IN THE

Circuit Court

OF THE

United States

Ninth Judicial Circuit, Northern District of California

THE SPRING VALLEY WATER WORKS (a corporation),

Complainant,

vs.

THE CITY AND COUNTY OF SAN FRANCISCO (a municipal corporation), THE BOARD OF SUPERVISORS OF THE CITY AND COUNTY OF SAN FRANCISCO, and JAMES P. BOOTH et al., members of and constituting said Board of Supervisors,

Defendants.

No. 13,395
IN EQUITY

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Complainant,

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Nos. 13,598 and 13,756
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CLOSING ARGUMENT

of Edward J. McCutchen for Complainant, on Final Hearing

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ADDENDA.

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SUBSTITUTIONAL VALUE.

Mr. McCutchen. If your Honor please: At the opening of the argument for defendants, counsel on the other side expressed a great deal of surprise that complainant had taken the position which was taken by counsel who made the opening argument in its behalf. He suggested that he was very much misled, that he was in a maze of uncertainty, that he did not know where to turn or exactly what to do because the theory upon which the case was presented upon oral argument was so radically different from that followed in the briefs. He also suggested that the oral argument antagonized the briefs and that it was absolutely impossible to reconcile the positions taken in the argument with those taken in the briefs. His criticism was directed, first, to our use of the so-called substitutional system; and, second, to resort to the cost of duplication for the purpose of determining value.

I was very much surprised by counsel's attitude. He was not content with stating it once, but he stated it time and again. Indeed, this substitutional system was as worrying to him as was Banquo's ghost to Macbeth. There was not a session from the time he began his argument until he closed that he did not devote some part of it to the substitutional system. The use of the substitutional system has worried him beyond measure; and it is that system which, he has so solemnly said to your Honor, had no foundation either in law or reason.

The doctrine of substitutional cost was urged in complainant's opening brief, and let me recall what counsel

on the other side said in reply. I will read from page 60 of the defendants' brief, under the sub-title of substitutional cost:

> "The contention that the value of complainant's plant should be fixed by 'the estimated cost of the next available substitutional system' has no basis in reason or law."

It is hard to understand why counsel so expressed themselves in their brief, if there was nothing in our brief indicating that we relied upon that method of reaching value.

But let us go a little further: I quoted to your Honor in my opening argument a statement from the brief of the defendants that substitutional cost was one of the elements to be considered. On page 361 of the transcript of his argument he said—and I only take up the time to show that the position of the complainant has been perfectly consistent—that nothing is said in complainant's closing brief, as to the fixing of value by comparison with a substitutional system, and that the views of the respective parties are irreconcilable.

"Upon oral argument", says he, "complainants have entirely changed their position."

And on page 396 of the transcript, he says:

> "Believing that the closing brief of complainant, filed more than four years after the testimony was closed, and signed by all of the solicitors for the complainant, represented the final wisdom of the large array of attorneys employed by complainant in this case, defendants prepared to discuss the issues of this case on the final arguments on the posi-

> tions taken in that brief. Greatly to our surprise, however, counsel for complainant in orally arguing his case has taken positions which are entirely inconsistent with the views expressed in the brief and has made but slight reference to the complainant's brief, and that is a very strange circumstance because counsel referred to our brief very frequently during his argument."

And I ask counsel now, in common fairness, to point to a line in the oral argument in which any position taken in the briefs is antagonized.

I could not understand what the purpose of counsel was in endeavoring to make it appear to the court that the counsel who made the oral argument was at cross-purposes with those who prepared the briefs.

Mr. HAVEN. I refer to the paragraph in the closing brief which says there are two methods of determining value in an action of this character, and in neither of those methods is the method of substitutional value mentioned.

Mr. MCCUTCHEN. In reply to that suggestion, I refer your Honor to the statement on page 8 of Vol. 1, complainant's closing brief, to which counsel has made reference. It is there said:

> "Second: By other independent evidence tending to show what would be the cost of reproducing all the property if it were necessary to acquire the lands and construct the works in their present condition at the time of the investigation."

If counsel can find any substantial difference between that statement and my statement of substitutional cost,

I would like him to do it. And he says he agrees with that; he is committed here practically to an agreement with that statement of the law on the subject.

And again he says, still trying to find some antagonism between the briefs and the oral argument, at page 543 of the transcript:

> "Now, turning from the brief to the oral argument of complainant, which is not consistent, or at least is not the same argument as was made in the brief; as I understand, the oral argument was mainly, and I don't know but entirely on the two bases upon which counsel seeks to fix the value of the property; one is what he has designated as a comparison of value with a substitutional system; the second was attempting to get at the value of water as such, and an attempt made by him to show that Grunsky had inflicted a heavy wrong on complainant by leaving out a certain quantity of water."

Are those the only methods of valuation which counsel understands were dealt with in the oral argument? If they are, I am unfortunate, indeed, in my effort to make myself understood. I put upon the blackboard here a number of valuations based upon his own figures, with one or two exceptions. Does he understand that those were not contended for, at least as minimum valuations?

And again:

> "With reference to the substitutional system, even if the Tuolumne system was an accomplished fact and were here furnishing water, or ready to furnish water, there is no authority for the assumption that that is a *final* basis for fixing rates for an existing plant."

I have not claimed that it is. Do not these quotations, taken one by one, starting with the beginning and reading on from day to day, show an admission on his part that so far from the argument having no basis in law or reason, it has very substantial basis?

After stating that counsel for complainant was grasping at a straw when he relied on the so-called substitutional system, and saying that a falling man will grasp at almost anything, he was asked this question:

> "Do you now say that substitutional cost is not to be considered?"

And his answer to that question was:

> "I do not.
>
> "Mr. McCutchen. Then I have not misconstrued you, have I?
>
> "Mr. Haven. You have not misconstrued me if you say that is to be considered, but, as I understood your argument, you say it is not only to be considered but because we have said it is to be considered we have therefore said that you were justified in building up your valuation by this comparison."

I stated to your Honor very candidly that I did not claim that you were obligated to allow for this property, if you were to take the Tuolumne system as a comparison. the entire cost of that system. But I did say that it was a most important circumstance, and in my view was the most important circumstance that was developed by this record. And counsel is compelled, by force of the logic of the positions which he took in the early part of his argument, to come to that conclusion; he can reach no other.

Upon what right, I ask,—and I asked him when I made my argument to reply to this, and he has closed his argument with silence upon the subject,—I say I asked him to tell us by what right he took substitutional cost for the structural parts of this plant, and refused to apply the same rule to water rights and real estate. Has he made any answer?

I now come for a moment to a comparison of this plant with a projected substitutional plant as a circumstance enabling the court to tell what the value of this plant is.

I never have contended, and I do not now contend, that your Honor is compelled to take as the measure of value of this property what it would cost to bring a supply of water from the Tuolumne. I do claim, however, that one of the circumstances which you may and should take into consideration is what it would cost to render the same service to San Francisco that was being rendered in the year 1903 by the complainant. Your Honor will recall that there are used, by the authorities dealing with the subject of rate regulation, the expressions "an equivalent service", "the cost of the service", "the value of the service". For the purpose of determining the value of the service, it is proper to consider what it would cost to supply San Francisco with the same quantity of water, and of the same quality, and with the same reliability of service, as that with which the city is now being supplied. Counsel was not very far away from that proposition when he got through with his argument. He started with the notion

that our argument for a comparison with the proposed system was monstrous, but, before he got to the end of his argument, he was prepared to admit the usefulness of the doctrine of substitutional cost, with the qualification that the cost of the substitutional system would stand as an upper limit to the value of the existing property.

Counsel at times was very alert to the effect of this substitutional doctrine, if we may so characterize it. He found it necessary, on other branches of his case, to follow a line of discussion which evidently did not appear to him at the time to have any effect on the doctrine of substitutional value. One of those instances is found on page 431 of his argument, where he said, when discussing cost—and by the way, at one time he thought cost was value, at another time he thought that cost of duplication was value—:

> "The city is bound to pay a fair rate of income upon the value of the property which is then being used for its benefit. The measure of that value has been held to be what it would cost to reduplicate the property. This must include, however, reduplication by the city itself, if necessary."

He was there discussing our right to make a discount on stocks and bonds. As he saw it, the proper way to ascertain the value of the property was to determine what it would cost to duplicate it, and that means what it would cost to duplicate all of it.

I went into quite an elaborate discussion for the purpose of showing what it would cost San Francisco if

the ideal system which Mr. Grunsky recommended were adopted, that is, a combination of the Tuolumne system, having but one pipe-line, with our peninsula system, that is to say: what it would cost per million gallons to bring water from the Tuolumne, where there is no market for it, to Crystal Springs reservoir, from which it could be distributed to a market. I assume that counsel finds no fault with my figures on that phase of the case. His only criticism is that it is not certain that that system will ever be built and that, therefore, your Honor should not use the comparison for any purpose. He did not go so far, toward the end of his argument, as to say that, but he did say that your Honor should not take the cost of the Tuolumne project as being beyond any doubt the value of the existing plant. I do not claim that. I think we have a showing here from which it may fairly be said that it is not possible to find, short of the Sierra, water which the city needs and which it must have, if the present system is not used. That is the conclusion of their own witness; that is their showing. There is no getting away from that showing so far as the city is concerned.

As I said to your Honor in my opening, you can afford to take that branch of the case as the city has made it. It makes no difference whether our engineers think that that will be an expensive system or not; the showing made is that San Francisco must have water. There is no intimation that she can get it cheaper than from the Tuolumne. The unqualified showing is that the Tuolumne is the most available system. Your Honor knows

something of the topography of this state; you know something about the localities where water is to be had, and you know, of your own knowledge—a knowledge which is common to all the people in California, certainly to all those who have spent any time in San Francisco,—that unless water be drawn from the San Joaquin or Sacramento rivers, and that has been condemned by everybody who has considered the subject—the city will be compelled to go to the Sierra unless she continues to rely upon the existing plant. That being the case, and Mr. Grunsky having said, and the city by its formal action having said, that the Tuolumne is the best and most available source, are we not entitled to take into consideration the cost of water per million gallons from the Tuolumne, to determine the value of our property? Mr. Schussler, than whom no man knows better the value of water, says that the water which we supply is worth at least $150,000 per million gallons. Mr. Hering, who is one of the foremost men in the country, and who is now employed by the city of San Francisco to supervise some of its engineering works, says that the water which we furnish is worth $150,000 per million gallons. Are not the statements of those witnesses very materially supported by a showing that to get other or additional water the city must go to the Sierra—to which their witnesses all say you must go—and that the water so coming from the Sierra will cost, exclusive of the cost of impounding it, at least $460,000 per million gallons? We do not ask you to make us an allowance of $460,000, but

suggest that the fact that that will be the expense of getting other water here affords a very substantial support to the statement of Schussler and Hering that our water rights are worth $150,000 per million gallons of daily production. It is all well enough to say that it is speculation, but, if it be called speculation at all, it is speculation with a very substantial foundation. We claim that your Honor should take into consideration with that—by judicial notice—the fact that San Francisco has voted the issuance of $45,000,000 in bonds to acquire that system. Counsel said you could not take that into consideration because it happened after the taking of the testimony in this case. We relied upon proof of the early action of the city and its officials to show the initial action on the part of San Francisco looking toward the acquisition of that supply. We might have asked your Honor to open the case before this argument began, and allow us to make proof that that initial action had been consummated by a determination to acquire that system, and that bonds had been authorized to be issued. It would not have been a valid objection that that had not occurred before the trial of this case. It would not have been an objection that that had not occurred before these expert witnesses testified. The order in which the proceedings were had would not have had any effect upon the value of the Tuolumne system; nor would it have had any effect on the value of our system. Our system would have been of just as great value, and the cost of the Tuolumne would have been just as great, whether San Francisco voted for or against these bonds. But the object of ask-

ing your Honor to take judicial notice of the fact was that you might know and consider that the initial action taken by the board of supervisors had finally resulted in the approval of the people of San Francisco.

JUDICIAL NOTICE AS TO BOND ISSUE.

Counsel has reminded me that I need not have gone so far afield to find authorities on the question of judicial notice. I listened to him with some interest when he said that I could have gotten that from the Schmitz case. From the beginning to the end of the Schmitz case, there is nothing said about judicial notice. The court did not consider in that case whether it could take judicial notice of the fact that Schmitz was mayor. In fact the statute expressly provides that it should take such notice. The court there considered the validity of an indictment, and we all know that although a court will take judicial notice of a fact, that does not relieve from the necessity of pleading the fact, if it be one which should be pleaded ordinarily. In the Schmitz case, there was no allegation in the indictment that defendant was mayor, and all that the court held was that the People should have pleaded that fact if they intended to rely upon it.

I understand counsel's argument to be that as we could not have offered proof of this matter before the testimony was published, the court cannot take judicial notice of it. I call your Honor's attention to the case

of *Southern Pacific Company v. Lipman,* 148 Cal. 491, from which I read:

> "It is insisted by counsel for respondent that neither the decision of the Supreme Court in 183 U. S. 519 (22 Sup. Ct. 154), nor the commissioner's letter can be taken into consideration as evidence because the decision of the Supreme Court of the United States was rendered and the letter written subsequent to the decision in the case at bar, and, as counsel say, have 'no legal significance in the determination of the motion for a new trial.' But they are not considered as evidence at all. The decision is taken as conclusive authority that the conclusion reached by the trial court that it had been finally determined by the prior decisions of the supreme court, cited in the agreed statement of facts, that patent shall not issue to plaintiff for these lands within its main-line grant, was wrong. And the letter of the commissioner of which we take judicial notice (Southern Pac. R. R. Co. v. Wood, 124 Cal. 475, (57 Pac. 388), is considered in connection with that decision as showing that the government has conformed to the equitable requirement declared therein and partitioned between itself and plaintiffs the lands within the conflicting primary limits of the grant, so as to set off to the plaintiff the lands in the case at bar within such limits which it had assumed to sell, in order that, as the court said, 'Thus the title to the purchasers be perfected.' "

The commissioner of the general land office had acted pursuant to a decision of the supreme court of the United States, and the trial court took judicial notice of the action of the commissioner. This action by him was after the case had been decided and when it was pending on motion for new trial.

And so we say here that the court will take judicial notice of these proceedings to the extent of considering them for the purpose of determining whether this initial action of the board of supervisors declaring in favor of the so-called Tuolumne system was ever completed by those having the authority to complete it.

There is one case which I desire to cite to your Honor on the question of substitutional cost which I failed to cite in the opening. It is *Brunswick Water District v. Water Co.,* with which your Honor is familiar. You will remember that the company in that case owned two sources of supply. It was bringing water from the more expensive source rather than from the source from which it could have been brought for smaller expense. The opinion nowhere intimates that the value of the complainant's properties is lessened because of their dedication to the public. Judge Savage wrote the opinion in that case and said, at page 543 of 59 Atlantic:

> "We turn to the other question involved in this request. That relates to the assumed existence of a nearer and cheaper source of supply than the one now in use by the company, which is a part of its present entire plant, and which in part represents its actual investment. *We do not doubt that, when the worth of a public service of this kind to the public or the customers is spoken of, necessarily one of the elements to be considered is the expense at which the public or customers, as a community, might serve themselves were they free to do so, and were it not for the existence of the practically exclusive franchises of the supplying company.* When the worth of the water to a consumer is estimated, we are not limited to the value of water it-

self, for it is an absolute necessity. Its value has no limit. Water, speaking abstractly, is priceless; it is inestimable. To sustain life it must be had at any price. And in this respect, a public water service differs from all other kinds of public service. In estimating what it is reasonable to charge for a water service—that is, not exceeding its worth to the consumers—water is to be regarded as a product, and the cost for which it can be produced or distributed is an important element of its worth. It is not the only element, however. The individuals of a community may with reason prefer to pay rates which yield a return to the money of other people higher than the event shows they could serve themselves for, rather than make the venture themselves, and risk their own money to lose in an uncertain enterprise. It was said by us in the Waterville case that the investor is entitled to something for the risk he takes, and it is not unreasonable for the consumer to be charged with something on that account. That is one of the things which make up the worth of the water to the customer. But such a consideration as this last one must always be treated with caution. The company is only entitled to fair returns, in any event, and 'fair' to the customer as well as to itself.

"In the aspect now being considered, the worth of a water service to its customers does not mean what it would cost some one individual, or some few individuals, to supply themselves, for one may be blessed with a spring, and another may have a good well. It means the worth to the individuals in a community taken as a whole. It is the worth to the customers as individuals, but as individuals making up a community of water takers. In the very nature of things a water system is usually intended to supply a somewhat compactly settled community, or a community whose geographical limits are somewhat restricted. As a matter of fact, in this state such systems usually supply villages, or

the more compact portions of cities. The necessity does not exist for extending such systems beyond these limits, and the expense would be practically prohibitive. Such a community must, in general, stand as a whole. The rates for such a system are generally and properly uniform, although the expense of supplying some—as those nearer the source of supply—is actually less than that of supplying those at the outermost limits. Still the benefits are uniform, and uniform rates are reasonable. Now, such a community is, we think, entitled to the benefit of such natural and sufficient facilities for procuring pure water as exist in its vicinity. Communities are in every respect entitled to the benefit of existing natural advantages."

ESTIMATES OF COST OF TUOLUMNE SYSTEM.

Defendants in their brief and counsel in his argument before your Honor have characterized the estimates of cost made by our engineers, that is, the estimates of cost for the construction of the Tuolumne system, as absolutely unreliable, because of large discrepancies in the different valuations. The estimates of these engineers are as follows:

Hering	$55,000,000	(p. 3475);
Schuyler	54,896,000	(p. 5408);
Adams	53,330,000	(p. 4681);
Schussler	55,000,000	(p. 1560);
Stearns	54,400,000	(p. 4256).

It is true that Mr. Stearns said that in his opinion the city could not afford to rely upon that plant with only two pipe-lines, and with no storage capacity,—and

it is well known, it would not have any storage capacity —so he said that in order to make the system approach reliability it was necessary to allow for another pipe-line, and that is the way Mr. Stearns reached $70,000,000.

So far from there being the very great diversity of opinion which counsel on the other side has told you of, there is, under the circumstances, the greatest unanimity of opinion as to what the cost of that property will be. We submit that all the facts necessary for the acceptance of the cost of Tuolumne supply as a basis for comparison, have been shown, and that this cost should be a guide of the greatest value in determining the worth of complainant's properties.

COMPLAINANT'S MONOPOLY.

I am reminded that considerable was said by counsel on the other side with reference to our monopoly. The monopoly consists, as I understand counsel, in having purchased from time to time the properties about the bay of San Francisco which are available for a water supply for San Francisco. It occurs to me to ask him what might have become of those properties if we had not purchased them; where might their ownership be today, if it were not in the Spring Valley Water Company?

We did use the word monopoly in our argument, but it must be borne in mind that we get no monopoly from any right that San Francisco or the state has conferred upon us. If we had not monopolized those nearby

sources, somebody else would have gotten them, and what would have been the plight of San Francisco to-day? She would have been compelled, long ere this, to go to the Sierra; to the place, as to which Mr. Dockweiler said, all engineers agree that she should go. If, by reason of acquiring all of the properties that are capable of producing water within a certain distance of San Francisco, we have acquired a monopoly of water producing properties, we are not to be criticised for having acquired such a monopoly. And if those acquisitions, and the fact that they are all united and under one ownership, and are interchangeable, as they are, add any additional value to the property, we are entitled to the additional value. Why should it be said that we are not entitled to that additional value as it would have existed if San Francisco had stood in our shoes, and had bought these properties herself? If she had bought them, and united them as we have, they would have increased in value. Would San Francisco in that case have had a monopoly? The answer will be "yes" but that would have been a monopoly in the interest of the public. However, the value on account of having acquired and combined all those properties would be just the same and only the same.

These properties are just as valuable in our hands as they would be if owned by San Francisco. We are not to be called monopolists, and we are not to be characterized as monstrous because, by the exercise of foresight and judgment,—which words counsel on the other side does not at all like,—we did acquire all of these

properties which are now used for the benefit of, and are useful to, San Francisco.

We now turn to a consideration of the various elements of value omitted by Grunsky in his valuation of complainant's properties.

INTEREST DURING CONSTRUCTION.

Counsel had nothing to say in relation to the item of interest during construction. Of course, there can be no question but that we are entitled to interest during construction, upon any method of valuation. His only argument upon interest during construction is with reference to the cost as it appears upon the books. He has no quarrel with the charge of interest during construction to ascertain what similar structures would cost.

Counsel seemed to get the impression from Mr. Schussler's statement that construction covered from one to one and one-half years, working seven months a year, and that that meant that the seven months were to be taken as the whole year. That is not my understanding of Mr. Schussler's testimony, because he says in several other places, one of which as I recall I quoted to your Honor, that it took from two to three years. So if you will take from a year to a year and a half, that is, from 12 to 18 months, as the aggregate time and assume that the work could be carried on for only seven months in each year you will get just about the result that all the engineers agree upon, namely,

that the average period of construction was about two years. The rule for the computation of interest is to take the full rate for one-half the time. That is the rule that the witnesses on both sides used.

In this connection Grunsky says as follows:

> "P. 361-XQ. 202. No allowance for interest during construction is included in the figures $39,531,000 for the Tuolumne system.
>
> "361-XQ. 203. I have made no calculation to determine what that interest would amount to.
>
> "362. This was intended as an indication of the bond issue that might be required, in order to construct the works. If I had been endeavoring to determine the actual cost of the works to the city, regardless of how paid for, I would have added interest.
>
> "362-XQ. 204. I assumed it would take five years to construct the works.
>
> "362-XQ. 206. With regard to interest, the general rule for its allowance during construction, is to add the full rate for one-half the time that it takes to construct the works.
>
> "362-XQ. 207-8. The interest on the bonds to provide the funds to build the Tuolumne system was assumed to be 3½ per cent. At that rate, on $40,000,000, for two and a half years, the interest would be $3,500,000.
>
> "378-XQ. 310. In the case of introducing items at cost, the 10 per cent has not always been added in addition to the cost that was given us."

I do not care to further discuss this question except to say that counsel claims we are not entitled to have interest during construction considered on the question of cost, because he claims it was paid out of the water rates. Does that make the property any less valuable, or its cost any less? Interest during construction was an item

of expense; that he does not deny. His criticism is that it was paid out of water rates. We might safely admit, for this branch of the argument, that it was so paid. If complainant did pay for it out of water rates, the result represented value, and it belonged to the corporation. He has presented us with a table—I do not know how long he said it was, I am almost afraid to say the number of feet in length, but it was very long,—by which he makes an effort to show how much of this interest during construction was actually provided for out of water rates. To whom did the water rates belong after they were collected? Did they not belong to the corporation? He says in that connection that it makes no difference whether the fact is that the company used money that came from water rates to take care of interest during construction, and it makes no difference whether such use reduced dividends; that in any event, it does not represent cost or value. That is the logic to which he comes all the time. So the effect is, if the company has money enough in its treasury to pay interest during construction, and the money is used for that purpose, such interest does not form part of the cost if the money used to pay it happens to have come from water rates.

My notion is that it does not make any difference from what source the money comes. It does not make any difference who paid it. It does not make any difference whether the water rates were too high when it was paid. It is, nevertheless, value which has gone into the structures. It is an entirely false quantity to say that it was

allowed for out of operating expense. They got an answer from Mr. Reynolds that the corporation did get enough money out of the water rates—I think beginning in 1880—to pay the interest which it did pay and to pay such operating expenses as were paid and to pay such dividends as were paid. Does that make interest during construction actually paid any the less a part of the cost of constructing the property? Money so paid is just as much cost as if we had drawn it from our own pockets. That is what we did, in effect, because we reduced our dividends to that extent. He seems to answer that satisfactorily to himself by saying that it is of no concern to us whether we did or did not use for the purpose money which otherwise might have been distributed in dividends. He does not seem to realize that this argument confounds cost of structures or value of structures with the source from which came the money to pay for them. If the structures were built to-day, they would cost so much in money, and their value would not at all be influenced by the source from which the money to pay for them was derived.

INTEREST ON PROPERTIES NOT IN USE.

When counsel was discussing the subject of interest, he stated that if interest were to be allowed during construction, there must be an allowance for interest on the properties not in use. Now, I cannot follow him there.

Mr. HAVEN. An allowance on the other side, I meant.

Mr. MCCUTCHEN. Do you mean that as I have said it?

Mr. HAVEN. No, I do not mean it as you say it. I say if you take into consideration interest, you must also take into consideration interest that has been paid for all these years on properties not in use, for which the rate payers have had no benefits.

Mr. MCCUTCHEN. In other words, let us take as a concrete example the Crystal Springs concrete dam. We will say that cost $2,000,000. A part of that sum includes interest during construction. Because interest during construction was part of the expense, it is included in the total cost of the Crystal Springs dam. The San Francisco Water Works, they say, went out of use many, many years ago. Now, if you are going to allow interest during construction upon the Crystal Springs dam, in order to get at the actual cost of that dam—and that is the only reason it will be allowed—you must calculate interest on $1,386,000 on the other side for property that has gone out of use. That is what counsel says he means. What are you going to deduct it from? Are you going to take it from the Crystal Springs dam? Does the fact that that property went out of use make Crystal Springs dam any the less valuable? Does it make its cost any the less? And yet that is the argument which counsel seriously makes. And it only shows, to my mind, the failure of counsel to distinguish between actual investment, as shown by the books, and the actual cost, whether shown

by the books or shown by these engineers. As a matter of course, to determine actual investment—and by that I do not mean primal cost—we should calculate interest on properties still owned but that have gone out of use. And that is what Mr. Reynolds did in the computation by which he reached the net investment of $49,000,000. Counsel does not deny it. His only criticism is that Mr. Reynolds computed interest on properties out of use at 6 per cent, and that he computed interest upon the moneys contributed at a higher rate. In this, counsel is correct; Mr. Reynolds should have computed his interest on properties not in use (and which were still in the company's possession) at current rates, whereas he actually did use six per cent for all years. This would necessitate a slight deduction from the $49,000,000, which he gives as actual investment. But this error is in no way connected with, and can have no bearing upon, the question of present cost of duplication. Here the only result desired is actual cost of each structure if presently erected, and previous investment and interest thereon is, beyond question, immaterial. When value is to be ascertained upon the basis of the cost of reproducing the properties, interest, in the sense in which it would necessarily be considered when actual investment is to be determined, is of no concern or importance.

ALLOWANCE OF $1,400,000 FOR INCIDENTALS AND OMISSIONS.

I am also reminded of counsel's reply to our inclusion of the $1,400,000 in Mr. Grunsky's valuations. I do not

exactly appreciate the argument. He said that Mr. Grunsky wanted to be careful and that the board of supervisors had the right to reject Mr. Grunsky's estimate. If it rejected his estimate, no basis remained for the valuation it adopted. Mr. Grunsky was called to the stand by defendants. He said that the $1,400,000 was intended to be included by him as an asset, as a tangible asset of the company. He did not use the word "tangible", but it is impossible to read his testimony and reach any other conclusion than that his intention was that that should be treated as a tangible asset, and that there was tangible value to represent it.

On page 196 in answer to question 34, he said:

> "The total appraisement made in 1904,—including allowance of $1,500,000, which, as I have already explained, should be considered rather as an allowance for omissions, contingencies and the like, would be $26,173,212."

I quoted in full in my opening argument, many other extracts from Grunsky's testimony in this connection. It is hardly necessary to comment further upon this element of value which he found and for which the supervisors refused to make an allowance.

UPPER CRYSTAL SPRINGS AND PILARCITOS DAMS.

Something has been said with reference to the Upper Crystal Springs dam. Counsel admits it may perform some service, but he seems to argue that, because there is an opening between the top of the roadway and the

top of the old dam, therefore it does not operate to form a settling basin. I do not understand how counsel reaches that conclusion, and I cannot follow him to that result. When the roily water comes in from the lower end of the water-shed, it goes without saying that if there is a dam there 80 feet high, which is solid—and on top of that there is some additional material intended to raise it in order that it might be used as a roadway —nevertheless that 80 feet or 90 feet, or whatever the original height was, serves to convert the lake into a settling reservoir, and there would be no settling reservoir if that dam were not there. It is not necessary that the dam should reach the entire height of the present road in order to serve as a settling reservoir. It is said by all our expert witnesses that it does perform a very important office. Mr. Grunsky is candid enough to say that it does perform that office to some extent, although he said that he did not think it was properly allowable. But, if it does perform that office, and if it does what Adams says—and nobody denies that it does that—then in the event of an accident to the Crystal Springs lower dam, it would store a large supply for the use and benefit of the consumers. So it does perform a very useful service. This no one denies, and therefore its cost should be included as part of our value.

There was also something said about the Crystal Springs concrete dam. It carried with it a veiled criticism on Mr. Schussler's method of construction. Your Honor knows that dam was within about three-eighths of a mile of the earthquake fault. You know that down below it are the towns of San Mateo and Burlingame,

having a population of six or eight thousand. No one can tell what might have been the result if Mr. Schussler had not built it as strongly as he did. The suggestion that it might have been built on a smaller section, and enlarged later, carries with it the necessity, at the time of enlargement, of emptying the reservoir and losing the twenty thousand million gallons of stored water which the reservoir impounds. However, there is no testimony to indicate how much the greater section increased the cost, and we do not understand that defendants really claim that this has any bearing on the value of the dam.

ALAMEDA LANDS AND WATER RIGHTS.

Mr. Grunsky's valuation of Alameda properties excludes from consideration approximately $700,000 actually invested, and upon which, on his figures, complainant would not recover any return. That is to say, the difference between our actual investment in Alameda properties and the allowance for that system in Grunsky's figures is approximately seven hundred thousand dollars. According to defendants' table No. IV our investment in lands and water rights, comprising the Alameda properties, is $2,413,482.78. Grunsky's valuation of Alameda lands and water rights is $1,720,251. Your Honor has visited the company's properties in that locality. We own nearly all, if not quite all, the riparian rights from above the location of the Calaveras reservoir down to the point

where Alameda creek empties into the bay of San Francisco. Our entire ownership there has contributed to our ability to deliver from that source of supply the pure water which Dr. D'Ancona, in the board of supervisors, when the investigation took place in 1903 said that San Francisco and its citizens were to be congratulated upon having, and which he further said was of a purity equal to that furnished to any city in the United States. The fact that we did not own all the watershed did not prevent us from delivering pure water. The ownership of the riparian rights was the essential thing. We think it may safely be said there is no water company supplying a large city in the United States that owns as large a percentage of the watershed from which its supply comes as does this company.

It was by reason of our control of the stream that we were enabled to deliver to San Francisco water of an unexampled purity. Not one dollar of our investment can be said to have failed to contribute to the result which Dr. D'Ancona found. And yet, when the supervisors fixed our rates for 1903, and the other years involved, they arbitrarily excluded seven hundred thousand dollars of our actual investment. Every acre of property, and every water right representing this investment, were actually in use in accomplishing the delivery of pure water to San Francisco, and no portion of them could be disposed of or excluded, without affecting the supply of water and its purity. The acquisition of this property extended over a period of thirty years. The result of the valuation allowed by the board for the Alameda property not only does not afford us any con-

sideration for the use of our money for that period, but actually deprives us of a large part of the principal. They refuse us a return upon what we paid for that property during a period of 30 years and say that the property is not in use. For example, it is said: "You are not using Calaveras reservoir." It must be clear to your Honor that if the Calaveras reservoir site should pass into the hands of, and be utilized by, other interests, a very valuable safeguard to the present water supply to San Francisco would be taken away. And yet, for its ownership, and our large investment in it, and the water rights appurtenant to it, we do not get any adequate consideration.

I now refer your Honor to Table No. IV, opposite page 199 of "Defendants' Brief".

We had some discussion the other day with reference to Mr. Grunsky's method of ascertaining the value of the Alameda lands and water rights. I said I could not find in the record anything to indicate how he segregated that item, or, rather, I could not find any itemization of his total for lands and water rights. I was endeavoring to get the items comprising that total, for the purpose of justifying my figure of $383,236, which I added to Mr. Grunsky's allowance for water rights. Counsel on the other side said that I was altogether wrong, that there was not any such basis, and that it was not his fault that Mr. Grunsky had left us in the dark, and with no clear disclosure as to the basis of his estimate.

Calling attention now to Table No. IV in defendants' brief, in the second column you will find the words

" Alameda Creek System, Lands, Water Rights, Rights " of Way, Rights of Way (San Mateo County)"; if you will follow along now to Mr. Grunsky's name, you will find these figures, "$720,000, water-rights, Peninsula System"; just underneath that you will find "$1,720,251". Now, if you will follow along to the column underneath Mr. Brooks' name, you will find opposite "Lands", "$2,103,730"; and you will find under "Water Rights", "$293,437.79". Looking at the last column, which is Mr. Dockweiler's, you will find "$2,116,718.91" as the cost of lands, and "$296,763.87" as the cost of water rights.

Counsel said there was no warrant for taking those figures. Mr. Grunsky allowed $1,720,000 as against an admitted total investment of over $2,411,000. I take my figures for this purpose from Mr. Dockweiler's testimony. There are two sets of figures there, one given by Mr. Brooks and one given by Mr. Dockweiler. There is not a word in the brief or argument of defendants that questions the reliability of either set of figures. I take $1,720,251, Mr. Grunsky's total for lands and water rights, and as Mr. Dockweiler's figure for water rights is the larger, I will use his figure, $296,763. If the latter figure is subtracted from the former, it is apparent that Grunsky allowed us for lands $1,423,488. Now, we can prove beyond question that he must have allowed us at least that much for lands because he said he took the latest purchases for lands as his basis for land values, and Dockweiler's figures show that if you divide that sum by the latest price paid per acre, you

will get fewer acres than we have there. However, counsel on the other side says this is all speculation. Your Honor will notice that I have not heretofore used Mr. Dockweiler's figures. I will be perfectly candid. I have not used his figures because I do not think he has made any showing which indicates that his figures are reliable, and I prefer to be consistent. If we were to substitute Mr. Dockweiler's value of Alameda properties for Mr. Grunsky's figure, instead of getting $383,000 as the excess over Grunsky's figures which appears in my diagram, we would get $1,200,000. So that when they say we are indulging in speculation in attempting to segregate land from water rights in Mr. Grunsky's valuation, they are going from one dilemma to a still more perplexing one.

Mr. Dockweiler says at page 647 of the testimony that the value of lands and water rights in Alameda system, in use and useful, is $2,953,800.

Now, let me show your Honor the difference, and there is no chance to quibble about it. Deducting Grunsky's total of $1,720,251 from Dockweiler's total for the same properties, we get $1,233,549.

The Court. Where is that testimony taken from?

Mr. McCutchen. From Mr. Dockweiler, page 647.

The Court. And that is the same figure for it which he in his table gives,—$2,116,718?

Mr. McCutchen. No, your Honor.

The Court. They do not mean the same thing?

Mr. McCutchen. They do not mean the same thing. That item of $2,116,718 means the cost of lands, according to Dockweiler. These later figures are the values of Dockweiler and Grunsky respectively. This is the *value* which Grunsky put upon our lands and water rights in the Alameda system. If, instead of putting upon my chart, $383,206, as the excess of water rights upon Grunsky's own theory, I had taken the difference between Dockweiler's total *value* for lands and water rights, and Grunsky's total for the same items, I would have had $1,231,794. But I still say that my plan is a consistent plan and I am willing to stand by it. If counsel does not want to stand by it, he must take the only alternative which his own case presents.

In answer to this contention, counsel calls attention to the testimony of Mr. Schussler, that a large part of the consideration on one of the land purchases should really be charged to water rights because by that purchase they had obtained control of water rights of immense value. Counsel can take any horn of the dilemma he pleases; he can take Mr. Schussler's valuation of water rights in Alameda County at $1,200,000; he can take Mr. Dockweiler's valuation of lands and water rights together, if he pleases; or he can take,—and we will be content,—the total valuation placed by Mr. Grunsky upon lands and water rights, and from that deduct $296,000 which Dockweiler said represented the cost of all water rights in Alameda County. It was suggested there were other water rights; that there were water rights in the one million dollar purchase. Assuming

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there were water rights in the million dollar purchase, they must have been included in Grunsky's figure of $1,722,000, according to counsel. If they were included at some figure other than Dockweiler's they were included at Mr. Schussler's figure, because there is not another figure in the testimony that will throw any light upon the subject. Instead of having water rights of $296,000 therefore, we have water rights of $1,200,000, so that at any angle from which you view the situation, you are bound to conclude that Mr. Grunsky has not given us the value for water rights in Alameda to which we are entitled.

