insufficiency which is meant by the statute, there was no mistake, although the patentee might have fallen into an error of judgment, or into an erroneous conclusion of fact; and, furthermore, the original patent, according to the definitions contained in the recent and perhaps in the earlier cases, was not defective nor insufficient either in its descriptive portions or in its claims.

The second claim of the first reissue, construed in the light of the contemporaneous facts, which are shown in the "file-wrapper and contents," cannot be fairly construed to mean a metallic frontage irrespective of the fastening of the frames to each other through the wood-work. Were this claim to be construed without study of the history of the application as it made its way through the patent-office. and of the amendments which it was compelled to undergo, it would probably receive the construction which naturally belongs to the first claim of the present reissue. But the patentee abandoned, under pressure from the patent-office, the clauses in the application which made the fastening of the frames to each other to be optional, and abandoned also a proposed third claim, which described the boxframes as secured to the pigeon-holes "independently of each other, by means of screws or other similar fastenings." In view of the fact that the patent-office excluded from the descriptive part of the specification suggestions of any other method of fastening than that by which the frames were to be fastened to each other, it would be singular if the intent of the office was to include in the second claim such other method of construction. If this claim has properly, and the applicant knew that it was intended to have, a narrow construction,—and of this knowledge I think there can be little doubt.—the plaintiff would not insist that the first and second claims of the present reissue ought, in view of the decision in Brass Co. v. Miller, supra. to be so construed as to be any broader than the third claim, which requires the combination of door-frames, doors, and pigeon-holes to be by means of rivets or bolts, which attach the frames both to the woodwork and to each other.

There is no infringement, and the bill is dismissed.

Cottler and others v. Stimson and others.

(Circuit Court, D. Oregon. August 1, 1884.)

1. Notice of Special Matter, under Section 4920, Rev. St.

Notice of special matter, in an action for the infringement of a patent, is not a pleading, and, instead of being put in the answer, should be served on the adverse party.

SPECIAL PLEA IN ACTION FOR INFRINGEMENT.
 Special matters, which may be given in evidence under the general issue, and a notice in such action, may also be pleaded specially; but special pleas must conform to the Code of Civil Procedure.

3. THE EASTMOND PATENT, No. 171,926, JANUARY 11, 1876.

Neither the Holt patent, No. 147,266, issued February 10, 1874, nor "A Treatise on Ventilation," written by Lewis W. Leeds, and printed by John Wiley & Sons, New York, 1871, anticipated the invention of Elbert Eastmond, entitled, in the application for a patent made September 22, 1875, "improvement in ventilating water-closets."

4. SAME—INFRINGEMENT—DAMAGES.

The amount of the royalty charged and paid for the use of the invention taken as the measure of damages for an infringement of the patent therefor.

Action for Infringement of Patent.

C. P. Heald and E. H. Merrill, for plaintiffs.

D. P. Kennedy, for defendants.

DEADY, J. This action is brought to recover damages for the infringement by the defendants of a patent for an "improvement in the ventilation of water-closets," applied for by Elbert Eastmond, on September 22, 1875, and issued January 11, 1876, to said Eastmond and his assignee, William T. Cottier.

The case was heard by the court without a jury, on the amended complaint, the answer thereto, and the reply. The answer contains a plea of "not guilty," and notice of the following "special matters," as provided in section 4920 of the Revised Statutes: (1) That the alleged invention was previously patented to Jared Holt, on February 10, 1874, by letters No. 147,266; (2) that it was previously described in a printed book entitled "A Treatise on Ventilation," written by Lewis W. Leeds, and published in New York in 1871; and (3) that a like apparatus and system of ventilation was previously constructed, known, and used at different places in the United States and Europe, of which proof was only offered as to two instances; namely, in the year 1871, on the south-east corner of block 55, in Portland, by J. H. Drummond and John C. Carson; and in the year 1870, in the town of Fond du Lac, Wisconsin, by Edward Squires. The answer also contains two special pleas, to the effect (1) that the plaintiffs have "constructed specimens" of their alleged invention without marking them "patented," and without notifying the defendants of the alleged infringement; and (2) that the alleged invention was not useful at the time of its production by the said Eastmond.

