

No. 713,283.

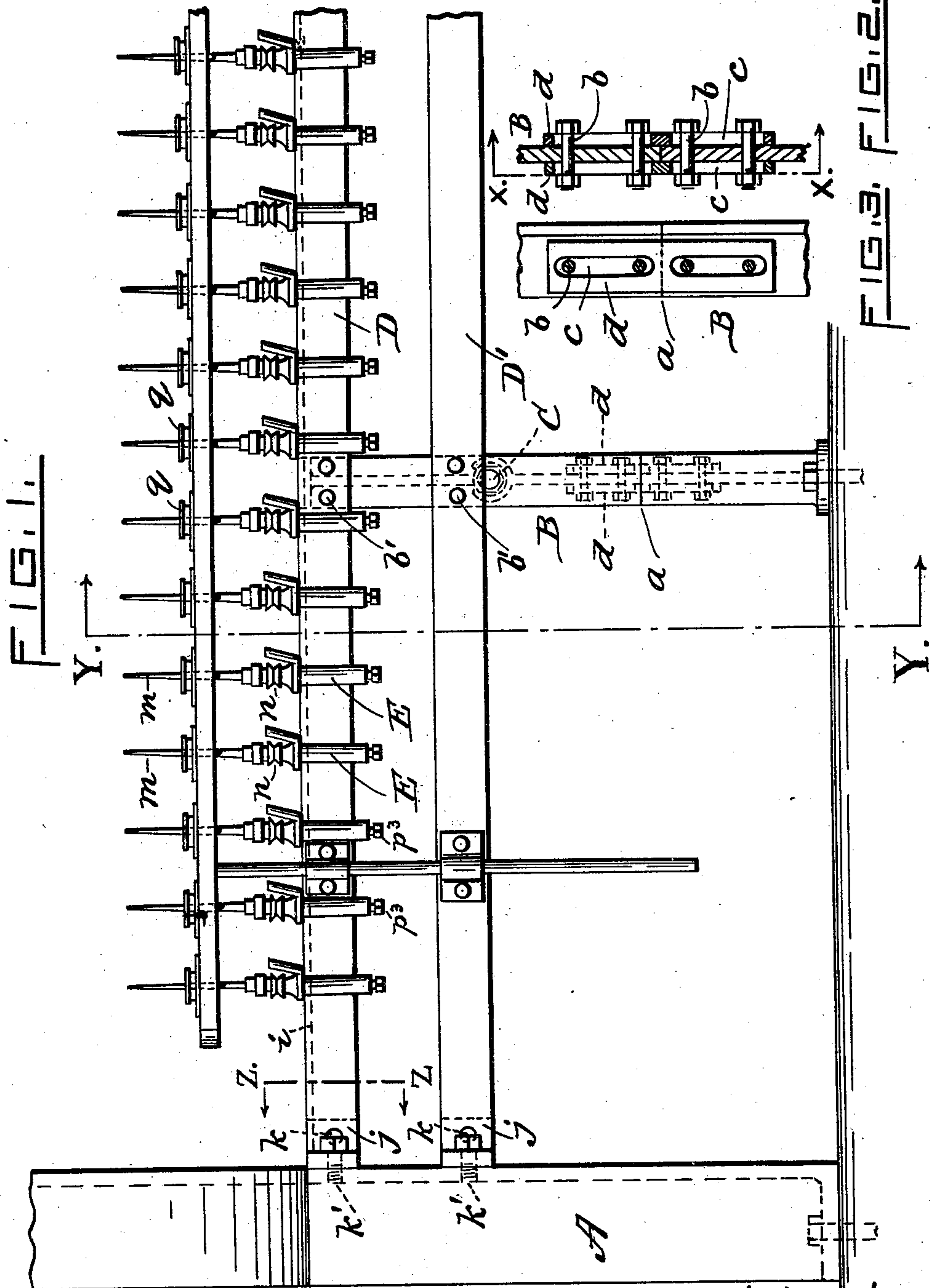
Patented Nov. 11, 1902.

