

# Scientific American.

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

VOLUME 5.]

NEW YORK FEBRUARY 2, 1850.

[NUMBER 20.

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.

Barlow & Payne, Agents, 89 Chancery Lane, London  
Geo. Dexter & Bro., New York City  
Stokes & Bro., Philadelphia.  
R. Morris & Co., Southern.

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.

### Railways in Cities.

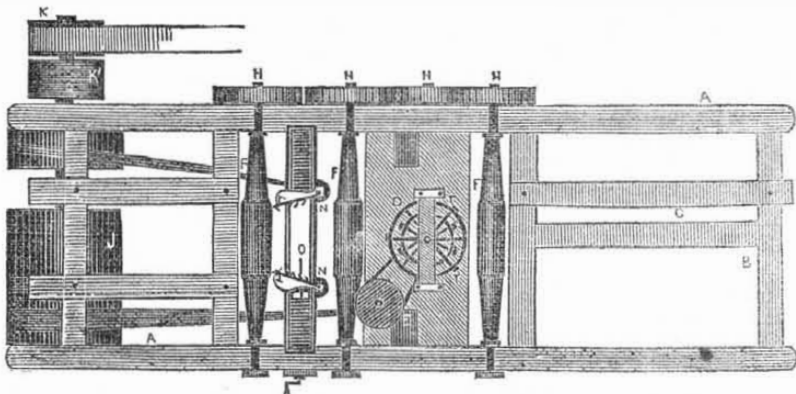
The following is an opinion of the Supreme Court, relative to the running of railways through streets, delivered on an application for an injunction to arrest the laying down of the rails of the Hudson River Railroad through Hudson street, in this city.

Chief Justice Jones stated that "Hudson street was ceded by the corporation of Trinity Church to the corporation of the City of New York, to be kept as a highway forever, the street, except in the line of block between Read and Chamber street where it is somewhat narrower, is from 85 to 90 feet wide and the double track, which in the middle of the road takes up less than 16 feet, and Canal street is 100 feet wide. The owners of the lots do not own the street, it having been ceded to the corporation, who by law, own the fee, they have a common interest in the street with others, but no greater interest, as to actual legal right, than the public at large. By the city charter the corporation have a right to regulate streets, and there is no good reason, but the contrary, why the power of permitting a railroad track to be laid down in a portion of any street or streets, for the public accommodation and use, should not come within the power of regulation; it is a different mode of use from what was originally thought of, but it is necessary with a view to the improvements in machinery, the advance of the age, and the facilities of this mode of travel. The Legislature gave permission to this Company to construct a railroad from the City of New York to a point opposite Albany, and to lay down their rails in such streets of New York as the Common Council should give them permission to do. The vote of the Board of Aldermen merely, granting this permission, was not a law such as required the vote of a majority of all members; in the Board of Assistants the vote was 13 to 5 in favor, and if minor matters were disposed of by a vote in joint ballot, it would be equally as good any way. The Court thinks that the corporation has a right to give permission for railroad tracks to be laid down in the streets—the owners of lots on the line have no more right than owners of adjoining property with the common right of use of the street. Should the business or premises of any be injured by the acts of the Company, they have their remedy in a suit at law. The motion for injunction must be denied. [Judge Edwards stated that the opinion of the Chief Justice was concurred in by himself and Judge Edmonds, being the unanimous opinion of the Court before whom the case was argued.]

### Hudson River Railroad.

The bill to amend the charter of the Hudson River Railroad was taken up in the Assembly on Friday last, in Committee of the whole, and amended so that the rights of the old creditors shall not be impaired by the securities given for the new loan contemplated. An amendment was also adopted, designed to insure the payment of laborers by contractors. The bill was then ordered to a third reading.

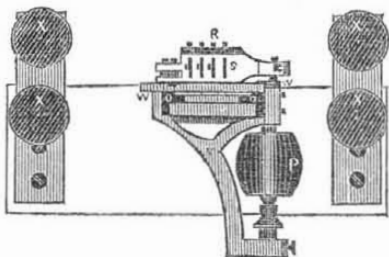
## IMPROVEMENTS IN MACHINERY FOR TONGUING AND GROOVING.—Figure 1.



This is an invention of Mr. Robert Kittle, of Dansville, N. Y., and for which letters patent were issued on the 15th of January, 1850.

