

CLARK V. BEECHER MANUF'G CO. AND
ANOTHER.

Circuit Court, D. Connecticut. February 15, 1881.

1. PATENT NO. 66,130—BLANKS FOR CARRIAGE-
THILL SHACKLES—INFRINGEMENT.

Letters patent No. 66,130, granted James B. Clark, June 25, 1867, for improvement in blanks for carriage-thill shackles, *held, not infringed* by devices manufactured under letters patent No. 106,225, granted August 9, 1870, to Willis B. Smith, for dies for forging carriage shackle blanks.

Complainant's invention, consisting of blanks for carriage-thill shackles and dies for making same, whereby the shackle is primarily formed with a curve on its central body portion, so that the subsequent straightening of the central portion and finishing of the blank forces the surplus metal to the corners to fill up the deficiency in them and make them sharply-defined right angles, *held, not infringed* by defendant's

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device, in which the body of the blank is primarily pressed into an angular shape, with its arms extending by sharply-defined obtuse angles, whereby the subsequent straightening and finishing the blank but forces the angles further apart, and pushes any surplus metal caused by changing the obtuse into right angles at the corners towards its center.

In Equity.

Charles E. Mitchell, for plaintiff.

Orville H. Platt, for defendant.

SHIPMAN, D. J. This is a bill in equity based upon the alleged infringement of letters patent granted to the plaintiff on June 25, 1867, for an improvement in blanks for carriage thill-shackles. The important question in the case is that of infringement. "The invention is for an improvement in the manufacture of the article known to the trade as 'carriage shackles,' or 'thill couplings;' that is to say, in the device by which the pole or thills of a carriage are hinged to the axle. The invention relates particularly to that class of

shackles which consists of a horizontal plate, with a pair of vertical ears rising therefrom, between which the eye of the thill iron is hinged. The flat 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." It is necessary, in order to make a salable article, that the corners of the back or flat portion of the shackle shall be sharp and well defined. If the ears of the blank are simply bent from the body at right angles, the outer corners will be rounded by means of this bending.

Before the plaintiff's invention two different methods of forming the blank were used. One was to prepare the blank with projections of metal at the points where the angles were to be formed, so that when the bending took place this surplus would fill out the corners with sufficient material to make a sharp right angle. This method is shown in the patent to James P. Thorp of May 1, 1860. The second plan was to form both the angles in the blank and the back before the bending took place, and then to straighten the arms without changing the shape of the back or of the angles. This 818 plan is shown in the patent to L. Burns of June 11, 1867. The plaintiff's invention was for the purpose of avoiding the troublesome projections of the Thorp patent, which made the bending a laborious work. The central part of the body of the Clark blank was curved, and the obliquely bent arms of the blank were also rounded where they joined the central curved body, the curve of these arms being the reverse of the curve of the body. When this blank was put into a bending die, in which the arms were held by clamping mechanism, the blow of the hammer upon the curved back "upset" the surplus metal in the curved portion, forcing it right and left towards the rounded corners, so as to fill up any deficiency of metal which might be caused by bending the arms, and to form sharply-

defined right angles. The invention was a blank having a curved body, whereby surplus metal was provided by the process of "upsetting" for the formation of sharp angles at the points where rounded or curved or equivalent formed arms join the central portion of the body, and are bent into the ears of the shackle. The specification says: "The blank, which is made in the shape of a cross in the usual manner, is placed upon the lower die, A, and the upper die, B, is then forced down upon it, whereby the arms, *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 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 hindersome or impractical projections. The dies are formed so as to give to the blank the required shape."

The claims are: "(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 blanks, 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."

Julius B. Savage, of Southington, was a licensee under this 819 patent, and is apparently the only person who has made the blanks shown in the drawings at his shop. Changes were gradually made in the shape of the blank—*First*, by enlarging the upper die at the junction of the arms with the body, so as to furnish more metal at that point; afterwards by straightening the arms and making their angles more definite, until finally the arms were in the same plane with each other, and the angles were sharply defined. Subsequently, Willis B. Smith, a foreman in Savage's shop, obtained a patent for the blank which

the defendant manufactures. The body or back of the blank is not straight; the straight part of the body is connected with the arms by two angular bends; the arms are in the same horizontal plane with each other and are parallel with the body; and the obtuse angles, at their junction with the body, are clearly defined. The defendants' blank has neither rounded corners nor a curved body. The back is to be straightened and the arms are to be bent in a bending die in the same manner that these operations are performed upon the plaintiff's blank.

It thus appears that the shape of the two blanks is different. One consists of a series of curves; the other consists of a series of angles. The question of infringement does not depend upon the form of the respective articles. If the straightening of the angularly-bent back of the defendants' blank pushes surplus metal towards the corners, so that, by means of this surplus, sharp instead of rounded angles are formed when the arms are bent, then the modification of shape is immaterial. If, on the other hand, the angles are already formed of such shape and so definitely that no surplus material is needed, or is furnished to the angles, but the straightening of the back merely forces existing angles further apart without a displacement of the material at the angles, then the two blanks are constructed upon a different principle.

The plaintiff insists that the defendants' back is upset so as to "push out" metal into the corners, whereby full and square angles are made as in the Clark device. The defendants' 820 position is that when the back of its blank is straightened, and the arms are bent, no stock is forced out to fill the angles, because they are already formed; but that these "defined angles have been forced from each other by driving surplus metal between them." It is agreed that the angles, after the arms are bent, are one-fourth of an inch further apart that they were before the

bending. The theory of the defendant, as stated by its expert, is this: "There can be no pushing out of the metal towards the angle, because there is already as much more metal in the vicinity of the angle than is required there, as the angle is greater than a right angle. Therefore, instead of the surplus metal being pushed towards the angle, it must be pushed away from the angle and towards the center; it cannot be pushed towards the angle, because the angle, having already too much metal near it, more cannot be pushed there. The bringing the upper portion between the ears into a straight line contracts that portion and forces the metal down into the center, and so as to produce the necessary elongation of the back between the two previously-formed sharp corners."

I am of opinion that the defendants' theory is the one which is better sustained by the testimony and the tests than the other, and that in the defendants' blanks there is no substantial upsetting of surplus of metal so as to form sharp angles. The surplus metal is used in the elongated back, and not in the angles. It follows that infringement has not been proved, and that the bill should be dismissed.

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