

No. 700,255.

Patented May 20, 1902.

J. L. SULLIVAN.

PLOWSHARE.

(Application filed Sept. 20, 1901.)

2 Sheets—Sheet 1.

(No Model.)

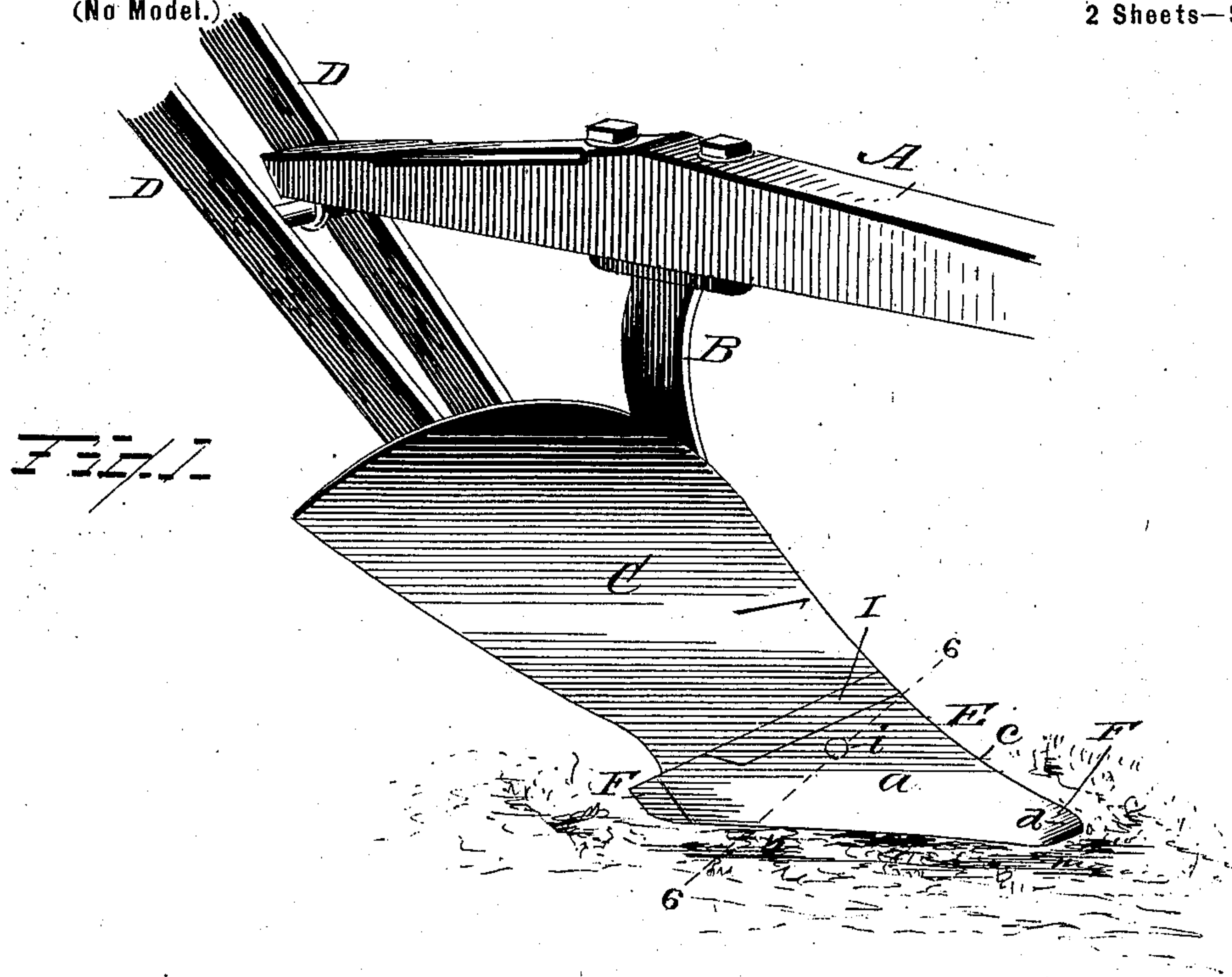


