

### Never Say Fail.

Keep pushing—'tis wiser  
Than sitting aside,  
And dreaming and sighing  
And waiting the tide.  
In life's earnest battle  
They only prevail  
Who daily march onward  
And never say fail!

With an eye ever open,  
A tongue that's not dumb,  
And a heart that will never  
To sorrow succumb,  
You'll battle and conquer,  
Though thousands assail;  
How strong and how mighty  
Who never say fail!

The spirit of angels  
Is active I know,  
As higher and higher  
In glory they go.  
Methinks on bright pinions  
From heaven they sail,  
To cheer and encourage  
Who never say fail!

Ahead, then, keep pushing,  
And elbow your way,  
Unheeding the envious  
And asses that bray;  
All obstacles vanish,  
All enemies quail,  
In the might of their wisdom  
Who never say fail!

In life's rosy morning,  
In manhood's fair pride,  
Let this be the motto  
Your footsteps to guide;  
In storm and in sunshine,  
Whatever assail,  
We'll onward and conquer,  
And never say fail!

[From Harper's Magazine.]

### American Inventions, or, Eighty Years of Inventive Labor among the Americans.

Jacob Perkins is best known by his inventions of set-awl and the credit of having been the first to make cut nails has been claimed, perhaps justly, for David Wilkinson, of Rhode Island; but the manufacture of American nails did not really begin till Perkins, then a mechanic in the Massachusetts mint, invented his machine, by which nails were cut and headed by one operation.—Perkins, like most inventors, ruined, disheartened, persecuted by creditors, took to other pursuits; but the invention remained, and is still the basis of our nail machines to-day. Two years after its success in America, the first nail machine was erected in England at Wimborne, in Staffordshire.

Very similar were the fortunes of Oliver Evans, the Delaware miller. His valuable inventions—the elevator, the conveyers, the hopper-boy, the drill and the descender—were put in successful operation at his brother's mills in 1783; but, as usual, the Brandywine millers would not believe the evidence of their senses, and would not see that machinery which effected a saving in labor of 50 per cent., with an increased yield of 14 per cent., were worth adoption.

Evans lived, however, to see their merit acknowledged even by his most inveterate antagonist, who saved some \$30,000 a year by introducing them into his mills; but meanwhile the inventor had turned his thoughts into another channel. He was seized—the shallow man—with the 'steam mania,' and had the inconceivable folly to declare that he could, with the power of steam, drive not only mills but vessels and carriages.—A man so flighty in the year of grace 1800 was to be scoffed and derided, or at best pitied, while he laboriously contrived a machine which, being amphibious, was a steamboat in the water and a locomotive on land.

He christened it the Oructor Amphibolis. It ran up Market street, at Philadelphia, by the power of steam, then round to the water, to which it took naturally, and swam up the Delaware sixteen miles. Very soon afterward machines as wonderful were made by Trevithick, Vivian, Stephenson, Griffith, Gordon, and Gurney, in England; and in twenty-six years the Oructor became a practical success at Manchester.

Whitney's great invention—the cotton gin—was perfected in 1793, when the inventor was a student at law at Savannah. Many years ago, the net gain to the Southern States from this invention was estimated at one hundred millions of dollars. In 1784 eight bags of American cotton were sent to Liverpool; they were there seized by the custom-house officers, who were satisfied that some fraud was being attempted, as no cotton grew in America.

Without the gin, indeed, it could not be raised profitably; and the southern land which was unsuitable for rice was lost. This single invention has given to the United States the staple which may be said, in round terms, to constitute one half their export; it feeds the poor of England, and clothes the world. Ingenuity has exhausted itself in improvements on Whitney's gin, but the glory of the inventor is undiminished. It did not give him bread; but if it stood alone, it would go far to acquit his country's debt of usefulness to the world.

Only second to Whitney stands Amos Whittemore, who, in 1797, invented the cotton-and-wool card-machine—a contrivance so wonderful that it has been compared to the human frame; so useful, that it may be said to have recreated the cotton and wool manufactures. Whittemore forms a bright exception to the common rule of inventors. He saw his invention succeed; he was

rewarded for it; he never saw it superseded, nor would he have lived till now.

In the contemplation of its use in every manufacturing country, and in the congenial employment afforded by the construction of his ingenious orrery, Mr. Whittemore could afford to see his English patent violated, and his rights usurped in France.

Justice requires that to these names should be added that of Thomas Blanchard, the inventor of the lathe for turning irregular forms. The idea of this beautiful and simple machine, which has received so infinite an application in our day, first occurred to Blanchard, it is said, as he was driving through a country town in New England. In the excitement of the moment he shouted, and sprang from his seat, attracting such attention that passers-by were half inclined to secure the person of so obvious a lunatic. Perhaps no American invention has challenged more admiration or provoked more piracy than this.

