FORGIE v. OIL-WELL SUPPLY CO., Limited.

(Circuit Court of Appeals, Third Circuit. November 21, 1893.)

No. 24.

1. PATENTS—WHO ENTITLED—INVENTION—WRENCH FOR OIL-WELL TOOLS.
Plaintiff, being interested in oil-well machinery, applied to an inventor and manufacturer of a patented lifting jack for information respecting the application of the principles of the jack to a wrench for oil-well tools. As the result, a modified jack was made by such inventor, stamped as patented by him, and introduced and sold by plaintiff, who thereafter surreptitiously obtained a patent on specifications embodying exactly the principles of the mechanism of the jack manufactured. During the sales by plaintiff, he effaced the patent stamp from the tools, and substituted his own, but on protest desisted, and agreed not to again offend. *Held*, that plaintiff was not the original inventor.

2. SAME.
Patent No. 422,879, granted March 4, 1890, to William Forgie, for a wrench for oil-well tools, is void, because the improvement covered by it is not the invention of the patentee.

Appeal from the Circuit Court of the United States for the Western District of Pennsylvania.

In Equity. Suit by William Forgie against the Oil-Well Supply Company, Limited, for infringement of a patent. Decree dismissing bill. 57 Fed. Rep. 742. Plaintiff appeals. Affirmed.

William L. Pierce, (Joseph R. Edson, on the brief,) for appellant.
James I. Kay, (Robert D. Totten, on the brief,) for appellee.

Before DALLAS, Circuit Judge, and BUTLER and GREEN, District Judges.

GREEN, District Judge. The bill of complaint in this case was filed to restrain the appellee, the defendant below, from infringing certain letters patent numbered 422,879, granted to the appellant on the 4th day of March, 1890, for certain new and useful improvements in wrenches for oil-well tools. In the specification of the letters patent, it was stated that the invention related to an automatic wrench for coupling and uncoupling the sections of a drill rod for a well boring or drilling apparatus. The coupling for which the invention was especially adapted for use consisted of a tapering or conical screw, the sockets of which were fitted tightly and securely together.

The drilling of oil wells, especially in the state of Pennsylvania, has become an art, well defined, and perhaps unique. Originally, oil wells were drilled only two or three hundred feet deep; but, since the flow of oil has lessened from these comparatively shallow reservoirs, wells are now more commonly sunk to a much greater depth,—in not a few instances, to the depth of three thousand feet; and, as the depth has increased, so has it been found necessary to increase the diameter of the well. The earlier wells were not more than 4 inches in diameter. Now, they are scarcely less than 12 to 16 or 18 inches. It followed, of course, that in the drilling of these larger and deeper wells the tools commonly used would nec-

essarily have to be much increased in size, successfully to perform the excavation. The apparatus used in drilling these wells is composed of what may be termed a string of tools, or heavy iron or steel rods, having a sharpened end, operated by steam power. This string of tools is lifted to a sufficient height, by the action of the steam, directly over the excavation. When at its maximum height, it is dropped suddenly into the well, and the drilling is accomplished by the repeated pounding of the tools upon the bottom of the excavation. A string of tools weighs generally from two to three thousand pounds, and it is readily seen, with the momentum acquired in their fall, its operation is simply tremendous. Now, usually, the larger part of the excavation is drilled through solid rock, and hence the concussion of the tools with the rock not only rapidly dulls the lower or sharpened tool in the string, but, as well, causes dust to arise, which, entering the joints, makes it almost impossible to unscrew them. The lower part of the string of tools is technically called the "bit," and this is fastened by a screw joint to the tool next above it. At very short intervals, it becomes necessary, from the dulling effect of the concussion upon the bit, to draw the tools from the well, and remove the lower section, for the purpose of sharpening. This was always an exceedingly difficult operation. As stated, not only did the concussion dull the end of the bit, and cause dust and little particles of rock to fill the threads of the screw by which it was attached to the next tool above it, but, as well, the threads of the screw subjected to so great a blow would be battered and distorted by the concussion with the solid rock. The manner in which, in the earlier days of oil wells, the bit was originally unscrewed from the tool immediately above it was this: An arc-shaped track, about half an inch thick, called in the evidence a "circle plate," was secured to the floor of the derrick, and connected with the well. In the plate, two parallel lines of holes were made, nearly from end to end. At one end of this circle plate was rigidly secured a stout post, against which rested the end of a stationary wrench bar. The other end of this wrench bar was hook-shaped, to grasp the lower section of the drill rod. This was really, in effect, only a powerful hand, to hold stationary the lower section while the upper section was rotated. The upper section of the drill rod was gripped by the end of a similar wrench bar, called the "moving wrench bar." The other end of this wrench bar projected out over the circle plate. A pinch bar, or, practically, a crowbar, with the end slightly bent, and of suitable size at the lower end to enter the holes in the circle plate, was thrust in one of the holes. Two men, facing each other, grasped this pinch bar, and—one pushing and the other pulling—used it as a lever against the moving wrench bar. By this means, the moving wrench bar and the drill rod were swung through a short arc, about equal to the distance from one hole to another on the circle plate. The pinch bar then, of course, lost its bearing, in the first hole of the circle plate, and was removed to the next hole in advance; and so, by this crude, tiresome, and repeated application of force to the bar, the sections of the drill rod were at last uncoupled.

