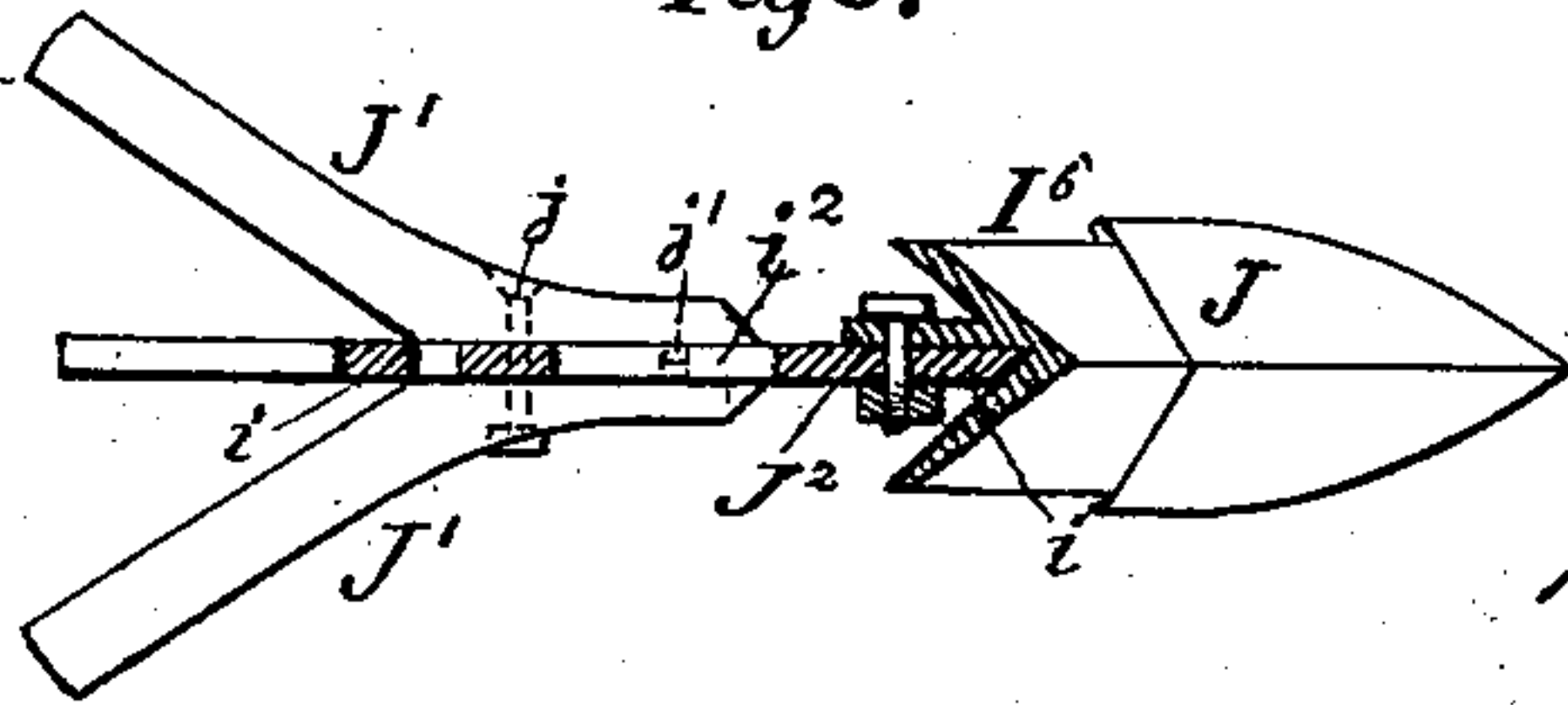
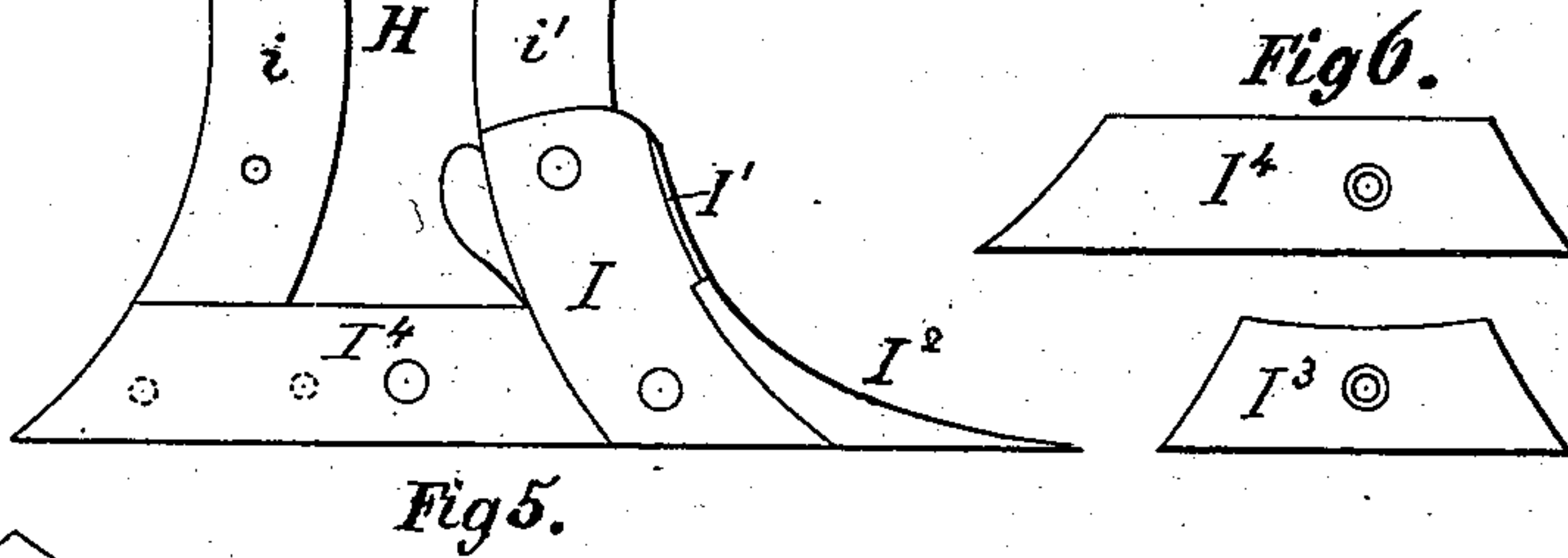
