

EDITORIALS.

MORE ABOUT IRON.

THE manufacture of iron in Utah as an extensive enterprise, engaging much capital and a vast amount of labor, skilled and ordinary, is in our opinion one of the things that are as sure to be, as anything not actually accomplished. We have published several articles on this subject, some theoretical, others practical, and now give place to a communication from the proprietor of large claims in Iron County, who ought to know whereof he speaks. We expect to present other suggestions and arguments, and statements of fact bearing on this question, that it may be kept before the attention of our wise men and those who are able to engage in a business that requires considerable money, but promises a rich return for the investment:

"It does appear to your correspondent that the manufacture of iron is of such vast importance to our Territory, that those who wish to encourage it should aim at the most speedy and practical way of going to work not only on paper, but by the building of blast furnaces, making pig iron, and supplying our home market with that article.

Your correspondent of the 2d inst. intimates that there is no place in the immediate vicinity of the southern iron mines suitable for extensive iron manufacture, etc.

Now let me state what there is there, for I have spent a great deal of time and observation upon the subject during the last four years. Iron City is beautifully situated in a most healthy location, being north of the rim of the basin and consequently is not excessively hot or dry, and has an abundance of land well suited for the establishment of the largest iron works there are at least a dozen flowing springs of water within half a mile of Iron City. Mr. E. Hanks, one of the former owners, tells me that the old company had grants of water above the works, but by digging wells from 10 to 20 feet they struck such an abundance of excellent water, sufficient for every purpose, that they never troubled themselves about getting water from above; and of late, in opening a body of coal two miles above the works (which bears evidence of being as good quality of coal as any yet found in Utah) at a depth of 30 feet, we struck so much water that we had to stop work until we could put in a pump.

In the next place, I will show that Iron ought to be made here. In the first place, it has been made here, and came very near being a great success, although it was 200 miles from a railroad; and if iron could be made at \$32 per ton, and freight the ore and charcoal from 30 to 135 miles, it could be made for \$25 per ton at Iron City, where every prerequisite is found in close proximity and the charcoal can be obtained for 10 cents per bushel, there being tens of thousands of acres of timber right around Iron City. So then I have shown that we have a beautiful, healthy location sufficient for a city of 5,000 and large iron works, plenty of good, pure spring and well water, coal and charcoal. We have also plenty of building rock and clay for brick, on the ground, out of which there is now ready for use, a foundry, machine shop, pattern shop, blacksmith shop, dwelling houses and a school house built of brick, besides other buildings of rock, adobies and lumber, consisting of engine house (with a 20-horse power steam engine) butcher shop, store, offices and dwelling house, charcoal house, two charcoal kilns, with the land on which the buildings stand with government title secured. A large quantity of material, such as cut rock for a large blast furnace, the present one being too small. There is also a great many tons of pig iron reserved for castings for the new furnace; there is also an air furnace built of brick, 30 feet high, there are fire rock, fire clay, moulding sand, lime rock of the best quality, and the best of iron fluxes all within two and a half miles of Iron City. Within a quarter of a mile of the coal commence the Iron mines, a group of nine claims of hematite, assaying from 60 to 70 per cent. metallic iron, containing millions of tons of ore on the top of the ground adjoining each other for two miles. Next comes the Blowout Mountain which is 1,100 feet long by 500 feet wide, over 100 feet high, five miles from Iron City and not in Iron

Spring mining district, as stated in the article of the 2nd inst. The ore is a magnetite, containing in five other claims, assaying from 70 to 75 per cent., containing millions of tons ore on the surface, culminating on the top of what is termed the Great Western Iron Mountain, with a large body of black magnetic ore on the summit that can be seen in all directions for 50 miles. There are some 15 other claims of different kinds of ore, all of it good enough to ship if necessary. The foregoing property was offered to the committee appointed by the Board of Trade to commence operations with at very reasonable terms, and would it not be the very place for the commencement at least? I am satisfied for one that if it was taken hold of with intelligence and economy that it is the very thing needed for this community, in the right place, and "There is millions in it."

THOMAS TAYLOR.

A COMMENDABLE CHANGE.

