

(No Model.)

2 Sheets—Sheet 1.

P. J. SHORTLE & J. LEITCH.
MECHANISM FOR GUIDING THE EDGES OF WEBS TO CLOTH FINISHING
MACHINES.

No. 432,494.

Patented July 15, 1890.

FIG. 1.

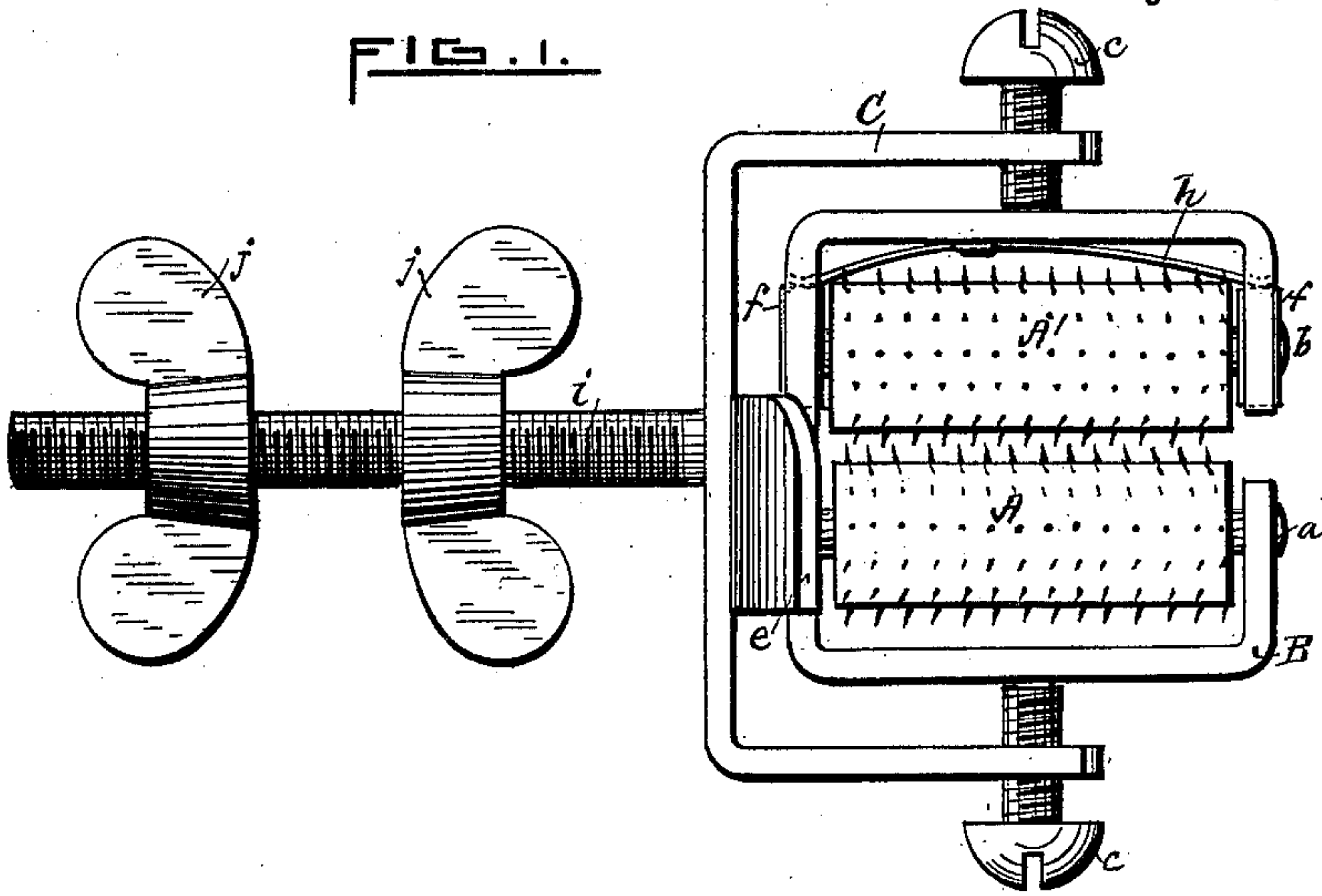


FIG. 2.