If the water rights were worth $1,200,000, as Mr. Schussler says, they were wholly in use during the whole of the years 1903, 1904 and 1905. It is true we had not constructed the Calaveras reservoir; it is true that we had not constructed the San Antonio reservoir, but the ownership of those properties by us prevented the waters being used by anybody else. The ownership of the lands and rights was not only a protection, but enabled us to render excellent service. No one can say what effect the failure of the company to acquire those properties years ago might have been. Calaveras and the property between it and Niles Canyon are called the key to the situation by Mr. Schussler. It was because of their ownership, because of the ownership of lands along that creek from Calaveras all the way to the bay, it was because we could not be interfered with by riparian proprietors, that we have been enabled all these years to deliver this water to San Francisco, and of which San

Francisco has had, and now has, the benefit. And yet the hint is thrown out that some of the water rights are not in use. What rights, if any, are not in use, there is no attempt to state. I don't know how Mr. Grunsky reaches his figure, but as I have shown to you, and I have shown it from the figures on that chart prepared and used by the defendants, he lops off from us in some way $700,000 of actual money paid out, and some of it paid out years ago.

In his first valuation of the property, Grunsky allowed us $300.00 an acre for the Calaveras land. In his 1903 valuation, he allowed us $60.00 an acre, because he said we were not using those lands for reservoir purposes. We were using them, however, for the purpose of protecting the water which San Francisco needed, and our ownership of them was, at all times, aidful in enabling us to render efficient service.

VALUATION OF $1,000 PER MINER'S INCH.

I want to come back to the valuation of $1,000 an inch for water. Mr. Adams stated, and there is no denial of it, in fact it is emphasized by the statement of Dockweiler, that waters about the bay of San Francisco are exceedingly valuable. He made the statement which was not questioned by any other witness that water here was worth more than in Southern California. He stated that there was no place in California where water was worth as much as about this bay. Mr. Dockweiler, when he testified and told us that water was king, said

that there was great need for water in this locality, and such great need for it that the people could better afford to go to the Sierra. What would it cost to get it from the Sierra? Is it not the showing here that it would cost, in excess of impounding and other works, at least $460,000 per million gallons? It is. Counsel would say in reply that that system is not built yet, and that we have no right to use that figure, but we have the right to take into consideration, from our general knowledge of the subject, what it would cost to bring water from the Sierra; and Dockweiler says that, rather than use this water for the purpose for which it is being used now, the city should go to the Sierra. That is as complete a showing as we could have that this water is worth infinitely more than $1,000 an inch. Dockweiler says that San Francisco should go to the Sierra, and he declares that that is the opinion of every engineer who has ever considered the subject. You know that the value of water, brought from the Sierra and delivered here to consumers, will far exceed $50,000 a cubic foot. That is common knowledge, and you do not require any evidence to establish it to your satisfaction. Nor does it require evidence that the Tuolumne project is to become a reality to establish for the Spring Valley water a value greatly in excess of this figure. The showing of Grunsky and Dockweiler conclusively establishes that fifty thousand dollars per cubic foot per second would be a ridiculously low valuation. There being the great need for water which each of them states,—and Dockweiler conclusively shows that after a Sierra supply

is conveyed here there will still be that great need for all we can furnish,—it is most absurd to say that our supply per million gallons is worth only forty thousand dollars, which is less than one-tenth, or fifty thousand dollars per cubic foot per second, which is less than one-fifth, the value Sierra water delivered in San Francisco would have.

We have the statement of Mr. Schuyler that, for irrigation in Southern California, water sells for $1,000 an inch. That represents its common value. That is not denied. Mr. Grunsky says domestic use is the highest use for water. Now, if to take the place of the water which is here it is necessary and it is the duty of San Francisco to go to the Sierra and bring water at what it will cost to bring it from that locality, will anybody have the hardihood to say that the water which we have is not worth $1,000 an inch? We are, therefore, not led to this result by one avenue alone,—we are led to it by two broad avenues which defendants have prepared for us. It seems that it would be almost trifling with a serious subject to hold that water for this great city of San Francisco, which you know, by reason of your general knowledge of the situation, is the highest use to which it can be applied, is not worth in excess of $1,000 an inch.

Considering the testimony of Mr. Grunsky that in his opinion the city should go to the Sierra for water; and second, the testimony of Mr. Dockweiler, that water is king, and because of the great need for the water now available, a supply should be brought from the Sierra,

it would seem to conclusively follow that this water which we supply, and which is so highly recommended by Dr. D'Ancona, is altogether undervalued, when placed at only $1,000 an inch. I ask your Honor to consider the testimony of Schussler and of Hering, with reference to the value of water, and in connection with it to consider the testimony of Grunsky with reference to the necessity of going to the Sierra, and the testimony of Dockweiler regarding the great need for water about this bay. As has been said, Schussler and Hering place the value at $150,000 per million gallons, which is less than one-third of what I have shown will be the cost of water from the Sierra. Thirty-five million gallons at $150,000 per million gives for water, or water rights alone, $5,250,000. I submit that in the light of the entire showing, that result is more consistent with fairness and is more logical than the result reached by Grunsky.

DUTY OF COMPLAINANT TO ANTICIPATE DEMANDS.

And let me remark here, that Mr. Grunsky, when upon the witness-stand, said that he considered it the duty of a public service corporation to anticipate the needs of the municipality which it was serving by at least 25 years. I have already commented upon Grunsky's exclusion of about $700,000 of our Alameda investment. If we did not get property in advance of the actual need for it, we would not be able to have it when it was needed. Property which we buy in anticipation of an immediate future demand is to all intents and purposes

just as much in use from the date of its purchase as the property theretofore acquired and used. The words "in use" are not fairly susceptible to the strict construction which defendants would give them.

I wish to refer to page 381 of Mr. Haven's argument. After quoting an extract from your Honor's opinion in the 1908 case, he said:

> "The principle established by the decisions cited by your Honor is very simple, namely, that the value to be fixed is the value of that which is presently used and useful. If a plant is larger than is necessary, or is more expensive than is necessary, the value allowed is not the value of the entire plant, but rather the value of that portion of it which is in use, or, in the language of the Supreme Court, the value of that which it employs for the public convenience."

In connection with that, I wish to read from Grunsky's testimony on the same subject.

> "XQ. 322. How long in advance of a demand for water, should, in your opinion, a company charged with the duty of supplying a municipality with water provide for?
>
> "A. It should look far into the future.
>
> "XQ. 323. What do you consider far? Give it to me in years, and I will understand it better.
>
> "A. It should take into consideration about a doubling of the population.
>
> "XQ. 324. How many years would you estimate that to be?
>
> "A. That time period would become shorter with an increase in rate of growth of a municipality. No definite rule can be given for that.
>
> "XQ. 325. If the population should double in five years, would you consider that a company was

doing its duty if it provided for only five years in advance?

"A. No, I think that a company should look farther than five years into the future; that is to say, if a company occupies such a position that it is practically the sole purveyor of water, and if the municipality is dependent upon that condition alone.

"XQ. 326. Yes, assuming that.

"A. And also assuming that the company, acting as the agent of the people, acts just as the municipality itself should act under such circumstances.

"XQ. 328. Do you think that in a country with a climate such as this is, and where the meteorological conditions and water supply is limited, as in this state, a company would be justified in providing for only 20 years? Take the particular case of San Francisco, would a company which had practically the sole supplying of this city, be justified in preparing for only 20 years?

"A. I did not in my answer mean to imply that the 20 years should be the absolute limit. A company that is to supply water for an indefinite period looks further into the future than that. But in planning such work, as pipe lines and the like, it is not always necessary to look as far into the future in the matter of pipe line capacities, as it would be in the general scheme of expansion.

"XQ. 329. Well, let us take the general scheme then, and say as to water sources, how far ahead ought the company to look?

"A. That will depend upon local conditions entirely, and upon the cost of acquisition upon the properties. If it becomes apparent that some property that will produce water, should come into use in the future, the steps towards its acquisition should be taken so long in advance of that acquisition that the property can be acquired without too great an expense. If the necessity is such that the

property must be had, it is always to be expected that more will have to be paid therefor.

"XQ. 330. Can we get at the years?

"A. I cannot give it in years.

"XQ. 331. Can you give it approximately? Approximately, what would you consider a reasonable period to provide for?

"A. The water that should actually be at the command of the company should certainly be sufficient for the community five years in the future. It is desirable that it should be a much longer period.

"XQ. 332. Would 50 years be unreasonable to secure water rights and lands?

"A. 50 years might be a reasonable period for the municipality itself. In the case of a private company, it is a difficult question to determine.

"XQ. 333. Would 25 years be unreasonable for a private company, in your opinion?

"A. If I were advising a private company I should certainly look that far into the future, and endeavor to so arrange matters that there would be no shortage of water.

"XQ. 334. That would require an investment of capital, would it not?

"A. Yes, it would require an investment of capital.

"XQ. 335. Do you think that that capital should not be compensated in any way by the municipality which will derive the benefit of it when it is devoted to a public service?

"A. It should be properly entered into the valuation when the property comes into use.

"XQ. 336. But, in the interim, should it not be entered at all?

"A. I do not think that it can be entered under the law."

In other words, as the board of supervisors had been treating the situation, Mr. Grunsky did not think it could

be entered. According to his view a water company would not perform its duty to the public if it did not make investments so as to anticipate present needs by at least twenty-five years. According to counsel on the other side, the city can at any time begin the construction of its own works, and in that event the property acquired for the future will never, while held for the city for whose benefit it was acquired, yield the company any return. I think it only requires that that proposition be stated in order that its answer may be afforded. If I had the time I would read to your Honor the cross-examination of Mr. Grunsky with reference to the Portola properties. He says they are useful to San Francisco, and that they can be utilized within five years at a comparatively small expenditure. Yet they are excluded from any consideration in the rates given to us by the board of supervisors. Other properties acquired and now owned by the company are almost certain to be needed for this city before a supply from another source can be brought here. When any of these properties come into use, by the rule of counsel on the other side, what are we to get, what valuation are we to be allowed? He says it will be its value for water producing purposes. I have endeavored from the beginning of the argument to have counsel suggest a rule by which its value for water producing purposes is to be found. I have not been able to learn from him what is the measure to be applied in finding the value of an isolated piece of property, although he is very sure it is not the rule applicable in eminent domain.

Among other things, counsel has said that if our properties have increased in value since they were acquired, we are entitled to the increase. In another portion of his argument, he has said that these properties were devoted to a public use, and that no value greater than their value for that use can be considered. I asked him upon the oral argument to state to your Honor, when he came to reply, what was the rule or measure by which that increase in value was to be ascertained. That seemed a pertinent question. I stated, and I repeat, there is only one rule for determining the value of a property, and that is the rule that obtains in eminent domain.

Counsel seeks to get away from the application of that rule, but fails to give any other rule which can be followed.

One of the positions announced by counsel was that this was not a private corporation and that its property could not be appraised as if it were a private corporation, doing a private business. That was stated not alone in his argument but in his brief as well, and to support it, he cited the case of *Kennebec Water District v. City of Waterville.* The claim is made that that case sustains his contention.

It may be well to know to what Judge Savage was addressing himself in that case. I will read from the Kennebec case, which is reported in 54 Atlantic Reporter, page 12:

> "We think it is clear that the pecuniary value of the property of the Maine Water Company, both

> plant and franchises, depends, to a considerable extent, upon the financial returns it can be made to yield to the stockholders; that is, upon its net income. The franchise or right to do business, if unproductive, is of little value, and it stands to reason that the plant, as a structure, irrespective of franchise, if the business were profitable, would be worth more and would sell for more, than if the business were unprofitable."

My recollection is that in that case the company had an exclusive franchise.

> "The basis of income, of course, is the tolls charged and received."

In that case, the company fixed its own tolls.

> "If the Maine Water Company were doing a private business, knowing its present net income, and the facts tending to show a probable increase in the future, or otherwise, it would be comparatively easy to approximate the present value of its plant and franchises. But it is not doing a private business."

That is to say, if it were doing a private business, value would be ascertained by the capitalization of income. No one can doubt that the court meant that and only that.

> "But it is not doing a private business. It is not a private corporation. The value of its property cannot be appraised as if it were a private corporation, doing a private business."

I understand that to mean, and it cannot mean anything else, that in such a case it is not permissible to ascertain value by capitalizing income.

"It is a quasi public or public service corporation. In pursuit of legitimate gain, it has devoted its property to a public use. In that way, the public have acquired an interest in the use of the property. The company owes a duty to the public as well as to its stockholders. It must serve the public faithfully and impartially and charge no more than reasonable rates for service. The legislature may limit the tolls of such a corporation so that they shall be reasonable. Unreasonable charges may be reached by the restraining hand of the court. Thus far the parties agree. And it may be said that the fair and equitable value of the system of the Maine Water Company, as a whole, may, in a large sense, be measured by its net income at reasonable rates, taking into account future probabilities. But the plaintiff (request 4) asks us to say that 'what would be reasonable rates can be determined only after and by means of a valuation of the company's property', and that 'the actual rates which may have been charged by the companies, and their actual earnings have no bearing either on the value of the companies' plant or property, or of their franchises, and are immaterial'. On the other hand the defendants state their proposition in these words (request 11): 'that the value of a franchise depends on its productiveness or net earning power, present and prospective, developed or capable of development, within the entire territory embraced by the taking; that whenever net earning power, or net incomes and revenues, is to be determined under this act, it is to be so determined under reasonable water rates, after due allowance for operating expenses and maintenance or depreciation'."

What the court wished to emphasize was that the value of the property of a public service corporation was not to be found by capitalizing income, as is sometimes done in determining the value of private

property. To claim that to be authority for the proposition broadly stated by counsel, that this is not a private corporation, and that, therefore, the value of its property cannot be appraised as if it were a private corporation, seems to be entirely unwarranted.

The COURT. Mr. McCutchen, if you should discover a valuable coal mine on your Lake Merced property, would that increase the value of that property for rate-fixing purposes?

Mr. MCCUTCHEN. This thought suggests itself to my mind—that we might remove the coal without in anywise interfering with the use of the property as a water-producing property. If the doctrine which has been adopted by the state, restricting our right of disposition is susceptible of a construction which would prevent us from mining the coal, then it would necessarily follow that its value as a coal mine would have to be included for rate-fixing purposes. It is unthinkable that a corporation must continue to use property of any kind for the benefit of the public, and not get a return upon its value.

The case which your Honor puts, while a very extreme one, is not, of course, warranted by the facts here. We start here with the proposition admitted by everybody, and particularly emphasized by Mr. Grunsky, that all this property is used and useful, the whole of it. That means we cannot take any part of it for any other use; we are bound to continue it in the use. The contention of the city is that because some one has said that it is only worth $2,000,000 for water purposes—

which by the way no one has said—although it is worth $14,000,000 for other purposes, as ordinary real estate, for instance, the state can still insist that we retain it and use it for water purposes by allowing us a return on only $2,000,000, and no return whatever on the other $12,000,000. I am reminded, while discussing this subject, of a question put to me by counsel on the other side, referring to the *Boom Company—Patterson* case. Your Honor remembers the facts in that case. Counsel asked me to suppose that Mr. Patterson had devoted his property to the public use of agriculture, assuming there could be such a state of things, and that some one attempted to take it in the exercise of eminent domain. It goes without saying that plaintiff could not, in the supposed case, condemn it except for a superior use. Could Mr. Patterson, asks counsel, claim more than $300 for the property, its value for agricultural purposes? I answer yes, emphatically. I will answer further by asking counsel if, in his opinion, it is possible under constitutional government, or, to use the language of Judge Hough, in any American government, that Patterson's property could be taken from him by a corporation upon payment of $300, but could not in turn be taken from the plaintiff for less than its value for its highest use which, in the case supposed, was $5200?

According to counsel, the property could be taken by another from Patterson, who had devoted it to the perpetual use of agriculture, and immediately after could be sold for its value for its most available purpose. The question would seem to afford its own answer. The

fact that Patterson had devoted his property to a particular use, would have no effect whatever upon its value when some one, asserting its necessity for a superior use, attempted to take it from him.

Instead of going so far afield as to employ the illustration with reference to the Patterson case, let us come home to the very situation we have in hand.

One of the positions announced by counsel was that the public had the right to take this property in the exercise of the power conferred upon it by law. The property, he says, is impressed with a public use, and he gives to it a value of, we will say, $2,000,000 or $2,500,000 for water producing purposes. Let us assume at the same time that its value for other purposes is what Mr. Baldwin says it is, namely, $13,000,000 or $14,000,000. Let us also assume that the city institutes a proceeding in condemnation; the defendant attempts to show by appropriate testimony that the property is worth, for residential purposes, $13,000,000 or $14,000,000; the city objects, that it is devoted to the public use of supplying water, and that the only issue on value is what is it worth for supplying water, and the court sustains the objection and a verdict is rendered, we will say, for $2,000,000 or $2,500,000, and the city takes the property and the defendant ceases to have any interest in it. The next day, under the charter of San Francisco, that property may be leased or sold, not for the purpose of supplying water, but it may be sold for residential purposes for its very highest value, and——

The COURT. Well, I don't think that there is any question but that that is the rule in eminent domain; the only question is how far that rule can be applied in cases of this sort.

Mr. MCCUTCHEN. I have cited to your Honor a number of rate cases in which that was held to be the rule, and there does not appear to be one holding the contrary. There was no qualification of this rule, or any suggestion of another in the *Consolidated Gas* case. I have cited to you any number of rate cases, where it is said present value is the ultimate fact to be determined. None of them says "present value for the purpose for which it is used"—you do not find that expression in any one of these opinions. That was contended for before Judge Hough and he replied that it was not intended, when the company in that case dedicated its property to public use, to thereby suspend the operation of the law of economics. Your Honor remembers his very strong expression which was in effect that it was inconceivable that any American government could have contended that any measure for the ascertainment of value should be applied to property like that there involved, which would not be applied in any other case where value was the issue. Your Honor will also remember that he said the property there being considered was as much private property as is the private property of any citizen.

When the case reached the supreme court, it said in effect that the method employed by the lower court to ascertain value was the proper method.

Judge Hough stated the principle not alone in one portion of the opinion, but he stated it two or three times, employing somewhat different phraseology. He quoted case after case from the Supreme Court of the United States, and said it was impossible to recognize the use of the present tense in all those cases, without reaching the conclusion that it is present economic value which is to be ascertained.

It is not possible to present to your Honor more apt illustrations or more apt cases upon the subject than those to which I have referred.

Now, let us apply that for a moment to the Lake Merced lands. What portion of the Lake Merced land is in use, or, to put it differently, what portion of the Lake Merced land is out of use? It seems to me there could not be a more apt or succinct illustration of the application to this case of the rule for which we contend. In other words, to state it in the form of a syllogism, all property which is in use must be included in the valuation; all the Lake Merced lands are in use, therefore all the Lake Merced lands must be valued.

The Court. The record shows that all of the land is in use, does it not?

Mr. McCutchen. Yes sir, unqualifiedly. It is the unqualified statement of Mr. Grunsky. Would your Honor like me to refer you to the page of his testimony? Counsel will admit that, I assume?

Mr. Haven. I would like to hear the testimony.

Mr. McCutchen. Very well, I will refer you to Mr. Grunsky's testimony.

Mr. Grunsky's report was offered in evidence, in which, among other things, was contained the following (reading from page 191 of his testimony):

> "Lake Merced properties—lands including contiguous lands in San Mateo county, the Ocean View pump tract, etc., 2,638 acres, $2,030,000."

At page 280 he was asked upon cross-examination:

> "XQ. 321. Did you say that you valued only the property in use?
>
> "A. That was the intention of this appraisement—to value the property in use."

Every witness in the case agrees with Grunsky as to the necessity of the Merced lands as part of the water system. The testimony was quoted in full in my opening argument.*

Let us see where the other rule will lead us. It will lead to the result I suggested a while ago. If this property, devoted to a public use, has a value for that use very much less than its value for any other purpose, then in eminent domain instituted by San Francisco,

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Note. Furthermore, counsel admits the usefulness of the Merced properties. At page 750 of his argument he said:

> "we would say that Lake Merced has always been treated by us as in use and included in all estimates".

For that reason he claimed we were chargeable with rents received from the Merced properties. Of course by "Lake Merced" he meant Lake Merced Ranch, because we got no rents from the *lake*.

according to counsel's contention, the city may take the property at the value which it has for the use to which it has been devoted, for, says counsel, by reason of the dedication, the company may not claim any greater value than it has for that use. San Francisco could only take it for a public use. She could not take it for private purposes. Under a provision of her charter, she could sell it immediately after acquiring it. The section is as follows:

> "Sec. 14. The City and County shall have power to acquire, construct or complete any public utility from funds derived from taxes levied for that purpose, or from funds derived from the sale of bonds issued for that purpose, as is provided in this Charter, and may operate, maintain, sell or lease the same, subject to the other provisions and limitations of this Charter."

I submit to your Honor, there is no other section which limits the right to dispose of it absolutely the day after it is acquired.

If, because the property has been devoted to public use, its value for that use only is to be considered for rate-fixing, and it must continue in the use so long as it is useful; and it could be shown that it would probably continue useful for all time, then upon the reasoning of counsel, San Francisco might plausibly contend in eminent domain that the company was entitled to no more than the value for the purpose to which it was devoted. I asked counsel to indicate any testimony in the record to the effect that the property, to its full extent, and for its full value, whatever it may be, is

not necessary to the city for its water supply. There is no suggestion of that nature in the record, nor any from which, by the most liberal rule, it can be inferred. Grunsky ascertained the value of the property as real estate, and that is all. He made no allowance for water rights. He did not place any value on Lake Merced water rights. He simply adopted Mr. Schadde's estimate of real estate value. The conclusion necessarily would be, if counsel is sound, that, according to Grunsky, who is referred to by counsel as the most judicial of all the experts here, we would not be entitled to any valuation whatever for Lake Merced properties. I do not for a moment suggest that your Honor will entertain any such thought as that, but I say that is the logic of the argument.

If we start with the showing, of which there is no denial, that this property is used and useful—I do not put it now as strongly as Mr. Grunsky puts it—is not your Honor bound to assume that it is used and useful to the extent of its value? There is no testimony here from which you can determine what part is useful and what part is not useful. There is no testimony from which you can determine the value of the property, as water producing property, as distinct from its value as ordinary real estate. If an effort were made to draw or define a line separating the portion which is useful from that which is not useful, it would hopelessly fail. It seems to me the difficulty has arisen from a failure to recognize the fact,—proven here beyond, and indeed without, conflict—

that the property as it stands is used and useful, and that means that all of it is used and that all of it is useful. It is not possible to say that any fractional part is not used and useful or that any fractional part of its value, whatever the value may be, is not properly chargeable against the use in which the property is engaged.

Your Honor's question suggests the thought that is contained in the opinion of the Supreme Court in the *New York Gas* case, where it is said that if the value of the property mounts so high as that to allow a fair rate on it would put an insupportable burden upon the consumers, then the question may have to be considered whether the rate will not have to be reduced even though it does not return fair interest or the current rate of interest to the stockholders. That is the point which your Honor's question in reference to a coal mine suggests.

It may be that if the property had a coal mine upon it. its value as a coal mine would cause it to mount so high as that, while we were still compelled to use it for the purpose of discharging our obligation to the public, to allow us the current rate of interest upon that value might make the burden insupportable to the consumers of water. I think that answers your Honor's question. As long as that condition has not been reached, as long as that point has not been reached, as long as we can be allowed the current rate of interest without imposing a burden upon the consumers greater than they can afford

to bear, so long are we entitled to a return upon the full value of the property.

If there were a coal mine upon the property, we would be entitled to have the value due to that taken into consideration, and to be allowed a return upon that value, until the possibility suggested in the *Gas* case should be realized. Until that condition is reached —and there is nothing in this record to show that we are in any danger of reaching that condition here—we must have a return upon full value.

And that again suggests to me that all through counsel's argument he confounded rate of return with value. You can hardly read a page of his argument, but that you find those two questions confounded.

There are two things to be determined by a rate-fixing body, and there are two issues to be determined by the court whenever the question properly arises. The one is, what is the value of the property which is the basic element upon which rates are to be fixed? The other is, what is a fair return upon that value?

Whenever one undertakes to determine that value except by economic laws, he gets into a state of uncertainty from which he never can extricate himself.

And let me ask, how are we to determine the value of this property for water purposes? We cannot determine it by the income it produces. That was in effect what Mr. Partridge asked Mr. Baldwin to do, when he was under cross-examination. We do not know any way of ascertaining the value of property like this except to

determine what it will sell for in the market. Grunsky, who is an hydraulic engineer, evidently knew no other way, because he went to a real estate broker to get the information. Counsel fails to suggest any other way. Unless our suggestion, which indicates what may conservatively be said to afford a reasonable way of getting at value, be the right method, the Court will find itself entirely in the dark in attempting to determine what this property is worth. I have listened for four days for a suggestion of some rule or measure by which, under the contention of counsel on the other side, the value of these properties may be fixed. Now, if I may borrow an expression from him, we have pointed out to you a broad road, a well-traveled road, from which, up to this time, courts have not departed. Counsel leaves that well-beaten track, but does he indicate one that you may safely take? I have studied this record and his argument with a great deal of care, and I cannot find that he indicated any, and that is the reason I asked him to tell us what his rule was, in order that your Honor might have the benefit of his view. He cannot state it. It is not within the possibilities that any lawyer can state it. His effort to escape the application of the eminent domain rule begins without logic and ends in the same way.

With reference to the *Omaha* case, counsel made the statement that that case decided there was a different rule applicable in the determination of the value of property for sale and in a rate-fixing case. All that Judge Lurton said on that subject was, somebody evi-

dently having contended that he was running counter to the *Consolidated Gas* case and the *Knoxville* case, that those were rate-fixing cases. What was said in the *Knoxville* case, and it was only with reference to going concern, was that the question would not then be decided, but would be left open. Judge Lurton simply said, in effect, it is sufficient to say that those cases were rate-fixing cases. It seems to me, if he considered there was any other rule, he never would have said that the *Consolidated Gas* case was a rate case, because I think I have shown to your Honor beyond the possibility of doubt, that in the *Consolidated Gas* case, the court considered value for all purposes, and in that case allowed for a franchise.

While I am upon that subject, let us look at the other properties. Counsel does not give you any rule to ascertain the appreciation in value of real estate. He has in effect said there never can be any appreciation. That is the logic of his argument. He is very quick to take off four million of dollars for properties which he says have gone out of use, but the inevitable logic and result of his argument is that no part of our property can appreciate in value.

Let me recall what he said when discussing the reason for the change in the method of bookkeeping which he said was inaugurated in 1879 or 1880. You doubtless remember what he said about profits. It was that the corporation could not earn any profits beyond the mere dividends which it distributed to its stockholders. That means, if it means anything, that the value must not be

permitted to increase, that no matter what happens, the value must remain stationary, except to the extent that the company puts in new money. I regard counsel's attitude on this question as somewhat significant and, that I may state him correctly, I will read from page 511 of his argument:

> "The regulation of water rates by the board of supervisors began in 1880, and the company could not, making a fair disclosure to the board of supervisors, allow undivided profits to accumulate because the rates must be sufficient simply to pay their dividends, *and not to accumulate a profit.*"

Indeed it is quite logical for him to go that length. It is quite in keeping with other statements made by him. If the return is to be a fixed return, it must be because the value is a fixed value, for return must be upon value. The argument that the company cannot accumulate a profit is of course irreconcilable with the possibility of an appreciation in value.

Counsel finds ground for criticism of us because we contend that the value, upon which income is to be computed, must be determined exactly as we would go about to determine the value of other property, and that all elements of the property, including what he styles the monopoly which we have secured, must be considered against the public, just as much as it might if only private interests were involved. And why not? What does he suggest to indicate unsoundness in the contention? We invested our money in this property. Is it to be said that when we made the investment, we took the chance of loss on account of properties ceasing to be

useful—and counsel says $4,000,000 of our original investment has gone out of use—but had no chance for profit? The question answers itself. But if we are to have the benefit of enhancement, how, by defendants' argument, is that to be defined?

The COURT. Do you regard that as absolutely the law, without any question and without any exception, that you cannot dispose of any part of that Lake Merced property?

Mr. MCCUTCHEN. That we cannot dispose of it?

The COURT. That you cannot dispose of it.

Mr. MCCUTCHEN. We cannot dispose of it so long as it is used and useful for the purpose for which we acquired it.

The COURT. And you cannot substitute other property for it?

Mr. MCCUTCHEN. No sir, we cannot. We cannot find any other property to substitute for it.

The COURT. I was asking you that as an abstract question, whether they could not substitute other property for this property, provided they had some that would answer the purpose.

Mr. MCCUTCHEN. I know of no law that would permit it. Whenever the property ceases to be useful, then, as a matter of course, it would no longer be affected by the public use. The public would no longer have any interest in its use. But as long as it is used, as long as it is useful, I understand the law of this state to be that we cannot relieve it from the use. Even though

there were property which might be a substitute for it, we could not make the substitution in my opinion, but in any event, unless there is some property that could be substituted for it, we certainly could not relieve it. It is because there is no property that can be substituted for it that these engineers state that it is indispensable to San Francisco. If we were permitted to sell it, we could realize $13,000,000. Nevertheless, the attitude of the city is that it is impressed with a use in its favor, and for that use it will allow us a return on about one-sixth of the actual value, and no more. Defendants come into a court of equity and ask a decree which shall say in effect that we shall have a return upon only one-sixth of the actual value. The claim is outrageous and unconscionable.

With reference to the Lake Merced lands, I want to call your Honor's attention to the further fact that they were purchased in 1872; that they were being used by the grantor of complainant at the time of the adoption of the constitution of 1879, which constitution contained the provision—and I think I am correct when I say that this constitution was in that respect a pioneer—that the Legislature might not pass any act relieving the property of a public service corporation from the duty which it was intended it should perform. The Spring Valley Water Works acquired this large tract of land and, while it owned it, the constitution containing this provision was submitted and ratified. It can hardly be said, therefore, that we devoted our property to public use with our eyes open.

There is no suggestion that we are using this property or ever have used it in any way that interferes with the discharge of our duty to the public. The use to which it is put now, promotes it, rather than injures it.

The Court. Was that question ever passed upon in this state?

Mr. McCutchen. That is, whether it can be used for other purposes?

The Court. Yes.

Mr. McCutchen. I do not think it has.

The Court. Or whether it can be disposed of?

Mr. McCutchen. Oh yes, I think that has been decided beyond any question.

I called your Honor's attention the other day to the *Pasadena* case. That case involved a sale by the Pasadena Land and Water Company to the city of Pasadena. The Pasadena Land and Water Company had been supplying not only the city of Pasadena, but South Pasadena as well, and South Pasadena, fearing that the sale of the property might interfere with its right to get water after title had passed to the city of Pasadena, instituted an action to prevent the conveyance of the property from the Pasadena Land and Water Company to the city of Pasadena. I do not recall what the judgment of the lower court was, but the case reached the supreme court, and that court held that the conveyance might be made, but it was subject, and the property conveyed would always be subject, to the obligation im-

posed upon the city of Pasadena as the grantee of the company, to supply South Pasadena with water, just as the Pasadena Land and Water Company had done in the past. Does that answer your Honor's question?

The Court. Yes, and no, too. What I would like to know is, whether there has ever been any decision as to your right to substitute other property which would perform the duty quite as well as the property which you have?

Mr. McCutchen. I can tell you that there has not been. That could not be done, I take it, except by one condition coming about. The showing here is that this property is used and useful. If San Francisco were to take the position that this property was not useful, even though it were used, that would bind her and she would probably be estopped from thereafter claiming it was useful and thus we would be able to dispose of it. I feel that I may say with positiveness that there is no decision by any court of this state holding that one property may be substituted for another. Assuming, however, for the argument, that that might be done, it would in no way weaken our claim that, as long as the property is used and useful, full value for it must be allowed. Unless we are allowed full value, the use of the property is taken without compensation. If we can be denied part of the value, we can be denied all of it. A claim more violative of common right was never suggested than that a city might compel a corporation to use property for the city's benefit, and deny it a return upon a value at least equal to the price for which the property could be readily sold.

Your Honor suggests that the *Pasadena* case does not entirely meet the thought which you have in your mind. It decides that the property there in question, being impressed with a public use in favor of South Pasadena, although it had been sold by the Pasadena Land and Water Company to the city of Pasadena, nevertheless was still impressed with the use in favor of South Pasadena, and the city of Pasadena could be compelled to render the service just as its grantor could have been compelled to render it if the grant had not been made.

The COURT. That was a sale of the whole water system?

Mr. MCCUTCHEN. That was a sale of the whole water system. Do not understand that I am contending for anything here different from the contention made by counsel on the other side in his oral argument. He did quote in his brief from *Munn v. Illinois*, to the effect that when one who had devoted his property to use of the public desired to withdraw it from that use, he might do so. But I do not understand that that is his position in oral argument. Our position with reference to this phase of the case is that the property is devoted to a public use, and we cannot withdraw it so long as it is useful, and particularly so long as San Francisco says it is useful, for the purpose.

The COURT. Do you also take the position that it cannot be used for any other purpose? That, if it is susceptible to other uses, it cannot be used for those purposes?

Mr. McCutchen. I take the position that if it is susceptible to other uses, it cannot be used so long as it is impressed with the public use, if the other uses in anywise interfere with the public use. I do not know whether your Honor has in mind the leasing of the surface for vegetables, or anything of that kind?

The Court. That would do just as well for the illustration as anything else.

Mr. McCutchen. I would say that so long as the company could allow the property to be used for the purpose of raising vegetables, and that that use would rather promote than interfere with the use for which it was dedicated to the public, that it would be a good thing and not a harmful thing to permit such use. Your Honor will understand that the revenue from such a source would be a mere bagatelle in any event.

Counsel has quoted to your Honor the provision of the constitution of California, which says:

> "The use of all water, when appropriated for sale, rental, or distribution, is declared to be a public use and subject to the regulation and control of the state in the manner provided by law."

All that the state has reserved by this provision is the right to regulate a public use. The state has not by this, nor by any other provision, attempted to reserve any right or power to fix or limit value, or to interfere with the operation of economic laws. The thought that it has, seems to be the fundamental error into which counsel is led by his argument. The fact that the state has an interest in the use does not empower the state.

nor the regulating body which is the agent of the state, to fix a value in any other way than value would be fixed if the issue arose in any other proceeding. This provision of the constitution does not mean that the *property* of the corporation or individual who is discharging the use, is subject to control and regulation of the state in the manner to be prescribed by law, it simply means that that *use*—and that is the only thing that has been dedicated to the public—is subject to regulation and control in the manner to be prescribed by law. It seems illogical to say that that provision of the constitution means that the property itself has passed to the public, or that any interest in it has passed to the public. And that is the fundamental error which has run throughout counsel's argument. It never was claimed before, certainly no court has ever held, that, by devoting property to the public use of supplying water, the public acquired any interest in the property. It acquires an interest in the use and it is that use that by this constitutional provision, the public has reserved the right to regulate and control.

Starting with that as a principle, that it is the use of this property which has been dedicated to the public, and it is the use of the property which the public has reserved the right to regulate and control, what is the measure of value when the public comes to regulate and control that use? Is there anything suggested in that constitutional provision which would relieve the board of supervisors, or a court having the right to pass upon the subject, from applying, in the ascertainment of value,

the rules which would be applied in any other case where value is to be ascertained? Is it to be assumed that it was the intention, when it was said that the state reserved the right to regulate and control the use, that it meant that it could regulate and control the value? That is the sharp point which this discussion develops, and to me—and of course I am a partisan—the answer is not only plain, but is inevitable. I do not see how two minds could differ upon the proposition which I am now presenting to your Honor.

In my opening argument, I stated that the power conferred upon the government to regulate and control did not confer upon it the power to say that that which was valuable had no value. We have been told time and again by the highest court in the country that the basic element upon which rates are to be fixed, that is, the basic element upon which this power to regulate and control is to be exercised, is the value of the property. It is strange, if the courts intended to say that that value was to be restricted or limited, that they have not at some time, in the many, many cases of this impression that have arisen, said that such a limitation or restriction was to be imposed.

The Court. You do not contend that you still have the right to fix the value, do you?

Mr. McCutchen. We do not contend that, but we say that the value is to be fixed just as if we did own the property and we were selling it for any purpose for which it was available.

The COURT. They have the right to fix the reasonable present value, just as they have the right to fix the reasonable rate of income on the property.