Fig. 2

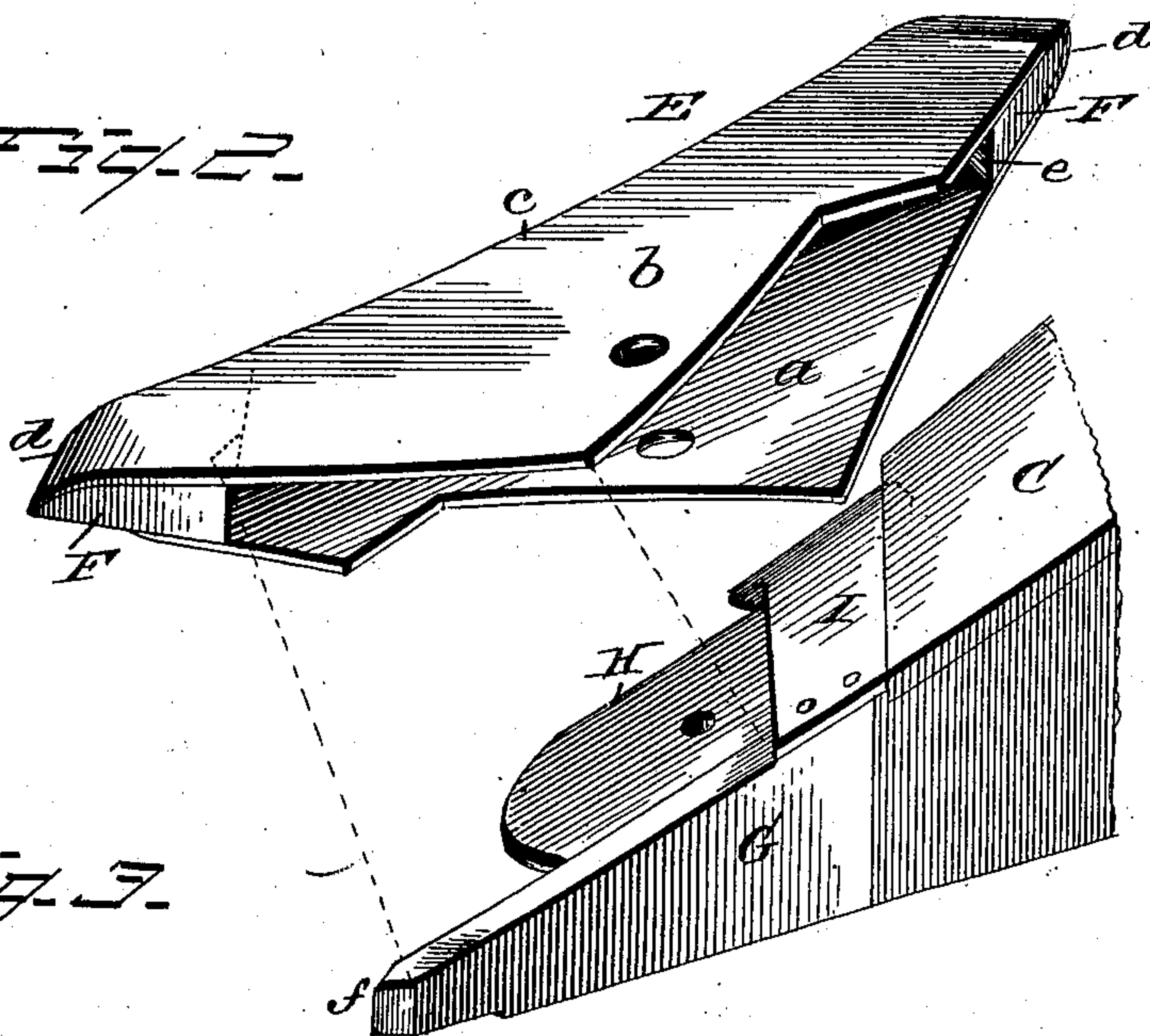


Fig. 3

Witnesses
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2 Sheets—Sheet 2.

Fig. 4.

