

(No Model.)

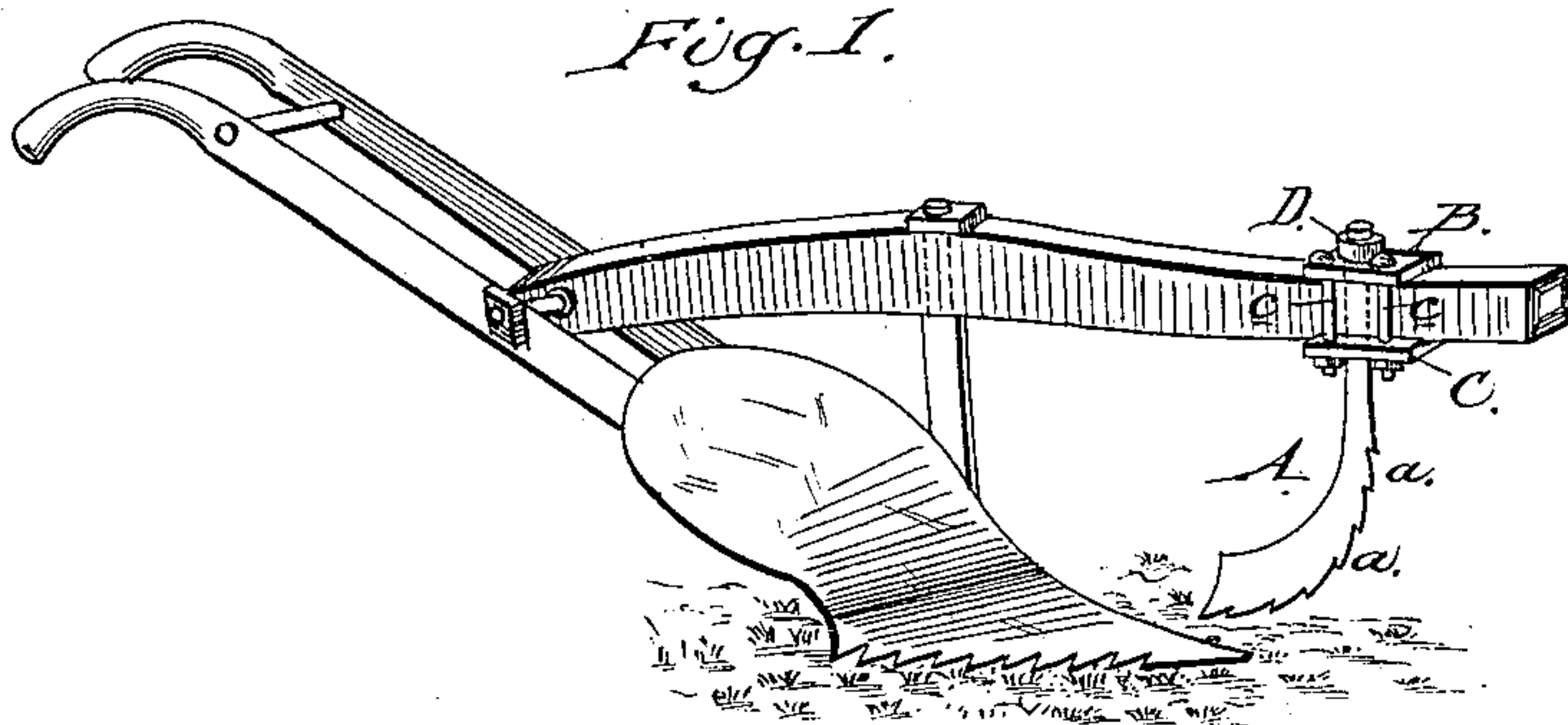
S. BARR.

PLOW.

