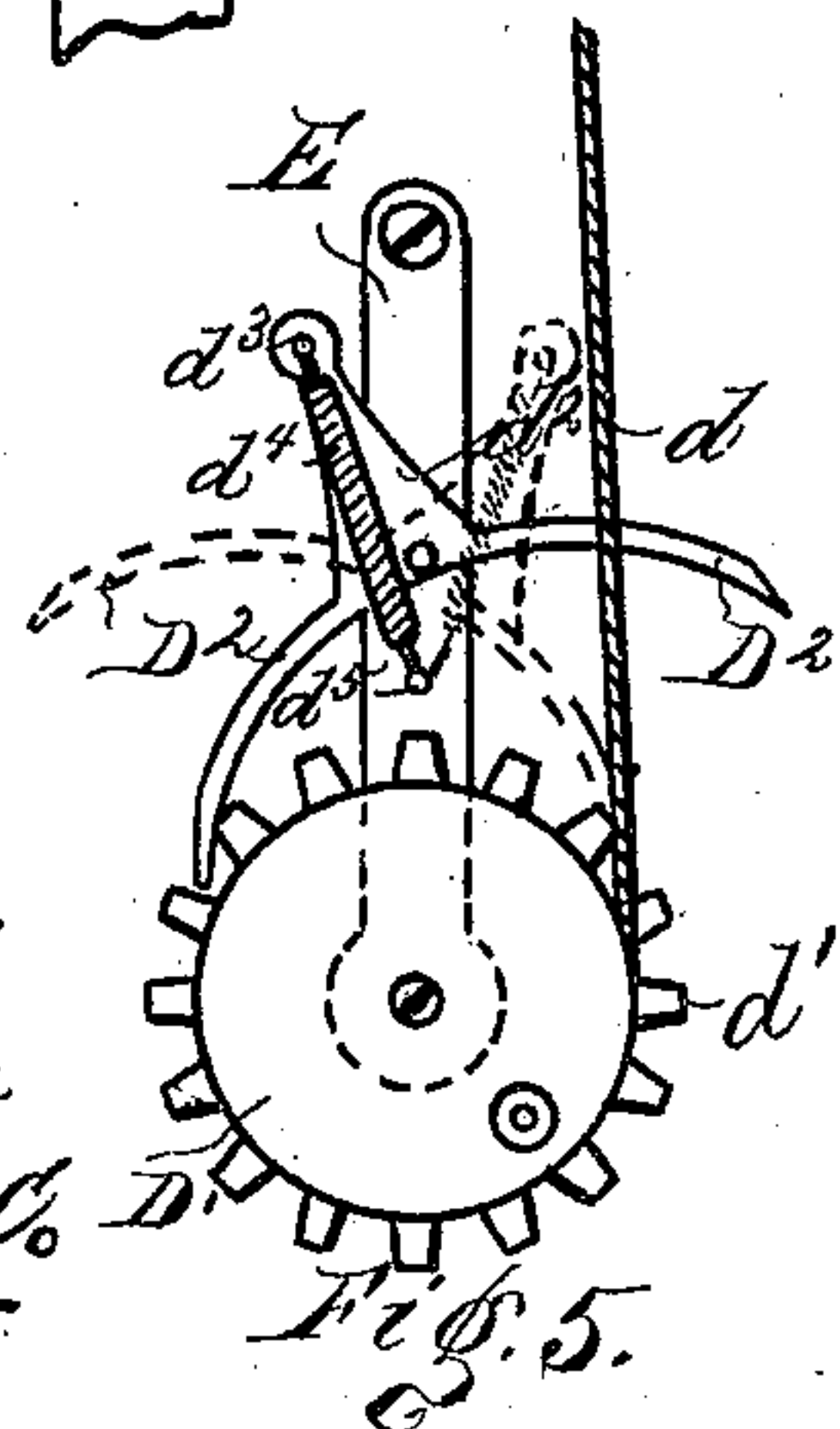
