v.39F, no.2-8

ZINSSER *ET AL. V.* KREMER.

Circuit Court, D. New Jersey. June, 1889.

1. PATENTS—CARBONATING BEER—INVENTION.

Reissued letters patent No. 9,129, granted March 23, 1880, the claim of which was "the process of charging beer and other liquids of a similar nature with carbonic acid, by dropping into and through the liquid lumps of bicarbonate of soda, or of other alkali, thereby causing the acid discharged from the lumps to pass through the entire column of liquid," the process consisting of compressing lumps of bicarbonate of soda or other alkali so that they would drop to the bottom of the vessel containing the liquid, instead of being thrown on top of the liquid in powdered form, as theretofore, thus causing waste, are not void for want of invention.

2. SAME—PRIOR USE.

In a suit for infringement, where defendant's evidence of "prior use" is met by as much evidence to the contrary, and defendant's evidence shows that the prior use was strictly secret, the defense of "prior use" is not sustained.

3. SAME—INFRINGEMENT.

The use of artificially compressed lumps of bicarbonate of soda for the purpose mentioned in complainant's claim is an infringement of their patent though the lumps are not compressed with the aid of cement which is referred to in complainants' specifications as an available aid for that purpose, but which is not mentioned in the claim.

In Equity. On bill for infringement of patent.

Arthur v. Briesen, for complainants.

Joseph M. Deuel, for defendant.

BUTLER, J. This suit is for infringement of re-issued letters patent No. 9,129, granted to the plaintiffs March 23, 1880, "for a new and useful improvement in treating beer and other liquids." The claim is stated as follows:

"The process of charging beer and other liquids of a similar nature with carbonic acid, by dropping into and through the liquid lumps of bicarbonate of soda, or of other alkali, thereby causing the acid discharged from the lumps to pass through the entire column of liquid, substantially as specified."

The specifications are as follows:

"This invention consists in treating beer and other liquids of a similar nature with lumps of bicarbonate of soda or other alkali, said lumps being compacted by means of a suitable cement, so that they are heavy enough to at once drop through the liquid to be treated, upon the bottom of the vessel containing the liquid. The carbonic acid evolved from said lumps is thus compelled to permeate the entire column of liquid above it, and at the same time to give up the requisite quantity of alkaline matter. Together with the lumps of bicarbonates of alkali may be used lumps of tartaric or other suitable acid, compacted in the same manner as the lumps of bicarbonate of alkali, as the amount of carbonic acid evolved from the latter can be easily controlled. It is a common practice

with brewers and others to use bicarbonate of soda, either alone or together with tartaric acid, in the manufacture of beer, sparkling wines, and other effervescent liquids, for the purpose of increasing the life of such liquid. The mode of applying such article or articles—by brewers, for instance—is to apply about one ounce of the bicarbonate of soda to each quarter-barrel with a tablespoon, the bicarbonate being in the form of a

powder. The powders on being thrown into the barrel of beer, will at first float on the surface of the liquid, and immediately evolve carbonic acid, a large portion of which is lost, together with the beer which is thrown out by the action of the acid before the barrel can be closed by a bung. Besides this, the operation of filling barrels is carried on in a great hurry, and a large quantity of the bicarbonate of soda handled with a spoon is spilled over the barrel, and wasted. Like effects occur in the use of tartaric acid in crystals when applied together with powdered bicarbonate of soda. These disadvantages we have obviated by preparing the bicarbonate of soda or of other alkali and the acid in solid lumps of such weight that the lumps at once drop through the liquid upon the bottom of the vessel, and give off the carbonic acid to the entire column of liquid, and not only, as heretofore, to the upper stratum. These lumps we produce by mixing powdered bicarbonate of alkali with a suitable cement, such as a solution of dextrin, and then compressing the same in molds of suitable size and shape. Lumps of acid are made in like manner. The advantage of using the bicarbonate of alkali, either alone or in connection with acid in this shape, is perceptible at once. The lumps being in compact form, when dropped into a barrel filled with beer, ale, or other liquid, will at once sink to the bottom, and the carbonic acid evolved from them is forced to stay in the liquid. The barrel can be easily closed by a bung without losing a particle of carbonic acid or of beer, and the said lumps can be introduced into the barrel without any waste. Besides this, the weight or size of our lumps is so gauged that each barrel will receive the exact quantity of bicarbonate of alkali and of acid required, and that the liquid in a number of barrels, after having been treated with the bicarbonate of alkali, with or without acid, will be of uniform quality."

The answer attacks the patent for want of inventive novelty, for defective specifications and claims, and because of prior use. It also denies infringement. The inventive novelty claimed consists in passing compacted lumps of bicarbonate of soda or other alkali, through beer and similar liquids, in casks, and depositing the same at the bottom, where it will slowly dissolve, and the carbonic acid evolved be distributed equally throughout the liquid. The treatment of beer and other liquids with bicarbonate of soda was not new. It was in common use, and had been for a long time. The method employed, however, was that of dropping powdered bicarbonate on top. This was attended with serious disadvantages. The liquid was not thoroughly permeated, and the powder, floating on top, instantly evolved acid in quantities so large as to cause overflow before the casks could be closed. The patentee sought for means to obviate these disadvantages. He saw that if the bicarbonate could be deposited at the bottom of the liquid, and its dissolution retarded, the entire contents of the cask would be equally treated, and the loss from overflow be avoided. He further saw that if the "bicarbonate could be compressed into solid lumps it would pass to the bottom when dropped, and the dissolution also be retarded. Experimenting with this method, he found the result beneficial and satisfactory. Thereupon he

applied for and obtained the patent. The novelty thus exhibited seems quite sufficient to sustain his claim. It is true that nothing more is done than charging the liquid with carbonic Acid gas, and this has been done before. But he does it in a different way, and with different results, producing a better article more economically,

