

BIOGRAPHICAL SKETCHES

OF

**DISTINGUISHED MECHANICS,**

COMPILED FROM AUTHENTIC SOURCES.

ORIGINALLY PUBLISHED IN THE DELAWARE STATE JOURNAL,  
UNDER THE SIGNATURE OF "RITTENHOUSE."

-----  
BY JOHN CONNELL,  
*A citizen of Delaware.*  
-----

Peace has her victories, no less renowned than war.  
MILTON.

-----  
WILMINGTON, DEL:  
FOTTER & ECKEL, PRINTERS, DELAWARE STATE JOURNAL OFFICE.  
1852.

right to use Steam Wagons in that State; but he could find no person to furnish the means, to aid him in constructing them.

After having for years, applied to various individuals without success to unite with him, by furnishing means, to build Steam Wagons, he at last applied to the Lancaster and Philadelphia Turnpike Company, with a view of introducing them on their Turnpike Road,

He submitted to the Company a statement of the cost and profits of a Steam Carriage, to carry one hundred barrels of Flour, tending to show, that one such Steam Carriage would make more net profits, than ten wagons drawn by five horses each. The Company however, declined his proposition, having no confidence in it.

He says:—"In the year 1805, I published a Book, describing my Steam Engine, with directions for working it, when applied to propel boats against the current of the Mississippi, as well as carriages on Turnpike Roads."

In 1804, Evans constructed at his works, by order of the Board of Health of Philadelphia, a machine for clearing the mud out of the Docks.

It consisted of a Scow, with a Steam Engine of Five Horse Power. He thought this a favorable time to show that his Engine would propel, both Wagons and Boats. He put his Scow upon temporary wheels, in a rough manner, and although its weight was equal to two hundred barrels of Flour, yet with his small Engine, he transported it with ease to the Schuylkill, more than a mile distant from his Works. He then launched it into the Schuylkill, and fixed a Paddle Wheel to the Stern, and drove it down that river into the Delaware, and up the Delaware to Philadelphia, leaving all the vessels behind at least half way.

In one of his writings, published about that time, he says:—"The time will come, when people will travel in Stages, moved by Steam Engines, from one city to another, almost as fast as birds can fly, fifteen or twenty miles an hour. A Steam Carriage will set out from Washington in the morning; the passengers will breakfast at Baltimore—dine in Philadelphia and sup at New York, the same day."

He observes, that to accomplish this, it will be necessary to have Iron Rails, or smooth gravel, with Rails as a guide. Although there were many other persons at that time, who entertained similar

D

## NO. X.

### OLIVER EVANS,

THE RENOWNED DELAWARE ENGINEER.

The subject of this Sketch, was born in New Castle County, in this State, in the year 1755 or 1756, upon a farm then owned by his Father, near Brandywine Springs.

At fourteen years of age he was put apprentice to a Wheel-right or wagon maker, and very early discovered a natural talent for mechanics.

By the time he was seventeen years of age, his mind was occupied in endeavoring to discover some means of propelling land carriages, without animal power.

Where he got the first idea of the power of steam, can be best told in his own words.

In a paper written and signed by himself, now before us dated in 1812, he says:—"One of my brothers on a Christmas evening, informed me that he had that day been in company with a neighboring Blacksmith's boys, who for amusement had stopped up the touch-hole of a gun barrel, then put in about a gill of water, and rammed down a tight wad; after which they put the breach of the gun in the Smith's fire, when it discharged itself, with as loud a crack as if it had been loaded with gunpowder. It immediately occurred to me, *here is the power that I want to propel my wagon*, if I knew how to apply it, and I immediately set myself to work to find out the means."

He shortly afterwards found a book, describing an old *Atmosphere* Engine; and he followed up his studies with increased ardour, until he found he could make a steam wagon. He petitioned the Legislature of Pennsylvania in 1786 for the exclusive right to use his improvements in the manufacture of Flour in that State; and also for the exclusive right for Steam Wagons. They granted his first Petition; but took no action about his Steam Wagons, believing him to be insane upon that subject.

The Legislature of Maryland in 1787, gave him the exclusive

views with Evans, relative to propelling Boats by Steam (and indeed long before him,) yet he appears to have been years in advance of all the rest, in respect to the use of Steam, for propelling *Land Carriages*. Evans made important improvements in the Steam Engine, both by increasing its power, in lessening the consumption of fuel one half, and by greatly reducing their price; by which means he brought them into more general use for saving Timber, grinding Grain as well as in Cotton and Woolen Manufactories, and all other Manufactories, where such a power was required.

Evans' first important invention we have postponed until the last. We allude to his improvement in the manufacture of Flour. For this invention, he obtained from the Legislature of Delaware, Maryland and Pennsylvania, an exclusive right to use it within these States; but the great difficulty he found, was to get the Millers to adopt it. Shortly after the Constitution of the United States went into operation, an Act of Congress was passed, to carry into effect that provision of the Constitution which secures to Authors and Inventors, the fruits of their labors.

Under that law, Evans obtained a Patent for his improvement in the manufacture of Flour. Before the Patent expired, it was declared void, by the Circuit Court of the United States at Philadelphia, owing to some informality in issuing it.

He then applied to Congress, who, on the 21st January 1808, passed an Act renewing his Patent, for fourteen years from that date.

A formidable opposition was got up in Maryland against his grant, on the ground that he was not the original inventor. Suits were instituted against those who infringed upon his rights.

