

Scientific American.

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

Vol. 4.

New York, April 7, 1849.

No. 29.

THE
Scientific American.

THE
BEST MECHANICAL PAPER IN THE WORLD.

CIRCULATION 12,000.

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.

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

Poetry.

MUTUAL ASSISTANCE.

A man very lame
Was a little to blame
To stray from his humble abode ;
Hot, thirsty, bemired,
And heartily tired,
He laid himself down in the road.

While thus he reclined,
A man who was blind
Came by and entreated his aid ;
" Deprived of my sight,
Unassisted to-night,
I shall not reach home, I'm afraid."

" Intelligence give
Of the place where you live,"
Said the cripple, perhaps I may know it ;
In my road, it may be,
And if you'll carry me,
It will give me much pleasure to show it.

Great strength you have got,
Which, alas! I have not,
In my legs so fatigued every nerve is,
For the use of your back,
For the eyes which you lack,
My pair shall be much at your service."

Said the other poor man,
" What an excellent plan !
Pray, get on my shoulders, good brother ;
I see all mankind,
If they are but inclined,
Can constantly help one another."

MORAL COSMETICS.

BY HORACE SMITH.

Ye who would save your features florid,
Lithe limbs, bright eyes, unwrinkled forehead
From age's devastation horrid,
Adopt this plan,—
'Twill make, in climate cold or torrid,
A hale old man.

Avoid in youth luxurious diet,
Restrain the passion's lawless riot,
Devoted to domestic quiet,
Be wisely gay ;
So shall ye, spite of age's fiat,
Resist decay.

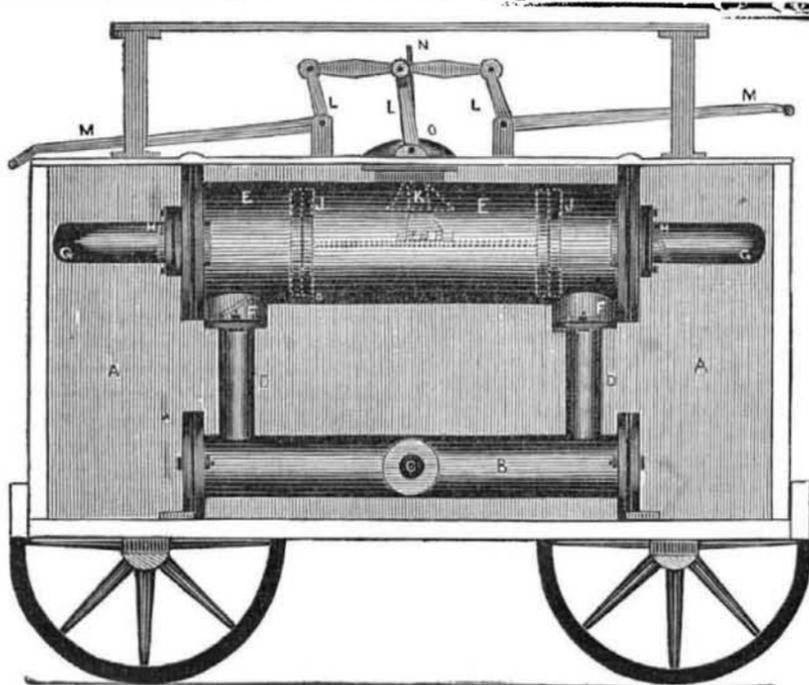
Seek not in Mammon's worship pleasure,
But find your richest, dearest treasure,
In books, friends, music, polishe'd leisure ;
The mind not sense,
Make the sole scales by which ye measure
Your opulence.

This is the solace, this the science,
Life's purest, sweetest, best appliance,
That disappoints not man's reliance,
Whate'er his state ;
But challenges, with calm defiance,
Time, fortune, fate.

A Noble Sentiment.

" I look," said Channing, " with scorn on
the selfish great of the world, and with pity
on the gifted prosperous in the struggle for
office and power, but I look with reverence
on the obscure individual who suffers for the
right, who is true to a good but persecuted
cause.

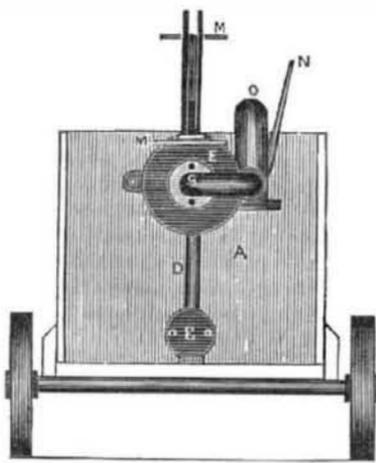
IMPROVEMENTS IN PORTABLE FORCE PUMPS AND FIRE ENGINES.—Figure 1.



This is an invention of Messrs. Benj. Joslyn, C. Jillson and Moses Clement, of Worcester, Mass., designed for a Fire Engine and as a portable force pump,—a machine no farmer should be without.

Fig. 1 is an elevated section and Fig. 2 is an end section, with the box removed. The same letters refer to like parts. A is a box mount-

FIG. 2.



ed upon a carriage. B is the suction connecting pipe chamber. C the suction opening. D

Song Birds.

