

Case No. 212,
[3 App. Comr. Pat. 322.]

ALLEN v. ALTER.

Circuit Court, District of Columbia.

June 18, 1860.

PATENTS FOR INVENTIONS—COAL-OIL
RETORTS—INTERFERENCE—COMPETENCY OF WITNESS.

[1. Letters patent issued April 27, 1858, to David Alter and Samuel A. Hill, for a retort revolved horizontally so as to subject its contents to a uniform heat, and for use in the distillation

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of coal oil, does not cover a retort which is merely oscillated, instead of revolved, and the invention is prior to that of Franklin W. Willard, with which it interferes.]

[2. Where a witness in an interference case, before the commissioner of patents has been examined by both parties, objection to his competency cannot be first made on appeal.]

[On appeal from the commissioner of patents.]

[Application by E. G. Allen, assignee of F. W. Willard, for letters patent for a process of distilling the liquid products from coal. An interference was declared with letters patent issued April 27, 1888, to David Alter and Samuel A. Hill, and Allen's application was rejected by the commissioner. Applicant appeals. Affirmed.]

MORSELL, Circuit Judge. The appellant claims as his invention the process therein before described for extracting the liquid products from coal, the same being effected by combining a retort so constructed and operated as to have a rotary or other equivalent motion for agitating its contents, and exposing all portions of the charge equally to the heat, with the use of a low red heat of about 850° Fahrenheit, as before set forth. The commissioner adopts for his decision the report of the examiners, dated 13th February, 1860, the substance of which is that "on the 1st of June, 1857, David Alter and Samuel A. Hill presented an application for letters patent for an improvement in retorts for obtaining the volatile products from coal, shale, &c., by dry distillation. The invention consisted in giving a continuous rotary motion to metallic retorts of a cylindrical shape for the extraction of the volatile products of coal for the purpose of subjecting the contents of the retort to a more uniform heat than can be obtained where the retort is stationary, and also greatly expediting the process without in any way diminishing the amount of product from a given quantity of coal. This retort revolved upon an axle, resting on masonry. To the axle at the front end is attached a large cog-wheel, which is turned by a wheel and pulley arrangement on the application of power. At the rear end of the retort, the axle is made hollow, forming a tube which communicates with the inside of the retort, and forms the means by which the volatile products are removed as they are distilled. The retort is kept in motion from the commencement to the close of the distillation of the coal contained within.

The patentees do not claim the use of the retorts so constructed as to be capable of being shifted on their axis from time to time, so as to expose a different portion of the retort to the action of the fire at each successive charge, but assert "that what we do claim as our invention, and desire to secure by letters patent, is the use of retorts so constructed, as hereinbefore described, as to revolve continuously on their axis during the process of distillation substantially in the manner and for the purposes set forth." This claim being admitted, letters patent were issued to Alter and Hill dated April 27, 1858. On January 27, 1859, this patent was reissued, having the following claim. "The destructive distillation of coal or other bituminous substances for obtaining the liquid products thereof in the form of what is known as coal-oils by the process herein before described, viz. combining

the use of a low temperature not exceeding a low red heat, say about 850° Fahrenheit, with the use of retorts so constructed as to have a rotary or other equivalent motion for the purpose of agitating their contents substantially in the manner and for the purposes hereinbefore set forth." On June 24, 1859, Franklin W. Willard completed an application for letters patent for a method of obtaining volatile liquid products from coal, which invention involved the use of a revolving retort, and the temperature at which the distillation was to be effected was indicated as about 850° Fahrenheit. Willard claimed the process herein described for extracting the liquid products from coal, the same being effected by combining a retort so constructed and operated as to have a rotary or other equivalent motion for agitating its contents, and exposing all portions of the charge equally to the heat, with the use of a low red heat of about 850° F. as set forth. The commissioner then proceeds to state the testimony on the part of the appellees, upon which testimony he says: "By the foregoing testimony the invention of the patentees is shown to have been fully made out, as far back as the fall of 1855, either the month of September or October, and the invention as then seen by experiment was substantially that described in the patent of Alter and Hill. It was the distillation of coal in a cylindrical metallic retort, which revolved over the fire for the purpose of moderating the heat; it was not oscillation or agitation of the retort, it was revolution, which was practiced." The commissioner next proceeds to state the testimony on the part of the appellant.

