

No. 827,629.

PATENTED JULY 31, 1906.

I. J. GRIFFIN.

NUT LOCK.

APPLICATION FILED JULY 3, 1905.

2 SHEETS—SHEET 1.

Fig. 1,

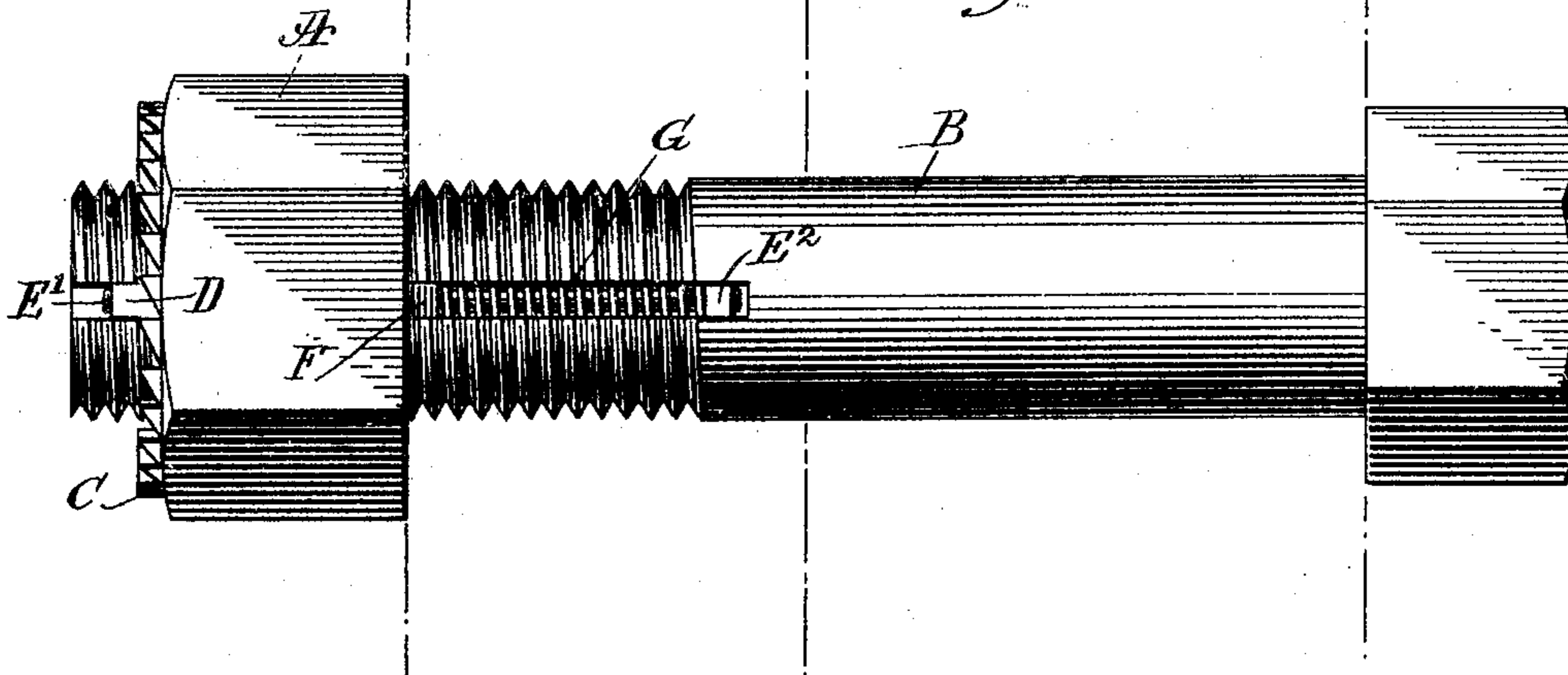


