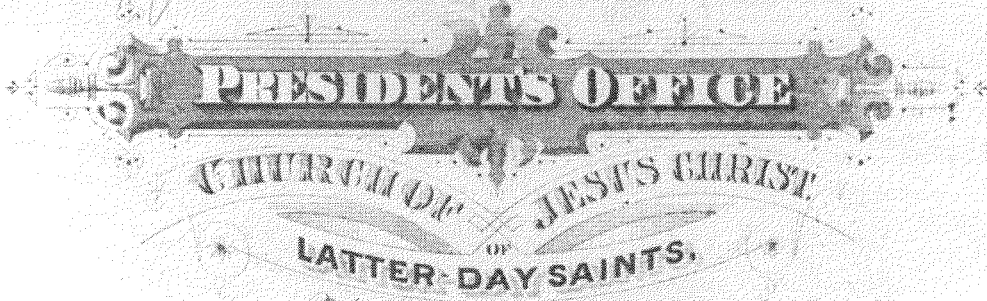


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Washington,
Salt Lake City, Utah Feb. 13th 1890

President Wilford Woodruff & Joseph F. Smith

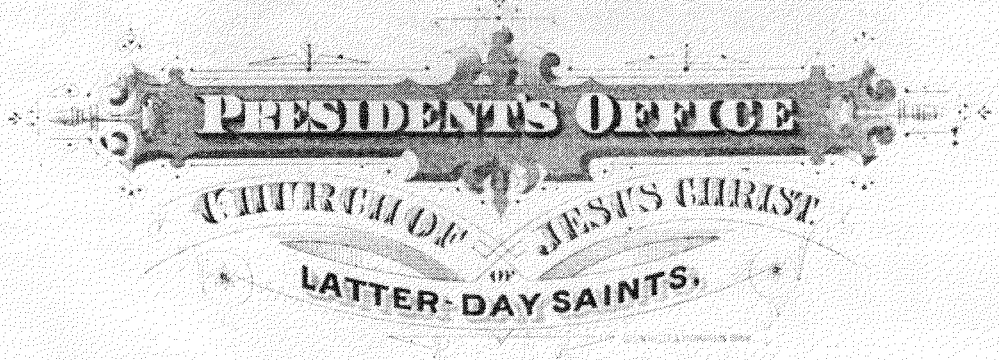
Dear Brethren:

I had a very satisfactory conversation with the Architect of the Capital, Mr. Clark, and Mr. William Larriman who has charge of the heating and ventilating of the capital. They took great pains in explaining to me the whole process, and went with me through the rooms and explained all that was necessary about the heating and ventilating of this building. For the House of Representatives, a 12-foot fan is used to drive the air, which is brought some distance from the outside of the capital into the building. This 12-foot fan is driven by a 24-horse engine, but this has been in use for thirty two years. Since then, great

over

improvements have been made, and now they tell me that a six-foot fan driven by a six-horse engine will answer the same purpose. There are two boilers of two hundred and fifty horse power, which supply steam for the engines that drive these fans, and also for the heating of the coils through which the air is driven to heat and ventilate the House. Besides the heating coils, there is also what is called an evaporator. This is for the purpose of moistening the air before it is blown into the hall of the House, and to supply it with the moisture of which it is deprived by driving it through the heated coils.

I am satisfied that this is the best method of heating that can be had. I was particularly desirous to know what the cost of this system would be over what is called the direct system, that which is being used in the capital, being called the indirect system. I was assured that all the difference in the cost would



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Salt Lake City, U.T.

189

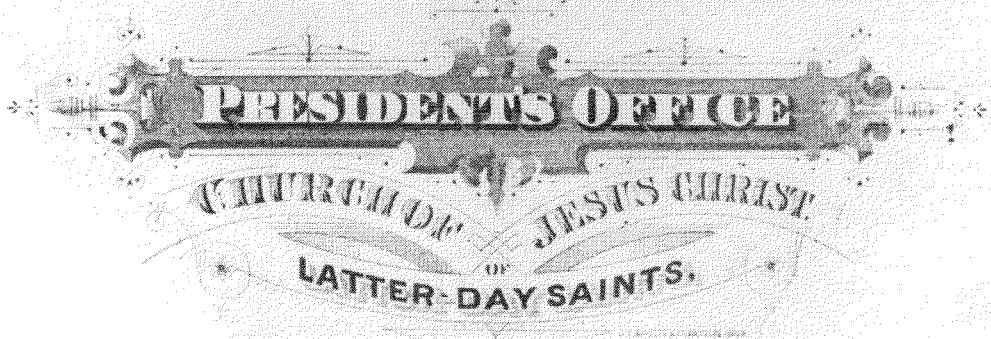
to the speed of the fans and the power to drive it.
 Mr. Lamm said that instead of a six-horse ^{power} engine,
 however, he would suggest that a 12 horse power engine
 be obtained to drive the fans so that there will be
 plenty of power, and the cost would be but very little
 more.

After examining the whole system, I asked them
 if they were going to choose between heating by hot
 water or heating by steam, that is by direct heat, which
 system would be preferable. The answer was, the
 low pressure system of steam heating; but I said
 objection was made to that because necessary preparations
 had to be made for the coldest of weather, and it was said
 that in milder weather the heat was excessive. I was told
 over

that that was not necessary, for coils might be arranged so as to use only a part, and then besides, the heating could be regulated by the pressure as well.

I certainly think the system of heating by indirect heat the preferable one, for then you can have ventilation as well as heat. This for our ^{large} tabernacle in the winter time, and in the summer also, would be excellent. In the summer the fan could be used for bringing in cool air and producing ventilation in hot weather, and in the winter when the doors are all closed, giving ventilation as well as heat. For the Temple, it might not be so essential, because large congregations do not assemble there; but for every purpose, if people value their good health, ventilation and heat ought to be associated, especially when it can be obtained with so little extra expense.

The boilers furnish steam to run the fan, steam to heat the coils, to run the elevator, and can also be



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Salt Lake City, U.T.

189

to furnish steam to run the electric lights. Somewhat later, our Temples will have to be supplied with all modern improvements, because I expect they will be as convenient and as complete as any buildings to be found any where.

The amount of air that is furnished to the hall of the House of Representatives is sixty cubic feet per minute for each member. This is a large supply than is necessary, but in order that they may be on the safe side and have ^{ing} plenty of power, that amount of good air is forced into the hall.

I have given you in this communication the results of my last inquiries. While I remain here, I shall still continue to get all the information possible upon this point.

With Love, I am, as ever,
Your Brother, Geo. D. Cannon.