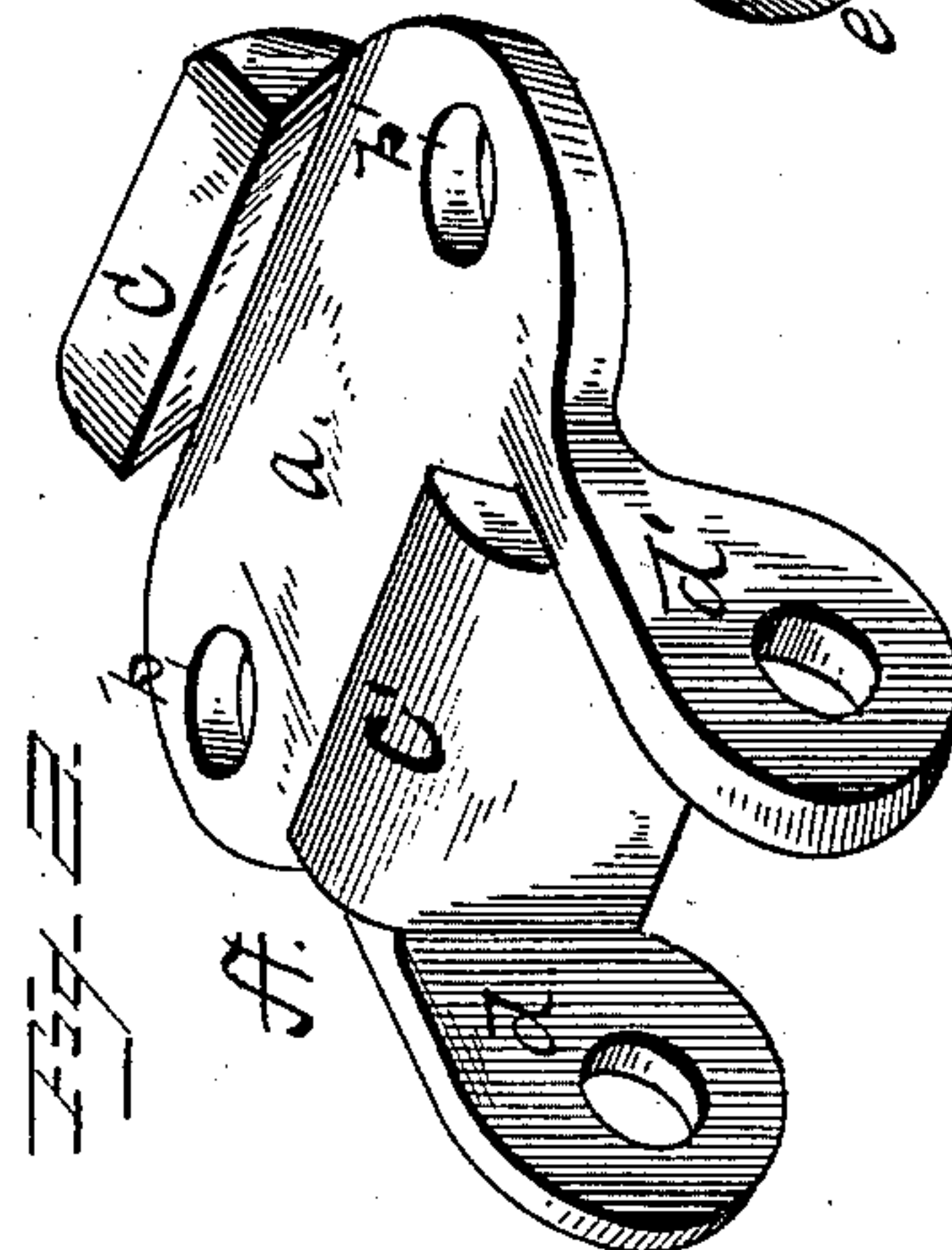