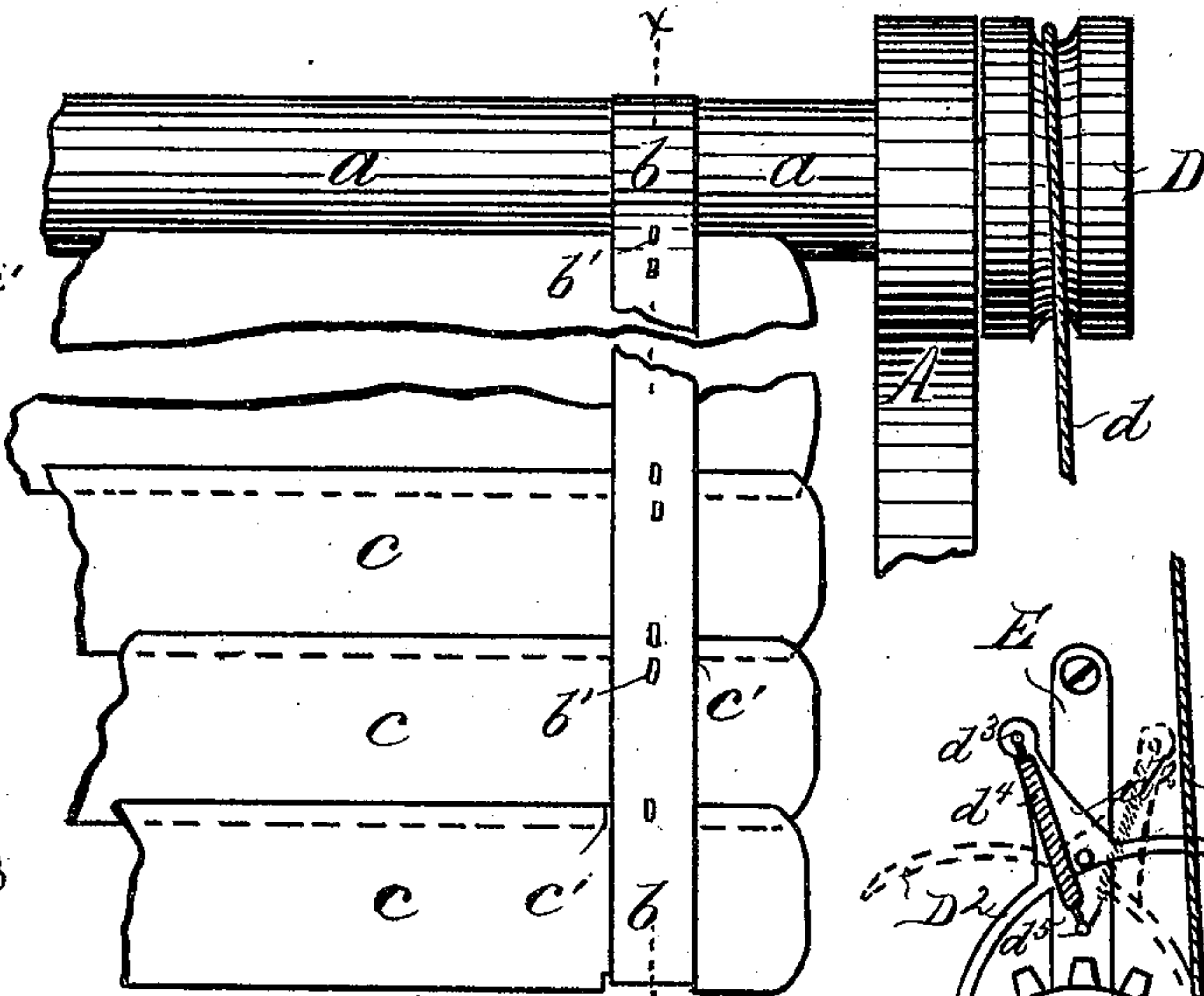
