

1FED.CAS.—43

Case No. 304.

AMERICAN MANUF'G CO. V. LANE ET AL.

[14 Blatchf. 438; 3 Ban. & A. 268; 15 O. G. 421; Merw. Pat. Inv. 358.]¹

Circuit Court, S. D. New York.

April 27, 1878.

PATENTS FOR INVENTIONS—WHAT CONSTITUTES
INFRINGEMENT—SIMILARITY—IMPROVEMENT IN TEMPERING UMBRELLA
RIBS.

1. The invention set forth in letters patent granted to A. Stewart Black, July 14th, 1863, for an “improvement in tempering umbrella ribs,” defined.
2. The first claim of said patent, namely, “constructing the tempering die with a square hole, corresponding in size to the wire to be tempered, in order that the wire may be straightened in all directions, and the flattened portions of the wire be brought in line with each other, as and for the purposes specified,” is infringed by the use, for the tempering of umbrella ribs of U-shaped wire, with wider flattened parts in them, of a die formed of two plates, one above and one below, with the groove in one plate shallow and semi-elliptical, to accommodate one edge of the flattened parts of the rib, and with the groove in the other plate broader and deeper, and, in its cross-section, the shape of the body of the wire, with a channel opposite to and like the groove in the other plate, to accommodate the other edge of the flattened part of the rib.
3. The prior existence of a square hole or groove for the purpose of drawing through it square bars or strips of metal, to compress them and straighten them, does not anticipate the invention claimed in said first claim.

[In equity. Bill for injunction to restrain the infringement of patent No. 39,210. Injunction granted.]

Everett P. Wheeler, for plaintiff.

John D. Shedlock, for defendants.

BLATCHFORD, Circuit Judge. This is an application for a provisional injunction to restrain the alleged infringement of letters patent granted to A. Stewart Black, July 14th, 1863. The specification of the patent sets forth that Black has “invented, made and applied to use a certain new and useful improvement in tempering umbrella ribs and similar articles.” The specification says: “In tempering ribs for umbrellas and parasols and similar articles, great difficulty is experienced in obtaining a uniform temperature throughout the entire length, so as to temper all parts equally. Some parts are tempered too much and bend in use, and others are not tempered enough and break. Besides this, the hardening operation renders the wire composing such ribs more or less crooked, and they have to be straightened at the time of tempering, while in a heated state. Various attempts have been made to effect these operations, however, with but partial success. The nature of my said invention consists in a peculiar construction of grooved or perforated metallic tempering die, that is heated to a sufficient extent to temper the umbrella rib or similar steel article, and the groove or opening in said die, being straight and of the size required for con-

taining such article, straightens it at the same time that its temper is drawn to the degree required. I make use of gas flames or jets to heat the said tempering die, whereby greater uniformity can be obtained in the same than by a fire heat, and said heat can be kept uniform, hour after hour, without especial attention, thus rendering my apparatus adapted to tempering in the most uniform and delicate manner, even when attended by boys, or comparatively unskilful workmen; whereas, the tempering of such articles has heretofore required the exercise of great judgment by skilful workmen." There are three figures of drawings referred to. Figure 1 "is a vertical section of the tempering apparatus, at the line x x, of Figure 2." Figure 2 "is a plan of said apparatus, partially in section, to show the interior." The specification proceeds: "In the drawing, a is a metallic bar, of the requisite size and length, with grooves planed or otherwise formed in the upper surface, as seen in the section, Figure 1, and these grooves are to be of the size required for admitting the wire forming the umbrella spoke or other article; and I prefer, for such ribs, that the grooves be formed with square corners, to allow the flattened parts of the ribs to pass, as illustrated in larger size in Figure 3, said flattened parts being made for the reception of the holes required

