

15FED.CAS.—74

Case No. 8,632.

LYMAN VENTILATING & REFRIGERATOR CO. v. LALOR.

[12 Blatchf. 303; 1 Ban. & A. 403; 6 O. G. 642; Merw. Pat. Inv. 139.]<sup>1</sup>

Circuit Court, S. D. New York.

Sept. 10, 1874.

PATENTS—INVENTION—WHAT CONSTITUTES.

1. A written description of a machine, although illustrated by drawings, which has not been given to the public, does not constitute an invention, within the meaning of the patent laws, so as to defeat a subsequent patent to an independent inventor, even though it be deposited in the patent office, as part of an application for a patent

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2. To attain the character of a complete invention, it must be embodied in a form capable of useful operation.
3. The reissued letters patent granted to Stephen Cutter, March 10th, 1874, for an "improvement in methods of cooling and ventilating rooms," (the original patent having been granted to Azel S. Lyman, as inventor, March 25th, 1856, and extended for seven years from March 25th, 1870, and reissued to said Lyman, December 26th, 1871,) defined, as to the meaning of the Claims in it.
4. The principle and mode of operation of the apparatus described in it, explained.
5. Various alleged prior inventions, examined and distinguished.

[This was a bill in equity by the Lyman Ventilating & Refrigerator Company against "William Lalor.]

John J. Allen and Edward J. Cramer, for plaintiff.

Edward N. Dickerson and Charles C. Bea-man, Jr., for defendant.

BLATCHFORD, District Judge. This suit, and several others, are brought on reissued letters patent granted to Stephen Cutter, March 10th, 1874 [No. 5,786], for an "improvement in methods of cooling and ventilating rooms." The title to this patent is vested in the plaintiffs for the whole of the United States, except the Eastern district of New York, and that part of the city of New York lying westerly of Broadway and Fifth avenue, and a few counties in New Jersey, the title for such excepted territory being vested in the Lyman Patent Refrigerator Company. The original letters patent were granted to Azel S. Lyman, as inventor, March 25th, 1856 [No. 14,510]; and were extended for seven years from March 25th, 1870, and were reissued to Lyman, December 26th, 1871, and were then assigned to said Cutter, and reissued to him, as above stated, March 10th, 1874.

The first claim of the reissue sued on is in these words: "The combination of a descending conduit, or cold air flue, or either, with a reservoir for containing cooling material, substantially in the manner and for the purposes described." This claim differs only in the addition of the words "or either" from the first claim of the reissue of 1871. The first claim of the reissue of 1871 was sustained in two suits in equity, on final hearing, one before Judge Hall, in the Northern district of New York, in March, 1872,—*Lyman v. Myers* [Case No. 8,629]; and the other before Judge Benedict, in the Eastern district of New York, in January, 1874,—*Lyman Patent Refrigerator Co. v. Oswald* [Id. 8,630]. In both of those suits it was sustained against the alleged prior invention of Thaddeus Fairbanks, a patent for which was applied for September 5th, 1846, and rejected February 6th, 1847, and withdrawn July 27th, 1847. Long after such withdrawal, John C. Schooley obtained from Fairbanks, for the sum of \$5, an assignment of Fairbanks' alleged invention, and an application was again made for a patent for it, and a patent was granted to Schooley, as assignee of Fairbanks, August 12th, 1856. Judge Benedict, in the case against Oswald, says: "The proofs show that Fairbanks abandoned his invention long prior to the issue of the patent upon it. His application for a patent, made in 1846, was rejected on the 27th of July, 1847, and he then withdrew his application. No subsequent effort to obtain a

