

## NEW INVENTIONS.

**Improvement in Turning Lathes.**

Mr. Peter Tomlinson, of Derby, New Haven Co., Conn., has taken measures to secure a patent for a good improvement in the fore-centres of turning lathes, by which articles to be turned can be very quickly centered and detached. A series of levers are employed for operating the fore-centre by means of a foot treadle. The workman, by placing his foot on the treadle, makes it throw the fore-centre forward to catch into the piece of wood to be turned, and the said fore-centre is then prevented from moving back when the foot is taken off the treadle, by a rack which the side of the treadle catches into. But when the article is to be detached, by placing the foot upon the treadle again, a spiral spring raises two levers, when the fore-centre is set free from the rack and is forced back, when the turned article drops out, and then the lathe is ready to receive another rough piece for turning. The improvement enables a turner to do nearly, if not quite, double the work he could do by the old arrangement.

**Improvement in the Construction of Sewers.**

Mr. Willard Day, of Brooklyn, L. I., has taken measures to secure a patent for a very valuable improvement in the method of constructing sewers, which will prevent effluvia from rising out of them, and at the same time will make them in a manner self-cleansing. The side of the culvert is inclined, so that the water from the gutters descend the culvert with a force sufficient to carry away down into the sewer all effluvial matters. This improvement over the common form of culverts will render our system of sewerage more healthy, and certainly more agreeable to all those who have culverts near their stores or dwellings. We hope the improvement will be introduced at once into our city and all other cities. A vertical man-hole is made near the culvert, so as to clean it out in case of accidental choking by sticks or such like obstructions, but we believe it will not require to be used. With good grates over our culverts, the improvement will enable the sewers to be self-flooding or cleansing. When we consider that water, having a velocity of 12 inches per second, tears up gravel, and at a velocity of three feet per second carries stones the size of an egg, we have some reasons for expressing the foregoing opinions.

**Improvement in Horse Collars.**

It often happens that articles in common use escape the attention of inventors, and hence we find machines, articles, and systems in the same state now as they were hundreds of years ago. It is but a few years since attention was devoted to sewing machines, and many such things, and although we cannot say the same of horse collars, for we have seen many modifications of them, yet we must say that too little attention has been paid to their improvement. We say this because the clumsy, close, shoulder galling collars are in general use.

J. R. Lindner, of Newark, N. J., has invented and taken measures to secure a patent for an improvement in horse collars, which consists in forming the body of the collar of a spring, and making it to open and close at the bottom to allow it to pass easily over the horse's head, and to adjust itself better to the shape of the neck and shoulders of the animal.

**Improved Railroad Cast-Iron Wheel.**

Mr. Isaac Van Kuran, of Boston, has invented and taken measures to secure a patent for another good improvement in Cast-iron Wheels, whereby he is enabled to construct and apply his previously patented wheel for driving-wheels. He has added an elliptical cast-iron band to his wheel, by which driving wheels of locomotives of increased diameter can be cast with every provision made for the contraction of the metal, and yet of sufficient stiffness to prevent vibration without increasing the thickness of the wheel at the hub. A chilled driving-wheel, of any diameter, can be safely cast, by this improvement, with a hub no thicker than five and a half inches, to which thickness it is desirable to limit it. Mr. Van Kuran's Cast-iron Railroad Wheels are in great demand, and meet with an extensive patron-

age. From his great experience, as a practical engineer and master machinist on one of our oldest roads, he is well qualified to form a most excellent judgment of the kind of wheel required to meet all exigencies.

**Stave Dressing Machine.**

Mt. Dennison Woodcock, of Independence Centre, Allegheny Co., N. Y., has invented an improvement in machinery for planing and matching staves for barrels, &c. He employs rotary cutters so combined and arranged that the staves are first planed on their inside and outside faces. Rotary cutters are also employed, by being set in an inclined position con-

verging towards one another in front, to match the edges and form the bilge of the stave. The stave is cut to its proper length by a circular saw which revolves above the stave as it (the stave) passes through the frame, and descends as it cuts through, but rises when the stave is cut. The dressing of the faces of the staves, the matching of the edges, and the cutting off the stave to the desired length, are operations performed continually. The stave is fed in rough at one end of the frame, and, untouched by human hands, it comes out at the other end finished and ready to be set in the truss hoops.

