# KURSHEEDT v. WERNER.

Case No. 7,947.

{12 Blatchf. 530; 2 Ban. & A. 81; 8 O. G. 146.}[1]

Circuit Court, S. D. New York. June 4, 1875.

PATENTS—"IMPROVEMENTS IN FLUTING MACHINES."

1. The claim of reissued letters patent granted to George E. King, June 23d, 1868, for an "improvement in fluting machines," the original letters patent having been granted to him, as inventor, February 26th, 1867, namely, "The guide E, constructed with one or more curved or arched portions, a', in combination with suitable fluting rollers, substantially as set forth, for the purpose specified," defined.

2. Although the specification describes the guide E as being composed of two pieces of metal, one over the other, at such a distance apart as to permit the passage of the fabric between them, and although, ax the arched part of the guide, both pieces of metal are arched, and the part of the fabric which is to be crinkled passes between such arched parts, while the other parts of the fabric pass between the two pieces of metal of the guide, although not between the arched portions, yet the fact, that the part of the fabric which is not to be crinkled passes between two pieces of metal, is immaterial to tie invention claimed, and the fact that the part of the fabric which is to be crinkled has, at the time it passes over the arched

part of the guide, a correspondingly arched piece of metal over it, is immaterial to the invention claimed.

3. The arched portion of the lower piece of metal is what is alone effective, in combination with the rollers, in producing the result of which the specification speaks.

4. It is the raising up of the fabric, or the deflection from the general plane of the fabric, or from the general course of the fabric, of that part of the fabric which is to be crinkled, by an interposed deflector, which is the essence of the patentee's invention.

5. The expression in the claim—the guide, constructed with a curved or arched portion—is the same thing as saying, the curved or arched portion of the guide.

6. The claim is infringed by a machine in which there are rollers with plain parts between fluting parts, and an arched projection raised up in front of the plain parts, whereby an extra width of material is taken up, by causing the material to ride over, and to be raised by, the arched projection, such extra width being crinkled as and because the adjacent parts are fluted.

{This was a bill in equity by Frederick A. Kursheedt against Robert Werner, seeking to restrain the infringement of a patent granted to George E. King.}

Frederic H. Betts, for plaintiff.

Arthur v. Briesen, for defendant.

BLATCHFORD, District Judge. The letters patent sued on herein are reissue No. 3,000, granted to George E. King, June 23d, 1868, the original letters patent {No. 62,492} having been granted to him, as inventor, February 26th, 1867. The patent is for an "improvement in fluting machines." The specification of the reissue says: "This invention is designed for making puffing applicable to shirt bosoms, trimming, or other purposes of dress, in which the article, as it issues from the machine, is, (without having recourse to laundering,) delivered in a complete form, either single or in two or more series or rows, composed of flattened borders, with flutes running along their inner edges, and puffed or crinkled surfaces between the flutes. The invention consists in a guide constructed with one or more curved or arched portions, in combination with one or more suitable fluting rollers, whereby the material, in passing through the machine, is fluted, and contracted laterally, as it were, or drawn up, between the flutes, to produce the required crinkled surface or surfaces in the puffing." The main feature of the machine is the arched guide, in combination with two rollers, one above the other, and opposite and near to the guide. The rollers are so formed that the strip of material, after being acted on by the guide, passes between the two rollers. The rollers have such configuration externally on their surfaces, as to produce a finished fabric, which has a longitudinal strip that is puffed or crinkled in such manner as to possess an irregular wavy surface, and, on each side of such crinkled strip, a longitudinal strip that is fluted, and on each side of and outside of each of such fluted strips a longitudinal flattened strip, through which stitching may be made longitudinally, to render permanent the conformation of the puffing. The portions of the rollers from between which the crinkled part of the finished fabric issues, are plain, and so are the portions from between which the flattened parts of the finished fabric issue,

while the portions of the rollers from between which the fluted parts of the finished fabric issue are grooved, so as to make grooves and flutes on each roller, a groove alternating with a flute, and the flute on one roller taking into the groove on the other. Each part of each roller is of the same width as that portion of the finished fabric which it is designed to shape. The parts of the rollers from between which the crinkled part of the finished fabric issues are of such diameter, that, when the rollers are in proper position, the face of that part of one roller is situated at such distance from the face of that part of the other roller, that no considerable pressure is exerted upon the fabric in passing between them. It is the action of the guide in connection with the grooved and fluted parts of the rollers and the plain part of each roller that lies between the two grooved and fluted parts of each roller, that produces the crinkled part of the finished fabric. The specification describes the guide as "the inclined guide E," and as being composed of two pieces of sheet metal, secured one over the other, at such a distance apart as to permit the passage of the cloth or fabric between them. It also states, that those parts of this guide E which are in front of the plain cylindrical portions of the rollers, "are curved upward or arched transversely, as shown at a'," in such manner that the width of the fabric passed between each pair of the plain portions of the rollers will be greater, if stretched out to its full extent, than the width of such plain portions of the rollers, so that the fabric, by means of such excess of width, will be crinkled or puffed in passing between such plain portions of the rollers; that the end of the strip of fabric is passed between the two pieces of metal of which the guide is formed, and between the rollers, which rotate so as to draw the fabric lengthwise between them; that the grooves and flutes of the rollers flute the parts which they press; that the parts outside of the fluted parts of the fabric are pressed flat; that the parts of the fabric which are drawn through the curved or arched parts a' of the guide E, being, if stretched to their full extent, of a width greater than the width of the plain portions of the rollers opposite such curved or arched parts of the guide, and being, also, gathered by the fluting formed at their sides or edges, are caused to assume a crinkled or puffed form, as they are passed between such plain portions of the rollers, the distance between the faces