The delightful music of song birds is perhaps the chief cause why these charming little creatures are in all countries so highly prized. Music is an universal language ; it is understood and cherished in every country, the savage, the barbarian, and the civilized individual, are all passionately fond of music—particularly of melody. But delightful as music is, perhaps there is another reason that may have led man to deprive the warblers of the woods and fields of liberty, particularly in civilized states, where the intellect is more refined, and, consequently, the feelings more adapted to receive tender impressions—we mean the associations of ideas. Their sweet melody bring him more particularly in contact with the groves and meadows—with romantic banks or beautiful sequestered glades—the cherished scenes, perhaps of his early youth. But, independent of this, the warble of a sweet song bird is in itself very delightful ; and to men of sedentary habits, confined to cities by professional duties, and to their desks most part of the day, we do not know

D, vertical pipes from B, coupled to the underside of the double cylinder E E, in the ordinary way. The valves opening upwards and indicated by the dotted lines F F. There are two pistons I I, which work in the double cylinder. They are connected by one piston rod as represented by the dotted lines. At the middle of the double cylinder there is an opening above, through which passes a vertical connecting rod. This connecting rod has a base toothed rack of an arc form K, as indicated by the dotted lines which rest on and mesh into a rack cast on a centre piece that connects the two piston rods together. The connecting rod is secured by a pivot joint on the deck and vibrates when operated by the brakes M M, through the angular side levers L L. H H, are the discharge valves opening outwards. G G, are the discharge pipes leading round into the air chamber O and from it through the pipe N. Any person acquainted in the least with a force pump will understand the construction and operation of the above hydraulic engine and will be able to form a very correct opinion of its merits. By favorable experiments made with a good sized working model, the inventors have been induced to take measures for securing a patent for the arrangement.

a more innocent or more agreeable recreation than the rearing and training of these little feathered musicians.

A Musical Ear.

Each race has a musical ear peculiar to itself, expressed in its aboriginal songs, or native wild notes ; its more elaborate forms, when subjected to the processes of civilization and imitation ; its character, as expressed by the human voice—the original instrument of nature—and is imitated and expressed by the various human contrivances of brass and catgut, parchment and reed. Let us consider this wonderful art—the art of music ; this mysterious, and seemingly superadded, faculty, the musical ear, not necessary, nor required when absent ; nor to be improved when present ; unalterable, fixed, determined and eternal in every race, according to its nature.

The Skowhegan, Me. Press, states that a mine has been discovered at Moose Head Lake, in which the ore is abundant and the quality good, yielding about 90 per cent of pure lead.

RAILROAD NEWS.

The Western Railroad.

During the late session of Congress, the question of constructing a Railroad from Cairo at the junction of the Mississippi and Ohio, to Chicago and the public lands, was referred to a committee, and a favorable report had thereon, accompanied by a map which has since been printed, showing the importance of the undertaking in connexion with other roads projected and in operation in the United States. The report assumes the mouth of the Ohio to be the geographical centre of the United States, from whence, by the shortest railroad routes, when the several lines shall have been completed, the time required to reach any given point, at an average speed of 25 miles per hour, will be as follows, almost annihilating distances.

From Cairo to	Hours.	Cairo to	Hours.
Mobile,	19	Galena,	22
Pensacola,	22	Detroit,	24
New Orleans,	26	Buffalo,	33
Nashville,	6	Indianapolis,	12
Charleston,	28	Columbus,	19
Louisville,	12	Wheeling,	24
Cincinnati,	16	Pittsburgh,	26
St. Louis,	8	Baltimore,	36
Alton,	9	Philadelphia,	38
Springfield,	10	New York,	42
Peru,	12	Boston,	51
Chicago,	16	Portland,	55

The report goes on to state, that by the most speedy steamboat routes the trip to New Orleans, from the mouth of the Ohio, requires four and a half days ; to Pittsburg, six days, and to Galena three and a half days.

Cincinnati Railroad.

At an election held last week by the citizens of Cincinnati to decide whether the city shall subscribe one million of dollars to the railroad from Cincinnati to St. Louis, resulted in the triumph of the friends of the measure, by a large majority. The sum would be expended in building the road from Cincinnati as far as the amount will allow, reserving a balance for the purchase of cars and locomotives, so as to put this portion of the road into use as rapidly as completed.

Syracuse and Rochester Railroad.

A very strong remonstrance has been drawn up against the passage of a bill for the above road.

Railroad Accidents.

An engineer named Garvin was badly injured on the Central Railroad at Sharon N. H. on the 19th, by his head coming in contact with one of the cars. An Irish laborer was accidentally killed upon Messrs. Pratt & Lobdell's section of the Hudson River R. R. near Fishkill on the same day, by being struck by a fragment of rock, during a blast. Upon the Fitchburg Railroad, at Somerville (Mass.) on 23d, a span of horses were killed and the driver seriously injured by encountering the down-train while crossing the track. The road at this place had just been reopened by a vote of the town.

The Great Bridge at Wheeling Va.

The people of Wheeling are going on rapidly with the construction of their vast bridge across the Ohio river, the span of which will be 1010 feet and its height above low water 97 feet, to avoid obstructing the steamboats. Its cost will be about a quarter of a million of dollars, or more than that of grading and bridging forty miles of railroad of an average degree of difficulty in Ohio. It is not likely that many such bridges will be erected considering the cost and risk attending them, but this project will stand out as a work honorable to the spirit of the people in Western Virginia.

J. C. Kirkwood, Esq. has been chosen Superintendent of the New York and Erie Railroad.