

(No Model.)

2 Sheets—Sheet 1.

W. L. HEBERLING.
ROOFER'S SEAMING TONGS.

No. 501,509.

Patented July 18, 1893.

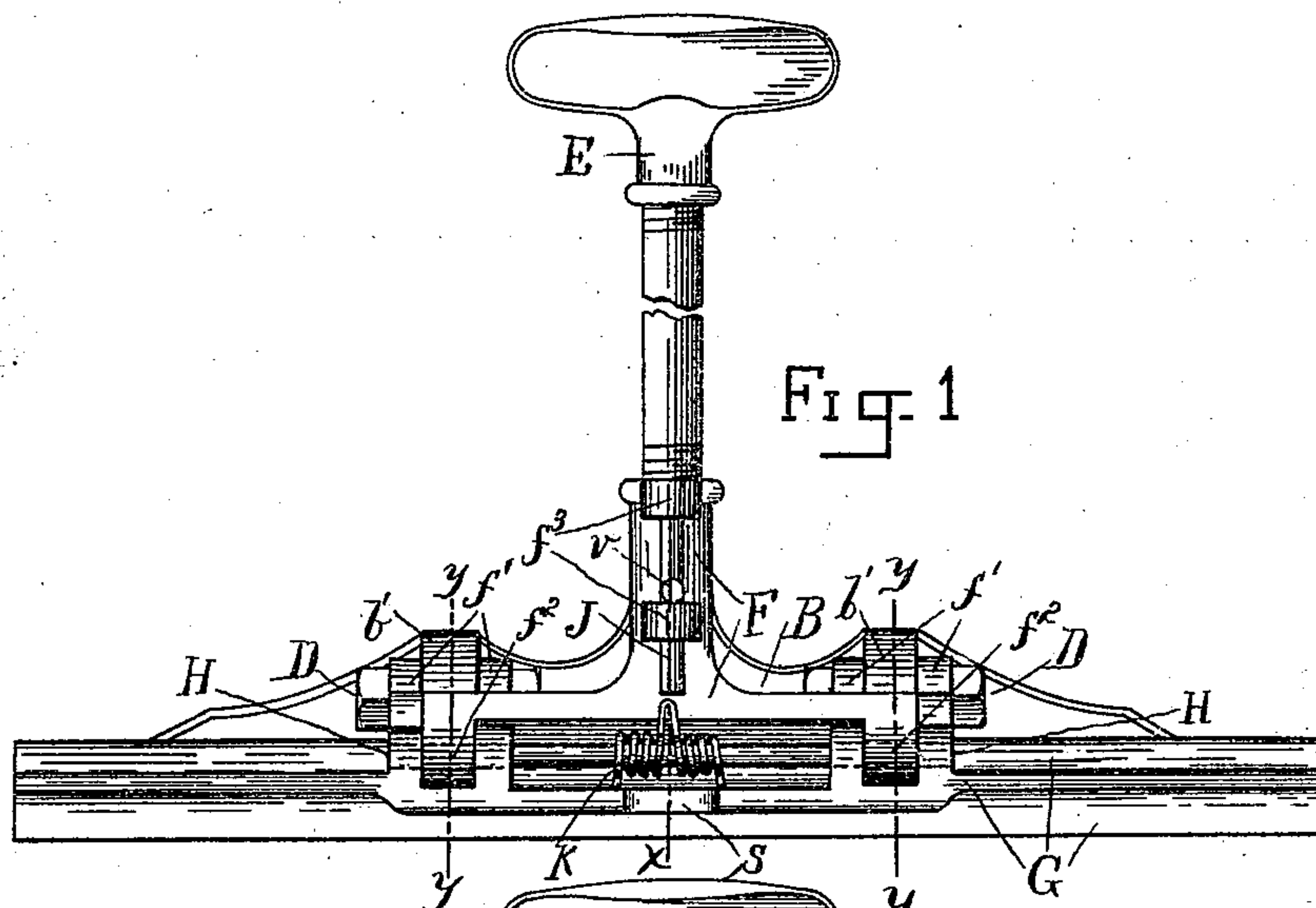


Fig. 1