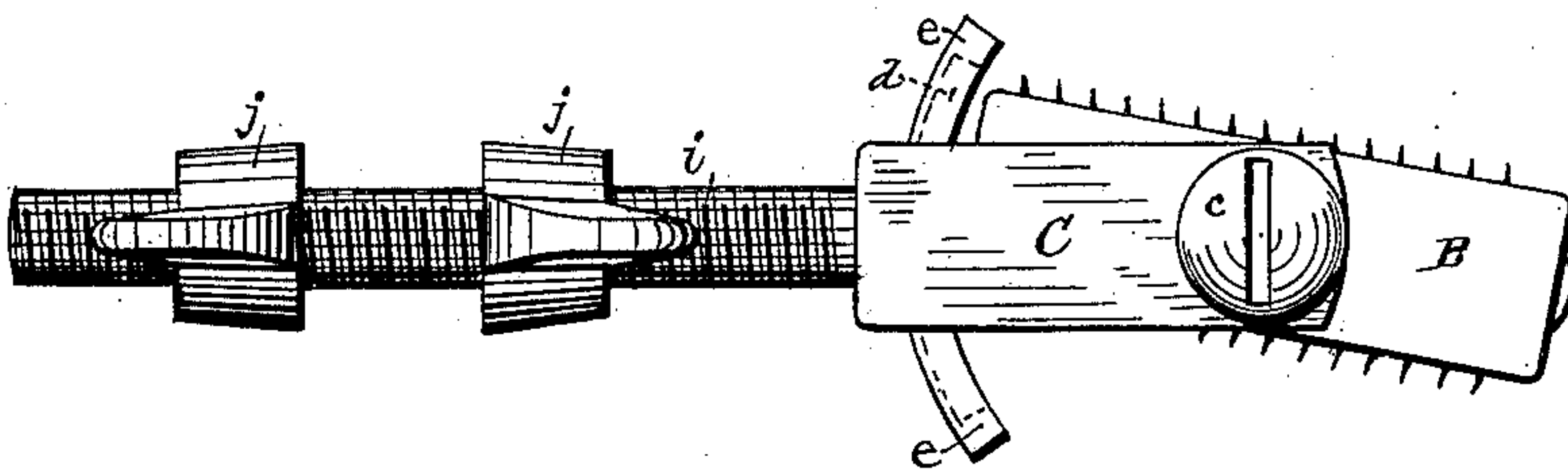
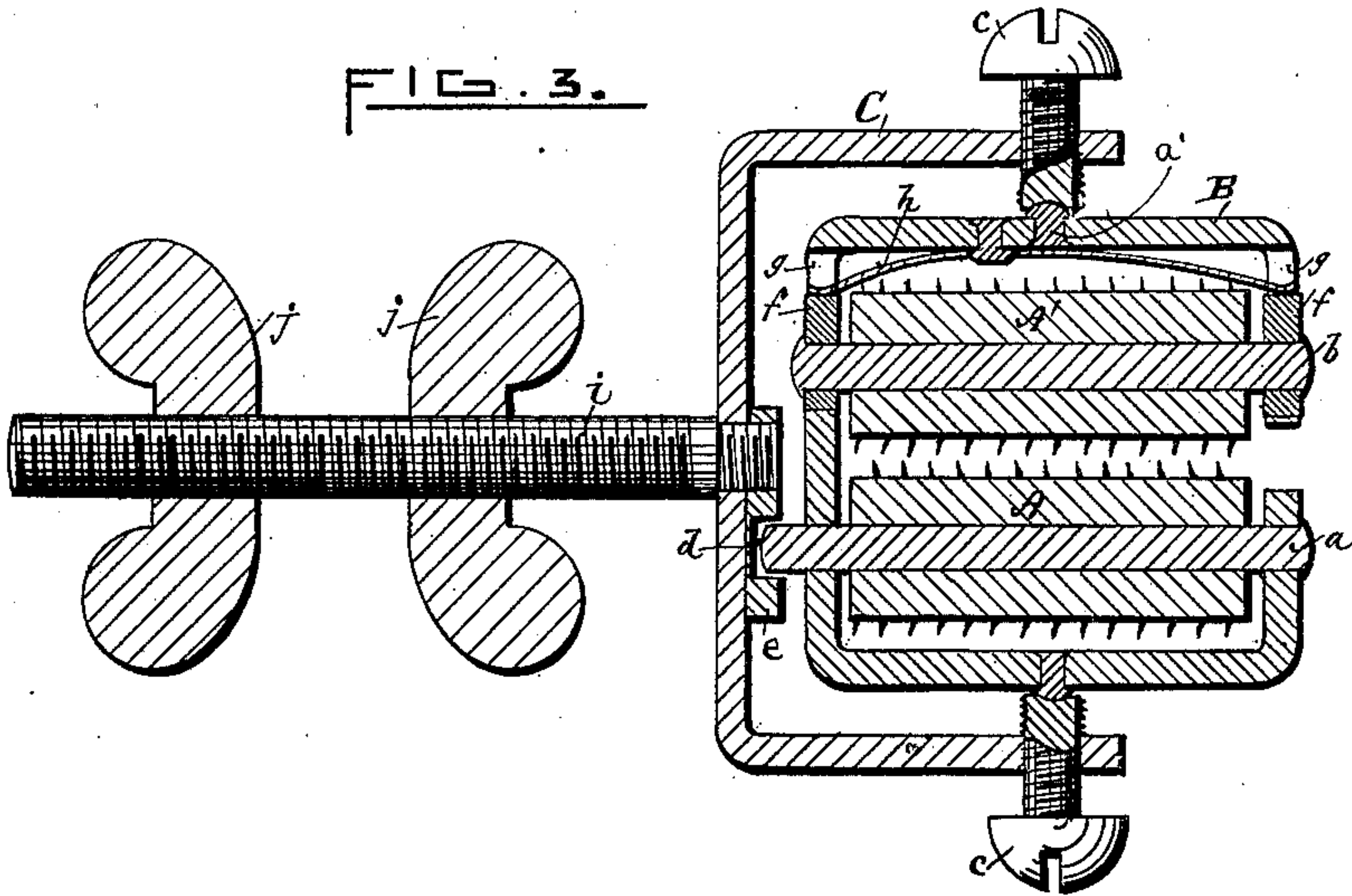


