

No. 725,727.

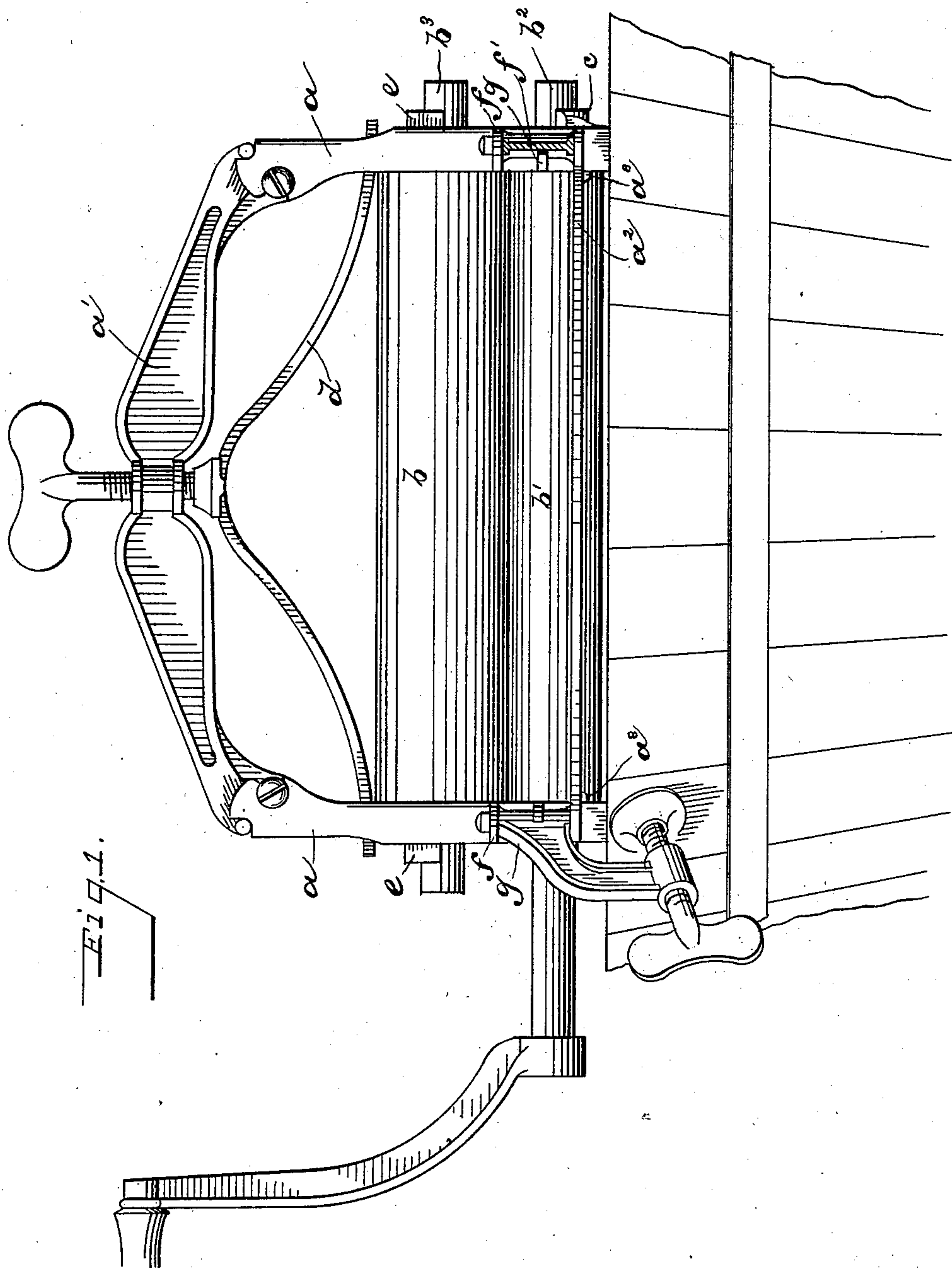
PATENTED APR. 21, 1903.

G. D. LEEDLE.
WRINGER.

APPLICATION FILED DEC. 26, 1901.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR.

