

## WASHBURN & MOEN MANUF'G CO. AND ANOTHER V. HAISH. WASHBURN & MOEN MANUF'G CO. V. HAISH.

Circuit Court, N. D. Illinois. December 15, 1880.

- 1. ASSIGNMENT OF PATENT-RESERVATION OF TERRITORY.—An assignment of all right, title, and interest in certain letters patent, "excepting 32 or 33 counties heretofore sold and assigned," is not void for ambiguity.
- 2. SAME-SAME-PLEADING.-Such objection cannot be considered, where a bill for an injunction designated the counties upon which the exception operated, and the defendant neither traversed such allegation in his answer, nor introduced proof tending to show that the territory in controversy was included within such exception.
- 3. SAME-RE-ISSUE-PRESUMPTION.-A re-issue of such patent to the assignee raises a presumption of title in such assignee.
- 4. PATENTS-PRIOR USE-PROOF.-Prior use must be established by a preponderance of evidence in order to defeat a patent, and every reasonable doubt should be resolved in favor of the patentee.

Coffin v. Ogden, 18 Wall. 120. Webster Loom Co. v. Higgins, 16 O. G. 675. Howe v. Underwood, 1 Fisher, 175. Hayden v. Suffolk Manuf'g Co. 4 Fisher, 103. Goodyear v. Day, 2 Wall. Jr. 283.

- 5. INVENTION-DEGREE.-If any invention is required in the production of a device, the law will not attempt to measure its extent or degree.
- 6. SAME-BARBED WIRE FENCE.—It required such invention to devise and produce a barbed wire which could be practically used for fencing purposes.
- 7. SAME-EVIDENCE-USE OF DEVICE.-The general acceptance and extensive use of a new device is evidence that it was the product of invention.

Smith v. Goodyear Dental Vulcanite Co. 93 U. S. 486.

*Eppinger* v. *Richey*, 14 Blatchf. 307. *Isaacs* v. *Abrams*, 14 O. G. 862. *Stanley Works* v. *Sargeant*, 8 Blatchf. 346.

- 8. SAME-RE-ISSUE-The specifications of a re-issue may be made more full and accurate, but must not be substantially changed so as to describe another device, or cover anything not in the original patent.
- PATENT No. 67,117 was issued July 23, 1867, to William D. Hunt, for his method of "providing the wires of a wire fence with a series of spur-wheels;" and *re-issued*, (No. 6,976,) March 7, 1876, to Charles Kennedy, assignee of William D. Hunt, for "a fence wire provided with spurs for the purpose specified." *Held*, that such re-issue was *valid*.
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- 10. PATENT NO. 66,182, dated June 25, 1867, issued to Lucien B. Smith, embodied the idea of fixing the barbs by bends in the wire, so as to prevent them from moving lengthwise on the wire. This patent was *re-issued*, (No. 7,136,) May 23, 1876, and contained a claim for the bent wires, as a means of preventing the movement of the barb lengthwise thereon. *Held*, that no objection to the re-issue had been well taken.
- 11. PATENT NO. 74,369 was issued to Michael Kelly, February 11, 1868, for thorns or barbs, fixed rigidly to the wires, so that they could neither slide lengthwise nor revolve upon the wires, (1) by stringing them upon the wires by holes through the center, and then compressing them upon the wire by blows or pressure, or (2) by "laying another wire of the same or different size along-side the thorn wire and twisting the two together." The latter method was first claimed in the *re-issue*, No. 6,902, dated February 9, 1876. *Held*, that such re-issue was *valid*.
- 12. PATENT NO. 84,062, dated November 17, 1868, issued to Michael Kelly, and *re-issued*, (No. 7,035,) April 4, 1876, was for a flat wire, pierced with holes, through which spurs made of pieces of wire, with the ends cut diagonally so as to leave them pointed without further manipulation, were thrust, and for compressing the wire so as to clamp the barb thus inserted in each hole. *Held*, that this patent and reissue did not show invention, in so far as it claimed for the first time a wire barb made sharp or pointed at both ends by being cut off diagonally.
- 13. PATENT NO. 150,683, issued May 12, 1874, to Joseph F. Glidden, showed a device for keeping the wires of a fence

stretched, or spread apart, by means of a slotted tube. It also showed, as part of the mechanism, a barb, made by coiling a short piece of wire between its ends around the fence wire. This feature was first claimed in the *re-issue*, No. 6,913, dated February 8, 1876. *Held*, that such re-issue was *valid*.

