

(No Model.)

3 Sheets—Sheet 1.

F. J. FARNER.
DOUBLE SEAMING MACHINE.

No. 359,857.

Patented Mar. 22, 1887.

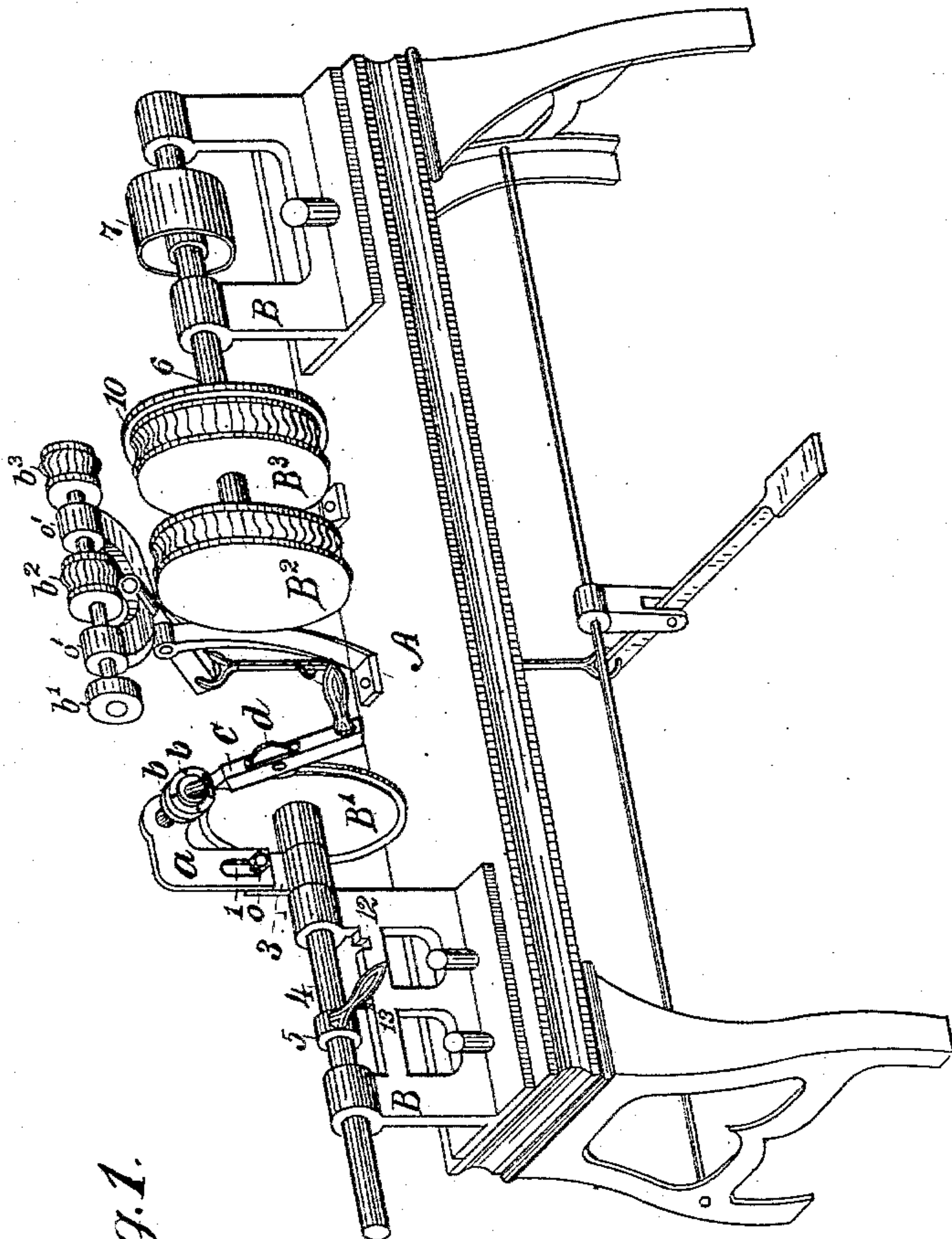


Fig. 1.

WITNESSES:

J. C. Windle.
Robt B. Middlebrook

Frank J. Farner INVENTOR

(No Model.)

3 Sheets—Sheet 2.

F. J. FARNER.

DOUBLE SEAMING MACHINE.

No. 359,857.

Patented Mar. 22, 1887

Fig. 2.

