

(Model.)

2 Sheets—Sheet 1.

E. B. RUDOLPH, Dec'd.

W. E. BOULTER, Administrator.

LEADING-IN DEVICE FOR OVEREDGE SEWING MACHINES.

No. 449,927.

Patented Apr. 7, 1891.

Fig. 3.

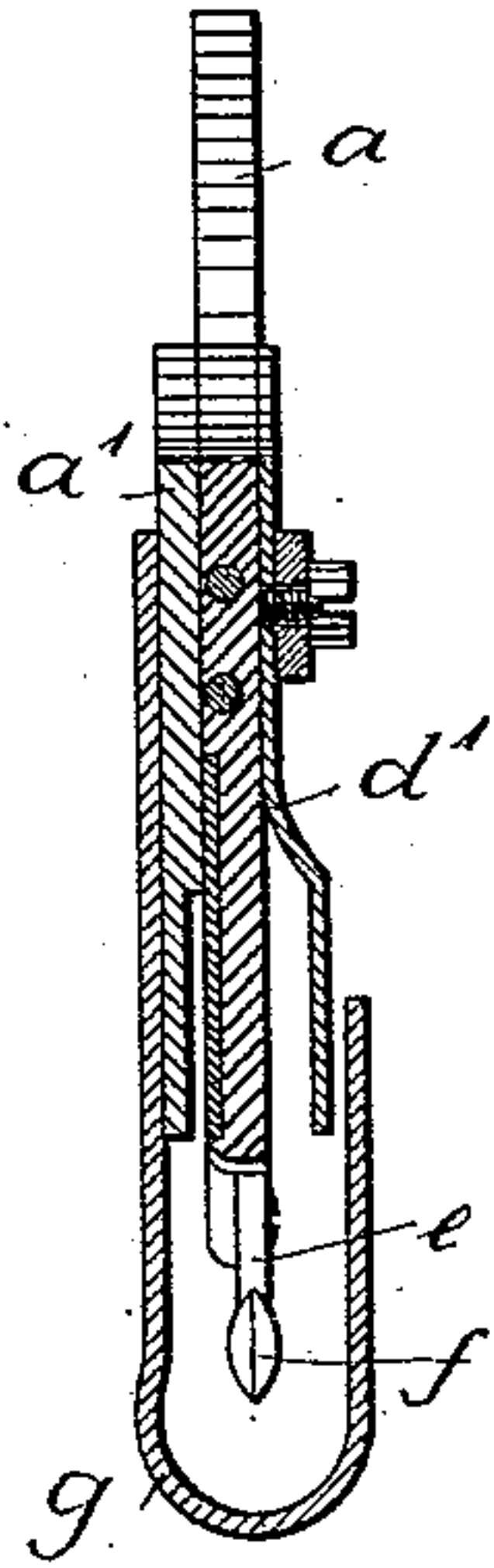


Fig. 1.