- 14. PATENT NO. 157,124, dated November 24, 1874, issued to J. F. Glidden, was for a "twisted fence wire, having the transverse spur wire, D, bent at its middle portion about one of the wire strands of said fence wire, and clamped in its position and place by the other wire strand twisted upon its fellow, substantially as specified." *Held*, that there was nothing left in the line of invention to justify the issue of this patent.
- 15. INFRINGEMENT.—Defendant manufactured a twisted fence wire, armed with a wire barb, cut diagonally, so as to leave the points sharp, and which was bent in the form of an "S," so as to clasp both wires and extend the sharp points in opposite directions from the wire. *Held*, that such fence wire infringed Hunt's claim for "a fence wire provided with spurs" or barbs; Kelly's idea of a rigid or fixed barb, held in place by the twisting of two wires together; and Glidden's barb, made by bending a short piece of wire around the fence wire so as to leave the two sharp ends projecting to form the spurs or barbs.

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In Equity.

Coburn & Thacher, Thomas H. Dodge, Benjamin F. Thurston, Offield & Towle, West & Bond, Lawrence, Campbell & Lawrence, Charles Mason, Hiram P. Dillon, and Miller & Godfrey, for complainants.

George Payson, N. C. Gridley, Munday & Evarts, George Christy, and Albert H. Walker, for defendant.

DRUMMOND, C. J. These are two of a series of 14 cases brought by the plaintiff upon the chancery side of this court, for an injunction and damages by reason of the alleged infringement by defendant of certain patents owned by the complainants, relating to barbed fence wire. By the first suit the plaintiffs allege that they are the owners of the following patents, issued by the United States: (1) Patent No. 67,117, issued July 23, 1867, to William D. Hunt, and reissued, No. 6,976, March 7, 1876, to Charles Kennedy, assignee of William D. Hunt; (2) patent No. 150,683, issued May 12, 1874, to Joseph H. Glidden, and reissued, No. 6,913, February 8, 1876, to said Glidden; (3) patent No. 66,182, dated June 25, 1867, issued to Lucien B. Smith, and re-issued, No. 7,136, dated May 23,1876; (4) patent No. 157,124, dated November 24, 1874, issued to J. F. Glidden,—all of which patents, it is charged, have been duly assigned by mesne assignments to the plaintiffs, the Washburn & Moen Manufacturing Company and Isaac L. Elwood.

The patents involved in the second suit are as follows: (1) Patent No. 74,369, issued to Michael Kelly, dated February 11, 1868, and re-issued, No. 6,902, dated February 9, 1876; (2) patent No. 84,062, dated November 17, 1868, issued to Michael Kelly, and re-issued, No. 7,035, dated April 4, 1876; (3) patent No 153,965, issued to Charles Kennedy, dated August 11, 1874,—the title to all of which patents has, it is claimed, been, by mesne assignment from the respective patentees, duly vested in the complainant, the Washburn & Moen Manufacturing Company.

The defences set up are—(1) A denial of the patentability of the devices in question, because, from the state of the art, it only requires mechanical skill, and not inventive 903 genius to construct them; (2) a denial of the validity of said patents for want of novelty, on the ground that barbed wire has been publicly known and used long prior to the alleged inventions; (3) a denial of the validity of the several re-issued patents, for the reason, it is insisted, that the inventions now claimed by the re-issues are not found in the original specifications, drawings, and models; (4) that, even admitting the validity of the letters patent, the defendant does not infringe the same, nor any of them; (5) a denial of the complainants' title to the Hunt

patent, and their right to maintain this suit upon the title shown.