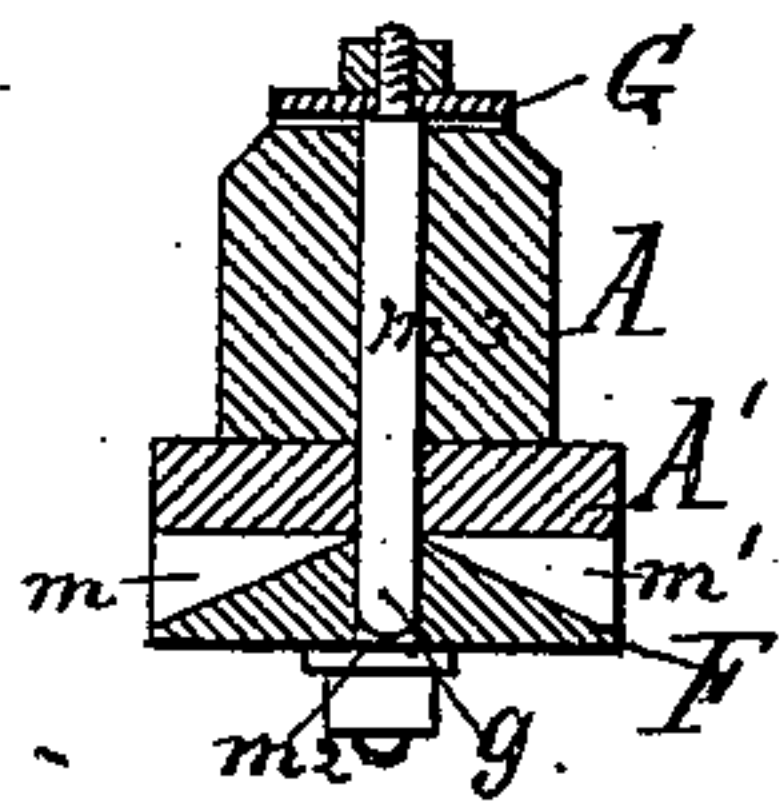
