

## New Inventions.

### Bending Sheet Metal.

Solomon G. Booth, of New York City, has invented an improvement in machinery for bending or corrugating sheet metal, to make the beams known as "Montgomery's Patent Sheet Metal Beam," or for forming, on sheet metal, corrugations of greater depth than can be formed by any means now in use. The machinery employed consists of a swage and die, and the nature of the invention consists in forming the die in two or more parts fitted to work one within the other, so as to make the corrugations of any required depth, without breaking or in any way injuring the sheet metal. It also consists in a certain arrangement of the mechanism which operates the dies whereby the different parts of the die are enabled to be conveniently brought into operation successively upon the metal. A patent has been applied for.

### Stone Sawing Machinery.

Joseph Greely, 2nd, of Nashua, N.H., has applied for a patent upon an improvement in machinery for sawing stone, which consists in the employment, as a saw for dividing stone into slabs, of a disc or plate of metal, which has a series of burrs of a thickness more than one-half of the thickness of the plate, sunk in opposite sides thereof, so as to be flush with it, and attached thereto by screws or other devices, which pass through their axes. These burrs are so arranged that all protrude the same distance beyond the periphery of the disc, and when caused to rotate by being moved in contact with the stone they cut it away to the width of the disc to which they are attached, thus dividing it.

### Improved Planing Machine.

Joseph Osgood, of Brockport, N. Y., has invented an improvement in planing machines, which consists in the use of an elastic face attached to each cutter stock, and so arranged as to press upon the board to be planed, and prevent the cutters from working too deep into the board or plank. These elastic faces yield so as to allow any slivers or shavings to pass from the cutting edge of one cutter to that of the other, thus preventing the board from being marred, as is often the case when the stationary mouth-piece is used. The cutter stocks are rendered adjustable, so that they may surface equally boards varying in thickness. The inventor has applied for a patent.

### Bee Hive.

Dewalt Fouse, of Williamsburg, Penn., has invented an improvement in Bee Hives, consisting in placing three sections on top of each other and holding them together by ledges serving to render the joints between them water-tight. The bottom boards of the lower section are inclined so as to allow the dirt and refuse of the hive to be more readily discharged. The sections are separated by slats from each other, the top section consisting of four small boxes having no bottoms. Either section can thus be removed independently of the other. The inventor has taken steps to obtain a patent.

### Prairie Plow.

Gardner A. Bruce, of Mechanicsburg, Ill., has invented an improved Prairie Plow, on which he has applied for a patent. His improvements consist in connecting the axles of the wheels upon the beams, loosely with it and the adjusting lever, by means of a jointed revolving rod, over which the beam can be adjusted freely, and upon which the adjusting lever is sustained. This rod passes loosely up through the beam, being connected to the adjusting lever by a loose joint, which allows the axle to have the necessary movements in the path of a horizontal circle, independent of the beam and lever, while changing the line of draught or turning curves.

### Improvements in Piano Fortes.

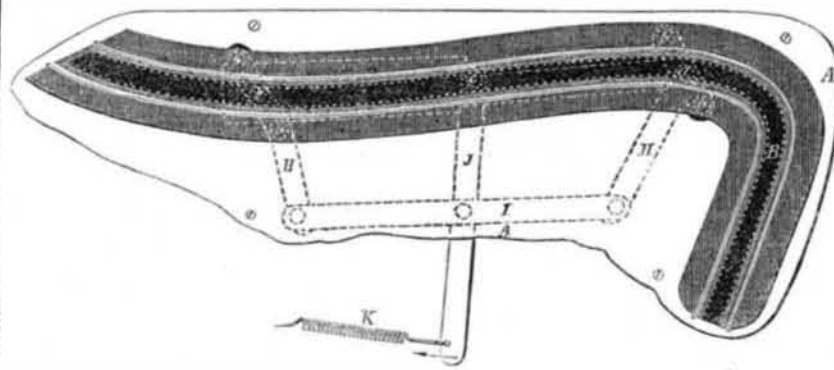
G. L. Wild, of Baltimore, Md., has invented an improvement in Pianos and other musical instruments of a similar kind, on which he has applied for a patent. The invention consists in the use of screws, or screws and levers combined, instead of the ordinary tuning pins, and

in so arranging said screws, that the necessity of winding the strings upon them is avoided. A loose ferrule is placed upon the lower portion of the screw for grasping the string and also for preventing the string from coming in contact with it, and wearing it as the instrument is being tuned.

