

(No Model.)

W. T. STAPLER.
PLOW STANDARD AND ATTACHMENT.

No. 482,510.

Patented Sept. 13, 1892.

Fig. 1.

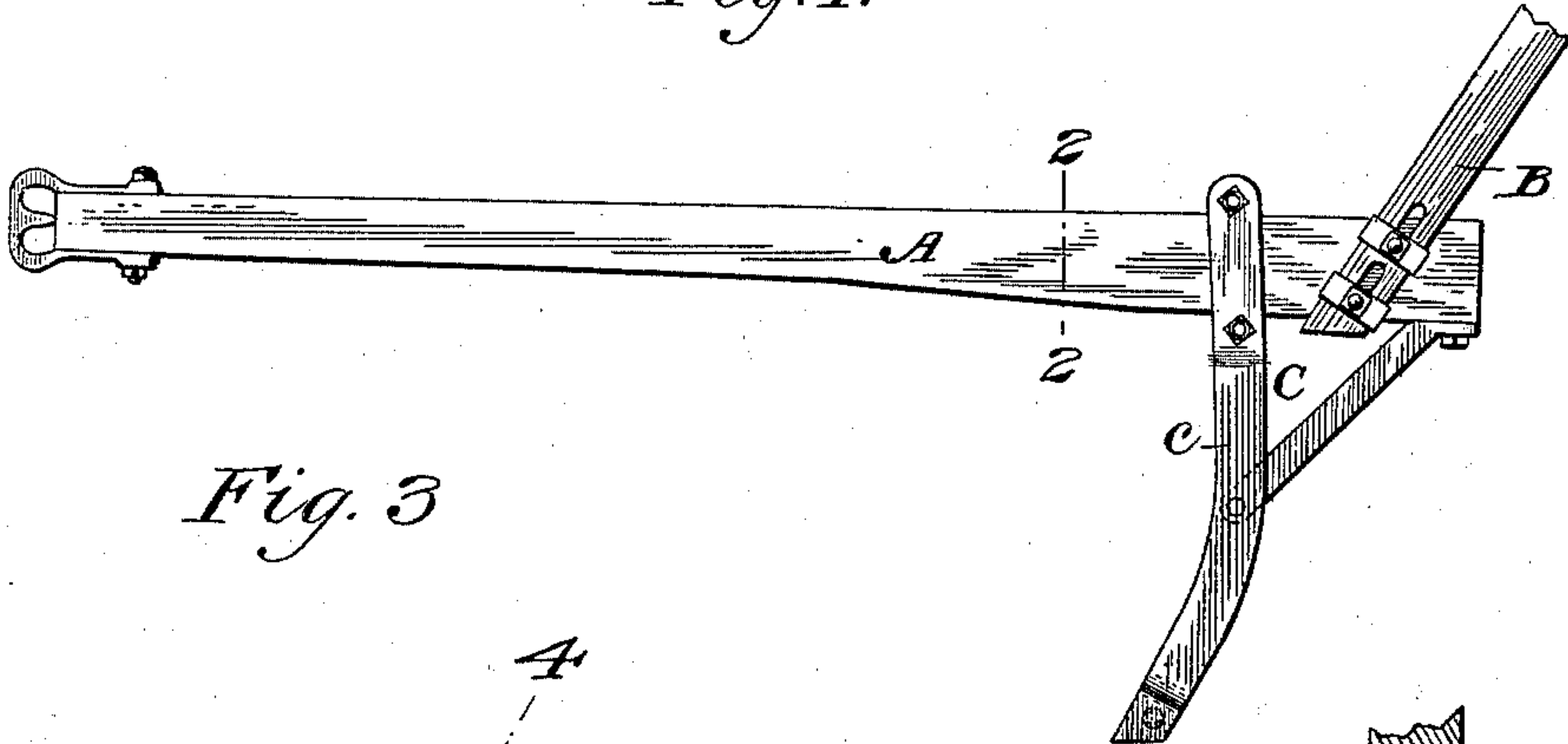


Fig. 3.

