

No. 720,548.

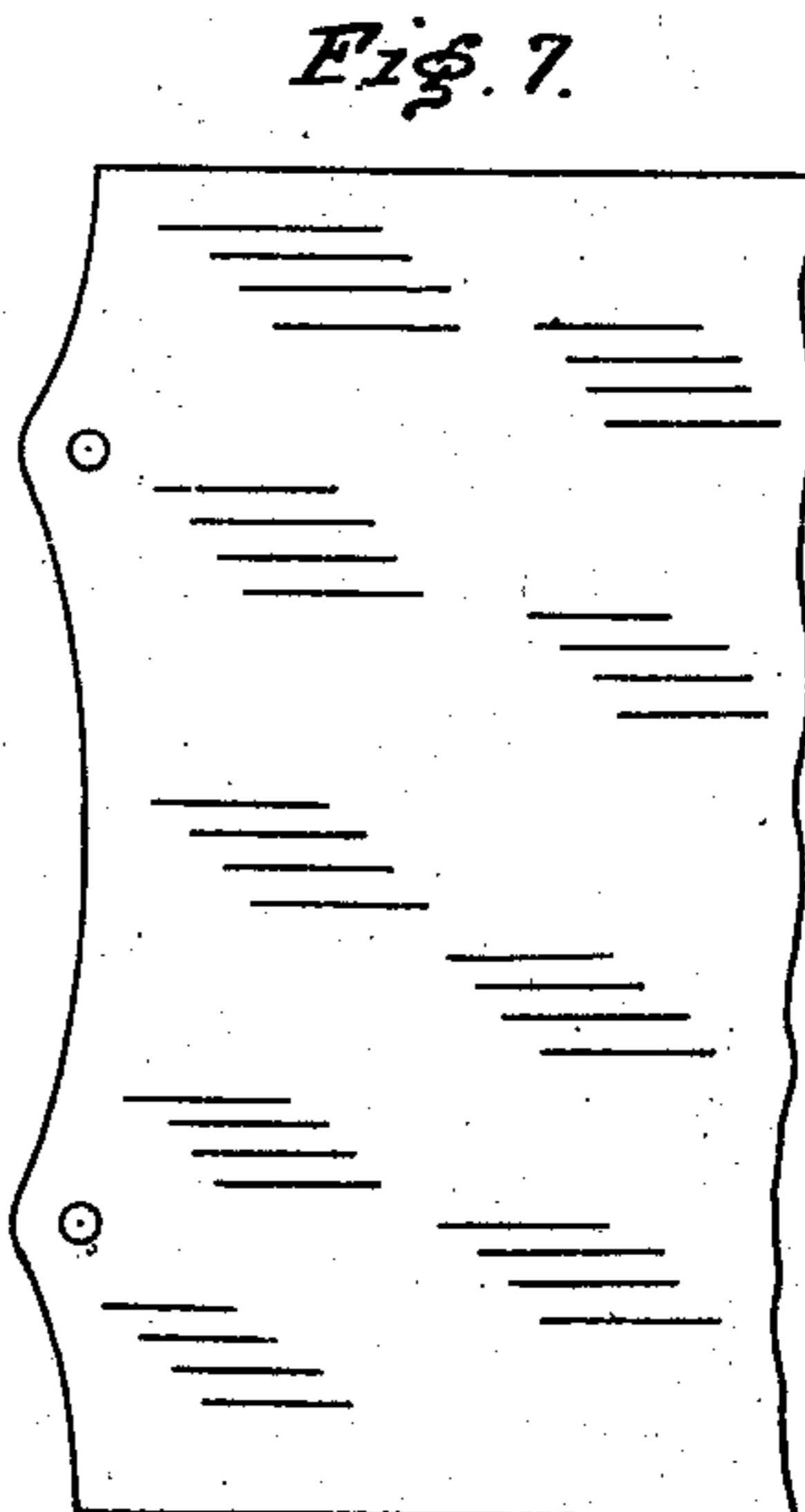
