

(No Model.)

W. HEITHERSAY.
REVERSIBLE PLOWSHARE.

No. 428,842.

Patented May 27, 1890.

Fig. 4.

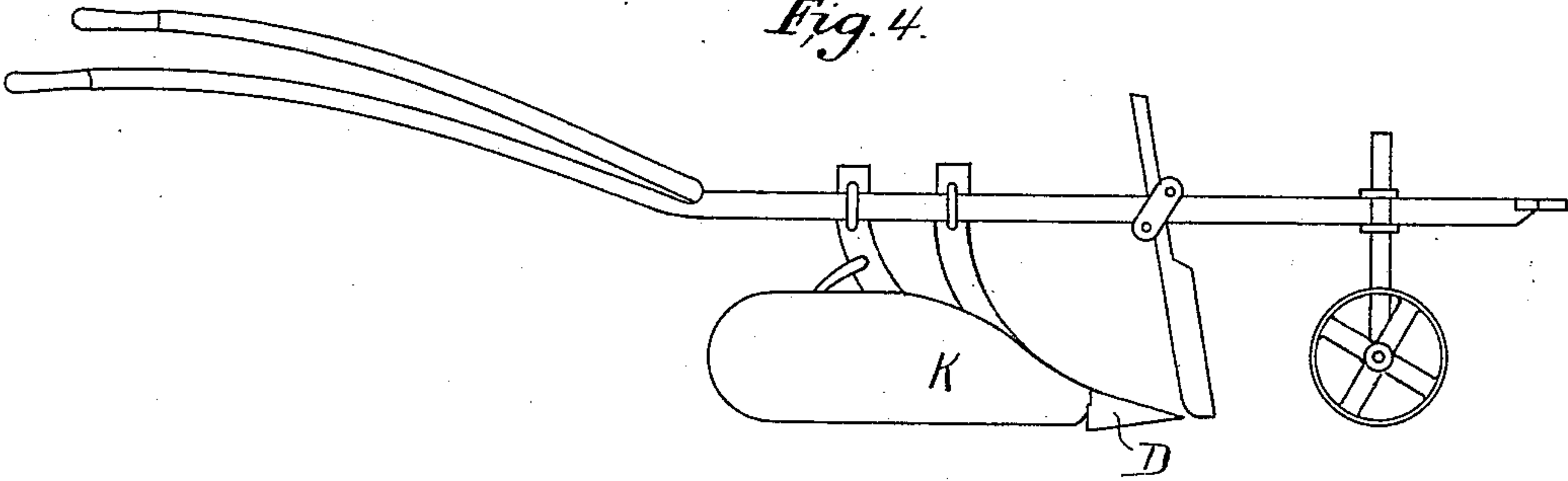


Fig. 3.

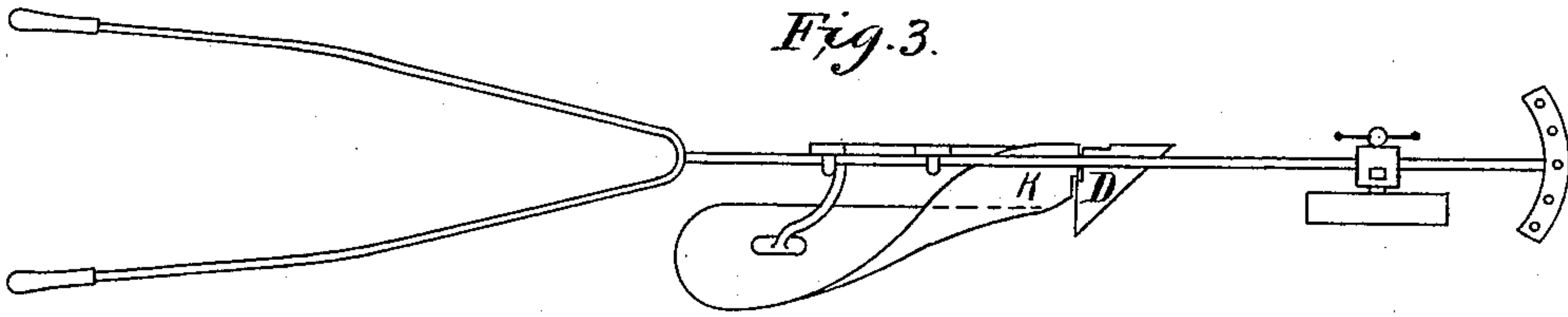


Fig. 2.