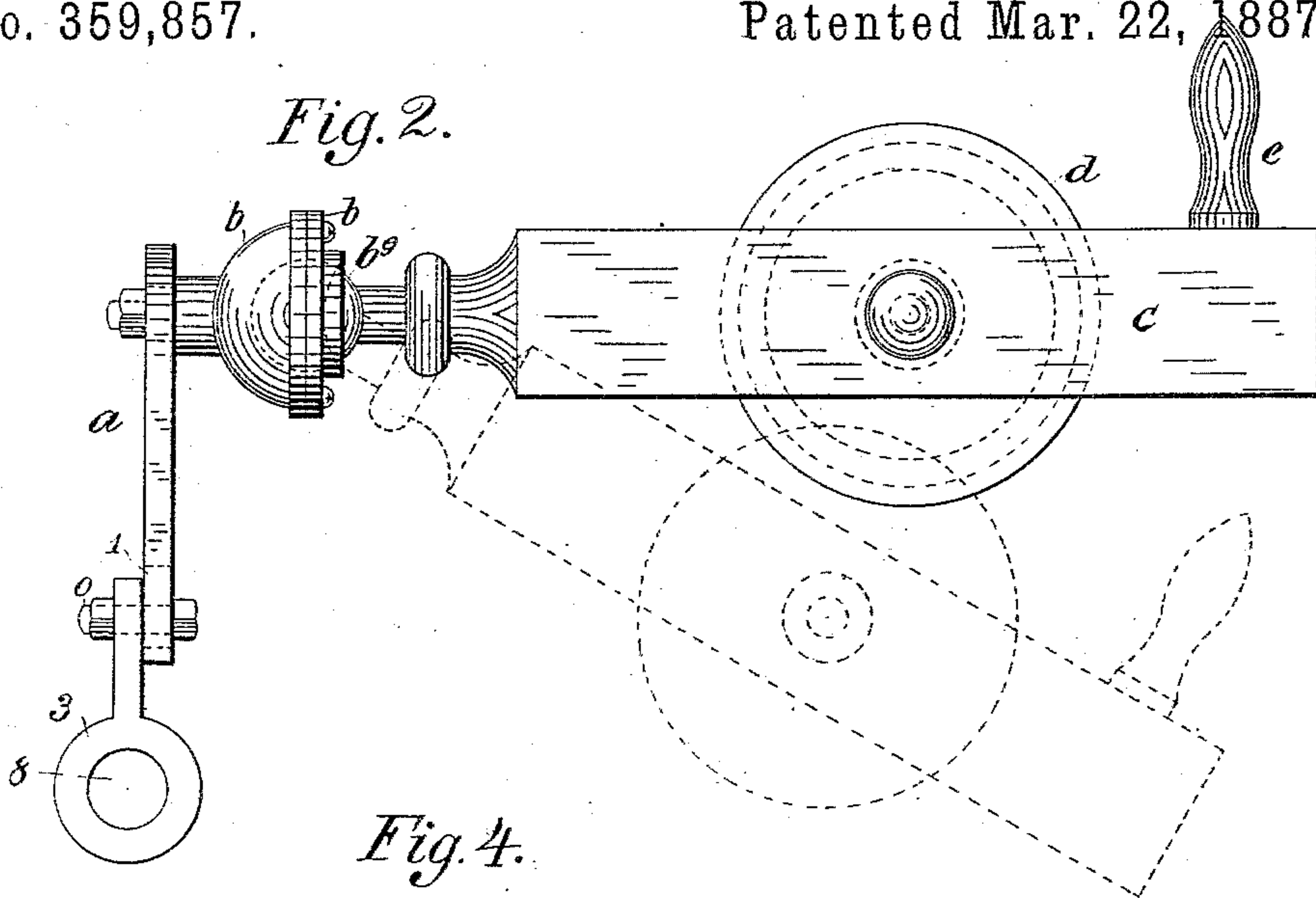


Fig. 4.

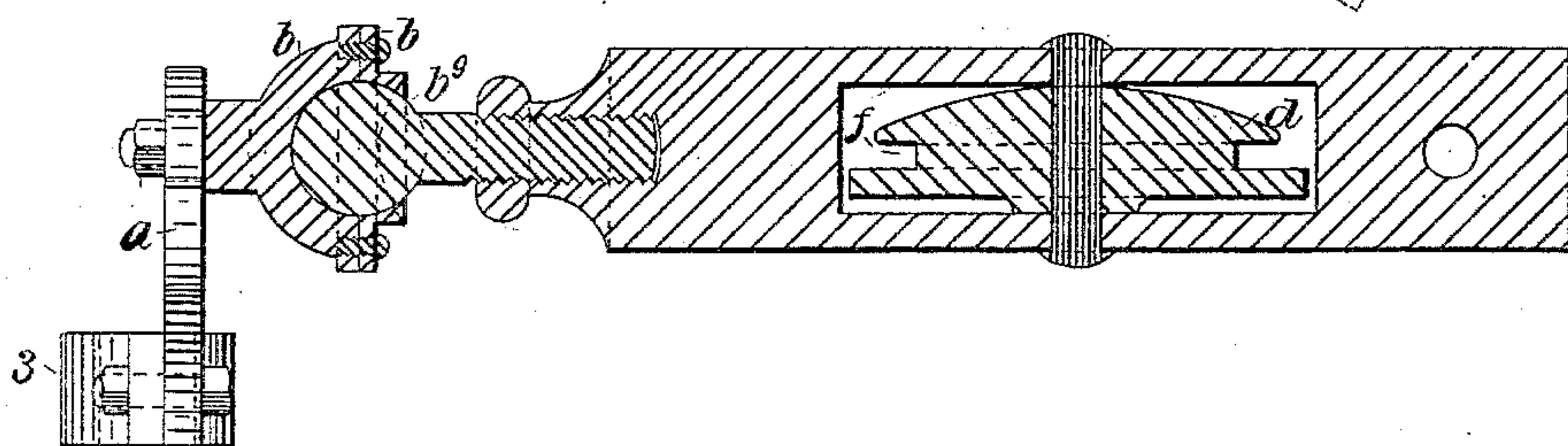


Fig. 3.