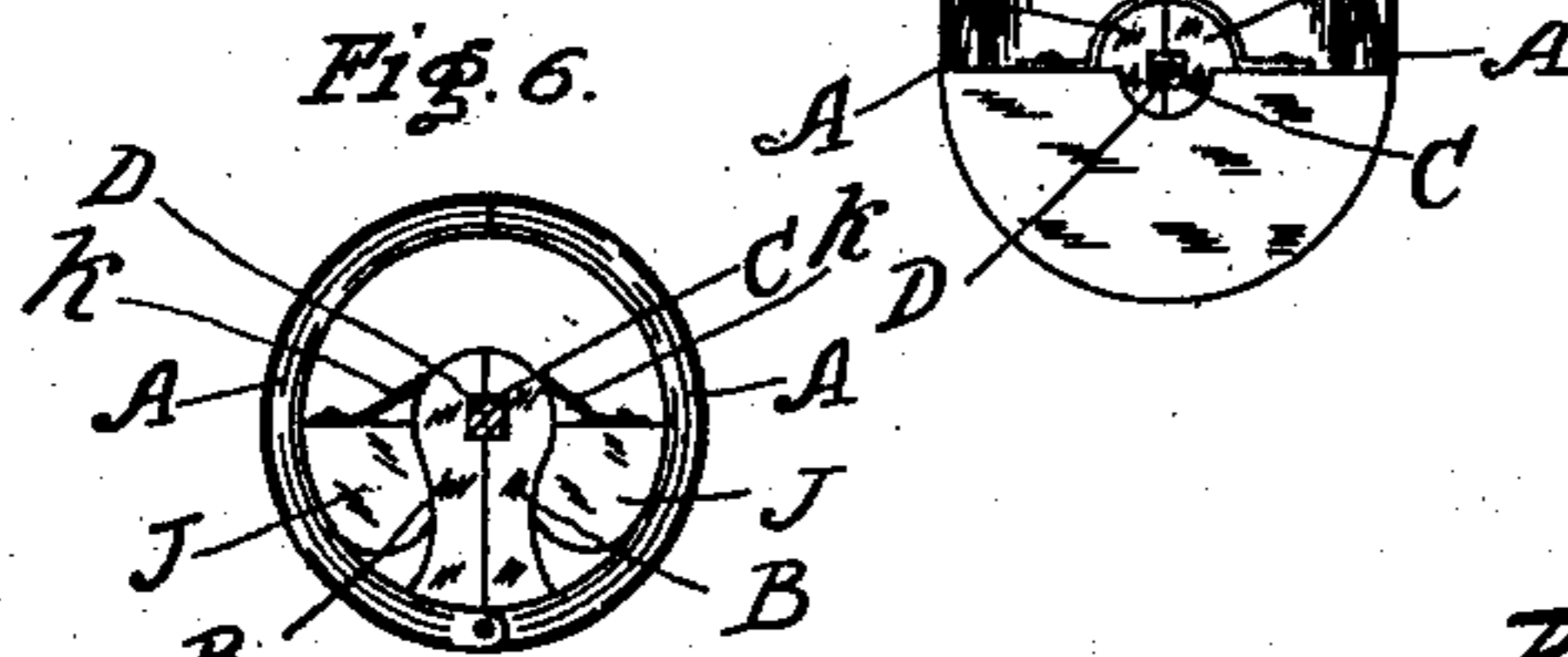
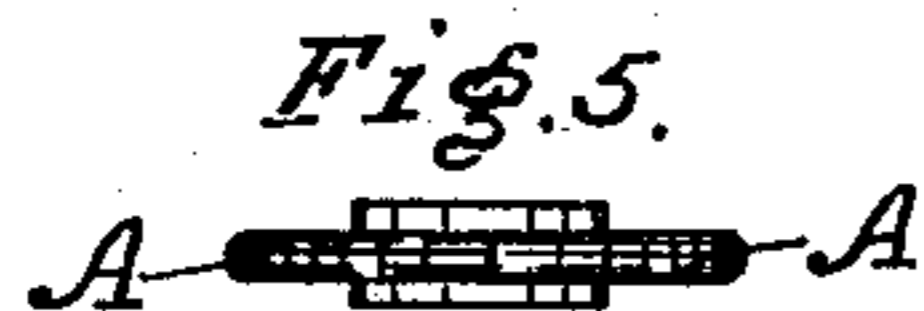
