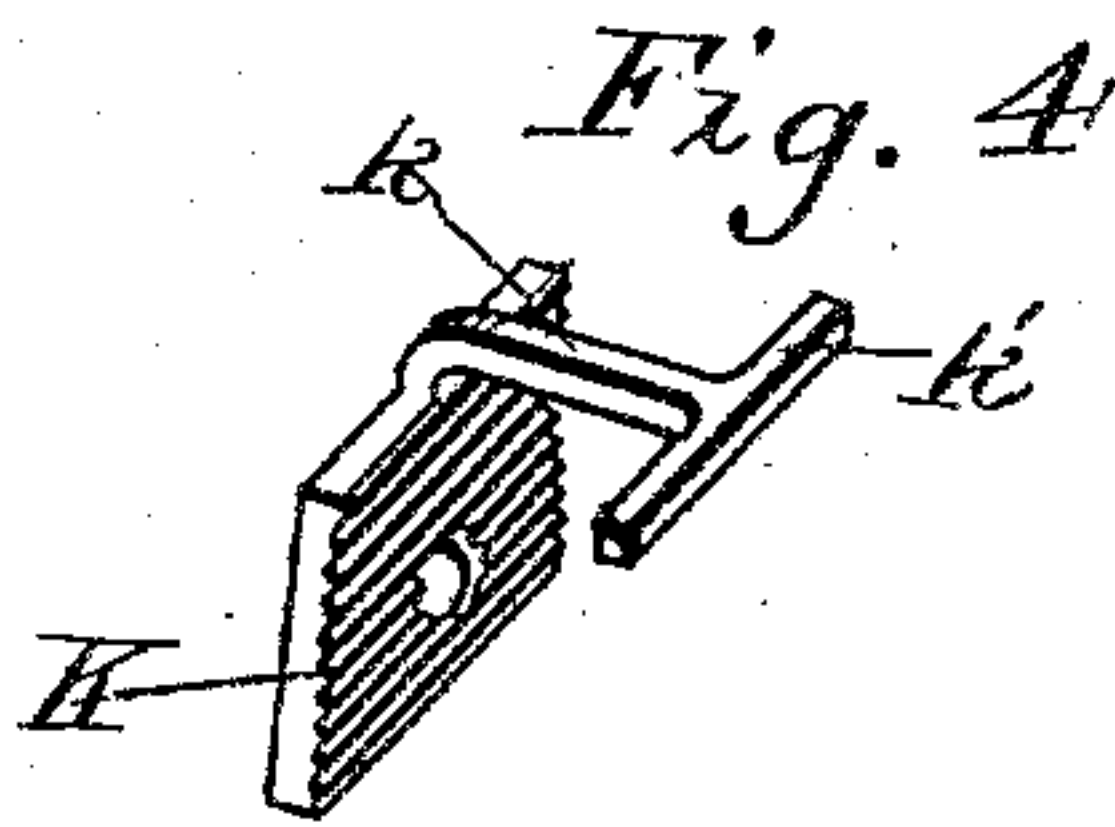
