

New Inventions.

Improved Loom for Weaving Carpets and other Figured Fabrics.

Mr. James McKenzie, a loom builder by profession, residing at present in Schenectady, N. Y., has made some important and novel improvements on the Carpet Loom, a model of which we have seen and examined.—The improvements consist, 1st, in a new mode of arranging and operating the shuttle boxes. 2d. A new match motion, or way, graduating the let-off speed of the warp beam and the take-up speed of the cloth beam. 3d. A new stop motion. The shuttle boxes are what the inventor terms the quadrant box. They are different in form and motion from both the sliding and rotary boxes now in use. They are quarto rotative, and are shifted by a back spring at any point desired, for they can be set for this purpose. This operation is certainly novel to us and very simple. We should like to see it have a fair trial. The match motion is not easily explained. It is well known how complicated the common plans are to accomplish this object. His is not complex. The principle of it consists in having a guide apron or rest, pressing by a spring against the warp and against the cloth beams, and according as there is more or less yarn on the one beam, and cloth on the other, to require a corresponding increase of surface motion on the warp beam and a decrease on the web beam, a blade from the lathe at every stroke, is so guided by the guards or rests on the warp and web beams, as to move a ratchet lever the exact distance required in gathering round the teeth of the beams to graduate the let-off and take-up in unison.

The stop motion is a double finger one, very different we believe from any in use, which when the thread breaks, at once detaches a crank lever, which throws the driving belt at once on the loose pulley and most effectually prevents all breakage. The improvements on these looms are great simplicity. One can be built for \$500, as good perhaps as some that cost \$1000. The inventor has taken measures to secure a patent and is prepared to manufacture the looms and make contracts with those who may desire to enter into engagements with him. Address, post paid, to Schenectady, N. Y., where the inventor is at present residing.

Paper and Book Folding Machine.

A few days ago we were invited to examine the model of a machine for folding books, at Earle's Hotel, this city. The inventor of it is Mr. E. N. Smith, of Springfield, Mass. and certainly he has exhibited much Yankee ingenuity and skill in the arrangement and combination of parts to accomplish his object. It is formed of various pairs of rollers, each pair secured at right angles to the preceding pair, with a blade or folder pressing between by a cam, to double the paper at the right period, then receding, when the paper is then carried between two other rollers, and acted upon in the same way, until all the folds required, are made, and the paper discharged. The sheets are carried forwards by endless tapes of gutta percha, the same as those used in some printing presses. This machine can be set in a second, to give paper one, two or more folds as desired, by throwing some of the folders out of gear. It is designed to be attached to a printing press, and it must soon come into general use in large establishments at least. We believe that the trade of hand book folding is in a measure "gone." For book folding it certainly has great advantages for neatness over hand work for it folds according to the printed surface. It performs its work with astonishing rapidity. The patent will soon be issued, and Mr. Smith is here to make contracts and sales of his invention.

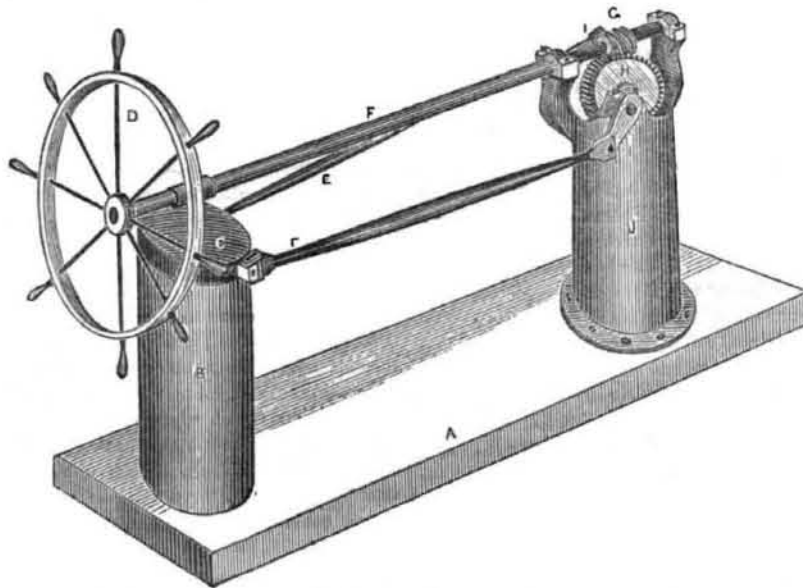
New Material for Fixing Colors on Cotton, Woolen and Silk Goods.

