

# Scientific American.

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

Vol. 4.

New York, January 6, 1849.

No. 16.

THE  
SCIENTIFIC AMERICAN :

CIRCULATION 11,500.

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 YEAR'S FAREWELL.

It comes, through the wintry night,  
A deep and solid strain,  
Like the voice of the distant torrent's might,  
Or the moon of the sleepless main;  
But wild is the music of wind-woke strings,  
In its far and fitful swell,  
And swift as the passage of eagle wings,  
Is the dying Year's farewell.

It floats o'er the faded fields,  
Where the reaper's joy hath been,  
With the song of praise which the peasant  
yields

For the harvests he hath seen;  
But the song grows sad on the battle-plain  
Of the Brahmin's sun-lit shore,  
For it tells of the eyes that look in vain  
For the loved that come no more.

It rings through the crowded marts  
Of the old world's wealth and power,  
And it winds its way to their weary hearts  
In the hush of the dreamy hour;  
To the young it speaks of their future springs,  
With the breezes blithe and bland,  
But it tells the aged of better things  
In the far unfading land.

And it tells of the deserts crossed,  
Of the fair forsaken ground,  
Of pleasant streams which the heart hath lost,  
And the hidden fountains found;  
For it speaks of the rock before us cleft,  
When its shadow darkly fell,  
And a blessed lesson of hope is left  
By the dying Year's farewell.

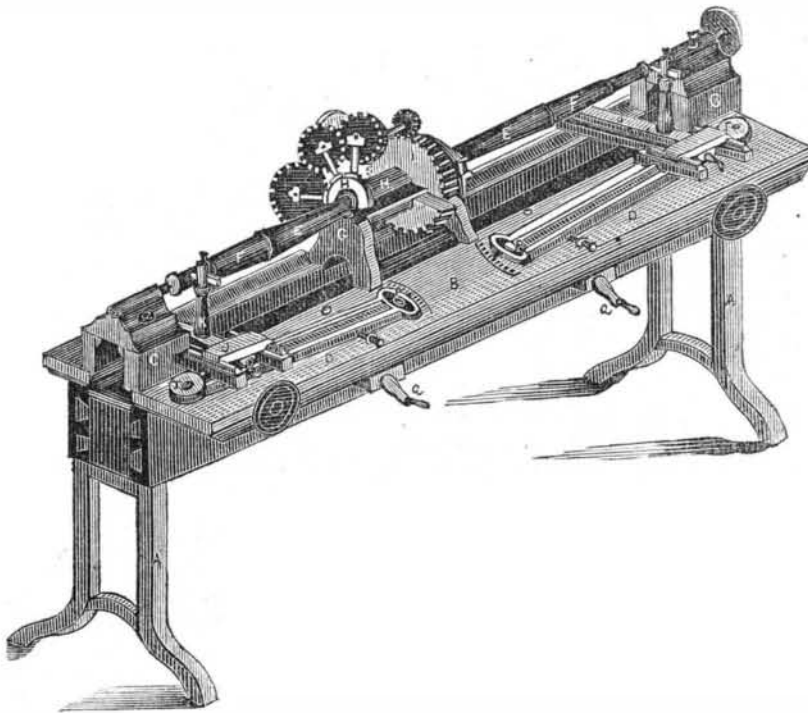
### SONG OF THE DIRT.

Dig—dig—dig—  
To pierce for the golden ore;  
Dig—dig—dig—  
Till you sweat at every pore.  
Dig—dig—dig—  
To root in the deep black sand;  
And this is to be a citizen  
Of a free and Christian land!  
And it's oh! to be a slave  
To the Heathen and the Turk,  
To rid the hands of the Christian man  
From such dirty and toilsome work!

Wash—wash—wash—  
Till the back is almost broke;  
Wash—wash—wash—  
With your legs and your thighs in soak,  
Wash—wash—wash—  
Revolving an old tin pan,  
And wabbling about with a shake and a splash  
Till you doubt you're a Christian man!  
Soul and body and mind,  
Mind and body and soul,  
O! can it be right when they're all confined  
To the basin and the bowl?

Pile—pile—pile—  
When it's only a little heap—  
Pile—pile—pile—  
Till it gradually grows more deep—  
Pile—pile—pile—  
And stow it away in a bag,  
Till you gaze with eyes of wild surprise  
On the contents of that rag!  
Oh! can it be here I stand?  
And can it be gold I see?  
Ho! ho! I am off for a Christian land  
To spend it so merrily!

## IMPROVED COMPOUND SLIDE LATHE FOR TURNING AXLES.—Figure 1.



This is a Turning Lathe invented by J. D. White, of Hartford, Connecticut, who has taken measures to secure a patent for his ingenious improvement.

