

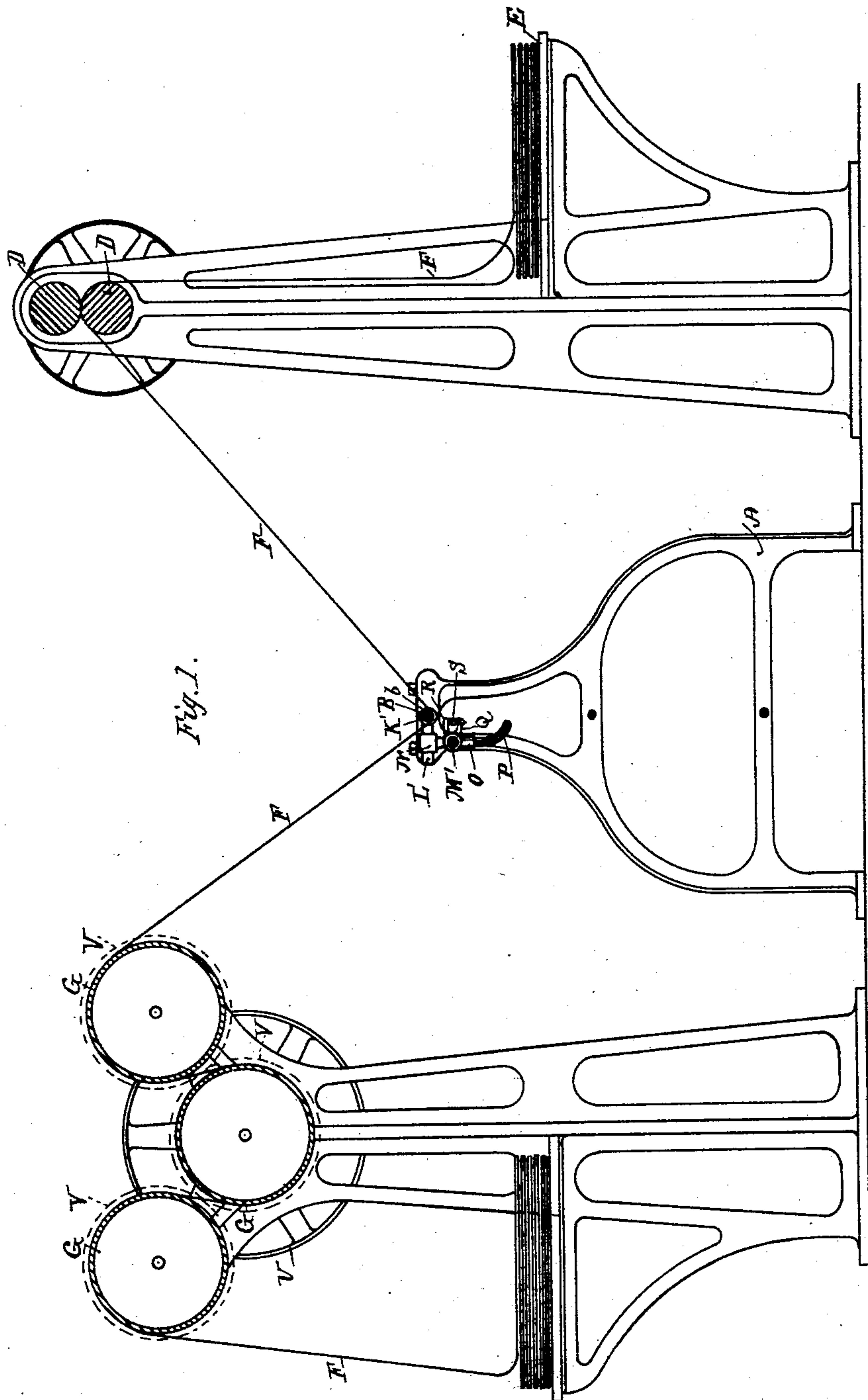
(No Model.)

2 Sheets—Sheet 1.

J. P. MANTON.  
APPARATUS FOR SINGEING CLOTH.

No. 569,109.

Patented Oct. 6. 1896.



WITNESSES.

Geo. P. Bonworth.