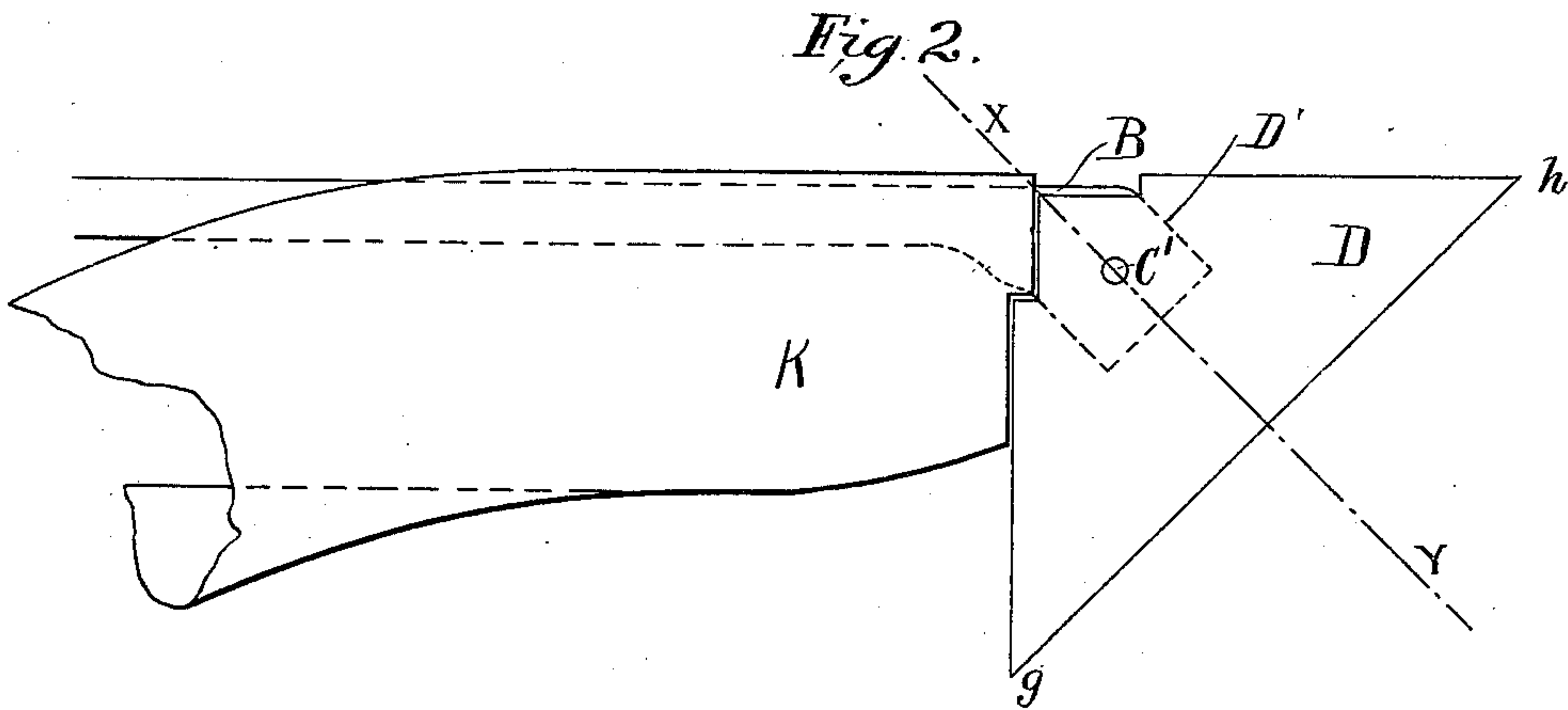
