

Statement of the Case.

HAINES *v.* McLAUGHLIN.

ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE
NORTHERN DISTRICT OF CALIFORNIA.

No. 315. Argued May 1, 1890. — Decided May 19, 1890.

The invention covered by the claim in letters patent No. 107,611, granted to James W. Haines on the 20th September, 1870, for an improvement in chutes for delivering timber, covers chutes, whether constructed with lapped joints or abutted joints, and was anticipated by several constructions for similar purposes described in the opinion; and the letters patent therefor are void.

A claim in letters patent cannot be enlarged by construction beyond a fair interpretation of its terms.

Several alleged errors of the court in its rulings and instructions examined and found to contain no error.

THIS was an action at law brought to recover damages for an alleged infringement of letters patent No. 107,611, bearing date September 20, 1870, and granted to James W. Haines for an "improvement in chutes for delivering timber." The specification, claim and drawings are as follows :

"Be it known that I, James W. Haines, of Genoa, in the county of Douglas and State of Nevada, have invented a new and improved chute for delivering timber from high mountains; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

"Figure 1 represents a side view of my improved chute.

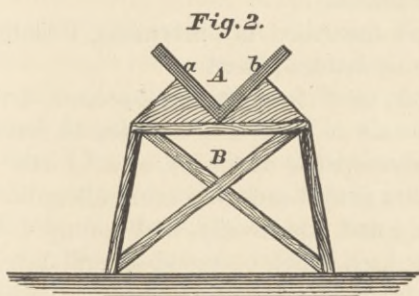
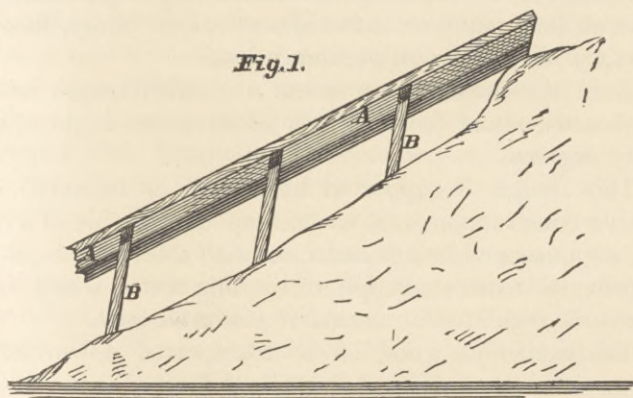
"Figure 2 is an end view of the same.

"Similar letters of reference indicate corresponding parts.

"This invention has for its object to furnish to the public an improved chute for facilitating the transportation of timber of all kinds from the tops or sides of mountains or other elevations, and consists in constructing a chute so as to present

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a V form in cross-section, the same being arranged on an incline corresponding, more or less, to the surface of the ground over which it passes, and brought in connection with a spring, or other water-supply, to receive the water there-



from, and thus form a smooth canal throughout its entire length.

“Heretofore chutes for this purpose have been constructed with flat, or nearly flat, bottoms, which, while sufficiently objectionable as requiring a greater quantity of water to ensure equal rapidity in the transit of the timber, are far more so for another reason, viz., the log or piece of timber, more especially at points where the inclination of the chute is slight, is liable to be checked in its descent by friction

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against the bottom and one side of the chute, and, when thus situated, others may pass it, thus leaving it to be again set in motion by manual assistance, or other logs striking it; the whole may become wedged together, so as to form a total obstruction to the passage of succeeding logs, destroy the chute at that point, or cause other serious injury, inconvenience, and, in any event, pecuniary loss.

"A in the drawing represents a wooden trough made of two boards, *a* and *b*, which are joined at an angle of about ninety degrees.

"This trough is supported by trestles or frames B B, of suitable construction, and is built up on the side of a mountain, its upper end being connected with a brook, lake, stream, or spring, to receive a supply of running water, which may, if desired, be regulated by means of a suitable gate.

"The timber or wood to be transported downwardly is thrown into the trough, and carried down by the water in the same. A very rapid and convenient means of conveying wood is thus provided.