A Mr. R. T. Pattison, of Glasgow, Scotland, has recently taken out a patent for a new substance entirely, to be used in color making for printed goods. The substance is made from either sweet, skimmed, or buttermilk, the latter kind should be used as early after churning as possible. The milk is taken and put into a kettle and raised to the heat of 160 degrees Fahrenheit, when a thick curd is deposited. The whey is then removed and the curd submitted to a severe pressure in a cheese press in order to free it from whey and moisture, when it becomes a granulated mass. It is then spread out on trays made of fine wood slats, and placed in a drying chamber. When perfectly dried, it is reduced to a fine powder in the way flour is ground, or between crushing rollers. It must be observed that he uses oxalic acid to precipitate the curd in new, or skimmed milk. In mixing this with colors, no positive rule can be given for all shades of colors—the ingeni-

ous color maker will soon learn to mix it according to the shades he desires to produce.—But one example will assist to explain its application. For ultramarine blue of a medium shade, take 12 pounds and dissolve it in a gallon of water. Then mix 8 pounds of the flour milk (or lacterine,) and mix it in two gallons of water, in which is mixed 4 ounces of ammonia, which converts the substance into a gummy consistency. This ultramarine and the lacterine are then mixed together and strained through a fine cloth, and rendered into a proper consistency for printing on cloth. It is stated to facilitate the permanency of the coloring matter and affords an excellent substitute for gum.

This is something which should arrest the attention of our calico printers, in order that they might give it a fair trial, as the supposition is uppermost in the mind, that Mr. Pattison would not pay about \$600 to get a patent for the article, if it was not of some importance.

IMPROVED STEERING APPARATUS.



This is a most valuable improvement on Steering Apparatus, invented by Mr. J. E. Andrews, of Boston, Mass., and to those who are acquainted with his former apparatus, the superiority of this will at once be evident.

A, is the deck. B, the rudder post, placed different from others, to apply the great lever power. C, is the head of the rudder post.—D, is the steering wheel. F, is the wheel shaft which passes through a support in the head of the rudder post, to show the parts in the simplest manner, but it is intended to support the shaft by a bearer independent of the rudder post, to allow the rudder post to rise without lifting the wheel shaft, as rudders are sometimes so litted by heavy seas, or in rivers striking against a sand bar, &c. The shaft F, is also supported on a bearing post J, placed behind the rudder post. This bearing post has two journal boxes on it for the shaft F, and also bearings for the axle of the cog wheel H. G, is a worm screw on the shaft F; it meshes into the wheel H, the axle of which extends out on both sides, and

has universal joints on its extremities, to turn in every direction. To these universal joints are attached cranks I I, one on each side, united to the connecting rods or horizontal arms E E. These arms are connected to two short arms passing transversely through the head of the rudder post. These short arms have universal joints on their extremities like the axle of the wheel H. The connecting rods E E, have therefore a perfect freedom to act without much friction, by the combination of these joints which move freely in every direction. By the combination of these different mechanical parts, the power of this steering apparatus is apparent, and bringing the cranks to the dead points, no sea can budge the rudder. In that case, it has a great advantage, and it can therefore be managed much easier than those in common use. Sea captains of the highest professional qualifications have given the most favorable opinions regarding the merits of this invention, for which Mr. Andrews has taken measures to secure a patent. For further particulars address the inventor.

Improved Feed Apparatus for Carding.

