

W. H. PLATT.  
Harrow-Teeth.

No. 143,713.

Patented Oct. 14, 1873.

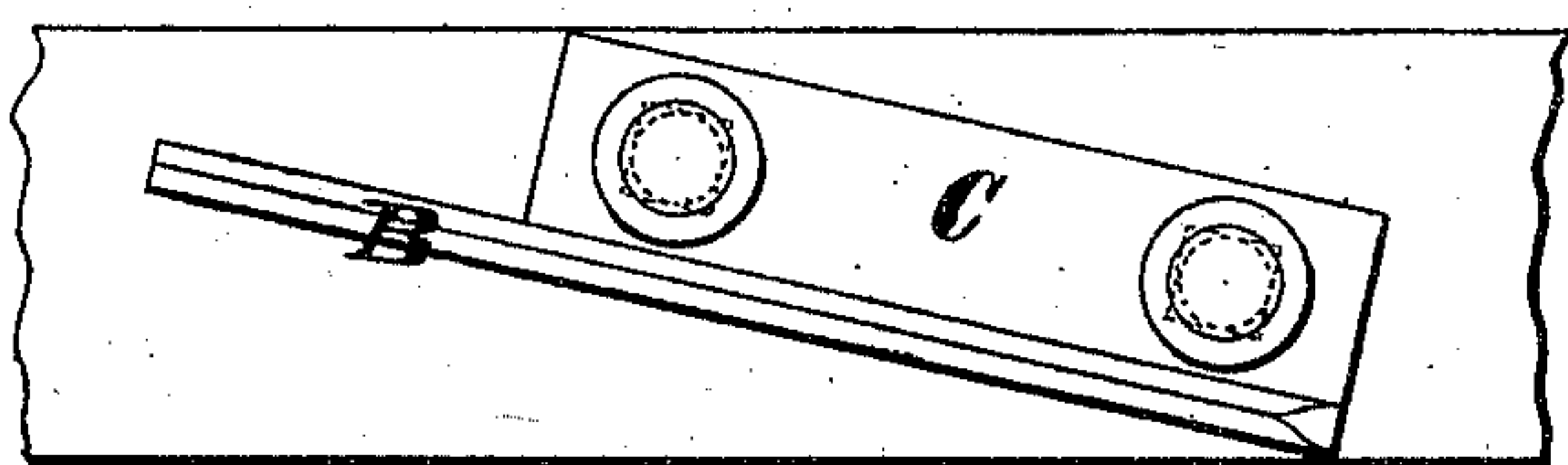


Fig. 1.