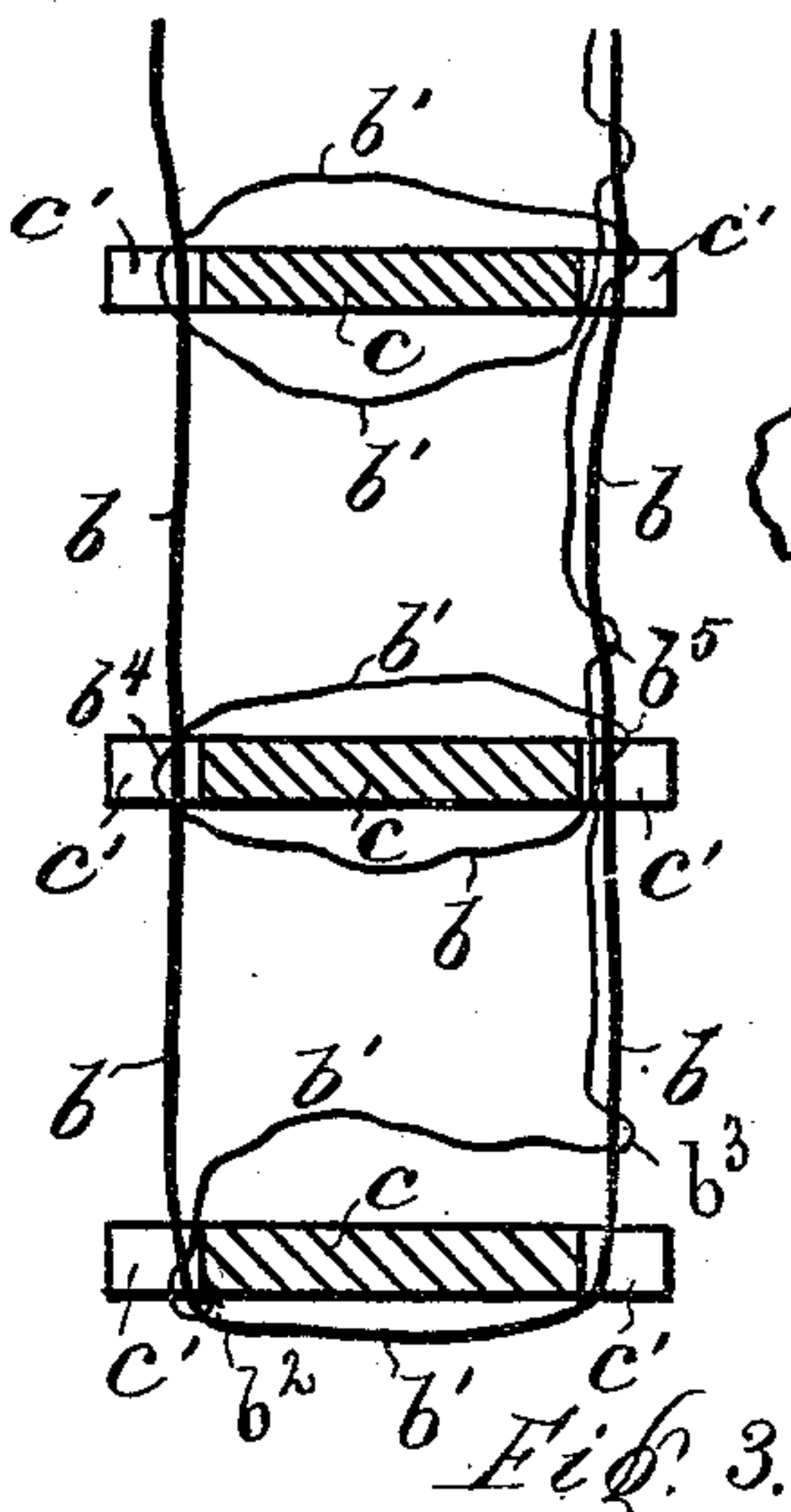
