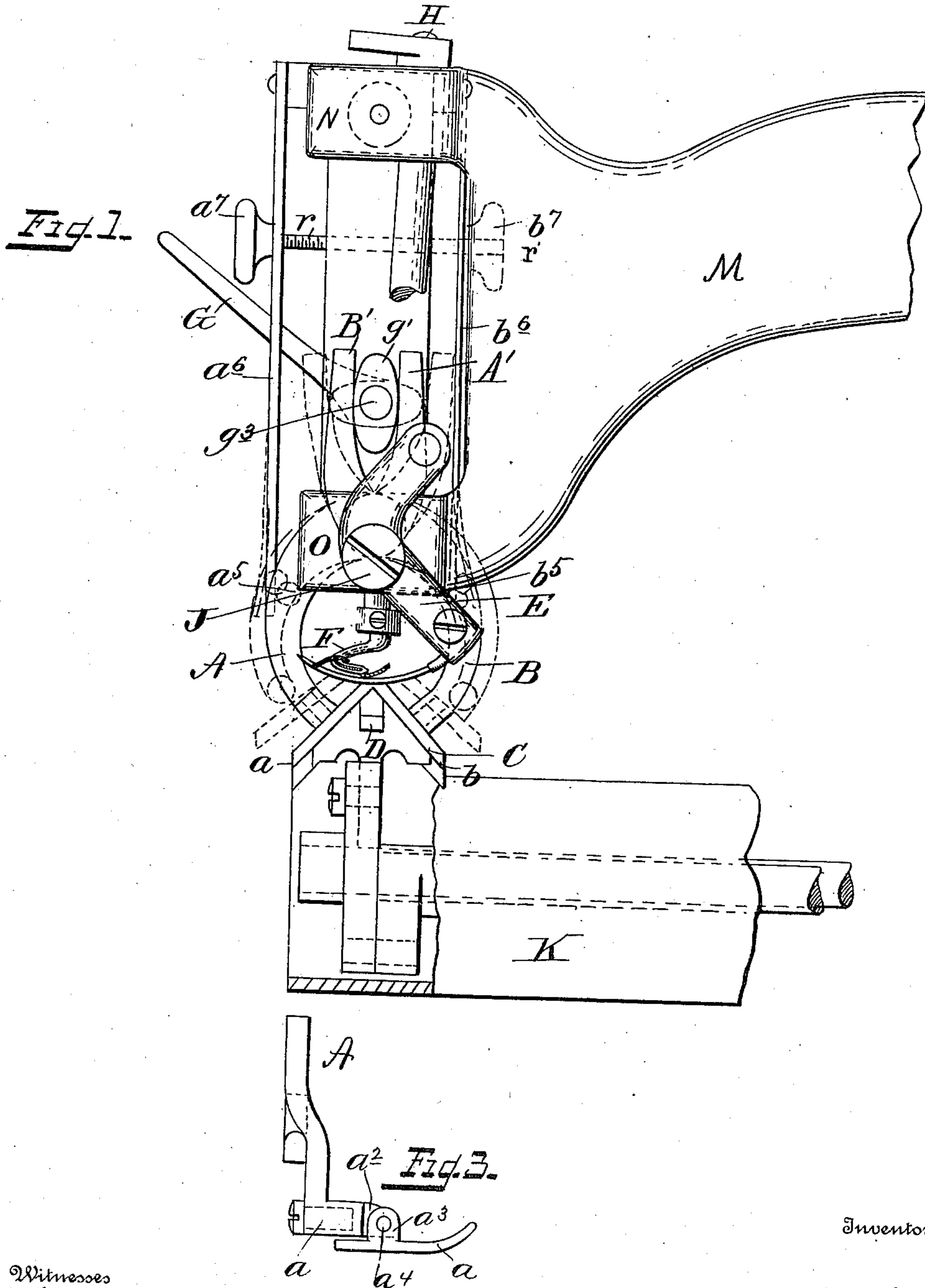


L. ONDERDONK.
PRESSER FOOT FOR BLINDSTITCH MACHINES.
APPLICATION FILED AUG. 29, 1904.

976,095.

Patented Nov. 15, 1910.