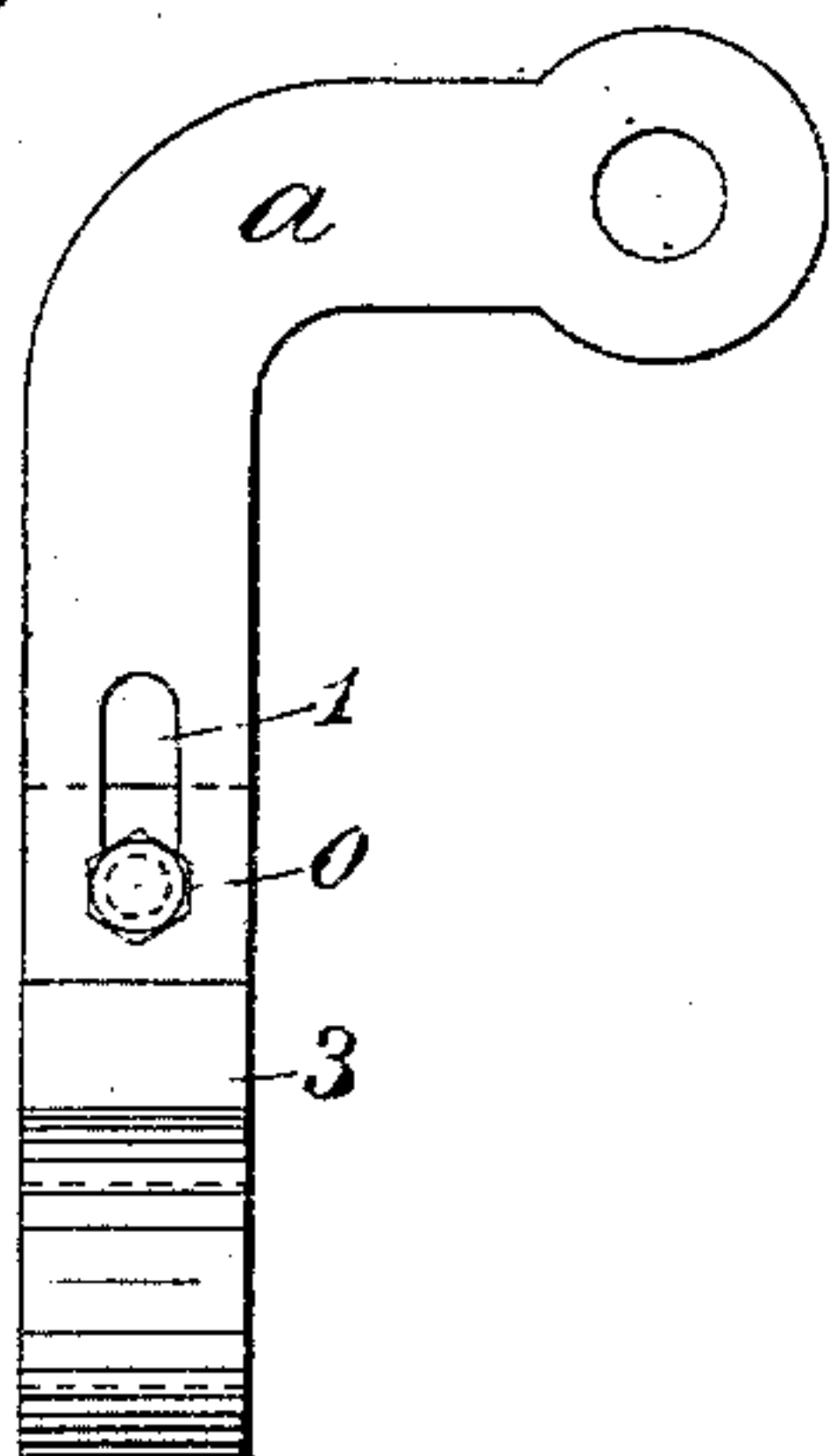


Fig. 5.a

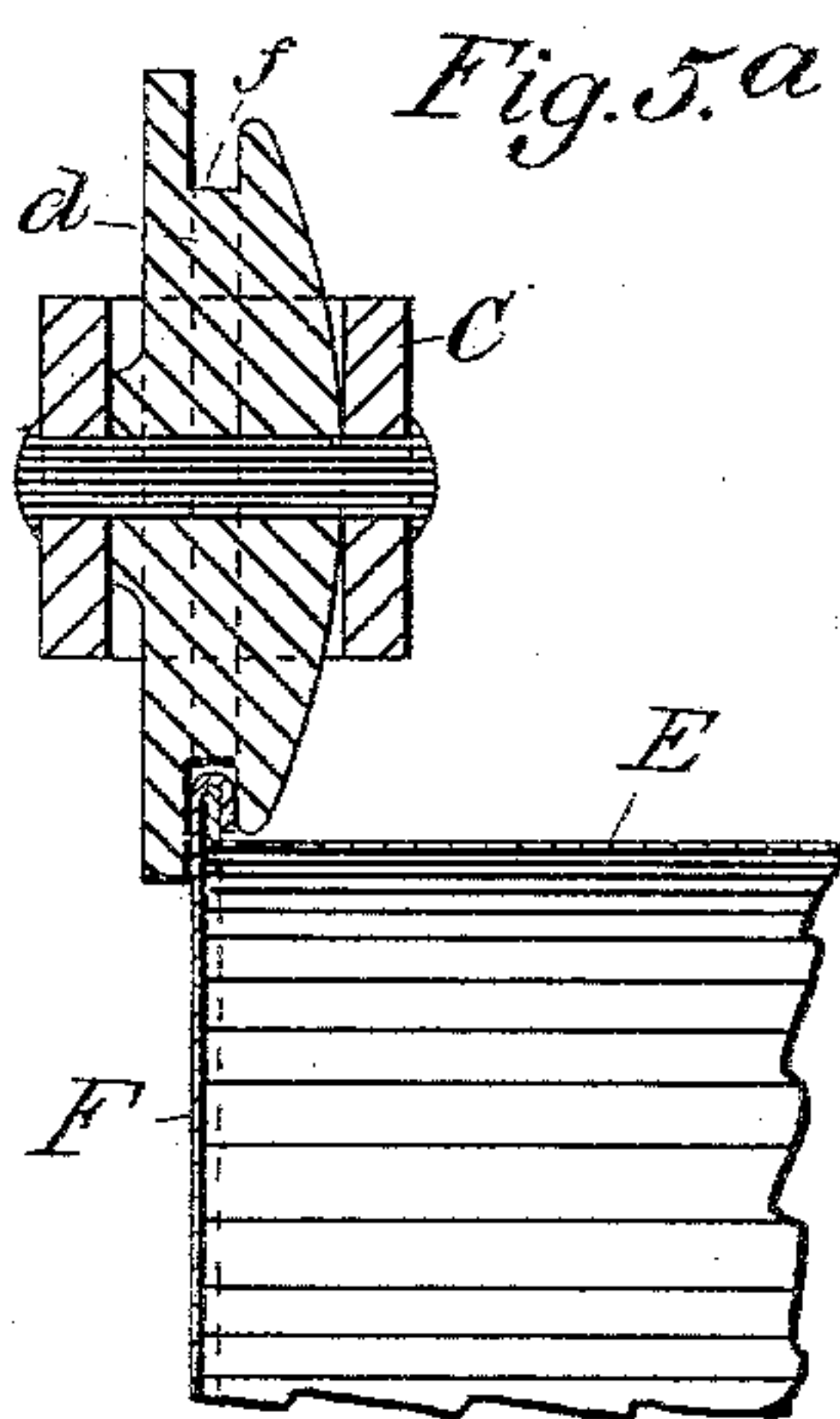