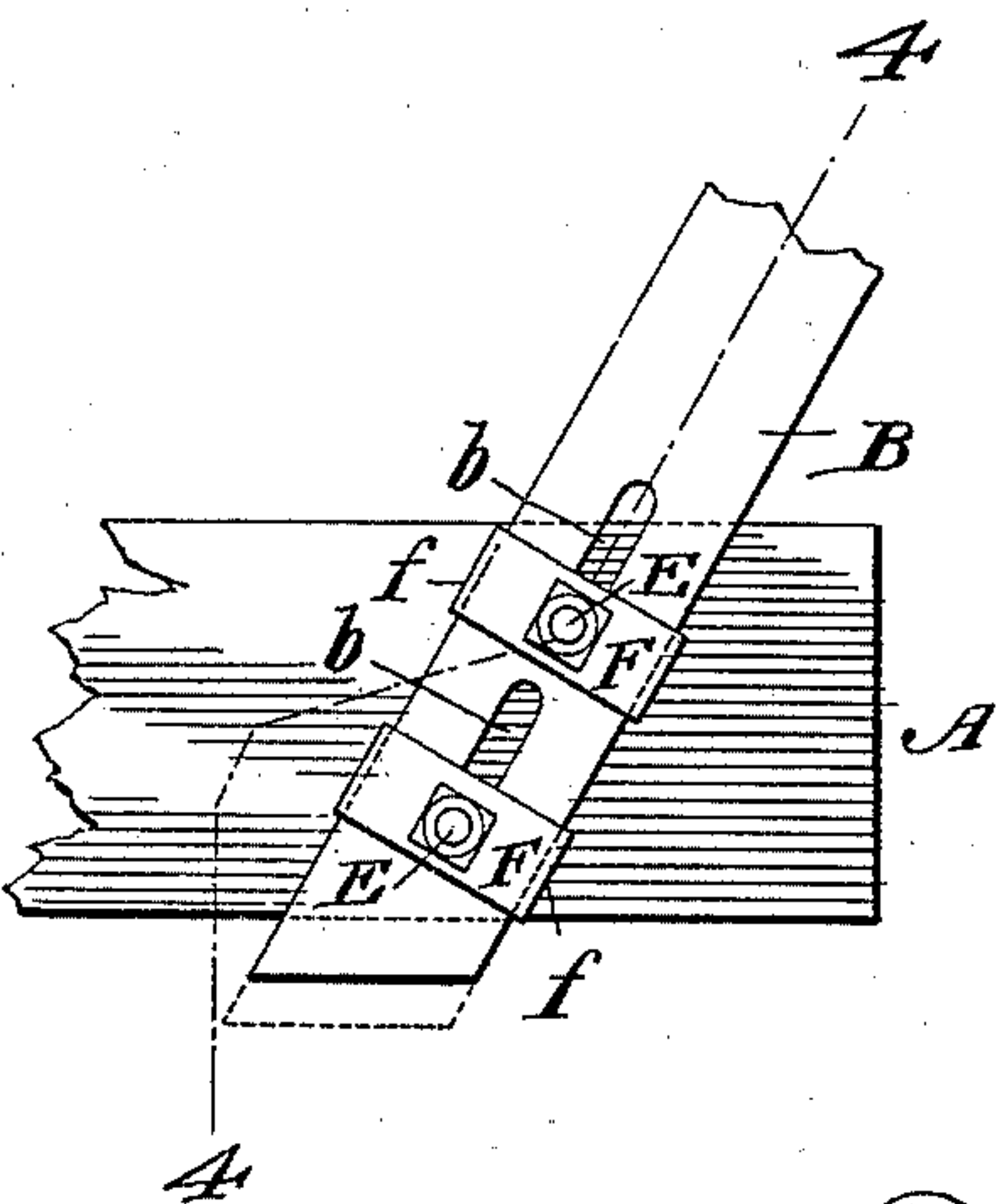


Fig. 4.