avoiding all waste. The same objection was made to the Crane patent, for an improvement in the manufacture of iron. It covered a hot-blast with anthracite coal. A hot-blast with bituminous coal was old; and a cold-blast with anthracite was old. The patentee simply introduced into the existing process a hot-blast with anthracite. The change was very slight, but the result was highly beneficial, and the patent, after a severe contest, was sustained, *Crane* v. *Price,* 1 Webst. Pat. Cas. 375,) has withstood the test of criticism and time, and is as good authority to-day as when first published. Hall's patent, for a new process of manufacturing lace, is similar in character. It covered the use of gas-flame for singeing off the superfluous fibers of thread. Flames of other substances had been employed a long time. By the use of gas-flame, however, the fibers were more effectually removed, and the lace given a smoother and finer finish. This patent encountered the same objection,—want of novelty,—but was sustained in *Hall* v. *Jarvis,* Id. 100, which is still quoted with approval. The reports show many similar cases. Probably no one has considered this subject with greater care than Judge Curtis, who says, (Curt. Pat. 7,8:)

"We have just seen that, in order to make a new processor method of working or producing an effect or result in matter the subject of a patent in England, a somewhat liberal construction of the term manufacture became necessary, by which an improvement in the art or process of making or doing a thing, was made constructively to be represented by the term winch ordinarily would mean only the thing itself, when made or done. It was doubtless to avoid the necessity for this kind of construction that the framers of our legislation selected a term which, *propria vigore,* would embrace those inventions, where the particular machinery or apparatus, or the particular substance employed, would not constitute the discovery so much as a newly-invented mode or process of applying them, in respect to the order, or position, or relations in which they are used. * * * This difficulty is avoided by the use of the term art, which was intended to embrace those inventions where the particular apparatus or materials employed may not be the essence of the discovery, but where that essence consists in using apparatus or materials in new processes, methods, or relations, so as to constitute a new mode of obtaining an old result, or a mode of attaining a new result."

And again, at page 15, he sums up the cases as follows:

"It will be seen that the comprehensive proposition laid down by the supreme court * * * embraces the cases where the process itself presents the advantages of the change from the old to the new, Or where the article manufactured presents such advantages, or where they appear both in the process itself and the result of using the process. Thus, if the article made be either new or better, having different or superior properties, the advantages are presented by the thing itself. * * * If the article, as made by the new process, is of as good or better quality, and cheaper, the advantage of cheapness is gained by a more economical process than the old one, and the improvement appears in the process,

while the article made by it may or may not be new; that is to say, may or may not possess other new properties than cheapness."

The line dividing invention from non-invention is very dim, and cases lying near it often present great difficulty. In deciding them judges have occasionally used expressions which seem extravagant, and

calculated to mislead. Some of them would almost justify a doubt whether a majority of patents issued are valid, and others whether any of them are invalid. The decisions, however, are generally harmonious. We think it may safely be said that wherever a change in the method of making an article of manufacture produces a different and beneficial result, although the difference consists only in improving or cheapening the article, and the change and its advantages had not been seen or made by others (than the patentee) interested in seeing and making it, there is sufficient evidence of invention to sustain a process patent. Here the effect of the change is to improve, and also to cheapen. The respondent admits the advantages by adopting the change. Much reliance is placed by him on *Dreyfus* v. *Searle,* 124 U. S. 60, 8 Sup. Ct. Rep. 390. On first blush this reliance may seem justified. Closer examination, however, will show that it is not. The patent there was "for an improved process of imparting age to wine," by introducing heat directly to the wine by means of metallic pipes passing through the casks, instead of the former method of applying heat to the cask simply, by placing them in ovens. While the specifications assert that this change saves time and fuel, and has other advantages, the case as reported, does not show this. It does show, however, that precisely the same method of heating water and high wines (to evolve alcoholic vapor in the latter) had been employed prior to the patent. The court finds these facts, and says: "There was no patentable invention in applying to the heating of wine or other liquid from the inside of the cask, the apparatus which had been previously used to heat another liquid in the same manner." With such finding of facts the case could not have been decided otherwise. It would be very unsafe to conclude from what is said respecting the process that the case would have been so decided without the facts referred to, and with proof of positive and material advantage from this method of applying heat.

We do not find anything to support the allegation of "defective specification and claim." Nor is the allegation of "prior use" sustained. There is some evidence that lumps of bicarbonate of soda were used at Brunjes & Linneworth's brewery before the complainants' invention; but it is met by as much, if not more, evidence to the contrary. With the burden of proof on the respondent this would be fatal, if nothing else stood in his way. In addition, however, is the important fact (proved by his own witnesses) that the use was strictly secret. Such a use is not important. *Gayler* v. *Wilder,* 10 How. 477; *Adams* v. *Edwards,* 1 Fish. Pat. Cas. 1.

Do the proofs show infringement? The respondent used lumps of bicarbonate of soda, as these complainants do, artificially compressed, so as to form a solid mass, without employing cement. This we believe to be an infringement. The employment of cement in forming the complainants' lumps is not a part of the patented process, and is not mentioned in the claim. It is referred to in the specification as an available aid in solidifying

the bicarbonate; it has no other office. The lumps of bicarbonate alone are important in the process. It may be more convenient,

require less time and less pressure, to use cement in forming them. The powder itself, however, if slightly moistened, or sufficiently compressed, will fill the role of a cement, as Dr. Sloane states. What the complainants discovered and secured by their patent is the use of artificially compressed lumps of bicarbonate of soda or other alkali in the manner and for the purpose described in the claim. What the respondent has done is an infringement upon the right thus secured. A decree will therefore be entered sustaining the bill.