

Case No. 18,285. CROMPTON V. BELKNAP MILLS ET AL.¹

{3 Fish. Pat. Cas. 536.}²

Circuit Court, D. New Hampshire.

May, 1869.

PATENTS—"LOOMS"—OATH—PRESUMPTION—SURRENDER—REISSUE—CONSTRUCTION
OF CLAIM—ASSIGNMENT—COMMISSIONER'S
DECISION—CONCLUSIVENESS—FRAUD—INFRINGEMENT—COMBINATION—EQUIVALENTS.

1. To warrant a patent, the invention must be useful; that is, capable of some beneficial use, in contradistinction to what is pernicious, or frivolous, or worthless.
2. The fact that a blank form of oath not executed is found among the papers cannot overcome the direct recital of the letters patent that the oath was taken, or the presumption that the requirements of the law were complied with in issuing the patent. The taking of the oath is not a condition precedent, failing which the patent must fail. Whether the oath be taken or not, or the fee paid, the omission would not render the patent void when granted.

[Cited in *Hartshorn v. Eagle Shade-Roller Co.*, 18 Fed. 91; *Hancock Inspirator Co. v. Jenks*, 21 Fed. 914; *Tonduer v. Chambers*, 37 Fed. 338. Quoted in *Holmes Burglar Alarm Tel. Co. v. Domestic Telegraph & Telephone Co.*, 42 Fed. 222.]

3. Differences of description or specification between the original and reissue are consistent with the identity of the thing patented. To correct a description or claim, or both, is one object of allowing a surrender.
4. In the reissued patent the patentee need not claim all that was claimed in the original patent. He may retain whatever he deems proper. A claim in a reissue for the use of a pattern chain, or any other device for determining the design to be woven, is not a claim for all subsequent improvements, nor does it enlarge the patent. It is limited to the pattern chain described, or one substantially the same, or some well known substitute.

[Cited in *Chicago Fruit-House Co. v. Busch*, Case No. 2,669.]

5. A reissue granted to an assignee may be extended to the patentee. In judgment of law, a reissue is only a continuation of the original patent.

[Cited in *Washburn & Moen Manuf'g Co. v. Griesche*, 16 Fed. 671.]

6. A notice of an application to extend the original patent is a sufficient notice of an application for the extension of a reissue.
7. The functions of the commissioner in extension cases are judicial, and his judgment settles conclusively all questions of notice.

[Cited in *Railway Register Manuf'g Co. v. North Hudson C. E. Co.*, 23 Fed. 595.]

8. If there was fraud practiced in obtaining the patent, that is a matter between the patent office and the patentee. The patent, although obtained by fraud, must be respected and enforced until reversed or annulled by some proceedings directly for that purpose. It is not exposed to the attacks of strangers or third persons for such reason.
9. The claim of Crompton is for a combination of five elements, to wit, the jacks, the lifter, the depresser, the pattern chain and the holding mechanism; and any machine combining substantially in the same manner substantially the same elements, or well-known substitutes for the same, must be regarded as an infringement. Such a claim would not be infringed by a combination which dispensed with one of the elements, and substituted therefor another element substantial-

ly different in construction and operation, but serving the same purpose. Nor by any and every combination of the same elements which may produce the same result, but only by the peculiar combination of the elements described, or one substantially the same.

10. The elements combined being old and the patent being for the peculiar combination, the doctrine of mechanical equivalents does not apply.

{Cited in Yuengling v. Johnson, Case No. 18,195.}

11. The identity or diversity of two machines depends, not on the employment of the same elements or powers of mechanics, but upon producing the given effect by substantially the same mode of operation, or substantially the same combination of powers.
12. One device can not be said to be a well-known substitute for another which can not be used for it.
13. A patent for a combination of three distinct things is not infringed by combining two of them with a third, which is substantially different from the third element described in the specification.
14. The loom manufactured under letters patent granted to S. T. Thomas, July 3, 1855, and February 11, 1862, and to Thomas and Everett, July 25, 1866, does not infringe the patent granted to Moses Marshall, December 11, 1849, as reissued and extended.