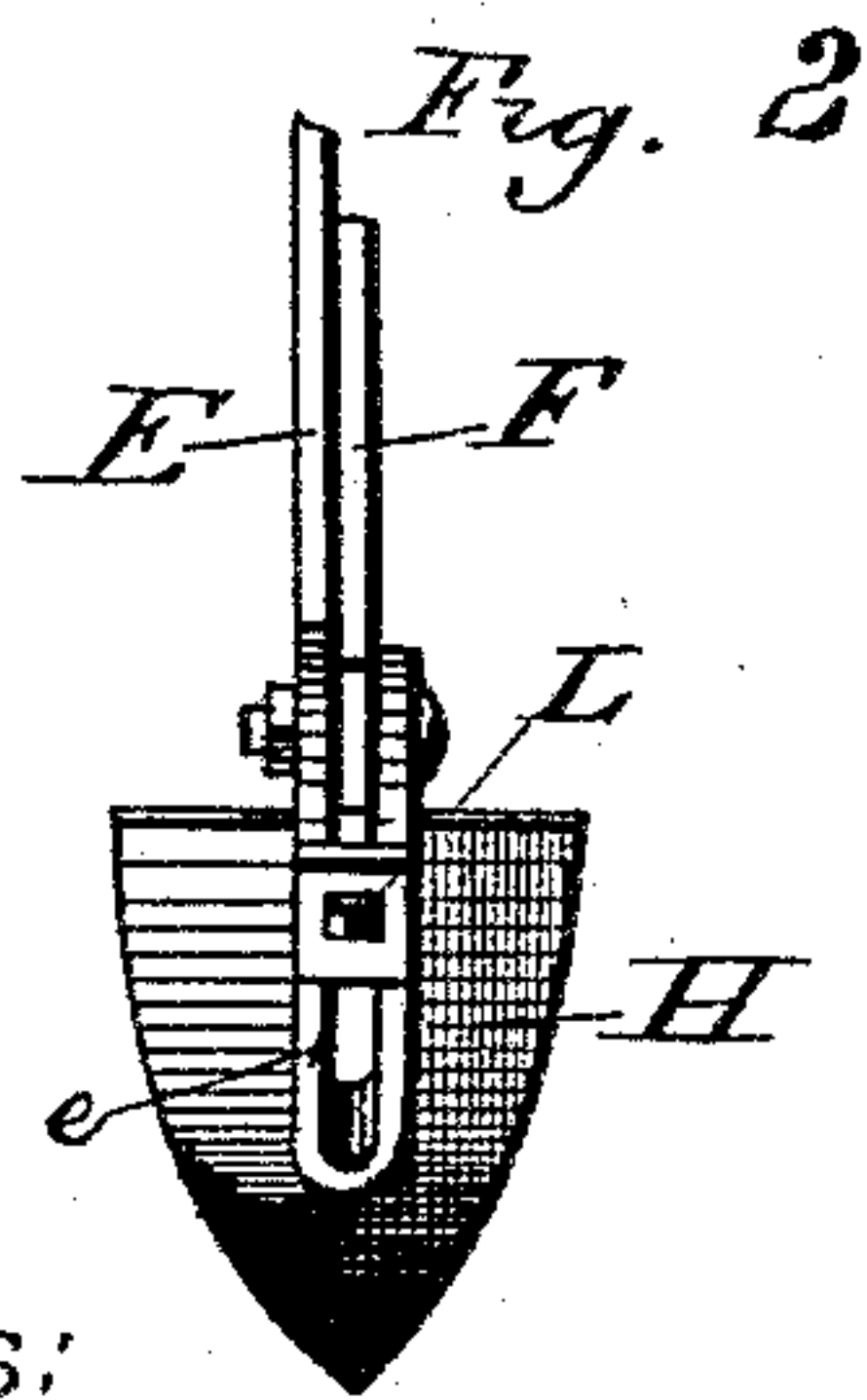
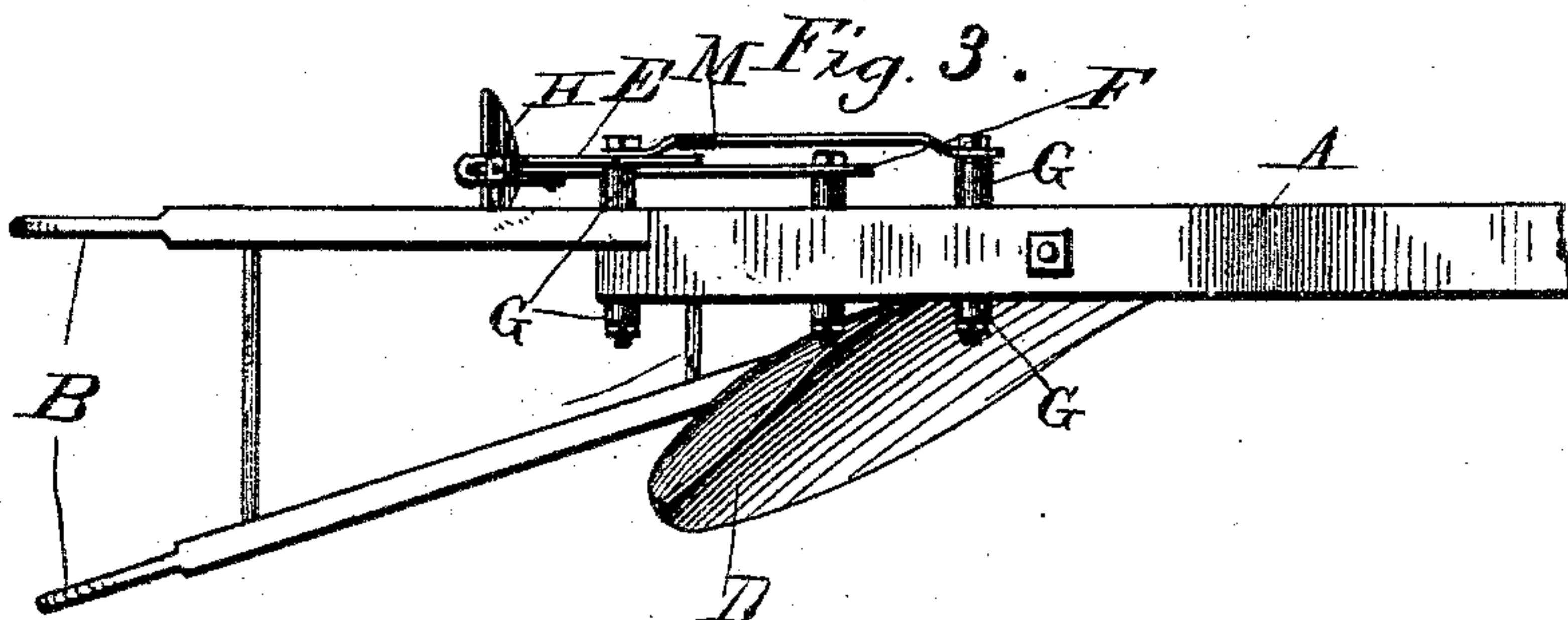
