

Howe Machine Co. Vs. National Needle Co.

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Appeal No. : 134 U.S. 388

Appellant : Howe Machine Co.

Respondent : National Needle Co.

Judgement :

Howe Machine Co. v. National Needle Co. - 134 U.S. 388 (1890)

U.S. Supreme Court Howe Machine Co. v. National Needle Co., 134 U.S. 388 (1890)

Howe Machine Company v. National Needle Company

Nos. 201, 202

Argued March 7, 10, 1890

Decided March 24, 1890

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APPEALS FROM THE CIRCUIT COURT OF THE UNITED

STATES FOR THE DISTRICT OF MASSACHUSETTS

SYLLABUS

There was no novelty or invention in

"the combination of a gripping chuck, by which an article can be so held by one end as to present the other free to be operated upon, with a rest preceding the cutting tool, when it is combined with a guide cam or its equivalent, which modifies the movement of the cutting tool, all operating together for the purpose set forth,"

which was patented to Charles Spring and Andrew Spring by letters patent dated May 10, 1859, and extended for seven years from May 10, 1873, and the letters patent therefor are therefore invalid.

Pennsylvania Railroad v. Locomotive Truck Co., [110 U. S. 490](#) , again affirmed.

These are appeals from decrees of the Circuit Court of the United States for the District of Massachusetts dismissing bills in equity brought on account of alleged infringement of letters patent granted May 10, 1859, to Charles and Andrew Spring for an "improvement in lathes for turning irregular forms." The patent was extended for seven years from May 10, 1873. The bills were filed May 27, 1879. The opinion of the circuit court was announced September 30, 1884, but, by reason of the interposition of petitions for rehearing, the final decree was not entered until April 17, 1886. The specification is as follows:

"To all whom it may concern:"

"Be it known that we, Charles and Andrew Spring, both of Boston, in the County of Suffolk and State of Massachusetts, have invented a new combination designed for turning such articles as are to be brought to a point, or are to be finished or turned at one end, and therefore cannot conveniently be

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held to be operated upon otherwise than by the opposite end, and we do hereby declare that the following, taken in connection with the accompanying drawings, which form part of this specification, is a clear, full, and exact description of our

invention, and sufficient to enable those skilled in the art to practice it. Fig. 2 is a perspective view embodying our invention, and Fig. 1 is a plan exhibiting more in detail some of its parts. *c* represents the head stock and *b* the tail stock of a lathe fixed upon a bed, *d*. The spindle, *a*, is supported and rotated in the manner usual in lathes, and carries a chuck which seizes and holds by one end the article, *o*, to be operated upon. The spindle, *l*, in the tailstock, *k*, is capable of traversing backwards and forwards in the axial line of the lathe's rotation, but does not itself rotate. This movement may be accomplished by the means usual for this purpose in lathes. The carriage, *m*, is raised from the lathe bed, *d*, in the support, *n*, on which it is guided in movements towards and from *o* by means of the usual 'ways.' Rotation of the screw, *p*, causes the movements of the carriage, *m*, and the set-screw, *s*, is used to gauge the diameter of the article operated upon, which it does by striking on *n*, which is fixed to the lathe bed, and arrests further onward movement of *m*. Fixed upon *m*, and partaking of its movements, is the arrangement which modifies the movement of the tool carrier. This arrangement consists of two principal parts, *q* and *r*; *q* is pivoted to *n* by screw, *t*, and is held in any desired position by the screws, *u*, *q* being slotted where these screws pass through it into *m*. It may here be mentioned that this provision for the adjustment of *q* is for the purpose of giving any required taper to *o*, and that the screws *v* aid in the adjustment of *q*. The piece, *r*, is connected with *q* by the guide rods, *w*, passing through the latter and fixed in the former. Compressed spiral springs around *w* act to draw *r* and the roll shown in dotted lines, Fig. 1, towards *q*. The carriage, *x*, rests upon and slides over *q* and *r*, and bears with it the tool-holder, *y*, which is of angular form, and can slide within *x* towards and from *o*. It is to *y* that the roll before mentioned, as shown in dotted lines, Fig 1, is fixed, *x* being slotted where it passes through

