

Scientific American.

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

Vol. 4.

New York, March 24, 1849.

No. 27.

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.

TERM — \$3 a year — \$1 in advance, and
the remainder in 6 months.

Poetry.

THE WORLD IS FULL OF BEAUTY.

There is a voice within me,
And 'tis so sweet a voice,
That its soft lisping win me
Till the tears start to mine eyes;
Deep from my soul it springeth,
Like hidden melody,
And evermore it singeth
This song of songs to me—
"This world is full of beauty,
As other worlds above;
And if we did our duty,
It might be full of love!"

When plenty's round us smiling,
What wakes this cry for bread?
Why are crush'd millions toiling,
Gaunt—clothed in rags—unfed?
The sunny hills and valleys
Blush ripe with fruit and grain,
But the lordling in the palace
Still robs his fellow men.
O God! what hosts are trampled
Amid this press of gold:
What noble hearts are sapp'd of life,
What spirits lose their hold!

And yet upon this God-blest earth
There's room for every one;
Ungarner'd food still ripens,
To waste, rot in the sun,
If gold were not an idol,
Were mind and merit worth,
Oh, there would be a bridal
Betwixt high heaven and earth!
Were truth our utter'd language,
Angels might talk with men,
And God-illum'd earth should see
The golden age again.

For the leaf-tongues of the forest—
The flower-lips of the sod—
The birds that hymn their raptures
Into the ear of God—
And the sweet wind that bringeth
The music of the sea,—
Have each a voice that singeth
This song of songs to me.
"This world is full of beauty,
As other worlds above;
And if we did our duty,
It might be full of love!"

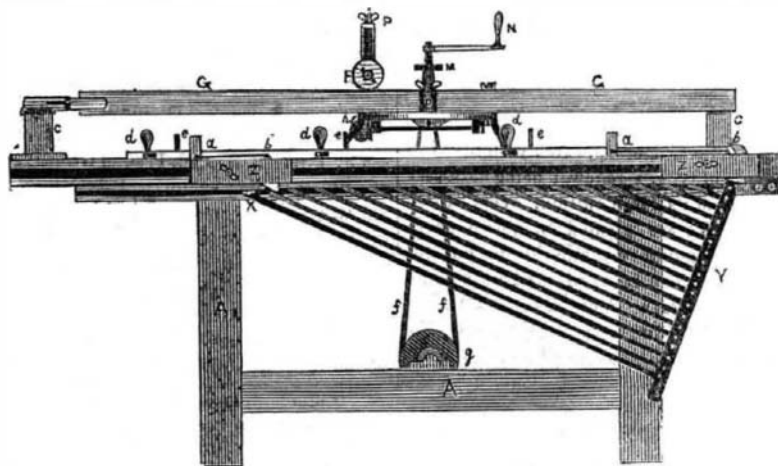
THE STAR AND THE CHILD.

A maiden walked at eventide
Beside a clear and placid stream,
And smiled, as in its depths she saw
A trembling star's reflected beam.
She smiled until the beam was lost,
As 'cross the sky a cloud was driven,
And then she sighed, and then forgot
The star was shining still in heaven.

A mother sat beside life's stream,
Watching a dying child at dawn,
And smiled, as in its eye she saw
A hope that it might still live on.

She smiled until the eyelids closed,
But watched for breath until the even;
And then she wept, and then forgot
The child was living still in heaven.

MACHINE FOR MORTICING WINDOW BLINDS.—Figure 1.



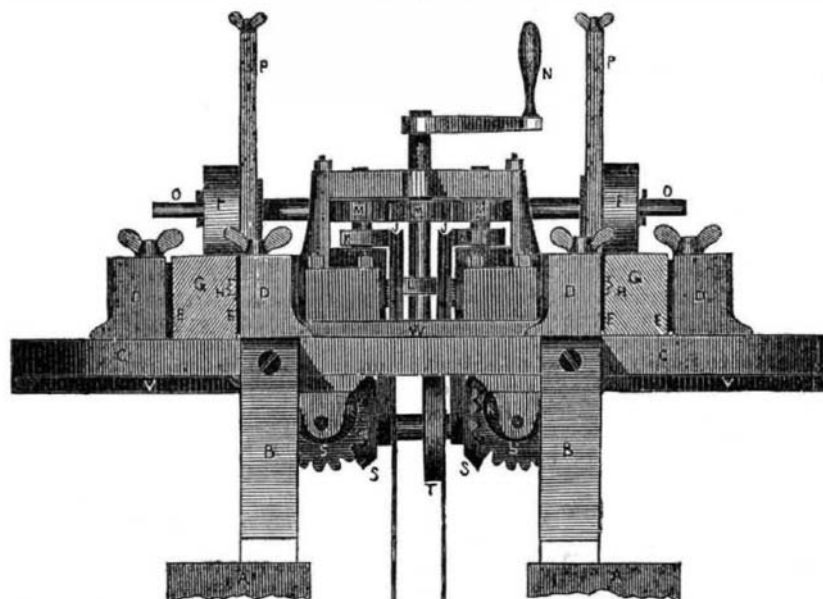
This machine is the invention of Mr. John Wiley, of New Orleans, La. Its object is to bore correctly the frame of window blinds to receive the slats, also to bore the middle of the slats and the centre rail to receive the links that unite them together, so as to raise the blinds up and down. The mortices for the slats are bored out in both sides of the frame at one and the same time, and the exact distance between each mortice is correctly laid out by the matching frame below.