Of the early American inventions, the bulk were farming implements. Independence found American mechanics barely competent to build a carriage or make a good plow. The United States were dependent on England, itself deplorably backward. Necessity made half the young farmers inventors. Year by year new plows made their appearance, new rakes, planters, cutters, threshers. To describe intelligibly, or even to enumerate the more prominent American agricultural inventions would be impossible in these limits.

An idea of the inventive movement may be formed from the fact that, during the first sixty years of the Patent Office, nearly 2500 different farming instruments were patented. No less than 400 different plows have been secured by letters-patent; and vast numbers of reapers, mowers, harvesting machines, grain hullers, farming mills, smut machines, winnowing machines, churns, etc.

So far as comparisons have been instituted, these tools have proved superior to the corresponding implements in use abroad; American reapers, for instance, are famous everywhere. And it may be safely added, that nowhere is farm labor so economized, or farming implements so cheap, as in the United States.

Household furniture likewise called forth inventive skill at the inception of our national history. Before the Revolution, cabinet-makers in London furnished houses in Boston and New York. Stoves were among the earliest and useful American inventions; they have continued to hold a prominent place in the Patent Reports; many American models combine economy in fuel with calorific power in a degree unequalled abroad.

The value of labor suggested washing machines; convenience required durable and cheap bedsteads and chairs. It has been doubted whether the models of these articles now in use can be improved. In the higher descriptions of furniture this country has not excelled. Its sphere in every department has been the useful, not the ornamental. Hence, though luxury has latterly created a demand for costly furniture, it has been supplied at a sacrifice of taste as conspicuous, in comparison with foreign art, as our successes in humbler departments of the craft.

America was nobly wooded eighty years ago.—To bring lumber to market, to adapt it for the carpenter's workshop, required many inventions. They have come at call; and are unrivaled. Between the stout woodsman of olden time with ax on shoulder, and the vast lumber depots of our day with their steam-mills, their elaborate saws, their slides, their docks, their slitting, blocking, chiming, dressing machinery—sometimes costing half a million of dollars for a single establishment—what a step!

Nor is there less progress in carpenter's tools. Eighty years ago every thing depended on manual strength and skill; now the man is a mere accessory of the machine. We saw, we slit, we chop, we plane, we groove, we tenon, we bore, we mortise, we veneer by machinery. The planing machine alone has become an institution, and has given birth to political parties.

As the climate required the invention of stoves, and our fertile land called for farming tools, and our woods demanded saw mills and planing machines, so the great extent of our country exacted swift conveyances by land and water. Fulton's mantle fell upon worthy shoulders. The Collins steamer Adriatic is believed to be peerless among ocean steamships; and most certainly the world may be searched in vain for rivals in speed, elegance and comfort, to the Hudson, Sound and Lake steamers.

Foreigners have candidly admitted our pre-eminence, consoling themselves with the reflection, that if builders here have outshone the world in skill, legislatures abroad have secured safety.—Nor are American triumphs confined to steam vessels—American packets enjoy the lion's share of the ocean traffic. An honorable rivalry exists between American clippers and those of Aberdeen and another British port; but it is believed that the late performances of the former have been as unique as those of the yachts which so recently startled Europe.

For navigation the United States have done something. Before they were emancipated from the colonial yoke, the reflection of the sun's rays in a pool of water inspired the poor glazier, Thomas Godfrey, of Philadelphia, with the idea of the quadrant; and though the Royal Society allowed their Vice-President to share an honor to which he had no claim, they recognized Godfrey's invention by presenting him with £200 worth of furniture. It is to him, and him alone, that navigation owes the sextant which bears the name of Hadley. An American steamer first crossed the Atlantic in 1819; Americans discovered and mapped the Gulf Stream; the American Maury has saved millions upon millions to commerce by his discoveries of ocean currents.

On land, the United States own the superiority of some foreign railways in point of solidity and management; but ours cost less, consequently abound more, and traveling is cheaper. Our rail-

way wheels, springs and brakes may compare with any. In their day, American stages were the admiration of travelers; and even French ingenuity has produced nothing so light and elegant as our wagons.

For a peaceful nation like the United States, their destructive inventions have been uncommonly numerous and successful. Fulton spent most of his life in trying to blow up ships; Bushnell is remembered by like experiments, and Perkins deserted his nail machine for a steam-gun.—It is in evidence that the identical Minie ball, under the name of the conical ball, was in use at Utica and elsewhere in the North a quarter of a century ago.

