.

## Improved Printing Press.

Mr. Henry Underwood, of Canandaigua, N. Y., has taken measures to secure a patent for a useful improvement in the hand printing press. The object of it is to afford a most excellent press to many printing establishments in the country, where there is not enough of work to employ a large power press, its price of construction being very little more than that of a common hand press, while the work which it performs is much greater and equally good. It performs nearly double the work of the present hand press, for its operation is not suspended while the sheets are being put in and taken out. The type bed is stationary; a reciprocating carriage is furnished with friskets at both ends for holding the sheets, consequently, when one sheet is receiving the impression, another sheet is being put on; so from side to side the sheets are fed, printed, and delivered.

## Improved Spring for Carriages.

Mr. John Lamb, of McDonough, Chenango Co., N. Y., has taken measures to secure a patent for an improvement in springs for carriages and other vehicles. Vulcanized india rubber springs are employed; one end of each is secured in the top part of standards which are attached to the bottom of the wagon; the other ends pass over friction rollers secured in the top part of standards which are attached to the axletrees; they run down and are secured fast in the lower parts of the said standards. These springs have sliding clamps on them for regulating their expansion and contraction for light and heavy loads.

## Improvement in Drying Stoves.

Mr. Nathan Buchanan, of Johnston, R. I., has taken measures to secure a patent for a very excellent improvement in drying stoves. The invention is a most excellent one for drying staves and timber of all kinds. The nature of the improvement consists in constructing drying stoves so as to dispense with the use of a chimney entirely, and employing the products of combustion mixed with heated air for drying purposes. This invention, as applied,

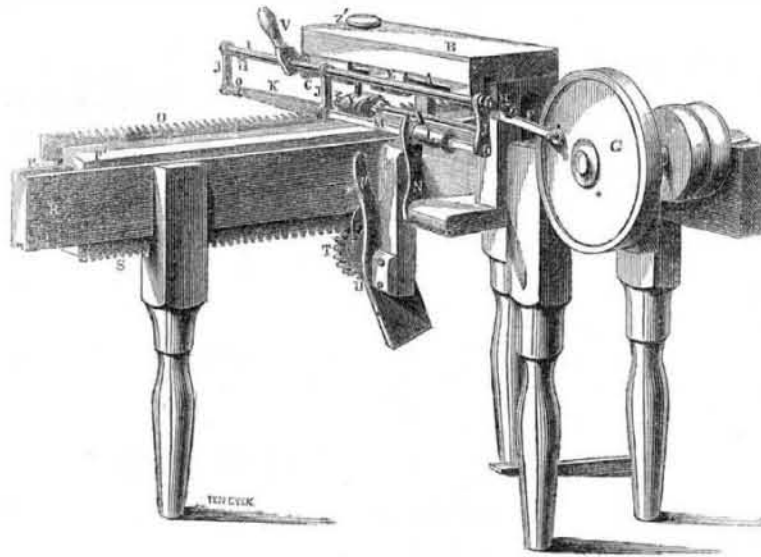
economises fuel, and, at the same time, the timber is rendered more enduring by the substances which heat and dry it. By the manner in which the furnace or furnaces of Mr. Buchanan are constructed, a perfect combustion of the fuel is certain, so that what is termed "the smoke" is consumed. Where wood is used for fuel, a portion of pyroligneous acid escapes in vapor, but this has preservative qualities. A low heat can be employed as desired, so that for smoking and drying

fish and hams with suitable fuel, the improvement is as useful and applicable as for drying timber.

## Improvement in Telegraphs.

Mr. John M. Batchelder, of Boston, has invented a new improvement in chemical telegraphs, whereby the paper prepared with the prussiate of potash is not used at all, but the common ink tissue paper which can be purchased at the stationers. It is stated to be a great improvement.

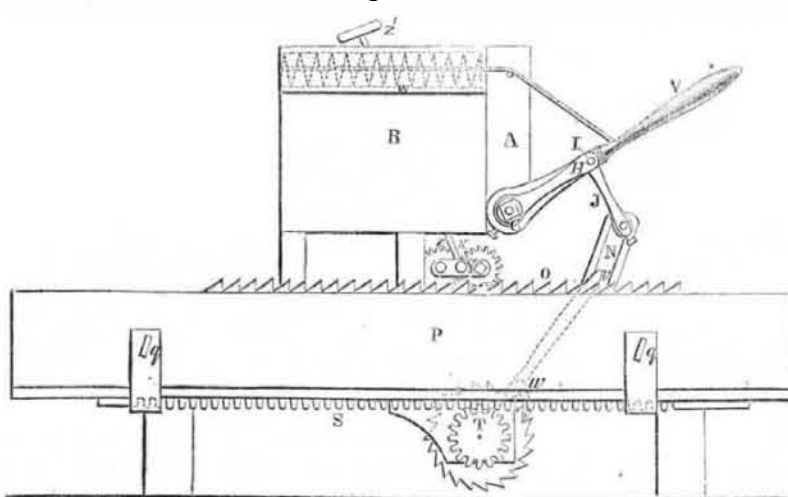
PATENT SAW-FILING MACHINE.—Figure 1.



The accompanying engravings represent the Saw-Filing Machine of Mr. Thomas M. Chapman, of Old Town, Me., for which a patent was granted on the 3rd of last September.