Fig. 2,

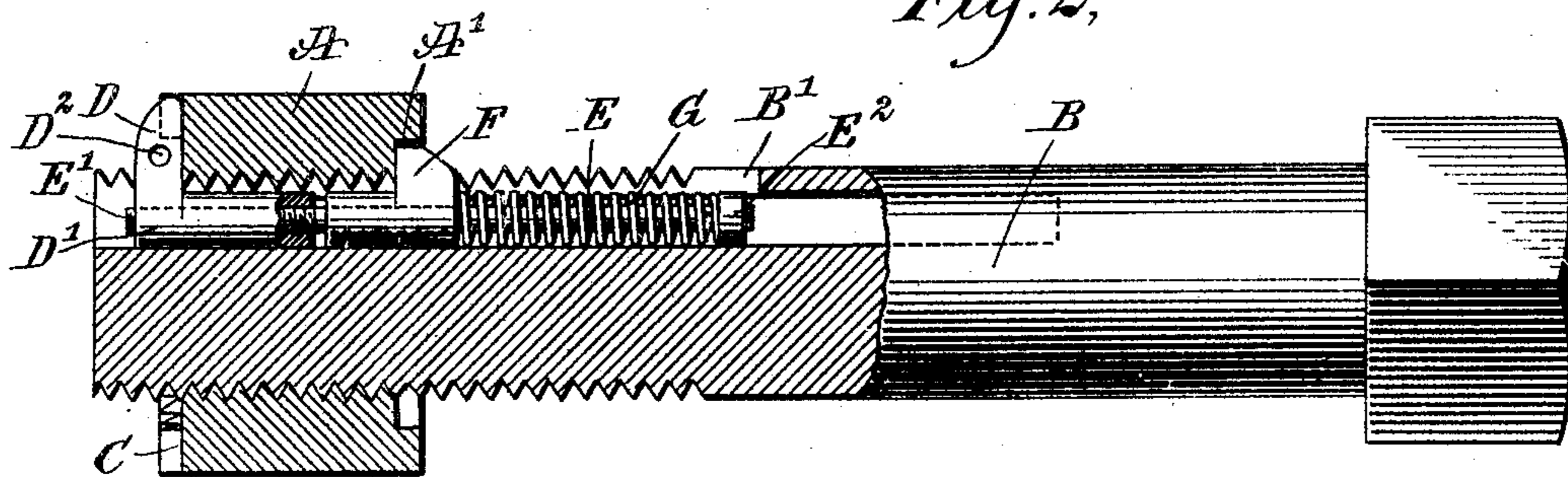


Fig. 3,

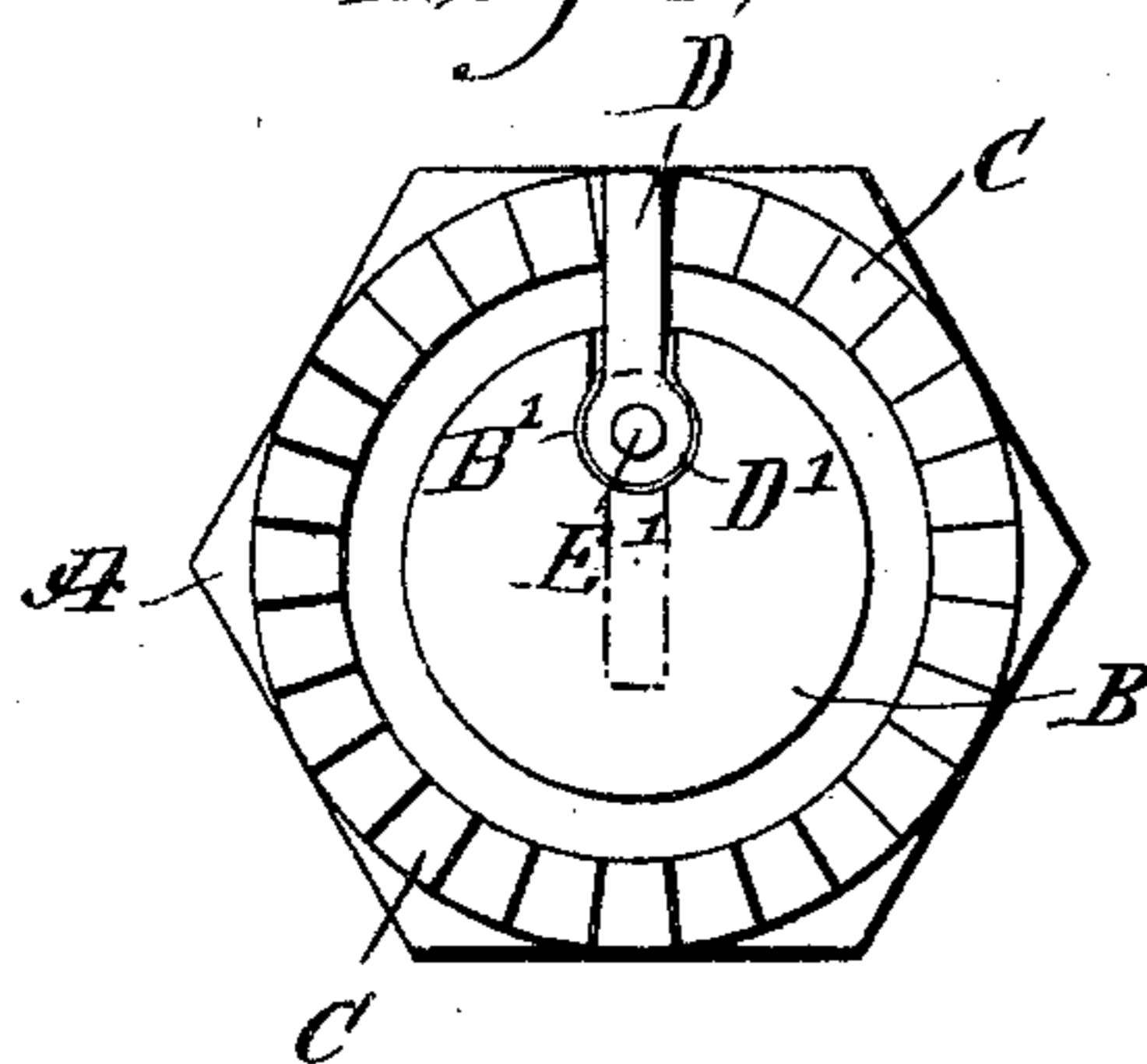


Fig. 4,

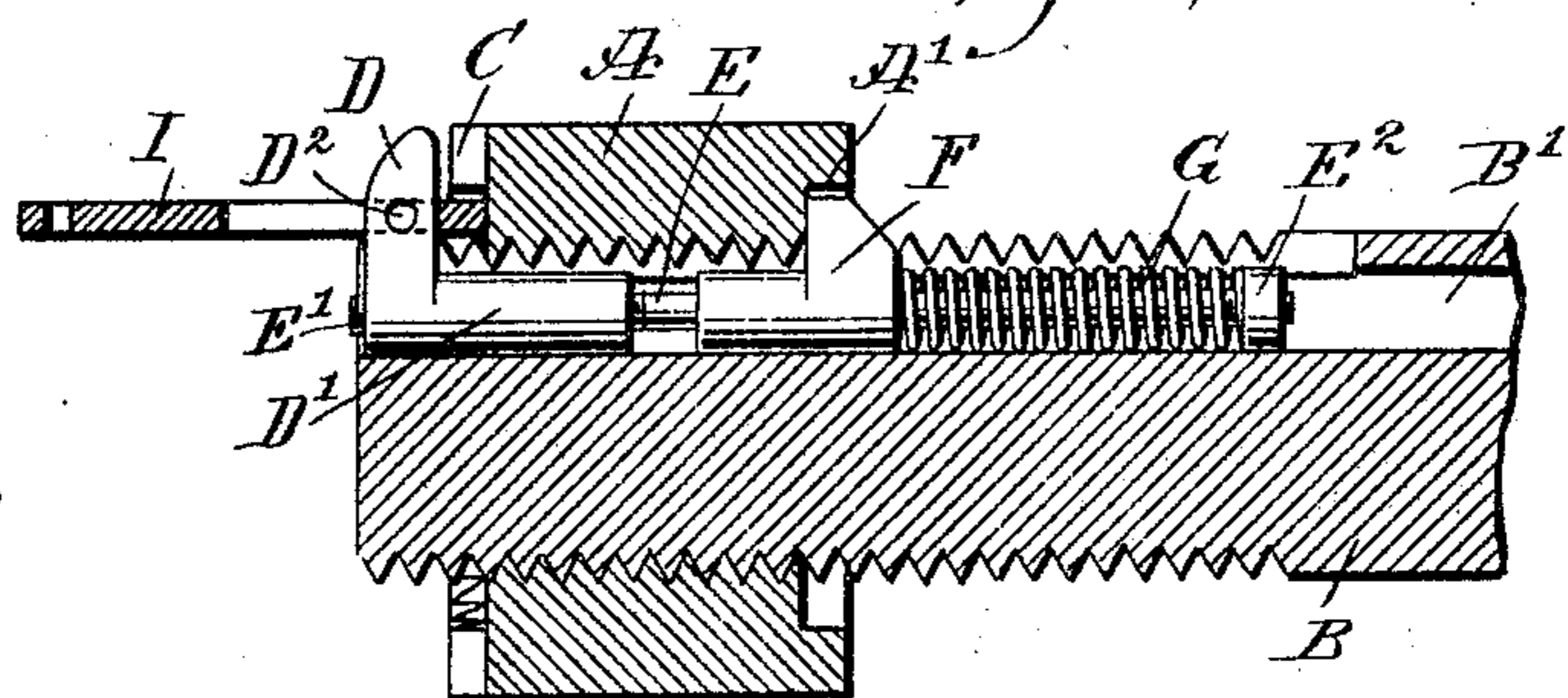


