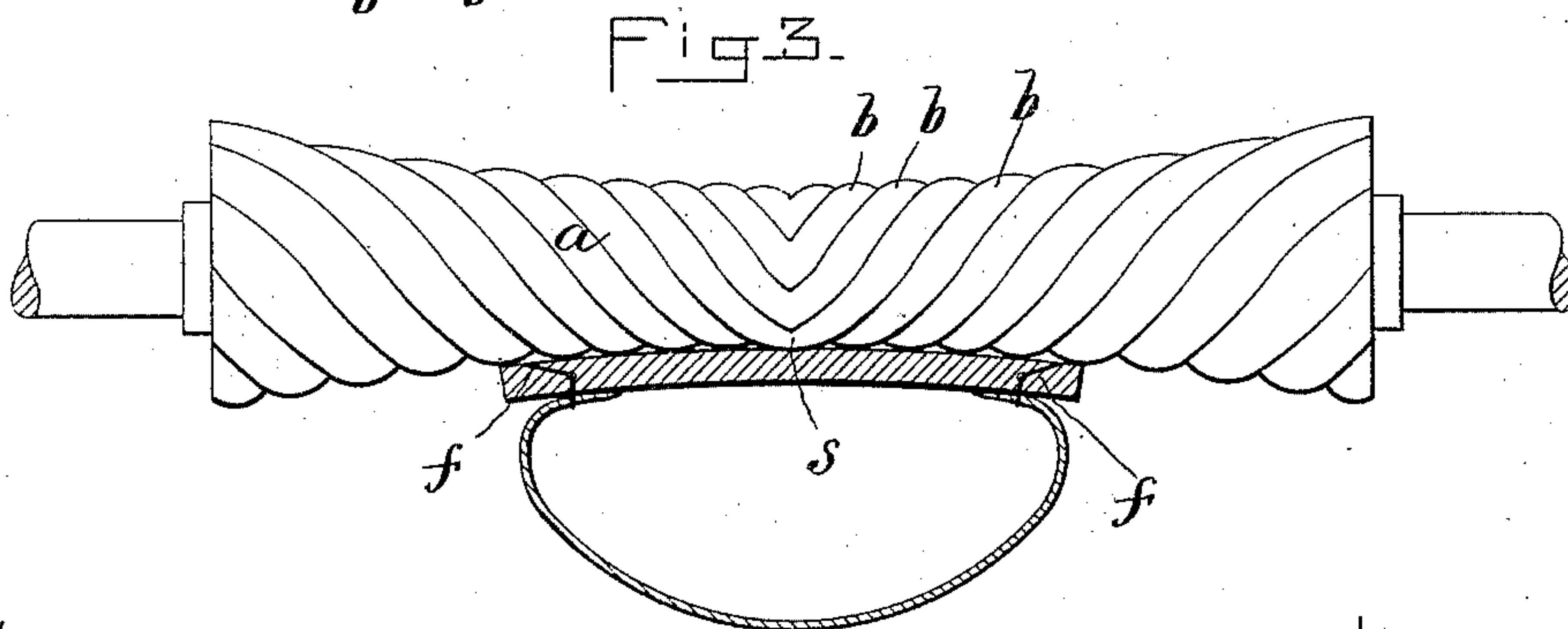