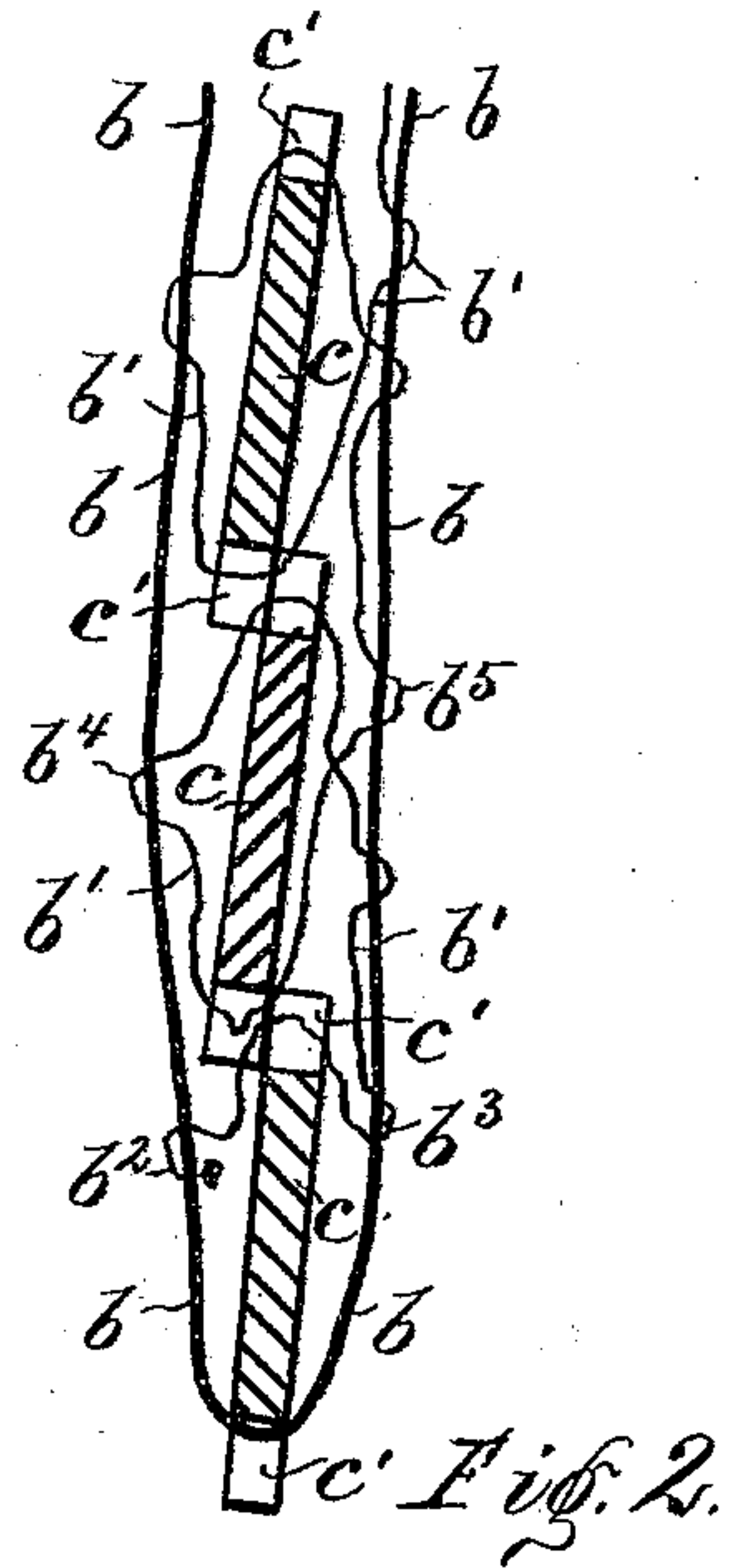
