

No. 632,424.

Patented Sept. 5, 1899.

J. PILLING.

PREPARING MACHINE FOR FIBROUS MATERIALS.

(Application filed Apr. 11, 1898.)

(No Model.)

2 Sheets—Sheet 1.

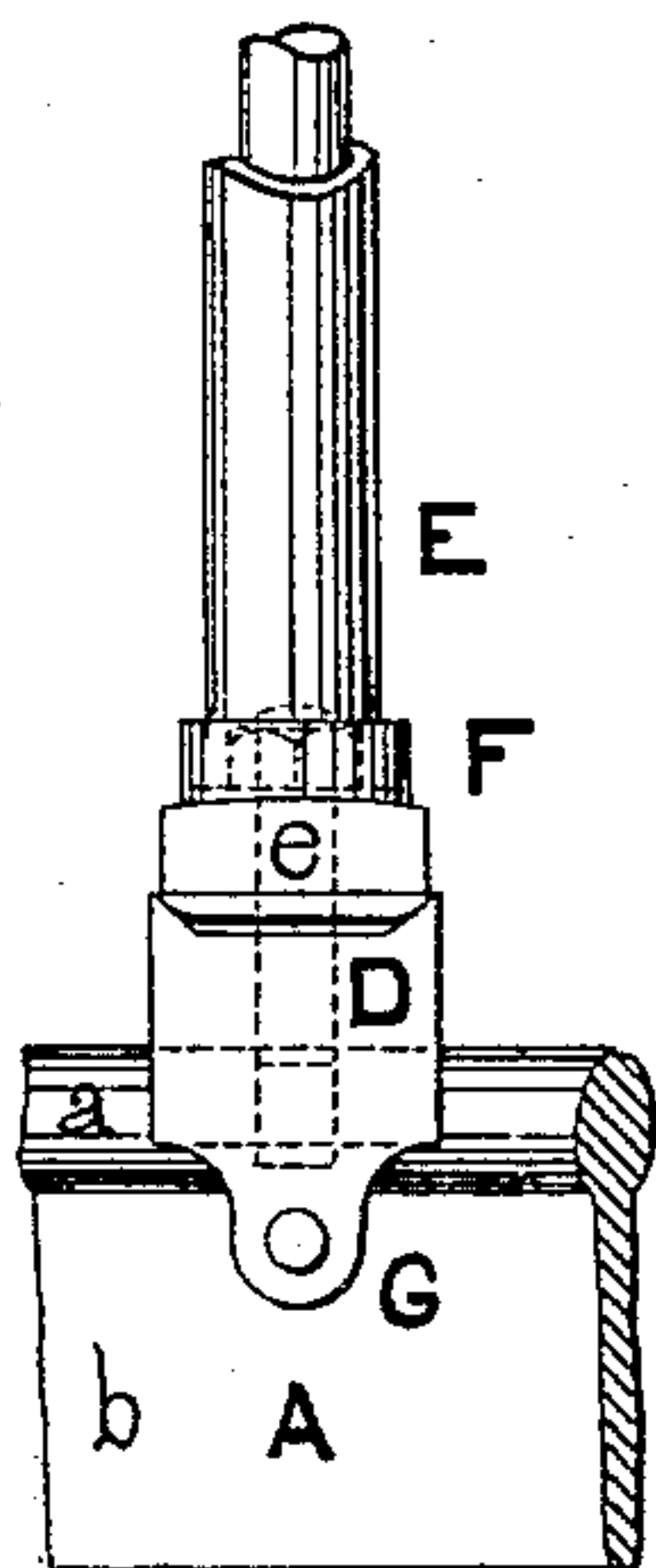


FIG. 2.