of such plain portions being such that no pressure is exerted upon the fabric passing between them, beyond that required to simply press the convex surfaces thereof downward to a sufficient degree to insure the shaping thereof into such puffed condition; and that the extent to which the material will be thus contracted laterally, or drawn up, between the flutes, will be governed by the excess of the width of the arched portions, a', of the guide over the length of a straight line or lines connecting such arched portions at their base.[2]

The description in the specification is of a structure capable of making several strips of finished fabric at once, which may be cut apart longitudinally in the flattened portions. Each of the strips so cut off will present a crinkled portion, two fluted portions, and two flattened portions. But, the specification also speaks of making but one of such strips at a time, with a guide which has only one curved or arched portion, and rollers which are capable of making, at one time, but one strip of finished fabric having the features before mentioned.

The claim of the reissue is in these words: "The guide E, constructed with one or more curved or arched portions, a', in combination with suitable fluting rollers, substantially as herein set forth, for the purpose specified." The specification speaks of the guide as being composed of two pieces of metal, one over the other, at such a distance apart as to permit the passage of the fabric between them. At the arched part of the guide, both pieces of metal are arched. The part of the fabric which passes between the arched parts is only that part of the fabric which is to be crinkled. But the other parts of the fabric, namely, those parts of the fabric which are not to be crinkled, but are to be fluted and flattened, pass, on their way to the rollers, between the two pieces of metal of the guide, although not between the arched portions. The language of the specification and claim shows, however, that the fact that the part of the fabric which is not to be crinkled passes between two pieces of metal on its way to the rollers is immaterial to the invention claimed, and that the fact that the part of the fabric which is to be crinkled has, at the time it passes over the arched part of the guide, a correspondingly arched piece of metal over it, is immaterial to the invention claimed. Both of the pieces of metal on each side of the arched part of the guide, as well as the piece of metal above the arched part of the guide, may be cut away or removed, without affecting the operation of the machine in the particular aimed at by the invention of the patentee, as described and claimed in the specification, and without removing anything which is of the essence of his invention, or is necessary to its completeness, as claimed.

The language of the specification throughout shows, that the arched portion of the lower piece of metal is what is alone effective, in combination with the rollers, in producing the result of which the specification speaks. Thus, the specification states, that it is the arched portion of the guide, in combination with the rollers, which is the invention,

in that, thereby, the material, in passing through the machine, is drawn up between the flutes, to produce the required crinkled surface. It also states, that it is the curving upward, or arching, of the part of the guide which is in front of the plain portions of the rollers, which causes the width of the fabric which is passed between such plain portions to be greater, if stretched out to its full extent, than the width of such plain portions of the rollers, so that the fabric, by means of its increased width, will be crinkled or puffed, in passed between such plain portions. It further states, that the effect of the curved or arched parts of the guide upon those parts of the fabric which they affect is, that such parts of the fabric are, if stretched to their full extent, of a width greater than that of the plain portions of the rollers, and that this fact, with the gathering of such parts of the fabric by the fluting that goes on in the adjacent parts, causes the crinkling. It further states, that this lateral contraction of the part that is to be crinkled will depend upon the degree of arching in the arched part of the guide. Now, it is the raising up of the fabric, or the deflection from the general plane of the fabric, or from the general course of the fabric, of that part of the fabric which is crinkled, by an interposed deflector, which is the essence of the patentee's invention. Such is his claim. The claim designates, as the invention, the curved or arched portion of the guide, in combination with suitable fluting rollers, substantially as set forth in the specification, for the purpose therein specified. The patentee calls the whole instrument in front of the rollers a guide, but the only material part of it is the curved or arched portion. The expression, in the claim—the guide, constructed with a curved or arched portion—is the same thing as saying, the curved or arched portion of the guide.