Mr. MCCUTCHEN. Unquestionably. We concede that. I conceded that at the outset of my argument. If your Honor will remember, I said that those were the same issues that you were passing upon here, the value of the property and the reasonable income to be derived from the property. Those were the two questions that the board of supervisors was authorized to determine, and it was bound to determine value by the application—and I cannot repeat it too often—of economic laws. The board could not exercise their whim in fixing value. The board has power to fix rates. The legislature has not said, either expressly or impliedly, that the board might disregard all or any of the rules and measures by which value from time immemorial has been determined. It cannot deny value to that which has value, nor can it deny full value in any instance. In arriving at value, it has no discretion.

The COURT. Do you draw any distinction between the constitutional limitations which are placed upon the rate-fixing body when it fixes the rate and when it fixes the value?

Mr. MCCUTCHEN. No, I do not, your Honor. Preliminary to the fixing of rates, it must determine value. It must determine value and upon that value it must fix what will be a fair return to the company. But it must find the value as it actually exists.

The Court. I understand you now. I thought you were trying to draw a distinction between the power of the board to fix the rates, and to fix the value—that it had no power to fix the value.

Mr. McCutchen. I did not intend to say that, your Honor. If it could not determine value for its own purposes, that is, for the purpose of fixing a rate, it could not fix the rate because it would have no basic element upon which to fix the rate.

Mr. Haven. Do not the same principles of reasonableness apply to the fixing of value as apply to the fixing of the rate?

Mr. McCutchen. I would say no. I would say that whenever it appears that the rate-fixing body has not allowed value, that then unless the rate which is allowed is large enough to cover the value which actually exists, the rate must be set aside. It has no discretion, absolutely none, in determining value. To say that it has any discretion in determining value, is to say that it may whittle it to a point. The only matter in which it has any discretion, if it has any at all, is in the rate of return. It has no discretion even in that respect under the later cases, as I construe them, and I interpret that to be your Honor's meaning in the 1908 opinion. Under the *Gas* case, it has no discretion to go below the current rate of interest, and has no discretion whatever in determining value. It must find value as it exists.

The question of counsel seems to imply that he thinks that the rate-fixing body has discretion in determining

value, and that it may determine that that which actually has value has no value in fact.

It has no discretion to determine what is reasonable value, because it is upon reasonable value that it must fix rates. And I would say that if, for instance, it valued a piece of property at $2,000,000, and it were shown that at the time, it was, beyond question worth $5,000,000, a court would set the ordinance aside without further question, unless the rate of return was sufficient to allow a fair income upon the actual value of the property, which was $5,000,000. In other words, the court would look, just as your Honor did in the 1908 case, to the ultimate result. Your Honor will remember that we argued in the 1908 case that if the board discarded and refused to consider elements of value which actually existed, that that was in and of itself sufficient to entitle us to a preliminary injunction. We did not claim that that was sufficient upon final hearing, but that it was sufficient to entitle us to a preliminary injunction. Your Honor declined to follow us, and stated that the ultimate question, whether it arose on application for preliminary injunction or on the final hearing,—the ultimate question to be determined was whether the rates fixed would yield a fair return upon the value of the property; not the value as the board fixed it, but the value as the court determined it. I deny that it has any discretion whatever to limit value below what value actually is. To repeat what I said in my opening, value is value for all purposes; and it can make no difference whether the property, when value is to be de-

termined, is owned by a public service corporation, or an individual. Counsel said, at page 373 of his argument, and I do not know whether it was a quotation from your Honor's 1908 opinion or not:

> "In protecting these rights of the public, a fair and equitable valuation of the property involved is as important as a fair rate of income."

I have no quarrel with that doctrine, but, on the other hand, I say that it is the true doctrine and that it applies to the corporation as well as to the public.

Quoting from your Honor in the 1908 case, he said:

> "Generally that which is just but no more than just to the owner, ought to be the equivalent of that which is just but no more than just to the consumer."

Counsel quotes the *Consolidated Gas* case—the supreme court opinion—and says that the correct construction of the opinion is that whenever a rate is unjust to the public, fairness to the corporation must yield. What conclusion is to be drawn from that? By that is not meant that the value of the company's property is to be any less, but that because the value of the property has mounted so high as that to allow current rates of return upon the value would create a burden unbearable by the consumer, the right to current rates on value must yield to the interests of the public. No other interpretation of that part of the opinion is possible. The court was there dealing with value. It had previously said that the court below adopted the proper method in ascertaining present value of the property. And the

unquestioned result of this decision must be that if the value of the property increased to such an extent that a fair rate of return upon it would work a hardship on the public, the rate of return may be lowered, on the ground of necessity. There is, however, no intimation in any portion of that opinion or any other that value will be lessened in determining the basis upon which rates must be fixed.

I have read to your Honor the portion of the argument of counsel claiming that a corporation of this kind will not be permitted to make any profit beyond a dividend for stockholders. Losses will be visited upon it, but he says the constitution will not permit the accumulation of profits, and that the corporation may not make anything beyond what is distributed to the stockholders. As has elsewhere been said, this is but another way of saying that the value of the property cannot enhance.

Now, I am going back for a moment to the *Gas* case in the lower court. It seems to me that that case ought to answer, as completely as can be answered, the question which has been in your Honor's mind. I read from 157 Federal Reporter, 854:

> "As to realty, the values assigned are those of the time of inquiry; not cost when the land was acquired for the purposes of manufacture, and not the cost to the complainant of so much as it acquired when organized in 1884, as a consolidation of several other gas manufacturing corporations.
>
> "It is objected that such method of appraisement seeks to confer upon complainant the legal right of earning a fair return upon land values which represent no original investment by it, does not indi-

cate land especially appropriate for the manufacture of gas, and increases apparent assets without increasing earning power. Analogous questions arise as to plant, mains, services and meters. The reported values whereof are the reproductive cost, less depreciation, and not original cost to the complainant or its predecessors."

Ir other words, he includes property of every description. He begins with real estate, and ends with meters.

"It appears by the undisputed evidence that some of these last items of property cost more than new articles of the same kind would have cost at the time of inquiry; that some are of designs not now favored by the scientific and manufacturing world, so that no one now entering upon a similar business would consider it wise to erect such machines or obtain such apparatus. In every instance, however, the value assigned in the report is what it would cost presently to reproduce each item of property, in its present condition, and capable of giving service neither better nor worse than it now does. As to all of the items enumerated, therefore, from real estate to meters, inclusive, the complainant demands a fair return upon the reproductive value thereof, which is the same thing as the present value properly considered. To vary the statement: Complainant's arrangements for manufacturing and distributing gas are reported to be worth the amounts above tabulated if disposed of (in commercial parlance) 'as they are'.

"Upon authority, I consider this method of valuation correct. What the court should ascertain is the 'fair value of the property being used'; the 'present' as compared with 'original' cost; what complainant 'employs for the public convenience'; and it is also the 'value of the property at the time it is being used.' *Smyth v. Ames,* 169 U. S. 546-7."

It has always been within the power of San Francisco to say to us that this property was not useful to it. It has always been within her power to say she no longer needs our Lake Merced lands, that they are not useful, and, if so, to decline to allow us any rate of income upon them. At any time within the past 10 years we would have welcomed that declaration. But she does not tell us that. She tells us the property is useful; not only useful, but indispensable. Having told us that it is indispensable, she at the same time says she does not propose to allow us what it is worth, but will fix upon it an arbitrary valuation which, perchance, she deems to be its worth for water-producing purposes.

And in this connection I desire to reply further to the question which your Honor put with reference to the presence of a coal mine on the property. If there were a coal mine, and San Francisco still said to us the property was necessary to enable us to render the service, by every rule of common sense, the consumers would have to pay a rate upon its value, including the coal. From that conclusion, there would seem to be no escape. The converse of the proposition is that a private corporation must devote the use of its property to the benefit of the public without adequate return upon its value, and this is unthinkable.

If you will bear in mind that it always lies with the municipality to say whether the property is useful, it seems to me the doubt which you have heretofore entertained will readily and quickly disappear.

Quoting further now, from the opinion of the lower court in the *Gas* case:

"It is impossible to observe this continued use of the present tense in these decisions of the highest court without feeling that the actual or reproductive value of the property at the time of inquiry is the first and most important figure to be ascertained, and these views are amplified by San Diego Land Co. v. Jasper, (C. C.) 110 Fed., at page 714, and Cotting v. Kansas City Stockyards, (C. C.) 82 Fed., at page 854, where the subject is more fully discussed. Upon reason, it seems clear that in solving this equation, the plus and minus quantities should be equally considered, and appreciation and depreciation treated alike. Nor can I conceive of a case to which this procedure is more appropriate than the one at bar. The complainant by itself and some of its constituent companies has been continuously engaged in the gas business since 1823. A part of the land in question has been employed in that business for more than two generations, during which time the value of land upon Manhattan Island has increased even more rapidly than its population. So likewise the construction expense not only of buildings, but of pipe systems under streets now consisting of continuous sheets of asphalt over granite, has enormously advanced.

"The value of the investment of any manufacturer in plant, factory or goods, or all three, is what his possessions would sell for upon a fair transfer from a willing vendor to a willing buyer, and it can make no difference that such value is affected by the efforts of himself or others, by whim or fashion, or (what is really the same thing) by the advance of land values in the opinion of the buying public. It is equally immaterial that such value is affected by difficulties of reproduction. If it be true that a pipe-line under the New York of 1907 is worth more than was a pipe-line under the

city of 1827, then the owner thereof owns that value, and that such advance arose wholly or partly from difficulties of duplication created by the city itself is a matter of no moment. Indeed, the causes of either appreciation or depreciation are alike unimportant, if the fact of value be conceded or proved; but that ultimate inquiry is oftentimes so difficult that original cost and reasons for changes in value become legitimate subjects of investigation, as checks upon expert estimates or bookkeeping, inaccurate and perhaps intentionally misleading."

* * * * * * *

"If 50 years ago, by the payment of certain money, one acquired a factory and the land appurtenant thereto, and continues today his original business therein, his investment is the factory and the land, not the money originally paid; and unless his business shows a return equivalent to what land and building, or land alone, would give if devoted to other purposes (having due regard to cost of change), that man is engaged in a losing venture, and is not receiving a fair return from his investment, i. e., the land and building.

"The so-called 'Money value' of real or personal property is but a conveniently short method of expressing present potential usefulness, and 'investment' becomes meaningless if construed to mean what the thing invested in, cost generations ago. Property, whether real or personal, is only valuable when useful. Its usefulness commonly depends on the business purposes to which it is, or may be, applied. Such business is a living thing, and may flourish or wither, appreciate, or depreciate; but, whatever happens, its present usefulness, expressed in financial terms, must be its value.

"As applied to a private merchant or manufacturer, the foregoing would seem elementary; but some difference is alleged to exist where the man-

> ufacturer transacts his business only by governmental license—whether called a franchise or by another name."

And let me stop here to remark that the principle of government regulation has, as your Honor well said in your 1908 opinion, existed from almost the beginning of the law. It was the common law that the government might regulate a public use. It was not the common law, nor is it the law of any American commonwealth, that when, in the exercise of the power to regulate it becomes necessary to ascertain value, a court or a rate-fixing body can deny value to that which has value.

To continue the quotation:

> "Such license, however, cannot change an economic law, unless a different rule be prescribed by the terms of the license, which is sometimes done. No such unusual condition exists here, and, in the absence thereof, it is not to be inferred that any American government intended when granting a franchise, not only to regulate the business transacted thereunder, and reasonably to limit the profits thereof, but to prevent the valuation of purely private property in the ordinary economic manner, and the property now under consideration is as much the private property of this complainant as are the belongings of any private citizen."

It is the use, which the government is clothed with the power to regulate and control. It is the rate of income, which it is authorized to fix. I doubt if ever before it was contended that, by devoting property to public use, any interest in the property itself passed

to the public. Counsel is entitled to be hailed as the pioneer in that field.

> "Nor can it be inferred that such government intended to deny the application of economic laws to valuation of increments, earned or unearned, while insisting upon the usual results thereof in case of equally unearned, and possibly unmerited, depreciation."

Mr. Haven deducts $4,000,000 from what he claims to have been our investment for property that was once useful but which, by the operation of the laws of nature, has gone out of use. At the same time he says we may not make any profit above a dividend to stockholders.

When Judge Hough comes to the discussion of franchise, he takes it for granted that the law of eminent domain applies; and he says that rate regulation is *pro tanto* condemnation. He employed in that case every rule which would have been applied had the city of New York been seeking to take the property in the exercise of the right of eminent domain.

And in the *Consolidated Gas* case the supreme court said (I will read your Honor from the opinion as published in 53 Lawyers' Edition, page 399):

> "And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding rates. If the property which legally enters into the consideration of the question of rates has increased in value since it was acquired, the company is entitled to the benefit of such increase."

It may fairly, and without fulsomeness, be said that the opinion of the court below in that case was a master-

ful opinion. No other interpretation can be given to the language of the supreme court than that it fully approved the method which the court below adopted in reaching value. It is the present value which is to be ascertained, and if the property has increased in value since it was acquired, the company is entitled to the benefit of that increase. There was no suggestion that it should be limited to its value for gas generating purposes. Judge Hough said the property was worth more than when originally acquired, for the same reason that all other realty was worth more; that for two generations past, realty values had increased more rapidly than the population. Yet counsel for defendants seems outraged at the suggestion that consumers are to be asked to pay this company a return upon increased value which has resulted from the growth of population about the bay of San Francisco. The *Gas* case seems to answer him.

That opinion simply harks back to the fundamental principle from which we started, and that is that it is not the property in which the public acquires an interest, but it is the use of that property. The public is not clothed with the power or right to regulate or control value, but may regulate and control the use.

I put to counsel in my opening argument the question whether, if the constitution of California had said that property devoted to a public use shall never increase in value, such provision would be constitutional? He did not see fit to answer it. He could have made but one answer. But by the logic of his argument he would be

forced to say that such a provision would have been constitutional.

The Court. Mr. McCutchen, you have stated that you have a vegetable garden there which yields a nominal income, and that the use of that vegetable garden is not injurious to the water storing and water gathering capacity of that land; suppose instead of considering that this is a nominal income, it was a very large income that you derived, and that the use of the land as now, for that purpose, is not in any wise harmful or detrimental to its use as a water gathering or water storing property—in that event, could you take the full value of the property that is, the present value of the property as a basis for fixing water rates?

Mr. McCutchen. We would be entitled to do so if the use did not interfere with the discharge of our duty to the city. That comes back to the proposition which we were discussing a few days ago, that if from outside sources, that is, from sources other than water rates, we derive a total of say 6 per cent, although our property is all devoted to the use of supplying San Francisco, from which we cannot relieve it, San Francisco would be entitled to water for nothing. I do not think that helps us in arriving at the solution of the question now under consideration.

The Court. Suppose that instead of being used for gardening purposes, you derived a large income from it in supplying the city of Oakland with water from that watershed?

Mr. McCutchen. I am inclined to think that if we did that it would be said that this property is not useful in its entirety to the people of San Francisco, that it was neither entirely used nor was it in its entirety useful to San Francisco. If there were enough water to supply not only the city and county of San Francisco, but the city of Oakland as well, in that event there would be a division of value. But we must keep to the showing which is made here, if your Honor please, for the purpose of determining the question in hand.

The Court. I appreciate that. There is no necessity of going through that again. I was simply trying to ascertain what your views were here with reference to this particular question that you are discussing.

Mr. McCutchen. Well my views are, as I have suggested to your Honor, that all this property is useful and therefore, full value must be allowed. Speaking of a vegetable garden, I know a portion of the land is planted to vegetables today; whether that was the case in 1903, I do not know, and I do not think there is anything in the record on that subject.

The Court. Oh, that is too trifling to take into consideration at all; we were simply using that as an illustration.

Mr. McCutchen. I submit that if the property is useful, and all of it is useful to San Francisco, and we cannot take it away from San Francisco, we are entitled to the full value, although it may be possible for us to make a use of it which is not inconsistent with the dis-

charge of our duty to San Francisco. And that, as your Honor can well imagine, would be in the nature of things some very trifling use, because the property cannot be relieved from the obligation which it owes to San Francisco.

Mr. Haven. Mr. McCutchen, may I ask you a question?

Mr. McCutchen. Certainly.

Mr. Haven. Suppose you could cover that Lake Merced land with improvements and get a large income, without interfering with it for the use of water-producing purposes and could use it for water-producing purposes at the same time, also getting an income out of it for real estate purposes, would that have any effect on the value of it?

Mr. McCutchen. I should say that that again would mean that the property was not useful, that portion of it which we had put to the other use, and which necessarily would be inconsistent with the use of it as a water supply.

Mr. Haven. I am assuming that both could be done together.

Mr. McCutchen. Well, you are assuming an impossible situation, it seems to me.

The Court. We have precisely that situation when you come to fix the rates of railroads as between interstate traffic and intra-state traffic; there the whole property of the railroad company is used perhaps very triflingly for intra-state traffic and still in proportioning

the property for rate-fixing purposes, it is not the whole value of the property that is taken, they ascertain the whole property and then it is apportioned between the two.

Mr. McCutchen. Do we not find a very great difference between that case and this? The whole property in that case is not necessary for intra-state business. It looks to me as if that answers that analogy. In this case, the whole property is necessary.

The Court. The public should pay simply for what it takes, nothing more, nothing less.

Mr. McCutchen. That is doubtless true, but in determining what it shall pay for the service it demands, the value of all property which is employed in such service must be taken as a basis. The public is not paying for the property. It is paying for the use of it, and that payment must be determined by ascertaining what property serves the public. The city needs *all* the water which can be withdrawn from the property, and requires the company to use *all the Merced lands* for that purpose.

The Court. It takes the use, but it does not take the property.

Mr. McCutchen. It takes the use to the extent of not permitting us to dispose of the property. For all practical purposes, so far as our right to a revenue is concerned, the whole property is taken.

The Court. That is the question I have been endeavoring to answer in my mind for the last two days. You

take the use of the property, you do not take anything more; but if you discover a coal mine on that ground, the city would not be entitled to take any of that coal,—it is not entitled to a blade of grass; it is not entitled to anything there. It would not be entitled to go out there and mow that grass and put it up for hay; it grows on the ground. It is only entitled to take the water that is produced on that land, so much of it as it needs. It would not be entitled to take any more than that.

Mr. McCutchen. That is unquestionably so, but your Honor will see that while the city is not entitled to the property itself or a blade of grass thereon, it is entitled to have the property, and the whole of it, not simply a part or an interest in the whole, but all of it, maintained in its present condition. We can, speaking broadly, change neither its condition nor its use. It would be most unreasonable, not to say unjust, to hold that the use of the entire property has been taken, but need not be paid for. While the city has not and cannot take the property, it can, and has taken the use. For this it must pay a rate on value. All the city is entitled to get from any property under these circumstances is water; it is under no circumstances to touch or control the land. It can, as your Honor says, neither mow grass nor extract ore.

The company, on the other hand, may justly demand a fair return on the value of all property impressed with the use. If all land is impressed, the value of all of it must be included; if only a part, then the value of

that part alone serves as a basis—but if it be once determined that given property is impressed, the difficulty ends. Its full value must be allowed. The objection to permitting the city to say—"True, your land is needful, ' but is not very valuable to us; we will allow you one-' half its value"—is patent. The argument that our land, while worth $14,000,000 as realty, is only worth $1,000,000 as watershed, is an exact analogy.

But the contention is made that, since its usefulness to the city is for water-producing purposes alone, its value for that purpose represents its value for rate-fixing. This argument entirely ignores the point we make. It is not directly a question of the value of the land to the city, but the value of the water; and the value of the latter is to be determined by using the value of the former as a basis. *In order to furnish the water we must devote all the land to the use.* If the city may dictate upon what basis it will pay, we are not alone allowing it to regulate the use, but we are permitting it to regulate value as well. Might it not say with equal force—"We will allow you what this land ' is worth for agriculture (or, perhaps, for mining.)"? If it has the right to do the one, has it not the power to do the other? Can the city, in other words, accept the benefit of a dedication of *all the land* and announce upon what basis of value the owner is to be remunerated? It is but an extension of the principle here contended for by defendants to say that the city may take land and allow therefor its cost, and refuse to recognize value in the form of unearned increment.

There must be a reason for the rule your Honor stated in the 1908 case, and to which you have referred here, namely, that it is value for water-producing purposes which is to be taken. The reason cannot be that the use fixes value. Mr. Justice Field stated the contrary in the *Patterson* case with too great positiveness to admit of question. It can only be because the city has the power and the right and the authority to determine what basis of value is to be adopted. Upon the theory which your Honor announced, the city might with equal propriety, though perhaps with not an equal showing of justice, take the value of the land as agricultural, instead of water-producing, property as a basis. On the reasoning of defendants, there is nothing to prevent it. Or, to go a step further, what would prevent an acceptance by the city of the theory that cost is value? And could it not, under this guise, deprive us for all time of any increase in value?

This is not, and never has been, the rule. It is not a question of policy which is here involved, but of constitutional right. And we submit that the city has no right to take the use of property from an individual without compensating that individual with a return upon the highest value of the property taken. The city cannot demand the land, name the use upon which value is to be determined, and reimburse the owner upon a basis which may, as it does here, deprive him of one of the most valuable of property rights. Furthermore, suppose we made a use of that land which polluted the water?

The COURT. Then you would have to be stopped, I presume?

Mr. McCUTCHEN. By whom?

The COURT. Well, if you did not stop it yourselves, I presume the government would stop you.

Mr. McCUTCHEN. The city and county of San Francisco would stop us.

The COURT. They are entitled to the use of that land for water-gathering purposes; they take the use of it for that purpose. I assume that you are not permitted to make any use of it that would interfere with the gathering of that water, but still if you could make a use of it for some other purpose which would not interfere with the water-gathering and water-storing purposes of the land which were needed by the city, I do not imagine the city could prevent you from doing it. Suppose you discovered a coal mine on that ground and you could put up your works and extract the coal without interfering in any manner with the gathering of the water and the storing of it, do you think that to that extent the city could stop you mining that coal?

Mr. McCUTCHEN. As I answered your Honor yesterday, I am inclined to think it could not.

The COURT. And in that event could you say that this land is worth twice as much now as it was before that coal mine was discovered and, therefore, it must go in for rate-fixing purposes at twice its former value, assuming that the additional value was for coal purposes?

Mr. McCutchen. No, I would not, assuming that we would in that case have the right, as your Honor suggests, to mine the coal. But even in that case, what would be the value of that which was left after the coal was removed? The value would be for the highest purpose to which the remainder of the land could be put, and that would be to sell it for real estate.

The Court. That is a question I would like to hear you say something about. Many people invest in land that is not productive and they hold it with a view of selling it at an enhanced figure some time in the future; they expect to make their profit out of the appreciation in the value of the land. Now, if you have an acre of land in Merced county, for instance, that is worth $100; your pasturage on that land would perhaps be worth $1.00 a month for an animal; you have a piece of land out here that is not needed at present for building purposes in San Francisco, but it has an enormous future value, and will be worth $10,000 an acre, but you could not use it for anything better at present than pasturage; how much would you be entitled to charge for pasturage on that land?

Mr. McCutchen. One dollar an acre. I am following your Honor's question—we could not use it for anything else.

The Court. You cannot at present, but still you would not sell it for $100 an acre, because it has an enormous value for future purposes.

Mr. McCutchen. When are we ever going to realize that?

The Court. You may in four or five or six years hence. You have invested with that in view; that the city of San Francisco will grow in five or six years, and that it will be needed for stores and residences; at the present time it is not so needed.

Mr. McCutchen. Does your Honor assume that to be a fact with reference to Lake Merced?

The Court. No, I am not assuming it at all; I am simply trying to see what sort of a formula we are going to apply to cases of this sort.

Mr. McCutchen. I think I understand your Honor's question. If I owned an acre of land in Merced county that was worth $100 an acre and I could not use it for any purpose but pasturage, and I could get but $1.00 an acre for it for that purpose, and an acre of land in San Francisco for that same purpose would not yield more than $1.00 an acre, then I should say that for pasturage purposes, my acre of land in San Francisco was not worth any more than my acre of land in Merced county. My acre of Merced land might appreciate or might depreciate; my acre of land in San Francisco might also appreciate or depreciate. Whenever it does appreciate, no matter when that event comes about, I am entitled to the benefit of it. I think that is the fallacy of the argument of the other side. Now, has that appreciation come about? Before I answer that question, I will take the case of the Merced acre. When that increased in value I would no longer rent it for pasturage at $1.00 an acre; I would use it for the more useful purpose for which it was then

available, or I would sell it at the enhanced price. And so here a demand has come about which makes this property immensely more valuable than the value placed upon it by the city. Now that, mind you, is a present condition; that is not a speculative condition; it is a present condition. So that for the purpose of getting at the sharp point with reference to the matter now under discussion, you must assume that there is a market today for this property, far in excess of Grunsky's figure. Now, of course, under those circumstances I would not rent it for one dollar an acre because I could sell the property and invest the money in something that would yield me infinitely more than a dollar an acre. But I happen to occupy a relation to the city of San Francisco by which San Francisco is permitted to say to me that the property is useful to her, and she will not let me sell it. She will allow me a return on my original investment, whatever it may be, say, for illustration, $2,000,000, and will continue this allowance so long as she may see fit to say the land is useful to her; the property is, in fact, worth $13,000,000, but nevertheless, while insisting that I shall continue to use it for her benefit, she will only allow me a return on a value of $2,000,000. That is the exact situation that is presented. We cannot use it for any purpose for which we can get income on $13,000,000. It is only common sense to say that if we could do it we would do it. San Francisco has us bound and tied. We are not in a position to use the land for anything that will interfere with the discharge of our public duty.

To adopt any other rule in this case than the one we urge, will leave you in the realm of speculation. There is absolutely nothing in the record that will tell you what is the value of this particular property,—that is to say, looked at as an independent property—for water-producing purposes. That is not the way Mr. Grunsky valued it. We quote from the testimony of Mr. Grunsky as follows:

> "Page 326, XQ. 17. Then what was the value upon which you attempted to appraise the properties in those four years?
>
> "A. In part it was cost of reproduction of the works; in part it was appraisement of land values by experts whose opinions I had confidence in and accepted; and in part it was my own personal opinion and judgment as to what would be a reasonable allowance for the lands and water rights.
>
> "XQ. 311. When these real estate experts appraised the city property of the Spring Valley Water Works as what kind of property did they appraise it for you?
>
> "A. They appraised it as they would have appraised other property similarly located.
>
> "XQ. 312. That is the ordinary commercial value as commercial property?
>
> "A. Yes sir.
>
> "XQ. 313. They did not appraise it as property capable of being devoted to the use of a water works supply?
>
> "A. No, they appraised it as they would have appraised it if it were not being used for that purpose.
>
> "XQ. 320. Then you would not have valued them and did not value them as being capable of devotion to a water supply system?
>
> "A. The real estate in San Francisco was not so valued.

"XQ. 552. 'The appraisement of the Lake Merced lands is based upon the values which they would have if their use for the production of water were abandoned.' Do you remember that?

"A. I remember words to that effect.

"XQ. 553. Is that correct?

"A. They were appraised as lands apart from their water-producing possibilities.

"XQ. 554. And is that so as to 1903 and also 1904?

"A. Yes sir."

No witness who testified on the subject said that that was the value for water producing purposes. Mr. Grunsky says the people from whom he got his information valued it as real estate. So, if that position be taken, you have absolutely no guide, absolutely no information, which will enable you to tell what the value of this property is. We have given you its value for ordinary real estate purposes. I desire to read upon that subject the testimony of Mr. Baldwin. And when I say that we have given you its value for ordinary real estate purposes, that is the only purpose for which we could give you its value, in the very nature of things, treating it as independent of other parts of the system. We could not tell you the value of this specific piece of property for water producing purposes. There is no measure or guide known to the law by which we could tell you that. We could not determine its value by capitalizing the rates which we could get from it. If we are to consider it as an independent piece of real estate—and that is the light in which it is considered by defendants—we must adopt the well-settled and the only rule by which its value can be determined.

And now I am reminded of a stipulation which counsel on the other side says was made in reference to the right of witnesses who testified in this case to consult others.

Mr. Grunsky did not consult brokers or experts under that stipulation; he did it before the stipulation was made. Let me tell your Honor how that stipulation came to be made. With reference to quantities, there was some information obtained by our people from outside sources through surveyors and assistant engineers. Mr. Partridge had objected to the use of that sort of information. When Mr. Grunsky took the stand, he testified to the way in which he got his quantities. Mr. Kellogg did not object, but asked Mr. Grunsky if that was a proper way, in his opinion as an engineer, to make computations of the contents of these properties, and Grunsky answered that it was indispensable, that one man could not do all such work. Thereupon Mr. Kellogg said "The only reason I asked you that, Mr. " Grunsky, is because the use of similar information " has been objected to by the other side." Mr. Partridge then proposed the stipulation, and I will read the exact language of it to your Honor:

> "It is stipulated that neither party will object to any evidence offered in this case based upon data or information furnished by others than the witness himself."

I say that that does not mean anything more or less than if a witness has seen fit to take information given to him by somebody else, he may use that information.

But it does not say, by any means, and is not to be construed to mean, that the man who gave the information was under oath.

Mr. Haven. Your position is, Mr. McCutchen, is it not, that the only evidence here as to the value of those lands for any purpose is Mr. Baldwin's appraisement?

Mr. McCutchen. No. I think I made that statement to you the other day, Mr. Haven, but I was wrong. I think there is other evidence; for instance, the evidence of Mr. Schussler, who was also under oath.

The Court. Did Mr. Grunsky give it as his opinion that the land was worth $2,000,000?

Mr. McCutchen. No sir.

The Court. He did not give any opinion at all?

Mr. McCutchen. He simply said, "I took that from "real estate experts; I do not claim to be a real estate "expert". Mr. Powers calls my attention to what Mr. Grunsky said on that subject, and I will read it now as your Honor has it in mind. I am reading from page 89 of Vol. 1 of the closing brief of complainant:

> "Mr. Kellogg. XQ. 140. I understand that in estimating the value of lands you obtained expert information?
>
> "A. Yes sir.
>
> "XQ. 141. You did not rely upon your own knowledge of land values; you are not an expert on land values, are you?
>
> "A. That applied to the matter of the city real estate. I had appraisements made, for the first valuation, by Mr. William Schadde, and a subsequent appraisement by Mr. H. P. Sonntag.

"Mr. Long. XQ. 142. Mr. Grunsky, will you tell what Mr. Schadde's experience was, in order to qualify him?"

To that question Mr. Kellogg objected. Of course the question is objectionable; there can be no doubt about that.

"Mr. Long. I do not want to interrupt you, Mr. Kellogg, but I would like to bring that out right here. I can bring it out later.

"Mr. Kellogg. You may go right ahead with the answer, Mr. Grunsky. I only object to the competency of it.

"A. At the time Mr. Schadde was employed for this purpose he was an appraiser of real estate values for the Hibernia Savings and Loan Society.

"XQ. 143. As to any of the other properties, did you take figures from other people as to values, in making up your appraisement?

"A. The appraisement made by both Mr. Schadde and Mr. Sonntag extended to the Merced properties, and included those properties, which overlap into San Mateo county; apart from that, there was no appraisment available to me by real estate experts of the lands owned by the company."

And at page 353 he testified further on the same subject:

"Mr. Kellogg. XQ. 149. Mr. Grunsky, did Mr. Schadde the real estate expert, or Mr. Sonntag, also the real estate expert, who furnished you with values of the city real estate, including Lake Merced, appear before the board of supervisors in 1901 or 1902 or 1903, or during any of the periods which your appraisments covered?

"A. They did not, so far as I know."

The proceedings here show they did not. I will now read from page 91 of the same testimony:

"XQ. 154. The sum and substance of it is, they reported to you on these valuations, you reported to the board of public works, and the board of public works reported to the supervisors?

"A. Yes, I accepted their valuations, their appraisements, as my appraisement.

"XQ. 155. Not yourself making any investigation on those particular topics, is that it?

"A. Yes, I was in conference with them.

"XQ. 156. Are you a real estate expert on values in San Francisco?

"A. I am familiar with the real estate values to some extent, but never have considered myself and do not now consider myself an expert."

He took another position with reference to the peninsula lands because he said he had familiarity with their values, and he determined their values himself.

I will now read to your Honor the testimony of Mr. Baldwin, commencing at page 5751. Mr. Baldwin is a very well-known real estate man, as is clearly evidenced by the dialogue from the record, when he was placed upon the stand.

"Q. 5. Do you know the property of the Spring Valley Water Works, located in San Francisco?

"A. Yes, sir.

"Q. 6. And the Lake Merced ranch, which is also partially in the county of San Mateo?

"A. Yes sir.

"Mr. Kellogg. Mr. Partridge, I suppose you will concede that Mr. Baldwin is a qualified witness?

"Mr. Partridge. Yes, entirely so."

And then Mr. Baldwin goes on to give his values of these properties, and to tell why he places those values.

He gives values from his general experience in handling properties of that kind; he gives individual transactions and individual sales within the neighborhood and within a short time before his testimony was given. He was asked, among other things, whether land values in that particular locality had increased within a short time, and he made the answer that they had increased 500 per cent in 10 years. There is not a word in this record that is claimed to contradict or qualify that testimony. What is there on the other side? You have the statement of Mr. Grunsky that he consulted a Mr. Schadde, who was an examiner for the Hibernia Savings & Loan Society, and that Mr. Schadde told him that this property was worth $2,000,000 odd. The counsel has thought it proper to call your attention to some transactions in the property which took place in 1904, and one transaction that took place in 1901. Three of them are transactions in properties on the sand dunes near the ocean. They averaged something over I should say, well, close to $900. They are given as $972 and $750 and, without taking the time to figure it, I think it will certainly average $850 an acre for the poorest property in the tract. At $850 an acre the property would have been worth more than the price which Mr. Schadde is said to have put upon it. Mr. Schadde did not go upon the stand. There was no opportunity to cross-examine him. We do not know what his method of valuation was. We do not know whether it was a horse-back opinion or one of poorer value. But the counsel has demonstrated here beyond the shadow of a doubt that Mr. Schadde's valuation is absolutely unreliable. But aside from that, is

Mr. Schadde's statement—he not having been under oath and not having been submitted to any sort of examination—is his statement to be given the credit that is to be given to the testimony of Baldwin, who gave a reason for every dollar of valuation assigned by him? I should say that the question furnished its own answer.

That stipulation did not mean that the statement of the witness was any the less hearsay. As I construe it, it simply meant that a witness might use that information for the purpose of reaching his conclusion, if he desired to do so. It did not at all change the value of his testimony. If they saw fit to rely, in as important a matter as that, upon the unsworn statement of Mr. Schadde, that is their concern.

The Court. What did Mr. Baldwin base his opinion on?

Mr. McCutchen. He based his opinion on sales in the neighborhood. I will read your Honor Mr. Baldwin's testimony because it is very important.

> "Mr. Partridge. Q. 33. How did you get your valuation of $13,650,000 for the Lake Merced lands?
>
> "A. I valued it at $5,000 an acre.
>
> "Q. 34. What was the basis of that valuation?
>
> "A. I did not quite understand your question.
>
> "Q. 35. By what method did you arrive at the valuation of $5,000 an acre?
>
> "A. From sales that are being made in and about that vicinity. Take, for instance, the Park Side property, which is along the line of 19th Avenue, and down at the further end of the Outside Lands District property, it is being sold in subdivisions at from $800 to $1200 a lot; 25 by 120 lots. That is equivalent to from $10,000 to $14,000 an

acre. That is only one instance. The whole outside district is full of illustrations of what can be done with that class of property. This Lake Merced property, of course, would have to be treated on a broad and comprehensive system of improvement and development. The property could not, in all probability, be sold in the San Francisco market quickly, to realize this amount of money, but it could be disposed of in other markets besides San Francisco; in other words, the home market might not be sufficiently strong to absorb $13,000,000 worth of property, but it can be sold."

Of course, that simply means that, when it is put on the market in the proper way, if the people who are here and have money to invest do not want it, there will be plenty of people to come in from the outside and take it. That is the invariable rule.

"Q. 36. Do you consider that as desirable property for residence purposes as the Park Side up on the hill?

"A. I think it is much more desirable.

"Q. 37. In the bed of the lake?

"A. I did not contemplate filling in the lake at all. I think the lake should be retained. The lake is a feature that adds tremendously to the value of the property surrounding it."

I am reminded of a suggestion made by counsel on the other side to the effect that Mr. Schussler, when a witness before the board of supervisors, was asked if that property was worth $5,000,000—and this was away back in 1895—and he said "if we could sell that prop- " erty for $5,000,000, we would sell it and apply the " money to our bonded debt". If San Francisco will permit us to sell it to-day, we will wipe out a very

considerable part of our bonded debt. But no, says the city, we must not sell it, we are using it for the city and its citizens, it is indispensable to them, and while we are using it for their benefit, and while we must continue to use it for their benefit, and while it is indispensable to them, nevertheless they will allow us a return on only one-fifth or one-sixth of its value.