FIG. 3.



WITNESSES.

James W. Beaman
John D. Lynch

INVENTOR.

Patrick J. Shortle
James Leitch
per J. Scholfield
attorney

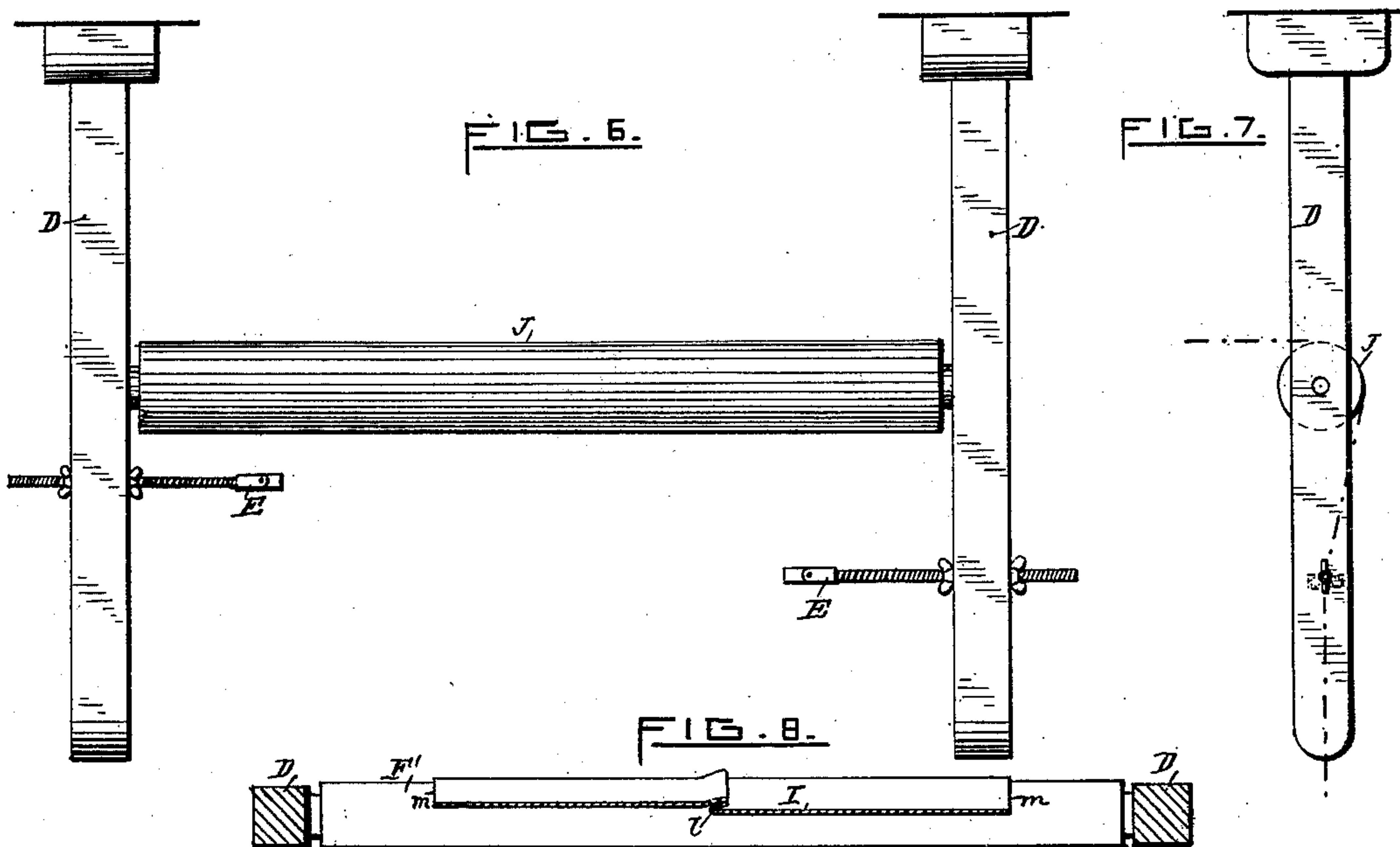
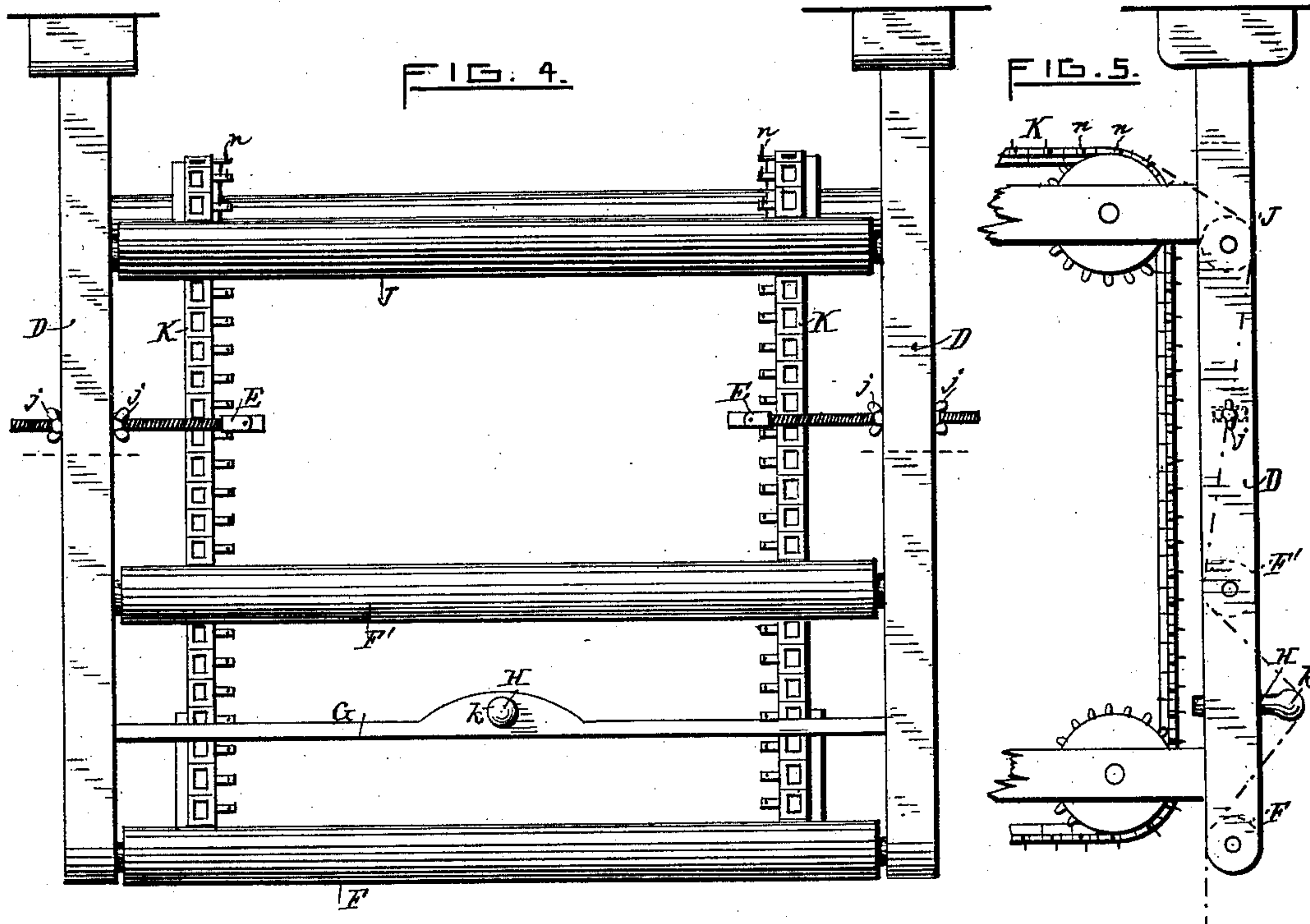
(No Model.)

