

# Scientific American.

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

Vol. 3.

New York, December 18, 1847.

No. 13.

## THE SCIENTIFIC AMERICAN :

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.

TERMS—\$2 a year—\$1 in advance, and  
the remainder in 6 months.

See advertisement on last page.

## Poetry.

### THE REIGN OF PEACE.

BY R. MACFARLANE.

There's a field ripe for the sickle,  
Waving with the golden grain,  
But 'tis not the field of battle  
Reeking with the gory slain.

There is seen no charging column,  
Cheering to the deadly strife,  
Nor the bugle sings to waken,  
Man to seek his brother's life.

'Tis a field of moral grandeur,  
Bounded not by earth or sea,  
But the world with all its fulness,  
Marching onward to be free.

Long the cloud of darkness slumber'd  
On old Tiber's sculptur'd shore,  
But a brighter day is dawning,  
Rome now speaks like Rome of yore.

We would not in iron phalanx,  
See her legions march again,  
Nor her cohorts red with carnage,  
On the bloody battle plain.

But with free bold thoughts of freedom,  
Striking shackles from the mind—  
Shedding gleams of social glory,  
Round the hearth of every hind.

Silent be the warrior's clarion,  
Hanging in the martial hall,  
And the chained in soul and body,  
Free from bonds of tyrant thrall.

Now upon her Alpine summits,  
Gleams the glorious torch of truth,  
And her eagle on dove's pinions,  
Cleaves the sky renewed in youth.

And upon the gale are floating,  
Songs of peace from England's strand,  
France too blending sweet her accents,  
In the moral chorus grand.

We too raise the heartfelt offering,  
Lord, let wars and troubles cease,  
Turn the sword into the ploughshare,  
'Stablish universal peace.

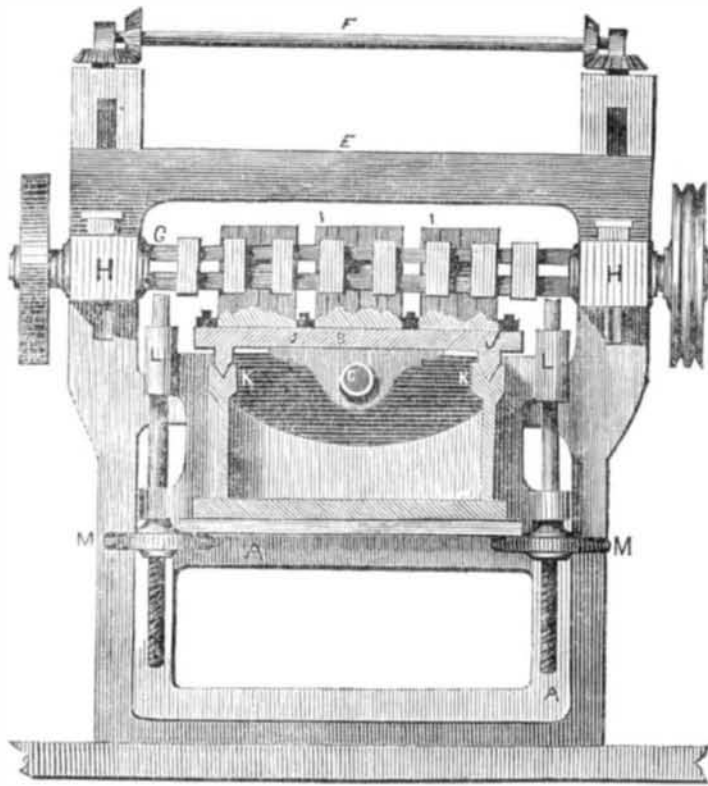
### THE POOR MAN.

God grant the poor man constant health,  
To toil for daily bread;  
He has no earthly wealth,  
And must be clothed and fed,  
The proud of place will grind his face,  
The hard withhold his hire—  
Great Parent? heed his piteous case,  
And guard his cottage fire.

Thou carest for the little birds  
That own no earthly lord—  
Thou carest for the flocks and herds  
That crop the flowery swards—  
Hear'st the young ravens when they cry  
Heedst the young lions roar,  
And will regard the poor man's sigh,  
And meek petition more.

Then grant the poor man constant health  
And strength for daily toil.  
With sweet content the dearest wealth,  
Of weary mortal toil.  
And grant him power to rule his mind!  
To own affections sway,  
And nurse the charities designed  
To smooth his pilgrim way.

## MACHINE FOR WORKING MOULDINGS.



This invention consists of certain mechanical arrangements for producing architectural, cabinet, or other mouldings. Our engraving represents an end elevation of the machine, which, with the aid of the letters of reference will be readily understood. A, is a cast iron bed piece with V grooves, and constructed in some respects similar to planing machines now in use for planing iron, &c. having a driving-screw placed in the centre of the bed piece, so as to give slow alternating motion to the travelling table, when power is applied thereto. The ordinary reversing gear is employed, the construction of which is well known; B, is the bed or traversing table which is shown in section, for the purpose of more clearly representing the various arrangements in detail, such as the mode of fastening the planks of wood to the table by the means of lateral clamps inserted in their sides; J, J, the position of the driving screws together with the inverted V rail, and standards, K, K; C, is the driving-screw, also shewn in section, and which passes longitudinally through the machine from end to end, in gear with the bed or table, by a nut, or any other suitable means usually applied to such purposes when reversing. There are two vertical standards, supporting in bearings the bridge E, with the cutter bars, or mandrils, attached. Each of these standards contain a screw of the same pitch, gearing into, and attached to the bridge, so that by turning the horizontal bar F, both screws are made to revolve at the same rate, and the bridge is thereby caused to ascend and descend, as may be required; G, is a horizontal bar, which revolves rapidly in its bearings, H, H, and carries a number of cutters or chisels, each having its cutting edge so shaped as to produce the required mouldings or any parts thereof, which can be produced by revolving cutters on a horizontal shaft. Motion is communicated to this axis by bands, from an over-head power-wheel. Its course, after leaving the power-wheel, is first directed down to a tightening pulley, which is clamped on to a part of the standard frame on one side, having a vertical slot therein for the purpose of enabling the operators at any time to obtain the requisite tension; it then passes up and over the upper half of one groove of the cutter-pulley,