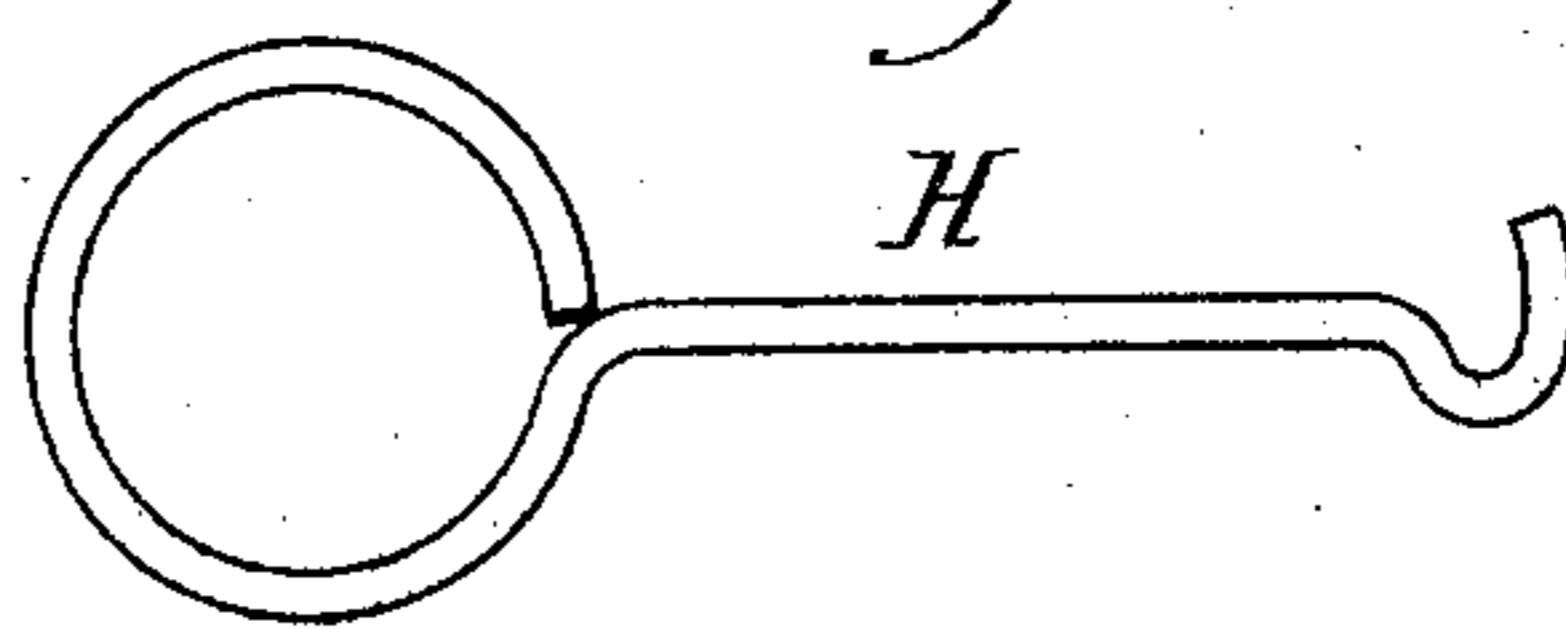
Fig. 5,

WITNESSES:

Edward Thorpe.
Rev. G. H. Foster.



Fig. 6,



INVENTOR

Ira J. Griffin

BY

Munn & Co.
ATTORNEYS

No. 827,629.

PATENTED JULY 31, 1906.

I. J. GRIFFIN.

NUT LOCK.

APPLICATION FILED JULY 3, 1906.

2 SHEETS—SHEET 2.

Fig. 7.

