

No. 612,046.

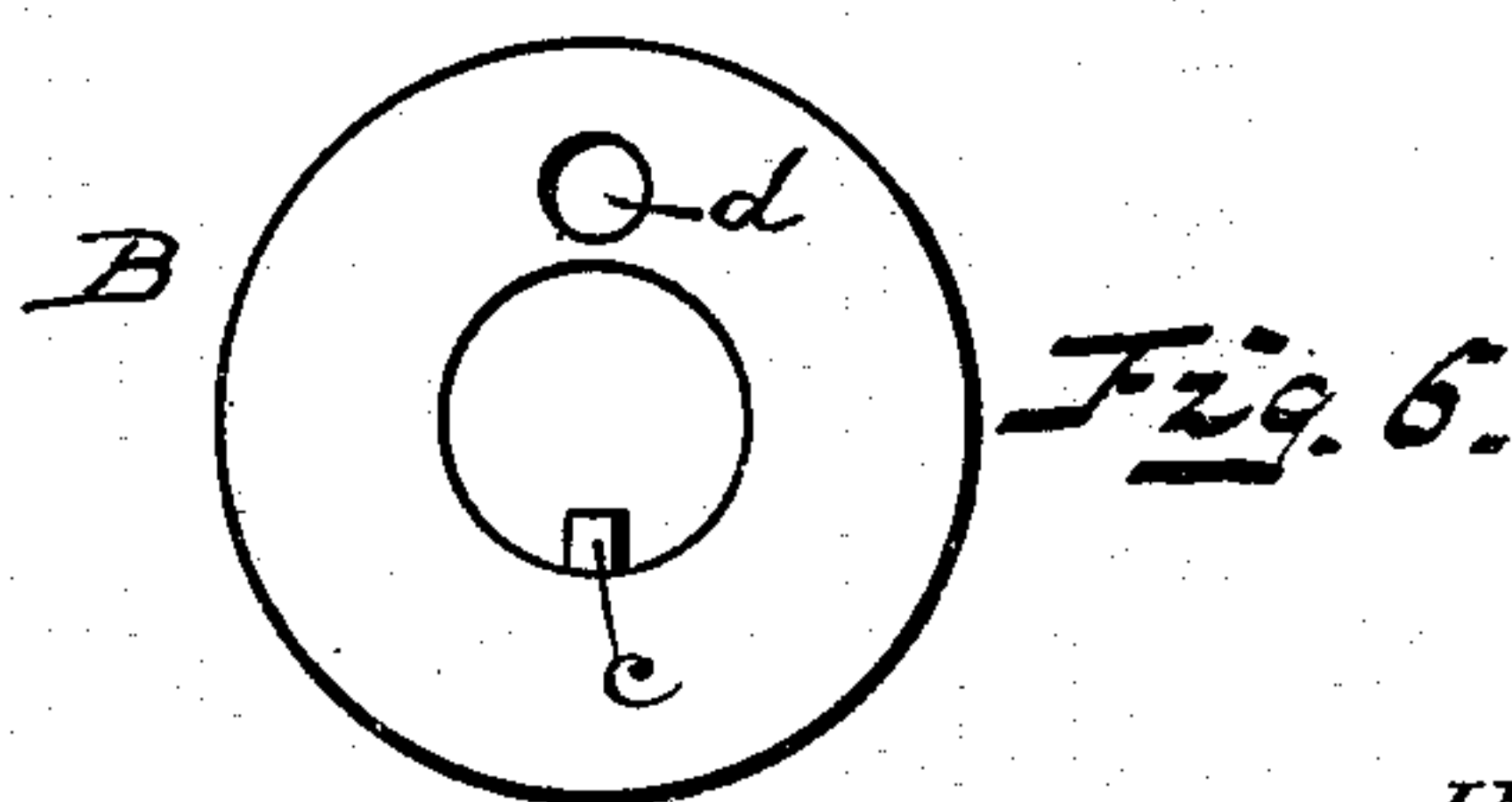
