

Case No. 319.

AMERICAN WHIP CO. V. LOMBARD.

[4 Cliff. 495;¹ 3 Ban. & A. 598; 14 O. G. 900.]

Circuit Court, D. Massachusetts.

Oct. 9, 1878.

PATENTS FOR INVENTIONS—INFRINGEMENT—EQUIVALENT FOR COMBINATION—MACHINE FOR SHAPING WHIP STOCKS.

1. Patent No. 53,003, to L. Hull, for gaugelathe, and reissue of same, No. 7,262, construed and sustained. It is now well settled that the patentee or owner of a patent for a combination is as much entitled to equivalents as the patentee or owner of any other class of inventions. By an equivalent, in such a case, it is meant that the element or ingredient substituted for the one withdrawn performs the same function as the other, and that it was well known at the date of the patent in question as a proper substitute for the one omitted in the patented combination.
2. The invention, consisting chiefly in the combination, in a machine for shaping whipstocks, of a holding and feeding mechanism, with revolving cutters having their axis of rotation at right angles, or nearly so, to the axis of the stocks, and of guides for directing and controlling the action of the cutters, as described in the specification and shown in the drawings, is infringed by a machine in which numerous blades are substituted for the burrs of the patentee, and where a formal change merely is made in the clamping and advancing mechanism by combining the two in one apparatus instead of performing the operation by two separate devices.

In equity. Bill in equity upon the alleged infringement of reissued letters-patent No. 7,262, dated Aug. 15, 1876, to the complainant, as assignee of Liverus Hull, for improvement in gauge lathes. The original patent was No. 53,003, and was dated March 6, 1866. [Decree for complainant for an account and for an injunction.]

Gillett & Stevens and S. J. Gordon, for complainant.

Brief of S. J. Gordon.

The view the complainants take of this invention and patent is, that inasmuch as, according to the state of the art, this invention was the first of its kind, which is not controverted, to embody successfully any holding, guiding, and reducing devices to round whipstocks, Hull's patent covers all holding, guiding, and reducing devices, acting together substantially as his devices, act together, and effecting the same result. Or, in other words, that under a patent holding such a place in the art to which it belongs, it is of no manner of importance whether the clamping devices to hold the whip-stock are of one form or another, so long as the stock is held; or whether the advancing and rotating devices are of one or another description, so long as they do advance and rotate the whip-stock; or whether the guides are of the same pattern or not, so long as they do guide and present the whip-stock properly to the cutters; or whether the cutters are burrs or blades or files, especially if they act alike, to scrape "off fine particles of rattan and whalebone," for it must be remembered it will not do to shave or whittle whalebone when advanced and rotated simultaneously in a machine. Mr. Hull says: "I have tried it many times and seen it tried by others, but in every case it was a total failure to accomplish any good result." Upon

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examining the Lombard or defendant's machine, it is found, and the testimony of all the experts and parties is in substantial accord on this point, that it contains and is dependent for its success upon its clamping or whip-stock-holding devices, its advancing and rotating devices, its guiding and reducing devices. Those effects have all to be produced by his mechanism to get the desired result, just as Mr. Hull had to produce them by his mechanism,—no more and no less. Mr. Lombard knew all about Hull's machine, was familiar with it, as was every one engaged in whip-manufacture in Westfield for the last eight years. He was alive to the manufacturing advantages which the old and leading company in that business had long possessed by using Hull's patented invention. If a rival machine could be built that did not interfere with the Hull patent, it would place other companies on a par with the complainants, and be likely to bring a handsome return to its ingenious constructor. As before said, Lombard had to take the precise steps of holding, presenting, advancing, revolving and reducing, that Hull had taken. His problem was to take them, if possible, by different mechanical devices—by equivalent devices—getting as far away from Hull as he could, but producing the same effects. How does he do it? What differences of construction has his ingenuity been able to devise? He must rotate his cutters; he must use two cutters set as Hull's are; he must have guides; he must advance the whip-stock; he must rotate the whip-stock; he must clamp or hold the whip-stock to advance, rotate, and present it to the action of the cutters.

