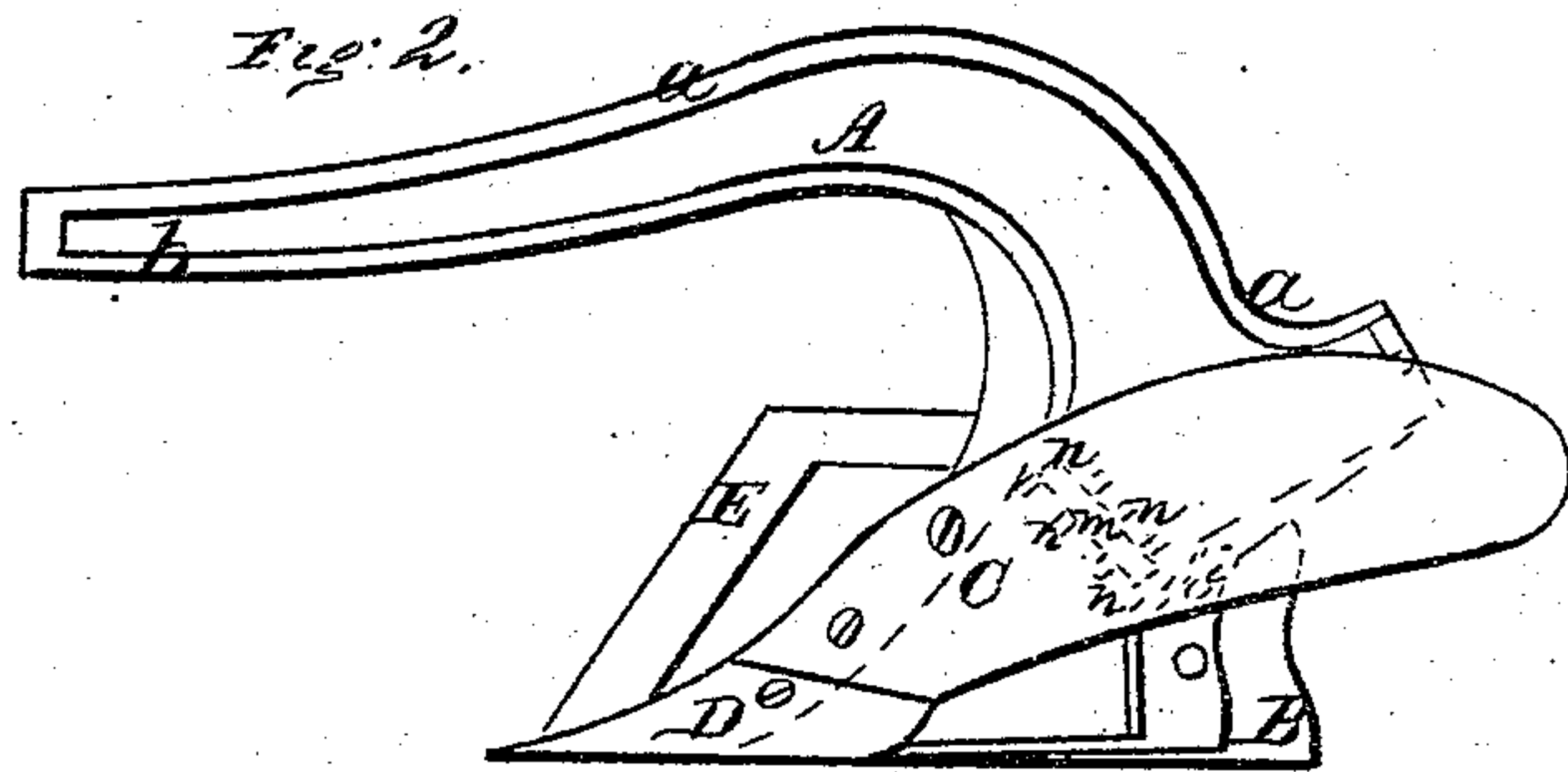
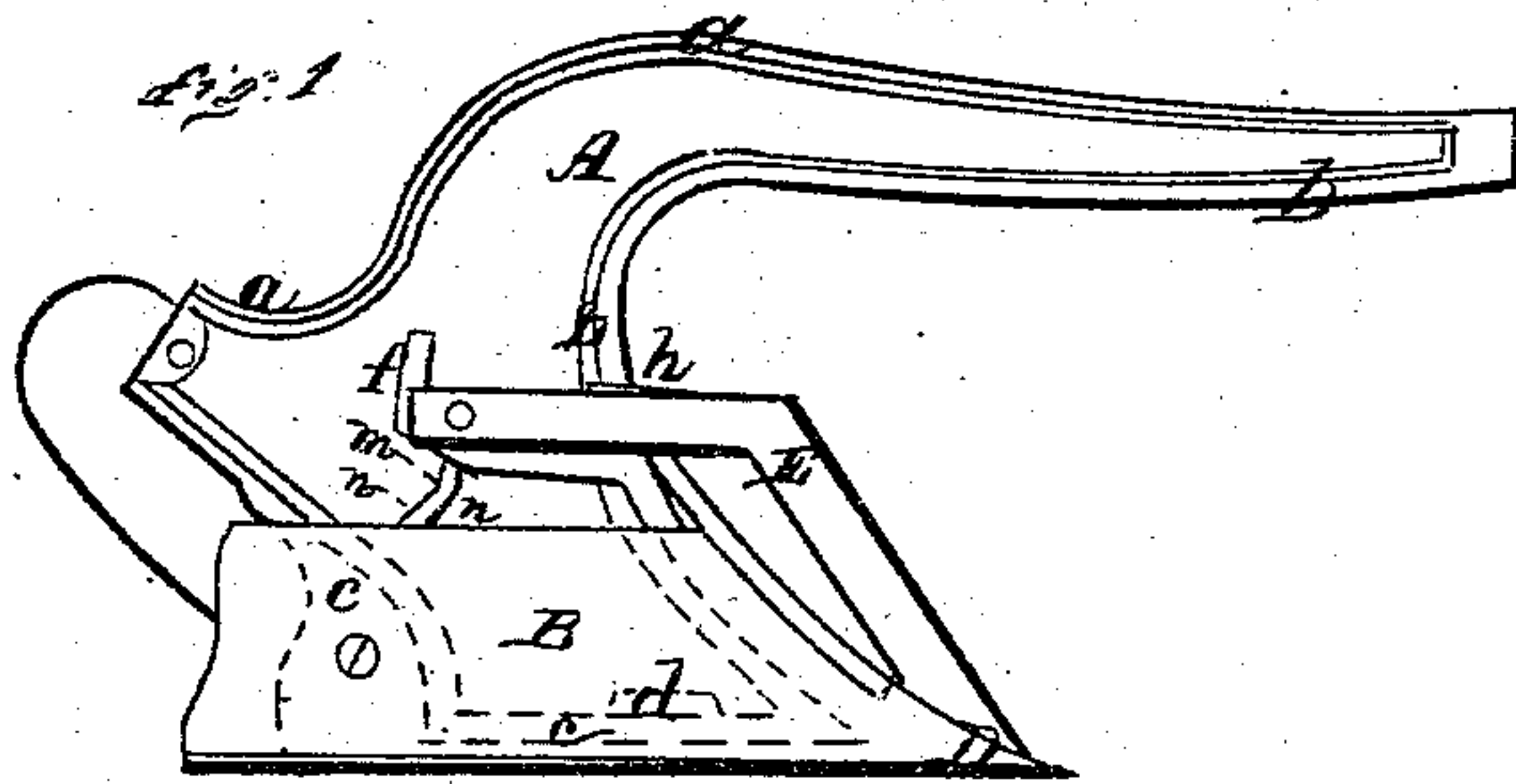


