Scientific American.

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

VOLUME 6.] NEW-YORK, NOVEMBER 9, 1850. [NUMBER 8.

THE
Scientific American,
CIRCULATION 16,000.
PUBLISHED WEEKLY

At 128 Fulton, street, N. Y., (Sun Building,) and 13 Court street, Boston, Mass.

BY MUNN & COMPANY,

The Principal Office being at New York.

A. T. Hatchkiss, Boston.
Geo. Dexter & Bro., New York City.
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Responsible Agents may also be found in all the principal cities and towns in the United States.

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Rail-Road News.

The Railway Monarch's Star again in the Ascendant.

It is whispered about, that overtures have been made to Mr. Hudson to induce him to come forward and lend the assistance of his energy and experience towards retrieving the affairs of a certain railway company whose dividends have pretty nearly disappeared since the "reform" directors have occupied the position he once filled. We do not pretend to know the fact, but we have some reason to surmise that the honorable member would only consent to meet such overtures in a favorable spirit upon condition of receiving some preliminary *amende honorable* for the unqualified abuse and slander which have been heaped upon him by former friends, and dealt with as if proved. In this the honorable member is certainly right. We must also, whilst referring to *on dits*, add, it is reported that more than one great railway corporation will be glad to see Mr. Hudson among them. There is also some talk of Mr. Hudson taking an active interest in the management of one newly-opened line, but of course such matters are only to be looked upon as rumors. One thing, however, is pretty certain, that Mr. Hudson's retirement from railway affairs has been severely felt in more than one quarter, and is beginning to excite a feeling of regret.—[Railway Record.

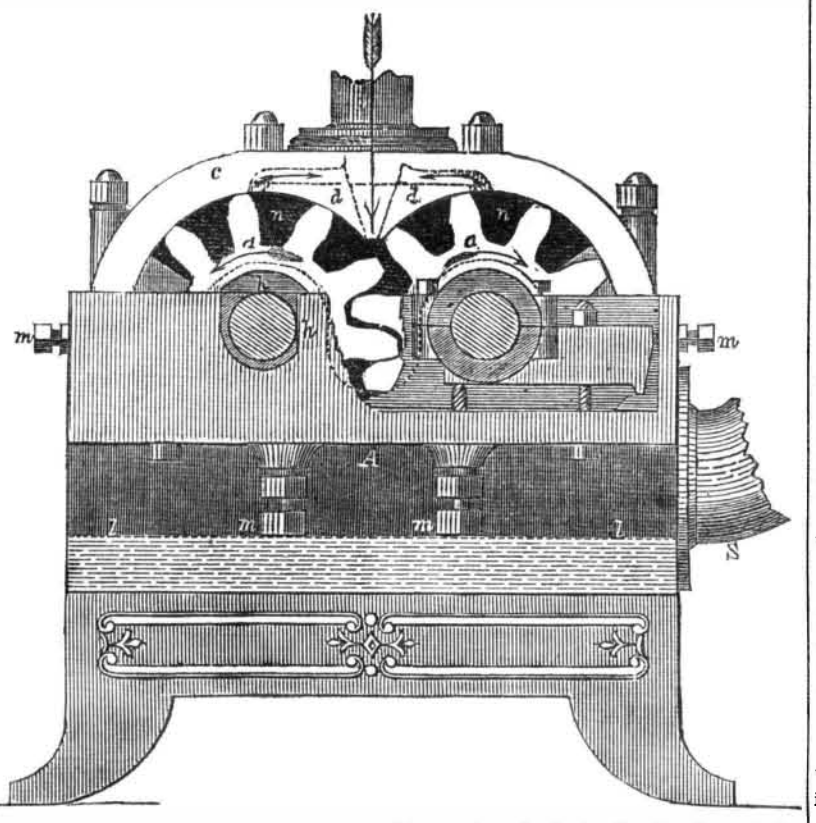
[The above relates to Mr. Hudson, who was almost hooted out of society last year, by public opinion in England, for what was termed "infamous railroad swindling."

The Compound Railroad Iron.

The Baltimore Patriot says, we published a notice on Thursday, of the specimen of a continuous railroad iron, which is now on exhibition at the Mechanics' Fair. It was manufactured at the Mount Savage Iron Company's Works, in Allegheny county, for whom Messrs. E. Pratt & Brothers, of this city, are agents. It is a decided improvement on the usual rail, and is fast coming into general use. The Mount Savage Works, are, we understand, now engaged on a contract for 1000 tons, ordered by the Utica and Schenectady Railroad, in New York, which they ordered after a trial of twelve months of the rail on a short distance on their road, which they laid to test it. It is now being received and forwarded from the Baltimore and Ohio Railroad Company's wharfs, Locust Point. Some 700 tons have already gone forward. It makes a continuous rail by breaking the joints and hence it is not liable to the great difficulty that attends the common T rail and other patterns, which give way where the two rails join. It also allows a greater speed over the road, with equal safety and more ease, and with less wear and tear to the cars.

A Modern physiologist notes the extraordinary fact, that at the dinner table, every time a man crooks his elbow his mouth opens. Can anybody explain this phonomena.

STEWART'S ROTARY STEAM ENGINE.



