

DELVIN V. HEISE *EL AT.*

Circuit Court, D. Maryland.

July 10, 1890.

PATENTS FOR INVENTIONS—PRIOR STATE OF THE ART—INFRINGEMENT.

Sash cord guides having been made prior to 1879 without side flanges, and with rounded end flanges, there is no patentable invention in the improvement described by letters patent No. 216,767, issued June 24, 1879, to Sloan and Clarkson, consisting of a cash cord guide having semi-circular end flanges and semi-cylindrical casing ends, all of uniform diameter with the casing, and sides that meet the face of the casing at right angles, and without a flange, whereby the device is adapted for insertion in mortise formed by a latterally cutting bit.

In Equity. For infringement of letters patent.

Price & Stewart, for complainant.

W. B. H. Dowse and *John R. Bennett*, for defendants.

Before BOND and MORRIS, JJ.

MORRIS, J. This is a suit in equity for alleged infringement of letters patent No. 216,767, issued June 24, 1879, upon application filed April 29, 1879, to Frank B. Sloan and Frank S. Clarkson, for improvement in sash cord guides. The patent has been assigned to the complainant. The specifications and claim are as follows:

"Be it known that we, Frank B. Sloan and Frank S. Clarkson, of Baltimore city, State of Maryland, have invented certain new and useful improvements in sash cord guides; and we hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawing, in which the device is illustrated in perspective view; Our invention relates to what are known as 'sash cord guides,' consisting, as a rule, of suitable casings containing sheaves for the sash cords, and adapted to be inserted in mortises in the window frames. These mortises have heretofore been cut by bit, mallet, and chisel in the usual way of forming mortises, the shape of the casing being previously scribed on the face of the window frame. A fair, but rarely accurate, fit was thus attained. Our present invention consists in certain improvements on the sash cord guide, described in reissued letters patent No. 8,586, granted to us as assignees of Edward H. N. Clarkson and Wm. H. H. Kesler, February 18, 1879, and is especially designed for insertion in a mortise formed by a laterally cutting bit, which is caused to enter the window frame, and cut laterally to a distance measured by the length of the casing of the sash Cord guide. This method of insertion possesses many advantages. As, the bit is of a diameter exactly equal to that of the casing, and as it is readily made to traverse the exact distance required, a perfect fit of the casing in the mortise is insured, and much time is saved. In the accompanying drawing, A is a cast metal casing of uniform diameter, the sides thereof meeting the face at right angles, and without a flange. The ends, are rounded in the arc of a circle having the same diameter as the casing, A, and the end flanges, a are similarly formed, being perforated at for the securing screws is the sheave, suitably mounted in the casing. In forming the mortise in the window frame, the bit is caused to enter the wood at a point corresponding to the center of the circle of which the end flange, a is the half, and is allowed to enter to a distance exactly equal to the thickness of the flanged. It is then moved, or the window frame is moved relatively to it, until the axis of the bit registers with the axis of the semi-cylindrical end, 6, when the bit is projected forward, perforating the frame. It is next moved laterally a distance exactly equal to that between the ends, b, b, when it is withdrawn until its point is below the face of the frame by the thickness of the flange, a, when it is again moved laterally to a distance from its original point of entrance equal to the length of the casing, A, over all, and is finally withdrawn entire-

ly. It is obvious that the slot or mortise so formed is of the exact size and shape of the casing, A, and absolute accuracy of fit necessarily follows. From the foregoing description of the construction of the device, and the method of forming the mortise, it will be seen that the essential features of the said sash cord guide *are—First*, that it shall be devoid of lateral flanges; and, *second*, that its ends, *b*, and end flanges shall be, respectively, truly semi-cylindrical and semi-circular. We are aware that sash cord guides having unflanged rounded ends, and others having flanged square, ends, are not new, and such we do

not claim. We claim the sash cord guide herein described, consisting of a sheave, B, mounted in a casing, A, having semi-circular end flanges, *a*, semi-cylindrical ends, *b*, of uniform diameter, and sides that meet the face at right angles, and without a flange, whereby the device is adapted for insertion in a mortise formed by a laterally cutting bit, substantially as described.”