H. E. Reynolds

INVENTOR.

Joseph P. Manton

per S. Scholfield  
Attorney

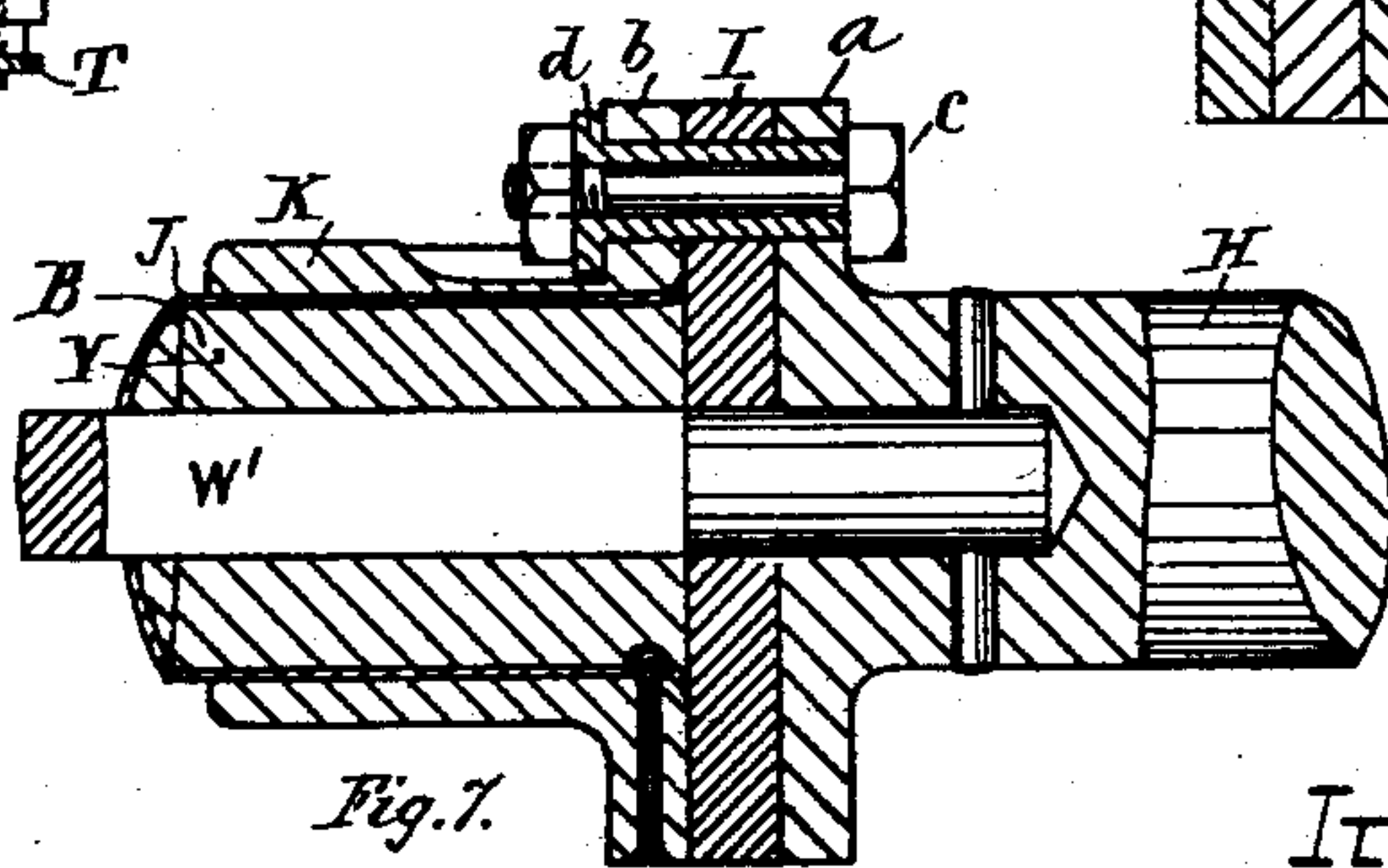
