

reasons stated in the opinion heretofore rendered in *Neacy v. Allis, ante*, 874, in which case it was sought by the assignee of the Dann patent to hold the complainant, Allis, as assignee of the Beckwith patent and manufacturer of the Beckwith dog, liable as an infringer. But this question, whether the Dann dog infringes the Beckwith, was not argued in the cases at bar as fully as its importance would seem to demand; and if it is deemed a question to be necessarily determined here, I shall reserve it for further argument and consideration, and in that case, as the question may be deemed a close one, and is in my judgment of great importance, I shall direct that it be argued before the full bench.

WHITTLESEY and others v. AMES and others, and two other cases.

(Circuit Court, N. D. Illinois. January, 1880.)

1. PATENTS FOR INVENTIONS—EXPERIMENTAL DEVICES.

Evidence of similar devices, merely experimental, will not defeat a patent, though prior in point of time.

2. SAME—NOT TO DEFEAT SUBSEQUENT PATENTS.

Although prior unsuccessful experiments in part suggested the construction which the patentee adopted and perfected, this fact will not defeat the patent.

3. COMBINATIONS IN REISSUES—USE OF A PART.

Although the owner of a patent had the right to claim a combination in his reissue, the claim cannot be extended to the sole right to the use of a part of the combination.

4. SAME—PROTECTION OF—SUBSTITUTION OF PARTS.

The court will so protect a patented combination as not to allow it to be defeated by a mere substitution of parts performing the same functions.

In Equity.

Coburn & Thacher, for complainants.

G. L. Chapin, for defendants.

BLODGETT, D. J. These are bills in equity for damages and injunction for alleged infringement by the defendants in each case of reissued letters patent No. 7,704, dated May 29, 1877, for an improvement in bedstead frames, the original patent having been issued November 30, 1869.

The original specifications describe the invention in the following terms:

“This invention relates to a new frame for single and double bedsteads, which are provided with elastic or flexible sheets for the support of the bed-

ding, or with other suitable bed bottom. The invention consists in the use of slotted or double-inclined end-pieces, in which the ends of the fabric are clamped, and in the employment of longitudinal adjustable standards, in which the said end-pieces are secured. By this arrangement the fabric is securely held, and can be stretched or slackened at will."

The claims in this patent were:

"(1) The inclined double end-bars, *c*, of a bedstead frame, arranged substantially as and for the purpose herein claimed and described.

"(2) The standard, *B*, arranged longitudinally adjustable on the side-bars of a bedstead frame, to permit the inclined side-bars (end-bars) to be set at a suitable distance apart, as set forth."

In the reissue the owner of the patent, the Woven-wire Mattress Company, was allowed to restate the nature and scope of the invention in the following terms:

"My invention relates to a new frame, which is provided with an elastic or flexible sheet or fabric for the support of the bedding. The frame is made of proper size to be inserted within any ordinary bedstead. My invention consists in the combination of the side-bars and end-bars, with the end-bars elevated above the side-bars in such manner that the elastic fabric, stretched from end-bar to end-bar, can extend the entire width of the frame over the side-bars, and an elastic fabric attached to the end-bars only of the frame; and it also consists in the combination of the side-bars and end-bars of the frame, connected together by standards or corner-irons, *B*. By this arrangement the fabric is securely held. * * * It will be observed that the purpose of this method of attaching the fabric to the frame is to give to the fabric its greatest elasticity by attaching it at its ends only, and at the same time making it as nearly the full size of the frame as could be well done, while it is substantially free from contact with the frame when used, excepting at its ends, where it is rigidly secured to the end-bars."

The description of the parts and the drawings is the same in the reissue as in the original patent.

Two new claims are allowed in the reissue, as follows:

"(1) The combination of the side-bars and end-bars and elastic-coiled wire fabric, *D*, attached only to the end-bars, with the end-bars of the frame elevated above the side-bars, so that the fabric will be suspended above the side-bars from end to end of the frame.

"(2) The combination, in a removable bed bottom or bedstead frame, of the side-bars, *A*, standards or corner-pieces, *B*, end-bars, *C*, and elastic fabric, *D*, combined and arranged substantially as and for the purposes specified."

The third and fourth claims are the same in the reissue as in the original patent.

The defendants in these cases are charged with an infringement of the first and second claims under the reissue. No dispute is made as to the complainants' title.

The defenses set up are—

(1) That Farnham was not the original and first inventor of the device covered by the original patent and reissue; (2) that the two new claims allowed in the reissue are not sustainable under the specification and drawings of the original patent, and hence the reissue is void as to those claims; (3) that the defendants do not infringe the Farnham patent, either original or reissue.