The commissioner thinks the experiment of September or October, 1855, made by Willard, as testified by Conklin and Willard, is not the same invention with that of the patentees. That invention, he says, as shown, is not agitation or oscillation of a retort, but revolution upon the long axis of a cylindrical metallic retort with a low temperature; for long before this coals had been agitated in retorts and oscillation of retorts had been practiced, and even partial revolution of a retort had been many years patented abroad; so that mere agitation of the coal by other than by complete revolutions forms no part of this invention, to which must be added the exhibition of a low degree of heat.

Now, if we compare this experiment of Willard's with this statement of the true invention, we will find that it is not substantially

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the invention in question. In the first place, the heat was a very dull cherry-red, says Conklin, and he stirred up the fire and turned the retort. A very dull cherry red, seen by day light is above the temperature claimed by both parties; and from the shape and form of the retort, which was like model F, it was more probably turned on its bottom rather than on its inside. This is shown to be actually the case by referring to F. W. Willard's deposition, (answer 25,) where he records his experiment made about 1855, when he says Mr. Conklin was present. Willard says he hung the retort so that it could be rotated perpendicularly, end over end. This is obviously not the invention of Alter and Hill, nor is it the invention claimed by applicant himself. This was not the earliest experiment of Willard. According to his statement, he was thus engaged from the month of July, 1853; his experiments were tentative and unsatisfactory. In April, 1855, having experimented several times, he came to two conclusions: 1st, that a low degree of heat was a sine qua non, and, secondly, that some method of agitating the coal would be desirable. Now, agitation merely is not the invention in dispute; it is agitation by horizontal revolution, and this was not known to Willard, up to April, 1855. How much later it was before he attained the conception of revolving the retort we have already shown by the experiment of September, 1855, in which Willard was assisted by Conklin; that the retort was rotated, but not revolved horizontally, which is the true invention. A bare inspection of the glue-pot retort, (Exhibit O,) in which the experiment of May, 1855, was performed, shows that revolution of the retort was not contemplated. It was simply an action of oscillation, for the retort cannot be made to revolve except by inverting its head at the same time, which it is hardly probable Willard intended should occur. Willard states that about the last of March, 1856, he altered the construction of his retort (answer 32) so that the retort might lie horizontally over the fire, made his vessel tight, and rotated the retort horizontally by a monkey wrench, and the temperature was not over 800° Fahrenheit. Exhibits E, G, D, Y, represent this retort. This is the true invention, the one in dispute, and this appears to be the earliest date to which it can be traced as Willard's idea; the subsequent operations of Bradford are not of importance in this connection. Inasmuch then as the last of March, 1856, is the earliest period to which Willard can refer the date of his invention, and inasmuch as the evidence of Moorhead carries back the invention by Alter and Hill to September or October, 1855, it is obvious that priority of invention belongs to Alter and Hill.

The commissioner notices the testimony in relation to the various declarations of Willard respecting the time to which he could carry back his invention, and then says: "Admitting, then, this as the date of the invention of Willard, and seeing that the application of Willard for a patent was made in the latter part of June, 1859, it appears that three years and nearly three months elapsed between the discovery or invention and the application to this office for a patent. The reason assigned by Willard is want of means, but it

appears from his own evidence that prior to his meeting with Mr. Allen he was offered the means of placing his claim before the office. If priority of invention had been proved by Willard, the question of abandonment might be urged with considerable force against him on account of this delay, but as he has not succeeded in establishing priority, the consideration of that question does not rightly belong here. In view, therefore, of the facts proven by the testimony showing that Messrs. Alter and Hill anticipated Mr. Willard in the invention in dispute by a period of nearly six months, thereby proving priority of invention, it is recommended that this interference be dissolved, and that the application of F. W. Willard be refused." Which report was confirmed by the commissioner, adjudging priority of invention to Alter and Hill, and disallowing a patent to the appellee, February 14th, 1860.

