DESERET NEWS.

Truth and Liberty.

NO. 31. GREAT SALT LAKE CITY, WEDNESDAY, OCTOBER 6, 1858. VOL. VIII.

The Song of Seventy.

BY M. F. TUPPER.

I am not old,—I cannot be old,
Though threescore years and ten
Have wasted away, like a tale that is told,
The lives or other men:

I am not old; though friends and foes
Alike have gone to their graves,
And left me alone to my joys or my woes,
As a rock in the midst of the waves.

I am not old,—I cannot be old,
Though tottering, wrinkled and gray:
Though my eyes are dim, and my marrow is cold,
Call me not old to-day.

For, early memories round me throng,
Old times, and manners, and men,
As I look behind on my journey so long
Of threescore miles and ten;

I look behind, and am once more young,
Buoyant, and brave, and bold,
And my heart can sing, as of yore it sung,
Before they called me old.

I do not see her—the old wife there—
Shrivelled, and haggard, and gray,
But I look on her blooming, and soft, and fair,
As she was on her wedding day.

I do not see you, daughters and sons,
In the likeness of women and men,
But I kiss you now as I kissed you once,
My fond little children then:

And, as my own grandson rides on my knee,
Or plays with his hoop or kite,
I can well recollect I was merry as he—
The bright eyed little wight!

'Tis not long since,—it cannot be long,—
My years so soon were spent,
Since I was a boy, both straight and strong,
Yet now am I feeble and bent.

A dream, a dream,—it is all a dream!
A strange, sad dream, good sooth;
For old as I am, and old as I seem,
My heart is full of youth;

Eye hath not seen, tongue hath not told,
And ear hath not heard it sung,
How buoyant and bold, though it seems to grow old,
Is the heart, for ever young;

For ever young,—though life's old age,
Hath every nerve unstrung;
The *heart*, the *heart* is a heritage
That keeps the old man young!

[From The Montreal Transcript, Aug. 11.]

THE VICTORIA BRIDGE ACROSS THE ST. LAWRENCE.

The work for the construction of this noble edifice is now rapidly proceeding, and we had an opportunity a few days ago of examining not only the completed parts of the structure, but also the operations which are taking place on the dams and piers which are not yet finished. We first proceeded over the abutment on the north shore to the tubes which are already placed across the two first spans of the bridge. The work of the riveting of the plates was going on, and the structure rang with the clangor of hammers forming the heads of the bolts. A large number of portable forges were stationed in all parts of the tube, and on the top of it, and rivets heated in the fires were supplied to the workmen by boys attending on each forge. It is interesting to see the speed with which iron—a material hardly known a few years ago in the arts of construction—can be formed into edifices adapted to the purposes of man. This speed is much facilitated by the circumstance that all the parts of the tubes are multiplications of the same patterns.

The bridge will consist of twenty-four piers, with twenty-five openings or spans—the center about half as large again as the others.—These openings are covered by a tube, or rather by a series of tubes of boiler plate, separated from each other at the ends, and strengthened by angle iron. An article like this is not the place for an account of the reasons which make the tubular form of materials stronger than any other arrangement of them; but we may remark that if the four plates which form the four sides of the tube were laid one upon another, the thickness of the whole would not exceed about two and a half inches, and would not support a fiftieth part of the load which may be safely carried over the tubes. It needs no engineering nor mechanical knowledge to be able to understand that hardly any accumulated thickness of such a material laid in a flat shape over an opening between 200 feet and 300 feet wide, would support the hundreds of tons weight made up by the component parts of a railway train resting on the middle of it.

The plates throughout the tubes are double; bolted to angle iron beams and girders; and always overlapping each other at the ends. For further security, each joint has placed over it, on each side of the plates, an extra sheet bolted on both sides of the joint, and called a covering plate. The object of all these precautions is to make the tubes resemble as much as possible similar tubes made of one piece of metal.