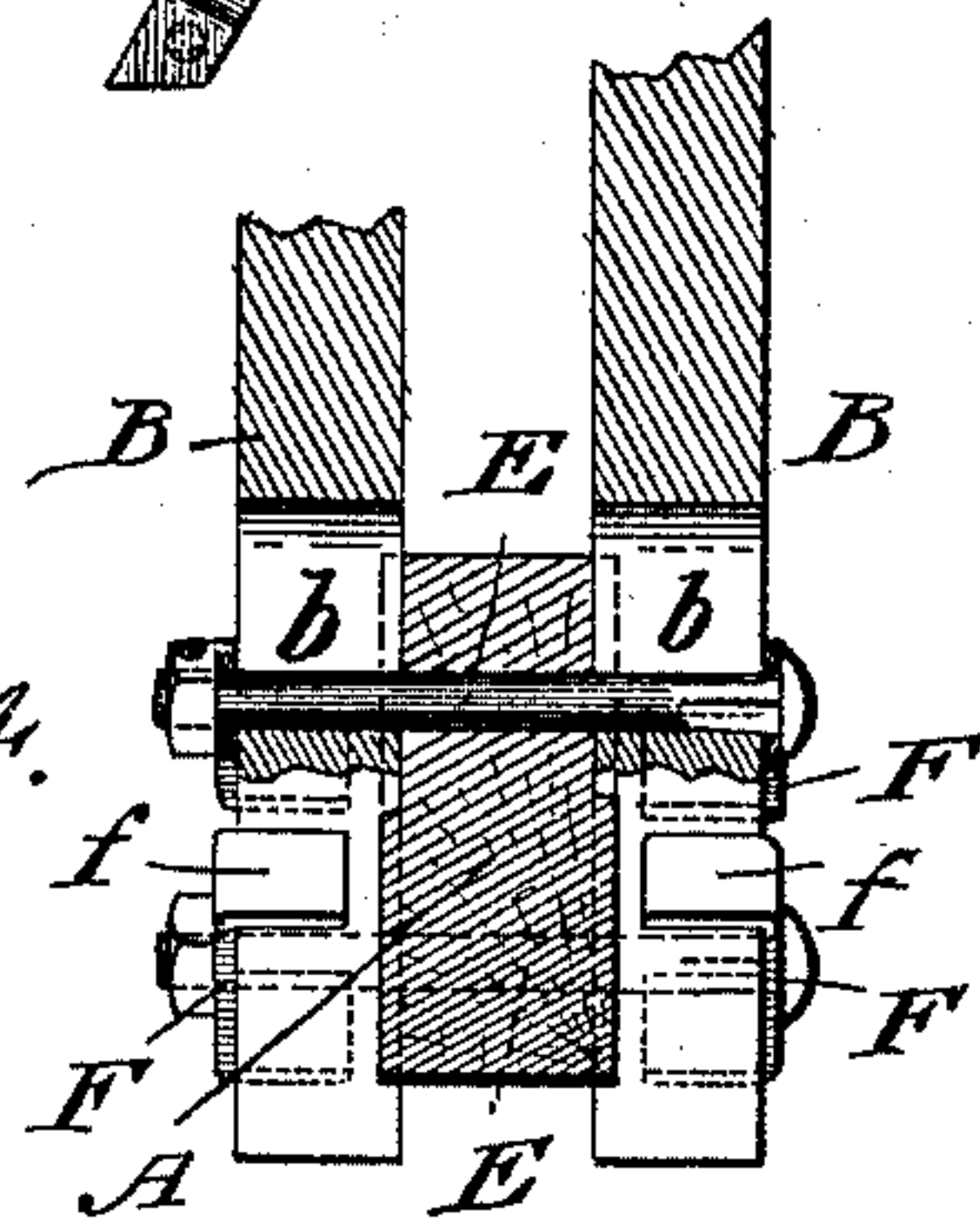


Fig. 5.