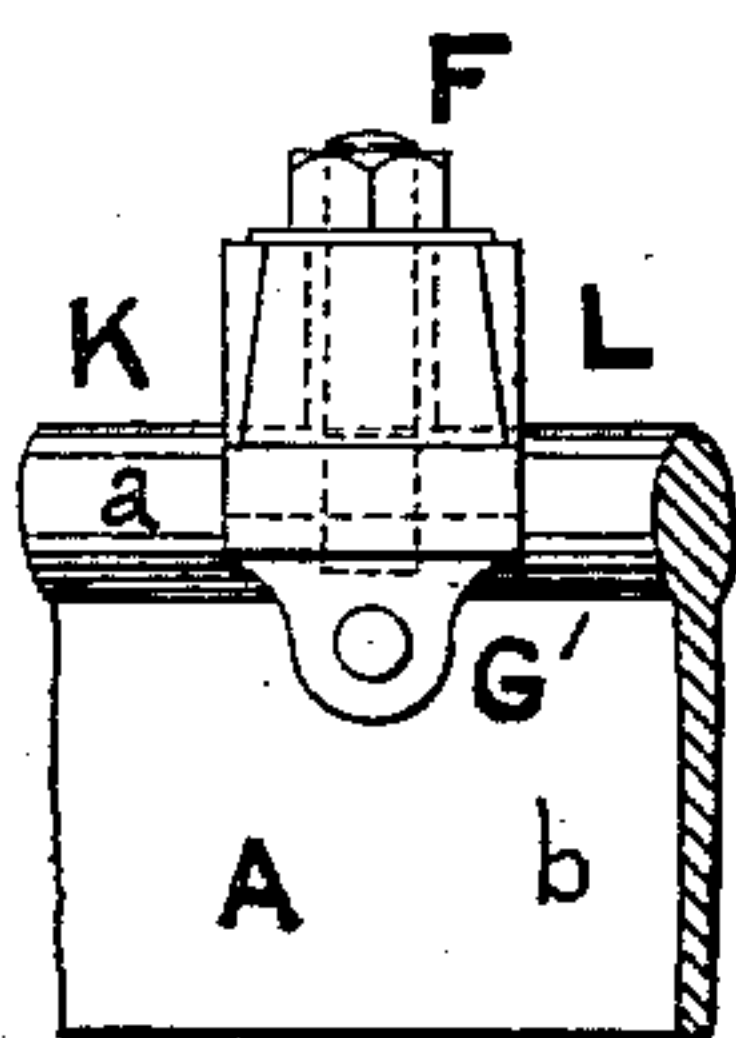


FIG. 3.

