

No. 825,714.

PATENTED JULY 10, 1906.

M. FORSTER.  
BINDER FRAME.

APPLICATION FILED FEB. 17, 1906.

Fig. 1.

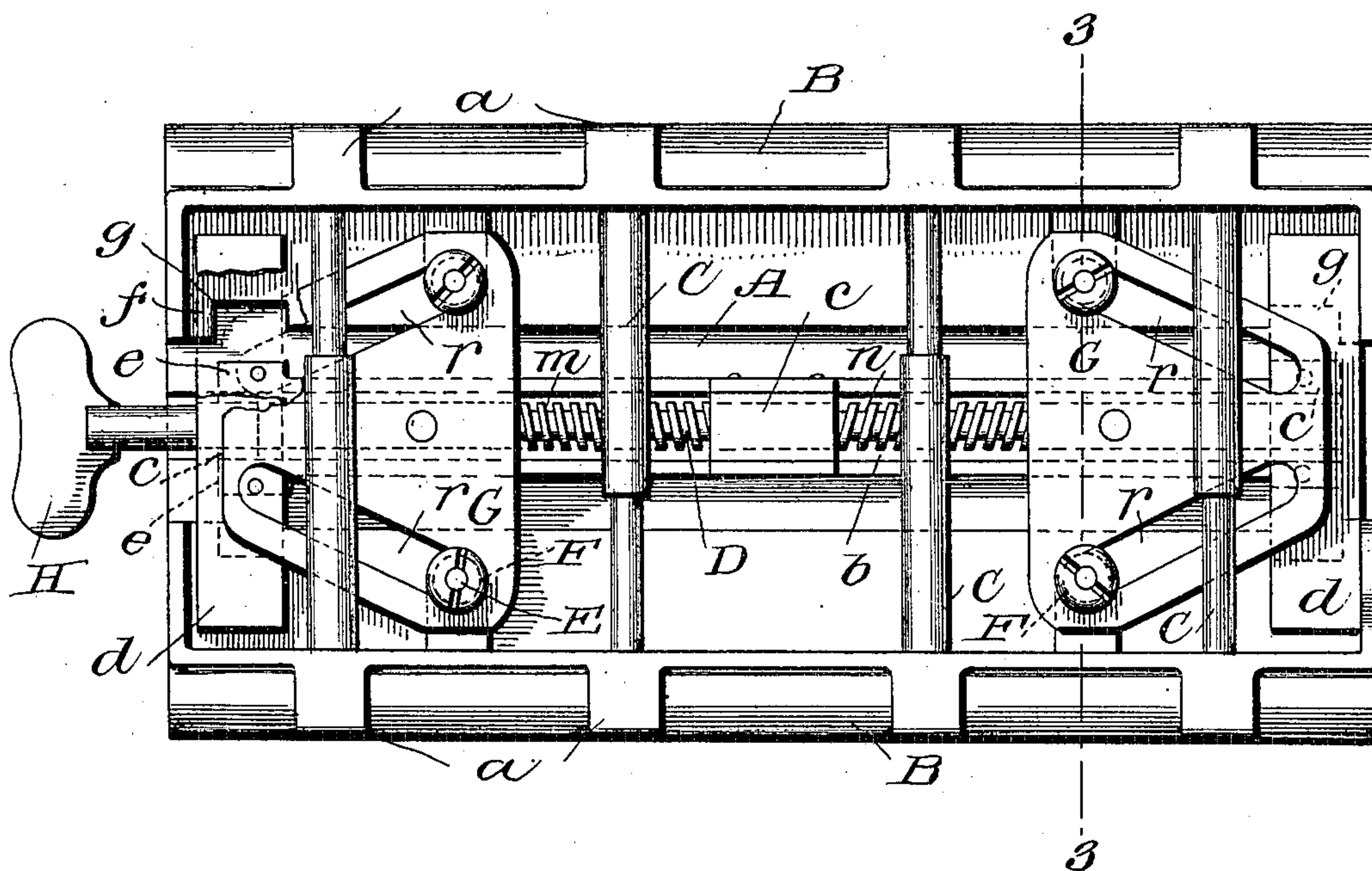


Fig. 2.