This has been the construction heretofore given to this patent. In King v. Maudelbaum [Case No. 7,799], the defendant's machine had two rollers, which did not have plain portions to form, in connection with an arched guide exterior to the rollers, the crinkled part of the puffing; but, the defendant had transferred the arched guide to one of the rollers, by placing thereon, on the portion between the fluting instrumentalities on that roller, knobs or buttons, which formed a series circumferentially around the roller, and had between each two of them a depression. The exterior surfaces of these knobs or buttons performed the same office as the arched portions of the patentee's guide, and caused a greater width

of fabric to be taken up and passed through over the knobs or buttons, than the width of the base of the knob or button in a straight line between the two adjacent fluted portions of the roller. The material was contracted laterally, or drawn up, between the flutes, in proportion to the excess in length of the arched exterior transverse surface of the knob or button over a straight line connecting such arched surface at the base of the knob. There were, on the other roller, depressions matching the knobs. On these facts, it was said, in the decision in that case: "The plaintiff claims, in substance, a curved or arched guide, in combination with suitable fluting rollers, to contract the material or draw it up laterally between the flutes, so that there shall be, in the finished fabric, a greater width of material than the width on the roller, in a straight line, between the two fluted portions of the roller, in a line parallel to the axis of the roller, and so that such greater width of material shall thereby have given to it a crinkled or puffed or wavy conformation. The defendant has the arched guide in combination with the fluting rollers. He has merely changed the position of such guide. It operates in the same way as the plaintiffs arched guide, to produce, in combination with the rollers, the same result that the plaintiff produces."

The same patent was again before this court in the case of King v. Werner {Case No. 7,809}. In that case the defendant used, in connection with the fluting rollers, a detent or finger, by which a portion of the fabric was held back and thereby formed into Y-shaped, but more or less irregular, lateral waves and crinkles. He had plain zones between the fluted portions of his fluting rollers. The free end of the detent bore against a platform midway of the plain zones. The fabric, in its passage to the rollers, passed over the platform and under the detent, which was a spring, and which so pressed the fabric against the platform, while the rollers were drawing the fabric forward, as to detain or hold back that portion of the fabric which was so pressed by the detent, and cause it to be crinkled in the space between the inner edges of the flutes. This result was attained because the same thing was done as in the King machine, that is, the width of the fabric passed between the pair of plain zones was greater than the width of such zones, and, as the fluting gathered the fabric, the portion of it which passed between the pair of plain zones was crinkled. In the decision in that case, it was said: "The main feature of the plaintiff's machine is the device for pulling away the fabric before the fluting rollers grasp it too firmly, so as to get the increased width of fabric opposite the pair of plain zones. The plaintiff shows how this is to be done by an arched guide. This arch raises up the fabric. The fabric rides over it, and so is pulled away from the fluted parts of the rollers. The obstacle interposed by the arched guide pushes up the fabric to an apex. There would be no difference in mode of operation, if the fabric were pushed down to a given point by an arched guide. The defendant interposes an obstacle which pulls back the fabric from the fluted parts of the rollers. The mode of operation is the same as in the plaintiff's machine, and the result is the same. The only difference is, that, in one, the centre of

the extra width moves upward as the pull is made, and, in the other, it does not; but, in each, the detaining instrument diverts the fabric from what would otherwise be its course, so as thereby to pull out extra width. I think the variation is merely mechanical and not substantial, and that the defendant's machine is an infringement." In the testimony in that case, evidence was given as to the use, prior to King's invention, of a guide called the Müller guide No. 5, which had an arched projection, raised in front of two rollers, and over which arched projection the material passed on its way to the rollers, but the evidence showed that such arched projection had been used not in combination with fluting rollers which had plain parts or zones opposite the arched projection, but always in combination with rollers on which, opposite the arched projection, were diamond embossing rings, which made a diamond figure on the material, and occupied all the space on the rollers that was not occupied by the fluting parts of the rollers. It was held that this did not present the combination set forth in the claim of the patent, for the purpose therein specified.

The defendant in the suit last referred to is the defendant in this suit. He has altered his machine by taking off the detent or finger, and putting in place of it an arched projection, raised up in front of the plain parts of the rollers, and like the arched projection in the said Müller guide No. 5. But, he dispenses with the Müller embossing rings, and uses instead rollers like King's, which have plain parts between the fluting parts and opposite the arched projection. He has removed from the King machine those parts before spoken of as immaterial to King's invention, namely the upper piece of metal in King's guide and the metal each side of the arched projection. He retains all that there is essential in King's guide, that is its curved or arched portion opposite the plain parts of the rollers which are between the fluted parts of the rollers, and he uses such curved or arched portion in combination with rollers which have parts suitable for fluting each side of plain parts, in a machine which operates, by means of such fluting parts, and such plain parts, of the rollers, and such curved or arched piece in front of such plain parts, to produce the crinkled or puffed conformation in the fabric, in connection with the fluted parts of it. The mode of operation of the parts is the same as in King's machine, in all features that are essential to King's invention, as described and claimed, and the result, in the finished fabric, is the same. The defendant takes up an extra width of material by causing the material to

ride over, and to be raised by, the arched or curved projection, and this extra width is crinkled as and because the adjacent parts are fluted.

The plaintiff is entitled to an injunction, as prayed for.

{For other cases involving this patent, see note to King v. Maudelbaum, Case No. 7,799.}

[1] {Reported by Hon. Samuel Blatchford, District Judge reprinted in 2 Ban. & A. 81, and here republished by permission.}

[2] {For drawings of reissued patent No. 3,000, see King v. Werner, Case No. 7,809.}