

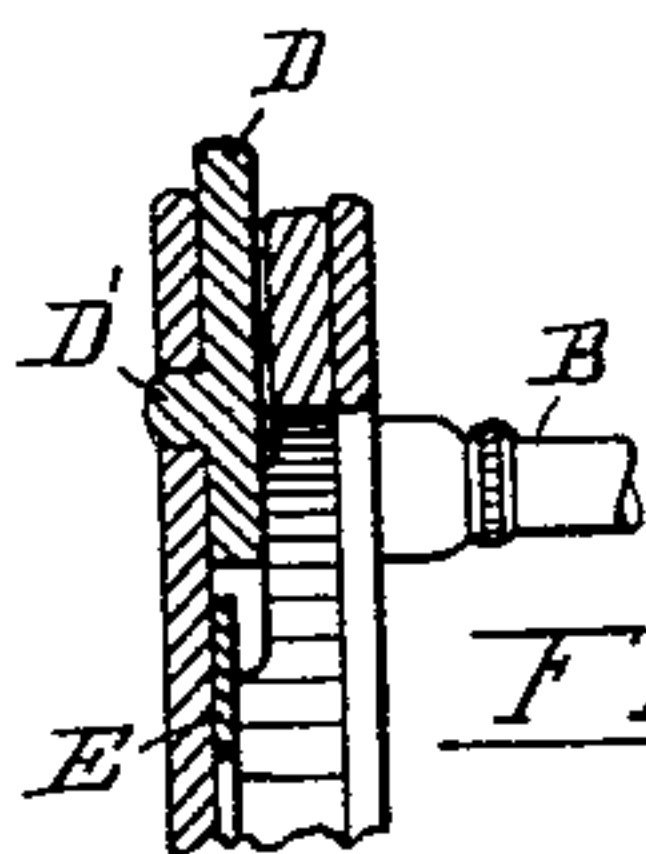
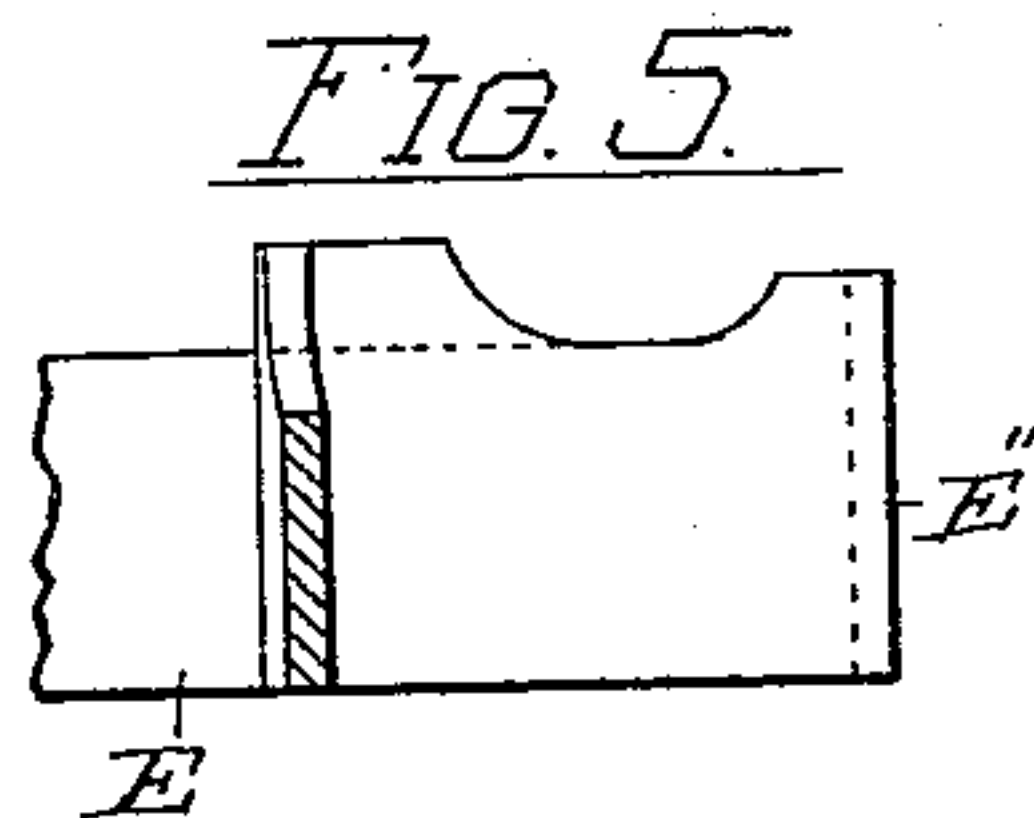