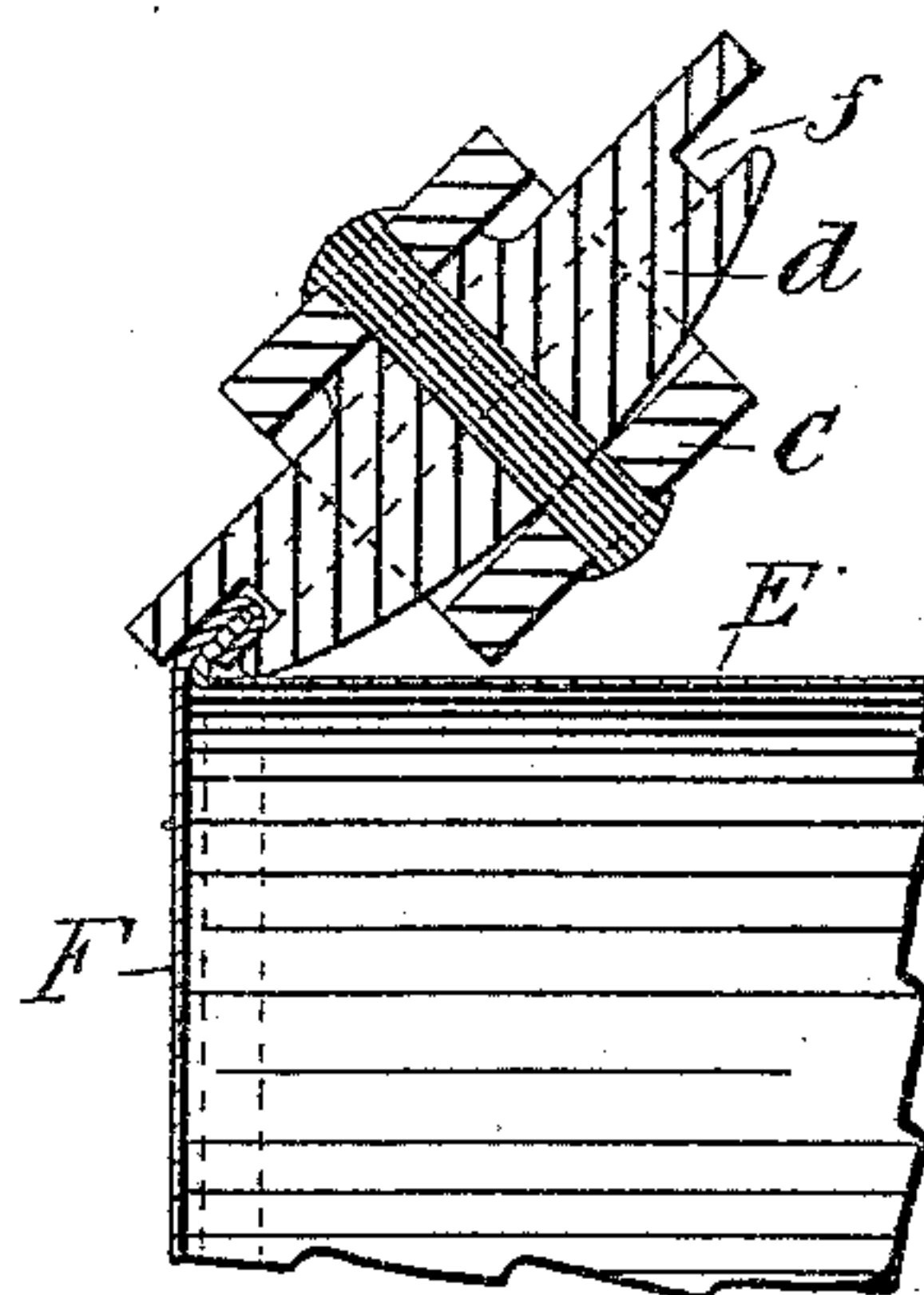


Fig. 5.b



WITNESSES:

J. C. Windle.
Robert B. Middlebrook

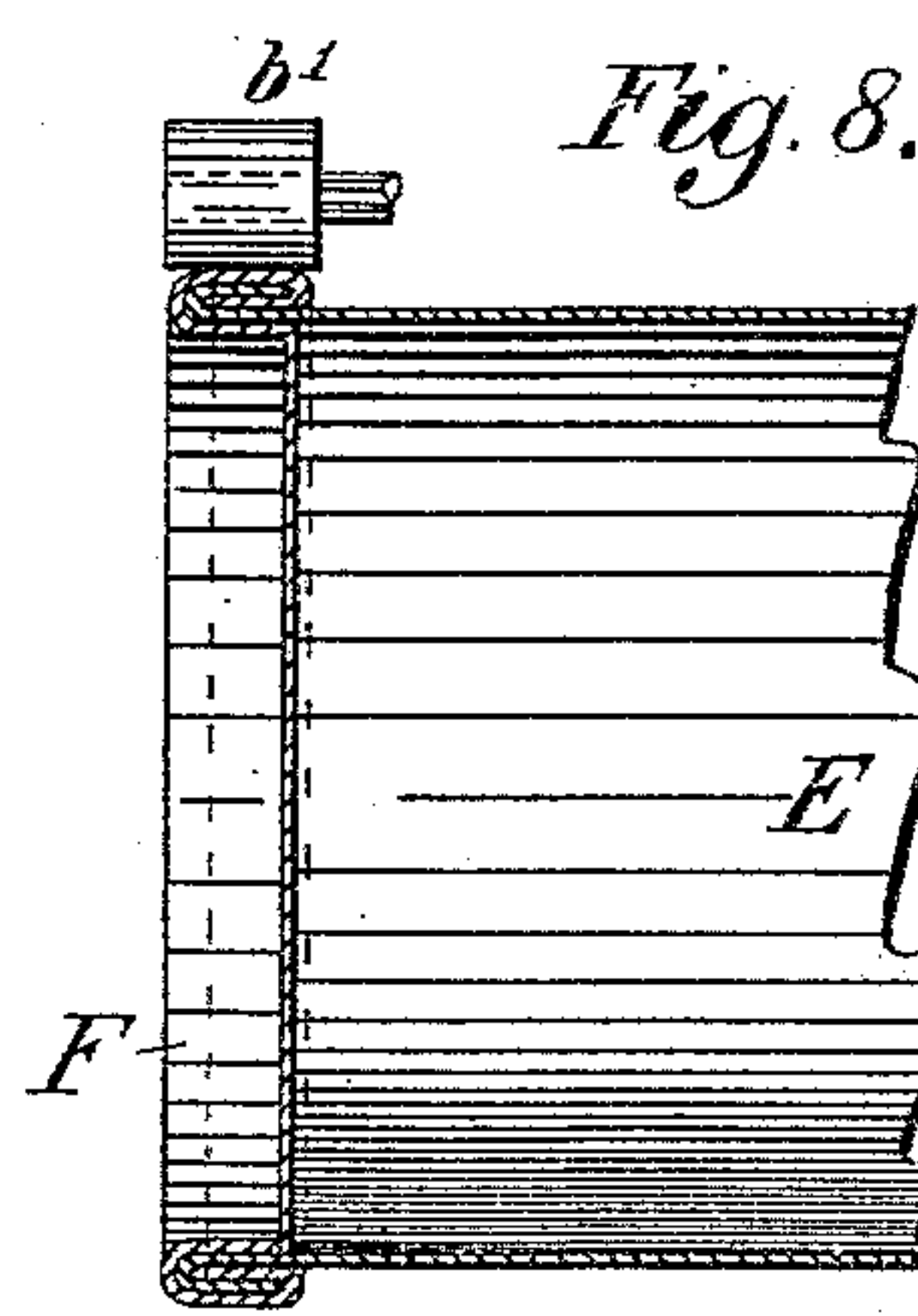
