NEW YORK FILTER MANUF'G CO. v. NIAGARA FALLS WATER-WORKS CO.

(Circuit Court, N. D. New York. December 29, 1896.)

PATENTS—INFRINGEMENT—METHOD OF FILTRATION.

The Hyatt patent, No. 293,740, for a method of purifying water by introducing into it a coagulant simultaneously with its passage to the filter, thereby avoiding the use of the settling basins of the prior art, and making the process continuous, construed, on motion for a preliminary injunction, and *held* infringed by a process in which the water is passed by a continuous flow through tanks before entering the filter, such tanks not in fact performing the function of settling tanks. Schwarzwalder v. Filter Co., 13 C. C. A. 380, 66 Fed. 152, explained and followed.

This was a suit in equity by the New York Filter Manufacturing Company against the Niagara Falls Waterworks Company for alleged infringement of a patent for an improved method of filtration. The cause was heard on a motion for a preliminary injunction.

M. H. Phelps and John R. Bennett, for complainant.

J. E. Hindon Hyde and Frederic H. Betts, for defendant.

COXE, District Judge. The complainant moves for a preliminary injunction restraining the defendant from infringing letters patent No. 293,740, granted to Isaiah S. Hyatt, February 19, 1884, for an improved method of filtration.

The patent has been sustained, after years of litigation, by the circuit court and by the circuit court of appeals. New York Filter Co. v. O. H. Jewell Filter Co., 61 Fed. 840, affirmed Schwarzwalder v. Filter Co., 13 C. C. A. 380, 66 Fed. 152. A motion for leave to amend and introduce new proof was denied. New York Filter Co. v. O. H. Jewell Filter Co., 62 Fed. 582. That Hyatt made a valuable invention is established conclusively by these decrees. Debate on that question is closed.

The defendant finds the principal justification for its acts in the concluding sentences of the opinion of the circuit court of appeals, as follows:

"In some of the plants of the corporation defendant settling tanks are used between the introduction of the coagulant and the filter bed. In those plants the method of the patent is not appropriated and there is no infringement."

It is argued that this language exempts from the claim of the patent all processes which employ settling tanks irrespective of their size, shape, capacity or the amount of sedimentation. A person may, therefore, use the Hyatt method with impunity, if, somewhere between the introduction of the coagulant and the entrance of the water into the filter, he places a receptacle larger than the inlet pipe, through which the water must pass. It is thought that this is not a correct exegesis of the judgment of the court. It is contrary to the spirit of the opinion. It is at variance with the statement of the invention as previously expounded and it has no basis of proof on which to rest.

It is stated in the moving affidavits, and not denied, that the sole question of infringement involved in the Schwarzwalder Case related to one particular plant erected by the Jewell Company where

tanks were not used and that there was no word of description in that record showing the construction, arrangement, operation or function of the settling tanks at Columbia and Louisville. When, therefore, the court used the language quoted the conclusion is irresistible that the settling tanks alluded to were the tanks of the prior art, the tanks about which the witnesses had been testifying, the tanks in which the water is permitted to remain at rest and in which sedimentation actually takes place. Settling tanks of the Spence type, in which the impurities actually settled, were the only ones described by the proof. When court or counsel used the expression "settling tanks" explanation was unnecessary; it was understood by all familiar with the art. The virtue of the Hyatt process, stated in a word, is that it is continuous; the vice of the prior processes was that they were intermittent. In the old tanks the water, mingled with the coagulant, was permitted to remain in a state of rest for hours and days until the impurities settled to the bottom.

The court drew a sharp distinction between these two processes, pointed out the advantages of the former and concluded by saying that one who used the latter to do an appreciable part of the work, did not infringe. Manifestly he did not! Hyatt's process is inconsistent with the use of settling basins, it is designed to obviate their use. He expressly says so in the description and the claim. "It is obvious," says the description, "that by the use of the uninterrupted process hereinbefore described I entirely dispense with the employment of settling basins or reservoirs as now commonly employed." This is precisely what the court says in different language. Hyatt might have added the quotation from the opinion to his description and it would not have limited, in the least, the scope of his patent. He might have said: "In some plants settling tanks are used between the introduction of the coagulant and the filter bed. I do not claim to cover these." Every one would have understood that he referred to settling tanks "as now commonly employed," and not to tanks where the water flows at nearly the same velocity as at other parts of the system, tanks which do not interrupt the process of filtration for a moment and do not permit the impurities to settle at the bottom. So, it is thought, must the court be understood. The language of the opinion is simply declaratory of the language of the specification as explained by the prior art. There is nothing to warrant the conclusion that the court intended to lay down a new proposition or to declare that the mere location of a large receptacle on the line of flow made such receptacle a settling tank. The simple question where tanks are employed is, are they settling tanks? If so, the claim is avoided, if not, it is immaterial how many tanks are used. So far as this question is concerned a party might conduct the water through a labyrinth of tanks, basins and large pipes, and yet be within the claim, if the water left the last tank in the same condition, as to turbidity, as it entered the first. In short, it is thought that the quoted language does not change the scope of the invention as previously defined. The question here is to be determined precisely as if the