So difficult was the operation that it often required the united power of many men to accomplish it successfully.

Mr. Forgie, the appellant, was an oil-well driller, and in 1886 was in charge of a gang of men drilling oil wells in western Pennsylvania. As such operator, he was constantly meeting with this great difficulty caused by the want of effective means to couple and uncouple the various parts of strings of tools, and that difficulty evidently caused him to consider whether, in some way or other, the power generated or transmitted by a machine could not be utilized to overcome it. The evidence does not disclose how he came to consider whether the machine or tool generally known as a "lifting jack" could be so utilized, but it is apparent from what he did that such an idea was in his mind.

In 1885 Mr. Josiah Barrett, of Allegheny, Penn., had perfected a lifting jack, or invented certain new and useful improvements in lifting jacks, which very greatly increased the capacity of that tool, and perfected its operative power. Mr. Forgie had heard of Mr. Barrett, and probably of the success of his inventive efforts, and sought an interview with him at the office of the Duff Manufacturing Company, of which Mr. Barrett was superintendent. At that interview the difficulties which embarrassed drillers of oil wells in the manipulation of their drilling tools were stated by Mr. Forgie, and, apparently, were fully discussed. Evidently, the suggestion that the mechanism and operative power of a lifting jack could be in some manner utilized to couple and uncouple the sections of a drill rod was original with Mr. Forgie, but, beyond this mere suggestion, the evidence does not disclose any further action on his part tending to a solution of the problem involving the adaptation of the jack to the novel purpose. As a result of this interview, or of others which followed it, Mr. Barrett prepared plans and patterns, changing in some degree, and altering, not so much the mechanism of his jack, as its operation, and made therefrom an experimental tool, which successfully accomplished the object in view. Practically, that which had been done was nothing more or less than the adoption of Mr. Barrett's lifting jack to the movement of the wrench bar. A number of these tools or devices were made by Mr. Barrett for Mr. Forgie, and sold by Mr. Forgie. They became very popular in the oil regions. They clearly filled a vacant place, and successfully vanquished the difficulties which had been so hard to combat. In 1890 Mr. Forgie, without notifying Mr. Barrett of his purpose, applied for and obtained letters patent for this tool or device, as his own invention. As Mr. Barrett continued, after the issue of the patent, to manufacture the reconstructed jack, and put it upon the market for sale, Mr. Forgie filed his bill, charging infringement, and seeking an injunction and other relief. There is no dispute that the tool manufactured and sold by Barrett is exactly similar to that which had been previously manufactured for and sold by Forgie. If the letters patent are valid, or if Mr. Forgie is entitled to the credit of the invention, undoubtedly, the defendants have infringed.

In the answer filed by the defendant in this cause, two defenses

are interposed. The one relates to the patentability of the device in question. The second is much more important and serious. It is set forth in the answer in these words:

"But this defendant denies that the said William Forgie was the original, true, and first inventor of said invention, but on the contrary this defendant alleges that Josiah Barrett, of the city of Allegheny, county of Allegheny, and state of Pennsylvania, was the inventor and originator of all the material and useful parts of said improvement, and that he communicated the same to the said William Forgie, and that the said William Forgie surreptitiously applied for a patent upon the improvement of said Josiah Barrett, and unlawfully obtained letters patent therefor."

