



## New Inventions.

### New Self-acting Brake and Safety wheels.

Mr. C. H. Smith of Niagara Falls, has invented an entirely new, simple and apparent effectual plan to recover cars that may have run off the rails. The plan is a simple modification of the wheels, with a self acting brake attached to the trucks and which can be applied to single wheels and locomotives. Upon each wheel there is an extra flange on the inside and extra bearings on each side of the ordinary faces of the wheel with its small flange in common use—the centre being the main running face, making the whole face of the wheel about thirteen inches—the two extra bearings being a little less in diameter than the centre face or bearing. If the wheels are thrown off their common bearings the extra flange comes into play and retains the wheel on the track, and this is done by an ingeniously constructed brake which comes into operation the moment that the trucks commence bearing on the safety flanges and stops the cars, when they can be easily thrown back upon the running surface.

The plan for the full accomplishment of this we do not yet fully understand, but at some future time we will perhaps be able to be more minute and particular, and as we expect to have a model before us, in the course of a few months. The inventor has just taken measures to secure a patent. A number of scientific gentlemen and practical mechanics have examined the invention and expressed very favorable opinions respecting its importance and advantages. All rail road companies should examine this invention and apply it to new cars. Mr. Smith's self-acting brake can be applied for common purposes by the usual hand wheel. Although the new wheels of this invention may be 60 or 70 lbs., heavier than those in common use, it is estimated that for safety and wear and tear they will be by far the most cheap in the end, although a little more expensive for the primary cost of new cars.

### Self-acting Chair.

We have examined a chair invented and constructed by Mr. Smith, cabinet maker, No. 146 Cherry st., this city. It is one of the best chairs for invalids that we have ever had the pleasure of seeing. It answers the purpose of sofa, chair and bedstead. The back is attached to the seat rail by hinges and the seat slides forward or backward in a rack, bringing the back to any angle desired or parallel with the seat by a most simple arrangement of a small catch spring to hold the seat of the chair at any desired point, and also to allow the seat and back to slide by a very light pressure to relieve the spring from binding on the seat rail. The stuffing of the back is very different from those in common use. The frame of the back is not curved much, but the spring cushion bulges out so as to allow the back to recline in the most easy manner. We believe these chairs can be furnished for about the same price as common easy chairs, and they certainly are a great improvement.

### Foster and Bailey's Rock Driller.

The importance of this machine, a description of which we published in our last, has been so highly estimated that respectable gentlemen have taken immediate measures to secure a patent in Europe. Information respecting it can be had by communicating with Mr. John T. Foster, No. 42 Gold street, this city.

### New Arch Bridge.

We have been informed that Mr. John Boynton of South Coventry, Conn., has made application for a patent for a new improvement in bridge building, whereby a bridge of great strength can be made over a stream of 1000 feet wide without a single pier between.