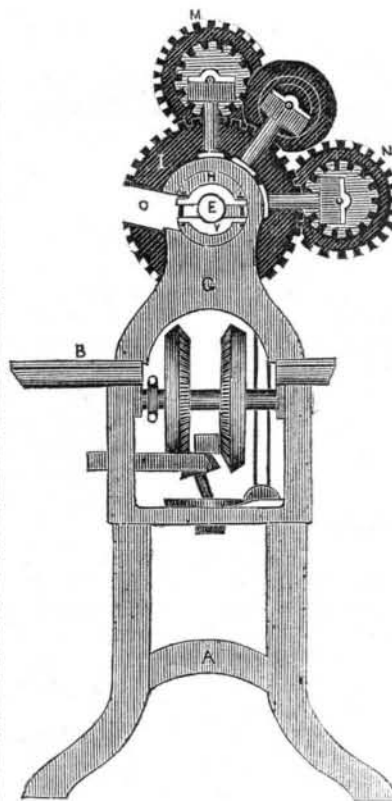
Fig. 1, is a perspective view of the lathe and fig. 2 is a transverse section taken at the left end of the chuck. This invention relates to the turning of axles with two slides and cutters one at each end, but it principally relates to having moveable ways that can move the tool stock to any angle with the revolving axis so as to turn shafts of any taper. By moving the slide parallel with the rotating axis, the cutter will make journals or shafts of equal diameter throughout with equal facility. A, is the frame of the lathe, and B is the table of the common form. C C, are two tail blocks and G two central head stocks to receive the chuck H. E, is the axle to be turned. This axle is placed sideways in the chuck through an opening in the chuck spur wheel I, and the chuck itself, so as to centre the axle in an easy manner. D D, are two moveable ways. J J, are slides of the tool stocks K. The slides move on the rail of the moveable way and are guided by it to cut at any angle. This is done by securing the bottom plate of the moveable way to the end of the table by a vertical axis or pivot T, and securing the way D, at the other end on the table by a set screw—The latter end of the way has a small slot P, in it, so as to let the moveable way be moved out and in at that end to and from the axle to be turned. This is done by a worm screw of which a a, are the handles. This screw passes through a vertical bar attached to the bottom of D D, passing through the table; and as this bar has an eye with an interior thread in it, it will be observed that the way at one end will be moved by the slot P, while the other end of the way will only move on its vertical axis. By setting the way in this manner, the tools will cut at the desired angle, which may be indicated by a pointer on the sliding end of the way, and an index on the table.

In turning axles, this compound lathe answers the purpose of two lathes, for the one, cutter can turn the journal at one end while the tool is cutting the taper F, at the other end. The moveable way is a very useful and simple improvement and can be applied to any lathe.

In fig. 2, the opening O, of the spur wheel and chuck is better seen. The chuck is revolved by a spur wheel I, which is fixed

around it like a ring. M N, are two spur wheels driven by a smaller spur wheel on the shaft of the pulleys which is between M and N. The use of the two spur wheels to drive I, is for one to be in gear with it while the slot O is passing the other. H, is a coupler which is screwed on to the axle and by a

FIG. 2.



pin projecting into the slot of the chuck, when the chuck will be revolved the axle will thus be revolved with it.

The gearing in fig. 2 seen below G is the double feed gearing to move the slides of the tool stocks in the usual way. This gearing is driven by a band from a pulley above. We have not lettered these for description, as it is a double slide gearing operating in combination the two slides of the tool stocks. This compound lathe has received much commendation especially the simple plan of operating the slides.

Leisure is a very pleasant garment to look at, but it is a very bad one to wear. The ruin of millions may be traced to it.

## RAIL ROAD NEWS.

### Railroads at the Close of the Year 1848.

The Railroad Journal, summing up the extraordinary influences of railroads upon the country and upon the world, says, it may be safely estimated that the entire expenditure, within the last twenty-five years, in the projection and construction of railroads, will not fall short of one thousand millions of dollars!! and that their influence in facilitating business, in reducing the expense and time of travel, and in opening up new regions of country, has given an increased value to property of twice that amount!!! and yet their influences are only just beginning to be felt. We may add that within a month two hundred and eighty two miles of new railroad will be added to that already in use in this country. The addition is made up as follows: New York and Erie, 127 miles; New York and New Haven, 50 do.; Nashua and Worcester, 45 do.; Harlem, 20 do. Total—282 miles.

### Railroad from New York to Boston.

The passenger trains have commenced running on the Railroad from this city New Haven and we hope soon to see the entire chain of Railroads to Boston via the Hartford Railroad managed with a fraternal spirit so as to allow passengers to pass along the whole route without much trouble or delay. There should be two daily trains between this city and Boston and there easily can be. This would be profitable to all the Companies, as there is enough of travel to make two large trains daily—but this is not all, with such facilities and rapid travel, we have no doubt, but the number of passengers would increase in a double ratio, at any rate, during the winter season, no person is going to take the uncomfortable and dangerous passage of the Sound, when he can get a passage by Railroad.

### New York and Erie Railroad.

This road was opened last week from Port Jarvis to Binghamton making 200 miles of this road now open from Piermont. This part of the road has been a herculean task to accomplish. Wide rivers have been crossed by costly and permanent stone structures; deep valleys have been raised to the required level; culverts, unexcelled elsewhere on our railroads, have been constructed; high and broad mountains have been "brought low," or pierced by tunnel formed excavations; until the greatest difficulties of this great work are at length overcome.

### Vermont Cattle by Railroad to Boston.

The construction of the Vermont Central Railroad has enabled the beef-growers of the Green Mountain State to furnish the Bostonians with their fat cattle without the loss of any of their flesh, or the exposure to dangers, by the long journey on the hoof. A train of 44 cars, laden with them, from the centre of Vermont, arrived at Boston last week.

### Break on an Incline.

On the 23d ult. while trains of burden cars were passing up and down the Schuylkill inclined plane of the Columbia Railroad, Pa. the rope broke and the cars rushed down the tracks with tremendous velocity. At the foot of the plane they came in contact with some standing cars, and half a dozen of them were dashed to pieces. The men who were upon the cars on the plane, saved themselves by jumping as soon as they found they were "at loose ends."

The convict labor in the Vermont State Prison has been let, under the authority of an act of the Legislature, to Messrs. Lamson, Goodnow & Co., of Shelburn Falls, Mass., for five years, commencing next May; the manufacture of scythe snaths and cutlery is to be carried on by the contractors.