

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 bedding,

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 sidebars 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.

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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 drawing

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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, 1969, 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. A Lout 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

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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 mad 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:

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“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.

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I will here remark that one difficulty all of them seem to have encountered was in fastening the fabric at the end. The fabric, from its elasticity and strength, would seem to be well adapted to the purposes for which this company was trying to utilize it; yet the difficulty they all met with, and the one they were all trying to surmount, was to make, in the first place, a cheap, light, portable frame, and, in the second

place, to secure these ends so they would be firmly held, and at the same time not ragged and rough, and not make an expensive fastening. Ellsworth devised a series of hooks interlocked to the wire fabric, which were, to say nothing else of them, exceedingly awkward and unsightly. Mr. Billings' efforts in that direction were certainly not successful. The fastening which he devised was ragged and liable to tear the clothing, if not to be uncomfortable to the occupants of the bed; and whatever Billings did produce that approximated towards success, seems to have been partly the suggestion of Sperry, because that which was nearest to success was the bottom, which was fastened into the frame with the hook-screws, which were hooked into the iron bar clamped across the webbing, and then fastened into the end pieces with screws on the outside, so as to tighten it up and give the requisite tension to the fabric. The difficulty all encountered up to Farnham was to fasten the ends securely and cheaply.

If the frame produced by Mr. Ellsworth had commended itself as better or more practical than Farnham's, it would undoubtedly have been adopted, because this company, having paid these men for the purpose, would undoubtedly have made arrangements in some manner for the control of the patent, if one was to be issued, for whatever device they should succeed in producing. But Ellsworth not only came later into the field, but he failed to produce a frame which met the demand. None of the manufacturers have adopted the Ellsworth frame, so far as the proofs in this case show.

Mention should also be made of the fact that in the first bed bottom made by Farnham the fabric was fastened to the side rails; but it is clear, from the evidence, that the skirt or curtain which fell from the line of tension between the tops of the end rails down to the side rails was intended only for a finish, to fill

up what would otherwise be a vacant space between the fabric and the side rails; it being apparent, as I have already said, that the idea of the Farnham device was to fasten the fabric into the frame, and for all purposes of supporting the weight it was to bear only by the end attachment; and the curtain for filling

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the space between the side rail and line of tension was undoubtedly soon abandoned as of no practical utility.

Nor do I find the principle of the Farnham frame in any of the devices referred to in the answers, to-wit, the Dye, Wegman, Rouillion, and Franklin patents, nor in those shown in the proof, outside of the references in the answer, for the purpose of showing the state of the art, such as the Walbridge, Boone & Bell, Payne, Schligman, Merriweather, and Hughes patents. The steam-boat bunk bottom shown in the testimony of Robert E. Campbell, and the Dreusike and Dye patents, must be considered as operating to limit the claim of this patent to the special devices shown.

The Campbell bunk bottom was made of canvas stretched from end rail to end rail, without outside fastenings; and, although canvass may not come within the definition of an "elastic sheet," there can be no doubt that it is a "flexible sheet."

The Dreusike bed was made of coiled wire fabric; and while provision was made for the side fastenings, I think there can be no doubt he intended that the strain of supporting the weight to be borne by the bed was to come upon the end fastenings.

In the light of this evidence I think that while these first two claims in the reissued patent may be sustained for the combination of the side rails, standards, end rails, and elastic coiled-wire fabric, yet it must be limited to the peculiar kind of side rails, standards, and end rails shown, or their manifest equivalents. Side rails, end rails, and elastic coiled-

wire fabric were old; but the inclined end rail, made in two parts for the purpose of clamping the fabric and holding it suspended by means of the inclination between the points of attachments, seems, so far as the proof of these cases shows, to have been the invention of Farnham. So, too, his “standards” or corner pieces, B, are not shown to have been anticipated by any prior user or inventor.

I think, therefore, that the owner of the Farnham patent had the right to claim, by the reissue, the combination of the elastic coiled-wire fabric with these parts, whether they were new or old but he had not the right to claim broadly for Farnham the sole right of suspending the fabric of which the bed bottom is made from “end to end of the frame,” because Campbell, Dye, and Dreusike had suspended the flexible sheets of a bed bottom from end to end of the frame before Farnham made his frame. Of course the court will so far protect the combination patented as not to allow it to be defeated by a mere substitution of something for one of the parts which performs

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the same, or substantially the same, function, and no other, as the part for which it is substituted.

With these views as to the construction to be given to this patent, I will now examine the evidence as to infringement in each separate case, beginning with that of Ames and Frost.

The mattress shown in the proof in this case (complainants’ Exhibit 1) shows a frame with the end rails raised above the side rails, and held in place by corner irons or standards. These standards perform the same function as the standards, B, in complainants’ patent. The elements of adjustability on the side rails by means of slots are not shown, but the standards are made adjustable on the side rail by means of a set-screw.

So, too, the recesses in the standards for holding the ends of the end rail are not inclined, but some inclination of the end rail is obtained by purposely, as it seems to me, making the end rail smaller than the recess, so that the tension of the fabric will tip or incline it sufficiently for all practical purposes. Probably some inclination to the end rail is, at least in theory, desirable in this kind of bed, so that the fabric will swing clear from its points of attachment at the ends; but it occurs to me that this is not a feature to which the ordinary buyer would attach much importance.

I conclude, therefore, that all the substantial characteristics of the complainants' frame are used in the Ames and Frost frame. They have standards like Farnham's and an inclined end rail practically like his. Their end rail is double, although they claim the second piece is only used for a finish, and is not intended to clamp and hold the fabric to the end rail. But I think this is a mere subterfuge. It is obvious that if the ends of the fabric are bent over the corner of the end rail, and the second piece, or cleat, fastened to the first piece of the rail over these bent ends, it must aid in holding the fabric to the frame. It makes what sailors call a "bight," and must re-enforce the other fastenings. I have no doubt, therefore, that these defendants must be held to infringe the reissued patent.

In the Zimmerman and Dean frames (complainants' Exhibit 1, Zimmerman, and complainants' Exhibit 1, Dean) I find the Farnham frame in all its distinctive parts, standard B, double end pieces inclined, and, in fact, all the parts covered by the Farnham claims, with hardly an effort to evade or avoid them.

The cases will be referred to a master to take proof and report as to damages.

See, also, *Woven-wire Mattress Co. v. Whittlesey*, 8 Biss. 23.

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