BY George D. Leedle
Attorneys

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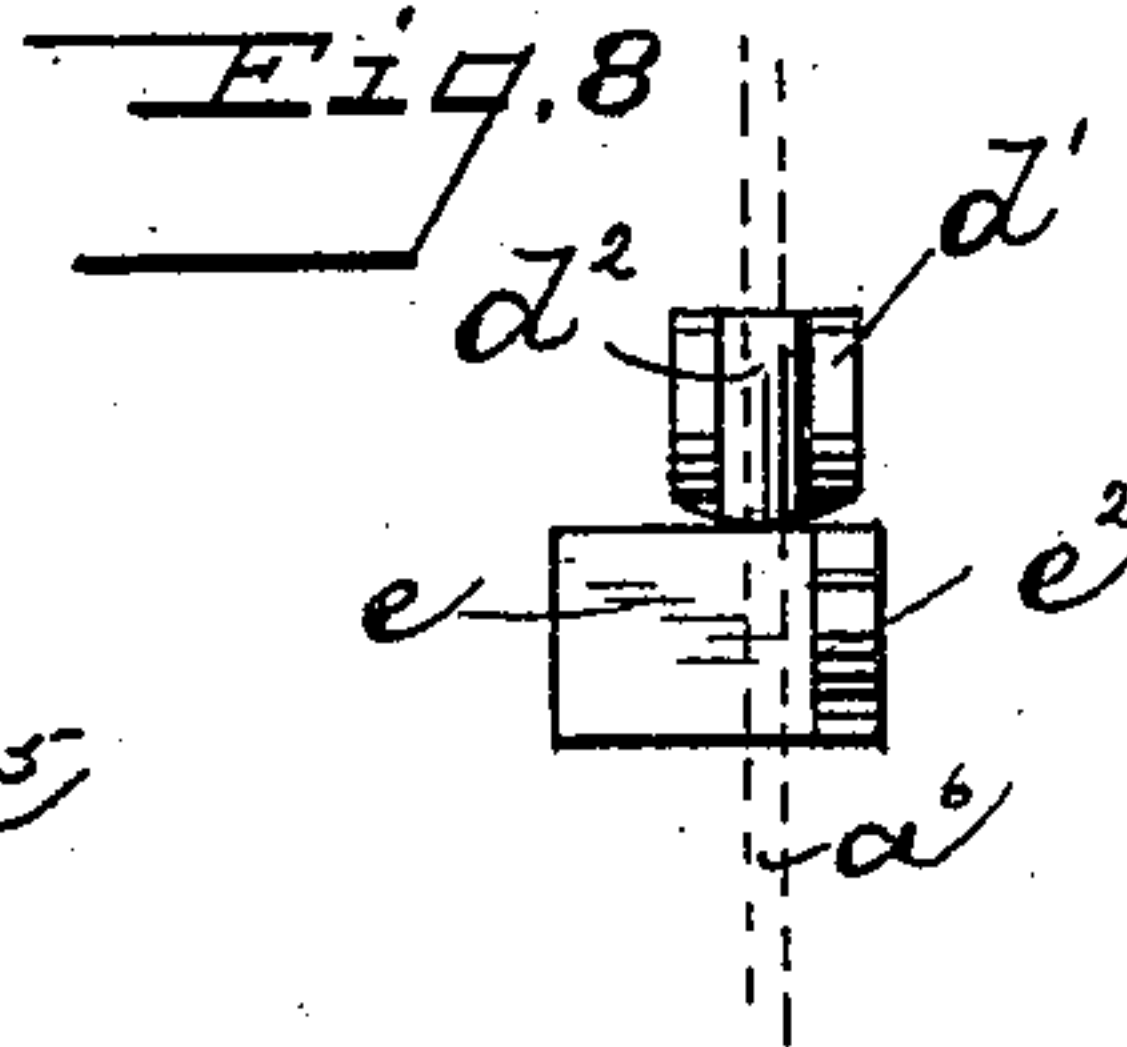
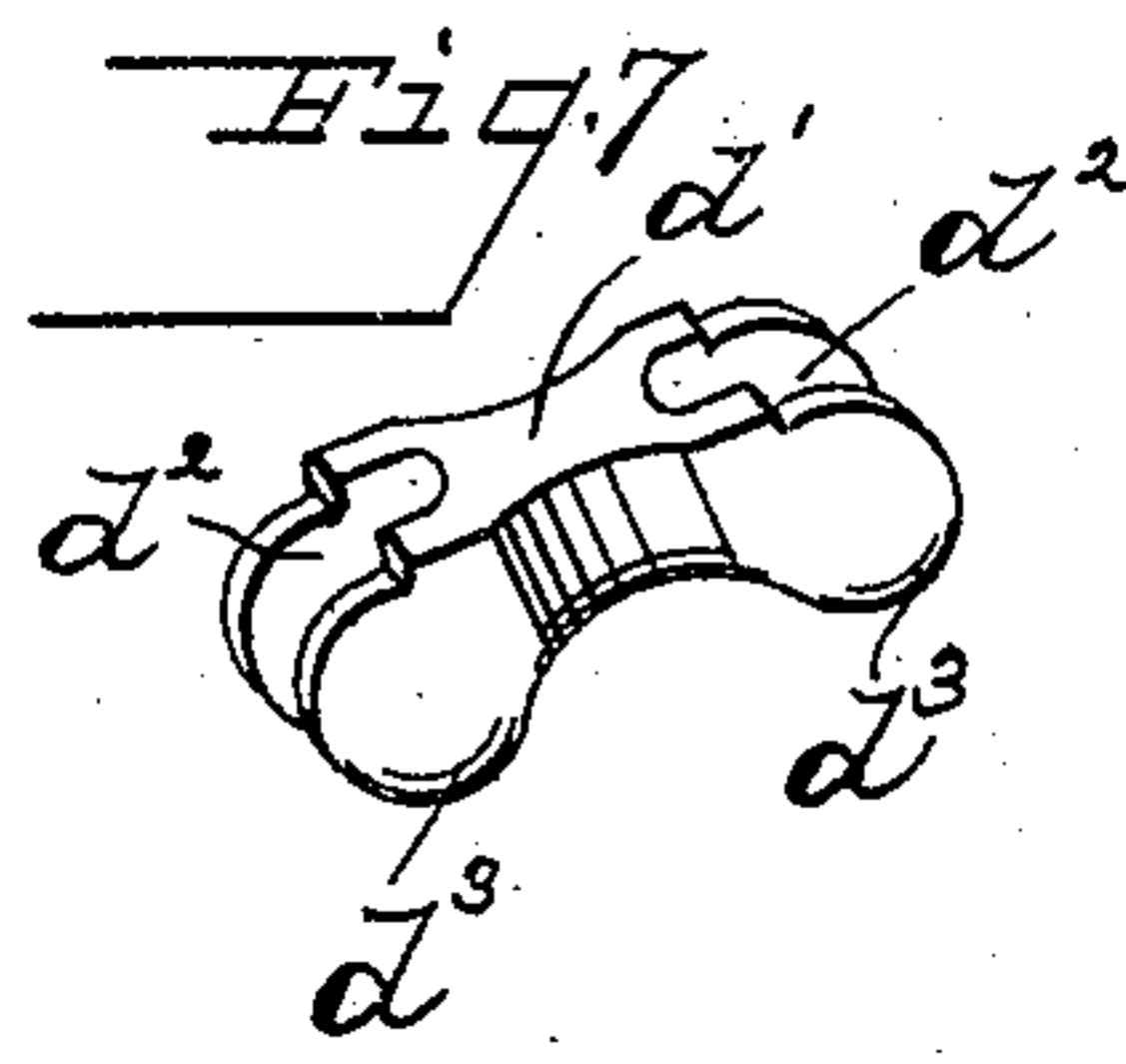
