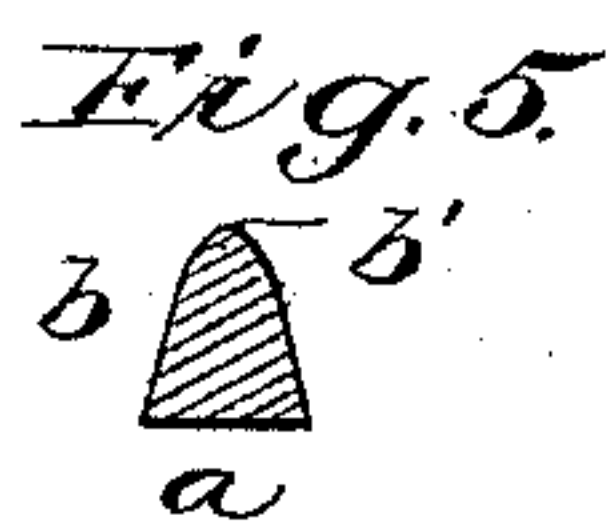
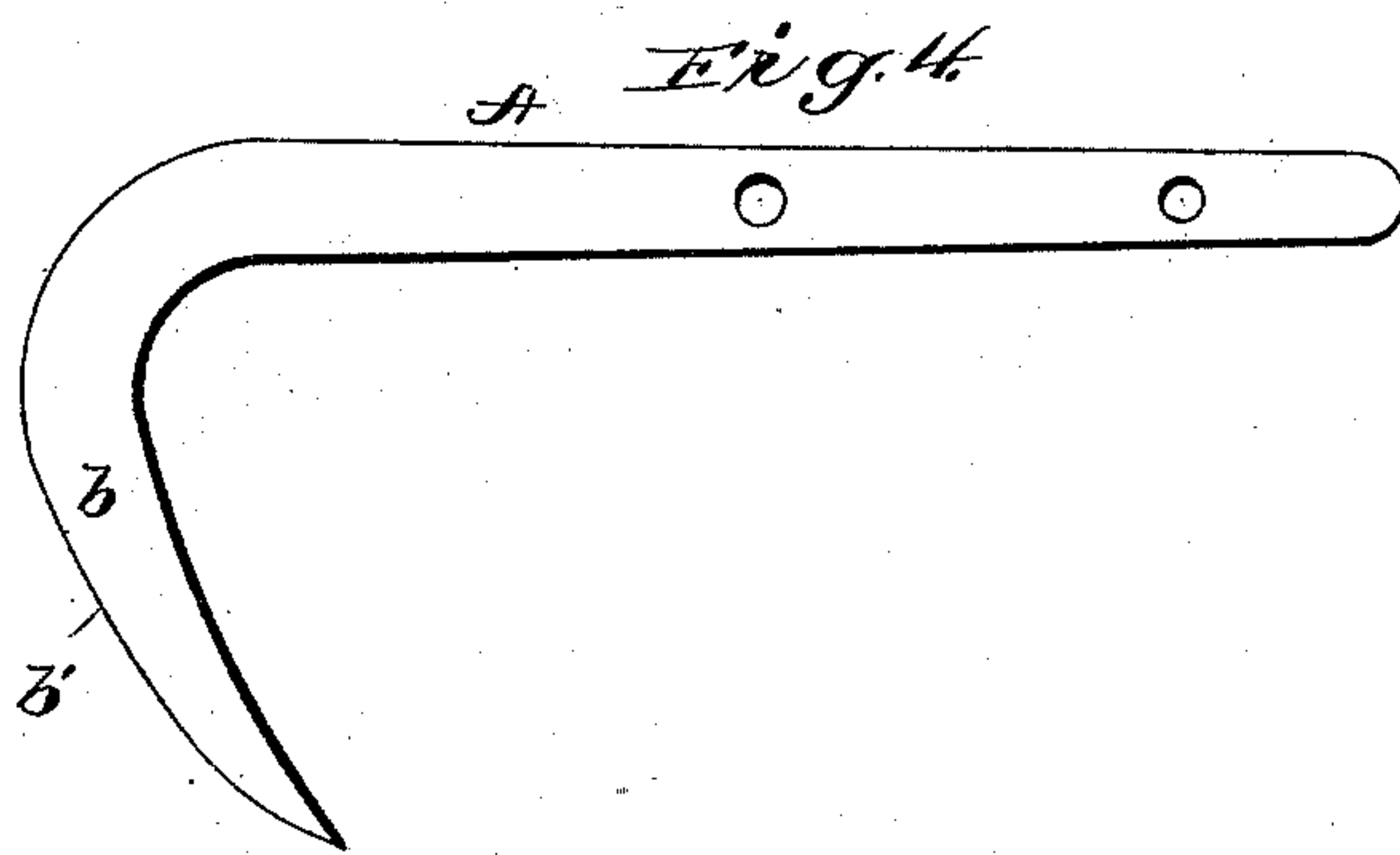