J. BROWN.  
SPINNING MACHINE.

(Application filed Dec. 12, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.

*J. Nelson Lincoln*

*Daniel E. Locke*

INVENTOR.

*James Brown.*

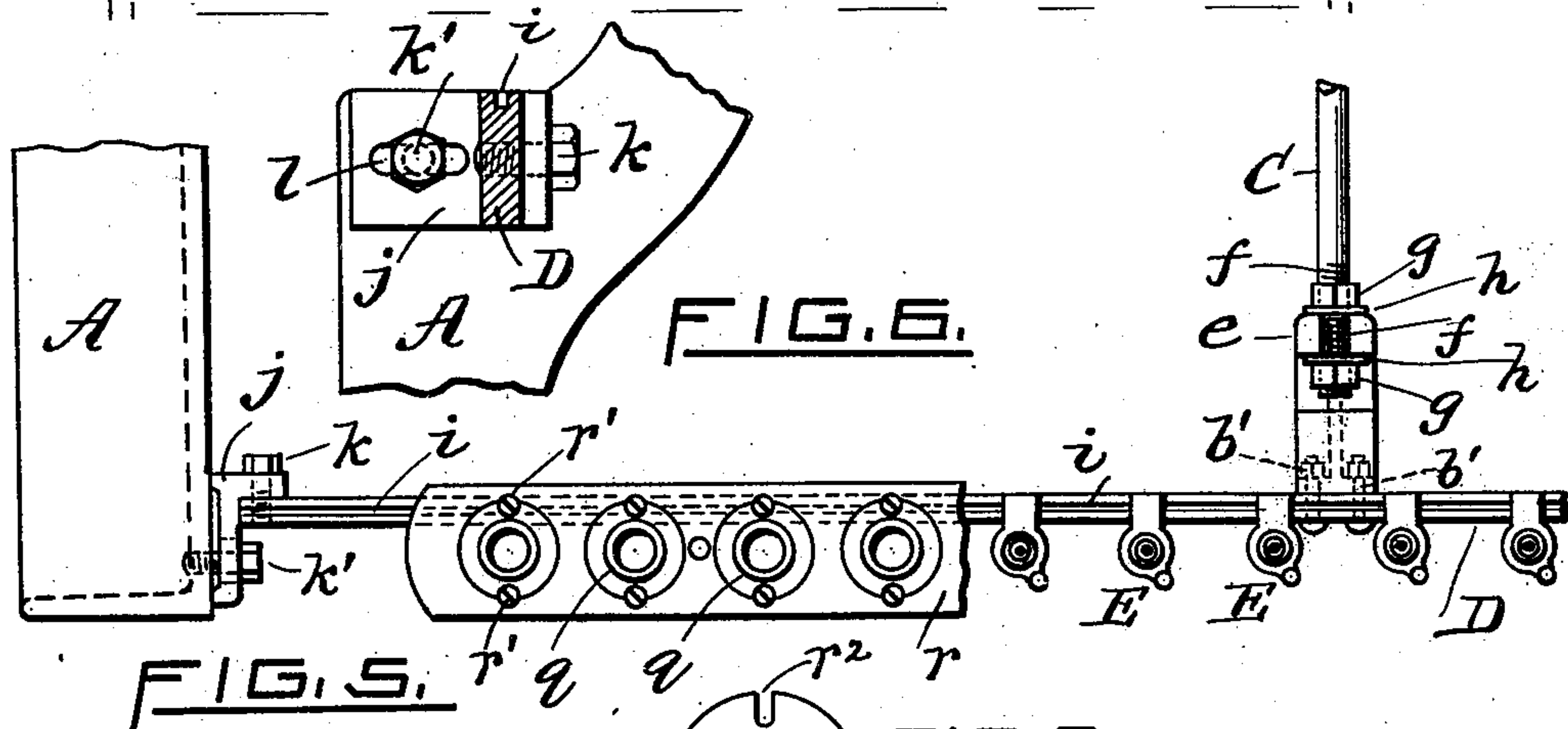
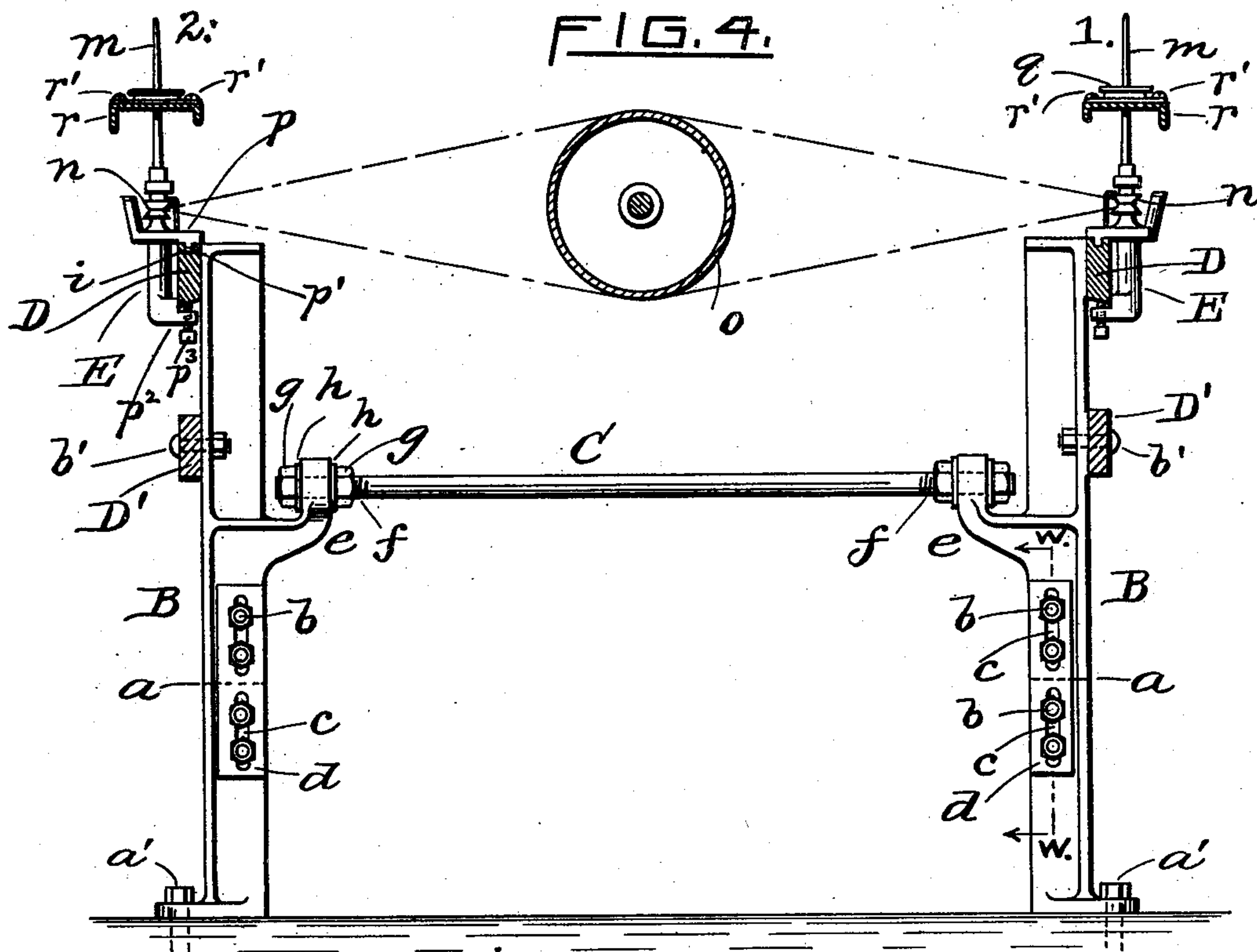
*By Charles T. Hannigan,*  
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*James Brown.*

