

chains is no change or modification of those essential features that give to the complainant's machine its patentability. The rods perform the same office as the chains, though perhaps in slightly different ways.

This case impresses me as one, however, in which I should supersede the injunction, upon the defendants giving a sufficient bond for damages in case they desire to take an appeal. A decree may be entered for complainant in accordance with this opinion.

KLEIN v. CITY OF SEATTLE.

(Circuit Court of Appeals, Ninth Circuit. October 6, 1896.)

No. 287.

1. PATENTS—EVIDENCE OF INVENTION—EXTENSIVE SALES.

The fact that a device has gone into general use, and displaced other devices, while in some cases high evidence of invention, is not conclusive of patentability, and is not sufficient to support a patent, where the changes made from the prior art are mere changes of mechanical construction, or of form, size, or materials.

2. SAME—INSULATING PINS.

The Klein patent, No. 297,699, for an improvement in pins for holding insulators for electric wires, consisting of making the pin of wrought metal, with a soft metal head, adapted to be screwed into the insulating material, is void for want of patentable invention. 63 Fed. 702, affirmed.

In Error to the Circuit Court of the United States for the Northern Division of the District of Washington.

Gavin McNab, Byers & Byers, and Battle & Shipley, for plaintiff in error.

Frank A. Steele and John K. Brown, for defendant in error.

Before GILBERT and ROSS, Circuit Judges, and HAWLEY, District Judge.

HAWLEY, District Judge. This is an action brought by the plaintiff in error against the defendant in error to recover damages for infringement of letters patent No. 297,699, issued to the plaintiff on the 20th of April, 1884, for an improvement in pins for holding insulators supporting electric wires. The case was tried before the court, without a jury, in accordance with a stipulation in conformity with the provisions of section 649 of the Revised Statutes. It is presented to this court upon special findings of fact found by the circuit court. 63 Fed. 702. The court held the patent to be void for want of novelty and invention, and entered judgment in favor of defendant for its costs. Is this judgment sustained by the findings of fact? This is the only question presented for review. *Trust Co. v. Wood*, 8 C. C. A. 658, 60 Fed. 346, 348, and authorities there cited; *Blanchard v. Bank*, 21 C. C. A. 319, 75 Fed. 249; *Grayson v. Lynch*, 163 U. S. 468, 472, 16 Sup. Ct. 1064.

The specifications of the patent are as follows:

"My invention relates to an improved pin or support for fixing and holding in place the glass insulators upon cross-arms of telegraph poles, and in other situations where an insulator support or attachment is required for an electric wire. As hereinafter more fully described, my improvement consists in providing an insulator pin of metal, having a head of larger diameter than the body of the pin, on which is a screw thread, or portion of a thread, of proper size, to be inserted into, and to engage with, the screw socket in the insulator.

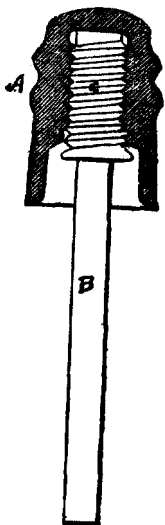


Fig. 2.

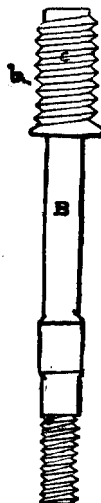


Fig. 3.

"Referring to the accompanying drawings: * * * Figure 2 is a view of the pin or support in detail, with the cap or insulator glass in section. Figure 3 is a view of the pin. A represents a glass insulator of the kind generally employed on telegraph poles and other situations to afford points of support for electric wires, in which is a socket with a spiral thread or groove for fastening it upon its pin. To provide a strong and permanent supporting pin, I take a length of metal rod, preferably of wrought iron, and upon one end I form a head, b, of greater diameter than the body of the rod, and of a size to be received into the socket or opening in the glass, A. This head, b, is provided with a spiral thread or groove, c, to engage with the thread in the socket of the glass, and this forms the means by which the insulator is secured on the pin. The other end of the pin, B, has either a screw thread, d, cut upon it so that it can be screwed into the arm or other support on the pole or elsewhere, or this end is left plain to be driven into a hole made to receive it in the cross-arm or other fixture. Where this pin will have an upright position, as on the top side of a cross-arm, it can be readily driven into the wood; but, in situations where the screw fastening would be preferable, the end of the rod can have the screw, d, cut on it. In such case the body of the pin, B, may have a square or flat position, as in Fig. 3, to receive a wrench. To form the head or enlarge position b, that receives and holds the glass, A, I can proceed in several ways; but the simplest and least expensive method I have found is to place the end of the rod, B, within a suitable mold, and then pouring in the molten metal around it, the mold employed for this purpose having a groove or thread in its interior, so that the head, when formed, shall be similarly grooved or threaded to fit into the socket of the glass, A. A very cheap and ready means of forming the head is to use solder lead, and in such case the glass insulator itself could be used as a mold, the end of the pin, B, being held in the center of the socket