The Case came up before the Circuit Court of the United States for the State of Maryland, Judge Duval one of the Judges of the Supreme Court of the United States, and Judge Huston of the District Court, being on the Bench.

After a full investigation of the whole matter, which occupied the Court for four days, verdicts were obtained in favor of Evans, upon all the suits instituted. We can scarcely suppose that a Maryland Court, and a Maryland Jury, would have concurred in verdicts in favor of a stranger, against their own citizens, unless they were founded both in law and justice.

The defeated parties shortly after, presented a memorial to Congress, praying relief from the operation of this Patent. The Committee of the Senate to whom it was referred, reported adverse to the prayer of the Memorialists, on the ground that it was improper for Congress to interfere in a matter which belonged to the Judiciary, who had already pronounced upon it. Amongst other documents which these memorialists presented to Congress, in opposition to Evans' Patent, was a long letter from Mr. Jefferson, dated Monticello, August 13, 1813, in reply to a letter which they had addressed him. Mr. Jefferson endeavors to show that Evans' *Elevator*, was nothing more than the old Persian Wheel; and that it had been used in Egypt to draw water, time out of mind; and that his *Conveyor* was Archimedes' Screw, which had been known for at least two thousand years. The tenor of Mr. Jefferson's letter, is against the whole system of Patents; although he admits, there may be extraordinary cases, in which it may be proper to grant them. Evans replies to this letter at great length, and clearly vindicates his own rights as the Court had before done for him.

Mr. Jefferson says, that "He assumes it as a lemma, that it is the invention of the machine itself, that is to give the Patent right, and not the application of it, to any particular purpose."

If Patent rights were confined within this limited space, but few would ever have been issued.

We consider, that new improvements—new combinations and new applications of things already known, constitute just grounds for a Patent right; and upon these principles, the great mass of the Patents are issued. Upon these principles, Evans' Patent was granted, and confirmed. For example, how many Patents have been issued, growing out of Steam? The power of Steam has been known, since the first Tea Kettle was boiled; but age past after age, and generation after generation, before this powerful agent, was ever used for any mechanical purpose.

In how many different modes and ways has it since been patented? Mr. Jefferson's general objections to Patents, may be drawn from various passages in this letter. He says that "Stable ownership is the gift of social law, and is given late in the progress of Society. It would be curious, that an idea, the fugitive fermentation of an individual brain could of natural right be claimed in exclusive and stable property. If nature has made any one thing,

less susceptible, than all others of exclusive property, it is the ac-  
 tion of the thinking power, called an idea \* \* \* He  
 who receives an idea from me, receives instruction, without lessen-  
 ing mine, as he who lights his Taper at mine, receives light, without  
 darkening me. \* \* \* *Inventions then,*  
*cannot in nature, be a subject of property."*

Can any reasoning be more fallacious than this? It was to ridi-  
 cule such logic as this, that Johnson wrote his Turnip-Crier:

"If a man, who Turnips cries—  
 Cries not, when his Father dies,  
 It's a sign, that he would rather,  
 Have a Turnip, than his Father."

It cost Mr. Jefferson nothing to light his Taper, therefore he lost  
 nothing by giving light to his neighbors. But if Mr. Jefferson had  
 devoted years of his life, and gone to great expense, to light his  
 Taper, the cases then, would have borne some resemblance. In  
 that case, we presume that even Mr. Jefferson himself, before giving  
 light to his neighbor, would have claimed some compensation, to  
 indemnify him, for the time he had lost, and the expense he had  
 incurred in procuring the light. It would require a large share of  
 charity, to believe otherwise.

Mr. Jefferson says, that he understands "That England, until we  
 copied her, was the only Country on Earth, which ever by a gen-  
 eral law, gave a *legal right, to the exclusive use of an idea.*" We  
 think that Mr. Jefferson was rather unfortunate in quoting England,  
 upon this occasion. What was it raised England to so much power  
 and dignity, amongst the Nations of the Earth?

It was not the extent of her Territory, for the whole island of  
 Great Britain, does not contain as many square miles, as the State  
 of Virginia and Georgia. It was not by the sale of her Agricultu-  
 ral produce, for she has not raised Bread enough, to support her own  
 population, for the last three quarters of a century.

It was her Iron, Wool, Flax, and other raw materials, and sub-  
 sequently, Cotton and other produce from abroad, all of which, by  
 human skill and human ingenuity (aided by her exhaustless Coal  
 Mines) she increased and multiplied in value, sometimes an hun-  
 dred and sometimes a thousand fold. This was the great source  
 of her commerce, wealth, power and prosperity. It was this, that  
 raised her to the proud position she holds amongst the nations of

Europe—it was this that enabled her to plant her banners upon the  
 four quarters of the Globe. All the *great improvements in Ma-  
 chinery*, which tended to bring about these mighty results, were  
 made by men in subordinate situations in life, who, if they had not  
 known that the law would have protected their inventions, would  
 never have wasted their time, money and minds, in making im-  
 provements, from which, they were to receive no benefit. We are  
 therefore of opinion, that the law of England, which give "*a legal  
 right, to the exclusive use of an idea*" is a wise law to which Britain  
 owes much of her prosperity, and we also think the provision in  
 our own Constitution, which protects Authors and Inventors in the  
 fruit of their labor, is a wise provision, founded in justice, humanity  
 and sound policy, Mr. Jefferson's *philosophical* opinions to the con-  
 trary notwithstanding.