

Why have we penetrated these mountains? To establish ourselves here that we might enjoy religious liberty. We have sacrificed more for religious liberty than any set of men in this generation and we are here for this purpose. And in every act of our lives we should do our best to preserve unchanged, and unalloyed the pure faith of the everlasting gospel which God has revealed to us for our salvation.

I bear testimony that these things are true, and that God did inspire His servant Joseph Smith and the elders of Israel to lay the foundation of the only true church upon the face of the earth, and did inspire His servant Brigham Young to lead forth the Saints to build up Zion in the chambers of the mountains in these last days—and this is the path to celestial glory. Oh, but, says one "Are you going to send everybody who does not believe in 'Mormonism' to that burning lake you were talking about?" No, we are not, we expect that God will deal with every man according to his works, whether good or evil; but we testify that no man can ever attain to the fullness of the blessings of celestial glory without obeying the ordinances which God has revealed to the Latter-day Saints. But there is a glory of the sun, and of the moon and of the stars, and one star differeth from another star in glory; so it is in the eternal worlds, in the great diversity of glories there is a place for all in accordance with their works, knowledge and understanding. But when we have come to a knowledge of the truth, if we fall therefrom our position is worse than if we had never obeyed it, hence the necessity of continued zeal on our part to fulfil the great duties required of us that we may be prepared for exaltation in the kingdom of God, which may God grant us in the name of Jesus. Amen.

#### HOW THE UNION PACIFIC RAILROAD MAY NOT DESTROY BRIGHAM YOUNG'S PECULIAR INSTITUTIONS.

The general belief that the advent of the locomotive and the great Union Pacific Railway into the Salt Lake Basin is to destroy the rule of Brigham Young and the peculiar institutions of the Mormon people, may not be well founded. The change may not work out the results which leading newspapers in the East have so exultingly depicted. If it is to do so, it will be in opposition to one of the ablest men living, and to natural barriers which will resist external pressure for many years to come, in our opinion.

Mormonism takes a powerful hold upon the religious convictions of its votaries. It is a form of religion which seizes upon the believers in it with a strong hold. It allures men who embrace its faith with the most sacred enticements, and fastens them to it with a spiritual hope which entwines itself into the very heart strings. It does this because it is founded upon the *unchangeable love of offspring*. Its whole underlying foundation is patriarchal. As we are informed, the Mormon Heaven is peopled with the children of those who live and die in the Faith. This, as we understand it, is the key-stone of the arch of Polygamy as it exists in Utah, and accordingly of the religion of which it is the most offensive feature.

Aside from the spiritual teachings of the Mormon Hierarchy, it is aided by the most adroit external aids which human ingenuity can devise. If it imposes burdens upon those over whom it rules, it secures the ready assent of those who bear these burdens by promises which induce the most cheerful sacrifices, and we see proof of this in the suffering of the people who cross ocean and desert, through every privation, to reach the sainted land of Deseret. The industrial character of the Mormon people is attested by the conversion of the barren regions they inhabit into a very garden, and it is probably true, although it is denied by many, that their social organism is as free as any other under heaven from the evils of indulgence and crime, not including the feature of polygamy, of course, which is the key-stone of the whole Mormon system.

But how is to be that the advent of the Union Pacific into Utah is not to destroy Brigham Young and Mormonism? We answer, that "Gentiles" will not inhabit that country in such numbers as to make such a result probable. If it is to be accomplished through legislation and penal laws looking to the punishment of polygamists, those who would thus ruin the system will have a hard job on hand. It will take fifty years to assert such a control in Utah under the existing state of things. In the first place, people are not going there to make homes upon a barren soil

when millions on millions of acres far nearer the centers of civilization which are abundantly fertile invite them to occupy and possess it. In the second place, we have it on good authority that the far-seeing Young has control of all lands within the Territory which can be made productive, even by irrigation, without which, as we all know, there is not a foot of it that is not as barren as stone.

But, it is urged, "civilization" will do it by mere force of contact and contrast. Be not so sure of that; we tell you that there is a band attaching the believer in Mormonism to that faith which is not so easily broken. We have met and conversed with many Mormons in our day—uneducated, as well as educated Mormons—and it is not so easy to wrestle with their arguments. And we believe it more than likely that the Union Pacific, throwing them into freer contact with the outside world, may be a source of strength rather than of weakness to this remarkable people.—*Omaha Herald*.

#### SILK CULTURE—THE MULBERRY.

BY LOUIS A. BERTRAND.