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patent or preserve his invention, or to put it into use, appears ever to have been made by him. The patent for the invention, subsequently issued August 12th, 1856, was obtained by one Schooley, as assignee of Fairbanks, who obtained an assignment of the invention from Fairbanks, for the sum of \$5, nearly ten years after the withdrawal of the application and abandonment of the invention by Fairbanks, the inventor.” To this it may be added, that, on the present motion, nothing is shown in reference to the invention of Fairbanks, except the papers from the patent office, and an affidavit by Schooley showing the foregoing facts. It is not show, that, prior to the date of the original patent to Lyman, much less, prior to the date of Lyman’s invention, a refrigerator was actually constructed embodying what was set forth in the application of Fairbanks. The alleged invention of Fairbanks, as anticipating Lyman, must, therefore, be laid out of view. As regards anything shown in the original application of Fairbanks, made in 1846, and rejected and withdrawn in 1847, it is well settled, that a written description of a machine, although illustrated by drawings, which has not been given to the public, does not constitute an invention, within the meaning of the patent laws. Evidence that such a description was made does not show, of itself, a prior invention. Such a description has not the same effect as a printed publication. It lacks the essential quality of such a publication, for, even though deposited in the patent office, it is not designed for general circulation, nor is it made accessible to the public generally, being so deposited for the special purpose of being examined and passed upon by the patent office, and not that it may thereby become known to the public. Although it may incidentally become known, the deposit of it is not a publication of it, within the meaning of the statute or the law. Moreover, although the description may be so full and precise as to enable any one skilled in the art to which it appertains, to construct what it describes, it does not attain the proportions or the character of a complete invention until it is embodied in a form capable of useful operation. **Northwestern Fire Extinguisher Co. v. Philadelphia Fire Extinguisher Co. [Case No. 10,337].**

In answer to the present motion for injunction, various other alleged prior inventions are set up. To understand their bearing, it is necessary, first, to define clearly what the plaintiffs cover by their patent. The specification

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states the invention to be one of “improvements in cooling, drying and disinfecting rooms.” It says: “My improvement in cooling, drying and disinfecting consists in the peculiar construction of the box or reservoir for holding the ice or other cooling material. The object sought to be accomplished by this construction is the production of a current of cool air in a determined direction, without mechanical aid and irrespective of place. The principle I employ is that which is exemplified in the hydrostatic column, and my use of it may be understood by the following comparison: If we suspend a cake of ice freely in the air, and near the ceiling of a closed room, slight currents would soon be produced by the disturbance of the equilibrium, consequent upon the cooling of the air in contact with the ice. These currents would be feeble, because the cold descending air would spread out over a wide base, and the temperature soon become equalized by mixing with warm air. If, however, we should place around the sides and under the ice a conduit, such as a pipe or box of sufficient size to surround the ice, the air, as it is cooled, would fall down and soon fill the same, but still have a tendency to spread laterally, in consequence of its gravity, and, therefore, it would exert pressure on all sides, similar to a non-elastic fluid. If one or more openings were made in the bottom of the same, this air would pour out with a certain force, due to the difference of the temperatures outside and inside, and to the height of the column, obeying precisely the same laws which would govern a non-elastic fluid. The construction of a refrigerating box on this principle enables me to employ it to various useful and valuable purposes, such as the preservation of meats and vegetables, ventilating, coding, drying and disinfecting apartments in hospitals, sleeping and other rooms. The reservoir, when adapted for holding ice as the cooling material, is a box open at or near the top and in or near the bottom. It may be divided into two compartments, by a grating, as shown in fig. 1—in such case, the latter serving to support the ice, while the space beneath may form a cold air chamber, E, and allow the free settling of the cold air from all parts of the grate. When enclosed in an air tight compartment, as is shown in fig. 1, at A, and the box D charged with ice, the moisture will be extracted from the air, at the same rate that its temperature is reduced, in the following manner: The air in A is at first of the temperature of the surrounding medium, and its hygrometrical condition is the same. Ice being now introduced into the box D, the air in contact will be immediately reduced in temperature, condensation takes place, and moisture is deposited. The condensed air, being of greater specific gravity, falls into the air chamber B. flowing thence, similar to the flow of water, through F, downward to and spreading over the floor, and, in so doing, displaces the lighter and warmer air, forcing the latter upward toward the top of the apartment. As it there comes in contact with the ice, the condensation and precipitation of moisture goes on until a minimum temperature is reached. Thus, a continual circulation is kept up, in such manner that the whole of the air must circulate through the ice-box. Of course, all articles, such as meats and vegetables, would be deprived of