Many very delicate considerations have to be attended to by the engineer who adopts this tubular mode of construction, in order to give his roadway the greatest strength, with the least weight and cost. The condition upon which the attainment of this end depends is, that the relative strain upon each inch of the surface should be known, and the strength of the metal at that place proportioned to the stress. It is impossible here to give any idea of the data upon which these calculations are made. The result, however, is that the hardest duty must be done by the metal situated at the ends of the tubes, and accordingly this part is strengthened by a considerable addition to the ordinary number of transverse supports of angle iron. As to the plates themselves, the same kind of calculations have determined that those in the bottom and top of the tube should be thinnest at the end and thickest in the middle of the length, while this order is reversed at the sides, and the greatest thickness of plate is used at the ends.

The sentences immediately foregoing will prepare the reader for the information that every sheet of iron, and every angle iron upright or girder has its place in the edifice marked with the greatest accuracy before it is shipped at Liverpool, and that, upon arriving on the bank of the St. Lawrence, it must not vary half an inch from the position for which it was destined. But, perhaps, it will excite wonder at the immense forethought, labor and attention to details, which are necessary for such perfect and long-before-hand adjustment, when we state that it is necessary to determine the position of 2,500 different pieces of iron in each of the smaller tubes, or of 62,700 pieces in the whole bridge. This is like numbering the bricks of a house, and never putting one in the wrong place.

The rivets used in each tube amount in number to 80,000, or to more than 2,000,000 in the entire structure, and, reckoning the heads as separate pieces of iron, we shall have more than 7,000,000 of distinct pieces of metal put together to form the tubular roadway. The expansion and contraction of metal is another circumstance requiring the attention of the architect in iron. Every one is, of course, aware of this phenomenon, but perhaps it may be a novel reflection to many that the vast structure, poised so high in the air above the St. Lawrence, and apparently so firmly fixed, is yet going through constant and not inconsiderable changes of dimensions and even of forms, and that instead of its parts being rigidly fastened to their places, the metallic roadway is in fact disengaged from the stone piers in order to allow the tube to stretch itself on its bed, as our readers are doubtless accustomed to do on theirs.

The principal phenomena of expansion and contraction in these tubes are two. The first is chiefly in the length, which varies in a summer day some inch and a-half for each tube covering a single opening, and between summer and winter varies about three and a-half inches. The other is a change in form, arising from the fact that the upper floor of the tube is exposed to the sun's rays, while the lower one is in the shade. The consequence is a greater lengthening of the upper than of the under plates, and a certain flexture of the tube. Such changes, if operating on a mass of iron about two miles long, would be, of course, very difficult to manage. The mode of providing against its inconveniences, therefore, is to divide the whole length of the roadway into thirteen tubes—one over the large central arch 330 feet long, and six on each side of it, each formed of two tubes, and each covering two of the smaller openings or spans of 220 feet.—The two tubes thus made into one, therefore, rest upon three piers, across one and resting by the two ends on two others. The united tube is firmly bolted down to the pier, which supports it in the middle; but the ends rest upon rollers, so that when they are prolonged by expansion the movement takes place without any resistance. The ends of the tubes at the piers where they rest on rollers, are of course, not in contact. There is a space of about a foot between them for any play arising from the cause already described. The weight of iron in the tube, over each of the smaller openings, is 300 tons, and over the larger one 900 tons. Thus the weight of iron in the bridge will be about 81,000 tons.

The progress made in laying the tubes this year has been considerable. Four spans are already covered—two on each side—and from this time to the end of the working season, it is expected that two more will be completed each fortnight, making twelve before the setting in of the winter. The setting in of the severe season of our Canadian year will of course retard such a work, but will not entirely stop it, and tube laying will be continued in spite of frost, and wind, and rain and snow.—Before leaving the tubes we saw a steam-riveting machine which, though it cannot accomplish all the work in that line owing to the difficulty in moving it, fastens a great many plates before they are put up in their places. It consists of a large steam cylinder, having a piston, on the projecting ends of which are a number of dies in the shapes of rivet heads. The plates, with the rivet placed in the proper holes, being then presented to those dies, the steam is allowed to enter the cylinder, and at once forces the dies against the rivets till they are pushed through the holes and clinched.

