

is not one truth that such are in possession of but what every other God knows." "None of these Gods are progressing in knowledge; neither can they progress in the acquirement of any truth."

In his treatise entitled "Great First Cause," page 16, par. 17, br. Pratt states:—"All the organizations of worlds, of minerals, of vegetables, of animals, of men, of angels, of spirits, and of the spiritual personages of the Father, of the Son, and of the Holy Ghost, must, if organized at all, have been the result of the self combinations and unions of the pre-existent, intelligent, powerful, and eternal particles of substance. These eternal forces and powers are the Great First Causes of all things and events that have had a beginning."

The foregoing quoted ideas, and similar ones omitted to be quoted, with the comments thereon, as advanced by br. Pratt in an article, in the *Seer*, entitled "Pre-existence of man," and in his treatise entitled "Great First Cause," are pleasantly presented. But to the whole subject we will answer in the words of the Apostle Joseph Smith, on a similar occasion. One of the Elders of Israel had written a long revelation which he deemed to be very important, and requested br. Joseph to hear him read it. The Prophet commended its style in glowing terms, remarked that the ideas were ingeniously advanced, &c., &c., and that he had but one objection to it. "What is that?" inquired the writer, greatly elated that his production was considered so near perfect. The Prophet Joseph replied, "It is not true."

This should be a lasting lesson to the Elders of Israel not to undertake to teach doctrine they do not understand. If the Saints can preserve themselves in a present salvation day by day, which is easy to be taught and comprehended, it will be well with them hereafter.

BRIGHAM YOUNG,  
HEBER C. KIMBALL,  
DANIEL H. WELLS.

#### REMARKS

By President BRIGHAM YOUNG, Tabernacle, P.M. of June 3, 1860.

[REPORTED BY G. D. WATT.]

I delight to meet with my brethren; it is my chief joy; it affords me great consolation and comfort. But whether I am alone or in the midst of the Saints, the Spirit of my religion is continually a sacred consolation to me; I hardly ever see the time when I do not have a flow of it.

One of the greatest blessings I enjoy is the privilege of meeting with the assembled Saints. Do you realize that there is not another denomination, professing Christianity, that enjoys this privilege in so great a degree as do the Latter Day Saints? There is not another society or community professing to believe the Bible, embracing it in their faith, would consent, for one moment, to sell or give away all they have and travel halfway over the earth for the sake of assembling together.—The position of all other professing Christians causes them to mingle more or less, with the ungodly—with those who take the name of God in vain—with those who delight in unrighteousness; were they called to make the sacrifices required of this people they would refuse, and abandon their religion rather than comply.

The Latter Day Saints are called to separate themselves from the wicked, to assemble together and associate with each other; and this is one of the greatest blessings bestowed upon me; that I may not be obliged to mingle with the ungodly. My business—my course of life—does not call me where I am under the necessity of hearing the name of that Deity whom I worship blasphemed; where His character, name, place, and attributes are held in the deepest derision, as they are in the world. I am not under the necessity of mingling with such characters. Is not this a blessing? It is. True, in traveling and preaching, I have mingled more or less with the ungodly, since I have been in this church; though, when I have fallen into such society, I have passed along as speedily as possible.

In Kirtland, in 1833, the Prophet Joseph told the Elders that if they would do right, would promote the kingdom of God upon the earth, as they professed they desired to do, they would take his counsel to never put forth their hands to do another day's work to build up a gentile city. From that day to this, I do not know that I have done one hour's work contrary to that counsel. You have frequently heard me refer to my poverty when I moved to Kirtland in the fall of 1833. Not a man ever gathered with the Saints, so far as I have known, but had more property than I had. When I came into the church I distributed my substance and went to preaching; and when I gathered with the Saints I had nothing. I then said I would not work to build up a gentile city. Other mechanics went from Kirtland to different cities to get employment. I said to them, I will work here, if I do not receive one farthing for my labor, and have to beg my bread, and I will assist in building up this place, and will make many dollars to your one, by so doing. I did, for when I started to the west, on the 5th of the following May, I could have bought what almost the whole of them had

made during the winter. They told me that it often cost them more to get twenty dollars they had earned than it did to earn it. I went to work for br. Cahoon, one of the Kirtland Temple committee. He had little or no means, and only a shell of a house. I helped him, and the Lord threw things in his path, and he paid me for my labor. I worked, day by day, and when spring came I had more in my possession for my labor than any who had gone out in search of work during the past winter.