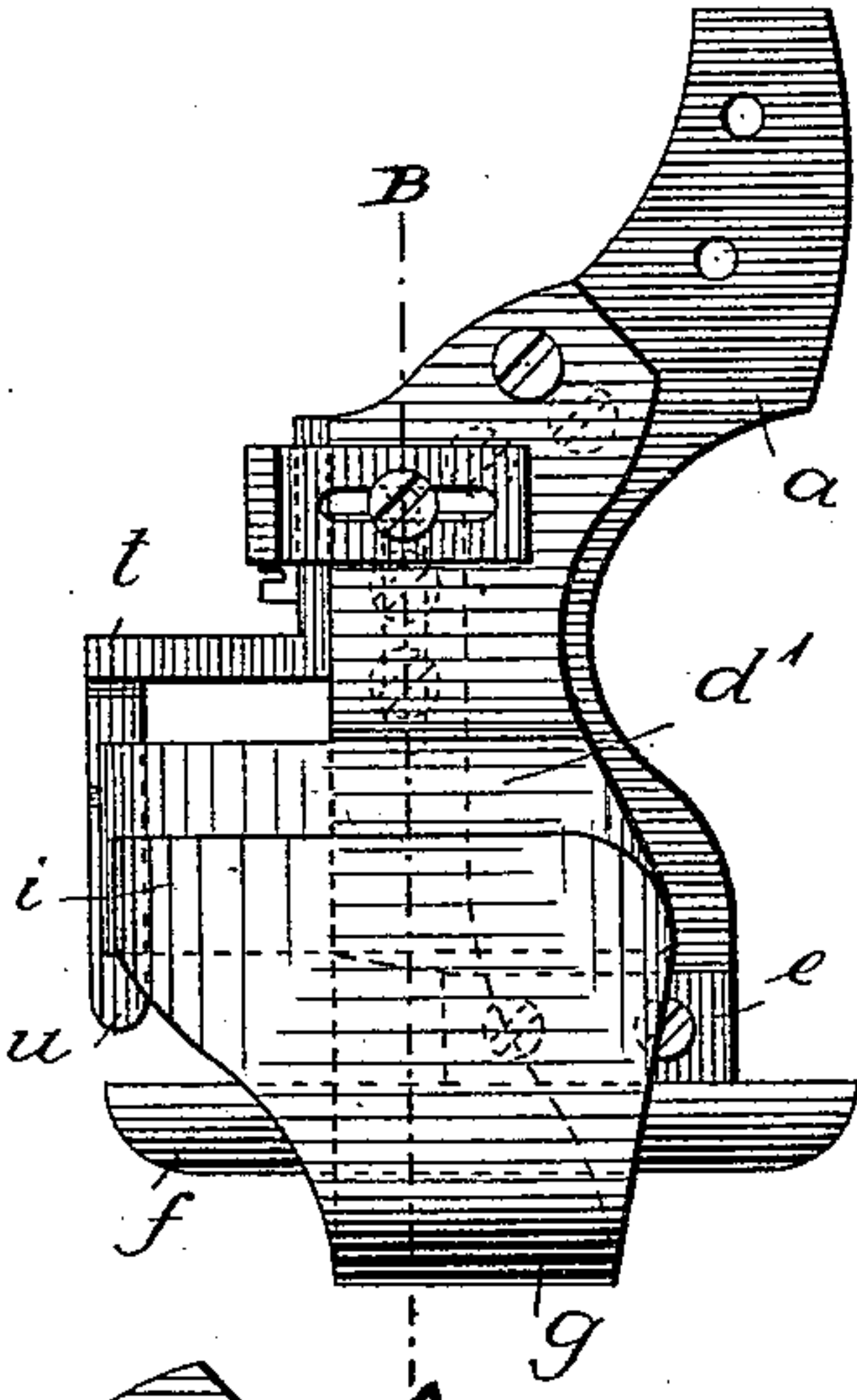


Fig. 2.

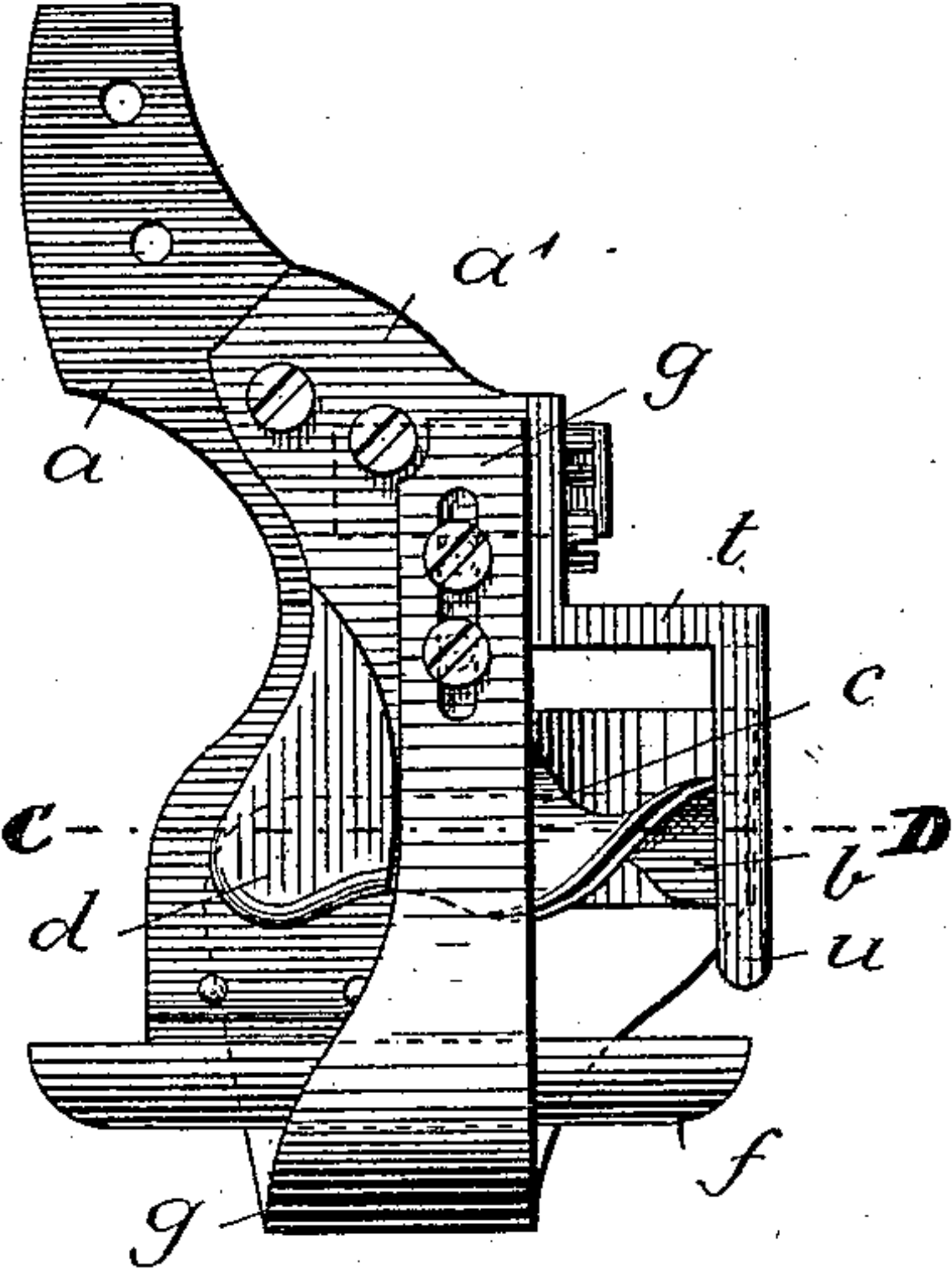


Fig. 7.