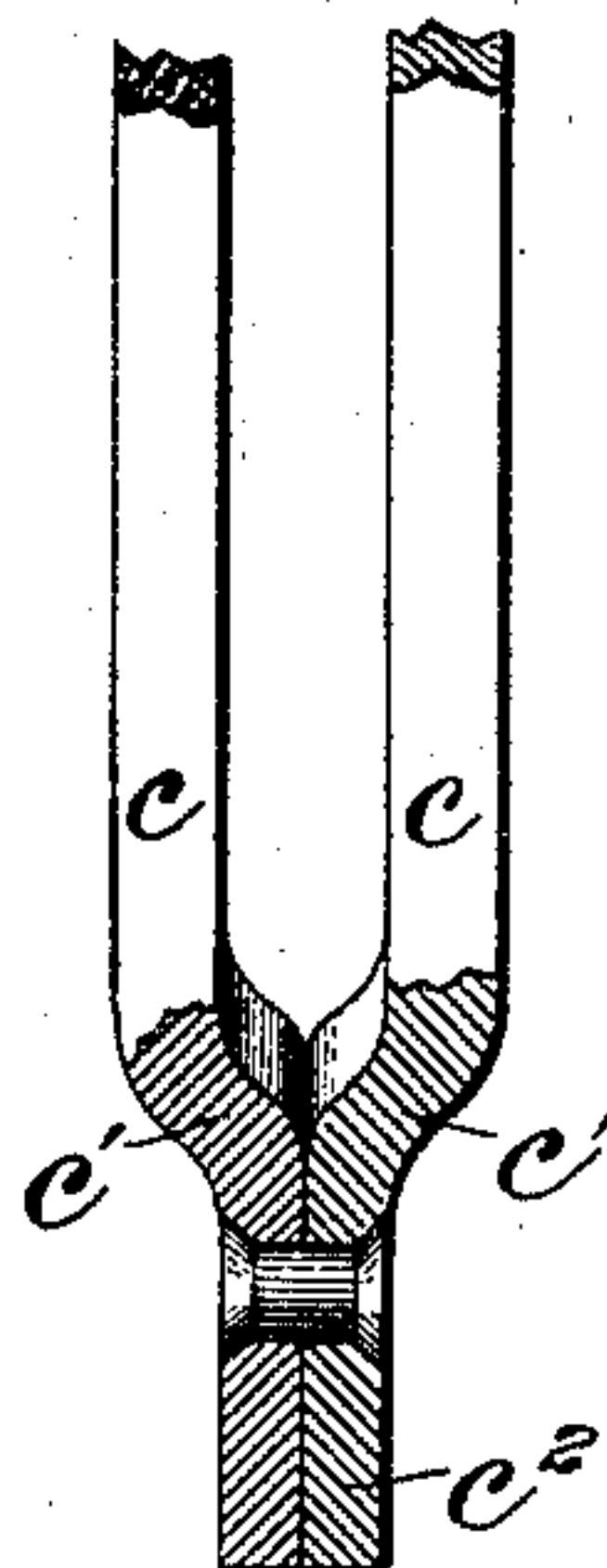
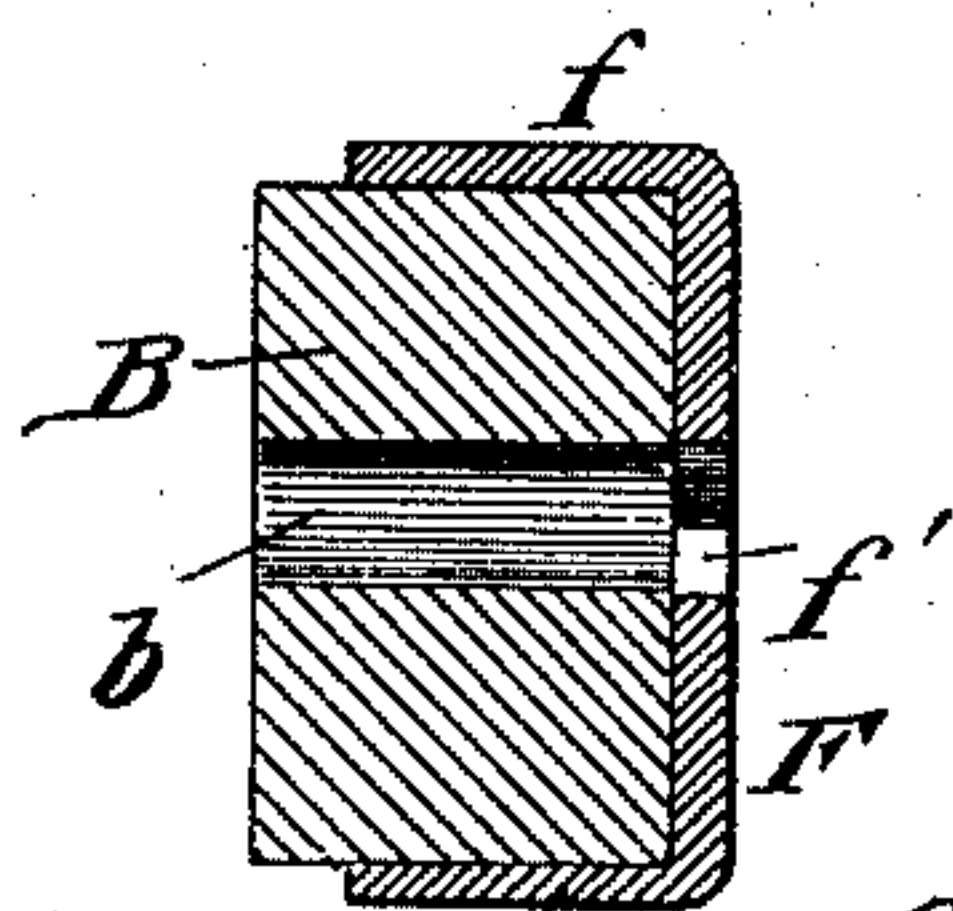