3 SHEETS—SHEET 1.



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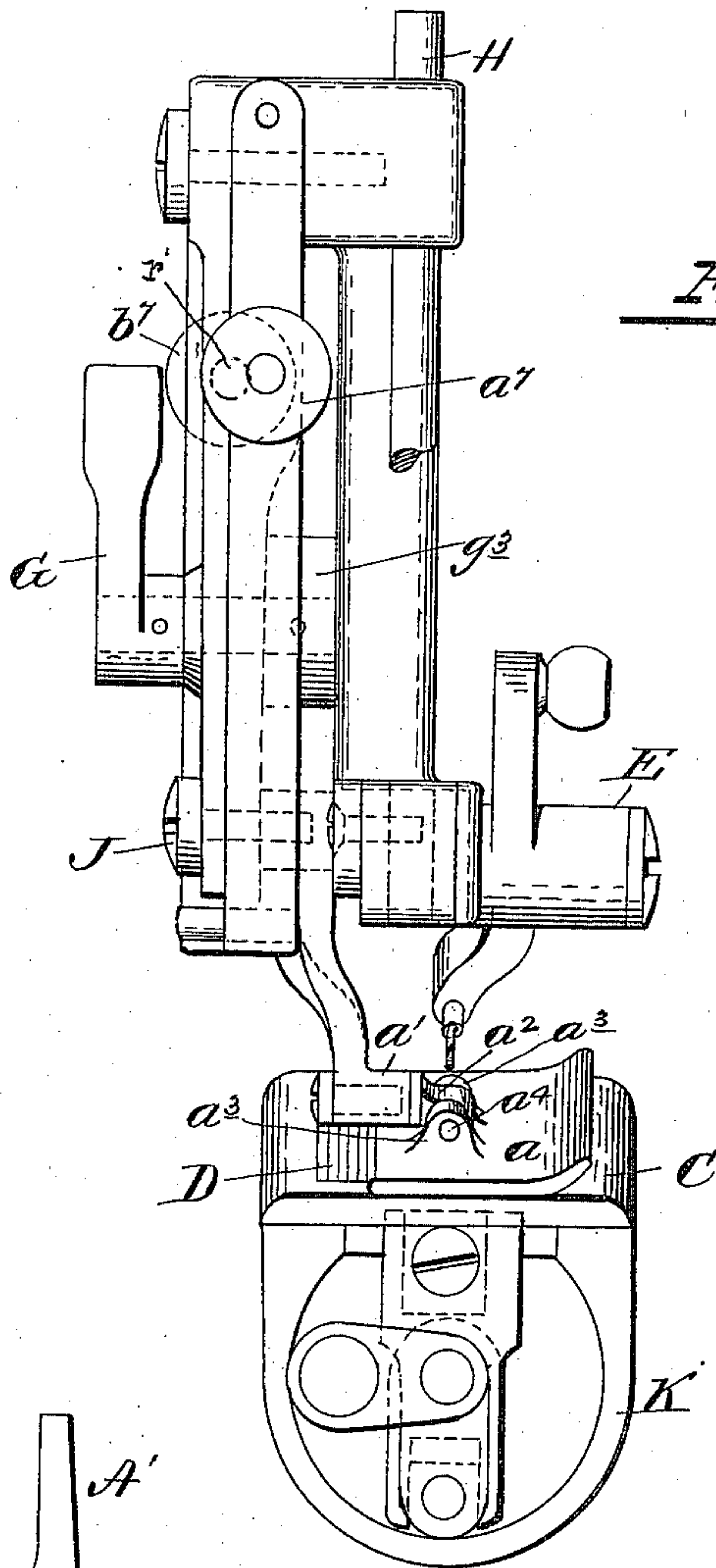


Fig. 2.

