Scientific American.

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

Vol. 4.

New York, April 28, 1849.

No. 32.

Scientific American.

BEST MECHANICAL PAPER IN THE WORLD CIRCULATION 12,000.

PUBLISHED WEEKLY. At 328 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.

THE LIFE CLOCK.

TRANSLATED FROM THE GERMAN. There is a little mystic clock, No human eye hath seen ; That beateth on-and beateth on, From morning until e'en.

And when the soul is wrapped in sleep, And heareth not a sound, It ticks and ticks the live-long night, And never runneth down.

O, wonderous is the work of art, Which knells the passing hour, But art ne'er formed, nor mind conceived, The life-clock's magic power.

Nor set in gold, nor decked with gems, By pride and wealth possessed; But, rich or poor, or high or low, Each bears it in its breast.

When life's deep stream, 'mid bed of flowers, All still and softly glides, Like the wavelet's step, with a gentle beat, It warns of passing tides.

When passion nerves the warrior's arm For deeds of hate and wrong, Though heeded not, the fearful sound, The knell is deep and strong,

When eyes to eyes are gazing soft, And tender words are spoken, Then fast and wild it rattles on, As if with love 'twere broken.

Such is the clock that measures life, Of flesh and spirit blended; And thus 'twill run within the breast, Till that strange life is ended.

LIVE THEM DOWN.

Brother, art thou poor and lowly, Toiling, drudging day by day, Journeying painfully and slowly, On thy dark and desert way ? Pause not-though the proud ones frown! Sink not, fear not-Live them down !

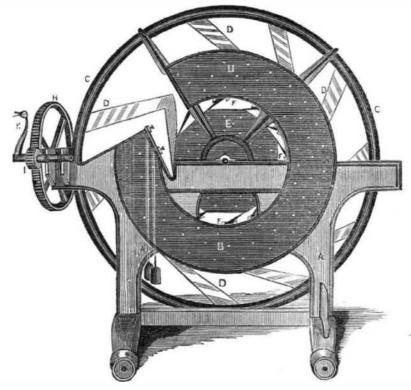
Though to Vice thou shalt not pander, Though to Virtue thou shalt kneel, Yet thou shall escape not Slander-Jibe and lie thy soul must feel-Jest of witling-curse of clown-Heed not either !-Live them down !

Malice may thy woes deride; Scorn may bind with thorns thy forehead-Envy's spear may pierce thy side! Lo! though Cross shall come to Crown! Fear not foemen !-Live them down !

For Mending Steam Boilers, &c.

Mix two parts of finely powdered litharge with one part of very fine sand, and one part quicklime, which has been allowed to slack spontaneously by exposure to the air. mixture may be kept for any length of time without injury. In using it a portion is mixed into a paste with linseed oil, or still better boiled linseed oil. In this state it must be quickly applied, as it soon becomes hard.

REVOLVING BOOT CRIMPING MACHINE.



This is a Boot Crimping Machine, invented | and patented by Mr. John E. Tucker, and rights for Towns, Counties and States are now offered for sale by Messrs. C. H. Taggard & Co. No. 17 Haverhill st. Boston. They have also made arrangements to manufacture and sell this useful machine.

A, is a frame on which this machine is erected. There are two sets of boot forms on the machine and two series of uppers are crimped at the same time-one set on each side, both of which are alike. B, are two metal plates, (only the outside one seen.) These plates are stationary and form an annular chamber between them. Projecting into the inside of this chamber are a number of spring iaws. the heads of which are represented by the light dots. The inner ends of these jaws are denoted by F F F. D, represents the crimpers, which are of the same nature nearly as a die block. The cut leather for the boot upper is placed between the cheeks indicated by the two set screws, and the two weights that are suspended are to hold the

Interesting Geological Fact.

Professor Aggassiz, in a recent lecture, stated an interesting fact, in connection with his remarks upon the family of the rose. which includes among its varieties not only many of the most beantiful flowers which are known, but also the richest fruits, such as the apple, pear, peach, plum, apricot, cherry, strawberry, rasberry, blackberry, &c-viz that no fossils belonging to this family have ever been discovered by geologists. This is regarded as conclusive evidence that the introduction of this family of plants upon earth was coeval with or subsequent to the creation of man.

The Power of the Muscular System.

