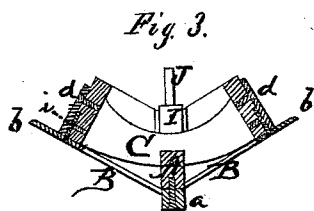
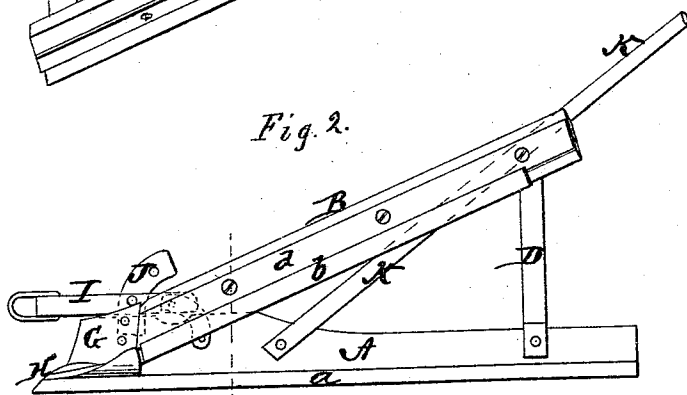
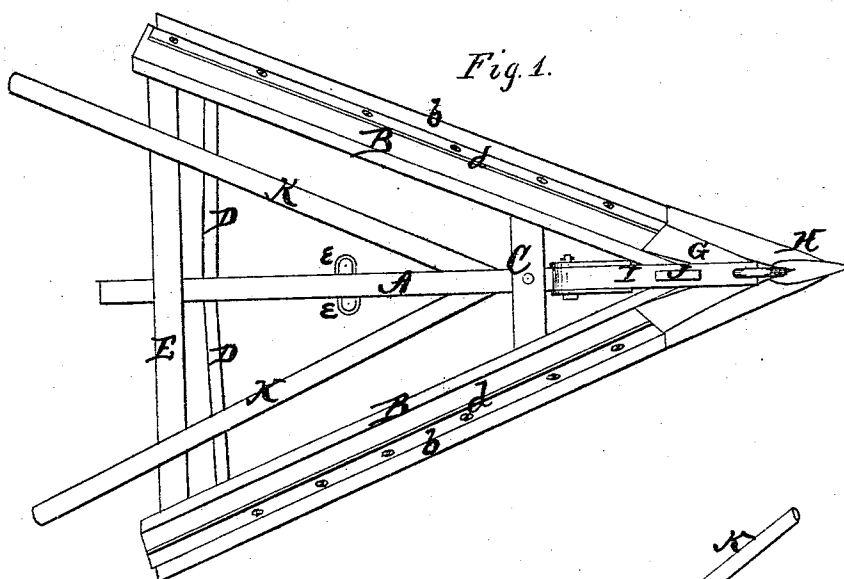


JOHN KELLY & W. H. HENNIS.

Improvement in Ditcher.

No. 123,262.

Patented Jan. 30, 1872.



Witnesses:

Henry A. Miller  
C. L. Ewert.

Inventor

John Kelly  
Wm H. Hennis  
per Alexander Mason  
Attys.

## UNITED STATES PATENT OFFICE.

JOHN KELLY AND WILLIAM H. HENNIS, OF WINAMAC, INDIANA.

## IMPROVEMENT IN DITCHING-PLOWS.

Specification forming part of Letters Patent No. 123,262, dated January 30, 1872.

*To all whom it may concern:*

Be it known that we, JOHN KELLY and WILLIAM H. HENNIS, of Winamac, in the county of Pulaski and in the State of Indiana, have invented certain new and useful Improvements in Ditching-Plow; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of parts forming a ditching-plow, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, and Fig. 2 a side elevation of our machine. Fig. 3 is a transverse vertical section of the same through line *x x*, Fig. 2.

A represents the keel of our ditcher, to the front end of which are attached wings B B. These wings are supported by a head-block, C, near the front ends, and by inclined braces D D near the rear ends; also by a straight brace, E, from wing to wing, as shown. The wings B B rise from the front end toward the rear, about one foot in every two, and they also separate from the center toward the rear at about the same rate. The keel A is shod with iron, *a*, and a sharp cutter, G, is attached to the front ends of the wings and keel. A share, H, is also attached at the front end, forming a line with the side cutters *b b*, which are attached to and at right angles with the wings. The outer face of the wings are also lined with metal strips or bars *d d*. The side cutters *b b* have projections *i* on their upper sides which are let into the wings and fastened by screws or rivets, the strips *d d* afterward covering the same. I represents a draft-

beam fastened to the keel by a bolt or other suitable means, and a curved iron, J, attached to the keel passes through a slot or mortise in the draft-beam, whereby the run of the machine is gauged, as the draft-beam may be set at any angle desired. K K are the handles, attached as shown in Figs. 1 and 2. The ditcher thus constructed works from the center and throws the dirt right and left, parting the dirt in front by the cutter. The dirt then falls back on the wings, and goes to the top of the ditch. In the sides of the keel A are two iron staples, *e e*, to be used when the horses are put on the banks of the ditch. Two long poles are put in these staples to guide the machine, without the operator going down into the ditch. When the machine is put in the ditch with the horses on the banks the draft-beam I must be elevated.

The share and cutter may be cast in one piece, and the side cutters made in sections, so that they may be used for any length of wing.

This ditcher may be used for cleaning out old ditches as well as for making new ones.

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

The combination of the keel A, metallic base *a*, spear-pointed at its front end, V-shaped cutter G, share H secured under the cutter and in a slot in the spear-point, and the metal-faced wings B B braced obliquely upward and outward, as shown, and provided with the side cutters *b b* on their lower edges, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 9th day of August, 1871.

JOHN KELLY.  
WILLIAM H. HENNIS.

Witnesses:

G. T. WICKERSHAM,  
P. J. FALVEY.