THE *Logan Leader* has grown out of its patent exterior. We are glad to see its progress. There are several papers in the Territory of the patent-half character. One part printed in California, the other half in Utah. They are all objectionable on that ground. The editor cannot possibly control one half the paper which bears his name, and fiction claims a large proportion of its space. However, it is a cheap and easy way of publication, and in some sparsely settled districts is the only form possible if a large sized sheet is demanded. And here is a consideration for the Cache Valley folks. They must be prompt and liberal in sustaining their local paper or it will not be able to bear the extra expense involved in the composition of a journal of that size. Yet we commend the departure, and think that even if the venture does not prove a financial success, it would be better to issue a smaller sheet all home made, than return to the patent outside of foreign matter and spirit. The present number is not up to the usual mechanical standard, but attention to press and rollers will remedy this, no doubt. We wish the *Leader* increased prosperity and influence, and commend its example to others.

SUGAR MAKING.

THE subject of the manufacture of sugar from the beet has been agitated on several occasions in this Territory. Years ago practical efforts on a large scale were made in this direction, which were not successful for reasons which need not now be discussed. Since then, individual experiments have been attempted, which have demonstrated the fact that sugar of good quality can be made from Utah-grown beets, and indicate that at some time in the history of the Territory, beet sugar may become one of its prominent products.

As further experiments will be tried in this direction, some suggestions from practical home workers will be of advantage. We therefore present the following from C. A. Madsen, Esq., whose name has become prominent in this Territory as the successful manufacturer of sugar from the Amber variety of sorghum. He has also worked with the beet in sugar making, and his hints will be of value to all engaged in the business here, whether on a large or a smaller scale:

"1. Cut off the tap root and top, and wash the beet.
2. Grate the beet on some kind of grater, cylindrical is the best.
3. Use for first batch of pulp, from 10 to 15 per cent. pure soft water, to be mixed with the pulp while grating. Place the pulp in a coarse sack, fitting in the press; a strong cider press will do. Press out the juice. Empty out the pressed pulp in a tub or tank, and mix it with 100 per cent. (by weight) of pure soft water; and press again as thorough as the press can do it.

Use this second expressed juice of the first batch, to the grating of the second batch instead of water as above; and so on alternately. But continue to use the 100 per cent. of water for the second pressing of each batch.

4. Pour the juice, first expressed from each batch, into a kettle or metallic-bottomed tank, of size according to batch, to be used for defecator. Heat the juice to 160 deg. F. and mix one-half per cent. pulverized pure lime with the juice, and bring

it to a boil. When white scum appears in the cracks of the crust it boils; then remove or extinguish the fire. Draw off the defecated clear juice by a syphon or swing-pipe, placed about 2½ inches from the bottom of the defecator, into another tank or vessel.

Place the scum and sediment from the defecator in the expressing bag, press the juice out and mix it with defecated juice.

Now add one-half per cent. of phosphoric acid, showing a strength of 40 degs. B., mix well. It will precipitate the lime as phosphate of lime.

5. Now mix with the juice 5 per cent. finely pulverized bone-black, and let this and the phosphate of lime settle together, and

6. Condense the defecated juice by evaporation to a weight of about 11 to 13 pounds, or about 12 pounds per gallon.

7. Put the condensed juice away in a place about 80 degs. warm. And if the beet juice is all right it will crystallize in a short time.

8. When crystallized, place the mush sugar in a strong factory sack and press the syrup out from the sugar in the cider press, or better, on a hand centrifugal, in which the mush sugar is placed, without any sack, and the syrup is wrung out, and a crude brown sugar will be the result.

An approximate success in this simple way, will make it appear where the beet can be raised successfully for sugar."

BOB SHEFFY.

THE ECCENTRIC PREACHER OF SOUTH-WEST VIRGINIA.

Country people have but few incidents of life to feed the universal desire for excitement. And the quiet farming population of this district, not having enough excitement in their politics, seek for their fill in religion.