It is all summed up in this: He makes changes in two of these necessary devices,—the cutters and the clamps. Instead of burrs to scrape off the enamel of the rattan and the whalebone, he uses one hundred and twenty blades that act as burrs to scrape it off, the same things Hull used before he adopted burrs, and discarded as inferior. It is not necessary to enlarge upon that. The work and finish of the blades are coarser and less perfect. They are a mere evasion—the substitution of one common and well-known wood-working implement for another. The refuse, made by Hull's burrs and Lombard's one hundred and twenty blades, is hardly distinguishable. Far more cunning was the evasion of the clamping and advancing mechanisms by combining them in one; by making the rotating clamps also advance the stock—that is, making the clamps carry along the stock. One device is made to do two

things, instead of having the two things done by separate instruments. Hull clamps his stock to a carriage, and moves the carriage. Lombard makes the clamps also serve as the propelling instrumentality. The fallacy of thinking a beneficent patent can be so escaped is here; not in knowing or not remembering what an invention is. It is not the precise, particular, defined mechanical instrumentalities that co-act in the result, for they may be embodied in a hundred forms; but it is the grand idea, the underlying principle, in obedience to which the mechanical instrumentalities act. Mr. Hull's invention was not conical burrs, or travelling carriage, or confining clamps, or revolving gears. But it was the comprehension of the steps to be taken to round a whip-stock by machinery; conceiving the plan to take mechanically those steps, one by one, or together, as necessity demanded. When those had been conceived and completely projected in his mind, the invention was made; and no matter in what form it was reduced to practice, no matter which of the various mechanical means, familiar to the craft, his taste or experiments led him to select in embodying his invention, it would not change it. It is just as much within the broad plan or principle upon which the machine is constructed, whether the whip-stock to be operated upon is fixed between two points, and then the points progressed, while the stock is revolved and its surface regularly reduced, or whether the stock, after being fixed between the points, is pushed along over them, or by them, while it is revolved, and its surface reduced. Both alike present it fitly to the reducing mechanism—which is the great thing to be done, the consummation of the details. If Mr. Hull occupied Lombard's place in the art, and was a mere alleged improver on prior patentees, it would be different. Then he would be held to his devices; for the whole scope of his invention would be found in his devices. But Mr. Hull was the founder of the art of rounding whip-stocks by machinery, as Elias Howe, Jr., was of sewing by machinery, between whose case and that of Mr. Hull's there is a striking parallelism. Both had an old, abandoned, worthless, impracticable machine, or attempt at a machine, made before they began, set up by infringers to rob them of the honor and profit of their achievements. Both required holding mechanism, advancing mechanisms, and mechanisms to operate upon fabrics, and in both cases those operations were the all-essential, the vital, salient features of the inventions. Both clamped the fabrics to be operated upon to a carriage, and then propelled that carriage. The successors of Howe liberated the fabric from the carriage, and made the clamps feed the fabric. The successor of Hull has done just that—liberated the whip-stock from the carriage, and made the clamps feed it along. But there was a vast difference in the results of the changes made by their respective successors. The improvers upon Howe put his invention into almost every house on the face of the globe. The improver upon Hull has not practically advanced the art at all. The followers of Mr. Howe fought desperately to escape his patent upon just that ground, that they did not hold and carry as he did. But court after court, beginning here, said No, gentlemen, that will not do; you clamp and car-

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ry, and you must clamp and carry, or you can never make a seam; and, therefore, you are within the sweep of the great principle he conceived and worked out. Your pieces of metal may be different from his, but, measured by what they do, their purpose and aim, and they are embraced by his discovery, because without some mechanical devices to perform these functions, nothing can be accomplished; and the first organizer of a machine to do what machinery never did before covers all mechanical devices and equivalents that take his steps to his result.

Hezekiah Lombard, respondent, pro se.