It will be noticed that the original Farnham patent only covered the peculiar "inclined double end-bars," as they were arranged and shown in the mechanism described, and the standards, B,—that is, the frame of a bed bottom or bedstead with end-bars made double and inclined, as there shown, and performing the functions shown, and the standard, B, longitudinally adjustable on the side-bars, as and for the purpose shown; and the peculiar characteristic of the frame constructed under the original specifications was that the fabric which was to be used therewith was to be fastened only to the ends of the frame. This peculiarity is not stated in words, but it is manifested from the organization of the mechanism and the relation which the parts bear to each other. No language describing this feature of the mechanism is necessary. It is obvious from inspection alone that the intention of the inventor was to make a bed bottom in which the fabric should be attached only to the ends of the frame, so that the strain upon the fabric by the weight of the occupant or occupants of the bed would be lengthwise of the bed, and not crosswise.

By the reissue a claim is asserted to the combination of these parts and the elastic coiled-wire fabric,—that is, the inclined double end-bars and the adjustable standard for holding those end-bars above the side-bars, and the elastic coiled-wire fabric, D, so arranged that the fabric will be suspended above the side-bars from end to end of the frame; while it is insisted on the part of the defendants that the claim is invalid—*First*, because no such combination is shown in the original specification and drawing of the Farnham patent; *second*, for want of novelty in the original device.

As I have already said, it is obvious that Farnham intended that the "elastic or flexible sheet" for the support of the bedding "should be attached only to the ends of the frame." He does not state of what material the "elastic or flexible sheets" were to be made. He does not use the words "elastic coiled-wire fabric" in any part of his specification, nor any terms which would show that he meant that kind of fabric to be used. Any "elastic or flexible" fabric is allowed by the language of the specification; but in the drawing the fabric, D, is shown to be made of coiled wire. It is objected that the draw-

ing shows only a coil, and not an interlocked connected series of coils. But it must be remarked that figure 1 in the drawing is a side view only, while the description in the specification called it a "fabric." Clearly a single coil, or any number of coils not interlaced with each other, would not be a fabric. I think there is enough in the drawing and specification, when taken together, to show that the inventor meant to describe by the word "fabric, D," a fabric made of coiled wire, and he had the right to claim a patent on the combination of these parts if the combination was new.

This brings us to the most seriously contested portions of this case under the proof.

It is conceded that, so far as the inventor is concerned, the woven-wire fabric was old. He did not invent it, and does not claim to have done so. But it is insisted on the part of the complainants that by bringing it into combination with this peculiar frame Farnham was the first to utilize it for domestic purposes as a bed bottom, and make of it a bed bottom acceptable to the public, and which has gone into general use. It appears from the proof that some time prior to January 1, 1869, the Woven-wire Mattress Company, of Hartford, Connecticut, had attempted the manufacture of bed bottoms by the use of a fabric made by weaving or interlocking coiled wires.

They at first made the frames upon which the fabric was stretched of iron, and the mechanism or organization consisted of the iron frame, to which the fabric was in some manner fastened at the ends and sides, so as to make a wire mattress upon which the bedding should rest. This device was unsuccessful. The mattresses so made were not acceptable, and there was no sale or demand for them. About the first of January, 1869, the company employed Mr. Charles E. Billings, of Hartford, to make experiments in getting up a more satisfactory device for utilizing the woven-wire fabric as a bed bottom. During the time he was so employed Mr. Billings was to some extent assisted by Mr. Henry E. Bissell, who was at that time secretary of the company. Mr. Billings was engaged by the company four or five weeks,—say until about February 6th,—and within that time he made four wooden bed-bottom frames, into which the woven-wire fabric was fastened. The general plan of all these Billings frames was that of a box of the width and length required for a bed bottom, into which the woven-wire fabric was fixed in the frame by various devices adopted for attaching it to the end-board. Some of them may have been attached to the sides; but I think the balance of proof shows that two, at least, of these frames had end-boards or end-

pieces higher than the side-pieces, and the fabric was suspended in the frame by attaching it only to the end-pieces. These were all experimental frames. None of them were offered for sale, and all but one were dismembered during the summer of 1869. One of these frames was sold, in the summer of 1869, to a Mr. Prutting, whose testimony is in this record, and the frame itself is produced as an exhibit. It is a box frame, with the sides and ends of equal height, and bears evidence that the fabric was fastened at the ends and sides. Mr. Billings closed his experiments in the forepart of February without producing a frame which was satisfactory to the company, and soon after his discharge Mr. John N. Farnham, to whom the patent in question was granted, was engaged by the company. His statement of the purpose of his employment is given in his own words, in answer to questions 10 and 11 of his deposition:

“Question. Who hired you? *Answer.* Stiles D. Sperry. He said: ‘We have got a mattress up there that we have been trying to fix and make salable. They can’t make it go to suit them.’ Wished me to go up and see. I went up there and looked at everything there was in the shop. He wanted to know if I thought it could be made any way, or if I thought it would pay. I told him I presumed it might. He gave me the key to the shop, and told me to go to work then and see what I could do.”