Continuing with Mr. Baldwin's testimony:

"Q. 36. Do you consider that as desirable property for residence purposes as the Park Side up on the hill?

"A. I think it is much more desirable.

"Q. 37. In the bed of the lake?

"A. I did not contemplate filling in the lake at all. I think the lake should be retained. The lake is a feature that adds tremendously to the value of the property surrounding it.

"Q. 38. Did you take that from your valuation, that portion of the land that is covered by water?

"A. No, I consider that the lake is a sufficient attraction to offset any land in the value of that area.

"Q. 39. How would you go to work to put that property on the market?

"A. I would employ the very best architects in the country—a man like Burnham, or someone equally as good, if he could be found—to create a model city of it, that is, lay it out in attractive shape. As to the details of construction, that is a matter for artists; that would be outside of my province.

"Q. 40. You would consider it entirely feasible, however?

"A. Absolutely so.

"Q. 41. In between the two lakes, do you mean, or, on the slopes, or both?

"A. All of the properties except the lakes themselves.

"Q. 42. You have made no estimate of the amount of water that that property provides for this corporation, have you?

"A. No sir.

"Q. 43. Do you know anything about that?

"A. No sir.

"Q. 44. Do you know how much profit the corporation receives from the water it sells out of those lakes?

"A. No sir."

That question suggests the argument made here that we are not permitted to make any profit—that we have no right to make any profit. The point suggested by the question seems to be that we do not make any profit out of the use of the land for water purposes, and it would seem to follow on that theory that it is not worth anything for rate fixing purposes, and we cannot use it for any purpose except to furnish water.

And again, reading from Mr. Baldwin's testimony:

"Q. 45. If that property were turned into residence property, you consider it would, within a reasonable time, be sold so as to produce the amount you give here, $13,650,000?

"A. It would produce that and more than that; by that I mean it would realize that sum exclusive of any cost of improvements. That is equivalent to about $450 a lot."

Just across the roadway they were selling lots for from $800 to $1250. That does not look like speculation. There are here 2800 acres of land all within the corporate limits of San Francisco. I suggest to your Honor

that you go down the peninsula and see the improvements there, away beyond the southern line of the Lake Merced rancho; that you go along the Ocean Shore Railway and look at the little villages that have been built up there far beyond the southern line of the Lake Merced rancho, and that will convince you that there was no exaggeration in Baldwin's statement that that property was then worth $450 a lot, or, in the aggregate, $13,650,000.

And now I want to point the application of counsel's argument by defendants' cross-examination of Baldwin.

> "Q. 46. How much ought money to earn, if available at the present time, in your opinion?
>
> "A. I think it depends a great deal upon what it is invested in. Money, in first-class real estate, is supposed to be entitled to 5 per cent net per annum; in other classes of property, less desirable, it is all the way from 6 to 10 per cent net per annum.
>
> "Mr. Partridge. Q. 47. Supposing the corporation gets 3,000,000 gallons of water a day from that lake, which it sells for $180 a million gallons, taking the entire water sales, $197,100 per annum, without deducting the cost of selling that water, if that property were worth $13,650,000 would you say the company was justified in keeping that capital tied up in that property? I further call your attention to the fact, in connection with it, that 5 per cent of the sum you name is $682,500, or some 3½ times the amount that the company actually receives?"

Could we be furnished with a better illustration of the soundness of the doctrine for which we are contending? The answer to the question is:

> "A. I do not know whether the company is justified in doing it; I would not want to do it myself."

Could we have a better illustration, I say, of the fairness and the logic of the doctrine for which we contend? Mr. Partridge thought he had the witness cornered, and that there was no possible escape for him.

But to continue:

> "Q. 48. But you would say definitely that if the company would put that property on the market it could, within a reasonable time, dispose of it for the amount you name, $13,650,000 profit?
>
> "A. And leaving the reservoirs intact, yes sir."

There is no testimony in the record that contradicts that. Not one word of testimony fell from the lips of a witness that contradicts it. The testimony of Baldwin has the ring of truth to it. If the issue of value were involved in any other case, and the showing was what it is here, your Honor would not, I venture to say, hesitate a moment to take his testimony as conclusive.

Suppose the company had made an agreement to sell this property for $10,000,000, and an action in damages for breach of the contract had been instituted for its refusal to make a conveyance, and that Baldwin, being a witness, had given the same testimony that he gave here, and that was all the testimony before the court. Would not your Honor, if the case were being tried before you with a jury, tell them that they were bound to render a verdict for the difference between the $10,000,000 and $13,650,000, because the testimony was uncontradicted? And must it not therefore be taken as an admitted or confessed fact in this case that that property is worth $13,650,000 except to the

extent that it may be qualified by these alleged purchases, to which I shall come later on?

Baldwin was further asked on cross-examination:

> "Q. 49. What would you say as to the value of that property now, compared to what it was 10 years ago?
>
> "A. I think it is worth five times more, at least."

We all know that. We all know that that section of San Francisco was transformed from a sand dune within ten years of the time this testimony was taken. We know that land south of Golden Gate Park which today is occupied by residences, as close to one another as are buildings in the locality in which this court is being held, was a sand dune but a few years ago. Our common sense tells us, and our every day experience teaches us, that changes of this nature must have enormously enhanced the value of these lands.

Mr. Baldwin's and Mr. Schussler's testimony is the only testimony in this case as to the value of Lake Merced lands. This valuation counsel does not criticise, except that he says that Mr. Baldwin's method of disposition might require some time. But Mr. Baldwin says, and he gives a good reason for it, that that amount of money can be realized for the property over and above expenses of sale, that is to say, it will be net. As that is the testimony, the court is not left to, and will not, speculate upon what the value is, but will take it from the record.

The testimony was given by a man of whom defendants, when he was placed upon the stand, said: "We admit his qualifications entirely." So there is no room for the criticism that this is the testimony of an expert, and that it is to be looked upon with suspicion. This expert is clothed with a certificate of reliability and character by counsel on the other side. It will be presumed that if it had been possible for defendants to produce an expert of good standing, who would question the soundness or reliability of Baldwin's valuation of the property, they would have produced him. Not having produced him, the presumption is that none such could be found. Baldwin said that just across the road the Parkside property was selling at from $850 to $1250 a lot, which is from $10,000 to $14,000 per acre. Defendants must have recognized the conservativeness of Baldwin's figures and have realized that any responsible expert in realty values would not have placed a lower valuation on this property than Baldwin did. I submit, therefore, that the court should take Mr. Baldwin's valuation because there is none other to be taken.

SALES OF LAKE MERCED PROPERTIES.

The defendants, for the purpose of proving the value of the Lake Merced property, have called your Honor's attention to certain transactions from which it is assumed the complainant, after the commencement of this suit. acquired title to some of that property. Three of those properties, as you will remember, are on the por-

tion of the property immediately or practically adjoining the ocean. So that I take it, for the purpose of determining the average value of those properties, it would be quite fair to add the prices per acre of the three, and take an average. That gives an average for the property purchased in that locality of $874. They say that the other property, which they describe as among the best,—although there is not any evidence to show it,—was purchased for eighteen hundred dollars per acre. By taking the average of those two prices, we get $1337 per acre. How many acres have we there—I will figure it at 2735 acres,—2735 acres at $1337 an acre will give a total of $3,656,000.

The Court. What was allowed for it in the supervisors' estimates for those years?

Mr. McCutchen. It was allowed at $2,030,000, Mr. Grunsky's valuation; the supervisors took his valuation.

I suggested to your Honor, when this question arose, that in my opinion the testimony had no probative value. However, the defendants insisted that it had, and I suppose for their purposes that is practically an admission of the value of the property.

I will read to your Honor from *Lewis on Eminent Domain,* Vol. 2, Second Edition:

> "Sec. 447. Purchases by the party condemning. —What the party condemning has paid for other property is incompetent. Such sales are not a fair criterion of value, for the reason that they are in the nature of a compromise. They are affected by an element which does not enter into similar trans-

actions made in the ordinary course of business. The one party may force a sale at such a price as may be fixed by the tribunal appointed by law. In most cases, the same party must have the particular property, even if it costs more than its true value. The fear of one party or the other to take the risk of legal proceedings ordinarily results in the one party paying more or the other taking less than is considered to be the fair market value of the property."

The COURT. That testimony is excluded, is it not, because it is affected by the condemnation proceedings? Do you think that is appropriate to a case like this?

Mr. MCCUTCHEN. Oh, unquestionably, your Honor. It has been held, repeatedly, that in a suit by a corporation to condemn property, it could not be shown what it had paid for similar property in the same locality—I mean by a contract with the selling public. The theory of it is, and it seems to me it is perfectly simple, that the corporation can take the property in the exercise of the right of eminent domain, and hence the parties are not at arm's length. There is not a willing seller and a willing buyer.

The COURT. But how does that affect this eighteen hundred dollar price? That was not taken under eminent domain.

Mr. MCCUTCHEN. No, but it could have been taken under eminent domain. That is the point. That is the reason for the rule laid down here.

The COURT. You mean any actual sale of that property made between a willing buyer and a willing seller

would have been inadmissible—no testimony could have been admitted?

Mr. McCutchen. I am afraid your Honor does not get my point.

The Court. I am afraid I do not.

Mr. McCutchen. You are assuming now that the Spring Valley Water Works was a willing buyer?

The Court. Under that eighteen hundred dollar purchase, there is nothing in the evidence that I recollect which shows that that was not a perfectly fair transaction between the parties, a willing seller on the one side, and a willing purchaser on the other.

Mr. McCutchen. But the willing buyer on the other side was a corporation that had the right to take the property in condemnation. The law is I think quite well settled. The law says, that such a transaction is to be looked upon in the nature of a compromise. That seems to be perfectly clear. Does your Honor see it as I suggest it from this authority?

The Court. Well, I would want to examine the authorities on that.

Mr. McCutchen. That is amply sustained.

The Court. I know that has been the rule in cases of eminent domain, where a party has been condemning a lot of land, they have to sue A, B, C and D, and so on; they compromise with A, B, C and D, and in the suit with E no testimony can be introduced as to the price paid A, B, C and D; but how far that rule goes back is

a question with me; whether it is going to cover every purchase that has been made by the corporation of land is another proposition.

Mr. McCutchen. I think your Honor will find I have stated the rule correctly. Let me suggest another thing: your Honor will undoubtedly look at the map of that land before you decide this case. You will find as to each one of these purchases, that they were isolated tracts, entirely surrounded by the property of the company. They were not attractive to the ordinary purchaser. There was really but one purchaser for them.

Mr. Haven. The gum forest faced on a well-established road.

Mr. McCutchen. The gum forest faced on a well-established road, yes, but was surrounded by the company's property. In that condition and with no railroad communication there, and none likely to exist until the company's property was put upon the market, a property owner would be much more ready to sell than under ordinary circumstances. I will not take the time to discuss this any further, because I am quite certain that an examination of the law will satisfy the court that these purchases have no probative value.

THE TESTIMONY OF SCHUSSLER.

There has been some criticism of Mr. Schussler with reference to his figures in this case, but when your Honor comes to read the record you will find a very potent and very cogent reason for the discrepancies be-

tween him and the other engineers who acted for complainant. You will find that Mr. Schussler was endeavoring to ascertain the cost of duplicating the property at the time the rates were fixed, which is what the supreme court of the United States has repeatedly announced to be proper. Mr. Schussler used an eight-hour day and two dollars and a half wage, while all of the other experts use a ten-hour day and two dollars wage. I do not claim that these facts alone account for all of the differences between Schussler and the other experts, but I do claim that, in large measure, they do away with the discrepancies which counsel on the other side has criticised so severely in some instances. A very large difference may be thus explained. Furthermore, it is well known, and it is developed in the testimony, that before 1903 San Francisco had become a unionized town, and that all work which was done from that time on was done under union regulations, and at a correspondingly increased cost.

Mr. Grunsky said that he was not figuring upon the cost of labor or upon the cost of materials as of the date when these rates were fixed, but that his prices were those ranging over a period of ten years prior to 1903. He admitted that between 1901 and 1903 the cost of labor and the cost of materials had enormously increased.

Now, I take it that Mr. Schussler had a perfect right to use the eight-hour day and the two dollars and a half wage, which were then actually prevailing, for the

purpose of determining what it would cost to duplicate the properties at that time, and that in any event his doing so very largely explains the fact that his valuation for the structural properties is larger than that of any other witness.

And is it to be said that Mr. Schussler is to be entitled, or that his estimates of value or cost are to be entitled, to no consideration in this case because he does reach a higher valuation than anybody else? Mr. Schussler has been identified with this property from the time of its commencement. As counsel on the other side says, he knows it better than anybody else.

Mr. Schussler answered forty-three hundred questions; I think he was on the witness-stand for three months. It seems to be regarded as strange that he should not be able to go back a period of 40 years, and tell the cost of structures as of that day. I should say that a witness who professed to be able to go back that length of time and tell the cost of the properties, unless he made some explanation to show why these particular facts were impressed upon his mind, would make himself an object of suspicion, and his testimony of questionable value.

I recall a very interesting fact that is developed in the testimony of Adams in this connection. Some very learned engineer had suggested to the cross-examiner that the number of brick which Schussler said were used to line one of his structures would have been enough to fill it up solid and to leave 20,000 brick over; and counsel asked Mr. Adams if he would not make a com-

putation and determine how many brick were probably in the lining of the tunnel. Adams, from the testimony, made a computation, and he found that there were not enough brick in Schussler's computation to line the tunnel and that Schussler was probably several thousand short (pp. 5075, 5130).

We cannot follow counsel, it is absolutely impossible to follow him, through all these criticisms of Mr. Schussler, but we ask your Honor to refer to the testimony, when these criticisms are being considered, and not simply to the extracts which are printed in defendants' brief. We ask your Honor, for instance, to look thoroughly into that phase of Mr. Schussler's testimony where it is claimed he made a statement before the board of supervisors in 1901, in which a very much lower valuation was claimed than in his estimate of 1903-04. I remember one quotation from defendants' brief as follows:

> "XQ. You stated at the end of your testimony, in answer to the question, 'Are those the present values': A. 'Yes, they are the present values, but I did not say that was all they were worth; a man may state a thing is worth $100, but that does not say it is not worth $150; if it is worth $150, it is certainly worth $100.' "

This I consider to be entirely misleading. He explains in connection with that, and there is no reference to the explanation in the defendants' brief, that the company was then engaged in an effort to acquire properties which were very needful; that the officers of complainant realized that the board of supervisors

would not allow any higher rates than had been allowed in previous years; that it had been the policy of the board of supervisors to cut down rates, and reduce values. He explains that he consulted with Mr. Kellogg, who was the counsel for the company, and that Mr. Kellogg said that it was not necessary to give more than a certain valuation; that no income above that would be allowed in any event, and that if a valuation, with reasons therefor, was given, that was all that need be done at this particular hearing; that complainant was seeking to acquire properties, and, if the high value which these properties really had was made public, such statements would make it a practical impossibility for it to acquire much needed property in Alameda county and on the peninsula. Mr. Schussler, deeming that a sufficient reason—and I think he was right in deeming it a sufficient reason, and I do not think your Honor would have any hesitation in advising a client of yours as Mr. Kellogg did—is criticised because he did not give the high valuation which he gave in subsequent years. I suggest that an examination of Schussler's testimony affords a perfect explanation of that phase of the case.

And another complete answer to all criticism of this character is that that is not an estoppel. There is no suggestion that the board of supervisors was induced to act upon anything said by Mr. Schussler in that year, that is, in fixing rates for the years in controversy. That such was not the case is fully shown by a letter written to the board of supervisors when it proposed to adopt these rates, in which the company said:

> "We solemnly protest against the enactment of these rates."

Therefore the supervisors were not misled. Neither they nor the consumers have been injured. Schussler gave them a valuation which they refused to accept. I think I can very candidly say that if your Honor reads the whole of that testimony you will reach the conclusion that Mr. Schussler is not fairly subject to any criticism for having said and done what he did at that time.

The testimony of Schussler is entitled to very great weight, no matter whether his is the highest estimate or not. He built the works. He knows better than anyone what would be involved in an effort to duplicate them. The results accomplished should enable him, better than anyone else, to advise as to the cost of duplication. Counsel on the other side would have you believe that Schussler, in order to serve the company, has made statements that are untrue and for which there is no foundation in fact. I submit to your Honor that such a judgment as that should not be lightly passed. His answers seem to be candid. When the fact was against him, he seems to have had no reluctance in saying so. He has, and he is entitled to have, a very exalted opinion of the work which he has done. He has said, for instance, that men doing work of the character required by him could only lay so many brick a day; other men have said that a man doing that sort of work would lay a great many more brick a day, possibly more than would be accounted for by the difference between the hours taken by Schussler and the hours taken by those who make other estimates. But

they say at the same time that it is a notorious fact in the engineering profession that the Spring Valley Water Company insists upon work of an exceptionally high character. I am not sure whether or not it was called to your attention, but I remember very well, that Mr. Adams, when he was under cross-examination, said: "I never insist upon such work as Mr. Schussler in-" sists upon". In the construction of ordinary works, there is no one, there is no concern, there is no water company, that draws the line as tightly with reference to quality and character of workmanship, and to quality of material, as does the Spring Valley Water Company. It is because of its rigid requirements that the company has been able to get the long life that it has out of its structures. It is for this reason that its structures show less deterioration than the structures of other companies.

We ask your Honor to consider all these facts when determining the weight and the credibility of Mr. Schussler's testimony.

QUANTITIES.

I also want to call your Honor's attention to the fact that the impression is somewhere given in the brief of counsel for defendants that there were no quantities given by any witness except Schussler; that there was no proof of quantities made by anybody else and, therefore, that all his estimates must fail. Am I correct about that?

Mr. Haven. No; the statement was that two of your witnesses took a great many of their quantities from Mr. Schussler—Mr. Adams and Mr. Schuyler stated they took their quantities from him in a great many instances, if not entirely so.

Mr. McCutchen. Well, I thought the claim was stronger than that.

I was going to refer to the testimony of Mr. Grunsky and to a letter written by him to the board of public works, in which he said that for a long time he had four men in the field making surveys, measurements and computing quantities in these various structures. I have not compared them in all cases, but if your Honor will look at the municipal report which is in evidence, you will find that those quantities vary very little from those given by Schussler. Grunsky does not agree with Schussler in his unit prices, but he does not differ from him materially in his quantities. It is an unfair, and it must be an unconvincing criticism to make of Mr. Schussler, that there is no check upon the quantities which he used. Is it to be assumed, that because he alone computed quantities, the results reached by him are incorrect? These structures were open to examination by any witness. Cross-sections of all of them were available; all the material was at hand for very close estimates.

Grunsky did say, as to the Crystal Springs dam, that quantities were difficult to determine, because the toes on the two sides were not uniform—and naturally, they would not be in a dam of that kind—but he did not say

it was impossible to ascertain quantities; he said just exactly the contrary.

At page 324 Mr. Grunsky testified:

> "In the matter of the constructive works, quantities were carefully determined, as carefully as circumstances permitted, and unit prices were adopted, these prices being applied to quantities in order to determine about what the cost of reproduction of the works would have been in a series of years preceding the time that the estimate was made."

And at page 419:

> "Assistants Sanford, Thompson and Meyer, also Mr. Stut, were all actively at work verifying statements as to properties of the water company and estimating quantities. Mr. Schadde acted as land appraiser. * * * Our combined estimates resulted in the making of the appraisement which was submitted on February 26th."
>
> "XQ. 545. Is it a fact that Assistants Sanford, Thompson, and Meyer, also Mr. Stut, were actively engaged in verifying statements as to the properties of the company and in estimating quantities?
>
> "A. Yes, sir. They were the assistants engaged upon the measuring of the different structures, works, and the like, that were in use for the Spring Valley Water Works in connection with the supply of water to San Francisco.
>
> "XQ. 546. And on their estimates of quantities, you made your report?
>
> "A. They were my assistants and made the measurements for me.
>
> "XQ. 547. And you made your report on that basis?
>
> "A. I used the information they gave me in connection with making my appraisement."

MISSING CASH BOOKS.

Counsel has said that it is very strange that the cash books were missing. I recall that counsel during his argument stated that Dockweiler said he had found in a stable, where the complainant company kept some of its records, vouchers from which the cost of all the properties could be ascertained. He said there were boxes and boxes of them. That suggests two thoughts to my mind: Mr. Dockweiler was the consulting engineer—so described—to the city attorney of the city and county of San Francisco. Of course, your Honor knows that there is no such office as that, and I read that to mean that he was the retainer of the city attorney of San Francisco for the purpose of aiding him in every way that his ingenuity could suggest in the preparation and in the trial of this case. He makes one of the most extravagant statements with reference to these vouchers that it would be possible for anybody to make; and if any evidence were needed, further than that which has been presented to your Honor's eyes, of the partisanship of Mr. Dockweiler in this case, the portion of the testimony so quoted should furnish it. How could he tell, not having examined those vouchers, whether the Spring Valley Water Company could ascertain the cost of every portion of its property? And if it could be told, why didn't he determine it? The answer will be that he only discovered the vouchers two weeks before the taking of the testimony was closed. There was no suggestion upon the part of defendants that Dockweiler would like further time to examine those vouchers and determine those facts.

There is nothing in the record to indicate that if such a request had been made, it would have been antagonized by the complainant. And if the vouchers existed, that shows quite conclusively that complainant was trying to conceal the facts they would establish. Your Honor will recall the testimony of Mr. Comte that I have read to you, in which he said that the board of supervisors had sent its expert to examine the books of the company, and that the accountant returned with the report that the company had shown him every courtesy and had thrown open all its books to him. Of what advantage was it to the company to have those cash books spirited away? I fail to find anything in the statement of counsel that indicates that any advantage was gained. He says that Mr. Reynolds stated while on the stand that he could, from the journal entries, reproduce any entry called for in the missing cash books. Defendants did not ask him to reproduce any of those entries. Nor is Mr. Wenzelburger's essay on that subject—and I do not say that offensively, because that is what it is—susceptible of the construction that those missing cash books prevented him from determining what the cost of the property was. I make no criticism—and I think it is needless for me to say that—of the city attorney's office; but I submit that when you consider the instructions given by Dockweiler to Wenzelburger, when you consider what he was told to do, and more particularly what he was told not to do, the criticism about the missing books is not entitled to much weight. Dockweiler, by the exaggerated and extravagant statement regard-

ing the facts which might be shown by vouchers which he did not inspect, shows that he was not seeking information to aid in the solution of any disputed question, but was looking for something which might be used to embarrass the company. There never has been a session of this court at which you have presided, where there was under consideration a case in which this company was interested, that Dockweiler has not been at the elbow of the city attorney. During all this long argument he is the only man on the city's side of the case, other than Mr. Haven, who has been in court. He has not only prompted him, he has not only come to the bar and given him information, but he has in every way shown himself to be, as he is, the paid advocate of the city. I do not reflect upon Mr. Dockweiler for that—that is what he was paid for; he was paid to assist the city attorney in preparing this case, and particularly in getting the evidence together.

Mr. Haven. You don't begrudge me that assistance, do you?

Mr. McCutchen. Not at all, that is what you paid Mr. Dockweiler for; but I do say it is asking a good deal of a Chancellor to take the testimony of Mr. Dockweiler as he would take the testimony of a man who had not shown himself to be a partisan. That is the point I am making. I think that is only common sense.

Mr. Haven. Is there anything in that exhibit you have there to show that those instructions were given by Mr. Dockweiler?

Mr. McCutchen. I am going to read it and see what the instruction is. This is the report dated October 25, 1904. This is Exhibit 100. I am reading from page 1. It is addressed to the city attorney:

> "On June 3, 1904, I made my first report to you on the general books of the Spring Valley Water Company, covering the first five months of the work.
>
> "This second report, and its accompanying schedule covers my work since and consists of data gathered and compiled from the company's general books from their beginning, 1860 to August, 1904. The schedule consists of one volume, two sections, comprising 411 pages. When I refer to the Spring Valley Water Company, I, of course, include the Spring Valley Water Works, the last named being the original corporation incorporated in 1858 and succeeded by the Spring Valley Water Company, September 15, 1903. I have continued the work under Engineer Dockweiler's direction, as instructed, and have furnished him from time to time detail schedules of land data running back to the beginning of the company's general books."

I now read from page 28 of the same exhibit. As we have seen, the witness was under Mr. Dockweiler's instructions.

> "I have gotten all the information furnished in this report and its various schedules from the company's general books, asking, as suggested by you, practically no questions or assistance from the company's officials."

That shows the condition under which Mr. Wenzelburger did his work. Why was that instruction given? Your Honor knows that an auditor is often sent to examine the books of a company. But it would be a most

remarkable thing to tell him not to ask any questions; that if he found anything that was doubtful and might be susceptible of explanation if he were to ask a question about it, that still he was not to seek any information. It is fair to characterize such action as the sending of a special agent to find what he could, and that if what he found was against the company, he was to seek no explanation. It is evident that Wenzelburger thought that if he had been permitted to ask questions he would have received information. I remember one instance of this particularly. There is an item which defendants charge against us, amounting to $15,000, where Wenzelburger says the company charges one amount for service connections with reference to operating expense, and another amount with reference to new construction. Now, is it not quite within the possibilities that, if he had asked for information on that subject, he would have received a reasonable explanation? Is it to be assumed that he would not have received it? Is it not to be assumed in common fairness that this charge was possibly susceptible of an explanation, and that it was the duty of this auditor, as it is the duty of every auditor who examines the books of a company, to seek information with reference to matters about which doubts arose in his mind?

I read further from exhibit 97, page 2, in which he says:

> "My work to this point, with the exception of a little land data, looked up and reported on verbally to Mr. Grunsky and Mr. Dockweiler, has been confined to the company's general books, from which I gathered all the information furnished, asking, as

suggested by you, practically no questions of the company's officials."

He then says:

"It was my hope to be able to compile in detail from the beginning every account affecting cost of plant, but before that result was attained,"—long after the dialogue about the missing cash books—"Mr. Dockweiler notified me to stop the work on September 30, 1904, because of lack of funds to carry it on. I worked on the books in the company's office until nearly that date in order to get as much data as possible, and have ever since been compiling the figures in my own office to prepare this report."

Does it not fairly appear from that report that Wenzelburger by no means thought that the fact that the cash books were missing would prevent him from making a complete report?

PROPERTIES OUT OF USE.

Counsel has referred several times to the properties out of use as designated by Mr. Schussler, and in one instance said they did not differ very largely in amount from that given by Mr. Dockweiler. Of course, counsel did not intend your Honor to understand that the properties out of use were referred to by Schussler in the same sense or in the same connection in which they were referred to by Dockweiler, nor that they were the same properties. Schussler was testifying particularly with reference to what is known as the Arroyo Valle reservoir site and the lands purchased there which drain into

it. As stated by Dockweiler, those lands were not owned by the company, nor by the Suburban Company, at the time his figures were taken; they only apply to one of the later years. Schussler, after having determined his value, proceeded on the same basis to determine the value of the Arroyo Valle reservoir and the waters which could be impounded from the watershed lands which drain into it. His total estimate for properties out of use was $4,500,000. Every one of the defendants' witnesses has said that those lands are out of use; not one dollar has been allowed for them in any one of the estimates. That, of course, will not be denied. So that when your Honor comes to consider properties out of use as described by Mr. Schussler, it will be necessary to bear in mind that the great bulk of that amount is for properties which defendants say never have been used and are not useful, and as to which no one of the defendants' witnesses allows us a dollar.

SAN FRANCISCO CITY WATER WORKS.

And while I am on the subject of properties out of use, there is an item of $1,386,000 which counsel on the other side would strike out of this list of properties, and for which he would make us no allowance either in investment or in actual cost of building up the works. That is an amount representing a large part of the cost of the San Francisco Water Works. Counsel says that we are not entitled to have this sum considered, because the franchises which were conveyed to us only

existed for periods of 30 years and 20 years, respectively, and that the one that was for 30 years was held to be void, on the ground that the legislature had attempted to confer on the corporation special privileges. But this company got something more than franchises by that purchase. As Mr. Reynolds points out, it got a going business. Reynolds calls attention to the fact that, in the year immediately following that purchase, the revenue of the company doubled. Having purchased a going business, it is not to be said that, because a franchise included in the purchase has expired, the asset, so far as it consisted of the purchased business, is not to be included in ascertaining our investment. Of course that is only to be considered in connection with what is the actual cost of the properties of the corporation and its stockholders; in ascertaining what is the actual investment. It seems, looking at it in that light, it would be very unfair to say that because the franchises had ceased to exist, or because one of them had been held to be void by the Supreme Court, the company did not get anything by the purchase. I think that is a very apt illustration of the soundness of our claim that a company of this kind is entitled to an allowance for going concern. The company certainly paid something for going concern in this instance.

DEPRECIATION.

With reference to depreciation, we find ourselves in rather an unfortunate situation. We all know, as your Honor said in the 1908 case, that there goes on from

time to time, and from year to year, by the operation of natural causes, a deterioration of the structural properties of a plant like the one with which we are dealing. It is claimed by the defendants that this deterioration has been, to a very large extent, taken care of by renewals made from time to time. To the extent that such renewals have been made, they belong to the company, no matter whether they were paid for out of income from water rates or from other moneys; those moneys at the time they were expended for the renewals belonged to the corporation. There is no foundation for claiming that because, if it be the fact, which we deny, the water rates were sufficient to enable the company to make renewals, we are not now entitled to an allowance for depreciation.

There is no presumption, as claimed by counsel, that water rates in the past have been fair. There is no presumption that in order to pay for renewals the stockholders were not compelled to forego dividends. But he says it is immaterial whether to do so they did forego dividends. When renewals were made, they became part of the complainant's property, and if the city had made it a present of the money necessary to make them they would be none the less part of complainant's plant and belong to it.

We are somewhat in doubt whether there is sufficient testimony in this record to enable your Honor to tell what the deterioration is from year to year; and we recognize, of course, that if deterioration has taken place, and your Honor makes an allowance to take care of

the depreciation which may take place in the future, it is only your duty to take into consideration the deterioration which has taken place in the past. Defendants contend that the renewals have kept the plant in excellent condition, and that it is in just as fine condition today, so far as the rendition of service is concerned, as when it was completed. About that there is no question. In the shape in which this proof is, we very candidly say to your Honor that we are unable to state what amount fairly represents such deterioration as may have taken place in the past; but in view of the statement that the plant has been kept up to this high state of efficiency it would seem we are entitled to some allowance for depreciation to take care of worn-out portions of the plant when they cease to be useful. Whether your Honor can determine what that is from the record, I confess I am unable to say. That renewals necessary to be made have been made, counsel on the other side admits. How the money was secured for the purpose, makes no difference. The plant is none the less the plant of the complainant company because the money to make renewals came out of the water rates. Your Honor recognized in the 1908 case that we were entitled to something for depreciation; what allowance should be made, I must frankly say I do not know definitely. My associate suggests to me that the subject is fully discussed in Vol. 1 of complainant's reply brief. We are willing to rest the matter of depreciation on our showing there and in the addenda to this argument.

UNDIVIDED PROFITS.

There was considerable discussion by counsel with reference to contributions by stockholders to the capital of the corporation and with reference to undivided profits. I do not understand that he has said anything further on that subject than he said in his brief, and I think that argument has been fully met. Undivided profits are clearly to be considered for the purpose of determining the actual cash which the company has put into the property. But, for the purpose of determining what the actual investment of these stockholders is, the only method which can be pursued is that which was followed by Mr. Reynolds. We suggested in our opening that it necessarily followed from the argument of counsel that it made no difference so far as the stockholders were concerned whether they got dividends in 1860 or whether they got them in 1905. It is, says counsel, a question of how much actual money in dividends the stockholders got, and the period of abstinence, as it is called by economists who have written upon the subject, is entirely ignored. I gave to your Honor, and I asked counsel to reply to it, a concrete illustration of the difference between his rule and the correct rule. I showed that if the money contributed had been put in a savings bank and left there, as it was left in this enterprise during the first seven years of its existence, the interest which would have accumulated in those seven years would have been in the neighborhood of $1,200,000 more than the interest allowed in their table

No. 1. To that he has made no response. The argument is unanswerable.

Counsel also suggests that we have no ground for dissatisfaction when we have a total investment, according to our books, of $26,699,000 derived from stockholders' contributions of approximately $9,000,000. Counsel could hardly have intended to say that, because the $26,000,000 included all of the money received from the sale of bonds, which was a very considerable amount.

TRANSFER SPRING VALLEY WATER WORKS TO SPRING VALLEY WATER COMPANY.

I now come to the matter of the transfer from the Spring Valley Water Works to the Spring Valley Water Company. I said something to your Honor the other day with reference to what the minutes showed. The offer made by Mr. Partridge included not only the minutes, but all the books and accounts of the two companies; it therefore included the stock books. Your Honor has seen neither those books nor the minute books, and this statement of mine will have to be taken, therefore, subject to verification by your Honor, which we will afford in any shape you desire.

There were 140,000 shares of the Spring Valley Water Works. The reorganization took place in September, 1903. By the end of December, 1903, there had been surrendered of the stock of the Spring Valley Water Works 129,545 shares. Your Honor will see that that includes all but about 10,500 shares. By the first of

September, 1905, when these books were offered in evidence, there had been surrendered 139,017 shares, of which not one share had been surrendered for cash. New stock had been issued for the old. That left outstanding at that time less than 1,000 shares, out of 140,000.

Counsel claims that that transaction fixes the value of our property. But, even if this theory of ascertaining value were adopted, we would still be entitled to a return upon a valuation of approximately $26,000,000. The price of that stock at $90 per share, was $12,600,000. We had outstanding bonds of $13,750,000. Our floating debt was at least $1,200,000; the total price paid was, therefore, $27,652,446. There was no period of abstinence, and there is, accordingly, no warrant for any discount. We paid immediately, if you are going to look upon this as a transaction of purchase and sale. Counsel, by a rule of mathematics that is quite new to me, says that in order to get at the actual value we must deduct for property not in use $4,600,000, $2,900,000 of which had not only gone out of use, but had, according to his own theory, no existence at the time of this transaction.

I assume that it is not necessary for me to suggest to your Honor that if this was a transaction of purchase and sale these people were not purchasing $2,900,000 of property that had gone out of use years ago, and which not only had gone out of use, but had ceased to exist. If it was a purchase and sale, complainant was buying the Spring Valley Water Works as it

was on that day. Furthermore, if value is to be predicated on this sale, the $1,700,000 is not properly deductible, because there is no showing—and in this instance the burden is upon the defendants—that the unused property is worth that amount.

If, however, there were some showing that the unused property was worth, in 1903, $1,700,000, as claimed by defendants, and if that sum were properly deductible from the $27,652,446, the total price paid for the entire properties, we reach, on defendants' own theory, a valuation of $25,952,446. The income of $1,284,000, which defendants claim complainant has received, gives, upon this sum, a rate of 4.1 per cent.

We submit that there is a conclusive showing that this transaction involved only a reorganization of the Spring Valley Water Works; and that defendants have so recognized it in their brief (680), where they say:

> "Other items of expenditure charged against operating expenses for 1903 to which Mr. Wenzelburger took exception were the expenses of the incorporation of the Spring Valley Water Company * * * for proxies in connection with the *reorganization.*"

Wenzelburger, at four different places in his exhibit No. 97, referred to the transaction as a "reorganization."

VALUE OF PROPERTIES.

I have been asked by counsel on the other side to tell what the value of this property is, and to tell whether it has any value and how your Honor is going

to arrive at that value. With reference to value, we believe we have made a definite showing. On one branch of the argument we began with the proposition that the rates allowed were wholly inadequate, even on defendants' showing of value. On that phase of the case we started with the estimate of Grunsky, so far as it was adopted by the supervisors, namely $24,124,389, and added to that an item which Grunsky included, but which the board excluded, and other items which, we think we have clearly demonstrated, Grunsky on his own method of valuation improperly omitted, and which brought the total up to $26,549,226. We have presented to you seven other valuations which are reached upon theories we have previously explained.

The valuation on which we rely is reached in the following manner: We take Mr. Grunsky at the value of the structures stated in defendants' brief, $15,276,744; to that we add interest during construction, $753,837, contingencies and omissions, $1,400,000, lands and water rights, $9,047,645, and we substitute for his value of water rights the values given by Mr. Schussler and Mr. Hering, $150,000 per million gallons. We also substitute Baldwin's values on San Francisco real estate for Grunsky's values on San Francisco real estate, and by that process we arrive at $43,066,241.