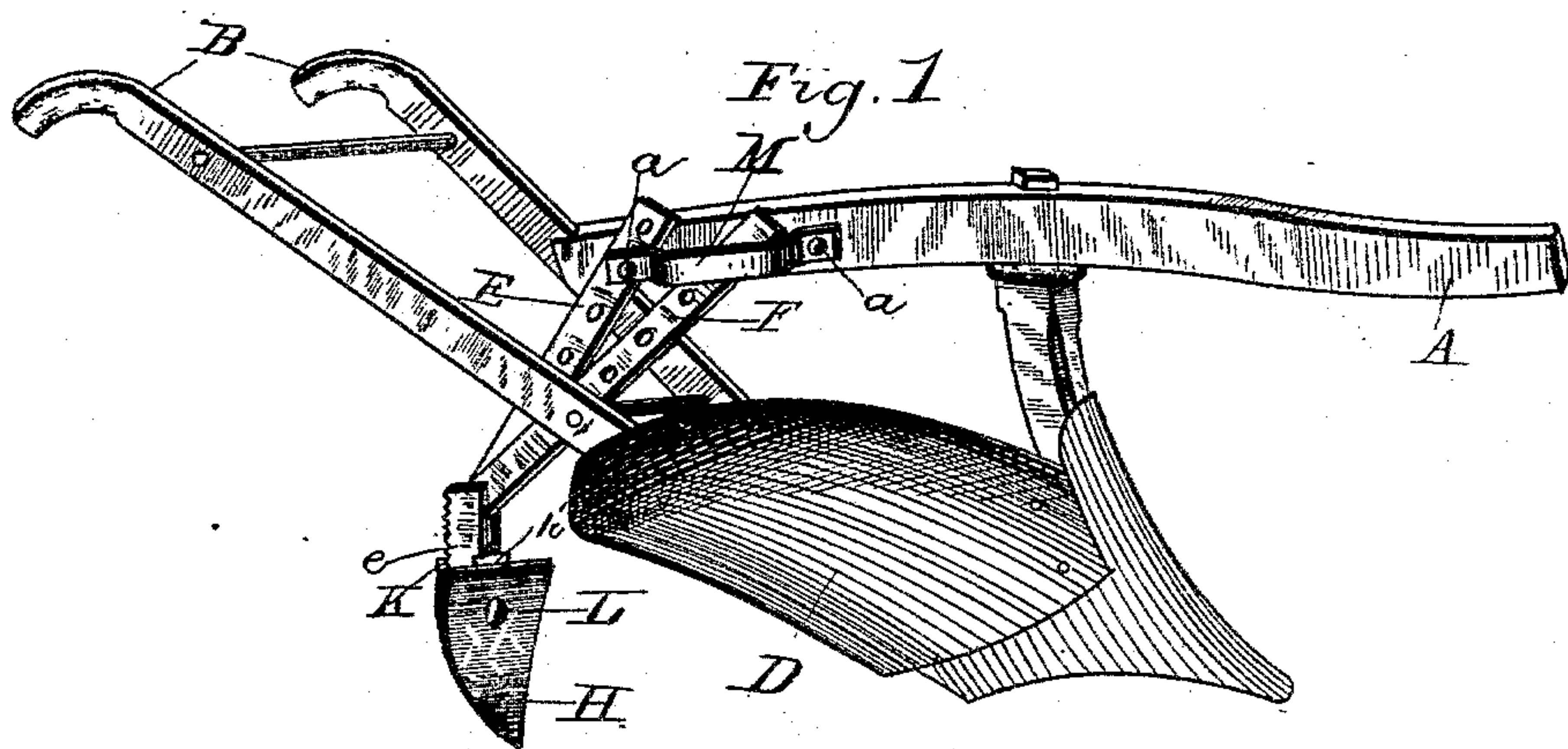


