



New Inventions.

Novelties in Steam Engines.

It is well known that a number of the engines that are now in operation both in France and Britain, have double cylinders, one a high pressure non-condensing and the other a larger cylinder to use the escape steam from the high pressure cylinder and then condense it. These have been highly commended by some of the European Journals, but after a full examination of their merits, we have come to the conclusion, that they are not so good as to apply but a single large cylinder and use the steam expansively. The single cylinder engine is certainly less expensive and more simple—important considerations. We have seen McNaught's and Joice's double cylinder engines and although beautiful and excellent pieces of mechanism, yet our partiality is for the single cylinder. For some purposes, however, the double cylinder would be good, or the using of the escape steam from a high pressure non-condensing engine and applying it to propel machinery. We have been informed lately of an instance of this kind which must be of considerable benefit to those who have applied it and all others who may do so. It is the using of the exhaust steam from a high pressure cylinder to propel a simple and compact rotary engine. Messrs. Wm. Zimmerman and F. C. Walker, mechanics, of Quincy, Illinois, have done this, and when we take into consideration that some rotary engines are so simple and can be built so cheap, especially a small one (and a five horse power is the largest that should be built,) we will at once perceive that the application of Messrs. Zimmerman and Walker is good and ingenious, and worthy of a patent, if our laws can grant one.

Improvement in Daguerreotyping.

Mr. J. Jones, of Baltimore, has made an improvement in the art of Daguerreotyping, which is very valuable. He fixes his impressions so permanent upon his plates by some process as to render them almost as durable in surface as if they were enamelled.—They can be carried perfectly safe to any distance without being covered with glass and may be rubbed with a wet cloth without scratching the impression or rubbing it off.

New Artificial Hand.

Messrs. Kretschmar and Gildea, of Dock st., Philadelphia, have invented a new Artificial Hand, which has been represented to us as not only neat and very beautiful but a very excellent substitute for the loss of the natural one. The frame is made of steel and the various bones substituted by steel wires and plates having very flexible joints. A small lever connects one joint with the other and the lowest joint of the fingers are connected with a double lever on the palm of the hand. When the palm is closed the fingers move like the natural hand. This apparatus can be fitted to any person who may be so unfortunate as to need it. There is a small lever by which the wearer may choose either the index or middle fingers at will, separate from the others, as may be desired.

Engine Trumpet.

Mr. Elbridge Webber, of Gardiner, Maine, has invented a trumpet which can perform some variations, to be driven by wind or compressed air. It can also be applied to locomotives by a little alteration of parts, and this is what some good people in Pennsylvania desire in order to get rid of the screeching whistle. A caveat has been filed for the invention.

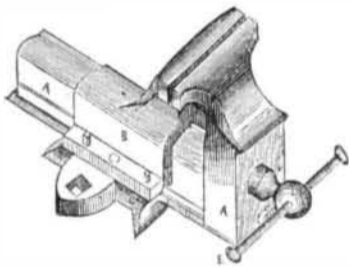
Counter-sunk Rivets for Pails.

Mr. Theodore Zinck, of this city, has made some beautiful hoops for pails, &c. having all the rivets countersunk. The application to hoops for pails makes them more beautiful and neat, and therefore the improvement is an important one.

Extraordinary Musical Mechanism.

An instrument called the Antiphonel, has been introduced to the public of London, by Mr. James Smith of Lord Street, enabling any person to play any kind of music, grave or gay, on the organ, piano, seraphine, &c., to which the new article is affixed. It cannot be described in words; it must be seen to be appreciated; and yet the following from the Standard is a pleasing and surprising contrivance:—"The whole machine is but two feet long, and four inches wide. On the top is a flat metal surface, pierced across its width in the centre with a series of small openings which admit through them a small number of metal points, rising a little above the metal plate. These points are the extremities of small levers encased below, and communicate with the keys, so that any point being pressed down, presses down the corresponding key, and produces the desired note. The 'music books,' if we may so call them, are a succession of small blocks of wood which are forced onward along the metal plate. On the under side of these blocks are inserted steel pins, resembling those on the barrel of a hand organ, and these, as they come in contact with the metal points, produce the tune. The blocks are moved along in lively music by a small crank handle. In slow or sacred music, another small handle, moving like that of a pump, is used, by which the notes may be maintained, when required, to any length. When one block has passed over the plate, another containing the continuation of the piece, or succeeding parts of a tune, may be introduced, and repetitions may as readily be accomplished. The blocks may be had, set to any given tune or piece of music, and are sold at so much per foot, so that any one may now order a mile of music. Mr. Smith, for our gratification played on the harmonium a variety of airs, quadrilles, hymns, &c. with great effect, by merely using one or two of the handles, and pulling the wooden blocks under a small roller, which presses them against the polished metal plate before alluded to. The machine itself passes the blocks along by means of a small cog wheel, working on a thin rack attached to each block."