With reference to our right to substitute $150,000 per million gallons, I have shown, I think conclusively, that it is impossible for San Francisco to bring water from the Sierra at a cost of less than $460,000 per million gallons. It is immaterial to what source the

city goes, assuming it goes to the only place where Dockweiler and Grunsky say it can go, and that is to the Sierra. It cannot bring water from any point in the Sierra any cheaper than from the Tuolumne. So that, if it will cost it that price per million gallons to bring water from the only place from which they say it can obtain it, I submit that it is only fair that the estimate of Mr. Schussler and the estimate of Mr. Hering as to the value of water, $150,000 per million gallons, be accepted. That is less than one-third the cost per million gallons of water from the Hetch Hetchy supply. Their valuation of water finds more substantial support in the record, and, in view of the whole showing, is more logical than that of Grunsky. Water is of great or small value as it will require a great or small investment to produce it. The city has itself shown what the cost of an equivalent quantity from the most available source will be, and it is far in excess of the value placed by Schussler and Hering upon our water rights. This testimony has also an important bearing upon the element of unit value. The combination of our properties has made it possible to accomplish a result which could not otherwise be accomplished except by going to the Sierra. The claim that existing water rights are worth at least one-third of the cost of delivering here, from the Sierra, water equivalent to the quantity those rights supply, does not seem an exaggerated one, nor does it sound unfair. It seems the court might with the utmost propriety allow this value of $150,000 per million gallons for water rights, or might allow it as the value of the unit, in excess of

the values of the several parts. We are entitled to an allowance for value due to the combination of our several properties, and it is difficult to suggest a more reasonable or logical method of reaching it.

In that connection I desire to read from *Cleveland Railroad Co. v. Bachus,* 154 U. S. 443, in which it is said:

> "The true value of a line of railroad is something more than an aggregation of the values of separate parts of it, operated separately. It is the aggregate of those values plus that arising from a connected operation of the whole and each part of the road contributes not merely the value arising from its independent operation, but its mileage proportion of that flowing from a continuous and connected operation of the whole. This is no denial of the mathematical proposition that the whole is equal to the sum of all its parts, because there is a value created by and resulting from the combined operation of all its parts as one continuous line. This is something which does not exist, and cannot exist, until the combination is formed."

All the separate elements of our property have the values placed upon them, respectively, by defendants, independent of any allowance for unit value.

> "A notable illustration of this was in the New York Central Railroad Consolidation. Many years ago the distance between Albany and Buffalo was occupied by three or four companies, each operating its own line of road, and together connecting the two cities. The several companies were united and formed the New York Central Railroad Company, which became the owner of the entire line between Albany and Buffalo, and operated it as a single road. Immediately upon the consolidation of these companies, and the operation of the property as a

> single connected line of railroad between Albany and Buffalo, the value of the property was recognized in the market as largely in excess of the aggregate of the values of the separate properties. It is unnecessary to enter into any inquiry as to the causes of this. It is enough to notice the fact."

I may be asked what that value is in dollars and cents. I confess freely to your Honor that I cannot tell. That is one of the problems to be submitted to the court. I have, however, suggested a method for getting at it which seems to me sound and altogether fair. It is none the less an element of value because we have not the assurance to stand before you and say exactly how much it is worth. We have given you all the facts; we have given you all the information of which the case is susceptible. It has value, however. And you are entitled to look at the cost of this substitutional system for the purpose of enlightening yourself as to what that value is. That showing surely has an important bearing on the question of unit value. Here were a lot of individual and isolated properties which have been acquired from time to time—I am afraid to say by the exercise of foresight and forethought and judgment, because those words seem to be offensive to counsel. However, we have acquired them from time to time, and we now have a system that enables us to perform a service that cannot be performed except by the bringing of water from the Sierra. The cost of that will be infinitely greater than the value defendants allow for our properties. That seems to be the most satisfactory evidence that could be adduced to show unit value. Particularly should it be carefully

weighed in determining whether Schussler and Hering are not quite conservative in estimating the value of water rights at $150,000 per million gallons. I know of no better way to present facts to you, I know of no other facts that could be presented, to enable you to exercise an intelligent judgment with reference to unit value, than the cost of an equivalent service to San Francisco. We could not render the service if it were not for this unification of our properties. We could not render the service with any one of these properties taken by itself. It is because we have combined them, it is because—to employ the language of counsel on the other side—Mr. Schussler has built up a magnificent system—that we are able to keep San Francisco supplied with water. But when counsel comes to consider that phase of the question, he says we are entitled to nothing for that element. It is sufficient, he says, that we get the values of the individual elements which go to make up the unit.

RATE OF RETURN.

I want to address myself for a moment to one question to which counsel has called attention, and that is interest on bonds. I do not know exactly what is claimed to be established by his argument, but I assume it to mean that, because we have paid four per cent interest on bonds, we are not entitled to receive, through rates, more than five per cent. I do not see why he was so generous as not to claim we are not entitled to more than four per cent. I feel I demonstrated in my opening that this contention is not sound. Counsel said that some of these bonds bore four per cent, and some six

per cent, I do not know just what the average was. All the property which this corporation has, is behind those bonds, and every dollar of it, if necessary, can be taken to pay them. The situation of the stockholders is not comparable in any way to that of the bondholders.

We have furthermore consistently claimed that, because of the nature of this business, the risks of the enterprise must be considered in ascertaining a reasonable rate.

I have a number of cases on this question of the risks of the enterprise. Many have been cited to your Honor in the opening brief, but there is one to which I wish particularly to call attention; it is a decision from the House of Lords, to which I referred in the 1908 case. The question concerned the tolls that were to be received for the use of a bridge. This case was cited with approval by Judge Brewer in the *Kansas City Stockyards* case, and a long quotation was made from it. The name of the case is *International Bridge Co.,* reported in 8 House of Lords, 529:

> "It seems to their lordships that it would be a very extraordinary thing indeed, unless the legislature had expressly said so, to hold that the persons using the bridge could claim the right to take the whole accounts of the bridge company, to dissect their capital account, and to dissect their income account, to allow this item and disallow that, and, after manipulating the accounts in their own way, to ask the court to say that the persons who have projected such an undertaking as this, who have encountered all the original risks of executing it, who are still subject to the risks which from natural and other causes every such undertaking is subject to,

> and who may possibly, as in the case alluded to by the learned judge in the court below, have the whole thing swept away in a moment, are to be regarded as making unreasonable charges not because it is otherwise than fair for the railway using the bridge to pay those charges, but because the bridge company gets a dividend which is alleged to amount, at the utmost, to 15 per cent. Their lordships can hardly characterize that argument as anything less than preposterous."

How does the argument which counsel made this morning seem to measure with the argument which was there characterized by their lordships as preposterous? He says we were borrowing some money at 4 per cent on our bonds, and therefore we are not entitled to make a profit out of San Francisco on money which we so borrowed. San Francisco is entitled, according to this argument, when determining the value to it and its citizens of the service rendered by the company, to take the benefit of any profit, so to speak, the company may have made on money which it has borrowed. I do not think I can more appropriately characterize that than as it was characterized in the opinion just quoted. It is preposterous.

Now, let us see what would follow from defendants' argument. If the company had been able, on account of the high standing of the men who were in the concern, and by the use of collateral, to borrow half the money that went into the plant at two per cent, the logic of the argument of counsel is that in that case you should simply allow a rate of return that would pay five per cent on half the value and two per cent on the other half. In other words, the rate of return should

not be on value, but upon the high credit which the corporation had, by reason of the personnel of its stockholders or by reason of its ability to satisfy the people from whom it borrowed that the money would unquestionably be returned. The argument, if it can generously be so characterized, has the merit of novelty. That the company could or can borrow at low rates, is no concern of the board of supervisors, nor is it any concern of the court.

It may very well be, and undoubtedly it is, the fact that the rate which the bonds bear affords to an extent the explanation of the company's ability to pay dividends as large as it has paid.

I take it that, so far from these facts being in counsel's favor, they are distinctly in our favor. With all that saving, we were enabled to pay only the very small dividends which the record shows. Our property is none the less valuable because we borrowed money to pay for it. We are none the less entitled to have its value determined in the ordinary way because we borrowed money to pay for it. It is none the less valuable because the credit of the corporation is good. Counsel cites to you a number of loans made to the company at four per cent. I remember that Mr. Wenzelburger in his report spoke of loans secured by collateral. That is not explained in detail, but I can well imagine that he means by that, that the company went to a commercial bank or to some man who had money to lend, and deposited a lot of its bonds as collateral on a short term loan, and in that way was enabled to get a lower rate of interest than might have resulted by selling its bonds

at the then prevailing price. The city is not entitled to the credit of that; not upon any theory. That does not affect the value of complainant's property, nor does it have the slightest bearing upon the rate of return to which the stockholders are entitled. It is an absolutely false quantity in the discussion, but illustrates the length to which defendants seem to be forced and indeed to be willing to go in their effort to sustain these ordinances.

In the discussion before the board of supervisors, when the 1903-04 rate was adopted, it appeared that the company had incurred a large floating debt. The question was asked, "Why have you incurred that debt?" The answer was that we could not pay any dividends and that we could not continue operation without doing so. I do not mean by that, that the company was paying dividends out of unearned profits, because if there was any appreciation in the value of the properties, that was a profit which they were entitled to use in paying dividends. But one of the supervisors, and one who took a very active interest in forcing the reduction of seven per cent, said in effect: "Let this corporation " stop paying dividends and pay its debts, there is no " reason why it should have any debt." In this connection I must again remind you of counsel's claim that, after the new constitution went into effect, complainant was not permitted to make any profit over and above the dividends paid to stockholders.

So, according to the argument of defendants, this corporation should have stopped paying dividends, and have paid its floating debt. That indebtedness accrued after the constitution went into effect. Having started

with a clean sheet practically, in 1879, complainant and its grantor, in order to pay dividends and keep the plant a going concern, incurred that floating debt, and were even then able to pay dividends of only 4.2 per cent in 1903, and 3.78 per cent in 1904. It seems to me that is the best illustration that could be put to your Honor of the reason for the reduction in dividends. That reduction was due and wholly due to the reductions beginning in 1897 and continued from year to year until 1903.

I again call attention to the testimony of some of the witnesses on the question of rate of return. I think I have said to your Honor that this evidence is not in the form of affidavits. These bankers and brokers had made affidavits which were used at the preliminary hearing, and, in order to save the time and expense of both the city and company, it was stipulated that if they were present they would testify to these facts. This is, therefore, to be considered their testimony in all respects, and to the same extent, as if they appeared before the Examiner.

I will read from the testimony of Jacob Barth, one of the most prominent brokers in San Francisco:

> "Jacob Barth. That he is a stock and bond broker and a member of the Stock & Bond Exchange of San Francisco, and has been doing business in said San Francisco as such broker for the last 10 years. That he is, and during all of said time has been familiar with the income yielded by investments of large amounts of capital in said San Francisco, and in said state, and generally on the Pacific Coast. That the usual and customary net income from investments of capital in corporations where they are judiciously managed is not less than

7 per cent per annum. That, in his opinion, based upon his knowledge of financial conditions in said city and county, and in said state, and generally on the Pacific Coast, and based also upon his said experience, a net income of less than 7 per cent per annum upon an investment of $10,000,000 and upwards, in a quasi public or public utility corporation in said city and county, and in said state, and generally on the Pacific Coast, would not be a reasonable or fair return upon the investments so made by said corporation in acquiring or constructing its properties for such quasi public purposes and that capital could not be obtained to be put into and be invested in such investments for acquiring or constructing such properties unless the owners of such capital could be reasonably sure that such investments would produce at least 7 per cent per annum, and that in his opinion, based on his knowledge and experience as such broker, the present selling price of the capital stock of the complainant, the Spring Valley Water Company (capitalized at $28,000,000) to-wit, $40.25 and $40.50 per share (with slight variations at times) is caused by the attempted cut in water rates purporting the last few years to be made by the board of supervisors of this city and county, in alleged ordinances, establishing rates, and that such price is based upon such facts and not upon the values of the properties of the complainant in use in supplying water to said city and county, and its inhabitants, because when rates have been in vogue allowing dividends of 6 per cent, or even somewhat less, upon stock of the former company, the Spring Valley Water Works, which had $14,000,000 stock issued, at a par value of $100 per share, and no more properties in use, the stock of said water works sold at par, and at one time even $3.00 per share above par.''

The fact therefore clearly appears, and there is nothing to contradict the showing, that the board of super-

visors cut rates from time to time. There can be no other possible reason for the reduction of dividends. The five per cent rate of return about which there has been so much discussion was not, in fact, paid by complainant to its stockholders, and the company was unable to pay it, and the board did not enact rates from which it could be paid. If your Honor will examine Mr. Reynolds' chart, you will find that, from 1901 on, the company never was able to pay five per cent. When the repeated cuts are relied upon here to establish acquiescence or estoppel it is enough to provoke a smile. I cannot refrain from recalling counsel's answer when, before discussing rate of return in my opening argument, I asked him whether there was any testimony in the record that five per cent was a fair return to the complainant. He replied that he did not think there was any testimony at all on the subject of rate of return.

I have called your Honor's attention to the fact that in this record of the board of supervisors, there was a letter from the company, following the report of the minority member of the water rates committee, recommending a horizontal cut of seven per cent, the letter saying that the company solemnly protested against the rate proposed. Nevertheless, the cut was made, the ordinance was passed, and we have come here for relief, and your Honor, as you said in the 1908 case, will determine all these questions as if these proceedings had not taken place before the board of supervisors—I mean as if the reasons for the various acts of the board of

supervisors did not appear. Upon your own independent investigation you will arrive at a result.

There is no pretense that complainant induced the supervisors to adopt any of the rates in question—on the contrary, it appears, and it was so stated by counsel, that the relations between the company and the city have for years been characterized by lack of harmony, and that there has never been a time for years when there was not lack of harmony on the questions of value and rate of return.

Counsel calls your Honor's attention to some testimony by Mr. Schussler, and also to an exhibit found in the 1900-01 Municipal Reports, which, it is claimed, show that five per cent is an adequate rate. This must have been offered on the theory that there had been either acquiescence on complainant's part or a compromise. The theory as to each of the propositions is wholly at variance with the facts. The exhibit is as follows:

Estimate of Spring Valley Water Works for 1901:

For operating expenses		$ 450,000.00
For taxes		260,000.00
For coupons		658,500.00
For other interest		19,000.00
For twelve dividends, 5 per cent		705,600.00
Total		$2,093,100.00
Less rent for building	$34,200.00	
Other rents	10,000.00	
Making a total of	$44,200.00	44,200.00
Amount needed from water rates		$2,048,900.00

I now read from page 2953 of Mr. Schussler's testimony:

> "In the water rate investigation of 1901, did you testify as follows: 'Mr. Schussler. I think the division was reduced either one or two years ago to 5%. This young man hands me a statement that up to January, 1899, the rate of interest on the stock was 6%, but from February on, that is, two years ago, the rate was voluntarily reduced to 5% on the stock.
>
> " 'Q. You mean the dividends?
>
> " 'A. Yes sir.
>
> " 'Q. That was by reason of the two ordinances passed by the board of supervisors?
>
> " 'A. No sir, it was passed before the ordinance went into effect and before the rate was fixed two years ago.' "

The supervisors began reducing rates in 1897, and this is unquestionably the reason for reducing dividends. For 1901 and 1902, as shown by Reynolds, the dividends fell below five per cent. The request of the complainant that it be allowed dividends at the rate of at least five per cent upon the par value of its stock in 1901, cannot be construed to be an admission that that was the current rate to which it was entitled.

During the discussion before the board of supervisors, in 1903, Mr. Connor, who was a member of the committee on water rates, recommended a horizontal cut of seven per cent from the rates of the previous year, in which there had been a horizontal reduction of ten per cent below those of the preceding year. For 1902-03, the supervisors allowed a valuation of $25,500,000, and the company during that year contributed over $700,000 in

capital investments, making the value of complainant's plants, on the basis of the supervisors' previous valuation, $26,200,000, at the beginning of the fiscal year 1903. When this horizontal cut of seven per cent was proposed, Mr. Comte, who is conceded by all to be a man of high character and great ability, said:

> "Supervisor Comte. I have been a member of this board for three years. When I came to the discharge of the duty devolving upon me as a supervisor, I had the same prejudice against the Spring Valley Water Works that some people have now. It was only after hearing the evidence which was introduced for three different years that I became satisfied that my prejudice was unfounded and unsupported. I am here as a juror, trying a case upon the evidence and the law as it is submitted to me, and not as a politician, nor as one who wears any man's collar, but in the discharge of my conscientious duty. I do not propose to obey the dictates of any club or newspaper. I do not understand that it is my duty as a supervisor every time that water rates are fixed, or gas rates are fixed, that I must of necessity make a cut or reduction upon the rates. Those rates should be allowed in a reasonable and fair manner, based upon the law as it has been construed by the highest courts in the land. It is uncontradicted that the true measure to be fixed in this matter is the allowance of a reasonable interest upon the actual value of the property used in supplying the city and county with water. I say that that is a very illiberal measure, because it makes no provision for a depreciation account, it makes no provision for a reserve fund, but simply allows an interest upon property, much of which in time will disappear, and the principal to a great extent will have been lost to the stockholders. But striking that out of the calculation and conceding that we are bound to follow the

majority opinion of the court, what are the facts in this case? This board last year fixed upon a valuation of $25,500,000. None of that property has been withdrawn from the service since that time. In other words, all the property that was there in February, 1902, is there now. We have had an expert. We have paid him for two months' work in trying to find errors in the books of the company. I have had none pointed out to me. I have not heard of any mistakes that the company has made. It has verified the opinion I always had of their bookkeeping, that it was fair and open to inspection. That valuation, then, has remained unimpaired, if we were correct when we fixed it twelve months ago.

"To that must be added the new construction of $733,500, which makes a total of $26,235,500, upon which, as the Supreme Court says, they are entitled to a fair income. I think that five per cent is a very small income in view of the depreciation that comes to this kind of property. Five per cent would give $1,311,775, to which we add for taxes much less than the company claims, but the amount we paid last year, of $242.500, it will be more this year, because they will have to pay taxes on their increased construction account more or less of $733,000. The state rate will be more, so that when we put it at what they paid last year, we are putting it below what it really will be. The operating expenses we put at $450,000, which is much less by some $30,000 than the company claim they will expend, which makes a total of $2,004,175 that they are entitled to receive under the laws under which we live. They received last year $1,980,651, which is much less than the amount they are entitled to receive. Now, they may receive some increased business, probably will, but if they do, it will not enable them to pay the twelve dividends which their stockholders are entitled to receive. It will not restore to them the $31,000 and over, which they paid in excess of taxes, over the amount we allowed them. It will

not pay back to them the $43,000 in excess in operating expenses. For that reason the majority of the committee thought that the continuance of the present ordinance for the next year was only fair, and less, really, than they were entitled to receive."

On that showing, with no change in conditions, and against our protest, they lopped off about $2,000,000 from the previous valuation.

It would seem unnecessary to make any explanation of the item reading "for twelve dividends 5 per cent", found in the 1901 reports. That applied to the fiscal year 1901, and not to any of the years with which we are now concerned, and the company did not get the rate asked even for that year. However, there is sufficient in the record to show that the reason for that statement was that the company very well knew that the board would not under any circumstances grant any higher rate. That is quite conclusively shown by the statement of Mr. Kellogg, who, while addressing the board and protesting against the proposed cut in 1903, said:

"The board last year estimated these properties to be worth $25,500,000. It is indisputably a matter of record by the evidence in this case that we have added to that construction $733,000, making something like $26,200,000, upon which, if you allow five per cent, we will still be a little over one dividend or one month's interest to stockholders short. And I think that five per cent is a very small per cent. I agree with one gentleman who said here on the floor of this house last night, that he did not think it was enough. But it is useless to talk upon such

a proposition as that when it has been fixed so many years."

In other words, the supervisors had turned a deaf ear for so many years that it was useless to talk about getting more than five per cent from them. That, of course, does not show what was the current rate of return to which the stockholders were really entitled.

We produce a dozen or more bankers and brokers, who state that capital can not be had to invest in an enterprise of this kind unless it pays at least six per cent, and some of them say seven and eight per cent. Against that,—after saying there is no testimony in the record on the subject of sufficiency of rate of return—counsel quotes the statement of Mr. Schussler with reference to a reduction of dividends in a previous year. I submit that that statement—aside from the fact that it is entirely foreign to the matters we are considering—is to be looked at in the light of the treatment shown to have been meted out to the company by the public agency. The statement of Schussler that the company reduced dividends was quite natural in view of the fact that it could not continue to pay what it formerly paid. For this there was but one reason. Mr. Kellogg said to the board in effect: It was useless to ask it for more than five per cent; the action of the board for many years had been such as that to argue with it for more than that return would be a waste of time. He said that percentage was too low, and that even if it were allowed, the company would nevertheless be compelled to pass one dividend; it could not pay twelve dividends to the

stockholders at that rate. He asked a return of at least five per cent on $26,200,000. What did the board do in response to this appeal? Did it grant what the company might have accepted? Indeed no! It turned a deaf ear to that appeal in 1903, as in 1901 it turned a deaf ear to the appeal that was then made by the company.

The 1901 statement seems to be relied upon as an agreement, or an acquiescence, or an estoppel, with reference to the rate of return, but this is completely contradicted by the record. The reduction in dividend referred to by Schussler was for the reason that the rates fixed, forced the reduction.

Counsel has stated repeatedly in his brief and argument that there had for years been contention between the company and the supervisors; that unfriendly and inharmonious relations had prevailed. It is not possible to assume that the reduction in dividends was made for any other reason than that the board of supervisors had consistently refused to allow complainant a sufficient income to pay larger dividends. No other reason can be assigned for the reduction than that the supervisors would not allow the company sufficient income to pay larger dividends.

If counsel had sought to rely upon this as an estoppel or an acquiescence, and, indeed, if it were not an afterthought, he would have pleaded it. We have presented the testimony of some of the foremost financial men in this city, and there is absolutely nothing on the other side. The fact that the company in 1901 filed a statement containing an item for twelve dividends at five per

cent, does not, by the most liberal interpretation in favor of the city, show that to have been a fair rate even for the year to which it referred, let alone for a subsequent year. Nor does the fact that Mr. Schussler said they reduced the rate to five per cent prove that that was a fair rate of return. The case is out of the hands of the board of supervisors. It is now before your Honor. What is the proof before you with reference to the fairness of rate? Is there one syllable of testimony—and counsel admits there is not—to show you that during the years 1903, 1904 and 1905, any lower rate than six per cent was a fair rate? It is upon this testimony that your Honor is to determine the question, and not on a showing of the company's willingness to accept in another year, under conditions not disclosed, a rate of five per cent, on par value, which, by the way, it did not get. That can be neither a guide nor even an indication as to what was a fair rate even in 1901, and surely not as to 1903 to 1905.

In passing, I wish to direct attention to one reason for making this cut as little as seven per cent; in other words, for not making it ten per cent. It was contended that the reduction should be ten per cent. A report adopted by the board, by a vote of ten to six, contained the following:

> "And in view of the fact that the Spring Valley Water Works has voluntarily increased the wages of its laborers to $2.50 per day of eight hours, and that it pays good salaries to its other employees, consent is reluctantly given to this enormous sum being allowed."

They not only did not allow complainant a fair rate for that year, but they did not allow it for the next

year, and they had not allowed it for years previously. They reduced the valuation of the properties from year to year, notwithstanding new structures were being added from year to year, and an increased quantity of water was being furnished each year over the delivery of the preceding year. One of the reasons stated in the testimony of the bankers and brokers for the fall in the selling price of the stock was the refusal of the board of supervisors to allow adequate rates, and the decline in price was attributed to the action of the board in persistently reducing income year after year. This is the only testimony in the record with reference to what was a fair rate of interest upon investments of this kind in 1903, and from that on to 1905. It is full and unequivocal that anything less than six per cent was unfair. Upon this—the entire showing—a rate of less than six per cent was inadequate. You can hardly be influenced by the fact that complainant was, two years before this controversy, under circumstances of which you are not informed, willing to accept a return of five per cent on the par value of its stock—in addition to the entire interest on its bonds—but which, as has been made clear, it did not receive.

I have omitted to call your Honor's attention to another point. In the 1903 and 1904 valuation, the supervisors not only did not take Mr. Grunsky's figure, but they took what Mr. Justice Lurton in the *Omaha* case described as the "bare bones". They took the individual properties, they determined the value of each piece of land, and the value of each structure, and made no allowance for what we call "Unit Value". They

made a horizonal cut of seven per cent from rates for the previous year, expressing the regret that they had not made it ten per cent, and in 1904 reduced the hydrant rate to one-half what it had formerly been.

Ten members of that board were the men who, two years before, passed the resolution which in effect said to complainant, "If you do not sell to us at a price that " is satisfactory to us, we will secure water elsewhere; " we will take your market away from you, and we will " convert your lands into agricultural lands merely."

It would require a great stretch of liberality to say that showed a spirit of fairness. We ask you to couple with that the suggestion that no dividends should be distributed until the floating debt was paid; and to add to that the suggestion of counsel that we are not allowed to accumulate any profits to pay floating, or any other, debt. You will then get some appreciation of the difficulties under which complainant has labored. I am stating these facts to you from the record. I ask whether that betrays the judicial spirit which Chief Justice Waite, in the *Schottler* case, said it must be presumed would be exercised by supervisors in establishing rates?

We have not only demonstrated that the allowed value was inadequate and unfair, but we have demonstrated that the action of the board of supervisors was dictated by an unfriendly feeling toward the company. We think it is not exaggeration to say that an impartial consideration of the record leads to that conclusion.

Let me say, however, there is no such rule as that for which counsel contends. It has long ceased to be the rule—if it ever was—that we must show bad faith, although I submit that we have shown absence of good faith here. It has ceased to be the rule—if it ever was the rule—that we must show anything more to a Chancellor passing upon a case like this than that the rate of income is inadequate. That is the only burden that is upon us. It could not be more succinctly expressed than it was by your Honor in the 1908 case, when you said that when the matter reached a court of equity it was the duty of the court, upon its own independent investigation, to ascertain the value of the property; upon its own independent investigation, to ascertain what is a fair rate of income, and upon that independent investigation to determine whether the rate of return allowed was fair or unfair.

These three cases are all submitted on the same testimony, with the single exception as to the operating expenses for the different years. We have called your Honor's attention to the fact that there are a number of items which defendants strike out of operating expenses, or with which they charge us, based on the assumption that there were items in 1904 and 1905, corresponding to charges in 1903, to which they make objection.

For instance, there are certain items in the 1903 case, such as service connections, $14,000 odd. There are no such items in the 1904 case, nor in the 1905 case; but they assume, because they found a particular charge in

the 1903 case, that the same charge existed in 1904 and in 1905. There is nothing in the record to warrant that assumption. In that connection, I again call your attention to the fact that Mr. Wenzelburger's report did not cover the whole of the year 1903, so that you cannot tell what was done with reference to any item mentioned by him before the end of the year. With these exceptions, the two later cases are heard upon the same testimony as the 1903 case.

NOTE: Upon oral argument counsel admitted at page 750 that he had improperly included $10,550 as income from properties not in use. He also admitted at page 764 that $47,000, shown by Reynolds to have been collected by the Suburban Water Company, on accounts which became due prior to 1903, had been included by him in his estimate of the Company's income for the fiscal year 1903. We quote as follows:

"Mr. HAVEN. On page 655 of the defendants' brief we point out that the outside rents included in those three items, being the latter two, amount to $61,981.66.

"Mr. MCCUTCHEN. You do not claim that that all accrued for the fiscal year 1903, do you?

"Mr. HAVEN. For 1903-4, yes, I so understood it. Is not that the fact?

"Mr. MCCUTCHEN. No, it is not. It is explained in the testimony by Mr. Reynolds and not contradicted, that $47,000 of that was for moneys accrued during the preceding years.

"Mr. HAVEN. You are right as to that year; I overlooked that. In the $115,082 there is a figure $47,000, or there is a certain figure coming from the previous year."

If these two sums are added together, we have a total of $57,550, so that the net income for the year 1903, even conceding the correctness of all counsel's other figures as to income and expenses, which we think have been shown to be inaccurate, is $1,226,826.31.

ADDENDA. A

VALUE OF SCHUSSLER'S ESTIMATES.

Defendants, at page 451 of their brief, say as follows, with reference to Mr. Schussler:

> "An engineer so circumstanced should have been the most valuable witness in this case. With his unusual sources of information, he could have enlightened the court upon the perplexing questions here involved. A study of this record compels us to the conclusion, however, that his estimates of the values of complainant's properties are neither trustworthy nor convincing, and cannot be relied upon by the court as a basis for the finding of value."

To support this statement, defendants then advance six reasons to prove the unreliability of Mr. Schussler's estimates. We shall consider these in detail.

I.

> "The record discloses estimates made by Mr. Schussler in reports to the board of supervisors in the matter of its investigations prior to fixing of water rates in the year 1901 and in February, 1904, but a few months before his evidence was given in this case, from August to December, 1904. The discrepancies between some of these estimates and his testimony in this case are so great as entirely to destroy the weight of such testimony."

To sustain this statement, defendants have inserted a table, numbered 36, which purports to be a comparison of Mr. Schussler's estimates in this suit with those given by him in previous water rate investigations. This

table, it is submitted, affords no proper basis for comparison.

(1) The figures given in the column headed "Estimates of 1901", were not in fact Mr. Schussler's estimates. He repeatedly, in the course of his testimony, emphasizes the fact that these figures were furnished by the secretary from the books. These figures showed what had been charged on the books to the cost of construction, but omitted large amounts, which should have been charged to that account. At page 2206, Mr. Schussler testifies:

> "XQ. 2898. In the exhibit filed by the company with the board of supervisors in 1900-1901, the cost of the upper dam is placed at $219,596.61. You place it at $345,477.
>
> "Mr. KELLOGG. I would like to ask you, Mr. Partridge, who made that exhibit?
>
> "Mr. PARTRIDGE. That is the exhibit of Mr. Ames; it is supposed to be the actual cost of it.
>
> "A. You should not compare my estimate of cost, that is, of what it would cost to build that kind of work in 1903, with what the bookkeeper or accountant states has been charged to that dam. I might not have charged everything to it; I do not know.
>
> "XQ. 2899. Then he has misled the board of supervisors if he has not.
>
> "A. I do not know about that; he has been asked to give an account. I am not the accountant. You should not compare his figures with mine. You might compare my former estimates with my present estimate; that would be a little fairer. Then you would see a difference in the estimates, owing to the fact that labor and materials are different in price now."

At page 2479, Mr. Schussler says:

"XQ. 3901. In your exhibit of 1901, did you place the Crystal Springs lower dam at $2,242,000?

"A. I did, not including ten per cent.

"XQ. 3902. And in your testimony, do you place it at $2,192,000?

"A. I do, but that needs also an explanation as regards the testimony of 1901. I called on Mr. Ames, the secretary, about a year ago, and told him that I thought there was too much charged to the lower Crystal Springs dam. He appointed a time when I jointly with him looked through the books. I discovered that some of the land purchases had been charged to the Crystal Springs dam in the sum total of $2,242,000 which I had given to the supervisors in this approximate estimate of 1901. Subsequently, when I went to work to make up the total estimate of 1903-04 of the upper Crystal Springs dam I think that I discovered that there were certain things that should have been charged to the upper dam; had been charged to the lower dam. * * * The only explanation that I can give of it—of course, I do not keep the books."

And at page 2484:

"XQ. 3921. You have, time and again, during this cross-examination, mentioned instances where you presented statements to the board of supervisors which, for one reason or other, we will say, were inaccurate. I say how do you expect the board of supervisors to fix your rates justly when your own statements to them are, according to your own testimony so manifestly inaccurate?

"A. Yes; but I have been the one who has gone to work and corrected those things, and I have been the one who has found out, for the purpose of getting at the exact facts, what portion should be properly charged to one account or another. * * * If I go as engineer of the company, to the secretary of the company, who has charge of the finances, and

ask him for a list of figures of what he has charged to various items, I cannot very well say, unless I positively know right then and there, that that is an overcharge or that there is a mistake in it. * * * Those things are liable to occur at any time."

At page 2763, Mr. Schussler says:

"I think I made, at the request of the supervisors, or at least I made for the supervisors, an estimate of the cost (Crystal Springs main dam), which figure was handed to me by the secretary because he was the only one who knew everything that had been charged to the dam. Not having any other proof to the contrary, I took his figures, as coming from the official head of the accounting department."

At page 2603:

"XQ. 4417. Mr. Schussler, will you have prepared for me, to be given to me either by Mr. Kellogg or someone else, the actual cost of each one of the structures that you have estimated in your testimony?"

To this he replies:

"A. That I cannot give you. The only man who can possibly give you that is the secretary. I have absolutely no account of that. I have simply an account of the dimensions as regards the three clay dams with the modifications that I have spoken of in my direct testimony. As to the cost, that would be a question of expert bookkeeping, and I believe the only man who would be able to give approximately near it would be the secretary."

And, at page 2606:

"XQ. 4425. In your communication to the board of supervisors dated March 11, 1901, you use the following language: 'I shall also show the undervaluation in the cost of the works below the actual

cost of construction which we can prove by the company's books, vouchers and witnesses, particularly the large undervaluations far below their cost and the value of the water and riparian rights of the Spring Valley Water Works.' How could you make such a statement as that if you did not know the cost of these various works?

"A. That was based upon the secretary's accounts, when it comes to cost. In making inquiry of the secretary and of the experts who had been employed, they definitely stated to me that the cost was greater than the figures given by Mr. Grunsky, in his estimates, and as I was the representative of the company at that time before the supervisors, I made this statement to them: 'That I shall also show the undervaluations in the cost of the works below the actual cost of construction.' The actual cost of construction being given me at that time by the secretary."

At page 1803:

"XQ. 1122. Is that the tunnel you have reference to in your estimate filed with the Board of Supervisors in 1901, at page 87, as having been constructed in July, 1888, and costing $89,865.53?

"A. I do not remember that. The books of all those constructions were kept by the secretary and in those days any information that the supervisors wanted from me, I being the man who was asked by our directors to go to the supervisors, I would inquire from the secretary, and he gave me the figures and data, and I simply delivered the figures to these supervisors as coming from the company."

With regard to his 1904 figures, Mr. Schussler says, at page 2498:

"In the year 1903-04, in this testimony, I have the total estimate of the Locks Creek line, inclusive

of ten per cent for incidentals, etc., at $399,200, on page 1048 of the testimony. My estimate made in February, 1904, was $376,700, so that that came quite close to it.

"XQ. 3972. There are three estimates on that?

"A. There is a change in the time and in the wage scale, and in materials also.

"XQ. 3973. From 1904 up?

"A. No sir; there is a change in the time and in the wage scale from 1901 to 1903-04.

"XQ. 3974. But your estimate of 1904 does not agree with your estimate now in this case?

"A. My estimate in 1904 was made at the time, and without any ten per cent being added in it.

"XQ. 3975. In 1904 did you add any estimate in it?

"A. No sir; I neglected that."

While at page 2514, Mr. Schussler says:

"XQ. 4055. Will you give from your exhibit in 1904 your estimate of the protective system from Colma Gulch? Have you the total for that?

"A. I have no separate estimate. I have an approximate estimate made at the time, in the absence of details, of $260,000 in the report to the supervisors in February, 1904.

"XQ. 4056. And in your testimony it is how much?

"A. In the testimony it is, inclusive of ten per cent, $343,000. That is, after carefully going over the details and putting in whatever might have been omitted in the original hasty estimate."

(2) But even if the secretary's figures for 1901 had included everything properly chargeable to the cost of construction, which they did not, there can still be no proper comparison with Mr. Schussler's figures, which were based on measurements and dimensions, quantities

and qualities, and which are estimates of what it would cost to reproduce, and not of original cost. His estimate of the cost of reproduction, moreover, always takes into consideration cost of materials, labor and the number of hours' work and the conditions as to day's work prevailing in the years 1903-04.

(3) The testimony shows as to some of the items to which attention is called in defendants' table, that although the particular structure selected for comparison is designated by the same name, the later estimate refers to a different structure. Take, for instance, the item designated "Ocean House Flume", from which counsel draws comparisons between the estimate of $9,000 in 1901, and $12,000 in February, 1904, and $15,750 in Schussler's testimony. These estimates did not refer to the same structure. The estimates for 1901 and February, 1904, referred to an old flume built about thirty years ago. That was completely rebuilt and enlarged to about double its former capacity in the first half of the year 1904 (p. 3864), and Mr. Schussler says that he had then with him, at the giving of his testimony, an account showing the actual cost of materials and labor used in the new construction (Test. Schussler, XQ. 1091).

