

THE
AMERICAN MAGAZINE,

A MONTHLY MISCELLANY,

DEVOTED TO

LITERATURE, SCIENCE, HISTORY, BIOGRAPHY, AND THE ARTS;

INCLUDING ALSO

STATE PAPERS AND PUBLIC DOCUMENTS,

WITH

INTELLIGENCE, DOMESTIC, FOREIGN, AND LITERARY,

PUBLIC NEWS, AND PASSING EVENTS;

BEING AN ATTEMPT TO FORM A

USEFUL REPOSITORY

FOR EVERY DESCRIPTION OF AMERICAN READERS.

VOL. I.

ALBANY:

PRINTED FOR THE EDITOR, BY E. & E. HOSFORD,

MAY BE HAD OF THEM,

And the following Booksellers: F. Adancourt, and D. Whiting, Troy; Tracy & Bliss, Lansingburgh; Sears & Co., Ballston-Spa; Riggs and Stevens, Schenectady; A. Seward, Utica; J. Bogert, Geneva; S. H. Salisbury, Buffalo; H. & E. Phinney, Otsego; S. W. Clark, and W. E. Norman, Hudson; P. Potter, Poughkeepsie; Th. Longworth, and Samuel Wood, New-York; Whiting & Tiffany, New-Haven; L. H. Redfield & Co., Onondaga; Kellogg and Beardslee, Manlius; S. R. Brown, Auburn; J. D. Bemis, Canandaigua; J. Nichols, Ithaca; Stephen B. Leonard, Owego; T. H. Wentworth, Oswego; C. Tappen, Jun., Kingston; J. P. Reynolds, Salem; Ward M. Gazlay, Newburgh, and by many Agents in this and the other States,—and by H. Spafford, at Brockville, Upper Canada, Agent for the British Possessions in America.

—♦—
1815.

and to have witnessed the misery and wretchedness I have seen among the farmers in that unfortunate portion of the globe, and the corruption and depravity among the higher classes. They would all gladly hasten back, kiss the American soil, and call it truly blessed, and forever thereafter hold their peace in pious gratitude to the great fountain of all good. I was gratified to observe my morning's lecture evidently remove the mist of anxiety which had obscured an intelligent countenance, and I trust and hope its effects will be salutary and lasting. Would to God I could at that moment have been within hearing of every discontented farmer in the United States of America.

THE ALBANY WATER WORKS.

The importance of a constant and certain supply of pure and wholesome water, to the inhabitants of populous towns, can hardly be duly appreciated, and there is little danger that it should ever be overrated. And when it is considered that the clayey soils of the river-hills, and the alluvial flats on which this city is built, afford very little good water by digging in any part, and none that can be called pure and soft; the importance of a competent supply of that of a good quality may be duly appreciated. We are well aware that by far the largest portion of our readers have no immediate interest in being informed of the extent of the recent improvements, and the laudable enterprize of a Company for supplying this city with water. And yet the magnitude of the works, and the novel facts connected with their execution, claim at least all the attention that we are disposed to bestow upon them.

The city of Albany is now supplied with water by an **IRON CONDUIT** of $3\frac{1}{2}$ miles in length, capable of delivering 400,000 gallons daily, into a Reservoir of hewn stone of that capacity, situated on a commanding elevation that overlooks the principal part of the town. This aqueduct is fed by a single spring, of a cool and uniform temperature; and there are about eight miles of wooden pipes or aqueducts, now laid, that extend the circulation from the Reservoir through all the principal streets, from which lateral ones conduct the water into the houses. It is intended to lay all these in cast iron. The main aqueduct, of iron, has a bore of $6\frac{1}{2}$ inches diameter, and it is thought that the method of connecting the pipes, or *joints*, as they are called, very successfully devised by the Superintendent of the Company, is an improvement on any of the modes hitherto known. It is done by inserting the pipes into each other, and the joint is made perfectly tight by a rim of soft lead. Some curious and interesting facts, concerning the expansive power of heat on these iron pipes, which have resulted from experience in this enterprize, ought to be generally known, and especially to all those who may have an immediate interest in knowing them.