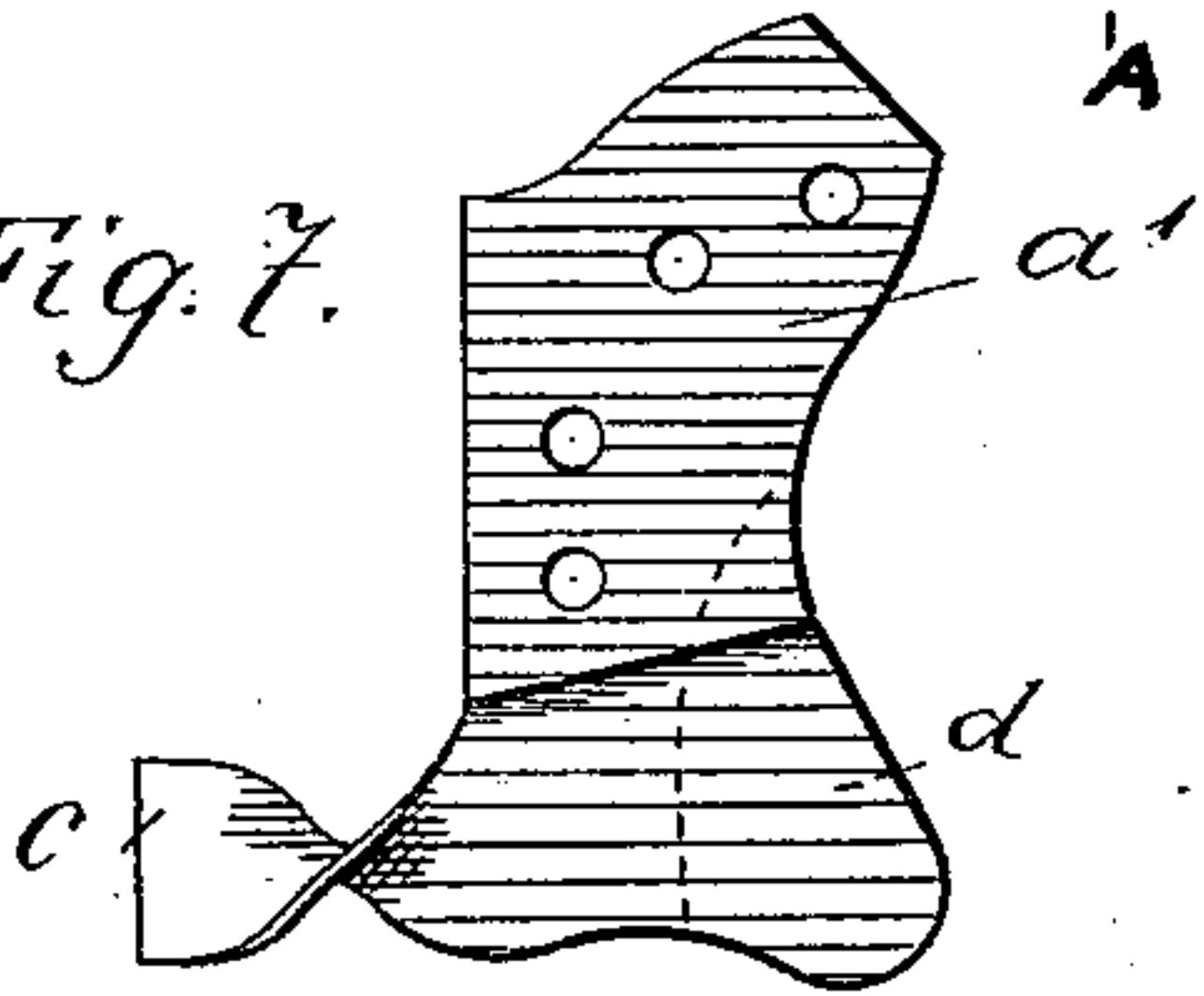


Fig. 4.

