

ROBERTS V. HARNDEN.

[2 Cliff. 500.]¹

Circuit Court, D. Massachusetts. Oct Term, 1865.

PATENTS—COMBINATION—ELEMENTS—EQUIVALENTS—REFRIGERATORS.

1. The first claim in a patent on an improved refrigerator was as follows: The employment of an open-bottomed ice-box, or equivalent thereof, in combination with a dividing partition, open above and below, so placed, that by means of self-operating internal circulation, the whole of the contained air shall be kept in motion and caused to revolve around this partition in currents, moving downward only on one side of the partition, and upwards only on the other, when the same is combined with a chamber for the refrigeration of food placed directly under the ice-box as set forth. This was immediately followed by a disclaimer of the vertical partition by itself, and the placing of articles to be refrigerated in a descending current of air. *Held*, it was a claim for the combination of three elements, viz., an open-bottomed ice-box, the partial partition, and the refrigerating chamber, operating as described in the specification.

[Cited in *Roberts v. Buck*, Case No. 11,897.]

2. Where all the elements of a machine are old, and the invention consists solely in the combination, by which a new and useful result is effected as compared with the old or previous machine, on which the improvement is made, no one can be held as an infringer who does not use all of the elements of the new combination. The invention consists in the new combination, and to that and its results the originator is entitled, but he cannot invoke the doctrine of equivalents to suppress any other invention which does not embrace his improvement.

[Cited in *Gould v. Rees*, 15 Wall. (82 U. S.) 194; *Fuller v. Yentzer*, 94 U. S. 297; *Gill v. Wells*, 22 Wall. (89 U. S.) 29; *American Whip Co. v. Lombard*, Case No. 319.]

3. The ice-box in the refrigerator of the complainant was described as an open-bottomed one, and was so made by making holes in the sides and bottom thereof; that of the respondent exhibited an education passage for the air across the bottom of the ice-box in the rear. The refrigerator of complainant was vertically divided by a

partition, not however reaching the top and bottom of the inside, but allowing at each end a space for air circulation, produced by difference in temperature of the two divisions. One side of respondent's ice-receptacle served for the partition, which allowed a wider space at the bottom than complainant's, and it was claimed that the circulation was irregular and different from the complainant's. *Held*, that although the operation of the two might be different in the particular that the respondent's was the more imperfect of the two, the purpose and operation of the two devices in the two patents, was substantially the same. In both inventions, the general tendency of the air in the compartment containing the ice-receptacle was downward, by reason of its comparative lower temperature and greater density; and in consequence of being warmer in the other division, upward.

[Cited in *Roberts v. Ryer*, Case No. 11,913.]

4. If two machines produce substantially a similar result by substantially similar means, no proof of difference between them lies in the fact that one is less effectual in operation, or more imperfect in structure, than the other.

[Cited in *Roberts v. Ryer*, 91 U. S. 159.]

Bill in equity [by George C. Roberts against Sylvester Harnden] for the alleged infringement of a patent for an improvement in refrigerators, of which the complainant was the assignee. The original patent was granted to one D. W. C. Sanford of Cincinnati, November 13, 1855 [No. 13,802], and was reissued April 21, 1857 [No. 455]. Shortly after the reissue, the patentee assigned an undivided half of the patent to one Charles G. Page, who subsequently joined with him in an assignment of the whole interest or the principal part thereof to the complainant. It was charged in the bill that the respondent commenced to infringe the complainant's patent on the 21st of July, 1860, and had continued to do so up to the date of the suit. The answer denied that D. W. C. Sanford was the original and first inventor of the improvement described in the specification of complainant's patent, or that the respondent had been guilty of any infringement thereon. It admitted the making and