### Electric Clock.

Alex. Hall of Ohio, has invented an Electric or Telegraphic Clock, the object of which, is to secure a uniformity of time at railroad stations. As we shall publish an illustration of this clock soon, we defer a description until that time.

## IMPROVED ATTACHMENT FOR PIANOS.—Figure 2.



The engravings herewith presented are illustrations of Albert T. Corliss' improvement in Pianoforte Attachments, denominated by him the Swell Mute Attachment, a notice of which was published by us four weeks since.

Figure 1 is a perspective view, and fig. 2 is a plan view. The same letters refer to like parts.

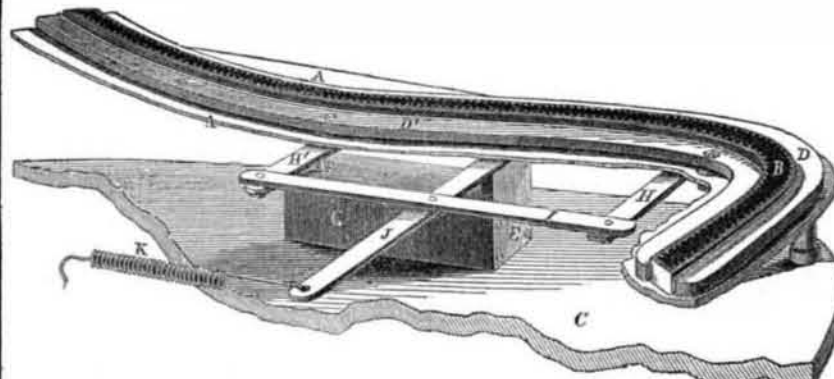
The object of this invention is to hold the tone of the instrument in perfect subjection to the performer, and produce effects on the piano corresponding with the effects produced by the swell on the organ—the crescendo and diminuendo.

A represents part of the sounding-board of a piano; B is the bridge, and C the bottom of the case. D D are clamps so arranged within the instrument, and so controlled by suitable mechanism that the performer may, at pleasure, cause them to press upon both sides of the bridge and hold it in such a manner as to control the vibration of the sounding-board, and

thus regulate the tone. These clamps, which constitute the novelty of the invention, and the principal part of the mechanism by which they are operated, are all supported by an iron elbow-piece, E, and a standard, F, both secured to a block, G, which rests upon and is secured to the bottom of the case. The elbow-piece, E, carries an upright-pivot, a, which forms the fulcrum of a horizontal lever, H, and the top part of the standard, F, forms the fulcrum of another lever, I. Both of these fulcra are exactly under the center of the bridge; and each of the levers is connected by the pivots, b b, on opposite sides of and at equal distances from its fulcrum, with the two mutes, D D, which are supported by the levers, whose pivots, b b, pass through openings in the sounding-board. By moving the levers the two clamps are removed entirely from the bridge so as not to touch it, or are made to press with equal force upon it.

The two levers have such a relation to each

Figure 2.



other that when connected together by a link-rod, I, they move together and cause all parts of the mutes to bear the same relation to the bridge. The link rod, I, is connected at about the middle of its length with a horizontal lever, J, whose fulcrum is a pivot, c, secured in the elbow piece, B. This lever, J, has a coiled spring, K, applied to it in such a way as to pull it in the direction of the arrow shown in fig. 2, and thus operate upon the levers, H H, to make

them draw the mutes away from the bridge. It is intended to be connected with a pedal so that the performer may at pleasure cause the mutes to bear upon the bridge with any required amount of pressure.

The inventor is a pianoforte maker, and is employed in the manufactory of Andrews & Robinson, Portland, Maine, at which place all communications of inquiry should be addressed to him.

### Tenoning Bedstead Rails.

T. R. & G. Bailey of Lockport, N. Y. have invented an improvement in machines for cutting the tenons on bedstead rails, on which they have made application for a patent. The invention consists in a peculiar arrangement of a cutter and chuck, to facilitate the operation of tenoning bedstead rails, and to give the tenon a form which shall render its lock with the mortise more secure.

