

Opinion of the Court.

CLARK v. BEECHER MANUFACTURING COMPANY
& Another.APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE
DISTRICT OF CONNECTICUT.

Argued April 17, 1885.—Decided May 4, 1885.

Letters patent No. 66,130, granted to James B. Clark, June 25, 1867, for an "improvement in the manufacture of blanks for carriage thill shackles," are not infringed by the manufacture of blanks for shackles in accordance with letters patent No. 108,235, granted to Willis B. Smith, August 9, 1870. The features of the Clark patent are, that, by dies, the arms of the blank are bent into an oblique direction, and the body into a curved form, so that the parts where the arms join the body are rounded on the outside as well as the inside; and that when, subsequently, the curved body is straightened, there will be in it sufficient metal to form sharp outside corners, by being pushed out into them.

The arms of the Smith blank are not bent in an oblique direction, its body is not curved, the parts where the arms join the body are not rounded, either on the inside or on the outside, and, in afterwards straightening the back, surplus metal is not pushed towards or into the corners, to form them, but the existing corners, already formed, are forced further apart, by driving surplus metal into the back, between the corners.

In view of the state of the art, and the terms of the Clark patent, it must be confined, at least, to a shape which, for practical use, in subsequent manipulation, has a disposition of metal which causes a sharp corner to be formed in substantially the same way as by the use of his blank.

This was a bill in equity to restrain an infringement of a patent. The facts are stated in the opinion of the court.

Mr. William Edgar Simonds for appellant.

Mr. O. H. Platt for appellees.

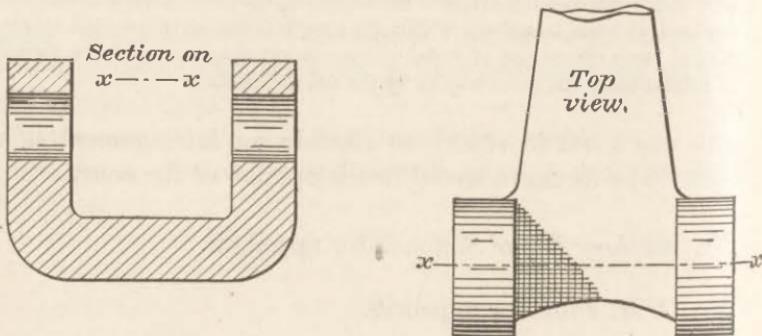
MR. JUSTICE BLATCHFORD delivered the opinion of the court.

This is a suit in equity, brought in the Circuit Court of the United States for the District of Connecticut, by James B. Clark against The Beecher Manufacturing Company, a Connecticut corporation, and D. F. Southwick, for the infringement of letters patent No. 66,130, granted to the plaintiff,

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June 25, 1867, for an "improvement in the manufacture of blanks for carriage thill shackles." The main defence to the suit is non-infringement. The Circuit Court, after a hearing and two rehearings, dismissed the bill, holding that infringement had not been proved. 7 Fed. Rep. 816. The plaintiff has appealed.

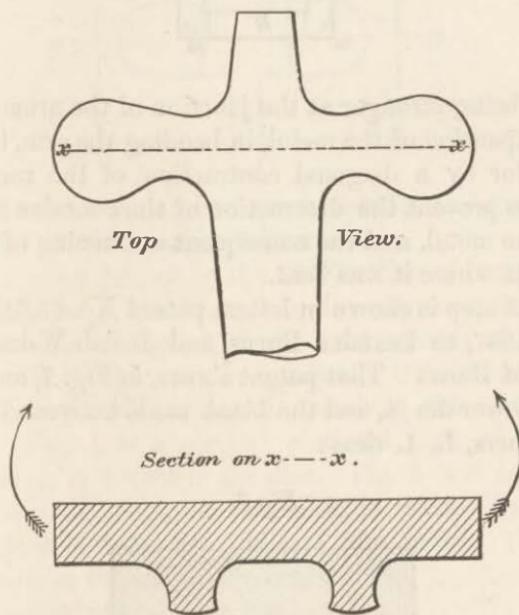
A history of the state of the art, and of the progress of invention in making shackle blanks, will conduce to a determination of the questions involved. A carriage thill shackle is a device by which the thills of a carriage are hinged to the axle. The finished shackle is a horizontal plate, with a pair of vertical ears rising therefrom, one at each end of the back. The cockeye on the end of the thill is received between the ears, and a bolt passing through the ears and the cockeye secures the parts. The flat back or body part of the article is forged with a projection at each side, forming what is commonly called the "clip," by which the article is secured to the axle. In forming the shackle, it is necessary that the outside corners, where the ears join the back, should be sharp, full and square, to obtain a good bearing on the axle, or the article will not be salable. The old style of shackle was of this shape. It was formed by