selling of refrigerators by respondent, 892 in accordance with letters-patent granted to one John O. Schooley, from whom respondent alleged he held a valid license, but denied that these articles were constructed in the same manner as the patented device of the complainant. The complainant's refrigerator was described as an entirety so far as the casing or outward form was concerned, but the interior was divided into two compartments by a partition which, however, did not quite reach the top or bottom of the inside, but left an opening or space between both the top and bottom of the partition and the top and bottom of the interior of the refrigerator, so as to admit of a free circulation from one to the other of the compartments. Placed at a high point in one of the divisions was an ice-box, perforated in the bottom and sides, to allow the free contact of the air with the ice therein, and having internal projections to prevent too close a contact of the ice with the sides of the receptacle. The bottom of the ice-receptacle was funnel-shaped, in order to conduct the melted ice to a central discharge. A current of air was thus created in the refrigerator; the denser portions, in contact with the ice, descending and passing under the lower end of the partition, the more rarefied rising, coming in contact with the ice, and in their turn also descending. The air, it was alleged, would thus continue to circulate over and under the partition, and through the two compartments, until the ice had melted and an equilibrium of temperature had been established. It was further specified, that the moving air imbibed moisture from the fruits, vegetables, and other articles in the refrigerator, but coming in contact with the ice, by change of temperature lost a proportion of its power of retaining the moisture which was condensed upon the ice, and finally passed off with the waste water, thus preserving the interior of the refrigerator from mould or dampness. Exhalations

and the odor of meats, as the patentee represented, were also precipitated, with the condensed vapor, upon the ice; and thus the compartments were kept sweet. It was admitted in the specification that a variety of devices for causing the internal circulation of air in the compartments of refrigerators were known, but it was asserted that no complete and continuous "rotation, purification, desiccation, and refrigeration of all the air contained in such compartments, had ever been effected under the same arrangement," as in the patentee's improvement.

The following were the claims: "The employment of an open-bottomed ice-box, or equivalent thereof, in combination with a dividing partition open above and below, so placed that by means of self-operating internal circulation, the whole of the contained air shall be kept in motion and caused to revolve around the partition in currents, moving downward only on one side of this partition, and upward only on the other, when the same is combined with a chamber for the refrigeration of food or provisions placed directly under the ice-box. Placing shelves or fixtures for holding articles to be refrigerated, or the articles themselves, in the descending current directly under an open-bottomed ice-box, in combination with a dividing partition open above and below. In combination with said shelves or fixtures so placed, constructing the open-bottomed ice-box in such manner that the air may pass freely down through the same, and fall directly from the ice, upon the articles to be refrigerated, while at the same time the drip of the water is prevented."

Vertically dividing one compartment of a refrigerator from another, and placing articles to be refrigerated in a descending current of air, were disclaimed. The disclaimer was placed immediately after the first claim in the specification. The patent, before named, upon which the respondent based his

right to manufacture and sell his refrigerators, employed the current of air, an ice-box, differing somewhat from the complainant's in construction, and a partition, in the interior of the structure, not reaching so low or near the bottom of the refrigerator as the complainant's, and combined with these a double movable register in two parts, one to admit external air to the ice, and the other to allow, at the same time, of the escape of the air which had remained for a time within the refrigerator. The theory of this arrangement was, that without any admission of external air, an equilibrium of temperature was in time established within the refrigerator, and circulation ceased. The claim was for "the combination of the double register," with the ingress and egress openings with the partition having the openings at top and bottom, the whole arranged and operating substantially as described.

T. A. Jenckes and C. W. Huntington, for complainant.

B. B. Curtis and C. P. Judd, for respondent

CLIFFORD, Circuit Justice. The better opinion is, that the first claim must be construed in connection with the several explanations which follow it, as those explanations are, to a certain extent, the construction which the patentee put upon the claim, and being a part of the instrument and immediately connected with the claim, the whole must be construed together. Taken in that point of view, the invention consists in a combination of three elements, all of which are admitted to be old. The claim; therefore, is for the combination, and for nothing more. The elements of the combination are as follows: First, the employment of an open-bottomed ice-box, constructed in such manner that, By the perforation of holes in the sides and bottom of the box, the air will pass freely down through the same, and fall directly from the ice upon the articles to be refrigerated; the second element is the dividing partition, open above 893 and below, and

so placed that by means of a self-operating internal circulation, the whole of the contained air shall be kept in motion, moving downward and upward in currents as described, and be thereby caused to revolve around the partition; the third element is the chamber with the shelves or fixtures for holding the articles to be refrigerated, as more fully set forth in the explanatory clause. The currents are caused by the downward tendency of the cold air in the compartment or box containing the ice, and by the upward tendency of the warm air in the other compartment where it is less affected by the ice. As described, the partition does not extend to the bottom nor to the top of the casing, but leaves an opening, as it is called, at each end. The extent of the openings is not given, but it is quite evident that they must be sufficient to allow the currents of air, created by the downward and upward tendency of the cold and warm air, to revolve around the partition in the manner described. The utility of the invention when constructed as directed in the specification, cannot be doubted; and it is equally certain that the respondent has not introduced any satisfactory evidence tending to show that the patentee is not the original and first inventor of the improvement. The suit is founded upon the reissued patent, and when introduced the letters-patent are prima facie evidence that the patentee is the original and first inventor of what is therein described as his invention. An argument upon that topic is unnecessary, as there is no evidence to overcome the prima facie presumption which the letters-patent afford. Undoubtedly the second question, which is the question of infringement, is attended with more difficulty, as the evidence upon that subject is quite conflicting. The complainant does not deny that the rule of law applicable to the case is correctly stated by the respondent. Where all the elements of a machine are old, and the invention consists solely in the