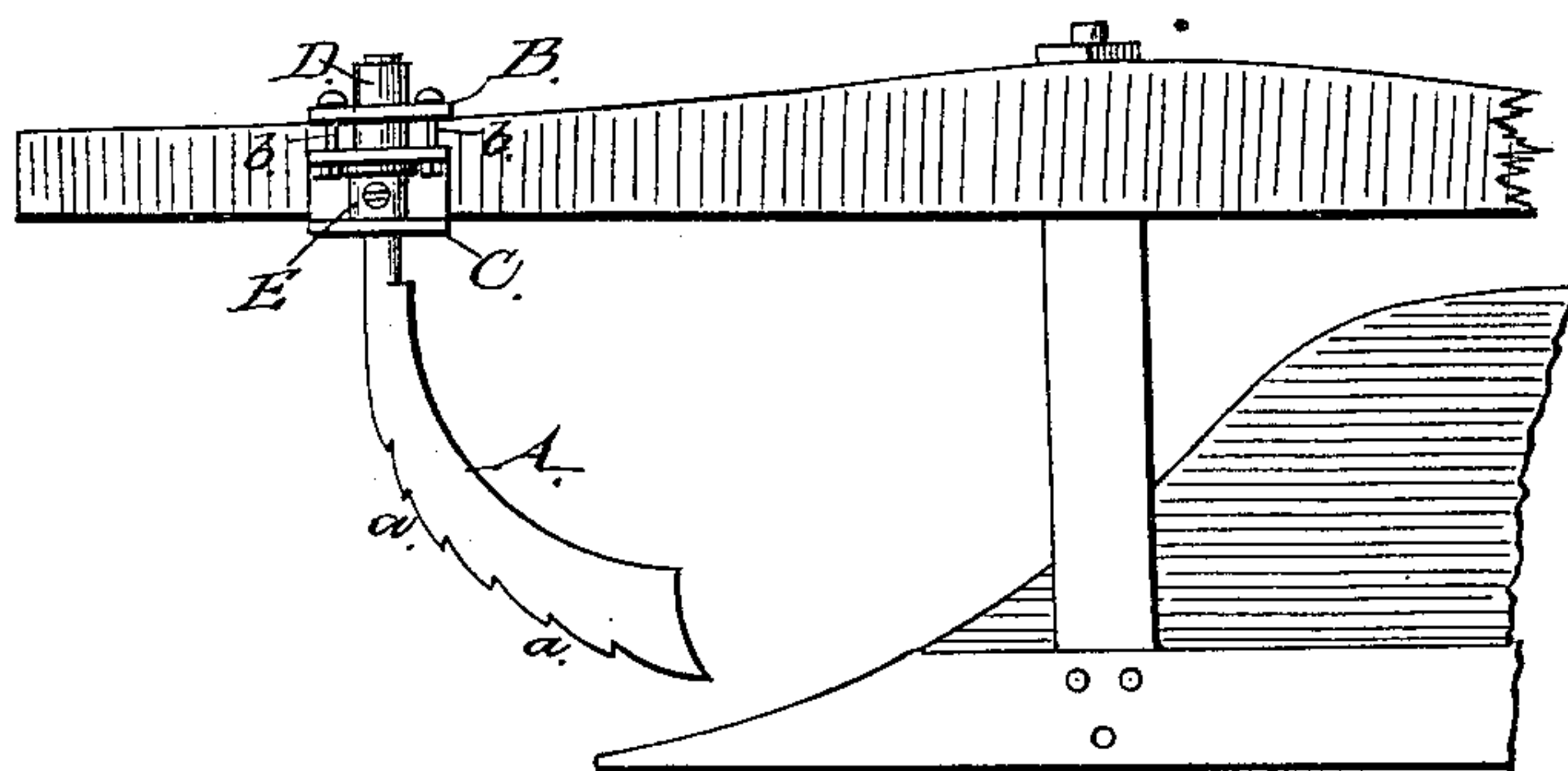
No. 377,226.

Patented Jan. 31, 1888.