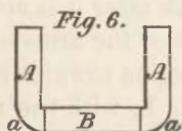
bending up the two ears from a piece of metal of equal thickness, and the outer corners became round, and the bearing on the axle was not firm and true. It was desirable to obtain in some way a reservoir or surplus of metal, which could be utilized, in the bending, by being thrown out into or remaining in the corners, to make them full and square on the outside. To

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attain this result, one James P. Thorp made an invention for which he obtained letters patent No. 28,114, granted May 1, 1860, which were reissued to his assignees, H. D. Smith and others, as No. 2,362, September 18, 1866. Thorp's blank was of the following shape: The two projections on the bottom of

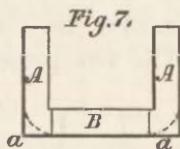


the blank were intended to furnish sufficient metal to make the outer corners of the shackle square and sharp, when the ears were bent in the direction indicated by the arrows. The projections were at the places where the arms joined the body. Thorp's patent showed a die for making the blank, constructed with recesses or cavities to form the projections, and stated that, after the arms were bent up, the blank, instead of being of the old form, Fig. 6, with rounded corners, *a*, *a*, thus:



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would be of the form of Fig. 7, with square or right-angled corners, α , α , thus :



the blank being stronger at the junction of the arms and body, and the expansion of the metal, in bending the arm, being compensated for by a diagonal contraction of the metal, which operated to prevent the destruction of the cohesion of the particles of the metal, and the consequent weakening of the blank at the parts where it was bent.

The next step is shown in letters patent No. 65,641, granted June 11, 1867, to Leander Burns and Josiah Wilcox, on the invention of Burns. That patent shows, in Fig. 7, an upper die M, and a lower die N, and the blank made between them, with square corners, L, L thus :

Fig. 7.

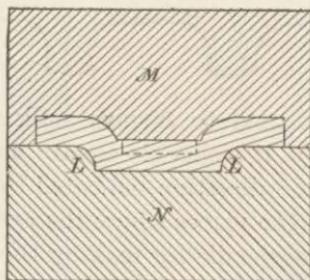
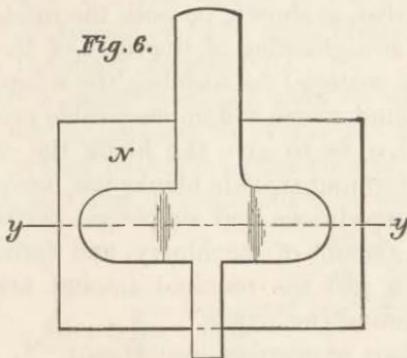


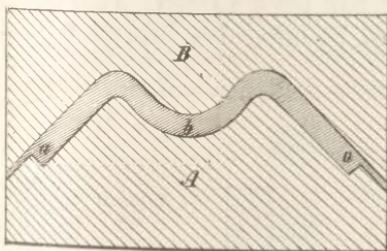
Fig. 7 is a transverse vertical section taken in the plane of the line $y y$, in Fig. 6. Fig. 6 is a face view of the lower die, N, and shows also the blank after it is acted on by the dies. The specification states, that, if the arms of the blank are bent up at right angles, in a direction towards each other, perfect square corners will be left at L, L, with the metal through those corners and the other parts of a uniform thickness.

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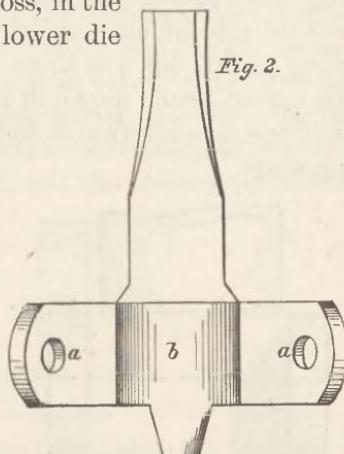


Then followed the patent to the plaintiff, the specification and drawings of which are as follows:

"This invention relates to the construction of carriage shaft shackles from solid blanks, and to the shape of the dies for forming the same, so that, with the least amount of labor and power, the said shackle may be gradually formed into the required shape. In the annexed drawings this invention is illustrated. Fig. 1 is a vertical sectional view of a shackle blank, showing it between the dies. Fig. 2 is a top or plan view of a shackle blank, as the same is formed by the dies. Similar letters of reference indicate like parts. The blank, which is made in the shape of a cross, in the usual manner, is placed upon the lower die

Fig. 1.