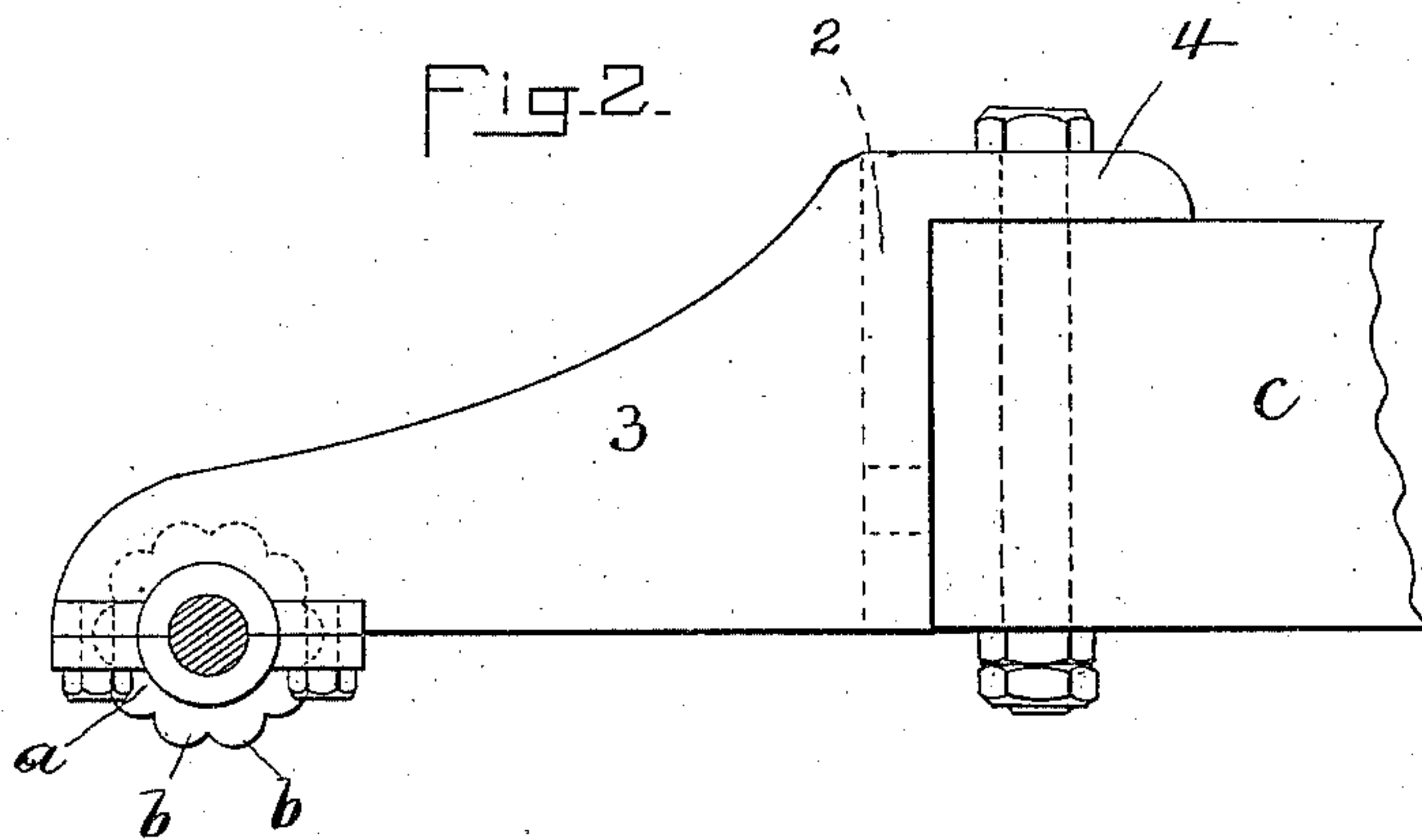