(No Model.)

Z. E. STONE.
PLOW.

No. 414,456.

Patented Nov. 5, 1889.



Witnesses:

F. R. Cornwall
L. S. Bacon

Inventor:

Z. E. Stone
Joseph H. Hunter
his atty.

UNITED STATES PATENT OFFICE.

ZEBEDEE E. STONE, OF MOUNT PLEASANT, TEXAS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 414,456, dated November 5, 1889.

Application filed July 3, 1889. Serial No. 316,395. (No model.)

To all whom it may concern:

Be it known that I, ZEBEDEE E. STONE, a citizen of the United States, residing at Mount Pleasant, in the county of Titus and State of Texas, have invented certain new and useful Improvements in Plows, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in attachments for turning-plows; and it consists in the construction and arrangement of parts hereinafter described and claimed.

The object of my invention is to provide an attachment for plows which may be used as a subsoiler, a dirter, or a cultivating attachment.

A further object of my invention is to provide a cheap, easily-adjusted, strong, and durable attachment for plows for the purposes above mentioned.

I attain these objects by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 is a perspective view of a plow with the attachment adjusted to serve as a subsoiler. Fig. 2 is a rear view of same. Fig. 3 is a top plan view with attachment adjusted to serve as a cultivator; and Fig. 4 is a detail view of the attaching device for the tooth.

In the drawings, A represents the beam of a plow; B, the handles, and D the mold-board.

E represents a detachable and adjustable standard formed with an inclined perforated upper end and a straight lower portion, which is bent up to form a U-shaped foot, as *e*. The upper end of this portion *e* has a perforation, through which passes a pin securing the lower end of an oblique brace-bar F between the ends of the foot. The standard E and brace F are secured to the inner face of the rear end of the plow-beam by suitable bolts *a*, extending through the same.

Between the standard E and brace F and the beam are interposed thick washers G, which place the standard E in the proper position relative to the plow-point when the attachment is used as a subsoiler, the depth and inclination of the tooth being governed by the

adjustment of the standard and brace by placing the bolts through the respective perforations.

In Fig. 4 I have shown the clip or attaching device for the tooth H. It consists of a perforated plate K, having a series of teeth on its inner face which mesh with teeth on the rear edge of the U-shaped portion *e* of the standard. From the upper edge of the plate K projects a bar *k*, which extends through the space between the parallel portions of the standard and has a cross-piece *k'* extending beyond the same in front of the standard. In the plate K is formed an opening, through which passes the bolt L after being passed through the tooth H. By this construction the tooth may be adjusted vertically and readily detached. The upper edge of the tooth impinges against the portion *k'*, which prevents its lateral movement, thereby requiring but one bolt to retain the tooth rigidly in place.

When it is desired to use the attachment as a dirter, it is only necessary to remove the washers G and place the standard and brace against the beam, thus throwing the tooth to one side of the center, where it will act as a dirter.

To adjust the tooth for cultivating purposes it is only necessary to withdraw the bolts and place the standard E and brace on the outer face of the beam, thereby carrying the tooth to one side of the plow.

M represents a guard-plate or brace attached to the beam in front of the brace F and extending back to the standard E, the attaching-bolt of which passes through its end, thereby relieving the rear end of the beam from over-strain. This brace M acts as a guard to prevent weeds and tall grass from becoming entangled with the ends of the brace and standard.

It will be seen that by the above construction and arrangement of parts a simple and durable attachment is formed, one which may be applied to any of the ordinary plows, and which saves the employment of extra "hands" for the several purposes designated.

Many minor changes in the construction and arrangement of the parts of my device

can be made without in the least departing from the nature and principle of my invention.

5 I am aware it is not broadly new to secure a vertically-adjustable attachment to the rear of plows or to secure the tooth by a plate somewhat similar to the one above described.

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

15 In a plow, the combination, with the beam and mold-board, of an attachment which is adapted to be secured to either side of the beam in the rear of the mold-board, consisting of a curved standard E, having its lower
20 end bent up parallel with and part way its vertical length, forming a U-shaped foot e, serrations on the rear edges of the foot, and registering perforations formed in the stand-

ard and upper end of the bent-up portion, an oblique brace F, secured between the parallel portions of the standard, having a series of perforations therein, a clamp consisting of a plate having a serrated inner 25 face and an integral T-shaped bar extending out from its upper edge through the foot, a tooth secured to the plate, the guard-plate M, secured to the beam and standard-bolt, and thick washers between the standard and 30 brace and beam for properly adjusting the attachment on either side of the beam to adapt it to the special work required to be done, substantially as described.

In testimony whereof I affix my signature 35 in presence of two witnesses.

ZEBEDEE E. STONE.

Witnesses:

G. S. Cox,

C. Cox.