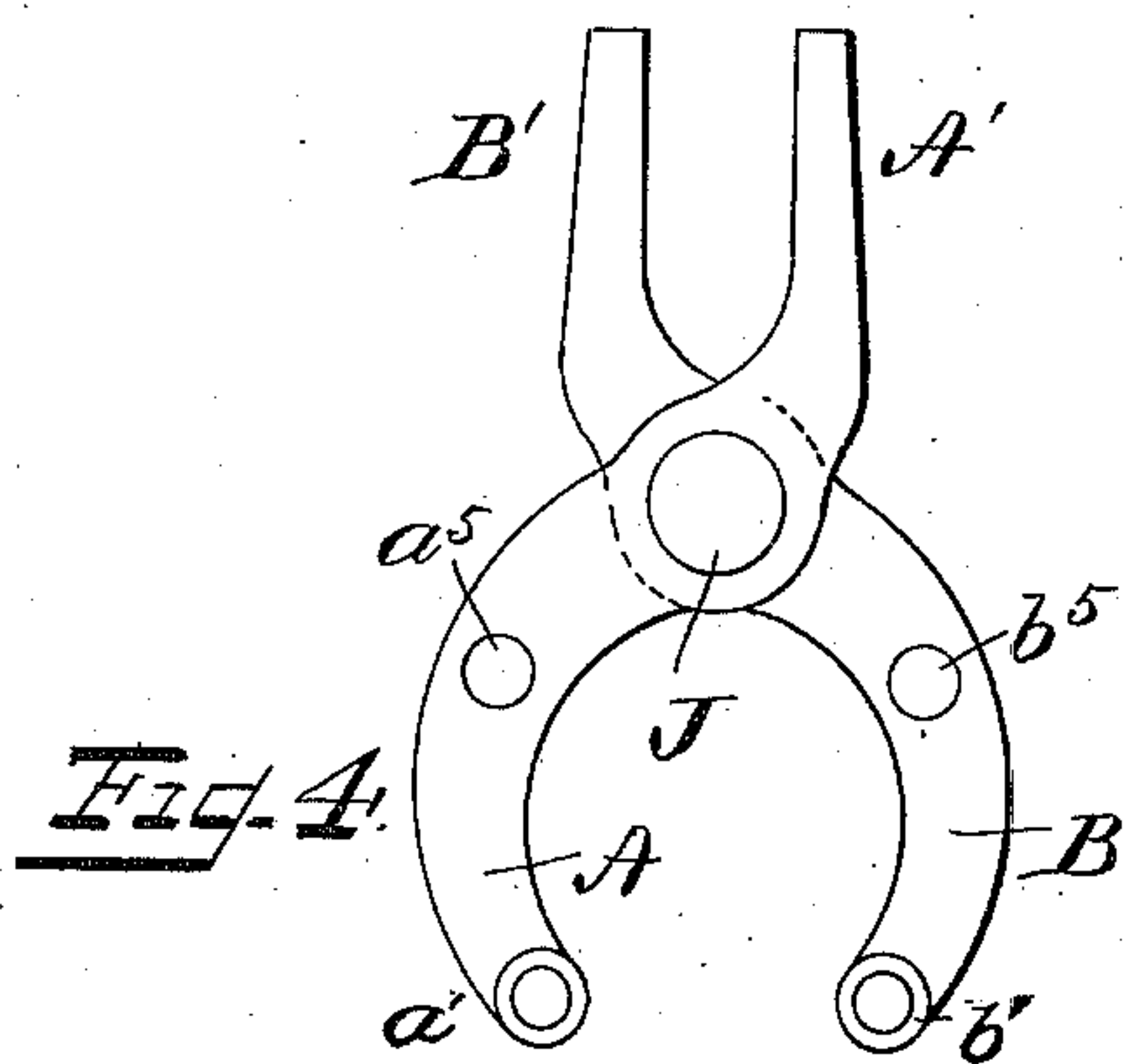


Fig. 4.