*E. Ball Jr,*

*Plow.*

*No. 33853.*

*Patented Aug 17. 1869.*



*Witnesses*

*Cornelius Cox*  
*Leopold Baum*

*Inventor.*

*E. Ball Jr*  
*By* *Charles H. Mason*  
*Atty*

# UNITED STATES PATENT OFFICE.

EPHRAIM BALL, JR., OF CANTON, OHIO.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. 93,853, dated August 17, 1869.

*To all whom it may concern:*

Be it known that I, E. BALL, Jr., of Canton, in the county of Starke, and in the State of Ohio, have invented certain new and useful Improvements in Plows; 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.

The nature of my invention consists in so constructing a plow as that mold-boards, points, or landsides made of different materials, or of different shapes and angles, may be attached to the same plow, to adapt it to the different kinds of plowing.

In accomplishing this object great difficulty has been experienced where the handles have been in any way connected with the movable parts of the plow. For instance, it will be readily seen that in case the farmer desired to remove his cast-iron mold-board and attach one made of cast-steel, any slight variation in the angle or curve of the latter would prevent its fitting up snugly to the handles. To obviate this difficulty I make the cast-iron beam the basis of attachment to all the other parts of the plow, so that all these parts are entirely independent of each other, and hence can be removed and replaced by others of a different shape without interfering with each other, or with the general character of the plow.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side view of the plow, showing the landside; and Fig. 2 is a view of the other side of the plow, showing the mold-board.

A represents a cast-iron plow-beam, of flat form perpendicularly, and curved form longitudinally, and having a flange, *a*, projecting on both sides, along the entire upper edge, and another flange, *b*, projecting on both sides along its lower edge. Along the bottom edge of the plow-beam A is a shoulder or offset, *c*, for the attachment of the landside B; and the flange *b* is suitably cut out, so as to allow the front edge of the landside to project slightly in front of the same. The landside B is, on its inner side, provided

with a small block, *d*, which rests on the shoulder *c* when the landside is secured to the beam. The front part of the beam A has a flat surface for the attachment of the share and mold-board. The mold-board C is secured, at its front edge, to the flat surface of the beam, and its rear part is supported by a brace, the ends of which rest in sockets *i i*, one on the side of the beam and the other on the under side of the mold-board. The share D, which is suitably cut out on its under side, so as to admit the front point of the beam, has, on its top and front, a groove, in which the lower end of the cutter-bar E is inserted. The cutter-bar E runs back through a dovetailed opening in the front flange, *b*, of the beam, and rests on a raised surface or shoulder, *f*, on the landside of the beam. It is fastened by a bolt, *g*, in rear of the front flange, *b*, and also with a three-cornered wedge, *h*, or pin in the dovetail.

For the purpose of attaching the handles to the beam, there is a groove on each side of the upper rear portion of the beam, through which grooves the handles are to extend down on the flat portion of the beam. They are pivoted at the shoulder by a bolt passing through, and are secured at their lower ends at any angle desired by means of a bolt passing through a curved slot, *m*, in the beam. On each side of this curved slot are sharp projections *n n*, which hold the handles at any point desired.

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

1. So constructing a metal plow-beam as that it is made the basis of attachment for all the other parts of the plow, and that these parts, when so attached, are independent of each other, substantially as herein set forth.

2. The plow-beam A, constructed as described, and provided with flanges *a* and *b*, shoulder or offset *c*, raised surface or shoulder *f*, curved slot *m*, and projections *n n*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of January, 1869.

EPHRAIM BALL, JR.

Witnesses:

CHAS. L. REIFSNEDER,  
PHILIP EVERHARD.