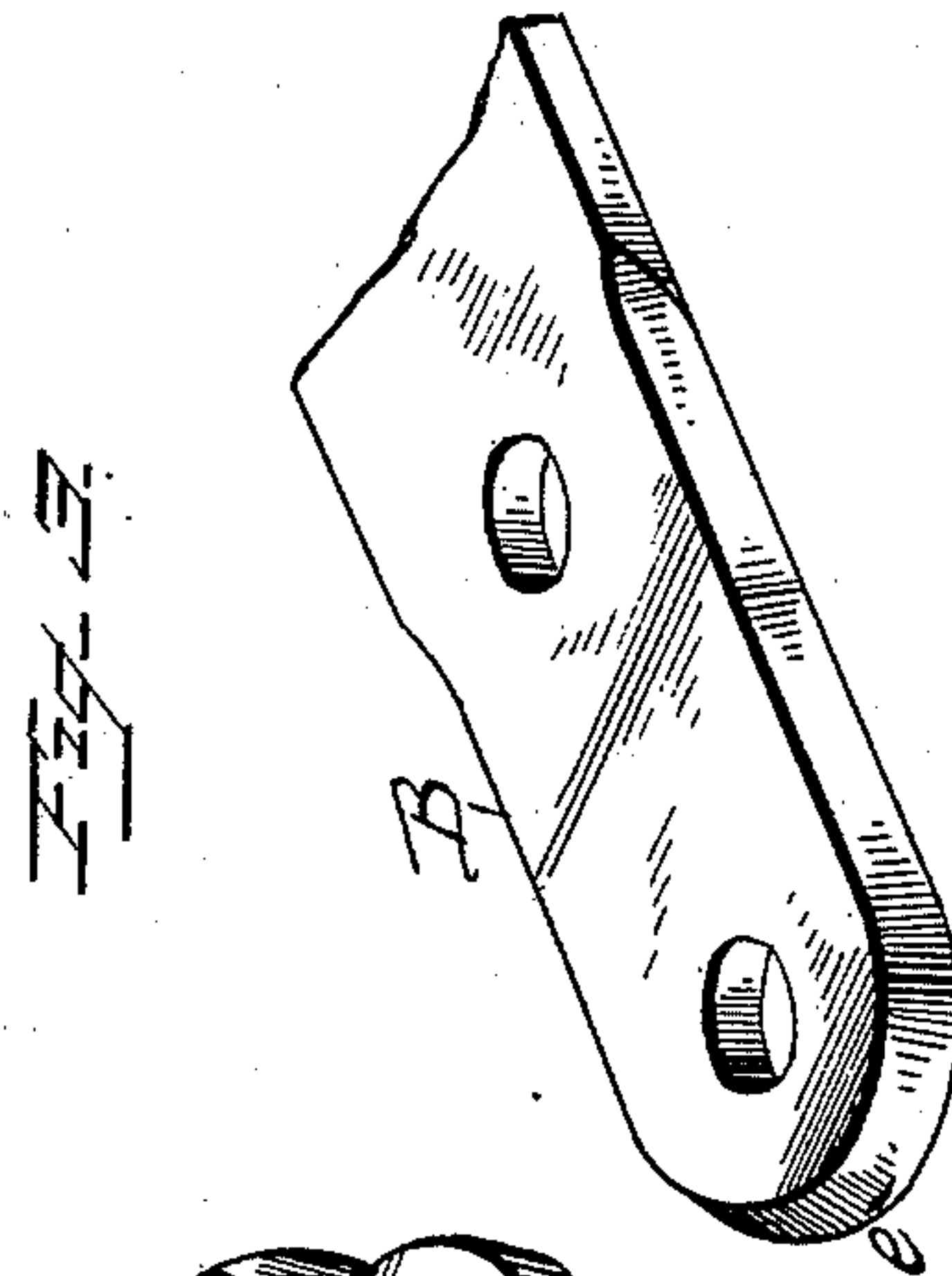
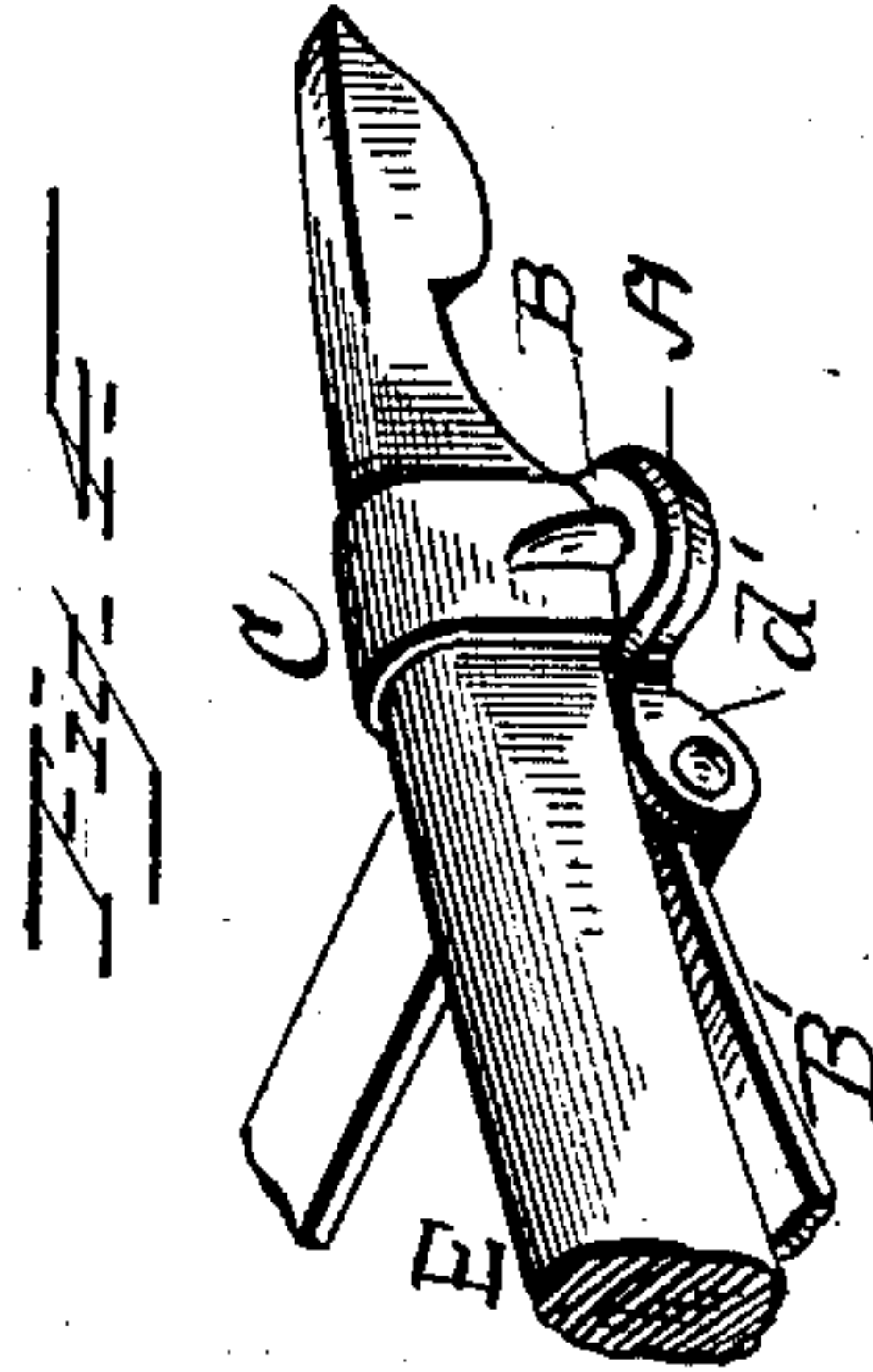