From this decision Willard's assignee hath appealed, and filed sixteen reasons of appeal. They are full and sufficient specifications of the three general heads, assigned as errors: First, as to the nature and character of the invention; second, respecting the evidence on behalf of Alter and Hill, and their assignees, the patentees and appellees in this case; third, respecting the evidence on behalf of F. W. Willard's assignee, the appellant and applicant in this case. The reasons will have their due consideration.

To these reasons the commissioner filed his reply by way of report. This document refers to the report just recited, and is in substance very nearly the same. It states additionally that, when Alter and Hill obtained their original patent, it was not broadly for the distillation of coals in a revolving retort, nor for any mode which would agitate the coal during distillation, for these points were described in patents to which the two parties were referred, and who thereupon disclaimed such, and confined their invention to retorts so constructed as herein before described as to revolve continually on their axes during the process of distillation, substantially in the manner and for the purposes set forth. The term "so constructed" involved the idea of a metallic retort, capable of continuous revolution, and the manner of distillation described a low red heat. When the patentees reissued their patent, they narrowed somewhat their claim by expressing the conditions of manufacture more fully, specifying in the claim the use of a temperature about 850° of Fahrenheit in retorts capable of distillation, and having rotary

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or other equivalent motion during the distillation. The phrase "or other equivalent motion" has been dwelt upon by appellant as evidencing the claim, and thereby admitting his earlier experiments as coming within his scope. But when the history of this art is known, one may ask, what is the other motion equivalent to a rotary one? Agitation of the contents of the retort was patentable, as also rotation of the contents of the retort. The retort was fully rotated on its axis during distillation by Belslay and Rowen, and particularly so by Lahon and Gingembres. But with these was the exhibition of the high degree of heat, of these existing patents; as the patentees were aware when they obtained their reissue, and when the words "or other equivalent motion" was subjoined. Common phrases and forcible ones as they are in many patents, they had no meaning here, since every other motion like it was already described; and since Alter's and Hill's invention was thus narrowed, no wider construction must be allowed for Willard's experiments.

Upon this state of the case, the commissioner laid before me all the original papers and evidence with his decision, the reasons of appeal and his report according to law, and to previous notice given of the time and place appointed for the hearing of said appeal, when and where the parties respectively appeared by their advocates who filed their arguments in writing, and submitted the said case.

And first as to the question of competency of Willard as a witness for appellant on the ground of interest. The objection does not appear to have been regularly made, and both parties having examined him, the objection must be considered as waived.

I proceed therefore to consider the case upon the merits. The parties in this case must be looked upon as original, independent, meritorious inventors of a peculiar process for the distribution of coal-oil. They both accomplished the purpose of their invention as stated in their specifications. The inventions are substantially the same. The one has already obtained a patent; the other is an applicant for a patent, contending that he is the prior inventor, and this is the issue. The thing in issue is substantially this: Practically extracting oil from bituminous coal by subjecting the coal equally to a moderate heat while undergoing a constant or continuous agitation. The appellant contends that by his proof his invention dates back to early in May, 1855. For this he principally relies upon the testimony of Willard, who says that by his experiment in April and May, 1855, he ascertained that by a low degree of heat, say about 800° Fahrenheit, he obtained the largest quantities and best qualities of oil; that he likewise, in the course of his experiments spoken of, came to the conclusion that some method of agitating the coal whilst undergoing the process of distillation would be desirable. This conclusion he came to in April, 1855. In May, of the same year, he constructed his glue-pot contrivance, and when he had adjusted it to suit him he would screw the union-joint tight, for the purpose of saving his vapor, and preventing its leaking, and having the coal, in this way, he found he had obtained the object he was seeking for; that is, to expose as much surface of the coal as was possible to a slow