This was a bill in equity [by George Crompton against the Belknap Mills and others] filed to restrain the defendants from infringing letters patent [No. 6,939] for “an improvement in looms for weaving figured fabrics,”

granted to Moses Marshall, December 11, 1849, assigned to complainant May 5, 1859, reissued to complainant April 24, 1860 [No. 974], and extended to the inventor for seven years from December 11, 1863, and assigned to complainant for the extended term, December 19, 1863. The claim of the original patent was as follows: "What I claim as my invention, and desire to have secured to me by letters patent, is the improvement herein above described in the machinery for operating the harness, so that any proper number of heddles may be used or changed as desired without taking the loom to pieces; said improvement consisting, first, in providing the movable spring rests for supporting the jacks of the harness when they are not in use, and which are sprung back by the bevel face on the shoulders of the jacks when they are kept in play by the cams on the pattern chain, the whole arrangement being substantially as herein above set forth; and second, in the 'evener,' constructed and operating as herein described, for assisting in moving the upper heddle levers and keeping them even, so that the cams or rollers on the pattern chain will operate accurately on the jacks as specified; meaning to claim the exclusive use of said spring rests and 'evener,' in a loom, the invention of which is entirely original with me. I also claim the combination of rotating, lifting, and depressing bars, arranged in endless chains, so as to revolve, as described, with the forked jacks, having internal shoulders, as specified." The claim of the reissue was as follows: "I claim combining with the jacks that operate the series of leaves of heddles, and with the lifter and depresser, and pattern chain, or any equivalent apparatus for determining the pattern, a mechanism for holding the jacks either in their elevated or depressed position, when not required to be operated, substantially as and for the purpose specified. I also claim imparting an irregular motion, substantially such as herein described, to the jacks, by means of eccentric cog wheels, substantially as and for the purpose specified." The defendants claimed to manufacture looms under letters patent granted to Samuel T. Thomas, July 3, 1855, and February 11, 1862, and to Samuel T. Thomas and Edward Everett, July 25, 1866.

Causten Browne and B. R. Curtis, for complainant.

Joshua D. Ball and T. A. Jenckes, for defendants.

Before CLIFFORD, Circuit Justice, and CLARK, District Judge.

CLARK, District Judge. December 11, 1849, a patent was granted to Moses Marshall for "an improvement in looms for weaving figured fabrics." He described his improvement to consist in this, to wit: "Providing the movable spring rests for supporting the jacks of the harness when they are not in use, and which are sprung back by the bevel face on the shoulders of the jacks when they are kept in play by the cams on the pattern chain," "substantially as set forth;" and, second, "the evener," as described. "Meaning to claim the exclusive use of the rests and evener in a loom, the invention of which is entirely original with me." He also claimed a combination of rotating, lifting, and depressing bars, which are not material in this case. The complainant alleges: That before May 5, 1859,

the patentee, Marshall, assigned to him, the complainant, all right, title; and interest in, to, and under said letters patent; and that, on said 5th day of May, 1859, he covenanted and agreed with the complainant to convey to him all right, title, and interest whatever in, to, and under any extension of said patent which might be obtained. That afterward, and before the 24th day of April, 1860, said letters patent were surrendered for a defect in the specification, and new letters were issued on said 24th day of April, 1860, to the complainant for the remainder of the term of fourteen years, from the date of the original patent, to wit, the 11th day of December, 1849. On the 8th day of December, 1863, this reissued patent was extended for the further term of seven years from the 11th day of December, 1863, and on the 19th day of December, 1863, said Marshall sold and assigned all his right and interest under said extension to the complainant. Under the reissued patent, the patentee, or assignee, stated his claim as follows: "What I claim as my invention, and desire to secure by letters patent is, combining with the jacks that operate the series of leaves of heddles, and with the lifter and depressor, and pattern chain, or any equivalent apparatus for determining the pattern, a mechanism for holding the jacks either in their elevated or depressed position, when not required to be operated, substantially as and for the purpose specified." He also claims imparting an irregular motion to the jacks, which is not here material. This reissued patent the complainant alleges the respondents have infringed. His bill of complaint is dated the 1st day of October, 1864, and prays that the Belknap Mills may be decreed to account for and pay over to the complainant all such gains and profits as have accrued to them in that behalf, and may be restrained from making, using, or vending any looms embracing in their construction the invention of said Marshall, and for general relief.