in the glass, while the molten metal is being poured in around it. The soft metal will then form a head around and on the end of the hard metal pin, and the glass can be readily removed by unscrewing from the end of the pin. By forming an enlarged head in this manner upon the end of the pin, I can adapt my improved pin to the form and style of the insulator now in general use, having a socket to receive the end of the supporting pin. The advantages possessed by my improved pin are very great. It requires only a small hole in securing it to a cross-arm or other part of a pole, so that the part is not weakened at the point of fixture to as great an extent as where the wooden pins are used. It is out of contact with the inner sides or edges of the glass at the rim; so the insulation is more nearly perfect, and it will stand great weight and strain in supporting long lines, or where the distance between the supporting points are, of necessity, very long, and where the weight or strain is excessive, it will bend, and not break off."

The claims of the patent are:

"(1) The wrought metal pin, B, provided with a soft metal head, b, which is grooved and threaded to fit into and engage with the socket in an insulator for supporting electric wires, substantially as set forth.

"(2) An insulator pin or support for electric insulators, having wrought-metal body and a screw thread head of larger diameter than the body of the pin, of cast metal, substantially as set forth."

The application for a patent was made September 13, 1881. The state of the art at that time, as shown by the findings, was substantially as follows:

Glass insulators, screw threads on inside, were in common use in electrical appliances, for the purpose of attaching thereto the wires over which the electrical currents were conducted. These insulators were used by attaching the same to pins. The pins were attached to cross-arms, and the cross-arms were attached to poles or other objects, thereby forming the means of conducting electrical currents.

"The pins," to quote from the findings, "first used, were ordinary screw wooden pins, upon which screw insulators were attached. Such wooden pins were attached to cross-arms by boring a hole in the cross-arms, and placing therein the opposite end of the wooden pin. Wooden pins were for some places and purposes found objectionable, unsatisfactory, and defective. They were weak, and would not support long spans, without being of such size as to weaken the cross-arms, which in that case would not support the long span. In running the wire up and down steep inclines, they would, in wet weather, make a short 'circuit' with the edge of the 'petticoat,' and 'ground' the current. They afforded no method for overhead attachment. In lines where a slight interruption might cause great damage, they were considered too unreliable. In places difficult of access, * * * such as over mountains and sparsely-settled communities, the fact that they lasted but a comparatively short time rendered them undesirable. For the purpose of remedying the objections above stated to the wooden pin, numerous experiments were made by numerous persons prior to September 13, 1881. Among the instruments devised and employed for remedying these objections, there was prepared and used an iron pin, smaller in circumference and otherwise than the wooden pin, to which iron pin there was attached a wooden screw head, to which the insulator was attached in the same manner as the same was attached to the wooden pin. This wooden screw head was attached to the iron pin by boring a hole through the wooden screw head, and running the iron pin through the same. Another device manufactured and used for remedying the defects in the wooden pin was by taking a piece of wood, and driving the same into the glass insulator and boring the hole in the wood, and forcing the iron pin therein. In other words, the wood was used as a bushing. Other pins were also used, which were made by using, as bushing or filling, plaster of paris, cement, rags, white lead, and sheet lead, etc. All of these pins were found objectionable, for the reason that the insulator could not be detached therefrom without removing the pin from the cross-arm or other object; and, furthermore, in moving the insulator from the pin, the filling was liable to become broken, and also were found faulty when the same had to be placed in a downward or vertical position, for the reason that the bushing did not secure or firmly hold

the insulator to the rod, as well as being difficult and laborious to remove the insulator from the bushing; and, in instances where the insulators were broken, it was found difficult and even impossible to fix other insulators to the bushing. Another device for remedying the objections to the wooden pin was an iron pin with an iron screw head, to which the insulator was attached. It was found that the insulator would not fit so exactly and satisfactorily upon the iron screw head as upon the lead screw head hereinafter mentioned, used in the Klein pin, and also the insulator was liable to be broken in screwing or fastening the same to the iron screw head."