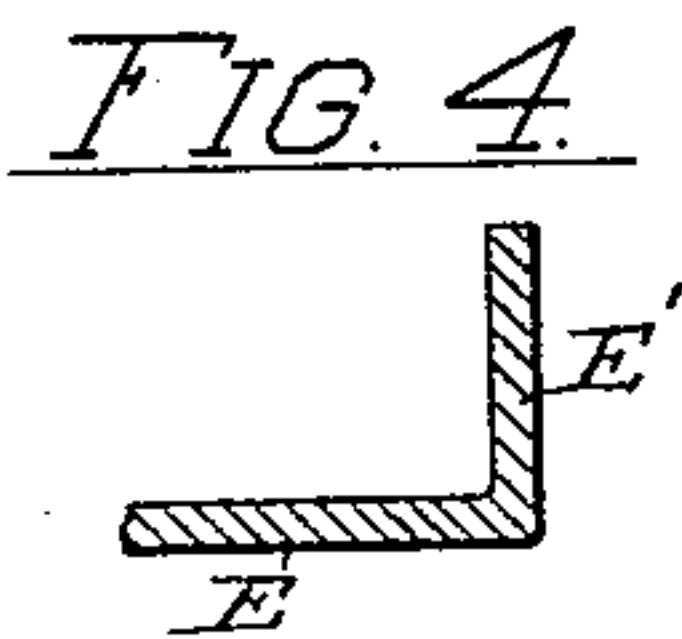
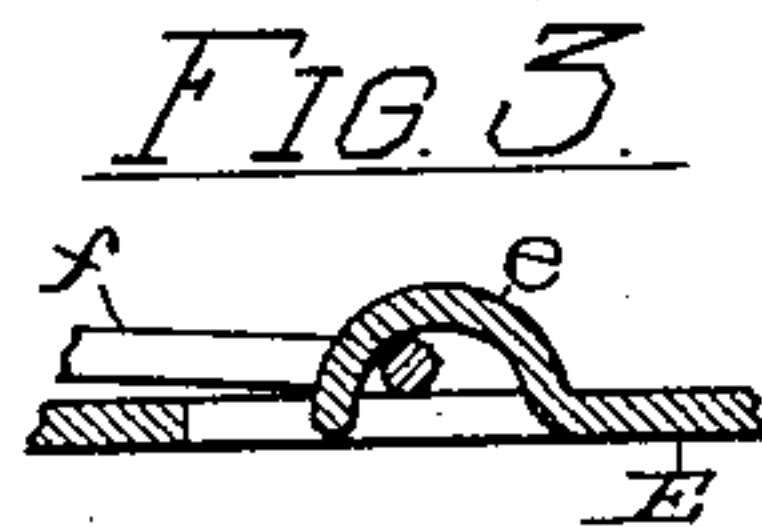
