

Nor is the publicity of the use dependent on the number of persons to whom it is known where the device is given or sold for use without limitation or injunction of secrecy. A use or knowledge of the use, if confined to one person, is fatal to the patent. See, also, *Manning v. Glue Co.*, 108 U. S. 462, 2 Sup. Ct. 860.

In *Elizabeth v. Pavement Co.*, 97 U. S. 126, it is said that while abandonment of the invention to the public will not necessarily follow its public use or sale within two years before the inventor's application, "yet if the invention is in public use or on sale prior to that time, it will be conclusive evidence of abandonment, and the patent will be void."

The rule of judgment applied to cases where the question of public use arises is stated in *Manufacturing Co. v. Sprague*, 123 U. S. 249, 8 Sup. Ct. 122, as follows:

"In considering the evidence as to alleged prior use for more than two years of an invention, which, if established, will have the effect of invalidating the patent, and where the defense is met only by the allegation that the use was not a public use in the sense of the statute, because it was for the purpose of perfecting an incomplete invention by tests and experiments, the proof on the part of the patentee, the period covered by the use having been clearly established, should be full, unequivocal, and convincing."

The condition imposed by section 4886, Rev. St. U. S., does not require for the defeat of a patent, because of the sale or use of its subject-matter with the inventor's consent two years prior to his application, that such sale or use must have been continued during all that period. It is enough if the inventor has sold an article or permitted its use without restriction at any time over two years before he applied for a patent. *Andrews v. Hovey*, 123 U. S. 267, 274, 8 Sup. Ct. 101; *Id.*, 124 U. S. 694, 719, 8 Sup. Ct. 676; *Egbert v. Lippmann*, 15 Blatchf. 295, Fed. Cas. No. 4,306.

The object of section 4886, which before the revision of the statutes was section 24 of the act of 1870, as said by Mr. Justice Blatchford in *Andrews v. Hovey*, supra, was to "require the inventor to see to it that he filed his application within two years from the completion of his invention, so as to cut off all question as to the defeat of his patent by the use or sale of it by others more than two years prior to his application, and thus leave open only the question of the priority of invention." Under these rulings and under the proofs in this case, it is clear that there was such a public use and sale of the Craig lubricator as to avoid his patent.

For these reasons, without discussing other questions, the bill must be dismissed, with costs.

TAYLOR BURNER CO., Limited, v. DIAMOND.

(Circuit Court, W. D. Pennsylvania.)

No. 24.

1. PATENTS—INVENTION—GAS HEATERS OR BURNERS.

The Taylor patent, No. 499,151, for an improvement in gas heaters or burners, consisting substantially in giving to the jet holes in a vertical

asbestos board an upward inclination, whereby the gas discharges itself more freely and evenly, *held* to show patentable invention, in view of the very beneficial results achieved, and of the fact that, while the desirability of these results was long recognized, no previous inventor or mechanic had conceived of the improvement.

2. SAME—ANTICIPATION.

An invention, consisting in giving to the jet holes of a vertical-faced gas burner an upward inclination, is not anticipated by the previous use of gas-log burners, which, on some part of their circumference, had upwardly inclined jet holes, as this was a mere accidental use, without recognition of its beneficial results. *Toplift v. Toplift*, 12 Sup. Ct. 825, 145 U. S. 156, applied.

Suit in equity for infringement of a patent.

Bakewell & Bakewell, for complainant.

John H. Roney, for defendant.

BUFFINGTON, District Judge. This is a bill in equity, filed by the Taylor Burner Company, Limited, against James H. Diamond, doing business as the Diamond Burner Company, for alleged infringement of letters patent No. 499,151, granted said company June 6, 1893, as assignees of William G. Taylor. The subject-matter of dispute is a gas heater or burner. Infringement of the first claim is alleged, and the defenses set up are denial of patentable novelty and anticipation. In burners for open fireplaces there are several desirable points, viz.: Efficiency, or the production and utilization of all the heat possible from the gas used; economy, or the doing so with a minimum consumption of fuel; safety in operation; and, lastly, uniting these in a fire and structure pleasing to the eye. The general type of burners in use before Taylor's present patent were those provided with vertical asbestos board or metallic face plates, through which the gas passed from a chamber formed on the rear of the plate. The asbestos board ones were provided with tufts of asbestos on the face, and beneath these tufts or rows the gas passed through the face by means of small horizontal jet holes. The ones with metallic face plates were also provided with rows or tufts of asbestos, and the plates themselves were corrugated. On the upper sides of these ridges were jet holes, which kept the flame closer to the face plate, and therefore with a resulting increased radiation. These burners were open to several objections. So long as there was a heavy pressure of gas (which, of course, meant increased consumption and expense), the flame was quite uniformly spread over the entire face surface; but, when pressure was reduced, the flame localized or burned in spots, thus presenting a ragged, scrawny appearance, or burned at the top of the face plate only, leaving unconsumed the lesser pressure of gas escaping at lower points. Sometimes the flames would back or run through the jet holes, causing puffs or slight explosions. In the asbestos board burner the greater the pressure the further the gas was driven from the face plate, and, consequently, there was less radiation and less brilliancy in the asbestos tufts. To obtain satisfactory results in heat and appearance, which latter is an important element in a fire which people sit facing, both types of burner had to be used, with a full pressure of gas, and this made them expensive.

