

CINCINNATI ICE-MACHINE CO. v. FOSS-SCHNEIDER BREWING CO.

Circuit Court, S. D. Ohio, W. D.

June 2, 1887.

PATENTS FOR INVENTIONS—INFRINGEMENT—ICE-MACHINES.

Letters patent No. 148,675, of March 17, 1874, to Francis V. De Coppet, for device for automatically lubricating an ammonia pump or compressor used in refrigerating or in manufacturing ice considered, and *held* infringed as to its second claim by the Linde ice-machine, covered by letters patent No. 228,864, to one Linde.

In Equity. Bill for injunction to restrain infringement of letters patent and for an account.

Stem & Peck and Arthur Stem, for complainant.

Dyrenforth & Dyrenforth, for defendants.

SAGE, J. This suit is for infringement of letters patent No. 148,675, granted March 17, 1874, to Francis V. De Coppet, for an improvement in ice-machines, and assigned to complainant. There are five claims in the patent, but at the hearing the complainant withdrew the charge of infringement as to all except the second and fourth, and they only will be considered. The patent is for a device for automatically lubricating an ammonia pump or compressor used in refrigerating, or in manufacturing ice. The patentee states in his specifications that "the ammoniacal vapors are drawn by the pump from the refrigerating vessel through the pipe, G, [the induction-pipe extending upward vertically from the pump,] and are exhausted into the coil of the condenser, D, through the pipe, H. The piston of the pump is supplied with the lubricant from the closed cup, S, attached to the induction-pipe, G, between the pump and the stop-cock, C. The lubricant passes through the valves into the barrel or cylinder of the pump, and any surplus is discharged therefrom, through the exhaust-pipe, H, into the trap, E, which is connected by a dip-pipe, e, with the induction-pipe, G." When it reaches the trap, it falls by gravity to the bottom of the trap, "the ammoniacal vapor continuing on to the compression coil, for compression to liquefaction. To return the glycerine back again to the piston packing valves and seats continually, and without loss of the ammoniacal vapor or glycerine, open the cock," which is just above the trap, "on the small pipe, e, and the pressure on the surface of the glycerine in the trap will force it through the small pipe, e, e, into the induction-pipe, G, and from thence as before described; and, when the glycerine becomes deteriorated by absorbing moisture from the ammoniacal vapors, it can be drawn off at cock, P," which is at the bottom of the trap, "for purification, and use again." The piston-rod of the pump "is lubricated from the covered cup, Z, which is attached to the stuffing-box of the head of the pump cylinder, and is also in communication through a pipe, O', with the induction pipe, G."

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The claims relied on are as follows:

“(2) The combination of the cylinder, C, exhaust-pipe, H, trap, E, dip-pipe, e, and induction-pipe, G, substantially as and for the purpose specified;” “(4) The combination, with the stuffing-box of the pump, of the lubricator, Z, pipe, O’, and induction-pipe, G, substantially as and for the purpose specified.”

It is admitted that the defendant is, and has been since prior to the bringing of this suit, using what is known as a “Linde Ice-Machine,” constructed under the Linde patent, No. 228,364, with certain additions and modifications. The peculiar feature of the defendant’s machine, pertinent to this cause, consists in a certain proportionment of the dimensions of the pipes whereby the ammoniacal vapor from the refrigerating coils is introduced into the compression cylinder, not as a dry gas, but in a moist condition; and by reason of this condition it is claimed that all the requisite effects are produced upon the gas by the piston and attendant mechanism, without causing heating of the compressor, thus obviating the need of extraneous cooling appliances, with the attendant disadvantages. It is also claimed by the defendant that the moist ammonia vapor is a sufficient lubricator for the compression cylinder, and that since oil which enters the compressor must necessarily be carried, in greater or less quantity to the coils, where, by reason of its non-conducting properties, it is injurious, it is desirable, if possible, wholly to exclude it from the compressor. This is, however, practically impossible, since the stuffing-box has to be lubricated in this as in all other machinery, and the piston-rod in its reciprocating movement carries more or less oil into the interior of the cylinder, where it becomes atomized, and mixed with the gas, by the high pressure, and would be carried into the coils of the condenser and refrigerator in injurious quantities unless intercepted, and at least the greater portion of it separated from the flowing gas before it reaches the coil.

Accordingly the defendant’s exhaust-pipe is provided with a trap similar to that of the complainant’s machine. The defendant substitutes for the complainant’s dip-pipe, e, a small lateral pipe connecting through a stop-cock with the trap, near its bottom,—that is, at about the level in the trap to which the complainant’s dip-pipe would reach,—and opening into a vertical cylinder chamber or “extractor” of the same conformation as the trap standing beside it. From the top of the extractor another pipe, also provided with a stop-cock, and of the size of that leading from the trap, extends to and connects with the induction-pipe.

It is conceded that when both stop-cocks are open, if used for extricating oil from the trap, and returning it to the induction-pipe, this device in the defendant’s machine is the mechanical equivalent of the complainant’s trap and dip-pipe; but it is insisted for the defendant that the complainant’s device was designed and adapted to short-circuit oil, and does not, and cannot, in harmony with the rest of the machine, short-circuit gas, beyond the trifling quantity that might be imprisoned in the oil; and, on the other hand, the de-

pendant's device is designed and adapted to short-circuit gas, and does not, and cannot, in harmony with

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the rest of the machine, short-circuit oil, unless, as contended by complainant, some foamy particles of oil still linger in the separated gas, and, notwithstanding all precautions, are carried over with it.