If they had waited for me to have lifted my hands to build a city at Fairfield, and its neighborhood, they would have waited until the judgment day. I said, when they came here, and I now say, if they had loaded every one of their wagons with gold and offered it to me, they could not have bought me, and I would not have worked for them. You may ask, "have you not helped them?" I have sold them a considerable amount of lumber, but in that operation which received the most help, they or me? They paid my price, and I do good with it, and intend to continue doing good.

Were I residing in a gathering place where I knew I could remain for two years, and had fifty thousand dollars to spare, I would expend it in the best improvements I could, and labor to improve until the last day of my remaining. The Lord is gathering his people, and this is a city for the Saints. A great many here are satisfied with a log hut. Some act as though they expected to be driven, and others say "we will soon go back to the Center Stake of Zion, and this house will answer my purpose till then." Let every mechanic and every scientific man of all classes and occupations, and every woman, improve to the best of their ability, faithfully living their religion, and we shall be none too well qualified to build up Zion, when that time arrives. I never saw a stone mason who thoroughly understood his trade. We have not a quarryman who fully understands getting out rock for the temple walls. Then how, amid such ignorance, are you going to properly lay the foundation of the New Jerusalem—the Zion of our God?—What do you know about building the great temple that is yet to be built, upon which the glory of God will rest by day and by night? Where is the man that knows how to lay the first rock in that temple, or to get out the first stick of timber for it? Where is the woman that knows how to make a single part of its interior decorations? That knowledge is not now here; and unless you wisely improve upon your privileges, day by day, you will not be prepared, when called upon, to engage to the best advantage in building up Zion.

No nation possesses any wisdom but what it has received from the same God that we worship. He is the best mechanic and the most scientific personage that we have any knowledge of. There is not a principle in astronomy, known by men of science but what has been revealed from heaven. All true knowledge among men, in relation to agriculture, the arts, science, commerce, and every avocation in life, has been given from our Father in Heaven to his children, whether they acknowledge and obey him or not.

Br. Wells was just speaking about the Lord's having a foot hold on this earth. He holds dominion over the winged tribes of heaven—they obey his law. He holds dominion in the depths of the sea, where man cannot pollute it. But there is not a mountain, valley, continent, island, or other portion of earth where mankind dwell, but what thereon they more or less pervert the ways of the Lord, and have done so nearly all the time; though His providences are over them all, and He will cause the wrath of man to praise Him. Enoch was the only man that could build a city to God; and as soon as he had it completed, he and his city, with its walls, houses, land, rivers, and everything pertaining to it, were taken away.

God does not violate the agency he has given to man, wherefore let this be in the mouth of every Saint, "the Lord shall have perfect dominion in my heart and affections," then he will begin to reign in the midst of the people, but he cannot do so now. When we have faith to understand that he must dictate and that we must be perfectly submissive to him, then we shall begin to rapidly collect the intelligence that is bestowed upon the nations, for all this intelligence belongs in Zion. All the knowledge, wisdom, power, and glory that have been bestowed upon the nations of the earth, from the days of Adam till now, must be gathered home to Zion.

The wicked will become more and more weak and ignorant, as they increase in wickedness. See the trifling, childish foolishness now among the nations of the earth. Br. George Halliday said, this morning "Mormonism has made me what I am." That is true. "Mormonism" embraces all truth in heaven, earth, and hell; consequently all we have received, that is calculated to make us of any worth, is from the principles taught by it.—Look at the world! Where is the wisdom of the emperors, kings, and rulers of the nations? Imbecility and weakness are fast creeping into high places, and spreading among the people. They love lies and choose darkness rather than light, and the Lord will grant them their desires until they dwindle into degradation and utter destruction, when the government will rest upon those who are faithful to God and their country.

This is my country. I am a native born, American citizen. My father fought for the liberty we ought to have enjoyed in the States, and we shall yet see the day when we shall enjoy it. Had we the power, would we hold the wicked down and whip them? No, for, except in self-defence, it is our duty to plead with them and offer them the terms of life and

salvation—to give them all the opportunity God has designed them to have. But what would they do, if they could get the advantage of this people? According to br. Kimball's comparison, they would hug us close and tight—they would oppress, corrupt, afflict, and destroy us. If they could but realize the generosity there is in the gospel of salvation, they would not hate us as they do now. But in their ignorance they would destroy a Saint, because they imagine that a Saint would do the same to them. A Saint would take no unjust advantage, but the devil will. That is what he tried to do in heaven.