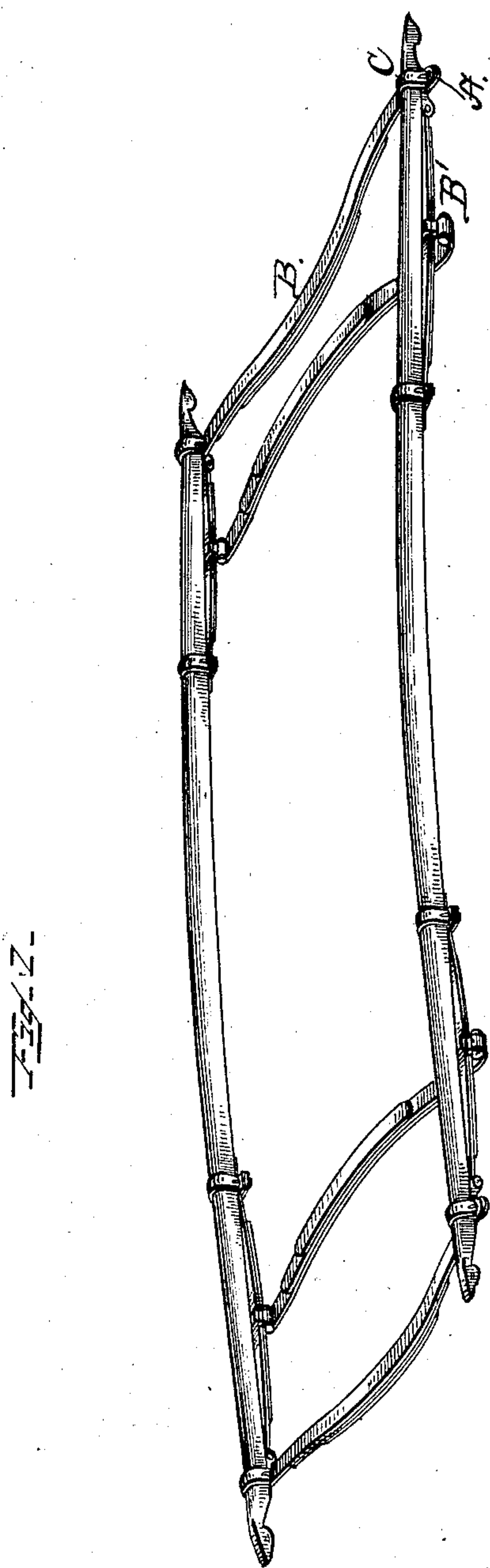