their moisture in a like degree with the air, the latter being brought to the condition of great purity and dryness. The water falls to the bottom of the cold air space E, where it may be caught by a trough or lip, and thence discharged to the outside by a suitable pipe. \* \* \* For further disinfecting, a charcoal-box or other suitable agent may be employed, as shown at B; or, by placing it at y, where the warm and moist air passes over, to be cooled and dried. Instead of a single opening or flue, in or at the bottom of the ice-box, or below the lowest level of the ice, several may be employed in combination with one cooling reservoir; or, where the apartment is of considerable size, more than one reservoir for the cooling materials, and openings or flues in like manner, may be arranged, either to increase the circulation, or to reduce the temperature and drying. Or both, as may be required. The discharge pipe F may be of different lengths, according as the blast is to be more or less forcible, the higher the column the greater being the weight and velocity of the discharge.” Only the 1st, 3d, 4th and 5th claims of the patent are involved in the present controversy. The first claim is above set forth. The 3d, 4th and 5th are in these words: “3. In a closed refrigerating chamber, an open bottomed cooling reservoir, provided with an aperture for the ingress of the air above the cooling material, in combination with a drip to prevent the falling of the water into the chamber below the cooling reservoir, substantially as described. 4. In a refrigerating chamber, an ice-box open above and below, and provided with a grate for supporting the ice. 5. In a refrigerating chamber, a receptacle for cooling material, divided into two compartments, the one serving to support the cooling material, and the other to allow the settling of the cooled air, substantially as described.”

It is apparent, from this description, taken as a whole, that the principle and mode of operation of the apparatus described is, that the cooling of the air in the air-tight compartment or refrigerating chamber is to be produced, not by conduction, or by the contact of such air with a metallic or other substance to which a low temperature is imparted by cooling material in a cooling reservoir, but by the free passage and circulation of such air from the top downward, through and in contact with the cooling material in the cooling reservoir, and then out into such compartment or refrigerating chamber, and then upward outside of the

cooling reservoir, and into the top of the cooling reservoir again, all the openings being entirely within the refrigerating chamber or compartment, and the direction of the current from the top downward being determined by the fact that the cooling material is surrounded by an enclosure which acts as a conduit. In connection with such establishment of a cooled current of air in a determined direction, the moisture in the air, gathered by it from articles in the refrigerating chamber, or from other sources, is deposited on the cooling material, in the cooling reservoir, as the air passes in direct contact therewith. Thus, the whole of the air must circulate through the cooling reservoir until a minimum equable temperature of the air is attained, and desiccation and refrigeration go on simultaneously. When, therefore, the first claim of the patent claims "the combination of a descending conduit or cold air flue, or either, with a reservoir for containing cooling materials, substantially in the manner and for the purposes described," a combination, to be the same combination, whether as an infringement or as anticipatory, must not only be a combination of such two instruments, but must be one having the principle and mode of operation, and operating in the manner, and effecting the purpose, of the combination described in the patent.

On the question of novelty, the defence sets up a refrigerator built by Mace & Healy, in February, 1851, for one Van Arsdale, in the house No. 31 East 21st street, in the city of New York, as a part of the house, where it still is. The ice is placed in an ice-chamber in the upper part of the refrigerator. The bottom of the ice-chamber is slatted, so that the cooled air and the drip of water can pass down between the slats. Underneath these slats is a solid drip roof of zinc, sloping each way from the centre, and terminating on each side a very short distance from the side of the refrigerating chamber, the edges of the roof being turned down. The water runs down the roof and over these edges, and then falls down to the bottom through narrow vertical spaces formed on each side by sheets of metal running down parallel to the sides of the chamber, just within the overhang of the turned down edges of the drip roof, and running down nearly to the bottom of the chamber. It is claimed that these narrow vertical spaces act as conduits not merely for the water but for the cooled air, and that the latter can pass under the lower edges of the sheet of metal into the chamber. It is also claimed that there are openings between the upper edges of these sheets of metal and the overhangs of the drip roof, though this is disputed. Now, it is very plain that this structure does not embody what is covered by the first claim of the plaintiffs' patent, as above defined. There is a reservoir for containing ice, combined with a descending conduit, and it may be that a small proportion of cooled air will, at some time in the operation of the apparatus, find its way down the narrow vertical spaces and out into the chamber. But, none of it or of any other part of the air in the chamber will find its way again into the ice reservoir, whether there be or be not openings over the tops of the vertical partition-sheets of metal. There is no such circulation of air as



there is in the plaintiffs' structure. The Van Arsdale refrigerator does its work by conduction, by the contact of the air in the chamber with the cooled metallic drip roof and the cooled metallic vertical partitions, and not upon the principle of the plaintiffs' structure.