Again, defendants compare the figures given the board of supervisors for 1901 as to the Crystal Springs pumping station, $91,610, with Mr. Schussler's estimate in this suit of $165,300. The testimony shows that the former figures were from the secretary's report, which, as to that item dealt only with the cost of the pump, while

Schussler's own estimates included the entire aqueduct, from the station to the Locks Creek line, besides much additional construction (p. 2243).

Another instance is the Pilarcitos side flume: In 1901 and February, 1904, the figures were $10,000 and $18,000, respectively; while, for the purposes of this suit, the estimate was $20,000. The additional $2,000 represents the main flume and a branch flume later constructed.

(4) The difference between Mr. Schussler's estimates in February, 1904, and those given at the time he testified in this suit has been already explained. The one represented approximations only, prepared in a period of five days; the other was the result of careful surveys and measurements and an elaborate investigation of every detail.

II.

We quote from defendants' brief (p. 455):

> "*Second.* Defendants produced four witnesses who participated in the construction of portions of complainant's properties in San Mateo County—Messrs. Emery, Higgins, Carey and Fifield. Their testimony, together with the records of complainant as contained in its minute and account books, contains the only basis of comparison of actual cost of construction with engineer's estimates which the record furnishes."

Defendants, upon this testimony, seek to show the exaggeration of Mr. Schussler's estimates and the inferior character of the structures composing complainant's

plant. We propose to examine this criticism in detail.

COST OF HAULING SAND, CEMENT AND BRICKS.

With respect to Schussler's estimate for the hauling of these three items, the following appears from the testimony:

In hauling sand, Schussler states, at page 2752, that a 4-horse team will haul 2 cubic yards, or 5,000 pounds, making one round trip a day, from Millbrae to structures in the Pilarcitos region, at an expense of $7.50, this amount of sand costing $3.20 delivered on barges at Millbrae; the total cost therefore for the 2 cubic yards or 14 barrels is $10.70, and the cost per barrel 76 cents. Since 5 barrels are sufficient for $1,000 bricks, the cost of sand on that basis is $3.80.

As to Locks Creek Tunnel No. 1, the sand or other material had to be hauled to the top of the hill and sledded down, since there was no road. It would be economy now, as it was then, to so deliver it, the building of a road for this one purpose being more expensive than to pay the extra sledding expense (1018-19). Schussler's cost is here 88.4 per barrel, or $4.42 per 1,000 bricks.

As to the brick shaft and inlet tunnel at San Andreas reservoir, San Andreas waste weir, and gate shaft and tunnel at Upper Crystal Springs dam, Schussler's figures are 65 cents, including cost of sand. For gate shaft and tunnel at Crystal Springs main dam and Six-Mile House tunnel, his estimates stand alone, and without criticism. In detail, they are:

Name of Structure	Cost of Sand Delivered Per Barrel	Per 1000 bricks laid
Pilarcitos waste weir	76 cents	$3.80
Gate House at Pilarcitos tunnel No. 1	76 cents	3.80
Pilarcitos tunnels No. 1 and No. 2	76 cents	3.80
Pilarcitos stone dam brick cap (Conditions like 1, 2, 3 above)		
Locks Creek tunnel No. 1	88.4 cents	4.42
Brick shaft and inlet tunnel at San Andreas reservoir	65 cents	3.25
Bald Hill tunnel (Conditions like 6 above)		
San Andreas waste weir	65 cents	3.25
Gate shaft and tunnels at Crystal Springs main dam	55 cents	2.75
Gate shaft and tunnel at Upper Crystal Springs dam	65 cents	3.25
Six-Mile House tunnel	57 cents	2.85

Schussler's cost of hauling cement is given for Pilarcitos waste weir, gate house and tunnels Nos. 1 and 2, at 62.5 cents per barrel, and for other structures at between 31 and 33 cents, on account of easier grades and greater accessibility. Two and one-half barrels of cement are used per 1,000 bricks, and the cost for various structures is given in the following table:

Name of Structure	Cost per bbl. of hauling to respective structure.	Total cost per bbl. of cement delivered at structure.	Cost of cement per thousand bricks laid.
Pilarcitos waste weir	62.5 cents	$3.37½	$8.45
Gate House at Pilarcitos tunnel No. 1	do.	do.	8.45
Pilarcitos tunnels Nos. 1 and 2	do.	do.	8.45
Pilarcitos stone dam, small brick cap	Conditions like three preceding.		
Locks Creek tunnel No. 1	do.	do.	$8.76
Brick shaft and inlet tunnel at San Andreas reservoir	31.2 cents	$3.06	7.65
Bald Hill tunnel	Conditions like preceding one.		
San Andreas waste weir	31.2 cents	3.06	7.65
Gate shaft and tunnels at Crystal Springs main dam	31 cents	3.06	7.65
Gate shaft and tunnel at Upper Crystal Springs dam	do.	do.	7.65
Six-Mile House tunnel near San Francisco County Line	33 cents	2.98 add extra 2 / 3.00	7.50

Cement costs $2.75 a barrel at the depot nearest to structure.

In hauling bricks, Schussler (822) estimates that a 4-horse team will make two round trips a day over Bald Hill, hauling 1,000 bricks, or 5,000 pounds to the load.

From this, it will be seen that Schussler's average weight for a 4-horse team is 5,000 pounds, and that his figures include all expenses. Defendants' witness, Fifield, on the other hand, says that at the time he was driving a team for complainant, he hauled from 10 to 12 barrels of sand at a wage of $10 a day, furnishing his own horses' feed, etc., but not taking into account any expense for screening or saving. His $10 cost for an average of 11 barrels gives over 90 cents a day, with no provision for the cost of the material, which Mr. Schussler arbitrarily estimates at 10 cents.

The weight of these 11 barrels is equivalent to the weight of 1.57 cubic yards, which is, therefore, less than Schussler's figures of 2 cubic yards. The statement that one round trip was made to Pilarcitos daily corroborates Mr. Schussler's testimony to that effect.

Carey is the second of defendants' witnesses to testify as to hauling. His evidence (45) shows that by putting in side boards in a wagon 4 feet wide (length not given) with six mules, between 2 and 3 yards of sand could be hauled. This is, of course, indefinite, but establishes an outside limit of 3 yards, or 7,500 pounds. It seems fair to take 2½ cubic yards as an average, or 6,250 pounds, and particularly so, since this is more closely in accordance with the figures of Fifield and Schussler, allowing

proportionately for extra power. No statement as to the cost of the team or the value of the driver's services, cost of maintenance, or as to the actual *weight* his team could haul is made.

Carey further testifies (45) that he could haul one load a day to Locks Creek tunnel inlet through San Mateo valley, while he made two to the outlet. The fact is, as shown by Exhibit 21, that to get to the inlet, the San Mateo valley could not be entered. This evidence was all given after a 30 years' lapse of time, and shows the general inaccuracy of the witness. He further states that he could make two round trips a day to the outlet. The distance from Millbrae is 7 miles (Ex. 21), and two round trips would make a total of 28 miles. His statement on page 45 was that he could make two trips a day to the Bald Hill tunnel, a total of 8 miles, while his claim of two trips a day to Locks Creek tunnel necessitates a haul of 20 miles more than the distance he has previously shown a team would travel in an ordinary day's work.

As to hauling sand for the San Andreas waste weir, no details are given, Carey simply saying that he hauled sand to the inlet of Locks Creek tunnel No. 1. This was impossible then, as now, as all materials had to be sledded downhill, as before stated. With cement and brick, as with sand, he testifies to hauling to the inlet of Locks Creek tunnel, where it has already been shown there is no road.

At pages 42 and 43, Carey says that he could haul 25 barrels of cement, or 2,000 bricks, a total weight of

10,000 pounds in each case, with a 6-mule team. This is so inconsistent with his former testimony that 6,250 pounds was a load that he must have been mistaken, particularly since his former figure corresponded so closely with the figures of the other witnesses.

It is to be noted that in not one sentence of Carey's testimony is any figure as to cost of maintenance, value of service, cost of screening or any other detail given, except his monthly salary of $70. We submit that his testimony is absolutely valueless as a test or criticism of Mr. Schussler's figures.

Higgins, another of defendants' witnesses, gives no evidence as to the hauling of sand, but he does remark, in connection with the transportation of cement, that

> "A six-mule team could haul in a load of cement 16 to 20 barrels to the load * * * that would do us for 2 or 3 days" (10-11).

The average day's work was 5 yards of masonry, and one barrel of cement was used to each cubic yard; we, therefore, conclude that 15 barrels was the outside amount used for three days, and that this was the average load carried. The only other detail given by Higgins as to hauling was $5 per thousand brick, but there is no means of ascertaining how he got the figure; it gives the ratio of $5 for 5,000 pounds, but does not show what the figure included, and furnishes no test whatever as to the entire cost of hauling.

The testimony of Fifield, in so far as it goes, is valuable, and shows the conservatism of Mr. Schussler's estimates. Carey's statements are so tinged with in-

definiteness and uncertainty, and show such variances, that it is difficult to see how much credence can be given them, while Higgins does not pretend to any exact knowledge on the subject. The exact and minute estimates of Mr. Schussler seem to entitle his figures to respect. He is the only witness who includes all the elements of cost in his figures.

We now approach the question as to the cost of the different elements which go to make up brickwork.

(I) *Sand.*

Mr. Schussler says, at page 753, that there is no sand fit for use in the region of these structures, and that sand must now be imported from San Francisco county; his estimate for cost of sand at Millbrae is $1.60 per cubic yard (there being 7 barrels to the cublic yard), while, as has been previously shown, the cost for hauling is $7.50 for 2 cubic yards. Carey testifies that the sand hauled was obtained from a ravine near Millbrae (45) near the Seventeen-Mile House, among the willows, where the water used to run, the necessary implication being that water no longer runs there. Higgins testifies that sand was hauled from the creek at Millbrae, the only cost being hauling, but he omits entirely to estimate on the cost of screening, saving and loading, while Fifield, in discussing the Pilarcitos properties, states that at first the sand was obtained from Pilarcitos creek, and that when that gave out, the supply at Millbrae was then consumed. He further states that the company had a man there gathering at all times.

No witnesses testify that there are *now* any sources in San Mateo county, from which sand can be obtained, or that the San Francisco supply is not the cheapest and most available; and the sole question, therefore, is whether or not the fact that sand at original construction was to be found in the vicinity makes an estimate now, which takes into consideration the fact that at present no supply is available, erroneous. It is believed that since the question is present value, the only material fact is what it will cost to erect a duplicate structure under the present state of supplies and engineering science. It is submitted that the fact that sand has been taken from this neighborhood, or that this sand is now in existing structures, is not at all pertinent. It surely would not be, if this sand had been used for other purposes, and the fact that complainant has used the supply does not decrease in any measure the expense which it must sustain, if the present plant of complainant is to be duplicated. In other words, no contention would be made that, if a supply available at original construction were obliterated by any act of God, the cost of present construction would be reached on the basis of that sand being now where it formerly was. So far as cost of duplication goes, that situation is identical with our own.

(II) *Cement.*

Schussler's estimate of cost of cement was $2.75 per barrel, delivered at the nearest railroad station (783, 852, 864, 822, 926, 892, 998). No other witness disputes these figures.

(III) *Brick.*

Mr. Schussler's figure as to the cost of good brick culled and selected, delivered by rail, is $11 per 1,000. Adams and Schuyler accept this figure (5077, 5524):

> "Do you know what brick usually costs?
>
> "A. Yes, I frequently have occasion to buy brick in the markets about the bay here. I have not bought any for the several years past for work I have been familiar with about the bay for less than $11. I have usually paid $12. Mr. Schussler's statement of $11 for the class of brick he was getting seemed to me beyond question but that it was a reasonable price." (Adams.)
>
> "Will you give us the details by which you arrived at the figure of $39.20 for bricking tunnel No. 1?
>
> "A. Brick, on the basis of their delivery at Millbrae on the cars—$11 per thousand", etc. (Schuyler).

Schuyler gives a detailed estimate of this figure. Defendants intimate, on page 430, that most of the bricks used in complainant's properties were slop made, and say:

> "The testimony of Messrs. Higgins and Carey shows that the greater portion of the brick was burnt by the company on Bald Hill; in one instance they were slop made by Chinamen. * * * Only a small portion of the brick came from San Jose."

Carey's testimony contains no such statement. At page 42 he says:

> "I hauled the brick and cement into the Pilarcitos Valley from Millbrae, we used to call it the 17 Mile House; also to the Bald Hill tunnel, which was being done by Jim De Noon, and to the Locks Creek tunnel."

At page 43 he says:

"Q. When you hauled bricks to the outlet end of the tunnel, where did you get them?

"A. They also came from the Bald Hill."

These two extracts are the only references by Carey to brick and the Bald Hill tunnel.

Mr. Higgins does say (pp. 3-4):

"The brick laid in the Bald Hill tunnel were supplied by Mr. Walker, who was supervisor and sheriff of San Mateo county. These brick were slop made and were made on Bald Hill by Chinamen, at $2.00 a thousand; Mr. Walker supplying the pug mill, horses and tools and a foreman to watch the work. Mr. Walker made them for the company at $6.00 per thousand. The cement used on all this work was Rosedale cement.

"Q. Did the company supply the wood?

"A. They were to supply the wood. Mr. Walker made these brick for $6 per thousand, complete, the company to supply the wood to burn them with.

"Q. And they cost how much?

"A. About $8. I do not know much about that, but I think it was about that.

"Q. $8 altogether?

"A. Yes, sir."

From this testimony, it is evident that Higgins did not know, and did not pretend to know, anything definite about cost. He thought it was about $8, but says:

"I do not know much about that."

And this $8 included no allowance for fuel or incidentals, as to which Mr. Higgins was evidently ignorant. The only slop made brick which defendants' own witnesses testify to was this lot at Bald Hill, and Higgins does

not even question Schussler's statement that all brick was carefully culled and selected. This, continued use and serviceability must be taken to prove. Furthermore, in connection with cost, there is no attempt to give an estimate as to the character, amount or cost of firewood used for this work, or the cost of loading and unloading, which Schussler places at from 83 to 55 cents (see Appendix, Table XVII). This testimony has the general characteristics of all Higgins' evidence—indefiniteness and ignorance of material considerations. And besides this, Higgins makes no allowance for inspection, which Schussler estimates at 50 cents per thousand, in addition to his $10.50 primal cost.

We submit that Mr. Schussler's figures are not only conservative estimates, but are the only ones taking into consideration all elements of cost.

THE TESTIMONY OF HIGGINS COMPARED WITH THAT OF SCHUSSLER.

In defendants' brief, at page 455, it is said:

> "Defendants produced four witnesses, who participated in the construction of portions of complainant's property in San Mateo county—Messrs. Emery, Higgins, Carey and Fifield. Their testimony, together with the records of complainant as contained in its minute and account books, contains the only basis of comparison of actual cost of construction with engineers' estimates, which the record furnishes. These witnesses were examined as to the actual cost of certain portions of the work, concerning which Mr. Schussler had previously testified as

to the manner of construction and cost of reduplication. The discrepancies between the two sets of figures, * * * are altogether too great to be accounted for by the difference in dates to which the two apply.

"It is to be regretted that additional witnesses who had personal information of the cost and manner of the construction of complainant's properties were not produced. They could have been much more easily found by complainant than by defendants. But it is submitted that the testimony of these four witnesses is sufficient to establish:

"I. That Mr. Schussler's estimates of the cost of construction of some of complainant's structural properties are very much exaggerated, and cannot be relied upon as a basis of valuation.

"II. That in the absence of a contrary showing the discrepancies which have been proved as to some of the works must be presumed to exist as to others; and therefore that none of Mr. Schussler's figures can be accepted or followed.

"III. That the estimates of all the witnesses as to cost of construction of the structural works are much higher than the actual cost of the works warrants.

"IV. That Mr. Schussler's testimony as to the character of materials and workmanship which went into the structures, and also his statements as to quantities is disproved, and must be disregarded."

The testimony of Emery, Carey and Fifield, in so far as it concerns the cost of any portion of the structural properties, has already been considered, and we believe that it can be asserted that Schussler's figures must be taken to stand alone, on account of the indefinite character and lack of detail which is found in the testimony of these three men. We therefore turn to Higgins as the

sole reliance of defendants in their efforts to show lack of accuracy and unwarranted exaggeration on the part of Schussler.

Higgins' testimony covers two broad fields: (1) brickwork; and (2) drifting of tunnels. We shall examine these two main subjects in detail.

I.

BRICKWORK.

This section involves the labor of handling and transporting brick from the place of delivery to the place where the work was actually done, the wages of bricklayers' assistants, such as hodcarriers, mortarmen, and helpers, the wages of the bricklayers themselves who did the mechanical work of laying the brick and mortar, the wages of carpenters, who are required for the preparation of the tunnels for the brickwork, and who assist, after the brickwork has been installed, in removing unnecessary timbers. In complainant's brick structures, which number twenty-four, 10,094,500 bricks were used (Tables 19, 20, and 21, Appendix). This brickwork, notwithstanding the contention of defendants, has been in the main done by day's work. A tabulated account by Mr. Schussler shows that out of twenty brick structures, only four, according to defendants' witness, Mr. Higgins, were done by him under contract, namely, Pilarcitos tunnel No. 1, Locks Creek tunnel No. 1, Bald Hill tunnel, and Six-Mile House tunnel. On the basis of number of bricks laid, these four structures represent 20.2 per cent,

or practically one-fifth of all the work of this character performed in the service of complainant. All the later structures of complainant have been erected on the day's work basis.

Before proceeding to a specific examination of Mr. Higgins' testimony, the fact should be shown that the conditions under which labor is now performed, aside from the question of wages, is very different from that in the early seventies. Now, no piece of work can be undertaken, with any prospect of success, unless the unions of the various laborers are taken into account; and whereas it may have been possible, at the time, that much of the work as to which Higgins testifies could be done without hodcarriers, that would be an utter impossibility now. Such rules as this make decided differences between actual cost in the first instance and the expense of present construction (2443).

Higgins qualifies as a witness in this suit with the following statement as to his experience (p. 2):

> "In the year 1867 I was employed as a journeyman on work being done by the Spring Valley Water Works at Lake Honda. In 1870 I was awarded the contract for the brickwork of the Bald Hill tunnel. In 1870 and 1871 I was engaged on the masonry work on College Hill. In 1871 I was awarded the contract for the brickwork on Pilarcitos Tunnel No. 1. In the same year I was engaged by the company as foreman in the construction of the stone dam in Pilarcitos ravine, about two miles below the main dam. In 1871 and 1872 I was awarded the contract for the masonry work in Locks Creek tunnel. In 1874 and 1875 I was engaged in bricking the waste weir of the San Andreas tunnel. In 1883

I was awarded the contract for the complete construction of the University Mound tunnel. In 1884 I had a contract with the Spring Valley Water Works for drifting and timbering two tunnels through Bernal Heights, one 1,120 and one 223 feet. In 1885 I was engaged in lining University Mound reservoir with concrete. In 1886 I was engaged in drifting and bricking the Sierra Point Tunnel. In 1885 I was engaged in the construction of the foundation of the Clay Street tank and the retaining wall about the fifty vara lot. In 1887 I was engaged in drifting and bricking the Crystal Springs Tunnel. I built the Bryant Street stable in 1888 and 1889."

We now turn to an examination of Higgins' testimony with regard to each specific structure upon which he claims to have worked.

(1) *Bald Hill Tunnel:*

Mr. Schussler's figures for the cost of brickwork on this tunnel, which includes the mechanical, semi-mechanical and common labor required for each 1,000 bricks, were $32.52. The tunnel was constructed in 1870, was 2,820 feet in length, and required 564,000 bricks (864).

At page 3, Mr. Higgins says substantially as follows: That the length of the tunnel was about 2800 feet; that complainant furnished sand, cement and brick, and that the contractor provided tools, candles, labor and board for himself and his men at $15 per thousand bricks laid; that the tunnel was to contain 205 bricks per lineal foot, but *that he believes* the tunnel took 183½ bricks per lineal foot, and that the work took 4½ months, during

which time there were employed, besides himself, four bricklayers and nine laborers. It is not stated in his testimony, at any point, what this work cost him per thousand bricks laid—whether he made or lost money on the job, or how much; at what rate he charged up his own time; at what rate he paid the four bricklayers or the nine laborers; what the number of hours which constituted the length of a day's work was; what the board of the men cost him. Furthermore, he does not take into consideration the fact that complainant, at its own expense, delivered all materials to be used by him at both ends of the tunnel, nor does he state that he was to pay the cost of lowering the materials from the surface to the tunnel. The tenor of his answers and the uncertainty of his memory cannot but detract from the value of his testimony, and it seems evident that, where specific details are necessary for the final total estimate, the fact that certain elements are not figured on at all makes the computation, as a whole, valueless. It is an absolute impossibility, upon the basis of his evidence, to ascertain what he himself figured should be taken to constitute the actual original cost of this tunnel.

(2) *Pilarcitos Tunnel No. 1:*

Mr. Schussler's figures for the labor employed on this tunnel in bricking are $31.70 per thousand brick. He says, at page 771, that one bricklayer can, in this small arch, lay about 400 bricks a day in the first-class fashion which complainant requires; that the wages and board of a bricklayer are $6.80 a day, or $17 per thou-

sand brick; that the wages of hodcarriers and mortarmen will reach $6.45 per thousand brick; that a carpenter will receive $2, and laborers $6.25 upon the same basis, giving his total of $31.70. The tunnel was constructed in 1871, is 1,550 feet in length and required 341,000 bricks (770).

Higgins' testimony, at page 6, shows that he bricked the tunnel in 1871. He estimates its length to be "about 1,300 feet", but he is not positive about this, and thinks it may have been longer. He states that complainant furnished all materials, such as sand, labor and cement, while he supplied tools, cars, candles, labor and board of men; that he employed four masons and eleven laborers. He estimates that 200 brick were used per lineal foot of tunnel, which he again thinks was about 1,300 feet in length, and upon this basis reaches a total of 260,000 bricks. He shows great uncertainty and doubt as to the time the work actually took him, but remembers having heard from Mr. Abbey that Lake Honda reservoir in San Francisco held only 42 days' supply, and that he agreed that, if this supply should run out, he would stop work and allow complainant to run sufficient water through that tunnel to supply part of the city, without any extra expense to the company. He takes this recollection as a basis for saying that the work was actually completed within forty-two days' time.

Higgins states that for this work he was to receive $24 per thousand bricks laid. From these facts, based upon an erroneous assumption as to the length of the

tunnel, and upon a guess as to the time the work actually consumed, and a resulting guess as to the number of bricks per lineal foot, Mr. Higgins arrives at the conclusion that each bricklayer actually laid 1,500 bricks during a ten-hour day.

Having piled assumption upon assumption, Higgins further proceeds to multiply the 200 bricks per foot by his assumed 1,300 feet of length, and divides the product, 260,000 bricks, by 42 days, obtaining 6,190 bricks laid daily by four men, or 1,547 by each of four bricklayers in a ten-hour day. As to the wages paid the men, Higgins says that the four bricklayers each received $5.50 per day of ten hours and their board, which he estimates at $5 a week, or 83 cents per working day. The eleven laborers received $40 a month and board, which he figures (p. 9) at $2.25 per day. The daily wages paid by Mr. Higgins to the bricklayers would be, therefore, $6.33, and the wages paid the laborers, $2.25, or to the former, 63 cents per hour, and to the latter, 22½ cents per hour.

The further error of Higgins' estimate is shown by taking the number of bricks actually laid, 341,000, and dividing by 42—the number of days which he assumes the work required—giving, in round numbers, 8,120 bricks per day, or an average for each bricklayer of 2,030. Practical experience shows this to be an impossibility. His price of $24 per thousand bricks does not include the cost of templets for the arches, which complainant had agreed to furnish. Another method of checking this estimate is to take the direct cost charges

of Pilarcitos Tunnel No. 1, without any allowance for incidental contingent, engineering or superintending expenses. These were:

1871	$16,489.84
1872	3,207.35
Total	$19,697.19 (Table II, App. Rep. Brief).

If this total is divided by 341, the number of thousand bricks actually laid in this tunnel, we get, as direct cost charges, $57.76 per thousand brick, with no allowance for incidentals or superintending expenses. This would seem to conclusively show the error of Higgins' estimate (p. 10) of $47 per thousand bricks laid, or $24 for labor and $23 for material, for it is $10.76 below charges on the books made by complainant's accounting department.

Considering the increased cost of labor and materials, the difference of something less than $8 between the cost figures and those of Mr. Schussler for present construction, shows, we submit, that the latter's estimate was conservative.

(3) *Locks Creek Tunnel No. 1:*

Schussler's estimate of present cost of labor per thousand bricks is $31.70 (p. 1,017), Higgins $16 (p. 12). This tunnel, 3,200 feet in length, was built in 1871-72. The number of bricks required was 704,000. The testimony of Mr. Higgins shows, in substance, as follows: He took the contract at $16 per thousand bricks, for all

labor required in laying the brick; he was to supply tools, while complainant was to furnish all materials, brick, sand and cement. The work was to be completed in sixty days, and if not so completed, the contractor was to forfeit $100 for every day over that time. Higgins believes that he completed about 3,100 feet of the tunnel within this time and that he was then stopped by bad weather, and later went back and finished the work. He employed eight bricklayers and sixteen laborers, the former receiving $6 per day and board at $1.00 ($7 total), the latter $40 per month and board, or $2.68 per day. As to the number of bricks required per lineal foot, he says:

> "We laid 200 brick to the foot and each mason would average about 1,300 per day.
>
> "Q. 41. Mr. Schussler in his direct testimony (p. 1,018) testifies as follows: 'The bricking of this tunnel required an average of 220 brick per lineal foot.' Is that the fact?
>
> "A. I would not like to say whether that was the fact or not. It was a tunnel about the same as the others; they called for 205 and 210. I would not say about 220. I would not like to dispute that or to say which way it was. As near as my recollection serves me I was paid for 200 bricks to the foot. * * *
>
> "Q. 46. How many bricks do you estimate were laid in Locks Creek Tunnel No. 1?
>
> "A. We laid 200 brick to the foot, making, for the 3,200-foot tunnel, 640,000 brick laid at that time. There were more in the tunnel and I went back in the fall and finished it."

This quotation shows that Higgins was at this point relying entirely upon memory, and that no present computation had been made by him in this connection.

Higgins does not say that he completed this work in time to avoid the forfeiture clause in his contract, but assumes, as he did in the case of the Pilarcitos tunnel, that the whole work was completed within the sixty days, although he had, on the preceding page, said that only 3,100 feet of the tunnel was at this time bricked by him. He therefore multiplies the whole length of the tunnel, 3,200 feet, which he had not actually finished, by 200, the number of bricks which he in an indefinite sort of way thinks the men may have laid per foot, arriving at a total of 640,000 bricks. By multiplying eight bricklayers, who were at work, by 60 days, he gets 480 bricklayers' days, which he divides into his total number of bricks, reaching as a result 1,333 bricks per bricklayer per day, which he rounds off at 1,300 to a man per day. A more inaccurate method of reaching a mathematical result can hardly be imagined. There is not a single premise which Mr. Higgins assumes which he was able to state, in the giving of his testimony, was an actual fact, according to his own knowledge. The absurdity of the result, no matter what method was employed in reaching it, is further shown by the fact that Higgins' total of $43 is $4 below that which he himself gives as the cost of Pilarcitos tunnel No. 1. While the diameter of both tunnels is practically the same, the Locks Creek tunnel, which we are now considering, is over twice the length of the Pilarcitos. It is generally conceded by defendants' witnesses that the longer a tunnel is, the more expensive its construction. We also call attention to the fact that in the construction of the Pilarcitos tunnel,

Higgins did the work by contract for $24 a thousand bricks, without any penalty or any time limit; whereas here, working under pressure and under a stringent forfeiture condition, on a tunnel of twice the former's length, he received only two-thirds the price. Such testimony as this does not seem to provide a basis for any computation whatever, and it appears to be a waste of time to further examine it. But, since defendants' sole witness as to this work is Mr. Higgins, we are forced to proceed, item by item, upon the chance that he may have provided some definite criticism of Mr. Schussler's figures.

(3a) *Small Brick Cap on Pilarcitos Stone Dam:*

At page 1,012, Schussler gives a lump estimate as follows: 10,700 brick laid at $56 per thousand. Mr. Higgins (p. 12) says that he sent one of his masons over from the Locks Creek tunnel to do this piece of brickwork. We quote from his testimony:

> "Q. 39. Do you know how many bricks were laid on that dam?
>
> "A. I do not. I sent a mason over from Locks Creek tunnel, where I was working on a contract job, and he alone finished the job in about four days. I did not pay any attention to it."

Mr. Schussler's undisputed evidence (p. 1012) shows that this piece of brickwork contains 10,700 bricks. If this number is divided by 4—the number of days this mason is supposed to have taken in its construction—it appears that the rate per day was 2,675 bricks. Mr. Higgins here, as elsewhere, qualifies his statement by

saying that he does not know much about this, but he does, nevertheless, state such to be the fact. Such a piece of work is submitted to be an absolute impossibility.

(3b) *Stone Dam in Pilarcitos Valley:*

This dam does not properly belong to the class called brickwork by Mr. Schussler, but is mentioned in Mr. Higgins' testimony and considered here. At page 11, Higgins is asked:

> "Q. 35. What do you estimate it cost a yard to construct the Pilarcitos stone dam?
>
> "A. Not to exceed $10. That estimate is based on the following details:
>
> | | |
> |---|---|
> | One man * * with board, | $ 7.75 |
> | Two men, including board, | 9.50 |
> | Three laboring men, including board, | 5.70 |
> | Total paid for labor per day, | $22.95 |
>
> These men lay 5 yards of masonry a day, making the cost of labor per yard about $4.55. Allowing an entire barrel of cement for each yard laid, I placed the cost of cement, including hauling, at $3.00. Cost of rock and sand, including hauling and quarrying, $1.50; that would make cost complete $9.00. I have allowed $1.00 extra in my estimate.
>
> "Q. 36. Would you do that for $10.00 a cubic yard today?
>
> "A. I would."

He assumes that all the building stone was found about 200 or 300 feet away on the upstream side out of the granite canyon. "There were lots of loose rock, and " we did not have to blast" (p. 10). This statement he practically contradicts on page 11, by saying: "Cost of

" rock and sand, including hauling and quarrying, " $1.50".

We now consider his cost of $3 for cement, including hauling: It is not in evidence what the cost of cement was at the time this dam was built, but it is a matter of common knowledge that material of this character was more expensive than at present. If we assume that the cost was $2.65 originally (its present cost), plus 10 cents for freight to Millbrae, we must then, on the basis of Mr. Fifield's testimony, add thereto for hauling 83⅓ cents. This results in a total of $3.50, according to defendants' own witnesses, as against Higgins' allowance of $3.00. Assuming, for the present, that the three masons whom Higgins mentions could lay an average of 5 cubic yards of this stone masonry in a ten-hour day, it would follow that in an eight-hour day they would lay 4 cubic yards, or each mason 1.33 cubic yards. The cost of five masons working at this rate would be (pp. 927-28):

5 stone masons at $6.80 a day	$34.00
2 hodcarriers and mortarmen at $4.30	8.60
3 laborers at $2.50	7.50
Total	$50.10

(These helpers would be essential under present labor conditions.)

If this latter sum is divided by 6⅔, the number of cubic yards of masonry, we get a cost per cubic yard of $7.50. To this should be added the cost of cement and sand, together with that of delivery, which would equal $4.89, and stone, $1.50. (This cost of sand and cement, together with the charges for hauling, have been previously

considered.) This, therefore, gives a total of $13.89 per cubic yard. Mr. Schussler's estimate for 1903-04, exclusive of incidental and contingent expenses, was $8,072 for 624.4 cubic yards of stone masonry, which will average $13.78 per cubic yard, a trifle less than the result reached above on the basis of Higgins' figures.

(3c) *Concrete Lining of University Mound Reservoir:*

Higgins says (pp. 2, 25-27, inclusive):

> "I was employed by the day on that work. The concrete in this reservoir was laid 4 inches thick. * * * Imported Portland cement was used in this work. Two barrels of sand, that is, about 6 cubic feet of sand, were used to one barrel of cement. The men employed in this work worked ten hours a day and boarded themselves. * * * I have taken this work at say one day's wages for the men that were working in there; that was the only way I could get at it. All the wages, including everything there, amounted to $105 a day; we averaged 75 barrels of cement a day, equal to 55½ cubic yards, at a cost of $1.90 per cubic yard, or 2⅓ cents per superficial foot; that is for labor. How I get the average of that is that in the bottom we averaged, say 95 barrels per day; in the sides 65, making 160 barrels. Taking half of that would be 80, and I have put it down at 75 barrels per day, which gives me 55 yards. We therefore have the following amounts:

Labor	$105.00
55½ yards of rock at $1.50, which was a good price for delivering it	83.00
75 barrels of cement and sand at, say, $4 a barrel, which is ample	300.00
Making a total for one day's work	$488.00

which we will call 11 cents per superficial foot complete. There were 58½ yards and 27 feet to the yard, gives you a total of 1498 feet; multiplying that by 3, it gives 4494 feet, which, at 11 cents per foot, will make a total of $494."

This evidence shows that the witness resorted entirely to a recollection of what he considered to be about a day's performance and about the quantity of materials used in a day. In the first place, he assumes that hard, fine-crushed rock, which was necessary for this piece of work, could be delivered at $1.50 per cubic yard. This rock was quarried at a distant quarry, crushed into small bits, loaded on wagons, hauled to the site of the reservoir, and delivered, and for all of this work, with perhaps an additional cost for the rental of the quarry, Higgins gives the figure of $1.50 per cubic yard.

Schussler's testimony relative to the foundation of the Presidio Heights tank in San Francisco (1431) gives actual cost for 1025 cubic yards as $2,349, or $2.29 per cubic yard delivered, and this rock was not as fine and was therefore less expensive than the former. Higgins' only estimate as to the cost of sand and cement delivered is a lump sum. He does state that the day's work was ten hours, but he does not state what the wages were for the laborers, what salary he himself received, or whether he added this to his estimate of labor cost per day; he simply lumps the whole sum at $105 per day for labor. It is evident from this that there is no way for us to determine the basis of his computation. He himself indicates that it is entirely a matter of memory.

Mr. Schussler estimates the concrete which it would take to line the University Mound Reservoir at 150,000 cubic feet, and the cost at $54,000 (p. 1371), making the cost per cubic foot 36 cents. This is the same rate which he applied to the forebay tunnel. At the Presidio Heights tank foundation, which is a late piece of construction, and which was built while the present scale of wages and materials was in force, the cost (p. 1431) was $7834 for 833 cubic yards, or 22,491 cubic feet. This makes the cost per cubic foot $34.83, showing his estimate of 36 cents for the University Mound Reservoir—a much more difficult and expensive piece of work—to be conservative.

(4) *Six-Mile House Tunnel:*

Schussler's estimate of the present cost of labor per thousand bricks, is $31.70, and the length of tunnel, 2145 feet. The number of bricks is 430,000 (p. 997). According to Higgins' testimony, a contract for the drifting, timbering and bricking of this tunnel was dated October 9, 1883, and required the contractor, under penalty, to complete the drifting and timbering at the rate of not less than 270 lineal feet per month, and within sixty days after completion to finish the brickwork in the tunnel, according to complainant's plans and specifications, the entire work to be completed within ten months from the date of the contract. As the tunnel was 2145 feet long, and Higgins was to drift at the rate of not less than 270 lineal feet a month, the drifting was to be completed in a little less than

eight months. His testimony shows that he did not commence bricking until after the drifting had been completed. It does not show when he finished the bricking, how many bricklayers, helpers or laborers he employed, how many shifts of these men were necessary, nor the wages which he paid the men, nor whether he boarded them, and, if so, at what cost. He took the work at the figure of $6 per lineal foot of tunnel, or $30 per thousand bricks laid; but he does not state whether he made a profit or lost money on the transaction; nor does he show what final total figure represents the entire cost to complainant both for the drifting and bricking of the tunnel. The testimony shows that complainant furnished the brick (see p. 331, Appendix), but there is no showing as to the cost of either cement or sand, or who paid for them. The contract required that there should be 200 bricks to every running foot, and, therefore, Higgins was to receive $30 per thousand bricks laid. At page 23, his estimate of the cost of brick delivered at the tunnel, was $12 50 per thousand. Cement and sand delivered, $9.00 per thousand, leaving $8.50 per thousand brick with which to pay the cost of labor, such as bricklayers, helpers, laborers, board, cars, tools, candles, and lastly, a fair compensation for his own services. At page 23 Higgins makes this statement:

> "Each man laid about 10 feet of brickwork with 200 brick to the foot, averaging about 2,000 a day."

