ically from the ends or edges of the clip in Reed's patent? Plainly such a use of two hooks in lieu of one could not be invention, and it will hardly be said to have been beyond mechanical skill to devise a firm connection between the two hooks so as to require the use of but one bolt to move them or to hold them in place. An equally obvious expedient was a curved clamp, corresponding more or less nearly in length with the seat and in curvature with the tooth to which it was to be applied. Indeed, it is apparent on the evidence before us, which in part is the newly-discovered evidence for the admission of which the decree in Reed v. Smith was opened, that such a curved clamp, even with biting edges, was in use upon the hay-rakes of Paddock long before Reed had constructed his device. Whether Paddock is worthy of belief when he says that the curve of his clamp was intentionally made such that only its ends would have a transverse bearing upon the tooth, is immaterial. A sample of the clamp, produced in evidence by the appellant, is clearly of that construction, whether it was made so intentionally, or, as it is insisted and perhaps has been testified, by "the natural shrinkage of the metal, which always takes place at the projecting points first." To constitute anticipation of a later patent it is enough that such a construction had been in well-established use, whether it originated in design or by accident. It may be that the curvature illustrated by the sample of clamp in evidence varies so little from the curve of the tooth that when pressed down the ends would not touch the tooth with a biting edge as distinctly as in some of the forms illustrated in the Reed patent, but it is to be observed that neither in the specification nor claims of that patent is the word "biting," or its equivalent, to be found, though it is often used with emphasis in the briefs, and some of the clips illustrated, instead of biting edges, have distinctly rounded ends, whose force in holding the tooth in place under conditions of equal pressure must always be in proportion to the degree of possible friction, which in turn must be in proportion to the area of the surfaces brought into instant contact. It is to be observed further that, if the curvature of a tooth and its seat be the same, the application of a clamp of whatever form will not affect the curve of the tooth, but if the seat be flat, and longer than the clamp, as, for instance, it is shown to be in the Miller patent, the tooth under pressure of the clamp will lose curvature, and approach a straight line. If the clamp and tooth be of the same normal curvature, the application of pressure will produce between them a crescent-shaped space, and so the clamp, which along its whole length at first touched the tooth, at last has a transverse bearing only at its ends. In other words, upon a seat which is flat, or is less curved than its tooth, any clamp which is shorter than the seat, and has a curvature not less than that of the tooth, becomes in use, "a curved clip with biting edges," and, if it were not an anticipation, would be an infringement of the patent in suit.

Upon these considerations, and others of like character which might be suggested, we are clear that this patent is void of invention, and on that ground the decree below is affirmed.

DODGE MANUF'G CO. v. ATKINS et al.

(Circuit Court of Appeals, Seventh Circuit. October 9, 1894.)

No. 110.

PATENTS—EXTENT OF CLAIM—PRIOR ACT.

The Sanborn patent, No. 275,947, for a "split pulley," is limited, as to the first claim, by the language of the patent and the prior state of the art, to a solid wooden pulley divided into two sections, in a serpentine or irregular course, so that the parts will interlock when adjusted together on the shaft.

Appeal from the Circuit Court of the United States for the District of Indiana.

This was a suit in equity by the Dodge Manufacturing Company against E. C. Atkins & Co. for alleged infringement of two patents relating to wooden pulleys. The circuit court dismissed the bill on the merits, and the complainant has appealed.

Lysander Hill, for appellant.

R. H. Parkinson, for appellees.

Before JENKINS, Circuit Judge, and ALLEN and BAKER, District Judges.

JENKINS, Circuit Judge. The appellant filed its bill in the court below to restrain the alleged infringement by the appellee of the first claim of the patent dated April 17, 1883, No. 275,947, granted to Gustavus B. Sanborn, for "split pulley"; and for the alleged infringement of a patent dated October 19, 1886, No. 351,064, granted to Charles McNeal, for "wooden pulley." The court below dismissed the bill upon the merits. The appellant assigned for error—"First, that the court below erred in placing upon the Sanborn claim in suit a construction so limited and so narrow as not to cover the defendant's pulleys; second, also in holding that the defendant's pulleys did not infringe the Sanborn patent."

The sole question before us upon this appeal has reference to the first claim in the Sanborn patent, which is as follows:

"A transversely divided or split pulley having its sections constructed upon their meeting surfaces to form a serpentine or zigzag joint, and to receive the shaft which carries the pulley in between them, substantially as specified."

Mr. Sanborn, in the specification to the letters patent, thus describes his invention, and its relation to the prior art:

"This invention relates to split pulleys made of wood, or mainly so, such as are used on shafting for driving machinery, and which are split or made in separate sections or halves, to provide for putting them on or taking them off of their shaft laterally relatively to the shaft, whereby they may be hung or removed without disturbing the shaft, and without interfering with other pulleys or devices on the shaft, or the hangers carrying the shaft. Such split wooden pulleys are ordinarily made by constructing them in halves transversely on a straight line or course, and making the meeting surfaces of their sections perfectly true, and doweling them together. This mode of construction very materially enhances the cost of such pulleys over or as compared with solid pulleys, and makes them inferior as regards strength. My invention consists in a split wooden pulley, which is made from a solid pulley divided into sections in a serpentine or irregular course, to fit them on the