The respondents in their answer deny the validity of the original patent to Moses Marshall, December 11, 1849. They also deny the validity of the reissue, April 24, 1860, and of the extension, December 8, 1863. And they also deny any infringement of the complainant's patent, if he has any, and say that they have never manufactured or used any looms involving the invention of Marshall, but that their looms have been manufactured under letters patent issued, two of them to Samuel T. Thomas, and one of them to Samuel T. Thomas and Edward Everett, and that they were

essentially different in principle, construction, and mode of operation. These letters patent they produce in evidence. The first are dated July 3, 1855, and are for an “improvement in looms.” Among other things, the patentee claimed the combining with each rocker, lever, and lifter, an arm, cam, and sector, or equivalents, the whole being applied together, and made to operate substantially as described. Also the combining with the series of lifters and pattern prism, a series of bent levers, or their equivalents, and imparting to the pattern prism vertical, or up and down, movements as described. This patent, and that to Moses Marshall and the reissue, had in view the accomplishment of the same object, to wit, the production of an “open-shed loom.” And the question of infringement arises between this patent mainly, and the Moses Marshall patent, as reissued and extended. The next patent to Thomas is dated February 11, 1862, and that to Thomas and Everett, July 25, 1866. The respondent objects to the Marshall patent of December 11, 1849. That the invention was neither new nor useful, and that the patentee did not, before the granting and issuing of the letters to him, take the oath prescribed by section 6, of the act of July 4, 1836, that he verily believed he was the original inventor or discoverer of the art, machine, etc., for which he solicited a patent. 5 Stat. 119.

A patent is deemed prima facie evidence that the patentee has made the invention. *Philadelphia E. Co. v. Stimpson*, 14 Pet. [39 U. S.] 448. There is, in this case, no sufficient evidence to overcome that presumption, or prima facie case. There is evidence that “open-shed” fancy looms were used prior to Marshall’s invention, but not involving the combination of Marshall. His invention must, therefore, be taken to be new. Precisely how useful it may be, the court have not undertaken to decide; but that it is sufficiently so to support a patent, we have no doubt. Other looms may have been preferred by different persons, or may have found a readier sale; but that good cloth can be woven by Marshall’s loom and invention there is sufficient evidence. To warrant a patent, the invention must be useful, that is, capable of some beneficial use, in contradistinction to what is pernicious, or frivolous, or worthless. *Dickinson v. Hall*, 14 Pick. 217; *Whitney v. Emmett* [Case No. 17,585]; *Many v. Jagger* [Id. 9,055].

These objections to the patent can not, therefore, avail. Nor can the other, that the oath required by section 6 of the act of 1836 was not taken, for two reasons: First We are not satisfied the oath was not taken. The letters patent recite that it was. The respondent finds among the papers on file in the case in the patent office a blank form of the oath, with the jurat not signed by any magistrate, and hence he argues the oath was not taken. But the oath may have been taken for all that; and this negative testimony can not overcome the direct recital of the letters patent that the oath was taken; or the presumption that the requirements of the law were complied with in issuing the patent. But suppose it were so. Suppose the oath was not taken; would the patent be void on that account? It was held otherwise by Justice Story, in the case of *Whittemore v. Cutter* [Case No.

17,600]. The taking of the oath, though to be done prior to the granting of the patent, is not a condition precedent, failing which, the patent must fail. It is the evidence required to be furnished to the patent office, that the applicant verily believes he is the original and first inventor of the art, etc. If he takes this oath, and it turns out that he was not the first inventor or discoverer, his patent must fail and is void. So, if he do not take it, and still he is the first inventor or discoverer, the patent will be supported. It is prima facie evidence of the novelty and originality of the invention until the contrary appear. *Parker v. Stiles* [Case No. 10,749]. So the act says, on payment of the duty, that is, fees, the commissioner shall make an examination, and, if the invention shall be found useful and important, shall issue a patent. Suppose the fees should not be required or paid, would the patent therefore be void? Yet the one requirement appears to be as much a condition precedent as the other. Both directory, not to be dispensed with; but neither involving the validity of the patent when granted.