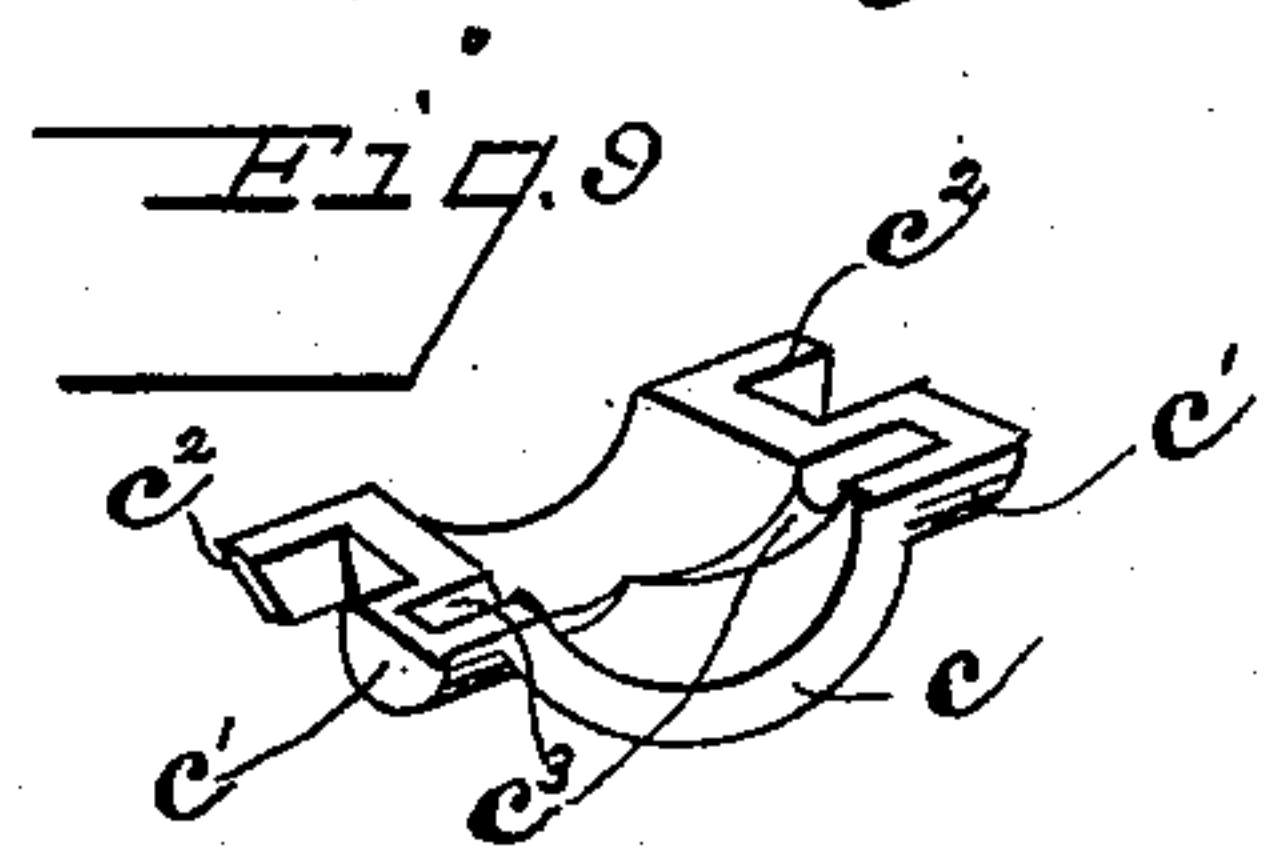
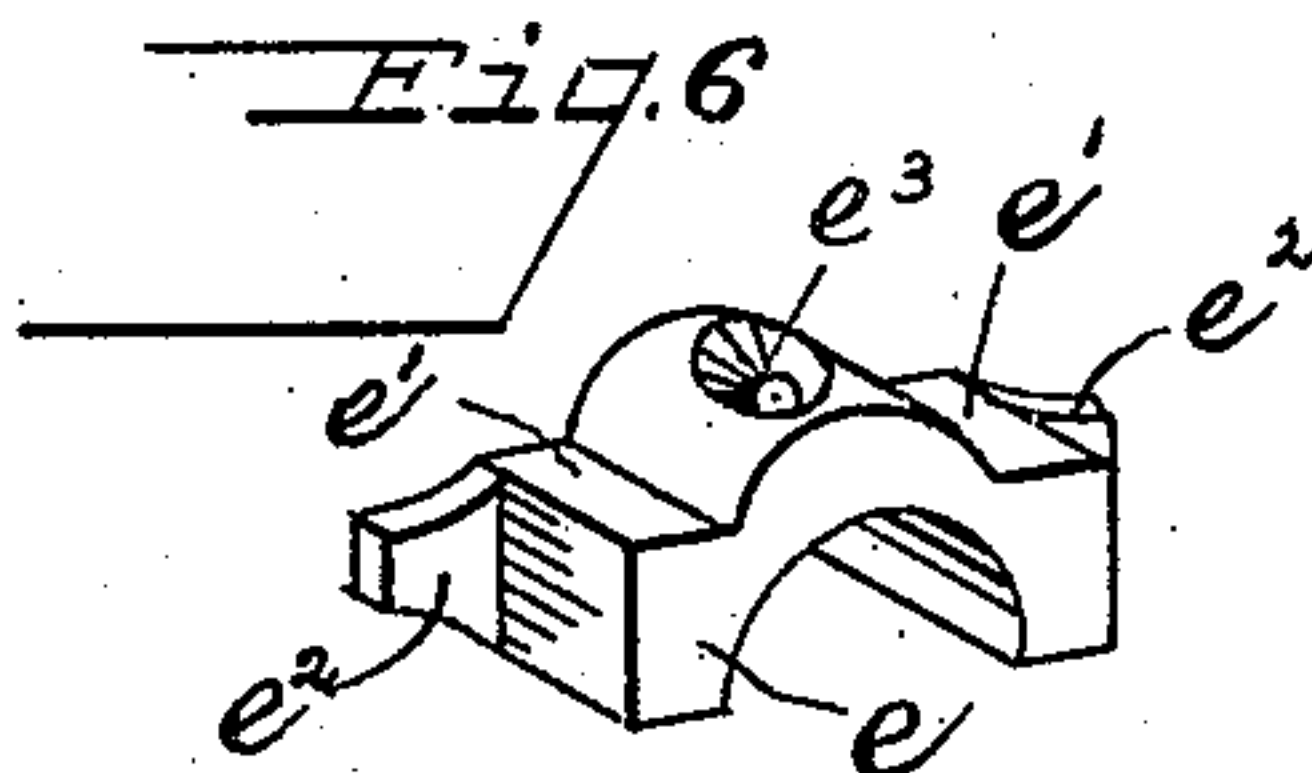