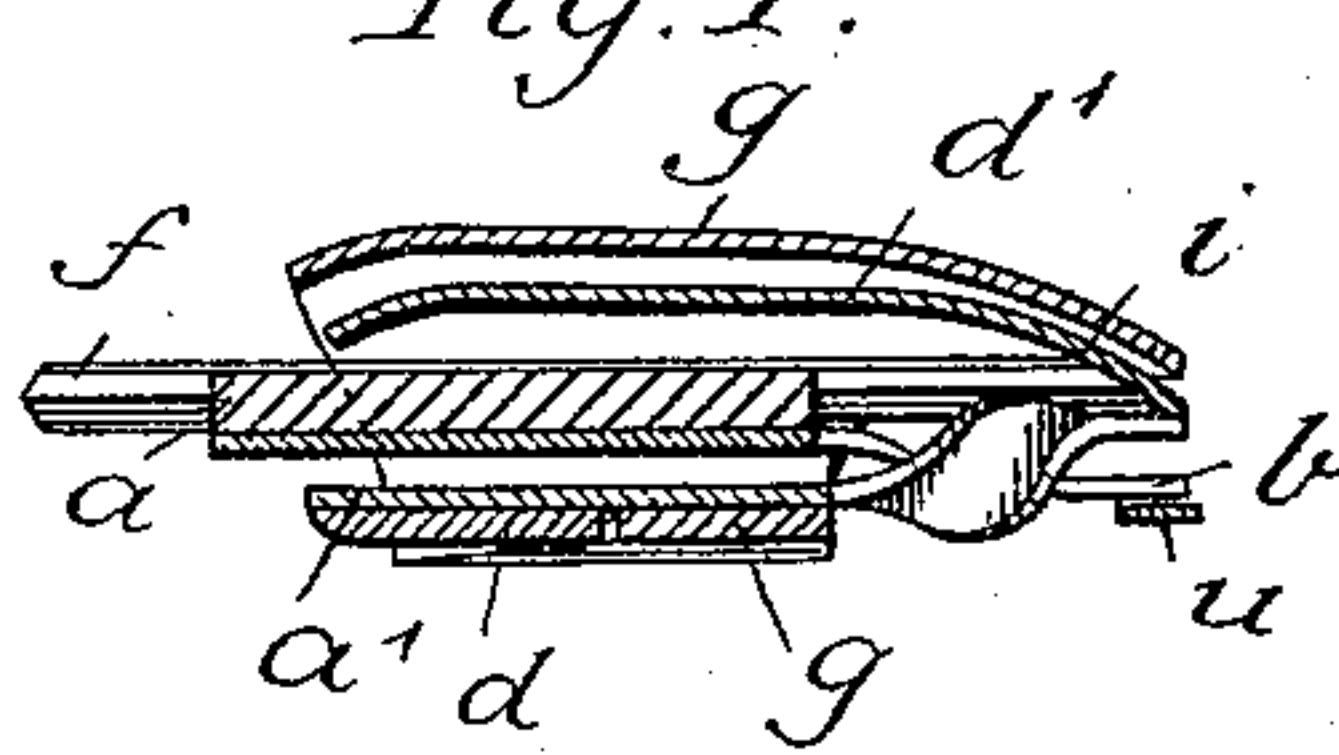


Fig. 6.

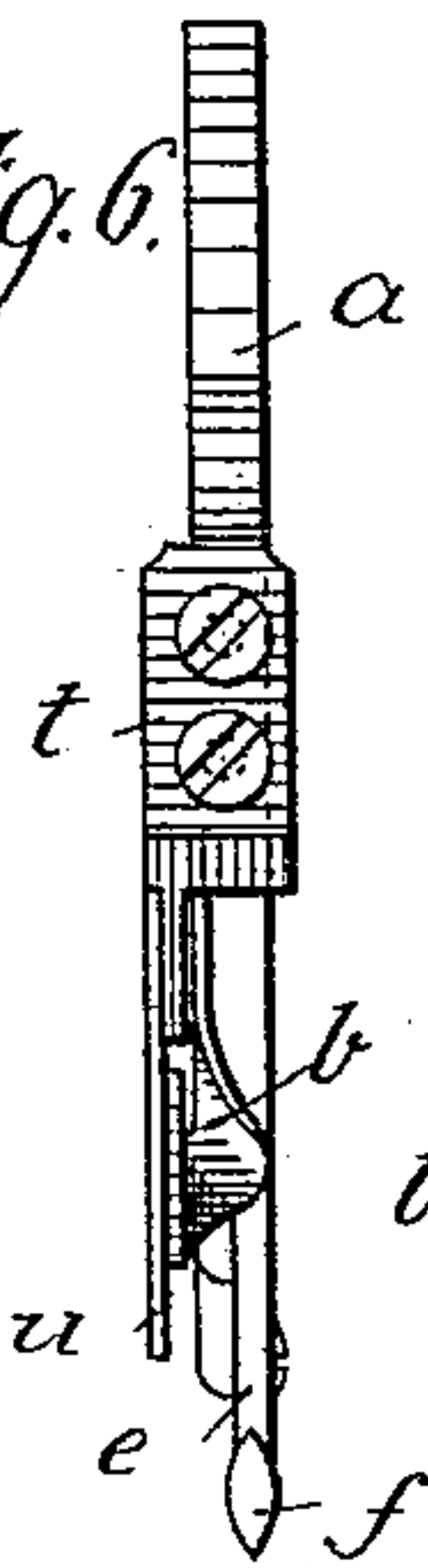


Fig. 5.