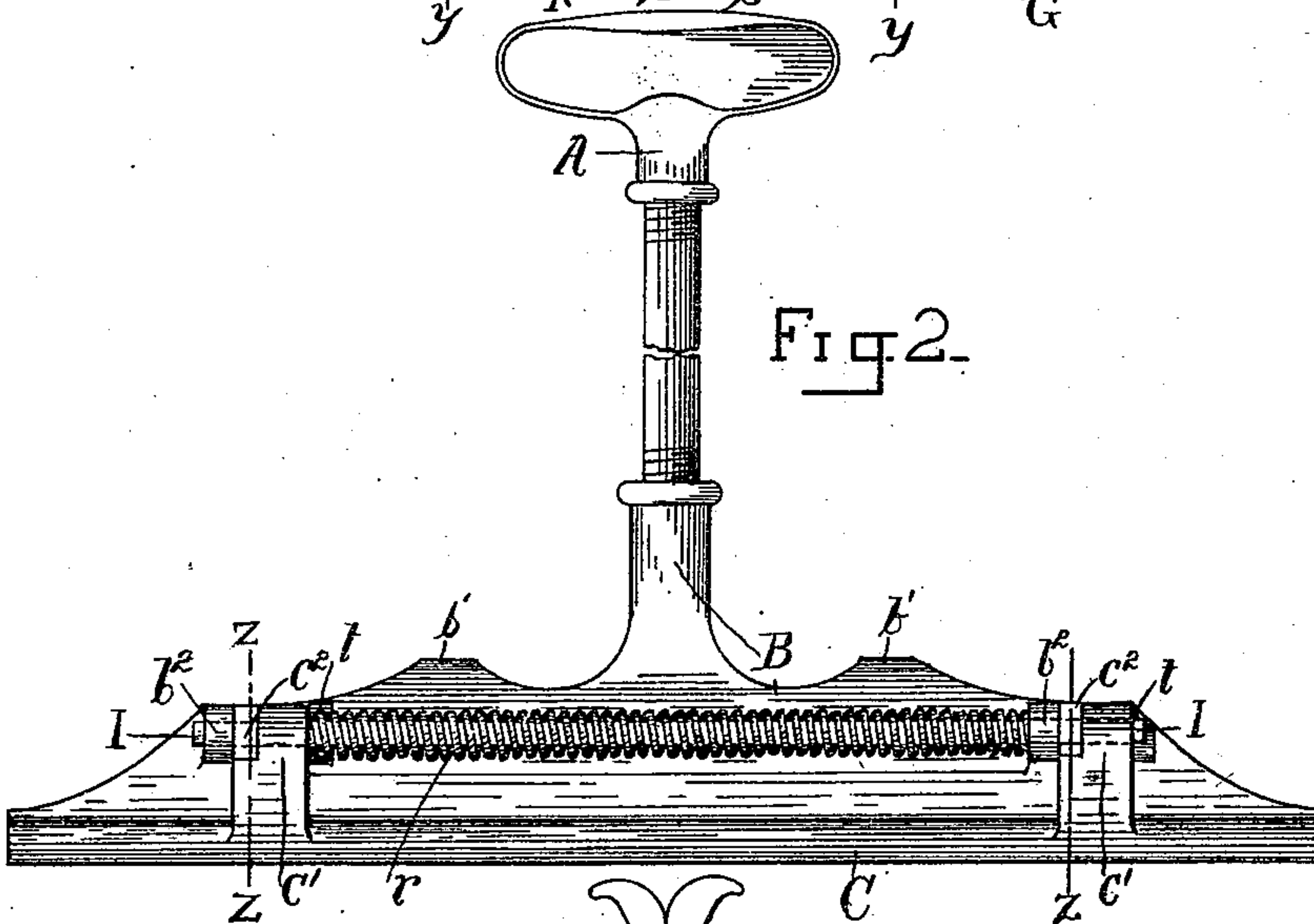


Fig. 2

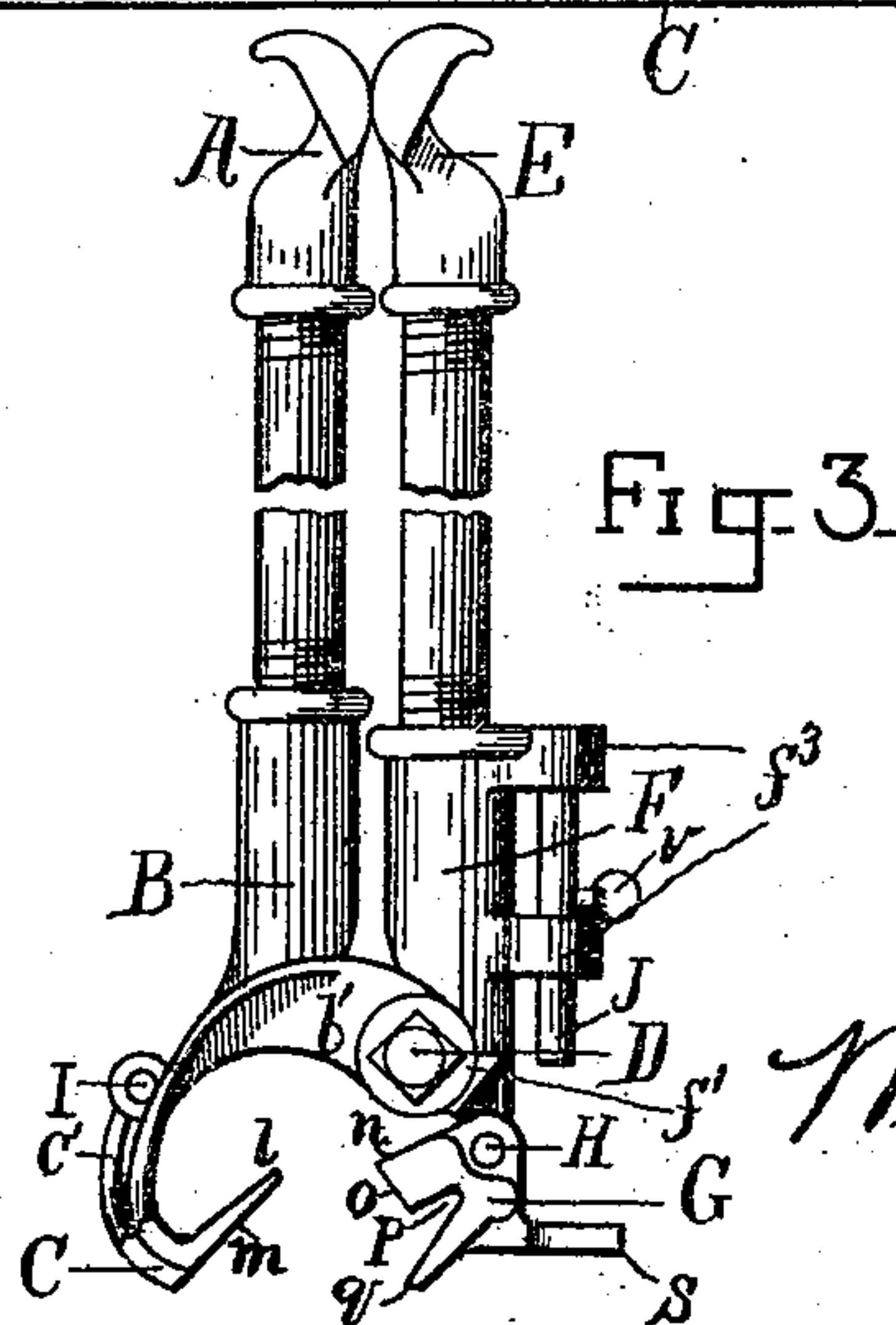


Fig. 3

WITNESSES:
Fred W. Hersey.
Henry Heberling

INVENTOR:
William L. Heberling.