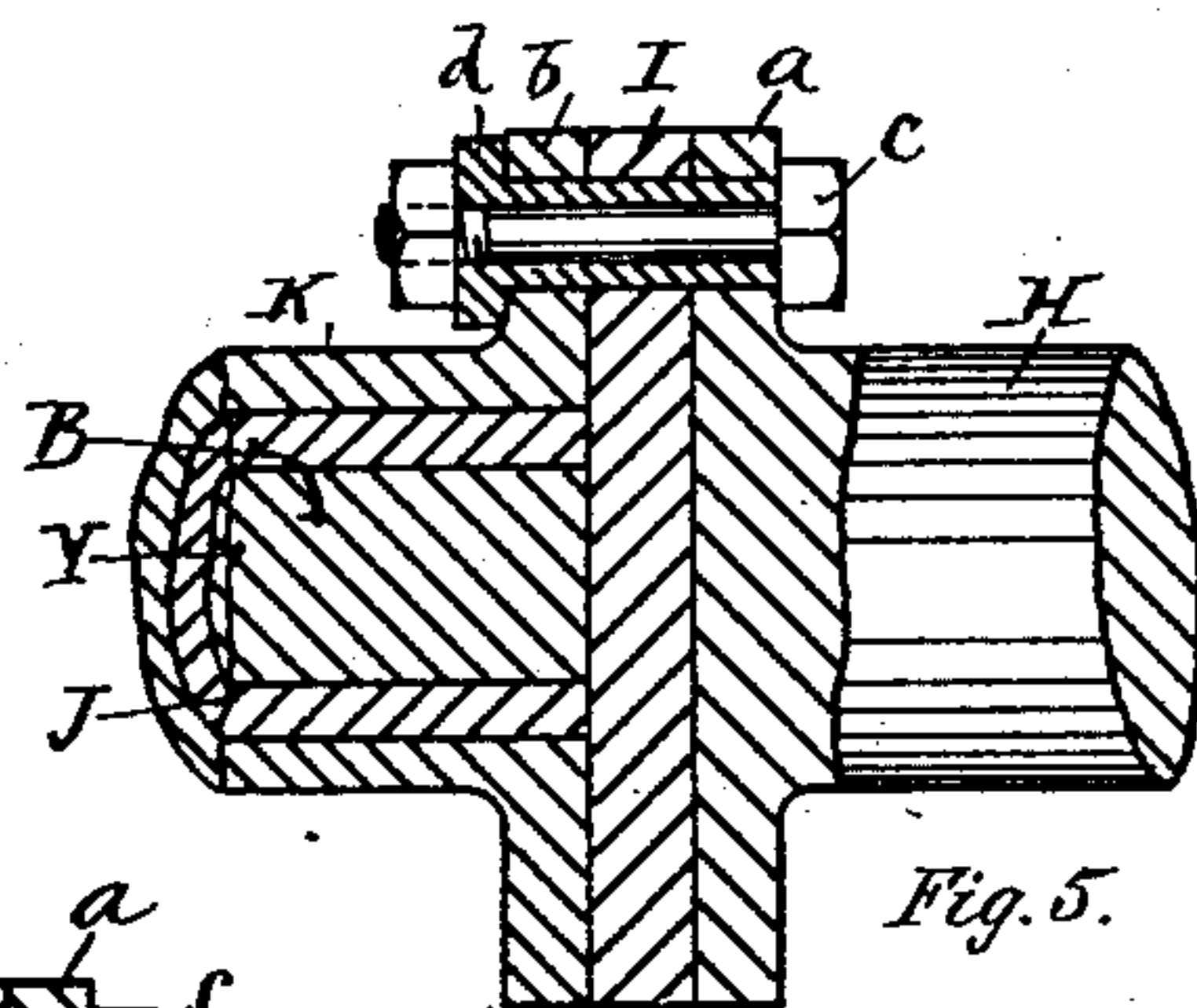
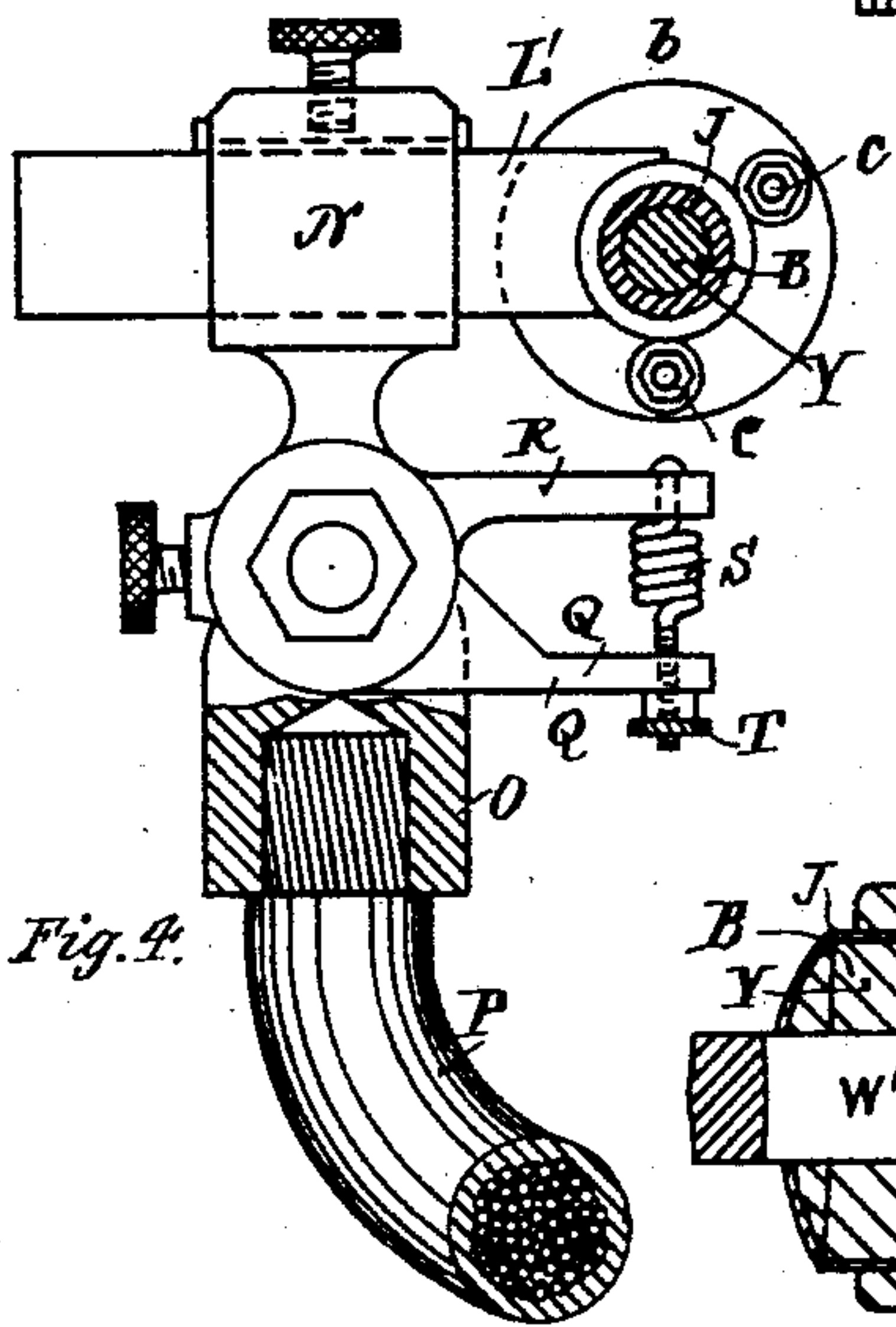