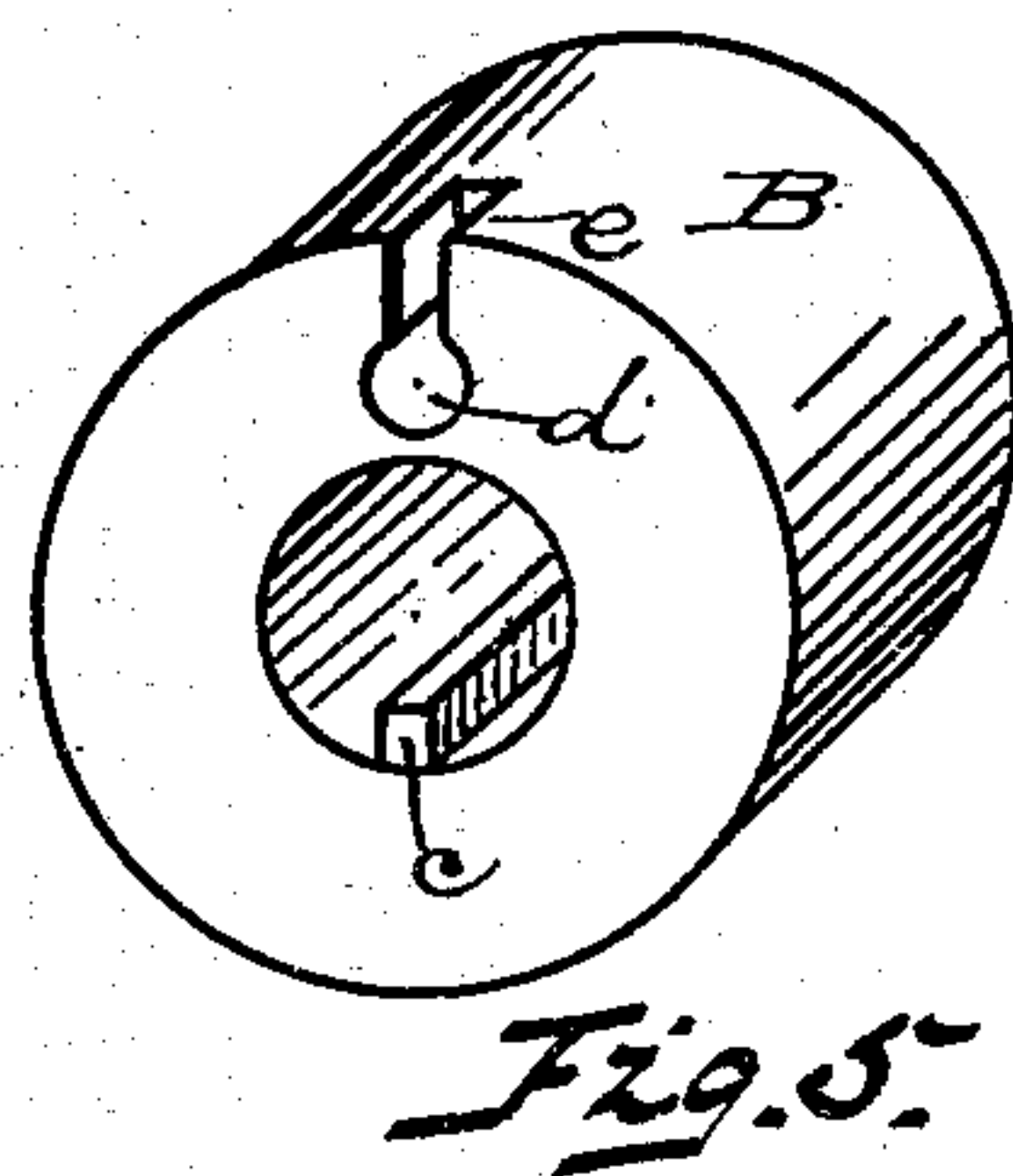