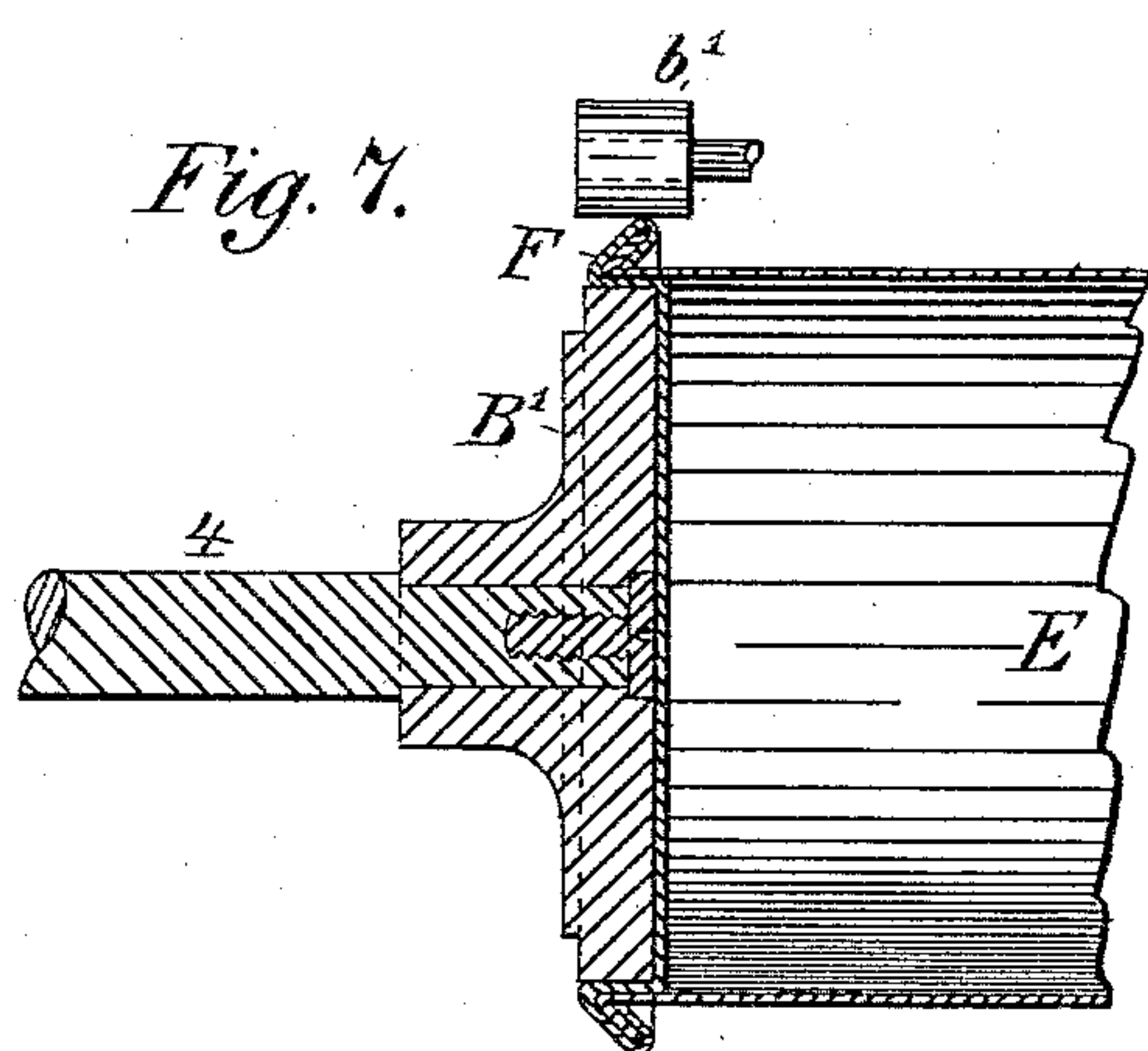
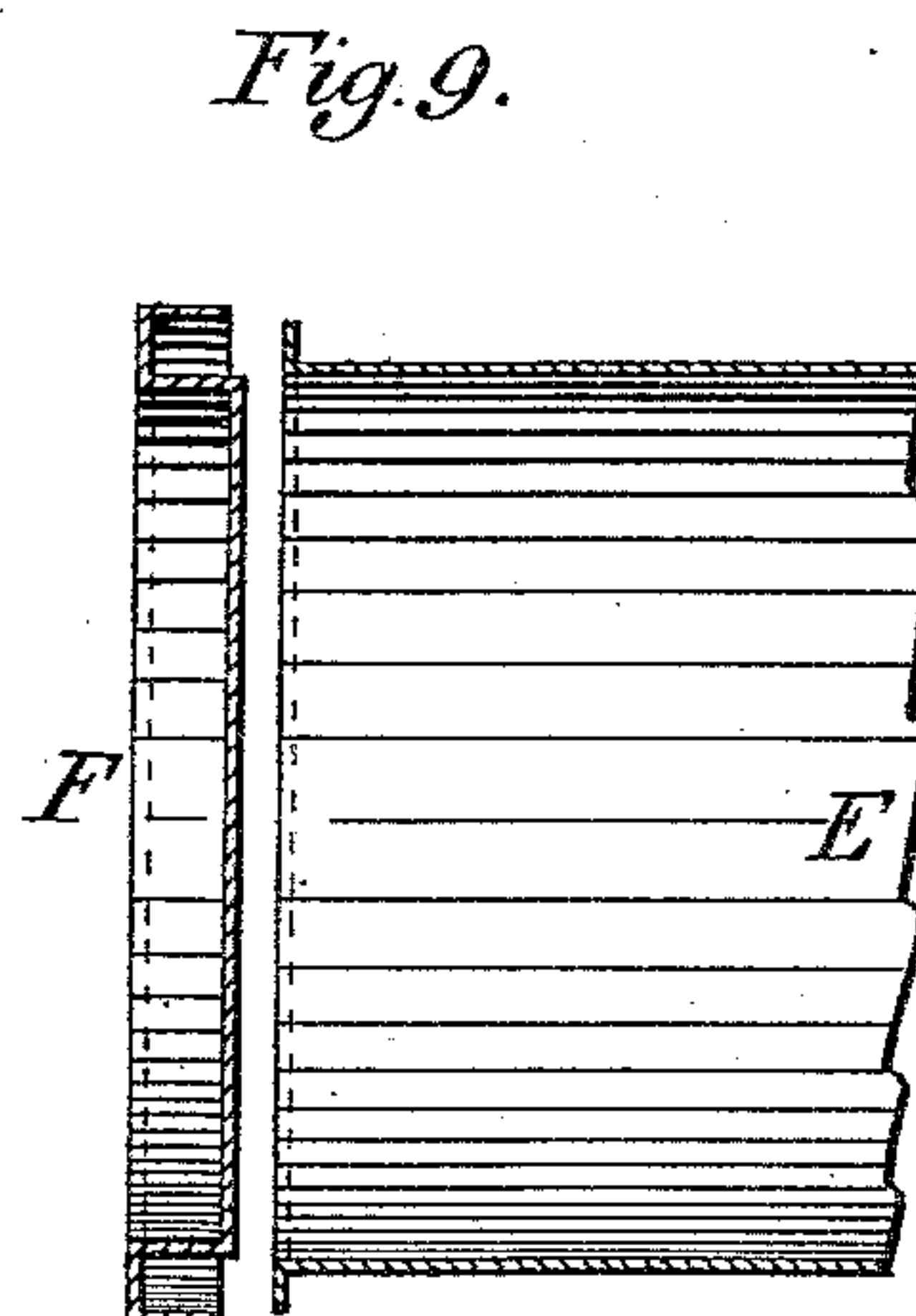
