

more just and judicious than the tenth section of the compact of 1785, containing the provisions relied on. But the able and distinguished commissioners appointed by the two states in 1877 had in charge the very duty of making certain and determinate all doubtful parts of the common boundary of the two states. Accordingly, the commission addressed itself to the task of removing all doubt from this part of the line, as well as others, and accomplished its purpose successfully. Probably no section of a boundary line was ever more clearly, precisely, minutely, definitely, or intelligibly laid down and defined than was the portion of the Maryland and Virginia line between Smith's and Watkins' points, and which may be found on pages 63, 64 of the Virginia Code, and page 482 of the twentieth volume of the Statutes at Large of the United States.

It is useless, in this opinion, to set out the careful language of the award in defining this line. The duty of the arbitrators was to make it cease to be doubtful, and to establish the line with precision and certainty. They performed that duty, and accomplished that purpose. The line is no longer doubtful, and the defense of the prisoner Marsh is inadmissible. It was competent for the Virginia court by which he was convicted to try him, and he must be remanded to the custody of the sheriff of Accomack county, Va.

BROWN et al. v. STILWELL & BIERCE MANUF'G CO.
(Circuit Court of Appeals, Sixth Circuit. February 7, 1893.)

No. 41.

1. PATENTS FOR INVENTIONS — NOVELTY — ANTICIPATION — LIVE-STEAM FEED-WATER HEATER AND PURIFIER.

Letters patent No. 274,048, issued March 18, 1883, to Edwin R. Stilwell, covers a live-steam feed-water heater and purifier connected with the boiler by steam pipes, and having a series of pans vertically arranged above the filter, and a space or chamber above the pans and water inlet, connected to the steam dome by a pipe, so as to discharge the hurtful gases from the top of the purifier directly into the boiler, thus getting rid of them without reducing the steam pressure in the purifier or boiler. *Held*, that the gas-discharge pipe was a novel and operative device, and was not anticipated by the Hayes, Jeffrey & Schlacks patents of March 30, 1880. 49 Fed. Rep. 738, affirmed.

2. SAME—COMBINATION—INFRINGEMENT.

The second claim of the patent is, in effect, a combination claim, covering a live-steam purifier having pans placed on a filter, and a gas-escape pipe connected to the boiler, and is therefore not infringed by a purifier which is without pans vertically arranged over a filter, though it uses the other element, the gas-escape pipe. *Rowell v. Lindsay*, 5 Sup. Ct. Rep. 507, 113 U. S. 97, followed.

3. SAME—CONSTRUCTION OF CLAIM.

The first claim is for "a live-steam feed-water purifying or heating apparatus, D, connected to the boiler by means of water pipe, K, steam-fed pipes, L, and gas-escape pipe, M, substantially as set forth." *Held* that, in view of the statement in the specifications that the gas-escape pipe will perform its office irrespective of the manner in which the purifier and heater is constructed, the claim should not be limited to the ex-

act combination described, but will include a combination of any live-steam purifier connected to the boiler by means of a water pipe and two steam pipes, as described.

4. SAME—LIMITATION—INFRINGEMENT.

The first claim is, however, limited by its terms and by the specifications—which connect the gas pipe either with the dome of the boiler or “the steam space of the boiler”—to a gas pipe connected directly with the boiler, and is not infringed by connecting the gas pipe to the steam pump, although by this connection the principle of operation may be the same. 49 Fed. Rep. 738, reversed.

Appeal from the Circuit Court of the United States for the Western Division of the Southern District of Ohio.

In Equity. Suit by the Stilwell & Bierce Manufacturing Company against S. N. Brown & Co. for infringement of a patent. There was a decree for complainant in the court below, (49 Fed. Rep. 738,) and defendant appeals. Reversed.

Paul A. Staley, (Lysander Hill, of counsel,) for appellant.
Wood & Boyd, for appellee.

Before JACKSON and TAFT, Circuit Judges, and HAMMOND, District Judge.

TAFT, Circuit Judge. This is an appeal from a decree of the circuit court for the southern district of Ohio, finding that the appellee, which was complainant below, the Stilwell & Bierce Manufacturing Company, is the owner by assignment of a valid patent issued to E. R. Stilwell for a live-steam feed-water heater and purifier, (letters patent 274,078, dated March 13, 1883,) and that the appellant and defendant below, S. N. Brown & Co., has infringed the same, and enjoining the appellant from further infringement. By stipulation, reference to a master was waived, and \$150 was agreed upon as damages to be recovered by appellee if the decree is not reversed.