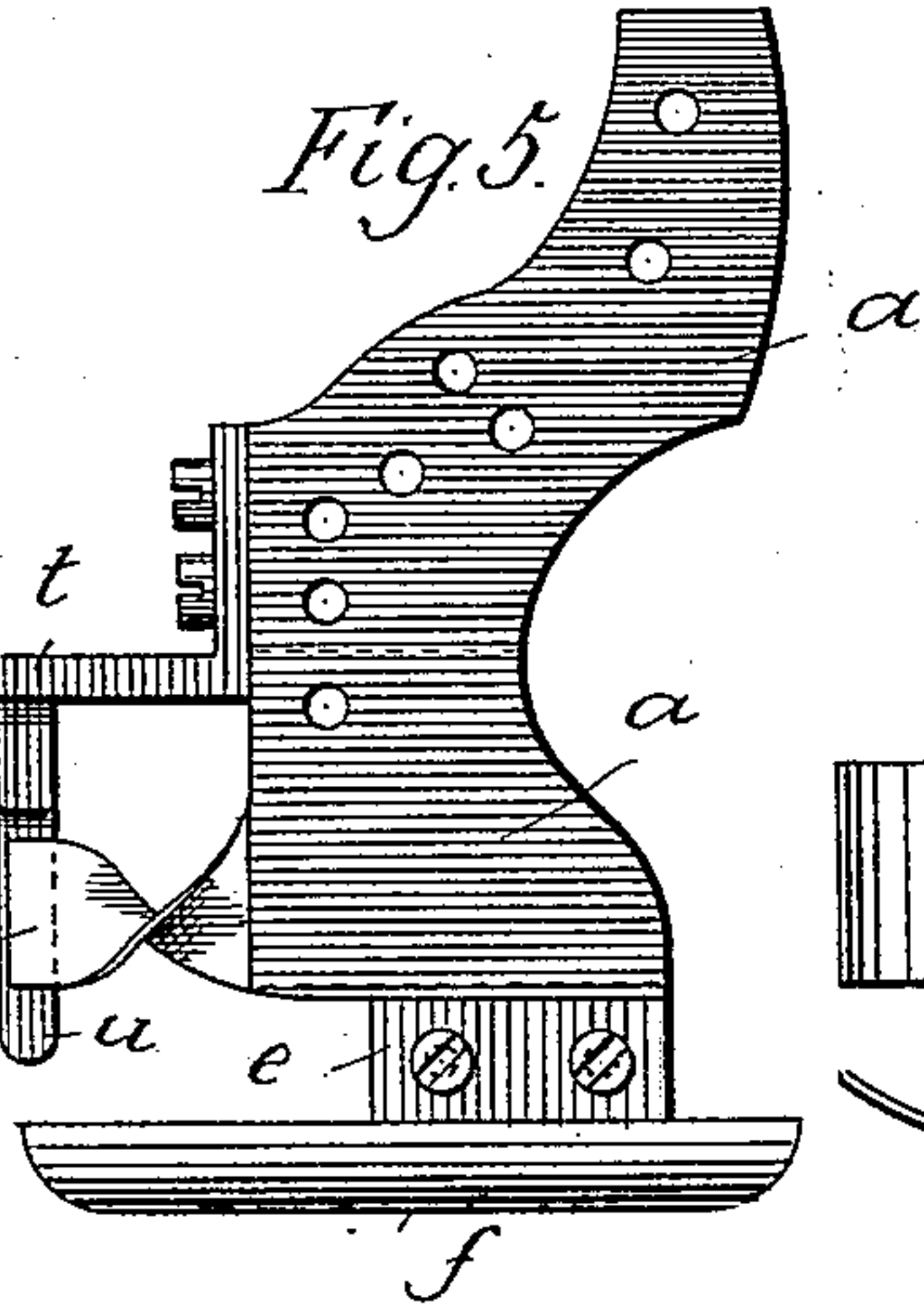


Fig. 8.