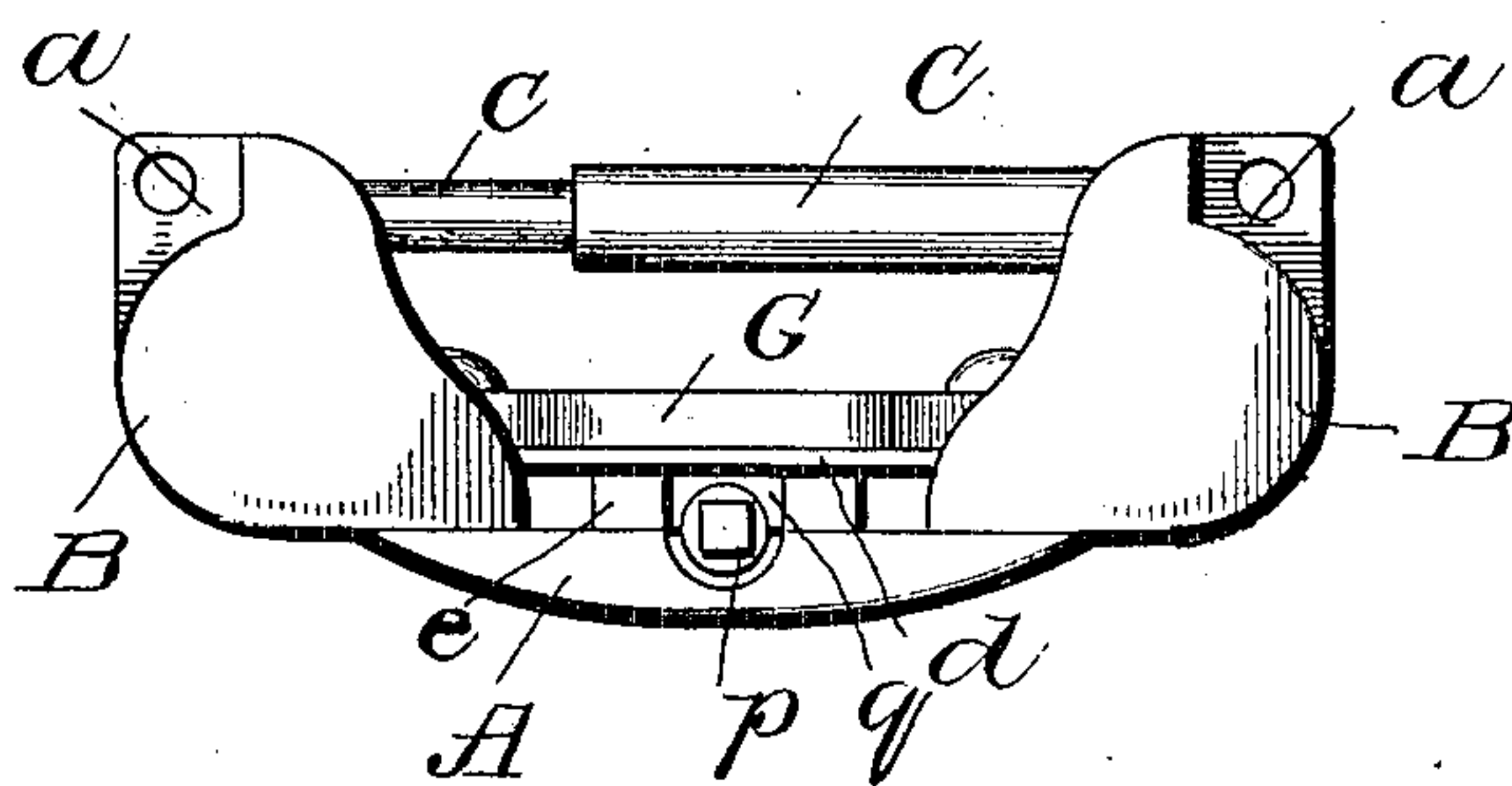
