

## NEW INVENTIONS.

## Improved Printing Press.

Joel Dinsmore, of Blooming Valley, Pa., has taken measures to secure a patent for improvements in Printing Presses. The object of this invention is to make a cheap press of a convenient form to be worked by hand, but capable of doing a greater amount of work in a given time than the common press. The printing is performed by passing the paper round a cylinder hung in a carriage, which is moved backwards and forwards along a stationary frame or railway, upon which is fixed a type-bed which carries the form, and at each end of which there is a feeding-board, from which the sheets are supplied to the cylinder. The cylinder is made to revolve by the movement of the carriage revolving in opposite directions. It is furnished with two sets of fingers, which take a sheet from each feeding-board, alternately, the cylinder carrying the sheet over the form and printing it as the said carriage moves towards the feeding-board; the fingers release the sheet at the proper time by suitable mechanism.

## Improved Rifle Barrel.

Benjamin D. Sanders, of Holliday's Cove, Brooke Co., Va., has taken measures to secure a patent for an improvement in rifle barrels. The improvement consists in making the grooves of the barrel of a form somewhat resembling the letter V in their transverse section, that is to say, the bottom of a groove is formed by a single angle, instead of by two angles in the ordinary way. The object of the improvement is to make the patch, when inserted with the ball, fill the grooves more tightly than can be done by the common grooves. The barrel, by the new grooves, is kept more clean, as each patch cleans out the barrel completely in its course, and the explosive force of the powder is more directly confined and exerted upon the bullet than can be done in a barrel where the grooves are not so tightly packed by the patch.

## Machinery for Scraping Ivory.

Benjamin S. Stedman, of West Meriden, Conn., has taken measures to secure a patent for improvements in machinery for scraping ivory, the principle of which consists in certain means for controlling the movements of the scraper, by which its edge may be made to describe either a straight line or various regular curves, which may be made to deviate in two opposite directions from a straight line, the said movements enabling it to scrape a plane surface, or a hollow, or rounding and curved surface. It is an important improvement in the art to which it belongs.

## Marine Signals.

Thomas H. Dodge, of Nashua, N. H., has taken measures to secure a patent for a new and useful improvement on his Patent Signal Lights, which were illustrated and described on page 145, this volume of the Scientific American. Instead of employing two lamps, as represented in the illustration referred to, he now employs only one; the signal is made more simple, and at far less expense, and it can be seen on four sides. We shall soon publish an engraving of it, when a more full description of it will be presented to our readers. Good night-signals are among the most important inventions of the age.

## Tennoning Wheel Spokes.

J. J. Hibbard, of Hermitage, Wyoming Co., N. Y., has taken measures to secure a patent for an improved machine for tennoning spokes for wheels and for cutting the back or bevelled edge of the tonnon parallel with the point and straight edge. A knife is attached to a bed piece, said knife having a spring connected to it, and adjustable guides for the purpose of placing the spoke properly upon the bed, so as to cut it in the desired manner.

## Saw Mill Improvements.

C. M. Miles, of Brockwayville, Pa., has taken measures to secure a patent for an improvement in saw mills, the nature of which consists in hanging, ranging, and guiding the saw by means of rods, guides, and a cross-head, all these parts being peculiarly arranged to dispense with the common saw sash.

## Attaching Hubs of Wheels to Axles.

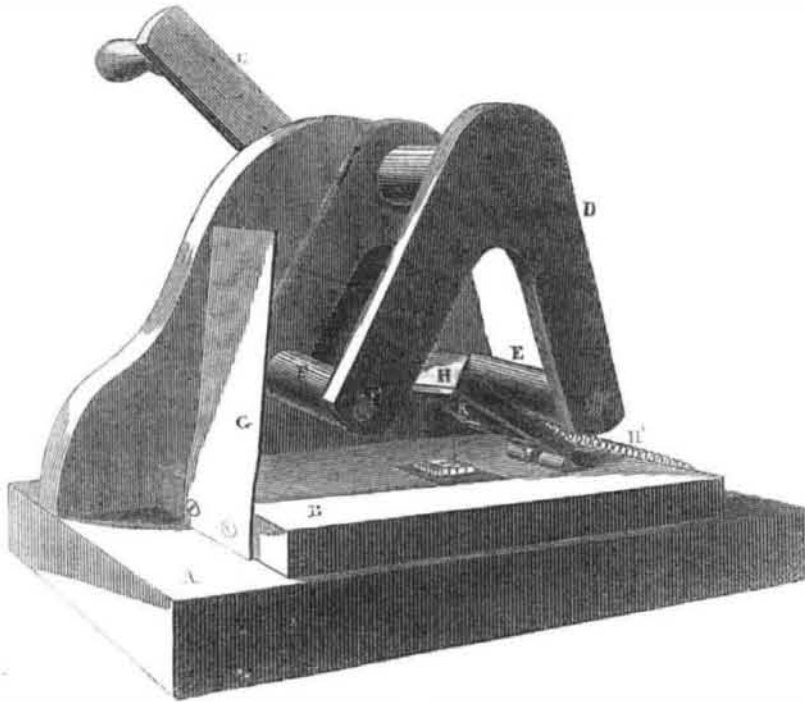
David Arnold, of Londonderry, Vt., has taken measures to secure a patent for an improved mode of attaching hubs to axles. The nature of the improvement consists in attaching a hub to an axle by means of screws which pass through the front band of the hub, the end of said screws fitting in a recess around the arm of the axle and near to the end of it.