Descending from the upper works of the bridge, we next took boat for the piers. Of these there are seven completed on each side; two are rapidly approaching completion, and two are just on the point of being begun. It is expected that, unless some unforseen event takes place, all the piers but one will be finished during the present year, or at least advanced so far as to permit of the work proceeding during the winter. At piers Nos. 10 and 17, we witnessed all the processes employed, from the commencement of the day to the laying of the masonry.

Of course the first thing to be done is to make a puddled dam round the place intended for the foundation of the pier, from the interior of which the water is to be pumped out, so that the masons may proceed with the foundations. The making and maintenance of the dam is, therefore, the chief difficulty of the engineer. The piles are driven into the ordinary bottom of the river; but the foundation of the stone work is several feet below, and the consequence is that the excavation required often destroys the foundation of the dam, and breaches constantly occur—all the more easily for the great depth and rapidity of the current. In order to lessen as much as possible the risks of these casualties, the line of bottom on which the dam is placed is rendered as even as possible by working a gravel scoop. This machine, however, constantly comes in contact with boulders and stones of various dimensions, and these have to be raised. For this purpose a diver is always employed, who descends upon the rock to be lifted, and holds the ram by which a hole for the 'lewis' is made. This effected, the impediment is raised by a crane. These stones are of very different geological formations, and have evidently traveled very far from their present site, on the icy embarkations by which they were first lifted from their original (what was their original?) resting place. We saw one of twenty tons weight which had been brought up from as many feet below the surface of the river.—Occasionally the break in the dam exhibits strange freaks.

The water will sometimes rise up like a fountain in the centre of the space marked out for the foundation, and it will require many hours of research to find the weak spot whence it has entered. The enemy, however, has to be traced, and, once found, the ingenuity and patience of the engineer soon conquer. Speed is a matter of considerable importance in the construction of works subject to so many accidents as piers built with dams. Hence, the workmen are employed in gangs night and day, the light being afforded by a lamp with an immense reflector. The stones for the piers have been supplied from the the quarries belonging to the Grand Trunk Company at Point Claire and from another quarry on the Richelieu.—The stone from the latter is brought down by the St. Lawrence and Champlain Railway.

We have to thank Mr. Hodges, the Chief Superintendent of the works for the contractors, and his able lieutenant, Mr. Arkman, for the kindness with which they afford us all the explanations necessary to enable us to understand the works which we saw going on.—They are entitled to congratulations on the success with which they have begun and prosecute their arduous labors, in a climate and on a river presenting so many difficulties. They expect to finish the entire work with the end of the year 1859, and they will then have erected perhaps the most remarkable specimen of bridge architecture which the world has yet seen.

MARRIAGES.—More than four-sevenths of the marriages in Massachusetts are among the foreign-born. Why is it? For the most simple of reasons—the foreign-born can afford to get married, and the native-born cannot; and this must be, so long as our extravagant modes of life continue. In social life, there never was a people tending to deeper and more destructive social corruption—and that is most evident from the records of all the courts, and the columns of all the newspapers—than Americans. Our fathers used to tell of the profligacy of Paris; their children tell of the mysteries of New York—a city not far behind any in Europe. And making proper allowances for size, how far is New York ahead of other cities and towns? Once was the time when a wife was a 'help meet;' now in a thousand cases, you can change the 'meet' to 'eat,' and make it read more truthfully.

We boast of our system of education; we have female high schools, female colleges, female medical schools, and female heavens. Our girls are refined, learned and wise; they can sing, dance, play pianos, paint, talk French and Italian, and all the soft languages, write poetry, and love like Venuses. They are ready to be courted at ten years, and can be taken from school and married at fifteen, and divorced at twenty. They make splendid shows on bridal tours, can coquette and flirt at the watering-places, and shine like angels at winter parties. But Heaven be kind to the poor wretch that marries in the fashionable circles.