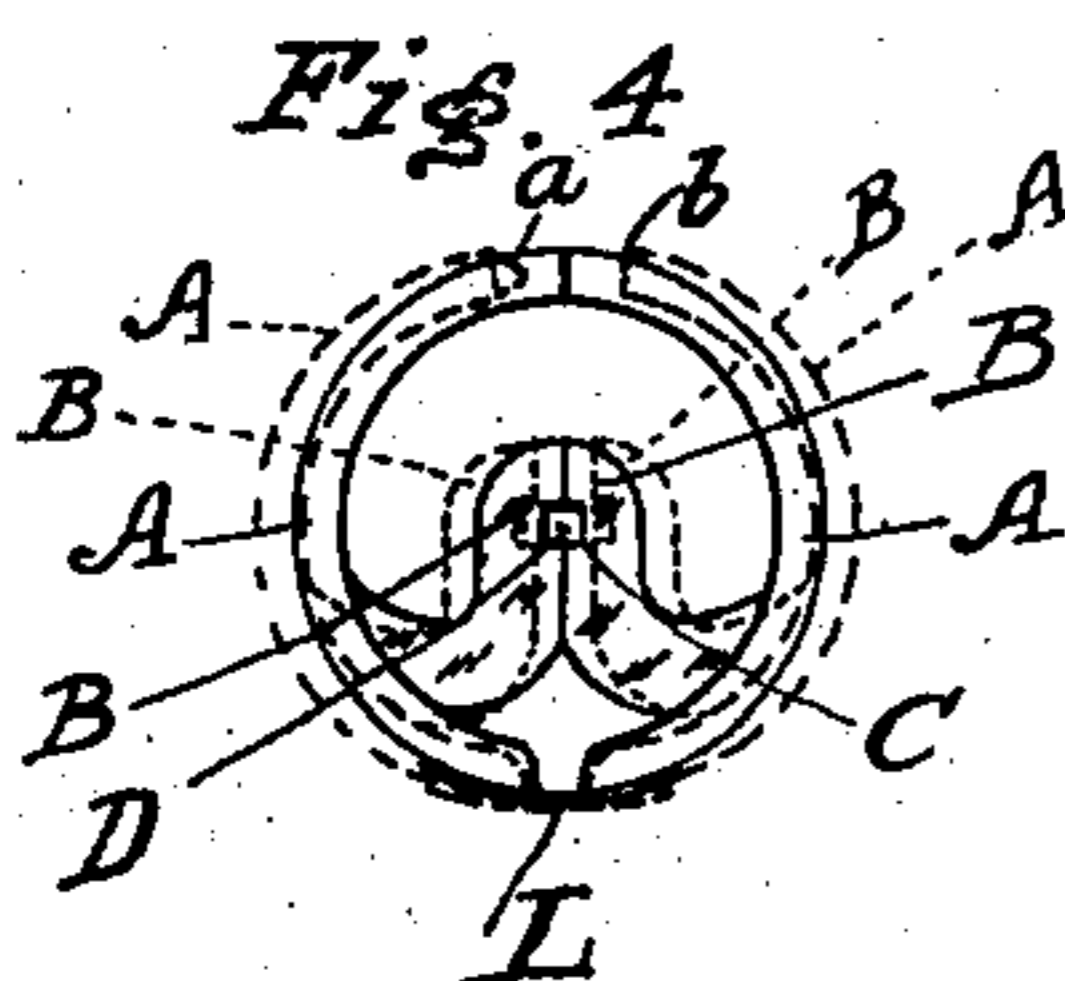
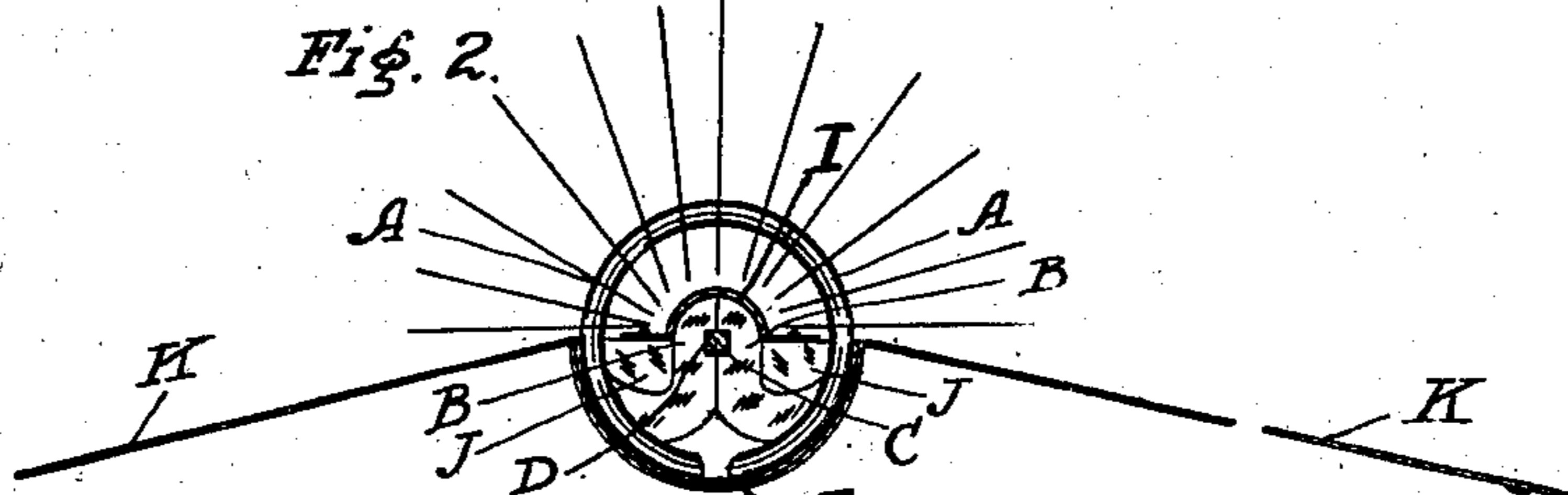