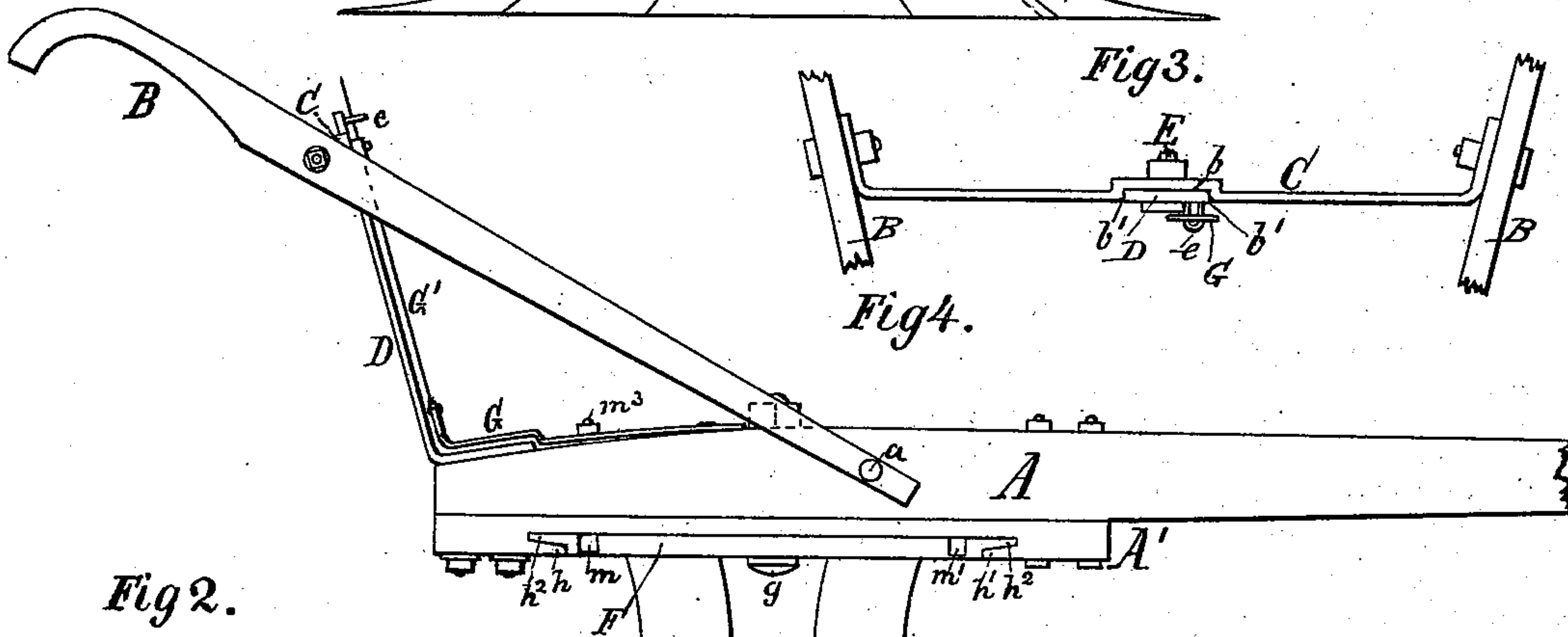
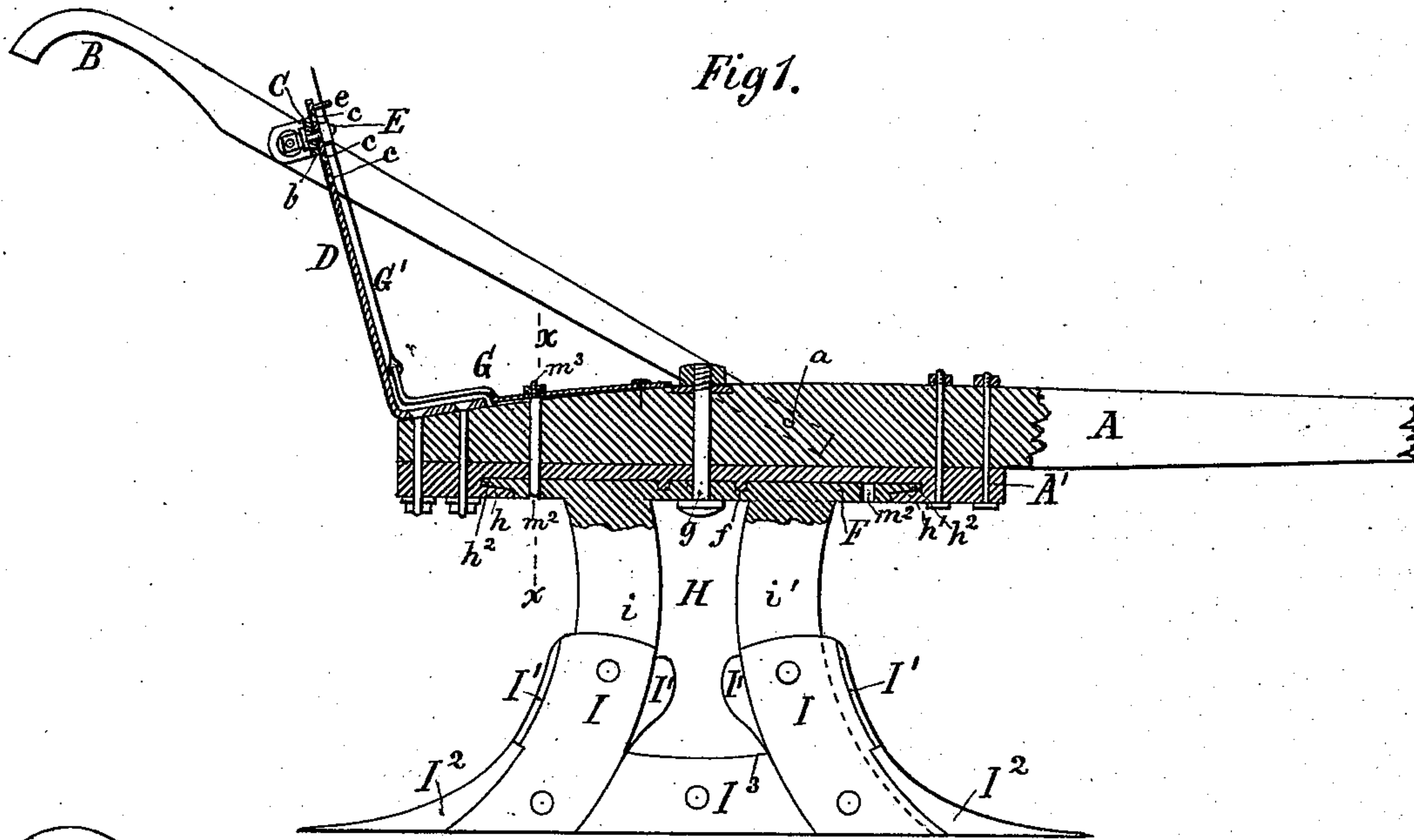