The next objections are to the reissued patent, and they are two: First, that the original patent was void, and the reissue was therefore so; and, second, that the reissue was not for the same invention as the original. The first of these objections has already been disposed of. It was maintained in the argument, that the original patent was void for want of the proper oath, and that the defect could not be cured by the reissue. But whether the oath were taken or not, we are of opinion as already expressed, that such an omission would not invalidate the patent, nor would it affect the reissue. The second objection to the reissue is a more serious one, and for its proper determination requires a careful examination and comparison of the original patent to *Marshall*, and the reissue to *Crompton*. The presumption of law is, that the reissued patent is for the same invention as the original. *O'Reilly v. Morse*, 15 How. [56 U. S.] 62; *French v. Rogers* [Case No. 5,103]; *Hussey v. McCormick* [Id. 6,948]; *Hussey v. Bradley* [Id. 6,946]. Differences of description or specification are consistent with the identity of the thing patented. To correct a description, or claim, or both, is one object of allowing a surrender. *Id.*

The original patent to *Marshall* claimed the improvement therein described, consisting, first, "in providing the movable spring rests for supporting the jacks of the harness, when they are not in use, and which are sprung back by the bevel face on the shoulders of the jacks when they are kept in play by the cams on the pattern chain, the whole arrangement being substantially as herein above set

forth;” and, second, “the evener constructed and operating as herein described, for assisting in moving the upper heddle levers, and keeping them even, so that the cams or rollers on the pattern chain will operate accurately on the jacks as specified, meaning to claim the exclusive use of said spring rests and evener in a loom, the invention of which is entirely original with me.” “I also claim the combination of rotating, lifting, and depressing bars, arranged in endless chains, so as to revolve as described, with the forked jacks, having internal shoulders as specified.” In the specification the elementary features of the improvement are said to consist in a series of stationary rests, which support the jacks of the harness, when the sheds operated by them are not in use; the chain shafts, and lifting and depressing bars for operating the jacks and harness; and the evener, which is composed of two rollers, set in it frame having a reciprocating rectilinear motion, which rollers press against the beveled ends of the harness levers, and assist in shifting the sheds of yarn, and, what is more essential, operate always to keep the levers even, for the proper operation of the cams on the pattern chain. The specification then describes the parts referred to, among others the jacks, the rests, the elevator and depressor arranged upon two endless chains, the method of connecting the jacks and heddle levers, the operation of the cams, the shafts, which carry the elevating and depressing bars, eccentric gear, the pattern chain, and the evener. In the reissued patent the claim is stated to be, the “combining with the jacks that operate the series of leaves of heddles and with the lifter and depressor and pattern chain, or any equivalent apparatus for determining the pattern, a mechanism for holding the jacks, either in their elevated or depressed position, when not required to be operated, substantially as and for the purpose specified.” “Also imparting an irregular motion, substantially such as herein described, to the jacks, by means of eccentric cog wheels, substantially and for the purpose specified.” The specifications described the object of the first part of the invention to be, to avoid moving any of the leaves of the heddles, which are not required to be moved for the production of the design, during any part of the operation, that is, to produce an open-shed loom, and of the second part of the invention, to consist in imparting an irregular motion to the lifters and depresses by means of eccentric cog gearing, etc. They then go on to describe the levers, jacks, the elevators and depressers, the cams and motions and forms of the jacks, the spring latches or catches, the pattern chain, and the evener, sometimes in the same words, sometimes more minutely, but always substantially, as in the original Marshall patent.

The most important difference, so far, is in the statement of the claims. In the original patent the claim is, first, for the movable spring rests; second, for the evener; and, third, for the combination of rotating, lifting and depressing bars, arranged in endless chains, so as to revolve, as described, with the forked jacks having internal shoulders. In the reissued patent the claim is, combining with the jacks that operate the series of leaves of heddles, and with the lifter and depresses and pattern chain, or any equivalent apparatus

for determining the pattern, a mechanism for holding the jacks either in their elevated or depressed position, when not required to be operated, substantially as and for the purpose specified. It *Battin v. Taggart*, 17 How. [58 U. S.] 74, it was held, that whether the defect be in the specification, or the claim, of a patent, the patentee may surrender it, and by an amended specification, or claim, cure the defect. In that case, which was for an improvement for breaking and screening coal, the claim was for the manner, in which the party had arranged and combined the breaking rollers with each other and the screen; and the amended specification described, in the reissued patent, substantially the same machine, but claimed the breaking apparatus only; it was held a dedication to the public did not accrue in the interval between one patent and the other. It has been repeatedly decided that the reissued patent must be substantially for the same invention as the original patent. Under such circumstances a new and different invention can not be claimed. *Battin v. Taggart*, 17 How. [58 U. S.] 74; *French v. Bogers* [supra]. In the reissued patent the patentee need not claim all that was claimed in the original patent. He may retain whatever he deems proper. *Carver v. Braintree Manuf'g Co.* [Case No. 2,485].