language had been omitted. To give the opinion the literal and unyielding construction for which the defendant contends places the court in the untenable position of presenting with one hand to the inventor a decree certifying that he, exclusively, is entitled to the fruits of a valuable invention, and, with the other hand, delivering to the infringer a simple but infallible recipe for avoiding the patent.

Does the defendant infringe? The point is made that infringement is avoided because the defendant introduces the alum into the intake main and not directly into the filter. The court is of the opinion that so long as the alum is introduced simultaneously with the passage of the water to the filter and produces the same result in the filter bed, the precise locality of its introduction is immaterial. The principal controversy, however, arises over the function performed by the defendant's tanks, so that the issue may be narrowed to the single question, does the defendant use settling tanks? That it uses tanks is conceded but are they settling tanks? Does it use tanks "commonly employed" as settling tanks at the date of the invention? Does it use tanks in which sedimentation takes place to any appreciable extent, tanks in which the work of purifying is carried on so as to relieve the filter beds in any practical degree? In short, can it be said that the pure water produced by the Niagara plant is the joint product of the tanks and the filter? If such water be produced by a process of sedimentation in the tanks and a subsequent process of filtration the Hyatt claim is not infringed. If, on the other hand, the purity of the water is due to the filter precisely as if the intake pipe communicated directly with the filter, the claim is infringed. Running the water through the enlarged main does not avoid infringement, and this is so even though the water in its passage deposits a small and wholly inconsequential amount of sediment.

The foregoing is, it is thought, a fair statement of the issue as it relates to infringement. The capacity of the defendant's tanks is said to be 28,000 gallons. The daily output of the plant is about 3,600,000 gallons, or about 2,500 gallons per minute. This immense volume of water passes through the tanks daily and remains therein only about 13 minutes. It is always moving, it is never at rest. Not only does it move longitudinally but in almost every other direction as well. The water enters near the bottom of the tank at one end, it then flows over a baffle, through an archway, over another baffle and is finally pumped up through a large suction pipe in the last compartment. That all this produces eddies, currents, cross currents, vertical currents and general turmoil in the tank is undisputed. In short, the passage of the water through the tanks resembles in a less degree its flow through the turbulent and rock-troubled channel from which it is originally taken. The tanks are washed not more than once a week. At the time of Prof. Main's visit, October 28, 1896, he says:

"I could not find that any one about the establishment knew when either of the tanks had been cleaned out. It might have been weeks or months for all the information I could obtain."

The filters, on the contrary, are washed twice every day.

If the proof stopped with these general facts it would seem to the ordinary lay mind that these tanks, which hold but 14,380 gallons each, and through which over 3,500,000 gallons flow each day in a confused and eddying mass, can hardly be the settling basins of the prior art. But this opinion is concurred in by two men who stand at the head of their profession and upon whose judgment in such matters the court has a right to rely with confidence. Dr. Chandler says, in speaking of the defendant's tank:

"It is evident, therefore, that this is not a settling basin, or settling tank in fact, and I am satisfied from my knowledge of the subject, that it is impossible for a basin constructed as this one is constructed, and of the dimensions of this basin, taken in connection with the flow of water, to act as a settling basin. In the first place, it is far too small for a filtering plant of the capacity of this one, even if the two basins were used alternately and the flow of water were stopped for a time in each basin successively; and, further, it is constructed in such a manner as to make it practically impossible for any sediment to accumulate in it, as it is used at Niagara."

President Morton, after examining the drawings of defendant's plant and Prof. Main's description, says.