Stiven's Parallel Vice.



The Vice is bolted directly to the Vice board by two snugs cast on the sole C, which is flanged on the under side, and abuts against the edge of the bench. One of the jaws B, is bolted to the sole and under it the other jaw A A, slides upon the flat surface of the sole. The upper side of the slide A, which is hollow, has a square feather upon it which corresponds to a groove in the inside of the fixed jaw piece B; the slide A, is also furnished with strips along the bottom edges which likewise slide against the sole plate C. Thus the piece A is held steady, and is moved along the sole by means of the screw and lever D E; this screw being confined in a collar at the neck, and projecting into the interior of the slide A A, works in a nut attached to the sole plate. By this means the moveable jaw may be slid along the sole, and screwed up against the fixed jaw B, holding firmly any object placed between them. The main advantage of this Vice consists in the parallel movement of the sliding jaw, without the work being marked. It is also stronger and likely to be more durable than the common Vice, in consequence of the direct action of the screw and its being completely protected from all dust and filings.

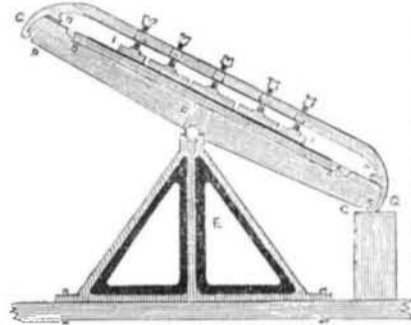
Transferable Slips.

Messrs. Robinson & French, of Andover, Mass., have invented an article called Transferable Slips or Soles, for boots, shoes and slippers. They are made of thin leather with a steel spring on the heel, and are to be put into the inside of the boot or shoe.

New Looking Glass.

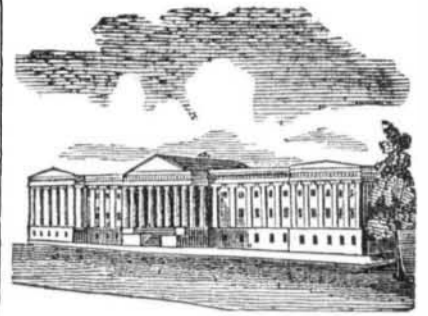
A new looking-glass of a highly ingenious construction, has lately been invented in England. It enables any one using it to have a full view of the back of his head. The mechanism is exceedingly simple; rods of brass are placed parallel to the upper portions of the glass from the handles; then, from the centre of this at the top, a curved piece turns on a swivel, to which piece a small oval glass is attached, and this, being brought round at an angle with the larger glass, affords the view of the back part of a figure standing between the two in the same manner, but with far more truth than we find by taking one glass in the hands to observe our reflection in another. Moreover it leaves the hand at liberty to use at will.

Machine for Silvering Looking Glasses.