We think that substantially the same invention is described in the two patents. It was urged in the argument that the reissued patent was not for the same but for a greater invention, because the patentee had inserted in the specification these words: "It will be obvious that this part of my invention is not dependent upon the use of the pattern chain, as it can be used in connection with any other device for determining the design to be woven, by shifting the jacks or their equivalent into position to be elevated or depressed." This is said to be done for the purpose of making it embrace all improvements afterward invented. But it certainly can not have that effect, nor can it enlarge the patent. If It could do any such thing it would render the patent void for uncertainty. But in the specification the patentee has described a pattern chain; in his claim he has claimed a pattern chain, or any equivalent apparatus for determining the pattern, in combination with other things, and to that pattern chain, or one substantially the same, or some well-known substitute, the patent must be limited. The same remarks will also apply to another interpolation, to wit: "Nor is it dependent upon the use of chains for carrying the lifting or depressing bars in a continuous circuit; as it is equally applicable

to looms in which jacks are elevated or depressed by the well-known reciprocating lifters and depressors, as in the well-known Crompton loom,” and to others of like character. They do not enlarge the invention or the patent We think, therefore, that the invention described and patented in the reissued patent is substantially the same invention described in the Marshall patent of December 11, 1849. The claim is in a different form, but for substantially the same invention. It may be open to the objection, so pointedly stated in the cases of *Burr v. Duryee*, 1 Wall. [68 U. S.] 535, and *Case v. Brown*, 2 Wall. [69 U. S.] 320, that there is an attempt to make the new specification more elastic, and to cover more than the old, but it does not enlarge the invention.

But if it should be held that the original patent to Marshall, and the reissue to Crompton, assignee, were valid, it is contended that the extension to Marshall was not, for three reasons, to wit: (1) That as Marshall never had any interest in the reissued patent, it could not be extended to him; (2) that no sufficient notice was given to the public of the application for the extension of the patent; and (3) that the extension was obtained by fraud.

To the first objection, to wit, “that as Marshall never had any interest in the reissued patent, it could not be extended to him,” it is a full answer, that, in judgment of law, the reissue is only a continuation of the original patent. So held in *Bead v. Bowman*, 2 Wall. [69 U. S.] 604. And as Marshall was the original patentee, the extension was legally and properly to him. *Wilson v. Rosseau*, 4 How. [45 U. S.] 646. The extension enuring, under the statute, to the assignees and grantees to the extent of their respective interests. 5 Stat 125 [Act 1836] § 18.

The second objection is that there was no notice ever ordered, or given, of any application to extend the reissued patent. There was of the application to extend the original patent, and the objection stands upon the supposition, or idea, that they are two distinct patents while in judgment of law they are one. If the reissue was only a continuation of the original patent, then a notice to extend the original would seem to have been sufficient. Again, under the act of 1836, the secretary of state, the commissioner of patents, and the solicitor of the treasury were a board of commissioners to “hear and decide upon the evidence produced before them, both for and against the extension.” It has been held that the functions of this board were judicial, and that their judgment settled conclusively all questions of notice. *Brooks v. Jenkins* [Case No. 1,953], The statute of May 27, 1848 (9 Stat 231, § 1), provided that the power to extend patents then vested in the board of commissioners should be vested solely in the commissioner of patents; and in *Clum v. Brewer* [Case No. 2,909], it was held that the act of the commissioner in extending a patent was conclusive of the facts, which he is required to find, in order to grant such extension, in the absence of fraud or excess of jurisdiction.