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to admit of movement of *y*. A portion of *x* extends upward, and is made to fit in a hole bored for that purpose in the spindle, *l*. To admit of nice adjustment of the tool, *c*, the piece, *z*, is pivoted to *y*, and raised and lowered by operating at the end opposite the pivot, the set-screw, *a'*, and holding screw, *b'*; *z* is

extended above and over the tool, c' , so that by the action of the set-screw, d' , the tool is confined to or released from y . On that side of x preceding the tool in its cutting movement toward the chuck and forming a part of or fixed to x is a yoke arranged to contain a die, s' . This die is made in two parts, having a hole through them, half in each part, of just the diameter of the material from which the finished article is to be formed. This hole in the die is made and kept concentric with the axis of the lathe's rotation by set-screws, one of which acts on opposite sides of each half, and also one from the top and another from beneath. The sides of q and r , with which the roll fixed in y comes into contact, should conform nearly to the general outline of the article to be turned. A slot is made in q from that side touching the roll, and in about the center of its thickness. Within this slot may be placed any desirable pattern projecting beyond the acting face of q , and this pattern may be adjustable. In the particular instance illustrated, q and r are formed for turning awls or machine needles. The pattern, e' , which is adjustable by means of the setscrew, n' , is pivoted in q , and serves to shape the shank of the awl or needle, while the pattern, o' , which is adjustable along the length of q as well as outward from it, serves to form and shape the point. A groove is formed in q as shown in dotted lines, Fig. 1, in which the pivot of o' is permitted to slide, and the pattern is held in position by the pinch produced by the action of the screws, $u v$. The material from which any article is to be turned by the use of our invention must be cylindrical and straight, and the hole in the die must be of its diameter. The carriage, x , is forced forward and drawn back by the spindle, l , and the direction of its movement is at all times parallel with the axis of the lathe's rotation. The tool-holder, y , partakes of the movement, x , and is at the same time moved toward and from the piece to be

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turned by the action of the shaping mechanism described as existing in q, r, e' , and o' upon the roll or pin fixed in y , and passing through x . The arrangement of the shaping mechanism illustrated by the drawing is that designed and adapted to the formation of awls or machine needles. The action of the springs upon the guide rods, w , draws r against the roll fixed in y , and keeps it constantly

pressed against q and the projecting parts of the adjustable formers, e' and o' , therein arranged. The form and adjustment of e' govern the shape of that part of the awls between its haft and shaft, and the form and adjustment, o' , the shape of the point, and, as o' is adjustable along the length of q , any length of awl or needle within the limits of the machine can be brought to a point. Provision is made for giving any desired amount of taper to the shape of the needle or awl by the inclination of q , obtainable by pivoting on t , and adjustable by the screws v . The tool is adjusted and held in the best position for cutting by the screws, d' , a' , b' , and the diameter of the article to be turned is varied by the action of screw, p' , and gauged by the screws s . The chuck used to hold the material to be operated on may be any of the well known forms of gripping or holding chucks that hold fast by one end the article which is to be turned. We prefer to use such a chuck as we have fully described in an application for letters patent bearing even date herewith. Prior to our invention, awls and needles have been brought to a point by grinding by hand -- a process which evidently is apt to leave the point out of the center of the needle -- and the part near the haft has either been left with a square shoulder or else a curved by the action of a separate tool from that which formed the shaft sometimes used as a hand tool. Amongst the advantages derived from the use of our invention may be mentioned that the article is turned perfectly true at one operation, and no time is lost by rechucking, hand-tooling, or grinding."

"Having described our invention, what we claim therein as new, and desire to secure by letters patent of the United States, is --"

"The combination of a gripping chuck, by which an article

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can be so held by one as to present the other free to be operated upon, with a rest preceding the cutting tool, when it is combined with a guide cam, or its equivalent, which modifies the movement of the cutting tool, all operating together for the purpose set forth."

The causes were heard before MR. JUSTICE GRAY and the district judge, and the opinion of the court was delivered by the latter, as follows, 21 F. 630.

"NELSON, J. These suits are bills in equity for the infringement of patent No. 23,957, granted to Charles and Andrew Spring, May 10, 1859, for an improvement in lathes for turning irregular forms. The invention, as described in the specification, is a new combination designed for turning such articles as are to be brought to a point, or are to be finished or turned at one end, and therefore cannot conveniently be held to be operated upon otherwise than by the opposite end. It consists (1) of a gripping chuck, by which the article is held by one end so as to present the other end free to be operated upon; (2) a rest preceding the cutting tool, to afford support to the article in the operation of turning; (3) a cutting tool, and (4) a guide cam, or its equivalent, which modifies the movement of the cutting tool. The chuck may be of any of the well known forms of gripping or holding chucks, which hold the article to be turned fast by one end. The material to be turned must be cylindrical and straight. In the drawings annexed, the guide cam is of a form suitable for turning awls or machine needles, and the plaintiffs contend that their machine, as patented, was intended to be and is a lathe for turning sewing machine needles or awls. The claim is for"

"the combination of a gripping chuck, by which an article can be so held by one end as to present the other free to be operated upon, with a rest preceding the cutting tool, when it is combined with a guide cam or its equivalent, which modifies the movement of the cutting tool, all operating together for the purpose set forth."