Br. Kimball asked whether there were liars and thieves in heaven. It is recorded that the devil is somewhere there, accusing the brethren and finding fault with them. Men in the flesh are clothed with the priesthood with its blessings, the apostatizing from which and turning away from the Lord, prepares them to become sons of perdition. There was a devil in heaven, and he strove to possess the birth right of the Savior. He was a liar from the beginning, and loves those who love and make lies, as do his imps and followers here on the earth. How many devils there are in heaven, or where it is, is not for me to say. Does the accuser of the brethren dwell with the Father and the Son? No, but he is somewhere; and when we go through the veil we shall know much more about these matters than we now do, for we shall possess all the sensibilities we now possess, brightened and increased in intensity by the visions and power of the spirit world to an extent of which you now have no idea.

I will now say a few words upon matters that immediately concern us. I believe it to be the duty of all sisters, who profess to be Saints, to make their apparel; and if they want ornaments, make them. It is the duty of the brethren to know how to build a house, how to make a garden, and how to do every thing that can be accomplished by the ingenuity given to man. Why? That we may know how to build and beautify Zion. Let us improve, and gather all the knowledge and faith we possibly can, both from heaven and earth, being diligent and fervent in all our duties, private and public, and striving to gather the wisdom of God, as bestowed on the nations, home to Zion.

I feel much encouraged with regard to our academy; it is well attended, and the scholars are interested and energetic in their studies. Schools are becoming numerous and well attended and the spirit of improvement is among the people.

Let all, in the coming harvest which promises abundance, strive to secure their bread-stuff; and especially do not part with it to feed your enemies.

Much depends upon mothers in regard to improving the rising generation. Let us all try to improve upon the many and rich blessings we enjoy. The priesthood is here. God is beginning to reign on the earth; open your hearts and let Him reign therein predominant. God bless you, every one. Amen.

#### History of the "Hot Blast" in Iron Making.

The following article, which we copy from the columns of the *Scientific American*, contains facts which may at least prove serviceable in any future experiments that may be entered into for the purpose of manufacturing iron in Utah—if, indeed, it does not furnish a key to the solution of the mystery hitherto acting as a barrier to complete success in this important branch of home manufactures:

The use of the "hot blast" in smelting iron has proved to be one of the most original and valuable inventions on record. It is now employed in all countries, and its importance is felt and acknowledged everywhere. In our last volume, we presented an illustrated history of the apparatus for heating the blast, and it has afforded us pleasure to have received several letters expressing sincere satisfaction regarding the publication of that information. We now present something more relating to this invention, from the inventor himself, who is still living, which makes the matter doubly interesting. Our information we obtained from a paper read before the Institution of Mechanical Engineers (England) by Mr. Neilson, and lately published in the *London Mechanics' Magazine*.

Six or seven years before the invention of the hot blast was brought out, Mr. Neilson had read an essay before the Glasgow Philosophical Society, on the best mode of taking out the moisture from the atmospheric air, in summer time, previous to its entrance into the tweers of iron furnaces, as it was found that the manufacture of iron was much impaired in summer both in quality and quantity, and he had become satisfied that this was owing to the greater amount of moisture in the air at that season. His first proposed method was to pass the air through two long tunnels containing calcined lime, and thus dry it thoroughly (by the lime absorbing the moisture) on its passage to the cylinder of the blowing engine, but this plan was not put on trial. About this time his advice was asked by a friend—Mr. James Ewing, of the Muirkirk Iron-works—in regard to a blast furnace situated half a mile from the blowing engine, which did not obtain a sufficient supply of air at that distance, and of course did not make so much iron as two furnaces close to the blowing engine. It then occurred to him that, as air increased in volume according to its temperature, if it were passed through a red hot vessel before entering the distant furnace, its volume would be in-