A, and the upper die B is then forced down upon it, whereby the arms a, a, of the blank are bent into an oblique direction, and the body, b, is curved, as shown in the figure. The portion of the blank where the arms join

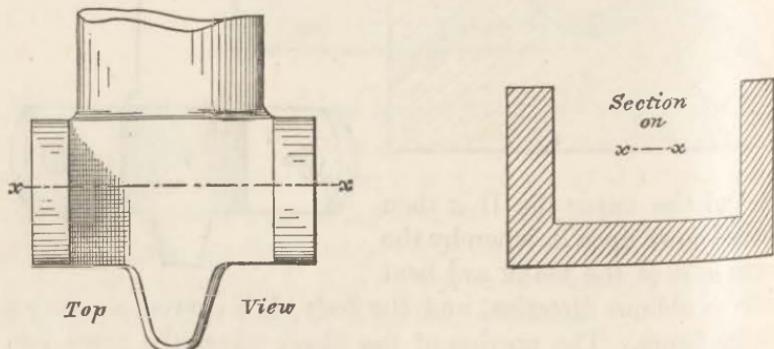
Fig. 2.

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the body is rounded, as shown, on both the inside as well as on the outside, the straightening of the body of the shackle pushing out sufficient material for forming the sharp corners, without having any hindrance and impracticable projections. The dies are formed so as to give the blank the required shape. This process of forming shackle blanks has proved, by practice, to be the most expeditious and simple yet performed, as it requires the least amount of machinery, and forms each part of the shackle with just the required amount and thickness of metal for completing the article."

The claims, two in number, are these: "1. The carriage shaft shackle blank, so formed between dies that the body *b* of the blank is curved, substantially as herein shown and described. 2. The dies *A* and *B*, for making the said blank, when so constructed and arranged as to form the rounded corners and the curved body of the said blank, substantially as herein shown and described."

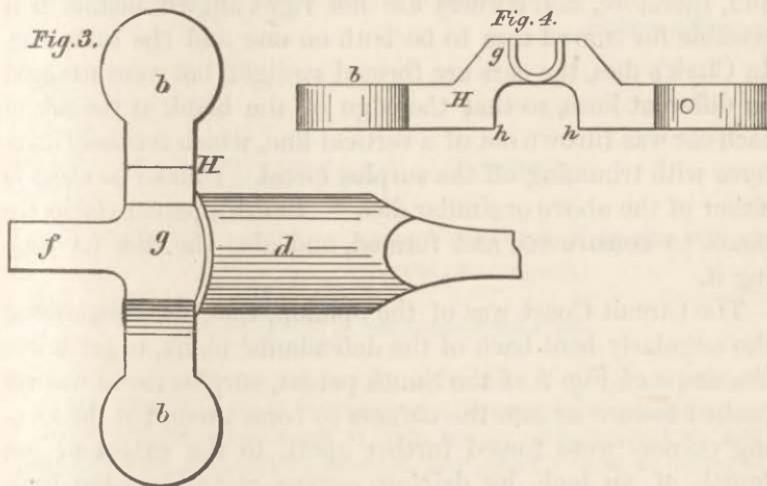
The plaintiff, according to his description, takes a blank in the form of a cross, and, by dies of proper shape, bends the arms of the blank into an oblique direction, and the body into a curved form, the result being, that the parts where the arms join the body are rounded on the outside as well as the inside; and when, subsequently, the curved body is straightened, there will be in it sufficient metal to form sharp outside corners, by being pushed out into them. The plaintiff's patent stops with the curved blank shown in Fig. 1 of his drawings. That blank is, in practice, afterwards formed, by other dies, into the following shape:



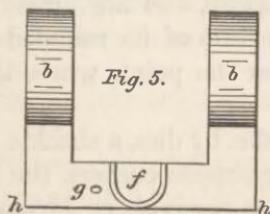
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Putting the blank into that shape is what the specification refers to when it speaks of "the straightening of the body," and "forming the sharp corners."