Figure 1 is a top view, looking down on the machine; and figure 2 is a side section of the tonguing and grooving machinery. In figure 1 the planing machinery is represented by the Bramah disc, D, having its series of planing cutters, T T. A is the framing, B, is a cross bar; C is the guide fence; E is a pulley from which a band passes, giving motion to the planing disc. F F F are the feed and pressure rollers. H H H H are connecting gear wheels; K is the loose pulley, with the belt on it, and K L, is the driving pulley; J is a band drum, with a band passing around the pulley, E at one side, and there is a band passing around the small pulleys N N, which operate the matching knives. One of these bands is left out, but when we say, the two pulleys, N N, are driven by bands, this office

FIG. 2.



will be at once understood. In figure 2, X X, are the feed rollers. R is the head stock for

the matching knives, S. This head rests upon the vertical shaft, P, being secured to it by a crank pin at W. The grooving cutters are let into the cutter head, R, in such positions as to form the groove in the edge of a plank or board during a portion of the forward movement of the cutter head, and the rear cutter knife, T, is placed in its head, in such a manner that it will cut into and finish the groove during a portion of the reverse movement of the head. It will therefore be observed that the tonguing and grooving knives have a reciprocating motion, derived from being connected eccentric with the driving pulleys. The cutter head is guided to work steadily by guide pins working in slots placed between the finishing knives, and the first knives. O is a set screw, to move one cutter head nearer or farther from the other, to set it for boards of different widths. V, fig. 2, only represents the matching tools frame, set screws being shown for setting it, and for connecting the various parts of it together. The motions of the tonguing and grooving cutters are peculiar, and are said to operate with great satisfaction. The machinery is simple, easily constructed, easily repaired, and easily superintended, which are very important considerations, especially in saw mills at a distance from machine shops.

The inventor and patentee is now ready to sell rights or enter into engagements relating to the use of the same. Any communication (p. p.) addressed to him at the above place, will receive prompt attention.

### Substitute for the Potatoe.

The root said to be discovered in South America, by an eminent French naturalist, and thought to be an excellent substitute for the potatoe, contains, out of 100 parts, 67.21 of alimentary farinaceous matter. Three or four hundred bushels are raised upon an acre. It is time that we had some cheap substitute for potatoes, for they are now selling in this city at \$1 per bushel, and have been for the past two years.

### Decrease of Sunday Travel.

In a recent circular of the American and Foreign Sabbath Union, it is stated that more than forty railway Companies now stop their cars on the Sabbath, and that on more than 2000 miles of railroad the men employed enjoy the rest and privileges appropriated to that day.

### Mobile and Ohio Railroad.

The Ladies of Mobile have determined to do their part towards raising funds for the prosecution of this great work, and are about to hold a grand bazaar for that purpose.

### Handel's Organ.

At a small but beautiful chapel in the parish of Whitechurch, Little Stanmore, ten miles from London, is placed the organ once belonging to Handel, and on which he performed, being organist to the Chandos family.

## Useful Receipts.

### To Gild Iron or Steel.

Make a neutral solution of gold in nitro-muriatic acid (aqua regia) and pour in to it a quantity of sulphuric ether; the ether will take up the gold and float upon the denser acid. The article is then to be washed with this auriferous ether (with a hair pencil); the ether flies off, and the gold adheres.

### To Silver Clock Faces.

Take 1 part chloride of silver (the white precipitate which falls when a solution of common salt is poured into a solution of nitrate of silver or lunar caustic), 3 parts of pearl ash, 1 of whiting, and 1½ of common salt, or 1 part chloride of silver and 10 parts of cream of tartar, and rub the brass with a moistened piece of cork, dipped in the powder.

### Artificial Gold.

Imitation gold, which not only resembles gold in color, but also in specific gravity and ductility, consist of 16 parts of platinum, 7 parts of copper, and 1 of zinc, put in a crucible, covered with charcoal powder, and melted into a mass.

### Boiling Potatoes.

An Irish paper gives the following directions for cooking potatoes. Put them in a pot or kittle without a lid, with water just sufficient to cover them. After the water comes nearly to a boil, pour it off, replace it with cold water, into which throw a good portion of salt. The cold water sends the heat from the surface to the heart and makes the potato mealy. After they are boiled and the water poured off, let them stand on the fire ten or fifteen minutes to dry.

### Cure of Cancer.

We see it stated that a preparation of arsenic is employed successfully, by some of our physicians, to cure cancer. Of course no one but a physician can prepare and prescribe the mixture.

### For Varnishing Figures.

Fuse half an ounce of tin with the same quantity of bismuth, in a crucible; when melted, add half an ounce of mercury. When perfectly combined, take the mixture from the fire and cool it. This substance, mixed with the white of an egg, forms a very beautiful varnish for plaster figures, &c.

### Pinchbeck.

Put into a crucible five ounces of pure copper: when it is in a state of fusion, add one ounce of zinc. These metals combine, forming an alloy not unlike jewellers gold; pour it into a mould of any shape. This alloy is used for inferior jewellery.

### To Stop Mouse Holes.

Take a plug of common hard soap, stop the hole with it and you may rest assured you will have no further trouble from that quarter. It is equally effectual as regards rats, roaches and ants.

### Chrono Thermal Medicine.

The author of the chrono thermal system thus remarks in concluding his work: "I will just make a remark upon the subject of the doses of all medicines. Perceiving, as you might have done by this time, the utter impossibility of fortelling in many cases, especially of chronic disease, the particular agent by which you are to obtain amelioration or cure, and as in almost every case where an agent does not act favorably it does the reverse, you must see the necessity of commencing your treatment with the smallest available doses of the more potent remedies—of feeling your way, in short,—before you venture upon the doses prescribed by the schools."