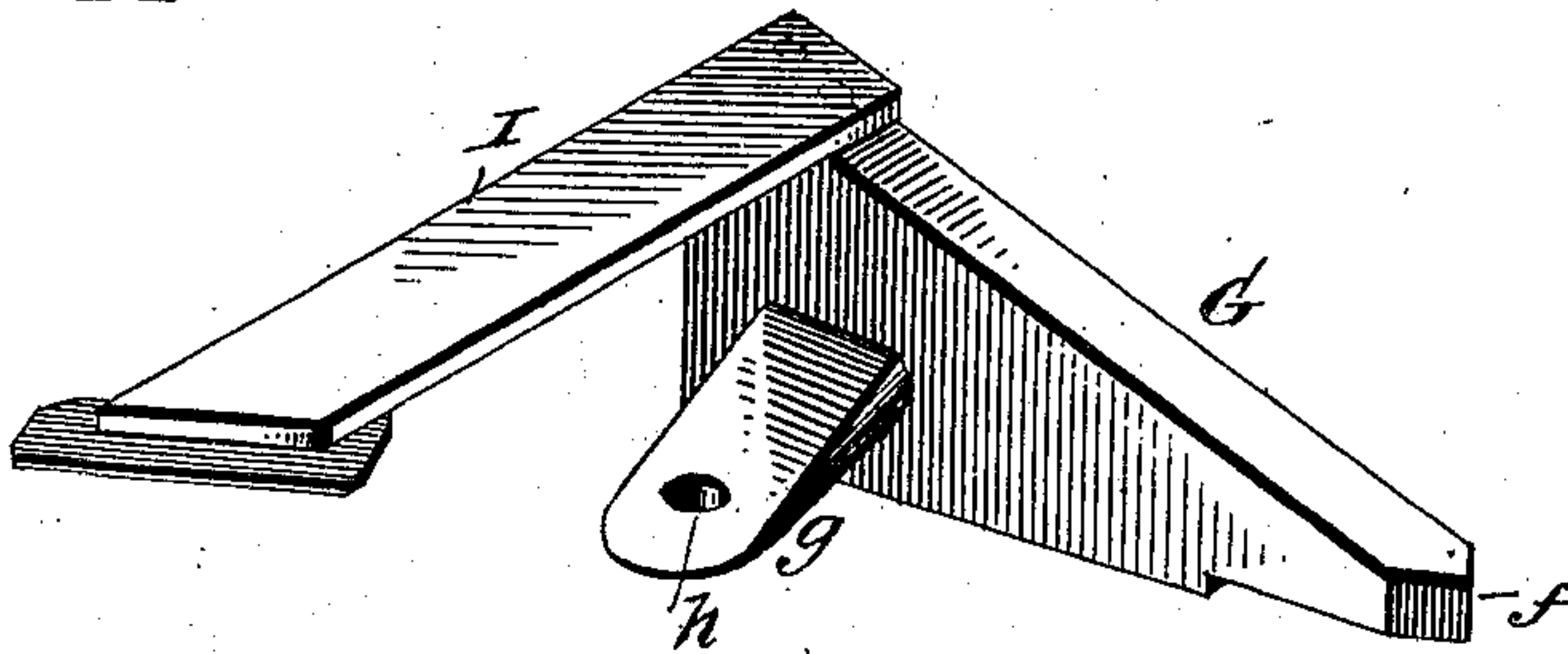


Fig. 5.