## New Rotary Engine.

William Taylor, of 93 Front street, Sche-

nectady, N. Y., informs us, by letter, that he has invented a new Rotary Steam Engine, which he believes to be the best ever constructed. He believes steam power is but in its infancy, as regards economy of fuel and safety from explosions. This engine, he states, is made cheap, is propelled with but a small quantity of fuel, and is safe from explosions. Those who have any interest in this class of inventions, would do well to inspect his engine at the place designated above, or address him by letter.

## DODGE'S PRINTING PRESS.



This figure is a perspective view of a new printing press, invented by Thomas H. Dodge, of Nashua, New Hampshire. It is the most simple and unique hand press we or any other person have ever seen. A is a strong bed plate of cast-iron, with a standard cast at the one side of it. It has a shaft hung on the standard with a crank handle, C. This shaft is made to vibrate like a pendulum when the press is working; B is the type bed, and a small form of type for printing, a card or bill is now secured upon it; H is the platten, it has an inclined back; K is its cloth face. This platten has a spring, H', so that when the said platten is released from the pressure roller, it springs up on its hinge, I, as it is now represented; D is a double vibrating angle on the lower ends of which are two rollers, the one E for pressing on the top of platten, H, to make the impression; G is a vertical ink board; the ink is placed on its inner face.—The ink roller, F, rolls in its open bearings, F', so as to work on the ink board, G.

Supposing a sheet of paper to be placed on the top of the type; by turning the handle, C, inwards, the roller, E, is made to move on

the top of the platten H, and to press it down with an equal pressure throughout the stroke. It would not do this, as the roller moves in the arc of a circle, unless the platten were of a wedge-shape, or the roller were made eccentric, but this is done by the shape of the platten.

The motion which brings roller E to make the impression, directs the ink roller, F, against the face of the ink board, G, which supplies it with ink, and then when roller, E, is moved back and the printed card taken out, the inking roller by the back stroke rolls over the face of the type, back and forth, and supplies the form with ink for the next impression. Thus by moving the handle, C, backwards and forwards like the pendulum of a clock, the whole printing operations are performed. This press can be operated with great rapidity, and a web of paper may be fed across the form by having a slot cut in the standard, and the paper fed by some appropriate intermittent motion.

Measures have been taken to secure a patent, and more information may be obtained by letter addressed to the inventor.

## Converting Rotary into Reciprocating Rectilinear Motion.

Henry Baker, of Catskill, N. Y., has taken measures to secure a patent for a new method of converting rotary into reciprocating rectilinear motion. The invention is more particularly designed for the purpose of driving the bed of a printing press, or the bed of any part of a machine to which it is desired to communicate a reciprocating rectilinear motion from a revolving shaft, but it is also applicable in almost any case where the said change of motion is required. The motion is communicated in the first place from the revolving shaft to one or two wheels or pulleys around which an endless belt or chain is placed, the said wheels and belt being so arranged that the belt will move in a direction parallel or nearly so, with the desired reciprocating movement. To the bed or object which is to receive the reciprocating movement, there is attached a ring which lies near to the belt, its inner diameter being about equal to that of the wheels or pulleys on which the belt runs. Two pins slide freely through the periphery of the ring on opposite sides, both pins being parallel with the band, and made to project by springs a short distance into the ring. A stud is attached to the endless band, and is