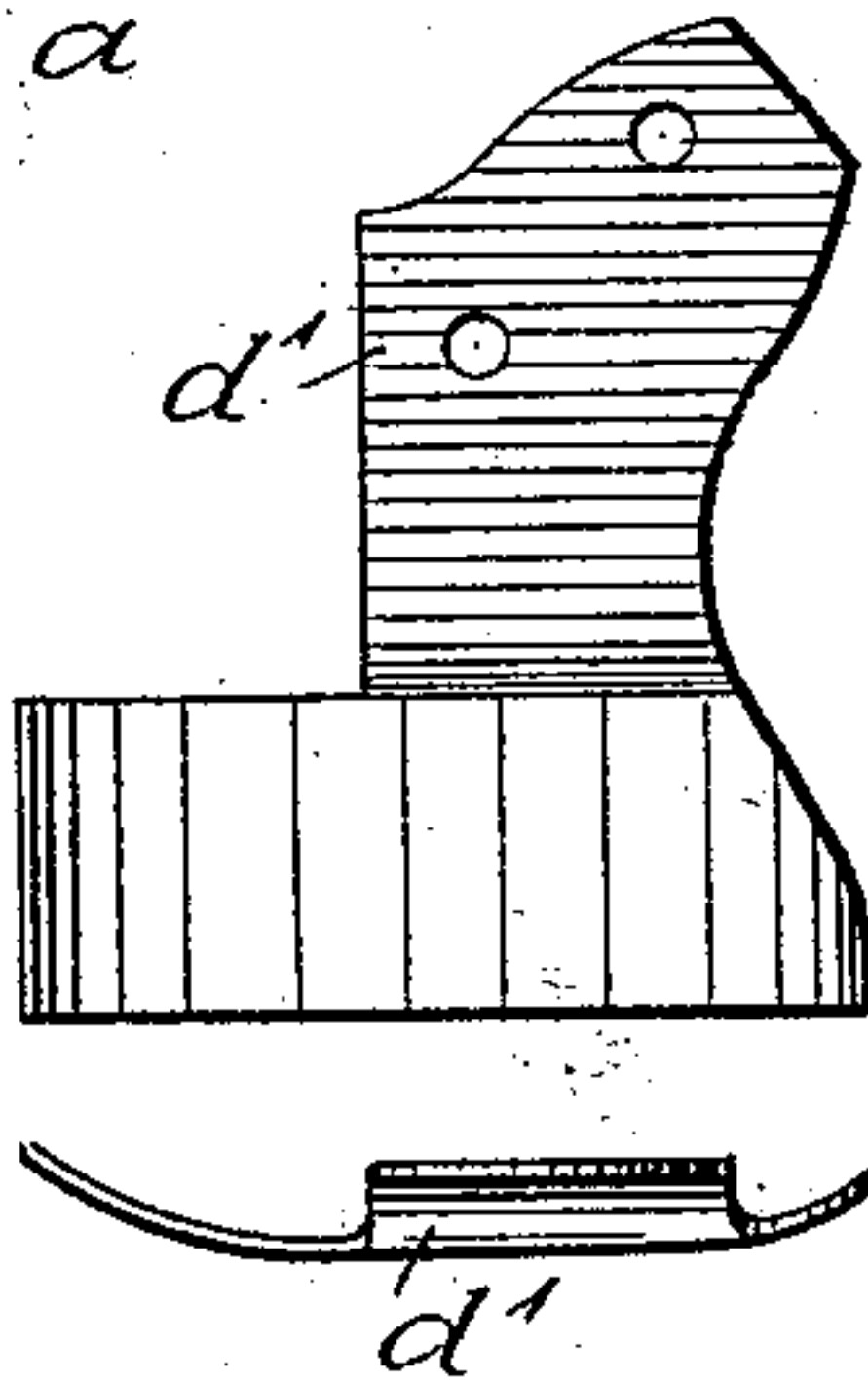
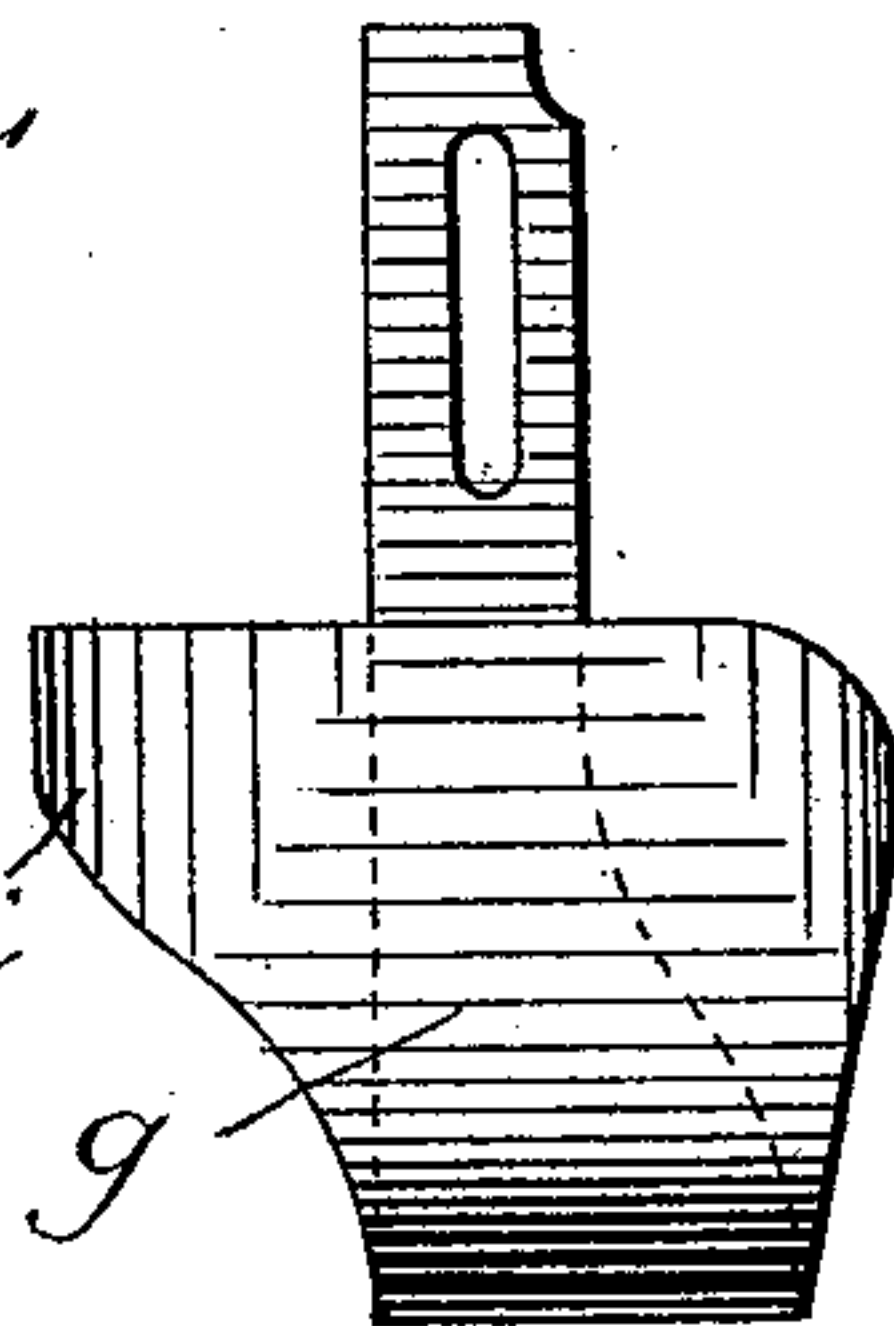


Fig. 9.



Fig. 10.



Witnesses:

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(Model.)