**PATENT BAND WRENCH FOR WAGONS & CARRIAGES.**

Figure 1.

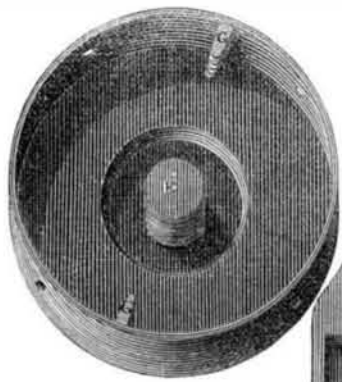
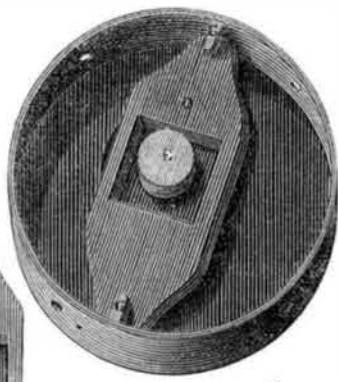


Figure 3.



This improvement was secured by patent last January (1851) to the inventor, Mr. A. M. Billings, of Claremont, N. H. The accompanying engravings represent the improvement in various positions, to show how it is constructed and operated.

A close band fits around the outside of the hub, the inside view of which is represented by No. 1; inside of this band is fitted what is termed a "band wrench," No. 2; this wrench is made to remove the common nut, which is placed on the ends of axles. No. 3 represents the wrench in its place. G G (No. 1) are flanges to hold the wrench, D, and allow it to slide in the band; E is a screw bolt which fits from the outside of the close band, through the centre of the wrench, D, which has a thread cut in it to allow the said screw to work out and in the wrench. No. 4 is a hub and axle without the close band, to show the nut, C, on the end of the axle sunk into the hub, from which it should project only about one-quarter of an inch; it also shows the grooves cut into the hub, to receive the flanges, G G, of the close band. No. 5 is an outside view of the close band, with a small

**Improvement in Scissors and Shears.**

Mr. John C. Symmes, of the city of Troy, N. Y., has invented and taken measures to secure a patent for an improvement in Scissors, which consists in constructing the pivot or axis of the two cutting jaws, in such a manner that the edges of the shears are drawn together sideways, in cutting, and all inconvenience arising from looseness of the pivot in the ordinary scissors, is obviated. The edges of the scissor blades are also formed longitudinally in such a manner that they always meet at the same angle throughout their whole length in cutting, thereby producing a smooth even cut of any length.

**Improved Shingle Machine.**

Mr. D. A. Bailey, of Robinson, Crawford Co., Ill., has invented a new improvement in shingle machines, which consists in the employment of knives having a rectilinear motion, and set at an inclination towards one another, which, in their descent or stroke, cut the shingle to the required taper, the wood being

square socket in the screw, E, and F beside it is the key to fit into the said socket to turn the short screw bolt; by turning this key forward, the screw carries the wrench up on to the nut; by turning the key backward, it brings the wrench back fast into the band. To remove your wheel from the axle, you apply the key to the socket and turn the screw forward, which at once carries the wrench forward until it clasps the nut; then whirl the wheel backward, and the nut is run off and the wheel instantly liberated. To put the wheel on, you simply run the hub on the axle, whirl the wheel forward, which runs the nut on; then, with the key still in the socket, turn the screw backward, which brings the wrench back from the nut securely into its place, and you are ready for the road. It is a simple and good invention, there can be no question of this. It can be applied to any wagon or carriage, and where is there a wagon which does not require it. It will no doubt soon come into general use.

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fed on to a suitable table for that purpose by a swinging frame, which holds the timber to its place till the knives effect the cut. Measures have been taken to secure a patent.