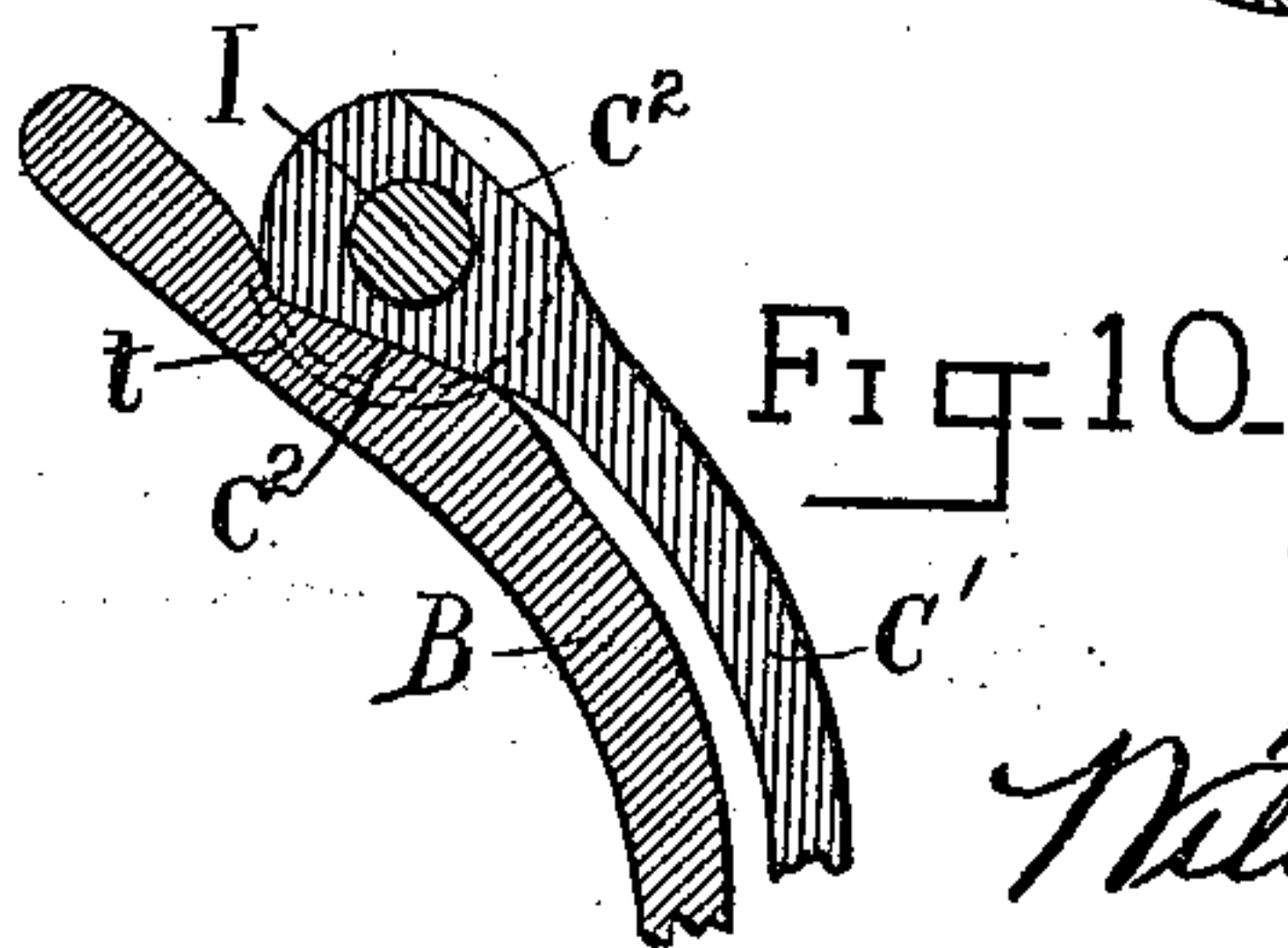
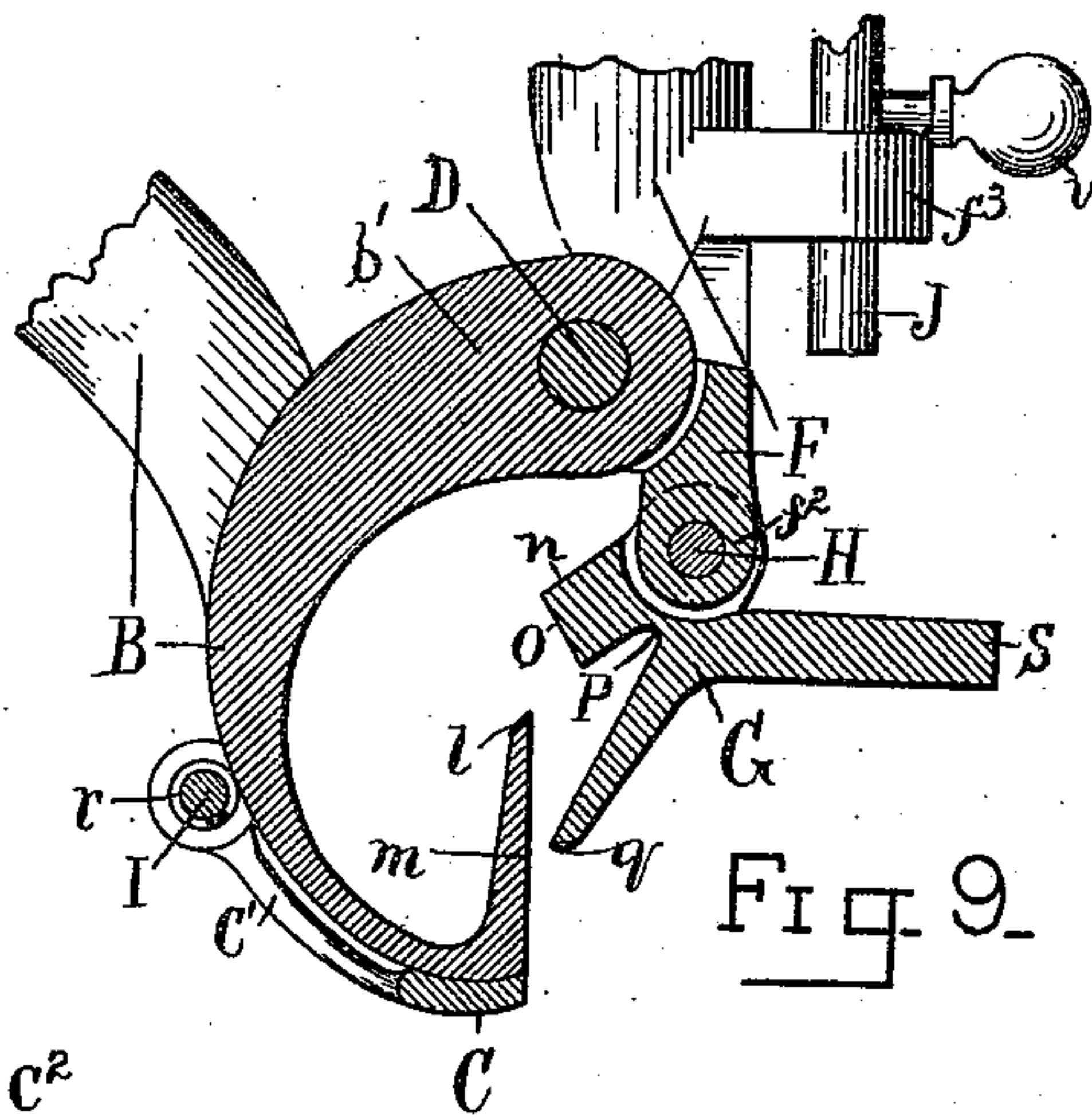