"Having thus described my invention, I claim as new and desire to secure by letters patent —

"The chute A, of V form, in cross-section, arranged on an incline in whole or in part, and adapted to receive a flow of water, for the conveyance of timber, as set forth."

The defendants denied each and every allegation of the complaint separately and specifically, and set up other defences. A jury trial was had, which occupied several days, and resulted in a verdict in favor of the defendants, upon which judgment was entered. A bill of exceptions was taken, and a writ of error sued out from this court.

The plaintiff's evidence tended to show that, in the fall of 1867 and the winter and spring of 1868, he cut a large amount of wood into lengths of four feet each on the eastern slope of the Sierra Nevada, with the design of floating it out of the mountains. These logs were rolled down the sides of the cañon upon which the trees had grown, and plaintiff built a square or rectangular flume, having bottom boards two feet wide and side boards eighteen inches wide. When he turned

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the water into the flume and commenced putting in his wood, he found that the wood would run faster than the water, and that the lighter sticks would run faster than the heavier ones, jamming and choking up the flume. He then spread the upper edges of the side boards of the flume as far out as he could without breaking the nails at the bottom of the boards, and found that that afforded some relief. Then he took inch boards, twelve inches wide, nailed them together at an angle of 90°, so as to make a V chute, and set that in the flume. He lapped each length about three inches, by placing the lower end of one length upon the upper end of the next length below. This worked much better, but there was difficulty on account of the laps when the water was light. He then changed to the butted jointed flume, in which the ends of the different sections abutted against each other, instead of lapping. This was in September, 1868. It is admitted that the patent was applied for August 6, 1870.

The evidence also tended to show that one A. C. Cleveland built a flume a little over a mile in length, with lapped joints, for the transportation of wood, the contract for the construction of which he made on June 22, 1868, and which was completed on the 21st of July, 1868, and used continuously until the early part of August, 1868, when Cleveland disposed of it to other parties. Cleveland described the mode and manner in which it was constructed, of two boards nailed together in V shape and put on trestles wherever necessary, and it was conducted along the mountain a distance of 6700 feet in length. Evidence was also given on behalf of the defendants in respect to what the witnesses called a sluice at Case's tannery, at the town of Mariaville, Hancock County, in the State of Maine, in 1858, and which was still in existence at the time of the commencement of the suit. This sluice was described in substance as follows:

"At Case's tannery there was a mill-dam twelve feet high, measuring from the centre of the stream to the top of the dam. It was the custom to float logs down that stream in the spring of the year from points which lay several miles above Case's tannery to other places below the tannery. In order to pass

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the logs over the mill-dam the said sluice was constructed. The sluice was about four feet across the top, and was built with two inclined sides, the planks of which were butted and the joints broken, which in cross-section stood at an angle of forty-five degrees, and were joined together at the bottom, and thus formed a trough in the form of a right-angled triangle, with the right angle at the bottom. This sluice or flume was some three or four hundred feet long and was four feet across the top. Its upper end was set into the mill-dam, so that the water from the dam would flow into and fill it sufficiently to convey the logs. It was built at a regular incline down the stream, and its lower end was a foot and a half or two feet above the water in a stream below the dam. The sluice or flume was built upon and sustained by suitable framework. The dam set the water back above it from a half to three-quarters of a mile. When the logs reached the lower end of the mill-pond each one as it floated was steered by the use of poles to the upper end of the sluice, through which it was carried by floating upon the water which ran through the sluice. A million feet of logs (lumber measurement) could be run through the sluice in a day, and two or three million feet were usually so run through the sluice each year. The sluice or flume was built on a regular incline. The water ran swiftly through it at a depth of about three feet, varying from day to day according to the supply in the dam."