It was in this condition of the art that "plaintiff conceived the idea of making a mold in which was cased a leaden screw head or thread, to be attached to the head of an iron pin, and, when so attached, to be used for the purpose of attaching the glass insulator. For the purpose of making the leaden screw head attach firmly and securely to the iron pin, said iron pin was by said Klein roughed with a cold chisel, and he then also conceived the idea of casting the lead screw head onto the iron pin; i. e. the iron pin was set in a mold, and the molten lead poured therein, so that the screw head became firmly attached to the iron pin, and at the same time a screw head was formed, through which, when necessary, the insulator could be removed by unscrewing the same."

The court also found that the Klein pins—

"Were not known or used in this country, or any other countries, so far as known by the evidence, and not patented or described in any printed publication in this or any foreign country before the plaintiff's invention thereof, and were not in public use or on sale for two or more than two years prior to plaintiff's said application for his letters patent therefor; that the said pins patented to the said Klein * * * have been found to be useful for the purpose for which the same were patented and invented, * * * and, since the date of the issuance of said letters patent, have been more commonly used than any other of the said iron pins above mentioned, and have so far supplanted the use of all of the iron pins above mentioned that none of the other of the said insulating iron pins are now in the market or being manufactured, so far as shown by the testimony; that, from the time of the issuance of said letters patent to the plaintiff, he has vended to others the right to make and use the said improvement in pins for electrical insulators, to his great advantage and profit; * * * that between the month of August, 1889, and the month of January, 1894, defendant, at various times, without license from the plaintiff, and against his will, did make and use pins substantially the same as that patented to plaintiff, and was so using the patented pin at the time of the commencement of this action."

Upon these findings, the court found as conclusions of law:

"That as the pin in controversy, patented to the plaintiff, consists of the use of iron in the place of wood, as in the pin which was in use prior thereto, and in the place of rags, wood, cement, etc., for a filling, which were used prior thereto, and the process of making the firm union of the lead head and the iron pin, there is nothing in plaintiff's patent which amounts to an invention, and the same does not involve the application of a new principle; that the pin here in controversy patented to the plaintiff is lacking in patentable novelty, and that the insulator pin in question is merely a mechanical device, substituting one well-known equivalent for another to perform the same office in the same way, as hereinbefore stated, and I so conclude from a comparison of this patented pin with that of the prior pins in use above mentioned; that letters patent issued as aforesaid to John M. Klein were issued improperly, and without lawful authority, and are invalid; that the defendant is entitled to judgment against the plaintiff for its costs and disbursements herein; and that they take nothing by this action."

It is contended by plaintiff that these conclusions of law are erroneous. It is undoubtedly true, as claimed by plaintiff, that the utility of a device or machine, and the fact that it had never been used before, is sometimes high evidence of invention, and in cases of doubt is given controlling effect. But every case depends

upon the state of the art, the character of the improvements, the results accomplished, the methods used, the changes made, etc. The fact that a patented device has gone into general use, and has displaced other devices, is evidence of its value and usefulness, and is always of importance in considering the question whether the device or machine is patentable. *Smith v. Vulcanite Co.*, 93 U. S. 486, 495; *Adams v. Stamping Co.*, 141 U. S. 539, 12 Sup. Ct. 66; *Manufacturing Co. v. Adams*, 151 U. S. 139, 143, 14 Sup. Ct. 295. But the fact that the patented device has gone into general use, while evidence of its utility, is not conclusive evidence of its patentable novelty.

In *McClain v. Ortmyer*, 141 U. S. 419, 428, 12 Sup. Ct. 76, 79, the court said:

"That the extent to which a patented device has gone into use is an unsafe criterion, even of its actual utility, is evident from the fact that the general introduction of manufactured articles is as often affected by extensive and judicious advertising, activity in putting the goods upon the market, and large commissions to dealers, as by the intrinsic merit of the articles themselves. * * * If the generality of sales were made the test of patentability, it would result that a person, by securing a patent upon some trifling variation from previously known methods, might, by energy in pushing sales, or by superiority in finishing or decorating his goods, drive competitors out of the market, and secure a practical monopoly, without in fact having made the slightest contribution of value to the useful arts. * * * While this court has held in a number of cases * * * that in a doubtful case the fact that a patented article had gone into general use is evidence of its utility, it is not conclusive even of that; much less of its patentable novelty."