2 Sheets—Sheet 2.

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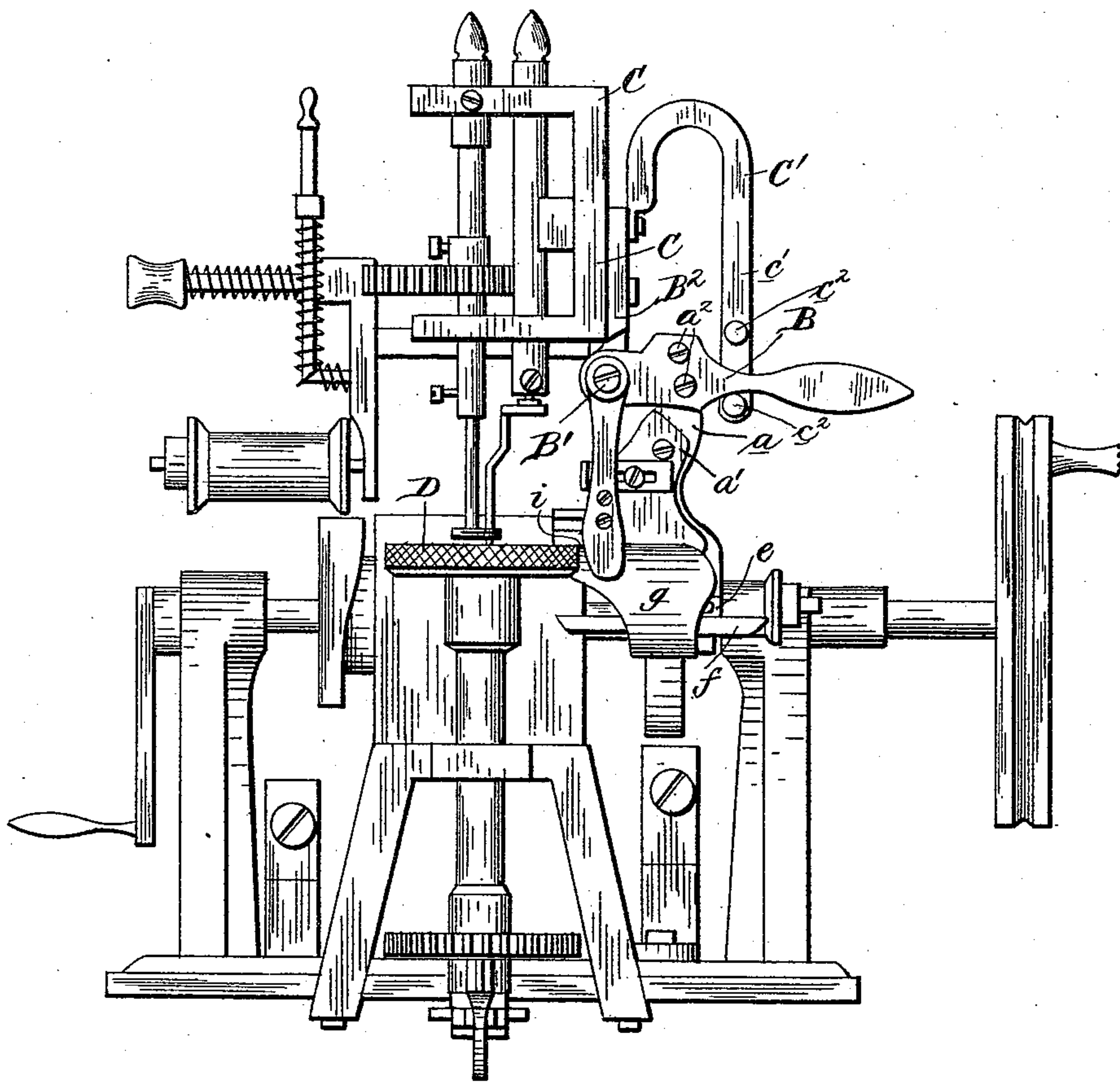
W. E. BOULTER, Administrator.

LEADING-IN DEVICE FOR OVEREDGE SEWING MACHINES.

No. 449,927.

Patented Apr. 7, 1891.

Fig. 11.



Witnesses

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J. E. Moorhead

Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM E. BOULTER, OF WASHINGTON, DISTRICT OF COLUMBIA, ADMINIL-
TRATOR OF ERNST B. RUDOLPH, DECEASED.

LEADING-IN DEVICE FOR OVEREDGE SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 449,927, dated April 7, 1891.

Application filed October 30, 1889. Serial No. 328,723. (Model.) Patented in England March 22, 1884, No. 5,330, and in Germany March 30, 1884, No. 30,463.

To all whom it may concern:

Be it known that ERNST B. RUDOLPH, late a subject of the King of Prussia, German Emperor, a resident of the city of Berlin, in the Kingdom of Prussia, German Empire, invented certain new and useful Improvements in Leading-In Apparatus for Overedge Sewing-Machines for Sewing Knitted Goods, (for which Letters Patent have been obtained in England, No. 5,330, dated March 22, 1884, and in Germany, No. 30,463, dated March 30, 1884,) of which the following is a full and clear specification.

The invention relates to sewing-machines of that class adapted to produce a broad folded welt or double edging for cut goods, such as the edging of jackets, drawers, hose, &c.; and the invention relates more particularly to devices adapted to be attached to such machines for properly folding the edge of the fabric and leading-in or guiding the latter between the feed-disks of the machine; and the object of the invention is to provide a leading-in device for sewing-machines which is of simple and inexpensive construction and well adapted for the purpose in view.

The invention consists in the construction, arrangement, and combination of parts constituting the improved device, all as herein- after fully described, illustrated in the accompanying drawings, and pointed out in the claim.