Both the pleas and notice conclude to "the country," as if an issue was formed thereby. And in their replication the plaintiffs join in this supposed issue by the common similiter,—and "the plaintiff doth the like."—and then proceed to controvert each of the pleas and notice.

The notice is not a plea, but only an awkward substitute for one. and needs no reply. It is no part of the answer and ought simply to have been served on the adverse parties, so that the matters contained in it could be given in evidence under the general issue of "not guilty." And these matters might have been set up in special pleas, without otherwise giving notice of them, and that is the better way, as being in harmony with the system of pleading prescribed by the Code.

As the two special pleas or defenses are made under the Code, they need not have concluded to the country; and as they consisted of new matter which did not make an issue with any allegation in the complaint, they ought not to have so concluded, even at common law, but with a verification—and this the defendants are ready to verify.

The plea of "not guilty" puts in issue the alleged acts of the defendants constituting the infringement of the letters patent. But on the argument it was practically admitted that the water-closet of the defendants is an infringement in form and operation of the plaintiff's patent; and that they are entitled to recover damages therefor unless the defendants can maintain the other defenses to the action, or some one of them.

The last plea—that the invention is not useful—was abandoned on the argument, so that the defense is now confined to the omission of the plaintiffs to mark the article in question "patented;" the anticipation of the Eastmond patent by the Holt patent; Leeds' Treatise on Ventilation; and the prior knowledge and use of the invention by Squires and Carson. And as to all these the burden of proof is upon the defendant,—the patent to Eastmond and Talbot being admitted, and also that the plaintiffs are the due and lawful assignees of the same for this county. In the specification upon which the Eastmond patent issued it is stated that experiment has proven that when a water-closet is placed tightly upon a vault, and constructed so as to form a continuous and duly-proportioned air chamber between the walls thereof from the vault to the roof, with a hooded exit for the air in the peak of the latter, a current of air will flow downward into the vault through the holes in the seat and thence upward through said air chamber and out at the exit, thereby keeping the air in the closet pure. And Eastmond claims therein as his invention,-

"(1) The application of a draught of air through the vault, A, between the interior and exterior coverings of a water-closet, thence upward to the exterior atmosphere, for the purpose of keeping the water-closet pure and wholesome; and (2) a double-wall privy, seated upon its vault, so that no air can enter the vault except through the holes in the seat of the privy, whereby the atmosphere of the closet is kept pure by means of a continuous downward draught through the holes, and an upward draught through the double wall of the privy, all constructed substantially as described."

The fresh air comes in at the doorway, and as it is drawn down into the vault below, carries with it and drives before it the fetid exhalations and odors from the vault, and thus keeps the chamber of the closet ventilated. The explanation, offered on the argument, of this phenomenon is based upon the assumption that decomposition is constantly going on in the vault, which generates heat, and causes a rarification of the air, or a partial vacuum therein, into which the heavy cold air presses. But, however this may be, it is admitted in this case that the result is produced by the construction of a water-closet in the manner indicated.

Holt's invention is styled in his specification "an improvement on privy-house," and consists in a "privy-house" placed on a vault with double walls, so as to furnish an air chamber or passage from the vault to the opening in the roof, with a "series of openings" in the "outer casing" below the floor "for the admission of fresh air into the vault;" and he claims as his invention:

"The outer casing, B, having the inlet openings, E, for the admission of fresh air into the vault, in combination with the walls of the interior chamber, A, arranged so as to form the ventilating passages, C, substantially as and for the purpose specified."

The successful working of this invention also assumes that a more or less vacuum is formed in the vault from natural causes, into which the fresh air from without will pass and drive upward and outward the lighter fetid air. But these inventions are not identical. Indeed, they are radically different, both in operation and result. In Holt's patent the fresh air is admitted below the seat, and instead of directly ventilating the chamber of the closet, must have the effect in some measure to drive the foul air up through the holes in the seat into the chamber, as well as up the air passage between the walls. By causing the fresh air to mix with the foul, the latter may be diluted and rendered so much the less offensive as it rises into the chamber, but that is all.