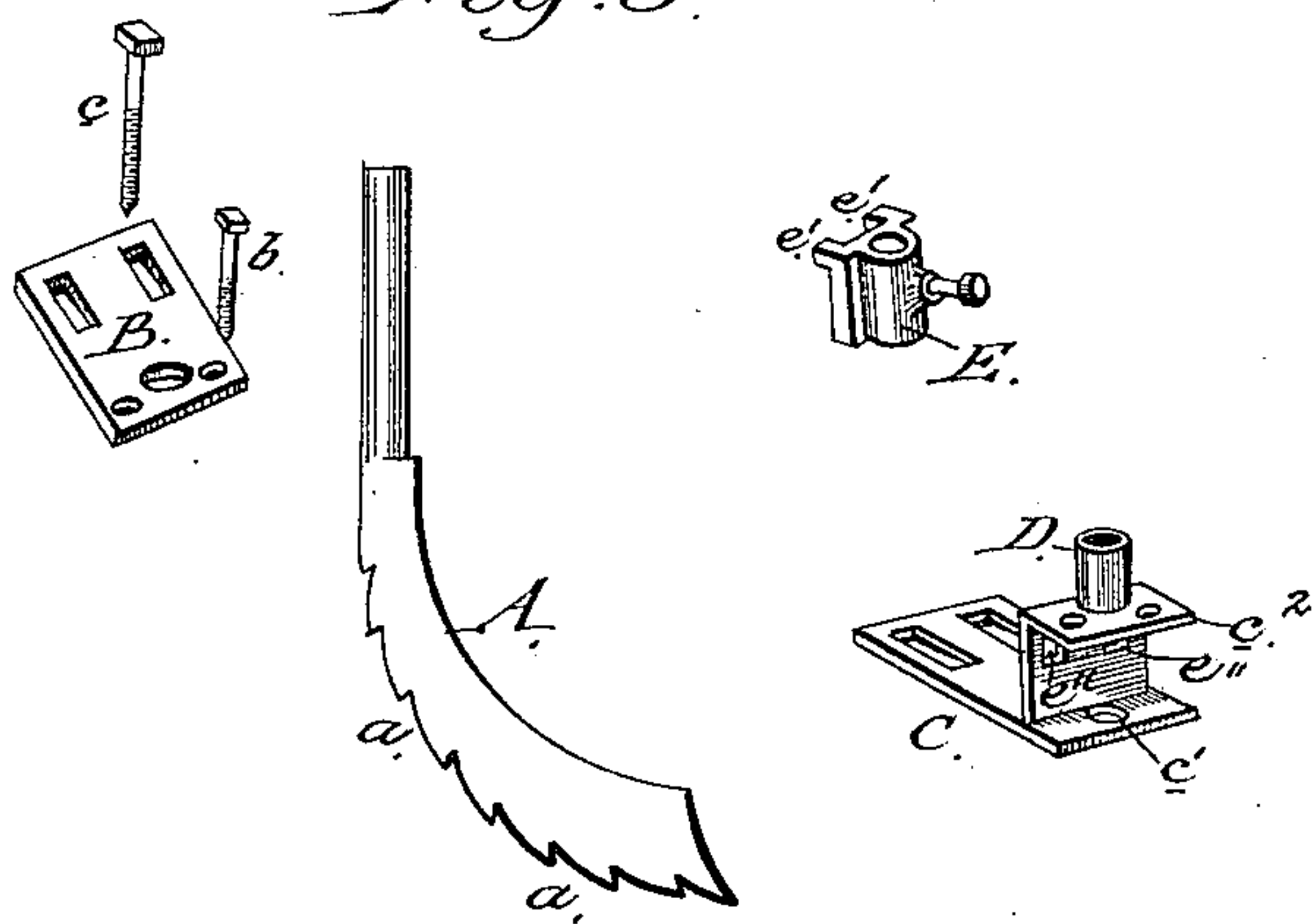
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
*D. W. Fowler,*  
*W. H. Patterson*

Inventor  
*Samuel Barr,*  
By his Attorneys  
*A. H. Evans & Co.*

# UNITED STATES PATENT OFFICE.

SAMUEL BARR, OF McCAUSLAND, IOWA.

## PLOW.

SPECIFICATION forming part of Letters Patent No. 377,226, dated January 31, 1888.

Application filed July 19, 1887. Serial No. 244,696. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL BARR, a citizen of the United States, residing at McCausland, in the county of Scott and State of Iowa, have  
5 invented certain new and useful Improvements in Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a perspective view of a plow with my improvements attached. Fig. 2 is a side elevation of the same, viewed from the land-side of the plow. Fig. 3 represents the colter and fastening devices detached from the plow.

15 My invention relates to plows, colters, and similar agricultural implements, and to the manner of constructing the edge and the means of adjusting and putting the same into effect; and it consists in the construction and combination of devices, hereinafter described and  
20 claimed.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now describe its construction and  
25 indicate the manner in which the same is carried out.

The objects of my invention are, first, to improve the edge of the cutting-tools by substituting for the common smooth edge a broken  
30 line of edges consisting of a system of cutting or slitting points more or less prominent, an important new feature being that the points or serrations of the edge range backward in a succession of their cutting-points, designed  
35 to relieve the drag incident to pulling a long continuous cutting-blade forcibly through the soil. It is a well-ascertained fact that a plow, shovel, or hoe is not worn dull so much by the necessary cutting, which should be quickly  
40 done, as it is by the constant tendency of roots, turf, or fibers mixed with grit to slide back on the edge of the implement, which abrades the edge more than the actual cutting when finally done.