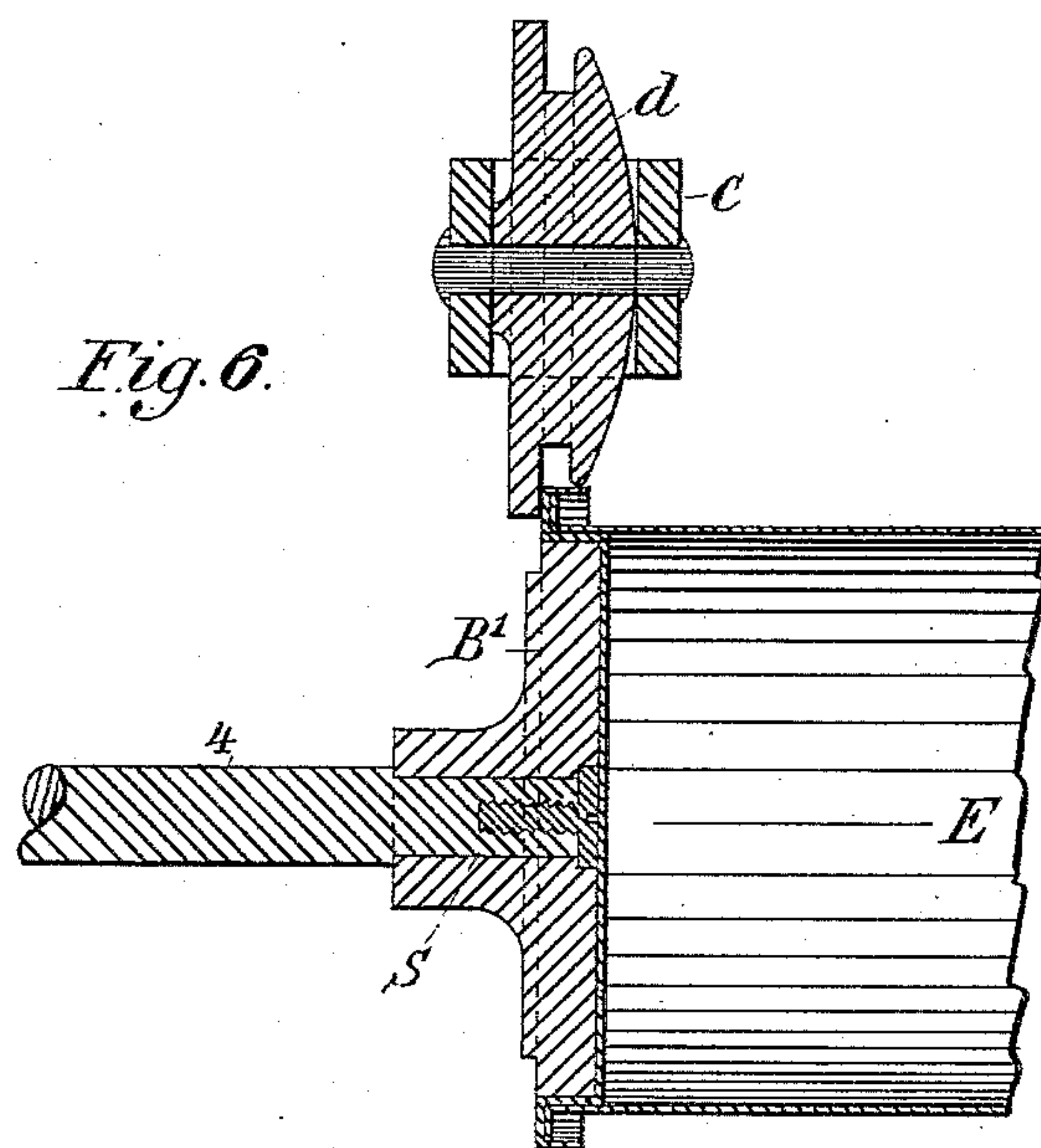
Frank J. Farner INVENTOR