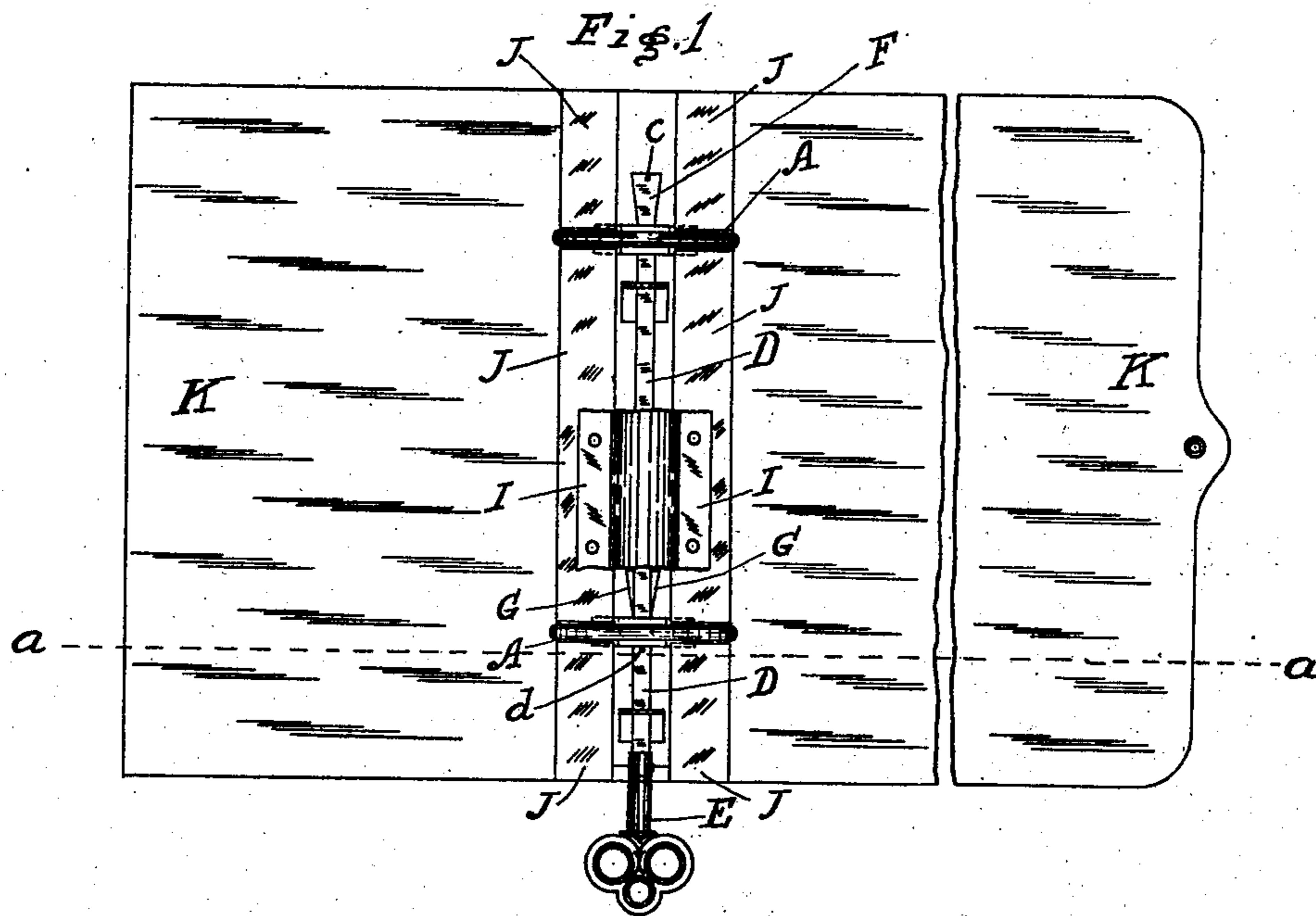
PATENTED FEB. 10, 1903.

