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## THE SCIENTIFIC AMERICAN :

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See advertisement on last page.

## Poetry.

### SPEAK NIAGARA.

BY J. H. DODGE.

Speak Niagara,  
And tell the date of thy mysterious birth—  
Art thou coeval with our mother earth,  
And, has each new-born year that's past and  
gone,

Listen'd with awe to thy tremendous song,  
Since first the sun his boundless light reveal'd  
Or earth within her lengthened orbit wheel'd.

Speak Niagara,  
And tell the wary atheist of a God,  
That waked thee from oblivion with a nod,  
And raised from earth on high, thy chast'ning  
rod,

To crush the impious wretch that mortals laud  
Who dares with sophistry and art proclaim,  
"Idle chance," gave birth to all that beings  
name.

Speak Niagara,  
And let the hoarse anthem of thy wrath be  
heard,  
While thou dost thunder forth the Almighty's  
word.

Those, whose impious tongues his name deride  
And bid them in earth's dreary caverns hide,  
Nor dare again, their treason to unfold,  
Gainst him from whose embrace creation rol-  
led.

Speak Niagara,  
Uplift thy own sublime and awful voice,  
Bidding the glorious light of truth rejoice,  
Till error's dark, relentless chains are broke,  
And god-like reason from her trance is woke,  
To bind no more with fetters fast and strong,  
Immortal spirits to atheistic wrong.

### A LOVER'S LOGIC.

BY CHARLES MACKAY.

I am skill'd in magic lord,  
And can tell thee, dearest maiden,  
What the winds at evening say,  
As amid the boughs they play;—  
What the river to its shore,  
Softly whispers evermore  
From its heart o'erladen.

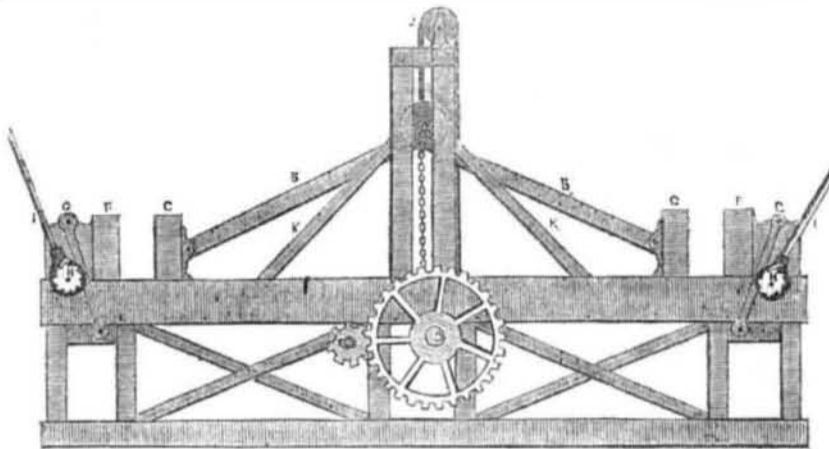
I can tell thee how the moon  
Breathes persuasion to the willows:  
What discourse the mountain makes  
To its shadow-loving lakes;  
And concealed in lonely nooks,  
What the little devious brooks  
Murmur to the willows.

"Love t'hou me—for I love thee,"  
Is the song they sing forever.  
At this moment I can hear  
The responses ringing clear:  
And the very stars repeat  
To the moon an answer sweet.  
"Love shall perish never."

And if thus Earth, Sea, and Sky  
Find a voice to sing their passion,  
Should we fail my dearest maid,  
Wandering in this greenwood shade,  
To repeat the same sweet song,  
We should do their music wrong,  
And be out of fashion.

The wings of a locomotive are said to be  
the very best flight of fancy.

## LAMB'S PATENT JOINT LEVER PRESS.



We have here one of the most ingenious yet simple inventions for deriving an enormous pressure from a small power which has ever been brought before the public. We look upon it with admiration when we come to think of the immense benefits which must result from its use when fully introduced as an assistant in that great branch of American produce, the Cotton trade. In New Orleans alone, over one million bales are annually sent away in ships, and it is of the utmost importance that the cotton should be compressed into as small a space as possible. An incredible amount of money and ingenuity have been expended for the erection of Cotton Presses; nearly all of them are operated on the screw or hydraulic principle, but the original cost, cost of repairs and time required for operation, compared with the superior advantages over them of Mr. Lamb's invention, makes it apparent that the above Press must shortly take the place of all others in use. Aside from Cotton, it is also admirably adapted for expressing Linseed, and producing all other kinds of vegetable oils, also Sterine, Sper, &c. &c. Indeed for any business where immense pressure is required it may be used with great advantage.