The appellee is a corporation engaged in the manufacture of steam machinery, and makes purifiers under the patent involved in this suit. The appellant does not manufacture purifiers, but is the user of the one claimed to be an infringement of appellee's patent, which was purchased from the Hoppes Manufacturing Company, another manufacturing company of Springfield, and a competitor of the appellee.

The water available for use in steam boilers is frequently filled with impurities, which, after a constant use of the boiler for several days, clog it, and much interfere with its proper operation. Among the impurities are sulphate of lime, sulphate of iron, and other incrusting substances, which form a scale in the boiler, difficult to remove. It becomes important, therefore, to purify the water before it is introduced into the boiler, and the patent in suit is for a device to do this. If the water is much heated, it will deposit as a sediment the objectionable substances. A well-known mode of heating the water has been to run

it into a closed purifying chamber, where steam from the boiler is introduced. From this chamber the purified water runs into the boiler by force of gravity. The steam has generally been taken from the exhaust pipe of the engine, so that it comes into the purifier after it has done its main work. As the pressure of the exhaust steam is much less than that in the boiler, its heat is less, and is often not enough to purify water which holds a good deal of matter in solution. Several patents had been taken out before the one in suit, for taking the live steam direct from the boiler into the purifier, whereby the greater heat of the steam would more completely cleanse the water. But this plan did not work perfectly. The heating of the water not only deposited the solid impurities, but also released gases, which mingled with the steam, and materially reduced its quantity and its heating capacity. The problem then was to get rid of the gases. The objection to releasing them directly from the purifier into the air was that it would seriously affect the pressure of the steam in the purifier and in the boiler. To obviate these difficulties, the patentee of appellee's patent, in addition to the ordinary live-steam pipe connection between the boiler and purifier, also connected the top of the purifier to the steam dome of the boiler with what he called a "gas-escape pipe," on the theory that through the upper pipe the deleterious gases would find their way out of the purifier into the boiler dome, and thus allow the hot steam freely to circulate in the purifier.

After this general statement, the purifier of the appellee may be described as a cylindrical shell with cast-iron heads. In the upper part is an overflow cup, G, into which the cold water is fed. Below this overflow cup are a number of trays, usually made of cast iron, through the bottom of which are openings to allow the water to flow down from one pan to the next lower. Below the pans, and filling up one side of the purifier, is a filtering chamber, J, with an entrance at the bottom. The purifier is connected with the boiler by pipes, M, L, and K. In operation, the water is pumped in at P, flowing downward from the overflow cup, G, over the trays into the chamber, H, at the bottom, upward through the filter, J, and thence through the pipe, K, into the mud drum of the boiler, C. The steam enters the purifier from the boiler through the pipe, L, branched into the pipes L' and L". The pipe, M, connects the top part of the purifier with the steam dome of the boiler, B. In the words of the patent, "deleterious gases escaping from the water, as it is freed from impurities, rise into the space, (i. e. the top part of the purifier;) and as the steam is taken from the steam dome these gases pass through pipe, M, directly into the steam dome, without passing through the boiler." The two claims of the patent are as follows:

"(1) A live-steam feed-water purifying or heating apparatus, D, connected to the boiler by means of water pipe, K, steam-feed pipes, L, and gas-escape pipe, M, substantially as herein set forth.

"(2) A live-steam heater or feed-water purifier having a series of pans vertically above the filter, and a space or chamber above the pans, and water inlet connected to the steam dome by a pipe, so as to discharge the gases from the top of the purifier directly into the boiler, substantially as herein set forth."

It is very clear, and it is in fact conceded by counsel, that everything connected with the purifier of appellee below is old, except the gas-escape pipe, M. Every feature except the gas-escape pipe was included in a patent issued to the same patentee in 1867, and is now public property.

The defenses are: First, invalidity of the patent for want of utility, novelty, and invention; and, second, noninfringement. The court below found all these defenses to be unsupported, and rendered a decree as above stated.