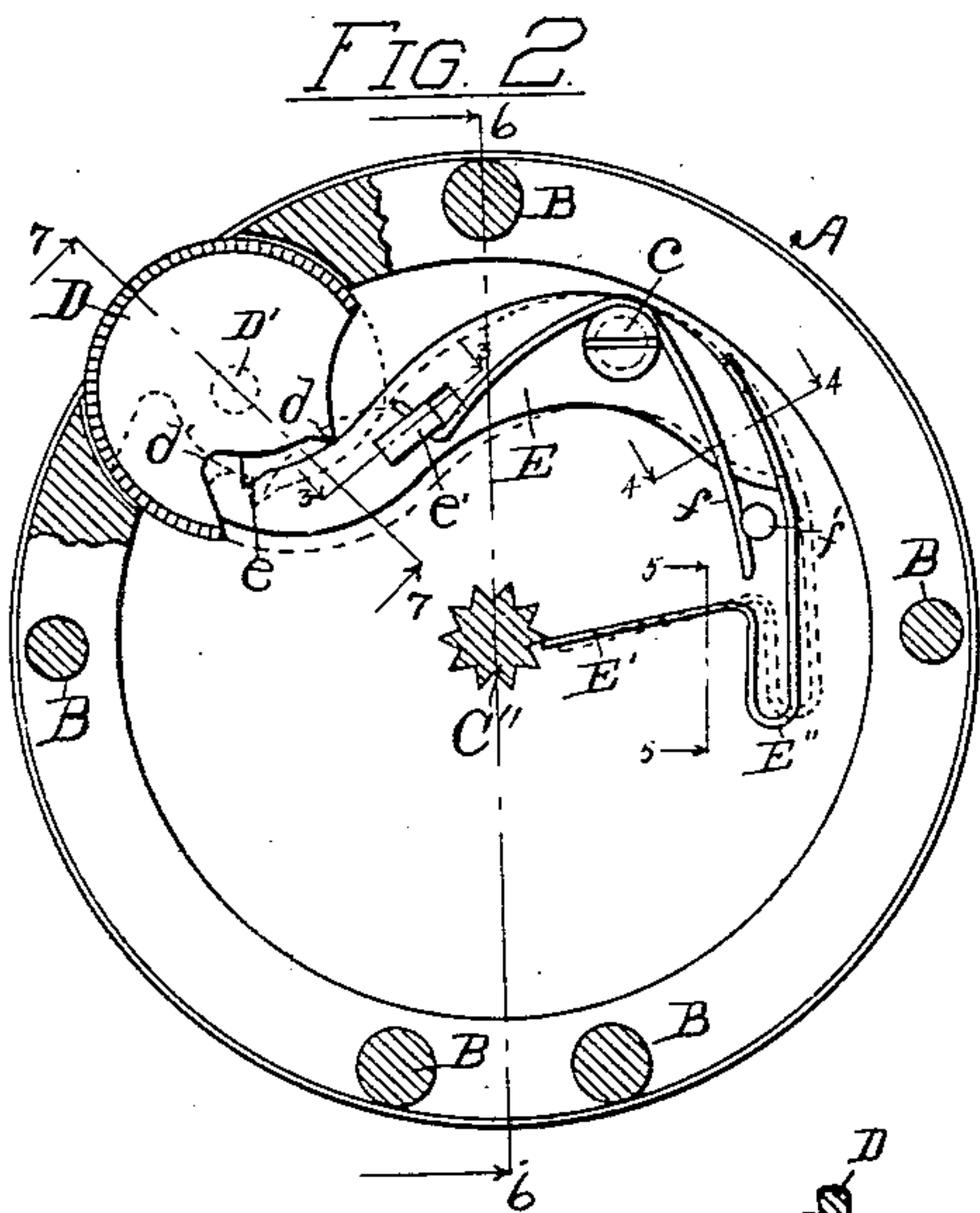
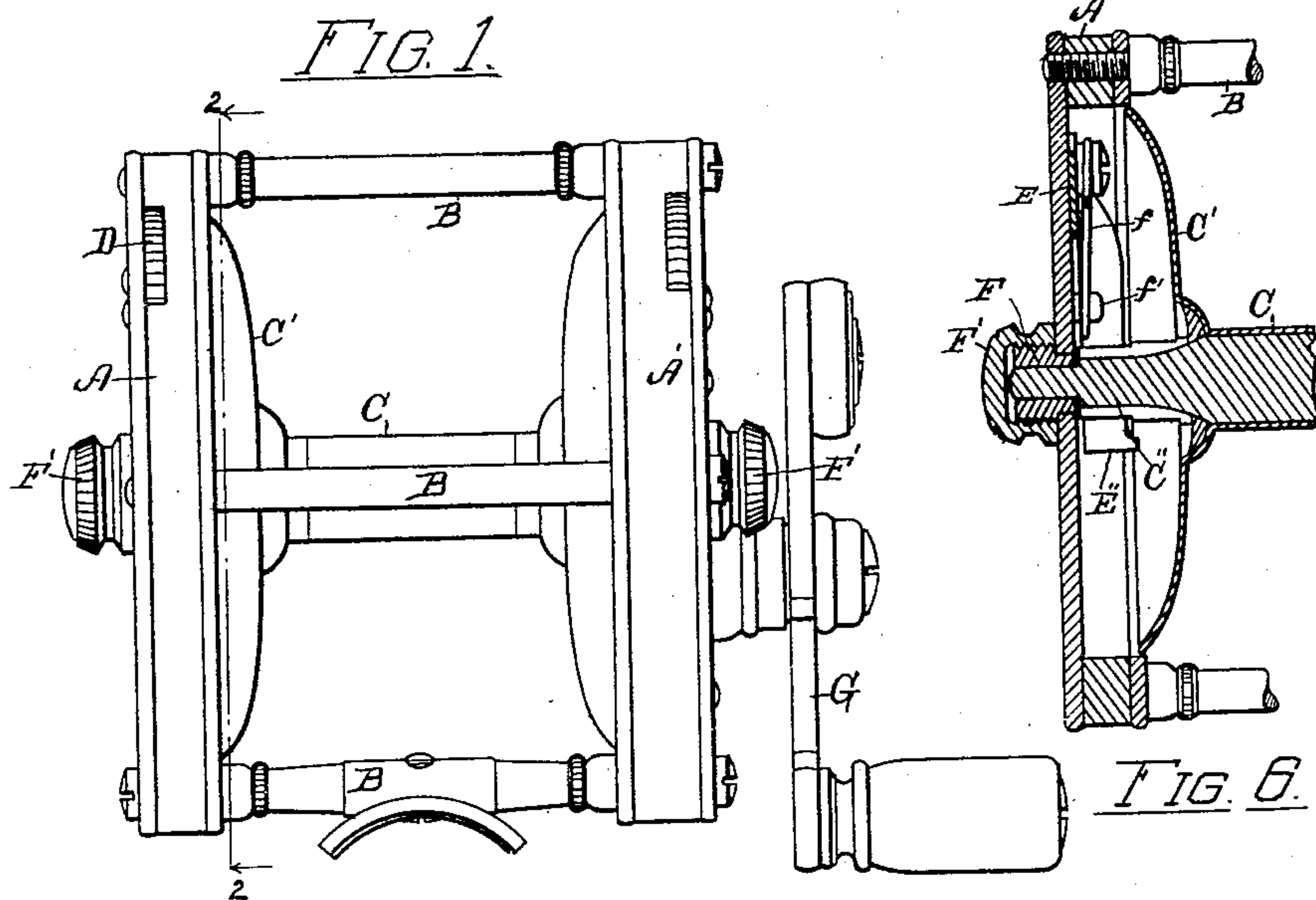
No. 734,971.