Fig. 6.



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WILLIAM T. STAPLER, OF HARMONY GROVE, GEORGIA.

PLOW STANDARD AND ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 482,510, dated September 13, 1892.

Application filed November 28, 1891. Serial No. 413,439. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. STAPLER, a citizen of the United States, residing at Harmony Grove, in the county of Jackson and State of Georgia, have invented certain new and useful Improvements in Plow Standards and Attachments; 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 relates to improvements in plow attachments, particularly such as are used with cultivating and shovel plows; and the object of the invention is to provide a simple and efficient standard and certain other attachments whereby cultivators and plows may be easily handled and controlled and are rendered more efficient, durable, and serviceable than similar implements heretofore in use.

It has heretofore been proposed to form plow-standards by uniting two depending limbs or pieces of metal at their lower ends, with an intervening toe piece or block of metal forming the heel or foot; but such standards are objectionable, for the reason that the width of metal forming the heel presents a wearing-surface at either side of the standard, which causes friction and increases the burden upon the draft-animal, and as the foot of the standard becomes worn the welded portion is loosened and the interposed toe piece or block drops out, thus allowing the limbs to separate and rendering the standard useless. To overcome this difficulty, I have devised a standard composed of a piece or pieces of metal adapted to be secured to the beam and having two depending limbs bent inwardly a short distance above their lower ends and riveted or otherwise firmly secured together, so as to form a rigid and substantial, though comparatively thin, heel-piece or foot, which is centrally disposed with reference to the vertical opening or slot above the heel to receive the bolt which secures the blade or point to the standard, whereby the plow will run true and without friction and wear upon the sides of the heel-piece, so as to cause the limbs of the standard to separate.

It has also been proposed heretofore to provide washers and clips of various construc-

tions for the purpose of preventing wood surfaces from wearing and framework from splitting; but the difficulty has been that either the washer or the bolt has been permitted to rotate when the nut is screwed for the purpose of tightening the bolt, and the metallic surfaces of the washers facilitate the rotation of the bolt, while without such washers the heads and nuts of the bolts soon wear and embed themselves in the wood, thereby weakening the timbers. To avoid such objections, I have devised a combined non-rotating washer and clip adapted to prevent wear by the rotation of either bolt or washer, and also adapted to serve as a clip which embraces the frame-pieces and prevents them from splitting.

It has also been proposed to attach plow-handles to the beams by slot-and-bolt connections, which permit the height and inclination of the handles and beams to be varied and the parts fixed in various adjustments; but I have devised means for retaining all the advantages of previous adjustments and at the same time adapting the handles to be adjusted simultaneously or independently, so as to regulate the height in plowing on level land and permit either handle to be raised or lowered without interfering with the position of the other in plowing on hillsides, whereby the plow or cultivator is adapted to be adjusted to suit different requirements and may be more easily handled and controlled when plowing rough and uneven land.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference are used to designate like parts, Figure 1 represents a side elevation of a plow embodying my invention. Fig. 2 is a section taken on line 2 2 of Fig. 1. Fig. 3 is a detail side view illustrating the method of attaching the handles. Fig. 4 is a section taken on line 4 4 of Fig. 3. Fig. 5 is an elevation, partly in section, of the plow-standard; and Fig. 6 is a horizontal section through the non-rotating washer and clip.