down again at the back, and over the driving pulley, it is then pressed in at the starting point to make the endless band. I, I, are the chisels or cutters, which are mounted upon the horizontal shaft G, which admit of being arranged and set up in any convenient or necessary form and number suitable to the production of compound mortises; each chisel being of the most simple form and construction, having its cutting-edge shaped to form the numerous mouldings, either simple or compound, by either using them separately or in conjunction with each other, as the case may require; L, L, are bosses cast on the standard on each side, and on each end, on a level with the surface line of the bed or table B. These bosses are bored to receive a vertical rod through each, the lower end of which has a thread run upon it, in gear with a nut and a hand-wheel, M, M, whilst the upper end forms a shackle or forked head, (but which is not shown in the above view,) it being readily understood to constitute merely a single bearing to carry a horizontal shaft from one side of the machine to the other transversely, on which elastic friction rollers are mounted: the object of such bearings being that when a different moulding is to be substituted for the one in the course of formation, the shaft containing the corresponding-shaped friction rollers by the mouldings last completed may easily be exchanged for that of any other, by removing it from the forked head in which it revolves. At the back of the bridge E, a horizontal and vertical slide is fixed, having a slot parallel to the bed of the machine, for the purpose of carrying two traversing cutter heads; affixed to which, through the intervention of revolving mandrils, are the cutters which work at any angle to the bed or table, as well as on the same surface level, as the cutters I, I. The cutters thus referred to receive their direct motion from the power-wheel over head, independantly of other parts of the machine, by an endless rope or chain passing round the wheel mounted in the cutter heads in such a manner that when this part of the apparatus is not required to work in connection with the other, it can be thrown out of gear at any time, even while the running mouldings are in action.

This is the invention of Mr. T. B. Jordan,

of Surrey, England, and in connection with the above description the inventor uses the bevelled cone wheels to produce rotary motion to give full effect to the cutting tools I, I, by the motion of the vertical mandril working in a broad beam the cutter head while the work to be cut is held down nicely by vulcanized india rubber rollers. The principle feature in the invention is the revolving horizontal bar whereby like borders made of type, the inventor is enabled to make compound and various patterns by simple chisels by their transposition.

## RAIL ROAD NEWS.

### Railroads in the New England States.

By a careful enumeration of the railroads in the New England States it is ascertained that there are 2,420 miles finished, or in progress of construction, December, 1847. Most of the unfinished roads, it is presumed, will be completed by the end of 1848.

The following is about the number of miles of railroad in each of the above six States, containing altogether an area of 61,784 square miles:—

STATES.	Miles Railroads.	Area sq. miles.
Maine, -	300	30,000
New Hampshire, 475		9,194
Vermont, - -	370	9,056
Massachusetts, -	900	7,500
Connecticut, -	300	4,674
Rhode Island, -	75	1,360

The capital already invested in railroads in the New England States, is supposed to be not less than \$50,000,000.

### Railway Items.

The Providence Rail Road is doing a good business. The receipts have averaged five hundred dollars per day for passengers alone. The Vermont and Canada Railroad will form a connection with the Ogdensburg Railroad at Rouses Point. A steam Pile Driver, is erected at Hamilton Canada, for the construction of wharves in connection with the Great Western Railroad. The receipts of the Mad River and Erie Railroad for the past year have been \$117,848,71 being an increase over the previous year of \$34,471, more than twenty thousand passengers passed over it without any injurious accident to any one. It is calculated that it will take \$55,000,000 to finish all the railways that are in progress in the United States.

### Western Railroad.

We learn that the receipts on this road, for the year ending Dec. 1st, exceeded those of the last year by \$365,000—or \$1,000 per diem throughout the whole period. The gross amount of receipts was \$1,218,000.

### Lines of Telegraph in Contemplation.

From Macon to Florida,—Macon to Tennessee, 1,000; St. Louis to New Orleans, 1,000, total 2,000 miles.

As many of these have two wires, the length of wire may be safely estimated as exceeding 3,000 miles. The completion of the southern route is expected in January; from Buffalo to Milwaukee next spring.

The old Indian house at Deerfield, Mass., an interesting relic of the Indian War, that survived the conflagration of the village of Deerfield, in 1704, has become so dilapidated that its present owner, Mr. Hoyt, has to remove it for the purpose of erecting a new house on its site. Inspired by a properspirit, the citizens of the village have appointed a committee to take measures to secure the preservation of the relic, by purchasing it and removing it to a new location, and having it kept in repair.

It is reported that William Chambers of Edinburgh is the author of Vestiges of the History of Creation.