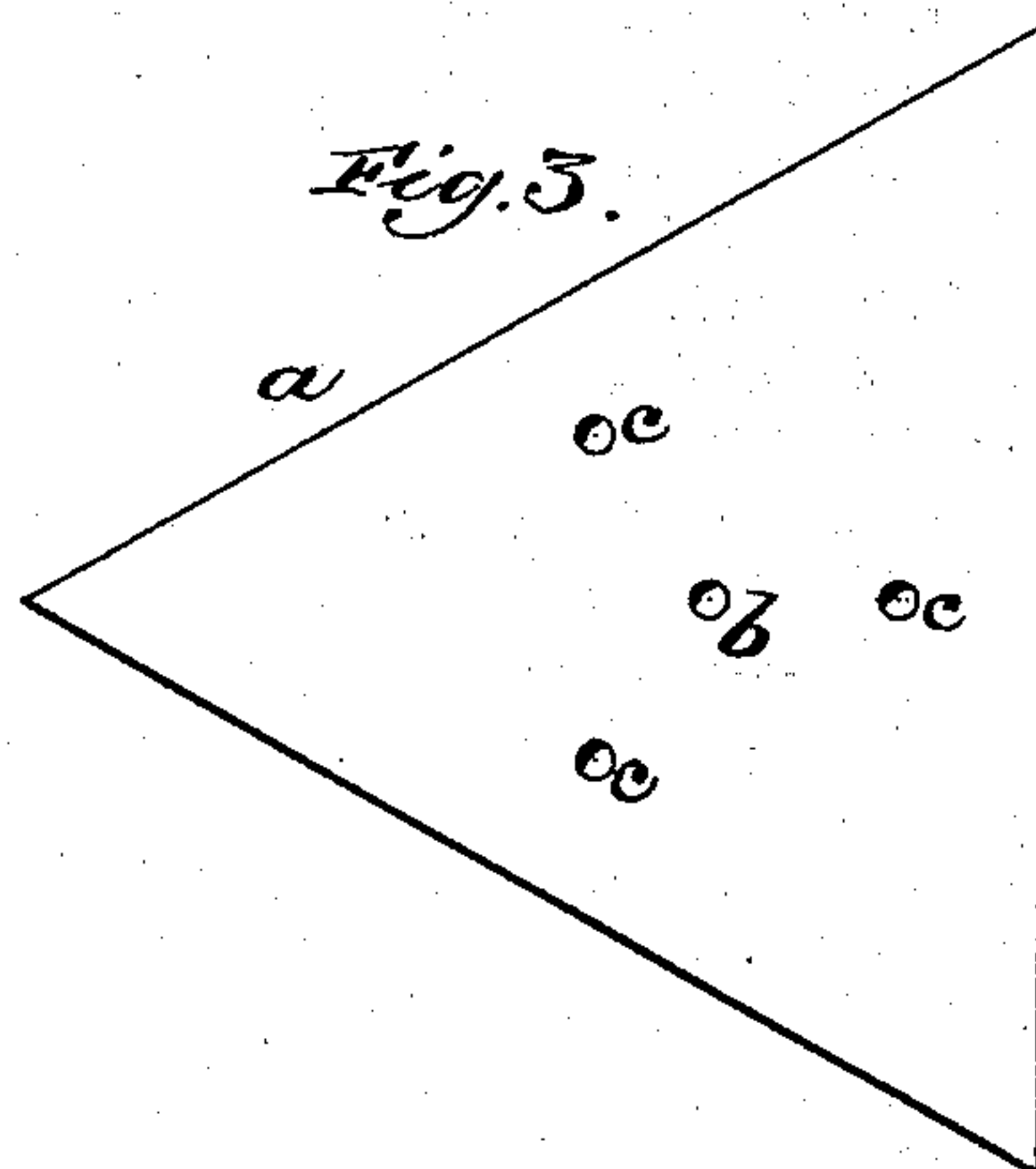
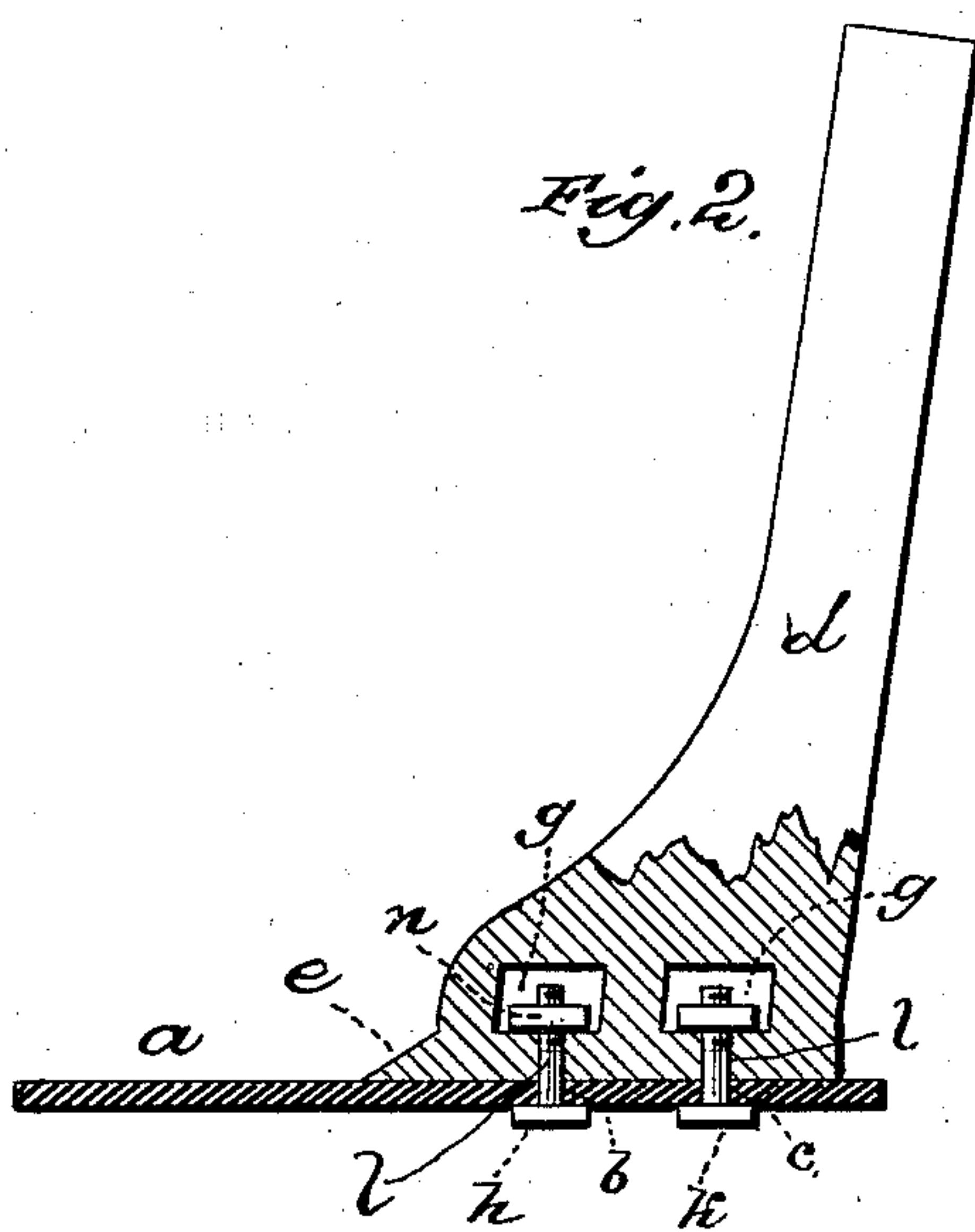