fire, and obtaining the results of distillation at a low degree of heat, and at the same time agitating the coal inside of the retort, producing a less destruction of the vapor, and getting a larger and better product of oil. Upon the end of the gas pipe, projecting through the side of the glue-pot, into the inside of the retort, he screwed a nut, for the iron of which the glue-pot was composed was too thin to hold his gas-pipe with safety. He says that he afterward redistilled and purified the oil produced by this and other experiments made with the same apparatus, and as described above. Is there a sufficiency in this evidence to show that Willard had any fixed, regular idea of the invention at the time of this experiment? With respect to the machine used by him; he says that he connected his gas pipe by an union-joint with a condenser; he commenced an occasional turning of the glue-pot over the fire. When he had adjusted it to suit him, he would screw the union-joint tight, for the purpose of saving his vapor and preventing it leaking, but when he wanted to alter the position of the retort he unscrewed it. According, then, to this operation, when screwed, the retort could not turn at all; when unscrewed he altered the position of his retort to another angle, and screwed the joint again, and so on. No witness corroborates him as to the fact of rotation at this experiment, and he has shown inconsistencies in statements about the date. The relation in which he stands, the nature of the operation, with these circumstances, tend to impair the credit of his testimony; but even if unimpaired, it fails to show the existence of an essential feature, the continuous revolution and agitation for the purpose of exposing the charge of coal equally to the heat.

The commissioner says the invention is very much narrowed down by the English patents, which he says were very well understood by the parties, by which oscillation and agitation of the contents of the retort were patented, also rotation of the contents of the retort. The retort was fully rotated on its axis during distillation by those patents. The invention, he goes on to say, was confined to retorts so constructed as to revolve continuously on their axis during the process of distillation. Thus, it must plainly appear that the appellant's invention cannot date from the month of April or May, 1855.

The next experiment made by him was in September or October of the same year. He then made a pattern for a larger retort

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that would hold some seven or eight pounds of coal, which he set into an oval upright stove made of sheet-iron, and lined with fire bricks. He says: "I hung the retort into the stove in such a manner as to be rotated perpendicularly or end over end;" and he then proceeds to state particularly the manner of hanging, &c. The result of the above experiment, he says, "I found, was more successful in attaining the desired product than the first experiment." Conklin says Willard (in the experiment just alluded to) took four or five pounds of coal, put it into an iron retort, about fourteen or fifteen inches long, about six inches at the bottom, about eight inches at the top, with a flange in the top. The lid was put on a strap across the top, with a set screw in it, to hold it down tight. He then placed it over the fire, and made oil. He stirred the fire up, and turned the retort. He gave it a rotation of probably three times in a minute. He thinks that, in the course of ten or twelve hours, they got from a pint to a quart of oil, on this occasion; also the glue-pot retort with the union screw was used. According to a particular description of it by one of appellant's witnesses, its contrivance was to oscillate perpendicularly; by "oscillate" he means a movement of the retort backwards and forwards. He says that he presumed that Willard did not think it necessary that it should be revolved all around; that any common mechanic might know from the construction of it, that such was not the intent. I think the testimony of this witness must be considered correct. Of course, therefore, there is no sufficient evidence that Willard had attained to the idea at that period, nor do I think Alter and Hill had.

The next period was in March or April, 1856. The commissioner thinks that the evidence shows that at this period Willard completed his invention, and I concur with him. But on the 19th of February, in the same year, Alter and Hill had made the discovery, and of course they must be considered as the prior inventors. There are parts of the testimony which prove that they were joint in the invention. Upon the whole, the decision of the commissioner ought to be, and is hereby, affirmed.