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PAPER MONEY AS A GOVERNMENT RESOURCE.

By the census statistics of 1860 the aggregate property in the United States amounted to sixteen thousand millions of dollars. The bank notes in circulation amounted to two hundred and seven millions, and considering that in the Pacific States the currency has hitherto been exclusively metallic, there may have been enough specie in circulation to make the whole money of the country three hundred millions of dollars, which is less than two per cent of the whole property of the community.

A portion of the sixteen thousand millions of property belonging to the citizens of the country consisted of gunpowder, flour, beef, &c., and of this the Government wanted one thousand millions of dollars' worth to carry on the war. How was the Government to obtain possession of this property?

A portion of it the Government was able to borrow, promising to return an equal value at some future time. There were numerous individuals in the community who had property which they could not use to advantage, and they were willing to loan it to the Government. This property existed mostly in the form of merchandise, but it was not for the most part in the kind of merchandise which the Government wanted, so the exchange was effected like other exchanges of property, through the medium of money. The holders of the property sold it for money and loaned the money to the Government, and then the Government exchanged the money for the merchandise which it needed. The only office which the money performed was to effect the exchange of the commodities. Pieces of green paper and little disks of gold and silver are of no more service in battle than pebble stones. War cannot be carried on by means of money unless the money can be exchanged for the needed commodities.

A second mode in which the Government could obtain a portion of the property of the citizens was by taxation—simply seizing it by means of the physical force which was under the direction of the authorities.

The third plan adopted was the issuing of notes of the Government, designed to circulate as money; it being supposed that any persons who owned gunpowder, horses, or any other property which the Government wanted, would willingly give their property in exchange for these notes. What was the effect of this measure?

As payment was refused by the banks on the two hundred millions of their notes, and as the Government did not redeem its notes, the two circulated together, swelling the amount of our currency. This led to a general advance in prices. Every thing which the Government now buys it must pay 33 per cent—the present premium on specie—more for than it would if the currency had not been disturbed. As the other loans to the Government are also being paid in this depreciated currency, while they will be repaid in coin, the whole accruing debt is swollen to the same extent. The debt is contracted with one measure of value to be repaid with another, and the change is against the Government. This issue of small notes, making them a legal tender, is in fact a forced loan, and of all modes of obtaining the property of the citizen, it is the most costly to the Government, and one of the most disastrous to the people. It operates in precisely the same manner as a debasement of the coin—a measure repeatedly adopted by feeble

tyrants and which has always proved exceedingly injurious wherever it has been tried. The money belonging to any community forms a very small part of the total property of the community, but it is an exceedingly important part. It is the measure of all values and the basis of all contracts. No other act can introduce so general confusion into the industrial operations of a community as an alteration of the value of the currency. This act impairs the obligations of all contracts and overthrows all prospective calculations.

The experience of France with the issue of *assignats*, that of James II. with his brass guineas, that of this country with its continental currency, and that of many other nations have demonstrated that, when the currency has been depreciated beyond a certain limit, it will be refused in the exchange of commodities, and will cease to perform its office.

Desiring the suppression of the rebellion and the salvation of the country as warmly as the safety of our own lives, we yet warn the Administration to devise other means for obtaining the property which it needs than the unlimited issue of "green-back" notes.

LUPINE AND CROOKED BEAM PLOWS.

On another page will be found the article contributed by Louis Schade to the Patent Office Report for 1861, on the Lupine plant. It will be seen that this plant is cultivated mainly for enriching land by plowing in the green crop, and it is possible that some of our readers may like to know what kind of plow is best for turning in the green crops.

Some years since, the writer of this had sixty acres of timothy meadow in Illinois ruined by army worms, and pig weeds sprung up over the whole field. In the fall it was determined to plow these weeds in, and a crooked beam plow was constructed for the purpose. To make the beam of sufficient strength, it was desirable to have the natural crook of the wood, and to obtain this an oak tree was dug around, and a portion of the root cut off with the trunk. In this way a beam was obtained so crooked that when made into the plow the highest part stood nearly three feet above the ground.

Three horses abreast were attached to this plow, and a man was set to work plowing in the weeds. So wonderful is the fertility of the Western prairies, that, though the statement may seem incredible, it is a fact, when these three horses with their driver had started in among the weeds, they were as completely hidden from sight as if they had marched into a forest.

But these tall, thick weeds were rolled under by the high beam plow without the slightest difficulty, and the whole field was smoothly and handsomely plowed.

MORE ABOUT COTTON AND ITS SUBSTITUTES.