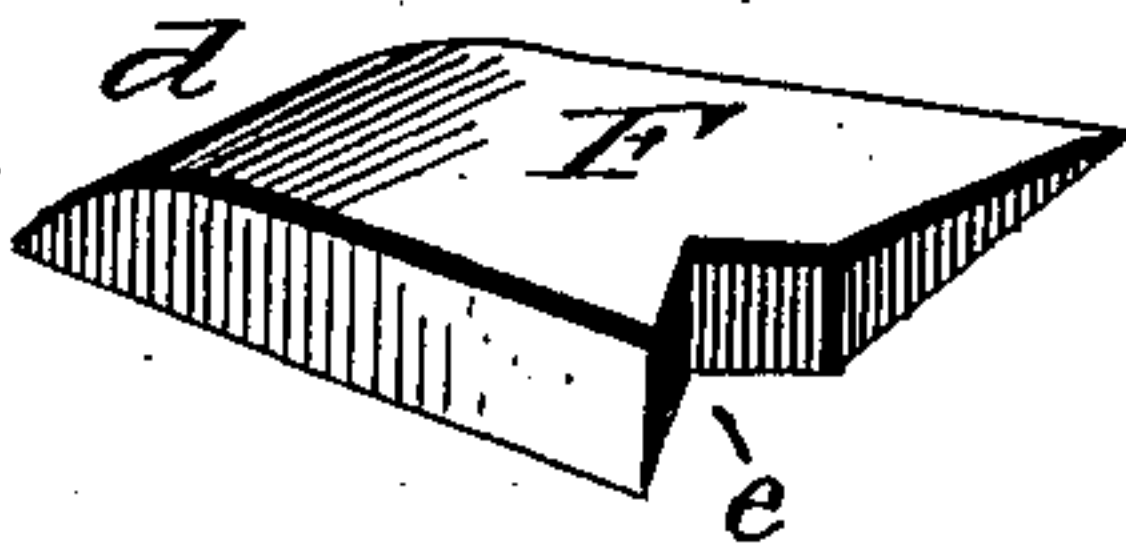


Fig. 6.