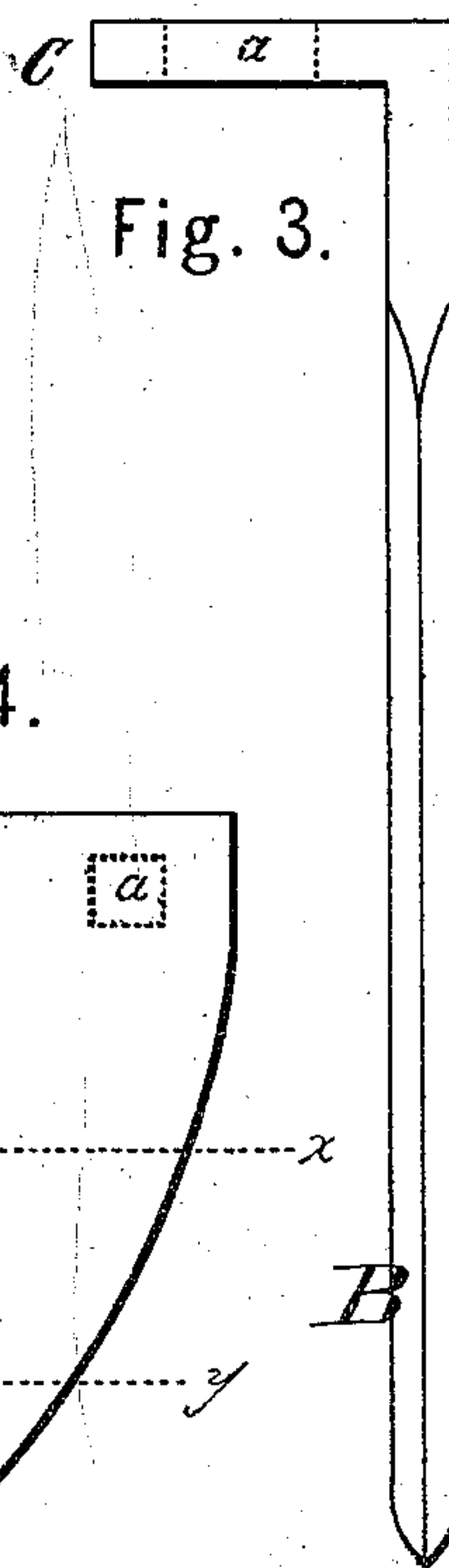


Fig. 3.