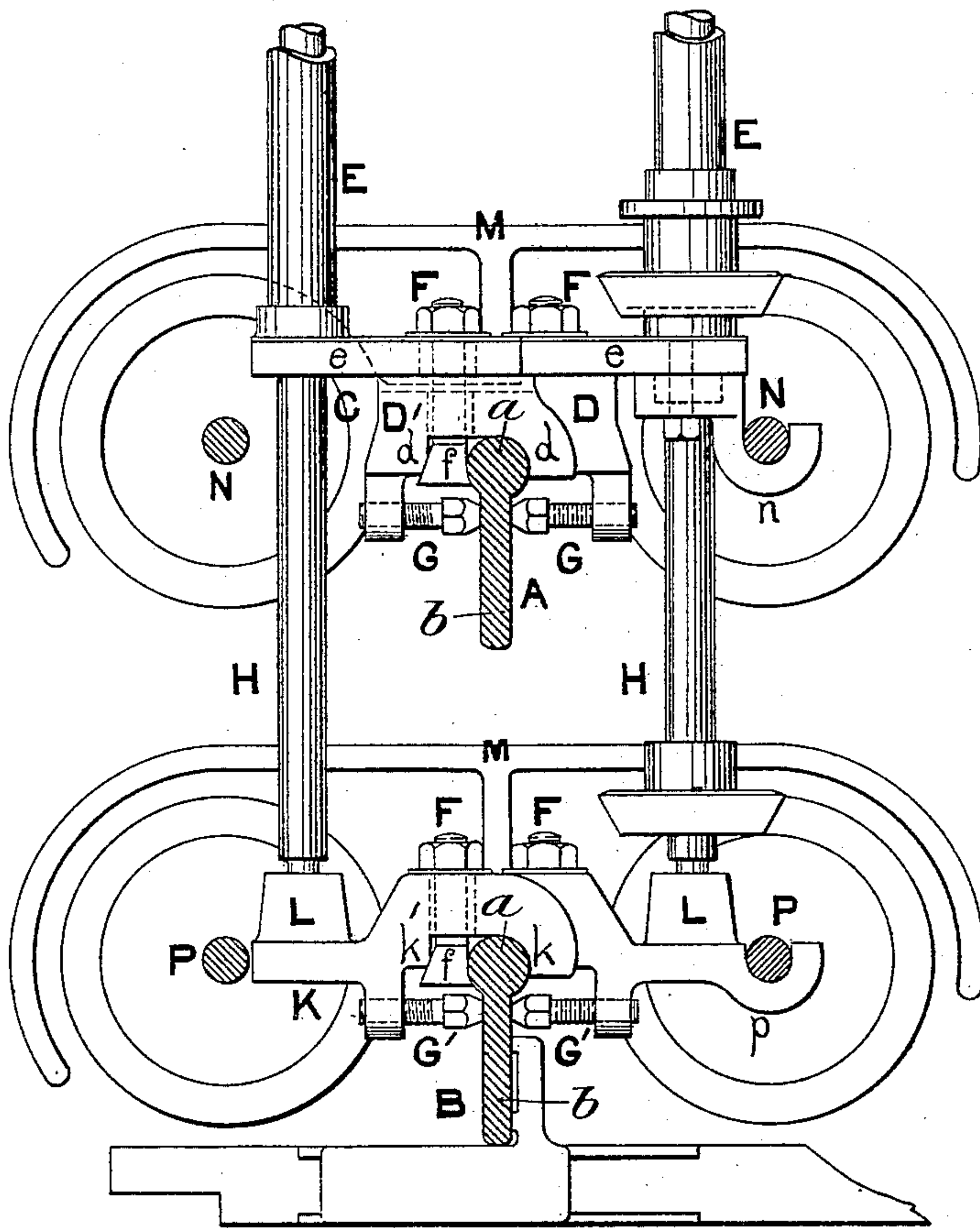
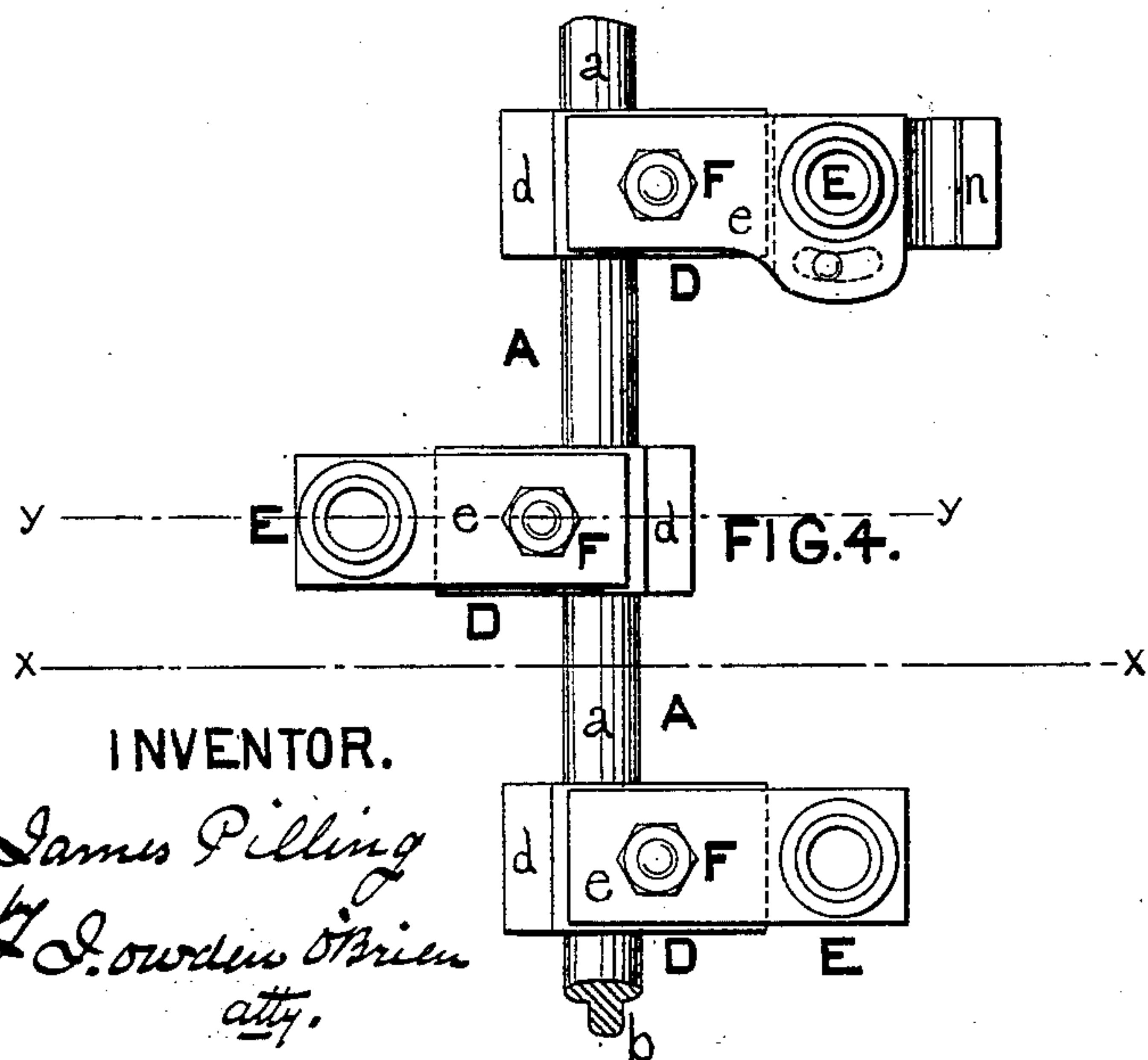