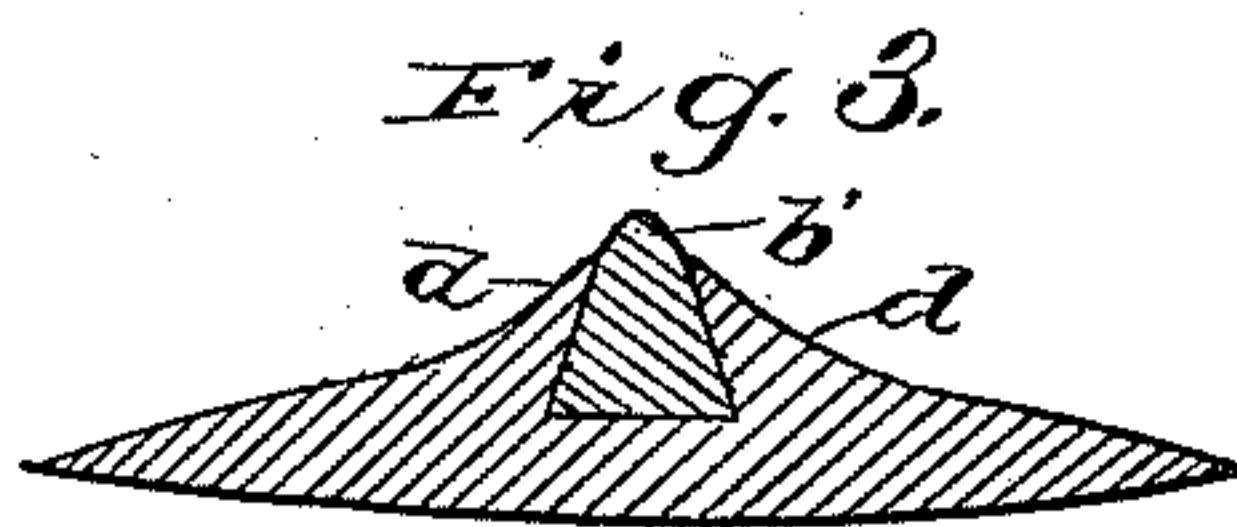
