

R. Dutton.
Harvester Iron Finger Bar
Nº 78,196. Patented May 26, 1868.

Fig: 1.

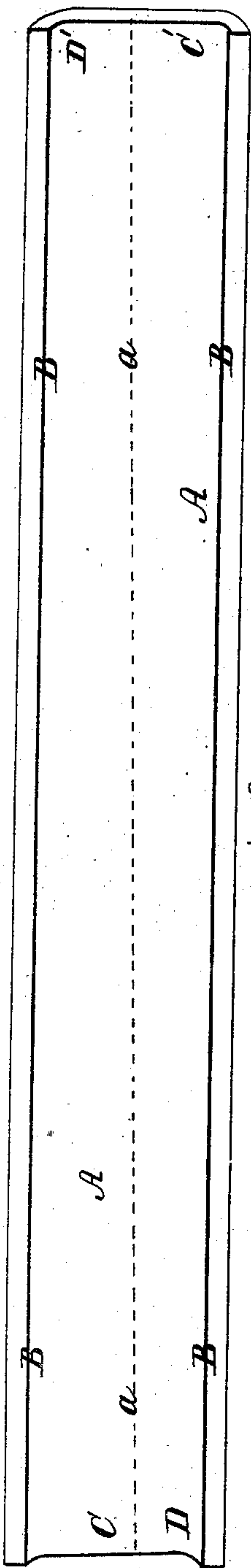


Fig: 2.

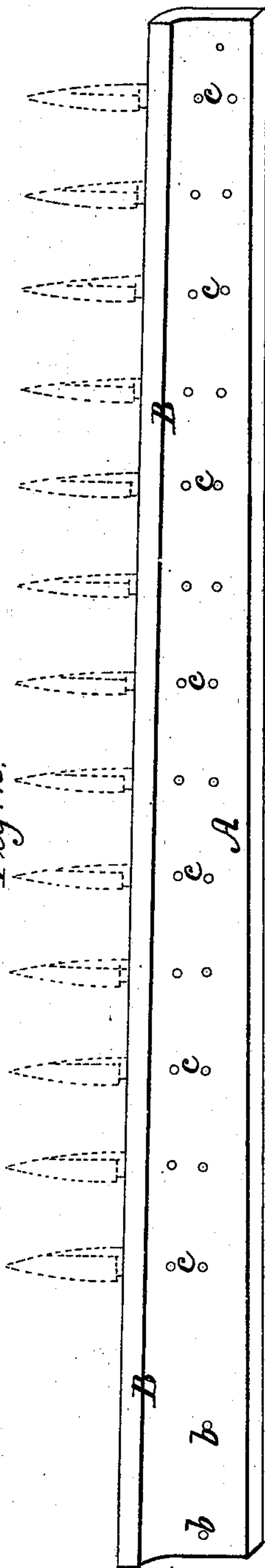


Fig: 3.

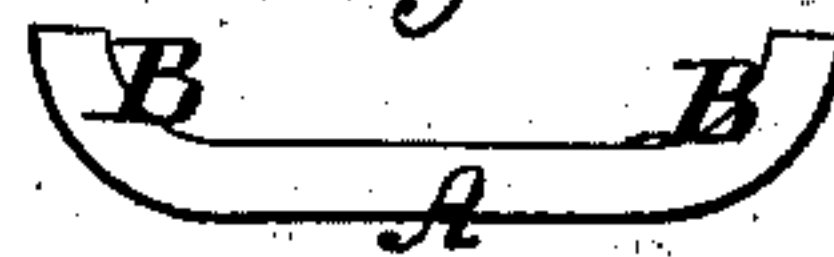
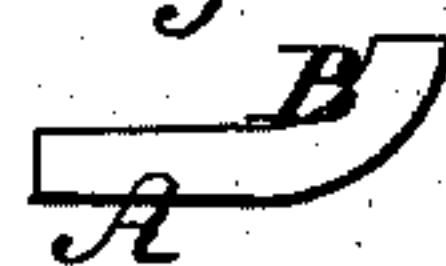


Fig: 4.



Witnesses;

Fred. B. Sears

W. R. Roulton

Inventor:

Rufus Dutton
by his Atty.
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United States Patent Office.

RUFUS DUTTON, OF NEW YORK, N. Y.

Letters Patent No. 78,196, dated May 26, 1868.

