

(No Model.)

U. H. BROWN.
SIDE HARROW.

No. 575,632.

Patented Jan. 19, 1897.

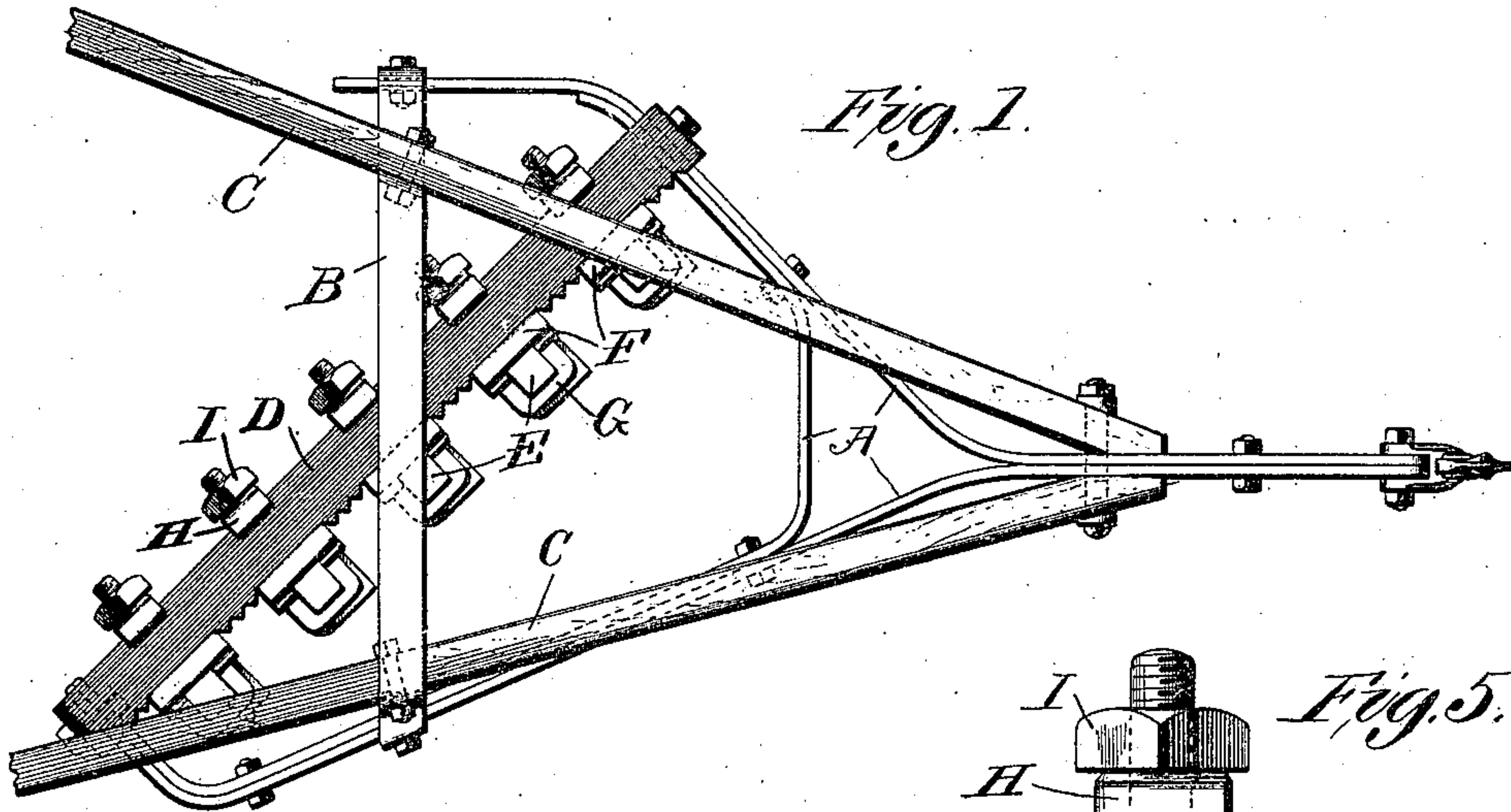


Fig. 1.