R. G. WHITLOCK.

DEVICE FOR HOLDING LOOSE OR REMOVABLE SHEETS OF PAPER.

APPLICATION FILED APR. 21, 1902.

NO MODEL.



WITNESSES

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RALPH G. WHITLOCK, OF LOS ANGELES, CALIFORNIA.

DEVICE FOR HOLDING LOOSE OR REMOVABLE SHEETS OF PAPER.

SPECIFICATION forming part of Letters Patent No. 720,548, dated February 10, 1903.

Application filed April 21, 1902. Serial No. 104,086. (No model.)

To all whom it may concern:

Be it known that I, RALPH G. WHITLOCK, of the city of Los Angeles, in the county of Los Angeles and State of California, have invented a Device for Holding Loose or Removable Sheets of Paper, of which the following is a full, clear, and exact description or specification, reference being had to the annexed drawings, and to the letters marked thereon.

My present invention is a further development of the invention for which I have filed application for Letters Patent on the 10th day of January, 1902, Serial No. 89,231, and have obtained Letters Patent No. 700,867, dated May 27, 1902.

My present improvements consist in substituting a single shaft which is capable of a rotatory movement for turning around the rings which carry the loose sheets of paper into any position of rotation of the said ring required, which shaft is also capable of being moved longitudinally for opening the rings when required for either moving the sheets of paper from the device or for placing sheets of paper therein in the manner hereinafter described.

Upon the annexed sheets of drawings, Figure 1 is a plan of the device constituting my present invention. Fig. 2 is a transverse section of the same upon the line *a a*, Fig. 1. Fig. 3 is an end elevation of the device shown folded or closed, as a book, and containing loose or detached sheets of paper held bookwise therein. Fig. 4 is an end elevation of one of the opening and closing rings whereon the loose papers are carried within the apparatus, showing also the arms, one of which is attached to each division of the ring for the purpose of enabling the square shaft used in the device to rotate and open and close the rings, also showing this part of the apparatus in dotted lines when opened for receiving papers or for having papers placed thereon. Fig. 5 is a plan corresponding to Fig. 4. Fig. 6 is an end elevation of one of the rings shown with its two parts hinged together instead of being connected by a spring, as shown in Figs. 2 and 4. Fig. 7 is a plan of the inner portion of one of the loose sheets of paper, showing the holes therein by which the sheet of paper is placed upon the rings of the device.