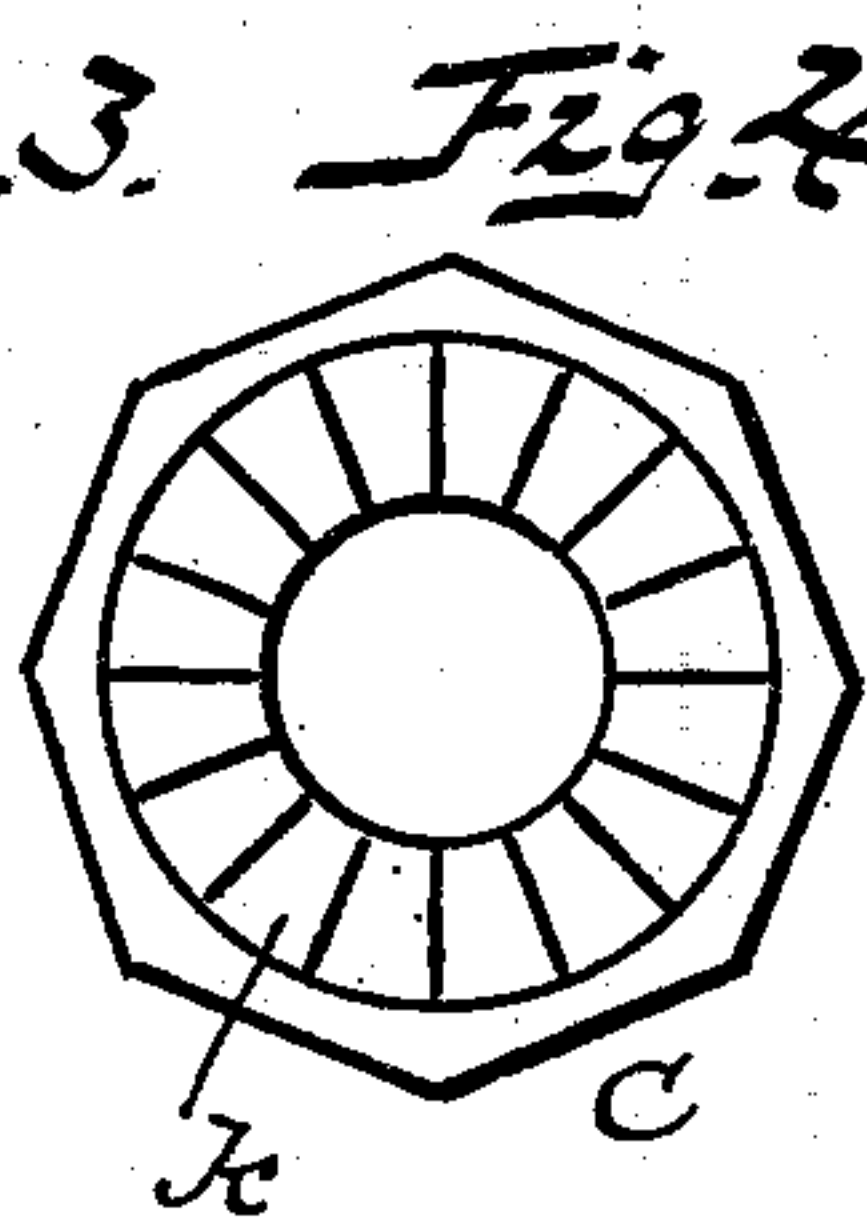
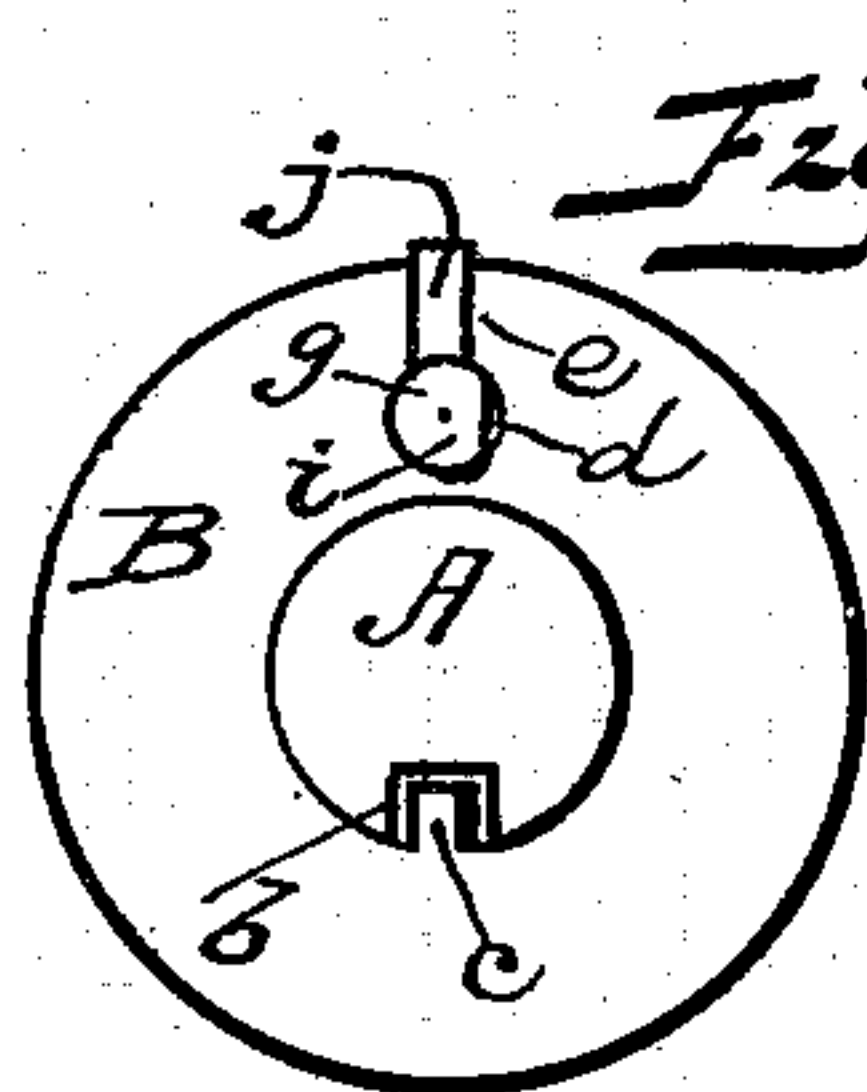