Eight different witnesses testified to the existence of the said Mariaville sluice, and each one of these witnesses said that he had never seen a V chute for carrying wood or lumber down a mountain side, such as described in the plaintiff's patent. One of them, however, testified that he saw one of these chutes used in transporting lumber down the mountain side over uneven grades in California in 1873. Close, who constructed this sluice in Maine, was called as a witness, and produced a diagram, which he thus described :

"My exhibit represents a cross-section of my sluice or flume, except as to stringers A A, which are not shown in cross-section. The flume itself, shown by the planking P P, is composed of plank on the inside of a frame and set at a con-

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venient angle of about forty-five degrees, and is supported on horses, one of which is shown in the part marked D D. The feet of the horses rest on cross-sills, one of which is shown in the parts marked B. From each end of the cross-sill B a brace C extends to the upper ends of horse D and the whole structure rests upon stringers A A. The planking is pinned or nailed to the inside of the frame. The stringers extend underneath the whole length of the flume, which can be extended to any desired length. The horse frames D D can be set at any desired distance apart, say from four to five feet, their only purpose being to support the planking P. This device gives a flume of V form in cross-section. The diamond piece V was placed in the throat of the horses D D for the purpose of saving water, and rested on the top of the planking. Piers were built over falls and gulches and over land, as the conformation of the ground required, and by the use of trestle work or posts. In one case that I know of such a sluice has been built on tops of trees, cut twenty feet from the ground. My flume was built on an incline to give a current or draft of water, and was used for the conveyance of logs or other lumber by means of the flow of the water. The way I happened to build this sluice was a case of necessity, as I will describe. The Messrs. Case, who owned the tannery at the place where I built the sluice at Mariaville, had a long race-way or penstock some three hundred feet in length on one side and in the bed of the stream below the dam for the purpose of carrying water from the dam to the flume in the tannery, and they called on me to come and help them out of their trouble. They said the log-driver wanted to cut a hole in their dam twelve feet by twelve feet and build a gate, and if that was done they said it would ruin them, as they had thirty thousand hides in their vats, which would spoil for the reason that the log-drivers would draw all the water from their pond and they could not run their hide nor the bark mills, as they had a limited supply of water to supply a gate of twelve feet by twelve. I made a contract with them to build a sluice to sluice by their tannery all the logs that were above their tannery or that ever would be, and in my contract I was not to lower

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their pond one inch. I built the sluice, as I have already described, and it was a perfect success, and people came from distances to see this new and improved sluice. A part of this sluice is now in existence, which can be seen by any one who desires to see it.

"The length of this sluice or flume was some three hundred feet. The first logs that were put through the sluice were by me, and four men of us put through six hundred and forty logs in thirty-five minutes, and this was in April, 1858, and, as I have said before, millions of feet of logs have been put through it since that time.

"The side boards were of plank two and a half inches thick, fourteen inches wide, and three plank on a side. There was room on the horses to have planked up two or three plank higher if desirable, but it never was called for, it being about impossible for a log to get out over the sluice or flume."

The defendants read in evidence from a work called "Babbage on Economy of Machinery and Manufactures," which was published in London in 1841, a description of the slide at Alpnach in Switzerland, of which the following is a copy:

"The slide of Alpnach is formed entirely of about 25,000 large pine trees, deprived of their bark, and united together in a very ingenious manner without the aid of iron. It occupied about 160 workmen during eighteen months, and cost nearly 100,000 francs or £4250. It is about three leagues or 44,000 English feet long, and terminates in the lake of Lucerne. It has the form of a trough, about six feet broad and from three to six feet deep. Its bottom is formed of three trees, the middle one of which has a groove cut out in the direction of its length for receiving small rills of water, which are conducted into it from various places for the purpose of diminishing the friction. The whole of the slide is sustained by 2000 supports, and in many places it is attached in a very ingenious manner to the rugged precipices of granite.

"The direction of the slide is sometimes straight and sometimes zigzag, with an inclination of from 10° to 18°. It is often carried along the sides of hills and the flanks of precipitous rocks, and sometimes passes over their summits. Occa-

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sionally it goes under ground, and at other times it is conducted over the deep gorges by scaffolding 120 feet in height."