The oldest form of sash cord guides or pulleys were made substantially as the one described in this patent, except that the end flanges, being intended to fit into a seat to be cut out with a chisel, were made square instead of round, and, economy in fitting the pulley to the frame not being so much sought for as strength and finish, the flanges were continued along the sides, forming a fitting strip of metal, for which an accurately measured seat was chiseled into the frame along the deep mortise made to receive the pulley casing. The old sash cord guide being thus fitted into the frame, it was held in place, just as the complainant’s is, by a screw in each of the end flanges. So long as the mortise for the pulley casing and the seating for the end and side flanges were made by hand, with auger and chisel, this old form of sash cord guide answered; but, when it was attempted to cheapen the cost of the complete Window frame made by machinery, it was found desirable to be able to do all the wood-cutting required to insert the sash cord guide with a single revolving bit driven by machinery, and to have the sash cord guide made so shaped as to readily fit into such a cutting, and so contrived as to require the least possible labor and time to fit and secure it in its place. Many attempts were also made by inventors to cheapen the cost of the device, and to dispense altogether with screws or nails to retain it in its place. Among this class of patented improvements was: (1) The pulley patented to J. W. Bliss, No. 1,054, February 21, 1854, which was designed to be retained in place by a wedge-shaped tooth, dispensing with screws, and of which device the specification states: “The ends of the face piece of the shell [in this case called the flanges of the casing] are likewise rounded instead of square,” to facilitate letting them into the window frame by boring their recesses with a brace, instead of cutting them with a chisel. (2) The sash pulley device, patented to Simon Drum, No. 64,957, May 21, 1867, which had no flanges at all, either at the ends or sides. (3) The device patented to J. O. Price, No. 95,138, September 21, 1869, which shows a sash cord guide with its casing rounded at each end, but without flanges, and having only a slightly projecting bevel, intended to be forced into the mortise, and to hold its place without screws. (4) The patent to A. Halladay, No. 147,322, February 10, 1871, for an improvement in the face plate of sash pulleys. The face plate or flange is composed of a series of conjoined disks, the end ones being perforated for screws, and the middle ones having a slot for the pulley wheel. (5) The patent to S. E. Maxon, No. 151,303, May 26, 1874, for a sash pulley having a very small beveled flange, “the upper end made oval to fit the oval end of a mortise formed by boring with a bit as wide as the thickness of the case.” (6) The patent to J. Vetterlein, No. 185,536, December

12, 1876, for a sash pulley similar to Halladay's, but with the pulley case also adapted to fit closely in a mortise formed of holes bored by an ordinary

bit. (7) The patent to O. S. Garretson, No. 205, 184, June 25, 1878, Which shows a pulley without side flanges, of which in the specification it is said: "These pulleys may be made with square ends, as shown, or rounded to fit a rounded mortise."

Of the above-mentioned patents the one to Halladay, February 10, 1874, shows that when Sloan and Clarkson made their application in 1879 there was nothing new in the idea that in fitting a sash cord pulley the end flanges might be made round, so as to fit into a seating which had been made by boring to a slight depth with the same tool with which the deep mortise was cut to receive the wheel and easing. Halladay says of his invention that it "consists in a peculiar shape of the sash pulley plate, whereby a single auger will be all that is necessary in putting the plate and pulley in the window frame." He says:

"The outer edges of the plate [the side flanges] present a series of arcs of circles. While the ends of the plate [the end flanges] are nearly entire circles. It will be seen that with this formation the entire sash pulley may be inserted in the window-frame with a simple boring bit and brace, a hole being bored for each of the disks, the end holes, being simply deep enough to admit the thickness of the plate and leave the face, flush with the surface of the frame. The other holes are bored through, or sufficiently deep to admit the flanges and cord Wheel. No chisel or cutting with any other tool than the bit is required."