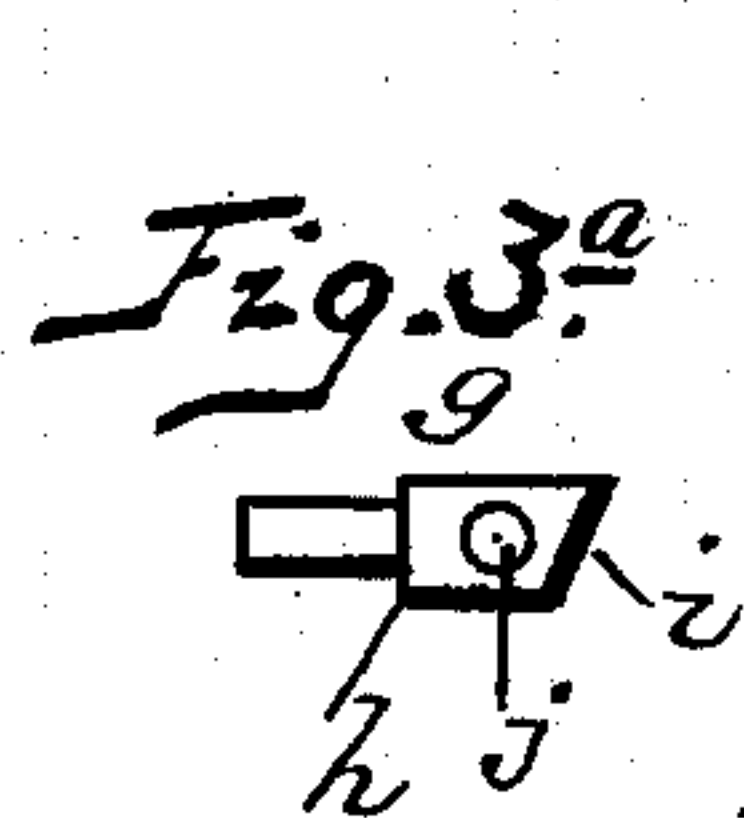