The number, variety and power of the motions capable of being produced by these muscles are indeed most wonderful, as all have seen and experienced. They enable us to climb the lofty tree, and even the smooth pole of liberty; to mount the towering mast, and not only support ourselves in the rigging of the ship, but to put forth great muscular exertion while she is tossing and rolling, and pitching, and that in the midst of the hurricane. Standing upon our feet, we can toss ourbodies, weighing from 100 to 200 pounds several feet upward and forwards, and in all better for having lived in it.

upper plate of the cheeks to keep the wet uncrimped leather smoothly in its place. C, is the revolving wheel to which the boot forms or crimpers are firmly secured. When the leather is placed in the cheeks over the mouth of the annular chamber, the wheel is turned round, which forces D into the annular chamber pressing in the leather out of the cheeks. it being held only by a sufficient weight to keep it smooth to the action of D, to prevent wrinkles. The spring jaws F, press gently but gradually, the leather close into the boot forms D, laying it smooth and perfect on the form. K, is the crank handle. I, a pinion gearing into the cog-wheel H.

That this machine is a good one, no one will doubt, that is self evident. It has been in operation and proved by some of the most experienced boot manufacturers and crimpers in New England. It has, in the hands of a good crimper, after he had got into the manner of using it, performed in one day, as much as three men could do in the usual way.

directions for many hours in succession, as in dancing and the circus. Or we can transport it fifty or sixty miles between sun and sun, and even carry many pounds weight upon our backs. Or we can chase down the flee test animal that runs. Or we can labor briskly every day, for scores of years. Or we can lift and carry several times our own weight. Or we can accomplish a multiplicity of powerful and protracted bodily exertions, and do a variety and amount of things almost with-

The Tides in the German Ocean.

striking example occurs to us of the happy connection of theory with observation in the prediction that there must exist a spot in the German Ocean, the central point of an area of rotation produced by the meeting and mutual action of two opposite tides, where no rise or fall of tide whatever could occur-a prediction actually verified by Capt. Hewett, in 1839, without any prior knowledge that such a point had been supposed to exist. This is one among the many triumphs of like kind achieved by modern science.

True glory consists in doing what deserves to be written—writing what deserves to be read and making the world the happier and the

RAILROAD NEWS.

Railreads.

In Massachusetts there are 32 finished railroads of an aggregate length of 1,047 miles, of which 217 miles are provided with a double track. The average of their dividends last year was 7 2.3 per cent, in 1847 it exceeded 8 per cent. The average speed of the passenger trains in Massachusetts has been 23.13 miles, and of the freight trains 12.35 miles per hour. In New York the average speed of the passenger trains has not exceeded 13 miles per hour, but is fast increasing.

In New York there are 982 miles of railroad, average dividends 3½ per cent, in 1848, showing these works in New York, to be vastly less profitable than in Massachusetts But the roads many of them are being relaid with good rail and their profits will vastly increase.

In Vermont and New Hampshire there are about 500 miles of railroad finished and in

In Connecticut there are 410 miles of railroad. The average dividend last year was only about 2 per cent.

The number of miles of finished railroad throughout the Union is 6,500, and about as much more in progress, at an average cost of \$30,000 per mile.

In England there are 4,500 miles of railroad completed at an average cost of \$150,000 per mile, all of it with a double track. The gross receipts of the English railroads in 1848 were \$52,000,000; the nett income or dividend 4 1-4 per cent.

In England the average speed of the express trains is 45 miles per hour, this speed is the rule not the exception, some trains have been run at the rate of 65 and some more. The older our roads become, we will increase in speed, for we only want good tracks to equal England.

Railroad Sold.

The Hagerstown (Md.) News, of Wednesday says :- " That portion of the Franklin Railroad lying in this county, between this place and Pennyslvania line, was, on yesterday, sold by Sheriff South to Colonel George Schley, of this place, for \$6000. It is about 5 miles of the road, the construction of which cost about \$20,000 per mile.

Germantown Raitroad.

Towards the close of the Penusylvania Legislative session, an act was passed supplementary to the act incorporating the Philadelphia, Germantown and Norristown Railroad Company, which authorises the company to form a connexion between their road and the Reading Railroad, at any point between Nicetown and the Schuylkill bridge.

Pennsylvania Central Railroad Meeting.

A meeting was held last week it the Room of the Board of Trade, Philadelphia, to adopt measures to complete the Central Rail Road, when it was resolved among other resolutions, that a Committee of eight citizens be now appointed to make a personal application to all the moneyed corporations of the City and County, and urge upon them the policy and propriety of lending liberal aid to the enter-

A Canal Boat Weathering a Gale.

A canal boat was recently washed into the lake at Cleveland, Ohio, during the night, with but one man on board; he, like an old salt, split all the lineson board, attached them to the cooking stove; threw it overboard as an anchor, and rode the waves of the lake safely until assistance was furnished him next morning.

We learn from the Wilmington (N. C.) Commercial that the insect which destroyed the turpentine trees last year to such a great extent, has again commenced its ravages.