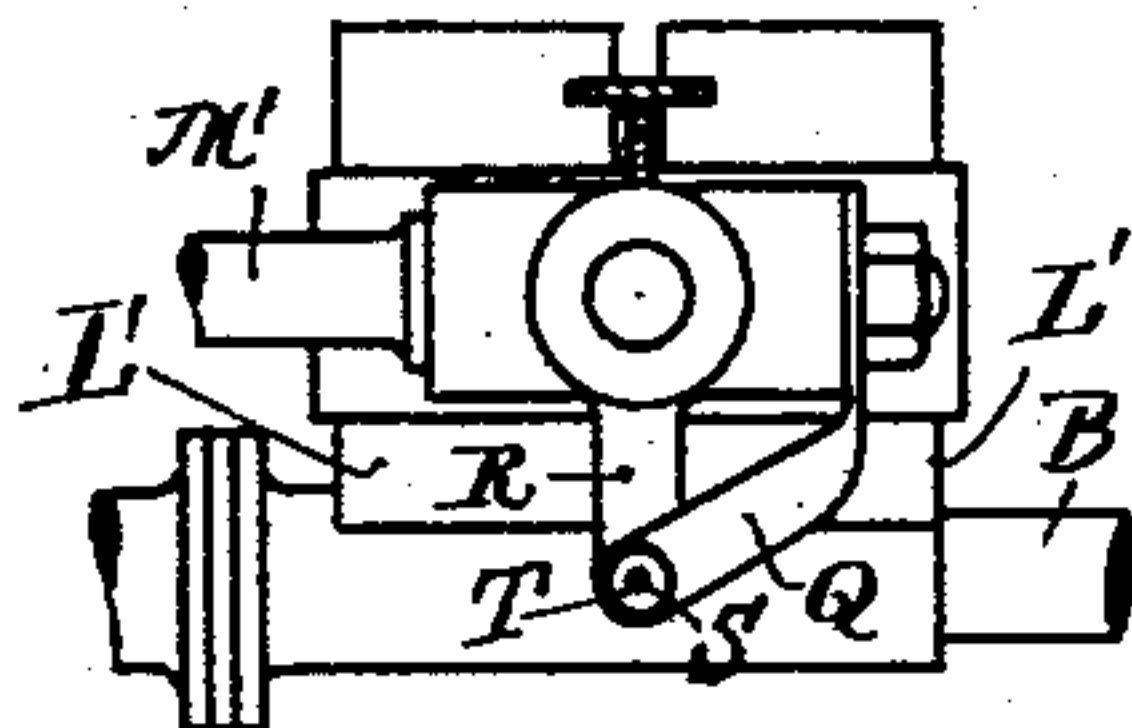
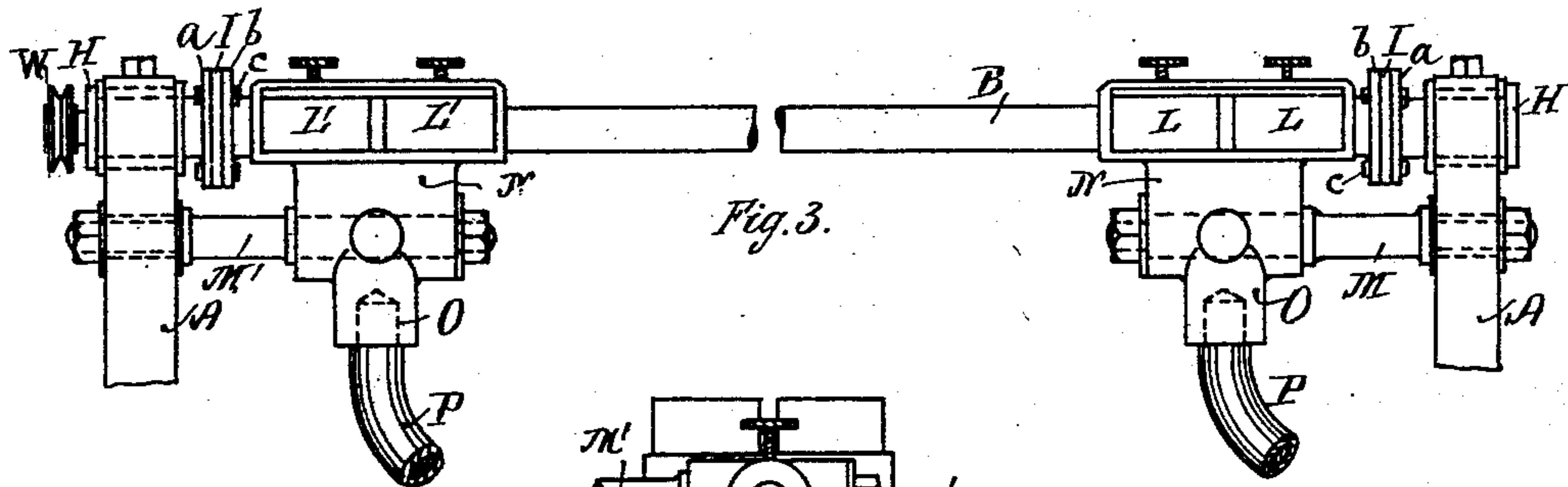