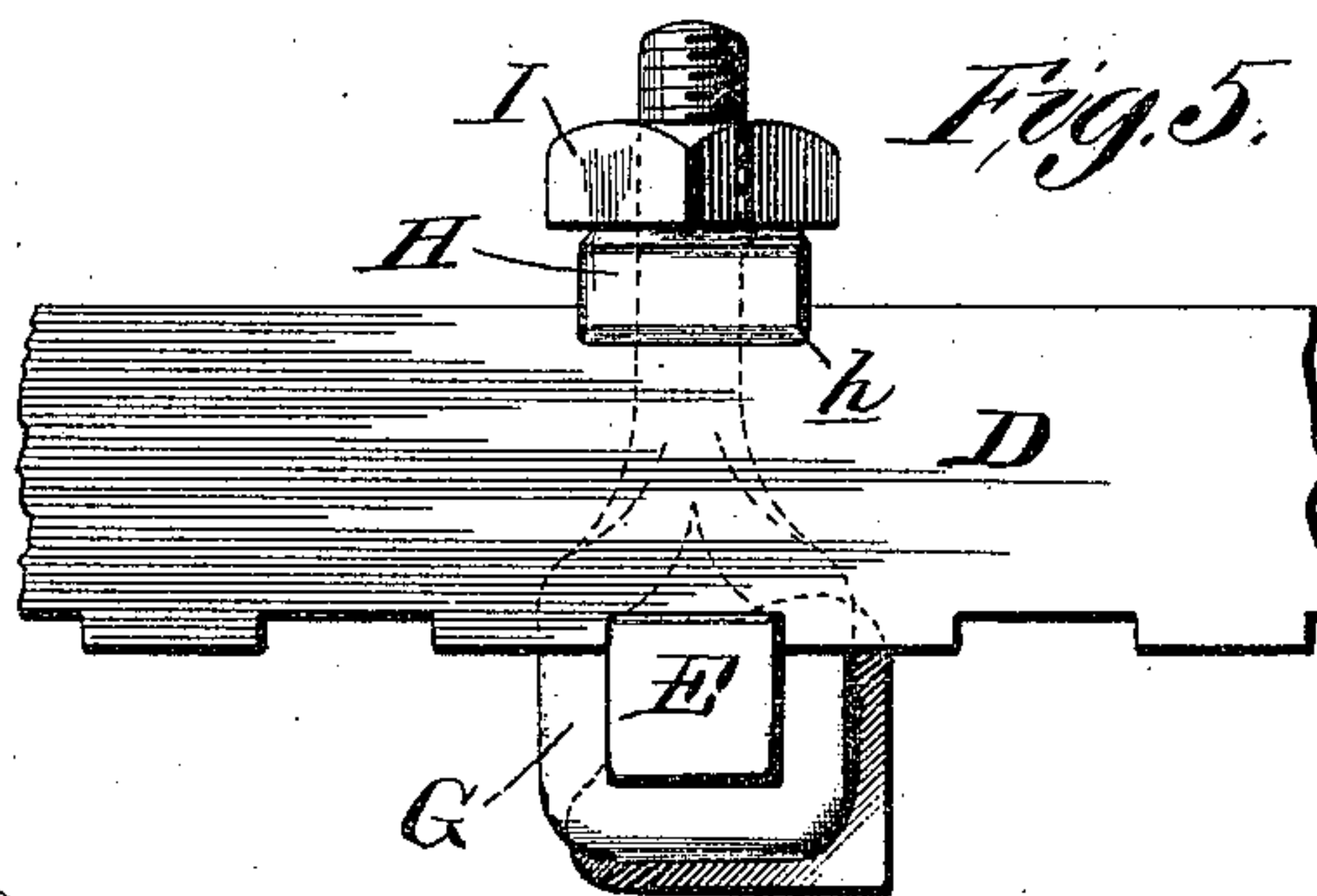


Fig. 5.