The defence also introduces evidence as to a movable refrigerator called the Harpel refrigerator. It is claimed that Mace & Healy, at 168 Allen street, New York, before July, 1852, made at least a dozen refrigerators, containing an ice-box in the top and back, wholly of zinc, which had two rows of holes near the top in the side towards the chamber, and a grate or wooden rack at the bottom of the ice-box, on which the ice rested, so that the cooled air and the water passed down through the grate, and the water fell upon an incline sloping away from the body of the chamber, and was carried off by a pipe, while the air passed through a row of holes in a vertical piece of metal near the side of the chamber, between the incline and the grate, and so into the chamber, and around into the ice-box again through the two rows of holes first mentioned. One of these refrigerators is said to be in existence. Harpel says he bought it in 1852. He gives no more specific date, except that it was while Mace & Healy were in Allen street. Gray, who did the carpenter work on the refrigerators, fixes the date of doing such work as being before October, 1852, because Mace & Healy moved at that date from Allen street to Houston street, but he gives no more definite date than that it was before July, 1852, and he gives no reason for fixing it as early as July, in 1852. Elsewhere, he says that he helped to make such refrigerators "in 1851 and 1852." Mace says the refrigerators were made while Mace & Healy were in Allen street, and that they moved from there in October, 1852. He gives the time of making and selling them as "in the years 1851 and 1852." Metzinger says he worked as zinc worker for Mace & Healy from April to July, 1852, at Allen street, and then did the zinc work for them for such refrigerators. Lyman carries back his construction of a refrigerator embodying the combination covered by the first claim of the plaintiffs' patent to "the spring or early summer of 1852." The Harpel refrigerator was not produced before the court, nor was it submitted to the examination of the plaintiffs' agents or experts; but, even if it be assumed that it, and others made like it, embodied what is found in the first claim of the

plaintiffs' patent, the loose evidence as to date cannot be allowed to prevail against Lyman's invention. The books of Mace & Healy are not produced or referred to for evidence as to date. None of the testimony, all of which is ex parte and by affidavit, antedates, even on its face, the invention of Lyman, except the general language of Gray and of Mace, that it was in 1851 and 1852 the refrigerators were made. Gray says he was at work as a journeyman on the carpenter work of refrigerators for Mace & Healy, in 1851 and 1852, at Allen street, but he 'assigns no more specific date to the refrigerators in question than that it was "before July, 1852," although he afterwards refers to the refrigerators as made "in 1851 and 1852." This evidence is too loose and inconclusive to be allowed to prevail, on a motion for a preliminary injunction, against a patent of such long standing, and which has been sustained on final hearing, and extended and reissued.

A refrigerator alleged to have been made by one Whittier, in Danvers, Massachusetts, in 1846, is also set up in defence. It was planned by one Mead, for his private use. Whittier was a carpenter and did the wooden work. Mead did the zinc work. Whittier says that the cooling chamber occupied the whole of one end, and the lower half of the other end, of the refrigerator; that the ice-box was placed in the upper portion of the latter end, and extended across the whole width, and lengthwise from about the middle of the length to within from one and a quarter to two inches of the inner wall at the end in which the ice-box was placed; that the side of the ice-box nearest the middle of the refrigerator was open for about two and a quarter inches from the top; that the opposite side of the ice-box had an opening about three inches in width across the whole side, the bottom of the opening being one and a half or two inches from the zinc bottom of the ice-box; that the ice-box was of zinc, and its bottom sloped slightly each way towards the centre; that a drip-pipe was affixed to the bottom, and passed through the refrigerator and below it; and that slats of wood were placed over and across the zinc bottom of the ice-box, the ice resting on the slats, and being thus kept above and free from the drip. Whittier says that the result of this construction was, that, when the ice-box was supplied with ice, a constant circulation of air within the refrigerator was created, through the opening at the top, and through the ice, and down into the cooling chamber, and up again into the ice-box through the opening at the top. He adds: "The location of the ice-box and its general shape were devised by Mr. Mead, but I myself suggested the openings to remedy a defective working of the refrigerator." This shows that the refrigerator was made and put to work without the openings, and worked defectively. Without the openings it was necessarily, a refrigerator operating solely by conduction. Therefore, when Mead and Whittier first made the refrigerator and put it to work, they had no conception of the principle of having a current of cooled air to circulate. Then the openings were made. Mead used the refrigerator for a time, and then sold it to one Johnson. Its history is not further traced. Whittier then says: "I made myself two or three other refrigerators on the same