In the drawings, Figure 1 is a front view of the leading-in device; Fig. 2, a rear view thereof; Fig. 3, a vertical section of the same on the line A B of Fig. 1; Fig. 4, a horizontal section on line C D of Fig. 2; Fig. 5, an elevation of the guide-plate *a* of the device; Fig. 6, an end view thereof; Fig. 7, an elevation of the guide-plate *a'*; Fig. 8, a like view of the guide-plate *d'*, and Fig. 9 an edge view thereof; Fig. 10, an elevation of the spring *g*. Fig. 11 shows an elevation of a sewing-machine provided with the improved leading-in device.

In Fig. 11 of the above drawings I have shown the leading-in device in connection with a sewing-machine similar to that shown in two pending applications for patents filed October 30, 1889, and November 2, 1889, and bearing the Serial Nos. 328,722 and 329,081,

respectively, and inasmuch as the construction and operation of said sewing-machine are fully set forth in said applications I do not describe the same in detail herein, except in so far as this may be necessary for a proper understanding of the mode of arranging and combining the leading-in device therewith.

a indicates a plate provided with the upwardly-projecting tongue, which is secured by means of screws *a*² to an operating-arm or lever B, which at one end is pivoted upon a pivot-screw B' to the lower end of a bracket B², which is secured to the head-block or frame C of the machine. To said bracket B² is secured a spring-plate C', curved, as shown, the longer leg *c'* of which is provided with two studs *c*², with which is adapted to engage the under edge of the lever B. It will be seen that the plate *a* can be readily swung upwardly by means of the lever B until the latter engages the upper stud *c*², in which position the device is held until the fabric has been properly inserted and adjusted in the device, after which the plate (and parts connected therewith) can be swung downwardly again into the position shown in Fig. 11, with the lever B engaging the lower stud.

The plate *a* is provided at its rear end with a twisted or helical projection *b*. To the plate *a* is secured a plate *a'*, which is likewise provided with a twisted or helical projection *c*, which is so located and positioned with respect to the helical projection *b* as to leave a narrow opening or space between them to admit of the insertion and passage therethrough of one edge of the fabric, and owing to the twist said edge of the fabric is lapped or turned over upon itself to form a welt. The plate *a'* is also provided with a rounded projection *d*, (see Fig. 2,) the latter serving to unroll the edge of the fabric. To the lower end of plate *a* is also secured a plate *e*, which is provided with a rounded bar *f*, extending in the direction of the feed, and which bar serves to prevent the fabric from passing up too high.

To the plate *a* is secured a spring-plate *g*, curved, as shown, and extending around the bar *f* and up to a level with the upper edge of the feed-disks D of the machine. This spring-plate *g* has a rounded end *i*, which

serves to press the fabric against the twisted projections.

d' indicates a slightly bent and curved plate secured at its upper end to the plate a , and its lower end extending slightly below the upper end i of the spring-plate g , and said plate d' serves to guide the fabric.

To the rear lateral face of the plate a is secured an angular bar t , carrying at its lower end a thin steel tongue u , which extends below and in proximity to the twisted projections $b c$, and serves to maintain the lapped or turned-over edge of the fabric in such position until it enters between the feed-disks.

The entire device is so arranged and positioned upon the machine that the twisted projections will, when the device is in its operative position, Fig. 11, lie in a horizontal plane corresponding with that of the feed-disks and in a vertical plane passing through the central longitudinal axes of the said projections (or nearly so) and the point of contact of the feed-disks, whereby the fabric as it leaves the said projections will be in the proper position to pass between the said disks.

The operation of the leading-in device may be briefly described as follows: The operator takes the fabric and causes it to assume a substantial U shape and passes it into the device in such manner that one portion of the fabric will lie between the short leg of plate g and one side of plate e and the other portion (whose edge is to be turned over into a welt) lying between the other side of plate e and the longer leg of plate g . The fabric is then pulled by the hand rearwardly to cause the edge which is to be turned over to pass in between the two helical projections $b c$, and as the fabric is continued to be pulled

rearwardly the said edge of the fabric will be caused to follow the "twist" of the projections, and consequently will be turned over upon itself by the time it reaches the rear end of the projections. The operator continues to pull the fabric rearwardly until the lapped-over edge of the fabric passes between the feed-disks, after which the operation of sewing can be commenced and continued, the edge of the fabric being continued to be folded over as it is drawn rearwardly by the feed-disks between the projections $b c$. The ends i of plate g and the plate d' serve to maintain one portion of the fabric in proper position—i. e., in close relation to the folded-over edge as it emerges from between the projections, and thus render the operation of sewing said folded edge to the said portion of the fabric a certain one. The tongue u of bar t , owing to its location with reference to the projections $b c$, serves to keep the edge of the fabric lapped over after it leaves the projections until it passes between the feed-disks.

Having now described the invention, what is claimed, and desired to be secured by Letters Patent of the United States, is—

In leading-in apparatus for folding hollow seams or welts on knitted goods, the combination of the main plate a with a twisted projection b , a second plate a' , having likewise a twisted projection c and a rounded projection d , gage-bar f , and covering spring g .

In witness whereof I have hereunto set my hand in presence of two witnesses.

WILLIAM E. BOULTER,
Administrator of Ernst B. Rudolph, deceased.
Witnesses.

H. F. RILEY,
H. B. KINGSBERRY.