Much of the present science of gunnery is built upon the discoveries of Major Mordecai of the United States army. At Sebastopol both the Russian and allied officers preferred the Colt's revolver to any other holster or belt weapon: the body-guard of the Emperor of China are said to have made the same sensible choice. Wherever men or beasts are to be shot, the American rifles—Sharpe's, Perry's, Wesson's and others—are household words.

Warner's rifling machines and bayonet machines are only second to Blanchard's more comprehensive invention. Nor have Dahlgreen's improvements in the form of cannon, and the modern plan of welding the metal in coils, been less useful to the science of artillery.

In hardware and fibrous and textile fabrics, the United States were long distanced by foreign countries, and still contend against dear labor; and yet England can not compete with this country in axes, spikes, or screws. American horse-shoes are remarkably cheap and good. Thanks to the American power-loom, domestic hosiery can be supplied better and cheaper than the foreign article.

Of shirting and one or two other varieties of this class of goods—as the cheaper kinds of shoes and boots—as much may be said; though much yet remains to be done before we can challenge Europe. The superiority of the India rubber goods made under American patents is practically acknowledged every where.

A variety of ingenious machines illustrate the mechanical bent of the American mind. Fire-engines are an example; our misfortunes have compelled us to excel the world in these machines, and they are certainly unequalled. Another invention—which is disputed, though apparently without good reason—is the sewing machine, of which many varieties have been patented at Washington.

This is surely one of the most important inventions of the day; its social consequences will be infinite in the European cities, and it must effect a great saving in clothes throughout the world.—New England clocks keep time all over Europe; skill and cheapness can no farther go. Nor should we forget the locks which have eclipsed the light of Braman, and brought into note the honest Saxon name of Hobbs.

American printing-presses also deserve mention: Europe can print as well, but it is doubtful whether any European press can throw off as many impressions in the hour as some of Hoe's.—The world has produced no press, for fine book printing, equal to that invented by Adams, of Boston; and New York is entitled to the credit of originating the type-casting machine, now extensively used in Europe as well as in this country.

Our architectural triumphs are to come. We build for a day; our rivals for all time. But in one class of construction—bridges—we can afford to challenge the world. In lightness, elegance, and strength, some American bridges are unsurpassed; and more than one of the finest bridges in Europe were designed by an American.

We have reserved for the close of this very hurried sketch three of the most notable gifts of the United States to the world. They are the electric telegraph, the art of photography, including the daguerreotype, and the discovery of the properties of sulphuric ether when inhaled. As was to be expected from their importance, all these have been claimed by foreigners; but it will not take long to vindicate the rights of the inventors.

To begin with the last. It was in 1846 that Drs Jackson and Morton discovered that sulphuric ether, when inhaled, produced insensibility to pain. Science was aware, long before, that the inhalation of ether caused stupefaction; but these two gentlemen were the first to notice and proclaim the application of the property to surgical operations. They secured the discovery by a patent dated 1846.

In the following year a British newspaper announced that Dr. Simpson, of Edinburgh, had made the discovery over again, with the variante that he used chloroform instead of ether. European physicians use the former; the latter is preferred here. Giving Dr. Simpson all due credit for his development of the subject, the honor of the main discovery can not be taken away from those who first made public the new application of this class of chemical substances, unless it be admitted that the year 1847 preceded 1846. Of the importance of the discovery it were superfluous to speak, the ancients would have deified men who made an amputation a pleasing dream.

Photography is as clearly American. Daguerre never succeeded in copying landscapes or taking likenesses; when the French Government purchased his process, it was only adapted to statuary and architecture. The first successful daguerreotype portraits were made in the New York University, in 1840, by Dr. Draper, who overcame the optical difficulty which had defeated all the previous attempts. When the news of the discovery reached Europe, it was ascribed to the peculiar brilliancy of the American sun; but this theory was hard to reconcile with the success which attended the American artists who soon prosecuted the business in London and Paris.

In this art, too, America has kept the lead; American daguerreotypes and ambrotypes are the most beautiful in the world; and, while the inven-

tion has afforded employment to thousands, it may be safely said that it has given to art the greatest stimulus it has received in modern times.

It is well known that, for many years previous to 1837, the scientific principles on which the electric telegraph is based were known in Europe and in this country. Oersted, of Copenhagen, Ampere, of Paris, Barlow, of Woolwich, Steinheil, of Munich, Lenz, of St. Petersburg, Henry, of Washington, had repeatedly verified them.

