

FERNOLINE CHEMICAL CO. v. CAROLINA OIL & CREOSOTE CO.

Circuit Court, E. D. North Carolina.

January 15, 1889.

PATENTS FOR INVENTIONS—INFRINGEMENT—APPARATUS FOR DISTILLING
TURPENTINE.

In reissued letters patent No. 10,689, to J. D. Stanly, for an apparatus for distilling and purifying turpentine, the claims are for a fire-box; an arch over it, and under the retort; a retort chamber above the arch; and spaces above and below the retort, connected at one end. The products of combustion pass from the fire-box underneath the rear end of the arch; thence horizontally along the under side of the retort, to the front end, whence they ascend vertically at the side of the retort to a space above it; thence backward along the top of the retort to the chimney. In the apparatus constructed by defendant under letters patent No. 388,750, June 5, 1886, a longer retort is heated from opposite ends by two furnaces, each heating one-half. In the space between the arch and retort, in each furnace, vertical partitions pass more than half way around the retort, terminating at alternate sides. The products of combustion escape at the side and rear end of the arch and the middle of the retort, the passages deflecting them upon the walls of the furnace, instead of upon the retort. They then ascend, and at the top of the chamber meet one of the partitions, and are made to descend to the heated arch, where another partition causes them again to ascend, the process being repeated until they escape at a chimney at the forward end. *Held*, that the Stanly patent protects at most the manner of delaying the products of combustion for equalizing the temperature, and is not infringed by defendant's apparatus.

In Equity. Bill to restrain the infringement of a patent, and for an account.

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Stickney & Shepard, W. T. Dortch, Strong, Grey & Stamps, and R. B. My Master, for complainant.

S. F. Phillips, M. S. Hopkins, and Battle & Mordecai, for defendant.

SEYMOUR, J. This is a bill in equity, filed by the Fernoline Chemical Company, to restrain the infringement of a patent, and for an account. The letters patent under which plaintiff claims are reissued letters No. 10,689, granted to one James D. Stanly. The original patent bears date October 31, 1882, and is numbered 266,909. Reissue patent 10,689 is for an apparatus for distilling turpentine, and for the purification of the crude products of the distillation thereof. It relates to a process by which pine wood is placed in an oven or retort, subjected to heat, and the vapor thus caused to issue from the wood conveyed into receptacles, in which it is condensed and distilled. The apparatus consists of a heating structure, a retort for containing the wood, and the construction for condensation. The controversy is with respect to the heating structure, and the means adopted to convey the heat to and distribute it about the surface of the retort. The defendant is engaged in the business of manufacturing oil from pine wood by distillation. Before the date of original patent, 266,909, Stanly had taken out two other patents for distilling turpentine and producing oil and other products from wood, numbered, respectively, 130,598, and 131,312, dated August 20 and September 10, 1872. On the 21st of February, 1882, and therefore earlier than the issuing of plaintiff's patent, he had sold to defendant's assignors, Hanson and Smith, the exclusive right to use said inventions (and all improvements that might be made thereon) in the state of North Carolina. The invention so purchased not proving, as defendant alleges, practically satisfactory, by reason of the furnaces failing to heat the retort evenly, by too great a consumption of fuel, and by burning the bottom of the retort, Hanson and Smith devised sundry improvements, which were patented by letters numbered 333,750, granted June 5, 1886. The apparatus used by defendant, and alleged by plaintiff to be an infringement on its patent, is constructed, as defendant claims, on the plan of the last-mentioned patent, which is itself an improvement on the patents which it holds under assignment from Stanly. The claims made by Stanly in the specification forming part of the reissued patent 10,689 are a fire-box; an arch located over the fire-box and under the retort; a retort chamber above the arch, in which is located the retort; and spaces above and below the retort, separated for the greater length of the chamber, but connected at one end. The object of the arch over the fire-box, and of the separation of the spaces above and below the retort containing the pine wood, is to equalize, as far as may be, the heat applied to all parts of the retort. The products of combustion are kept from the retort by the arch, under which they pass to its rear beneath the arch, escaping from the latter at the rear end. Thence they pass horizontally along the under side of the retort, between the retort and the arch, to the front end, where they ascend, through vertical passages at the sides of the retort, into a space above the same. They then pass rearward, along the