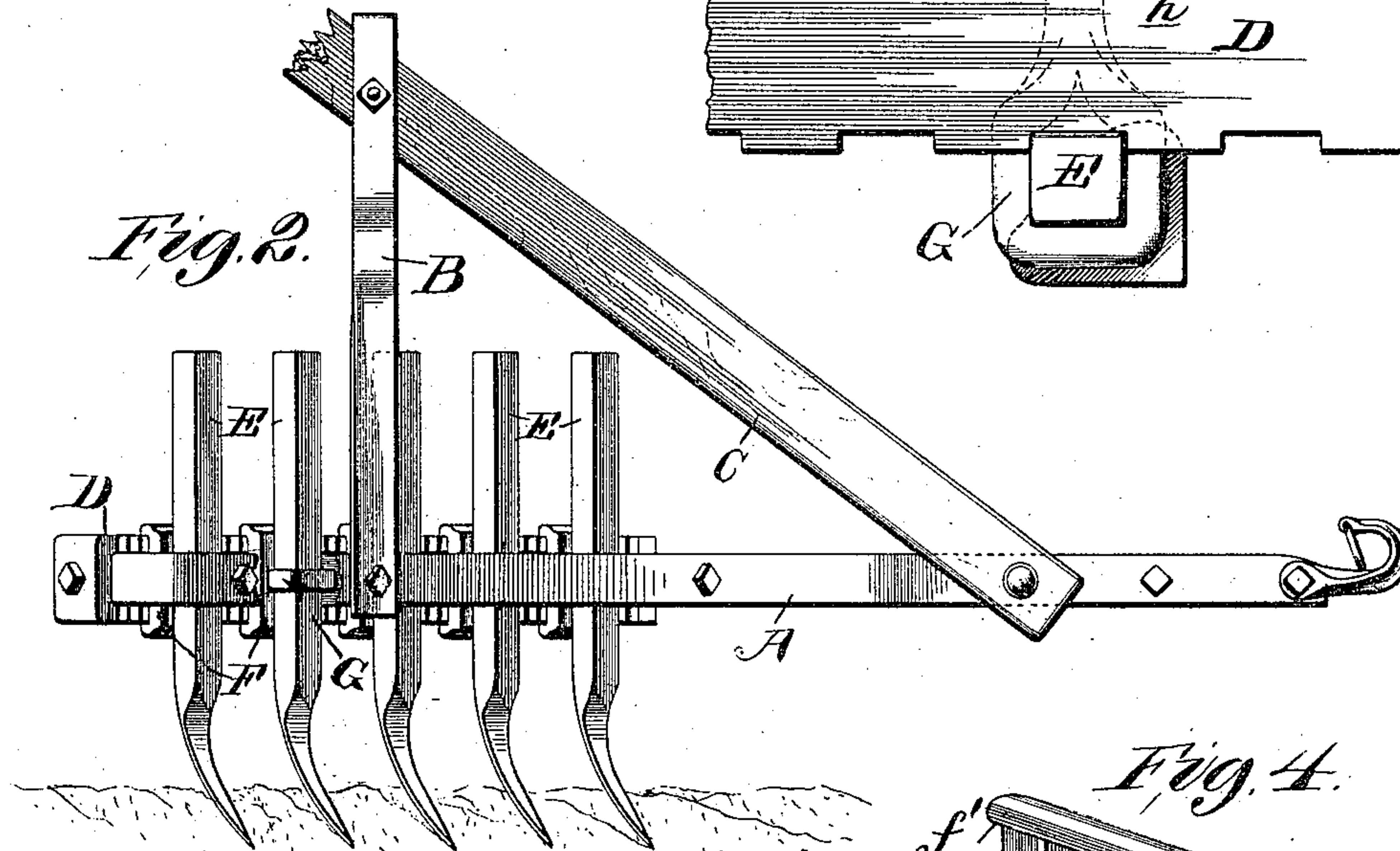


Fig. 2.