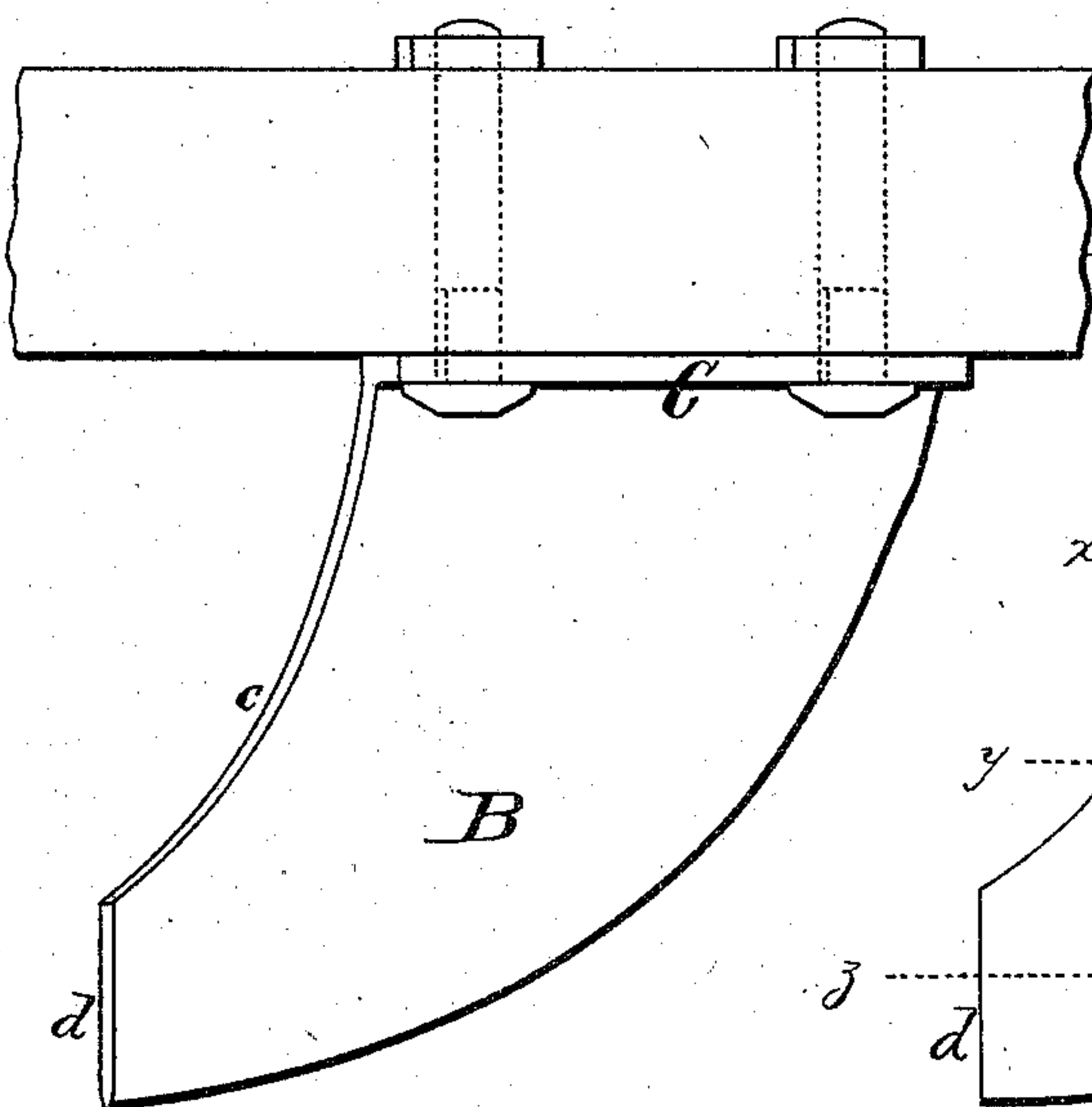


Fig. 2.

Fig. 4.