Figure 1 is a perspective view, and fig. 2 is a side elevation. The same letters refer to like parts. The nature of the improvement in this machine consists in attaching a swinging frame to a horizontal rod, having a reciprocating motion; the horizontal rod is so arranged as to turn in the direction of its axis, and the swinging frame has consequently an up-and-down motion, and, being connected to the horizontal rod by joints, it also moves backwards and forwards. The file is attached to the swinging frame, and is so arranged as to turn on its axis, and is adjusted or kept in any desired position by a handle. The saw to be filed is placed between clamps and secured by screws; the clamps are moved by means of a rack placed under them, in which a pinion works; on the shaft of the pinion is placed a ratchet wheel, which is operated by a pawl and lever. By the improved arrangement, the same motion is given to the file by mechanical devices as is given by the hand.

Figure 2.



pivot, o. O is the saw, which is secured between the clamps, P P' by the screws, q q; the inner clamp, P', has a groove or recess cut in it, in which the rest, R, works. The clamps with the saw move forward on the rest, R. S is a rack attached to the under side of the clamp, P'. The pinion, T, meshes into it. U is a ratchet wheel, which is turned by the pawl, w, which is attached to the lever, v. When this lever is depressed, the pawl catches into the teeth of the ratchet wheel, turns it, and also the pinion, T, and as this pinion meshes into the rack, S, the clamps and saw are moved forward to file tooth after tooth. V is a lever for depressing the file, K, and

A is a metallic plate attached to block B on the frame. This plate has two projections on its lower part, with holes in them, through which the horizontal rod, C, works. There is a button attached by a set screw to the rod, C. This button fits in a recess in a block, E. F is a connecting rod attached to the said block and to the pulley, G; when this pulley revolves it gives a reciprocating motion to the rod, C. H H are arms firmly attached to the ends of the rod, C; these arms extend outwards from the rod, project a little upwards, and have holes through them at their outer ends; these holes form the bearings for a rod, I, which works freely in them, and may be worked backwards or forwards. J J are arms attached to the rod, I; the lower part of said arms support the file, K, the handle, L, and shaft, M. The file handle and shaft turn on their axis. The handle, L, is prevented from moving, when the file is in motion, by the arm, N, which is attached by a screw on the lower part of the frame; its upper part has a slot in it, which works in a recess in the end of the handle. The shaft, M, passes through the centre of the handle. The file rests on a

reciprocating motion. The file is brought down edgewise between the saw teeth by the lever, V, with the left hand; the rod, C, is adjusted to suit either the front or back of a tooth, by turning the handle, L, with the right hand. The front part of a saw tooth is nearly vertical, while the back forms an angle of about 45°. The necessity of having the file turn on its axis, so as to accommodate itself to that angle, is obvious. The swinging frame having a motion towards and from a person, allowing him to stand before the machine, greatly assists to the perfect adjustment of the file to the teeth. The handle, L, does not move with the swinging frame in its reciprocating motion; it is secured by the arm, N; the shaft, M, moves through the centre of the handle. The file is kept in its proper position, while filing the front or back of a tooth, by having the right hand placed on the handle L, the left hand being engaged in holding down the lever, V, and thereby keeping the file down between the teeth of the saw. The saw is moved forward, as each tooth is filed, by working the lever, v. The swinging frame of the file is raised to allow the saw to be moved forward. The improvement is a good one, and should receive general attention.

More information may be obtained by letter addressed to Mr. Chapman, the patentee.

## Revolving Last Holder.

Mr. H. G. Dewitt, of Napanock, Ulster Co., N. Y., has taken measures to secure a patent for a very useful improvement for boot and shoemakers' use. It consists of a holder to retain boots and shoes on lasts, while making. The holder is an apparatus placed on a bench, in which the last, with the boot or shoe on it, is fixed, so as to turn round, or change its position in any way for the operative to work on the boot most conveniently, and which will enable him to stand and work at the bench, and at the same time afford him every facility for operating the shoe or boot that he now has by sewing or pegging it on his knee. This apparatus, to all the shoemakers who use it, will tend to promote health and lengthen out the years of life. It is a philanthropic invention in every sense of the term. It will relieve those shoemakers who suffer from pain in the chest, and the holder is so fixed that it can be let down, and when the operator may be tired of standing he can sit down and work.

## Improved Ship Block.

Mr. C. H. Platt, of the city of New York, has taken measures to secure a patent for a good improvement in ship blocks. He secures the cheeks of the blocks the required distance apart by metal plates attached to the cheeks of the blocks by transverse bolts, hoops or bands.

## A Singular Diet.

A correspondent of the Chicago Tribune tells of a little girl ten years of age, whose only subsistence since infancy has been sugar and milk—some obstruction or disease of her throat having led her always to refuse any thing more substantial. She is stated to be as large as children usually of her age, and as healthy, bright, and active as those whose food would be considered more invigorating. —[Exchange.]

[Some people may doubt the above, but we know of a stronger case still. We once knew a man over 40 years of age, who weighed 180 lbs., was active and well built—a farmer—who had never partaken of what we call solid victuals, from the time he was nine years of age. His principal food was milk without sugar, and sometimes soups. His name was Whitelaw.

On Thursday last week an explosion of a boiler at the paper factory of Messrs. Demar, Muir & Kay took place at Trenton, N. J. One man was killed. The boiler was used for boiling rags with potash and lime. In some way or other, we have no doubt, but an explosive compound was formed, which produced the lamentable result.

We see it stated in some of our exchanges who are posted up in the conciences of the Senate, that the committee on patents in the Senate, have reported unanimously in favor of the extension of McCormick's patent for the reaping machine.