These works have cost the Company the whole amount of their capital, which is 80,000 dollars. The main aqueduct from the spring to the city, was first laid in wood, large yellow pine logs, in 1802; and these were so far decayed in 1813, as to threaten a failure in the supply of water, and a total loss to the Company of all their advances, which had amounted to 40,000 dollars—at that time the whole amount of capital that was authorized by law. On application to the Legislature, a law was passed augmenting the capital to 80,000 dollars, with which the late improvements have been effected. The daily consumption of water now, is computed at about 200,000 gallons, leaving a surplus of one half the supply for the future increase of consumption, and an abundant provision in every part of the town for extinguishing fires. With these heavy expenditures, the Company now calculate on having secured a permanency of supply for many years to come, perhaps for some centuries. The works are all constructed in the best manner, with a commendable liberality of expense.

Having carefully observed the progress of this undertaking throughout, and the ingenuity and great carefulness of Elisha Putnam, the Superintendent, in conducting every part, we have great pleasure in thus noticing his merits, while we make them known to others who may have an interest in deriving a benefit from his skill and experience. It may probably be a fair calculation to suppose that from 25,000 to 30,000 dollars might have been saved, from the expense of this undertaking, had the capital all been properly applied in the first instance, and with the advantages of the knowledge and experience at present possessed by the Company.

The following scale of prices, showing the rates at which the water is sold to families, manufactories, &c. may be useful to our Readers, as affording comparative data of expense, interesting to the inhabitants of other towns.

Albany, October, 1815.

EDITOR.

RATES FOR THE USE OF THE WATER.

1st Class Dwelling Houses—	Every 3 story double House,	\$ 16 pr. ann.	
2d do. do.	Every 3 story House, with three windows in front on the lower floor, or two front rooms with an L,	} 14	
3d do. do.	Every 3 story single House and 2 story double House,		
4th do. do.	Every 2 story House with two front rooms and an L,	} 10	
5th do. do.	Every 2 story single House (of 2 rooms on first floor) of brick, or fronted with brick,		
6th do. do.	Every other dwelling House of whatever description,	} 6	
Every additional family in any House, to pay	- - -		3
If more than one additional family in any house, each such additional family to pay	- - -	2	
Every Store, or Store House, not otherwise rated,	- - -	6	
<i>Rates for the use of Water in Erecting Buildings.</i>			
1st and 2d Classes,	\$ 25	Every Grocery Store in a House occupied by a family taking the Water,	4
3d, do.	20	Every Distillery,	100
4th, do.	15	Every Tannery,	70
5th and 6th do.	10	Every Morocco Factory,	50
Every Store or Store House, of 3 stories or more,	15	1st Class of Breweries,	60
Every Store or Store House, of 2 stories,	10	2d. do. do.	45
<i>In addition to the foregoing Rates on Houses,</i>			
1st Class Taverns, to pay	\$ 10	3d. do. do.	30
2d, do.	8	Every Dyer,	15
3d, do.	6	Every Leather Dresser,	20
Every Boarding House, from 6 to 2		Every Printing Office,	15
		Every Bakery,	6
		Every Blacksmith,	6
		Every Hatter,	12
		Every Stone Cutter,	12

FOR THE AMERICAN MAGAZINE.

Albany, October 26th, 1815.

MR. EDITOR—By inserting the following Question in your interesting and justly admired Miscellany, you will, I have no doubt, afford some amusement to the sons and friends of Science throughout the state.

Respectfully, J. B.

QUESTION.

Required the number of miles that an observer should be elevated in the zenith, at the southeast corner of the Capitol, at Albany, in order to see the Sun's upper limb three hours before he shall have made his appearance in the horizon of the place of observation?

Required, also, a mathematical demonstration, independent of parallax and refraction?