Much evidence was introduced tending to show that the theory upon which the escape pipe is supposed by the appellee to carry the gases is unsound. The appellant's experts testified that the condensation of the steam in the purifier, caused by heating the cold water, would so reduce the pressure of the steam there, compared with that of the boiler, as to produce a very rapid current of steam from the boiler into the purifier through both the steam pipe, L, and the gas-escape pipe, M, making it impossible for gases to be carried from the purifier to the boiler through either pipe. The theoretical evidence was supported by an experiment with one of the appellee's purifiers. A tin curtain was lightly hung in each of the pipes, L and M, so that it would be affected by the lightest current of air or steam, and opposite the curtains in the pipes were inserted glass peep holes, permitting easy observation of the direction in which the curtains swung. It was established by half a dozen witnesses that when steam was up, and the engine was running, the current in both pipes, at the same time, kept both curtains swung in the direction of the purifier. The appellee's expert gave it as his opinion that the curtains would interfere with the action, circulation, and movement of the gases, and that it was therefore not a demonstration of the claim based on it. Appellee's expert made experiments of his own with complicated apparatus, the substance of which, shortly stated, was that he gathered in a test tank a sample of the gases and steam from the top of the purifier, and by condensing the steam determined the relative volumes of the steam and the gases, first when a single steam-pipe connection between the boiler and the purifier was open, and then when both steam-pipe connections were open. His calculations showed that the use of the second steam pipe much reduced the relative volume of the gases as compared with the steam. It is difficult for a court to judge of the relative weight to be given to these two experiments, though it should be said that the simplicity of the first experiment, and the result, agreeing as it does with the ordinary rules of mechanics governing the effect of pressures, are rather more persuasive than the complicated experiments of the appellee's expert. It may be, on the other hand,

that the theory of pressures advanced on behalf of the appellant, by which a current is said to be created from the dome of the boiler towards the purifier, does not give sufficient weight to the difference between the pressure of the steam in the boiler itself and in the steam dome, caused by the fact that the steam is constantly being drawn from the steam dome through the main steam pipe to run the engine. This may not only reduce the pressure in the dome, but may also create a current of steam from the dome, which will exert an influence in the top of the purifier to carry the gases with it towards the engine. The evidence is conflicting as to the practical working of the appellee's purifier in keeping the boiler free from scale or other impurities. On the whole, the question is such a doubtful one that we are not disposed to differ from the finding of the court below on this point that the device is operative.

Nor do we differ with the court below as to the novelty of the invention. It does appear that in the patent of Hayes, Jeffrey & Schlacks, patented March 30, 1880, there is described a feed-water purifier for boilers, which is connected to the boiler by two pipes, through which steam would reach the purifier. The purifier, however, is very different from the one in suit. It is situated inside of the dome of the boiler. The steam pipes, connecting the purifier with the steam space of the boiler, are referred to as "one or more pipes;" and the two pipes, when used, are evidently not intended by the patentee to produce a circulation and release of gases, but rather to double the supply of steam to the purifier. The patent is never shown to have been put into operation, and the device is so small, as compared with the boiler, and so obviously without other devices necessary in a successful purifier, that we do not think it can be relied upon as an anticipation of the gas-escape pipe, M, in the patent we are considering, if that pipe in fact operates as gas-escape pipe. The other devices are much less like the patent of appellee than the one we have described.

Nor do we think there is any want of invention in supplying a gas-escape pipe, if it does the work claimed for it.

The remaining question is as to infringement. The appellant is not the manufacturer of the device claimed to be an infringement. It purchased its purifier from the Hoppes Manufacturing Company. As manufactured and furnished to defendant, the purifier contained only one steam-pipe connection between the boiler and the purifier. The pans in the purifier made by the Hoppes Company are arranged somewhat differently from those of the appellee, and are said to be more efficient in removing the impurities from the water by adopting what counsel call the "stalactite principle." They are so made and placed that the hot water, after it has deposited a sediment of impurities inside the pan, overflows and runs under the bottom of the pan towards its middle, and then falls to the pan below. The result is an incrustation on

the bottom of each pan. The pans are thus made under a patent issued to John J. Hoppes. After the appellant had used the purifier for a short time, complaint was made to the Hoppes Company that it did not do the work for which it was sold. On the supposition that not enough steam was furnished by the boiler through the connecting steam pipe to the purifier, an additional steam-pipe connection was made between the boiler and the purifier. This did not increase materially the proper deposit of scale and other impurities in the purifier, and after five months' use the second boiler connection was cut off, and for that Hoppes, of the Hoppes Company, substituted a pipe from the top of the purifier to the steam pump. This was the only pipe furnishing steam to the pump. The effect of the change was to make the purifier a part of the pipe connecting the boiler and the steam pump. The evidence is that after the change the deposit of impurities was improved, though the feeding of the water to the boilers continued to be imperfect. The cause of the latter trouble was found to be a structural defect in the boilers themselves, and new boilers were put in.