With regard to the last point named, raising the question of title to the Hunt patent, it is sufficient, we think, to say that the objection comes too late to be considered upon the merits of the cause. In the assignment by Hunt of his interest in the original patent he purports to convey all his right, title, and interest in the said letters patent, "excepting 32 or 33 counties heretofore sold and assigned," not designating the counties thus previously sold and assigned; and the defendant insists that the conveyance by Hunt is so far ambiguous as that nothing passes by this assignment, because it is uncertain what counties were so reserved or had been previously conveyed. We think it enough to say that this reservation is such as is capable of being made certain by competent evidence showing what counties had been actually conveyed by Hunt. The bills allege that certain counties in certain states were the ones upon which the exception operated, and the answers do not traverse or deny this allegation. Besides this, since the assignment from Hunt was made this patent has been re-issued to Hunt's assignee, and we think it must be presumed that the title was fully exhibited to the patent officer at the time of such re-issuance; at least, that a re-issue to the assignee of Hunt raises a presumption of title in the assignee. If the defendant wished to raise the question as to whether the reservation included the territory now in controversy, they should have raised it by their answer, or at least have put in proof tending to show that the title to some 904 part of the territory involved in this suit was not conveyed by the original assignment from Hunt.

A large mass of testimony has been put into the cases bearing upon the question of novelty, and the state of the art at the time these inventions are claimed to have been made. The defendants have introduced voluminous proofs tending to show the public use of barbed wire for fencing purposes long prior to any of these alleged inventions. We will not take the time to examine those proofs in detail, but dispose of that branch of the case by saying that these proofs fail to satisfy us that barbed wire for fencing purposes had ever been publicly known or used prior to these inventions in such manner as to defeat these inventions for want of novelty. We do not intend to be understood as intimating that the witnesses who have testified to the various instances of the use of barbed wire for fencing purposes have been guilty of intentional false swearing, but simply to say that this proof, which is almost wholly made up of the recollections of witnesses revived after the lapse of many years, and contradicted, as it is in most instances, by the explicit testimony of other equally credible witnesses, leaves so much doubt as to the actual existence of these various barbed wire fences, or any of them, as to make it at least unsafe ground on which to defeat a patent. The rule as to the degree of proof required to defeat a patent by showing prior use is well stated in the following authorities:

In *Coffin* v. *Ogden*, 18 Wall. 120, the opinion having been delivered by Mr. Justice Swayne, it is said: "The invention or discovery relied upon as a defence must have been complete and capable of producing the result sought, and this must be shown by the defendant. The burden of proof rests upon him, and every reasonable doubt should be resolved against him." So, too, Judge Wheeler, in the case of *Webster Loom Co.* v. *Higgins*, 16 O. G. 675, says: "The burden of proof rests upon the defendant to show beyond any fair doubt the prior knowledge and use set up."

In *Howe* v. *Underwood*, 1 Fisher, 175, Judge Sprague said: "How invariable is it that after a great invention has been 905 brought before the world, has become known to the public, and been put in

form to be useful, that people start up in various places and declare that they invented the same thing before. The cotton-gin and the ether discovery are illustrations in point; and others of similar character might be added indefinitely. These pretended prior inventors had thought of such a thing; that they had the conception of such a thing, perhaps; but they never carried it to the extent of making it of practical utility, so that the world could obtain possession of it. But when they find that another has completed that which they had begun, they are astonished that they did not see, think they must have seen all that is necessary, and claim that they have invented it. After having seen what has been done, the mind is very apt to blend the subsequent information with prior recollections, and confuse them together. Prophecy after the event is easy prophecy. I think that this is one of the cases in which several of the witnesses have been led into the illusion of believing that they knew before what they have learned or been taught."

The same learned judge, in *Hayden* v. *Suffolk Manuf'g Co.* 4 Fisher, 103, said: "Where an invention of a useful machine, or structure or improvement in any machine, is shown to have been made, and it is sought to be invalidated by an old machine made years ago, the jury should examine the testimony and the evidence with care and caution, so as to be satisfied that that which is said to have existed was actually and substantially the same. \* \* \* The rule of law is a reasonable one; at all events it is a rule of law that a party that sets up such an old instrument that has passed away has upon him the burden of satisfying the jury, upon a preponderance of evidence, that it is substantially the same as what has taken place before they will set aside the patent."

So, in *Goodyear* v. *Day*, 2 Wall. Jr. 283, Mr. Justice Grier says: "It is usually the case, where 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 906 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."