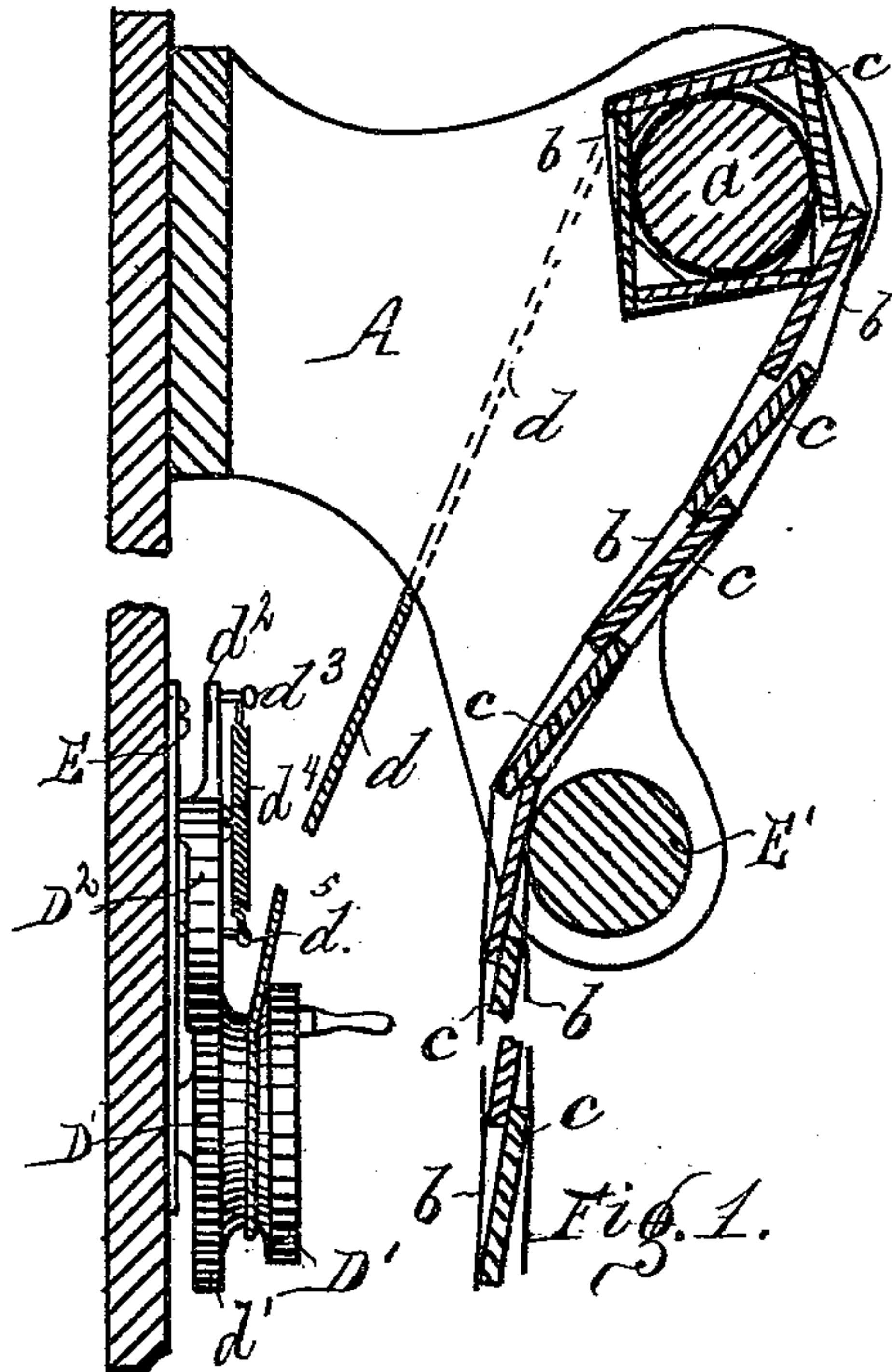