This estimate, for a difficult piece of work, is so much in excess of any other estimate for similar work, with

the single exception of his guess as to the stone dam, that we believe it cannot be accepted. This belief is further fortified by the fact that details as to cost of services are not given.

An explanation of the estimate is furnished by Mr. Schussler. The time limit being 60 days, and there being 430,000 bricks to be laid, Higgins probably had in mind a certain number of bricklayers and on that basis reckoned his rate per day.

(5) *Brick Forebay and Tunnel at College Hill Reservoir:*

The witness here gives no details as to the cost or number of brick, or to the cost of cement or sand, or the number of days' work of brickmasons and helpers, but only states what he thinks he remembers as the average day's work done by each brickmason. His testimony is as follows:

> "I was told to hire the men by the day and the company would furnish everything. The men were paid $5 per day for eight hours' work, without board. We averaged about 1200 bricks to the man. In that work the cement used was Rosedale cement.
>
> "Mr. KELLOGG. Q. 23. How many brick did you say to the man?
>
> "A. About 1200. I do not say that is positive, but about that" (pp. 5-6).

Higgins is positive as to the fact that he looked after the work, but he is not positive about the rate at which bricks were laid. And, although in the long,

narrow and cramped Six-Mile House tunnel he claims that bricklayers averaged 2000 bricks a day to a man, he can, upon the same day, and while such a statement is fresh in his mind, still say that in this more accessible structure at College Hill, a large part of which was open work, the average was 1200. About that, however, he is not positive.

Schussler's figures as to the cost of reconstruction of this forebay were 60,000 bricks at $43 per thousand, $2580. The situation of this work is similar to that of the Lombard Street reservoir. This is another strong illustration of the fact that Higgins did not have actual and definite figures in mind, and that all through his testimony he is in great doubt as to what the exact conditions were. This is easily explained by the fact that much of the work in question had been constructed 40 years before his testimony was given, and that all of it had been finished over 18 years previous to 1903. In only isolated instances did he have even memoranda to refresh his recollection, and it would be an extraordinary feat of memory for any man, without such assistance, to give accurate and detailed information as to work of this character.

(6) *San Andreas Waste Weir:*

Schussler says, at page 824, that in this structure a bricklayer would lay about 500 bricks a day; that his wages and board would be $6.80, or, for a thousand bricks, $13.60; that four bricklayers would have three hodcarriers and mortarmen at $3.50 and board, or

$4.30, making $12.90 a day; that there would also be three laborers to assist in running cars, piling brick, etc., at $2.50 per day, making $7.50 for the three; that one carpenter would be $4, giving a total of $24.40. If this is divided by 2,000 bricks, we have, for the help per thousand bricks, $12.20, giving a total for bricklayers and helpers of $25.80 per thousand bricks.

The San Andreas waste weir was constructed in 1874, and required 696,000 bricks (p. 820). Higgins (pp. 15-16) says:

> "I was employed as foreman on the San Andreas waste weir, which was built in 1874 and 1875. Besides myself there were three masons and eight laborers employed by the water company on that work.
>
> "I would say that we averaged about 1,000 brick a day. We must have averaged, I think, from 1,000 to 1,200 brick a day to the man, but we will say 1,000 brick a day. I want to be on the safe side of this thing.
>
> "Q. 49. How many men were engaged on that work for the entire time?
>
> "A. There were four bricklayers, including myself, and eight helpers, or laborers rather. I received $7 a day and the other brickmasons received $6 a day. Later on they paid me $200 a month. There were no hodcarriers engaged on the work, nor was there a carpenter; except I will state that at the outlet end of that tunnel it was funnel-shaped and they had carpenters to make the center for the inlet end of the waste weir of that tunnel. It was a large center and it was funnel-shaped, and it required a carpenter to do it. That was put up and we bricked it over.
>
> "Q. 50. That was the customary way of bricking an arch?

"A. Yes, sir; we did it in the usual way, according to the engineer's instructions."

In the first place, it is hard to tell from this evidence whether there was or was not a carpenter. He says there was no carpenter, and then proceeds to show that there was need of one, and that one was present. He does not state whose carpenters built the stage, both for the outside as well as the inside of the brick gatehouse at the inlet end of the waste weir, nor how anyone but a carpenter could have made the templets for the arches, and it seems probable that a long lapse of time had caused him to forget these considerations. The testimony is further unsatisfactory in that it gives no details. For instance, it is not shown whether complainant boarded all the men, including Higgins himself, nor what the cost per day was. He does not give the length of day's work, what the services of the carpenter cost per day, nor what they cost complainant per thousand bricks laid. He makes no estimate as to the cost per thousand bricks laid, or bricks, cement and sand delivered at the structure. The only point about which he attempts to make even a rough estimate is what might have been the number of bricks which a bricklayer averaged per day in this structure, some of which was built 30 years ago, and some 18 years previous to the time this testimony was given. There is not a fact definitely stated. The witness says that he thinks they must have averaged from 1,000 to 1,200 bricks a day, but he is not sure. That all his testimony in this connection is mere guesswork based neither upon actual definite knowledge nor memorandum, is once again shown

by the fact that he estimates 2,000 bricks a day for the exceedingly difficult Six-Mile House tunnel, and 1,000 for what is comparatively a much easier piece of work.

Mr. Schussler's figures, on the other hand, are based upon actual experience in the year or year and a half preceding the giving of his testimony, and upon the prices which the company actually had to pay for a given piece of work. It seems that his estimates must therefore be given respect.

(7) *Bernal Tunnels:*

These tunnels were constructed in 1884, and required 403,500 bricks (p. 1499). The length of these tunnels was 225 feet and 1120 feet, respectively, making a total of 1345 feet. At page 991, Mr. Schussler showed the difficulty and interruptions encountered and the loss of time occasioned by the alternating work which boilermakers and bricklayers had to perform, the principal difficulty in construction being that it is through these tunnels that the water from the Crystal Springs pipe-line is carried under pressure, and that the tunnels themselves had to be completely bricked to insure safety. Mr. Schussler says that where, under the present conditions of labor in other tunnels of about the same size as these, a first-class bricklayer lays between 400 and 500 bricks in cement mortar in an eight-hour day, the same bricklayer, under the conditions existing in the pressure tunnels, will not, by a large percentage, be able to equal that daily performance in these tunnels. Higgins says, at page 24, when asked as to the bricking of the pipe in these tunnels:

"Yes, I did, but it was not done under contract. It was day's work. I started the work. I was there twenty days, and then I went on other work. The same men stopped there and finished the tunnel. I got over there every chance I had to see them. I did not finish it, I only started it."

He does not state how many days or months were required to complete all of this brickwork in these tunnels, aggregating 1345 feet in length, but he does say that he only worked there for twenty days. When asked by defendants' counsel to estimate the complete cost, upon being shown a memorandum, he said (p. 24):

"A. Yes, I made this out. That pipe is 3 feet 8 inches in diameter; add 8 inches to that, and take three times that, and you will get the circumference of that as 13 feet; 12 brick to the foot gives me 156 brick to the foot, or 1404 brick for 9 feet. There were employed in doing 9 feet of masonry the following:
2 masons one day.....$12.00."

Again referring to the manner in which he reached his 156 bricks, which he assumes to be the number of bricks in these tunnels per lineal foot:

"I figure that we laid 156 brick to the foot, which would mean a total of 209,820 brick.

"Q. Was the back filling of brick or of earth?

"A. We set the two rings of brick about the pipe and then had it filled in with earth. There was no back filling of brick" (p. 25).

As to this testimony, the first serious error is the assumption that there were only two concentric rings of brick masonry about the pipe, instead of the three

rings which Schussler has previously shown to exist. Beside this, there was additional outside brickwork filling (991).

Furthermore, Mr. Schussler shows that Higgins' testimony is full of technical errors. In the first place, the outside diameter of the pipe was not 3 feet 8 inches, or 44 inches, but 44.6 inches; nor (2) was the thickness of the two rings of brick masonry 8 inches, but, rather, 9; nor (3) was the diameter of the center line of his double brickwork lining 44 inches plus 8 inches, or 52 inches, but actually 44.6 plus 9 inches, or 53.6. Furthermore, he is obviously in error when he tries to obtain the circumference of the double brickwork ring by multiplying his assumed 52 inches by 3, when he should have multiplied the 53.6 by 3.1416. If these details had been followed by Mr. Higgins, a total of 14.03 feet, instead of his 13 feet, would have been obtained.

Mr. Higgins' assumption is, further, that two-thirds of a cubic foot of brickwork took 12 bricks (pp. 2-3), and that one cubic foot takes 18. The 18.4 cubic feet of brickwork required to solidly fill the entire space between the outside of the pipe and the inside of the tunnel would, at the rate of Higgins' 18 brick per cubic foot, require about 331 bricks, instead of the 156, which as he figures it, represents the number of bricks per lineal foot of tunnel. Schussler's testimony shows a conservative average of 300 bricks to the lineal foot.

Beside this, Higgins is inconsistent with regard to the pipe. He says (p. 25):

> "The masons could not lay any more brick than the boilermakers put in pipe for. They put in three pipe a day. There was one machinist and two laborers employed in putting in three pipe a day. That is what they did for a day's work; not any more or less."

While, at page 24, he says:

> "12 brick to the foot gives me 156 brick to the foot, or 1404 brick for 9 feet. There were employed in doing 9 feet of masonry the following:
> 2 masons one day.....$12.00
> 4 laborers one day..... 9.00"

and he gives this as an "average of 700 brick per man."

This memorandum assumes that the three lengths of pipe which the boilermakers could put in a tunnel in a day's work equalled 9 feet. Mr. Schussler's testimony (p. 982) shows that this pipe was not three feet in length, but 3 feet 6¼ inches, or, in round numbers, 3½ feet. We are therefore confronted with a question which Mr. Higgins does not answer,—whether the witness intends to say that the bricklayers bricked into the tunnel three lengths of pipe in a day (10½), or whether he means to say that the boilermakers put in three pipes a day, but that the bricklayers covered with brickwork only 9 feet. Mr. Higgins is very emphatic in saying that the boilermakers could only put in three pipe a day, and that the bricklayers could not put in the brickwork at a faster rate than the pipes were installed. He apparently assumed that the three pipes had a total

of only 9 feet, and that he laid only two 4-inch rings of brick around the pipe, and that he filled the balance of the tunnel with earth. He further assumed that it took about 156 brick to the running foot of pipe. On the basis of all these assumptions, he comes to the conclusion that the day's work of a bricklayer consisted of 9 times 156, or 1404 bricks a day. Practically every one of these assumptions is incorrect, and the total is obviously so.

His estimate of 700 bricks per man is reached upon the assumption that there were two men laying brick. It seems futile to investigate these details at length upon the meager information furnished by Mr. Higgins, but we wish to show that in every instance where his testimony controverts that of Mr. Schussler, he is in error. Figuring on the actual length of the pipe as 3½ feet, it would require to fill the entire space between the outside of the pipe and the inside of the tunnel 300 bricks to each running foot, or 3150 to 10½ feet of pipe, and 2700 for Mr. Higgins' assumed 9 feet daily. If we follow his assumption, therefore, it would mean that each bricklayer must lay 1350 bricks a day, while, if the 10½ feet of pipe is taken as a basis, they must each lay 1575 bricks per man per day. The difficulties of the work render this an absolute impossibility. It may also be worthy of notice that Mr. Higgins appreciated the much greater difficulty and expense in laying the brick in the pressure tunnels, as compared with the Six-Mile House tunnel, for his figures show that, in his opinion, a bricklayer in the pressure tunnels could lay only 35

per cent of the number of bricks which he could lay in the easier Six-Mile House tunnel.

(8) *The Gate Shaft and Tunnels at Crystal Springs Main Dam:*

At page 927, Mr. Schussler testifies that bricklayers in the small inlet tunnels will average about 500 bricks a day, which makes the cost per thousand bricks $13.60. The cost of helpers he, in detail, shows to be $12.76, with a total per thousand bricks laid of $26.36. These structures were built in 1887, and required 940,000 bricks.

The brickwork comprised in this structure is arch work, and much more difficult than ordinary outside brickwork. Mr. Higgins says that he was employed in drifting and bricking the Crystal Springs tunnel in 1887 (p. 27). He gives no facts as to the item of day's wages to the bricklayers or to the men who helped them. The only time he mentions wages is when he refers to his own wages and the wages paid to the men who drifted the tunnel. He does quote the price of the board of these men, and after giving the number of men with which he started, gives the pay which the men on the cars and roustabouts received. He says:

> "The men employed in the drifting of the tunnel were paid $2.00 a day and board. The contract for boarding the men was let to a man by the name of Price, who got $4.00 a week for each man. I started in on that work as foreman with 20 men under me. The men on the cars and the roustabouts got $40 a month and board (p. 27).
>
> "Q. 74. You also had charge of the bricking of said tunnel and you kept an account of the expenses thereof, did you?
>
> "A. Yes, sir."

And, further, in answer to a request to give the cost of labor employed on the work, the bricks used, and the number of barrels of cement, Higgins says:

> "Yes, sir. There were $16,009.55 for masonry work on that tunnel. * * * There were 1,050,000 bricks.
>
> "Q. 76. How many barrels of cement?
>
> "A. 2257 barrels. * * *
>
> "Q. 81. You say that is the cost for as much of the work as you did. What do you mean by that?
>
> "A. I do not include the cost of some subsequent work which was done on the top of the shaft. I did all this work on that tunnel with the exception of raising the top of the shaft" (p. 30).

This is all the information he gives as to these tunnels. While he places the total number of bricks at 1,050,000, Mr. Schussler shows that the total number of bricks in the entire structure, in its present condition is 940,000, fully 80,000 of which were laid in the year 1890, two years after Higgins had stopped work. The total which was actually laid at this time was, therefore, 860,000 bricks, and not 1,050,000. Higgins does not give the number of bricklayers employed at any time, nor the total number of days' work required, nor the number of days' work of laborers, nor the wages of either. On Higgins' basis of 1,050,000 and $16,009.55, we get $15.24 for labor per thousand bricks. As Higgins does not give any data necessary to arrive at the correct cost of labor, Schussler suggests that data

obtainable from work at the San Andreas waste weir be used. If this substitution is made, the cost would be,

for labor	$16,009.55
for Higgins' wages and board	1,950.00
for board of bricklayers and laborers.	3,520.00
Total	$21,479.55

This sum probably represents the cost of labor connected with the laying of 860,000 bricks placed in the structure at the year 1887. This gives an average cost of $24.88 to be charged to labor per thousand bricks in Crystal Springs tunnels and shafts, and not $15.24, as Mr. Higgins evidently wishes to infer. Mr. Schussler's estimate of $26.36 is about $1.50 higher than the estimate of Higgins thus reached. This, however, does not seem excessive, in view of the changed labor conditions.

We have now examined carefully every structure as to which Higgins claims to have any knowledge of cost, and we believe that it is a conservative statement to say that his evidence must be considered absolutely valueless. In not one instance has he given a total which includes all the cost elements necessary to determine what the actual expense to the company for that given piece of work was. In broad subjects, which do not require detailed and specific information, the testimony of such men as Higgins and Carey may well be of value; but to produce an ordinary workman thirty or forty years after the work has been completed, and to attempt, upon the basis of his remembrance, without any data or other proof, to overthrow

the estimates of the engineer who built the works and has computed every element with the greatest care, is hardly convincing.

DRIFTING OF TUNNELS.

Bald Hill Tunnel and Pilarcitos Tunnel No. 2.

At page 399 of defendants' brief, we find the following quotation from Mr. Schussler's testimony regarding Bald Hill Tunnel:

> "The drifting of this tunnel, at that time when it was drifted, cost between $10.50 and $11.00 a running foot, inclusive of timber. It can now be done for about $9.00 a running foot."

A quotation is then inserted from what is said to be the minutes of the directors, showing that the contract for drifting this tunnel had been let at $8.50 per lineal foot. It is not stated in the contract or in defendants' brief who was to furnish the timbers and labor for timbering this tunnel; whether extra compensation was paid to the contractor for this material and work; and if so, in what amount; who furnished the track, the cars or the tools.

The westerly part of this tunnel was drifted from the bottom of the San Andreas brick outlet shaft, requiring the hoisting by hand-windlasses of all materials blasted and excavated out of this part of the Bald Hill tunnel, which is 2820 feet in length, and all the timbers and other materials had to be lowered in the same manner

down to the men at the inlet level. There is no statement in defendants' brief as to who paid for all this extra labor.

Mr. Schussler's statement, quoted above, referred to the total cost per running foot of tunnel, inclusive of all drifting, blasting, track, cars, tools, timbers, lagging, labor of erecting and timbering the tunnel, hoisting excavated materials out of the shaft, and lowering timbers into it. This is one of the instances where the cost at the present time was found by Mr. Schussler to be decidedly less than the original cost, and he therefore discards, as he has done in other instances, all data as to original cost, reckoning only on the demands and expenses of today. He took into consideration the improved methods of blasting with single-hand drills and giant powder over methods formerly used, and he also considered the increase in the wages of miners since the original drifting of Bald Hill Tunnel, and says:

> "It can now be done for about $9.00 a running foot."

Finally, defendants' contention that Mr. Schussler's primal cost estimate was inaccurate, can hardly be material when they do not attempt to assail his present total estimate.

Lake Honda Tunnel.

At pages 377-8 of defendants' brief, it is said:

> "The minutes show, however, that the same Mr. de Noon to whom Mr. Schussler refers, contracted for the Lake Honda tunnel (timbered) at $8.00 per foot; as Mr. Schussler's estimate for this tunnel is

> the same as for the two Pilarcitos tunnels, the same cost price must be assumed. If Mr. Schussler's memory of the cost price is erroneous to the extent of $3.50 per foot, what shall be said of his other estimates, based on recollections? The minute record referred to is found in Book B, pages 234 and 235, and is as follows: 'November 15, 1866; the President reports that he has given the contract of the Lake Honda tunnel to Mr. R. P. de Noon, at $8.00 per lineal foot, timbered.' ''

There is no showing here, as has been found to be so often the case, what the actual cost of this tunnel was; whether the contractor, who, it is in evidence, had much trouble with caving and other difficulties (pp. 789 and 790), made or lost money on the job, and whether the company came to his rescue when he was in financial difficulties.

Mr. Schussler shows (p. 2451) that one portion of the 3420-foot Lake Honda tunnel was drifted and blasted through rock, while the other portion was through sand, and he suggests that the contractor who had had experience during the same year with Pilarcitos tunnel No. 2, may have assumed from the outside appearance of the flat ridge, through which the latter tunnel was to be drifted, that it would be all, or nearly all, of a sandy character, and that this supposition induced him to enter into the low contract price, named in the minutes.

Six Mile House Tunnel.

Defendants' brief contains the following, at page 319:

> "Table No. 16 sets forth the estimates on the drifting, timbering, and bricking of this tunnel, to-

gether with figures on cost supplied by Mr. Higgins, the contractor. It is noticeable that Mr. Schussler's estimate nearly doubles the cost."

Once more there is the assumption with no basis in actual proof that Higgins' figures for the drifting as well as for the bricking of that tunnel represent its cost. It would be idle here to reiterate what has been previously said under the head of "Bricking", as to Higgins' estimates. They are so fragmentary and incomplete and are so lacking in necessary detail, that cost of drifting can be no more nearly ascertained from his testimony than could the cost of bricking.

Mr. Schussler, in all instances, gave the details of his estimates, and in the absence of conflict as to details, his estimates should stand.

Bernal Heights Tunnel.

Counsel for defendants (p. 286), says:

"These are two tunnels leading the extension of the Crystal Springs 44-inch pipe through two ridges at Bernal Heights which are included by Mr. Schussler in his estimates on the City Pipe System under the classification of 'single structures.' Following will be found Table No. 11, giving the estimates submitted on drifting and bricking of these tunnels, together with figures on cost, supplied by Mr. Higgins, who did the work under contract. It will be noted that the difference between Mr. Schussler's estimates and cost given by Mr. Higgins equals $19,-599.88, being increase over 100 per cent on cost."

Higgins' testimony shows conclusively that he did not, as asserted in the above quotation, perform the work

under contract. He claimed that he did the drifting under contract, but as to the bricking says it was not under contract,—it was day's work (testimony, p. 24). His testimony is further conflicting in that he says, on page 23, that his contract was for $7.75 per lineal foot, while on page 25, he says the drifting was $7.87½. He nowhere says what wages per day were; or cost per lineal foot; or what the value of his own time was. He does not state how many shifts of men he had drifting tunnels; nor how many men to the shift; nor the number of hours which each man worked; nor the number of men employed in running cars. It is therefore impossible here, as in other cases, to compare the estimates of Schussler and Higgins, as to the cost of drifting or timbering, under present conditions of organized labor and the shortening of a miner's day's work. Much of the total difference, however, in this estimate, which includes bricking and drifting, is due to the fact that Mr. Higgins, speaking from recollection, states that the number of bricks actually used was 209,820, whereas it has been shown by us that the number was actually 403,000 bricks.

Outlet Shaft and Tunnels, Crystal Springs Main Dam.

Counsel says (p. 306):

> "Table No. 15 gives a comparison of cost figures, and estimates of the drifting and bricking of these outlet works, showing the usual extravagance of Mr. Schussler's estimates."

Higgins is once again defendants' only witness as to the actual work of drifting and bricking this structure. His testimony (pp. 27-8), shows that he had twenty men working in the tunnel; that the men who did the drifting, — the number of whom he does not give, — received $2.00 a day, and their board; that the rest of the men, the number of whom he does not give, received $40 a month and their board. To the total amount of wages, $6,143, which Higgins said he paid for drifting 580 feet of tunnel (actually 554 feet, Schussler, 924), should be added the cost of board of these laborers, whose number is rounded off at twenty. This equals for 22 weeks, at $4.00 per week per man, $1760. Higgins' own wages, at $200 per month, for 5 months, would equal $1000, in addition to the cost of his board, $88. This gives a total of $8991, which, when divided by Higgins' erroneous length of tunnel, 580 feet, gives a cost of $15.50 per lineal foot, and not $11.00, as Mr. Higgins would indicate, by omitting the cost of board of these men as well as his own wages and board.

If the above amount of $8991 is, however, divided by 554, the actual number of feet in the tunnel, the result is $16.22 per lineal foot, which does not include allowance for timbers, lagging, track, etc. Schussler's estimate is $16.80, per foot, but this includes many incidentals not taken into account by Higgins, even under our amended estimate.

This covers all Schussler's estimates which defendants have subjected to criticism.

III.

We quote from page 456:

> "*Third.* In the case of some estimates, comparisons are furnished by records of contracts and purchase prices disclosed by the minutes and account books of the company. In all cases in which such information is obtainable, the difference between the actual record and the estimates and statements of the chief engineer are so marked as to be absolutely unexplainable, as is shown by the tables and quotations from minutes and testimony given in the preceding pages."

This is practically a repetition of the statement made under the general heading of II above, and it is shown that in every case where the estimates of Mr. Schussler exceeded the amounts named in the minute books, there were ample and satisfactory reasons for these excesses. In some cases, the contractor did not complete his contract according to the prices named in the books; in others, the prices there named covered only a portion of the work which was to be completed, and, we believe, it is not putting the case too strongly to say that in not a single instance does a set of figures found upon the minute books contradict Schussler's estimate, without some adequate explanation. Furthermore, in every case, it must be remembered that Schussler's estimates are for present cost, heeding always the changed conditions as to labor and material. The court can hardly put much stress upon this argument of defendants.

IV.

> "*Fourth.* Mr. Schussler's valuations are disproved by the preponderance of the testimony of the other witnesses. That his figures are very greatly in excess of those given by complainant's best informed witnesses, Messrs. Adams and Schuyler, is proved by columns 31 to 35 of table number 3, which show that the average of Messrs. Adams' and Schuyler's estimates on all structures amounted to $16,993,625, while Mr. Schussler's total figure for the same structures was $19,317,000. * * * As the estimates of the other witnesses who gave details are in nearly all instances less than those above mentioned, Mr. Schussler's estimates stand alone without support from any other witness. It is submitted that they are not only unsupported but absolutely disproved by the discrepancies above noted."

It seems unnecessary to once more review in detail the cause of difference between Schussler, on the one hand, and Adams and Schuyler, on the other. The principal cause of difference which we have previously emphasized is the item of labor, which is perhaps shown most clearly in the cost of brickwork, where Schussler figures, in some instances, at $63, while Adams and Schuyler are approximately $40. This represents the main, and practically the only large point of difference in their testimony. To say that Schussler's testimony is "disproved" because of this difference or because of a difference from other witnesses of $2,000,000 in the total estimates is an absurdity. It may be proper to reduce some of his estimates, but it may be fully as proper to increase some of theirs; in any event, his is the most carefully prepared and contains the fullest data of any valuation furnished by any witness.

V.

From page 457 we quote:

> "*Fifth.* Mr. Schussler's answers to questions propounded on cross-examination are frequently so evasive and apparently insincere as not to inspire confidence."

To sustain this statement, one quotation from Mr. Schussler's testimony is given as follows:

> "XQ. 3289. You stated at the end of your testimony, in answer to the question: Q. 'Are those present values? A. Yes.'
>
> "A. They are the present values, but I did not say that was all they were worth. A man may state a thing is worth $100; that does not say it is not worth $150. If it is worth $150, it is certainly worth $100" (p. 2311).

We concede that this quotation, standing by itself, does give an impression of evasion; but let us see what the circumstances were under which this testimony was given. At page 2309, Mr. Partridge was cross-examining Mr. Schussler as to his estimate in 1901 for lands, water rights and rights of way, of $6,400,000, and the present estimate of $29,000,000 for the same properties. Schussler's answer was as follows:

> "A. That is very easily explained. In the first place we were at that time acquiring property on the Alameda Creek system, and it would not do for us to publicly announce what we considered the property worth that we were getting at lower figures, and trying to get at lower figures. By keeping the purchases private, and the knowledge of our being the people who were trying to buy it, and not putting too high a valuation on it publicly (we) saved incidentally and indirectly to the city a great many millions of dollars. The city fathers

who carried on the investigation on the part of the city, were only too anxious to have it known publicly, broadcast, and scattered through the newspapers, how much we were paying, and if at that time we had put on those incompleted purchases the value that we considered them worth, that we knew they would be worth the moment the entire properties, particularly on Alameda Creek, were unified into one unit as they have been since, we would never have been able to buy that property. * * * I consulted with the attorney and said, 'I said, Mr. Kellogg'—or whether it was Mr. Herrin, I do not remember—'if we disclose the real value of these properties, what they are going to be, before we complete our purchases that are now pending'—a number of them were pending—'we will never be able to complete the purchases.' He said something to this effect: 'This is for the purpose of water rate fixing, and even if you put on a lower valuation than what you think it is worth, it will answer the purpose.' Therefore I specifically stated, as you read there, that in most cases it is quoted at so much *only*. We were willing to acknowledge that we were to pay $100 an acre for watershed properties, and for that reason we did not hesitate in mentioning it. But the reservoir sites, being the absolute keys to the situation, we were not willing to disclose at that time, most of the purchases being incomplete, what they were really worth. As I stated in the quotation of that testimony, we had only about 3,800 acres, or thereabouts, outside of the Calaveras reservoir site, which would make the total acreage that we at that time acknowledged publicly we owned around the Calaveras reservoir site somewhat over 5,100 acres. We have since acquired a great deal of additional property and a portion of that being in the reservoir site, it was very essential that we did not then publicly state what we thought it was worth."

Then come the passages to which defendants object:

> "You stated at the end of your testimony in answer to the question: 'Are those the present values? A. Yes.'
>
> "A. They are the present values, but I did not say that was all they were worth."

It seems to us that the explanation is not only plausible, but is a full explanation. The answer may have been unhappily framed, but when read in connection with the subject under discussion, the sincerity of the witness is apparent.

VI.

From page 458 of defendants' brief we quote as follows:

> "*Sixth.* Mr. Schussler's testimony discloses a remarkable absence of knowledge with regard to the cost of sundry properties of complainant. His long connection with the company enabled him to have access to all of its records. He also alleges ignorance as to some of the details of recent construction, concerning which it would seem that an engineer of his ability and thoroughness should have been advised. This consistent avoidance of any knowledge of cost prices, particularly with regard to structures recently built, greatly weakens the value of his estimates. Nearly, if not all, of the other witnesses, state that they would have preferred to have used cost prices as the basis of their estimates, if they had been available. We have proved that such figures were available to Mr. Schussler in many instances. The wide difference between such figures and his estimates probably furnishes the reason why they were not used."

Defendants then, in skeleton form, state thirty-nine different places in Mr. Schussler's testimony in which this professed ignorance is shown. We shall examine these in detail:

(1) *Actual Cost of Alameda 36-Inch Pipeline* (2886):

"XQ. 5536. Can you give us the actual cost of laying the Alameda 36-inch pipeline?

"A. No, sir, I cannot. I have estimated that as closely as I could get at it under the circumstances."

Actual cost involves the sums expended on the books. As Mr. Schussler repeatedly points out, it was not his business, in the first place, to know these amounts, and, in the second place, if it had been, they were not obtainable.

(2) *Size of Trench for Pipe* (2886-7):

"XQ. 5535. On the Alameda pipeline, Mr. Schussler, have you any record of this excavation for the trench?

"A. We have not. The ditch was dug of sufficient and ample size to handle the pipe, and the joint-holes were dug, and when the pipe had been put in and riveted together, and repainted and coated, the ditch was thoroughly filled and replaced in as near the condition as it was before as possible. There was no record kept of the size of the trench.

"XQ. 5537. Can you give us the character of the earth through which the trench was dug?

"A. No, sir. On this side of the bay, that is, on the west side of the bay, it run through a clayey character of country, quite stiff. In the neighborhood of Redwood City it turned into stiff adobe, and continued some distance until it turned into yellowish or brownish clay again as we got toward Belmont, and that character continued with more or less variation."

Apparently Mr. Schussler did not here know the character of the soil through which this pipe was run.

(3) *Right of Way Cost* (2887):

"XQ. 5541. How much did the right of way cost?

"A. That I could not tell you. The land agent has charge of those matters."

The pertinency of this answer is evident.

(4) *Vandervoort Crossing* (2824):

"XQ. 5238. Can you give us the actual cost of that (Vandervoort crossing)?

"A. No, sir, I cannot. It is the estimate of cubical contents. There was no accurate separate account kept of any of these structures. The entire works went in as a whole, and by a careful remeasurement we have proportioned as near as practical the various details."

The answer that no one knows the cost is certainly a sufficient excuse for Mr. Schussler's inability to state it.

(5) *Cost of Laguna Creek Ditch* (2824):

"XQ. 5233. Do you know the actual cost of that?

"A. I do not. I computed the amount of riprap and of concrete at what it costs now.

"XQ. 5234. You do not know the exact cost of it?

"A. No, sir, I do not.

"XQ. 5235. The Laguna Creek ditch, from what data did you make up your estimate of the cost of that?

"A. Those were all measured carefully by a careful survey made under the auspices of Mr. Williams."

(6) *Cost of Laguna Creek Diverting Dam* (2824):

The answer of Mr. Schussler to this question is identical with his answer regarding the question above.

(7) *Filter Galleries at Sunol* (2858):

"XQ. 5403. Can you give the exact cost of that filter gallery?

"A. I cannot, sir. I have a very close estimate of it based upon my experience and judgment and also based upon the experience with other work, and for the year 1903-04."

Once more, Mr. Schussler's inability to give actual cost does not seem inconsistent with his knowledge of present structural cost.

(8) *Cost of Pipe in City Distributing System* (2962):

"XQ. 5884. Can you give the actual cost of the pipe system?

"A. No, sir, I do not know whether anybody can give that.

"XQ. 5885. Where did you get all these data from which you made up these estimates?

"A. In the first place, I got all the data of how many feet of pipe we had of each kind and of each size.

"XQ. 5886. Where did you get that data?

"A. From our pipe book records.

"XQ. 5887. How did you get the data of the cost of these particular jobs?

"A. These were kept a careful tally of by our foreman in the yard, checked by our foreman on the ditch. So we are absolutely certain we have the correct account as near as it can possibly be got at."

The witness is, therefore, in this case attempting to supply, as far as possible, details which are not otherwise obtainable.

As to the following questions and answers, we believe no further criticism is necessary:

(9) *Cost of Laying Pipe on Lobos Avenue* (2603):

"XQ. 4414. (Referring to Lobos Avenue pipe.) Do you know what the cost of laying it was?

"A. I do not.

"XQ. 4415. Do you know how far it was—that is how long it was?

"A. I do not know the length of it now, but it was laid from the pumping station uphill to Lobos avenue."

(10) *Percentage of Deterioration in City Pipe System* (2969):

"XQ. 5925. Can you tell by experience how much deterioration takes place in the city system?

"A. You mean by percentage?

"XQ. 5926. Yes.

"A. No, sir, I cannot. I believe that cast iron pipe has a very much longer life than it is generally supposed, especially if water is kept running through it with more or less current."

(11) *Estimate to Board of Supervisors on Clay Street Tank, 1904* (2517):

"XQ. 4076. The next is the Clay street tank?

"A. In the report of 1904 I estimated the Clay street tank at $15,000. I do not think that I included some of the work surrounding the tank, such as pavements. I do not know whether I did include the wall made of concrete which surrounds the property. However, the hasty estimate made at that time of the Clay street tank was $15,000. An accurate revision of all the details of this work, including the wall surrounding the property on three sides, and other street work that had to be done on account of it, also the standpipe, etc.,

which is given in great detail in my testimony on pages 1397 and 1398, I placed in round figures at $19,000."

(12) *University Mound Reservoir* (2516):

"XQ. 4074. The next is the University Mound reservoir?

"A. The University Mound reservoir in my estimate in the report to the supervisors in February, 1904, was placed in round figures at $175,000. I do not know whether that includes the buildings or the fences around it, but it was simply placed here in round figures at that price. In my carefully revised estimate for the purpose of this suit, after going into great detail into all the construction, and inclusive of the building, barn and fences, it was placed at $204,000."

(13) *Cost of Crystal Springs Dam* (2763):

"XQ. 4964. Can you give us the actual cost of the Crystal Springs main dam?

"A. No, sir, I cannot. I think that might be segregated in the secretary's books by making some of those deductions that I mentioned to you some time ago.

"XQ. 4965. Did you make any reports on the cost of it either before or during its construction, or after it was finished?

"A. I do not remember.

"XQ. 4966. Do you know that you did not?

"A. I really do not, no. I may have talked to our directors—Do you mean to the directors?

"XQ. 4967. Yes, or to any person?

"A. I think I made, at the request of the supervisors, or at least I made for the supervisors an estimate of the cost which figure was handed to me by the secretary because he was the only one who knew everything that had been charged to the dam. Not having any other proof to the contrary I took his figures as coming from the official head of the accounting department."

(14) *Excavation for Crystal Springs Dam* (2751):

"XQ. 4889. Do you know the actual cost of the excavation for the Crystal Springs dam, the lower Crystal Springs dam?

"A. I do not. I have made a very careful estimate, though, of what it would cost in 1903-04."

(15) *Character of Earth Through Which Trenches for Crystal Springs Line Were Dug* (2777):

"XQ. 5028. Can you give the character of the land through which the trenches were dug for the laying of the pipe?

"A. No sir, I cannot, but we can estimate it very closely on account of having similar work done since."

(16) *Character of Rock Through Which Crystal Springs Tunnels Were Drifted* (2776):

"XQ. 5027. Can you give the details of the character of the rock through which these tunnels were drifted?

"A. No sir. The character is about the same throughout that country."

(17) *Proportion of Pilarcitos Dam Built by Contract* (2045):

"XQ. 2216. Was the dam built by contract?

"A. No sir, but a part of it.

"XQ. 2217. How much of it?

"A. I do not remember that.

"XQ. 2218. You remember the depth of those pits, but you do not remember how much of the dam was built by contract?

"A. No sir; but I can show you by this profile.

"XQ. 2219. The profile shows how much of it was built by contract?