The beam A and handles B may be of any suitable construction, and the standard C may be secured to the beam and braced in the manner shown in the drawings or in any desired manner. The depending limbs c c of the standard C may spring from a common

piece of metal straddling the beam or two pieces secured together, with the beam between them, by connecting-bolts placed one above and the other below the beam, as shown.

5 Near their lower ends the pieces *c c*, which are placed edgewise and preferably curved forward to give the proper inclination to the blade, are bent inwardly at *c' c'*, as shown in Fig. 5, and their lower ends are riveted or

10 otherwise firmly secured together, so as to form a solid and substantial heel-piece or foot *c²*, integral with the standard proper. By this construction the vertical opening or slot above the heel to receive the bolt which secures the

15 blade is centrally disposed, while a solid and substantial and yet narrow heel or foot is provided, which is adapted to serve as a base-piece or runner, forming a firm support for the blade without presenting a wearing-sur-

20 face at either side of the blade, whereby friction and wear upon the foot of the standard is avoided.

D represents an ordinary brace, which may be secured at either the front or rear of the

25 standard.

The handles B may be connected near their upper ends in any suitable manner; but I preferably provide a hinged connection or flexible round extending between the handles, so

30 as to permit them to be adjusted independently of each other for the purpose of raising or lowering either handle, which is frequently desirable when plowing on hillsides. Such independent adjustment may be accomplished

35 by providing the handles with elongated slots *b b*, through which may be passed suitable bolts E E for securing the handles in the desired position after adjustment.

F F denote non-rotating combined washers

40 and clips, which may be made of cast or wrought metal; but they are preferably formed from a flat rectangular plate of the required length, having its ends *f f* bent or arranged at right angles to the main central

45 portion of the plate or casting, so as to embrace the timber at either side of the fastening-bolt. The main portion of the plate is formed with a polygonal or square opening *f'* to receive the correspondingly-shaped

50 shank of the fastening-bolt E, whereby the latter will be prevented from turning when the nut thereon is turned. As thus constructed the washer has a threefold function: It prevents the fastening-bolt from rotating

55 with the nut. It serves to prevent the timber from splitting. It prevents the head or nut of the bolt from wearing and embedding itself in the wood, and it will not itself rotate with the

bolt, whereby injury to the timbers by wearing and splitting is avoided, and the time 60 usually lost by the rotation of the bolts and washers in tightening the nuts is saved.

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

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1. The plow-standard constructed substantially as described, comprising a pair of metallic plates placed edgewise and separated above their lower ends the greater portion of their length, said plates being bent abruptly 70 inward near their lower ends and extending thence downwardly face to face and rigidly secured together, so as to form a narrow centrally-disposed heel-piece or runner integral with the standard proper, whereby a firm 75 support for the blade is afforded and friction and wear upon the sides of the standard back of the blade are prevented, substantially as described.

2. The combination, with the plow-handle, 80 of the non-rotating washer and clip consisting of a flat metallic plate having its ends arranged at right angles to the central portion thereof and having a square or polygonal opening through said central portion, and 85 the fastening-bolt having a correspondingly-shaped shank adapted to fit said opening, whereby wearing and splitting of the timber are prevented and the fastening-bolt, nut, and washer are each secured against rotation, 90 substantially as described.

3. In combination with the beam, the independently-adjustable handles, and means, substantially as described, whereby either or both handles may be adjusted and secured in 95 the desired position, said handles being flexibly connected together, so as to permit of their independent adjustment for the purpose of raising or lowering either handle independently of the other, substantially as described. 100

4. In combination with the plow-beam, the independently-adjustable handles having the elongated slots at their lower ends, the non-rotating washers, and clips arranged to embrace the handles and span said slots, and 105 the fastening-bolts connecting the handles through said slots and clips, so as to adjustably connect and bind the handles, beam, and clips together, substantially as described. 110

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

WILLIAM T. STAPLER.

Witnesses:

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