general principle prior to 1850, but varied the construction of the bottom of the ice-box by elevating the framework of wooden slats above the zinc bottom, and adding a wooden lining inside of the zinc box. The flow of cold air was then through the channel between the slat floor and the zinc bottom. I also changed the slope of the zinc bottom, so as to make it slant across the whole bottom of the icebox and terminate in a depression from which the drippipe led out." It thus appears that the Mead refrigerator was regarded by Whittier as experimental, for no more were made like it, but when he came to make others he varied the construction. He says he sold the two or three he so made. Their history, or how they operated in practice, we are not told. Certainly, if the true principle of constructing refrigerators, that embodied in the plaintiffs' patent, had been successfully and practically developed in the two or three refrigerators made and sold by Whittier, it seems very strange that no more than two or three were made in a space of four years, and that the value and merit of the invention were not more fully recognized. The making of the two or three refrigerators by Whittier is not shown to have given rise to the manufacture and introduction of refrigerators embodying the first claim of the plaintiffs' patent, for, although Whittier says, that "since 1850" he has "built other refrigerators on the same general plan," he does not say when he built them, or that the first he built of them was not built very recently, and in view of the Lyman patent The evidence as to the Whittier structure is not such that it can prevail against the plaintiffs' patent, in its present posture.

Another refrigerator, deposed to by one Wells, is also adduced. Wells testifies, that, between 1846 and 1856 there were made in Boston, in the shop of one Patten, for whom he then worked as a journeyman cabinet maker, many hundred refrigerators, which were sold for use in Boston and elsewhere; that the refrigerator was lined with zinc, and divided by a zinc vertical partition, at right angles with its front and rear, into two spaces, in the proportions of one-third and two-thirds; that a row of holes was pierced through this partition near its top and another row near its bottom; that the ice was placed in the smaller division of the refrigerator, and the larger division was used as the cooling chamber; that the ice was raised from the bottom of the ice-box

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by a rack or frame pierced with holes; and that there was a circulation of air through the upper holes, the ice, and the lower holes. A model of one of these refrigerators is produced. This model shows that the ice was not placed in an elevated position, but was placed at the bottom of the smaller division, the rack resting on such bottom. The upper surface of the rack is below the lower holes in the partition. In the ice-chamber there are arrangements for shelves to be placed above the ice, on which to put articles to be cooled. The description and drawing of the plaintiffs' patent clearly show that, to carry out Lyman's invention, the ice-box is not to be placed in the relative position to the other parts of the structure in which it is placed in the "Wells structure. Such description and drawing represent the ice-box as placed in the extreme upper part of the cooling chamber. The operation of the Wells structure must have been substantially by conduction by means of the metal, and there is in it no practical development of the principle of Lyman's structure, in respect of circulation. Although Wells states that, prior to 1851, at least 500 of such refrigerators were made and sold, yet it is not shown that all which were ever made have not passed out of existence, superseded by structures built upon the plan of Lyman's.

The defence also introduces the affidavit of Darius Eddy, who says that, since 1847, he has been in the business of making refrigerators, and is still in it; and that, from 1847 to 1850 he made and sold, in Boston, two refrigerators of the following description: The refrigerator was in the usual form of an upright refrigerator. It was made with an inside and outside box, but, in the rear, the filling usually placed between the inner and outer boxes was omitted, so as to leave a vacant space. This space was divided vertically, at right angles with the front and rear of the refrigerator, from the top to near the bottom, so as to make two flues or channels for the passage of air. The ice-chamber occupied the whole of the top of the inside box. The ice rested upon a rack shelf placed in the ice-box, the ice-box being of zinc. Below the ice-box, and occupying the whole remaining portion of the inside box, was the refrigerating chamber. In the left hand side of the ice box, near the bottom, holes were opened from the ice-box into the left hand open space behind, for the cold air to pass into such space, and descend to its bottom. Just above the bottom, other holes were pierced, leading into the refrigerating chamber. In the right hand side of the refrigerating chamber, and near its top, and just below the ice-box, a third row of holes was pierced, leading into the right hand flue behind, for the warm air to pass from the refrigerating chamber into such right hand flue and rise to its top. Near the top of said flue a fourth row of holes was pierced, leading into the ice-box, for the warm air to pass into the ice-box. It is claimed that this structure developed the same principle of the self operating circulation of the air and deposit of its moisture on the ice, that is found in Lyman's structure. There may be in it an idea of circulation, but the structure is not the same as Lyman's. The descending conduit is not combined with the ice-reservoir

substantially in the manner of Lyman's, nor have the two the same mode of operation. In the Eddy structure, there would be a circulation in the supplemental space behind, probably. The partition is described as riot extending to the bottom, but as leaving a free space underneath it. So, too, there would be a ventilation afforded to the icebox and the refrigerating chamber by means of the use of the holes and the spaces behind. But, the structure was evidently one of the class that cooled by conduction, as its principle of operation, the ice-box being of zinc.

