

Scientific American.

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

VOLUME VII.]

NEW-YORK, OCTOBER 4, 1851.

[NUMBER 3.

THE
Scientific American,
CIRCULATION 16,000.

PUBLISHED WEEKLY
At 128 Fulton street, N. Y., (Sun Buildings),
BY MUNN & COMPANY.

Hotchkiss & Co., Boston.
Dexter & Bro., New York City.
Stokes & Bro., Philadelphia.
Jno. Thomson, Cincinnati, O.
Cooke & LeCount, San Francisco, Cal.
Courtenay & Wienges, Charleston, S. C.
John Carruthers, Savannah, Ga.
M. Boullémet, Mobile, Ala.
Barlow, Payne & Praken, London.
M. M. Gardissal & Co., Paris.
Responsible Agents may also be found in all the principal cities and towns in the United States.
Terms—\$2 a-year—\$1 in advance and the remainder in 6 months.

RAIL-ROAD NEWS.

Railroads of Massachusetts.

Massachusetts has constructed 1,150 miles of Railroad, at a cost of \$52,000,000; and the other New England States have constructed 1,799 miles more at a cost of \$55,000,000. To these might be added the Northern N. Y. (or Ogdensburg) Railroad, which is virtually a New England road, making a total of about 3,000 miles of railroad, constructed at a total cost of upwards of \$110,000,000.

The gross earnings in 1850, of all the railroads in Massachusetts, and of those that are partly in Massachusetts and partly in adjoining States, were \$6,903,000. The net earnings during the same time, were \$3,480,347. The cost of these roads was \$53,264,000. The net income was therefore more than 6 per cent. on the total cost.

The number of passengers transported over these roads during the same time was 8,973,681, which gives an average of 28,754 a day for 312 days.

Hempfield Railroad.

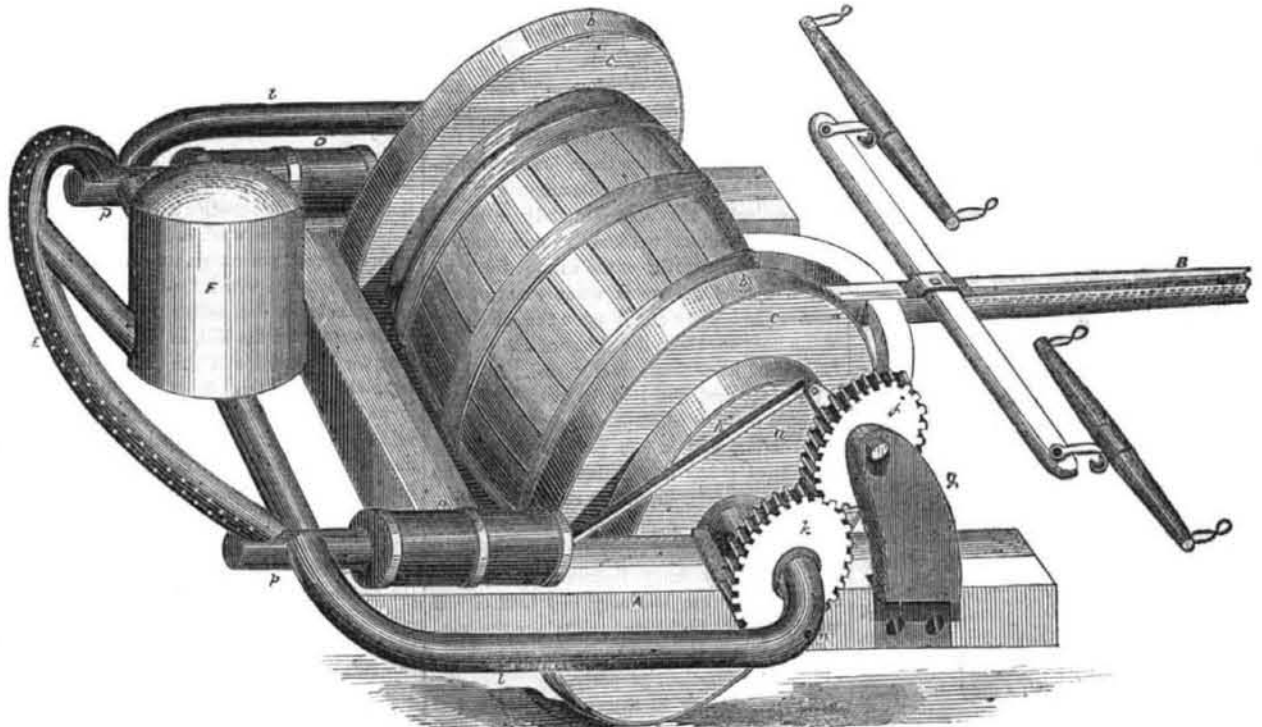
We learn from the Wheeling Gazette that the County Court of Ohio County have authorized a vote to be taken on the fourth Thursday of October, upon the question whether Ohio county will subscribe an additional sum of \$150,000 to the Hempfield road. This subscription, if made, and of which there appears to be not the least doubt, will make the total subscription of Ohio County \$300,000. In addition to this, the citizens of the county have subscribed individually for upwards of \$150,000, and the City Council of Wheeling \$50,000—making a total of upwards of \$500,000 subscribed. Washington and Westmoreland counties, in Pennsylvania, are each counted upon for an equal or larger amount. The road, it is stated, between Wheeling and Washington, will be put under contract early in November next.