(No Model.)

T. H. WHITAKER.  
SIDE HILL REVERSIBLE PLOW.

No. 376,931.

Patented Jan. 24, 1888.



Witnesses:  
J. P. Theo. Lang.

Robt. L. Fenwick

*Inventor:*

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# UNITED STATES PATENT OFFICE.

THOMAS H. WHITAKER, OF YOUNGSVILLE, NORTH CAROLINA.

## SIDE-HILL REVERSIBLE PLOW.

SPECIFICATION forming part of Letters Patent No. 376,931, dated January 24, 1888.

Application filed June 16, 1887. Serial No. 241,506. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS H. WHITAKER, a citizen of the United States, residing at Youngsville, in the county of Franklin and State of North Carolina, have invented certain new and useful Improvements in Side-Hill Reversible Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in certain novel constructions, arrangements, and combinations of parts in a plow having a pair of mold-boards and a pair of shares with points, whereby one mold-board and share with point can be readily substituted for another at the completion of the plowing of a furrow or at any point desired. The construction is also such that the plow can be conveniently converted into and used as a single mold-board plow, and also into a shoveling and leveling plow, and the plow in all of its forms is so constructed that its handles can be adjusted to suit persons of high or low stature.

Figure 1 of the accompanying drawings is a view of the improved double-mold-board plow as seen from the land side, a portion of the same being broken away to show the spring fastening bolt or pin, as well as other portions, more clearly. Fig. 2 is a vertical transverse section in the line  $xx$  through the fastening bolt or pin, showing the locking bolt or pin hole and inclined transverse ways for the locking pin or bolt to move upon in its passage into the said locking bolt or pin hole. Fig. 3 is a top view of a portion of the plow. Fig. 4 is a side view of the plow, showing it adapted for use as an ordinary single-mold-board right or left hand plow. Fig. 5 is a horizontal section of the plow as adapted for cultivating small growing cotton or other crops and leveling the land between the rows of plants, and Fig. 6 is a side view of the two interchangeable landside-bars.

A is the plow-beam, and B B the handles, pivoted at  $a$  to the beam.

C is a flat cross-bar with its ends bent angularly and applied between the handles. At the middle of this bar a seat or depression,  $b$ , forming shoulders  $b' b'$ , is made, and into this

depression an upright standard, D, is seated, said standard being fastened to the beam and extended up above the cross-bar C, and confined to the said cross-bar by means of a bolt, E, as shown. In the standard a number of adjusting-holes,  $c$ , are provided, by which the height of the handles can be regulated according to the stature of the plowman. The cross-bar C, with its depressed seat  $b$  and shoulders  $b' b'$ , serve to keep the handles and the standard D steady and firm against sidewise movement. The screw-bolt E, while it fastens the bar to the standard, also serves, with the holes  $c$ , as the means by which to secure the handles after they have been raised or lowered at their rear ends for the purpose of accommodating the plow to a man or a boy.

