a patent as aforesaid, except on proof of abandonment of such invention to the public, or that such purchase, sale, or prior use has been for more than two years prior to such application for a patent."

Such being the law and the fact, it can require no comment to show that the appellant is barred of his right, whatever it was, to a patent in this case.

I think, therefore, that the Commissioner was correct in his decision, and that the same ought to be affirmed.

John F. Clark, for the appellant.

JOHN B. CORNELL, APPELLANT,

vs.

THADDEUS HYATT, APPELLEE. INTERFERENCE.

POSITIVE AND NEGATIVE TESTIMONY—RELATIVE WEIGHT.—The rule of law is, that if one witness swears positively that he saw or heard a fact, and another merely swears that he was present, but did not see or hear it, and the witnesses are equally faithworthy, the general principle would, in ordinary cases, create a preponderance in favor of the affirmative.

SM—MUST BE RECONCILABLE.—This rule, however, is to be understood with this explanation: That the principle supposes that the positive testimony can be reconciled with the negative without violence and constraint.

SM—SUPERIORITY OF NEGATIVE TESTIMONY WHEN IRRECONCILABLE.—Evidence of a negative nature may, under particular circumstances, not only be equal, but superior, to positive evidence. This must always depend upon the question whether, under the particular circumstances, the negative testimony can be attributed to inattention, error, or defective memory.

SM—WEIGHT OF TESTIMONY—FAIRNESS OF WITNESS.—The negative testimony of a single witness, who is in a position to know the fact, may outweigh the positive testimony of two witnesses, particularly where they are shown by their answers to be unfair in their testimony.

REFUSAL TO ANSWER ON CROSS-EXAMINATION.—A witness, on cross-examination, is bound to answer all material and proper questions; and his refusal to do so, or the giving of an evasive answer, shows a want of fairness on his part that must be considered as affecting the credit to be given to his testimony.

(Before MORSELL, J., District of Columbia, February, 1856.)

STATEMENT OF THE CASE.

The invention in controversy related to illuminating vault covers, in which panels of glass are set in a metallic framing; and it consisted in so securing the panes or panels of glass as to bring their upper faces flush with or a little above the upper faces of the bars of the metallic frame, and forming grooves or gutters in these bars around the glass, so that the water and dirt deposited on the glass might easily flow off. The patent issued to John B. Cornell, No. 14,281, February 10th, 1856. (See Patent Office Reports, 1856, vol. 3, p. 284, for diagram.)

MORSELL, J.

The Commissioner states in his decision that Cornell does not attempt to carry back the date of his invention to an earlier period than February, 1855; that Hyatt attempts to fix the date of his invention in September, 1854, and the Commissioner thinks he has sufficiently established that proposition; that he shows that he had at that time made a drawing of his invention and given directions to his foreman to have a pattern made, and that the pattern was made accordingly; that as to the objection that no complete tile was made for Hyatt previous to those which were completed for Cornell, that is not material. The pattern for his tile was composed of hexagonal pieces all made alike, and intended to be put together, as occasion should require, so as to make a larger or smaller tile at pleasure. The parts were invented and the manner of putting them together. That was the whole of the invention.

The Commissioner says: "An argument is also attempted, to the effect that Hyatt did not contemplate placing the glass flush with the iron framework. The proof is that the first pattern made was condemned, because the glass would have been below the level of the frame. It is true the witness states that he does not think that Hyatt, in giving directions for the making of the model, spoke particularly in regard to the glass being set level with the iron frame. This is not material. He had given general directions to his foreman; the foreman had caused the model to be constructed, and it was constructed in this manner. As between the foreman and his employer, no question is raised.

The invention was made by the one or the other of these persons, and made prior to the date of Cornell's invention." That, he says, is sufficient in this case. And priority was awarded to the said Hyatt, in accordance with the views above expressed. The decision was dated May 31st, 1855.

From this decision Mr. Cornell hath appealed, and assigned as his reason of appeal, in substance, that the decision is against the evidence in the cause. No question in this case was raised as to the patentability of the invention. It is alleged on the side of the appellee that they are the same in substance, both that of the appellant and of the appellee.