The difficulty which hindered the construction of a telegraph lay in the absorption of electricity by the air acting as a conductor on a long wire. This difficulty was only apparent; mathematical inquiry dissolved it by proving that, after a certain point, the loss of electricity became imperceptible; but this fact was unknown before 1837. In that year four persons are said to have become aware of it: Dr. Steinheil, Professor Wheatstone, Mr. Mr. Davy, and Professor Morse. If any stress could be laid on private communications to individuals, Professor Morse's claim might date from 1832, when it is proved that he thought out a telegraph, and would probably have constructed it had he had the means.

But it is obvious that we can only look to public and authentic documents for evidence of priority. No published account of Professor Wheatstone's telegraph appeared before 1839; his patent was sealed on 21st January, 1840, and the specification was filed on 21st July of the same year. Edward Davy's patent was sealed on 4th July, 1838, and the specification filed on 4th January, 1839; no authentic account of his invention having appeared in public before. Dr. Steinheil first made known his invention by a communication to the Academy of Sciences at Paris bearing date 19th July, 1838.

Professor Morse filed his caveat at Washington on 6th October, 1837, and his specification, with an application for a patent, on 7th April, 1838.—Professor Morse's invention was, therefore, nine months prior to those of Steinheil and Davy, and some fifteen or more before that of Wheatstone. It was so recognized by the Supreme Court of the United States and the courts in France.

It differed in kind from the foreign inventions, and telegraph men are not agreed on the relative merits of the two sorts of instruments; but even those who deny Morse's claim to the invention of the telegraph as a means of communicating intelligence, acknowledge that he invented the first practically useful electro-magnetic marking telegraph. The credit of House, the inventor of the printing telegraph, and of others who have effected improvements in the process generally, has never been disputed.

To sum up, therefore, the United States, during the last eighty years, have endowed the world with the lightning-rod, the steamboat, the photograph, the electric telegraph, the discovery of the use of inhaled ether, the sewing machine, the best and cheapest farm implements, the best carpenter's tools, the best locks, fire-engines, nails, spikes, screws, and axes; the best fire-arms, the cheapest clocks, the fastest steamers and sailing vessels, the cheapest railroads, the lightest wagons, and many of the most useful labor-saving machines in almost every department of industry. If any nation, during the same eighty years, has done more, or as much, the fact is not generally known.

Since the passage of the first Patent Law, sixty-six years ago, about 25,000 patents have been issued to American citizens; and the annual applications for patents are rapidly increasing, though many fields of invention seem overstocked. Of the glorious catalogue the lion's share belongs to the patient industry of New England. If it were fair to measure inventive genius by the proportion borne by inventions to population, Maine would hold the first rank among the States.

Accident would award the second place to the District of Columbia; and other States would follow thus: Connecticut, Massachusetts, New York, Rhode Island, Maryland, New Hampshire, Vermont, New Jersey, Pennsylvania, Delaware, Missouri, Virginia, Ohio—the others being far behind.

### MINUTES

OF A GENERAL CONFERENCE OF THE SANDWICH ISLANDS' MISSION OF THE CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS, HELD AT WAILUKU, ISLAND OF MAUI, COMMENCING ON MONDAY, OCT. 6TH, 1856.

10 A. M.

Present.—Of the Presidency of the mission: Silas Smith and H. P. Richards.

Presidents of Conferences:—Ward E. Pack, Wm. King, Edward Partridge, John R. Young, George Speirs and Joseph Smith.

Traveling Elders:—S. M. Molen, Eli Bell, F. W. Hurst, Wm. W. Cluff and Washington B. Rogers.

Elders lately arrived from Utah:—Alma L. Smith, Wm. France, R. A. Rose, T. A. Dowell, F. A. H. F. Mitchell, W. B. Wright, F. W. Young and John Brown.

Singing. Prayer by Prest. Smith. Singing. Moved and carried that Elder Edward Partridge act as clerk of the conference.

Moved and carried that we sustain Elder Silas Smith as President of this Mission.

Prest. Smith arose and expressed his joy in once more meeting the brethren in the capacity of a conference; also tendered unto them his thanks for the confidence reposed in him, and said he should endeavor by the assistance of the Holy Spirit to merit a continuance of the same. He also stated that in consequence of Br. J. T. Caine being released from the mission by the Presidency in Zion, he should be under the necessity of choosing another counselor to fill his place, whereupon he presented Elders H. P. Richards and Edward Partridge as his counselors, who, upon motion, were unanimously sustained.

Moved and carried that we uphold and sustain Brigham Young and his counselors as the First Presidency of the Church of Jesus Christ