It is to be remarked, that the court is not furnished with any testimony of experts, by the defence, to the effect that any of these alleged prior structures embodied substantially the combination found in the first claim of the plaintiffs' patent. Every presumption is to the contrary, for it does not appear that the extensive use now made of structures substantially like Lyman's is traceable to any of these alleged prior structures. In fact, the more numerous and diversified the forms and arrangements which existed prior to Lyman's, the more certain is it, that they, none of them, reached the principle of Lyman's, because his principle, once practically developed by him, sunerseded the prior structures.

It remains to see what are the structures sought to be enjoined. There is a dispute as to how the structure of Lalor is arranged. The plaintiffs show that it has an ice-box in an elevated position, in the refrigerating chamber, with an opening over the top of that side of it which is towards the refrigerating chamber, so as to permit the free passage of air over the top of such side from the refrigerating chamber into the ice-box; that the refrigerating chamber is closed; that the ice-box has a grating in it near its bottom, for the passage of the cold air and of the drip; that the drip falls upon two inclines, one sloping each way towards a central point, from each of two sides of the ice-box, but the two not meeting in the centre, and the drip being caught by a pan which is under the central space between the inclines and overlaps their inner edges; that the cold air passes through the grate, and down through the space between the inclines, and over the edges of the pan, and so into the refrigerating chamber; that there is no opening in any side of the ice-box, except the opening, before mentioned, at the top; and that all the cold air which passes out of the ice-box, passes down through the grate

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at the bottom. Lalor shows, that, in the same side of the ice-box in which there is the opening at the top, there is another opening near the bottom, about six inches wide, through which the cold air passes from the ice-box into the refrigerating chamber; and that, although the ice rests upon a rack through which the drop falls into a pan, there is no opening for the cold air to pass out over the pan. It is immaterial which, in the particulars in dispute, is the true description of Lalor's structure; for, in either form, it infringes the first claim of the plaintiffs' patent. In either form it has a descending conduit combined with an ice-reservoir, substantially in the manner and for the purposes described in the plaintiffs' patent, as such combination has been hereinbefore defined. The ice-box is open at the top and "near the bottom," in the language of the plaintiffs' specification. The sides of the ice-box perform the office of a descending conduit, while the grate holds up the ice and makes a reservoir. The air passes in above and upon the "ice and down through the ice, and, when cooled by it, is conducted out from below. It may be that the operation of the structure is inferior to that of the one in which the cold air passes out through the grate at the bottom, but the operation, as a whole, is the same as that of the Lyman structure. I find that Judge Benedict, in the Eastern district of New York, has enjoined, under this patent, the structure of one Abel, which had no opening in the bottom of the ice-box for the passage out of cold air, but had one entire side of the ice-box slatted vertically, except adjacent to its top and bottom, so that the air passed in near the top and passed out near the bottom. I concur in the correctness of that decision. In accordance with such view, the arrangement of Lalor, with the egress opening in the side of the ice-box, is, a fortiori, an infringement of the first claim of the patent. If the egress be through the bottom, there is equally an infringement of such claim. In order to infringe, it is not necessary that there should "be a tube, chamber or conduit below the icebox, to conduct the cooled air from the ice to or near to the bottom of the refrigerating chamber. As before said, the sides of the ice-box are a conduit. The specification of the patent so expressly states. It speaks of placing around the sides of, and under, a cake of ice placed near the ceiling of a closed room, a box of sufficient size to surround the ice, and calls such box a conduit. The first claim refers to such a conduit when it speaks of a descending conduit. The specification, in describing, and the drawing, in exhibiting, a structure with the cold air passing through the grate below, and then down through a flue to near the bottom of the refrigerating chamber, was setting forth what the specification was required to set forth, namely, what was regarded at the time by the inventor as the best embodiment of his invention. But, the first claim rightfully claims the descending conduit, whether the box without the flue or the box supplemented by the flue, to confine and give direction to the cooled air, in combination with means of holding the cooling material in position, when the combination operates substantially in the manner and for the purposes described.

The structure of Kopp is like the description of Lalor's structure given by the plaintiffs, as above set forth, and, therefore, is an infringement of the first claim of the patent.