### Gas Burner.

Andrew Mayer, of Phil. Pa. has applied for a patent on an improved Gas Burner. The novelty of the invention consists in the mode of arranging and fitting the regulating valves, which are applied to gas burners to regulate the flow and consumption of the gas. Owing to the minuteness and delicacy of these valves, it has always been difficult to apply them to the burner in such a way as to have their perfect operation insured, but this invention is intended to overcome the difficulty.

### Reaping Machine Sickles.

We have received a letter from Henry Green, of Ottawa, Ill., in which he states that he is the inventor of the form of sickle referred to by James M. Thomas, in his communication, which appeared in the "Scientific American," on page 107, and not B. Murray, as therein stated. He has sent us a sketch of this sickle, and says, "they have been made in this manner for three years."

### Singular Phenomena.

The "Belfast Journal" says that in a portion of the Penobscot River, a short distance above Prospect Ferry, where the river widens to the breadth of about a mile, a great commotion was discovered in the water several months since, so that the surface was much disturbed, and stones and earth seemed to be thrown up from the bottom. This upboiling still continues at intervals, and experiments show that at least an acre of the river bed has sunk from a depth of seven to a depth of fourteen fathoms. A sul-

phuric gas is emitted from the water during its periods of Commotion, and it is said that two distinct shocks of an earthquake have occurred since the commencement of the phenomena. These disturbances are undoubtedly of volcanic origin, though the phenomenon is very remarkable for this region.

### Regulation of Public Clocks in Boston.

Prof. Horsford, of Cambridge, Mass., has proposed to the Common Council of Boston, a new plan for regulating "time-pieces" in and about Boston.

On the cupola of the State House of Boston, which is fortunately so high that a signal made at its top, with a properly colored object of moderate magnitude, may be seen from many points, and by steamers and vessels leaving the harbor, and from the surrounding suburbs and country, embracing an area of some ten miles radius, it is proposed to erect fixtures for dropping a dark colored ball, every day, at noon precisely. At five minutes before noon, the ball is to be run up to the top of its rod, and there secured by a device. At noon precisely, the ball is to be relieved by an electro-magnetic apparatus, designed by Messrs. Farmer & Batchelder.

Accurate time is sent from the Cambridge Observatory, to Boston, twice every week, and a plan like that recommended, has been found of great utility in London, where similar signals, are employed in the Strand.

### Documentary History of New York.

We are indebted to Henry S. Randall, Esq., State Superintendent of Schools, for a copy of the "Documentary History of New York."—This is a great favor to us, as it contains much matter of deep interest, relating to the history of steam navigation, and we are confident that no paper in our country has more claims to this kind of donations. We were indebted to Dr. O'Callaghan, the able historian, for some of the proof-sheets of this work relating to Fulton's first steamboat, during the time we were publishing articles on steam navigation, for this he will ever have our gratitude, and Mr. Randall we will ever regard as a true friend to the spread of useful information, as we shall have frequent occasions to refer to these volumes in order to convey useful and rare information to our people.

### A Secret Telegraph.

The Olympic Academy of Vicenza, Venice has publicly declared the invention of Termeschini, by which messages may be transmitted secretly, to be perfectly successful. The results of the inquiry show:

"First, that the apparatus of Termeschini may be applied to Morse's telegraph; secondly, that when the dispatch is sent secretly it can only be received so, any fraud in that respect being subject to immediate detection; thirdly, that secrecy may be suspended or applied at pleasure. The report of the commission is highly eulogistic of the invention."—[Ex.

[Wonderful invention truly. "When the dispatch is sent secretly it can only be received so." This is bright. Are not all telegraph messages sent and received secretly. The operators at both ends of a line, by an understanding, can transmit, at any time, a message understood by themselves only.

### The Fire Annihilator Again.

Secretary Dobbin, of the Navy Department, with Commodore Morris and other distinguished gentlemen were present to-day at the Navy Yard, to witness the trial of Phillip's Fire Annihilator. A wooden building near the yard was set on fire and the Annihilators applied, but the building was destroyed in a short time, thereby showing that no reliance can be placed upon these instruments to extinguish a conflagration.

We copy the above from the "Sunday Dispatch."

### Commander Ingraham.

Capt. Henry W. Morris has been detached from the rendezvous at New York and ordered to proceed to the Mediterranean to relieve Commander Ingraham, in command of the sloop-of-war St. Louis. The return of Commander Ingraham to the States is occasioned by the precarious state of his health.