If that allegation be true, this cause is ended. Who, then, was the inventor of this device in question,—Forgie or Barrett? In considering this question, it may be well, at the outset, to understand who are the contestants for the honor of this alleged invention.

Forgie was born in Washington, Penn., about 45 years ago. He had probably but little education; certainly, none of a technical character. He appears to have begun life pretty early on his own account, and as a carpenter, or perhaps as an apprentice to a carpenter. Tiring, apparently, of this occupation, he became a sailor, and followed the sea for a period of two years. That seemed to weary him, as well, and he left that service to become a soldier, doubtless serving out his term of enlistment. He gained some knowledge as a sapper and miner in a military school in Canada, whither he had drifted. Returning to the United States, he again enlisted in the army, and served for a period of three years. At the end of that period, he went to the oil country in Pennsylvania, and began to work there as a carpenter. Then he became a driller of oil wells, and finally a contractor for the construction of oil wells themselves. Certainly, his life and occupations seem not to have been of that character which would carry with them a knowledge of mechanics, or of the operation of the laws of mechanics, even in their simplest form. So far as Mr. Barrett, the other claimant of this invention, is concerned, the facts are meager. He does not disclose in his testimony his earlier occupations, but it appears that for a long number of years he had been connected with an iron manufacturing company as a valued employe. He was an inventor, and had previous to the time in question invented several tools or machines, especially this lifting jack, which, it is said, ranks as one of the best known. He had advanced himself in life until he had become the superintendent of a large manufacturing company. Now, it appears from the evidence, as has been stated, that Forgie seems to have been impressed with the apparent inability of mere muscular force rapidly and properly to operate a wrench for the unscrewing of oil tools, and to have reached the conclusion that in some way or other a mechanical device could be substituted. But this notion, whatever it was, was extremely hazy, and without any well-defined limit. He does not, at least in the prima facie case as made by him, speak of or describe his alleged invention with particularity; and one of his own witnesses, who was called to substantiate his claim

that he was the inventor of the tool in question, is compelled to admit that, even after he had received from Mr. Forgie an explanation of mechanical details, he was utterly unable to explain intelligibly any of them, and could only say that Forgie had three or four ideas about the matter, but that he did not know whether any of them were practical or not; that the whole of Forgie's idea, as the witness recollected it, was that a jack was to be applied to the screwing and unscrewing of oil-well tools, in some way or other. He simply proposed, so far as the witness understood him, to get something that was easier to screw the joints, and unscrew them. The only conclusion which can be drawn from the testimony touching Forgie's knowledge or conception of the present device, which he afterwards patented, is that it was extremely indefinite, and utterly unpracticable; and it was because of his own inability to formulate his ideas definitely that he sought Mr. Barrett, for the purpose of suggesting to him the use of the lifting jack, and to discover from him if it could be so altered and changed and modified that it might accomplish the purpose desired. The accounts given by Mr. Forgie and by Mr. Barrett of the first interview which took place between them are not contradictory. Undoubtedly, Mr. Forgie did describe to Mr. Barrett the usual method of coupling and uncoupling the tools with the old appliances, and the great necessity for overcoming existing difficulties. He conceded the value and power of the jack invented by Mr. Barrett, and repeatedly said that, if it could only be made applicable to this work of coupling and uncoupling oil-well tools, he thought it would do the work with ease. But there was the rub. How could it be so applied? Evidently, Forgie had not the slightest idea as to this, for nowhere does it appear that he made the slightest suggestion, of any practical benefit, looking to this end. A lifting jack was to be used, primarily, for lifting perpendicularly; but the wrench bars, in the act of coupling or uncoupling oil-well tools, must be moved horizontally. To a most superficial observer, it must have been apparent that to accomplish the last result the position and plane of operation of a lifting jack must be materially changed. Yet this primary step towards success in solving the problem under consideration was taken by Barrett, and not by Forgie. At that very first interview, there is no dispute about the fact that Barrett put his jack in such position that it would operate horizontally, and then described to Mr. Forgie the changes that he would make in it, so that it would exert pressure upon the oil-tool wrench. Nor is there any serious dispute that at this interview Mr. Barrett also made various sketches or rough draughts of the proposed changes in the jack, and of the patterns that would be necessary to construct the tool in accordance therewith. Then, too, it is not denied that Mr. Barrett suggested to Mr. Forgie that a Mr. Rankin, who was a pattern maker, and made for him all the patterns for his lifting jack, had better be employed to change those patterns, or make new patterns according to the rough draughts that Mr. Barrett had made, which would be necessary for the making of the device, as it was to be altered. Mr. Forgie, in his account of this same conversation, while he takes