creased, and it might be enabled to do more duty in the furnace. Being at that time engaged as engineer in the Glasgow Gas-works, he made an experiment upon the illuminating power of gas supplied by heated air, brought up by a tube close to the burner; and he found that, by this means, the combustion of the gas was rendered more perfect and intense; so that the illuminating power of the particles of carbon in the gas was greatly augmented. He then tried a similar experiment with a blacksmith's fire by blowing heated air into it, by which the fire was rendered most brilliant, and the heat exceedingly intense in comparison with another fire supplied with cold air in the usual manner. Having obtained such remarkable results on a small scale, it occurred to him that a similar increase in the intensity of heat could be obtained on a large scale in large blast furnaces; but being a gas-maker, he could not persuade iron-masters to allow him to make the necessary experiments. At that time there was great need of improvement in the working of iron furnaces, as many of them were standing idle for want of the blast because they were unable to supply the necessary heat for smelting the iron, and unless £6 (\$29.10) per ton could be obtained, no profit was realized. A strong prejudice then existed against meddling with the furnaces—a sort of superstitious dread of change prevailed, owing to the great ignorance of furnace managers with respect to the real action going on in the furnace. Mr. Neilson at length succeeded, however, in inducing Mr. Charles Macintosh, of Glasgow, and Mr. Colin Dunlop, of the Clyde Iron works, to allow him to make an experiment. This was done, and although the air was only raised 50°, it showed a marked difference in the scoria—more iron was obtained from the same quantity of ore than before. This only made him anxious to try his plan on a more enlarged and perfect scale, but he was still retarded by the iron-masters—they objecting to any alteration in the furnace. In one instance, when he succeeded so far as to be allowed to heat the blast, he wanted to make a bend in the pipe to bring the air more closely to the sides of the heated metal and increase the area of heating surface, to elevate the temperature; but his request was refused, and it was asserted that, if the pipe were bent, the furnace would cease working. These prejudices proved serious obstacles to early success; and it was two or three years after this before he was allowed to put a bend in the main heating pipe. But, after years of perseverance, he was at length enabled to work out the plan into a definite shape at the Clyde Iron-works of Mr. C. Dunlop, near Rutherglen, in Scotland.

The invention of the hot blast in smelting iron consists solely in heating the blast between the engine-blower and the furnace, and it is not associated with any particular construction of the intermediate heating apparatus. This was the cause of the success which had attended the invention; and in this respect it had much similarity to that of his countryman, James Watt, who, in connection with the steam engine, invented the plan of condensing the steam in a separate vessel from the cylinder, and was successful in maintaining his invention by not limiting it to any particular construction of condenser. Mr. Neilson was glad to say that the English iron-masters had stood by him in the attempts made in the early times of the hot blast, to deprive him of the benefits of his invention; and to them he was indebted for the successful issue of the severe contest he had then gone through.

Such is the substance of Mr. Neilson's paper. His invention is in very general use in this country, and it has been the means of enabling us to smelt ores which, otherwise, would now have been lying in the earth as useless as the sand by the sea-shore. In Scotland, it has been the means of enabling iron manufacturers to produce pig iron, with a profit, for £2 16s. instead of £6—the former being less than one-half the price of what it was forty years ago. Mr. Neilson was not an iron manufacturer, hence he had great difficulties to overcome in introducing his invention; and had he taken out an American patent, it certainly would have been forfeited by our law (as discussed by us on page 401 of our last volume), which would have been a case of great hardship and injustice. It seems that his own countrymen tried to rob him of the benefits of his invention, but he triumphed over them through the sturdy support of English iron-masters; and he is now, in his old age, enjoying his *otium cum dignitate* (ease with dignity).

Whether or not the attention of our iron mongers has been called to this valuable discovery, we are not informed. If not, the trial, if it could be conducted on a small scale, without much expense, might lead to favorable results. While this subject is before the community, we are desirous of affording every facility within our reach to bring the matter to a successful issue.

THE DRUNKARD'S FATE.—John D. Defrees, writing from Washington to the *Indianapolis Journal*, says:

Twenty years ago I was a looker on at the doings of Congress. The two men who attracted the most attention were William Cost Johnson, of Maryland, and Thomas F. Marshall, of Kentucky. They were the most brilliant orators—the "observed of all observers." Mr. Johnson died in this city a few days ago, a pauper and an outcast, unnoticed and unlamented. The papers, a few days ago, informed us that Mr. Marshall is an inmate of a hospital at Buffalo, diseased and miserable, and about to die! Intemperance, of course, is the cause of all this.