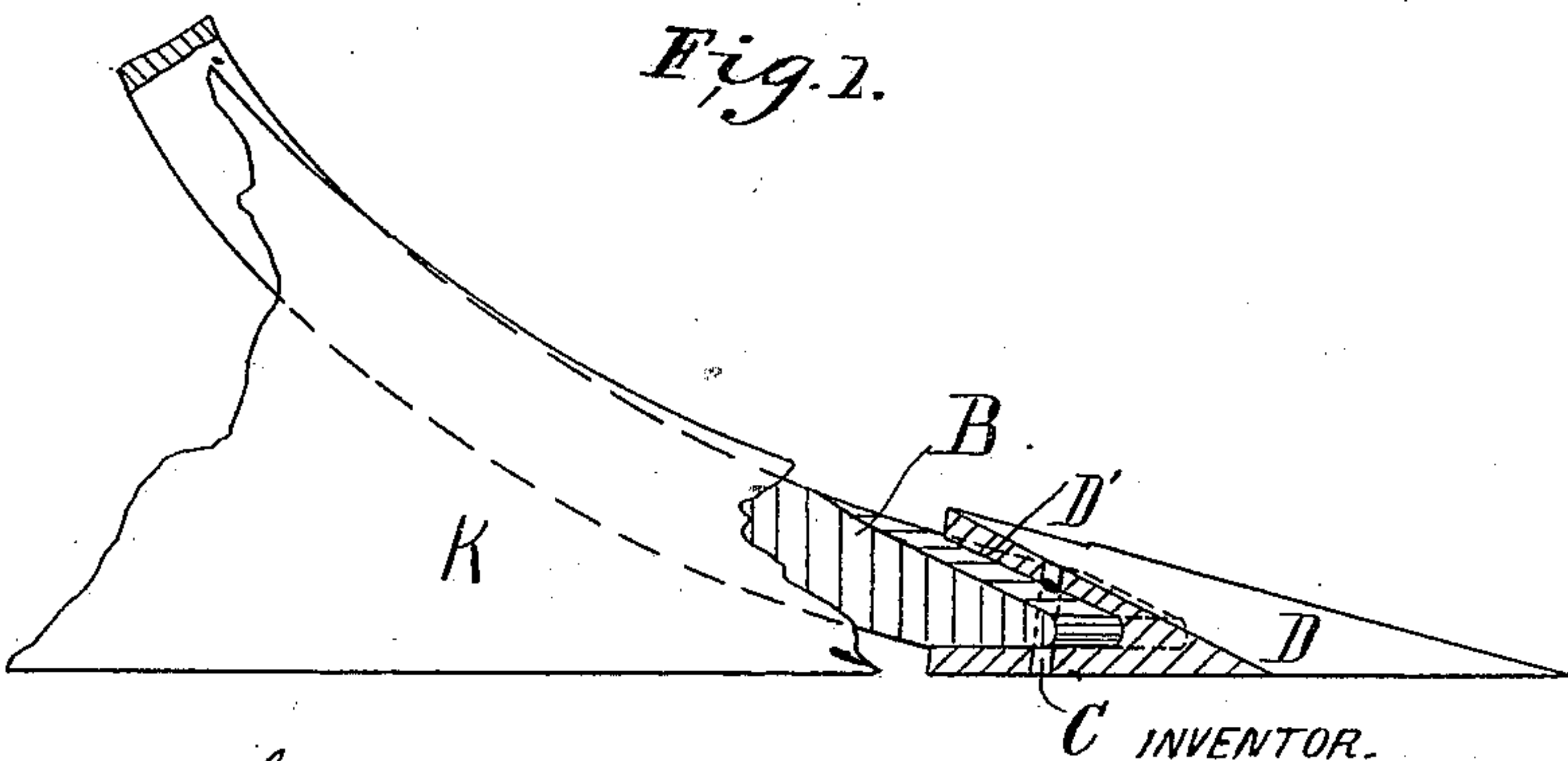