The double steam-pipe connection between the boiler and the purifier, which was maintained for a few months only, is not relied on as an infringement of the patent, and was not the basis upon which damages were awarded to the complainant. The real issue in the case is between the Hoppes Company and the appellee, as to whether a live-steam purifier, which uses a gas-escape pipe connected to the steam pump, is an infringement of appellee's patent. On that issue the court below found for the appellee. If this finding cannot be sustained, the decree must be reversed.

The patentee, in his specifications, says:

"One object of my invention is to connect the top of the heater or purifier with the top of the boiler or steam dome by a pipe, so as to allow the direct escape of gases generated in the heater."

Again:

"L" represents a branch steam pipe, admitting steam at or near the bottom of the series of shelves, which passes up over the pans in the opposite direction to the course of the water. By employing pipes, L', L'', of large area, say of two to four inches in diameter, the water in the purifier is kept at or near the same temperature as that in the boiler, and the space above overflow, G, forms in fact a part of the steam dome of the boiler. As a consequence, deleterious gases escaping from the water as it is being freed from impurities rise into the space, and, as steam is taken from the steam dome, these gases pass through pipe, M, directly into the steam dome, without passing through the boiler."

And again:

"The principal features of my invention, which consists in connecting the top of the heater with the steam dome of the boiler, or with the steam space of the boiler, can be employed with a combined heater and purifier, or with either a heater or purifier. Thus this escape pipe would perform its office irrespective of the manner in which the heater would be constructed. For instance, either the shelf or the filter might be removed, so long as the feed water was heated by a current of live steam in a vessel

directly connected to the boiler itself. The escape pipe, M, can be advantageously used in such construction, which is embraced in the first clause of the claims herein."

And the claims, to state them again for the sake of clearness, are:

"(1) A live-steam feed-water purifying or heating apparatus, D, connected to the boiler by means of water pipe, K, steam-feed pipes, L, and gas-escape pipe, M, substantially as herein set forth."

"(2) A live-steam heater or feed-water purifier having a series of pans vertically above the filter, and a space or chamber above the pans, and water inlet connected to the steam dome by a pipe, so as to discharge gases from the top of the purifier directly into the boiler, substantially as herein set forth."

It is to be observed that these are, in effect, combination claims. The second claim covers a live-steam purifier having pans placed on a filter, and a gas-escape pipe connected to the steam dome of the boiler. This claim is not infringed by appellant's purifier, which is without pans vertically arranged over a filter. Appellant uses no filter. It is well settled that the omission in the alleged infringing device, of an element named in a combination claim of a patent said to be infringed, is a complete defense to the charge of infringement. *Rowell v. Lindsay*, 113 U. S. 97, 5 Sup. Ct. Rep. 507.

The first claim, however, in view of the statement in the specification that the gas-escape pipe will perform its office irrespective of the manner in which the purifier and heater is constructed, ought not to be limited to a combination of the heater and purifier exactly as described in the patent with the other parts named, but will include a combination of any live-steam purifier connected to the boiler by means of a water pipe and two steam pipes, as described. Now, appellant's device is a live-steam purifier, and if it is connected to the boiler by three pipes, as described in the first claim, it is an infringement of the claim. It has the water pipe, K, and the steam pipe, L. Some point is made that the description of the claim uses the plural, "the steam pipes, L." This probably refers to the fact that the pipe, L, enters the boiler by two branches. The appellant does not branch the pipe, L. It is contended that the use of a single pipe without branches for introducing the steam is an omission of an important element of the combination claimed, because this division of the pipe, L, into branches is mentioned in the specification as bringing about a more effective distribution of the hot steam over the water surface in the purifier. We do not decide this question, because the decree must be reversed on another and more satisfactory ground.