Bob Sheffy, a crazy old man of the Methodist creed, has from time to time visited the little mountain valleys of this region, and supplied the inhabitants with excitement by his peculiar methods of dispensing with the gospel. He is the king of Methodist shouters, and has method in his shouting. Is there a camp meeting in prayers? Bob Sheffy remains away for awhile, seeking an opportunity to draw the attention of the assembly to his coming. Waiting till the shouters are tired out, calling for a lord that never comes, and have all sunk into unquiet repose, near the midnight hour, shouting and singing at the top of his voice, Shiffy advances, awaking the assembly and arousing all to a babel of excitement, while with renewed efforts they crowd the mourners' bench and shout and pray till again exhausted.

TREE CLIMBING.

Sheffy has developed an original way of attracting the attention of his hearers. This way, to a believer in the Darwinian Theory of the descent of man, would be another proof of the affinity between man and the monkey. Leaving the stand of a camp meeting, in the exuberance of his spirits, he mounts a tree, and swinging himself like an ape from limb to limb, he shouts and exhorts with renewed effort, while his audience is lost in wonder at his temerity, and look upon his actions as all but divine.

NOVEL WAY OF PRAYING.

Sheffy usually carries an old blanket with him, which he chiefly uses as an altar on which to pray. Going into the woods, in some locality where he can attract attention, he spreads his blanket, kneels down, and vociferously shouts to his lord for his blessings, believing no doubt that his lord is deaf. And when travelling along the road, should he see a few persons coming, down goes the blanket and its owner in prayer, that the observers may hear and see his devout piety.

The effect of these foolish actions upon many superstitious and ignorant persons is such that Sheffy is by them almost deified. And he, not too crazy to be very cunning, takes advantage of their credulity, and visits about from place to place, exacting the choicest viands, with turkey and chicken a plenty, for he is quite as well known for his gluttony as for his lunacy. But with all his peculiarities Shiffy is a gallant that is noted for his attention to the pretty girls of his audiences. He never loses an opportunity of seeing them home.

IRON AGAIN.

WE give place to-day to another communication on iron manufacture, for the purpose of keeping the subject before the public, not with the object of endorsing any particular project or organization, nor sustaining any opinions in regard to the best method of starting an enterprise for the manipulation of the iron products of the Territory, but merely to keep the matter in agitation, with the hope that something practical will grow out of its discussion. The information and views set forth in the following article we consider of value to all who are investigating the question of the feasibility of iron manufacture in Utah:

MAMMOTH MILL,
Tintic, Utah, July 28th, 1881.

Charles W. Penrose,
Salt Lake City, Utah,

Dear Sir.—The quarterly statement of the condition of Blast Furnaces in the United States, July 1st, 1881, as compiled from the *Iron Age*, is as follows:

	IN BLAST.	OUT OF BLAST.
Charcoal Furnaces,	147	125
Anthracite "	146	90
Bituminous "	144	77
Total,	437	292

In the establishment of an iron enterprise, and particularly in charcoal furnaces, two furnaces are usually erected side by side, and the blast supplied from one engine and blowers, which admits of the continuous operation of one furnace, and accounts in some degree for the number of furnaces out of blast at the present time. In fact it is the case most of the time. A charcoal furnace, of the capacity estimated, would employ about 75 men in all. The number of teams would be as the distance of the transportation of wood and charcoal. About ten trained men would be necessary, all the others would be men accustomed to common labor; in the event of the inauguration of rolling mills, trained men would be required altogether, or nearly so. In the year 1867, I had an opportunity of obtaining data bearing on the prices of labor in rolling mills in Europe, from a gentleman connected with the North Chicago Rolling Mills. The prices paid ranged from 15 to 40 shillings sterling per day, which corresponded closely with the prices paid in the United States at that time for the same class of labor; taking into consideration the value of the United States currency, the rates paid in Europe were the highest. He added: "These men, though lavish in their expenses, invest large sums in Building Societies, Savings Banks, and the like; many of them live in their own houses, and a great number have very respectable and well furnished houses."

Reference has been made to a corporation in process of organization, to be known as the Rose of Tintic Mining Company, which is intended to be a general mining and metallurgical enterprise, organized upon a somewhat different basis from many existing mining corporations. It is intended to be utilitarian and progressive, not communistic nor altogether co-operative, but will harmonize within its sphere the existing conflicting relations between capital and labor, and aid in some degree the development of the growing intelligence of the human race. A number of mine owners or rather the owners of prospective mining claims in Tintic and vicinity have promised to place properties into the organization if organized upon a humanitarian basis; in their own phraseology "if it is a square deal."