The bill is brought upon reissued patent, granted to the complainants as assignees of Liverus Hull, for a new and useful machine for dressing whip handles or stocks, alleging an infringement of the same by the defendant, and praying an injunction and an account of damages. The answer denies any infringement of said patent, and alleges that said Liverus Hull was not the inventor of the improvement in gauge lathes described and claimed in said letters-patent, and that the alleged invention of said Hull was known and used by John O. Griffin, James P. Whipple, and others, before the time of the alleged invention of said Hull. The complainants produce John Boyd Eliot, a mechanical expert, who affirms that the first two claims only of their patent are infringed by the defendant. A model of a machine is introduced by the defendant, which John O. Griffin and James P. Whipple affirm to be a correct representation of a machine made and used by them previous to 1860, six or eight years before the invention of Liverus Hull. Said machine does not contain all the devices of the Hull machine, but contains all the devices referred to in the first two claims of the complainants' patent and substantially in the same combination. The evidence shows that the clamps in the Sacket machine are substantially the same and combined the same, with the same device and for the same purpose as in the Hull machines. That the guides for holding the stock are substantially the same, and for the same purpose, and in the same combination with cutters and clamps as in the Hull machine. That the cutters are substantially the same and in the same combination with the same devices as in the Hull machine. And the evidence shows that there are no clamps in the machines used by the defendant substantially like the clamps described in the complainants'

patent, and claimed in the first and second claims thereof, nor no clamps whatever. And the evidence further shows that the clamps in the complainants' patent are only fastenings to hold the whip to the rotating mandrels, and have no other office or use. The evidence shows further that the feed rollers in the machines used by the defendant perform the office of rotating the whips and carrying it in the direction of its length without any carriage and without moving with the whip. That they do not operate as clamps. That they are not adjustable for the same purpose as the clamps in the complainants' patent. That they are not adjustable at all. That the feed rolls have no function whatever that the clamps have. That there are no cutters in defendant's machine whose axis of rotation is at right angles to the stock, or substantially so, nor that have substantially the same action on the stock, or perform substantially the same office in dressing the stock as the cutters do and are claimed to do and have in the complainants' patent. That there are no guides in the defendant's machine for firmly holding the stock in one position relative to its axis whilst being dressed by the cutters, nor for any other purpose for which the guides in the complainants' patent are specified to be used for. That the evidence further shows that there are no guides needed in the defendant's machine for the same purpose as described in the complainants' patent; that the guides used in the defendant's machines are for another and different purpose and have different functions from those used in the complainants' patent. That the state of the art at the time of the said invention, was such that the patentee is not entitled to the principle. That the complainants' patent is for a combination.

CLIFFORD, Circuit Justice. Power to grant letters-patent is conferred by an act of congress, and when that power has been lawfully exercised and a patent has been duly granted, it is of itself prima facie evidence that the patentee is the original and first inventor of that which is therein described and secured to him as his invention. Defective patents may in certain cases be surrendered and reissued for the same invention in a corrected form, and when that is done in conformity with the requirements of law, the same prima facie presumption arises in favor of the patentee as that which arose in his favor from the original patent before it was surrendered. Sufficient appears to show that the assignor of the complainants became and was the inventor of a new and useful improvement in gauge lathes, and that letters-patent were granted to him, as such inventor, for the same; that the patentee, for due cause shown, surrendered the original patent, and that a new patent, with an amended specification, was subsequently issued to the complainants for the same invention, which is the subject of the present controversy. Service was made, and the respondent appeared and filed an answer. Such defences only as were pressed at the argument will be noticed, of which the following are the most material:—

1. That the assignor of the complainants was not the original and first inventor of the patented improvement.

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2. That the charge of infringement is not proved, that the respondent never made, used, or sold the patented improvement, and never in any way infringed the rights of the complainants under their patent.

Applicants for a patent are required by the patent act to give a short title or description of the invention or discovery, correctly indicating its nature and design, and pursuant to that requirement the original patentee stated in the specification that he had invented a new and useful machine for dressing whip-handles or stocks, or other articles of a like nature, adding thereto that the object of his invention was to properly round and shape the handles or stocks of whips, and other articles of like character.