combination, by which a new and useful result is effected, as compared with the old machine, on which the improvement is made, no one can be held as an infringer who does not use all of the elements of the new combination. The reason of the rule is, that others as well as the first patentee, may improve the old machine; and if they do so by the use of a substantially different combination, they are not infringers, although they may have used all of the elements of the first invention, except one, and their machine may perform substantially the same functions.

The property of the first inventor consists in the new combination he has made, and to that and its result he is fairly and fully entitled, but he cannot invoke the doctrine of equivalents to suppress any other improvement which does not embrace his improvement and which is substantially different. Formal differences or colorable evasions, however, are not sufficient to confer any right as against the first patent, but the patentee and all those claiming under him will treat all such as culpable infringements.

Applying those rules to this case, the respondent insists that he is not an infringer. He bases his defence in this behalf, chiefly upon two grounds, which will be briefly and separately considered. He insists, in the first place, that his ice-box is substantially different, because, as he insists, the eduction passage for the air across the bottom of the box in the rear, is not substantially the same as the holes in the ice-box of the complainant; secondly, because, as he insists, the side of the ice-box, as used in his machine, instead of the partition in that of the complainant, is not substantially the same as the partition in that of the complainant. The side of the ice-box, it will be observed, does not extend below the box itself, and consequently, the lower opening, if such it may be called, is much larger in the machine of the respondent than in that of the complainant. The corresponding suggestions are,

that the machine of the respondent has no open-bottomed ice-box, like that of the complainant, and that it has no device or partition to keep separate the ascending currents from those which are descending. The theory of the complainant is, that the currents of air in his machine moved upward in one apartment and downward in the other, but the respondent insists that the currents in his machine move in all directions in each apartment and that in that respect the two machines are substantially different. Evidently the operation of the machine of the respondent is not as perfect as that of the complainant; but it cannot be admitted that an infringer can successfully defend himself against the charge of infringement by the allegation and proof that his machine is not as good as that of the inventor whose rights he has invaded. The rights of an inventor are oftentimes affected as injuriously by the sale of poor machines in the market, as by those made more strictly in conformity to his patent. The effect of the eduction passage for the air in the one or the other machine is precisely the same in kind, and the mode of operation in the one and the other is also the same. The purpose is to allow the cold air to descend from the icebox upon the articles to be refrigerated; and when that is accomplished, it passes into the other apartment where the temperature is warmer, and ascends precisely as in the machine of the complainant. But it is said that inasmuch as the ice-box does not extend more than two thirds of the way to the bottom of the box, the operation is not as complete as it is in the machine of the complainant; and no doubt there is a difference, but it is one of degree, and not of kind, and in my judgment cannot save the respondent from the charge of being an infringer. The general tendency of the air 894 in the compartment containing the ice-box is downward, and the general tendency of the air in the other compartment is upward; and although it may not be as

completely so in either apartment of the respondent's machine as in the machine of the complainant, still the better opinion is, I think, that the difference is not such as will relieve the respondent from the charge of infringement. The same remarks are applicable also to the partition. The slide of the ice-box is not as long in the machine of the respondent, as the partition in the machine of the complainant; but the difference is merely formal, because, if it is not extended downward sufficiently to perform the same function as that of the partition, the machine would be of no value. Unless it accomplishes the same result in kind as the partition in the machine of the complainant, the machine would be useless; and it certainly is no defence that it is different in form, if it performs the same function in substantially the same way and produces substantially the same result. Nor is it any defence that the result is not as good, if it be substantially the same in kind and is produced substantially by the same means. The complainant is entitled to a decree.

{For other cases involving this patent, see note to *Roberts v. Buck*, Case No. 11,897.}

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