45 The essential purpose of my improved serrated edge is to obviate this difficulty, as no fiber would likely pass this succession of sharp points without being severed. The length of edge in actual cutting-resistance is also much  
50 abbreviated, as the deeper part of the serration is not necessarily kept sharp, as the point in advance anticipates the cut.

To improve the means of putting the invention in shape to secure a better effect as a colter, I arrange a vibrating colter having superior cutting-power, and being lighter in  
55 draft, lighter in weight, easier of construction, and of trifling cost in material. To secure the full value of the serrated edge on a vibrating colter, it is necessary to suspend the colter from  
60 the plow-beam and to curve the colter-blade backward in the form of an arc.

In the drawings, A represents my serrated arc-shaped colter-blade, the curved under edge of which is formed into a system of thin cutting-points, *a*, which, as the plow advances  
65 through the soil, sever the turf, stubble, weeds, &c., by a constant succession of drawing cuts across the sward by the points *a* as they pass, each point deepening the work of the preceding one in turn. The same principle of serrature may be applied to the edge of a plow-share.  
70

It is a well-known fact that the corner or point of any tool cuts easier than its broad  
75 edge. On this principle I resolve the broad edge of a plow into a system of more free-cutting points, thereby saving a large percentage of draft, and also of abraded steel, as nothing is worn from the serrated edge by undue sliding.  
80

Any practical plowman may observe that the outer corner of his steel plowshare, commonly called the "wing," remains comparatively sharp after the rest of the edge is worn  
85 dull. In this and similar cases the wing remains sharp because it has the advantage of cutting or slitting on the principle above described. It is for the purpose of securing the full advantage of this tendency to ease and certainty of cutting and to secure a greater permanency of sharp edge on the plowshare that  
90 I form the entire length of edge into a succession of such free-cutting corners, all having a like backward trend.

95 In order to secure an easy and ready adaptation of the beam-clasp to a plow-beam of any varying angle of surface, whether wood or metal, and to furnish a bearing for the colter-shank, I place the plate B on the upper surface of the beam and the plate C under the  
100 beam, and I secure these plates together by means of the screw-bolts *b b* and *c c*, each of the said plates being slotted, as shown in Fig. 3.



After forming the lower plate, C, with a bearing,  $c'$ , for the colter-shank, the body of the plate extends part of the way up the side of the beam, where it again spreads out in the form of a ledge,  $c^2$ , from which ledge rises the sleeve D as an additional bearing for the colter-shank. This sleeve passes through the top plate, B, as shown in Fig. 2, the plate acting as a support, the plate being free to move up or down on the sleeve. This arrangement also allows the plate to adjust itself to any taper or angle of beam without affecting the line of the bearings of the colter shank or the position of the colter. It is evident that by the use of this sleeve-bearing D and the slotted holes in the plates B and C (see Fig. 3) the range of the beam-clasp is rendered universal as to size and taper of differently-formed beams, whether wooden or iron.

E is an adjusting-block fitted to the colter-shank, (see Figs. 2 and 3,) and provided with a set-screw,  $e$ . By means of this block the colter is adjustable to any desired depth and the vibration of the colter limited, or the colter locked rigidly, as may be required. This adjustment-block has provided on its inner face and at its upper end two projections,  $e' e'$ , which, when the colter is caused to vibrate in its bearings, rock into corresponding depressions,  $e'' e''$ , provided for this purpose in the face of the vertical portion of the plate C.

When it is desirable to use the colter in a rigid position, the position of the adjustment-

block is reversed on the colter-shank, which brings the projections  $e' e'$  squarely and firmly against the face of the plate, when the rigid colter may be readily adjusted to any line of cut or any depth or width of furrow-slice by the set-screw  $e$ .

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

1. The combination, with a plow and plow-beam, of a rearwardly-bent vibrating colter having a series of backwardly-ranged serrations formed on its lower curved surface and a shank capable of rotating or being locked, whereby said colter is fitted to said beam, substantially as described.

2. The combination, with a plow-beam and colter, of the slotted plate B and the slotted plate C, provided with the sleeve-bearing D and depressions  $e'' e''$ , and the adjusting-block E, provided with the projections  $e' e'$  and set-screw  $e$ , all constructed and arranged substantially as and for the purpose herein set forth.

3. In combination with the plow-beam and colter, the beam-plates B and C, provided with slotted bolt-holes, the short bolts  $b$ , and the long bolts  $c$ , substantially as and for the purpose set forth.

SAMUEL BARR.

Witnesses:

H. E. GORBER,

T. W. McCAUSLAND.