made to project into the ring close within its periphery, at right angles to the pins mentioned. As the band moves, this stud catches one or other of the pins, and propels the ring, and whatever is connected with it. One part of the endless belt or chain, on one side of the wheels, moves in the opposite direction to the other side, alternately, and the sliding pins are so placed, that, when the stud spoken of moves in one direction, it catches with one, and when it moves in the other direction it catches with the other, and the pins are drawn back from the ring. At the time the stud on the running belt reaches either of the pulleys, it runs around it on the belt and catches the other pin, and by its reversed movement drives back the ring in the opposite direction to that in which it moved before, and thus by an alternate reversal of the ring by the action of the stud on the pins, there is a continual change of motion from rotary to the reciprocating rectilinear, and there is also an intermittence of the motion, which is very desirable in the working of some machines.

## Improvement in the Manufacture of Gas.

S. R. Dickson & Richard Owens, of Schuylkill Haven, Pa., have taken measures to secure a patent for a most valuable improvement in

the manufacture of gas for illuminating purposes. The object of the invention is the making of the gas from any hydro-carbon, but especially resin, or such-like hydro-carbons, by submitting the crude materials in a proper vessel, at first to a lower heat than that now imparted to them by the common processes for making gas, and then allowing the gas so made to pass over and through retorts, where it is submitted to a high degree of heat, after which it passes to the coolers. The surplus heat employed for the retorts is used to distil the gas in a cylinder from the crude hydro-carbon. This process produces a greater quantity of good illuminating gas, at one continuous process, than can be done by any of the common methods, consequently there is far less refuse in the form of tar, &c.

## Adamantine Sperm Candles.

In our last number we made a few remarks respecting the beautiful Adamantine Candles of George H. Folger, of Nantucket, Mass., and said they were manufactured for him by H. E. Rogers, of South Manchester, Conn. This was an error into which we were led, unwittingly, by the names and prescription on the label. Candles were and are manufactured by Mr. Folger, and he is the inventor of the improvements, by which the said candles have been brought to their present unrivalled state of perfection. His factory is at Nantucket, and we beg to state again, that although we have examined and tried many kinds of stearine candles, we have found none so hard and white, and so free from running while burning; they are indeed beautiful, and as good as they are handsome.

## Mildew on Canvas.

Messrs. Editors—What is mildew, and is there any preparation that will prevent it on sails, awning, &c.? I am informed that cotton duck manufacturers have given up trying to procure any preparation to prevent mildew. I am aware that many awnings are stamped "anti-mildew," and "warranted not to mildew," in New York city, while some are stamped "water-proof." In these quack nostrums I have no faith, from the fact if there were any virtue in them our heavy cotton-duck manufacturers would adopt it. J. H. L. Newark, N. J., June 8, 1852.

[The mildew which appears on canvas, and which soon riddles it with small holes, and destroys its tenacity, is a kind of minute fungi; this any person can discover by examination. It is no time to apply the remedy when the fungus has made its appearance. We are not acquainted with the virtues of the anti-mildew awnings; but it is certainly an easy matter to render them water-proof. The fishermen of Norway and the western coasts of Europe, dye their sails and nets with oak and other barks, to prevent this mildew. The oak and other barks, which they use for this purpose, contain a great quantity of tannin matter, and this enters into combination with the fibres of the canvas and exerts a preventive influence by the formation of a new compound. It is our opinion that if cotton or linen canvas were steeped in a solution of sumac, or oak or walnut bark—say one pound of Sicily sumac to ten of canvas, for twelve hours, then taken out of that and steeped in a solution of the hydrochloride of zinc or tin, for three hours, that the canvas would never be affected by the mildew. The sumac should be boiled, and the canvas should be steeped in it in a large vessel, so as to cover the cloth entirely with the liquor, and not have it too closely packed. The chloride of zinc is made by dissolving zinc in muriatic acid. A large vessel should be used for the acidulous solution; it should not be stronger than 2° by Twaddle's hydrometer. The sulphate of zinc would also answer the same purpose. The cloth should be well washed out of the acid liquor in cold water, and it should be washed lastly in hot water. This process would metalize the canvas; we have never tried it, but from an acquaintance with practical chemistry, and a knowledge of the effects of one substance upon another, we are positive that it would act as a preventive of mildew. The canvas thus treated would assume a greenish yellow color. As we have said before, the chloride of tin will answer as well as the zinc. It is made with tin, and employed in the same as the zinc.