### Silken Sails for Ships.

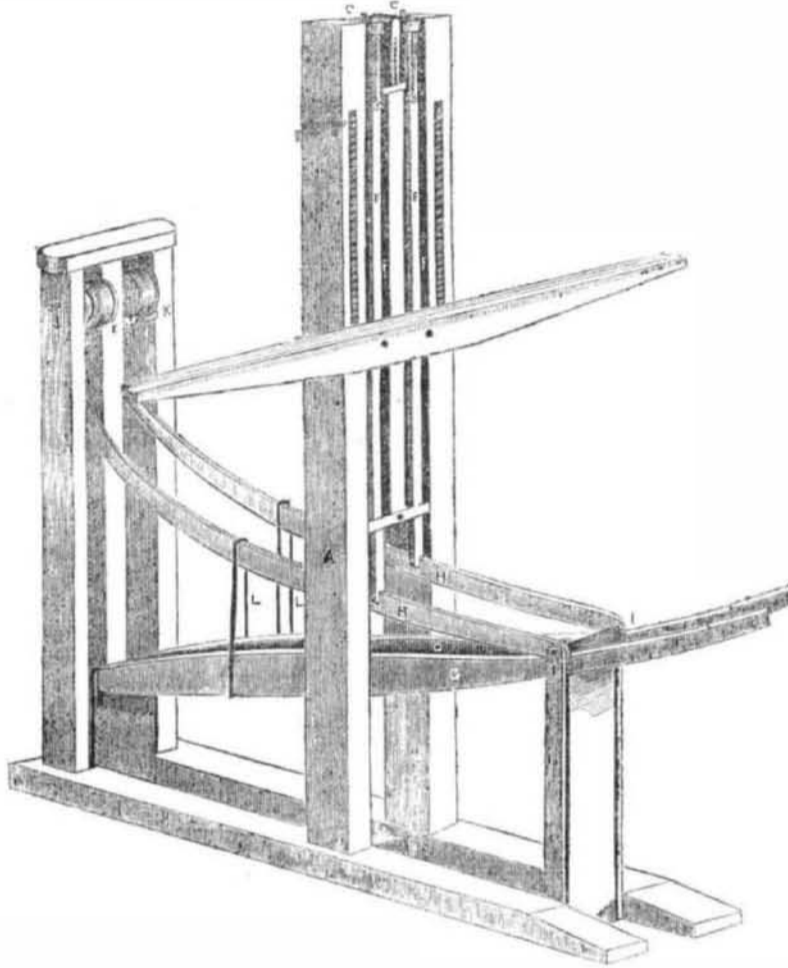
A new discovery of great interest to the navy has just been made known in France by a gentleman known as the Pere Chatelu, but who is in reality the Marquis de Chasteaux, one of the most ancient titles in France. His father having died in emigration and leaving him no resource, the marquis deemed it in better taste to drop the title for a while, until he had acquired fortune enough to support it with honor. The discovery consists in the employment of the cocoons and refuse of silk for the manufacture of sails, and cordage. The material is lighter, cheaper,

stronger and more elastic than hemp. The invention is adopted by the Minister of Marine.

A kind of coarse silk called pongee is perhaps the most durable fabric that is made into articles of wearing apparel, and our readers will easily perceive that the Marquis's fabric is of the same nature, and no doubt must remain of its utility for the purpose set forth above.

A French inventor has succeeded in discovering a method of gilding silks without injuring the material, and a most dazzling appearance is said to be produced by the gilding, especially upon satin.

## IMPROVED MORTICING MACHINE.



This is an important improvement on the Morticing Machine, whereby the leverage of the treadle is more perfectly adjusted to the kind of work to be morticed than by any other machine of the same kind. It is the invention of Mr. Job F. Howland, of Springfield, Mass., who has made application for a patent.

EXPLANATION.—A is a frame which can be varied at pleasure. B B, are chisels, the machine being made double, one chisel for each part, that one half of the mortice may be cut in one direction and the other half in the other direction. These chisels are secured to head pieces C C, by nuts and screws which pass through slots on the top of bars E E, that slide vertically between ways F F, in guides to secure an easy and accurate motion. The lower ends of the bars are jointed by levers H H, that turn on a fulcrum pin in yielding standards I I, that spring to the motion of the bar. The far ends of the lever are provided with straps which pass around and are attached to rotary hollow drums K K, which turn on an arbor J. Within these drums are barrel springs the outer ends of which are attached to the periphery of the drums and the straps by small pins and the inner ends to the arbor, so that the tension of these springs tend

always to draw up the lever ends with them to the chisel bars. The tension of the springs can be increased or diminished by turning the arbor with a handle as there are ratchet wheels on the drums which are held fast at any desired point by palls or catches. Below the levers are two treadles G G, hung on a fulcrum pin at the back of the frame and these treadles are connected with the levers by bridle links L L, which fit in notches on the upper edges of the levers and the lower edges of the treadles, so that they can be shifted along the levers and treadles to increase or decrease the leverage of the treadles to suit the kind of work to be done.

It will be observed that as the leverage of the treadles are varied, the force of the tension of the lifting springs will vary also, and therefore as the leverage of the treadles is varied so must the tension of the springs be varied, by winding or unwinding them. In this way the two can be adapted to one another and to the operator and the whole to the kind of work to be morticed, with the utmost regularity and precision, a result which experience has shown to be very important in this class of machines.