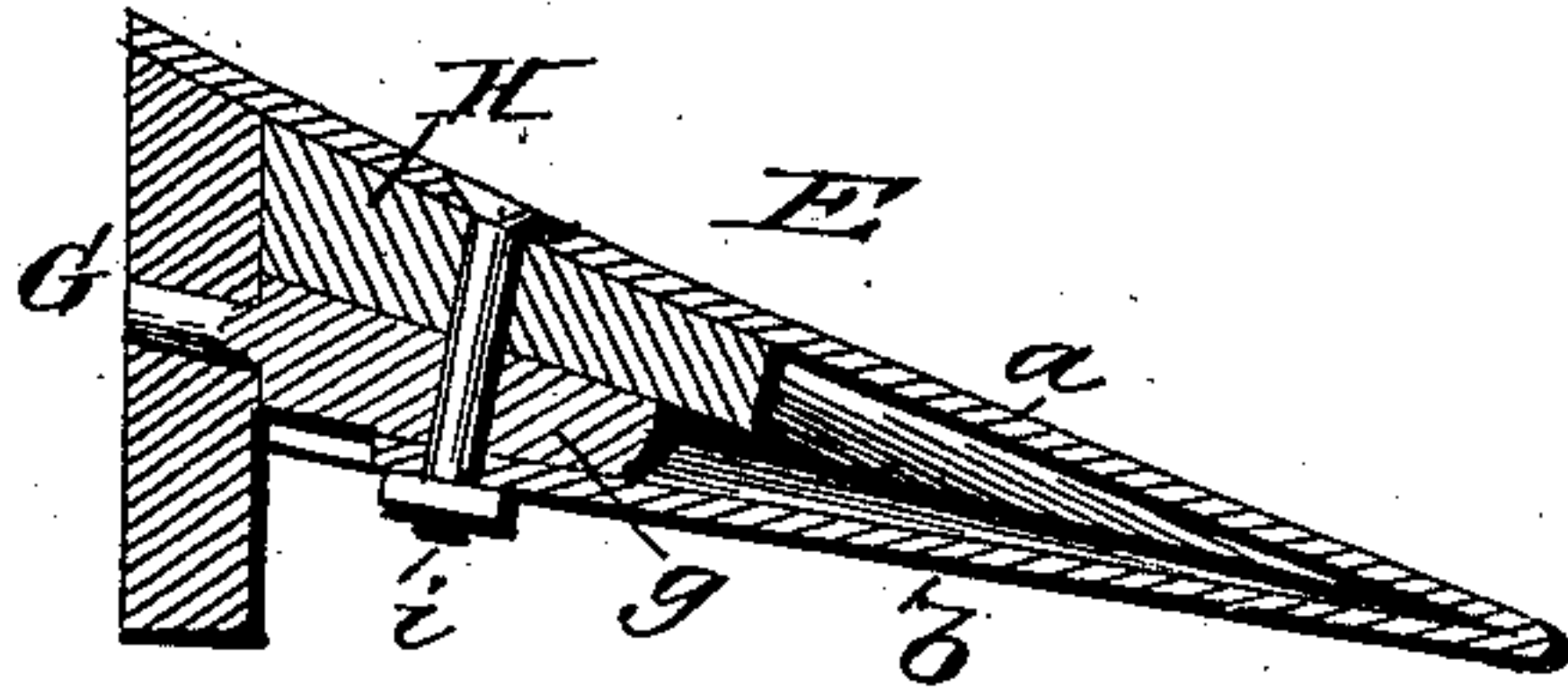


Fig. 7.