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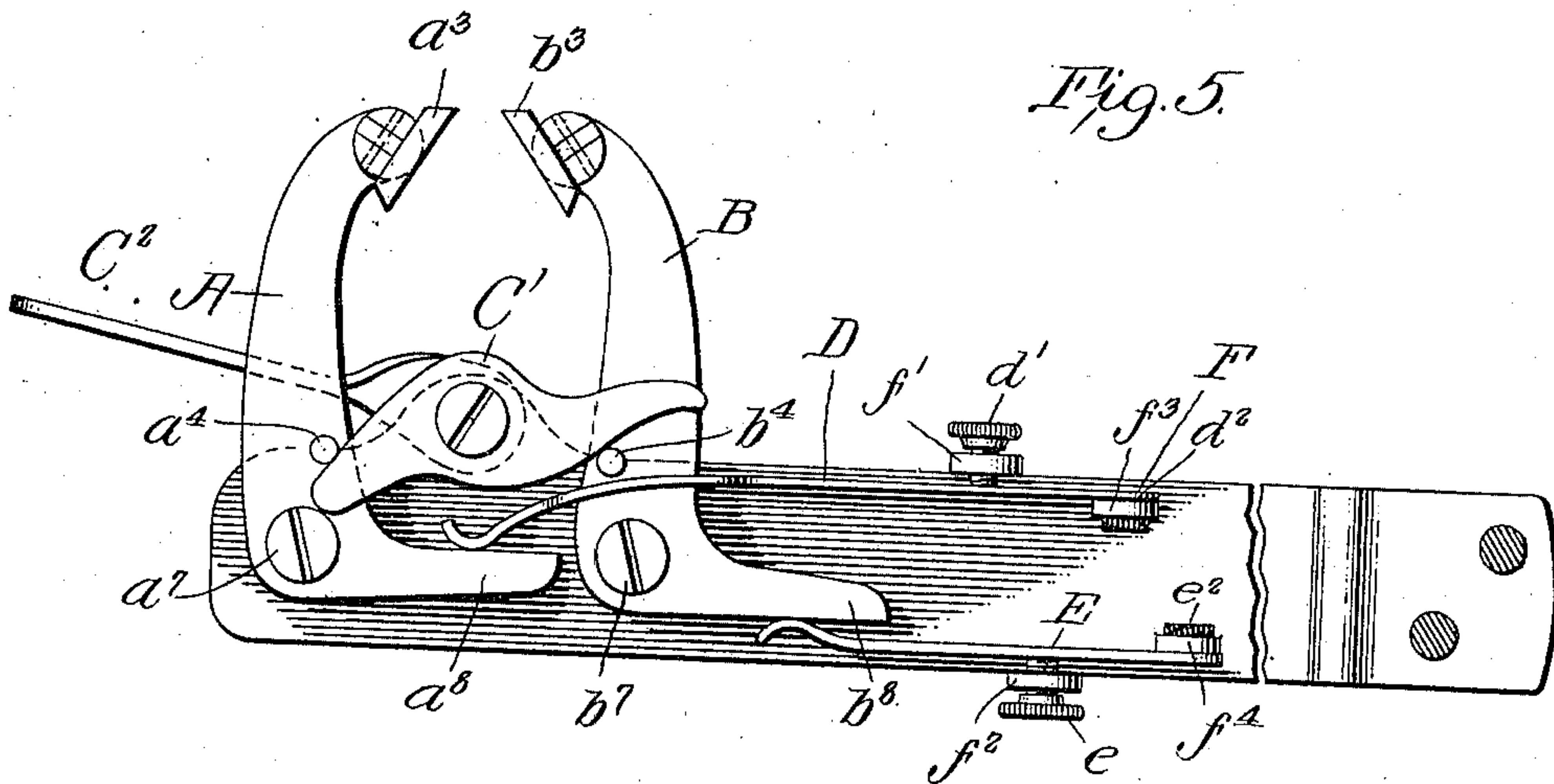
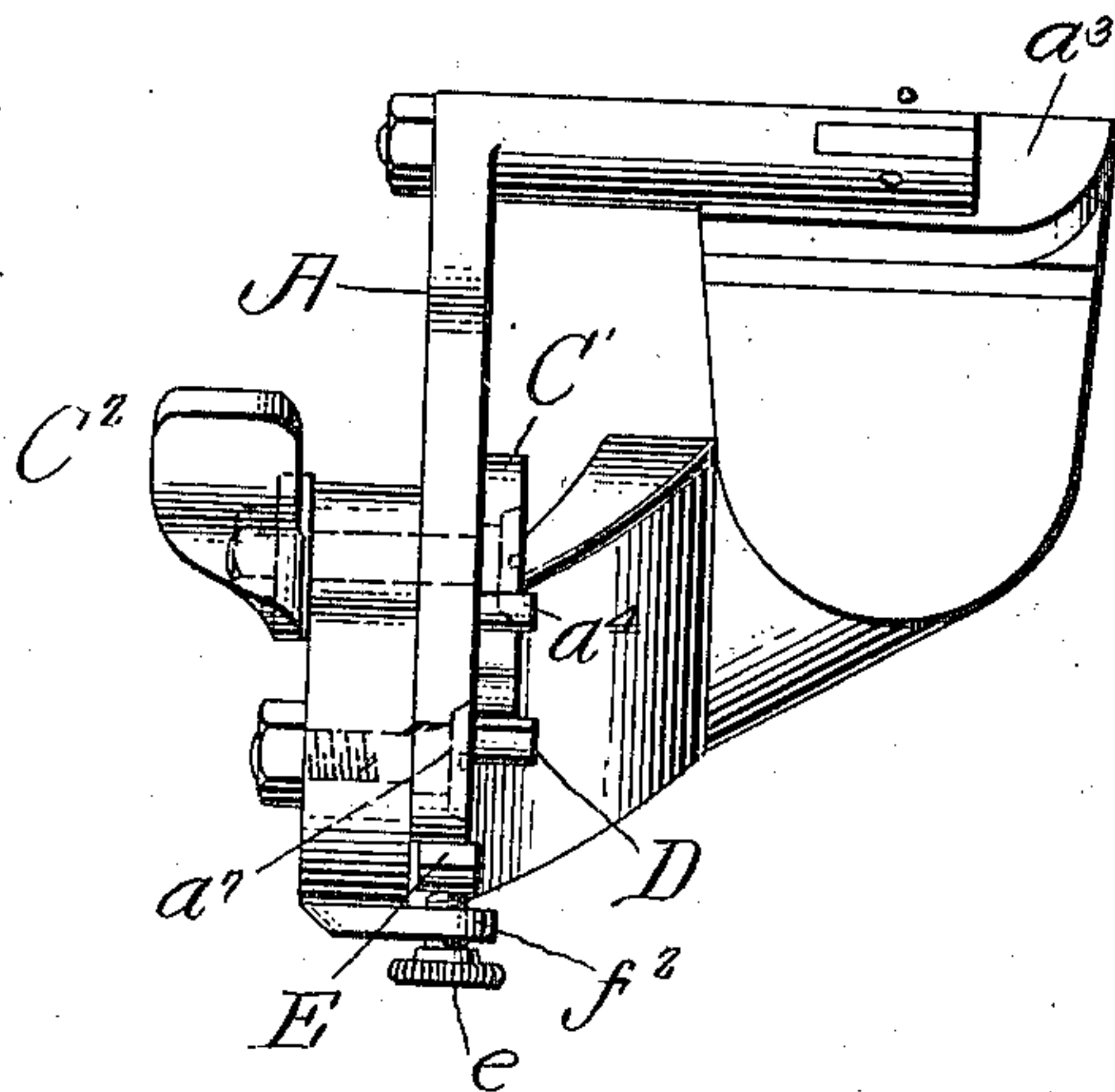