more credit to himself for suggestions than Mr. Barrett gives him, does not contradict Mr. Barrett in any particular point, but admits, among other things, that Barrett did say, referring to his lifting jack, "Why not go on and use this machine of mine, I have everything necessary to do the work with, and can do it much cheaper, and I know it will do the work;" and he adds, "and consequently we agreed upon that method, and I went to the pattern maker and got the patterns made accordingly." This is a corroboration of Barrett's statement, and, taking both accounts together, it clearly shows that when Forgie went to Barrett he had no definite plan in his mind; that he was in pursuit of information and aid; that various plans were talked about; and that finally the conclusion was that Barrett's jack, to be altered as Barrett suggested, was the one that would do the work. Nowhere is there the least intimation in the testimony that Forgie suggested any other mechanism than that which Barrett had described to him as part of his jack. It is a very remarkable feature of this case, and extremely suggestive of the power of Forgie to appropriate, that more than a year afterwards, when he applied for this patent, he embodied in the specifications of his invention every part of the mechanism of Barrett's lifting jack, without a change, or a shadow of a change.

If the statement of Mr. Barrett is true,—and it seems to be in harmony with and to be corroborated by other matters in the cause than those referred to,—it is quite clear that he should have the honor of this invention, if there be patentable novelty in it at all. Forgie had conceived of no practical tool or device. He had no theory or plan which would enable a lifting jack to be used as the motive power to couple and uncouple a string of tools used for boring an oil well. He simply stated, when he went to Forgie, the necessities of the case, and sought from him information whether a certain tool invented and patented by him could not be adapted to meet these necessities. If this were all the testimony in the case, we should have but little if any hesitation in giving the credit of this invention to Barrett. But there are other matters which still more strongly preponderate against the claim of Forgie; and one is that, for a long time after this modified jack of Barrett's was applied to the oil-tool wrench, the tool was stamped as Barrett's patent, with the full knowledge and consent of Forgie, and without protest or objection. This stamping of the tool continued for nearly a whole year. Forgie was the sole person employed to sell them during that time. Every tool passed under his eye, and yet he stands with his mouth closed, without a word of objection to the bold and unlawful appropriation by Barrett of this device as his invention, if he were not the inventor. Another corroborating circumstance is this: Rankin, the pattern maker, who was an entire stranger to Forgie, and who had no interest in this matter, states that, when Forgie came to see him about the pattern, he gave him express directions to see Barrett, and obtain from him instructions how to make the patterns; he told him that Barrett was to get up the plans; and that in fact Barrett did get them up, and give them to him to make. Another circumstance corroborating Mr. Barrett's con-

tention is found in this fact: It appears that after a year or more, during which time Mr. Barrett was manufacturing this tool for Mr. Forgie to sell, and during which time Barrett's name appeared as patentee upon the machine itself, it came to the knowledge of Barrett that Forgie, after the tool had left Barrett's factory, had chipped off or ground off his name, as patentee, and affixed his own name in place thereof; that Barrett immediately protested to Forgie that he could not permit such change to be made, and threatened, if Mr. Forgie did not instantly cease, he himself would stop manufacturing the tool in question for him; and that thereupon Mr. Forgie agreed that he would not again offend in this particular. How can such conduct on the part of Forgie be reconciled to his claim that he was the original inventor of the device in question?