at the ends and near the middle of such ribs, and, when placed in the said grooves, these flattened portions are diagonal and are brought properly into line with each other by the groove itself. The grooved bar a is to be covered with a second bar b, setting closely to the bar a, so as to form a perforated tempering die. It will be seen that this form of construction is preferable to any other in which the hole might be bored or formed partly in each bar, as this construction is the cheapest and most accurately made, although I do not confine myself in this particular. Where desired, the upper bar b may also be grooved with the same or a different sized groove or channel, setting intermediate to those in the bar a; and the parts a and b may be held together by screws or otherwise. The perforated metallic tempering die made as aforesaid, and heated by competent means, will temper wire umbrella ribs, or similar articles passed through it, and hold the same in a straight position while being tempered, the wire or ribs being passed in at one end and forcing out the tempered rib at the other end." The specification then describes an apparatus for heating the dies, by means of gas-burners, and says, that, "by this device, the temperature of the dies is rendered uniform and continuous, and can be regulated with the greatest exactness, by the flow of gas admitted." There are three claims, as follows: (1.) "Constructing the tempering die with a square hole, corresponding in size to the wire to be tempered, in order that the wire may be straightened in all directions, and the flattened portions of the wire be brought in line with each other, as and for the purposes specified;" (2.) "Constructing the tempering die with the grooves in one of the half-pieces coming opposite the flat surface of the other half-piece, whereby the tempering dies are more easily made and kept in order, as set forth;" (3.) "The tempering dies constructed substantially as specified, and enclosed in a suitable casing, in combination with gas-burners applied substantially as shown, whereby the temperature of the said tempering dies is easily regulated and maintained with uniformity, as set forth."

The defendants have made umbrella frames called "paragon" frames, the ribs in which are constructed of U-shaped wire. Such wire cannot be tempered and straightened in a die with a square hole, if there are wider flattened parts in the wire. The die with a square hole can be used to temper and straighten only round wire, if there are wider flattened parts in the wire. The wire referred to in the specification of the plaintiff's patent is round wire. The "paragon" ribs tempered and straightened by the defendants have wider flattened parts in them, and have been tempered and straightened by them in heated dies. The dies are formed of two plates, one above and one below. The groove in one plate is shallow and semi-elliptical, and the groove in the other plate is broader and deeper. The former groove accommodates one edge of the flattened parts of the rib, while the latter is, in its cross-section, the shape of the body of the wire, with a channel opposite to and like the groove in the other plate, to accommodate the other edge of the flattened parts of the rib. In the square-holed die, the wider flattened parts of the round wire are

accommodated in the diagonal corners of the square hole, while the surface of the round wire touches the four sides of the square hole. In the defendant's die, the contour of the body of the wire touches the surface of the body of the groove at all points, while the wider flattened parts of the wire pass through the two narrow grooves.

In each of the two constructions of dies the result is attained of tempering and straightening the rib at the same time, and of doing this after the wider flattened parts have been formed in the rib. In each the groove is straight longitudinally, and is of the shape and size requisite not only to contain the rib, but to embrace and support it at such points as will serve to straighten it in its passage, and to admit at the same time of the free passage of the wider flattened parts through portions of the groove, which are so arranged as to keep such wider flattened parts of the rib in line with each other. In each the dies, when heated, will temper the rib, and hold all parts of it in a straight position while being tempered, and the tempering and straightening take place while the rib is moving through the groove longitudinally from end to end. The mode of operation of the two dies, in their use in connection with the wire which is passed through them, is the same. The defendants' tempering die is constructed with a hole which corresponds in size to the wire which is to be tempered, and, in tempering the wire, by drawing it through such hole when the die is heated, the wire is straightened in all directions, and the flattened portions of the wire are brought in line with each other. The language of the first claim of the plaintiff's patent describes the defendants' die and its effect on the wire that is drawn through it, except that such claim describes the hole in the die as square. The hole in the defendants' die is not mathematically square. But, the whole tenor of the specification shows that the meaning of the claim is, that the hole or groove shall be of such size and shape as to allow the body of the wire to go through and be straightened while it is being tempered, and also to allow the flattened parts of the wire to go through and be kept in line with themselves and with the body of the wire. For a round wire a square hole will accomplish all of these results. The corners of the square are merely supplementary spaces for the