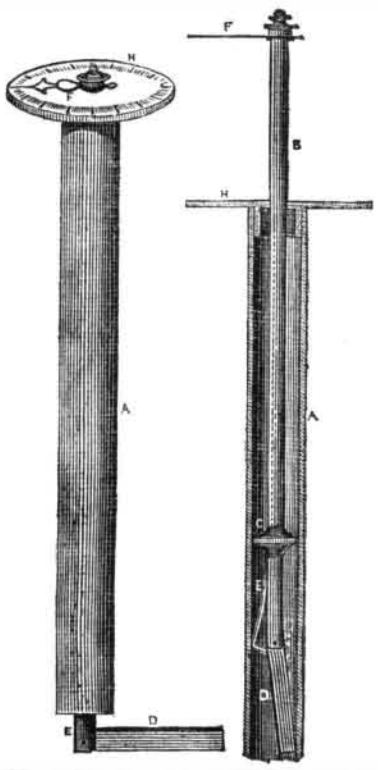
This is the rotary steam engine, invented by Mr. Stewart, of Nashville, Tenn., and described on page 43, in a communication from Mr. F. R. Delano. With the accompanying engraving and description, together with the communication referred to, a full and correct idea of its nature, construction and operation will be obtained.

The above drawing represents an engine of twenty horse power. In operating with this engine, the steam is admitted in the direction of the perpendicular arrow, between a pair of cogwheels, and is confined there by the cap pieces, *c*, and two cheek pieces, *d*, which embrace the upper portions of said wheels, steam tight; so that it cannot escape except by driving the wheels in the direction of the arrows, *a a*. In its passage out from under the cap, the same steam can be taken from the spaces, *n n n*, in the direction of the arrows, and thence conveyed to another engine, and applied a second time, by which the maximum effect of its expansive force is obtained. The wheels are kept in their places by means of perpendicular and horizontal setscrews, *m m m*, and by stationary guides, *h h*. The box, A, in which the wheels are placed, serves for a heater by filling it with water to the dotted line, *l l*, and S, is the escape pipe through which the steam passes off.

There will be a few more remarks about this engine next week.

Wilder's Leeway Indicator.

FIG. 1. FIG. 2.



This is the invention noticed by us two weeks ago, as that of Mr. J. Wilder, of Detroit, Michigan, who has applied for a patent for the same. A is a tube or pipe made of wood or metal, secured in a proper place on the quarter-deck by a flange at the top, and extending down to the outside of the keel of the vessel, and in the interior of this is arranged and connected the machinery attached to a vane below, to move a pointer above and indicate the leeway.

Figure 1 is a perspective view, and figure 2 is a vertical view, showing the interior and how the vane can be drawn up when the vessel comes into port, or for any other purpose. The same letters refer to like parts. A is the pipe spoken of; B is a piston rod, it passes down through the dial plate, H, and works in a collar of the said plate, so as to be moved around; on this rod is a piston, C, to fit snugly in the pipe, to make the rod work steady; E is a spring secured to the bottom of the piston, C, and abutting against the vane, D, to keep the vane in its horizontal position below, when the vessel is sailing, but which allows the vane to be drawn up, (as it is attached by a pivot joint to the rod B) when a considerable power is applied to it for that purpose. F is a pointer attached to the top of the rod, B, and according as the re-action of the water, by the drift of the vessel, acts upon the vane, D, to turn it out of the parallel line with the keel, so will the indicator point out the real, not the apparent, direction of the vessel. The vane, D, is set on a line with the keel, so as to be affected by the side tow only. With respect to its practical action and use on vessels, we have not any particular account in our possession at present. It will take some experience and many trials to graduate the working parts so as to arrange the size, tension, &c., into a system applicable to all vessels, and also for working, especially in seas where there are currents, like the gulf stream. Whatever information is received shall be duly laid before our readers. This illustration and description cannot fail to direct attention to the importance of the invention; and more information may be obtained by letter addressed to Mr. Wilder, at Detroit.

The Principle on which Plants are Propagated by Cuttings.

The propagation of plants by cuttings is an operation of frequent use, and of considerable importance in all horticultural establishments. The many thousand plants that are annually propagated to embellish flower-gardens and pleasure grounds, and the taste displayed in the arrangement of colors, demand the greatest skill, vigilance, and forethought to prepare, to arrange, and to provide for the display.

The conditions necessary for the propagation of plants by cuttings are, a certain portion of organised matter, the assistance of leaves, a degree of heat and moisture accordant with the nature of the plant, and free drainage at the roots.

When the ascending sap reaches the leaves, the water is discharged through the minute invisible pores, and by the decomposition of carbonic acid gas, which separates to carbon, and sets the oxygen free, a vital action is performed, by which the sap is changed into the organic matter, or descending sap. It is then that all parts of the plant are supplied with a store of organised matter, which renders the parts fit to be employed as cuttings. When removed from the parent, that store, under proper management, will enable them to put forth roots and new leaves, and develope all the parts required for the growth of the plant. If the shoots are in a rapid state of growth, full of rising sap, their tissues lax and not matured, failures may be expected to attend all attempts to propagate them by cuttings.

The next part of the subject is to inquire in what manner the leaves retained on the cuttings assist the protrusion of roots, and the development of other leaves.

As the removal of the cuttings from the parent branch will make no change in the nature of the sap, which is always more or less in circulation in the whole system of the plant, and it is the office of the proper juice to descend in the cuttings to the joint at which it was cut; when its downward course is impeded, it accumulates there until a callous is formed, and roots are protuded; the organised matter of the cutting is diminished to supply the development of roots, and leaves are required to secrete more, to replace that which was expended in the formation of roots. It is when there is sufficient organised matter in the cutting to supply the roots, without exhausting its own vital energies, that the external assistance derived from the leaves may not beneeded.

The London Times of the 12th instant, states that a steamer has arrived at that port from Russia, with eighty-nine packages of goods intended for the great Industrial Exhibition. Another lot of goods, equally as large, was daily expected from the same country.

The new pavement on the Boulevards, Paris, has been found to answer admirably; it is free from mud in rainy weather, and from dust in dry weather. It consists of small stones which are besmeared with cold bitumen and oil.

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