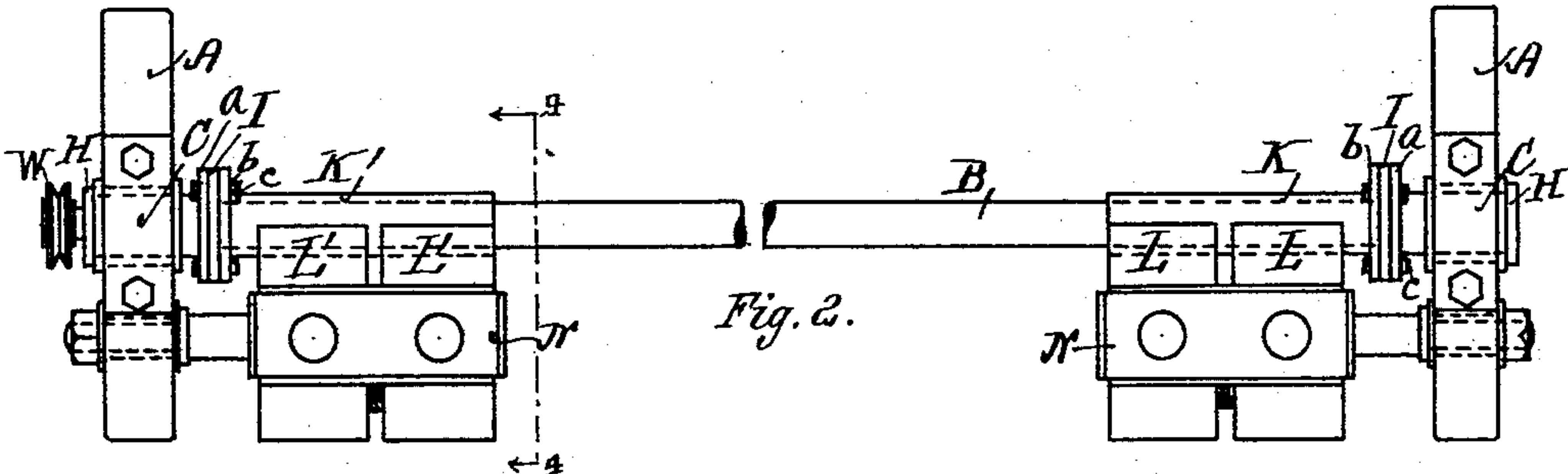
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2 Sheets—Sheet 2.

