

monious action of capital and labor, is the supply of a currency based upon sound financial principles. The first requisite for business is a token universally recognized throughout the land as the true representative of a dollar. The Government is fully competent to issue such a token, especially when deeply indebted, as at present; and no other standard or measure of a dollar should be tolerated. This necessarily excludes the paper dollar issued by corporations, purporting to be redeemable in coin, upon demand; and advisedly so, because these private issues have always proven extremely treacherous and delusive. Either gold and silver should constitute the only permissible circulating medium, or they should be demonetized, so that the periodical panics which harass the business world might be avoided.

"We hold that the true method of adjusting the national finances to insure justice to all and injury to none is most simple and easy. The Government should pay off the 5-20 bonds so soon as the five-year option shall have matured, by issuing legal tender notes so far as necessary, provided such payment could be made *honestly*, the terms under which the bonds were issued being fully considered. If such payment can be shown to be unjust, and contrary to the law authorizing the issue of the 5-20 bonds, then the Secretary of the Treasury should be instructed to issue legal tender notes to the amount of at least \$200,000,000, and be directed to purchase and cancel such other Government obligations therewith as could be bought on the open market at the lowest figures. To absorb any surplus of legal tender notes that might at any time exist, over and above the legitimate demands of trade, and to inaugurate a "self-adjusting currency regulator," the Secretary of the Treasury should be furthermore directed to issue, when required by any person presenting legal tender notes (amounting to, say \$1,000 or its multiple), bonds bearing interest at the rate of three and sixty-five one hundredths per cent (ten cents per day on each \$1,000), both principal and interest payable on demand, in legal tender notes, at any time after sixty days from date of issue. Interest to be paid semi-annually until the principal is demanded, and then in full to date."

This currency regulator has been aptly compared to the governor upon a steam engine, the treasury representing the boiler, and the business of the country the engine. If the boiler be strong enough the accumulation of steam in it beyond the needs of the engine at any particular moment does no harm. When more steam is wanted, the governor (rate per cent with interchangeability) operates to give an ample supply, and when less is wanted it adjusts the valve to the diminished requirements of the engine.

A national bank organization was recently effected in this city by a convention of leading bankers from nearly every State in the Union. How this organization is regarded by shrewd observers will appear in the following extract from an exchange: "This organization consummated last week shows that they intend to be ready for any and every emergency. Thus organized, they can collect within ten days millions of dollars for a corruption fund, and no matter how great an excitement may arise against the banks, the people would be powerless for several years, during which they could be worried out, leaving the bankers in possession of the field, triumphant in their ruinous profits."

The only way to defeat organization is by a counter organization, and it is for this reason that we see hope in a well organized association of merchants and manufacturers to meet powerful coalitions whose object is to enrich themselves at the expense of all other interests.

Having in our former article discussed the plan of a self-adjusting currency of legal tender notes, convertible *at will of the holder* into bonds bearing interest at the rate of 3-65 per cent, we will not at this time again discuss it. But to those who are inclined to raise objections we will say, that after having considered it deliberately and carefully for months we fail to see a flaw in it. It takes all power over the money market from the Secretary of the Treasury, and from all cliques and combinations, and puts it right where it ought to be in the hands of the people, individually, but not collectively, thus effectually defeating combination.

To carry out the figure of the steam engine the governor is at present in the wrong place. Instead of having it on the engine, commerce, whose movements we wish to control and render uniform, it is now actuated by the motion of another engine—Secretary of the Treasury—without a governor and a law unto itself. So erratic and fitful are its movements that one moment we are without steam, and the next running at a speed which threatens our very existence. Merchants and manufacturers, who can scarcely at this moment collect enough of outstanding accounts to meet current expenses, ought to carefully consider this subject.

Should the present administration meet this question on its merits, irrespective of adverse influences which will inevitably be brought to bear against it, the wisdom of such a course will secure the grateful recognition of the entire country, and a fame second to none achieved by any administration since the formation of our Government.

The French Cable Laid.

The French Atlantic Cable has been successfully laid, making in all, three cables which have been stretched between the Eastern and Western hemispheres. The Great Eastern has proved herself especially useful in the laying of long cables, and should she now be laid up forever, her history will always be connected with that of the most remarkable enterprises ever undertaken and completed. The efficiency of submarine cables, and their immunity from interruption through the effect of atmospheric electricity, suggests the expediency of connecting all large sea ports by cables instead of land lines.

JOSHUA SHAW, ARTIST AND INVENTOR.—THE EARLY HISTORY OF THE COPPER PERCUSSION CAP.