Fig. 6.



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UNITED STATES PATENT OFFICE.

LANSING ONDERDONK, OF NEW YORK, N. Y., ASSIGNOR TO UNION SPECIAL MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PRESSER-FOOT FOR BLINDSTITCH-MACHINES.

976,095.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed August 29, 1904. Serial No. 222,612.

To all whom it may concern:

Be it known that I, LANSING ONDERDONK, a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Presser-Foot for Blindstitch-Machines, of which the following is a description, reference being had to the accompanying drawing and to the letters and figures of reference marked thereon.

My invention relates to the presser foot for a blind stitching machine, and consists in a novel construction and arrangement of parts that will more readily accommodate itself to all varying thicknesses of goods while being sewed, and also permit the goods to be easily placed for sewing.

The invention consists further in the arrangement of parts set forth in the following description and the accompanying drawings, and defined in the claims.

In the drawings, Figure 1 shows in side elevation, a portion of a blind stitch sewing machine with my presser foot in place on the work support, and showing in dotted line the presser foot raised; Fig. 2 is an end elevation of the same; Fig. 3 shows in side elevation one of the presser levers and its foot detached from the machine; Fig. 4 is a front elevation of the presser levers; Fig. 5 shows in side elevation a bracket carrying the presser foot members, which bracket is adapted to be attached to the work support; Fig. 6 is an end view of a work support, with my improvement shown in Fig. 5 attached thereto.

The machine illustrated in the drawings is of the Onderdonk blind stitch type, such as shown in Patent No. 721,077, granted February 17, 1903. Said machine consists of the usual goose neck M, carrying lugs N and O. Pivoted to the lug O is the needle lever E, which is provided with the usual curved needle. Coöperating with the needle is the looper F, the shank of which extends through the lugs O and N, and has secured at its upper end the arm H, which is suitably connected to the driving mechanism. K is the cylindrical bed plate, which carries the feed shafts, and is provided with the inverted V-shaped work support, C, over which the goods are crimped and presented to the needle, which enters and emerges on the same surface of the work. D is the feed

dog for feeding the work. All of the above parts are common in this type of machine.