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WITNESSES.

Geo. P. Bonworth,  
H. C. Reynolds

INVENTOR.

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per S. Scholfield  
Attorney



# UNITED STATES PATENT OFFICE.

JOSEPH P. MANTON, OF PROVIDENCE, RHODE ISLAND.

## APPARATUS FOR SINGEING CLOTH.

SPECIFICATION forming part of Letters Patent No. 569,109, dated October 6, 1896.

Application filed January 29, 1895. Serial No. 536,585. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH P. MANTON, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Apparatus for Singeing Cloth, of which the following is a specification.

The nature of my invention consists in the employment, with means for drawing the cloth forward, of a revolving metallic tube having electric connections made therewith, whereby the tube itself becomes a portion of the electric circuit and is heated by the passage of the electric current therethrough.

It also consists in the combination, with the apparatus, of an insulated metallic rod to prevent the bending of the heated singeing-tube, which forms a portion of the electric circuit.

In the accompanying drawings, Figure 1 represents a longitudinal section of a cloth-singeing apparatus embodying my invention. Fig. 2 represents an enlarged detail top view of the revolving electrically-connected tube. Fig. 3 represents a detail side elevation of the same. Fig. 4 represents an enlarged section taken in the line 4 4 of Fig. 2. Fig. 5 represents an enlarged detail longitudinal section of the coupling-joint for insulating the electrically-connected singeing-tube. Fig. 6 represents a view of the under side of the attaching device for the electric brushes. Fig. 7 represents an enlarged longitudinal section, as in Fig. 5, showing a modification.