Important explanations are superadded substantially as follows: that to accomplish the work correctly, the stock must travel longitudinally towards the cutting devices, or vice versa, in order that the material removed from the stock may be stripped or cut lengthwise of the same instead of around it, or transversely, so that the surface of the stock will be left smooth; and he adds that the proper form or shape must be given to the stock at the same time that its surface is being finished, and consequently that the cutting apparatus must be controlled by a guide corresponding to the taper or form of the stock or handle of the whip. Preceding, as those explanations do, the statement of the claims of the patentee, they show in concise terms the true nature and character of the organized machine, and it is obvious that he intended by those explanations to illustrate in a general way the mode of operation by which the several devices, when combined, will accomplish the described new and useful result.

Strong support to that proposition is found in the paragraph which follows those explanations, in which the patentee states that the invention consists chiefly in the combination of a holding and feeding mechanism, and revolving cutters having their axis of rotation at right angles, or nearly so, to the axis of the stock, meaning the whip-handle to be rounded and shaped, and the described guides for controlling the action of the cutters, meaning the described cutting apparatus of the machine, as fully explained in the specification and drawings. Machines of the kind must of course have a frame of a suitable form to support the other parts of the machine, as shown in the drawings. The machine in this case has a carriage mounted upon the frame, the carriage

being arranged to travel on guides or rails, for the purpose of giving a longitudinal motion to the stock. Standards are also mounted upon the carriage for supporting the mandrels which hold the stock in proper position to be guided to the cutters.

Devices of the kind for holding the stock are indispensable, and the specification shows that they are rotated by suitable gearing in such a manner as to keep the stock constantly revolving while it is under the action of the cutting apparatus. Means of attaching the stock to the mandrels are also shown, which is accompanied by clasping each end between a pair of levers, pivoted on a device called a head, mounted on the inner ends of the mandrels, which serves as a fulcrum to the levers and also causes them to revolve. Between the outer end of each pair of the levers there is arranged a cone, which can be longitudinally adjusted by a screw formed on the mandrels in a way to spread or release the outer ends of the levers, so as to close or open their inner ends, between which the opposite ends of the stock are held in proper position to the cutters. Suffice it to say, without entering further into the details, that every element of the machine, and its mode of operation, is given in the specification, confirming the remarks previously made, that the invention consists in the combination of the described mechanism for rounding and shaping stocks or handles for whips, or other articles of a like nature, including the described holding and feeding mechanism, together with the cutting apparatus, having its axis of rotation at right angles, or nearly so, to the axis of the stock, with the described guides for controlling and regulating the action of the cutters with their entire apparatus, as shown in the specification and drawings.

Five claims are annexed to the specification, the first two of which only will be reproduced, as it is not now claimed that the other three have been infringed:—

1. The combination, in a machine for shaping whip-stocks, of two rotating and adjustable clamps for holding the whip-stock, with revolving cutters, whose axis of rotation is at right angles to the axis of the stock, substantially as described for the object set forth.

2. The combination, in a machine for shaping whip-stocks, of revolving cutters, the adjustable and rotating clamps for holding and revolving whip-stocks, and the guides through which the stock is passed for firmly holding the stock while being dressed by the cutters as described.

Whip-handles or stocks are constructed in the rough before they are in a suitable condition to be dressed and smoothed, or rounded and shaped, by the machine described in the complainants' patent, which is true, also, of the whip-stocks manufactured by the respondent.

Undressed whip-stocks of the kind in controversy are described by the respondent as composed of eleven pieces, as follows:—

1. A middle piece of wood, or rattan, called a wedge, to which is attached a spike at one end and a piece of whalebone at the other.

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2. On this central core, or wedge, are laid four other pieces of rattan called sidings, which are half round, with one edge planed off so as to allow them to fit the wedge or centre piece.

3. Then there are four other pieces of rattan called chinks, shaped so as to fit the pieces of siding, to fill up the crevices between the siding pieces, and make the handle large enough for a whip-stock.

4. All these pieces being thus prepared, they are then glued or cemented together before the stock is in a suitable condition to be dressed and finished in the machine.

Stocks of the kind are composed of rattan, whalebone, and glue, besides the spike at butt-end. When constructed in the rough they are not fit for the market.