Substantially to the same effect, see *Manufacturing Co. v. Cary*, 147 U. S. 623, 635, 13 Sup. Ct. 472; *Grant v. Walter*, 148 U. S. 547, 556, 13 Sup. Ct. 699.

A patent must combine utility, novelty, and invention. It may, in fact, embrace utility and novelty in a high degree, and still be only the result of mechanical skill, as distinguished from invention. A person, to be entitled to a patent, must have invented or discovered some new and useful art, machine, manufacture, or composition of matter, or some new and useful improvement thereof. In the language of the supreme court:

"It is not enough that a thing shall be new, in the sense that, in the shape or form in which it is produced, it shall not have been before known, and that it shall be useful, but it must, under the constitution and statute, amount to an invention or discovery." *Hill v. Wooster*, 132 U. S. 693, 701, 10 Sup. Ct. 228, 231, and authorities there cited.

A mere difference or change in the mechanical construction in the size or form of the thing used, in order to obviate known defects existing in the previous devices, although such changes are highly advantageous, and far better and more efficacious and convenient, does not make the improved device patentable. In order to be patentable, it must embody some new idea or principle not before known. It must, as before stated, be a discovery, as distinguished from mere mechanical skill or knowledge. *Atlantic Works v. Brady*, 107 U. S. 192, 200, 2 Sup. Ct. 225; *Hollister v. Benedict*, 113 U. S. 59, 5 Sup. Ct. 717; *Thompson v. Boisselier*, 114 U. S. 2, 11, 5 Sup. Ct. 1042; *Busell Trimmer Co. v. Stevens*, 137

U. S. 423, 433, 11 Sup. Ct. 150; *Andrews v. Thum*, 15 C. C. A. 67, 67 Fed. 911.

Nor does the fact that better material is used in constructing the device, such material being well known as adapted to the purpose for which it is used, make the device patentable.

In *Hotchkiss v. Greenwood*, 11 How. 248, 266, where it was held that the substitution of porcelain for metal in making door knobs of a particular construction was not patentable, the court said:

"No one will pretend that a machine made, in whole or in part, of materials better adapted to the purpose for which it is used than the materials of which the old one is constructed, and for that reason better and cheaper, can be distinguished from the old one, or, in the sense of the patent law, can entitle the manufacturer to a patent. * * * It may afford evidence of judgment and skill in the selection and adaptation of the materials in the manufacture of the instrument for the purposes intended, but nothing more."

See, also, *Hicks v. Kelsey*, 18 Wall. 670; *Dunbar v. Myers*, 94 U. S. 187, 197; *Florsheim v. Schilling*, 137 U. S. 64, 11 Sup. Ct. 20.

Applying these general principles to the facts of this case, we are of opinion that the conclusions arrived at by the circuit court were correct. The judgment of the circuit court is affirmed, with costs.

CLUNE v. MADDEN et al.

(Circuit Court, D. Indiana. November 5, 1896.)

No. 9,231.

1. PATENTS—INVENTION—FOLDING BEDS.

There is no invention in the use of a pin or hook on the back of a folding bed lounge to automatically engage with an eye on the headrest when the two sections are folded together, thus holding the back firmly in place.

2. SAME.

The Clune patent, No. 394,957, for a folding bed lounge, is invalid as to the first claim for lack of invention.

This was a suit in equity by Michael Clune against Thomas Madden and others for alleged infringement of a patent.

Chester Bradford, for complainant.

V. H. Lockwood, for defendants.

BAKER, District Judge. This is a suit in equity in the usual form for infringement of the first claim of letters patent No. 394,957, issued to the complainant, December 25, 1888. The claim involved reads as follows:

"(1) A bed lounge, composed of two folding sections, hinged together, the lower one having a back rigidly attached thereto, and a fastening for the same, composed of two parts, one of which is fixed at or near the top of the inside of the head of the upper folding section, the other at or near the top of the back, so that when the lounge is folded up the two parts will engage with each other, securing the headrest of the frame to the back, substantially as shown and described."

The defenses relied on are noninvention and noninfringement. The only novelty in the combination claimed by the complainant con-