While I have shown a curved needle, it will be understood that I may use a straight rectilinearly moving needle, and also that any other form of bed plate may be used.

My invention resides in the presser foot, which, as shown in Figs. 1 to 4, consists of two supporting members A, B, which are pivoted to the head of the machine by a screw J which passes through said members and is screw-threaded into said head. Said members A and B are oppositely arched as shown, and are enlarged at their lower ends to form bearings. The bearing a' receives a stud a^2 , which is secured between the ears a^3 on the foot a , by a pin a^4 . This connection affords a swivel bearing for the foot, allowing the same to tilt in any direction and accommodate itself to the inequalities of the goods. The member B carries a foot b , which is swiveled to said member in the same manner as the foot a is connected to its member. These foot portions a and b engage the opposite sides of the V-shaped work support and extend approximately to the vertex thereof. The goods is held clamped by these feet against the work support, with a sufficient portion of the goods extending up between the feet into the path of the needle, which vibrates back and forth directly above the upper edges or parts of the foot portions a and b .

The member A has a projecting stud a^5 , located about midway between the foot and the fulcrum J. Rigidly connected to the head of the machine is a spring a^6 , which engages the stud a^5 , and normally holds the foot a on the work support. Likewise the member B has a stud b^5 engaged by a spring b^6 , which normally holds said foot in engagement with the work support. A rod r carried by the head of the machine projects through the spring a^6 , and is provided with a nut a^7 , by means of which the tension of the spring may be adjusted. A rod r' projects from the machine head in the opposite direction as shown in dotted lines in Figs. 1 and 2, and by means of the nut b^7 , the tension of the spring b^6 may be adjusted.

The members A and B cross at their pivot connection and extend upward into shank portions A' and B' , as is clearly shown in Figs. 1 and 4. These shank portions are spaced and intermediate the same is a cam

g' carried by a shaft g^3 , passing through a supporting plate on the head of the machine. On the rear end of this shaft is an arm G, which is rigidly connected thereto.

5 The operation of my device will be apparent from the above disclosure. The springs normally hold the foot portions against the goods on the work support. The presser levers or members are entirely independent of each other, and either one can
10 yield without moving the other. Consequently, if inequalities such as a hem or seam occur on one side only of the line of stitching, the foot portion on that side will
15 rise to accommodate the same, while the foot portion on the other side will firmly hold the goods in place. I find this to be an extremely important feature in the blind stitching art, for, if the work becomes loose on
20 either side of the crimping member, a false and poor seam is produced. It will also be noted that by my arrangement the parts of the presser foot may be readily assembled or taken out, without disturbing the needle or
25 looper. Also with my type of foot, wherein the presser members yield, it is unnecessary to make the work support yielding, or to hinge the same so that it can be lowered to insert the goods. All that is necessary, is to
30 provide for a slight relative adjustment between the work support and the needle, so the amount of bight taken by the needle may be regulated. The presser members A and B are pivoted above the fulcrum of the needle lever, and, therefore, in their movements
35 the foot portions swing in an arc of a greater radius than that of the needle, and do not interfere with the needle.

40 In Figs. 5 and 6 I have shown the presser foot carried by the bed plate. In this case the bed plate is provided with a bracket F which is secured to the bed plate a distance back from the free end thereof by suitable screws. The bracket is offset from the support to provide sufficient space to allow the
45 goods as they are stitched to pass between the bracket and work support. This bracket carries the presser foot. The members A and B are pivoted to the bracket at a^7 and b^7 respectively. The member A has an extension a^8 , which is engaged by a leaf spring D, rigidly secured at d^2 to a lug f^3 , projecting from the bracket F. Intermediate the ends of said spring is a lug f' through which
50 passes the screw d' . By means of this screw the tension of the spring may be adjusted. Likewise the member B has an extension b^8 engaged by a spring E secured at e^2 to a lug f^4 ; and a screw e' passing through the lug f^2 contacts with said spring and thereby the
55 tension thereof may be adjusted. Intermediate the members A, B, is a cam C' which engages pins a^4 , b^4 on said members A and B. This cam has an extending hand piece
60 C^2 by means of which the presser members

are operated and the foot portions a^3 and b^3 moved from the work-engaging member.