FIG. 1.



WITNESSES

*E. Howard*  
*R. Wendale*

INVENTOR.

*James Pilling*  
*by J. Owen'Brien*  
*att'y.*

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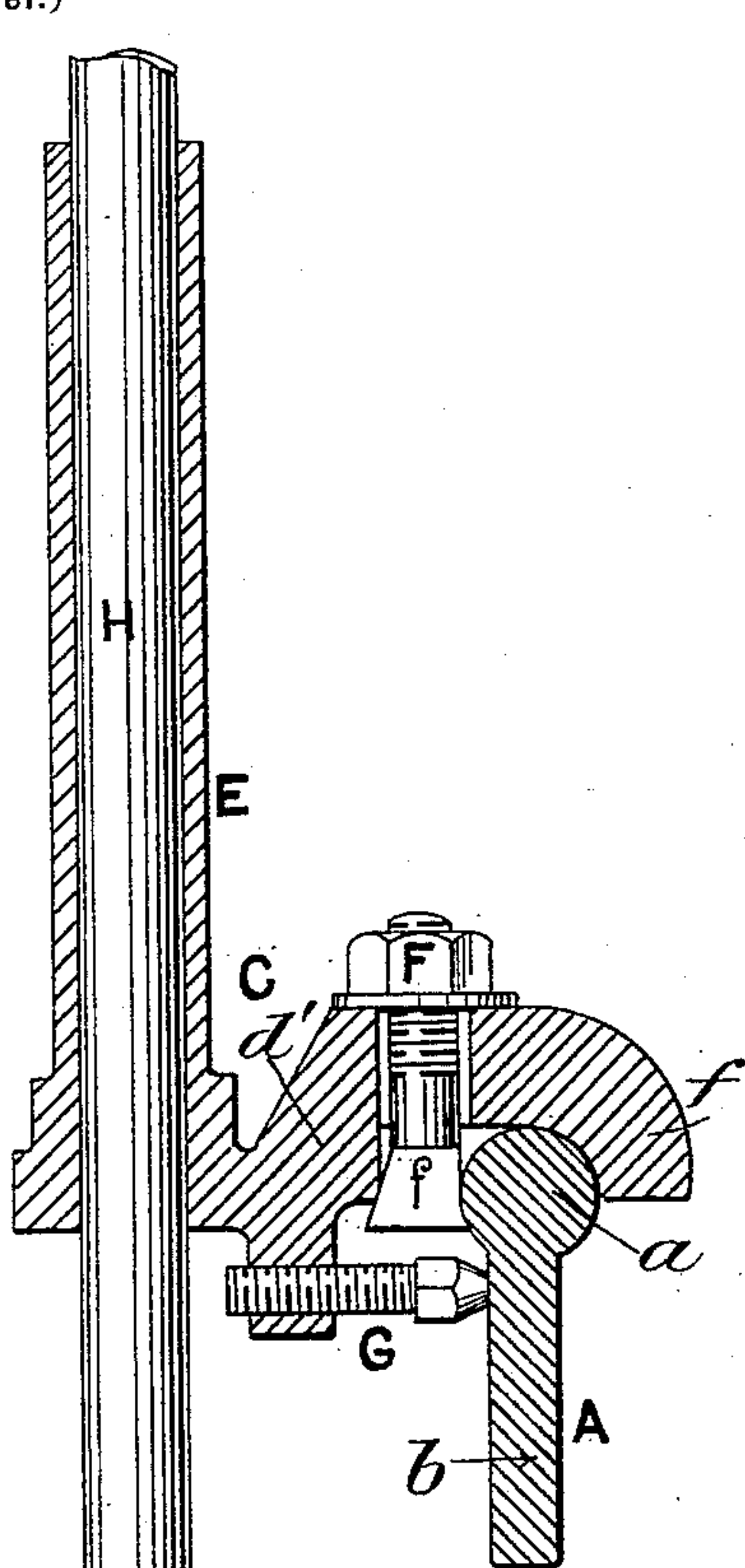


FIG. 6.