The defendant's mode of operating its device is, as disclosed by the evidence, as follows: When it is desired to draw off the oil from the trap, the stop-cock in the pipe leading from the extractor to the induction-pipe is closed. The stop-cock in the lateral pipe connecting the extractor with the trap is then opened, and the oil flows freely from the trap into the extractor. The stop-cock in the lateral pipe is then closed, and the oil in the extractor is allowed to stand at least an hour, and, not being subject to the pressure of the constantly incoming gaseous liquid in the trap, the gas carried over into the extractor with the oil separates from the oil, and rises above it. The stop-cock at the top of the extractor is then slowly opened, and the gas passes into the induction-pipe through the small pipe leading from the extractor. The oil is then drawn off through a faucet at the base of the extractor. By this means the gas—which is expensive—is almost entirely eliminated from the oil, and the loss or waste reduced to the minimum.

To all this the complainant answers that the defendant has and uses its combination, and the introduction of two stop-cocks, and the use of the device in a different way and for a different purpose, is no justification; especially as the device is capable of being used and operated in the way, and for precisely the purpose, of the complainant's device. The complainant also contends that, upon the opening of the stop-cock in the pipe connecting the extractor with the induction-pipe, however carefully it may be done, the movement of the escaping gas will cause such commotion in the entire contents of the extractor as to carry over to the induction-pipe, and thence to the cylinder of the compressor, oil sufficient to serve as a lubricant, it being required for that purpose, and the moist ammonia being of itself insufficient. On this point the expert witnesses are in direct conflict, which is not at all rare. Obviously it would depend upon the pressure of the gas. If that be great, it would be practically impossible to discharge it without its carrying oil with it. If it be small, and the stop-cock be opened gradually and carefully, the gas might be removed without disturbing the oil.

The main question involves, first, the validity of the second claim of the complainant's patent,—for the combination of the cylinder, exhaust-pipe, trap, dip-pipe, and induction-pipe. Every part is old. The trap is shown in the drawings, and is referred to in the specification, but not claimed, in the English patent granted February 6, 1869, to Deefrene for an ice-machine. It was a well-known device long before that date. It was not new to supply oil to the interior of the valves and piston chamber of the steam-cylinder through the induction or valve passages. That is shown in the Badger patent, No. 69,957, of October 27, 1867; the Cammeron patent, No. 97,354, November 30, 1869; and the Hinman patent, No. 110,040, December 13, 1870. The use of a dip-pipe was old at the date of the

invention described in complainant's patent. The drawings of the Deefrene patent show a horizontal pipe leading from

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near the bottom of the trap, to the oil supply vessel, mounted above the stuffing-box of the compressor, and supplying oil as a lubricant to the piston-rod, and through the stuffing-box to the cylinder. There was gas pressure in the Deefrene trap, as in the complainant's trap. There is nothing in the specifications of the Deefrene patent relating to this horizontal pipe, nor is any connection shown between the oil supply pipe and the stuffing-box, but that is clearly implied. The testimony of De Coppet, the inventor and patentee of the patent assigned to complainant, carrying his invention back to a date prior to Deefrene's patent, is not satisfactory nor sufficient to establish the fact; and, if it were, there is not the proper showing of reasonable diligence in perfecting and adapting it, and in applying for his patent. It may therefore be stated here that the fourth claim of complainant's patent is anticipated by the Deefrene patent.

But the second claim remains to be considered. The device above referred to, shown in the Deefrene drawing, is not the mechanical equivalent of the method shown in complainant's patent for conveying the oil from the trap in its machine back to the induction-pipe, and through the pipe to the compression cylinder, for the reason stated by defendant's expert that, when the oil is admitted to the pump cylinder by way of the induction valves, those valves, as well as the eduction valves, and the general interior of the cylinder, are lubricated; but when oil is conveyed into the cylinder by the piston-rod, even though it be in sufficient quantity for the interior lubrication, it will manifestly not lubricate the induction valves, but only the interior of the cylinder and the eduction valves. De Coppet's method is the introduction of the oil into the induction-pipe by the pressure of the eduction-pipe or pump, acting upon the oil in the trap through the medium of a dip-pipe. He was the first to utilize this pressure in the method and for the purpose stated, and the result is a constant automatic supply of oil as a lubricant through the induction-pipe to the induction valves, the interior of the cylinder, and the eduction valves. The conclusion of the court is that the combination by which this result is effected, although the parts of the combination are old, displays invention.

Does the defendant infringe? It has the combination covered by claim two of the complainant's patent, and uses it in an ice-machine constructed and operated upon the general principle of the complainant's machine. It is true that, according to the testimony, the defendant does not use the combination for the purpose to which it is applied by the complainant; but as constructed, and without any change or modification, it is capable of precisely the use stated in the complainant's patent; and that this circumstance is conclusive upon the question of infringement is too well settled to require verification. An applicant for a patent is required to state the manner of using his invention, and, in the case of a machine, to explain the principle thereof, and the best mode in which he has contemplated applying that principle; but is not bound to state all the uses or applica-

tions,—in many cases that would be impossible,—and he is not limited to those he does state. The patentee's

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exclusive right is to the manufacture, use, and sale of his invention, and for any and all purposes.

Let a decree be entered for the complainant upon the second claim of his patent, for an injunction and account, and for the defendant upon the remaining claims.