2 Sheets—Sheet 2.

P. J. SHORTLE & J. LEITCH.
MECHANISM FOR GUIDING THE EDGES OF WEBS TO CLOTH FINISHING
MACHINES.

No. 432,494.

Patented July 15, 1890.



WITNESSES.

INVENTOR.

James W. Kearney
John S. Lynch.

Patrick G. Shortle
James Leitch
per J. Scholfield
attorney

UNITED STATES PATENT OFFICE.

PATRICK J. SHORTLE AND JAMES LEITCH, OF GILBERTVILLE, MASSACHUSETTS.

MECHANISM FOR GUIDING THE EDGES OF WEBS TO CLOTH-FINISHING MACHINES.

SPECIFICATION forming part of Letters Patent No. 432,494, dated July 15, 1890.

Application filed July 20, 1888. Serial No. 280,538. (No model.)

To all whom it may concern:

Be it known that we, PATRICK J. SHORTLE and JAMES LEITCH, citizens of the United States, and residents of Gilbertville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Mechanism for Guiding the Edges of Webs to Cloth-Finishing Machines, of which the following is a specification.

Our invention consists in the combination of opposite guiding-templates with means for presenting the web to the templates in a laterally-contracted condition, so as not to interfere with their proper guiding action, as hereinafter set forth.

Figure 1 is a face elevation of the guiding-template used by us. Fig. 2 is an edge view of the same. Fig. 3 is an axial section, partly in elevation. Fig. 4 is a view representing our improved mechanism for guiding the edges of a web to a cloth drying or tentering machine, and showing a front elevation of the same. Fig. 5 is an end view of the mechanism shown in Fig. 4. Fig. 6 is a view showing the guiding-templates as adapted for feeding the webs to gigs and cloth-presses. Fig. 7 is an end view of the same. Fig. 8 represents a transverse section, partly in plan, as would be taken in the line *xx*, Fig. 4, showing the three-ply longitudinal fold in the web.