IMPROVEMENT IN THE MANUFACTURE OF FINGER-BARS FOR HARVESTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, RUFUS DUTTON, of the city of New York, in the county of New York, and State of New York, have invented a new and improved Method of Constructing the Finger-Bars of Mowing and Reaping-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making a part of this specification.

The nature or character of my invention consists in forming or rolling, by suitable machinery or mechanism, a blank or plate of steel or metal, of the thickness required for a finger-bar, and of a width sufficient for two finger-bars, such plate also having each edge turned or raised so as to form a flange or rib, so as to secure all required strength and rigidity, with the least quantity of metal; and in dividing such blank or plate of metal diagonally in the direction of its length, so as to form two bars from it.

Figure 1 represents a blank or plate of steel or metal formed by machinery, with its edges curved upward or raised, and made of a width sufficient for two finger-bars.

Figure 2 shows one-half of such a plate or blank, as represented in fig. 1, constituting a finger-bar, such plate being cut diagonally lengthwise through its centre.

The finger-bars of mowing or reaping-machines have heretofore generally been constructed singly, or a single bar by itself, and such bars have most usually been a flat piece or bar of metal, of a uniform thickness, and the tapering form has been given them by hammering and rolling, or by cutting away the part necessary for such purpose.

By my improved method of construction, a blank or plate, A, of steel or metal, is first rolled out or formed by suitable machinery or mechanism, as by rolls, of any thickness desired, and of a breadth sufficient for two finger-bars. Such plate, however, instead of being rolled or formed flat, is turned up or raised at each side or edge, as seen at B B, fig. 1. The blank or plate A, as it is so formed by the machinery, is simply a plain flat piece of steel or metal, with its opposite sides or edges turned or curved up, generally about a quarter to three-eighths of an inch above the upper surface of the bar.

Having been so shaped by machinery or mechanism, the plate is then cut the required length for a finger-bar, and is then cut or divided into two halves or pieces lengthwise and diagonally, in the direction shown by the dotted line *a a*, fig. 1. This division of the plate A produces two finger-bars suitable for use, and requiring no forging or shaping, and only smoothing in some parts, and making suitable holes to connect it to the machine, and to attach the fingers thereto.

The blank or plate A should be cut or divided in a diagonal direction, as indicated by the dotted line *a a*, fig. 1, so as to give to each half of the plate or to each bar, a greater breadth at one end than at the other. The broader end is intended to form the heel of the bar, which connects to the machine, and which receives the greatest strain, and the narrow end forms the outer end of the bar, where less strength is demanded. The inclination of the division-line *a a* will correspond to the desired taper of the bar, but generally will be such that in a finger-bar of four feet long, the heel of such bar will be about one or one and a half inch broader than the other end.

When the plate A is thus divided, the ends C C of the two parts become the inner ends of the bars, and the other ends D D' become the outer ends. And when the two parts are so changed that their broad ends are together, the turned-up or raised edge of each bar will be on the same side of each, and will also constitute the front edge or side of the bar. If it is desired to have such turned-up edge on the back side of the bar, the diagonal line *a a* will incline in an opposite direction from that shown.

By so turning up one edge or side of the finger-bar, much greater strength and stiffness are secured, thus permitting the bar to be made of much thinner metal than it otherwise could be. All required strength with great lightness can thus be secured and combined. To secure the lightest bar possible with the required strength, I prefer to make the finger-bar of steel.

Figure 2 represents one-half of a plate or blank, such as is shown in fig. 1, having suitable holes *b b* to connect the bar to the machine or shoe, and other holes *c c* for securing the fingers to the bar, such fingers being indicated in outline by dotted lines.

Figure 3 is a cross-section of fig. 1, showing more plainly the curving or the raising of the edges *B B* of the plate.

Figure 4 is a cross-section of one part of the plate *A*, after it has been cut or divided lengthwise, as shown by fig. 2.

What I claim as my invention, and desire to secure by Letters Patent, is—

Constructing the finger-bars of harvesters, substantially as described, that is, forming, by suitable machinery or mechanism, a metallic plate of the required thickness for a finger-bar, and of a width sufficient for two bars, and having both of its edges or sides turned up or raised above the general surface or plane of the plate, and then dividing or cutting such plate obliquely lengthwise, so that when so divided, there will be formed two separate plates, each suitable for a single bar of tapering form, and each having a raised or turned-up edge, for the purpose set forth.

R. DUTTON.

Witnesses:

FRED. B. SEARS,

W. R. RONALDS.