But here, third, it is said that the extension was procured by fraud. We do not, however, think this objection is open to this respondent. He stands before the court accused

of infringing the complainant's patent. He may, undoubtedly, show that the invention claimed by the complainant was not new or useful, or that it had been dedicated to the public, or that there was no sufficient specification or description, and so that there was in fact no infringement for which he should answer, but we think he cannot attack the granting and validity of the patent in this collateral manner. If there was fraud practiced in obtaining the patent, that is a matter between the patent office and the patentee; and can, perhaps, be inquired into by some proper proceeding of the officers of the government to vacate the patent. But, in this particular, like a judgment, it must be respected and enforced, until reversed or annulled by some proceedings directly for that purpose. It is not exposed to the attacks of strangers or third persons for such reason.

The next, and only question remaining, is that of infringement. The respondents admit they have on hand, with intent to sell, the Thomas loom, manufactured under the patents to Thomas and to Thomas and Everett. But they deny that either of the respondents ever at any time, before or since the date of said alleged reissued letters patent, or before or after the alleged extension of the said alleged patent, have manufactured, used, sold, or continued to manufacture, use, or sell any loom or looms embracing the said alleged improvement, or any mechanism substantially the same.

The question then is, whether the Thomas loom, as it is called, infringes the Marshall patent as reissued and extended? The original patent to Marshall, December 11, 1849, claimed the movable spring rests to hold the jacks of the harness, and the "evener," and the combination of the rotating, lifting and depressing bars, so as to revolve, etc. As reissued to Crompton, the claim was for combining with the jacks and with the lifter and depresser and pattern chain, or any equivalent mechanism for determining the pattern, a mechanism for holding the jacks either in their elevated or depressed position when not required to be operated, substantially and for the purpose specified. The language is "a mechanism for holding the jacks." This is broad enough, upon its face, to cover any mechanism, and if it stood alone and unaided it would be so general and uncertain as to be entirely void, but in the specification the holding mechanism is described particularly and precisely, and the claim is limited by such specification. Here, then, are combined five elements, to wit, the jacks, the lifter and depresser, the pattern chain, and the holding mechanism; and any machine combining, substantially in the same manner, substantially the same elements,

or well-known substitutes for the same, must be regarded as an infringement of this reissued patent *Gorham v. Mixer* [Case No. 5,626]. But it would not be infringed by a combination which dispensed with one of the elements and substituted therefor another element, substantially different in construction and operation, but serving the same purpose. *Eames v. Godfrey*, 1 Wall. [68 U. S.] 79; *Vance v. Campbell*, 1 Black [66 U. S.] 427. Nor by any and every combination of the same elements, which may produce the same result, but only by the peculiar combination of the elements described, or one substantially the same. *Case v. Brown*, 2 Wall. [69 U. S.] 320. The elements here combined are old, the patent is for the peculiar combination, and the doctrine of mechanical equivalents does not apply. *McCormick v. Talcott*, 20 How. [61 U. S.] 405. The identity or diversity of two machines depends not on the employment of the same elements or powers of mechanics, but upon producing the given effect by substantially the same mode of operation, or substantially the same combination of powers. *Odiome v. Winkley* [Case No. 10,432]; *Evans v. Eaton* [Id. 4,560].

Following these principles and adjudications, we proceed to the examination and comparison of the Marshall and the Thomas looms. In both we find, substantially, the same jacks, differing in form, but performing, substantially, the same office. In both we find, substantially, the same elevator and depresser. Arranged in the Marshall loom is a rotating, endless chain, so that the same bar in going up is an elevator, but in rotation or revolution going down, becomes a depresser. These three elements are substantially the same, but when we come to the holding mechanism, we find a marked and substantial difference in the two machines.

In the argument of the respondents' counsel, it was contended that the holding mechanism of the Marshall loom was not only the "series of horizontal spring latches or catches," and the shoulders on the two prongs of the jacks, but that it included the connecting mechanism of the jacks with the heddle lever, the pattern mechanism, and the "evener." Now, although it be true that the connecting mechanism and pattern mechanism of the jacks hold the jack securely upon the spring latches as upon a seat, until they be forced or allowed to come off by the pattern mechanism, and although in the operation of the machine there is a point of time after the jacks are forced off the springs, when the heddle levers are firmly held by the evener, so that the jacks can not move nor the sheds close until allowed to do so by the removal of the evener, yet we have considered the holding mechanism to be as decided in the patent, to wit, the series of horizontal spring latches, or catches, and the notches on the prongs of the jacks, and still we find the holding mechanism of the two machines to be substantially different. In the Marshall machine the elevator carries upward a particular jack, the beveled face on the projecting notch on the prong of the jack meets the beveled face of the spring, presses it back and passes it. Then the spring flies out under the shoulder of the jack and the jack rests upon it in a manner

similar to a window-sash raised and resting on the old and familiar window-spring. Here it sits or is held until the pattern mechanism forces it off the spring and allows it to descend. When a jack is carried down by the depresser, it is held by a similar spring; being kept on its seat by the pattern mechanism, until allowed to be drawn off by the oblique connecting mechanism.