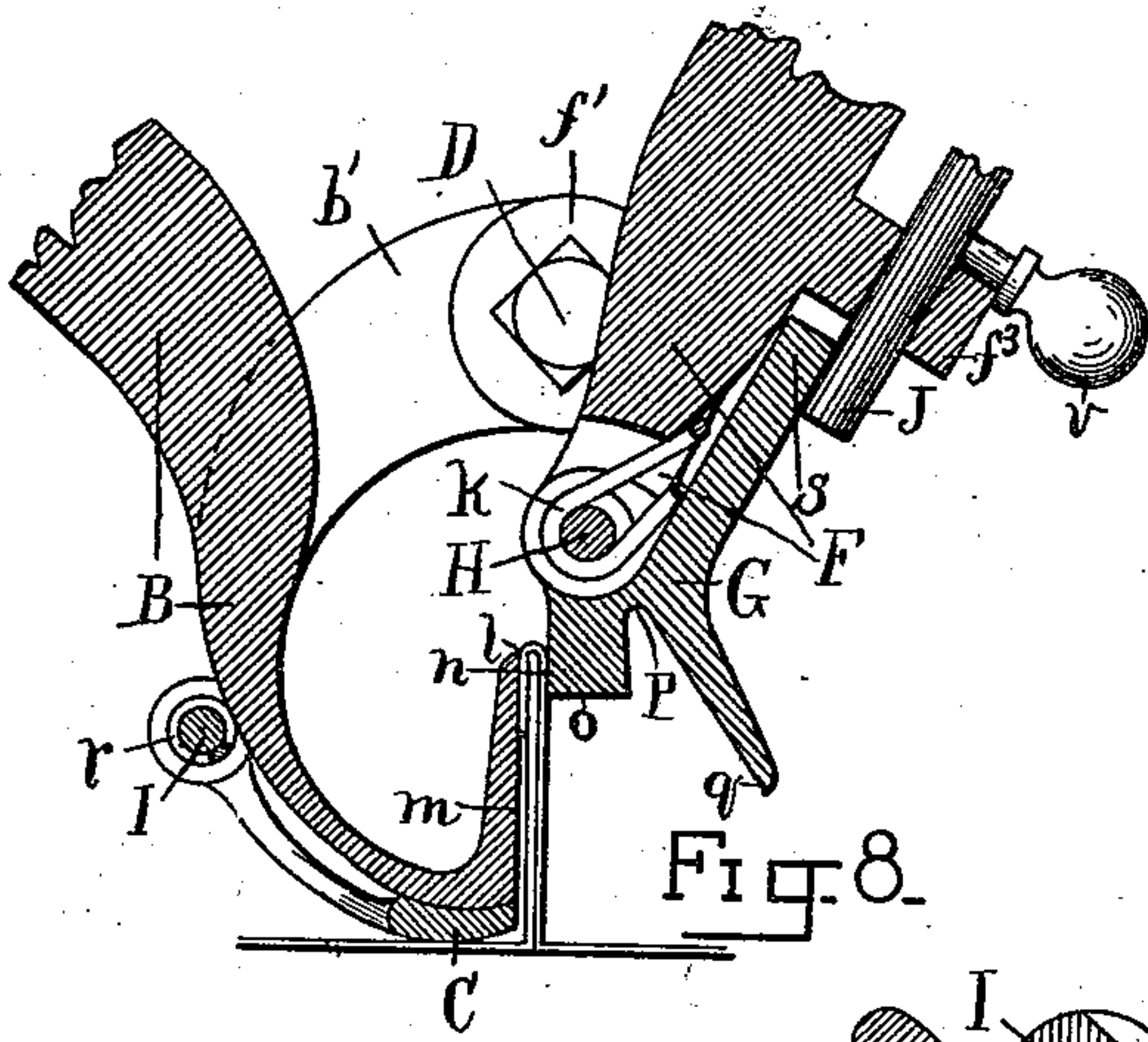
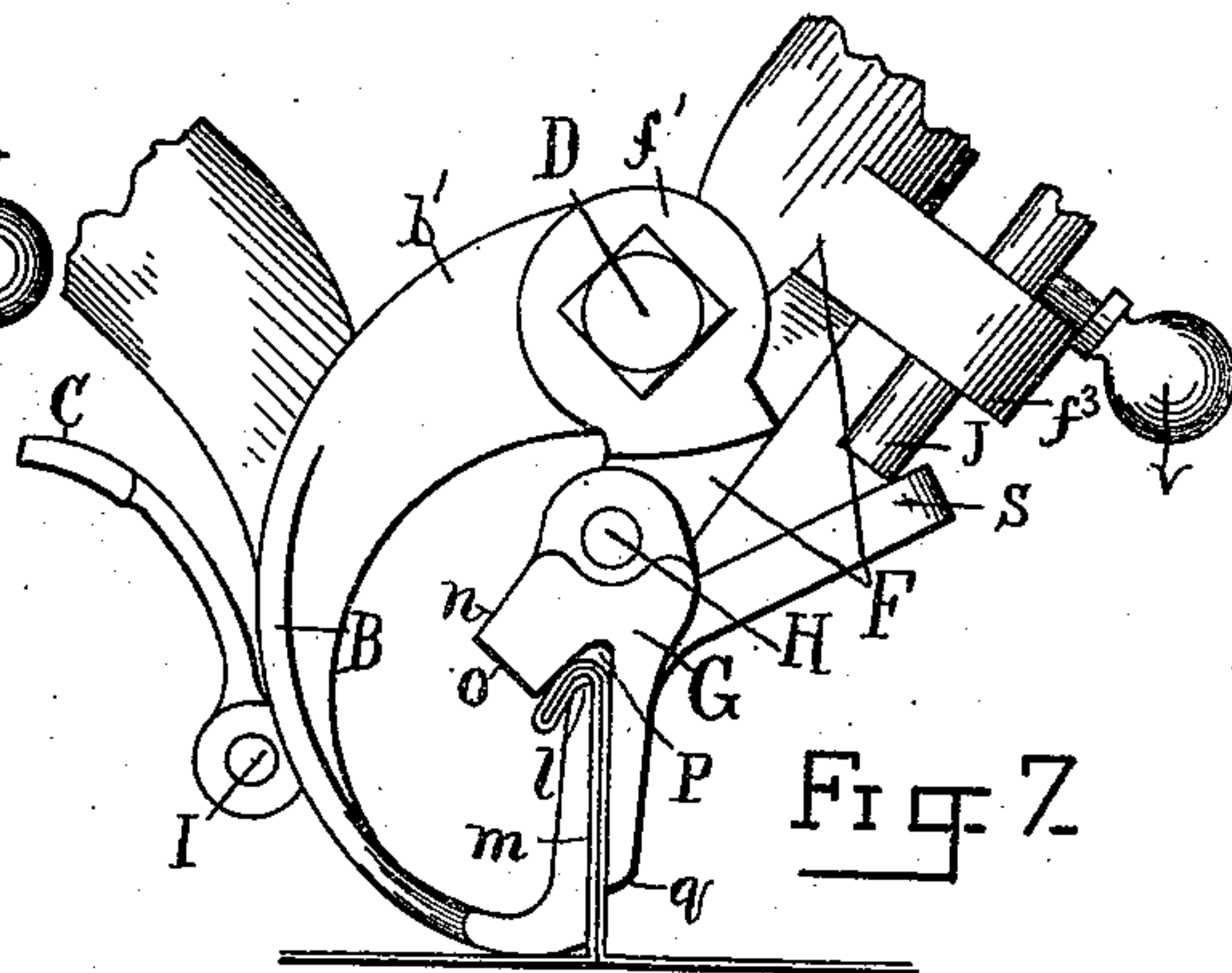