The common silvering table is a slab of marble ground to the most perfect degree of evenness, and placed in a frame so that a certain degree of obliquity can be given to it.—All around the margin is a gutter, through which, at one corner, a hole is made so as to allow the escape of the mercury when the plug that closes the hole is removed. It is this corner which is the lowest when oblique position is given to the table, in order that the mercury may be run to it from the other parts of the gutter. On the silvering table is spread a sheet of tin foil of the same size as the glass, or rather a little larger; a fluid amalgam of tin is then poured on it, and spread over its surface with a brush till it adheres; more mercury is then poured on till it stands about a quarter of an inch deep over the tin foil. The plate of glass, having previously been made quite clean, is then slid gently and steadily from a sheet of paper, just dipping below the surface of the mercury, but avoiding to touch the tin foil for fear of tearing it. When the glass is fairly over the tin foil, the table is placed a little oblique by means of a rack; the mercury now runs into the gutter, and the glass subsides on the tin foil. The glass is then pressed tightly against the foil by means of the screws, as seen in the engraving. By this pressure at the end of 24 hours the silver is so firmly adherent to the glass that the screws may be removed, and the glass is then raised up in a sloping position to allow the mercury to drip off. The silvering then becomes quite hard. The drawing above is a section of the machine. A B, the stone slab; C D, its frame containing the usual channel for the mercury; E, the support on which the bed is turned; the middle strengthening bar F, which serves for an axis, is placed a very little on one side, to make the side C, at which the slope is given, always preponderate, that side usually resting on one or more screws, by which it is lowered or raised again. The upper and under sides of the frame C D, are made quite parallel, to fit the hooked ends of the long clamps G G, which extend from one end to the other. The clamps are furnished with little plates H H; these project inwards for the clamps to stand and slide on when the screws are loosened.—They are also, with the under hooks, made sufficiently wide to prevent the clamps from falling on one side. A sufficient number of these clamps I I, are ranged over the bed about one foot apart and the screw holes in one clamp are made to be opposite the intervals in the next, in order to distribute the pressure more equally over the surface of the glass. The clamping blocks are of wood faced with leather. When the glass is being put on, the clamps are usually drawn to one end of the bed or otherwise removed out of the way.

Melt together in a crucible, three parts of copper with one of zinc; the alloy will be found to be the common brass.



LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE.

For the week ending May 2, 1848.

To Andrew McCleary, of Philadelphia, Penn., for improvement in Spark Arresters. Patented May 2, 1848.

To William Van Anden, of Trenton, N. J. for improvement in Rivet Machines. Patented May 2, 1848.

To Horace H. Day, of Jersey City, N. J. for improvement in Gutta Percha Fabrics in imitation of Patent Leather. Patented May 2, 1848.

To Morgan Loomis, of Worcester, N. Y., for improvement in Smith's Bellows. Patented May 2, 1848.

To James Babbitt, Boston, Mass., for improvement in machinery for separating Gold. Patented May 2, 1848.

To Elisha Ayer, of Norwich, Conn., for improvement in Locomotive Steam Boilers.—Patented May 2, 1848.

To William A. Kentish, of New York City, for improvement in Anchors. Patented May 2, 1848.

To John R. Warrington, of Damascoville, Ohio, for improvement in Corn Shellers. Patented May 2, 1848.

To Thomas W. H. Moseley, of Columbus, Ohio, for improvement in Sash Fasteners.—Patented May 2, 1848.

To Gardner Chilson, of Boston, Mass., for improvement in Hot Air Furnaces. Patented May 2, 1848.

INVENTOR'S CLAIMS.

Machinery for Inclined Planes.

By George Escol Sellers, of Cincinnati, Ohio. Improvement in machinery for ascending and descending inclined Planes. Patented Nov. 13, 1847. Claim.—What I claim as my invention and desire to secure by letters patent is the method substantially as herein described of increasing the tractive power of the Locomotive Engine by the resistance or gravity of the train to be drawn thereby, by connecting such train with the driving wheels that grip the central rail as described. I also claim the connecting of the wheels that gripe the central rail, and which act thereon as drivers with a spring, substantially as described, whereby the required adhesion can be obtained when the locomotive is descending or ascending an inclined plane without a train of cars, or when by accident or other cause, the resistance or gravity of the train cannot be employed for this purpose. I also claim the forming of the connection between the gripping wheels and the train by means of two opposite toggle joint-levers, connected with the levers of the gripping wheels substantially as described; whereby the train is made to act on the gripping wheels either in ascending or descending inclined planes, as described. I claim the connecting of the two gripping wheels with the frame of the locomotive by means of levers substantially as described, whereby the locomotive is left free to vibrate between the track rails whilst the gripping wheels are acting on the central rail, thereby relieving the central rail from being affected by the surging of the locomotive from side to side. And finally I claim the combining of the gripping tongs with a railroad car or cars, by means of the arms of its levers, and by chains or jointed rods substantially as described, whereby the pull of the cars, on running down an inclined plane, in the event of the breaking of the connection with the locomotive or of the cars with each other, will act on the tongs and cause them to gripe the rail, as described.