"The defendants have proved by testimony which we cannot doubt that as long ago as the year 1845, and perhaps still earlier, a machine was in use in the shop of William Murdock,

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in Winchendon, Massachusetts, which contained all the elements and the precise combination of the Spring patent. It had the gripping chuck, the rest preceding the cutting tool, the cutting tool, and, instead of the guide cam, its equivalent, a

pattern, all the parts arranged, combined, and operating in the same manner as in the Spring machine. It had in addition a fixed cutting tool preceding the rest, which served to reduce the material to the cylindrical form in which it is first received in the Spring lathe. But this extra tool formed no part, and was wholly independent, of the other combination. The machine still had all the elements of the Spring lathe in the same combination. The Murdock lathe was used for turning tapering wooden skewers or spindles for use in spinning yarn. It was not constructed so as to be capable of turning awls or machine needles from metal."

"It has been decided by the Supreme Court that"

"the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated."

" *Pennsylvania Railroad Co. v. Locomotive Truck Co.*, [110 U. S. 490](#) ."

"Applying this rule to the present case, we are of opinion that the application to the turning of machine awls and needles from metal of mechanism old and familiar in the art of wood turning is not invention, and is not patentable. We therefore decide that the Murdock lathe was an anticipation of the Spring invention, and that the complainants' patent is void for want of novelty. This view of the case renders it unnecessary for us to consider the other matters urged in defense of the complainants' suit at the argument."

"The entry in each case will be bill dismissed with costs. "

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MR. CHIEF JUSTICE FULLER, after stating the facts as above, delivered the opinion of the Court.

Doubtless a claim is to be construed in connection with the explanation contained in the specification, and it may be so drawn as in effect to make the specification an essential part of it, but since the inventor must particularly specify and point out

the part, improvement, or combination which he claims as his own invention or discovery, the specification and drawings are usually looked at only for the purpose of better understanding the meaning of the claim, and certainly not for the purpose of changing it, and making it different from what it is. As remarked by MR. JUSTICE BRADLEY in *White v. Dunbar*, [119 U. S. 47](#) , [119 U. S. 52](#) :

"The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is, and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms."

The patentees state that they

"have invented a new combination designed for turning such articles as are to be brought to a point or are to be finished or turned at one end, and therefore cannot conveniently be held to be operated upon otherwise than by the opposite end."

In the drawings attached to the patent, *q* and *r* are the guide cam or pattern specially referred to in the specification, and it is said that "in the particular instance illustrated *q* and *r* are formed for turning awls or machine needles," and that "the arrangement of the shaping mechanism illustrated by the drawing is that designed and adapted to the formation of awls or machine needles." They also say that "the material from which any article is to be turned by the use of our invention must be cylindrical and straight," and that

"the chuck used to hold the material to be operated on may be any of the well known forms of gripping or holding chucks that hold fast by one end the article which is to be turned."

The claim is couched in plain and unambiguous language, and is

"the combination of a gripping chuck, by which an article can be so held by one end as to present the other free

to be operated upon, with a rest preceding the cutting tool, when it is combined with a guide cam, or its equivalent, which modifies the movement of the cutting tool, all operating together for the purpose set forth."

The alleged improvement is in the mode of producing turned articles of "irregular forms," and the purpose set forth is the turning of such articles as are to be brought to a point, or to be turned or finished at one end, and which ought therefore to be held by the opposite end in order to be operated upon. The material is not specified, but it must be cylindrical and straight. The complainants' expert testifies on cross-examination:

"The patent is for a combination. The new part consists of elements, each and all of them old and familiar in preexisting combinations. They are therefore the gripping chuck; the supporting rest preceding the cutting tool; a cutting tool having the reciprocating motion towards and from the axis of the piece to be operated upon, under the control of a guide cam or former, so organized as to be also under the constant control of delicate adjusting apparatus, by which the required diameter of a piece to be operated upon may be constantly preserved without disturbing the functional performance of former and cutting tool, substantially as set forth and described, all operating together for the purpose set forth. It is, then, the combination of these several elements, as organized, which constitutes the new part."

But the combination claimed is the combination of a gripping chuck, a rest preceding the cutting tool, a cutting tool, and a guide cam or its equivalent, and complainants cannot now be permitted to read into it any delicate adjusting apparatus not originally included in the claim, and then insist, in the words of the witness, that there is "a margin of patentable novelty."