My last communication contained a brief account of the efforts of President Young and Brothers Urnsbach and Watt to introduce the mulberry and silkworm into this Territory. Desiring to help these gentlemen in promoting the same great cause, I intend to write a certain number of elementary articles to that effect, this most important culture being still in its infancy here. My present communications will include everything connected with it, from the most suitable species of mulberries for Utah, to the making and keeping the worms' eggs. Hundreds of books have been published in Europe on this matter. But I will only discourse from my experience. My counsel to beginners will be founded, not on scientific theories, but on well authenticated facts. In the meantime, let the farmers of Utah plant mulberry trees everywhere. They will prove the richest inheritance they can bequeath to their children. I will now show them what varieties are the best for our climate.

The writers on the mulberry culture have described many varieties composing that numerous family; much difference is found in their descriptions; the number and nomenclature of the trees are different in each work. The various authors have extended, without end, the division of the species. But, in my numerous travels and researches, I have found that but a single species of the *Morus* exists, to be divided into two branches, called *races*, namely, the *white* and the *black*. Now, I will mention the best varieties of mulberry trees to be cultivated in Utah for silk raising.

First, *Morus Alba*, or white mulberry, is a native of China, but for centuries has been naturalized in Europe. This tree is of rapid growth, and is extensively known for the uses of its leaf as the food for silkworms. The leaves are pointed, cordate, entire, or lobed, but vary much in the different sub-varieties. The fruit is white, roundish, of an insipid taste. The bark of the tree is of an ash color. The tree is valuable for its timber, and exceedingly long-lived. It is excellent for various cooper, joiner and wheelwright's works. It takes a fine polish, and is able to remain a long time in the water without being spoiled.

Among the sub-varieties which have been produced from the white mulberry by its seed or by grafting, I will mention the Spanish and Roman mulberries, extensively cultivated in all warm climates. The *white green*, or *Colomba*, is eminently silky, and the *little green* or *Colombassette*, is very hardy, flourishing under every northern latitude.

Second:—The *Morus Moretty*. This tree a native of Italy, has been the first result of the mixture of the white and black races. The leaf is large, and cordiform, sometimes lobed, of a deep green smooth on one side, uneven and rugged on the other, less thick than that of several varieties produced by the white race. Its shoots are strong and lengthy, and preserve the character proper to the primitive white race; their color is slightly deeper, the joints a little more distant than those of the white varieties. The fruit, which is at first violet, becomes at maturity perfectly black.

Two distinct varieties have been discovered in the Moretty, by the French nurserymen; one has its wood of a deep brown, the other of a greyish ash color; the leaves of the first are of a deeper green than those of the second. That phenomenon, which arises from the proportion of the mixture of the races by copulation, has caused the first to be

named *Moretty-Mulberry*, and the other *Elata-Moretty*. But it is still the Moretty-mulberry which prevails in both varieties, the white or the black race. And the same phenomenon will always occur in sowing the seed proceeding from a single tree, either pure Moretty or Elata. That mulberry has the disadvantage of producing much fruit; it is now on that account unpopular among the Italians; but, being a hardy variety, it should be most profitably cultivated in Utah, as a dwarf tree or in the form of a hedge.

Third:—The *Morus Multi-caulis*, or many stalked mulberry, is a native of China. This noble mulberry, which is the type of the primitive white race, is simply the female which was first discovered at Manila, the capital of the Philippine Islands, by Mr. Perrotet, a French naturalist, and brought by him to France in 1821. The male, a native also of China, has never been exported from that country. In 1840, I saw large plantations of the *Morus Multicaulis*, both male and female at the mouth of the river of Canton. These magnificent trees are also numerous at Manila, where I resided eight months.

It is the first mulberry which was propagated from cuttings; but being a native of a semi-tropical climate, it has disappointed a vast number of its enthusiastic cultivators in Europe. The great facility with which it is propagated from layers and cuttings constitutes its chief merit. But it is too tender for a cold climate. Nevertheless, such is the hugeness of its thin and soft leaves that it fully deserves the attention of our "Dixie" farmers.

Four:—The *Loo-Mulberry*, is a native of China. Looking upon that mulberry as a most valuable acquisition to my adopted country I will give a full account of its introduction into France.

It was known that the Chinese had in their possession a wild mulberry, called *Loo*, readily propagated from layers and cuttings, flourishing upon almost every kind of soil, and producing excellent, beautiful leaves, and easy to be gathered. But that precious tree, so much esteemed by the "Celestials," who cultivated it profitably even in the cold regions of their vast empire, was lacking in the French collections. In 1834, Mr. Camille Beauvais received one hundred and thirty-three seeds of a most valuable mulberry, according to the statements of a Dutchman who had brought them over from China, and who presented them to that far-renowned silk-grower. These seeds produced strong trees, which gave a plentiful crop of large and delicate leaves, which were devoured ravenously by the silk worms. The most beautiful trees were propagated upon different soils, at every exposure, and the success was perfect. The name of *Loo* was given to the new mulberry, because, if it is not the Chinese *Loo*, it is, indeed, its son or its brother. In 1847, Mr. de Tringuelon, an experienced silk-raiser, had already said of the *Loo*:—"It is the very best mulberry we possess; it is fit for every form; it adds to the qualities of our grafted trees the alimentary power of the wild ones." Another very competent silk-grower said of the *Loo* at the same time:—"This mulberry offers enormous advantages. Being cultivated as a bush, it shoots long stems, well stocked with large leaves, of which the product is considerable. It is easily propagated from cuttings, and is able to stand the influence of the frosts. The gathering of the leaves and pruning make its cultivation cheaper than any other variety. So certain its worth seems to me that I intend to plant it extensively, not only for its leaves, but also for forming regular copses, to be worked as our common woods, in expectation that I shall get from them in four years what other forest trees could not produce in six years."