The testimony as to the state of the art shows that fence wire and wire fences, and wires for such purposes, composed of two or more strands twisted or laid together, were old at the time these inventors entered the field; also that fences had been, long before Hunt's invention, armed with spikes, or other sharp projecting points, for the purpose of making them more effective in resisting the encroachments of animals or other intruders. Indeed, the thorn hedges, which have been used almost from time immemorial, are in one sense only a barbed fence, their effectiveness as a barrier arising mainly from the natural thorns or spurs with which the hedge shrubs are armed. It must be conceded, both from the proofs in these cases, and from those common facts within the knowledge and observation of all intelligent persons, that the idea of furnishing a fence or wall with some kind of sharp spikes or prickers is old. The ordinary picket fence, the device of spikes on area railings to prevent loungers from leaning against them, the placing of broken glass, pottery, or sharp stones or spikes upon the tops of walls, to protect fruit gardens, are wellknown illustrations of what we refer to. The most that can be said of these old devices, as applicable to these patents, is that they narrow the field for the exercise of inventive faculty, and limit the range of the patents.

In this connection it is proper to consider briefly the objection that these devices are not patentable from the fact that, in view of what was well known in the same direction, it did not require inventive genius to make any of the devices involved in these patents, but that only mechanical skill was requisite to adapt old devices to this new use. There is no doubt that a device, in order to be patentable, must be the result of <sup>907</sup> inventive genius. The mere mechanical adaptation of old things to new uses is not usually invention, unless in combinations; and yet it is extremely difficult in many cases to say just where the inventive faculty asserts itself as the controlling force. And the authorities furnish us no satisfactory test to apply and determine this question. Although there is usually little difficulty in determining, as a matter of fact in each case, whether a device is or is not in some degree the result of invention. If there is any invention required, then the law will not attempt to measure its extent or degree. If, for instance, the proof had shown that wire provided with barbs, spurs, or prickers was a well-known article used for other purposes than fencing, there would be no difficulty in saying that it did not require invention or the exercise of the inventive faculty to substitute it for fencing purposes in place of plain wire which had been used before. But we cannot say that the inventive or creative faculty is not required in devising a mode by which plain fence wire can be armed with spurs so as to make it available as an effective fencing material. The proof does not show that such wire was known and applied to other uses. No one, so far as this record shows, had made or used it before for any other purpose; so that, to our minds, it seems quite clear that it required invention to devise and produce a barbed wire which could be practically used for fencing purposes. In the absence of any other test the courts have seemed to assume that the fact of the acceptance of a new device or combination by the public, and putting it into extensive use, was evidence that it was the product of invention; or, as one of the counsel for plaintiff expressed it, "utility is suggestive of originality."

In Smith v. Goodyear Dental Vulcanite Co. 93 U. S. 486, Mr. Justice Strong said: "Undoubtedly the result of consequences of a process or manufacture may in some cases be regarded as of importance when the inquiry is whether the process or manufacture exhibits invention, thought, and ingenuity." Webster, on the subject of patents, page 30, says: "The utility of the change, as ascertained by its consequences, is the real practical test of the sufficiency of an invention; and, since the 908 one cannot exist without the other, the existence of the one may be presumed on proof of the existence of the other. Where the utility is proved to exist in any degree, a sufficiency of invention to support the patent must be presumed. We do not say the single fact that a device has gone into general use, and has displaced other devices which had previously been employed for analogous uses, establishes in all cases that the later device involves a patentable invention. It may, however, always be considered; and, when the other facts in the case leave the question in doubt, it is sufficient to turn the scale."

So in *Eppinger v. Richey*, 14 Blatchf. 307, Judge Shipman said: "Two facts exist in this case: one is that an important improvement has been attained; the second is that the improvement is in a staple article which has been manufactured in this country for a long series of years. \* \* \* The utility of the patented article has been evinced by its large sales. \* \* The inventor evidently gave to the public an article which it wanted, and which it had not previously known. Without giving to the general use of the invention as a test of its patentability any greater importance than the supreme court in the case of *Smith* v. *Goodyear* Dental Vulcanite Co. (above quoted) indicate should be given to this circumstance, I am of the opinion that the facts in the case fully establish the conclusions: (1) That however simple the change in the method of manufacture apparently may have been, yet it was change which required invention for а its accomplishment; and (2) that the improvement resulting from the changed method of manufacture has been so great that the article which is produced is, within the meaning of the patent acts, a new and useful article of manufacture."