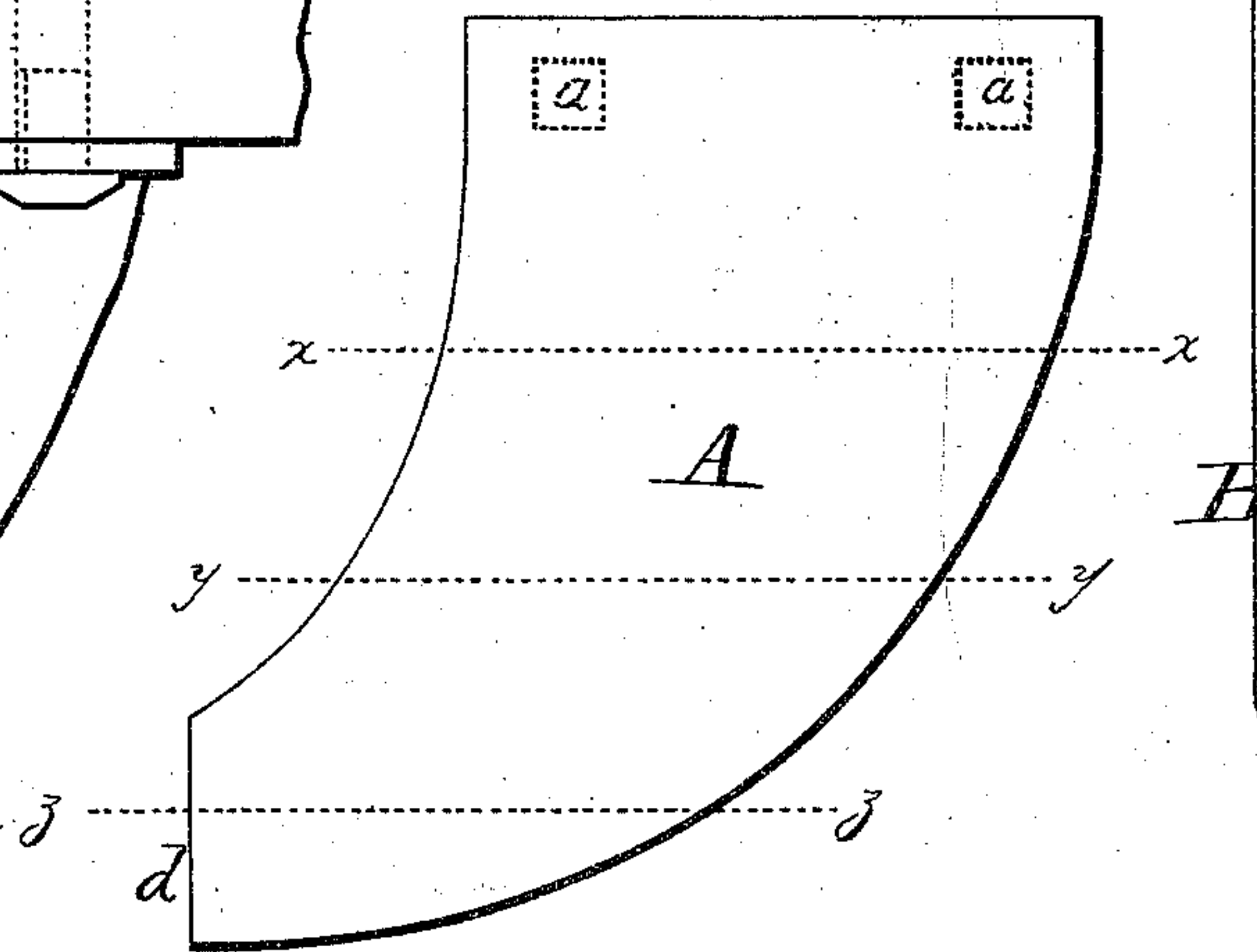


Fig. 5.



Fig. 6.



Fig. 7.

WITNESSES.

*Villette Anderson.*

*George E. Upham.*

INVENTOR.

*W. H. Platt,*

*Chipman & Hosmer & Co.,*  
*Attorneys.*

# UNITED STATES PATENT OFFICE.

WILLIAM H. PLATT, OF DAYTON, OHIO.

## IMPROVEMENT IN HARROW-TEETH.

Specification forming part of Letters Patent No. **143,713**, dated October 14, 1873; application filed November 16, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM H. PLATT, of Dayton, in the county of Montgomery and State of Ohio, have invented a new and valuable Improvement in Harrow-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of an under view of my harrow-knife attached to the beam. Fig. 2 is a side view of the same. Fig. 3 is a front view of my harrow-knife. Fig. 4 is a view of the plate from which my knife is struck up. Figs. 5, 6, and 7 are sections.

This invention has relation to harrow-knives; and the novelty consists in the form of the knife, whereby it is especially adapted to the purpose in point of efficiency and durability. The object of this invention is to provide a knife-blade for a harrow which will remain rigidly upright in the position in which it is set, and whose edge, producing a drawing downward cut, is of a sufficiently-hardy nature to withstand the rough service to which a harrow-knife is subjected for a considerable length of time.

These knives, as is well known, are usually arranged at intervals between the teeth of a harrow, and, while being subjected to the uncertain oblique movement of this instrument, are depended upon to cut clods, overturned sods, sticks, and trash of all kinds; hence, it is important that they should be made of the best steel, and of the form below described.

In the accompanying drawings, the letter A designates the blank from which the knife B is struck up and perforated in the flange C, usually at one operation. This flange C extends the entire length of the top of the blade, and is bent at right angles therewith, so that when it is secured by screws or bolts passing through the perforations *a a*

into the harrow-beam the blade will assume a rigidly-upright position. The side faces of the knife-blade are parallel, and the widest portion of the blade is next to the flange. From this part the blade, bounded in front by a convex cutting-edge, *b*, and in rear by a concave edge, *c*, becomes gradually narrower, finally terminating in an upright edge, *d*, which connects the convex cutting-edge with the concave rear edge. The profile of the convex cutting-edge is circular, and in length it is a quadrant or nearly so. By this form a drawing cut is secured regularly and constantly increasing in keenness from the heel of the blade to the point, as the sectional views sufficiently illustrate. This drawing cut is necessary to make efficient the very hardy edge of the blade. This hardness is secured by placing the edge in the middle plane of the blade, and connecting it with the faces of the blade by rapidly beveled and rounding surfaces, as is shown in the sectional views. Thus the angle of the edge is made substantial, and at the same time the metal falls away from it sufficiently rapidly to prevent clogging, and in its lower or more horizontal parts the obliquity of the edge to the horizontal draft gives a very keen and perfect action where efficiency is chiefly required, as in cutting the matted grass and trash lying at the bottoms of the overturned sods and clods.

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

The harrow-knife having a quadrant edge curved downward and rearward, connected with the sides of the knife-plate by isometrically-curved bevels, and having its perforated upper portion bent at right angles therewith, forming the attaching-flange C, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

W. H. PLATT.

Witnesses:

GEO. E. UPHAM,  
PHIL. C. MASI.