Extensive nurseries were started, and about eight acres were permanently planted with the *Loo* by the originator, Mr. C. Beauvais, on his Silk Institute, called *Les Bergeries de Senart*, and located in the vicinity of Paris. Although on a poor soil, his magnificent plantation was much admired by every visitor, but specially by southern silk raisers. I will state, in the proper place, what a powerful influence the foundation of that Institute, and the scientific experiments performed by Mr. Beauvais have had, in France, on this most important branch of industry.

As an ornamental tree, the mulberry has no superior in the vegetable kingdom. For instance, our State Road, if planted with two rows of standard mulberries, would soon become one of the most splendid avenues of the whole world. The Pacific Railroad, when completed, will enable us to import a

great number of these most valuable trees.

Before closing the present chapter, I will state that the mulberry seed preserves its vitality only one year. Parties desiring any quantity of fresh and reliable seed from France, to be planted in the fall of 1869, would do well to convey their orders, as soon as convenient, to Bro. George D. Watt, and I will immediately take the proper steps to have those orders filled next season.

#### IRON AT \$20,000 PER POUND.

A gentleman visiting the American Watch Company's factory, at Waltham, Mass., relates that a small vial, such as homœopathic pills are kept in, was handed to him, which was filled with what seemed to be grains of coarse sand, of the color of blue-tempered steel.

On examination under a microscope, they proved to be perfect screws, of which it required 300,000 to weigh a pound.

Microscopic bits of steel, with the points exquisitely polished, were also shown, so small that fifty weighed only a single grain. These were said to be worth twenty thousand dollars per pound.

These, as well as every other of the running parts of the watch, are made entirely by machinery, which turns out each different piece exactly like its fellows.

The following is his description of the method of making the fine screws: what you see at a first glance is a thin thread of steel, finer than the most delicate of pins, slowly pursuing its way through a little hole in a machine, and being grasped by a tiny tool which runs round it, as if embracing it; and then, presto! out comes a knife and cuts off its head. All this is done so quickly that you have to wait and watch the operation, after you know what it is all about, before you can see the process I have described.

The bits thus beheaded with a knife, look exactly like little grains of powder. But they are screws.

You notice that when you take a microscope to examine them. They are complete—almost. Not quite yet. A girl picks them up, one by one, with a dainty tool, and places them in rows, one in every hole in a flat piece of steel. This little plate as soon as it is filled, is placed under another machine, and it would do any Irishman good to see it work. It beats Doneybrook Fair "all hollow." I never had a more convincing proof of the superiority of the mechanical over manual labor.

For while a good hearty man with a stout bit of shillalee may break half a dozen heads of a day,—with fair luck—this machine, without so much assaying "by your leave," comes out of its hole, and runs along each row, quietly splitting the head of each one of them exactly in the center.

And now the screw is made.

#### IDAHO.

GOVERNOR BALLARD, of Idaho, delivered his Biennial Message to the Legislature on the 10th instant, a copy of which has been kindly forwarded to us, by T. C. Bail & Co., of the *Boise Democrat*. He says, in relation to agriculture that,

"It is generally supposed that our agricultural lands are limited in extent, and confined to the valleys. This is a mistake. Over half the whole area of the Territory is well adapted to agricultural pursuits. I am fully convinced of this fact, from personal observations, having recently visited the northern portion of the Territory, and traveled over a large portion of the country."

By an Act of Congress, passed last year, the net proceeds of the Internal Revenue of the Territory of Idaho for the fiscal year, ending June 30th, 1866 and the two succeeding years, not exceeding \$40,000, was set apart for the erection of Penitentiary buildings. The Governor is informed that the revenue collected and applicable to that purpose will amount to the full sum of \$40,000. The Legislature is requested to designate the place for such buildings. Thirty per cent. of the whole revenue of the Territory is set apart for Territorial Prison expenses; but notwithstanding this large appropriation, the Territorial Prison has entailed a debt upon the Territory of over \$22,000 within the last two years.

Beethoven once said of Rossini that "if his master had boxed his ears often, he might have been a great composer."

A Scottish music publisher inserts in the head of every note in his publications the name thereof.