The biography of distinguished men, is not only a pleasant but a profitable study. Especially is this the case, when the subject of personal history has risen from humble obscurity by his own talents and industry to high and honorable position, in the observance of those moral qualities which constitute an example worthy of imitation.

In this pushing age we do not perhaps think often enough of the brave pioneers in invention, who cleared away obstacles, and smoothed the path of progress, before we came on to the stage of action.

It may well be questioned whether any invention in the art of gunnery, since the introduction of gunpowder, was a longer stride in advance than the invention of the copper percussion cap.

Joshua Shaw, whose name will ever be connected with this improvement and the extension of the principle to the discharge of heavy artillery, was born in the eventful year 1776, at Bellingborough, Lincoln Co., England. By the courtesy of Mr. John Dickinson, a grandson of Mr. Shaw, now residing at Fort Hamilton, Long Island, we have been put in possession of a manuscript autobiography, written by Mr. Shaw, at the request of William Dunlap, an epitome of which is embodied in the latter's "History of the Rise and Progress of the arts of Design in the United States," published in 1834. To this interesting and characteristic manuscript, with the voluminous correspondence held by Mr. Shaw with various European governments and particularly with the Ordnance Department of the United States, we are principally indebted for the facts contained in this sketch.

Mr. Shaw was left an orphan at the age of seven years, by the death of his father, and he says: "I had from that moment to earn my dinner before I ate it; and, like Bloomfield's farmer boy, I had to watch the cattle and keep the sparrows away from the cornfields; a kind of domestic Crusoe of the lonely field and common, with an old gun on my shoulder, and carrying a noisy instrument called the "bird-claps." With these I was able to frighten away the little intruders, but many a time when my own supply of food ran short, I had compassion on them, and would say: 'How hard it is to be without bread, I will give them time to pick a few grains and then either fire the gun or start the rattlers.' Three years did the young artist watch the sparrows, occupying the hours and relieving the monotony of his task by drawing pictures in the sand, of owls, pigs, and other objects, animate and inanimate, thus evincing the early budding of a genius destined in the future to be recognized and honored by the world. Nor was his attention wholly absorbed by his passion for drawing; our young aspirant learned to read and write, making the sand his rude though ample page, in the three years of his shepherd boy life, during which time his wages was *one penny per day*. At the end of that time, his mother having in the mean time married, he was called home to assist in the business of his stepfather, a plumber and glazier by occupation, at the end of which time, Mr. Shaw, a lad of about fifteen years, was again obliged to shift for himself. An uncle now gave him *nine weeks'* schooling, the only regular tuition he had during his life. He then obtained employment upon one of the rural mail-routes, and entered His Majesty's service as a mail carrier. This employment did not last long, and again he says: "I found myself threatened with the prospect of dining on roasted sloes and bilberries, and driving the sparrow and yellow hammer from the forbidden feast. I was on my way home, and, being hungry, I purchased by the way some cheese and bread, which the shopkeeper, out of respect I suppose for the elevated situation I had occupied as mail carrier, wrapped in part of a newspaper, which I read at my leisure after dining. Amongst other things an advertisement met my eye, 'Wanted, an apprentice to the Sign, Coach, and House-painting business, apply by letter, post-paid, to George Sparrow, Stamford, Lincolnshire. A premium will be expected.' I turned short about and traveled twenty miles that same day, determined to see Mr. Sparrow, but as he expected a premium, I had but small hopes of success, except my talent for drawing should be a recommendation. My hand however, had only been tried upon crows, magpies, owls, mice, and other familiar objects, while I was drill officer of the cow-pasture, and lest I should be imperfect, I sat down, and with my finger drew upon the dust which covered the road, a pig, a goose, and such other objects as were suggested, and in this way night overtook me before I had reached the sixteenth milestone. I budgeted along with only nine shillings in my pocket which belonged to my stepfather, in deep reflection upon coming events and possible results. At eight in the evening I reached Stamford, and the house in which the great Apelles of the place resided. How my heart palpitated as I touched the knocker."

Here our aspirant remained all night, and in the morning, after trial, was accepted without a premium, in consideration of his talent in drawing. In this way he reached the first and lowest rung of the ladder, which he at once began to climb so vigorously that in time he was placed in charge of the business. His first exploit of a public nature was the painting of the Commandments in St. Michael's Church, with the King's arms, and beneath it Moses and Aaron, agreeably to the old English custom. He now began to acquire considerable reputation as a painter of the pictorial signs of the period. His employer having become jealous of Mr. Shaw's reputation, a separation took place, the latter purchasing freedom from his last year of service for twenty pounds sterling, and removing to Manchester, where he was installed foreman of a very respectable establishment. It was here that he formed a resolution to become an artist in the highest sense of the term, and to that end commenced a system of constant and la-

borious practice, taking for his studies dead game, flowers, fruit, and landscape.