What are they at—washing floors? Oh, we forgot! nobody has bare floors now; how vulgar that would be! What are they at—making bread and boiling beef? Why, how thoughtless we are! To be sure, they will board, or have servants.—What are they at—mending old clothes? But there we are again; the fashions change, so often, that nobody has old clothes but the rag men and the paper-makers now? What are they at—washing babies' faces, and pinning up their trowsers? And here our intolerable stupidity once more; having children is left to the Irish!—What lady thinks of having children about her now? or, if she is so unfortunate, don't she put them to wet nurses to begin with, and boarding-schools afterwards?

We repeat, we have come to a point where young men hesitate and grow old before they can decide whether they can marry, and afterwards keep clear of bankruptcy and crime. What is the consequence? There are more persons living a single life; are there more living a virtuous life? It is time for mothers to know that the extravagance they encourage is destructive of the virtue of their children; that all the foolish expenditures making to rush their daughters into matrimony, are, instead of answering that end, tending to destroy the institution of marriage altogether.

OH! JERUSALEM!! JERUSALEM!!!—Mr. Williams of the Utica Herald, in a late letter says: It was very unhealthy at Jerusalem, and the moral atmosphere of the place was still worse. I certainly never saw so quarrelsome a place in my life. Everybody seems to be at war with everybody else. The Jews fight among each other like cats and dogs. The Greeks and Latins fight against each other with such ferocious violence that the Pasha is compelled to interfere at every Easter time. Even the few Franks who tarry there have caught the common rabbies and oppose each other with the malignity of devils.—Just now the great quarrel between the English Consul and the English Bishop has quite eclipsed all minor feuds. The former recently placed the latter under arrest, whereupon the good Bishop appealed to the Prussian Consul for protection, who proceeded to arrest somebody else. The Bishop refuses to acknowledge the Consular authority, while the Consul takes his revenge by trying to break up the Bishop's school. Ostensibly the difficulty originated in the appointment by the Consul of a certain man to represent him in his absence; really, however, it is High Church against Low Church. The Consul is a Puseyite, while the Bishop is more than suspected of the sin of being evangelical (you know an unpardonable sin in the Church of England in these days). Pretty much everybody is mixed up one way or other in this petty quarrel; and all Syria is ringing with the scandal. Thus far, however, the American Consul has kept out of the difficulty; but for the reason mainly that he is most of the time too drunk to know what is going on. [It may surprise some of my readers that our 'Representative Abroad' at Jerusalem is simply a common sot, but such is unhappily the truth. He was appointed by the late President Pierce.] Verily, Jerusalem is under a curse.

CHUFAS OR EARTH ALMONDS.—The editor of the Alabama Cotton Planter thus gives his experience with one of the articles sent out of the Patent Office:

We have many inquiries as to the value of this crop; some express fears that the nuts can never be eradicated. We have not tested them long enough to know whether they can be or not; for our own part we hope they cannot. We know them to be the most valuable crop for fattening hogs that can be grown. We last year put a lot of half-starved hogs upon an acre of them, and never saw pigs improve as fast. As the hogs rooted upon them, the chickens forsook the house lot for the chufa patch, and fattened faster than we ever knew them on corn, and the flavor of flesh was delicious. We took the hogs off in the early spring, and now find a splendid stand of chufa on the same ground. Should they do as well this season as last, they will prove invaluable. Many confound them with the grass nut; they belong to the same family, but in their growth they are not at all alike. The chufa forms its nut near the surface, generally not more than two inches below. When the stalk is pulled up before it has dried, nearly all the nuts come with it. Therefore we think that it is easily rooted out if it is desirable to do so. We look upon it as the greatest acquisition introduced by the Patent Office.