Cornell claims as his invention "the flat-faced panes of glass, secured in positions that bring their exposed surfaces flush or a little above the upper faces of the bars of the metallic frame, where the said bars have grooves between their said upper faces, which form gutters around the panes of glass for the purposes as set forth in the specification." There is no proof to show that his invention was discovered earlier than 1855 (February). The appellee claims to have made his in September, 1854. His application for a patent appears to have been filed on the 29th of March, 1855, and that of Cornell's on the 9th of March in the same year.

Cornell having offered *prima-facie* proof of his being the original inventor of said improvement, which it is admitted is patentable, the question must be decided from the weight of the evidence whether his proof has been satisfactorily rebutted by proving that Hyatt was the original inventor of substantially the same improvement in the year 1854, or prior to the period proved by Cornell. In order to show from the proof the specific essential differences between that shown by Hyatt and the one by Cornell, it is contended that Hyatt has invariably made his illuminating vault covers with the glasses set below the upper surface of the frame; or if the frames of glass have been flush with the upper surface of the frame, they have not been surrounded by grooves. On the other hand, that Cornell's invention consists in placing the glass flush with the upper surface of the frame at the same time that grooves lower than the level of the glass are made to surround each pane of glass; that supposing the surface of the glasses were placed lower than the upper edge of the frame which receives

them, the water and dirt would accumulate upon the face of the glasses, and the grooves or channels outside of them would do no good in the way of preventing the accumulation of dirt or water upon the surface of the glasses, or in preventing the standing water from destroying the joints between the glasses and the iron frame, and thereby producing leakage.

On the other side it is insisted that the direction is proven to have been given by Hyatt in 1854 to his foreman, James E. Cornell, for making a pattern of grooved tiles, with a drawing of it, and with the explanation given to him that the object was to have the upper surface of the glass on a level with the surface of the iron around it, and with grooves around to catch the dirt and conduct the water; that the pattern was a single piece to make castings from for making gratings of any size, which pattern was made by Corey; that the first being defective, because the ring of iron would extend above the surface of the glass, instead of being on the same level, another was made about the same time, and castings made from it by Davis, and delivered on the 5th of October, 1854. With the corroboration of the pattern-maker, with his explanations and identification of the exhibit, all this ought to be considered as establishing beyond doubt that Mr. Hyatt is the original and first inventor of the improvement at issue; and that as to the negative testimony on the part of the appellant, it can have no possible weight.

It will be perceived that in order to do justice to the parties in this case a critical review of the testimony must be taken, and it is thought it will be better to give, without gloss, a simple condensed view of it.

James E. Cornell, the first witness on the part of Hyatt, says he was Hyatt's foreman; that in the year 1854 (September) Hyatt gave him directions for making a pattern for making grooved tiles; that he gave him a drawing directing him to have a pattern turned to have castings from, so that when they were set in a wood pattern they would form grooved or water courses, to be again cast from, and that the tile could be set level and still have an inclination in the gutters; that he stated to him at the time that that was the object in getting it up, and another object that it would be less trouble to make the patterns, as they could be made of any size by imposing them like type. He was

asked how Hyatt proposed to make tiles of different sizes by means of those castings. He answered: "By taking a piece of wood and boring the holes out the size of the castings, and then by setting the castings in, so that the glass would be protected by a ring of iron, and the other part would go in to form a groove between the glasses; also by setting them on a level surface and casting them together without setting them in the wood." As to the position of the glasses with reference to the iron frame, "they are level with the surface of the ring of iron; as to the design, they would present a handsomer tile." He was asked, on cross-examination, whether any of the tiles he speaks of had been made for use. He answered: "There has never been any of them laid or sold." He testifies that the casting *A* was made from the first pattern that was made right and used; that the reason why the first pattern was not used was because the iron ring was above the glass. He was again asked, on the cross-examination, whether the first pattern was made in accordance with Mr. Hyatt's directions. He answered: "I do not think he spoke in regard to the glass being set level." In answer to question of appellant, he said: "Mr. Hyatt generally has his glass set level—glass of that size or larger—that is, flush up with the iron."