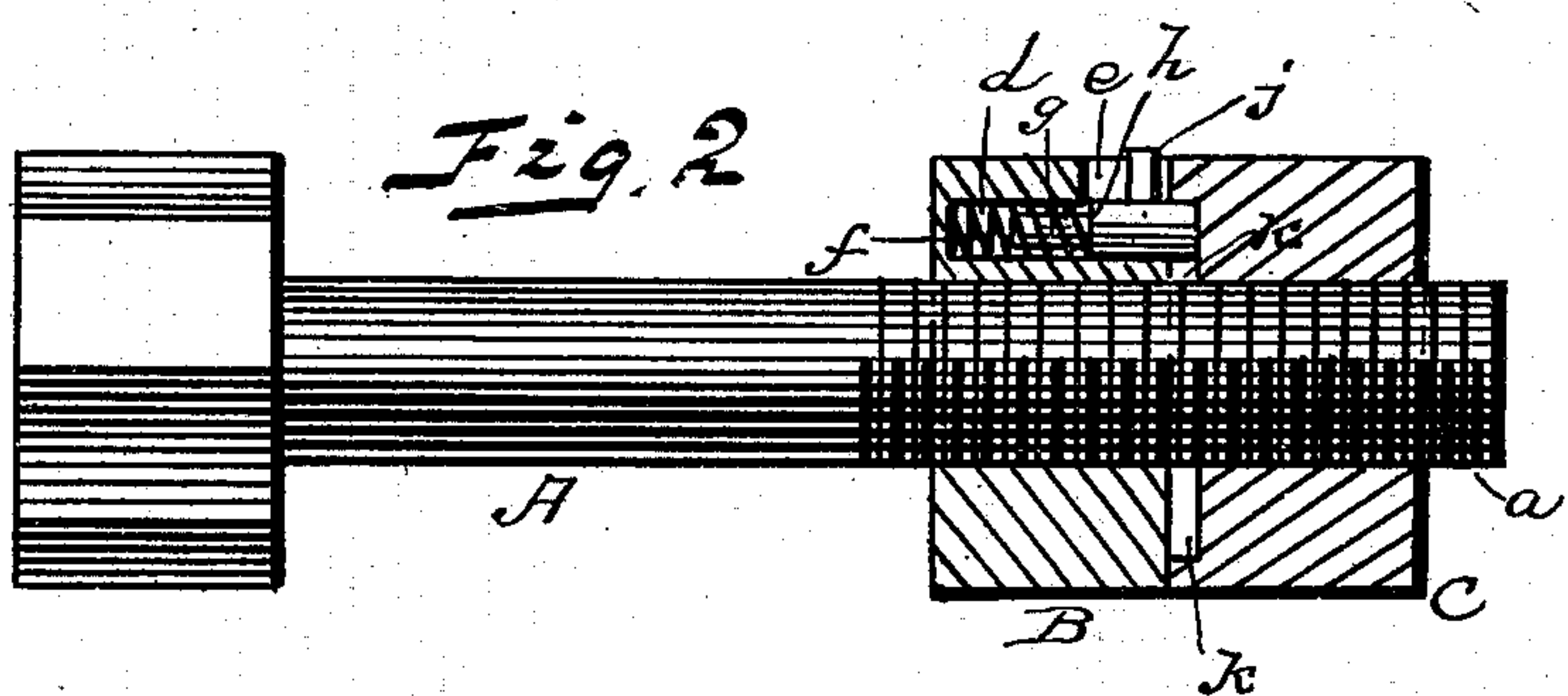