In our opinion, the gas-escape pipe of appellant is not covered by the gas-escape pipe claimed in the patent of appellee. The specifications connect the gas pipe, M, either with the dome of the boiler or the steam space of the boiler. "The steam space of the boiler" is any place within the shell of the boiler where steam is, and it does not include the steam space inside the pipes which lead from the boiler. The ordinary meaning of the phrase would have this limitation, and it is very clear from the evidence of the expert called

by the appellee below that he understands the words in this sense. Moreover, the first claim describes the purifier as "connected to the boiler by means of * * * gas-escape pipe, M." The purpose of connecting the gas-escape pipe with the boiler was to make the purifier as much as possible a part of the boiler. As is apparent from statement of appellee itself, hereafter quoted, the idea of the inventor was not only to produce circulation of the gases, but to produce as near as possible an equilibrium between the purifier and the boiler. A connection with pipes leading away from the boiler would not serve so well to maintain the equilibrium. We are forced to the conclusion that the inventor, in drawing his specifications and claims, did not intend to cover anything but a pipe connecting the top of the purifier with the steam dome or other part of the boiler.

We are confirmed in this opinion by the history of the case. The patent in suit was issued in 1883. In 1884 a patent was issued to J. H. Berkshire for a live-steam feed-water heater and purifier connected to the boiler by a water pipe, K, and a steam pipe, L, while a gas-escape pipe, M, connected the top of the purifier with the pipe, M, leading from the boiler to the engine, or with any other circulating pipe." The Hoppes Company own the Berkshire patent. August 12, 1890, a patent was issued to Ralph B. Day for a live-steam purifier, with a gas-escape pipe connecting the top of the purifier directly with the steam pump,—the exact device used by the appellant. The Day patent was assigned to the appellee, and was originally set up in the bill of complaint in this case. J. J. Hoppes instituted interference proceedings in the patent office against the Day patent, based on an application for a patent which he had made for the same device in 1888, and the controversy resulted in Hoppes' favor. A patent was issued to him for his device August 4, 1891. After this the appellee dismissed that part of its bill which alleged infringement of the Day patent. In the competition between the appellee and the Hoppes Company, in the sale of live-steam purifiers the former published the following caution to the trade in 1890:

"Caution. We offer a word of caution to all intending purchasers of live-steam purifiers. We were the first to place on the market a practical live-steam purifier. In our experiments we discovered that two steam connections between the purifier and the boiler were necessary in order to obtain a perfect equilibrium of pressure between the two vessels, and perfect circulation, both of which are absolutely necessary to prevent the accumulation of dangerous and deleterious gases in the purifier, and to insure a regular and uniform feed from the purifier to the boiler. The patents granted to our Mr. Stilwell broadly cover the two steam connections with the boiler. When our would-be competitors put their purifiers into actual use, they also discovered the necessity above referred to. With the pressure of this necessity upon one hand, and the Stilwell patent confronting them upon the other hand, they have sought to escape the dilemma in which they were thus placed by suggesting to their customers that the necessary relief could be obtained by carrying steam from the purifier to the steam pump, or some other machine, and in that manner getting up the necessary circulation. The desired end is in this way partially accomplished, and the per-

formance of the purifier rendered much more satisfactory; but, unfortunately for them, the arrangement indicated is broadly covered by a patent issued to R. B. Day, and which has been assigned to us. We do not indulge in threats, but we shall insist on our patented rights being respected."

It would seem to be clear from this that the appellee, even at so late a day, and after the very controversy here involved was mooted, conceded that the Stilwell patent covered only the connection of the escape pipe with the boiler, and that the Hoppes Company (which is the competitor referred to) did not infringe that arrangement by connecting the escape pipe with the steam pump. In appellee's view it was the Day patent, and not the Stilwell patent, which the steam-pump connection infringed. As we have seen, the Day patent proved invalid, and now complainant seeks to broaden the claims of the Stilwell patent beyond what was intended or expressed by the patentee, and beyond what, until the Day patent failed, the appellee ever asserted.