The plow-beam has a strong plate, A', bolted to its under side, and from the center of this plate a large cylindrical arbor,  $f$ , projects. Beneath this plate a revolving plate, F, is pivoted by means of the sustaining or relieving arbor  $f$  and a pivot-bolt,  $g$ , passed down through the plow-beam and the plates A' and F, as shown. The plate A' is provided with two beveled lips,  $h h'$ , one at each of its ends, and over said beveled lips of the plate A' the beveled ends  $h^2 h^2$  of the plate F stand when the plow is in operation.

On top of the plate F, and on each side of the bolt or pin locking hole  $m^2$  therein, are provided transverse pin or bolt ways  $m m'$ , which are inclined downwardly in opposite directions from the said pin or bolt locking hole  $m^2$ , as shown. In line with the pin or bolt locking hole  $m^2$  a pin or bolt,  $m^3$ , is passed down through the beam and plate A' at a point near the rear end of the said plate A'. This bolt or pin is connected to a spring-plate, G, which is fastened by one of its ends to the beam, forward of the bolt or pin, and to an operating-rod, G', which is connected, by a guide-eye,  $e$ , or otherwise, suitably to the central handle-supporting standard, D, near its top. By this construction and arrangement the plate F, after being unlatched by the plowman and has become reversed end for end, will automatically relatch itself, this latter operation being accomplished by moving the bolt or pin out of the locking-hole  $m^2$  into either of the inclined ways leading out of and into the pin or bolt



locking hole  $m^2$ . This automatic action is important, as it enables the plowman to use both of his hands for controlling the plow and horse or horses while the plate F is being reversed  
 5 end for end. With my construction it is only necessary to withdraw the bolt or pin and start the reversing movement slightly, whereupon the plowman's hand may be withdrawn from the mechanism which operates the bolt or pin  
 10 and used for controlling the plow and horse or horses.

If preferred, the under side of the beam A may be constructed in the same manner as the plate A', in which case said plate A' would not  
 15 be used, and the beam would be of metal.

To the plate F a double standard-plate, H, having two upright standards,  $i$   $i'$ , and a horizontal connecting-limb,  $i^2$ , is attached in any suitable manner. This plate is adapted for  
 20 receiving front and back foundation blocks or seats, I, mold-boards I', and shares I<sup>2</sup>, with points, as shown, and between the pairs of foundation-blocks and mold-boards and shares with points a short landside bar, I<sup>3</sup>, is attached  
 25 to the limb  $i^2$ .

In order to make the double standard-plate H available for use with the parts forming one of the plowing-structures, as shown in Fig. 4, I have provided an auxiliary landside, I<sup>4</sup>, which  
 30 is of greater length than the landside-bar I<sup>3</sup>.

The standard-plate H is adapted for receiving on either of its upright portions  $i$   $i'$  a shovel, J, having a right and left bevel, and a saddle, I<sup>6</sup>, having a bolting-flange, J<sup>2</sup>, and in rear of  
 35 this shovel wings J' J', for leveling the land

between the rows of cotton or other plants, can be applied to the limb  $i^2$  and fastened by bolts  $j$  and dowels  $j'$ , as shown in Fig. 5.

My improvements are specially useful in the construction of plows for cultivating cotton 40 and corn fields, while its convenience of manipulation for the various uses mentioned and its cheapness will insure its adoption for many uses, I think.

What I claim as my invention, and desire to 45 secure by Letters Patent, is---

1. In a double-mold-board reversible plow, the combination of the double standard-plate H, revolving latching-plate F, provided with the pin-holes  $m^2$  and inclined transverse pas- 50 sage-ways  $m$   $m'$ , the plow-beam provided with lips  $h$   $h'$ , and the vertical moving pin or bolt  $m^3$  on a longitudinal spring-plate, G, connected to the operating-rod G', substantially as and for the purpose described. 55

2. The combination, in a reversible plow, of the beam A, standard H, the rotating standard-plate F, locking-plate A', a spring latching device, a landside, and wings J', the standard of the said plow being adapted to receive 60 the blocks or seats I and mold-boards I' for a reversible plow, or the saddle I<sup>6</sup>, shovel J, wings J', and interchangeable landsides, substantially as shown and described.

In testimony whereof I affix my signature in 65 presence of two witnesses.

THOMAS H. WHITAKER.

Witnesses:

ROBT. L. FENWICK,

J. P. THEO. LANG.