PATENTED JULY 28, 1903.

W. SHAKESPEARE, JR. & W. E. MARHOFF.  
CLICK MECHANISM FOR FISHING REELS.

APPLICATION FILED AUG. 18, 1902.

NO MODEL.



Witnesses:

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# UNITED STATES PATENT OFFICE.

WILLIAM SHAKESPEARE, JR., AND WALTER E. MARHOFF, OF KALAMAZOO, MICHIGAN; SAID MARHOFF ASSIGNOR TO SAID SHAKESPEARE.

## CLICK MECHANISM FOR FISHING-REELS.

SPECIFICATION forming part of Letters Patent No. 734,971, dated July 28, 1903.

Application filed August 18, 1902. Serial No. 120,020. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM SHAKESPEARE, Jr., and WALTER E. MARHOFF, citizens of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Click Mechanism for Fishing-Reels, of which the following is a specification.

10 This invention relates to improvements in fishing-reels.

The objects of the invention are, first, to provide an improved click mechanism for fishing-reels which is simple in construction and positive in its action; second, to provide an improved click mechanism for fishing-reels which is economical to construct and use, the parts of which are simple to produce and not liable to become disarranged in use or be subject to injury from wear; third, to provide an improved construction of spring for use in this connection.

Further objects will definitely appear in the detailed description to follow.

25 The objects of this invention are accomplished by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

30 A structure embodying the features of this invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front elevational view of a structure embodying the features of our invention. Fig. 2 is a detail sectional view taken on a line corresponding to line 2 2 of Fig. 1, portions of the spool and the head A of the frame being broken away to show the arrangement of the parts. Fig. 3 is a detail sectional view taken on line 3 3 of Fig. 2, showing the manner of securing the tension-spring *f* to the click-lever E. Fig. 4 is a detail sectional view taken through the lever E on line 4 4 of Fig. 2. Fig. 5 is a detail sectional view through the lever E, taken on line 5 5 of Fig. 2, showing the structure of the spring end E' thereof. Fig. 6 is a detail sectional view taken on line 6 6 of Fig. 2 through the reel-

head, showing the relation of the parts. Fig. 7 is a detail sectional view taken on line 7 7 of Fig. 2, showing the thumb-button D.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A A' represent the heads of the frame. These are secured together and in proper relation by suitable pillars B in any preferred form. The spool of the reel is supported and housed by this frame. Our improved click mechanism is supported and housed in frame-head A.

C represents the spool, which is provided with suitable heads C'. The shaft C'' is provided with suitable bearings, as F, carried by the heads. The bearings are protected by the caps F'. A crank G is carried by the head A' and is connected to the shaft C'' by suitable gear.