Nor do we think that the facts stated by Mr. Forgie, when examined long after the close of the defendant's case, strengthen his position in the slightest. It was a perfectly well-defined issue in this case whether Barrett or Forgie was the inventor of this device, and whether Forgie had not surreptitiously, and in fraud of Barrett's rights, obtained letters patent therefor. When he was first examined by his own counsel, upon his direct testimony, he failed to give evidence which would raise a doubt as to Barrett's primary conception of the changes in the jack necessary to be made, prior to any suggestion which Forgie may have made. But after the close of the defendant's case, and not in rebuttal thereof, but as a part of the prima facie case which he should have made originally, and under the explanation or excuse that his counsel had failed to ask him proper questions to bring out the true facts, Forgie, in detail, claims that he was the first inventor of all the mechanism connected with the tool in question, and insisted that he had explained it in full to Barrett only for the purpose of obtaining from Barrett information where the necessary patterns could be made. Such testimony is interjected in the cause at too late a date to be of much weight. Besides, notwithstanding that claim of Forgie, which clearly was an afterthought, he utterly fails to produce any witnesses who had known of such a conception by him of the mechanism in that jack, or any sketches or any drawings or any patterns showing that he had materialized his knowledge, if he had any at all, into any practical plan. Admitting that he may have had some conception of what was wanted,—which, however, is very doubtful,—mere conception is not invention. It is the crystallizing of that conception into the invention itself, operative and practical, that entitled the inventor to the protection of letters patent. Nor can full weight be given to the testimony of Forgie, because he repeatedly contradicts himself, while upon the witness stand, in important particulars. This may have arisen from infirmity of memory, or from the peculiar position that he occupied as a witness in the case; but he cannot rid himself of the effect of the contradictions, nor ask the court to place that faith in his statements which, perhaps, otherwise might be given to them. It is unnecessary to go over any more of the evidence on this part of the case in detail. It is enough to say that the court are satisfied that Mr. Forgie was not the in-

ventor of this device, but that the real credit of the invention, if any there be, belongs to Mr. Barrett.

Counsel for the appellant insisted that, if the testimony left in the mind of the court a reasonable doubt upon this point, his client was entitled to the benefit of it. A large number of cases, both in the supreme court and in the circuits, hold that doctrine, nor do we propose to dispute it. If it were an open question, we might consider whether the presumption arising from the granting of the letters patent could not be overthrown, as any other presumption at law is overthrown, by the preponderance of evidence. But accepting it as settled that any doubt is fatal to a claim antagonistic to the validity of letters patent themselves because of fraud, we can but say that in this case the principle cannot afford the appellant any assistance. The evidence is too convincing to permit the shadow of a doubt.

Having arrived at this conclusion, it is not necessary to discuss the question of novelty, which was raised and ably argued by both counsel before the court. The result is that the judgment of the court below is affirmed.

EDISON ELECTRIC LIGHT CO. et al. v. DAVIS ELECTRICAL WORKS.

(Circuit Court, D. Massachusetts. December 13, 1893.)

No. 3,196.

PATENTS—INFRINGEMENT—RECONSTRUCTING ELECTRIC LAMPS.

The Edison incandescent electric lamp is an organic whole, which lasts only during the life of the carbon filament; and, if the bulb is thereafter broken open, the identity of the lamp as a structure is gone. Therefore it is an infringement of the patent to make a hole at the bottom of the bulb, insert a new filament having its ends inserted in platinum sleeves, close the hole by fusing a piece of glass over it, and then exhaust the air.

In Equity. Bill by the Edison Electric Light Company and others against the Davis Electrical Works for infringement of letters patent No. 223,898, granted January 27, 1880, to Thomas A. Edison for an electric lamp. Decree for complainants.

Frederick P. Fish and Wm. K. Richardson, for complainants.
John L. S. Roberts, for defendant.

COLT, Circuit Judge. If the Edison lamp were so constructed that a new burner could be placed in it, like a new wick in an ordinary lamp, or if it were made of two parts designed to be taken apart for the purpose of replacing the old burner with a new one, as in the Sawyer-Man lamp, I should hold that a purchaser of the Edison lamp had a right to renew the carbon filament, on the ground that this was an ordinary repair, contemplated by the patentee when the lamp was sold, and that the defendant in so repairing such lamps did not infringe the Edison patent. But the difficulty which meets me in this case is that the Edison lamp was not designed to be so repaired, and is incapable of such renewal.