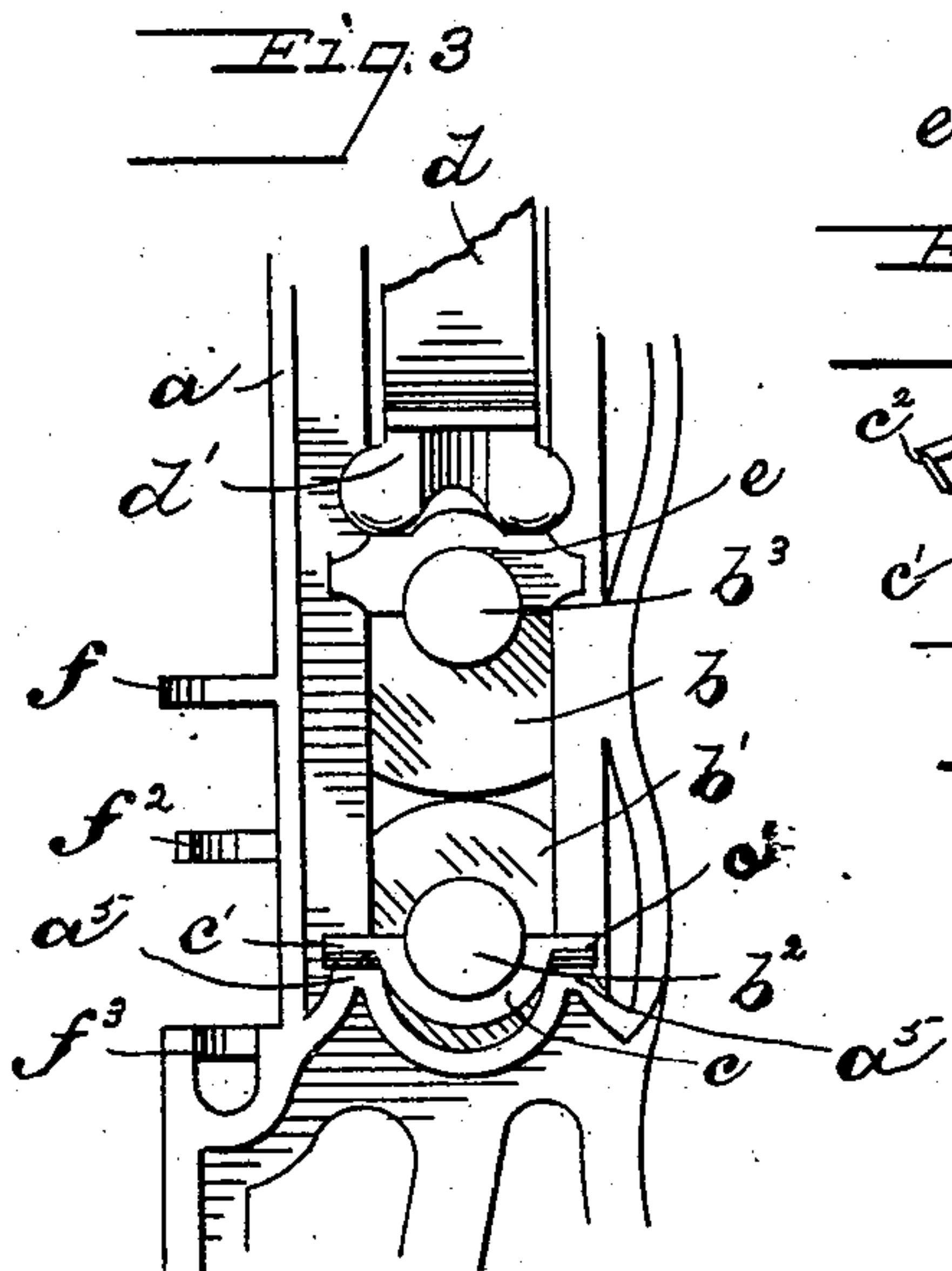
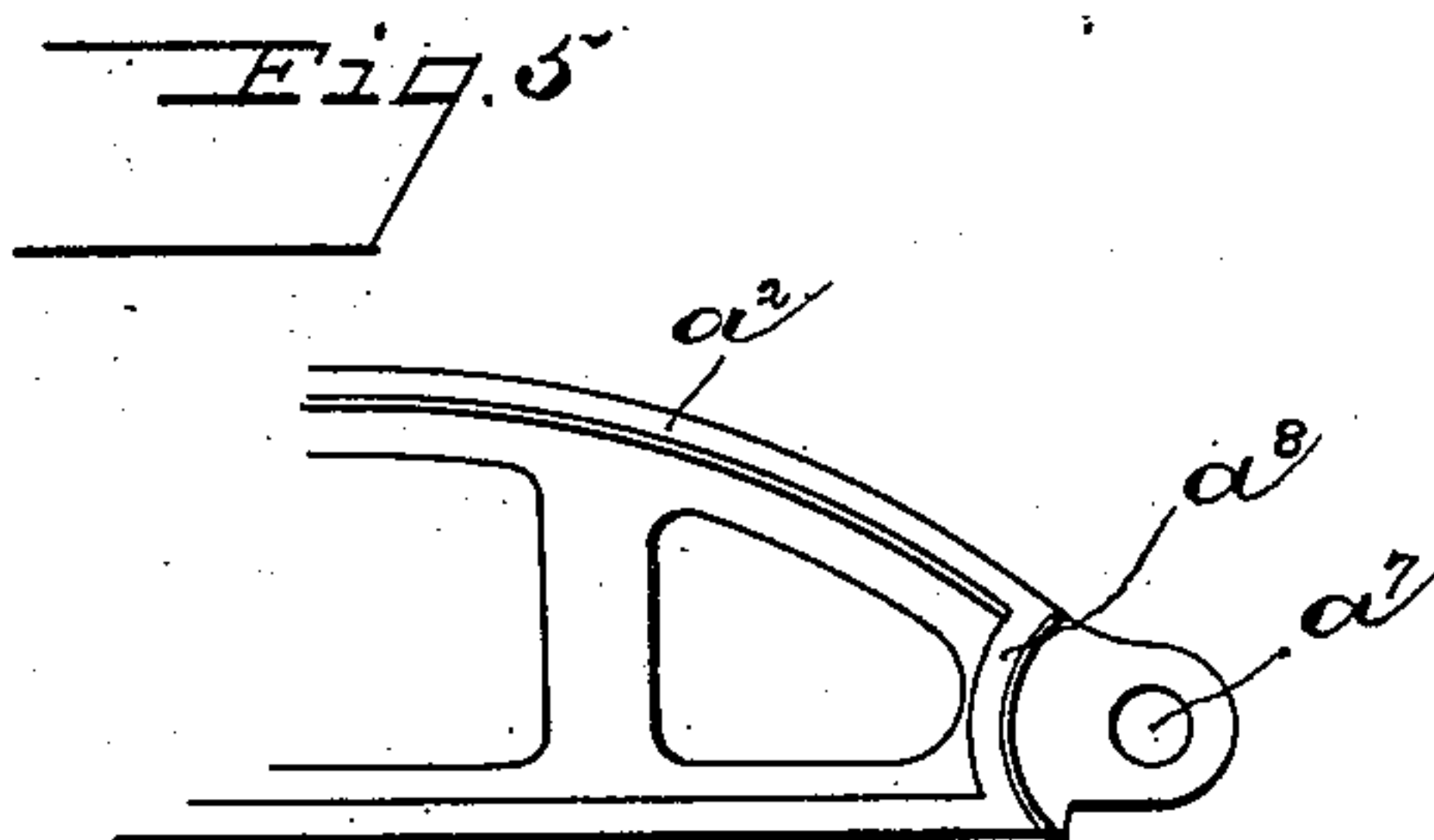