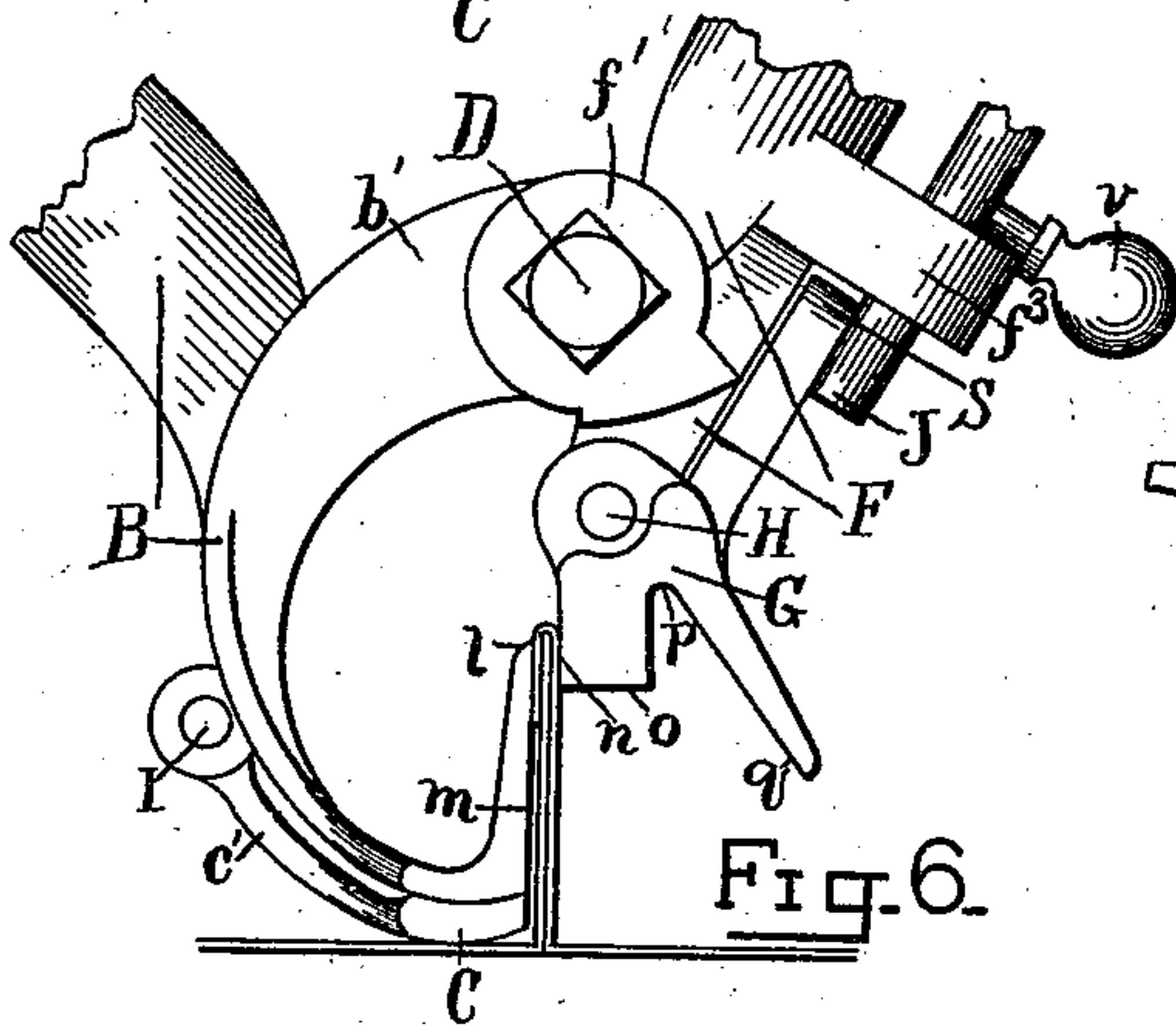