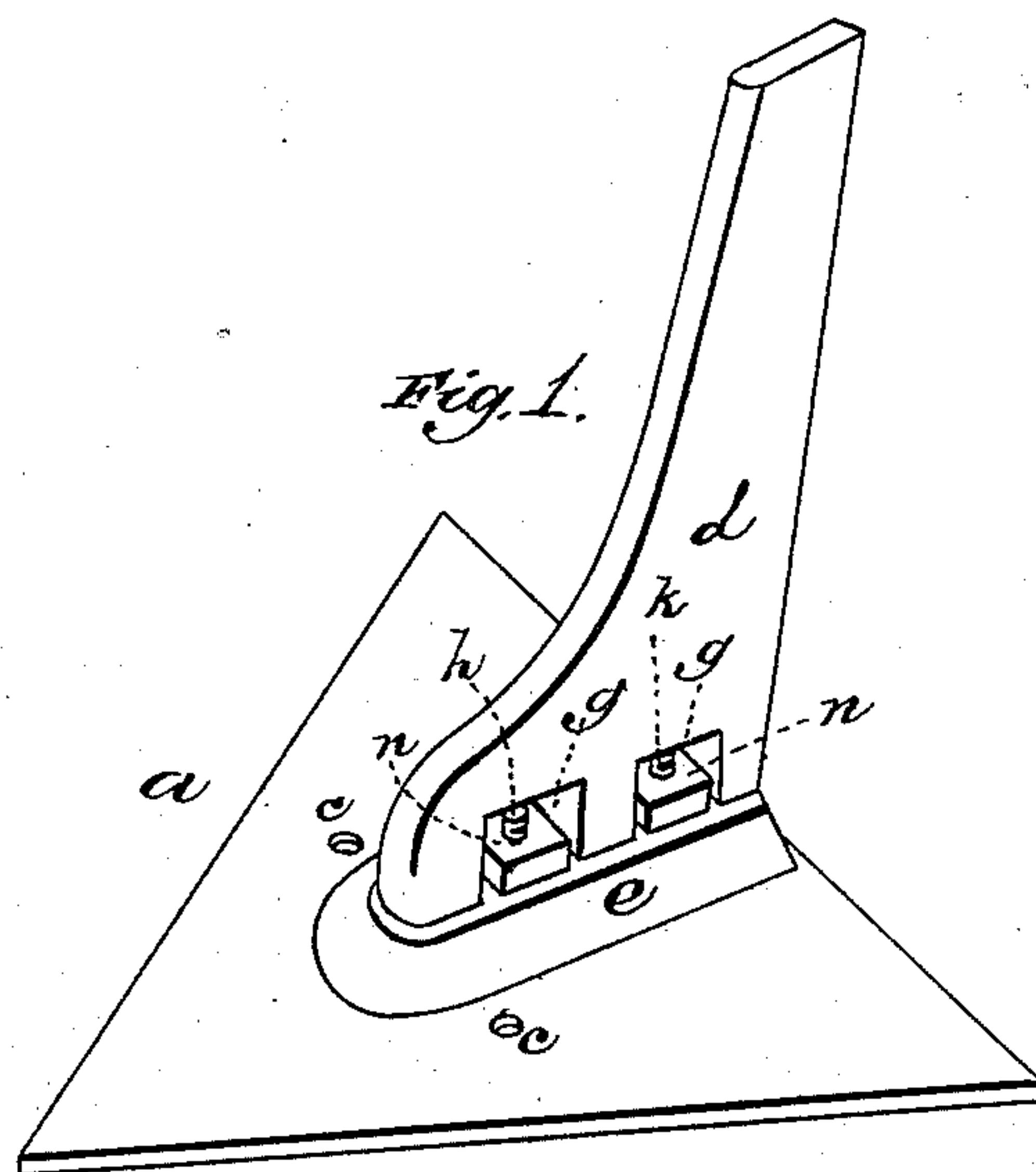


