

Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME 5.]

NEW YORK AUGUST 31, 1850.

[NUMBER 50.]

THE
Scientific American,
CIRCULATION 14,000.

PUBLISHED WEEKLY.
At 128 Fulton Street, New York, (Sun Building,) and
13 Court Street, Boston, Mass.

BY MUNN & COMPANY.

The Principal Office being at New York.

A. T. Hotchkiss Boston.
Geo. Dexter & Bro., New York City.
Stokes & Bro., Philadelphia.
Barlow, Payne & Parken, London.
Responsible Agents may also be found in all the
principal cities and towns in the United States.

TERMS—\$3 a year—\$1 in advance, and
the remainder in 6 months.

Rail Road News.

North American Colony Railroad.

In the House of Lords on the 8th inst., Lord Stanly presented a petition from magistrates, free-holders, and others, of the county of Westmoreland, in Canada, referring to a project which was under consideration for extending a line of railway communication through the whole province of Nova Scotia, New Brunswick, and Canada, to Quebec, pointing out the great advantage that would be derived, both locally and socially, from such a measure, and praying that it might meet the support of the government. They proposed that Parliament should give a guarantee under which a sum might be raised equal to that which the colonists themselves were prepared to guarantee.

Nashville and Chattanooga Railroad.

Three hundred Irish laborers have arrived at Chattanooga to break ground on the Nashville and Chattanooga road. The work before them is most arduous but magnificent in contemplation. They commence operation at the base of the Look-out Mountain.

The termination of the mountain on the River is a perpendicular wall of rock, about six hundred feet in height. Along the base of this, an immense wall is to be built, much of which will have its foundation in the bed of the River, and be carried to such a height as to be above all freshets and dangers from high water.

Buffalo and Detroit Railway.

The Commercial Advertiser states that a charter has been granted by the Canadian Parliament for a railway from the Niagara river, opposite that city, to Sandwich, opposite Detroit. Distance 227 miles. Route easy, the country being a dead level. The Michigan Central Railroad Co. are understood to favor the project.

The Legislature of Maine have incorporated the European and North American Railway, with an express limitation as to stockholders' liability beyond their stock—an exception never before granted in Maine. They have also appropriated \$5000 for a survey as prayed for by John A. Poor and others.

The line of Railroads between Albany and Buffalo, N. Y., have done a good business this season. During three weeks of the present month 18,905 passenger passengers passed over it, being an increase of 50 per cent. over the same period of last year.

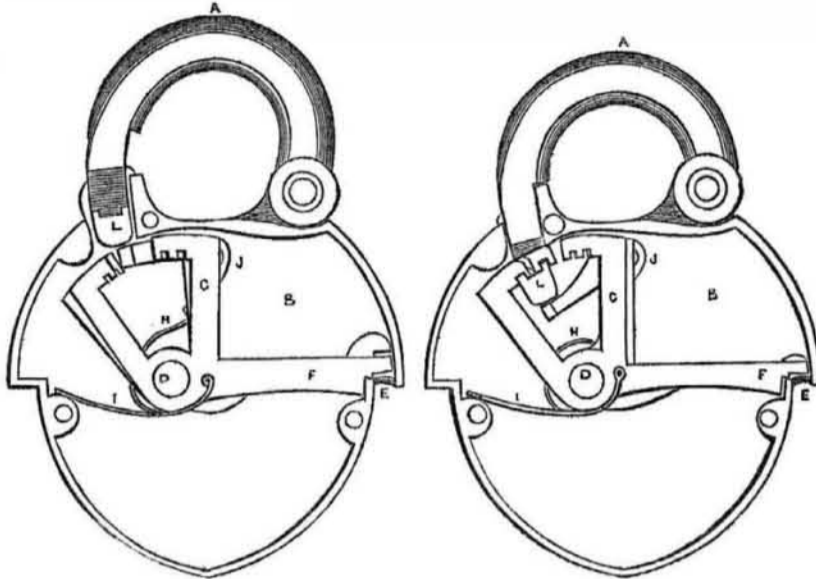
The Pennsylvania Central Railroad will be opened at Holidaysburg on the 1st of September. This will complete the chain from Philadelphia to Johnstown—280 miles. At Johnstown passengers can take stages or canal boats for Pittsburg.

The line of railroad is to be extended from Montreal, Canada, to meet the lines which converge at Rouse's Point and lead to Boston and New York on the Atlantic.

IMPROVEMENT IN PADLOCKS.

Figure 1.

Figure 2.



This improvement is the invention of Mr. F. C. Goffin, of Morristown, in Morris Co., N. J., and he has taken measures to secure it by patent. Fig. 1 is an interior view, (showing the position of the several parts, when unlocked. Fig. 2 is an interior view of the padlock, with the front plate removed, and the several parts in their proper positions when locked. Fig. 3 is the key, having prongs of unequal length. The same letters refer to like parts. A is the bow catch; B is the body of the lock. C are tumbler sectors (there are three of them) all fixed on the axis D. F are the shanks of them, they rest upon the side of the lock and directly over the aperture, E,

FIG. 3.



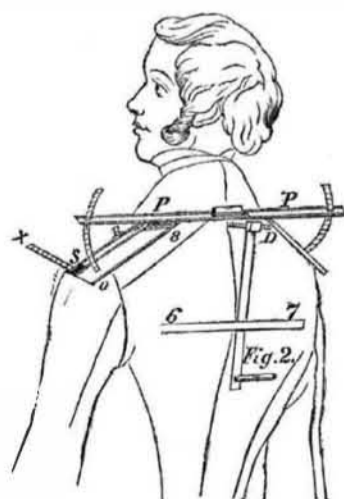
which receives the key. H is the spring of the first tumbler sector; it passes round and catches under one arm, I, of the bent lever, J. The other arm of this lever presses up against the end of the bow catch, A, when the instrument is locked. When the jaw of the bow catch is released from the tumbler sectors, it is then thrown out by the lever being acted upon by the spring, H. This spring performs two offices, viz., throwing the left side of the tumbler sector over the jaw of the bow latch, A, and ejecting the bow latch from the lock.