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

1. The combination with a work supporting member, having inclined work engaging faces for crimping the material, an overhanging arm, a needle carried by said overhanging arm, independent presser members
70 coöperating with said inclined work engaging faces and means for moving said presser members relative to each other toward and away from the work engaging faces in a path below the path of the needle. 80

2. The combination of a support, a crimping member carried thereby, an overhanging arm, a needle supported by the overhanging arm, independent presser members pivoted to said overhanging arm, so as to swing in
85 a direction substantially at right angles to the crimping member, and coöperating with said crimping member, and means for moving said presser members toward and from each other, and the crimping member. 90

3. The combination with a crimping member, means for supporting said crimping member, an overhanging arm, a needle supported by said overhanging arm, independent presser members coöperating with the
95 crimping member, and means for moving said presser members relative to each other, and toward and away from the crimping member in a path below the path of the needle. 100

4. The combination of an arm, a crimping member carried thereby, an overhanging arm, a needle supported by said overhanging arm, independent presser members pivoted to said overhanging arm and coöperating with said crimping member, and means for simultaneously moving said presser members away from each other and the crimping member. 105

5. In a sewing machine the combination of a bed plate, a feeding mechanism, a crimping member carried by the bed plate, a needle reciprocating across said crimping member, and independently yielding presser members engaging each side of the crimping member respectively and means for moving said presser members relative to each other, and toward and away from the crimping member; substantially as described. 110

6. The combination of a bed plate, a crimping member carried thereby, a needle reciprocating across said crimping member, independently pivoted presser members engaging the crimping member, means for yieldingly holding said presser members in engagement with said crimping member, and means for lifting said presser members by turning the same on their pivotal support; substantially as described. 120

7. The combination of a bed plate, a 125 130

crimping member carried thereby, a needle reciprocating across said crimping member, independently pivoted presser members engaging the crimping member, means for yieldingly holding said presser members in engagement with said crimping member, and means for simultaneously lifting said presser members by turning the same on their pivotal support; substantially as described.

8. The combination of a bed plate, a crimping member carried thereby, a needle reciprocating across said crimping member, pivoted presser members engaging the crimping member, means for yieldingly holding said presser members in engagement with said crimping member, and a cam for simultaneously lifting said presser members; substantially as described.

9. The combination of a work support, a pivoted needle lever, a needle carried thereby, a presser foot engaging the work support beneath the needle, and means for raising and lowering said presser foot in a path beneath the needle path and above the work support; substantially as described.

10. The combination of a work support, a pivoted needle carrier, and pivoted presser members, the radius of the pivoted presser members being greater than the radius of the pivoted needle, whereby said presser member may be raised and lowered without interfering with the needle, and means for operating said presser members; substantially as described.

11. The combination of a work support, a pivoted needle carrier, and independently pivoted presser members, the radius of the pivoted presser members being greater than the radius of the pivoted needle, whereby said presser members may be raised and lowered without interfering with the needle, and means for operating said presser members; substantially as described.

12. The combination of a work support, a pivoted needle carrier, presser members pivoted to the head of the machine, and comprising arched shaped portions, a foot swiveled on each of said portions, and means

for raising and lowering said members; substantially as described.

13. The combination of a work support, a pivoted needle carrier, presser members pivoted to the head of the machine, and comprising arched shaped portions, a foot swiveled on each of said portions, shank portions, a cam between said shank portions, means for operating the cam, and springs for yieldingly holding said presser members in engagement with the work support; substantially as described.

14. The combination of a work support, a pivoted needle carrier, presser members pivoted to the head of the machine, and comprising arched shaped portions, a foot swiveled on each of said portions, shank portions, a cam between said shank portions, means for operating the cam, and springs for yieldingly holding said presser members in engagement with the work support, and means for adjusting the tension on said springs; substantially as described.

15. In a sewing machine, the combination with a work support, an overhanging arm, of a presser foot mechanism comprising independently pivoted presser members carried by said overhanging arm with means for yieldingly holding them against the work support, and common means for lifting said presser members by turning the same on their pivotal support toward and away from each other; substantially as described.

16. In a sewing machine, the combination with a work support, and an overhanging arm, of a presser foot mechanism comprising independent presser members pivoted on said overhanging arm, and common means for lifting said presser members by moving the same on their pivotal connection with the overhanging arm in opposite directions; substantially as described.

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

LANSING ONDERDONK.

Witnesses:

W. L. SWIFT,

JOHN H. HOWELL, Jr.