The defendants make shackle blanks by dies, under letters patent No. 106,225, granted to Willis B. Smith, August 9, 1870. Fig. 3 of that patent is a plan view of the blank which the dies forge, and Fig. 4 is an end view of the blank. In



these figures, *b*, *b*, are the ears; *d* is the clip; *f* is the shaft; *g* is the body of the blank; *h*, *h*, are the corners at the junction of the ears and the body; *H* is the whole blank. The corners *h*, *h*, are formed at right angles to each other. The specification says, that the blank *H* is then placed in a trimming die, and the surplus metal which projects from its edges is removed; and that the blank is then heated, and the oblique portions of



the body, *g*, are bent, so as to throw the ears, *b*, upward, in the form shown in Fig. 5, in which operation the corners, *h*, *h*,

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previously formed at right angles, remain unmolested, and are square and full. The specification says: "I am aware that dies for the same purpose have been previously used, as shown in the patents to L. Burns, June 11, 1867, and J. B. Clark, June 25, 1867. In Burns' dies, the body of the shackle is formed straight, while the ears are curved, the curve commencing at the plane where the ears are to be bent to form the corners, and, therefore, said corners are not right angled, neither is it possible for curved ears to be both on one and the same line. In Clark's dies, the ears are formed straight, but were arranged on different lines, so that the edge of the blank at the side of each ear was thrown out of a vertical line, which seriously interferes with trimming off the surplus metal. I make no claim to either of the above or similar dies." Smith's patent claims the blank so constructed and formed, and also the dies for forging it.

The Circuit Court was of the opinion, that, in straightening the angularly bent back of the defendants' blank, to get it into the shape of Fig. 5 of the Smith patent, surplus metal was not pushed toward or into the corners to form them, but the existing corners were forced further apart, to the extent of one fourth of an inch, by driving surplus metal into the back, between the corners.

We are of opinion that this view is correct. Besides this, the arms of the defendants' blank are not bent in an oblique direction, its body is not curved, and the parts where the arms join the body are not rounded, either on the inside or on the outside. The defendants' blank, as in Fig. 4 of the Smith patent, has abundance of material near the corners *h*, *h*, which are to be sharp and square, and are already formed, while the plaintiff's blank, by reason of its rounded corners, has a deficiency of material near the points where the square corners to be formed are to be.

In the efforts to make, by dies, a shackle blank, which should ultimately have sharp outside corners, the inventors, in succession, had the idea of a reservoir or surplus of metal. Thorp had it in the downward projections. Burns had it in his sharp lower corners with curved arms. The plaintiff had it in his

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curved body and rounded corners. Smith has it in his shape. But, in view of the state of the art, and the terms of his patent, the plaintiff must be confined to a curved body, rounded corners and oblique arms, or, at least, to a shape which, for practical use, in subsequent manipulation, has a disposition of metal, which causes a sharp corner to be formed in substantially the same way as by the use of his blank. The defendants' blank does not have such a shape.

Decree affirmed.

WOLLENSAK *v.* REIHER.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF ILLINOIS.

Argued April 14, 15, 1885.—Decided May 4, 1885.

In view of the state of the art existing at the date of the patent granted to John F. Wollensak for an improvement in transom lifters by original patent No. 136,801, dated March 11, 1873, and by reissued patent No. 9,307, dated July 20, 1880, and the claims of that patent, it must be limited to a combination, with a transom, its lifting arm and operating-rod, of a guide for the upper end of the operating rod, prolonged beyond the junction with the lifting arm, so as to prevent the operating-rod from being bent or displaced by the weight of the transom; and it is not infringed by the device secured to Frank A. Reiher by patent No. 226,353, dated April 6, 1880.

This was a bill in equity to restrain infringements of a patent. The facts are stated in the opinion of the court.

Mr. L. L. Bond (*Mr. Ephraim Banning* and *Mr. Thomas A. Banning* were with him) for appellant.

Mr. Charles T. Brown submitted on his brief for appellee.

MR. JUSTICE MATTHEWS delivered the opinion of the court.

This bill in equity was filed by the appellant to restrain the alleged infringement by the defendant of re-issued letters patent No. 9,307, dated July 20, 1880, the original patent, No.