P. HUHN.
VENETIAN-BLINDS.

No. 175,563.

Patented April 4, 1876.



Witnesses:
Chas. D. Minsner.
J. W. Heithaus

Inventor:
Peter Huhn
per Arthur & Co.

UNITED STATES PATENT OFFICE.

PETER HUHN, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN VENETIAN BLINDS.

Specification forming part of Letters Patent No. **175,563**, dated April 4, 1876; application filed December 13, 1875.

To all whom it may concern:

Be it known that I, PETER HUHN, of St. Louis, Missouri, have invented an Improved Window-Curtain, of which the following is a specification:

This invention relates to Venetian blinds, adopted to be wound round a top roller; also to shades, screens, or window-curtains.

The nature of this invention consists in the construction and the combination of the various parts to operate in the manner as hereinafter will more fully appear.

Of the drawing, Figure 1 is a sectional elevation. Fig. 2 is a sectional elevation through the slats on line *x x* of Fig. 4, showing how same are contained in loops. Fig. 3 is a similar section of the slats, showing these positioned horizontally. Fig. 4 is a part front elevation of the curtain, as suspended from roller at top. Fig. 5 is a front elevation of the hand-gear below by means whereof the raising of the curtain is effected.

A, Figs. 1, 4, represents suitable brackets attached to each side at top of a window-frame. Extending across the window, and turning in the brackets A, I arrange a roller-shaft, *a*. From this shaft *a* I suspend the blind-slats by means of bands *b* and cords *b*¹ at each side, in manner as follows:

The respective bands *b* have one end thereof fastened to the roller-shaft *a*; from thence made to reach the length required for the entire blind-slat curtain, passing round the lowest blind-slat, and thence made to return to the top roller, and also fastened again, and as indicated in Figs. 2, 3, 4. The cords *b*¹ I first secure at one end to the band *b* at *b*², (see Figs. 2, 3;) from thence I pass it upward far enough to form a loop, (according to the size of the slats to be used;) thence said cord *b*¹ is passed through the front part of the band *b* at *b*³, and also at this point repassed through *b* up along to reach a loop over the top of the second slat; thence passed through the band *b* at *b*⁴, and down under said second slat; thence up through a point, *b*⁵, and in a similar manner passed to loop the third slat, as well as all other slats that compose the curtain.

c are the blind-slats proper. These I adapt to be placed in the loops made by the bands

b and cords *b*¹, and further form said slats so as to fold nicely and facilitate their folding over and round the roller-shaft *a*. Hence the opposite edges of the slats at *c'* are formed to have an open slot. (See Figs. 2, 3, 4.) The slats are simply laid in the loops formed by the cord *b*¹, so that thus loosely laid in the loops of the cord *b*, the slots *c'* will be all in line with each other, and said slats will have their edges partly covered by the edges of the succeeding slats, and as indicated by dotted lines in Fig. 4, and full lines in Figs. 1, 2.

The loose slats, as is apparent, can be readily adjusted by the operator, to admit or keep out the light; further, said slats can be taken out and replaced at will, and be cleaned, washed, and otherwise kept neat.

The position the blind-slats assume in folding round the top roller is shown in Fig. 1. As they fold or lie top of each other on four sides a great saving of space is achieved, a better admission of light from the top is had, besides being in a more presentable appearance.

In order to raise the slats by their top rollers they are connected by cord attachment to the following hand-gear: To one end of the top roller-shaft I secure a roller, D. (See Fig. 4.) To this roller in its groove I fasten one end of a cord, *d*; the other end thereof to the groove of a lower roller, D¹. (See Figs. 1, 5.) This lower roller I form, further, to possess the teeth *d*¹, (see Figs. 1 and 5,) in which a spring-pawl, D², is made to engage. This pawl D² has, forming part of it, an arm, *d*², from which projects a further arm, *d*³. (See Figs. 1 and 5.) One end of a coil-spring, *d*⁴, is secured to *d*³. The other end is fastened to a similar arm, *d*⁵, projecting from a hanger, E. This hanger E is secured at top and bottom. At bottom the same fastening device also secures the gear-roller D¹. The hanger, its spring-pawl, and the roller D¹ will be secured to the lower part or sides of the window-frame, or in a position so as to be within the reach of the operator. By simply turning the roller D¹ by its hand-crank the cord *d* is made to coil round the top roller D. This turns its shaft, and consequently in this manner the slats are raised and made to fold at top. The spring allows the pawl to be easily acted upon,

so that the operator, with great ease, can lift one end of the pawl in order to turn the lower roller; also, said spring keeps the pawl always in engagement with the gear, so that at any desired position the crank-roller is stopped from turning. The pawl is lifted out of engagement when the curtain is drawn down, this being done by taking hold and drawing the curtain itself.

What I claim is—

1. In combination with brackets A, having roller-shaft *a*, the blind-slats *c*, having slots at *c'*, the cords *b*¹, and bands *b*, all arranged

to operate as herein shown and described, and for the purpose set forth.

2. The hand-gear and pawl device, consisting of the toothed roller D¹, the hanger E, its pawl D², arm *d*², spring *d*⁴, cord *d*, in combination with a roller, D, as and for the purpose set forth.

In testimony of said invention I have hereunto set my hand.

PETER HUHNS.

Witnesses:

WILLIAM W. HERTHEL,
CHAS. F. MEISNER.