"I am able to say with certainty that such a plant fully embodies the invention assigned to Hyatt by the above-quoted opinion of the court, and that the so-called 'settling basins' represented as connected therewith, are in no sense settling basins, such as are referred to in the opinion of the court, and do not in any way modify the process of continuous filtration as defined in said opinion. In these so-called 'settling basins,' the water is never in a state of rest, but, on the contrary, is in a rapid condition of motion, and not only so, but by special arrangement of cross walls or partitions, scouring currents are established in the water as it moves through, well adapted to prevent sedimentation or settling of any solid matter which might exist in the water."

Persuasive as is this testimony infringement does not rest upon opinion but upon facts. The plant has been twice examined to determine this question,—on October 28th by the complainant's experts and on December 7th by the defendant's experts. The examination on October 28th is the more important—First, because the tests were simpler and more determinative; second, because it was made in the presence of the defendant's expert; and, third, because if infringement is established on the 28th of October it is no answer to say that there was no infringement on the 7th of December when the conditions were wholly different both as to the turbidity of the water and the amount of alum used. If the Hyatt process were used October 28th it must have been used for a number of days prior and subsequent thereto. This is sufficient to establish infringement.

It should be remembered that at the time of complainant's examination no one knew when the tanks had been last washed out. An immense volume of water had, therefore, passed through them. The court will take judicial notice of the fact that in such circumstances impure water will deposit some sediment. The examination of Prof. Main and Mr. Kendrick demonstrates conclusively that the defendant does not use settling tanks. Substantially the entire surface of the basin was perfectly clean. In one of the compartments were two small patches of mud half an inch deep where it lay thickest.

The entire amount of mud in the whole basin was estimated at less than half a bucketful. The water when examined near the bottom with an electric light showed no evidence of turbidity due to sedimentation. When the tank was drained the last water that ran out was clear. An examination of the samples of water taken before its entrance to the tanks and after it had passed through them showed practically no difference in turbidity. In short, the facts found were absolutely incompatible with the theory of settling tanks considering the size of the tanks, the volume of water and the small quantity of alum used.

But this was not all; an examination of the filters showed that substantially the entire work of clarifying and purifying the water was done in the filter bed, precisely as in the Hyatt process. If there had been any substantial sedimentation in the tanks the result would have been registered in the filter bed. Assuming Prof. Main's observations to be correct the court has no doubt that the defendant is practicing a continuous process of filtration by the use of small quantities of coagulant,—too small to produce substantial sedimentation in settling basins,—the impurities being removed by passing the water through a filter bed of sand; in other words, the Hyatt process.

The correctness of these observations is hardly disputed so far as their principal features are concerned. The chief criticism of Prof. Main's method is that he used the suction pump to drain the tank, but as over two feet of water remained when the pump stopped operating and as this was the water examined and found to be clear it is thought that there is little force in the criticism. Again, it is said that the statement that the tank was perfectly clean is discredited by the fact that on coming up from the tank the experimenters washed their hands. This certainly proves that they washed their hands, but it proves little else.

The facts found by Prof. Main and Mr. Kendrick are hardly disputed at all. The contradictions are in the most general and guarded terms. One of the witnesses saw mud and slime in the channel in the middle of the tank. How much he does not say except that it was a "thin layer." Another speaks of "a substantial deposit of slime and mud." Another says that there were "many times 'two quarts' or 'a half bucketful' of mud" in the tank, and testifies, further:

"I have examined these settling basins on other occasions and have invariably found a substantial deposit of mud and slime; the amount always being in proportion to the turbidity of the water since the last cleansing of the settling tanks."

Two other witnesses testify to having seen, when the tanks were being cleaned, "a noticeable deposit of sediment and mud," and a third has seen "thick mud and slime deposited in the settling tanks." This is uncertain and vague, and wholly inadequate to disprove the positive assertions of the complainant's witnesses. The statement that a muddy stream will deposit more mud than a clear one is thought to be in exact accordance with the truth and accounts for some of the different results found on December 7th.

For the reasons heretofore stated it is unnecessary to discuss the examination on the 7th of December when no one representing the complainant was present. The difference in the quantity of mud may well be accounted for by the increased turbidity of the water and the length of time the tank had been in use without cleaning. The experiments of the 7th, though interesting, do not seem to the court to destroy the verity of the conclusions reached by the complainant's experts. The court is, therefore, of the opinion that infringement has been established.