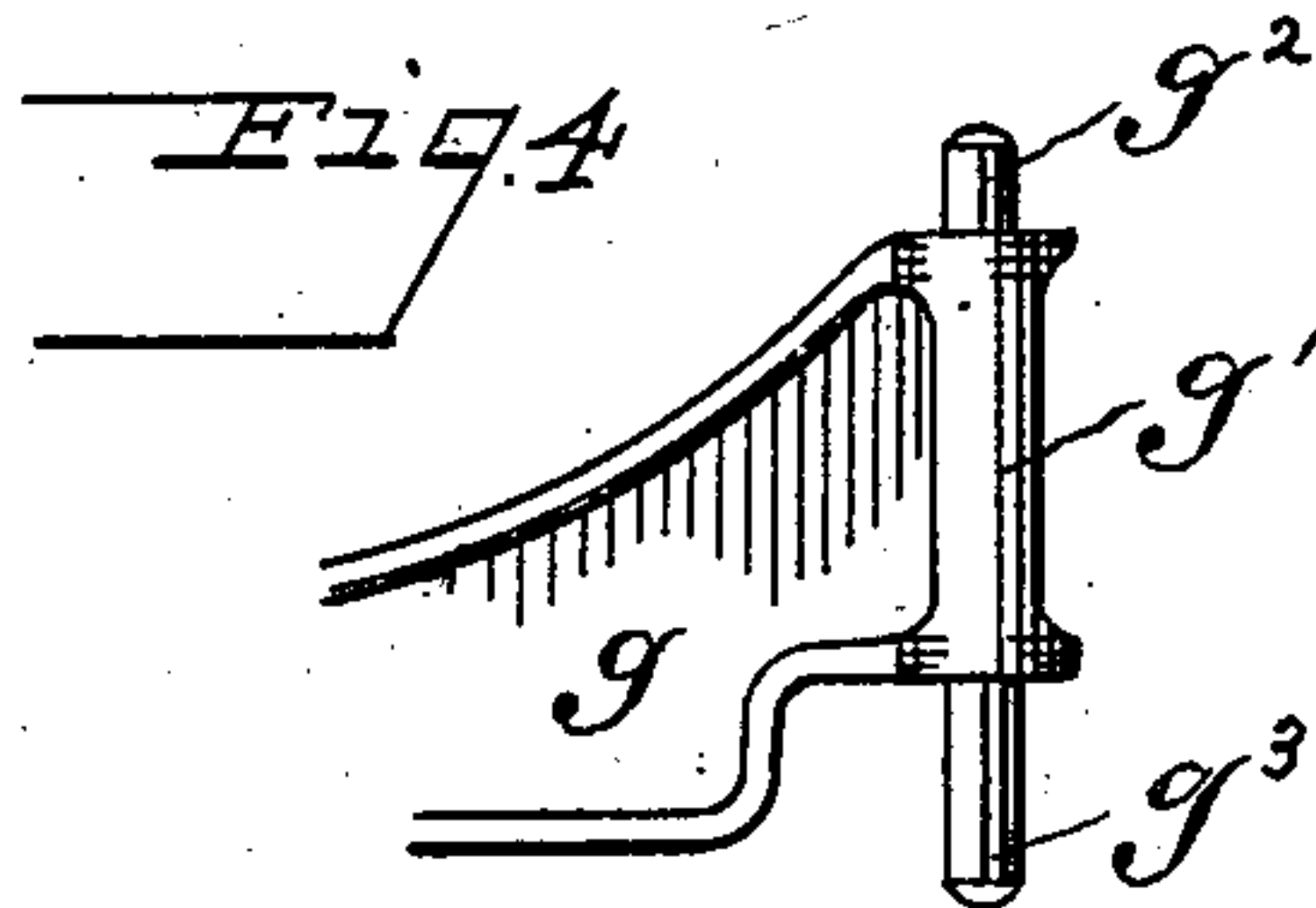
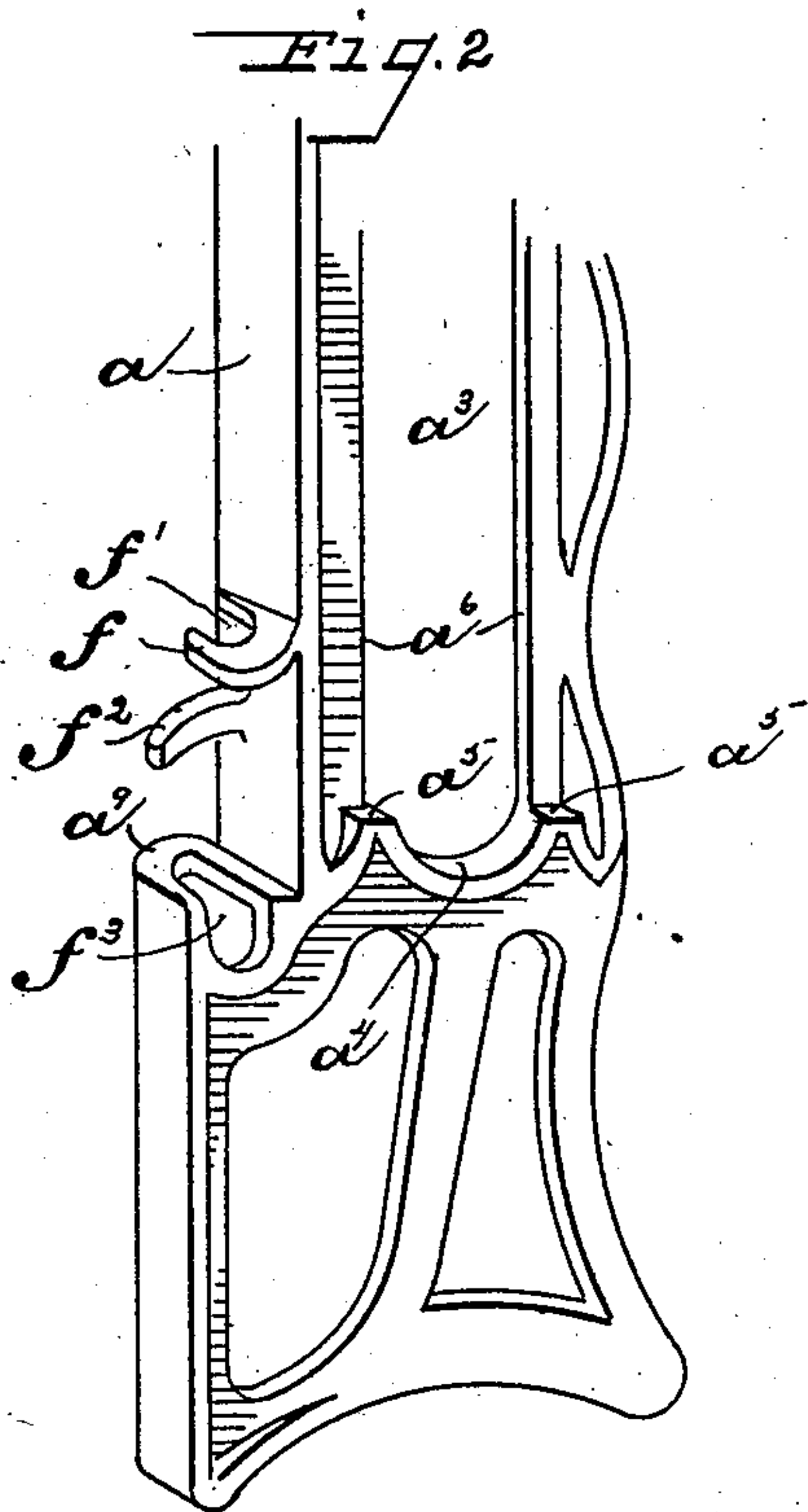
G. D. LEEDLE.