Four things are required of the machine in order to dress the rough stock, and make it salable as a finished article:—

1. It must have means for holding the stock during the operation of dressing the article.

2. It must have means of advancing and rotating the article at the same time.

3. Means of guiding the rough article must be furnished, so as to preserve its shape during the operation.

4. It must have a cutting apparatus, to reduce the circumference of the rough article from butt to tip, as it is advanced and rotated.

By referring to the specification, it appears that the patentee adopted for holding devices two standards, to support two mandrels having a pair of levers which clasp each end of the whip-stock. Having devised means to hold the article, his next step was to provide an apparatus to advance the stock and cause it to rotate at the same time, which he accomplishes by a carriage travelling on rails and by a gearing causing the mandrels to revolve as the apparatus advances. Two notched plates are provided for guiding devices, sliding upon each other, so that when the stock is in the notches of the plates and between them, “they close upon the stock, and steady it under the cutting action.” Two upright revolving steel burr-cylinders are provided as reducing devices, and it must be admitted that they are admirably adapted to the accomplishment of the function, without risk of injury even to the most slender part of the stock.

Argument to show that the patented invention is one of merit and of a highly useful character is quite unnecessary, as the remarks already made are amply sufficient to demonstrate that proposition to every impartial and well-informed mind; but it must be remembered that it is not a patent for

the result, nor can it receive a construction which will shut out all other improvements. None of the elements or devices of the patent are claimed, nor do either of the claims, which it is alleged the respondent has infringed, warrant the construction that the original patentee was the original and first inventor of the entire machine. Instead of that, both the first and the second claims plainly proceed upon the ground that the invention is for a combination of old elements, and the words of the specification afford persuasive and convincing proof that such is the true theory of the patent, whether the question is tested by the specification or the claims which it is alleged have been infringed. Viewed in the light of these suggestions, it is clear that the invention consists chiefly in the combination of a holding and feeding mechanism, with revolving cutters, having their axis of rotation at right angles, or nearly so, to the axis of the stock, and of guides for directing and controlling the action of the cutters, as described in the specification and shown in the drawings.

Suppose that is so, still it is contended by the complainants, and well contended, that the patentee or owner of a patent for a combination is as much entitled to equivalents as the patentee or owner of any other class of inventions. Doubts at one time existed as to the correctness of that proposition, but it is now well settled in accordance with the views of the complainants. *Gould v. Rees*, 15 Wall. [82 U. S.] 194; *Gill v. Wells*, 22 Wall. [89 U. S.] 28.

Questions of the kind usually arise in comparing the machine of the defendant with that of the plaintiff, and the rule is, that if the defendant omits entirely one of the elements or ingredients of the patented combination without substituting any other in its place, he does not infringe the plaintiff's patent; and if he substitutes another in place of the one omitted, which is new, or which performs a substantially different function, or, even if it is old, was not known at the date of the plaintiff's patent as a proper substitute for the omitted element or ingredient, then the charge of infringement is not maintained. By an equivalent in such a case, it is meant that the element or ingredient, substituted for the one withdrawn performs the same function as the other, and that it was well known at the date of the patent in question as a proper substitute for the one omitted in the patented combination. Hence it follows that a party who merely substitutes another old element or ingredient for one of the elements or ingredients of a patented combination is an infringer, if the substitute performs the same function as the one omitted, and was well known at the date of the patent as a proper substitute for the element or ingredient employed in the patented combination. *Roberts v. Harnden*, [Case No. 11,903.] Mere formal alterations of a combination in letters-patent do not constitute any defence to the charge of infringement, as the inventor of such an improvement is as much entitled to suppress every other combination of the same devices to produce the same result as the inventor of any other patented process or product. Examples of the kind frequently arise in suits for infringement, as where a spring is substituted for a lever to produce power, or

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where a weight is substituted for a spring to produce pressure, and many others, where the same rule may be applied.