Mr. Justice Shepley said, in the case of *Isaacs* v. *Abrams*, 14 O. G. 862: "A change in the form of a machine or instrument, though slight, if it works a successful result, not before accomplished in a similar way, in the art to which it is applied, or in any other, is patentable."

Judge Shipman said, in *Stanley Works v. Sargent*, 8 Blatchf. 346: "Utility is not an infalliable test of originality. The patent law requires a thing to be new as well as useful in 909 order to entitle it to the protection of the statute. To be new in the sense of the act it must be the product of original thought or inventive skill, and not a mere formal or mechanical change of what was old and well known; but the effect produced by the change is often an appropriate though not a controlling consideration in determining the character of the change itself."

Tested by the rule of utility here suggested, this record abundantly shows that the device in question has been accepted by the public to an extent which has hardly heretofore followed the most successful inventions. Its utility must be considered as a conceded fact. From what has already been developed, it is clear that it has made possible the cultivation of the extensive praries of the west, the pampas of Brazil, and the steppes of Russia, where, before the introduction of this cheap mode of fencing, it was impossible; and it has, even to a great extent, already superseded the use of wooden fences in the timbered portion of the country; and the question is, to whom but these inventors is the public indebted for this widely-useful device?

The third objection, that the re-issues are invalid, involves a consideration of the original patents in their order, and those patents as they now stand amended and re-issued.

The Hunt patent of July 23, 1867, was for his method of "providing the wires of a wire fence with a series of spur wheels." The re-issued is for "a fence wire provided with spurs for the purpose specified." In other words, what Hunt at first claimed as his invention, and obtained a patent for, was his special mode of arming the wires of a wire fence with spur wheels or barbs; but in his re-issue he claimed as his invention a barbed fence wire as a new article of manufacture, and it is argued that while he may have been the first to place his particular kind of spur or barb on a fence wire, and may have been entitled to a patent for such specific device, yet he nowhere claimed to be the inventor of barbed or spurred wire as such, and therefore his broad claim in the re-issue should not have been allowed and cannot be sustained.

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It is not deemed necessary to attempt here any full discussion of the law in regard to the re-issue of patents. It is enough to state, as a general rule, that what is claimed in the re-issue must be found in the original specifications, drawings, and models; that is, "no new matter can be introduced into the specifications." The invention as claimed in the reissue must be found properly described in the original specifications. In the language of the supreme court in *Powder Co. v. Powder Works*, 98 U. S. 138: "The specifications may be amended so as to make it more clear and distinct; the claim may be modified so as to make it more conformable to the exact rights of the patentee; but the invention must be the same. So particular is the law on this subject that it is declared that no new matter shall be introduced into the specification. This prohibition is general, relating to all patents; and by 'new matter' we suppose to be meant new substantive matter, such as would have the effect of *changing the invention*, or of introducing what might be the subject of another application for a patent. The danger to be provided against was the temptation to amend a patent so as to *cover* improvements which might have come into use, or might have been invented by others, after its issue. The legislature was willing to concede to the patentee the right to amend his specification so as to fully describe and claim the very invention attempted to be secured by his original patent, and which was not fully secured thereby in consequence of inadvertence, accident, or mistake; but was not willing to give him the right to patch up his patent by the addition of other inventions, which, though they might be his, had not been applied for by him, or, if applied for, had been abandoned or waived."

So in *Russell* v. *Dodge*, 93 U. S. 463, Mr. Justice Field said : "And as a re-issue can only be granted for the same invention embraced by the original patent, the specification could not be substantially changed, either by the addition of new matter or the omission of important particulars, so as to enlarge the scope of the invention as originally claimed. A defective specification could be rendered more definite and certain, so as to embrace the claim made, or the claim could 911 be so modified as to correspond with the specification." The doctrine of these authorities is that the inventor may, in his specifications on the re-issue, make his description more full and accurate; but he must not substantially change it so as to describe another device, or cover anything not in the original. It would seem from the specification and testimony of Hunt that his idea of the mode of utilizing his device was for the user to purchase the spurs and fix them upon such of the wires composing his fence as he thought desirable. But experience demonstrated that the value of the invention consisted not in teaching each fence builder how to barb his own wire, but in the introduction of barbed wire as an article of manufacture, and in furnishing to the consumer the manufactured article ready for use without further need of mechanical skill, or the use of tools, to fit it for its purpose, beyond the single act of fastening it to the posts. It can hardly need evidence or argument to prove that Hunt's device is much more accurately described as "barbed fence wire" than as a method of barbing wire; and if he was the first to suggest the idea of barbing wire for fence purposes, he had the right to cover that by his patent. The specifications in the original and re-issued patent are substantially the same. No material change is introduced, and whatever change is made is merely that of giving point or direction to the invention now claimed.