F. J. FARNER.

DOUBLE SEAMING MACHINE.

No. 359,857.

Patented Mar. 22, 1887.



WITNESSES:

J. O. Windle.
Robert B. Middlebrook

Frank J. Farner INVENTOR

UNITED STATES PATENT OFFICE.

FRANK J. FARNER, OF ARMOURDALE, KANSAS, ASSIGNOR OF ONE-HALF
TO DAVID B. BRIDGMAN, OF SAME PLACE.

DOUBLE-SEAMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 359,857, dated March 22, 1887.

Application filed October 29, 1886. Serial No. 217,511. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. FARNER, a citizen of the United States, residing at Armourdale, in the county of Wyandotte and State of Kansas, have invented a new and useful Improvement in Double-Seaming Machines, to be used for the purpose of double-seaming the bottoms onto the cylindrical part of tin buckets and in the same operation of swaging the cylindrical part of said bucket, of which the following is a specification.

My invention relates to the process of fastening tin bottoms onto the cylindrical part of tin buckets, such as are commonly used for packing lard; and the objects of my invention are, first, to double seam in a thorough and speedy manner the tin bottoms onto the cylindrical part of said tin buckets, and, second, in the same operation to swage or bead the cylindrical part of the bucket. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a detailed view in perspective of the entire machine adapted to the fastening of the bottoms onto cylindrical tin buckets as the same appears with my invention forming a part thereof; Fig. 2, a view of my ball-and-socket joint with lever and handle attached, and of the metallic L-shaped arm used to support the same, together with the circle collar and upright to which the L-shaped arm is adjustably attached by means of a bolt. Fig. 3 is a detail view of the L-shaped metallic arm for supporting the ball-and-socket joint, together with the bolt and slot in the L-shaped arm encircling the bolt, and the collar to which the said arm is attached. Fig. 4 is a sectional view of the ball-and-socket joint, showing also the seaming-wheel with edge grooved. Fig. 5^a is a sectional view of the seaming-wheel and of a tin bucket, showing the cylindrical part thereof with the bottom in position and the grooved wheel as it appears after having turned down the edge of the bottom of the tin can. Fig. 5^b represents the grooved wheel as having turned over the edge of the bottom of the can. Fig. 6 represents grooved wheel in position ready to be pressed downward by the lever in which it is journaled, together with a sectional view of the cylindrical part of the tin bucket to which the bottom is to be affixed

and the metallic face-plate or circular disk with its castings and supports. Fig. 7 is a view of the bottom of the can and the cylindrical part as they appear when the roller *b'* is pressed down upon the edge of the bottom of the can after said edge has been turned partially over by the grooved wheel. Fig. 8 represents the bottom of the tin can and the cylindrical part as they appear after the bottom has been double-seamed onto the body of the can, and also the position of the roller *b* when it has been brought down for the last and completing contact with the edge of the bottom of the can. Fig. 9 represents the cylindrical part and the bottom of the tin can separately as they appear when ready to be joined and operated upon by my invention.

Similar letters refer to similar parts throughout the entire series of views.

Fig. 1, A represents the table; B, the support or iron frame supporting shafts 6 and 4; B', circular disk used to press against bottom of can and hold it in place; B² and B³, large rollers over which the cylindrical part of the can is slid with the bottom of the can facing B'. *b'* represents the small roller used for pressing and thereby double-seaming the bottom onto the body of the can after the edge of the bottom has been bent and turned by the grooved wheel in the hand-lever attached to the ball-and-socket joint. *b*² and *b*³ represent small rollers used for beading the body of the can.

o' o' are journals for the roller-shaft. *b b* is the ball-and-socket joint; *d*, small wheel revolvable in lever; *e*, handle, with which to manage lever; *f*, groove in wheel; *a*, the metallic L-shaped arm supporting ball-and-socket joint; 1, the slot in the L-shaped arm encircling the bolt; *o*, the bolt by means of which the L-shaped arm is adjustably secured to the collar encircling the shaft.

4 is the shaft carrying disk B'.

5 is the handle by which shaft 4 and all attachments thereto are slid toward B² or away from the same.

13 is a lug attached to handle 5.

When power is applied to pulley 7, shafts 6 and large rollers B² B³ are revolved. Over these large rollers the cylindrical part of the can is slid, with the bottom, as shown at F, Fig. 6, just caught on the cylindrical part,

said bottom having been previously stamped, as shown at F, Fig. 9, by a process not invented by me. The shaft 4, with its various attachments, is then, by means of handle 5, slid toward B² until lug 13 drops into slot 12, at which juncture the face of the disk B' is pressed flat against the bottom of the can, as shown in Fig. 6. The grooved wheel d is then, by means of lever c, pressed against the turned edge of the bottom of the can, as said edge appears in Fig. 6, where the grooved wheel d is seen in position preparatory to its bending over the edge of the bottom of the can. The edge is by this pressure of the grooved wheel d turned down, as in Fig. 5^a, and at the same time, by the person in charge turning the lever in which wheel d revolves slightly toward the right, as in Fig. 5^b, the already bent or turned edge is inclined to such an angle as to allow roller b' to be brought to bear in pressing the edge still nearer flat, as more fully appears in Fig. 7, where E denotes the body of the can; F, the bottom; B', the face-plate or circular disk, and 4 the shaft.

25 The means by which the rollers b' b² b³ are brought into pressing contact with the can are the treadle-rod and lever shown in Fig. 1; but on this means I claim no patent.

Let it be noticed that when shaft 4 and its attachments are slid toward the bottom of the can the circular disk and the said bottom are brought face to face directly under roller b', (see Fig. 1,) and said shaft 4 is slid just far enough to attain this position, and is there held by means of lug 13 and slot 12. After the position shown in Fig. 7 is attained in the manner above described, the operation is concluded by applying the pressure of roller b' against the already partially-turned edge of the bottom of the can, with the result of thoroughly flattening and double-seaming the entire bottom onto the body of the can, as more fully appears in Fig. 8.

As soon as circular face-plate or disk B' comes in contact with the bottom of the can, as above described, it (the disk) revolves on pin S, as more clearly appears in Fig. 6, and thus the entire can—body and bottom—is kept in rapid rotation, while rollers b² and b³ bead the body of the can, ornamenting it, and roller b' is pressed down to accomplish the double-seaming, the lever, with its grooved wheel d, managed by its handle e, having previously been so worked by the operator as to make the turn described in the foregoing specification, and shown in the drawings.

I am aware that prior to my invention tin bottoms have been double-seamed onto the cylindrical part of tin buckets of the kind referred to by means of several different machines used in succession, each machine doing some one part of the entire work to be accomplished. I therefore do not claim to be the inventor of each and every part of the entire machine shown in Fig. 1; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the disk or head B', of the ball-and-socket lever attachment bearing a grooved seaming-wheel, f, substantially as and for the purpose described.

2. The combination, with the shaft 6, bearing one or more beading-rollers, B² B³, of the treadle and lever frame bearing one or more beading-rolls, b² b³, and flattening seam-roll b', and the seaming devices consisting of revolving disk and adjustable grooved seam-roll d, and its supporting frame, mounted substantially as described, for changing the position of the axis of this grooved roller, as set forth.

FRANK J. FARNER.

In presence of—

PETER E. HATCH,
CHARLES F. CLARK.