L is the jaw of the bow latch. It has a recess formed near the end, and has two small projections which catch into recesses on the inner surfaces of the sides of the tumbler sectors. The tumbler sectors have spaces cut out of them to allow the bow, A, to pass through them. The spaces on the sectors must be all on one line, to allow the end of the bow latch to pass out. The key must be made of such a length as will throw the left side of the tumbler sector, on which it acts, clear of the jaws, and at the same time not allow the right side to catch it. It is not easy to see how the key fits at E, by this side view, but suppose the key is placed flat with its edge toward the front and pushed up the three levers, F, (all independent) will be thrown in a line back, and the jaw, L, fig. 2, will be thrown out, as in fig. 1. The principle of it consists in having the tumbler sectors placed separately on one axis, and operated by a key of unequal prongs—the whole tumblers working simultaneously, or else the lock will not be opened for the springs of the sector tumblers act separately. The bow, A, must be pushed down before the key will operate, as the notches seen on the tumblers hold the jaw, and this must be released before the tumblers can be thrown back to let the jaw out.

More information may be obtained of Messrs. Logan, Vail & Co., Agts., 25 Cliff st., this city.

Self-Varying Tailors' Measure.

FIG. 1.



This duplex instrument is the invention of Mr. Amos Stocker, of Ogdensburg, St. Lawrence Co., N. Y., and secured to him by patent on the 28th of last May. The object of the

invention is to get the true form of the shoulders either erect or rounded, to enable the tailor to cut the cloth for a coat, from given lines, to the proper shape, upon mathematical principles. The instrument consists of two parts, both embraced in the engraving. They are used together but are separate. Figure 1 represents the one across the shoulders, and fig. 2 is the one for measuring the perpendicular of the back. The instrument, fig. 1, has a small spirit level fixed on its middle part. It is formed of a straight piece of brass plate, P P, which is laid on the shoulders, and which has a notch for the neck, with two side plates, R, attached by hinges, S, to its underside. These lower plates may be termed the quadrant leaves, as they have curved indexes, S, attached to them, which slide through slits in the plate, P P. When the plate, P P, is laid on, the leaves, R, drop down on the shoulders, and the inclination of the shoulders, is indicated on the curved indexes. The plate is made in two parts to slide into one another to make it shorter. To the leaves on the front side there are attached indexes, X, which can slide

out and in crosswise. These are for the purpose of marking the shoulder bone and indicating the width between the top of the vertebrae, on the spirit level, where the measure is centered, and the chest, also the front breadth of the shoulders. This at once tells correctly the amount of stoop or bend over the shoulders—how much his shoulders are contracted or curved from the straight line inwards, and vice versa.

The back instrument, fig. 2, has a cross-rod, 6 7, a perpendicular bar, a fixed spirit level at the bottom, and a sliding index gauge, D, at the top. This instrument is laid perpendicular on the back, and by sliding the gauge at D through the slot of the perpendicular bar, it will measure the number of inches the top of the shoulders are from the perpendicular line; in other words, how straight or bowed the back is. The proper form for cutting the important parts of a coat to make it fit correctly are hereby measured in such a way that it is impossible to go wrong in any case. The coat cut by this measure will always be a true fit.

The inventor is a tailor—one who knows what will and what will not answer. Communications may be addressed to him at Ogdensburg.

Useful Receipts.

Solvents for India Rubber.

Ether for this purpose should be agitated with water and decanted. Benzole will dissolve caoutchouc with warmth and long digestion. Rectified coal naphtha forms an imperfect solution employed in Mackintosh's waterproof fabrics. Oil of turpentine, rendered pyrogenous by absorbing it with bricks or porous ware, and distilling it without water and treating the product in the same way, is also used for this purpose. It is stated that the solution, on evaporation, does not leave the caoutchouc in a sticky state. Bisulphuret of carbon is a good solvent, dissolving the gum without heat. This constitutes Parker's Patent Solvent. Chloroform is an excellent but rather expensive solvent. India rubber is rendered more readily soluble by first digesting it with a solution of carbonate of soda, or water of ammonia.

Compound for Promoting the Blowing of Flowers.

Sulphate of ammonia 4 oz., nitre 2 oz., sugar 1 oz., hot water a pint. Keep it in a well corked bottle. For hyacinth glasses add 8 or 10 drops of the liquid to the water, changing the water every 10 or 12 days. For flowering plants in pots add a few drops to the water employed to moisten them.

Scouring Drops for Removing Grease.

1st. Alcohol, pure, 6 oz., camphor 2 oz., rectified essence of lemon 8 oz.

2nd. Camphene 3 oz., essence of lemon 1 oz., mix. Some direct them to be distilled together.

3rd. (French.) Camphene 8 oz., pure alcohol 1 oz., sulphuric ether 1 oz., essence of lemon 1 drachm.

4. Spirit of wine a pint, white soap 3 oz., ox gall 3 oz., essence of lemon ¼ oz.

The Greenock Advertiser (Scottish) says; "A strong probability exists of a direct passenger communication being opened between Greenock and New York, by a line of screw steamers, the property of Greenock owners."

The establishment of a line of American steamships between Boston and Liverpool is among the things talked about in these days of speculation and enterprise.