*By Charles T. Hannigan,*  
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# UNITED STATES PATENT OFFICE.

JAMES BROWN, OF PAWTUCKET, RHODE ISLAND.

## SPINNING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 713,283, dated November 11, 1902.

Application filed December 12, 1901. Serial No. 85,670. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BROWN, a citizen of the United States, residing at the city of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Spinning-Machines, of which the following is a specification.

My invention relates to certain parts in the construction of a frame for a spinning-machine; and the object of my invention is to provide means whereby the centers of the spindles are readily adjusted to an exact plumb position on the frame and transverse of the machine.

A further object of my invention is to provide means whereby the spindle-bolsters have adjustment longitudinally of the frame of the machine.

My invention consists in the combination, in a spinning-machine, of one or more transverse frames intermediate the end frames of the machine, each of said transverse frames divided across, so as to leave a lower stationary portion, means for securing each of the said transverse frames at their points of division, two bars extending longitudinally upon each side of the machine, situated in a vertical plane one above the other and secured upon the upper portions of each of said transverse frames and end frames, respectively, the upper two of said bars being provided with a groove extending longitudinally from either end thereof, a series of bolsters mounted upon the upper bars of said frames and provided with spindles, each of said bolsters having a rear extension at its top and bottom thereof, the top extension of said bolster terminating with a tongue to engage in the groove of said bar and the bottom extension provided with a screw-threaded opening to receive a set-screw to impinge against the bottom edge of said bar and hold said bolster in position upon the same, and means intermediate each opposite upper portion of the said transverse frames to permit of adjusting the centers of the spindles to a vertical plane on the machine, in the manner as hereinafter fully described, and specifically pointed out in the claims.

In the accompanying sheets of drawings, Figure 1 represents a partial side elevation

of a spinning-machine embodying the several parts of my improvement. Fig. 2 is a central vertical sectional view of the clamping arrangement for each of the divided sections of transverse frames of the machine, taken in line W W of Fig. 4. Fig. 3 is a front sectional elevation view of the clamping device, taken in line X X of Fig. 2. Fig. 4 is a transverse sectional view of the spinning-machine, taken in line Y Y of Fig. 1. Fig. 5 is a partial top plan view of one side of the spinning-machine. Fig. 6 is a sectional view illustrating the means for securing the bars to the end frame of the machine, taken in line Z Z of Fig. 1; and Fig. 7 is a plan view of one of the traveler-rings.

Similar letters of reference indicate similar parts in the different views of the drawings.

As well known in this class of machines, the spindles in revolving at a high rate of speed frequently get out of plumb and necessitate the placing of felt or cardboard beneath the bolsters, thus requiring considerable time on the part of the operator to make the spindles run true. The principle of my improvement is to obviate this difficulty, whereby a ready means is quickly afforded to bring the spindles to an exact vertical or plumb position upon the frame of the machine.

Referring to the drawings, A designates one of the end frames of the machine, and B B the transverse frames, situated opposite to each other and comprising one or more sets intermediate the end frames of the machine, and said transverse frames are divided across, as at points *a a* in Fig. 4, to provide lateral movement of the upper portions upon their lower portions that are held in a fixed position by bolts *a' a'*, and each of the divided sections of transverse frames are connected together by bolts *b b*, that project through elongated slots *c c*, formed in plates *d d*, located upon each side frame B B in the manner as shown in Figs. 2, 3, and 4. Integral with the transverse frames B B, at the upper portion thereof, are inwardly-extending arms *e e*, each of which has a U-shaped end portion to receive the screw-threaded end portions *f f* of a rod *c*, and this rod is secured within the U-shaped end portion of the said arms by nuts *g g*, that impinge against washers *h h*, interposed between said nuts and



said portion of the arms, respectively, as shown in Fig. 4.

D D' are two flat bars extending horizontally upon each side of the machine and rigidly secured upon each upper portion of the said transverse frames by bolts  $b' b'$ . These bars extend from the end frames of the machine located in a plane one above the other, and each bar is made alike, with the exception that the upper bars D D are each provided with a groove  $i$  in its top edge and extending the full length of the said bar. The ends of the bars D and D' are secured upon angle-pieces  $j j$  by bolts  $k k$ , and these pieces have one of each of their extensions projecting from the said bars and provided with a slotted opening  $l$  to receive a bolt  $k'$ , that secures the ends of the bars by their angle-pieces to the end frames of the machine in the manner as shown in Figs. 5 and 6.