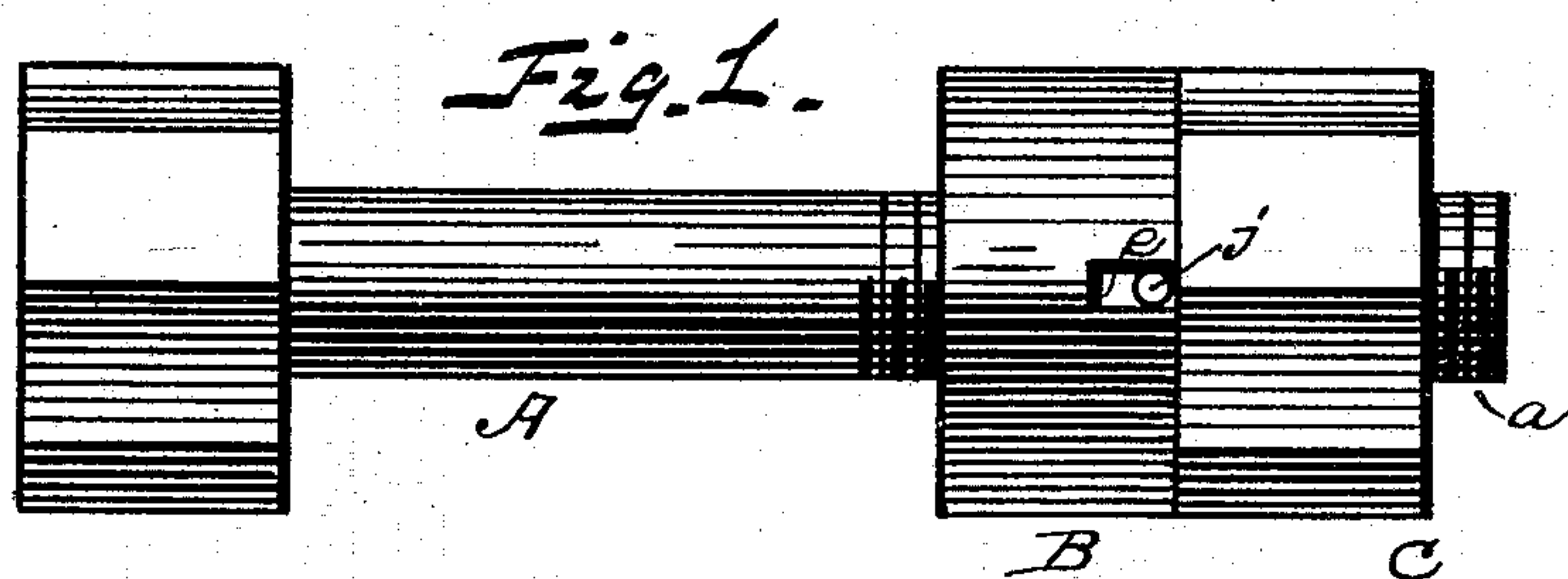
Patented Oct. 11, 1898.