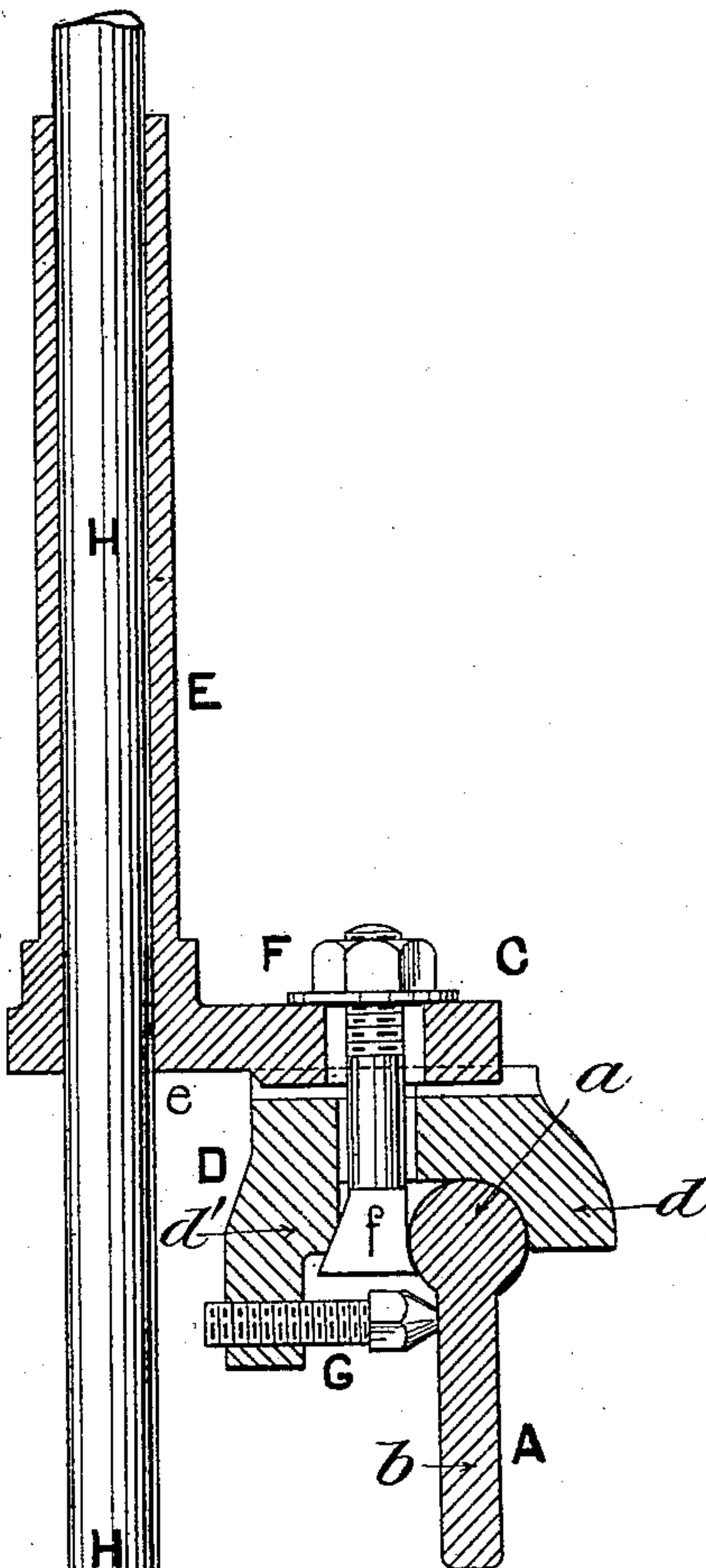


FIG. 5.

WITNESSES.