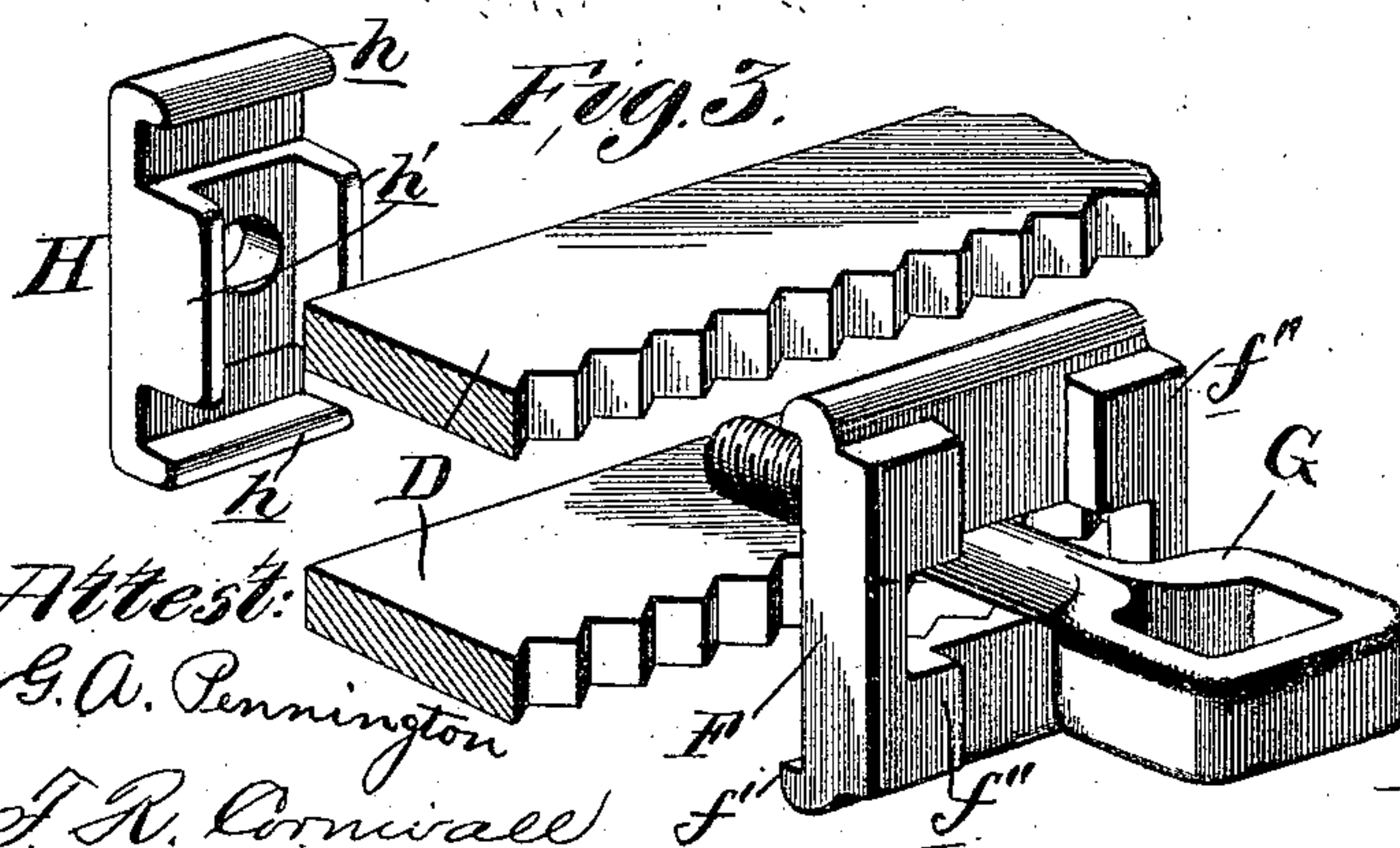


Fig. 3.