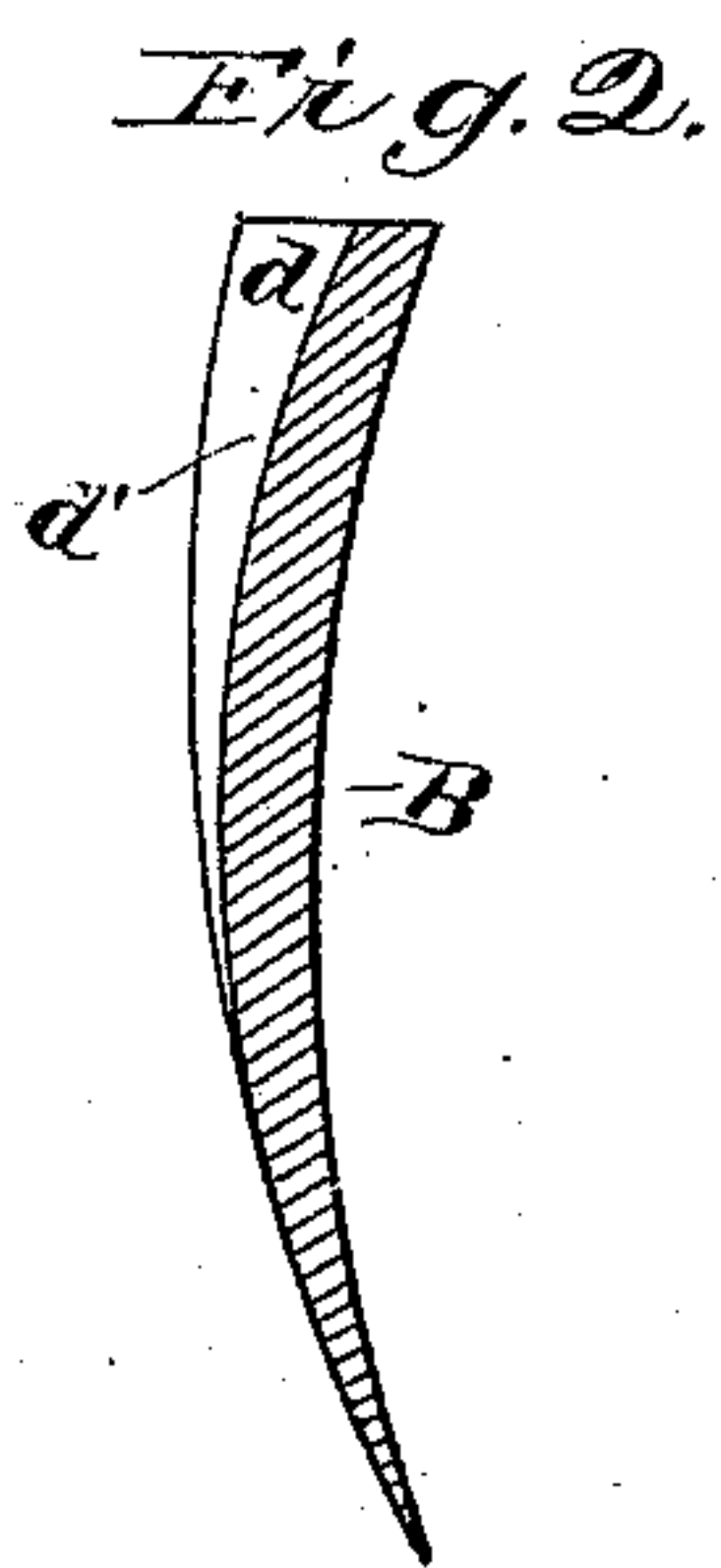
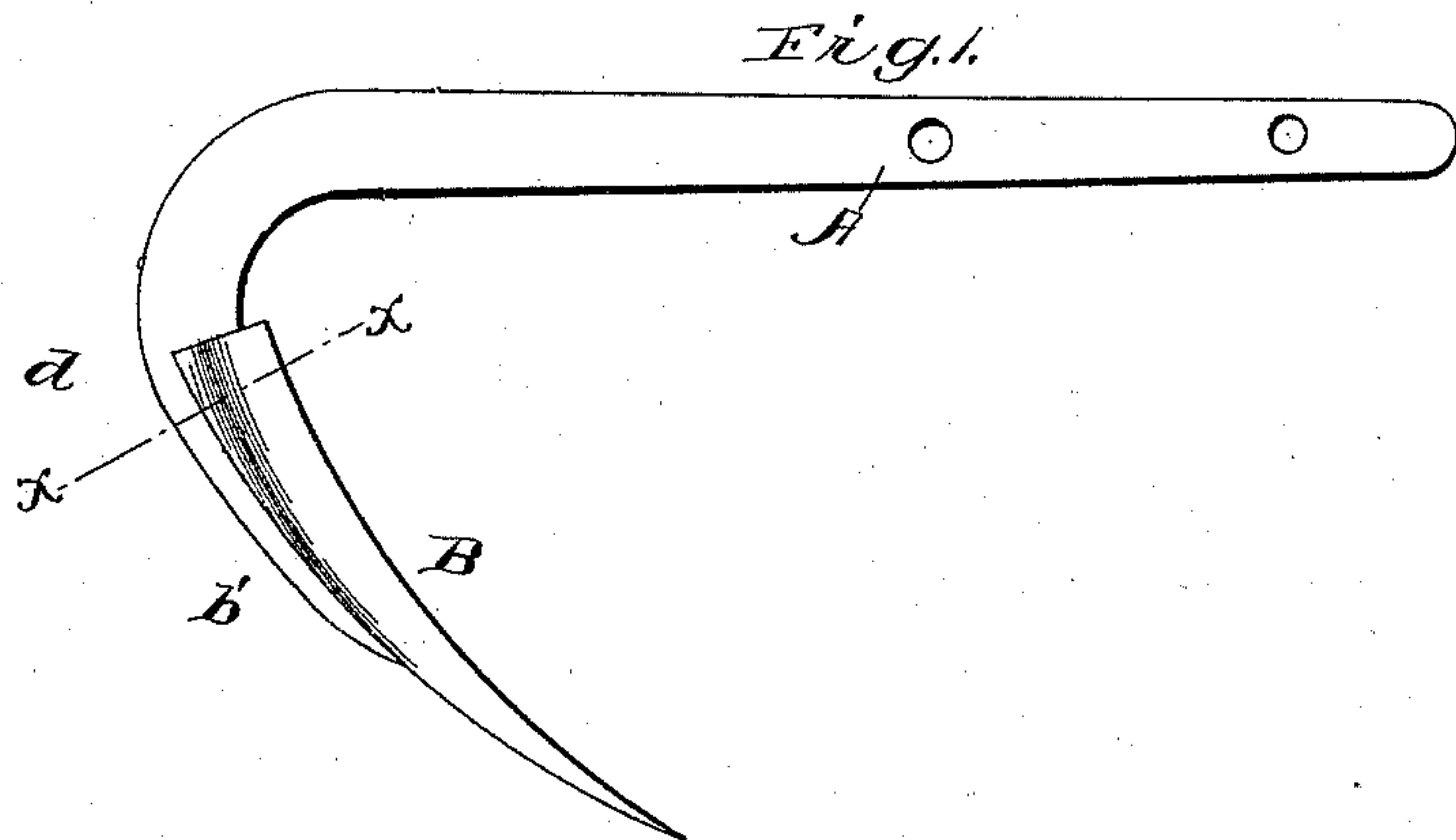