"A. No sir; but it shows what the original dam was. Most of that was built by contract. The con-

tractor had taken the work too cheap. I was extremely rigid, and so was the superintendent, about the quality of the material, and in working it, and the consequence was that the contractor lost a good deal of money."

(18, 19) *The Terms of This Contract* (2057):

"XQ. 2261. Have you the contract?

"A. No. I have no idea what has become of it.

"XQ. 2262. Have you any record of the terms of it?

"A. No sir, I have not.

"XQ. 2263. Has the company?

"A. Maybe. Possibly the secretary may find something for you. My recollection is that it was 38 or 40 cents a cubic yard."

(20) *Number of Cubic Yards Removed Pilarcitos Stone Dam Flume and Character Thereof* (2462):

"XQ. 3837. Have you any details of the number of cubic yards removed?

"A. No sir. As I stated in my direct testimony we have only a few accurate data as to the cost of building flumes where we kept the accounts separate. There was the main Locks Creek flume, and then we had almost complete data of the stone dam flume, and we had accurate data of the Ocean House flume. Taking those various flumes into consideration, and figuring them on the basis of what they would cost to be reproduced during 1903-04, I arrived at an average cost for that mountain flume, as I said before, of about 18 cents for every foot, board measure, of clear surfaced lumber used in the channel of the flume."

(21) *Date When Upper Pilarcitos Dam Was Built* (1696):

"XQ. 590. When was upper Pilarcitos dam built?

"A. I do not know; but it was several years before the consolidation; it was long before my time.

"XQ. 591. Do you know who built it?

"A. I think it was built under the direction of Col. von Schmidt."

(22) *Labor, Lumber, Iron Pipe of Original Pilarcitos Pipeline* (2034):

The witness volunteered as follows:

"Before you begin, Mr. Partridge, I wish to state that I have an old map that purports to be the survey of the old Pilarcitos line to Lake Honda. It was made in 1861. It had been misplaced, but we found it again. I think that from that map I can make some kind of an estimate—I will try at least—of what that line may have cost at about 1861 or 1862, when the old Spring Valley Water Works constructed it. I will try to make that estimate as near as I can get at it at this late date. I do not know what the price of lumber was at that time, nor the price of iron pipe, nor exactly what labor was, but I will endeavor to find out; it may take a few days to do it."

(23) *Cost of 24-Inch Cast Iron Pilarcitos Pipe and Other Details* (2651):

"XQ. 4554. Referring to that 24-inch cast iron pipe mentioned in connection with the Pilarcitos system, what was the number of blow-offs there per mile?

"A. I do not know. I believe there are but one or two blow-offs there. That is laid in the bottom of the valley. We only put in the blow-offs where a pipe passes over a depression. There may be two in that lower portion of the pipe.

"XQ. 4555. How many valves?

"A. There is a valve to each blow-off, and then we have air-cocks on top. I do not remember now how many. We usually put an air-cock on each

summit, where we go over a higher piece of ground in order to let the air out whenever the pipe is being filled."

"XQ. 4556. What was the size of the trench?

"A. I do not remember exactly, but it was probably a foot wider than the outside of the pipe.

"XQ. 4557. What depth?

"A. That I do not know, but we usually carry about 2½ feet of dirt on top of the pipe.

"XQ. 4558. What was the character of the work excavated there?

"A. I could not tell you, sir. It is the usual character that we encounter in those hills. It is usually stiff clay or clayey material. Sometimes we encounter rock, especially on the side hills.

"XQ. 4559. Do you know how much it costs to lay that pipe per foot?

"A. I could not tell you. We have an approximate estimate of it. It figures about, taking into consideration transportation and dragging it over the country and transporting it over the hills and hauling it from Millbrae with teams and bringing it to Millbrae on the cars, and all the work in connection with it, digging the trench and the lead joints and the painting and the labor, 10.6 cents per pound, inclusive of the pipe."

(24) *Cost of Pilarcitos Side Flume* (2133):

"XQ. 2635. (Referring to the flume.) What was the character of the soil?

"A. It was pretty easy cutting.

"XQ. 2636. How much did it cost per foot?

"A. That I do not know.

"XQ. 2637. How much would it cost now?

"A. That I do not know, but I am going to give you an explanation of how we estimate and arrive at the cost of the building of flumes"—which he does.

(25) *Average Cost of Rights of Way on San Andreas Line* (2898):

"XQ. 5594. Do you know what the actual cost of the rights of way was on the Crystal Springs pipeline?

"A. No sir, but I think the land agent could find that out for you. I believe that there were some water payments—cheaper water or something of that kind—besides money. I do not remember how those things were divided."

(26) *Details of San Andreas Pipeline Construction* (2747):

"XQ. 4861. Do you remember the distance between the joint-holes and all those details?

"A. No sir, not now, but the distance between the joint-holes was guided by the length of the pipe that came from the shop. As I described yesterday, there is a joint riveted and chipped and caulked on the ground in the ditch, and that fixes the length of the joint-holes."

(27) *Cost of Wrought Iron Pipe in Flume and Feeder on San Andreas* (2741):

"XQ. 4829. (referring to this feeder.) Can you tell us the actual cost of that pipe?

"A. No sir, I cannot. This is my estimate of what it would cost to reproduce that work in 1903-04."

(28) *Cost of Flume Portion of San Andreas Pipe Feeder* (2738):

"XQ. 4809. Referring to the feeders that feed water into the San Andreas, especially the flume and pipe feeder, what is the amount and character of excavation for that flume?

"A. In the first place, you mean the one on the west side of the San Andreas valley?

"XQ. 4810. The 2780 foot flume?

"A. In the first place, there is a grade cut through the slope of the mountain for the flume, and wherever we come to a deep gulch which would be too long to go around, we go straight across with the pipe.

"XQ. 4811. That is not what I wanted. I want to know the size of the grading you did?

"A. That I do not know. It was sufficient to have the entire width of the flume rest on solid ground, so that no part rests on any of the fill that is thrown out, and so that there is a space behind the flume to allow the air to circulate well, and so that the dirt that might slide down at any time would have some space to slide into.

"XQ. 4812. I want to know the size of it.

"A. I could not tell you. * * * It varies with the different sizes of flume."

(29) *Data on Locks Creek* (2741):

"XQ. 4821. Have you the original data of that Locks Creek flume?

"A. I have not.

"XQ. 4822. What has become of it?

"A. I do not know. I suppose it is in the office.

"XQ. 4823. Will you produce those data tonight?

"A. I have nothing original; whatever I have are simply notes copied from the time data that the timekeeper gave me.

"XQ. 4824. I want the originals that the timekeeper gave to you?

"A. I have not got them.

"XQ. 4825. What did you do with them?

"A. Perhaps I can find them. They may be still in the office, or they may be with the timekeeper; I do not know."

(30) *Ocean View Pumps, 1904 Estimate* (2515):

"XQ. 4065. The next is Ocean View Pump.

"A. I do not believe I included the Ocean View Pump in the report to the supervisors in February, 1904.

"XQ. 4066. Why not?

"A. I do not know. It is omitted here.

"XQ. 4067. Is it in use?

"A. It is ready for use.

"XQ. 4068. Have you ever used it?

"A. We have used it formerly.

"XQ. 4069. Are you using it now?

"A. No sir, but it is ready for use.

"Mr. KELLOGG. It is a relay pump, is it not?

"A. Yes sir, it is a relay pump, in case of any accident or breakdown in the main pipe leading up from Lake Merced."

(31) *Number of Worthington Meters in Use Now* (2949):

Referring to meters, Schussler says:

"A. Those were the old second-hand Worthington meters. Since that time we have replaced most of them by brass meters of a different pattern.

"XQ. 5845. How many Worthington meters are there in use in the city at the present time?

"A. I do not know.

"XQ. 5846. There are some 5,000 or 6,000 are there not?

"A. I do not know. Mr. Booker has the record of that.

"XQ. 5047. I thought Mr. Williams could tell you that?

"A. You would call it hearsay, because he gets it from Mr. Booker."

(32) *Cost of Telephone Lines* (2968):

"XQ. 5922. Could you tell the cost of the telephone lines?

"A. No sir; perhaps Mr. Brooks, the purchasing clerk, may be able to tell you that."

(33) *Cost of Roads Built by Complainant* (2968):

"XQ. 5921. Can you give the actual cost of those roads?

"A. No sir, I have only made an estimate."

This testimony was given after detailed examination as to different requirements in road-making.

(34) *Number of Miles of Company Fence* (2967):

"XQ. 5912. * * * Do you know how many miles of fence you have?

"A. I do not exactly, no sir.

"XQ. 5913. Do you know what kind of fence it is?

"A. Some is board fence and some is barbed wire fence and some is netting fence.

"XQ. 5914. Do you know how many miles of each kind?

"A. I do not."

(35) *Work on Tunnels by Hand and Air Drills* (2437):

"XQ. 3738. Considering the fact that you have to fill in, do you believe it could be done cheaper by hand than by air drills?

"A. I do not know, but my opinion is, from my experience, that this is the best method for this particular work. If you have a tunnel in a mine where you have hard rock, and you do not have to refill the spaces excavated, and if the tunnels are large and roomy, you might use the other method."

(36) *Construction of Dams (Plowing or Hand Labor)* (2085):

"XQ. 2416. Was there any reason why you could not use plows, at least near the surface?

"A. We might possibly have used plows for the upper portion, but in most cases the pits were small and short, and in that case the turning around of the plows causes a great deal of loss of time.

"XQ. 2417. It would be very much cheaper than the expense of blowing it up and then breaking it up afterwards with sledge-hammers, would it not?

"A. Well, I do not know. We have had excavations—we frequently used the plow. For instance, we used the plow frequently in making pipe ditches for our main conduit pipes.

"XQ. 2420. It is much cheaper, is it not?

"A. I do not think it is very much cheaper.

"XQ. 2421. Do you know whether or not it is?

"A. No sir, because wherever we find that it is cheaper to use the plow method, naturally we would use it, the same as we use it for the removing of the top soil, as I detailed yesterday."

(37) *Mixing Gravel and Clay in Dam Construction* (2093):

"XQ. 2473. Would it do any harm to a clay dam of this kind if there was any gravel mixed with the clay?

"A. It has been done, I believe, in England. I have had no experience with it. I have always made it a point not to have any loose material of that kind in it. If the gravel was thoroughly puddled by hand or in a machine with first-class clay, I suppose it would do no harm."

(38) *Cement in California and England* (2125):

"XQ. 2604. What kind of cement do you use?

"A. We have been using Portland cement, partly English and partly German.

"XQ. 2605. Is there not any domestic cement which is as good?

"A. I do not know. They are making a cement here now which promises to be very good, if the character of the manufacture is maintained such as some of the samples I have seen."

(39) *California Cement in Government Contracts* (2126):

"XQ. 2609. Do you know whether the United States government has made contracts with the local cement makers for large quantities of their product?

"A. I do not. I understood that not long ago there was but very little foreign cement imported here now because the local cement shows up very well, and I think is a little cheaper."

We submit that the answers to these questions do not show a "consistent avoidance" of the knowledge of cost prices, but that in every instance the facts as to cost were either impossible of ascertainment or were peculiarly within the knowledge of some other official of complainant.

We further submit that defendants have failed on every side to prove that the estimates given by Schussler are not trustworthy and convincing. His testimony is entitled to the greatest respect and consideration.

ADDENDA B.

AN ANSWER TO DEFENDANTS' ARGUMENT AND TABLES REGARDING ESTIMATES ON WROUGHT IRON PIPE.

It is our aim to here show as briefly as possible the points in defendants' tables and the accompanying arguments in which we believe they are in error. At page 590 of the argument, defendants say:

> "It is entirely true that Mr. Schussler's unit of 10.6¢ per pound is an average arrived at by him by averaging a unit of 10.87¢ per pound which he considered the reduplication value of the Alameda 54-inch pipe-line and the other unit of 10.4¢ per pound, which he ascribed to the oldest pipe-line,—the San Andreas pipe-line."

The unit of 10.4¢ was the figure which Mr. Schussler reached for the 44-inch San Andreas line, of which the actual cost was known (pp. 2742-48) and which was reduced by him to 1903-04 rates (p. 2776). This line was built as shown on defendants' table No. 1, in 1897-9, and is next to the newest of defendants' wrought iron pipelines. Although the system applied by Mr. Schussler in determining his average cost per pound of pipe has been considered in the briefs, we wish to outline here the method which he employed:

The actual, and to all intents, the present cost in 1903 of the Alameda 54-inch pipe was known. With this, Mr. Schussler averaged the cost of the 44-inch San Andreas pipe In reaching the sub-unit as to the cost of iron for this latter figure, he took the four component parts of

this system,—the 30-inch pipe at 4.6¢, the 44-inch pipe at 3.75¢, the 1400 feet of 37-inch pipe at 3¢ and 2020 feet of 44-inch at 4.6¢. The average of these four pipes, reckoned on a basis of actual weight, gives as a result 4.06¢, which Mr. Schussler took as the cost of the 44-inch San Andreas in comparing this cost with that of the 54-inch Alameda pipe. Knowing the cost of iron in this pipe, he applied 1903-04 rates to the other units as well, reaching a result of 10.4¢ which, as we have previously shown, he averaged with the 10.87¢ of the 54-inch Alameda, obtaining a unit applied to all pipelines alike of 10.6¢.

San Andreas 30-Inch Pipe. In referring to the San Andreas 30-inch pipe, at page 593, defendants argue that because this pipe weighed only 37½ pounds per foot, and was consequently comparatively light pipe, that it was therefore worth less per pound than a heavier pipe. We believe that the answer to this proposition is obvious. In the first place, the pipe is small, only 30 inches in diameter, and is used under light pressure, where there is no necessity for thickness in the pipe. It is important to distinguish between character and weight. The weight of a pipe in no way enters into the question of character or quality of the iron. It is simply rolled thinner, since there is no requirement for its withstanding heavy pressure. The facts here stated will be found to be substantiated in Mr. Schussler's testimony as follows:

Pilarcitos Pipe. At page 778 with reference to this pipe, the good quality of this iron is shown, and its cost price of 3.9¢ per pound in the east is noted.

San Andreas 30-Inch Pipe. This pipe is similar to the Pilarcitos pipe, and Mr. Schussler states at page 2275 that it would cost 3.9¢ per pound in the east. It is also an important fact that the iron used in the 54-inch Alameda, the 36-inch Alameda, the 30-inch San Andreas and that in the Crystal Springs system, is all first-class iron,—while that in use in the 44-inch San Andreas and the Islais Creek line is inferior to, and of a grade lower than, that used in the former pipe.

Crystal Springs 44-Inch Pipe. It is shown by Mr. Schussler, pages 978 and 1208, that the iron in this line is of a high grade, while at page 2152, it is stated that it was rolled in the same manner as the Pilarcitos and San Andreas iron, costing, Mr. Schussler states, at pages 2274-6, 4.6¢ per pound.

Alameda 36-Inch Pipe. This pipe is shown at page 1208 to have been composed of iron of a high grade, costing (page 2274) 4.6¢ per pound. These specific statements are cited to show that the quality of the iron in the Pilarcitos 30-inch, San Andreas 30-inch, Crystal Springs 44-inch, and the Alameda 36-inch, is of the highest quality, and that the weight, varying as it does in the different lines, is no indication of the character of the material entering into the composition of the pipe itself,—the weight per foot necessarily varying in the different pipes in proportion to their diameters, as well

as the various thicknesses of the iron. The fact that an allowance is made for the pressure which the pipe must necessarily withstand, is neither a controlling factor nor an indication of any kind as to what the quality or character of the iron employed actually is.

This rather full explanation is here given in answer to the question of the court at page 594 of defendants' argument, as to whether there are different qualities of iron in the Crystal Springs pipe-line, because of the differences in weight. There is no difference in quality. The iron employed in this system is of the same quality throughout,—the only distinction which can possibly be drawn being that the iron in the pipe of the smaller thickness has been drawn out more than that in the thicker pipe. The number of laminations is the same in each.

Abandoned San Andreas 30-Inch Pipe. At the bottom of page 595 of the argument, defendants quote Mr. Schussler's testimony "that a portion of the original " San Andreas 30-inch pipe-line was left in the ground " and abandoned, because it was too expensive to take " out". The answer to this suggestion which plainly appears in the testimony is that no portion of this pipe was estimated upon by Mr. Schussler, but that his estimate included the 44-inch pipe which replaced it.

Quality of Pilarcitos Pipe. Defendants have quoted from Mr. Schussler's testimony regarding this pipe at Schoolhouse Station, with the evident intention of showing the poor quality of the pipe here in use. It has al-

ready been shown that this pipe is of good quality and that the difficulties encountered in this particular place were due to the fact that the pipe was not, at the time of its installation, caulked. This is an old pipe, and when it was put into use, the process of caulking had not been given a thorough trial. Upon proof of its effectiveness, however, this pipe was taken out, caulked and put in again, and has, from that time to this, given no trouble whatever.

54-Inch Alameda Pipe. With regard to Table No. 3, defendants fail to quote Mr. Schussler's entire testimony as to the data which he was to give regarding the cost of wrought iron pipe. The portion quoted by them is as follows:

> "I shall give the data which shows the cost per pound of plate iron in the construction of these pipes."

There should be an addition to this, to the effect that Mr. Schussler compared the data which he gave for the 54-inch Alameda line, with some of the other pipe, and that the result gave him the cost for all wrought iron pipe, and not for the 54-inch pipe alone. The laying of this pipe was attended with greater difficulties than was that in connection with the 54-inch pipe, but Mr. Schussler concludes that allowances for other units would be less in the case of the 54-inch pipe to a practically equal extent, so that it is safe to adopt practically the same units here (p. 330, complainant's opening brief).

Sub-Units. Defendants, in describing table No. 4, at page 598 of their argument, state that the second volume of the closing brief concedes all the sub-units claimed by them except those which are specifically mentioned. This is not the fact. It is true that the only sub-units actually in evidence are those with regard to the 54-inch pipe, but the testimony plainly indicates beyond the possibility of a doubt, that the estimates for the 54-inch pipe were not accepted as to the other, without reason. We shall examine these sub-units in detail.

(a) *Rivets.* In connection with the item of rivets, it is shown that the weight of the rivets used in the construction of the 54-inch Alameda pipe was 4 per cent of the plate iron actually used, and that in all pipe lines of complainant, the proportion in weight of rivets to the total line is the same. This figure is, therefore, not an arbitrary adoption of a unit shown in the 54-inch pipe, but represents the cost, proved by the experience of the company. The rivets in all pipe lines cost the same per pound as shown in detail on page 159, appendix to complainant's reply brief, and the sub-unit of .17¢ would, therefore, be the same for all lines.

(b) *Hauling, digging, etc.* This item in the case of the 54-inch pipe, was 1.86¢. At page 193 of Volume 2, complainant's reply brief, it is shown that this item, in connection with the San Andreas 44-inch pipe, was 2.26¢. Mr. Schussler's testimony, as to the conditions and circumstances surrounding the laying of other pipes, transportation, etc., which is criticized at the bottom of defendants' table No. 3, shows plainly that Mr. Schuss-

ler did not use the item of 1.86¢ for all the pipes. In this instance, the oldest pipes showed a larger expense. The further reference in defendants' table No. 4 to the appendix of complainant's reply brief, page 202, from which defendants deduce that Schussler based cost estimates for trench work on the cost of the 54-inch pipe, shows that the 54-inch pipe was not meant, but the two larger pipes, that is, the 54-inch Alameda and the 44-inch San Andreas. The evidence shows that somewhere between 1.86¢ and 2.26¢ had been applied to the smaller pipes.

At page 598, defendants refer to their table No. 5, which has to do with the original cost figures of pipe lines. It is argued that Mr. Schussler was influenced in ascertaining the cost of the San Andreas pipe by the fact that that was the only figure which appeared in the record. This is error. Mr. Schussler's testimony shows that he stated that the 44-inch pipe was of a quality inferior to the other pipes, and that he took cognizance of that inferiority in quality and lower price in his estimate of the San Andreas pipe-line when he reached his estimated value of the plate iron for that line in San Francisco at 4¢. Counsel further argues at pages 598-9 of the argument that the increase in price per pound for the Millbrae force pipe was due to the smaller quantity ordered, as compared with the San Andreas 44-inch pipe. The fact is (2681-94) that the delivery to the contractor for the laying of the 44-inch pipe was contingent upon the delivery to complainant of plate iron from the mills in the east. It is there stated what the rate of delivery was to be to the con-

tractor, and that the completion of that delivery was not to occur until some time in the following year, so that at that time, two months after the 44-inch pipe was ordered, and at the time when the order for the Millbrae force pipe was given. the mills had not completed one-half of the San Andreas order, and were then actually engaged in the rolling of iron for the San Andreas 44-inch line.

Table No. 7 claims a price for the San Andreas 44-inch of 2½¢ per pound in the east. This is error. The testimony shows it to have been 3¢. The Islais Creek pipe cost 2½ cents in the east and 3¼ cents here.

In table No. 8, there is a quotation from Mr. Schussler's testimony regarding the damage by salt water, and the failure to properly caulk the San Andreas pipe; a further quotation from Mr. Schussler to the effect that the caulking was afterwards done, and that the line is still efficient and in actual use, should, in all fairness, have been added.

The fifth, sixth, seventh and eighth quotations can have no possible bearing upon Mr. Schussler's estimates, for the reason that the iron referred to was not in use, nor estimated upon by Mr. Schussler in his valuation in these cases.

Mr. Schussler estimated on 44-inch pipe, and on page 2190 of his testimony he stated specifically the purposes served by this pipe,—one of which was an increase in its carrying capacity.

The quotation opposite the Crystal Springs line in this table should be extended. It is to the effect that

the iron is worth 4.6¢ per pound here. The same reference applies to the Alameda 36-inch pipe. Moreover, the last quotation in table No. 8, should be amplified by the further statement that Mr. Schussler took into account the lower price of iron in the 44-inch pipe when he reached his estimate of 4¢ per pound for the iron in the San Andreas pipe-line. These statements are in answer to page 601 of defendants' argument.

In table No. 9, also, the figures of 2½¢ for plate iron should be changed to 3¢ in accordance with Mr. Schussler's testimony; while the second quotation should further explain that the price of 3¢ per pound was the price in the east, and not in San Francisco. The only other fact which need be noted, in connection with this table, is that the third quotation, referring to an extra piece of pipe, applies not to the 44-inch pipe, but to the 37-inch.

Table No. 10: In this table, the figure "3¢ for main portion of 44-inch pipe" is in accordance with Mr. Schussler's testimony and the cost of 3¢ in the east; this fact involves an addition of .75¢ for freight. The reference to 2020 feet of 44-inch pipe, and the further reference to "highest unit * * * lighter pipe" necessitates the answer that this 2020 feet of 44-inch pipe is the same grade of iron as that used in the Crystal Springs line. It is slightly lighter in weight, because its thickness is less, due to the fact that it was only required to stand one-quarter of the pressure which the Crystal Springs pipe was forced to bear. Furthermore, the reference to the average of the whole pipeline and the statement that it was lighter iron, and the

further statement that three large portions were replaced, simply necessitates a re-statement on our part that weight is no indication whatever of quality, and that the portions replaced were not estimated on by Schussler at all.

Table No. 11: Defendants seek to show that the Crystal Springs pipe and the pipe used at the Islais Creek Crossing, costing 2½¢ in the east, are of the same character. This is not the case. The Crystal Springs is of the highest grade of iron, costing 4.6¢ here, while the Islais Creek pipe would cost here 3¼¢. The Crystal Springs 44-inch pipe is not the same pipe, nor is it of the same grade of iron, and the discussion of the two pipes in the same connection unless noted, gives an erroneous impression. Defendants try to show further in this table that the iron used in the 44-inch Islais Creek Crossing in 1900 differs from that in the 44-inch San Andreas, and conclude that because the Islais Creek 44-inch was laid on a trestle, it was consequently cheaper plate iron per pound. It is, of course, obvious that the fact that the pipe was laid on a trestle *does* not detract, and *cannot* detract from the value of the iron which was bought in the east, and it might be well in this connection to state that it costs less per pound to lay pipe on trestle, barring the cost of the trestle, approximately 4¢ (which defendants seem to ignore), than it does to lay the same pipe in the ditch.

Defendants' reference to the plate iron in the various pipe-lines, and their argument to the effect that they did not use Mr. Schussler's estimate of 3¢ for

plate iron (defendants say for laying pipe-line), for all the lines, but did for two smaller lines involves an adoption by the city of the 3¢ rate for the pipe-lines, against 4.6¢ used by Schussler. The actual fact is that Schussler gave his estimate of 3¢ in the east for the San Andreas 44-inch and the Islais Creek 44-inch; for the Pilarcitos 3.9¢ in the east, and San Andreas 3.9¢ in the east, and defendants arrive at 3¢ here in San Francisco for Pilarcitos and San Andreas pipe, by a process of erroneous assumptions and deductions from Mr. Schussler's testimony, which the testimony itself does not warrant. Mr. Schussler did give the price of the 44-inch San Andreas pipe at 3¢ in his original testimony, and did not say 3¢ in the east. This fact has, however, since been corrected, and the undisputed cost of the San Andreas iron in San Francisco is 3.75 cents per pound.

TABLES NOS. 1 AND 2, ON DEPRECIATION.

The purpose of these tables, as stated in defendants' argument, is to show that depreciation has been covered through allowances made in water rates. We believe that we can show conclusively the error of this argument:

Alameda Pipe.

The cost of the Alameda pipe-line, as given by defendants, is..... $1,589,869.30

This figure probably includes the Belmont pumps and the 16-inch submarine pipe, although it is not possible from the table submitted to state this with certainty. To be entirely conservative, however, we include these two items at the figures given by Mr. Grunsky in the Municipal Reports, 1900-1901, as follows:

Belmont pumps (page 220).....	$159,470.00
Plus 10%	15,947.00
16-inch submarine pipe (p. 217).	120,000.00
Plus 10%	12,000.00
Total.....	$ 307,417.00

This amount, when subtracted from the figures given by defendants, supra, leaves as a total..... $1,282,452.30 as the approximate cost of the Alameda pipe.

Defendants' witness Grunsky, page 223, Municipal Reports for 1900-1901, estimates the life of wrought iron pipe at forty years. Reckoning upon a basis, therefore, of $1,282,452.30, and assuming that the pipe will last the 40 years which he suggests, we find that in order for the company to be made whole at the end of that period, there should be contributed annually to a fund for that purpose $21,224.58. This is, of course, estimated upon the basis that the money contributed from year to year

will be compounded. Were this system not followed, the annual contribution would necessarily be materially higher. This sum would be in addition to all operating charges of every character, such as those for patrolling the line; keeping gates, blow-offs and air valves in working order; salaries of patrol-men; up-keep of conveyances; tools; cost of repairing leaks or breaks caused by earthquake, explosion, floods, wash-outs, windstorms, etc.; replacement of lumber, trestles and air valves; painting buildings; and other preservative measures. Accepting then, our figure of $21,224.58 as an annual contribution, which must be made in fairness to complainant to provide an amortization fund, we find that from defendants' own figures, the contributions actually were as follows:

1901	$1,263.30
1902	1,074.77
1903	869.69

These figures, upon defendants' own showing, include every cent which the company received to cover depreciation.

Crystal Springs Pipe Line.

The cost of this line, according to defendants' exhibit 101, page 228, was $1,348,045.04. Accepting Grunsky's testimony as to the life of the pipe—40 years—we find that it would be necessary that there should be an annual contribution to a depreciation fund, for this system, of $22,310.14.

The following payments were in fact received by complainant:

1901	$ 17.25
1902	275.70
1903	928.49

It should, moreover, be borne in mind that these are the only payments received by complainant to cover this account, and include items which we submit are beyond question operating expenses.

Pilarcitos and San Andreas Pipe Lines.

The cost of these lines, according to defendants' table showing the cost of structural works, which was taken from pages 226-228 of exhibit 101, shows an expenditure of $975,384.48. Estimating upon the basis previously explained, we find the necessity for an annual contribution of $16,142.61. The amounts actually received by complainant, according to defendants' own figures, which we shall subsequently examine, were:

	San Andreas	Pilarcitos	Total
1901	$ 49.67	$ 973.96	$1,023.63
1902	8.22	2,953.26	2,961.48
1903	210.41	544.68	755.09

Locks Creek Line.

The cost of this line, on the basis of defendants' table, which shows the cost of structural properties, was	$393,784.66
From this, to ascertain the cost of pipe, we subtract the San Andreas and San Mateo tunnel, generally known as "Pilarcitos tunnel No. 2"	$73,624.01

Stone dam	6,000.00
10% for contingencies	600.00
Tunnel No. 1	76,800.00
10%	7,680.00
Earth dam	7,200.00
10%	720.00
Concrete dam	7,500.00
10%	750.00
Tunnel No. 2	70,600.00
10%	7,060.00
Concrete aqueduct	50,800.00
10%	5,080.00
44-inch pipe	18,900.00
10%	1,890.00
44-inch pipe	2,800.00
10%	280.00

Leaving, when subtracted from the total expenditure for the line $393,784.66
as the cost of flumes $115,000.65

Grunsky estimated the life of a flume at 20 years; the life of permanent structures at 100 years, and the life of pipe 40 years. The figures given above for permanent structures amount to $191,290; for pipe, $23,890; and for flumes, $115,000.65. Reckoning, then, on the above life, we find that the annual contribution to cover depreciation should be as follows:

For permanent structures	$ 612.13
For pipe	395.05
For flumes	4,732.25
Total	$5,739.43

The amounts claimed by defendants in table No. 1 to have been allowed for this depreciation, under the head of "operating expenses", were:

1901	$ 86.12
1902	3,073.61
1903	863.02

Pumping Plants.

It is exceedingly difficult to arrive at a definite annual charge to cover depreciation in pumping plants, upon the basis of the testimony presented in this case. Grunsky, at page 223 of the Municipal Reports of 1900-1901, gives the life of pumping engines at 40 years, and boilers at 20 years. There are parts of engines, such as springs, valves, castings, etc., and of boilers, such as tubes, grates, burners, etc., that have to be replaced oftener than is allowed in the estimates of Grunsky, in order to keep the main parts of the plant intact for the stated periods. There is such great uncertainty as to these minor details, and as to the extent or nature of maintenance and depreciation in this connection, that an itemized estimate to cover depreciation is impossible. This is well illustrated by a charge made in 1903 of $270.00, which is entered on the books simply under the heading "Pumps". This might be repair, a replacement to cover an accident, a depreciation charge, or a permanent improvement. The same holds true as to charges for such items as tube-cleaners, fans, harness repairs, burners, stacks, and many others.

Crystal Springs, San Andreas and Pilarcitos Reservoirs.

For the maintenance and protection of these reservoirs, a large force of men is necessary, particularly in the seasons of the year when forest fires are a possibility. In connection with this work, there are expenses for horses, wagons, tools, blacksmithing, carpenter work, castings, fittings, hardware, paint, pipe, plumbing and repairs, and lumber. These charges, all of which are included in tables Nos. 1 and 2, are so evidently maintenance expenses, in no way connected with a depreciation account, that we do not here discuss the matter further. We do, however, wish to discuss generally the items claimed by defendants to cover depreciation. There is no showing that any of the items enumerated in either of the tables above referred to, claimed by defendants to be chargeable to depreciation, are not in fact expenses incurred in the operation of complainant's plant. It must be remembered that they were so charged upon the books of complainant, and the nature of the expenses indicates a proper understanding of such accounts by complainant. It would be futile to attempt a specific discussion of each of these many charges, but we do wish to show in sufficient detail that the claim of defendants in this regard is supported by neither reason nor authority. Such items as blacksmithing for shoeing horses, electrical fittings, hardware, erection of keepers' houses, paint, asphaltum for patrolmen's launch, plumbing, furniture, whitewash, castings, valves, oil, plaster, etc., are evidently expenses incurred in the ordinary operation of complainant's plant, and can in no sense be taken to con-

stitute a depreciation fund, upon which complainant may depend on the exhaustion of an individual portion of its plant.

Defendants' exhibit 101, prepared by Mr. Wenzelburger, has been carefully examined, and we find that there is no single charge therein which cannot properly be said to be a construction or operating expense. In the absence of some proof, or at least of some indication, showing an error in complainant's method of apportionment, we believe that the fact that the charges were entered as against construction or operation should be taken to be conclusive that they were properly so made. The whole question has been adequately covered and discussed in previous parts of this argument, and in the briefs of the respective parties, and it would be useless to once more cover that ground. We do, however, submit that this exhibit discloses no new reason why the charges on complainant's books should be changed. The fact should not be lost sight of that, upon defendants' own showing, there is no allowance, and has been none in past years, to cover the decay of perishable portions of complainant's plant.

We have accepted, for the purposes of this discussion, defendants' figures as to cost of pipe-lines, and as to the allowances made in the fixing of rates, to cover depreciation, and we find that whereas $22,310 should have been allowed in 1901 to cover the deterioration in the Crystal Springs pipe-line, $17.25 was actually allowed; that where in another instance $16,142 was, according to Grunsky, a proper allowance, $1,023.63 was actually received by the company. Of these charges so received,

practically every cent was to cover regular operating expenses, and no allowance of any character was made with the intention of covering the major items of depreciation, such as the exhaustion of pipe-lines or the ultimate decay of other structural properties. It is a fact, which no manipulations of defendants can remedy, that this complainant has not received, at any time, an allowance for depreciation, and that there was no allowance made by the supervisors in 1903, 1904 or 1905 to cover that item. Whatever provisions have been made to insure the continued life and reliability of complainant's plant, have been made by the stockholders, and if, as claimed by defendants, the plant is now in as good condition, structure for structure, as at its inception, that is due to no allowance made by the city, nor to receipts gained from rate-payers. We could hardly have desired a stronger showing than that with which we are furnished by defendants' table, and upon the subject of depreciation we are willing to leave the case as defendants have made it.

COST OF STRUCTURAL PROPERTIES.

Turning to a consideration of the table entitled "Showing Cost of Structural Properties of Complainant", which gives the figure $14,875,258, we find no error in the charges so far as they apply to the Alameda Creek system, Crystal Springs system, or the Lake Merced drainage system. Under the heading "Locks Creek Aqueduct", the item "San Andreas and San Mateo tunnel, $73,624", should be eliminated and added to the Pilarcitos system. This is Pilarcitos tunnel No. 2.

Pilarcitos System.

To this account should be added tunnel No. 2, as above suggested, also Pilarcitos steam engine, exhibit 101, page 226, $1,520.60. From the San Andreas system, there has been omitted the item "Abbey Flume, $9,233.41", pages 22 and 228 of exhibit 101. This is the Ocean House flume on the Pilarcitos pipe-line, and is still in existence.

City Distributing Reservoirs.

The following reservoirs are entirely omitted from this table:

The College Hill, for which there does not appear any charge in the new construction accounts or in the segregated trial balance of January 1, 1904;

The University Mound, the cost of which was $197,486.30;

Presidio Heights reservoir, as to which the various charges are found, exhibit 99, pages 14 and 96, $3,956.94, pages 13 and 88-91, exhibit 98, $21,549.80, making a total of $25,506.74. No allowance is made in this table for payments made by complainant to San Francisco Water Works for reservoirs bought from that corporation, namely, Lombard street and Francisco street reservoirs;

Also from this table, under the heading of "City Pipe System", have been omitted items of construction in the segregated trial balance of January 1, 1904, parts of which structures are now in use in their original locations, and parts of others of which are in other portions of the city pipe system.

Other omissions are:

Page 227, exhibit 101, Lake Honda reservoir pipe, $74,329.54;

Lake Honda 22-inch main, $64,687.51;

Lake Honda 30-inch main, $88,642.08.

"San Pedro Works, $21,308.55".

We also find that the cost of all pipe acquired from San Francisco City Water Works has been omitted. Defendants estimate the cost of this pipe, using Adams' units, page 138 of their brief, $136,801.66. If these additional construction expenses are considered, the total is over $15,500,000.

In addition to the omissions above noted, there are items included in the segregated trial balance of January 1, 1904, which include charges properly allowable against structures, in addition to those specifically named. They are: salaries, exhibit 101, page 225, $465,462.18; interest during construction, page 225, $301,189.90; contingent expenses, such as surveying, engineering, etc., $414,573.06; construction, general expense, $372,369.58; sundries, such as telegraph lines, street work, sewers, fencing, gates, cement, lumber, grading, engineers' expenses, provisions, etc., $726,-229.06.

If we add these omissions to defendants' table we have as the total primal cost of complainant's structural properties, instead of the $14,875,258 reached by defendants, $17,798,000, which we are willing to accept. This result, it should be remembered, is reached from defendants' own showing and fails to take into account the greater cost of present day construction.