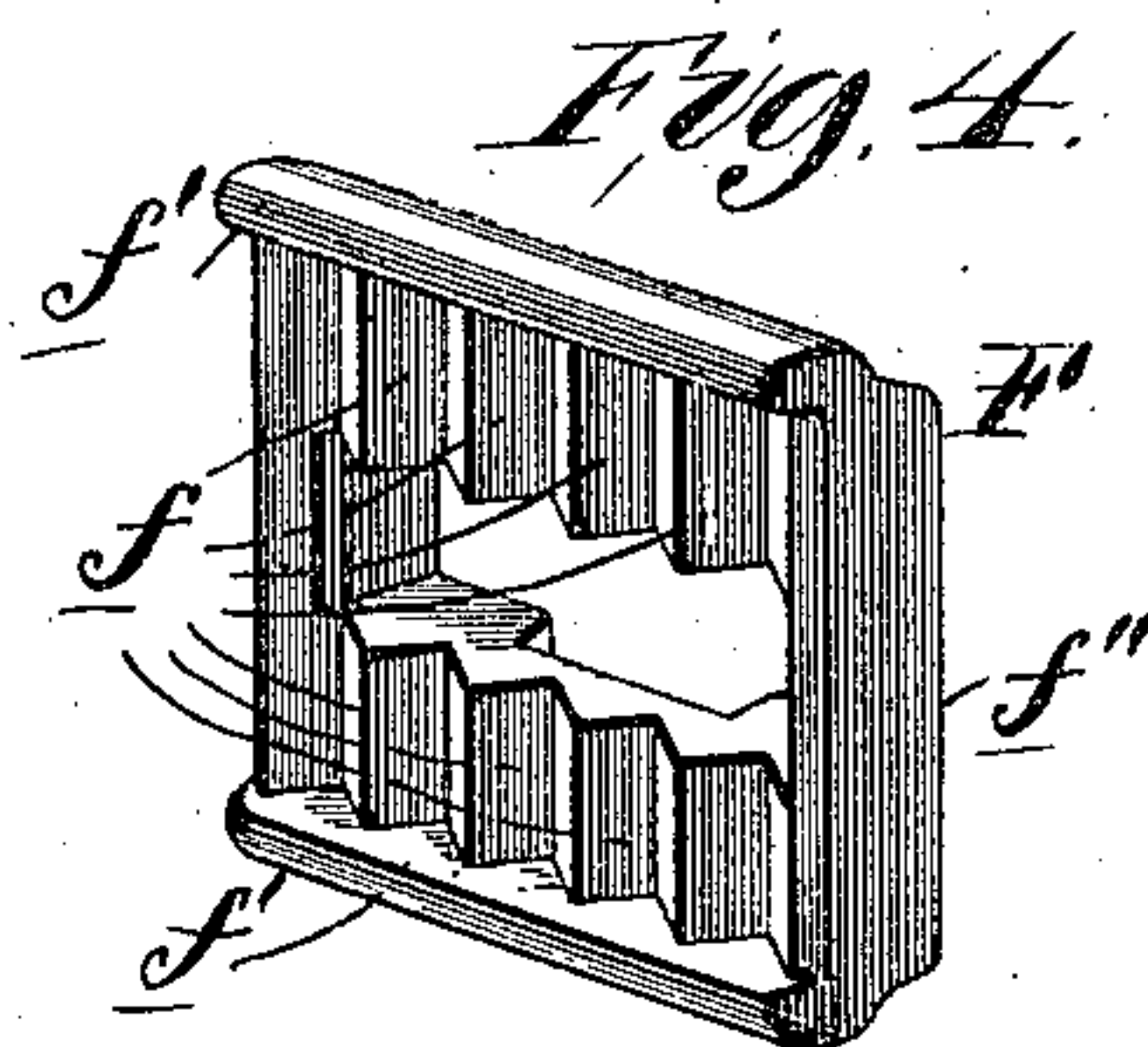


Fig. 4.

Attest:

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UNITED STATES PATENT OFFICE.

URI H. BROWN, OF ZANESVILLE, OHIO, ASSIGNOR TO THE MANSUR & TEBBETTS IMPLEMENT COMPANY, OF ST. LOUIS, MISSOURI.

SIDE HARROW.

SPECIFICATION forming part of Letters Patent No. 575,632, dated January 19, 1897.

Application filed September 16, 1896. Serial No. 605,957. (No model.)