*E. Howard.*  
*R. D. Wendale.*

INVENTOR

*James Pilling*  
*By J. O. S. O'Brien*  
*att'y.*



# UNITED STATES PATENT OFFICE.

JAMES PILLING, OF PARBOLD, ENGLAND.

## PREPARING-MACHINE FOR FIBROUS MATERIALS.

SPECIFICATION forming part of Letters Patent No. 632,424, dated September 5, 1899.

Application filed April 11, 1898. Serial No. 677,227. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES PILLING, of Parbold, in the county of Lancaster, England, have invented certain new and useful Improvements in Preparing-Machines for Fibrous Materials, of which the following is a specification.

The invention relates to roving, slubbing, and intermediate frames employed in the preparation of fibrous materials for spinning, and is designed to provide for the fixing and adjustment of the spindle-supporting brackets comprising the collars and foot-steps and also of the board brackets to enable them to be set at different positions or gages along the length of the rail by which they are supported.

The invention consists, essentially, in constructing these brackets detachable to fit onto the top of a beaded rail with a clamping-bolt and adjusting-screw, by means of which they can be clamped or clenched in any desired position upon the rail.

It will be fully described with reference to the accompanying drawings.

Figure 1 is a side elevation, partly in section, on line *x x*, Fig. 4; Fig. 2, a front elevation of top spindle-supporting bracket and collar; Fig. 3, a front elevation of bottom spindle-supporting bracket and foot-step; Fig. 4, a plan of top rail and brackets; Fig. 5, a transverse sectional elevation (enlarged scale) on line *y y*, Fig. 4; Fig. 6, a transverse sectional elevation showing a modification.

In the drawings forming part of this specification the separate parts of my improvement are designated by letters of reference, and in the practice of my invention the lifting-rail A and the bottom rail B, which have hitherto usually been made of T-section, are constructed with a flat web *b* and a beaded top *a* of curved or cylindrical form.

The top spindle-bracket C is provided with a movable shoe-bracket D, which rests upon and is clamped to the lifting-rail A, and with a sleeve E, with a foot *e* forming part thereof, bolted to the bracket D. The bracket D is formed with a curved projecting finger *d*, which embraces the beaded top *a* of the lifting-rail A and is capable of a swiveling movement around the longitudinal axis of the bead *a* and of adjustment to any position along the length of the rail. At the opposite side the

bracket D is formed with an inclined face *d'*, and it is clamped to the rail by a bolt F with an inclined head *f*, one face of which is curved to engage the bead *a* of the rail and the opposite face inclined to engage the inclined face *d'* of the bracket. The end of the regulating-screw G rests against the web *b* of the rail, and by means of this screw the position of the bracket on the rail is maintained or locked. The upper side of the bracket D is formed with a recess or socket into which the bottom of the sleeve-foot *e* fits, it being rounded to permit of a slight swiveling movement between the two parts. The sleeve-foot *e* is provided with a slot to permit of a longitudinal movement and is secured in position by the bolt F. The spindle H passes through the sleeve E, which is thus adjustable to permit of the spindle being set perpendicular and to rotate freely therein. The bottom spindle-bracket K, which carries the foot-step L, is fitted to the bottom rail B in a similar manner. It may be provided with a shoe-bracket similar in shape and form to the bracket D, and the foot-step may be formed with a foot *l*, being adjustably bolted thereto; but at present I prefer to make the spindle-bracket and foot-step in one piece or casting. The bracket K is formed at one side with the projecting finger *k* to embrace the bead *a* of the bottom rail B, with an inclined face *k'* at the opposite side and regulating-screw G'. It is clamped to the rail by the bolt F of similar shape to the bolt F above described. The bottom bracket K is capable of a swiveling movement around the bead *a* of the bottom rail.

I prefer the arrangement shown in Figs. 1 to 5 of the drawings, with the top bracket capable of adjustment to and from the rail and the foot-step and bottom bracket in one piece; but, if preferred, the collar and top bracket may form one piece, or the foot-step may be made adjustable to and from the rail by means of a shoe-bracket, as shown in Fig. 6.

The board bracket M is constructed with a forked socket *m*, which fits over the beaded top *a* of the rail and is clamped thereto in the desired position by the screw *m'*. These brackets are also capable of a slight swiveling movement around the bead *a* of the rail by filing or chipping the rib *m''* and of being fixed to the rails in various positions or gages.