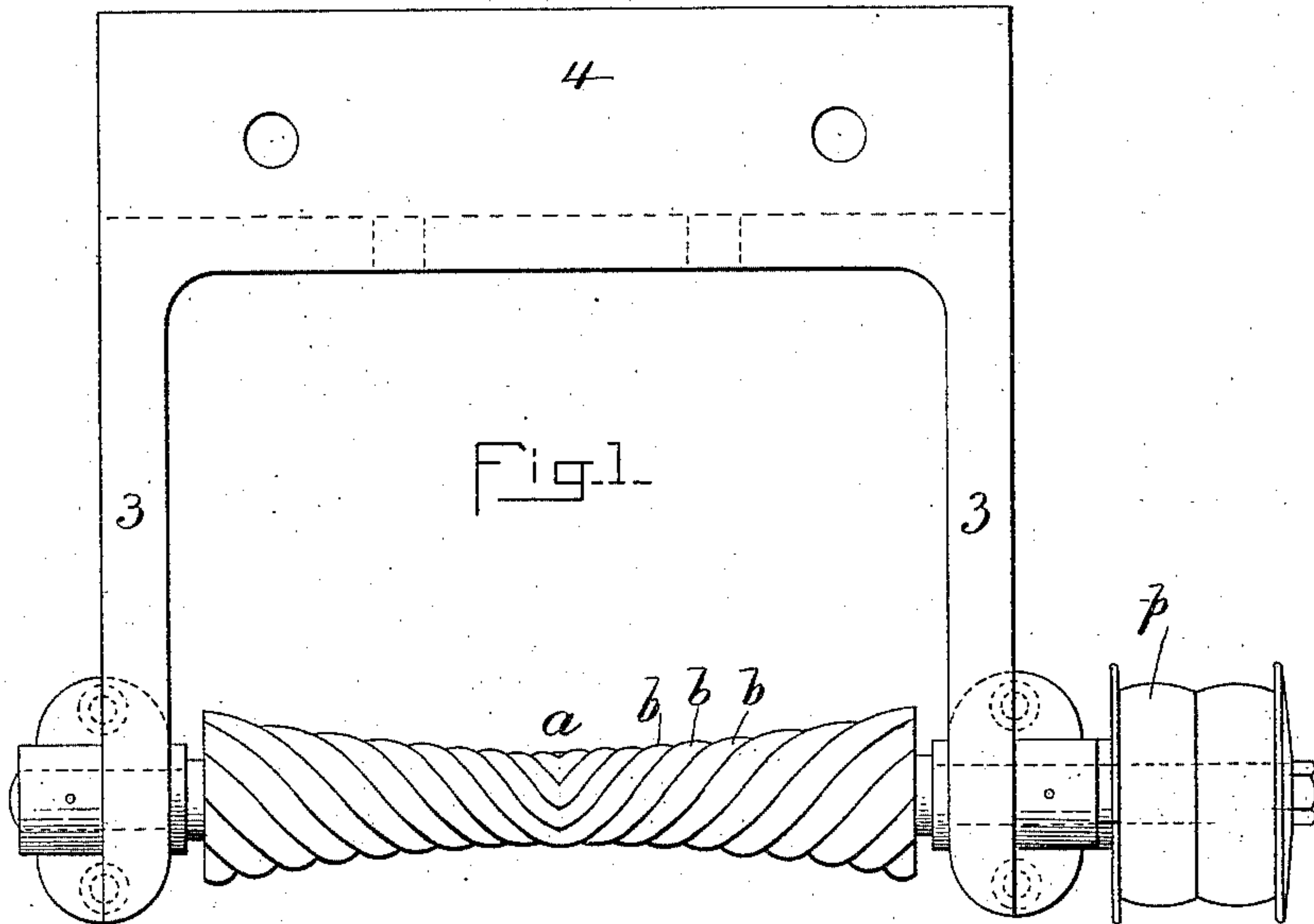