In the accompanying drawings, *A A'* are opposite rollers, which are provided at their peripheries with spurs, as in ordinary loom-templates, and are supported for revolution upon the pins *a* and *b* in the frame *B*, which is pivoted to the holding frame or fork *C* by means of the screws *c c*. The inner end of the pin *a* is loosely held in a recess *d* in the inner face of the curved arm *e*, which serves to limit the pivotal movement of the frame *B*, and the pin *b* is held in the sliding guides *f f*, which are made capable of movement in the openings *g g* in the frame *B*, and which are pressed toward the roller *A* by means of the flat spring *h*, so that the roller *A'* will be caused to yield to the passage of an accidental fold or extra thickness of cloth between the rollers. The frame *B* is pivoted about centrally of the rollers *A A'* by means of the screws *c*, which are made hollow upon their ends to receive the pivoting-spurs *a' a'* of the frame *B*, so

that when the edge of the web varies in either direction from the true line the said frame with the temple-rollers will be caused to swing upon the pivots of the frame to such an angle with the edge of the running web as to cause the return of the said edge to the proper guiding-line.

The holding frame or fork *C* is provided with a screw-threaded shank *i*, upon which are placed the oppositely-placed thumb-nuts *j j*, by means of which the pivoted temple can be adjustably secured to the frame of the machine.

The application of the pivoted temples to the purpose of feeding a cloth drying or tentering machine is shown in Fig. 4, in which *D D* are opposite wooden hangers secured to the ceiling of the room in close proximity to the feeding end of the said machine. *E E* are the oppositely-set guiding-templates, which are secured to the hangers *D D* by means of the nuts *j j*. *F F'* are two rolls or equivalent bars, over which the web is made to pass, and about midway between the rolls or bars *F F'* is placed the cross-bar *G*, in the center of which is located the projecting pin *H*, provided with a rounded end *k*, which, when the web is being drawn over the said rolls or bars *F F'*, and the pin, as shown by the broken line in Fig. 5, serves to produce a three-ply lengthwise fold in the web, as shown in Fig. 8, in which *I* represents a transverse section of the web, and *l* the three-ply fold produced at the passage of the web over the surface of the roll or bar *F'*, and the object of producing the fold *l* is to bring the edges *m m* of the web nearer to each other than the normal width of the said web, in order that the temples *E E* may be caused to uniformly act upon the web in a slack condition and without lateral strain, which would cause the action of the pivoted temples to be defective. When the end of the web is carried under the roll or bar *F* and under the roll or bar *F'*, the projecting pin *H* will cause that portion of the web which intervenes between the roller *F* and *F'* to bulge outward, thus bringing the edges of the web nearer to each other in a direct line which lies in the horizontal plane of the pin than the normal width of the outspread web, and then as the web is being

drawn forward a three-ply fold will be generated at the roll or bar F' on account of the narrowed-in condition of the edges of the web which are running onto the said roll or
5 bar. The edges of the web pass from the guiding-templates E E over the roll J and onto the pins or hooks *n* of the chains K K of the drying or tentering machine, by means of which the web is to be stretched to the proper
10 width and dried, as usual in such machines.

Figs. 6 and 7 illustrate the method of employing the temples for the purpose of feeding the web to a gig or to a rotary press; and in this case the temples E E are not set in
15 line with each other, so as to cause an interfering action, but are set in different planes, whereby the opposite edges of the web will be allowed to yield to the proper action of each of the temples.

20 We do not limit our invention to a pivoted temple having oppositely-set rollers when op-

erating upon a web previously contracted in width by means of a longitudinal fold, but also include the ordinary pivoted temple having a single roller.

We claim as our invention—

The combination, with a projection for transversely curving the web so as to draw the opposite edges of the same inwardly to a distance apart less than the normal width of
30 the said web, of the pivotally-held temple-rollers located at the opposite edges of the web for guiding the said edges to a cloth-finishing machine from the transversely-contracted condition of the said web, substan-
35 tially as and for the purpose set forth.

PATRICK J. SHORTLE.
JAMES LEITCH.

Witnesses:

J. F. GREEN,
J. J. SCHOLFIELD.