Mr. Hyatt's next witness was Cory, the turner. He was asked if any person on behalf of Hyatt applied to him to make a pattern similar to Exhibit "A." To which he answered: "Yes; I was applied to by James E. Cornell." He came to him with a small drawing, and stated that Hyatt wished him to turn a pattern similar to that. Upon which he asked him what it was for. He does not remember what he replied, but he did not give him any satisfaction what it was for. He turned it, however, according to the drawing, and Cornell came and got it after it was done. Cornell afterwards brought it back, and said it was not exactly as Mr. Hyatt wanted it. Witness then said: "If you had told me what it was for, I should have known better how to do it." Witness is under the impression that he made another one; thinks the first conversation was in the month of September, 1854, and that the alteration was made immediately, within an hour. In answer to the question why it did not suit, he says he thinks it was too deep; he thinks it was in the same form as Exhibit "A." Exhibit "B" was shown to him; he thinks that was the pattern;

that the kind of glass which they make use of for this purpose was generally made flush with the tile. In answer to the question whether anything was said at that time about channels between the glass, he answers: "Yes; about the time he made that pattern, and previous to that time, Hyatt had used the glass flush with the top of the tile." Thinks, also, he had formed channels between the glass. He thinks they were lower than the face of the glass. Of course the iron around it protected it. This witness declines to answer a question put to him on his cross-examination which it appears to me was a legitimate question, and which ought to have been answered. He is asked to refer to some tile in use where the channels are lower than the face of the glass. Says he does not know that he can. To the question why tiles having grooves lower than the face of the glass have not been introduced into use by Mr. Hyatt, he answers: "At the time this thing was got up we were very busy."

To oppose the effect of the aforegoing testimony, the appellant examined Ingalls, a witness who had been Hyatt's superintendent for three years prior to the middle of April, 1855. He says that he was in the employ of Hyatt (as just stated) something over three years as his superintendent, in which employ he continued until the middle of April, 1855. He is requested to state whether he was familiar with Mr. Hyatt's views as to the best location of the glasses in illuminating vault covers during the time that he was in the employ of Hyatt; and if so, to state what they were. He answers: "I know the glasses were generally put below the level of the iron surface. It was a general direction of Hyatt to keep the edge surface—exterior surface—below the surface of the iron. The surface was usually convex; so that, while the edge would be below the iron, the middle might be flush or even above."

He is desired to state whether grooves or water-channels were placed in the illuminating covers to carry the water from the glass; to which he answers: "I have never seen a vault-light of his [Hyatt's] where a series of glasses were arranged in that manner."

He is asked if he frequently heard Mr. Hyatt speak of the pattern which he termed the type pattern. Answer: "I have heard him speak of it, but don't know that I could say fre-

quently." Question: "Can you state how the glass was to be placed in that pattern?" Answer: "I never heard any contemplated exception to the general rule, as I have stated, as to keeping the edges of the glass below the surface of the iron." Question: "Did Mr. Hyatt ever state to you that he intended to have his type patterns arranged in a cover in such a manner as to form channels or grooves for preventing the water and mud from standing on the face of the glass?" Answer: "I have no recollection of his having done so." Question: "Were you in Mr. Hyatt's employ at the time the vault covers Nos. 17 and 19 Maiden Lane were constructed and put down?" Answer: "I was." Question: "State whether patterns were got up for those covers." Answer: "I think there were." Question: "State the relative position of the glass and the position and arrangement of the grooves, if any, in said covers." Answer: "The glass was depressed below the surface of the iron, and there were no grooves between the glasses."