E E are the bolsters, having the usual spindles  $m m$ , provided with whirls  $n n$ , that are driven by the cylinder  $o$  in the ordinary way, and each of these bolsters has an upper rear extension  $p$ , with a downwardly-projecting tongue at its extremity, as  $p'$ , to engage in the groove  $i$  of the bars D D, and the lower ends of the bolsters have a rear extension  $p^2$ , that is provided with a screw-threaded opening to receive a set-screw  $p^3$  to impinge against the bottom edge of said bars and hold said bolsters in position upon the same.

Having described the different parts of my improvement, I will proceed to explain its operation. Referring to Fig. 4, when one or more spindles happen to get out of plumb during the running of the machine—say on side No. 1—the bolts  $b b$  and bolts  $k' k'$  of the frames A and B, respectively, are unscrewed a trifle, after which the outer nut  $g$  of the cross-rod C is then unscrewed to allow of screwing forward the next inner nut  $g$  and forward the upper portion of the frame B upon the top edge of its lower fixed portion and carries the centers of the spindles to their normal or plumb position on the machine, after which the aforesaid nuts and bolts are screwed up and firmly hold the respective parts in place. After the spindles are so adjusted the traveler-rings  $q q$  are moved outward upon the rail  $r$ , said rings having lateral movement on the rail by set-screws  $r' r'$ , that enter the rail from slotted openings  $r^2 r^2$ , formed diametrically opposite each other in the circular base of the rings, as seen in Fig. 7, and when they are concentric with the centers of the spindles the said screws  $r' r'$  are turned to hold the rings firmly in position.

Having described my improvement, what I claim as new, and desire to secure by Letters Patent, is—

1. In a spinning-machine, the combination, of one or more sets of transverse frames intermediate the end frames of the machine and each set of transverse frames divided across

so as to provide a movable upper portion upon a fixed lower portion, and each of said upper portions of frames having an inwardly-extending arm integral therewith and provided with an opening, a rod mounted in the opening of the arms of said frames and provided with an exterior screw-threaded surface at each end thereof, nuts engaging the threaded portions of said rod and adapted to impinge against each side of said arms to hold the upper portions of frames in position, means for securing the said transverse frames at their divided portions, two bars rigidly mounted upon the upper portions of said transverse frames and extending longitudinally upon each side of the machine and in a vertical direction with each other, the upper bar of each set being provided with a groove extending the full length thereof, means to secure each opposite end of said bars rigid to the end frames of the machine, a series of spindle-bolsters having a rear extension at their top and bottom ends, the top extension of said bolster terminating with a tongue to engage in the groove of said upper bar and the bottom extension provided with a screw-threaded opening, with a set-screw to enter the threaded opening of said bolster to impinge against said upper bar, and hold the bolster in position upon the same, as set forth.

2. In a spinning-machine, the combination, of one or more sets of transverse frames intermediate the end frames of the machine, each of said transverse frames divided across so as to leave a supporting lower portion that is held in a fixed position, means for securing the said transverse frames at their points of division, a bar rigidly secured upon the upper portion of the said transverse frames and extending horizontally upon each side of the machine, said bar provided with a groove in its top edge and extending the full length thereof, a series of spindle-bolsters mounted upon said bar, each bolster having a rear extension at its top and bottom thereof, the top extension of which terminates with a tongue to enter the groove of said bar and its bottom extension provided with a screw-threaded opening to receive a set-screw to impinge against the bottom edge of said bar and hold said bolster in vertical position longitudinally of the machine, a spindle mounted in each of said bolsters, with means mounted between the upper portions of said transverse frames, to move the same inwardly or outwardly upon their lower fixed portions and adapted to bring the centers of the said spindles to a vertical position, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES BROWN.

Witnesses:

J. NELSON LINCOLN,  
DANIEL E. LOCKE.