passage of the wider parts. The shape of the exterior walls of such spaces is manifestly immaterial, so long as the spaces exist and have exterior walls. In the patent the spaces are described as corners of a square. But, whether the two lines of the corner form a right angle with each other, or a greater angle than a right angle, or form together any other figure, is manifestly shown by the specification to be immaterial, so long as the walls of the groove hug the body of the wire and yet leave space for the wider flattened parts. The corners of the hole in the defendants' die, though not mathematically square, are, to all practical intents, square, so far as the supplementary spaces are concerned. The invention embodied in the first claim of the patent is found, in all particulars, in the defendants' dies. The first claim of the patent is not limited to a groove which is wholly in one of the two half-pieces of the die. That feature exists in the second claim; but the specification states that a groove formed partly in each of the two half-pieces is contemplated by the inventor.

The specification is not artistically drawn. It seems to set out with describing the invention as being to draw the rib through a straight heated groove of the proper size in a metallic die, and it follows out that idea. It states the leaving of a space for the flattened parts of the rib to pass through, as a preferential construction. It would seem as if the intention originally was to claim broadly the tempering and straightening of the rib in a heated metallic die having a straight groove in it of the size and shape of the rib. But there is no such claim. The first claim is narrowed to a construction which includes only a rib with flattened parts, and a groove which will accommodate such flattened parts, which are shown in Figure 3 of the drawing as projecting beyond the line of the body of the unflattened parts of the rib. The first claim does not include a rib which has no flattened parts, nor does it include a groove which will accommodate only a rib which has no flattened parts. It is contended by the defendants that the first claim claims merely a die with a square hole, as a structure, and that, if a square hole in a metallic die is shown to have existed before, the first claim is void for want of novelty. But, the fair construction of the first claim, in connection with the body of the specification, is a claim to the mode or process of tempering and straightening a rib which has a body, and flattened portions other than such body, by drawing the rib through a straight hole or groove in a heated metallic die, of the proper size and shape to at once embrace closely the body of the rib, and yet, by supplemental spaces in the groove, to allow such flattened portions to pass through freely and be brought in line with each other. The whole text of the specification shows that the invention is declared to be one of an improvement in tempering the rib, that is, in the process or mode of tempering it, and the description is declared to be a description of such improvement. The square hole or groove may have existed before and been used for the purpose of drawing through it square bars or strips of metal, to compress them and straighten them, but, such prior existence and use of the square groove

does not anticipate the invention claimed in the first claim of the Black patent, as such invention is above defined. In such aspect, the use of the square groove in the manner and for the purpose indicated in such first claim is not the mere use of an old thing for a new purpose, or the mere use of an old thing for a new purpose, or the mere application of the square groove to a new use.

The defendants adduce various prior inventions, but none of them anticipate the invention covered by the first claim of the patent. The Holland patent has semicircular grooves for straightening and tempering umbrella ribs, but makes no suggestion as to ribs with wider flattened parts. The Fox patent is for tempering and straightening cylindrical wire in circular grooves. The same is true of the Chesterman patent and the Maddin patent. The Hadfield and Shipman patent shows square holes and round holes through which to draw metallic strips, to temper them, but nothing is disclosed that suggests anything more than that round wire is to be drawn through a round groove and square wire or steel through a square groove. So far as appears, Black was the first person to perform the process described in the first claim of the patent by the means therein described, and thus the first to temper and straighten an umbrella rib having the wider flattened parts in it.

I do not see that there is any infringement of the second and third claims. Let an injunction issue as to the first claim.

[NOTE. So far as known, this patent, No. 39,210, has not been involved in any other cases reported prior to January 1, 1880.]

¹ [Reported by Hon. Samuel Blatchford, Circuit Judge; reprinted in 3 Ban. & A. 268; and here republished by permission. Merw. Pat. {nv. 358.}]