To all whom it may concern:

Be it known that I, URI H. BROWN, a citizen of the United States, residing at Zanesville, in the county of Muskingum, State of Ohio, have invented a certain new and useful Improvement in Side Harrows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a top plan view of my improved side harrow. Fig. 2 is a side elevational view of the same. Fig. 3 is a detail view illustrating the manner of securing the teeth to the harrow-frame. Fig. 4 is a detail view of a tooth-seat. Fig. 5 is a modification.

This invention relates to a new and useful improvement in side harrows; and it consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described, and afterward pointed out in the claims.

In the drawings, A indicates a frame, which is preferably constructed as shown, the forward end of the frame being provided with a draft-clevis, as usual.

B indicates an inverted-U-shaped extension, secured to the frame A for the attachment of the handles C, whose forward ends converge and are secured to the frame A.

D indicates a notched slotted frame secured to the frame A, the notches of said frame D being at its forward edge.

E indicates the teeth, which are formed with a rectangular or non-circular shank, said teeth being secured to the frame D in the following manner: A tooth-seat F, having serrations *f* on its inner face corresponding to the serrations or notches on frame D, is adapted to be placed against the inner face of said frame, while lips *f'* extend above and below said frame to prevent vertical displacement of the tooth-seat after it is in position, the intermeshing of the teeth or serrations *f* with the teeth or serrations of the frame D preventing lateral displacement. The outer face of this tooth-seat is provided with projections *f''*, between which the tooth E is afforded a seat. This tooth-seat is slotted and through said slot an eyebolt G passes, the eye of said bolt being shaped corresponding

to the cross-section of the shank of the tooth which said eye receives. The rear end of eyebolt G passes through a clip H, which clip not only acts as a bridge over the slot of the frame D, but also affords a seat for the impingement of a nut I on the eyebolt, which clamps the parts together. This clip H has lips *h*, extending above and below the frame D and inwardly-projecting flanges *h'*, which extend in the slot of frame D to brace said frame, as can readily be seen.

By the above construction it will be noted that as many teeth as can be placed on the frame D can be used, and that said teeth can be adjusted vertically to any desired depth. It will also be noted that in addition to the above these teeth can be adjusted laterally on the frame D to any desired position.

In Fig. 5 I have shown a modified form in which the tooth-seat is dispensed with, the tooth being seated directly in the frame D, the eyebolt embracing said tooth and clamping it in position, as before described.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a side harrow, the combination with a slotted frame which is notched in its forward edge, of a tooth-seat notched on its inner face to engage the notches of the frame, said tooth-seat being provided with inwardly-extending lips above and below the frame and formed with projections on its outer face between which the tooth is afforded a seat, a tooth, an eyebolt which embraces the tooth, said eyebolt passing through a slot in the tooth-seat, a clip through which the rear end of the eyebolt passes, and a nut which is received on the outer end of the eyebolt for clamping the parts together; substantially as described.

2. In a side harrow, the combination with a slotted frame D of a tooth E, an eyebolt G through which said tooth E passes, the rear

end of said eyebolt passing through a clip II, flanges *h* on said clip which project above and below the same, flanges *h'* on said clip which extend into the slot of frame D to brace the same, and a nut I which is adapted to be screwed upon the rear end of the eyebolt G and impinge against the clip II for securing the parts together; substantially as described.

3. In a side harrow, the combination with a slotted frame which is serrated at its forward edge, of a tooth-seat which is serrated on its inner face to engage the serrations of the frame, said tooth-seat being provided with inwardly-extending lips above and below the frame for preventing vertical displacement, projections on the outer face of said tooth-seat, between which the tooth is

adapted to be received, a tooth, an eyebolt through which the tooth passes, said eyebolt passing through a slot in the tooth-seat, a clip through which the rear end of the eyebolt passes, lips on said clip which extend above and below the frame, flanges on said clip which extend into the slot of the frame, and a nut which is received on the outer end of the eyebolt for clamping the parts together; substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 12th day of September, 1896.

URI H. BROWN.

Witnesses:

W. M. MORGAN,
J. B. FORD.