As shown upon the drawings, the rings of

the device (marked A A) are provided with internal arms B B, fixed to or forming part of each half of the rings A A, which internal arms B B are constructed at their upper part with a square hole C, as shown more particularly at Figs. 2, 3, 4, and 6, one-half of each such square hole C being situated in each arm B, as shown. Within this square hole C the square shaft D is carried, and by rotating the square shaft when all the parts of the device are in the position shown at Figs. 1, 2, 3, and 6 the arm B B and the rings A A, forming part of or connected thereto, are moved angularly—that is to say, rotated into whatever position may be necessary for opening the rings A A and removing therefrom or placing thereon loose sheets of paper—while the opening of the rings is effected by then drawing the square shaft D outward by means of the thumb and finger being applied to the key E. The rotary movement of the rings A A is provided for by the wood or other material of the back J being cut out, as shown in the drawings, so as to constitute a completely non-obstructing recess in the wood or other material for each ring A to be rotated in to the extent of the small angular movement, being all of such movement necessary to admit of the removal or entrance of any loose or separate sheets or leaves of paper from or into the device. This pulling outward of the key E causes the wedge-shaped portions F and G, respectively, upon the square shaft D to be drawn into the halves of the square hole C in each pair of arms B B of each ring A, and as the wedge-shaped portions F and G are thus drawn forward—that is to say, into or through each half-square hole C in each pair of arms B B—it follows that the arms B B and the position of the rings A, to which each pair of arms B B is attached, are bent outward to support the terminals of the rings (marked *a* and *b*, respectively) of each ring A, as more particularly shown in dotted lines at Fig. 4. Also it further follows that by pushing the square shaft D backward—that is to say, into its normal position—the arms B B and rings A A become closed again and securely retain the papers which may be placed upon the rings A A.

As shown in Figs. 4 and 6, the halves of each of the rings A A may be united by means of

a spring L, as in Figs. 4 and 2, or by means of a hinge-joint, as in Fig. 6 and as shown in the drawings of my two aforesaid former applications for Letters Patent, the manner of
 5 uniting the two halves of the rings A A by means of a hinge-joint not constituting any essential part of my present invention.

With the view of causing the rings A A and the arms B B to close with positive action
 10 when the wedge-shaped portions F and G of the square rod D are pushed backward a spring may be applied to press upon each of the arms B B, such springs being shown at k k, Fig. 6. The tendency of each of these
 15 springs or their equivalents is to press the two arms B B and the two halves of the rings A A into the closed or shut position. Such springs may be fastened to the material of the back J of the device and shaped to press
 20 upon the upper part of the arms B B, as is shown more particularly at Fig. 6.

For the purpose of covering over the square shaft D and its wedge-shaped portions F and G a thin metallic shield I, part of which only
 25 is shown in Fig. 1, is fastened to the wood or other material (marked J) constituting the main portion of the back of the device, and the entire device is covered over with or inclosed in a flexible cover K. (Shown open in
 30 Figs. 1 and 2 and closed in Fig. 3.)

To prevent the rod D from being pulled out of the square holes in the arms B B or to be pushed forward too far into these holes, a stop
 35 c in the outer end of the wedge F and a stop d at the forward end of the wedge G are respectively placed therein. It is to be understood that the key E fits upon the end of the square shaft D, and the key has a slit in it to engage with a pin in the outer end of the shaft
 40 D, acting after the manner of a bayonet-joint, which attaches the key temporarily to the shaft D and prevents it from being pulled off the shaft when the shaft D is pulled outward to open the rings A A.

45 Having now described the nature of my

said invention and the best system, mode, or manner I am at present acquainted with for carrying the same into practical effect, I desire to observe in conclusion that what I consider to be novel and original, and therefore
 50 claim as the invention to be secured to me by Letters Patent, is as follows:

1. The device for holding or binding together loose or removable sheets of paper, said device consisting of a back portion with flat
 55 top portions, wherein one or more rings capable of being rotated are carried, said portions containing a rotatably-slidable square shaft with wedge portions thereon, said rings being acted upon by springs, tending to keep said
 60 rings shut, the springs, said shaft being provided with stops and a key, said rings having internal arms which when closed form a square hole whereinto the square shaft fits, the binding or cover, the whole contained with-
 65 in the binding or cover, and all operating together in the manner and for the purposes substantially as set forth.

2. The combination consisting of the flexible back, the flat-topped portions of said back,
 70 the one or more spring-connected rings held in said back, the sliding and rotating square bar with the wedge portions thereon and key for operating the same; the stops on said bar, the arms within the opening and closing rings
 75 the stops on said square bar, the half-square holes in each arm of each half of the opening and closing rings, the covers or inclosure of the device, all operating together in the manner and for the purposes substantially as set
 80 forth.

In testimony whereof I have hereunto set my hand and seal, this 10th day of April, A. D. 1902, in the presence of two subscribing witnesses.

RALPH G. WHITLOCK. [L. S.]

Witnesses:

ST. JOHN DAY,
 B. M. WILKINS.