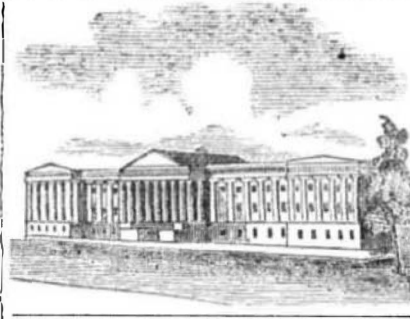
### Thermometer Churn.

A Mr. Crowell, of Boston, (we believe) has constructed a churn with a false bottom of two sheets of zinc, into which warm water is to be kept in cold weather, or cold water in warm weather for the purpose of keeping the cream or milk to be churned at 62 degrees of temperature. A thermometer is attached to the churn in such a manner as to intimate exactly the heat of the contents in both chambers. The warm water can be drawn off, or more added by common arrangements. The idea of regulating the temperature is a good one. It is sometimes necessary, however, to raise the temperature to 80 degrees, and then

cool for gathering the butter. Of this we are satisfied from seeing a number of experiments performed under variable circumstances.

### Patent Force and Suction Pump.

This is the name of a pump invented recently by Messrs. Barlow and Fuller, of Marietta, Ohio, and sold by Holder & Co of that place, which has been employed by a number of citizens of there to pump the water from their cellars which were filled by the late freshet. The inhabitants of that place speak in high terms of praise regarding its merits. It can be used for a fire engine as well as for a common pump and that answer a double purpose.



## LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending Feb 1, 1848.

To O. F. Winchester, of Baltimore, Md., for improvement in making Shirts. Patented Feb. 1, 1848.

To John S. Lafitte, of Baltimore, Md., for improvement in Spark Arresters. Patented Feb. 1, 1848.

To Robert Dillon, of New York City, for improvement in connecting pumps with hydraulic press or rams. Patented Feb. 1, 1848.

To William V. Many, of Albany, N. Y., for improvement in Car Wheels. Patented Feb. 1, 1848.

To J. I. Vedder and Henry Vine, of Schenectady, N. Y., for improvement in raising and tilting buckets. Patented Feb. 1, 1848.

To Samuel Adams, of New York City, for improvement in Axles for Carriages. Patented Feb. 1, 1848.

To David D. Hanson, of Weare, N. H., for improvement in Molasses Faucets. Patented Feb. 1, 1848.

To Erastus Stebbins, of Cabotville, Mass., for improvement in Molasses Faucets. Patented Feb. 1, 1848.

To Daniel S. Billings, of Conneaut, Penn., for improvement in Wheel Cultivators. Patented Feb. 1, 1848.

To Joseph Dudley, of Fall River, Mass., for improvement in Molasses Faucets. Patented Feb. 1, 1848.

To William Ball, of Cabotville, Mass., for improvement in Faucets. Patented Feb. 1, 1848.

To Joseph Whitworth, of Manchester, England, for improvement in machinery for Knitting. Patented Feb. 1, 1848. Date of English patent July 1, 1847.

## INVENTOR'S CLAIMS.

### Machinery for Making Hinges.

By George H. Horton, and Leander Armstrong, of Hartford, Conn. Improvement in Machinery for manufacturing Hinges. Patented 11th September, 1847. Claim—We wish it distinctly understood that we do not intend to confine our invention to the precise forms and arrangements of mechanism as above detailed; but we mean to vary the same to any desirable extent, while we do not change the combinations or principles we consider new and as our improvements. We do not claim the invention of the die in combination with one impelling slide and chamber to receive the half of the hinge, as we are aware that such has been used before for the purpose of making a half hinge, for bending into a proper shape for a joint, but that which we do claim as our invention is the combination of the die, two impelling slides and chambers, and the turning die *f*, the whole being arranged and made to operate together substantially as above described. We also claim the wire-feeding apparatus in its combination with the dies, or machinery for making the hinge joint, and as arranged and operating therewith substantially as herein before explained. We also claim the slide or hinge discharging apparatus for making the joint of the hinge and operating therewith as specified. And in combination with the said dies, or apparatus for bending the parts of the joint of the hinge we claim the slides (by which lateral extension of the metal is prevented) the same being made to operate therewith substantially as specified. We also claim the combination of the cutting-slide (or part which severs the wire) with the bending apparatus, the same being actuated and arranged as described.

Twenty-six acres of Tobacco were successfully cultivated last year by a farmer near Springfield, Mass.