Within a few days after being set at work in the manner described, Mr. Farnham made the patterns for the standards, B, and during the month of March he made a bed frame in all respects like that described in his patent. The idea of this frame, substantially as it was afterwards constructed, seems to have been conceived by Mr. Farnham very soon after he commenced work in the shop. He states that for the first three or four days he was engaged in weaving a fabric. Then he made the patterns for the cast-iron standards, B, which were the same as described in his patent; and before he had made the frame he explained to Mr. Sperry and Dr. Hawley, members of the company, how he proposed to make it, and made the frame in the manner explained, (interrogatories 127 to 130,) showing that his completed frame was only the mechanical embodiment of the idea he first formed.

At the time Mr. Farnham entered the shop the four frames made by Mr. Billings were there, and he undoubtedly had the benefit of whatever could be learned from what had been done by his predecessors in the direction in which he was to apply his efforts, which was to make a salable frame or device on which the woven-wire fabric

could be made available for the purposes of a bed; but I think it is abundantly established by the proof that the desired end had not been attained prior to his employment. What Billings and Bissell may have done may have suggested to Farnham the device he finally adopted; but this does not invalidate his patent. He seems to have been the first to achieve success, and that what these others had done should not defeat his patent is shown by the following authorities:

In *Galloway v. Bleaden*, 1 Webs. Pat. Cas. 521, the patent being for an improvement on the floats of paddle-wheels, Chief Justice Tindal says, page 529:

"That there had been many experiments made upon the same line, and almost tending, if not entirely, to the same result, is clear from the testimony you have heard, and that these were experiments known to various persons; but if they rested in experiment only, and had not attained the object for which the patent was taken out—mere experiment afterwards supposed by the parties to be fruitless, and abandoned because they had not brought it to a complete result—that will not prevent a more successful competitor, who may avail himself, so far as his predecessors have gone, of their discoveries, and add the last link of improvements in bringing it to perfection. If that is the case, the plaintiffs are entitled to your verdict."

In *Goodyear v. Day*, 2 Wall. Jr. 283, Mr. Justice Grier says, page 298:

"It is usually the case when any valuable discovery is made, or any new machine of great utility has been invented, that the attention of the public has been turned to the subject previously, and that many persons have been making researches and experiments. * * * Many experiments may have been unsuccessfully tried, coming very near, yet falling short of, the desired result. They have produced nothing beneficial. The invention, when perfected, may truly be said to be the culminating point of many experiments, not only of the inventor, but by many others. He may have profited indirectly by the unsuccessful experiments and failures of others, but it gives them no right to claim a share of the honor or the profit of the successful inventor."

In *Parker v. Stiles*, 5 McLean, 44; see 1 Fisher, Pat. 623, *Leavitt, J.*, says, (page 337, Fisher):

"Proof of the previous use of a structure bearing some resemblance in some respects to the improvement of the plaintiff, and which might have been suggestive of ideas, or have led to experiments, resulting in the discovery and completion of his improvement, will not invalidate his claim under his patent."

In *Whitely v. Swayne*, 7 Wall. 685; S. C. 1 Whitman, Pat. Cas 208, *Nelson, J.*, delivering the opinion of the supreme court, says:

"The plaintiff's title rests upon a patent for improvements in a machine for harvesting clover and grass seed, which improvements, after a full and fair trial, resulted in unsuccessful experiments, and were finally abandoned. They never went into any useful or practical operation, and nothing more was heard of them from Steadman, (the patentee,) or any other person, for a period of six years. * * * Clearly, if any other person had chosen to take up the subject of the improvements where it was left off by Steadman, he had a right thus to enter upon it, and, if successful, would be entitled to the merit of them as an original inventor."

See, also, *Union Paper Bag Co. v. Pultz & Walkley Co.* 15 O. G. 423.

And this brings me to consider what was done by another experimenter in the same field.

It appears from the proof that about the same time the company employed Mr. Farnham, and gave him the key to its shop, with directions to "go to work and see what he could do," a Mr. E. W. Ellsworth, who seems to have been to some extent a successful inventor of other mechanical devices, was employed "to get up a more portable frame" than the iron one they had been using. Mr. Ellsworth took an unframed fabric to his house, and some time (as he testifies from recollection, without *data*) in March he produced and took to the shop of the company a mattress frame which, like those of his predecessors, Billings and Farnham, was fastened only to the end rails. But I consider it quite clear from the proof—*First*, that Ellsworth's frame was not produced until some time after Farnham's; *second*, that it was not a practicable frame,—not a portable or salable frame,—such as wanted for the trade.

I come, then, to the conclusion that there is nothing in the proof, as to the frames made by Billings and Ellsworth, which anticipates the Farnham frame for want of novelty. He undoubtedly took up the experiment where Mr. Billings left off, and it may be presumed that he profited by what had been done up to that time. The problem all were seeking to solve was to obtain a cheap, portable frame upon which the woven-wire fabric could be stretched, so as to make a comfortable bed bottom, and Farnham seems to have hit the mark at once. Billings had not attained the desired end, and what Ellsworth did was after Farnham. It must be remembered that all these efforts were made in one common interest. The mattress company was the party for whom all were working, and it cannot be supposed that this company would have employed both Farnham and Ellsworth to continue experiments if Billings had attained success.