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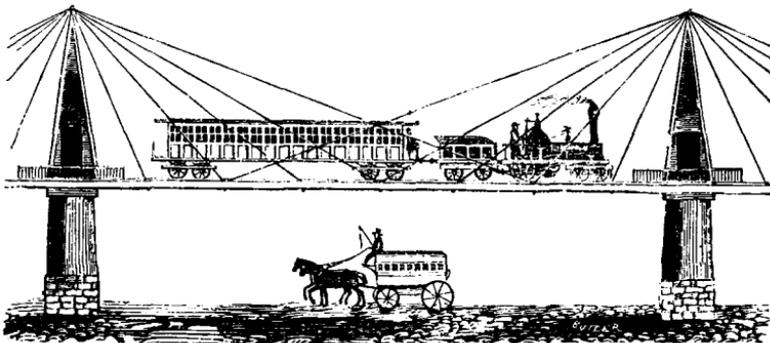
Number 4

Eighty-one Years of Scientific Progress

COMPLETE RUN OF *Scientific American* NOW IN
POSSESSION OF LIBRARY

THE Society's set of the *Scientific American*, oldest of scientific periodicals in this country, is now complete, the first three volumes, 1845-46-47, all rare, having by the generosity of Mr. Joseph P. Day, a founder member, been acquired within this last month.

BROADWAY ELEVATED RAILROAD.



EXPLANATION, &c.—We have heretofore alluded to the constructing of Elevated Railroads over the centres of some of the principal streets of this city; since which we have more attentively examined the subject, and are fully convinced of the practicality not only of constructing such roads, but of rendering them unobjectionable to the citizens resident on those streets, and those who have occasion to ride, promenade, or pursue the ordinary branches of business therein. This road must consist of a single track—which would not be objectionable, as a train each way, every half hour, would furnish ample accommodation—elevated about eighteen feet from the ground, and supported by a series of stone columns, eight feet in diameter, and sixty feet apart. A frame work of substantial timber is elevated over each column, and about twenty

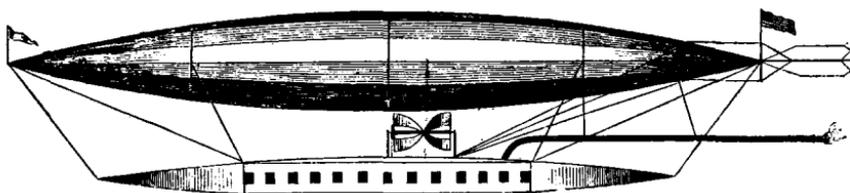
THE ANCESTOR OF THE "L"

Considerable human interest attaches to the story of the finding of some of the rest of the set. Two or three volumes were reported as having been seen in a second-hand store in a neighboring town.

One trail led to another, until finally the collector, after a strenuous hunt, found himself in a junk shop, in the obscure outskirts of the town. Burrowing in a collection of old clothes and hay, he was rewarded by the discovery of volumes 49 to 104.

There is curious fascination in turning over the pages of these treasures, which reveal year, by year in so picturesque a manner, the evolution of the mechanical arts. This journal, the successor of the *New York Mechanic*, has carried its scientific interest throughout, and for the student of the history of mechanics it would seem to be quite indispensable. Of particular interest to railroad men is the illustration in vol. I, no. 1, of an "Improved Railroad Car," with

THE TRAVELLING BALLOON.



ÆRIAL NAVIGATION.—The practicability of travelling rapidly and safely through the air, has been already established, as far as theory can establish a point without actual experiment; and the most important principles on which success in this mainly depends, have been already thus established. The specific gravity of hydrogen gas is less than that of atmospheric air, by something more than one ounce per cubic foot; and consequently a cubic foot of this gas being enclosed, has a buoyant power of one ounce in atmospheric air. A hollow globe, five feet in diameter, may be made of oiled silk of less than one pound weight; yet this globe, being filled with hydrogen gas, will possess a buoyancy in atmospheric air of more than four pounds. This sufficiently illustrates the first principles of ballooning; but as it is plain that a

THE AIRSHIP AS CONCEIVED IN 1845

light, high wheels, and chimney-like ventilators. Considerable prominence is given to the "Steamship Great Britain," recently arrived from Liverpool and termed 'the mammoth of the ocean.' This boat, combining sails and steam power and built entirely of iron, was visited in New York by about 12,000 people "who paid 25 cts. for the gratification." The only criticism advanced is with regard to the method of propulsion by the screw, and the *American* remarks that it would not be surprised "if it should ere long be superseded by paddle-wheels at the side."

A subsequent issue provides plans, as indicated in the accompanying cut, for a safe and practical form of aerial navigation. The balloon is propelled by a small steam-engine, the boiler consisting of small copper tubes. As a precaution, each passenger is provided with an improved parachute, "of which each may avail himself in case of extraordinary emergency and thus descend safely

to terra firma." It is rather surprising to find at so early a date a project for an elevated railroad on Broadway and, a few pages farther on, plans for what is usually regarded as the recent innovation of making ice by machinery. Comment and criticism extend even so far as to include chemical research, romance, poetry, religion and phrenology.

Studies of the past from contemporaneous sources are always interesting, and when they deal with ideas on which today are founded the conveniences and essentials of modern living, they become doubly so.

An Industrial Endorsement

THE Associated Industries of Massachusetts has recently given the Business Historical Society its endorsement, and in its weekly periodical — "Industry" — there has already appeared a two-page article descriptive of the purposes and functions of this Society.

To other industrial associations of like nature, we would say "Go thou and do likewise!" As "Industry" remarks, "In your offices, storehouses, attics are undoubtedly many old reports, pamphlets, books and so forth, which are of little value to you but which would make valuable addition to the collection of the Business Historical Society's library. Look them up. . . . Push the good work along. It is very much needed."

The Price of Slaves

THERE has recently come to the Library a small collection of official "Appraisements of Estates," all from Jefferson County, Georgia, and in date running from 1800 to 1820. These appraisements give an excellent idea of the nature of the small slave-holding estate of that period, the commodities, tools and implements upon it, the stock of household goods and the price of slaves. Most of the estates appraised have only a few slaves, not more than thirteen. Of course it was a period of large price fluctuations, but on an average a man slave appears to have been valued at about five hundred dollars, a woman at three hundred, and a boy or girl at two hundred. The value of an estate, apart from the slaves, was, as a rule, small. Thus one with ten slaves, who were put in at \$2955,