Now, in the Thomas loom there is a very different mechanism or device. There is a jack which is carried up and down by an elevator and depresser. On one side of this jack there is a gearing connecting it with and operating a sector. As the jack goes up and down, it rolls or rocks this sector forward and backward, as if you should turn a wheel part of the way round, say one-fourth, and then bring it back again, and so continue. In or near the circumference of this sector, there is a cam groove, and playing in this cam groove, forward and backward, as the sector moves, a projecting stud or friction roller connected with an arm of the heddle lever. This heddle lever rocks upon its fulcrum, and as the arm, guided and controlled by the projecting stud in the cam groove, is carried upward or downward by the cam groove, the ends of the rocking heddle lever are carried backward and forward, elevating or depressing, or holding stationary the harnesses. In the one end of the, cam groove is a concentric into which the projecting stud or roller falls, which it is contended by the complainant's counsel is a substitute for the spring latch or catch of the Marshall loom; but we are of the opinion it is not so; but that the whole cam groove, of which the concentric makes a part, is more correctly a substitute for the cam; and that this device of the Thomas loom much more resembles in principle and operation the old Middlesex cam loom than it does the Marshall loom. It can not be conceded that the Marshall and the Thomas holding devices are the same, because the operation in both cases is performed by a surface of metal passing under or over another surface, and that, therefore, one infringes the other. In the old Middlesex cam loom one surface passed over another, to wit, over the cam, and was elevated, depressed, or held stationary by it; yet it was very different from the Marshall device. We can not give the Marshall holding device any such latitude of construction. There is also in the Thomas loom a brake connected with and operating upon the periphery of the sector, retarding, regulating, and governing its motion. And whether we regard this brake as a part of the holding mechanism or not, we think and conclude that these two elements are substantially different, and that one is not a well-known substitute for the other.

We come now to the last element or device, to wit, the pattern mechanism. Had the patent to Marshall not been surrendered, and a new one issued, the question of infringement, if it arose at all, must have arisen between the holding mechanism of the two looms; but that patent having been surrendered, and a new one issued, claiming a combination of elements, that new one is liable to be avoided by showing that the Thomas loom uses a substantially different element from any one of those combined.

To return to the pattern devices. These two mechanisms or devices are very different in their construction and in their operation. H. B. Renwick, one of the complainant's experts, says: "I think the pattern chain in model B (the Thomas loom) is, considered by itself, a substantially different species of pattern chain from that specially described and represented in the drawing of the Marshall reissue, and differing from it in the fact that it requires motion in two directions in order to cause it to operate upon the jacks, while the chain represented in the drawings of Marshall requires motion only, in one direction." Precisely in the sense mentioned by this expert we are now considering these two devices or mechanisms,—that is, by themselves; and in that view they are substantially different in principle, construction and operation. But if we consider them in regard to the functions they perform, we shall find as great and substantial difference. Both select the jacks to be operated; but the pattern chain, in addition to this, in the Marshall loom, forces the jacks off the upper series of spring catches, and holds them on to the lower series, in both instances in opposition to the force supplied by the oblique connection of the jacks with the heddle levers. Both these devices are said to be old. That is true in a limited sense. The Marshall chain is old. The Thomas mechanism is old in the fundamental principle. It is that of the Jacquard pattern; but Thomas has made two improvements upon it, which are not old. They are also said to be well known substitutes for one another; but it is very evident, both from the testimony of the experts and an examination of the machines, that, though the Marshall pattern mechanism might be applied to the Thomas loom, there is no apparent practical mode of applying the Thomas pattern mechanism to the Marshall loom, with its present method of holding the jacks. Can one device be said to be a well-known substitute for another which can not be used for it? Thus much for the elements of the Marshall combination. We now pass to the combination itself. Is the combination in the two machines substantially the same? It may be said they can not be, if the elements are not the same, as gold and copper is not the same combination as silver and copper. But the inquiry is to another point. Is the method or manner of the combination the same? We think not. Indeed, there seems to be as wide and substantial a difference in the mode of combination as in the things combined. Take, for instance, the combination of the jacks with the holding mechanism in the Marshall loom. By the lengthening of the lower heddle lever, giving an oblique direction to the connection of the jacks with the upper lever and lower, the protuberances upon the prongs of the jacks are held upon the