(No Model.)

B. M. SOULE.  
SIDE SPRING VEHICLE.

No. 303,333.

Patented Aug. 12, 1884.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

BUREN M. SOULE, OF CEDAR RAPIDS, IOWA.

## SIDE-SPRING VEHICLE.

SPECIFICATION forming part of Letters Patent No. 303,333, dated August 12, 1884.

Application filed May 27, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, BUREN M. SOULE, a citizen of the United States of America, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Running-Gear for Road-Wagons, of which the following is a specification.

My invention relates to improvements in road-vehicles, the object being to provide as adjuncts to a running-gear of a vehicle an improved shackle to hold the ends of the cross-spring, and to give additional security to the parts connected by means of the clip and shackle, and to provide an improved cross-spring adapted to fit in a dovetail of the shackle.

My invention consists in an improved shackle and spring, and in the novel combination of parts, as will be hereinafter described and specifically stated.

In the accompanying drawings, forming a part of this specification, and illustrating my improvements, Figure 1 is a perspective view of the side bars and connected springs of a road-vehicle having my improved attachments. Fig. 2 is a view of my improved shackle. Fig. 3 is a view of the end of the spring, and Fig. 4 is a view showing the connection of parts on an enlarged scale.

The letter A represents my improved shackle-iron, consisting of the bed-plate *a*, having perforations *b b'* in each end, and formed with side flanges, *c c'*, the inner faces of which recede, forming a dovetail to admit the flaring end of the cross-springs, and also formed with side ears, *d d'*, provided with bolt-holes, as shown. The end perforations of the bed-plate are intended to admit the passage of the legs of a clip-iron, and the side ears are to receive a bolt, to which is fastened the end of the horizontal spring.

The letter B represents the cross-spring, having the ends *e* formed flaring to fit the dovetailed groove formed in the shackle-iron. The ends of the spring are provided with perforations; as shown, to register with the perforations in the bed-plate of the shackle-iron, and are intended to receive the legs of the clip, which prevent the spring from being

withdrawn from the shackle. The thickness of the spring should correspond with the height of the flanges or walls of the shackle-iron, in order that the parts may present a comely appearance when united, and also that the bearing or strain between the parts may be uniform.

The letter C represents a clip of the usual construction.

The letter B' represents a horizontal spring, having one end pivotally secured to the bolt in the shackle-iron, and the letter E represents the side bars of the vehicle. These several described parts are united by setting the clips over the side bar, and passing the legs down through the perforations in the spring, which is fitted in its seat in the shackle, and thence through the shackle, and then securing the clip in the usual manner.

It will be observed that by the construction and connection of parts set forth additional strength is attained, and that by dovetailing the spring and shackle together the strain on the shackle is not so directly on the clip.

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

1. The shackle-iron A, herein described, consisting of the bed-plate *a*, with end perforations and dovetailed side flanges, and formed with perforated side ears, substantially as and for the purpose set forth.

2. The improved spring B, having its ends perforated and formed flaring to fit a dovetail in the shackle-iron, substantially as described.

3. In combination, a shackle-iron formed with dovetail flanges on the bearing-plate, and having end perforations and perforated side ears, a cross-spring, the ends whereof are perforated and formed to make a dovetail joint with the shackle-iron, a side bar of the vehicle, and a clip adapted to secure the whole together, substantially as described.

In testimony whereof I have hereunto subscribed my name in the presence of two attesting witnesses.

BUREN M. SOULE.

Attest:

J. N. WHITTANE,  
L. A. BRADLEY.