New Inventions.

Brown's Water Gas.

Having had some enquiries made of us about what is termed Brown's Water Gas, recently patented by a gentleman of Baltimore, we would state that it is made out of the hydrogen of decomposed water and a mixture of carbonic gas, made from resin. Our Washington correspondent writes us, "The people here are still in ecstacies with the Water Gas. From a number of experiments made it was shown that water gas, consuming 2 feet and 6-10 per hour, emitted a light from the burner equal to 25 sperm candles; while with the common gas the same burner consumed exactly 4 feet, and gave light only equal to six sperm candles. The price of the coal gas is $4 per 1000 feet, and that of the water gas only $1,50."

The patent of Mr. Brown is not for the gas, but the machinery to make it. There is a patent older than his for making the same kind of gas. The claims of Stephen White, page 166 (this Vol.) Scientific American, precedes Mr. Brown's on page 198. White's gas was exhibited at the last annual Exhibition of the American Institute, and was exhibited in England nearly two years ago, and is described on page 285, Vol. 4, Sci. Am.,—the description there agrees with that of the Baltimore papers, regarding Brown's. Any body can make gas from water, and use the hydrogen with carbonic gas, if he or they use apparatus different from those patented.

Manufacture of Ice.

The Paris scientific reporters notice, with approval and adoption, the very ingenious invention of Dr. Gerrie, of Florida, of making ice by expansion of highly compressed air previously reduced to the ordinary temperatures. They notice, likewise, the sort of claim to priority which Sir John F. W. Herschel has put forth in the London Athenæum. The astronomer adduces only oral suggestion on his side, made privately to friends within the last four or five years. He adds in postscrip:—"An old steam-boiler, buried some twenty or thirty feet under ground, in well rammed earth furnished with a condensing pump (worked above ground,) and one eduction pipe opening by a stopcock through a rose into water, would in all probability supply ice ad libitum, for the use of a family in the country:—the condensation being performed over night".—[Exchange.

The invention of Dr. Gerrie is one which found its way into France through the colums of the Scientific American.

Woolen Printing—Great Improvement.

Messrs. Holt & Brierly of Lowell, have now in successful operation a new improvement of their own discovery, which promises to yield a rich reward. It is the printing of woolen goods, in any style of stripe or figure that may be desired, and in perfectly fasts colors, such as will stand the test of thorough washing. Mr. Thomas Brierly is the original inventor and the discoverer of the process of this printing, and has it secured by patent. The colors are of superior brilliancy, and the style of goods is universally admired. For linings of ladies' and gentlemens' cloaks and coats, we predict that these goods will soon become all the rage. For childrens' clothing, too, they are so much prettier than any thing in the market, that they can hardly fail of a great run.—[Exchange.

[The machinery spoken of above may be new, but it is no new thing to print both fast and fugitive colors of various patterns on woolen goods by machinery.

Improved Axle Box.

Mr. Wm. H. Hovey, of Hartford, Conn., has invented an improved axle box, whereby the lubricating material is retained in the most simple manner perfectly tight, by two regulating arched springs, in combination with an elastic metalic packing ring, whereby the face of the ring is kept always true up against the box. Measures have been taken to secure a patent.

DICK'S ANTI-FRICTION PRESS.

The accompanying engravings represent Mr. David Dick's patented press, adapted for pressing cotton, punching, straightening railroad iron, embossing, and for every purpose of pressing. It is compact, and presents a most important arrangement of mechanical powers, to avoid friction. The great principle of this invention is the saving and centralizing of the power, by directing the power which is applied through a line of contact points. The most perfect machine is that which transmits the power applied, in any ratio, multiplied into time, or what is better in machinery, "space," with the least loss by friction. In all machinery constructed to gain power, by losing time, to use common terms, the loss by friction is very great, such as block and tackle, and other machinery, screw, &c., where the power is transmitted over a great extent of surface. In machinery for lifting or pressing, 100 lbs. passing through two feet space, will lift 200 lbs. through one foot of space, and so on in the same ratio, barring the friction, which is the great evil of all complicated machinery. This great drawback (friction) on power is removed in Mr, Dick's press, so far as positive mathematical demonstration can test—and there is no surer way—its value.

Fig. 1.