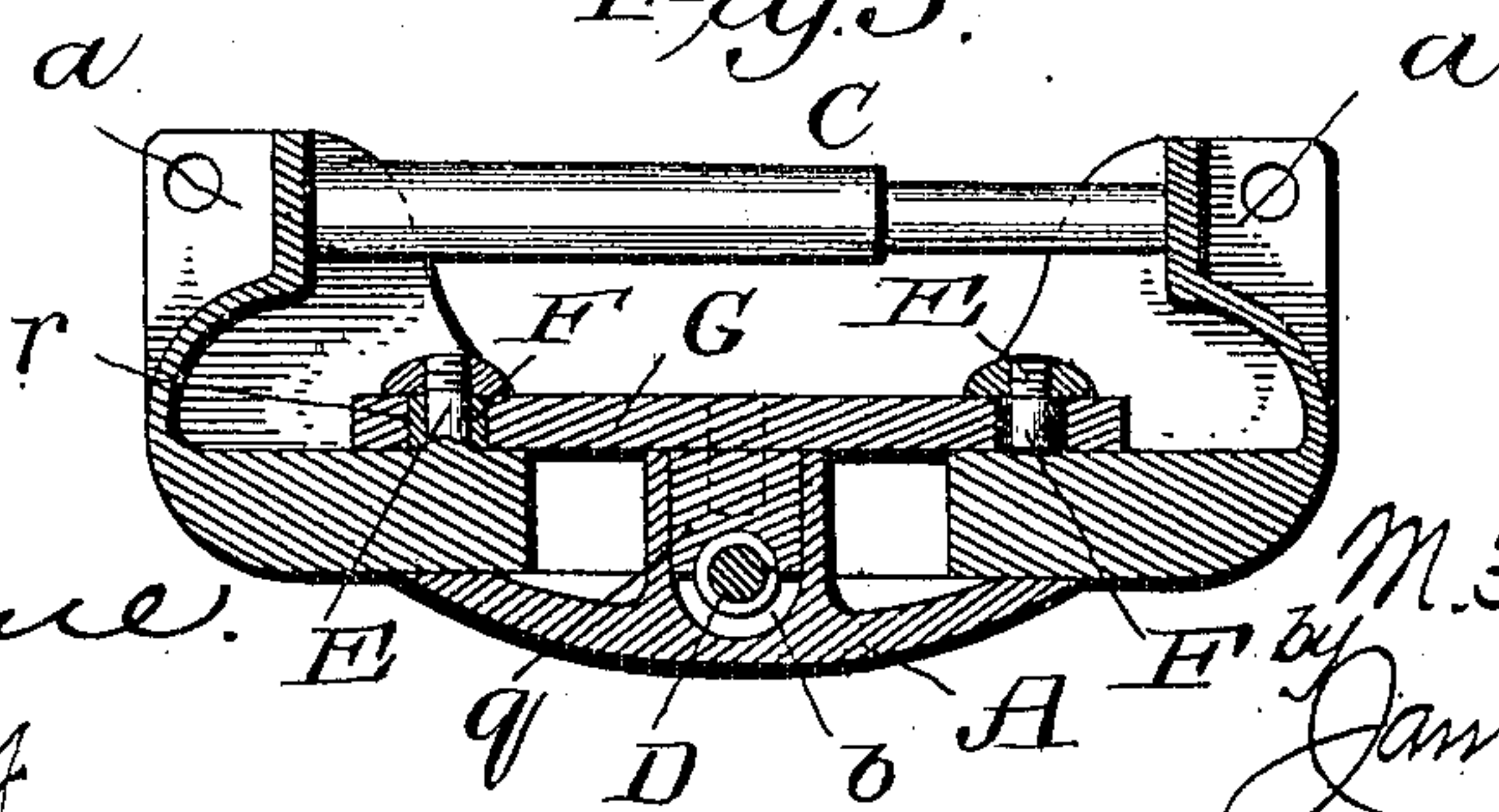


Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

MATTHEW FORSTER, OF LA FAYETTE, INDIANA.

## BINDER-FRAME.

No. 825,714.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed February 17, 1906. Serial No. 301,694.

*To all whom it may concern:*

Be it known that I, MATTHEW FORSTER, a citizen of the United States, residing at La Fayette, in the county of Tippecanoe and State of Indiana, have invented new and useful Improvements in Binder-Frames, of which the following is a specification.

My invention pertains to binder-frames for use in loose-leaf ledgers and other books; and it contemplates the provision in a binder-frame, of simple, compact, and durable means for transmitting motion from a key to the cover-plates of the frame with a view of adjustably positioning the said cover-plates at various distances from each other.

Other advantageous features of the invention will be fully appreciated from the following description and claim when the same are read in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of the binder-frame constituting the present and preferred embodiment of my invention as the same appears when the cover-plates are disposed at the greatest distance apart. Fig. 2 is an end elevation of the binder-frame with the actuating-key removed. Fig. 3 is a transverse section taken in the plane indicated by the line 3 3 of Fig. 1.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is the back of my novel binder-frame, and B B are the cover-plates, which are movable toward and from each other on the back and are provided at their outer sides with the usual apertured lugs *a* to permit of covers (not shown) being readily connected in a hinged manner to the cover-plates. The back A is preferably convex at its under side and is provided on its upper side with a longitudinal channel portion *b*, in the middle of which is fixed a bearing *c* for a purpose presently set forth. Said back A is also provided at the ends of the channel portion *b* with cross bars or plates *d*, which are fixed on spaced lugs *e*, as best shown in Fig. 2.

The cover-plates B are of the ordinary well-known form in cross-section, though they may be of any other form compatible with my invention without departure from the scope thereof, and are provided in the inner edges of their lower portions *f* with notches *g*, which are designed when the said

cover-plates are moved inwardly to the full extent to receive the lugs *e*.

C C are transverse leaf-holding pins, which are made in sections fitted to slide upon each other and have the sections secured to the cover-plates B.

D is a longitudinal central shaft bearing in and held against endwise movement by the block or bearing *c* and having oppositely-threaded portions *m* and *n* at opposite sides of said block or bearing and also having an angular portion *p* at one end, Fig. 2.

E E are headed pins connected to and rising from the lower portions of the cover-plates B.

F F are antifriction-rollers mounted on the said pins E, and G G are plates arranged and movable longitudinally on the channel portion *b* of the back A and having nuts *q* disposed in said channel portion *b* and receiving the oppositely-threaded portions *m* and *n* of the shaft D. By virtue of this construction it will be apparent that the channel portion *b* supports the plates G and at the same time guides the nuts *q*, and in that way holds the plates against movement in any direction other than in the direction of the length of the frame. Each of the plates G is also provided with slots *r*, which converge outwardly or toward the adjacent end of the frame and receive the adjacent antifriction-rollers F after the manner best shown in Fig. 3. From this relative arrangement of parts it follows that when the shaft D is rotated the plates G will act directly on the antifriction-rollers F and in that way move the cover-plates outwardly or inwardly, according to the direction in which the shaft D is rotated. It also follows that the cover-plates B may be moved outwardly or inwardly at one and the same time and to a uniform extent with but a minimum amount of effort on the part of the operator.

For the purpose of enabling the operator to conveniently rotate the shaft D, I provide the socket-key H. (Illustrated in Fig. 1.) The said socket-key is removably arranged on the angular end *p* of the shaft D, and consequently may be readily removed subsequent to an adjustment of the cover-plates B.

It will be gathered from the foregoing that my improvements are simple, inexpensive, and compact and yet are well adapted to withstand the usage to which binder-frames are ordinarily subjected; also, that by rea-



son of the plates G directly engaging projections on the cover-plates B there is no liability of casual movement of the cover-plates relative to each other subsequent to the placing of the said plates at the desired distance apart.

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

10 In a binder-frame, the combination with a back having a longitudinal channel portion formed on its upper side and extending from a point adjacent to one of its ends to a point adjacent to its other end, a bearing fixed in  
15 the middle of said channel portion, lugs disposed at the opposite sides of the ends of the channel portion, and cross-bars fixed on said lugs and extending outward from the same; of cover-plates having lower portions inter-  
20 posed between the said cross-bars and the

back and also having pins rising from said lower portions, a longitudinal shaft arranged in the channel portion of the back and journaled and held against endwise movement in the bearing and having oppositely-threaded 25 portions, and plates movable longitudinally on the channel portion of the back and having depending nuts guided-in said channel portion and receiving the oppositely-threaded portions of the shaft and also having slots 30 converged toward the ends of the frame and receiving the pins on the cover-plates.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MATTHEW FORSTER.

Witnesses:

WM. J. BENNETT,  
LOUIS ROBELLAZ.