WRINGER.

APPLICATION FILED DEC. 26, 1901.

NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE D. LEEDLE, OF SPRINGFIELD, OHIO.

WRINGER.

SPECIFICATION forming part of Letters Patent No. 725,727, dated April 21, 1903.

Application filed December 26, 1901. Serial No. 87,190. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. LEEDLE, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Wringers, of which the following is a specification.

My invention relates to improvements in wringers; and the object of my invention is to construct a device of this kind in which the bearings for the rolls may readily adjust themselves to compensate for the varying positions of said rolls when in use or by reason of any inaccuracies in the frame of the machine.

A further object of my invention is to provide means for more easily and readily assembling the frame of the machine.

A further object of my invention is to improve in the construction of the rolls to reduce the power required for their operation and also to overcome certain objections.

My invention consists in the constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a device embodying my invention shown in position on a tub. Fig. 2 is a perspective view of one of the side frames of the machine with the upper portion thereof broken away. Fig. 3 is a side elevation of one of the side frames with the rolls and their bearings shown in position therein. Fig. 4 is a detail view of a portion of one of the clamps. Fig. 5 is a bottom view of one end of the apron. Fig. 6 is a perspective view of one of the bearings for the upper-roll shaft. Fig. 7 is a perspective view of an intermediate bearing-block for the spring. Fig. 8 is a front view of the upper-roll bearing with the intermediate bearing-block shown thereon. Fig. 9 is a perspective view of the bearing for the lower-roll shaft.

Like parts are represented by similar letters of reference in the several views.