(No Model.)

W. B. LEE.  
PLOW OR CULTIVATOR TOOTH.

No. 505,425.

Patented Sept. 19, 1893.



Witnesses:

J. M. Fowler Jr.  
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Inventor

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Attorneys

# UNITED STATES PATENT OFFICE.

WILLIAM B. LEE, OF OZARK, MISSOURI, ASSIGNOR OF ONE-HALF TO DAVID WOLFF AND ZACHARIAH A. JOHNSON, OF SAME PLACE.

## PLOW OR CULTIVATOR TOOTH.

SPECIFICATION forming part of Letters Patent No. 505,425, dated September 19, 1893.

Application filed June 29, 1893. Serial No. 479,152. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. LEE, a citizen of the United States, residing at Ozark, in the county of Christian and State of Missouri, have invented certain new and useful Improvements in Plow or Cultivator Teeth; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the means of securing cultivator and plow points to their beams or standards and particularly to that class used for cultivating purposes.

My invention consists in forming in the point a tapering, dove-tail slot, or socket, and in forming the depending portion of the standard in triangular form in cross section, and tapering from the beam portion toward the toe, whereby the point will be wedged and firmly held on the standard against accidental displacement, while being adapted to be readily removed for repair or renewal.

It further consists in so forming the slot, or socket, and the toe of the beam that the point will be held securely in place without the use of bolts or other fastening devices whereby the weakening of the parts is prevented, and in certain other details in the construction of parts, all as hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of the beam, showing the point connected therewith. Fig. 2 is a vertical, longitudinal section of the tooth. Fig. 3 is a transverse section on the line  $x-x$  Fig. 1. Fig. 4 is a side elevation of the beam. Fig. 5 is a cross section of the beam point or toe.

The horizontal portion of the beam, A, may be constructed in any usual or preferred manner and so as to be connected to any form of walking or sulky plow or cultivator. The depending, or toe portion of the beam curves forward with its front face made flat as shown at  $a$ , and with the rear portion in angle form as shown at  $b$ , with a rounding face at the point of angle, as shown at  $b'$ , for a purpose hereinafter explained, the points of angle converging toward each other and meeting at the point. The plow point or tooth, B, is preferably forged from a single piece of steel and the central rear portion is thickened out

into ribs  $d$ , forming a dove-tail slot or groove,  $d'$ . These ribs are made thick at the top of the tooth and taper in curved form toward the point, converging in gradual lines into and forming a continuation of the rear face of the point, with the slot opening outward. The toe of the beam is made of greater thickness than the depth of the groove so that its rear curved face  $b'$  extends out through the slot, and the side faces of the ribs are made in concave form so as to form gradual curved lines or faces, and in such manner that no abrupt angles are presented to the ground. By forming the socket up in the form of ribs on the rear face of the point it will be seen that the same will be greatly strengthened without increasing the cost of manufacture, and by forming the parts or gradual curves, as described, it will be seen that no sharp angles are formed to catch in roots, stones or other hard substances. It will also be seen that by this construction the usual bolts or set screws are dispensed with and that the working action of the device tends to tighten and hold the parts more firmly united. It will thus be seen that by my improved construction, instead of the parts becoming loose by use, the action of such use, as above stated, tends to keep the parts always firmly connected. This, in practice, has been found very desirable, as where bolts or other fastening devices are employed they soon become loose by wear, and after they have been used for a short time they become so rusty that it is impossible to tighten them up; or when it was found necessary to remove the bolts to substitute new ones, special tools were required, it being often found necessary to cut off the heads or ends before being able to remove the bolts at all.

By my construction no tools are necessary for applying or removing the tooth for any purpose and as will be seen the parts are always firmly connected.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The shovel or point, having the ribs or flanges on the rear face made thick at the top of the tooth and tapering in curved form toward the point, and converging in gradual



lines into and forming a continuation of the rear face of the point, with a dovetail socket or groove between the ribs, in combination with the toe or standard point made in triangular form to fit the socket or groove, and  
5 forming with the flanges of the tooth a strengthening rib, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM B. LEE.

Witnesses:

N. R. JOHNSON,  
GEO. B. GIDEON.