The bobbin-driving shaft N is carried in bearers *n*, bolted at intervals to the bottom of the sleeves and capable of a swiveling movement thereon, and the spindle-driving shaft P is supported in bearers *p*, cast to the bottom brackets K.

My improvements are well adapted to accomplish the results for which they are intended and do not add materially to the costs of machines of this class, and it will be apparent that changes in and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages.

What I claim as my invention, and desire to protect by Letters Patent, is—

1. In a preparing-frame for fibrous materials the combination with a rail formed with beaded top of a spindle-supporting bracket to engage the spindle, said bracket having a projecting finger to engage the top of the rail, and an inclined face on the opposite side, a bolt with an inclined and curved head to engage the top of the rail on one side and the inclined face of the bracket on the other by which the supporting-bracket is secured to the rail in any position along its length and an adjusting-screw to maintain the position of the bracket substantially as described.

2. In a preparing-frame for fibrous materials the combination with a rail with beaded top of curved form of a spindle-supporting bracket comprising a movable shoe-bracket D which rests upon the top of the rail, said bracket having a projecting finger *d* which engages the rail, and an inclined face *d'* on the opposite side, a bolt F with inclined head *f* the collar E and collar-foot *e* clamped to the movable shoe-bracket D by the bolt F substantially as described.

3. In a preparing-frame for fibrous materials the combination with a rail with beaded top of curved form of a spindle-supporting bracket comprising a movable shoe-bracket D which rests upon the top of the rail, said bracket having a projecting finger *d* which engages the rail, and an inclined face *d'* on the opposite side, a bolt F with inclined head *f*, the collar E and collar-foot *e* clamped to the movable shoe-bracket D by the bolt F the screw G for maintaining the position of the bracket, the bobbin-shaft N and bearers *n* bolted at intervals to the bottom of the collar E substantially as described.

4. In a frame for preparing fibrous material for spinning, a rail comprising a web portion and a beaded top, and a spindle-supporting bracket provided with a curved finger which is adapted to engage one side of said beaded top, and with a bolt having an inclined head which is adapted to engage the other side of said beaded top, said bracket being also provided with a regulating screw or screws adapted to bear on the web portion of said rail, substantially as shown and described.

5. In a frame for the purpose described, a

rail provided with a beaded top, and a spindle-supporting bracket provided with a finger which is adapted to engage one side of said beaded top, and with a bolt having a head which is adapted to engage the other side of said beaded top, said bracket being also provided with a regulating device or devices adapted to bear on the central portion of said rail, substantially as shown and described.

6. In a frame for preparing fibrous material for spinning, a rail comprising a central web portion and a beaded top, and a spindle-supporting bracket provided with devices which bear on the opposite sides of said beaded top, and an adjusting device or devices adapted to bear on the central web portion of said rail, substantially as shown and described.

7. In a frame for preparing fibrous material for spinning, a rail comprising a central web portion and a beaded top, and a spindle-supporting bracket mounted on said rail and adapted to turn therein, said bracket being adapted at one side to bear on one side of said rail and provided at the opposite side with an adjustable device which bears on the opposite side of said rail, substantially as shown and described.

8. In a frame for preparing fibrous material for spinning, a rail comprising a web portion and a longitudinally-beaded top, and a spindle-supporting bracket mounted on said beaded top adapted to turn thereon, said bracket being adapted at one side to bear on one side of said rail, and being provided at the opposite side with an adjustable device which bears on the opposite side of said rail, substantially as shown and described.

9. In a frame for preparing fibrous material for spinning, a rail comprising a web portion and a beaded top, and a spindle-supporting bracket mounted on said beaded top and adapted to turn thereon, substantially as shown and described.

10. In a frame for preparing fibrous material for spinning, the combination of a rail, comprising a web portion, and a longitudinal beaded top, and a supplemental supporting-bracket mounted on said beaded top and adapted to turn thereon, said bracket being provided on its under side with a cavity or recess adapted to receive the beaded top of said rail, and the upper wall of which is partially segmental in form, said bracket being also adapted on one side to bear on one side of said rail, and being provided at the opposite side with an adjustable device which bears on the opposite side of said rail, substantially as shown and described.

In witness whereof I have hereunto signed my name, this 26th day of March, 1898, in the presence of two subscribing witnesses.

JAMES PILLING.

Witnesses:

I. OWDEN O'BRIEN,  
R. OVENDALE.