Messrs. Webster & Groves, of Rockville, Ct. have made an improvement in the Feed Apparatus of Carding Machines, for which they have taken measures to secure a patent, and which from a fair trial, has proven itself to be of great utility. The difference between this improvement and the common feed rolls, consists in having a convex surface feed in the wool on a concave surface. The difference is a very pointed one. The wool is finer spread on the breaker, taken up more evenly and there is far less clogging than by the common way of feeding.

New Process of Silvering Glass and other Surfaces.

We learn from our able and most valuable foreign exchange, the "London Patent Journal," that Mr. Thomas Drayton, of Regent street, London, a practical chemist, has recently secured a patent for improvements for silvering glass and other substances. The glass is silvered by causing the silver to be

of mastic varnish afterwards. It is stated to be as applicable to the silvering of metals as glass. It is certainly a wonderful discovery and improvement over the old system, or other systems at present in use.

In 1841, we think it was that Mr. Drayton made his first discovery for improvements in silvering glasses. By his first process, he used naphtha, oil of cassia, and a mixture of the oil of cloves. The other ingredients were the same as that described in his new patent with the exception of the sugar. This is a new ingredient, and it seems to answer the purpose of three old ones, which are left out. In 1840, we believe that Dr. Stenhouse first called attention to this subject, by precipitating a pure coat of silver by means of aldehyde, &c. The old quicksilvering process was very unhealthy.

New Measuring Instrument.

Mr. J. Palmer, of Albany, N. Y., has invented a new instrument for measuring, which is said to be well adapted to the measuring of all kinds of forms, round, square, &c., answering the purpose of a substitute for both dividers and calipers. If such is the case, it must be a valuable instrument indeed.

Bakewell's Telegraph.

The London papers say, that Mr. Bakewell's "Copying Telegraph" writes four hundred letters per minute. He has lately secured a patent for it, the specification of which we have received, from which, we are convinced, that the papers accord to it too much merit.—It never can write 100 letters much less 400 per minute. It never can be employed to compete with others, in its present state.

New War Projectiles.

One of the military innovations that have marked the war in Hungary is the Austrian fire rockets. These rockets have been ably directed not only against towns, but against bodies of troops. There have also been used, both in the Austrian and Hungarian armies, probably rockets, carried by corps of foot bombardiers able to march with the infantry. Each man carries three of these small sized projectiles. Another man carries a rest framed of wood on which the rocket is placed and directed. The Austrians have been the first to bring into practice, to so great an extent this new and terrible means of destruction. It has been stated that these Congreves, employed in a battle, ranged by the Austrian bombardiers, who have practised them for many years, have produced a tremendous effect, particularly upon the Hungarian masses of cavalry. They are tubes of wrought iron brought to a point, pierced with holes, and filled with incendiary matter, and are so charged as to emit above them, at the end of their flight, small streams of liquid fire. The sharp hissing sound is much more terrifying to the horses than the noise made by the passage of the bombshells, and one of them is quite enough to throw a whole squadron into disorder. The Hungarian army, having found large stores of these rockets in the arsenals which fell into their power, have equally made use of them in all their attacks upon towns and in battles upon plains.

Kyanized Cordage.

Four trials between Manila, and Kyanized rope made of tow by Messrs. J. T. Crook & Co. at East Mayville, Ky, resulted in proving the Kyanized rope about fifty eight percent stronger than the Manila cordage, which together with the tests as to durability, which have been previously made, will give a character and standing to this cordage which no hemp cordage has ever hitherto attained.

The Manila used for the trial appeared to be of excellent quality and the Kyanized used was manufactured to match the Manila as nearly as possible in size, number of yarns, closeness of twist, &c.

Well Done Lake Ontario.

The brig Iroquois is advertised to sail from Sackett's Harbor for San Francisco. Sackett's Harbor, as most of our readers are doubtless aware, is on Lake Ontario, in this State, and the Iroquois will sail down the St. Lawrence, through the Gulf, and thence South touching probably at some of the West India Islands, thence around Cape Horn to San Francisco.