**Engine Shafting.**

Mr. T. S. Bourshett, of Philadelphia, has taken measures to secure a patent for a very useful improvement in the construction of shafting by uniting wrought and cast-iron. The wrought metal tube is placed in the centre, and a number of similar metal bars or rods are interspersed longitudinally between the central tube and the outside of the shaft, and the cast metal run in the mould on end to fill up the interstices and form the shaft. It is claimed for this improvement that a shaft, or other body so formed, is better adapted to stand the various kinds of straining that shafts are subject to, than either cast or wrought iron singly. There is no part of the machinery of a steamboat so severely tried as the shafting; it is necessary to have it strong.

**Garments without Seams.**

We have sewing machines not a few in number, now-a-days, and there can be no doubt but they are a benefit to mankind,—but would it not be a far greater improvement, and thereby a greater benefit, to make garments without seams, and thus obviate the necessity of cutting up the cloth into small pieces, just to be united together again by needle and thread. At a glance it appears to be an erroneous principle of manufacturing garments, to cut up fine whole cloth into small pieces, and then sewing them together by a process both troublesome and expensive. Samuel M. Perkins, of Springfield, Bradford Co., Pa., has invented improvements in the manufacture of garments, whereby we shall be enabled to wear coats, and all such habiliments, independent of the weaver or tailor. The nature of the improvement consists in causing the bat, or fleece of wool, cotton, or other fibrous material, as it issues from the carding machine, to be wrapped on a "Former" of the required shape of the desired garment. The "Former" is made to revolve, and at the same time, it has a reciprocating motion in a direction at right angles to the feed, so that the fleece will be wrapped spirally in contrary courses upon the "Former," for any number of layers in succession, according to the thickness of the garment required to be made. Measures have been taken to secure a patent. From the days of darkest obscurity and barbarism, in almost all nations, cloth has been and is made first of threads, then woven, then cut up, then sewed piece by piece again. Surely modern inventive genius has something yet to do to improve on the most approved process, which finally results in the garments we wear. Mr. Perkins has made a move, and his machine is an ingenious one in the right direction. Felt, we know, has been used for coats, &c., but seamless felt cloth garments, we presume, will soon be new articles entirely in our markets. The felting qualities of certain kinds of wool are well known, but whether cotton or linen can ever be felted in the same way, time alone will determine.

**The Carbonic Gas Engine.**

I was in Cincinnati the first of September, and had an opportunity of examining Prof. Salomon's "Carbonic Acid Gas Engine." He certainly has created a great power, but consumes so much of it in the details of the engine that he has but a small surplus remaining for useful purposes; from 1,008 lbs. to the square inch on the piston, he has but 360 lbs. that can be used, and this 360 lbs. would soon be lost in case of the least leakage of the joints, which it will be almost impossible to prevent, from the great pressure to which they are subjected. I hope he will succeed, but I have my doubts. In case of an explosion there would not be so many pieces to fly, but what there is would fly strong. \*\*\*

Cuyahoga Falls, O., Oct. 15, 1851.

**Copyright Case.**

U. S. Circuit Court, Philadelphia, Judge Grier presiding.—On Monday the 20th inst., an injunction was granted in this case of Huntington and others, against Johnson and others, the court granted a special injunction, to restrain the defendants from the printing and publishing of certain works of S. P. Goodrich, (Peter Parley,) comprising his histories of England, France, Greece, and the United States; the copyrights of which are claimed by the plaintiff. The injunction to remain in force until further order of the court.

**Immense Railroad Depot.**

The excavations which have been made in the square of land bounded by Centre, Elm, Franklin, and White streets, are preparatory to laying the foundation of a structure which will probably be the largest in the city. It is intended for the depot of the New Haven and New York, and New York and Harlem Railroad lines, and will cover the whole block. The cost of the building will not probably be less than seventy-six thousand dollars.

**A Monster Tunnel.**

Ground is broken for the great tunnel of four miles long through the Hoosic mountain for the Troy and Greenfield Railroad.