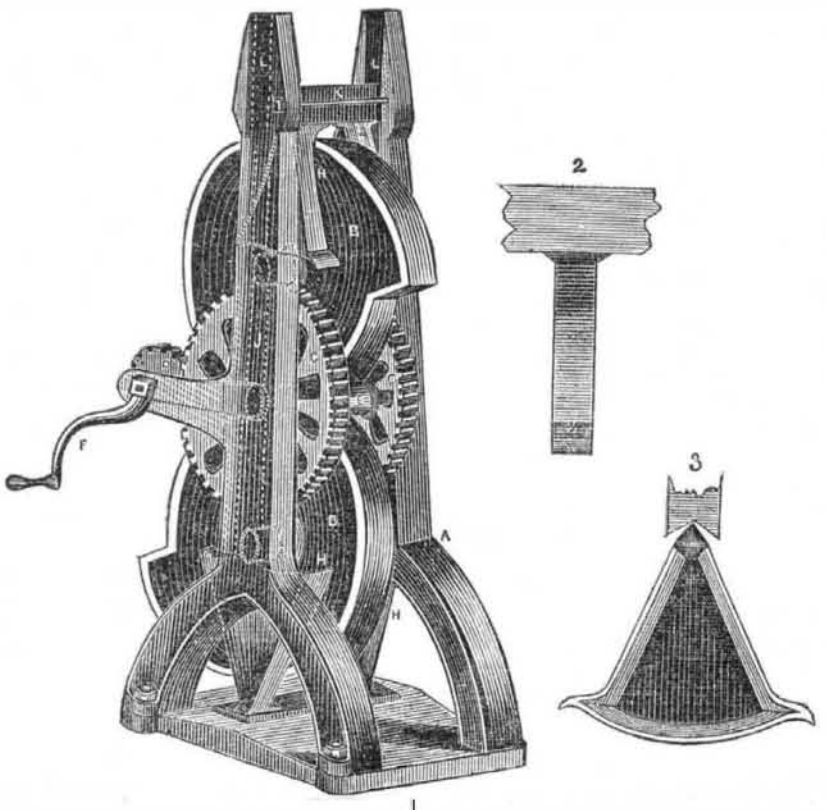


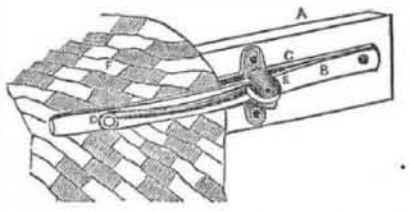
Fig. 1 is a perspective view; fig. 2 is a side view of the sector, fig. 3. All the sectors are formed alike, but reversed in position—the upper and lower. A is the upright frame or standards; B B are two partial rotating cams. C C are two cog-wheels on the axle, E. This axle is allowed to move slightly up in its bearings; D is a pinion on a fixed axis, it is operated by the crank handle, F. A pinion and lever are employed, as required, on each side; H H are sectors (four), one on each side of the cams, B B. They are formed as represented by fig. 3, which represents the position of the top one; the lower ones are in a reverse position, viz., resting on their apex. The axle of the lower cam, B, rests on curved surfaces of the lower sectors, and the axle of the upper cam presses on the curves of the upper sectors. The axle of the upper cam moves upward in its side bearings, and the upper sectors are pressed upward, pushing up the plate or frame, R, which moves upward in the guide slots, L L, to press any thing that may be placed on it, against some rebutting back. The upper sectors move in one direction while the lower ones move in the contrary direction, bringing their curves to act most effectually, ballancing all the motions, and acting in right lines through *points* of contact, produced by the contact of the curved surfaces of the axles, cams and sectors, consequently the amount of friction is very small.

These presses have received the highest commendations by all those who have used them. We have seen testimonials of their utility from the Camden and Amboy (N. J.) Railroad Company, the Methodist Book Concern, this city; Mr. Morse, the Assistant Engineer, of the U. S. Dry Dock, at Brooklyn, and is excellent for a printing press.

They are manufactured by Mr. Joseph E. Holmes, Jane street, corner of Washington, New York. The best of materials are employed in their construction, and they are made and put together in the best manner.

Bed-Clothes Clasp.

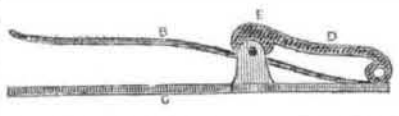
Fig. 1.



This is a little instrument for securing bed-clothes to prevent them from being drawn off persons while asleep. There is not a single family but has felt, or at present feels the want of such an instrument. Almost every child requires the bed-clothes to be secured snugly, and more especially when two sleep together. Here is the very thing required and desired, without a pin or pike to make a mother's heart uneasy, and will prevent many *colds*, which are the causes of frequent and dangerous sickness.