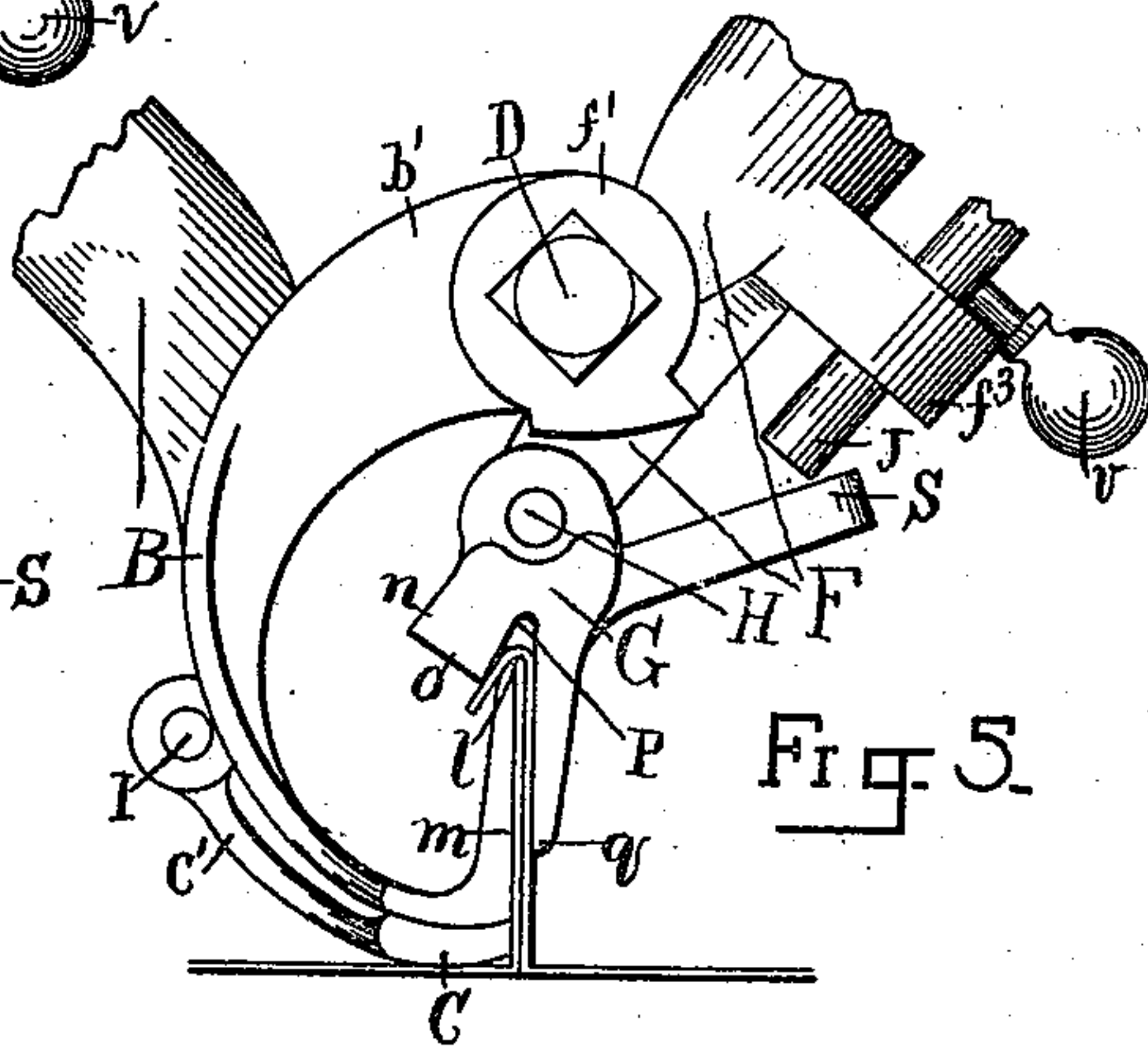
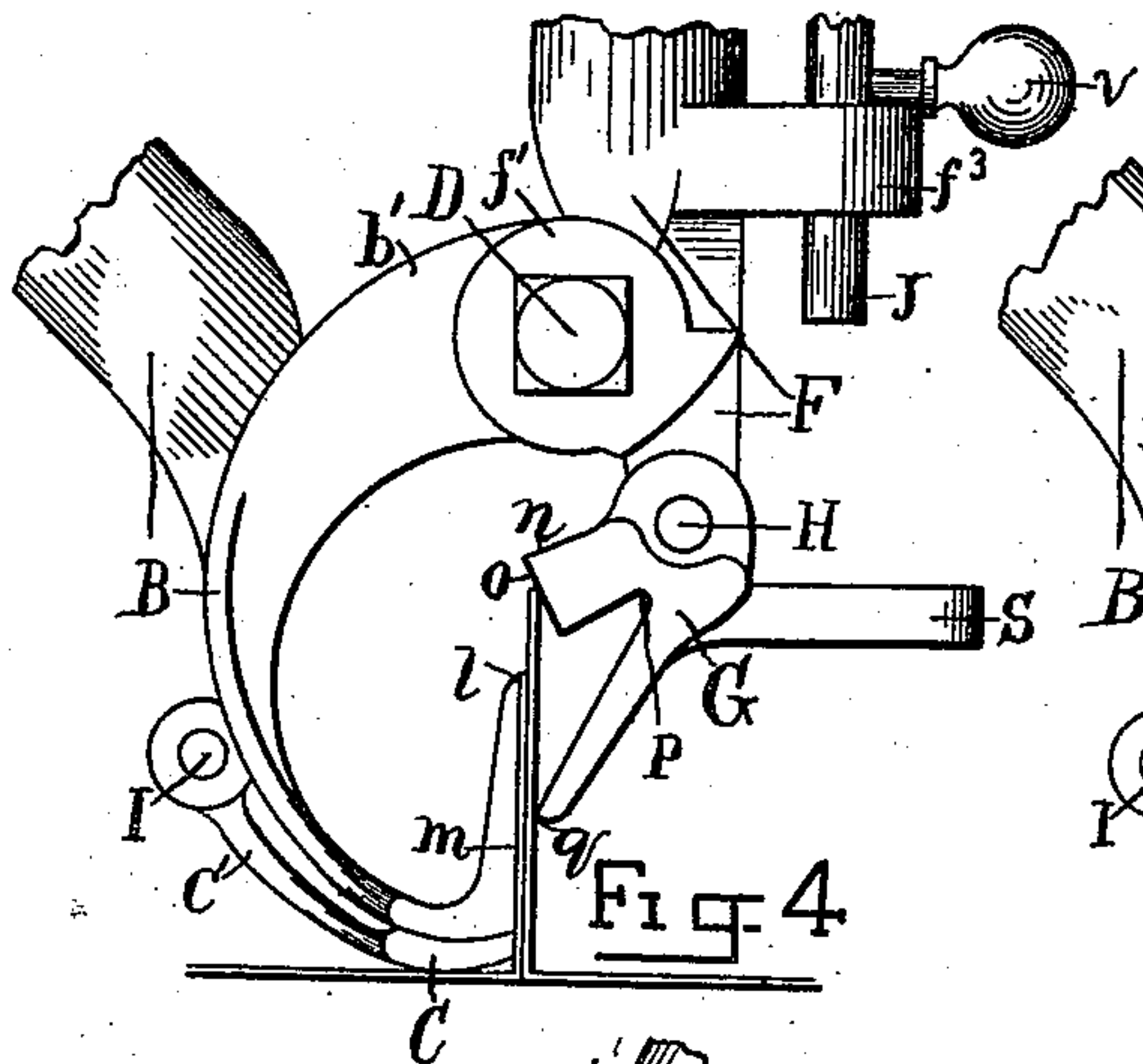
(No Model.)