The motion is also opposed upon the ground that new evidence has been adduced tending to show anticipation. Several of the affidavits relate to alleged prior use by Benjamin T. Loomis and Livingston H. Gardner at Baltimore and New Orleans, respectively. Substantially the same facts were presented to the court on a motion to open the Schwarzwalder decree. New York Filter Co. v. O. H. Jewell Filter Co., 62 Fed. 582. Gardner's contribution to the art was summarily dismissed with the following observation:

"The New Orleans affidavits are, in my opinion, unimportant. The information which they contain is unsubstantial in its character."

As to the Loomis defense, it is true that the motion was denied because the defendants had been guilty of negligence in not presenting it sooner, but it is thought that had the learned judge who decided the cause at circuit been impressed with the idea that Loomis' testimony would have invalidated the patent, so careful a jurist would have found some way to have the evidence brought before him. The affidavit of Mr. Loomis is largely devoted to excuses for not using the invention after it was made and for not having it patented. Neither excuse seems entirely satisfactory. He sold many filters in Baltimore but did not attach his alum-feeding device because "the water was so pure and free from disease germs as to require no special care in filtration." This would seem a plausible reason for selling no filters at all, but as the citizens evidently thought their pure water needed filtering it would seem that Baltimore was an ideal market for an improved filter. After December, 1882 (he does not say how long after), he had an order for a filter to be used at a place a distance from Baltimore to which he attached the alum-feeding device, but he omits to state where the place was or who gave the order. He had obtained a patent for a filter in September, 1880, but he did not patent his invention of 1882 because he thought it covered only the particular form of apparatus and this he did not consider worth patenting. It seems incredible that if Loomis had actually discovered the Hyatt process his achievement should have reached a termination so lamentable.

The single filter made by Peterson was, on his own showing, a failure. There is no evidence that it is in existence and the description is too indefinite and uncertain to be considered. The other anticipatory evidence has been examined, but it is thought that nothing material has been added to the record in the Schwarzwalder Case. It may be said generally of all this proof that it is shadowy and uncertain and fails to meet the rule so often reiterated

by the courts that prior use must be established beyond a reasonable doubt.

This motion was submitted after unusually able oral arguments, but without briefs or any assistance from complainant's experts so far as this branch of the controversy is concerned. As the affidavits relating to prior use were first presented at the argument this was inevitable. The court has examined this testimony with all the care possible in the circumstances and entertains the hope that nothing important has been overlooked. Although some parts of the testimony have not been discussed, all have been considered.

The complainant has established its patent after years of fierce and expensive litigation. The patent has but four years more of life. If relief be withheld now the complainant is practically remediless. Its business will be destroyed long before the second weary journey through the courts is terminated. The equities are with the complainant; so are all the presumptions. If either party must suffer pending the final decree it should be the defendant and not the complainant. The motion is granted.

THE GLENDALE.

EVICH v. THE GLENDALE.

(District Court, E. D. Virginia. January 4, 1897.)

ADMIRALTY JURISDICTION—STATE STATUTES—LIEN FOR WRONGFUL DEATH.

A state statute giving a right of suit in rem to the personal representative of a person whose death is caused by the wrongful act of a vessel (Code Va. § 2902) creates a lien, and may be enforced by a libel in rem in the federal court, when the injury occurs in waters of the state navigable from the sea.

This was a libel in rem by Phillip B. Evich against the steam tug Glendale to recover damages for wrongfully causing the death of plaintiff's intestate, Joseph Evich.

Pollard & Sands, for libelant.

William Flegenheimer, for the Glendale.

HUGHES, District Judge. About 8 o'clock p. m., near dusk, on June 7, 1895, Joseph Evich, a lad about 12 years old, in company with his father, Phillip B. Evich, and with two other men, J. L. Ebenhack and Richard Coleman, was in a small boat in James river, half a mile below Richmond, engaged in fishing with a seine. The steam tug Glendale, then coming down the river, under command of E. A. Craddock, ran into the rowboat, and capsized it, by which act all in the rowboat were thrown into the water, and Joseph Evich was drowned. The Glendale was owned by H. and E. J. Furman, partners under the firm name of Furman Bros. The father, Phillip B. Evich, as administrator of his son Joseph, deceased, brings this libel in rem against the Glendale, claiming $10,000 damages for the loss of the services of his son.

The evidence shows that it was still daylight at the time of the accident, and that objects as large as a rowboat could be seen