The laterally Cutting bit had not apparently at the time of Halladay's patent come into use or been known to him, but every idea required to Shape the old-fashioned pulley to adapt it for use in a mortise made by a laterally cutting bit is here suggested in his patent. Also in the patent to Vetterlein, December 12, 1876, which is for an attempted improvement upon the Halladay device, he says:

"It is usual in the manufacture of sash pulleys * * * to employ a case with a flange all around the outer edge, and this flange is let into the surface of the wood, * * * so that the flange is flush. In some instances the ends of the sheave case have been the segment of a cylinder, but the sides were flat, and in others the flange that is let into the surface of the wood has been composed of segments of circles, but the case itself had flat sides."

An inspection of the drawings annexed to the patents above cited, and a reading of their specifications, shows clearly that prior to 1879 it was in common use to make sash pulleys without side flanges, so that they could be put into mortises cut by revolving bits, without any side seating, and these patents are convincing proof, also, that it was not a new idea in 1879 to round the flange ends, so as to make them fit into a seating in the wood cut just deep enough for the purpose by the same revolving tool. And as to dispensing with the side flanges, it appears not only from the prior patents above cited, but from Others put in proof, that it was an idea commonly used in most of the attempts to cheapen the cost of sash pulleys, and to lessen the time required to fit them in the frames, and that for the very reason they are dispensed with in complainant's device and method.

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Although the specifications and claim in complainant's patent are drawn upon the theory that in order to perform its functions the complainant's device must be made in exact compliance with what is there

stated to be its essential features, in actual practice this does not appear to be true. The patentees claim it to be essential that the device shall be devoid of lateral flanges, and that the semi-circular end flanges and the semi-cylindrical ends of the pulley case shall be of uniform diameter, and also that the sides of the case shall meet the face at right angles. In the defendants' device there is a small flange or fitting strip or projecting face along its sides. The semi-cylindrical ends of the case are less in diameter than the semi-circular flange ends, and yet the testimony shows that, for all practical commercial purposes, these differences do not interfere with its use. It seems that, provided the width of the face including the side flanges is not greater than the width of the mortise cut by the boring and laterally; cutting bit, and provided the rounded flange, ends properly fit into the seating made by the bit, the essentials of the device are obtained; and there is no doubt that any one of the oldest fashioned pulleys would give the same results, provided its flange ends were rounded, and provided the mortise made by the bit was wide enough to receive the side flanges, or provided the side flanges were reduced sufficiently to go into the mortise made by a given bit. Whether the side flanges should be reduced or altogether omitted in order not to require too much wood to be cut away from the frame, or to allow a larger wheel and casing to be used without increasing the width of the mortise, are surely mere matters of mechanical adaptation. In all of the prior patents for sash cord pulleys filed in this case the end and side flanges were varied in size and shape, or altogether omitted, or reduced to a mere beveled edge, as the inventors thought best suited their purposes. Great as may have been the commercial success of contriving a mortising machine with a side-cutting bit capable of cutting a mortise by moving in right lines, and of shaping a pulley case and flanges which would fit into the mortise and seating cut by such a bit, we cannot bring ourselves to think, considering the state of the art in 1879, that it required invention on the part of these patentees to round the flange ends of the old-fashioned pulley and to omit the side flanges.

It is noticeable that the testimony with regard to the manner in which Sloan and Clarkson arrived at the form of pulley or sash and guide which they have patented does not in any way suggest invention, and certainly not joint invention. It points rather to the simplest form of reasoning, inference, or deduction applied to an old and well-known device, to fit it for a new machine-made cutting. Simply as a sash cord pulley, complainant's pulley is no improvement on the old pulley. It is no cheaper and no better, and the fact of its utility in connection with the machine-made mortise cannot be held to change what would otherwise be mere mechanical adaptation into patentable invention, and to confer on the complainant the right to a monopoly of its manufacture for all purposes, if, considering what had already been done by others, it required no exercise of invention to arrive at the result embodied in complainant's pulley. The bill must be dismissed.

BOND, J., concurs.