2 Sheets—Sheet 2.

W. L. HEBERLING.
ROOFER'S SEAMING TONGS.

No. 501,509.

Patented July 18, 1893.



WITNESSES:

Fred W. Hershey
Henry Heberling

INVENTOR:

William L. Heberling

UNITED STATES PATENT OFFICE.

WILLIAM L. HEBERLING, OF HAVANA, ILLINOIS.

ROOFER'S SEAMING-TONGS.

SPECIFICATION forming part of Letters Patent No. 501,509, dated July 18, 1893.

Application filed May 20, 1892. Serial No. 433,686. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. HEBERLING, a citizen of the United States, residing at Havana, in the county of Mason and State of Illinois, have invented certain new and useful Improvements in Roofers' Seaming-Tongs; 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, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a tool for locking standing seams in metal roofing, that will be more simple and easy of operation and do a larger variety of work than tools now in use for this purpose. More particularly, to provide a tool that will properly form either a wide single lock or a narrow double lock in standing seams of both steel and tin roofing without either foot power or the common inward pressure on the handles of the tool, which is so straining on the operator. I accomplish this object by a simple device which is operated solely by the outward and downward movement of two handles.

The construction and operation of this tool will be better understood by reference to the accompanying drawings in which each part is designated by the same reference letter throughout the several views.

Figures 1, 2 and 3, are views of the opposing sides and one end of the tool in elevation. Figs. 4, 5, 6 and 7, are detail end views of the working parts of the tool in different positions. Figs. 8 and 9, are cross-sections in detail taken at the lines X, and Y, Fig. 1, with a change in position of the grooved former and its handle. Fig. 10, is a partial cross-section taken at the lines Z, Z, Fig. 2.