The Springs completed their first machine in September or October, 1857. Their patent was issued May 10, 1859.

As found by the circuit court, the testimony leaves no doubt that, as early as 1845, William Murdock used a lathe at Winchendon, Mass. for turning pointed skewers

of wood. This had a chuck, a cutting tool, a rest preceding the cutting tool, and a pattern governing the movement of the

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cutting tool, to shape the skewer to the desired form -- or, in other words, all the elements of the Spring combination, as claimed.

Defendants' expert, Brevoort, correctly says:

"This Murdock device shows the combination of a holding chuck which holds the material at one end while the other end is left free, a rest preceding a cutting tool, which latter is controlled in its movements by guide or former, so that the parts operating together will produce irregular forms. Now this is the invention referred to in the claim of the Spring patent, and this Murdock lathe undoubtedly contains the invention recited in the Spring patent, with the exception that in the Murdock lathe the parts are adapted for turning wood, while in the Spring device they are more especially adapted for turning metal."

And he continues:

"I understand that this Murdock lathe was used for turning large numbers of yarn skewers, such as were used at one time in mills where cotton goods were manufactured. 'Defendants' Exhibit Murdock Skewer, W. G. H., Sp. Ex'r,' shows one of these skewers, and when I compare this skewer with a sewing machine needle, as the question requested me to do, I find that both the needle and the skewer are brought to a point. The Murdock lathe, the Spring device, and the Pernot lathe all being adapted for producing points upon the articles subjected to their action, the only difference being that the Pernot and Spring lathes were adapted for making points on metal, while the Murdock lathe is adapted for making points on wooden blanks, all of the three lathes referred to, as well as the Wright lathe and the Waymoth lathe, being so constructed as to produce the desired configuration upon the surface of the turned blank by using a pattern or former of the desired shape. In all the lathes referred to by me in this testimony, the irregular form of the article turned is reached by the former, guide, or pattern causing the

cutting tool, as it was slid toward the holding or gripping chuck, to approach or recede from the axial line of the work, and in all these lathes the cutting tool is preceded by a rest through a hole in which the work revolves, leaving one end of the work free, while the other is held and turned by the chuck. "

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There is nothing in the specification about the nature of the material to be used, nor is the device limited to the production of awls and needles, although the drawings show that mode of applying the invention, and "the particular instance illustrated" is that "designed and adapted to the formation of awls or machine needles." But the invention claimed is not restricted to lathes for turning sewing machine needles, nor did the patentees by disclaimer place any such limit upon the construction of the patent. The rule laid down in *Pennsylvania Railroad Co. v. Locomotive Truck Co.*, [110 U. S. 490](#) , that the application of an old process or machine to a similar or analogous subject, with no change in the manner of applying it, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated, has been applied in very many cases by this Court. *Thompson v. Boisselier*, [114 U. S. 1](#) ; *Peters v. Active Mfg. Co.*, [129 U. S. 530](#) ; *Peters v. Hanson*, [129 U. S. 542](#) ; *Aron v. Manhattan Railway Co.*, [132 U. S. 84](#) ; *Watson v. Cincinnati &c.; Railway Co.*, [132 U. S. 161](#) . In the employment of the chuck, the rest, the cutting tool, and the guide cam, in the making of awls and needles, the patentees displayed the skill of their calling, which involved

"only the exercise of the ordinary faculties of reasoning upon the materials supplied by a special knowledge, and the facility of manipulation which results from its habitual and intelligent practice."

Hollister v. Benedict Mfg. Co., [113 U. S. 59](#) , [113 U. S. 73](#) . The purpose of Murdock in reference to the wooden skewer was the same as the purpose of the Springs in reference to articles of any material which could be worked up on their machines. The claim was certainly broad enough to include Murdock's invention, and no disclaimer was ever filed; and, even with a limitation as to the article,

patentable novelty was not present, within the rule upon that subject. The art of turning is the art of turning, whether applied to wood or metal, and it would seem that there was here nothing more than the substitution of one material for another, without involving an essentially new mode of construction. And, be that

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as it may, there was no restriction as to material. Operation in metal would, of course, demand variations in organization, but not necessarily anything more than would result from the experience of the intelligent mechanic.

The Springs did not claim a combination of a slotted guide cam, an adjusting screw, a spring, guiding rods, etc., with a former, a cutting tool, a rest, and a gripping chuck, and, as it stands, the claim was, in the existing state of the art, for an analogous or double use, and not patentable.

The circuit court was clearly right, and its decree is

Affirmed.