Counsel for defendants contend that the downward draught of air in the Eastmond patent is only an extended or double use of the upward draught of the Holt patent, and therefore not a patentable invention; citing Roberts v. Ryer, 91 U. S. 150, and Brown v. Piper, Id. 37. In the former of these cases it was held that "it is no new invention to use an old machine for a new purpose," and therefore a mere change in the form and proportions of the compartments of a refrigerator, so as to utilize the descending instead of the ascending current of endlessly circulating air, was only a double use of such refrigerator. the latter it was held that a patent for an apparatus for preserving fish and other articles in a close chamber by means of a freezing mixture, having no contact with the atmosphere of the preserving chamber, covered nothing but a double use of the well-known ice-cream But in this case a draught of air towards a vacuum, which is not patentable, and may be used by any one, is applied by the Eastmond patent to the ventilation of a water-closet in a peculiar and essentially different manner from that in the Holt, and, so far as appears, with very different results.

Objection is made to the introduction of the book entitled "A Treatise on Ventilation," because it does not appear to be a "printed publication," within the meaning of the statute; and it was admitted subject to the objection. It is a book of 226 pages, and purports to be the second edition of two courses of lectures delivered on the subject of ventilation by Lewis W. Leeds, before the Franklin Institute, at Philadelphia. By the title-page it appears to have been printed

by "John Wiley & Son, New York, 1871," who style themselves "publishers." But there is no other evidence than what is furnished by this copy that the work was ever on sale or in circulation.

In Walk. Pat. § 56, it is said that "a printed publication is anything which is printed, and, without any injunction of secrecy, is distributed to any part of the public in any country. Indeed, it seems reasonable that no actual distribution need occur, but that exposure of printed matter for sale is enough to constitute a printed publication."

But something besides printing is required. The statute goes upon the theory that the work has been made accessible to the public, and that the invention has thereby been given to the public, and is no longer patentable by any one. Publication means put into general circulation or on sale, where the work is accessible to the public. See Reeves v. Keystone Bridge Co. 5 Fisher, 467.

In the nature of things, it is not improbable that this work has been regularly published and is in general circulation; at least, among those interested in the subject. It is not likely that it was printed for private circulation. But I doubt if the evidence is sufficient to warrant such a conclusion. It does not appear that any other copy of it is or ever was in existence, or that it was ever placed publicly on sale, or otherwise distributed among or made accessible to the pub-

lic or any considerable portion of the community.

But, waiving this objection, the invention of Eastmond is neither described no referred to in it. The portion of the work relied on to prove the anticipation of the invention is a sort of supplemental chapter, found on pages 171 to 176, both inclusive. It is devoted to the ventilation of hospitals, and particularly describes a plan furnished by the author to the sanitary commission, during the war, which appears to have received a prize at the Paris exhibition, as a part of an American sanitary collection. It is illustrated, on page 173, by a diagram of a hospital with a latrine, or water-closet, attached, showing the method of ventilation by the application of heat below to form upward currents of air between the walls of the building and the action of the wind in passing over the escape or ventilator in the roof of the building, with an upward slope, thereby sucking the air from below and forming a partial vacuum, which helps to maintain the current of air from below. The author styles it the principle of the Emerson ventilator applied to ridge ventilation. the adjoining latrine a current of air appears to be sent down through the holes in the seat, from whence it is drawn through the vault and upward, and discharged through a large ventilating shaft, instead of a passage between the walls. This ventilation of the latrine is particularly described on page 175, and the author says was first applied by him to the ventilation of the latrine-room of a hospital in Washington in 1863.

But the radical difference between the two systems is this: The ventilating shaft in Leeds' plan must be brought in contact with ar-

tifical heat, so as to rarify the air therein and cause the current to flow upward. This would be impracticable in the case of the ordinary detached water-closet, for the ventilation of which the Eastmond patent is particularly intended.