The opposing sides of this tool with their separate handles A, and E, are hinged together by bolts D, D. The side having the handle A, consists further of a socket jaw B; raising bar C; hinge pin I; and coil spring τ . The side having the handle E, consists further of a socket piece F; grooved former G; hinge pin H; torsion spring K; and sliding bolt J. The socket jaw B; Figs. 1, 2, 3, 4 and 9, has an upwardly projecting lip l , with face m , and

curved back which varies in height. It is also provided with four hinge lugs, two b' , b' , at its top reaching forward for the bolts D, D, the others b^2 , b^2 , at its back for the pin I, on which the raising bar C, is hinged. Under the pin I, and near the lugs b^2 , b^2 , are two concave depressions t , t , Figs. 2 and 10, to accommodate the ends of the lugs C' , C' , of the raising bar C; but between these depressions and the lugs b^2 , b^2 , and directly at the side of said lugs, the jaw is provided with narrow raised benches which fit the notches C^2 , C^2 , in the lugs C' , C' , of the raising bar C, and locks it rigidly on its hinges either in working position as in Figs. 4, 5, 6, 8 and 9, or in idle position as in Fig. 7. To release the bar C, it is forced endwise against the coil spring τ , until the notches C^2 , C^2 , stand fully over the depressions t , t , when it may be turned on its pivot from either of its shown positions to the other in which when it is reached it will be automatically locked by the spring τ , forcing the notches C^2 , C^2 , again in over the benches. The socket piece F, Fig. 1, is in the form of an inverted T and has two lugs f^3 , f^3 , at its back in which the bolt J, slides. It is also provided with double lugs f' , f' , for the bolts D, D, and two single lugs f^2 , f^2 , extending downward on the lines Y, Y, for the pin H, on which the grooved former G, is hinged. The pin H, is provided with a torsion spring K, which bears against the handle piece and former, causing the latter when idle to stand in proper position for the commencement of work, but allowing it when at work to change its position as required. The grooved former G, has lugs on its upper back part for the hinge pin H, and is provided with two lips o , and q , with a groove or recess between them, and a short arm S, at its back.

In operation the tool is placed astride two adjoining perpendicular seam flanges with its handles near together, as in Fig. 3. The handle A, is then moved from the handle E, until the face m , of the jaw B, and the lips o and q , of the former G, are all in contact with the intervening flanges, as in Fig. 4. When in this position an outward and downward movement of the handle E, rocks the upper portion of the former G, in over the lip l , pressing the point q , firmly against and supporting

the flanges at their sides below the place of bending, while their upper portions are carried in and down over the edge *l*, of *B*, by the lip *o*, of *G*, until the position shown in Fig. 5, is reached where the movement of the handle is checked by the contact of the arm *S*, of *G*, against the bolt *J*, which completes the first operation of the tool, leaving the upper portion of the seam bent over at an angle of about forty-five degrees, as in Fig. 5. To fold this bend down tightly against the side of the seam and thus complete the lock, I quickly convert my tool into a seam clamp by raising the sliding bolt *J*, and passing the arm *S*, of *G*, in behind it and returning the bolt as shown in Figs. 6, and 8, where the action of the tool as a clamp in its second operation on a seam is also clearly illustrated. To form a second fold on a seam the groove former *G*, is unlocked by sliding the bolt *J*, the raising bar *C*, is released and swung from under the jaw *B*, and allowed to lock in idle position as in Fig. 7, and the operation of bending the seam over and clamping it down again repeated as above described, forming the second lock in the seam as much lower than the first as the tool is lowered by swinging the bar *C*, from under it.

It will be noticed that the form and arrangement of the different parts of this tool give it great power and large range of capacity, and that its operation is simple and easy.

What I claim as new, and desire to secure by Letters Patent, is—

1. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is hinged or pivoted to its actuating device and provided with a downwardly projecting lip or arm adapted to engage the side of a seam and turn the former or bender on its hinge or pivot when forced over the seam.

2. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is adjustably attached to actuating mechanism and has working faces on opposite sides one to form the initial bend and the other to close down the fold.

3. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which has two lips between which is a groove or recess to receive the work and the said upwardly projecting lip of said jaw and is loosely hinged or pivoted to its actuating mechanism and adapted to rock automatically over the said upwardly projecting lip of said jaw.

4. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a

former or bender which is hinged or pivoted to its actuating device and provided with a downwardly projecting lip or arm adapted to engage the side of a seam and turn the former or bender on its hinge or pivot when forced over the seam, and a spring to hold the said former or bender when idle in proper position for the commencement of work.

5. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is hinged or pivoted to its actuating device and provided with a downwardly projecting lip or arm adapted to turn it on said hinge or pivot when forced over a seam, and a stop to limit the rotary movement of said former.

6. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is adjustably attached to actuating mechanism and has working faces on opposite sides one to form the initial bend and the other to close down the fold, and a locking device to hold the said former or bender rigidly in adjustment.

7. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is adjustably attached to actuating mechanism and has working faces on opposite sides one to form the initial bend and the other to close down the fold, and a sliding bolt to lock said former or bender rigidly in position.

8. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is hinged or pivoted to its actuating mechanism and adapted to rock automatically over the said upwardly projecting lip of said jaw, and a raising bar which is hinged or pivoted to the said jaw having the said upwardly projecting lip and is adapted to be folded beneath it or to be swung out therefrom.

9. In seaming tongs the combination with a jaw having an upwardly projecting lip and provided with means for its operation, of a former or bender which is hinged or pivoted to its actuating mechanism and adapted to rock automatically over the said upwardly projecting lip of said jaw, and a raising bar which is hinged or pivoted to the said jaw having the said upwardly projecting lip and is adapted to be folded beneath it or to be swung out therefrom, and a locking device to retain said raising bar in its different positions.

WILLIAM L. HEBERLING.

Witnesses:

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