J. D. MATHEWS & E. B. HORNER.

NUT LOCK.

(Application filed June 17, 1898.)

(No Model.)



WITNESSES

Jas. B. Clarke  
Wm. W. Morris,

INVENTORS.

J. D. Mathews  
E. B. Horner.

by E. H. Bates Attorney



# UNITED STATES PATENT OFFICE.

JOSIAH D. MATHEWS AND EDWARD B. HORNER, OF MARTINSBURG,  
WEST VIRGINIA.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 612,046, dated October 11, 1898.

Application filed June 17, 1898. Serial No. 683,690. (No model.)

*To all whom it may concern:*

Be it known that we, JOSIAH D. MATHEWS and EDWARD B. HORNER, citizens of the United States, residing at Martinsburg, in the county of Berkeley and State of West Virginia, have invented certain new and useful Improvements in Nut-Locks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in nut-locks; and it consists in the novel construction, combination, and arrangement of parts of which it is composed, all as will be hereinafter fully described, and particularly pointed out in the appended claim.

The annexed drawings, to which reference is made, fully illustrate our invention, in which—

Figure 1 represents a side view of our invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is an end view showing the nut removed. Fig. 3<sup>a</sup> is a detail view showing the locking-pin. Fig. 4 is an inside face view of the nut. Fig. 5 is a perspective view of the collar, and Fig. 6 is a face view of the collar, showing our device in modified form.

Referring by letter to the accompanying drawings, A represents the bolt, having the usual male screw-threads *a* and provided with the channel or groove *b*, formed in the screw end and extending from the inner portion to the extreme end of the bolt.

B indicates a removable non-threaded collar which fits loosely on the bolt and is provided with a feather or lug *c* on the interior thereof which engages the channel or groove in the bolt, whereby said collar is prevented from turning thereon. This collar B is provided with a horizontal recess *d*, which is open at one end and closed at the opposite end, and a narrow groove *e*, which communicates with the recess and extends some little distance from the face backward on the collar and is open at the top and front face of the collar, thus providing an opening or recess with a narrow mouth, for a purpose presently explained. Within this recess *d* is located a

coiled spring *f*, which surrounds a locking-pin *g*. The forward end of said pin is enlarged, providing a shoulder *h*, against which one end of said spring has its bearing, while the opposite end of the spring bears against the rear wall of the recess in the collar. The front end of the enlarged portion of the locking-pin has a beveled face *i*, and said pin is further provided with a vertically-extended thumb-pin *j*, which projects into the narrow channel of the collar and within reach of the operator in manipulating the device.

C designates the nut for the bolt and is provided with the usual female screw-threads as well as ratchet-teeth *k* on its inner face, which do not extend to the outer edge of the nut and are hidden from view.

It will thus be seen from the above description, when taken in connection with the annexed drawings, that when the nut is screwed upon the bolt and comes in contact with the locking-pin said pin yields and clicks over the ratchet-teeth in the inner face of the nut, and when the nut is screwed home said pin or the beveled point thereof engages one of the ratchet-teeth and prevents the nut from accidental displacement and locking it firmly to the collar, and through the medium of said collar the nut is locked to the bolt. At the same time said collar is prevented from turning by the feather or lug therein engaging the channel in the bolt, as hereinbefore stated.

When it is desired to remove the nut from the bolt, the operator simply forces the locking-pin backward by pressure upon the vertical pin in the narrow channel, when the beveled point of said locking-pin will be withdrawn from engagement with the ratchet-teeth in the inner face of the nut, when the latter can be readily removed by turning it in a reverse direction to that in which it was turned in locking it to the bolt. Again, it will be seen that our device in locking the nut is accomplished automatically and cannot possibly be unlocked without the aid of an operator.

Fig. 6 shows the collar in a modified form, wherein we dispense with the thumb-pin and narrow channel for said pin, and when said pin engages the ratchet-teeth in the nut it



locks the collar and nut automatically to one another in the manner above stated; but this construction will not allow the nut to be removed except by force in breaking the nut, 5 collar, or bolt; but in the construction heretofore described the nut can at any time be removed and replaced at will and be secure in position, and the device can be used not only on rail-joints, but in any place where a safe 10 lock-nut is desired, and a nut-lock as herein described is simple in operation, durable, and at the same time cheap to manufacture.

We are aware that prior to our invention various nut-locks have been patented having 15 spring-and-ratchet fastenings. Hence we do not claim such a device broadly; but,

Having thus described our invention, what

we claim, and desire to secure by Letters Patent, is—

The nut-lock described, comprising the 20 channeled bolt, nut provided with the teeth, the collar having the interior feather and recess, and channel arranged at right angles to said recess and communicating therewith and the locking-pin having the thumb-pin extend- 25 ed at right angles to the body of said locking-pin, all as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSIAH D. MATHEWS.

EDWARD B. HORNER.

Witnesses:

S. B. SIGLER,

C. D. DUGAN.