In view of this gentleman formerly a resident here is now east on a visit and looking over the field with a view of obtaining the aid of capital and machinery, or rather what the prospects are in the event of effecting the organization. If the Utah Southern railroad is projected from Lehi through Tintic and connected with the present established route at or near Leamington as it is surmised, but not known, this branch when constructed would form an important auxiliary to a metallurgical works established there. The proposed location of works has been made for the reasons stated in my article. And particularly for its central position and ample water supply—it is distant from the mines in Tintic about 30 miles and from the mills about 22 miles, which are located in Tintic Valley which is at best an elevated basin and entirely dependent on springs for its water supply, though sufficient for all milling operations going on, it would not be well suited for a large manu-

facturing enterprise of the character proposed.

I wish to be distinctly understood upon this point as some parties interested here seem to think that any amount of water is obtainable in Tintic Valley, but as the mining expert would say "it is not in sight." Water is not necessary as a power for an iron works, as the gases evolved from furnaces can be utilized as fuel for generating steam. Economically employed there would be a surplus of power for other machinery such as lead or copper furnaces, and even stamp mills. I built three charcoal blast furnaces using water power, and abandoned its use in the erection of others, within 100 yards of one of the largest water powers in the State of Wisconsin, the furnaces did much better work.

I had an opportunity of looking over the blast furnace erected at Ogden some years ago and found it then very defective in some important points of construction, and particularly the arrangements for conveying and distributing the blast. My remarks on this point created some slight exhibition of prejudice against me from some of the promoters or projectors of the enterprise, who, after mature deliberation, consoled themselves by coming to the conclusion that I did not know anything about it, and other expressions, more "vulgar than classic," which I forbear to mention. I have had occasion to notice a feature which is peculiar to iron making enterprises; that is, if they fail to make a successful start it is up hill business to re-construct them and get them in successful operation.

I have given the question of co-operation some attention and have come to the conclusion that although well suited to commercial transactions it seems more difficult in application to productive industry. I have had an opportunity of seeing its inauguration in England in what is or was known as Working Men's Co-operative Associations. I have understood that it does not work as well as was anticipated. I have understood lately that one of the largest iron manufacturing enterprises is conducted on a co-operative plan; to wit, the employees are allowed to purchase and hold a limited amount of dividend-bearing stock, while the capital employed secures a certain per centage as dividends and controls the general management. Any surplus is annually subdivided *pro rata* amongst the capitalists and employees. This plan is said to work well, and if I am correctly informed, was first inaugurated at the iron works represented by Sir J. Louthian Bell, and has resulted in removing all conflicts between capital and labor within the sphere of that corporation.

I have come to the conclusion that the harmonious relations of capital and labor is an abstract science and can only be attained by successive discoveries of principles, just as we are getting at a knowledge of electricity by facts as they are brought out in its practical application, which cannot be established by any preconceived code.

The establishment of an iron manufacturing enterprise is well worthy of attention, especially to those who are interested in the development of the resources and prosperity of Utah; and there seems no good reason why its inauguration should not take place ere long. If such gentlemen as Hon. William Jennings and others who control capital, would give the subject an earnest investigation and go to the bottom of the question, they would find it to be a safe and lucrative investment.

Very respectfully,

Your obedient servant,
J. C. CAMERON,
Mining Engineer.

MARRIAGE AND CRIME.

THE increase of crime troubles many thoughtful persons in the great cities of the United States. It is conceded that in spite of all the agencies at work to educate the masses, and thus as some people think prevent crime by striking at its fancied cause—ignorance, and also to punish the criminal when caught and convicted, offences against law and order, against God and man, are increasing mightily in the land.

As samples of the condition of affairs in Kentucky, the *Louisville Post* says:

"Crime is certainly greatly on the increase in Kentucky, and the improper exercise of the pardoning power is doubtless one of the chief causes. Yesterday two men fought