The testimony of this last witness, if not outweighed by that of the preceding witnesses, must be allowed, I think, to prove that the invention, according to the pattern and directions gotten up in September, 1854, by Mr. Hyatt, was an essentially different thing from that claimed by the appellant. With respect to the glass and its position, the glass was convex, not flat, thick glass; and although as to its position the middle part might be flush or even somewhat above, the edges were below the surface of the iron, and the grooves or channels to carry off the water and mud were above, instead of being below, the edges of the glass. The general rule of keeping the edges of the glass depressed or below the surface of the iron was directed by Hyatt, and pursued in all instances.

The objection to the efficient weight of this testimony is that it is negative evidence, "and that it can have no possible weight." The rule of law on the subject certainly is, that if one witness were positively to swear that he saw or heard a fact, and another were merely to swear that he was present but did not see or hear it, and the witnesses were equally faithworthy, the general principle would in ordinary cases create a preponderance in favor of the affirmative. But this rule is to be understood as consistent with this explanation: That the principle supposes that the positive

can be reconciled with the negative without violence and constraint. Evidence of a negative nature may, under particular circumstances, not only be equal, but superior, to positive evidence. This must always depend upon the question whether, under the particular circumstances, the negative testimony can be attributed to inattention, error, or defect of memory. Supposing, then, the testimony just alluded to cannot be reconciled without violence and constraint, according to the rule, there is yet another difficulty to be overcome, and that is, that there are two witnesses on the one part to the facts and but one on the other; to decide which outweigh, the circumstances connected therewith must be considered. The witness Joshua K. Ingalls was the superintendent of Mr. Hyatt in the business of making illuminating vault covers for three years, and up to the middle of April, 1855, covering the period of time when Mr. Hyatt claims to have discovered his invention. In that situation, possessing (as it must be supposed) most of the confidence of his employer, and it being a matter directly connected with his duty, (which from its nature it is to be presumed required him to be a person of more intelligence than the other workmen in the shop,) if any improved invention of the manufacture had been discovered by Hyatt, is it not probable that he would have known it as well as the foreman, Cornell? There appears to be nothing in the course of his examination to impeach his entire fairness. The time within which the fact must have taken place, if at all, had been but very recent; so that inattention, error, or defect of memory cannot reasonably be attributed to his testimony.

With respect to the testimony of the other witnesses, if there was an improvement as claimed, the evidence is certainly very vague and wanting in precision.

It does not appear that the directions to the witness Cornell were marked with anything special or peculiar, nor could the drawing indicate any such. Corey, the turner, says that although he asked Cornell what it was for, he gave him no satisfactory information, and he made the first pattern according to what he understood the drawing to indicate; that is, according to the old contrivance. It is true it was objected to by Hyatt as being too deep, and was carried back by Cornell to be altered; still there is

no such information stated as to show the special peculiar purpose. The witness Cornell says: "I do not think Hyatt spoke in regard to the glass being set level." I must not overlook the evasive answers of this witness as to the question, have any of the tiles you speak of ever been made for use. His answer is: "There has never any of them been laid or sold." And so with respect to the witness Corey, who refused to answer a question on cross-examination which I think was material and proper, and which I think he was bound to do. This want of fairness on the part of the witnesses must be considered as affecting the credit of their testimony.

In conclusion, what did Mr. Hyatt himself think of it? On the 3d of April last was he not then of the opinion that the upper surface of the glass must be below the metallic frame? In his specification on which his patent was reissued for his original vault cover, (reissue patent No. 303, April 4th, 1855,) in speaking of vault covers that had been constructed prior to his invention, he makes use of the following language: "The great thickness of such glass obstructed the light, which evil was increased by the scratching of the entire surface necessarily exposed; but, notwithstanding the greatest practical thickness of glass adopted, they were still much exposed to breakage and its consequences." Again, although it is shown from the proof in the case that the improvement could be constructed fifty per cent. cheaper, with its other great and efficacious advantages, he has never used or laid one or made any for sale. The inference is that he never invented it.

Upon the whole, my conclusion is, and I do so determine, that there is no sufficient proof in the case to show any substantial interference, and that there is error in the decision of the Commissioner, and that it ought to be reversed, and it is accordingly hereby reversed.

Z. C. Robbins, for the appellant.

Chas. M. Keller, for the appellee.