In the above engraving, A represents the joints of the two levers B B; these levers it will be seen, are attached by pinions to the blocks C C, called followers. The power being applied to the small wheel E, puts in operation the large wheel D, on the drum of which one end of the chains are attached, the other ends being fastened at A, where the levers join. The wheels being put in operation the chains are drawn down, thus spreading the levers and pushing the two followers C C, with tremendous force against the two head blocks F F. The cotton, or whatever article to be pressed, is placed as will readily be seen, between the followers C C, and the head blocks F F. Above the joint of the levers will be seen attached a rope J, passing over a small friction roller down to the drum of the large wheel D, and fastened on the side opposite the chains. As soon as the desired pressure has been given to an object, the motion of the wheels is reversed, causing the chains to be unwound, while the rope, being by the same movement wound up, draws with it the two

levers B B, and brings back to their places the two followers C C. The pressed bales are now removed, others inserted, and the operation goes on as before. G G, are braces with palls at the tops, which hold the head blocks F F I I, are two levers which operating on the ratchet wheels of two inside rollers, serve the purpose of instantly moving the head blocks F F back or forward, as desired. This is also an admirable part of the invention, for the superintendent is thus enabled at pleasure, by merely moving either or both of the levers I I, to increase the pressure on both bales equally, to increase one or diminish the other, or to give an equal pressure to two bales of unequal sizes. K K, are two braces supporting the uprights.

Among the advantages which this Press has over others, are these—The whole power applied is expended on the bales or articles to be pressed, for it requires no more power to press two bales than one. The power is always expended on the ends of the bales, and not on the cogs and screws, as in other presses; hence the wearing out and liability to derangement, is wholly prevented.—By simply moving the lever I, the Press is accommodated to any sized bale, two of unequal sizes being pressed with the same equality and facility. The cost of constructing this Press is hardly one-half that of the common screw or hydraulic machines. A ten horse power engine is sufficient to work two Presses of this kind, each exerting 500 tons pressure, and in pressing cotton, the time required is half a minute to each bale. They can easily turn out 1000 bales per day. The power of the Press is by no means limited, varying only with the strength of construction. A pressure of 5000 tons can as easily be gained as 500. Several of these Presses have been constructed in this city by Stillman & Co. of the Novelty Works, also by Steele & Co., and found to operate beautifully. Two distinct patents were granted on the machine, and the inventor having completed arrangements is now ready to supply any demand. All orders may be left at the Office of the "Scientific American," where any further information relative to the invention may be obtained. Letters should be post paid.

### Maryland Mechanics Institute.

The Maryland Institute for the promotion of Science and Arts, has at last fully organized and has secured the upper story of the Post Office building, as a lecture room. They are also making arrangements, to hold a fair for the exhibition of the products of the genius and skill of their mechanics and manufacturers.

An ice boat run a mile in one minute and twelve seconds at Albany, on the 3d inst.

### The Wondrous Virtue of Silence.

Deep and powerful souls adjust everything in silence, and make no noise with their doings or with themselves. They go on their way like the works of God. In deep silence the sun ascends the heavens; silently sinks the night down upon the earth. What prepares itself in greater stillness than the reawakening of Nature, and what is more glorious than the opening of Spring?

A line of telegraph has been put up between Lima and Callao, in Peru.

## RAIL ROAD NEWS.

### Locomotives.

Some locomotives are being used in England on the broad gauges, weighing all of thirty tons, and are used where heavy trains of cars required being drawn over roads. The important features in railway Engines are the modes of connecting the piston rod to the crank on the wheels. Where great speed is required they are generally only attached to one pair of wheels; the other wheels acting only as running wheels to the locomotive, but having no friction upon the rails. The friction upon the rails is about 1-6th to 1-10th the weight of the car, and on a level road will draw about 35 or 40 times the weight of the car, but of course will decrease upon an ascending grade, just in proportion as gravitation in the cars gives additional weight to them while ascending the grade.

The speed also of a locomotive depends much upon the weight carried. Suppose it requires the weight of one ton to draw a train 40 miles in 4 hours, then the speed is 10 miles per hour, and the amount of power developed may be set down as 40, that is the weight by the distance—but the time which we have to develop this power is four hours. Now, if it is required to take the same train 40 miles in one hour, then it is evident that 4 times as much power is required, theoretically, but as an increased resistance of the atmosphere is exerted on the train at the higher speed of about 16, that is, as the square of the increased speed, it is evident that a much greater amount of power is required to run trains at a high speed than at a low speed.

### Illinois Central Railroad.

Petitions are now circulating in Illinois for the General Government to assist her in completing the Central Railroad, which is designed to run through that State to the delta formed by the confluence of the Ohio and Mississippi rivers. The State of Illinois has already expended on the project one million and sixteen thousand dollars.

There is now before the Legislature of Massachusetts sixty three petitions for new railroads, branches of railroads, &c., together with the numerous petitions in aid of the several projects, also remonstrances against the same.

The labors of the Committee on Railroads must be extremely arduous.

Mr. F. P. Holcombe, a civil engineer at the South predicts "that the mighty Mississippi for all purposes of travel, will be deserted. We have but to compare New Orleans to show the probability of this event. From New Orleans to Louisville, by water, is 1,400 miles—by land 600 miles." The Railroad Journal is of the opinion that the prediction of Mr. Holcombe will be verified at no distant day.

The "right" of Massachusetts to subscribe to the new stock of the Western Railroad was sold on Monday week, the Worcester Telegraph says, for \$3000.

### Bridge Roofs.

The flooring of railway and all other bridges should never be laid down until a strata of cement was laid underneath and then dried. Uncouth and expensive coverings for wooden bridges might be entirely dispensed with by a plentiful use of pitch and tar. We know one wooden bridge without any cover that is now thirty years old and is nearly as good as ever. The wagon tracks of it are flat and broad iron rails, it is all well pitched between the planking, every bolt was tarred before driven in, and it looks as if it would stand the floods and storms of hundreds of years yet.