Fig. 1, is a side elevation, and Fig. 2 is a transverse section. A A, is the frame of the machine and Y is a matching frame, composed of a number of strips of wood laid out at the exact distances from one another, say one inch, or they can be drawn in to measure off any distance that is not less than the thickness of each strip by the tops sliding back in the small groove at X. The stack to be morticed is represented by G, which is placed in a sliding frame *a a*, (one stack on each side) and fed into the morticing drills under the feeding roller F, and inside of the guide D, which has a friction roller inside of it to move against the side of G. There are two of these guides D, one on each side of G, as seen in the cross section at fig. 2.

In fig 2. the stack or side G, of the window

blind is represented as passing below the feed roller F, and the guide or side feeding rollers D D, and is acted upon by the morticing drill H. H. The cutters are moved out and in, to cut a mortice, and recede during every revolution of a small vertical shaft turned by the crank N. On the inner end of the cutter shafts are fixed grooved pulleys J J, which revolve the cutters H H, by the bands *ff*, passing up from the driving pulley *g*, fig. 1. The cutters receive the reciprocating, or out and in motion, from three double angle cams, L on the shaft of N, and K K on two sub shafts—the cam L, drives out the cutters, and the cams K drive them back. The cams K K receive motion by the gearing pinions M M M. Fig. 2 exhibits this combination and the way the stack is fed through and to the drills H. W, is the bed plate that supports the machinery. P P, are two uprights with coiled springs between each pressing on blocks that rest in the shaft O, to regulate the feed of the rollers F. All the feed rollers are thus regulated by the nuts on the top of them, as seen in both engravings. The bevel gearing S S, between the two posts B B, fig. 2, are to operate two cams R R, to raise up the drilling machinery so as to bore or drill the blind frame or slats at any point in their diameter.

Figure 2.



The way to operate this bevel gear to raise up the cutters is by a rack wheel T and a ratchet on the other side of the machine. We will now explain how the frame to be morticed is carried forward, and retained at the exact points for the mortices. We find some difficulty in doing this, so as to render it plain, that others may understand it as we do.

In fig. 1, the Italic characters refer to the frame that carries forward G to the drills. Y, the gauge or matching frame is stationary and lays out G, to be morticed—each mortice as

far from the other as may be desired. C C, *d d* and *a a*, are parts of a sliding frame that moves along in a longitudinal recess on the top of the table A A. To this frame is attached two ratchet slides Z Z, which slide in the dark groove. Each of the ratchet slides has a slot cut down through it for the catch (seen by the white angle) to work in, to be lifted up and drop down, working on an axis, to allow the slide frame and G to be pushed forward to the cutters by drawing up the catch by the handle *a*, which is attached to it by a small

chain *b*, and retaining the slide frame and G again at the exact point by dropping the catch into the next slot of Y, when the slide frame is pushed forward by the handles *a* and *c*, and so on continually. *h*, are the supports of the bed plate W, seen on an enlarged scale in fig. 2. By this machine various tools may be employed for cutting, marking or morticing for different kinds of work. Measures have been taken to secure a patent.

RAILROAD NEWS.

Damages for Fatal Accidents.

The Marblehead Mercury states that the Eastern Railroad Corporation have asked from the relatives of those who were killed on that road by the collision last November, to bring in "sealed proposals," setting a price on their lives. The Legislature have passed a law that not over \$5000 shall be recovered by the relatives of any person killed on any Railroad in that State.

Cincinnati and St. Louis Railroad.

The city council of Cincinnati, have subscribed \$500,000 to aid in the construction of this great Railroad.

Reading Railroad.

The London Morning Chronicle states that more than eight million dollars of British money are now invested in the bonds and stocks of the above mentioned company.

Harlem Railroad.

Last week as the freight train on this road was nearing the tunnel, a heavy mass of rocks and earth fell upon the track, and the cars running against it, were smashed to atoms. The engineer and fireman miraculously escaped with but little injury.

A new route is about to be established between the Gulf of Mexico and the Pacific. Lines of stages between the two oceans are to connect this route with steamboats on the Atlantic and Pacific.

Another Explosion.

The steamboat Hecla while leaving the Bayou Sara, La., lately unfortunately collapsed both flues of the larboard boilers, and the steam passing entirely through the main deck which was covered with deck passengers, a great number of them were scalded, and several killed. The full number killed and wounded is not known. Three were killed instantly, and a number of others were missing. Between twenty and thirty were known to be scalded, some four or five so badly that they were not expected to live. Are we never to have an end of this wholesale steamboat murder in the West?

English Miners in Spain.

An English company has leased the silver mines of Guadalcanal, in Seville, which have been under water for 150 years. The company proposes to drain them. One of its members is the celebrated Harvey, who drained the Lake of Haarlem, in Holland. The water has already been removed from a portion of the mines, and some valuable specimens of the silver ore taken from the lodes and sent to England. From the product of these mines the far-famed palace of Escorial was built.

Straits of Magellan.

It is said that large beds of coal, of a superior quality, have been discovered at the Straits of Magellan. Some years ago this would have been a most important announcement, but now it can only subservise the temporary purpose of being serviceable to such steamers as California adventurers may take around the Horn, until the railroad and canal across the Isthmus are finished. That may be a pretty long time, nevertheless, especially as regards the canal.

A pound of crude iron costs 4 cents, but by labor its value for watch springs increases to \$2000.