It has been said by counsel at the bar that theories do not control the decision in patent cases; that it is facts and results which are all-important. This is true in the sense that if a man describes in his specifications a machine by which to get a certain result so that any one skilled in the art can reproduce the machine and the result, he cannot be deprived of his exclusive right in the machine by a demonstration that his theory, stated in the patent, of the causes producing the result, is untrue. But a correct and certain knowledge of the principle by which the result is reached will often enable the patentee, or his solicitor, to cover, with general words, many different devices in which it may be applied. If he fails to use broad enough language to do so, then one of two things is true: either that he does not fully understand the true principle, and the other devices are not part of his real invention, or else, knowing the principle, and its possible wider application, he has chosen to limit his claim for a monopoly to one particularly described device, and has abandoned the others to the public. Whichever horn of the dilemma he chooses, the court has no power to broaden the claims. In the case at bar, therefore, even if the connection of the gas-escape pipe with the steam pump is only another and similar device for the application of the same principle which is embodied in the Stilwell patent in suit, as contended by counsel for appellee, the patentee did not cover that device in his patent, for he limited his claim and specification to a connection with the steam dome of the boiler, or some other part of the boiler; and a connection with the steam pump is not a connection with the steam dome or the steam space of the boiler. They may now appear to be equivalent, but they were not known to be such when appellee's patent was issued, and the patentee did not mention them as such in his specifications. The doctrine of equivalents, therefore, does not aid the appellee. *Rowell v. Lindsay*, 113 U. S. 97, 5 Sup. Ct. Rep. 507.

As the patentee has expressly limited himself to a connection with the boiler, he has given to the defendant below, and to the

world, so far as he is concerned, the right to make the connection at any point outside the boiler and the steam dome, without infringing his patent. This rule in the construction of patents is so well established as hardly to need authority. One of the leading cases is that of *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274. In that case the patentee claimed an invention for wide and thin drilled eye bars applied on edge for use in the lower chords of iron truss bridges. The alleged infringement was round or cylindrical bars, flattened or drilled at the eye for the same use. It was held that, as the patentee had specified wide and thin bars in his claim, he was limited to that description, although the same function was performed by the alleged infringing devices. Mr. Justice Bradley said, (page 278:)

"When a claim is so explicit, the courts cannot alter or enlarge it. If the patentees have not claimed the whole of their invention, and the omission has been the result of inadvertence, they should have sought to correct the error by a surrender of their patent, and an application for a reissue. They cannot expect the courts to wade through the history of the art, and spell out what they might have claimed, but have not claimed. Since the act of 1836 the patent laws require that an applicant for a patent shall not only, by a specification in writing, fully explain his invention, but that he shall particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery.' This provision was inserted in the law for the purpose of relieving the courts of the duty of ascertaining the exact invention of the patentee by inference and conjecture, derived from a laborious examination of previous inventions, and a comparison thereof with that claimed by him. This duty is now cast upon the patent office. There his claim is, or is supposed to be, examined, scrutinized, limited, and made to conform to what he is entitled to. If the office refuses to allow him all that he asks, he has an appeal. But the courts have no right to enlarge a patent beyond the scope of its claim as allowed by the patent office, or the appellate tribunal to which contested applications are referred. When the terms of a claim in a patent are clear and distinct, (as they always should be,) the patentee, in a suit brought upon the patent, is bound by it. *Merrill v. Yeomans*, 94 U. S. 568. He can claim nothing beyond it. But the defendant may at all times, under proper pleadings, resort to prior use and the general history of the art to assail the validity of a patent, or to restrain its construction. The door is then opened to the plaintiff to resort to the same kind of evidence in rebuttal; but he can never go beyond his claim. As patents are procured ex parte, the public is not bound by them, but the patentees are. And the latter cannot show their invention is broader than the terms of their claim; or, if broader, they must be held to have surrendered the surplus to the public."

See, also, *Harris v. Allen*, 15 Fed. Rep. 106; *Manufacturing Co. v. Rosenstock*, 30 Fed. Rep. 67; *Smith v. Putnam*, 45 Fed. Rep. 202; *Otley v. Watkins*, 36 Fed. Rep. 323; *Burns v. Meyer*, 100 U. S. 671; *Klein v. Russell*, 19 Wall. 433.

But it is said this is a pioneer patent, one which constitutes a decided step in the art, and that as such the courts should be liberal in construing it to cover what the patentee really invented. In our opinion, all the patentee really invented was the gas-escape pipe connection with the boiler. There is nothing to show in his specifications or in the evidence that he had in mind, as feasible,

the connection which was made in the Day or the Hoppes patent with the steam pump. And even if there were, the words the patentee used in his claim are too plain to admit of construction. He set limits to his monopoly in language the effect of which no liberality in construction can avoid.

