

Commissioner's Note of November 9, 1915.

To leave this part of the report without comments, seems to evade the real issues and the basic facts affirmatively necessary to aid the litigants in the progress of adjudication, the interests of the Commissioner in enlisting aid was not desired, excepting one, the prevailing attitude does not invite recommendation or a submittal of conclusions. in a report to the Court.

To the communication of The Timpanogus Canal Company of June 4, 1915, I answer in the words of the Hon. Samuel W. Johnson:-

" It is the boast of some who affect to glory in the sufficiency of practice and decri theory, that the former is based upon experience, which is the only safe guide. But this is a one-sided view of the matter. Theory is also based upon experience, if it be worth the name. The fancies of an ignorant and undisciplined mind are not theory as that term is properly understood. Theory, in the strict scientific sense, is always a deduction from facts, and the best deduction of which the stock of facts in our possession admits. It is therefore also the interpretation of facts. It is the expression of ideas which facts awaken when submitted to a fertile imagination and well-balanced judgement. A scientific theory is intended for the nearest possible approach to the truth. Theory is confessedly imperfect, because our knowledge of facts is incomplete, our mental insight weak, and our judgement fallable. But the scientific theory which is framed by the contributions of a multitude of earnest thinkers and workers, among whom are likely to be the most gifted intellects and most skillful hands, is, in these days, to a great extent worthy of the Divine truth in nature, of which it is the completest human conception and expression.

" Science employs, in effecting its progress, essentially the same methods that are used by merely practical^{men}. Its success is commonly more rapid and brilliant, because its instruments of observation are finer and more skillfully handled; because it experiments more industriously and variedly, thus commanding a wider and more fruitful experience; because it usually brings a more cultivated imagination and a more disciplined judgment to bear upon its work. The devotion of a life to discovery or invention is sure to yield greater results than a desultory application made in the intervals of other absorbing pursuits. It is then for the interests of the farmer to avail himself of the labors of the man of science, when the latter is willing to inform himself in the

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details of practice, so as rightly to comprehend the questions which press for a solution.

" The farmer deals with the plant, with the soil, with manures. these stand in close relation to each other, and to the atmosphere which constantly surround and acts upon them. How the plant grows, - the conditions under which it flourishes or suffers detriment, - the materials of which it is made, - the mode of its construction and organization, - how it feeds upon the soil and air, - how it serves as food to animals, - how the air, soil, plant, and animal stand related to each other in a perpetual round of the most beautiful and wonderful transformations, - these are some of the grand questions that come before us; and they are not less interesting to the philosopher or man of culture, than important to the farmer who depends upon their practical solution for his comfort; or to the statesman, who regards them in their bearings upon the weightiest of political considerations."