In the drawings, A, Fig. 1, represents one of the end frames which serve to support the bearings of the revolving tube B, which is driven by means of the pulley W, the journals H H of the said bar being held to revolve in the bearing-boxes C C of the opposite end frames A A, as shown in Figs. 2 and 3, the cloth F, as represented in Fig. 1, being drawn forward by passing between the driven rollers D D to a suitable place of deposit E; the said cloth in its passage to the revolving electric singeing-tube B passing over the revolving steam-heated copper cylinders G G G for drying the cloth preparatory to singeing, and thence under the said singeing-tube B, or the cloth may be otherwise arranged for passing forward to the singeing contact with the said tube.

The tube B is provided with the solid me-

tallic journals H H, which are furnished with the flanges a a, and are insulated from the tube B by means of the interposed sheets of mica I I or other suitable non-conductor of heat and electricity.

The tube B is preferably made of nickel or other metal and filled with any suitable non-conductor of heat and electricity, as, for instance, a compact filling of pulverized mica or asbestos, or a compact filling of anhydrate of aluminium or other suitable substance Y, and upon the outer ends of the tube B are placed the sleeves K K', which are preferably made of bronze or other metallic composition, the said sleeve K being adapted to receive the electric current from the delivering-brushes L L at one end of the bar B and the sleeve K' to transmit the same to the receiving-brushes L' L' at the other end of the said tube, the said sleeves being shrunk firmly upon the tube B, or otherwise secured to the same, to form a proper electric connection therewith. The sleeves K K' are provided with the flanges b b, which are secured to the flanges a a of the journals H H by means of the bolts c c, the said bolts being insulated from the said flanges by means of the sleeves d, made of suitable non-conducting material.

Upon the studs M M', which project inwardly from the frames, are pivoted the holders N for the brushes, the said holders having a downwardly-projecting hub O, to which electric connection is made from the operating electric dynamo by means of a suitable electric wire or cable P. To the ends of each of the studs M M' is secured a fixed arm Q, projecting forward, as shown in Figs. 4 and 6, and between the outer ends of the arm Q and the projecting arm R of the holder N is placed the spiral spring S, upon the lower end of which is placed the nut T, by means of which a yielding tension may be produced between the fixed arms Q and the said holder to cause the required pressure of the brushes upon the connecting-sleeves K K' of the electric singeing-bar. The steam-heated drying-cylinders G G G may be connectedly rotated by means of the pulley U and the gears V V V. (Shown by dotted lines in Fig. 1.)

A modification of my invention is shown in Fig. 7, in which the singeing-tube B is supported and strengthened by means of a cen-



trally-arranged steel rod W', preferably made of square cross-section, and connected with the journals H H by suitable means, the said rod constituting the metallic strengthening-  
5 core of the tube B, the space between the said metallic core W' and the tube over which the cloth is drawn being filled with the non-conducting composition Y.

The rotation of the tube B serves to bring  
10 the cloth in contact with its whole surface and to prevent the tube from sagging when subjected to heat.

I claim as my invention—

1. In an apparatus for singeing cloth, the  
15 combination with means for drawing the cloth forward, of the singeing-tube forming a portion of the electric circuit by means of which it is heated, the connected sleeves, the non-conducting core, means for revolving the  
20 singeing-tube, the electric brushes in contact

with the sleeves of the singeing-tube, and electric connection with the brushes, substantially as described.

2. In an apparatus for singeing cloth, the  
combination with means for drawing the cloth 25 forward, of the singeing-tube forming a portion of the electric circuit by means of which it is heated, the insulated metallic rod for supporting the heated tube, the non-conducting core between the rod and the inner sur- 30 face of the tube, means for revolving the singeing-tube, the electric brushes in contact with the sleeves of the singeing-tube, and electric connection with the brushes, substantially as described.

JOSEPH P. MANTON.

Witnesses:

SOCRATES SCHOLFIELD,  
HENRY E. REYNOLDS.