At length he was so fortunate as to find purchasers for three or four subjects in rapid succession, and emerged from the obscurity he had hitherto been forced to sustain into public notice as an artist of considerable promise. He now went to London where he met with much discouragement from cold-hearted critics, and after staying there three years, retired to Bath, where he practiced his art for some seven years with increasing reputation. He now met with some encouragement from the surrounding gentry and nobility, and as he was a good sportsman and possessed of fine social gifts, he became a frequent guest at their tables.

He next returned to London, where he enjoyed considerable popularity and received many commissions; but being so unfortunate as to differ in politics from the aristocratic directors of the British Institution, he was subjected to persecution, and the prize awarded to his painting of the deluge, by that institution, was withheld. This and other subsequent events disgusted him with England, and he resolved to come to America. He had previously, however, made the acquaintance and secured the warm personal friendship of Benjamin West, then President of the Royal Academy, who urged him to canvass for a membership in that institution, but he refused to stoop to what he considered a degradation, the begging for honors to which he considered his merits entitled him.

He, therefore, after obtaining introductory letters from West to many distinguished men of the time in the United States, came to Philadelphia, where he permanently established himself. He was the bearer of West's celebrated picture of "Christ Healing the Sick," a present to the Philadelphia Hospital, where he placed it appropriately, and where it still hangs.

In 1814 he invented the copper percussion cap. He, however, kept the discovery secret until his arrival in America, when he sought to obtain a patent for it, but was refused on the ground of his being an alien, the law at that time denying a patent to aliens unless they had resided two years in the country. His claim to the origination of the invention was, however, recognized, although a patent was refused.

It was undoubtedly owing to this fact that Mr. Shaw became at a later period, an urgent advocate of reform in the patent laws of the United States, and their present liberal provisions are attributable doubtless, in considerable measure, to his exertions. The transactions of the Franklin Institute contain many papers upon the subject of patent law prepared by him.

During the delay the public got possession of the improvement, and Mr. Shaw failed to reap any adequate reward for his invention. In 1823 he obtained a patent for the percussion cap and lock for small arms, and, in 1828, another for percussion locks and wafer primers for cannon. The justice of his claims was afterward disputed, the invention being attributed in part to Alexander John Forsyth, clerk of Belhelvie, Aberdeenshire, Scotland, to the celebrated Joseph Manton, London, and to John Day, of Barnstable, England, but the specifications attached to their patents show that the copper cap as patented by Mr. Shaw, was a thing unknown to them. They had a knowledge of fulminates and methods of firing them, but there was only one thing in common with their methods and that of Mr. Shaw, the discharge of fulminates by percussion.

After a protracted investigation of his claims, the United States subsequently awarded Mr. Shaw \$25,000, a very small portion of its real debt to the accomplished inventor. The award speaks volumes for the genuineness of Mr. Shaw's claims, but little for the generosity of the Government toward the gifted son of her adoption, who had bestowed upon the world, to use the language of the Committee of Patents, in their report on Mr. Shaw's claims bearing date Feb. 10, 1846, "is one of the most ingenious, and one of the most useful inventions of modern times." Of this award Mr. Shaw only received \$17,000, the estimate of his claims being subsequently unjustly reduced to that amount.

Mr. Shaw received in 1817, or about that time, a premium from the Emperor of Russia for improvements in naval warfare.

In 1833 he visited England with a view to obtaining the adoption of improvements in cannon locks, which he had made, and the wafer primer for cannon which has been so largely used. Russia also adopted his improvements, agreeing to pay a stipulated sum for every piece of artillery upon which it was placed, but which we are informed neither Mr. Shaw, nor his family after his death, ever received.

Mr. Shaw died in Sept., 1860. He was long a member of the Franklin Institute, and contributed many valuable papers to its transactions, and enjoyed the friendship and confidence of many of the most distinguished men of his time. His genius as an artist has been universally acknowledged, but it is evident that his genius for work was the real basis of his success. As a controversialist he wielded a vigorous and fearless pen, and though one of the most genial and kind-hearted of men, was unsparing where he deemed censure deserved. He was the originator of several minor inventions besides the more important ones relating to discharge of artillery. Among these was the swivel diamond for glaziers.

His life was a constant warfare with obstacles and difficulties, but he retained his vigor to extreme old age, setting an example of perseverance and integrity well worthy of admiration and imitation.

WE would call attention to an advertisement on the last page of this paper of a paper mill for sale. The building is substantial, the machinery is in good running condition, and adapted to making both coarse and fine paper. To a practical manufacturer the property will be sold on very advantageous terms.