We must therefore reverse the decree, with instructions to dismiss the bill.

On Rehearing.

(October 2, 1893.)

A motion for rehearing has been made in this case. The chief argument for the motion is based on the fact which the record discloses, that a short time after the issuance of the Stilwell patent the appellee erected a purifier for the Dayton Manufacturing Company's works, in which the gas-escape pipe was connected not with the steam dome, but with a live-steam pipe, near its boiler outlet, which supplied the steam-heating apparatus and the feed pump. This tends to weaken the conclusion of fact reached in the foregoing opinion that Stilwell, when he obtained his patent, did not know that anything but a connection with the boiler direct would accomplish his purpose; but we cannot see how it affects the reasoning and result reached in the opinion, which are based on the language of claim,—one which excludes from the monopoly of the patent anything but a connection with the steam space of the boiler. Even if we were to concede that a connection with a live-steam pipe near its boiler outlet was a connection with the steam space of the boiler, it is to be noted that the escape pipe of appellant does not connect with the boiler or any outlet from the boiler. It is an outlet of the purifier away from the boiler. It is true that it connects with a steam-using device, but it furnishes the steam to this device itself. In other words, the purifier, with its single boiler connection and the escape pipe to the feed pump, makes a single live-steam connection between the boiler and the feed pump. This is a different device from that described in the patent, and no construction of the language of the latter can bring the former within it.

Before closing, reference should be made to the averment of the original bill filed by appellee in this action in reference to the Day patent, which, as has been said, was identical with the device used by appellant:

"And your orator further complains and says, on information and belief, that heretofore, and before the 9th day of June, 1890, Ralph B. Day, of Mansfield, Ohio, was the original and first inventor of a certain new and useful improvement in live-steam purifiers, fully described in the letters patent hereinafter mentioned, and which had not been known or used by others in this country, and not patented or described in any printed publication in this or any other country, before his invention or discovery thereof, and not in public use or on sale for more than two years prior to his application for a patent therefor."

This averment does not work an estoppel against the appellee and complainant below, for when the interference proceedings between Day and Hoppes resulted in the issuance of Hoppes' patent, and the consequent defeat of Day, the averment was withdrawn in an amended bill; but it has much probative force to show that the complainant below did regard the Day device as different from that patented to Stilwell, and owned by it. This, too, is the only effect of the circular referred to in the opinion. Counsel for appellee seem to think that the court has treated the circular as an estoppel. In this they are mistaken. Reference was made to it as evidence of the construction given to its own patent by the complainant below.

The motion for a rehearing is denied.

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

(Circuit Court, W. D. Pennsylvania. July 10, 1893.)

No. 18.

PATENTS FOR INVENTIONS—INVENTION—COMBINATION—OIL-WELL TOOLS.

Letters patent No. 422,879, issued March 4, 1890, to W. Forgie, for a wrench for oil-well tools, consisting in the adaptation of a lifting jack to produce a circular horizontal pressure against the arm of a wrench, for the purpose of screwing and unscrewing the tools, are void for want of invention, as this was only an adaptation of the jack to an analogous use, and as neither it nor the wrench perform any new function.

In Equity. Suit by William Forgie against the Oil-Well Supply Company, Limited, for infringement of a patent. Decree for defendant.

William L. Pierce, for complainant.

James I. Kay, for defendant.

Before ACHESON, Circuit Judge, and BUFFINGTON, District Judge.

BUFFINGTON, District Judge. W. Forgie brings this bill against the Oil-Well Supply Company, Limited, for alleged infringement of a patent for wrench for oil-well tools, applied for January 28, 1888, and to him granted March 4, 1890, and numbered 422,879. The respondent is the selling agent of the Duff Manufacturing Company, which latter is the manufacturer of the alleged infringing machine, and the real respondent in the case. The device in dispute is a jacking apparatus for screwing and unscrewing oil-well tools. The respondents allege their device is made under patents issued to one Barrett, and a suit against Forgie for alleged infringement thereof in his device was argued with this bill, and is disposed of in our opinion at No. 54, November term, 1891. 57 Fed. Rep. 748.

The present case turns upon two questions: (1) Was Forgie the inventor of the device? and (2) if so, is the device patentable? Tools