The Squires closet has no other resemblance to the Eastmond patent than the ventilating space, not made by a double house, but by an outer and inner wall, consisting of the weather-boarding on the one side and the ceiling on the other, and cutting an inch of the girt and plate away, so as to make the opening between the walls continuous. It also has a hip roof with a ventilating pipe in the top; but this pipe does not appear to be covered with a hood and open at the sides, as the one in the Eastmond patent, with a view of producing a vacuum therein by the action of the wind. The foul air may pass up from the vault between the walls and out this ventilator, if there is any adequate cause to produce such result. It does not appear from the evidence that the ventilation of this closet involves in any way the use of a current of fresh air; and, if it does, it is not shown when or how it enters. The holes in the seats, according to the diagram, appear to be closed, and there are no indications thereon that the current is expected to enter the door-way and pass down through the seat into the vault, as in the Eastmond patent. But it is stated on the diagram that the house projects over the vault four or five inches on each side. This being so, it might be inferred that a current of fresh air entered the vault below the floor, as in the Holt patent, through the space caused by this projection, between the vault and the sill of the house. But it is also stated on the diagram that the house "is not banked around at the bottom, but sides run down into ground," and this, if so, will prevent the fresh air from entering there. The burden of proof is on the defendants to show the similarity in these structures and their mode of ventilation, and they have not succeeded.

The Carson closet is an ordinary one, weather-boarded outside and ceiled inside, and seated on a vault above the ground. It may take air downwards through the holes in the seat, but it is open on the outside, between the roof and the plate, the width of the rafters, and it is as likely to receive fresh air through this opening as elsewhere, and thus check the upward current, if any, and even send it downward to the vault and out the holes in the seat into the chamber. Both the court and counsel examined this closet on the ground, and if the Eastmond patent does not succeed in keeping a purer atmosphere about a closet than there was about it, it is not worth talking about.

But neither of these closets were designed, nor apparently adapted nor used, to produce the result claimed for the Eastmond patent. And whatever similarity of structure or effect there may be between them is accidental, and common to most water-closets. Walk. Pat. §§ 67, 68.

The evidence supports the first special plea, so far as the omission of the plaintiffs to mark their water-closets with the word "patented" is concerned; but it fails upon the allegation that they had not otherwise notified the defendants of the alleged infringement. On the contrary, the proof is satisfactory that the defendant David Stimson was notified by the plaintiff D. W. Williams of the infringement some months before the commencement of this action, and continued the use of the water-closet until after its commencement, when the ventilator was removed from the roof.

The evidence on the subject of damages is meager. Taking the amount of the royalty charged and paid for the single use of the invention as a measure of damages, the finding will be for the plaintiff in the sum of \$25, with leave to move, on notice to the defendants, for judgment for a greater sum, as provided in section 4919 of the Revised Statutes.

TURRILL v. ILLINOIS CENT. R. Co.

SAME v. MICHIGAN S. & N. I. R. Co.

(Circuit Court, N. D. Illinois. February 6, 1880.)

1. PATENTS FOR INVENTIONS-INFRINGEMENT-DAMAGES-PROFITS.

In estimating profits made by the infringer of a patent, the comparison must be between the patented invention and what was known and open to the public at and before the date of the patent. If the rule were otherwise, a patent might be practically destroyed by subsequent inventions.

2. Same—Interest.

Interest is properly allowable on a decree for profits from the time the report is in proper form for exceptions.

In Equity.

F. H. Kales and West & Bond, for complainant. George Payson and J. N. Jewett, for defendants.

Harlan, Justice. Looking into the records of these cases as they were presented to the supreme court of the United States in 1876, (94 U. S. 696,) I find that decrees were rendered against the Chicago & Alton Railroad Company, the Chicago, Burlington & Quincy Railroad Company, the Pittsburgh, Fort Wayne & Chicago Railroad Company, the Michigan Southern & Northern Indiana Railroad Company, and the Illinois Central Railroad Company, for the infringement of the Cawood patent. As to the three companies first named, the decrees were affirmed upon the ground that the machines used by them were infringements of that patent. The decrees against the Michigan Southern and Illinois Central were reversed, because the sums adjudged against them improperly included profits made from the use of certain other machines which were declared by the supreme