Much discussion of the first defence is not required, as it is obvious that the evidence introduced by the respondent is insufficient to overcome the prima facie presumption arising from the patent that the assignor of the complainants was the original and first inventor of the improvement. Incomplete as the evidence is in respect to the Sacket machine, it is clear beyond all doubt that it cannot be held to support that defence. Taken as a whole, the evidence fails to satisfy the court that the supposed invention was ever completed as an operative machine. Nor is the evidence sufficiently full and explicit to enable the court to understand what its construction was, or its precise mode of operation. Persistent efforts appear to have been made by the supposed inventor, to induce manufacturers in his neighborhood to adopt it, without success, and the proof is, that, in almost every instance in which it was tried, it split the whalebone, and that when it did not, it left it in a worse shape to finish by hand than it was before the stock was put into the machine.

These efforts to introduce the machine were made twenty years ago, and have not since been renewed, showing, to the satisfaction of the court, that it was a mere experiment, and that it was finally abandoned. Such a defence requires better evidence to support it, and, in the absence of such evidence, the defence must be overruled. Grant that, and still the respondent denies that he has ever made, used, or sold the patented improvement, which, in the view of the court, is the principal issue between the parties. Questions of the kind, where the invention is embodied in a machine, are usually best determined by a comparison of the machine made by the respondent with the mechanism described in the specification and drawings of the complainants' patent. Very material aid in making that comparison has been derived in this case from the testimony of the expert witness examined by the complainants.

Nothing can be plainer than the proposition that it was the object of the assignor of the complainants to construct a machine that would round and shape undressed whipstocks and other similar articles with greater facility and with less expense than it could be accomplished by hand. all of which

he effected by the devices of the machine described in the specification and shown in the drawing, and it is equally certain that the respondent desired to accomplish the same thing and nothing more, unless it was to change the form of the devices so as to avoid the charge of infringement. He knew what the devices were which were employed by the assignor of the complainants, and he was entirely familiar with the patented machine and its mode of operation. Years of experience had proved its utility and adaptation to accomplish the object for which it was constructed and patented. Beyond all question, it embodies a particular plan, and the evidence satisfies the court that the respondent borrowed every feature of his plan from the patented machine.

All agree that such a machine, to be successful, must have a holding and feeding mechanism, that it must have means to cause the stock to revolve as it advances, and that it must have revolving cutters with axis of rotation at right angles, or nearly so, to the axis of the stock, and that it must be provided with guides for controlling and regulating the cutters in order to keep the stock constantly revolving, while it is subjected to the cutting or rasping operation. Proof of conclusive character is found in the record that the object of the respondent in constructing his machine was the same as that of the assignor of the complainants, and the court is of the opinion that he accomplishes it by substantially the same means. Decided support to that proposition is derived from a comparison of the two machines and from the testimony of the expert witnesses.

Enough appears to show that the respondent adopted the same combination as that adopted by the assignor of the complainants, that is, that he provided means for holding, presenting, advancing, rotating and reducing the undressed stock, as is described in the specification and drawings of the patent. Changes were made by him in two of the necessary devices. Instead of burrs to scrape off the enamel of the rattans and whalebone, he uses numerous blades, sometimes as many as a hundred and twenty, that perform the same function as the burrs in the patented machine. Blades of the kind were first adopted by the original patentee, but he soon discarded them and substituted the burrs, which are much to be preferred. Formal change is also made in the clamping and advancing mechanism, by combining the two in one apparatus, that is, the respondent's device is made to do two things instead of having the two thing done by separate devices, the difference being that the assignor of the complainants clamps his stocks to a carriage and moves the carriage, whereas the respondent makes the clamps also serve as the propelling instrumentality. Suffice it to say that the expert examined by the complainants states that he finds in the model of the respondent what he regards as substantially the same combination of devices and for precisely the same purpose as those specified and claimed in the first and second claims of the complainants' patent. Extended reasons are given by the witness in support of the conclusion, but it is unnecessary to reproduce his testimony. It is fully corroborated by a comparison of the alleged infringing exhibit with the patented

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improvement. Nor is it necessary to examine into the extent of the infringement, as that will fall within the province of the master. Decree for the complainants for an account and for an injunction.

{NOTE. So far as ascertained, there are no other reported cases directly involving this patent prior to 1880.}

¹ {Reported by William Henry Clifford, Esq., and here reprinted by permission.}