upper series of spring catches. There is no such connection, device, office performed, or combination, that we can discover, in the Thomas loom.

Again, take the combination of the pattern mechanism in the Marshall loom with the jacks. It is so arranged as to hold the protuberances of the jack upon the lower series of spring catches, there performing substantially the same office that the oblique connection of the jacks with the heddle levers does in regard to the upper catches. There is nothing like this in the Thomas loom. Again: take the combination of the holding mechanism with the pattern mechanism and jacks, and there we find a substantially different combination, or mode of combination, in the two looms. In the Marshall loom the jacks are combined with the holding catches by their oblique connection with the heddle levers, keeping the jacks seated upon the upper catches until forced off by the pattern cams, and pulling the jacks off the lower catches when not held on by the cams. Is there any such arrangement in the Thomas loom? We do not find it, nor anything nearly approaching it. In the Thomas loom the jack is connected with the rocking sector by a gearing, rocking the sector backward and forward as the jack goes up and down. In the circumference of this sector is a cam groove or slot; in this groove plays a stud or friction wheel attached to an arm of the heddle lever. This stud is guided and held by the cam slot, thus elevating, depressing, or holding the heddle lever as it comes into one or the other part of the slot. The pattern mechanism has nothing whatever to do with this holding, elevating, or depressing, farther than to select the particular jack. We leave out of this combination the brake, purposely, though that device in the Thomas looms, and the “evener” in the Marshall, plays very important parts, both in holding the shed open and in preventing its closing too quickly.

We might pursue this examination and comparison further, but we have gone far enough to warrant the conclusion to which we have come, that the respondents have not infringed the complainant’s reissued patent. See *Brightly’s Dig.* p. 612, §§ 84, 96, 89. To constitute an infringement of a patent for a combination, the defendant must have used the same combination, constructed and operated substantially in the same way. *Gorham v. Mixer* [Case No. 5,626]. A patent for a combination is not infringed unless all the essential parts of it are substantially imitated. *Bell v. Daniels* [Case No. 1,247]. The patentee of a combination can not treat another as infringer

who has improved the original machine by the use of a substantially different combination, though it produce the same result *Union Sugar Refinery v. Matthiessen* [Id. 14,399]. A patent for a combination of three distinct things is not infringed by combining two of them with a third, which is substantially different from the third element described in the specification. *Prouty v. Ruggles*, 16 Pet [41 U. S.] 336; *Silsby v. Foote*, 14 How. [55 U. S.] 219; *McCormick; v. Talcott*, 20 How. [61 U. S.] 402; *Vance v. Campbell*, 1 Black [66 U. S.] 427; *Eames v. Godfrey*, 1 Wall. [68 U. S.] 78; *Brooks v. Jenkins* [Case No. 1,953]; *Brooks v. Bicknell* [Id. 1,945]; *Parker v. Hay worth* [Id. 10,738]; *Latta v. Shawk* [Id. 8,110]; *Lee v. Blandy* [Id. 8,182]; and other cases. In *Morris v. Barrett* [Id. 9,827] it was held that in an action for an infringement the machines themselves, as shown by the models, were evidence entitled to the highest credit.

We have examined the models in this case very carefully and repeatedly, and they have very materially aided us in coming to a satisfactory conclusion, particularly in determining how much weight was to be given to the opinions and explanations of the experts, two of which appeared on each side swearing with equal confidence and apparent intelligence in opposite directions. The complainant's bill must be dismissed, with costs.

¹ [Corrected report of Case No. 3,406.]

² [Reported by Samuel S. Fisher, Esq., and here reprinted by permission.]