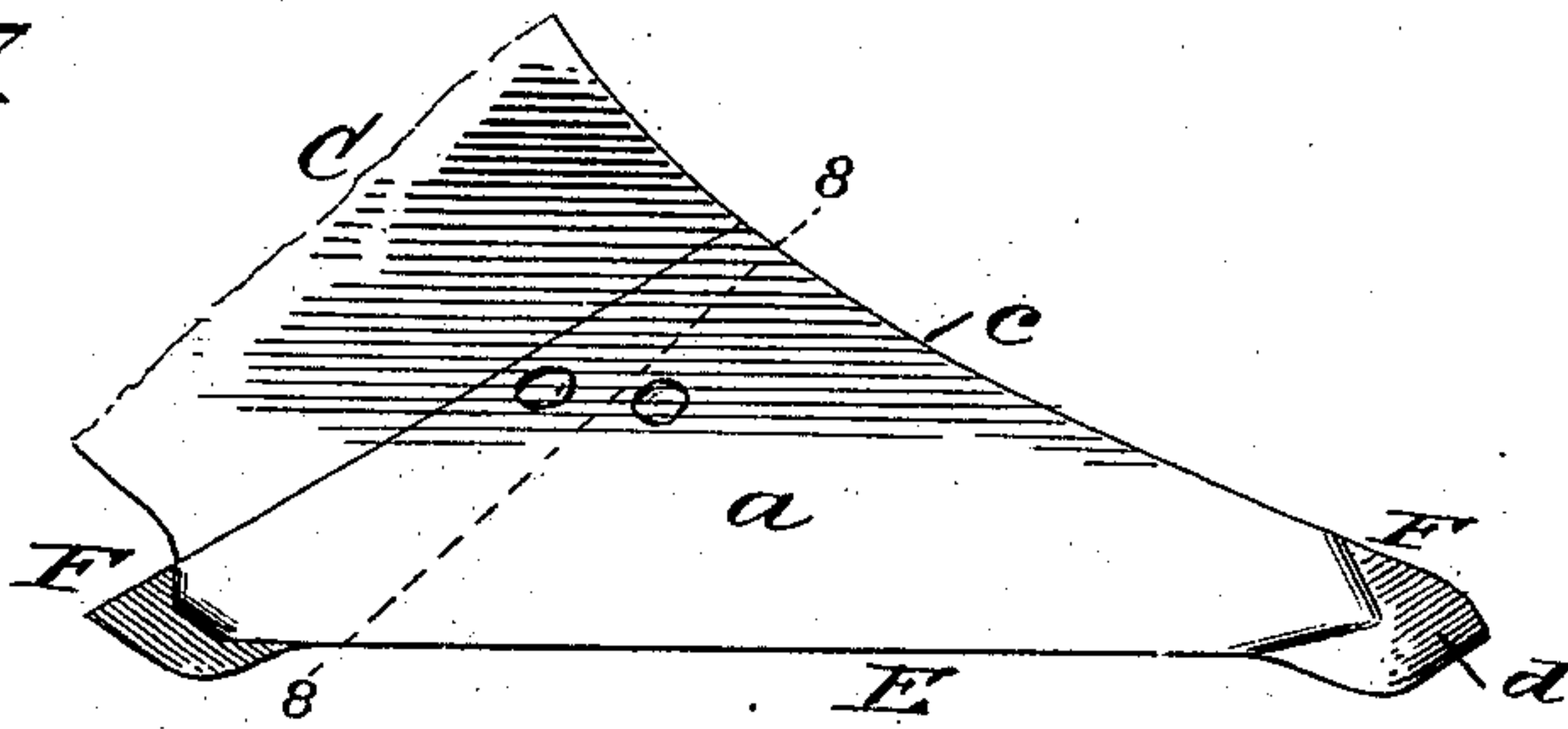
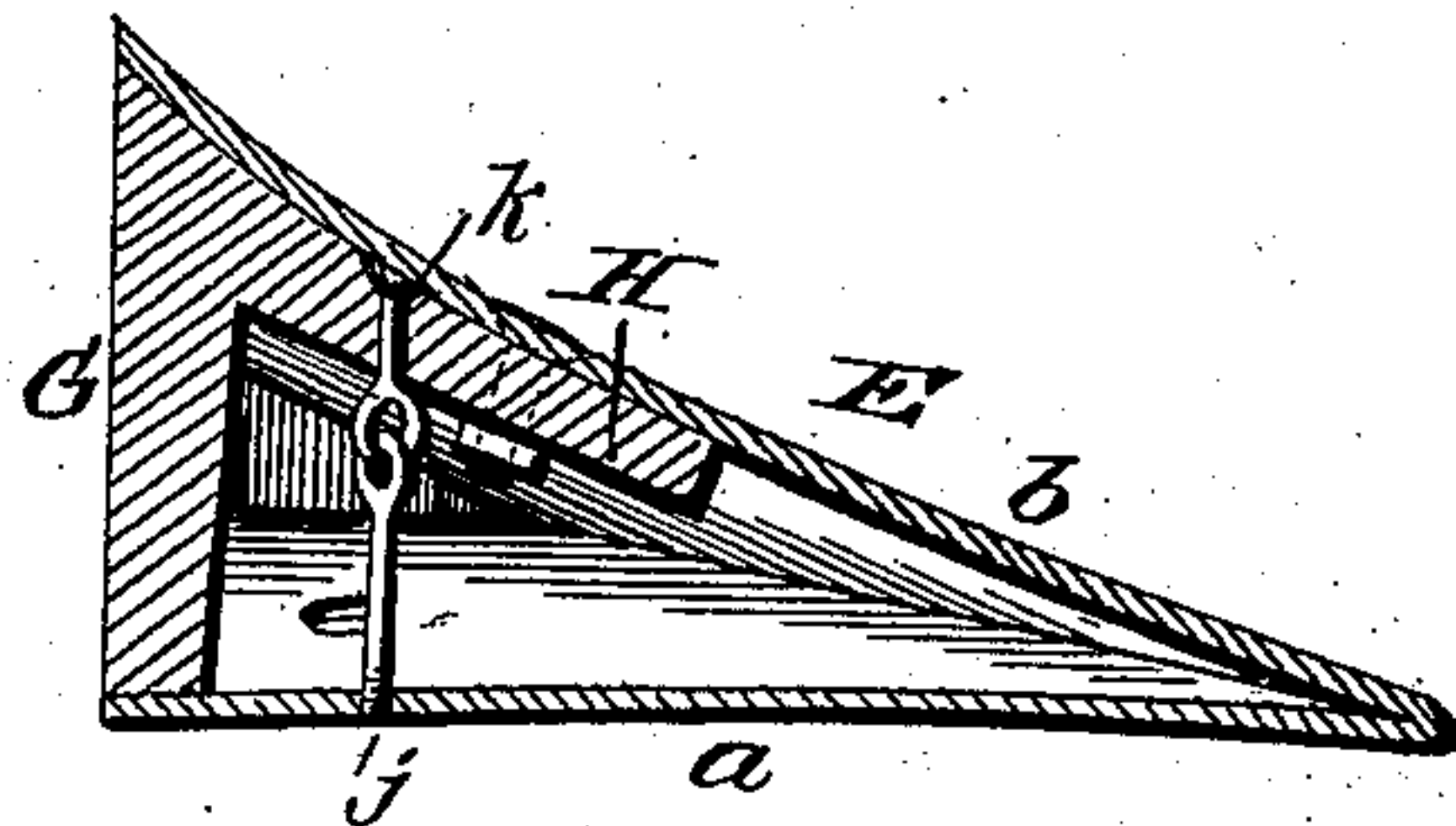


Fig. 8.