The structure of Dorn & Smitzer is like the description of Lalor's given by the plaintiffs, except in certain particulars. The plaintiffs claim that the structure of Dorn & Smitzer, in addition to having a horizontal aperture at the top of the ice-box, opening into it from the refrigerating chamber, has other horizontal openings, parallel with the upper one, along the same side of the ice-box, and a grate at the bottom, through which the cold air and drip pass, and a pan underneath sloping entirely in one direction, and so arranged that the cold air can pass down over each edge of it. The defence claims, that, in Dorn & Smitzer's structure, the cold air can pass down only over one edge of the drip-pan, and not over both edges of it, and that there is no opening between the inner edge of the drippan and the back of the structure, but only an opening between the outer edge of the drippan and the outer corner of the ice-box into the body of the chamber; and that the slats on the side of the ice-box, which confine the ice, are not horizontal, but are vertical slats separated by two horizontal beams, to which they are nailed, the vertical slats extending from the top to the bottom of the ice-box. It makes no difference which is the correct description in these particulars, for, either form is an infringement of the first claim of the patent. The openings through the grate effect the main purpose of the structure, the egress in the side being additional.

The plaintiffs show the structure of Ayen to "be like their description of the structure of Dorn & Smitzer. The defence claims that the drippan of Ayen is depressed in the centre, and is in close contact, on one side, with the side of the structure, and that the descending air passes out only between the outer corner of the ice-box and the outer edge of the drip-pan. Either form is an infringement of the first claim of the patent.

The plaintiffs show the structure of Hoffman to be like their description of the structure of Dorn & Smitzer, except that the drippan is inclined both ways towards the centre, the cold air passing down over each edge of it. The defence claims, that, in the structure of Hoffman, the ice-box once had a slatted bottom and a side of horizontal slats; that now the bottom of the ice-box is floored over with a solid floor of boards; and that the inner edge of the drippan is

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in close contact with the side of the structure. Either form is an infringement of the first claim of the patent.

The structure of Cunningham is like the plaintiffs' description of the structure of Hoffman, except that the side of the ice-box which has an opening at the top of it is solid below that opening, and the inner edge of the dripan is in close contact with the side of the structure. It infringes the first claim of the patent.

The plaintiffs show that the structure of Schlang is like the structure of Cunningham. The defence claims, that underneath the ice-grating, and over the dripan, there is a curved sheet of zinc, with the concave face upward, which comes into contact with the back of the structure, on one side, and nearly in contact with the outer side of the ice-box, on the other side, and receives the drip, and has a hole in its centre, for the water to escape; that all the air which passes out passes over the outer edge of this curved sheet; that no air passes through the curved sheet; and that the curved sheet compels all the air to go out sidewise at the lower corner of the ice-box. In either form this is an infringement of the first claim of the patent.

The plaintiffs show that the structure of Burkle is like their description of the structure of Ayen, except that the inner end of the drip-pan is in close contact with the side of the structure. The defence claims that the side slats to the ice-box are set vertically, and not horizontally. Either form infringes the first claim of the patent.

I find that Judge Benedict, in the case of Crowell, has enjoined a structure like those which the plaintiffs show to be the structures of Cunningham and Schlang, as being an infringement of the first claim of the patent, and that, in the case of Schaefer, he has enjoined, as such infringement, a structure like the description by the defence of the structure of Dorn & Sinitzer. He says, in the latter case, and I concur with him: "The front side of the ice-box is so constructed as to allow air to pass out through slits in the side; but, making such slits in the side of the icebox does not work any substantial change in the refrigerator. Although, perhaps, riot as effective as without the slits, it still contains the characteristic elements of the invention of Lyman, as described in the first claim of the reissue" of March 10th, 1874, "and clearly is an infringement upon that patent." In the structure of Schaefer, in addition to the slats in the side of the ice-box, there was a grating in the bottom of it, and the cold air could pass down and over one edge of the dripan into the refrigerating chamber.

I have carefully considered all the matters presented in these cases, and am of opinion that the injunctions asked for must be granted, as to the first claim of the patent.

[For another case involving this patent, see *Lyman Ventilating & Refrigerator Co. v. Chamuslain*, Case No. 8,631.]

<sup>1</sup> [Reported by Hon. Samuel Blatchford, District Judge, reprinted in 1 Ban. & A. 403; and here republished by permission.]