(No Model.)

Z. HOWE & E. OATLEY.
CULTIVATOR.

No. 268,234.

Patented Nov. 28, 1882.



WITNESSES
Emory H. Bates.
Philip Levasi.

INVENTORS
Zadok Howe.
Elliot Oatley.
by *Audus Smith*
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UNITED STATES PATENT OFFICE.

ZADOK HOWE, OF LOWELL, AND ELLIOT OATLEY, OF GREENVILLE, MICH.
CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 268,234, dated November 28, 1882.

Application filed July 22, 1882. (No model.)

To all whom it may concern:

Be it known that we, ZADOK HOWE, of Lowell, county of Kent, and ELLIOT OATLEY, of Greenville, in the county of Montcalm, and State of Michigan, both citizens of the United States, have invented a new and valuable Improvement in Cultivators; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of our cultivator. Fig. 2 is a vertical sectional view, and Fig. 3 is a plan view of the blade.

This invention has relation to cultivators; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, the letter *a* designates the blade, consisting of an equilateral triangular plate made plane, and having a perforation in its center, as at *b*, and opposite the middle of each side, as at *c*. This plate may be made of iron or steel. If made of iron, the edges and points should be chilled or faced with steel.

The standard *d* is made flat from side to side, and its lower end is formed with a broad bearing, *e*, sufficiently long to extend from the center to the middle of one of the edges of the blade. Above the broad bearing transverse slots or openings *g* are made through the lower portion of the standard, these openings being arranged respectively over the central and side perforations of the plate when the bearing is in position. The plate is secured to the

standard by means of the center bolt, *h*, and rear bolt, *k*, which are inserted through the central perforation, *b*, and one of the perforations *c*, near the rear edge of the plate. These bolts also extend up through perforations *l* in the bearing *d*, which communicate with the transverse openings *g*, the latter affording space for the attachment of the nuts *n* to the upper ends of the bolts, and protecting said nuts when in position. The standard may be adjusted in different angular positions with reference to the beam of the cultivator, and thereby the blade can be arranged in level or flat position, or at any angle desired. Either surface of the blade can be turned down, and either of its points may be turned to the front to serve as the entering or working point of the blade, the adjustment being easily and quickly made by manipulating the bolts. The blade can therefore be made to wear a long time.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

The combination, with a cultivator-standard having a broad bearing or foot, *e*, having perforations *l* and lateral recesses *g*, of the triangular plate or blade *a*, and the bolts *h* *k* and nuts *n*, whereby said blade is secured to said foot, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

ZADOK HOWE.
ELLIOT OATLEY.

Witnesses:

WM. N. AVERY,
A. L. PECK.