The bill of exceptions states :

"The plaintiff's counsel, during the trial, constantly claimed that the plaintiff's invention was not a mere flume in V form nor a mere chute in V form, but he claimed that it was a combination of both, and he also claimed that the patentee was entitled to his patent because he had discovered that a chute made in V form in cross-section and built down a mountain's side of varying grades, so that its operation partook of the nature of both a flume and a chute, would do work which no other form of flume or chute would do. He also claimed that, because the plaintiff kept on improving such combined flume and chute until he found out by actual experiment and use that such combined flume and chute, when made without laps so as to form a smooth canal throughout its entire length, would do several times as much work as it would when it was made in any of the methods which had been used in constructing it prior to the month of September, 1868; that the invention was not to be considered, in law or fact, as a completed invention until it was so constructed; that it formed a smooth canal throughout its entire length, as mentioned in the specifications of the patent. All the way through the trial the plaintiff's counsel claimed that a 'flume' and a 'chute' were two different things. Plaintiff's counsel frequently, during the trial, spoke of plaintiff's said alleged invention as a 'flume.'"

Mr. M. A. Wheaton and *Mr. William M. Stewart* for plaintiff in error.

Mr. Z. Montgomery for defendant in error. The court declined to hear argument for defendant in error.

MR. CHIEF JUSTICE FULLER delivered the opinion of the court.

Nine exceptions were taken in the progress of the trial, and error is assigned in the giving of each one of the instructions which are shown in the first, second, third, fourth, fifth, sixth, seventh and eighth exceptions, and also in the refusal of the

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court to give an instruction asked for by the plaintiff, as shown in the ninth exception. The first exception related to an observation by the court to the jury that counsel upon both sides had used the terms "flume" and "chute" synonymously, that the words of the patent were "an improved chute," but that in discussing it, the terms had been used as of the same signification. The bill of exceptions states that it was the fact that the plaintiff's counsel had frequently during the trial spoken of the alleged invention as a "flume." This is not only so stated as a conclusion from the evidence, but we find quite a number of questions put by plaintiff's counsel, which make use of the word "flume" in that way, as for instance: "What part of the flume does timber go fastest?" "As the chute is steepest the timber goes faster?" "How was the body of water in the lapped flume or chute, which you commenced using in 1868, as to quantity?" "To what extent has the V chute or flume gone into use, made as you made it, since 1868? since you made this in 1868?" "Do you recollect what time Mr. White finished that chute?" "What difficulties, if any, did you encounter in using that flume after Mr. White left it?" The remark of the court was fully justified and could not have affected plaintiff injuriously, as his claim was that his invention was a combination of a "flume" and a "chute," and the distinction contended for as existing between them was insisted on in that connection and made entirely clear throughout the case. And in the fifth instruction asked for by the plaintiff and given by the court, reference is made to Haines' patent as "a combination of flume and chute," although the patent does not cover any such combination.

The second exception was to the charge of the court in relation to the Alpnach flume or slide, to the effect, at first, that if the jury believed, from the evidence, that that slide substantially accomplished the object and purpose of the patented article, and that a party skilled in the business, reading that description, could easily and readily build a flume such as was patented here, then the description and publication would constitute a defence. But this part of the charge was withdrawn upon the defendants' counsel disclaiming the

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slide as a complete anticipation, and the court then said: "It is not claimed by the defendant that this Alpnach slide, an account of which has been read to you, over in Switzerland, is a complete anticipation. It is only submitted to you as a possible suggestion of the idea of bringing timber down from the mountain sides." This disposes of this exception.

In the course of the charge, the court went over the facts in relation to the Cleveland flume, stating, among other things, that it was successfully operated until the 15th of August, 1868, and performed its functions and ends satisfactorily. Plaintiff's counsel specifically objected to the statement that the flume worked successfully, and a colloquy ensued as to what constituted successful operation, and the judge told the jury that that was the way he understood the testimony, as applicable to the issues, but said that he left the matter wholly to them to determine. In this, as the question arose, there was no error. *Transportation Line v. Hope*, 95 U. S. 297. Counsel for plaintiff objected to this part of the charge, also, upon grounds treated of under subsequent exceptions. The extract is quite long, and it is unnecessary to give it in full. It concluded as follows: "If, under all the evidence in the case, then, you believe that this flume built by Cleveland was in all its substantial elements the same as that afterwards patented by the plaintiff in this case, then your verdict must be for the defendants, because it is a conceded fact that that was a public use, or whether conceded or not, it was a public use, and it was in use more than two years before the plaintiff applied for his patent." This is the third exception, and may be considered with the fourth, fifth, sixth, seventh and eighth exceptions to the following portions of the charge:

4. "You have heard a good deal in this case, gentlemen, in regard to this matter of abutted joints or lapped joints. Now, I say to you, you may dismiss that particular quality of this flume from your consideration. There is nothing in the patent covering this matter of joining sections of the flume, and a party would be liable for infringement, I apprehend, if liable at all, who should use this flume with a lapped joint as well as if he used it with an abutted joint. As a matter of fact, the

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evidence in this case, I believe, without contradiction, shows this in the Mariaville flume, made at Maine, a model of which is before you. The joints there were what mechanics call 'broken;' the boards ran over from one section half way over on the other, and were abutted.

"That would undoubtedly give strength to the flume, and where heavy materials were run through would probably be an advantage.

"On the other hand, where no very great strength is required, the ordinary abutted flume, as made by the plaintiff in this case, might have an advantage, and that perhaps for cheapness, and where other conditions obtained where it could be used, perhaps a lapped flume would cover all the requirements needed and be cheaper than either one of the others; but as a matter of law you may dismiss the whole matter of joints from your consideration one way or the other, because specifically it is not covered by the patent."

5 "If a wooden trough of 'V' form in cross-section, arranged on an incline, in whole or in part, and adapted to receive a flow of water for the conveyance of logs or timber or wood when thrown into said trough, and to transport the same downwardly along said trough by means of water flowing therein, was an old device at the time of plaintiff's alleged invention, the mere fact, if such be the fact, that plaintiff first applied this old device to the transportation of logs or timber or wood down the side of the mountain or of such a cañon or of an elevation, was no invention, and under such a state of facts, if you find them to exist, your verdict should be for defendants."

6. "The invention which is covered by the claim of plaintiff's patent is a chute of V form in cross-section, arranged on an incline, in whole or in part, and adapted to receive a flow of water for the conveyance of timber thrown into said trough and carried down by the water in the same. According to this description, the character of the incline is not stated, and therefore is not material, except that it should be steep enough to give the water strength of flow sufficient to transport the timber thrown into the trough."

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7. "If the Cleveland chute was a chute of V form in cross-section, with its series of planks lapped at their ends, arranged on an incline in whole or in part and adapted to receive a flow of water for the conveyance of timber thrown into said chute and carried down by means of water in the same, and was finished on the 22d day of July, 1868, and was publicly and successfully used by Cleveland for the transportation of wood or timber in the manner aforesaid between the 22d day of July, 1868, and the 5th of August, 1868, then this was a public use of plaintiff's invention in the United States for more than two years before plaintiff's application for a patent, and constituted a constructive abandonment of plaintiff's invention, and under these facts, if you find them to exist, your verdict should be for defendants."

8. "If you believe that the wooden flume testified to by several of defendants' witnesses as having been constructed at Mariaville, Maine, was constructed and operated at that place in the year 1858 and thereafter, and was of 'V' form in cross-section, and was arranged from the top of a dam to a point 300 feet beyond said dam, and was adapted to receive a flow of water for the transportation of logs from the upper to the lower end of said flume and along the whole length thereof, and was set upon an incline steep enough to give the water in said flume strength of flow sufficient to swiftly transport the logs placed in the head of said flume to the lower end thereof and along the whole length thereof, and that this flume was successfully operated and many thousands of logs transported through it in the year 1858 and thereafter, previous to 1868, by means of a flow of water through said flume, then I instruct you that this was an anticipation of the invention claimed in plaintiff's patent, and that your verdict should be for the defendants."

The argument of plaintiff's counsel is that the lapped flume did not include Haines' completed invention; that it was one of Haines' experiments, which Cleveland saw and copied, but this could not affect Haines' right to go on and complete his invention by making further experiments and discoveries producing further new and useful results; that until it was a

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completed invention the time had not arrived at which it was his duty to apply for a patent; and, therefore, that he forfeited nothing by delay.