In the said drawings, a represent the side frames of the wringer, which are connected together at the top by the arch a' and at the bottom by the apron a^2 , which forms the guide for the clothes in the usual manner, all of these parts being preferably constructed of metal. The side frames a are each formed

with an opening a^3 , which opening extends to the top of the frame and terminates near the bottom in a rounded depression a^4 . On each side of the opening a^3 , adjacent to the points where the depression begins, are formed supporting-faces a^5 , these faces being formed on the outer side of each of said side frames. Fitted in this depression a^4 is the bearing c for the shaft b^2 of the lower roll b' , which bearing is provided on either side of one end thereof with projections c' , formed half-rounded on their under sides and adapted to rest on the supporting-faces a^5 of the side frames. The other end of said bearing c is provided on each side with a projection c^2 , the respective projections c' and c^2 forming between them recesses within which extend the guides a^6 on the side frame to prevent lateral displacement of the bearing.

c^3 represent grooves for the reception of oil for lubricating the bearing.

The upper roll b rests upon the lower roll b' and is driven thereby by friction, a spring d being employed to exert pressure upon said rolls in the usual way. The ends of this spring are extended through the respective openings a^3 and rest upon supporting-blocks d' , each block being formed on either side with a depression or groove d^2 , within which extend the guides a^6 of the side frames to hold said blocks from lateral displacement. The under side of each of these blocks is formed with rounded bearing-faces d^3 , and these bearing-faces d^3 rest on the supporting-faces e' of a bearing e for the shaft of the upper roll. The bearing e is provided on either side of the inner end thereof with a projection e^2 to engage the guides a^6 of the side frame, and thus hold said bearings in proper position in said frame. The bearing e is shown provided with an opening e^3 for lubricating purposes.

It will be seen that by providing the block d' with the rounded bearing-faces, as described, I provide, in effect, a rocker-bearing for the upper roll, which construction permits the bearings for said roll to assume the constantly-varying positions into which they are forced by the roll in performing its work—as, for instance, when the upper roll rises at one end owing to the uneven thickness of the material passing between the rolls or to the fact

that the material is fed between the rolls wholly at one end thereof. Uneven wear on the bearings and shaft for the upper roll is prevented, and said upper roll may be more easily driven. Likewise by the construction described I provide for the shaft of the lower roll a bearing which will be sufficiently free to be always in perfect alinement with said shaft regardless of any slight inaccuracy of frame or shaft.

To provide for readily and easily assembling the frame of the machine, I have constructed said frame so that the lower parts of the side frames may be secured together without the aid of bolts, rivets, or other fastenings of this character. To accomplish this, I provide the forward edge of each side frame with a lug f , formed with a depression f' , and beneath this lug is a curved projection f^2 , and beneath this projection the frame is formed with a recess f^3 . The clamps g are each provided with a rounded end g' and upper and lower projecting studs g^2 g^3 , the stud g^2 being adapted to fit in the recessed lug f , the stud g^3 extending into the recess f^3 , and the rounded portion g' of the clamp resting against the projection f^2 . Each end of the apron a^2 is perforated, as shown at a^7 , and adjacent to each perforation on the under side of the apron is formed a rounded rib a^8 . In assembling the parts the projection or stud g^3 of one of the clamps is inserted through one of the perforations a^7 of the apron, and the respective studs g^2 and g^3 are then placed in position in the recesses f' and f^3 of the side frame, the apron being turned at right angles to its normal position to permit of this. After the studs have been properly inserted in the recesses the apron is swung around to its proper position with relation to the frame, the rib a^8 thereon engaging with the rounded portion a^9 of the side frame, thus locking the parts together. By repeating the operation with respect to the other side of the machine it will be seen that the respective side frames will be firmly locked together at the bottom in a manner which can be readily and easily accomplished without the aid of bolts, rivets, or other fastenings of this kind. The upper parts of the side frames are then secured to the arch in any suitable manner, preferably by bolting, as shown.

In regard to the feature of the bearing for the upper roll it is obvious that the parts might be modified by forming the bearing e with the rounded bearing-faces and the block d with straight faces to rest thereon, although the construction described is the preferable one.

Having thus described my invention, I claim—

1. In a wringer, upper and lower rolls and their shafts, loose bearings for the upper-roll shaft carried by the side frames of said wringer and having flat bearing-faces formed on its upper surface, a spring to exert pressure on said bearings, and interposed blocks between said spring and bearings, said blocks being provided with recesses to engage the side frames and with rounded bearing-faces at the points of contact with flat bearing-faces of said bearings, substantially as specified.

2. In a wringer, the combination with an apron with perforated ends, clamps having oppositely-extending studs, side frames with open bearings to receive said studs, said studs on one side of said clamps also engaging the perforations of said apron, projections on said frames to engage said clamps, and ribs on said apron to engage said frames, said projections and ribs forming the sole means to lock the lower end of the frames together and hold the studs of said clamps in said open bearings, substantially as specified.

3. In a wringer, the combination with the side frames having oppositely-disposed recesses forming open bearings, and an apron to connect said side frames having perforations in its respective ends, of clamps having oppositely-disposed studs to be received in said bearings and engage the perforations of said apron, a projection on said frames between said bearings adapted to hold the studs of said clamps in said open bearings, and ribs near the respective ends of said apron to engage said side frames, substantially as specified.

In testimony whereof I have hereunto set my hand this 19th day of December, A. D. 1901.

GEORGE D. LEEDLE.

Witnesses:

CHAS. I. WELCH,
CLIFTON P. GRANT.