top of the retort, to the chimney, which is at the back end of the apparatus; that is to say, the heat passes backwards under the arch before impinging upon the retort, thence forward over the arch and under the retort, thence backward over the retort to the chimney. The original Stanly patent; No. 180,598,—one of the two the right to use: which was purchased by defendant's assignor,—was, according to the specification; an improvement in the process and apparatus whereby spirits of turpentine are distilled from pine wood. It provides, as does plaintiff's patent, a process whereby pine wood is placed in a retort, subjected to heat, and its vapor conveyed into receptacles, and condensed. The fire is placed directly under the retorts. The apparatus now used by defendant provides for an equalization of the heat applied to the retort by means of forcing it to pass under an arch, and through flues surrounding the retort.

Before considering what the court deems the substantial difference between the mode in which the heat is applied to the retort in the plaintiff's and the defendant's inventions, I will state that the testimony shows that plaintiff's patent rests for its validity upon a very narrow margin of invention. Arranging spaces around vessels of various forms for the purpose of retarding and regulating the process of heating such vessels, and the use of arches above fires to protect retorts from the action of flames, were both old in art at the time of the invention covered by plaintiff's patent. What it is entitled to protection in, if anything, is the manner in which the products of combustion are delayed in being carried around the retort; that is, its mode of equalizing the heat, and its combination of contrivances for effecting its purpose.

In defendant's apparatus the fire-box is, as in plaintiff's, covered by an arch. The retort is longer than that used by plaintiff, and is heated from opposite ends, by two furnaces, each heating the retort from its end to the middle. In each furnace there is a space entirely around the retort between the outer surface and the surrounding masonry. In this space there are vertical partitions passing alternately over and under the retort. Each partition passes a little more than half way around the retort, and the ends terminate at the side of the retort. These vertical partitions divide the space around the retort into an indirect flue or passage extending upwards and downwards, repeatedly, from the top to the bottom of the retort. At the rear end of each furnace—that is, under the middle of the retort—the arches are provided with openings extending outward into the chamber which contains the retort. The arch extends continuously to the rear wall. The openings through which the products of combustion escape into the chambers surrounding the retort are situated at the side and inner end of the arches, and deflect them so that they do not directly impinge upon the retort, but are directed more immediately to the side walls of the furnace. The result of the mechanical arrangement described is that the products of combustion, after passing along under the arch and through the flues into the chambers surrounding

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the retort; and impinging upon the side walls of the apparatus, immediately ascend to the upper part of the chamber. On reaching it,

being impelled forward by the draft, they meet a partition, extending down from the roof of the chamber, and are thrown down to the upper surface of the protecting arch, where they come in contact with a surface heated by the direct action of the flames. Again impelled forwards, they, strike another partition, are thrown upwards, and then, upon reaching the top of the chamber, are again diverted downwards, and again upwards, until they escape through chimneys situated at the forward ends of the apparatus. I do not place any stress upon the fact that two furnaces are used in defendant's and only one in plaintiff's apparatus; but for other reasons I cannot consider the former as substantially the same Structure as the latter. The use of vertical, instead of horizontal, partitions has the effect of changing the method of heating the retort. The products of combustion in the case of the vertical partitions immediately surround the upper as well as the lower part of the retort, while under the Stanly patent they pass under the entire length of the retort before reaching its upper surface. Again, the heat in defendant's apparatus, after surrounding both the lower and upper part of the retort, is twice thrown down against the lower hot arch, where its temperature may be renewed. Again, the flames in defendant's furnace are diverted from the retort when they first emerge from under the arch, instead of directly impinging upon it, a fact which tends to increase its durability. These differences, are, it would seem, sufficient to relieve defendant from the charge of infringing upon the plaintiff's method of producing the result aimed at, and are, substantial improvements. The result itself I do not consider as covered by either patent.

I have laid no stress on the alleged tests, to which so much testimony is directed. Defendant's trial was *ex parte*. In that of plaintiff the facts that no damper was placed in the smoke-stack of defendant's apparatus, and that the wood used in it was 20 per cent, lighter than that used in plaintiff's retort, deprive the tests of all title to confidence. The bill is dismissed.