The English mind seems to be in such a state of excitement respecting a deficiency of cotton that it grasps eagerly at every proposed substitute for it. A few weeks since some beautiful samples of prepared jute were exhibited in Manchester, and it was asserted they could be spun on cotton machinery, when lo! the price of jute advanced in a few days fifty per cent. Two weeks ago we pointed out the natural defects of jute, and from foreign papers received since then, we learn that English cotton manufacturers have become convinced that it cannot be used as a substitute for cotton. But the jute excitement was no sooner quieted than another substitute for cotton was brought before the Manchester manufacturers in the form of a very beautiful fiber obtained from the *zostera marina*. This fibrous material was prepared by Mr. Henry Harben, who at a late meeting of the Manchester Chamber of Commerce, exhibited several samples of the article, and described the plant from which they were obtained. It was admitted that the fiber greatly resembled cotton, and that it could be carded and spun on cotton machinery.

The plant which produced the fiber is the well-known *alva*, which is largely used by upholsterers for stuffing mattresses and cheap cushions; coarse paper is also manufactured from it both in America and Europe. It is a flowering marine plant and grows with its root in the sea-water. We judge that it cannot take the place of cotton as a substitute, be-

cause it contains a large amount of vegetable gluten, which must be separated by fermenting and washing, thus involving fully more expense than flax to prepare. The great advantage which cotton has over all the substitutes proposed is that it can be prepared for carding by simple ginning, whereas jute, flax and the *zostera marina* require to be treated by both chemical and mechanical processes.

A contributor to the *Manchester Examiner and Times* asserts that there is more cotton in Liverpool than has been reported, and that the exact quantity has been underrated for speculative purposes. From his statement we would conclude that the stoppage of so many of the English cotton factories was due to a want of demand for manufactured goods rather than a deficiency of cotton. His statement may not be reliable, but he says there are now 170,000 bales in Liverpool, and that in the course of the present year there will arrive from India 450,000 bales; from Egypt 40,000; from Brazils 55,000; from Greece 10,500; Italy 12,500; Malta 5,000; America 5,000; Turkey 50,000; making a total of 798,000 bales. The quantity of American cotton is under-estimated we believe. More cotton has been received at New York lately than most persons are aware of. Exclusive of the cotton taken by our cruisers, no less than 15,066 bales were received during the four weeks ending the 11th inst. A considerable quantity of this came from the southwest by railroad. At present the prices in New York are 57 and 57½ cents per lb., for midlings, which is higher than it has been for half a century.

MALACHITE AND WORKS OF ART.

If copper were as unoxidizable when exposed to the atmosphere as gold or silver, it would be esteemed one of the most beautiful as it is one of the most useful metals. When polished, it is of a deep reddish color, but it soon becomes dull, owing to a portion of its surface combining chemically with the oxygen of the moist atmosphere, and forming a thin greenish coating. This green oxide is copper rust. Some of the ores of copper are exceedingly beautiful, especially the green and blue carbonates, the former called "malachite." It usually accompanies the ores of copper, but it has been found in the largest masses, and greatest abundance in certain mines in Siberia; and Russia is the only country which has attained distinction for the manufacture of articles from it. Sir Roderick Murchison, the eminent geologist, who has examined the Russian mines, supposes that this carbonate of copper was once in a liquid state, and that it gradually solidified by slow dropping. Every mass of it seems to have been grouped around a center, in nearly concentric layers, and according to the varying richness of the solution at different periods during dropping, the concentric layers varying in dark and light tints of beautiful green. The masses of malachite found in the Siberian mines are generally of a rounded form. This mineral is softer than marble, but it is much heavier; quite brilliant, and its green tints have a silky appearance. It has been held to be a gem by some writers, and it almost deserves to be classed among the precious stones of the jeweler. It is fragile and very difficult to work. Although seldom found in lumps weighing more than twenty pounds; masses have been found in the Ural mountains, in the mines of M. M. Demidoff, of St. Petersburg, in masses of several tons weight. It receives a very high polish, and is chiefly used in the production of rich inlaid cabinet work, such as tables, mantel pieces, work boxes, snuff boxes, vases. In several of the palaces of the emperor of Russia, there are rooms in which the furniture is mostly veneered with malachite.

At the celebrated Malachite Works of M. M. Demidoff, in St. Petersburg, the largest pieces of malachite are first reduced to blocks, then they are cut into thin veneers, with circular saws. A block of malachite being secured upon its carriage, it is fed toward a revolving circular disk, and fine sand and water are fed into the cut until the veneer is severed, in the same manner that marble slabs are cut out. In every piece of malachite, there are light and dark streaks of green, and their curves are as graceful as some of those in veneers cut from mahogany crotches. These veneers of malachite are cut to the proper form, so as to combine the varying tints in