(No Model.)

J. HEMINGWAY & D. B. ALDOES.  
CHANNEL FLAP LAYING MACHINE.

No. 445,613.

Patented Feb. 3, 1891.



WITNESSES:  
*A. S. Harrison.*  
*Erving W. Hamlin.*

INVENTOR:  
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*David B. Aldoes*  
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*Attys.*



# UNITED STATES PATENT OFFICE.

JOHN HEMINGWAY AND DAVID B. ALDOES, OF LYNN, MASSACHUSETTS; SAID HEMINGWAY ASSIGNOR OF ONE-HALF HIS INTEREST TO ALFRED C. HEMINGWAY, OF SAME PLACE.

## CHANNEL-FLAP-LAYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 445,613, dated February 3, 1891.

Application filed May 9, 1890. Serial No. 351,134. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN HEMINGWAY and DAVID B. ALDOES, of Lynn, in the county of Essex and State of Massachusetts, have  
5 invented certain new and useful Improvements in Channel-Flap-Laying Machines, of which the following is a specification.

This invention relates to rotary devices for smoothing out and pressing to place the channel-flaps of boot and shoe soles after the operation of attaching the sole to the upper by  
10 stitches or other fastenings in the channel, the flap being turned back before the fastening operation to expose the channel.

15 The invention has for its object to provide a rotary flap-laying device adapted to lay the flap along both edges of the sole at one operation; and to this end it consists in a rotary roll provided with longitudinal ribs or blades  
20 and made longitudinally concave, so that the line of contact of the ribs or blades can extend entirely across the convex bottom of a boot or shoe sole when the latter is presented to the periphery of the roll in position to enable the ribs thereof to press down or lay the  
25 channel-flap, the said ribs having rounded smoothing surfaces or edges adapted to smooth down the channel-flaps without cutting or scratching the surface of the sole.

30 Heretofore in rotary devices of this character the form of the roll has been such that the bottom of a sole, which is convex crosswise, cannot bear from edge to edge on the roll, so that two passes of the sole have been  
35 required to lay the flap, one pass being made with the flap at one edge of the sole in contact with the roll, and the other after the boot or shoe has been tipped to bring the flap at the other edge in contact with the roll. Our  
40 improved concave roll, fitting the crosswise concavity of the sole, enables the flap along both edges of the sole to be in contact with the roll at the same time, so that but one pass is required in laying the entire flap.

45 In the accompanying drawings, forming a part of this specification, Figure 1 represents a top view of a channel-flap-laying roll embodying our invention and the frame in which it is journaled. Fig. 2 represents an end view

of the same. Fig. 3 represents a side view of  
50 the roll, showing a sole applied thereto.

The same letters of reference indicate the same parts in all the figures.

In carrying out our invention we make a roll *a*, which is longitudinally concave, its ends  
55 being larger than its central portion, while its periphery curves gradually inward from its ends to its center. The longitudinal curvature of the roll is such as to adapt it to the  
60 convex curvature which exists in all boot and shoe soles after the usual sole attaching and forming operations, so that when a sole *s* is placed in contact with the periphery of the roll with its length extending crosswise there-  
65 of both flaps *ff* of the sole will bear at the same time on the roll, as shown in Fig. 3. The roll is provided with ribs or blades *b*, extending  
70 lengthwise of the roll, said blades being preferably arranged spirally or helically, the spiral direction of each blade being reversed at the longitudinal center of the roll, as shown  
75 in Figs. 1 and 3, so that each blade has a tendency to spread or lay the flap outwardly toward the margin of the sole. The blades have rounded surfaces or edges adapted to  
80 smooth down the channel-flap without scratching or cutting the surface of the sole. The shaft of the roll *a* has its bearings in a frame composed of a flanged back piece 2 and arms  
85 3 3, projecting from said back piece. The flange 4 of the back piece is formed to bear on the top of a bench *c* or other support, while the face of said back piece bears against the edge of said support. The roll is thus  
85 held so that a sole can be pressed upwardly against it, the operator holding the boot or shoe below the roll with the sole upward. The roll may be rotated by a driving-belt running  
90 on a pulley *p*, affixed to the shaft of the roll.

We claim—

90 In a channel-flap layer, the combination, with a supporting-frame, of a longitudinally-concave roll journaled in bearings in said frame and provided with reversed spiral ribs  
95 formed with convex rounded smoothing surfaces or edges, whereby they are adapted to smooth or press down the flap without scraping or cutting the surface of the sole, the con-

cavity of the roll being such that its ribbed surface conforms to the transverse convex curvature of the bottom of the sole, whereby said ribs are adapted to bear on the channel-  
5 flap at both edges of the sole simultaneously, as set forth.

In testimony whereof we have signed our names to this specification, in the presence of

two subscribing witnesses, this 5th day of May, A. D. 1890.

JOHN HEMINGWAY.  
DAVID B. ALDOES.

Witnesses:

N. D. A. CLARKE,  
J. C. KIMBALL.