The Hudson River Railroad is now finished from New York to Troy: it will be opened throughout next week, and passengers will have the pleasure of going from New York to Albany in four hours. Forty years ago it took as many weeks to sail up the North River.

The Great Drouth.

For the last six weeks there have not been above two or three showers of rain in New York City. If storms are peculiar to the equinoctial periods, then this season has been an exception to the rule. The country round is suffering greatly for the want of water; the brooks and wells are all dried up, and the pastures are brown as the heath of the desert. The east winds generally bring clouds and rain, but the wind was in that quarter for two days, last week, and only a few drops of rain fell. It is the longest dry spell that we have had for a number of years. As is usually the case, we will no doubt have a long period of rainy weather after this. Only that the country is suffering greatly for the want of rain, we could almost wish for such weather all the time. The air has been bracing, and the skies clear.

WATER SPRINKLER FOR STREETS, &c.—Fig. 1.



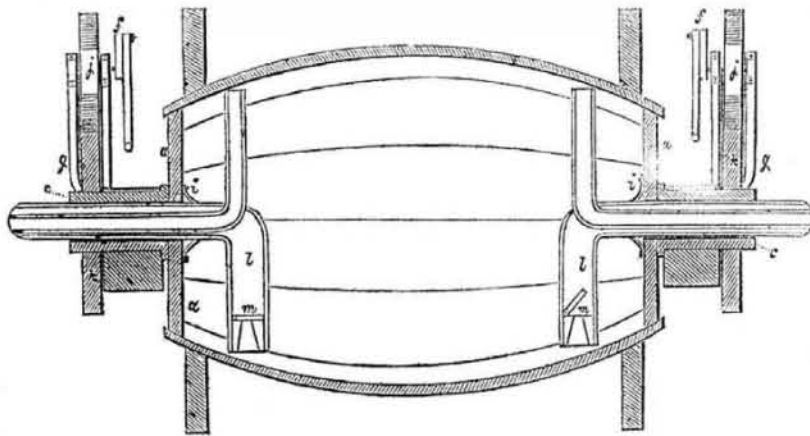
The accompanying engravings represent a Water Sprinkler invented by Mr. J. D. Fitch, of Smithsburg, Washington Co., Maryland, and secured to him by patent.

Fig. 1 is a perspective, and fig. 2 a vertical sectional view, showing the pipes as they communicate with the interior of the revolving water vessel.

The machine consists of a water vessel by which the water is carried and from which it is drawn by force pumps; the latter being operated by the revolving vessel, expel the water in a shower through numerous perforations in a curved pipe at the hinder end of the machine thus sprinkling a broad strip of ground as the machine is drawn forward.

In the engraving, A is a strong frame to which the other portions of the machine are attached, and which is furnished with a pole, B, or with shafts to which the team is hitch-

Figure 2.



mounted upon a projecting extremity of a hollow gudgeon. The barrel of each force pump is connected with the interior of the water vessel by a suction pipe, *l*, which passing through the hollow gudgeon is bent downwards so as to draw the water from the lower part of the vessel. The vacant space which intervenes between the suction pipe and the hollow gudgeon is packed to prevent leakage, either by a collar of leather, *i*, or by some other suitable means. The lower extremity of the suction pipe is fitted with a valve, *m*, to prevent the reflux of water from the pump barrel when the piston is forced inwards; and each is furnished with an air pipe, *n*, which passing through it into the water

ed. The water vessel is most conveniently being driven by the revolving vessel, eject the water through the perforations in the curved pipe to a considerable distance on each side of the machine. This machine, from the simplicity of its parts, and its efficiency is particularly applicable to the watering of the streets of cities, and as the water which constitutes the great weight of the machine is rolled forward in the revolving vessel, but comparatively little power is required to perform the work. More information may be obtained by letter addressed to the inventor.

being driven by the revolving vessel, eject the water through the perforations in the curved pipe to a considerable distance on each side of the machine.

This machine, from the simplicity of its parts, and its efficiency is particularly applicable to the watering of the streets of cities, and as the water which constitutes the great weight of the machine is rolled forward in the revolving vessel, but comparatively little power is required to perform the work.

More information may be obtained by letter addressed to the inventor.

Metallic Paint.

A quantity of ground zinc stone has been shipped to Richmond as an article of commerce. The mineral was recently discovered in Rockbridge County, Virginia, and is transported to market by way of James River and Kanahwa Canal. This curious stone has the remarkable quality, when finely pulverized, mixed with flaxseed oil, and spread on any surface, of reforming itself into stone, by a reunion of its rock particles; thus constituting a firm and hard rock covering, or coat of mail—impervious to water and proof against fire. Its value has been well and satisfactorily tested, and if found to succeed as well hereafter, as formerly, for roofs, &c., it will, to a certain extent, supersede slate, tin, sheet iron, and kindred appliances.

Terrible Explosion.

For all that has been said on this subject, these public murders are as common as ever. On the 21st inst., the steamboat James Jackson, exploded at Shawneetown, Illinois, and no less than 35 persons were either killed or wounded. The government inspection system is a mere sham. A law should be made compelling all steamboats to be built upon the low pressure principle.

Erratum—Tilton's Violin.

The article last week in our columns about this improvement, stated that Mr. Tilton lived in Cannelton, Ala.: it should have read Carrolton; the error was made in mistaking the letters *r* in the MS.

The Fastest Steamboat Running on Record.

The steamboat New World ran from this city to Albany, on Tuesday of last week: her running time was six hours and fifty-five minutes. This is something over twenty miles per hour for the whole distance, or nearly equal to our railroad speed.