

as Niagara Falls, at a cost that even now would probably be less than that of the Chilean fertilizer.

A novel briquette factory exists at Langenburg, in Prussia. Turf is cut from an adjacent moor, floated by water to the mill, and is ready for immediate use. In the first machine it is broken into small lumps. It then passes to a machine grinding it into null or a fine powder, then slowly slides through an inclined drying cylinder heated by exhaust steam, and is finally compressed. The average output is 80 briquettes a minute, or about 12,775 tons a year. This fuel, though burning slowly, is stated to give a fairly good heat, and its low price cause a demand greatly in excess of the supply. The cost of production is stated to be less than \$1.75 per ton.

An artificial sandstone, made at Uccle-Calevoet, Belgium, is a silicate of lime obtained by imitating the supposed conditions of nature. A mixture of 80 per cent of clean coarse sand and 20 per cent of hydraulic quicklime is placed in an iron mold, which is introduced into a boiler filled with hot water, and is kept for three days under a pressure of six atmospheres and at a temperature of about 329 degrees F. The resulting block is at first soft but hardens quickly in air. The stone is absolutely homogeneous, absorbs little water, has four times the crushing strength of French freestone, and at the cost of ten cents per cubic foot is much cheaper than the natural product.

The poisonous ptomaines of preserved meats, hams, game pies, etc., are found by Von Ermenglin to be due to a specific organism—*Bacillus botulinus*—which secretes a toxine so extremely powerful that 1-60,000 of a grain killed a rabbit in twenty-four hours. These ptomaines are fortunately of only rare occurrence, and in uncooked meats are destroyed by thorough cooking—150 deg. to 160 deg. F. being sufficient to render the toxine inert.

Two French mechanics have placed an electric motor upon the shaft effecting the necessary movements of a sewing machine. Freed from the driving belt and pulley, the machine is very compact, and a small current drives it at speeds which may be varied from 150 to 1,500 revolutions per minute.

Ammonia gas is an irritant poison, and two recent deaths in England resulted from mucous membrane inflammation due to inhaling ammonia.

CONCERNING THE GILA VALLEY.

Almost covered up with letters of inquiry in the last few days, and besieged on all sides by personal friends and the many seemingly interested in our Arizona country, I find it necessary to again appeal to you, Mr. Editor, for help, and with your consent use your valuable paper to answer the numerous inquiries made of me.

Before beginning I wish to verify statements already published. I have been told that some of our people have almost apostatized, to think the "News" would publish, and a high State official would say, "that a sweet potato weighed 35 pounds and that corn grew 16 feet high. The writer is prepared to demonstrate all he says. Of course the potato has long since gone where such sweet foods go, but there is a photograph left and the testimony of half the people of the valley as to the facts in the case. The writer boasts no great pretensions of honesty, but a singular fact has transpired which adds to his testimony. Several gentlemen have said to the writer, "I met some

people from your valley today, and they verify your statements; you all seem to agree on the general condition of your country." Of course these people have been put under proper training before we let them out of the valley. This large potato is a remarkable exception, though wagon loads are produced every year ranging from 5 to 15 pounds each, while with tall corn that's about the only kind we grow, as the corn and potato statements are now old and no doubt easy to believe, I will give you something to set you to thinking. Johnson grass grows eight feet tall and red root weeds as large as a wild plum tree; actually while plowing in my corn field I encountered weed roots that would stop my horses. Such large roots; the widespread leaves of one weed would cover four square yards of ground, and an ax had to be used to cut them down before plowing could be successfully done. But that is nothing; we have a variety of weeds that look over our ordinary well trimmed trees, sun flowers make good fence poles; a limb of a young tree grew nine feet in one year, and actually a graft in a pear tree grew six feet in one season and bore fruit. Sugar cane grows three or four years from the one planting, and so on. The writer has reserved some of the astonishing facts, lest people would think we were over-drawing our statements. I am willing to leave the matter with others who know, if there should be any further question about the correctness of the statements formerly made and those in the above lines. Now to business:

In answer to letters of inquiry from Frisco, Ogden, Cleveland, Emery county, Eden, Weber county, Logan and other places, I take pleasure in answering as follows: The land not already filed upon may be secured in the usual way, by homestead or desert act, but the choicest quarter sections have already been taken. Though there are still smaller pieces left, forties and eighties near the settlements while farther away and in less desirable locations larger quantities may be secured. After the survey of our canal was completed this last spring, and it was fully determined that the new canal would be put through, our people located all the choicest land that it might be properly secured. We felt that incoming Saints might share with us on very reasonable terms. Choice farm land under cultivation and that not cultivated in and about our towns can be had at prices ranging from \$15 to \$50 an acre, and even less in the rural districts. There are thirteen canals already conveying water on our lands owned entirely by the people of the valley. A water right usually covers ten acres of land and in the majority of our canals can be had for \$25, though in the Montezuma and San Jose, two canals holding prior rights the prices are materially higher. Not more than one-third of the valley on the west side of the river is covered by these canals, the remainder left to be covered by our prospective enterprise. The land above mentioned not located and which can be obtained on reasonable terms from those who have filed upon them, lies between our present upper canal and the foothills of the Graham Mountain, along which we hope in the near future to see the waters of the Enterprise running. This canal is to be constructed entirely by the people, the greatest portion of which can be worked with plow and scraper there being but a few hundred feet of blasting and mason work. It is expected that all who work on the canal get their pay in stock, shares of water, priced at \$25 each with the payment in cash of only 5 per cent of the amount subscribed. We may complete this in one or two years and it may take five, depending entirely upon the energy of the people and their efforts

to put it through. This canal when constructed will be thirty-six miles long, twenty-five feet wide at the bottom and four feet deep; this water source will be all we will ever need for the portion of the valley it covers.

Good well water is procured at an average depth of fifty feet, none of which is surface water; the more used the more abundant, purer and better it gets. The river water is clear about three-fourths of the year and is good for general household purposes. I consider the Gila Valley well watered. I trust this will answer all questions on the land and water satisfactory to our inquirers. There are no monopolists or syndicates as yet in our valley and we hope there will never be any to place the yoke of bondage on the people.

Those purposing moving into our country would do well to sell out all cumbersome household furniture and farming implements. Everything can be procured in the valley that is needed at prices about the same as in Salt Lake City. Bring nothing but bedding and clothing unless it should be valuables, pictures, etc. As to transportation, if those who are going are not already provided with suitable teams and traveling outfit it would be decidedly cheaper and better to go by rail, as the cars pass immediately through our settlement. Our conference rates, round trip, either by way of California or Colorado, is in the neighborhood of \$60. There is a liberal arrangement by the railroads for the accommodation of colonizers. We invite the good people, especially Latter-day Saints, all of whom we would advise to ask counsel of their superior church officers before making such a move. I would advise men earning good pay to continue their employment securing what means they could to aid them, at the same time, sending a portion of their family to our valley to procure land and begin the establishment of a home, for the money earned would be a very strong factor in making a start in a new country. Those coming into our valley would have to take their chances with us. We need more help, and the land already under cultivation could easily sustain as many more people. The employment by which to earn means is principally on the farm and the mechanical labor necessary in building homes. Honest, industrious and enterprising people may do well from the start even if our new canal should not be constructed, we will welcome many good citizens.

The mountains are full of timber; there are at present three or four saw-mills in operation and the Cluff Bros. have flumed over three miles in which a choice mountain stream flows operated as a chute through which to convey lumber from the tops of the mountains. This when completed to the valley, will greatly reduce the price of lumber and convey to the valley a choice stream of water which some day will no doubt be used as water-works in our coming cities. The altitude of our valley is a little rising of 3,000 feet and as Salt Lake valley is over 4,000 feet, our temperature is correspondingly that much warmer. We have about two months' rainy season in July and August, otherwise we have good weather almost the entire season. As for health as already explained in former letters we have a healthy country, no rheumatism or lung troubles, but few contagious, and they not of a malignant form. It is true there are some unpleasant features, but we sincerely trust our readers are not expecting to find a perfect country. We have no mosquitoes, gnats, flees or bed-bugs, but there are several flies and one or two spiders to take care of them. There are a few Gila monsters