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UNITED STATES PATENT OFFICE.

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PLOWSHARE.

SPECIFICATION forming part of Letters Patent No. 700,255, dated May 20, 1902.

Application filed September 20, 1901. Serial No. 75,785. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. SULLIVAN, a citizen of the United States, residing at North Carrollton, in the county of Carroll and State of Mississippi, have invented certain new and useful Improvements in Plowshares; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has reference to that class of plows provided with a reversible share; and the object thereof is to improve the share in the several details of construction, whereby the cutting edge may be reversed or turned over, so that the previously top surface may become the underneath surface and the forward point take the place of the back or outside rear portion, whereby the share is rendered more effective and practical and materially enhancing the value of the plow both in strength, durability, and efficiency.

The invention consists in a reversible plowshare constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings is a perspective view of a plow, showing my improved reversible share connected thereto; Fig. 2, a detail view in perspective and on an enlarged scale of my improved reversible share; Fig. 3, a similar view of that portion of the support over which the share fits and to which it is connected; Fig. 4, a detail view in perspective of a portion of the support for the share; Fig. 5, a perspective view of one of the share-points; Fig. 6, a sectional view taken on line 6 6 of Fig. 1; Fig. 7, a perspective view of the plowshare, showing a portion of the moldboard of the plow; Fig. 8, a sectional view thereof, taken on line 8 8 of Fig. 7.

In the accompanying drawings, A represents the usual plow-beam, and B the standard, C the moldboard, and D the handles, all of which may be of any preferred construction and are simply shown to better illustrate the application of my improved reversible share to a plow.

The reversible share is indicated at E and may be constructed of any suitable sheet

metal of any preferred thickness, the two wings *a b*, which form the share, being composed of one and the same piece of metal or may be formed of separate pieces connected together by welding or as otherwise found desirable. The two separate pieces of sheet metal which form the wings *a b* may be connected together at their cutting edges, as indicated at *c*, leaving their inward surfaces inclined to each other, each wing having the necessary concave upon its outer side and otherwiseshaped to fit the plow when brought into position.

The share-points are indicated at F, which may be of similar shape and dimensions relative to each other, the points being located between the wings *a b* and connected thereto by welding, riveting, or by any other means found best adapted to the purpose, this being a matter left entirely with the manufacturer. The share-points are beveled upon one side only, as shown at *d*, the bevel upon one of the points being opposite to that of the other point, so that on reversal of the share one of said points will fill the office of the other. A plowshare is thereby provided with one common cutting edge and projecting into two opposite points, which points are so formed with relation to each other that one or the other of the points is adapted for use when the share is reversed. The cutting edge, as also the points, may be reinforced or made of any desired shape by inserting additional material in the joining process or by attaching same to their outside surfaces, and a backward projecting of the points may extend back a sufficient distance to rest in contact with the base-bar of the plow. The construction may be such that while one surface of the share is in use the opposite surface may rest underneath in contact with the ground-surface, or the share may be so constructed that the rear portion of bottom wing may be elevated above the ground-surface, such changes coming within ordinary mechanical skill and judgment and would not affect the essential features of the invention.

The two wings *a b* of the share E flare outward at an angle to each other, the meeting edges of the wings forming the cutting edge, (indicated at *c*,) providing a strong and durable share.

The share when constructed from a single piece of sheet metal by casting, stamping, or otherwise presents a share without seams or joints and materially adds to its strength and effectiveness, although the wings of the share may be made of separate pieces of metal, as hereinbefore described.

I do not wish to confine my invention to any particular shape or contour of cutting edge *c* of the plowshare, as it may be straight or on a curve, as shown, the points *F* being changed in form to adapt them to such changes as may be made in the share or plow.