Fig. 1.



WITNESSES.

Fred G. Dieterich
Geo. W. Evans

C INVENTOR.

William Heithersay.

BY *Munn & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM HEITHERSAY, OF PETERSBURG, ASSIGNOR TO HIMSELF, AND
ERNEST EYSTON HARROLD, OF ADELAIDE, SOUTH AUSTRALIA.

REVERSIBLE PLOWSHARE.

SPECIFICATION forming part of Letters Patent No. 428,842, dated May 27, 1890.

Application filed May 25, 1889. Serial No. 312,096. (No model.) Patented in South Australia June 18, 1886, No. 691; in Victoria August 4, 1887, No. 5,223; in New South Wales September 13, 1888, No. 934, and in Queensland September 14, 1888, No. 573.

To all whom it may concern:

Be it known that I, WILLIAM HEITHERSAY, a subject of the Queen of Great Britain, and residing at Petersburg, in the colony of South Australia, have invented certain new and useful Improvements in Reversible Shares for Plows, Scarifiers, and Cultivators, (and which have been patented in the following countries: South Australia June 18, 1886, No. 691; Victoria, August 4, 1887, No. 5,223; New South Wales, September 13, 1888, No. 934, and Queensland September 14, 1888, No. 573,) of which the following is a specification.

The object of my invention is to provide a double-pointed share which can be reversed when the forward point becomes blunt, and thereby cause the reversed blunt point to be automatically sharpened in the further use of the share.

The invention will first be described, and then specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a side view, about quarter-size, of lower part of standard, mold-board, and foot, showing section of reversible share on line X Y of Fig. 2. Fig. 2 is a plan, about quarter-size, of share, foot, and portion of mold-board. Fig. 3 is a plan of plow fitted with reversible share, omitting colter. Fig. 4 is a side view of plow fitted with reversible share.

D is the improved plowshare, which is triangular in plan and of gradually-increasing thickness from its cutting-edge, which is the base of the triangle, rearwardly. A recess D' is formed in the rear side of the share, where it is the thickest, and where the apex of the triangle is formed. Apertures C are formed in the top and bottom walls of the recess D'. Where the sides of the triangle join the base of the triangle, the penetrating points *g h* are formed.

The foot B of the plow or other standard is not projected in the line of progression of the plow, but is at an angle of forty-five degrees thereto. The bottom of foot B and the bottom of the share D are parallel with the surface of the ground, or may, if preferred, for hard ground be arranged so as to give a

slight dip to the point or nose of the share. The cutting-edge of the share lies between the letters *g h* and is at an angle of forty-five degrees with the direction of progression of the plow.

In Fig. 2 of the drawings the point *h* forms the plow-point, and *g* the wing of share. The share is secured on the foot B by a pin C', which is passed through a hole in the center of foot and a corresponding hole through the share. The hole in the share may be produced by a core used in the process of casting or by drilling or otherwise.

The shares may be manufactured of cast-iron, malleable cast-iron, wrought-iron, or steel.

The share is used as an attachment below and in front of a mold-board—such as K—usually found in the description of plow in which renewable shares are accustomed to be used. One form of such plow is shown in my drawings herewith. The shape of the plow-body and standard may be varied in any way not inconsistent with the retention of the foot, as shown.

In operation, when the share, as shown in the drawings, has been used for a day or more the point *h* will be worn blunt and would in any ordinary plowshare have to be sharpened by chipping or other means involving great delay or else a new share would have to be substituted. By my invention the point *g* having become sharpened by the action of the plow, the pin *c'* is knocked out, the share is turned over, and thus reversed, so that the point *g* takes the place of the point *h* and the point *h* takes the place of the point *g*. The pin is replaced and the plow set to work again. By the time the point *g* gets blunt the point *h* has been again sharpened, and the reversal takes place again, and so on until the share is worn close up to the socket. The corners of the share at *g* and *h* may be slightly rounded, if so preferred, and otherwise varied to suit the shapes of different mold-boards without departing from my invention.

I do not limit myself to the exact configuration and details of construction herein set forth.

Having thus described my invention, what

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

1. The combination, with the standard having a foot B projected laterally at an angle, of a reversible approximately triangular share D, secured at its apex to the said foot, the cutting-edge of the share being the base of the triangle between the points *g h*, substantially as set forth.
2. The combination, with a plow having a foot B in front of the mold-board and projected laterally at an angle of about forty-five degrees, of a reversible share D, triangular in plan and provided with a recess D' at its apex receiving the said foot, the cutting-edge of the share being between the points *g h*, or formed by the base of the triangle, and at an angle to the line of progress, substantially as set forth.

3. A plowshare D, approximately triangular in plan and increasing in thickness from its base or cutting-edge *g h* rearwardly to its apex, having apertures C in its top and bottom walls, the said edge *g h* standing at an angle of forty-five degrees to the line of progress when the share is in its operative position, and a socket D' in said apex, substantially as set forth.

In testimony that I claim the foregoing as my specification I have signed my name, in presence of two witnesses, this 29th day of March, 1889.

WILLIAM HEITHERSAY.

Witnesses:

CHARLES NICHOLAS COLLISON,
GEORGE EDWIN PASCOE.