A lever E, having a spring extension E' extending radially inward, is supported on a pivot *c*. (See Fig. 2.) The lever E is formed of spring metal and is turned up at right angles at a point beyond the pivot *c* (see Fig. 4) to form the spring portion E' of the lever. In this structure none of the action of the spring is consumed about the pivot-point, and the action of the spring is always the same and is smooth and even.

The spring E' is in the preferred construction bent into a loop at E'', and its end is then turned inwardly radially to engage the click-pin, which is preferably formed integral with the shaft C''. The width of the spring is increased at the bends, forming the loop E'' to strengthen it at this point, so that the action is still that of a long and practically-straight spring. By thus forming the spring its end engages the click-pin in the most desirable position.

The lever E is controlled by the thumb-button D, which is pivotally secured in position by the stud D', so that its edge projects beyond the periphery of the frame-head. The button is formed with a lug or projecting



point *d*, adapted to engage the lever *E* to throw it out of engagement with the click-pinion and to engage the notch *e* in the lever to lock it out of engagement with the pinion. A notch *d'* is formed in the button and engages the end of the lever and serves as a stop to limit the movement of the parts in throwing the click into action. A spring *f* is provided for the lever *E*, which tends to throw the click out of engagement. This spring is fulcrumed about the pivot *c*. One end of the spring *f* engages the pin *f'* on the head *A* and the other engages the loop *e'* on the lever. The loop *e'* is formed by striking up a narrow tongue from the lever. This arrangement is found to be very simple and effective.

We have illustrated and described our improved click mechanism for fishing-reels in the form preferred by us. We are aware, however, that it is capable of numerous variations in structural details without departing from our invention.

Having thus described our invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a click mechanism for fishing-reels, the combination of a suitable frame; a click-pinion; a lever *E* having a spring extension *E'* turned at an angle to the said lever and adapted to engage said click-pinion, said spring *E'* having a loop *E''* formed therein; a pivot *c* for said lever; a pin *f* on said frame; an engaging loop *e'* formed on said lever; a spring *f* fulcrumed on said pivot *c* adapted to engage said pin *f* and loop *e'*; a thumb-button *D* having a lug *d* adapted to engage said lever; a notch *e* in said lever to engage said lug *d*; and a notch *d'* in said button to engage the end of said lever and serve as stops, all coacting for the purpose specified.

2. In a click mechanism for fishing-reels, the combination of a suitable frame; a click-pinion; a lever *E* having a spring extension *E'* turned at an angle to said lever and adapted to engage said click-pinion, said spring *E'* having a loop *E''* formed therein; a pivot for said lever; a suitable spring arranged to hold said lever normally into engagement; a thumb-button *D* adapted to engage said lever,

whereby said lever is controlled, for the purpose specified.

3. In a click mechanism for fishing-reels, the combination of a suitable frame; a click-pinion; a lever *E* having a spring extension *E'* turned at an angle to said lever and adapted to engage said click-pinion, said spring *E'* having a loop *E''* formed therein, the bends in said spring forming said loop being reinforced; a pivot for said lever; and means for controlling said lever, for the purpose specified.

4. In a click mechanism for fishing-reels, the combination of a suitable frame; a click-pinion; a lever *E* having a spring extension *E'* turned at an angle to said lever, adapted to engage said click-pinion, said spring *E'* having a loop *E''* formed therein; a suitable pivot for said lever; and means for controlling said lever, for the purpose specified.

5. In a click mechanism for fishing-reels, the combination of a suitable frame; a click-pinion; a click spring-lever; a thumb-button *D* having a lug *d* adapted to engage said lever; a notch *e* in said lever adapted to engage said lug *d*; and a notch *d'* in said button adapted to engage the end of said lever to serve as stops, for the purpose specified.

6. In a click mechanism for fishing-reels, the combination of a suitable frame; a click-pinion; a click spring-lever; a thumb-button having a lug *d* adapted to engage said lever; and a notch *e* in said lever adapted to engage said lug *d*, for the purpose specified.

7. In a click mechanism for fishing-reels, the combination of a suitable frame; a click mechanism; a thumb-button *D* adapted to control said click mechanism, having a pivot-pin *d'* formed thereon, arranged to project through said frame and be held in position by the parts thereof, as specified.

In witness whereof we have hereunto set our hands and seals in the presence of two witnesses.

WILLIAM SHAKESPEARE, JR. [L. S.]

WALTER E. MARHOFF. [L. S.]

Witnesses:

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