The points *F* upon the inner ends have V-shaped or any other form of groove *e*, as shown in Fig. 5 of the drawings, and with these grooves engage correspondingly-formed tongues or projections *f* upon the ends of the bar *G*, said bar extending at right angles to the moldboard-support *H* and extends downward from the moldboard and forms the landside of the plow, or, in other words, the bar may be termed a "forward" projection on landside, and it is evident that the groove represented at *e* may be on the end of the bar *G* and the tongue *f* may be formed on the points *F*.

The bar *G* and support *H* may be of any suitable construction and formed integral, as shown in Fig. 8 of the drawings, the support being formed with or without a flange or lug, as shown at *g* in Fig. 4 of the drawings, and to which the bar is connected.

Any suitable means may be employed for connecting my improved reversible share to the plow, and in describing any of these features or parts I do not wish to confine my invention thereto, as many changes or modifications may be resorted to without in any manner affecting the special construction of plowshare.

When providing the bar *G* with the lug *g*, said lug has a hole *h* for connecting with a suitable bolt *i*, as shown in Fig. 6 of the drawings, said bolt extending through the lug and support and also through the wings of the share, and in such construction, as shown in Fig. 4, a strip *I* is employed to fill the vacancy at moldboard, this filling-in strip being shown in the position it will assume in Fig. 1 of the drawings.

Any suitable bolts or other like fastenings may be employed for connecting the share to the plow, and in Fig. 8 I have shown the bar *G* and moldboard-support *H* integral and in Fig. 6 of the drawings the bar and support, as shown, as separate, either construction being used, as circumstances require.

In Fig. 8 the fastening consists in the two eyebolts *j* *k*, so constructed as will provide a swivel connection, the bolt *k* in such instance being loosely connected to the moldboard-support. This swivel connection may be of any suitable form and construction, and, if desired, both the bolts may have screw-threads upon their ends, which are right and left hand threads, respectively, so as to screw into both

upper and lower wings, as the case may be, also through moldboard-support and extended lug *g*.

While the wing configuration of the ordinary plowshare is generally somewhat triangular or irregular, it follows that my improved share would be rather similar shape for use in the same plow; still a share whose edge contour would prevent a loose union with the moldboard and base-bar of plow could be used and the intervening vacancies brought to an evenness with the surrounding parts by insertion of the pieces of material of proper shape, which may be secured in any convenient manner and thereby save expense in the modification of the plow or changes of its construction, as circumstances would require.

The plowshare herein described materially differs in construction from the reversible plowshares in ordinary use in that it is composed of two wings which flare outwardly, the meeting edges of the wings forming the cutting edge of the share.

Each wing of the share is substantially triangular in shape, and at the intersection of two of the angles of each wing at both ends of the share are the share-points, which share-points are alternately beveled—that is to say, each point is beveled on one side only—the bevel on one of the points being opposite to that of the other, so that when the share is reversed the point lowermost will have its bevel upon the proper side.

It is evident that many changes or modifications in the several details of construction may be resorted to without in any manner affecting the principle of my invention, and any such changes as would come within ordinary mechanical skill and judgment may be made without departing from the essential features of the invention.

Having now fully described my invention; what I claim as new, and desire to secure by Letters Patent, is—

1. A reversible plowshare comprising two wings substantially triangular in shape, said wings flaring outwardly to form an acute angle, the meeting edges of the wings forming the cutting edge of the share, substantially as and for the purpose set forth.

2. A reversible plowshare comprising two flaring wings substantially triangular in shape and provided with points, one of said points having a face-bevel opposite to that of the other, substantially as and for the purpose described.

3. A reversible plowshare comprising two wings substantially triangular in shape, said wings flaring outwardly to form an acute angle, the meeting edges of the wings forming the cutting edge of the share, and oppositely-beveled points upon the share, substantially as and for the purpose specified.

4. A reversible plowshare substantially triangular in shape and comprising two outwardly-flaring wings, said wings forming together an acute angle and the meeting edges

thereof forming the cutting edge of the share,
and independently-projecting points suitably
connected to the share and one of said points
having a face-bevel opposite to that of the
5 other, substantially as and for the purpose
set forth.

In testimony that I claim the above I have

hereunto subscribed my name in the presence
of two witnesses.

JOHN L. SULLIVAN.

Witnesses:

E. L. DUKE,

W. B. CHANBLEY.