The next patent in order of time involved in this controversy is that issued June 25, 1867, to Lucien B. Smith, which, although earlier in matter of date than Hunt's, yet is of later conception, Hunt's invention going back to 1865. The only advance made in the art by Smith's invention was the idea of fixing the barbs by the short kinks, or bends in the wire, so as to prevent them from moving lengthwise on the wire. So far as this device was an improvement on Hunt's, it may, perhaps, be held valid; but it cannot be held to include all equivalent methods of preventing lateral motion, because Hunt had suggested keeping the spurs at a suitable distance apart, by means of "flanges or otherwise." This Smith patent has been re-issued with a claim for the bent wires as a means of preventing the movement of the barb lengthwise thereon, and we do not see any well-taken objection to the re-issue; but the device seems of little importance in this case, as none of these defendants use it, or its equivalent. We only refer to it as showing another step towards the perfected wire as now used.

It is true that in his specifications, original and amended, Hunt describes his invention as "an improvement in fences;" but this is no part of the substance of his specifications, but only the mere name which he chose to give to his device. Nor do we see any reason why Hunt, having described his method of barbing fence wire, might not have had the broad claim in his original which he obtained in his re-issue; and if he could have had it in the first instance he certainly had the right to it in the reissue. Hunt, then, for the purpose of this case, must be deemed to have been the first to enter the field as an inventor of barbed wire fencing. Others who followed him may have patents, subject to his, for improvements. His mode of barbing his wire was by a spur-wheel revolving loosely on the wires, or by single spurs strung upon the wire by holes punched through them. These spurs may have been expensive to manufacture, or affix to the wire, but that only went to the practicability of adopting his device in competition with other fencing material then in use, and not to its novelty.

The next patent to be considered in the order of time is that issued to Michael Kelly, February 11, 1868. This patent was for thorns or barbs, fixed rigidly to the wires, so that they could neither slide lengthwise nor revolve upon the wires. Two modes of accomplishing this result are shown: one of stringing them upon the wire by holes through the centre, and then compressing them upon the wire by blows or pressure; and the other by "laying another wire of the same or different size along-side the thorn wire, and twisting the two together;" but no claim was made for the latter mode in the original patent. By the re-issue this feature is made the g13 fourth claim, and, it seems to me, properly allowed under the law, as it was clearly described and suggested in the original specifications.

The second Kelly patent is for a flat wire, pierced with holes, through which spurs made of pieces of wire, with the ends cut diagonally so as to leave them pointed without further manipulation, were thrust, and by compressing the wire so as to clamp the barb thus inserted in each hole. The only feature of this patent which it is claimed affects this case is that it shows for the first time a wire barb made sharp or pointed at both ends by being cut off diagonally; but barbs had been before this time made sharp by cutting the sheet metal diagonally, and it was certainly no invention for Kelly to point wire by cutting it diagonally after it had become a frequent practice to cut sheet metal in the same way for that purpose.

The Glidden patent of May 12, 1874, showed a device for keeping the wires of a fence strctched, or spread apart, by means of a slotted tube. It also showed, as part of the mechanism, a barb made by coiling a short piece of wire between its ends around the fence wire. This feature was not claimed in the original patent, but is claimed in the re-issue as part of the invention; and, as it is shown in the original specifications and drawings, the patent may be considered as having been properly re-issued to cover this device. The second Glidden patent, of November 24, 1874, is for a "twisted fence wire, having the transverse spur wire, D, bent at its middle portion about one of the wire strands of said fence wire, and clamped in its position and place by the other wire strand twisted upon its fellow substantially as specified. "The proof shows that the final form of fence wire and spur which has been adopted for practical use is substantially that shown in the last Glidden patent; but it seems to us there was nothing left in the line of inventor. The idea of barbing fence wire was Hunt's. The idea of fixing the barb rigidly upon the wire, and holding it in place by another wire twisted upon it, was Kelly's. The wire barb looped over the wire, or one of 914 the wires, was that of Glidden's earlier patent; and by grouping all these devices into one finished wire a result is obtained substantially like that shown in the final Glidden patent of November, 1874. There was nothing new in Glidden's last patent, and no room for the claim of invention in the wire therein provided:

In the suits brought by the Washburn & Moen Manufacturing Company and Isaac L. Elwood against Haish, the defendant is charged with infringement of the Hunt patent, the Smith patent, and the two Glidden patents. As already said, we consider the Smith patent and the last Glidden patent as unworthy of further consideration in connection with this case.

The proof shows that the defendant Haish manufactured a twisted fence wire, armed with a wire barb cut diagonally, so as to leave the points sharp, and which is bent in the form of an S, so as to clasp both wires and extend the sharp points in opposite directions from the wire.

Defendant claims that even if the Hunt, Kelly, and Glidden patents are valid, he does not infringe, because his barb differs essentially from the barb of either of the complainants' patents mainly in the fact that it cannot be used except in combination with a wire of at least two strands. Assuming the validity of the re-issue of Hunt, Kelly, and Glidden, there can be no doubt that Haish infringes Hunt's claim for "a fence wire provided with spurs" or barbs. It also infringes Kelly's idea of a rigid or fixed barb, held in place by the twisting of two wires together; and Glidden's barb, made by bending a short piece of wire around the fence wire so as to leave the two sharp ends projecting to form the spurs or barbs.

Glidden's device for forming the barb is undoubtedly a very simple one, and rests very close to the border line between mechanical skill and invention. After Hunt had made barbs by cutting sheet metal into stars, or spur-pointed wheels, to be strung upon the wire by a hole through the middle, the points of the spurs being necessarily obtained by cutting the metal diagonally at the periphery of his wheel, and 915 after Kelly had shown his two-pointed barb strung upon the wire by means of a hole through the middle, and held in place by another wire twisted upon the thorn wire, it would seem to require but little invention to form the barb by bending a short piece of wire, pointed at both ends, around the fence wire, thereby forming a loop in place of the hole through the barb shown by Kelly. The loop is, when made, only the hole which Kelly punched through his barb; and yet there can be no doubt that the wire barb shown by Glidden is much more readily made and attached to the fence wire than the Kelly barb, which must first be strung upon the wire by passing the end of the wire through the hole before it can be fastened or fixed in place thereon; and, as before remarked, if utility is one of the tests of inventive ability, the proof showing clearly that it has been substantially adopted by all the manufacturers as the method of barbing wire, Glidden's method of forming the barb is not shown by the proof to have been anticipated by either method, and it is clearly now and useful; but, when once the idea of looping or clasping a wire barb around the fence wire has been shown, there was then no invention in such slight changes of the loop as are shown in the Haish barb. It is true, the Haish barb is required by its form to clasp both wires, but Glidden might, without change of the essential principle of his barb, loop it around both wires, if for any reason it was found desirable to do so. The underlying thought or principle of the Glidden barb is that of bending it over or around the fence wire, instead of punching a hole through the barb and passing the fence wire through the hole; and, when once the principle is shown, it is obvious that a great variety of barbs or loops can be made, all of which produce only one result.

This discussion leads us to consider for a moment the various forms of barbs cut from thin or sheet metal. It is manifest that there is and can be no essential difference between making the barb from strips of thin or sheet metal cut diagonally, so as to leave both ends pointed, and wrapping or bending that around the fence wire, and making a similar barb from round wire, as shown by Glidden; nor does the fact 16 that sheet metal barbs are cut so as to present more than two points when wound around the fence wire, or interlaced between the strands, make them any less an infringement of Glidden's device or relieve them of liability to Hunt.

We, therefore, come to the conclusion that complainants have the right to the relief asked by their bills; the principles we have laid down, in our estimation, fully covering the controverted questions in all the cases before us. Decrees may be prepared finding that defendants infringe, and referring the cases to the master to take account of damages and profits.

Blodgett, D. J., concurred.

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