The instrument is small and neat. Figure 1 is a perspective view. Figure 2 is a side view. The same letters refer to like parts. A is the bed rail; C is a quite a small cast

Fig. 2.



metal plate, secured by screw nails to the rail of the bedstead. B is a steel spring about half an inch broad, secured at one end by a nail to the plate. It is bent upwards with its tension in the same direction. There are two little upright ears cast on the plate, C, with a pin passing through them at the top, securing a small cam, E, between the said ears. This cam is made in one piece, with its handle, D, which acts as a lever. This lever turns on its fixed axis, or pin, between the two ears, and by the form of the cam, when the handle, D, is turned in one direction, the spring B, as in fig. 1, is pressed down on the plate, A, securing the quilt, H, firmly between the spring and the said plate. When the handle, D, is turned in the other direction, the clasp is open, as represented in Fig. 2. The clothes have but to be drawn through between the spring, B, and the plate, C, and the lever, D, turned the contrary way from what it is in fig. 2, when the clothes will be firmly secured and retained without the least possibility of being drawn out, for the peculiar form of the cam, E, makes this clasp retain the clothes like a vice. Every bedstead should have two, at least, of these clasps on it.

The inventor is Mr. Francis A. Rockwell, of Ridgefield, Ct.; the agents here are Messrs. Tuttle & Bailey, 210 Water st.

We would respectfully state that this is the distinguished clasp (the fame of which is already wide-spread) for preventing the "kicking of the kiver off."

Water Pressure Engine.

In mountainous districts, where there are high falls of water, with only a small quantity, a water pressure engine is much better than a water wheel. At the Alport mines, England, there is a water pressure engine, the cylinder of which is 50 inches in diameter, and the stroke 10 feet. It was worked by a column of water of 132 feet in height, so that the proportion of power to act on it was as the area of a piston to that of the plunger—namely, 1,963 to 1,385, or fully 70 per cent. This engine has never cost them $60 a-year since it was erected in 1841. Its usual speed was about 5 strokes per minute, but it was capable of working at 7 strokes per minute without any concussion in the descending column, the duty actually done being equal to 163 horse-power:—Area of plunge 9.621 feet×10 feet ×7 strokes=673.41. 673.41×62.5×132=5555632÷33000=163 horse-power. When water acts by its gravity or pressure, those machines do the best work when the water enters the machine without shock or impulse and quits it without velocity. They thereby obtain all the available power that the water will yield with the least loss of effect; and this result is best accomplished by making the pipes and passages of sufficient and ample size to prevent acceleration of the hydrostatic column.

Acoustic Apparatus to enable the Deaf to Hear in Church.

At the Elder street Chapel, Edinburgh, Scotland, there is erected a contrivance for deaf persons to hear, which is well worthy attention. In front of the book-board, and projecting semicircularly from it to the extent of about nine inches, is a deep tapering cup or horn of gutta percha, the upper edges of which are in the plan of a book-board, the longest diameter of its orifice being about 18 inches. This is covered with cloth uniform with the pulpit, the drapery of which is arranged around it; so that the eye detects nothing but an elegantly curved outline, in place of a straight and box looking front to the pulpit. The lower end of this corniform cup tapers into a gutta percha tube of about two inches in diameter, which is carried down with in the pulpit frame; and to that main trunk are attached smaller pipes which are laid out to the required pews, where a flexible tube with an ear-piece, is connected, by means of which the deaf spectator becomes a hearer, even the very deaf, who did not hear one word, or the echo of one sound before, and is enabled to follow the speaker through his whole discourse as plain as if he spoke into the conversational trumpet.

Improved Scribing Machine.

Mr. John Shellenberger, of Indianapolis, Indiana, has invented a very excellent scribing machine, which is suitable for bevelled and straight work. The scribing tools are easily shifted in slots running along the frame, and set by screws at the points desired, both horizontally and upright. The boards or timber for panels, doors, &c., are placed on fixed rests, and by pressing a treddle with the foot, the frame with the scribing tools marks out the proper places. Thus the setting of the tools for one kind of work, saves the laying out of work of the same kind, and makes all perfectly true and exact. The tools for bevels work different, in a plate, but it is operated in the same way. Measures have been taken to secure a patent.