Various instructions guarding this point were given by the court, and among them these:

"7. If an inventor applies for his patent within two years from the time that he first exhibits his completed invention in public no amount of public use within that two years either by the inventor or others will work any forfeiture of his right to a patent or constitute any evidence of abandonment."

"16. The jury will not consider any former flume or chute to be an anticipation unless they believe such former flume or chute developed the same mode of operation as the flume described in the plaintiff's patent."

Of course, if the patent for the completed chute described nothing which could be recognized as a patentable improvement differing from the prior lapped chute, then the objection has no basis to rest on.

The evidence leaves no doubt that the lapped chute was in public use with Haines' consent or allowance more than two years prior to the application for the patent.

Counsel further insists that the flumes referred to in the fifth and sixth exceptions did not include the plaintiff's invention and were not covered by his patent, and that whether this was so, and whether the "smooth canal" of the patent could be anticipated by the lapped chute, were questions of fact which the court should have left to the jury to decide.

A claim admitted by the Patent Office and acquiesced in by the patentee should not be enlarged by construction beyond the fair interpretation of its terms, and this patent says nothing about how the joints are constructed, nor whether the chute contained any joints at all or not; and this is admitted in the brief of the plaintiff's counsel.

The specification says: "This invention has for its object to furnish to the public an improved chute for facilitating the transportation of timber of all kinds from the tops or sides of mountains or other elevations, and consists in constructing a chute so as to present a V form in cross-section, the same

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being arranged on an incline corresponding, more or less, to the surface of the ground over which it passes, and brought in connection with a spring or other water supply, to receive the water therefrom, and thus form a smooth canal throughout its entire length." This smooth canal is the result obtained by constructing the chute according to the description, and it covers lapped joints just as much as it does abutted joints. The Mariaville sluice was constructed on the same plan as the Haines' chute, and both were rectangular flumes. Haines himself testifies that his V chute was "a rectangular flume at an angle of 90°." It was intended to facilitate the transportation of timber of all kinds from other elevations as well as mountains, and was necessarily arranged on an incline adapted to the surface over which it passed; and the character of the incline was not stated.

The parts of the charge presented by exceptions five or six were correct, and, as to the other instructions, they described the working of the Haines flume as represented in the patent and in Haines' testimony, and by them the court charged the jury that if they believed from the evidence that the Cleveland and Mariaville chutes, or flumes, or sluices were constructed and successfully operated on the plan and in the manner described by the court, which was the plan and manner in which the Haines chute was operated, then this was an anticipation of the invention claimed by Haines. There was no error in this, for such was the conclusion of law, if the jury found the facts from the evidence to be as stated; and it is to be noted in this connection that the court in conclusion instructed the jury as follows:

"All questions of fact are exclusively for the jury to decide. The court does not decide nor instruct you as to whether the Mariaville sluice or any other sluice or flume or chute was or was not an anticipation of the plaintiff's patent. The question of anticipation is purely a question of fact, and is exclusively for the jury to determine."

The ninth exception was taken to the refusal of the court to give the following instruction: "The patent in this case is not merely for a V-shaped trough or sluice. Neither does it

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cover a flume with a flat bottom and flaring sides. Neither does it cover a V-shaped flume or sluice so constructed on an even or nearly even grade, that it will carry throughout its length a full volume of water sufficient to float freely the wood or other material that is transported through it. None of these things would constitute any anticipation of the patented invention." This instruction was open to serious objection. It was not contended that either the Cleveland flume or the Mariaville sluice had a flat bottom, nor did the description of the patent require the chute to be so constructed as to have a given amount of fall. It is not error to refuse to instruct as to an abstract question, and instructions should never be given upon hypothetical statements of fact, of which there is no evidence. The charge of the court was as favorable to the plaintiff as he had any right to demand, and to have given the foregoing would have tended to confuse and mislead. It was properly refused. In fact, it appears to us that the evidence of anticipation was so conclusive, that, as contended by counsel for defendants in error, the Circuit Court would have been warranted in directing the jury to find for the defendants, inasmuch as, if there had been a verdict against them, the court would have been compelled to set it aside.

The judgment is affirmed.