These difficulties were overcome by Taylor by a device the simplicity of which is its chief merit. He took the common asbestos board face plate of the old construction, but, instead of piercing the jet holes horizontally, as had been done, he gave them a downward inclination, preferably of such an angle that the lower side of the external opening was higher than the upper side of the internal one. In his specification he says:

"By arranging the openings at an inclination as shown, I have found that, even with the lowest pressures, there is no danger of the air from the outside passing into the gas chamber, and causing an explosion, as whatever gas there may be in the passages, as at the moment the gas is turned out, it will have a tendency to rise and discharge itself from the outer face of the burner, and this tendency is sufficient to prevent the air passing into the gas chamber, and being ignited therein. There are other reasons which make the particular arrangement better, among which may be said that the gas apparently is more evenly distributed over the surface of the heater, by means of the inclined openings, than when they are perpendicular thereto. * * * It may be further added that, where the openings or perforations are horizontal, and the gas in the opening, owing to its buoyant action, it tends to press upon the upper surface of the opening, and if the pressure at both ends of the opening is substantially the same, the gas will either remain in the opening or escape from both sides about equally. When, however, the openings are inclined, the buoyant action of the gas tends to cause it to rise through the opening; and, as the upper end of the opening, in my construction, is outside the gas chamber, it will be seen that the tendency of the gas is to flow out of the burner, and this adds to its safety, and aids in preventing explosion."

The claim here in question is the first, namely:

"A gas burner, comprising a plate of asbestos material having a series of perforations through the same, the perforations being at an inclination to the surface of the plate, substantially as described."

The results of this simple change are really quite striking. The flame closely hugs the face plate, either under high or low pressure. More heat is radiated into the room from the same amount of gas. The asbestos tufts are made more generally incandescent. When the gas is turned down, the jet holes seem to act as tiny flues, and draw forth the gas in small quantities, which still continue to burn, or flash in flame, from one jet to another over the entire surface of the plate. When the gas is turned off the fire goes out quietly, and, even turned very low, there seems to be no tendency of the flame to follow the gas into the chamber, and cause puffs or small explosions. Experiments made during the taking of the proofs show that, where two burners of identical construction, save that one had horizontal, the other sloping, holes, were used under similar conditions, the latter radiated two-ninths more heat than the former. The distribution of the flame under low pressure is also more even. The evidence in the case, and the illustrations given during the argument, satisfy us the Taylor device accomplished a new and useful result in gas burners, and its simplicity commends, instead of condemns, it, in our judgment. It is true Taylor did nothing more than incline the holes of the old asbestos board construction. But, where the subject is so volatile and fleeting as one as gas, seemingly simple changes of conditions, surroundings, or appliances often accomplish new and far-reaching results. So, in this case, the simple change of the direction of the jet holes has made Taylor's device the success it is shown to be. Such

a method never seemed to have occurred to any of the mechanics who have worked with gas fires for years. While the desirability of keeping the flame close to the radiating face plate was recognized as highly desirable, no one seems to have thought of inclining the holes in an asbestos plate, or to have discovered the subtle and desirable effect such inclined holes would exert on the gas. The character of the result accomplished, and the advances made by it, to our mind, stamp Taylor's device as of a patentable character. Nor was it anticipated by prior devices. While the placing of the holes in the upper side of the ridges of the corrugated metallic plates in use at that time brought the flame in close contact to the face plate, yet these holes were not the holes of the Taylor device, or capable of performing the same functional purpose. In Taylor's burner, a board of material thickness is used, and such thickness (a factor absent in the metallic plate) permits the lower side of the external opening to be higher than the upper side of the internal opening. By this means the higher heated portion of the face-plate opening serves as a positive draft to draw the gas to the surface, and, generally, over the entire face plate.

Nor is Taylor's device anticipated in the gas log or in the burner of the Hewitt patent. While some of the holes in these constructions are inclined, yet such inclination is merely accidental, and was not given for any functional purpose. The holes are made normal to the surface in which they are drilled, and are given a relatively upward or downward inclination to the side they happen upon. Such a construction would be fatal to the efficiency of the Taylor device. Such mere accidental use of some of the features of an invention, without recognition of its benefits, does not constitute anticipation. *Topliff v. Topliff*, 145 U. S. 156, 12 Sup. Ct. 825.

Upon the whole case, our judgment is with the complainant. The respondent's structure is a substantial reproduction of Taylor's device, and is clearly an infringement upon the first claim of his patent. A decree may be prepared.

NATIONAL MACH. CO. v. WHEELER & WILSON MANUF'G CO.

(Circuit Court, D. Connecticut. January 11, 1896.)

1. PATENTS—DECISION IN INTERFERENCE PROCEEDINGS—CONCLUSIVENESS.

The fact that a party to an interference proceeding permits the decision to go against him by default does not make such decision conclusive against him upon the question of the patentability of the machine in a subsequent suit against him for infringement. It is conclusive only upon the issue of priority of invention.

2. SAME—TWO PATENTS TO SAME INVENTOR.

The question whether two patents cover the same invention depends upon the scope of their claims. Claims are coextensive which specify the same combination of the same number of parts, with the same features, though the functions which are mentioned in the claims are not coextensive. But two claims are not coextensive which specify different combinations of parts of a process, machine, or manufacture, even where some of these parts are in each of the combinations. *Miller v. Manufacturing Co.*, 14 Sup. Ct. 310, 151 U. S. 186.