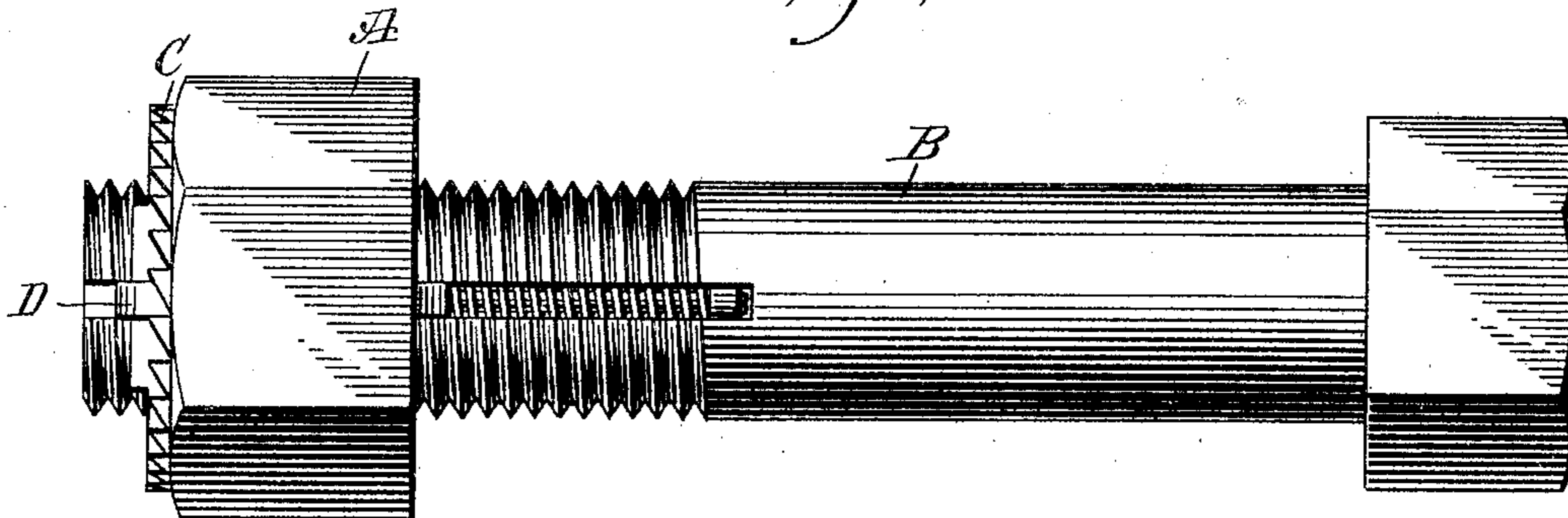


Fig. 8.

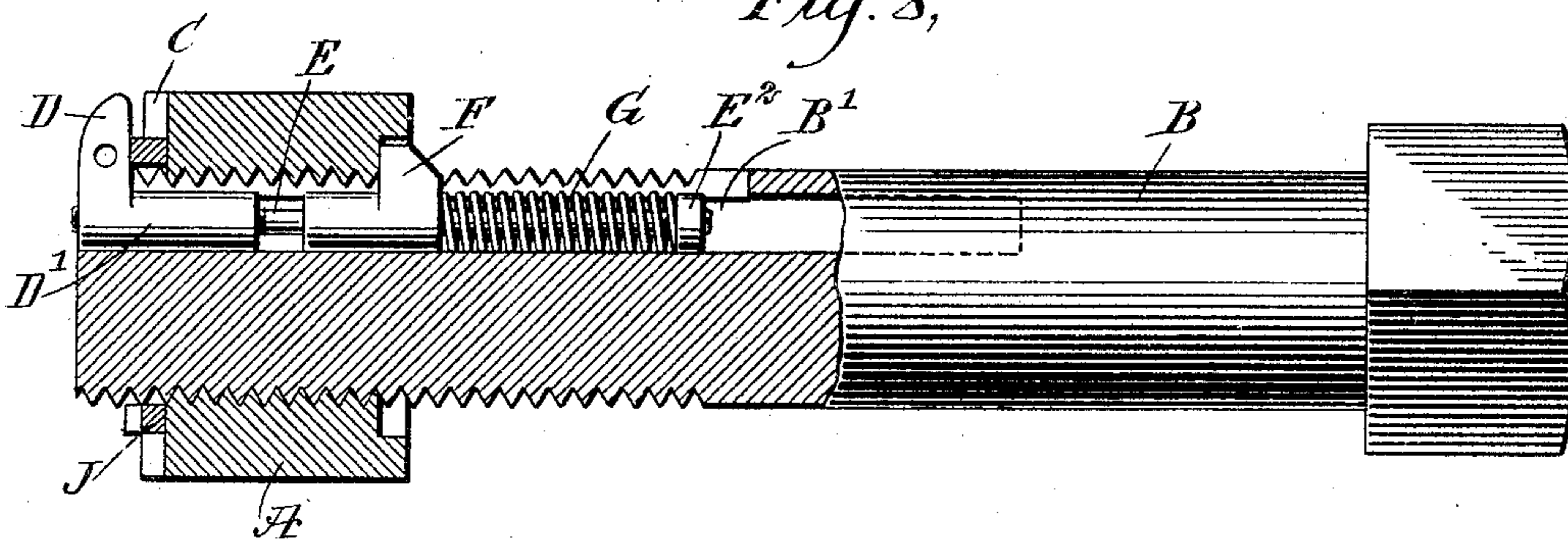
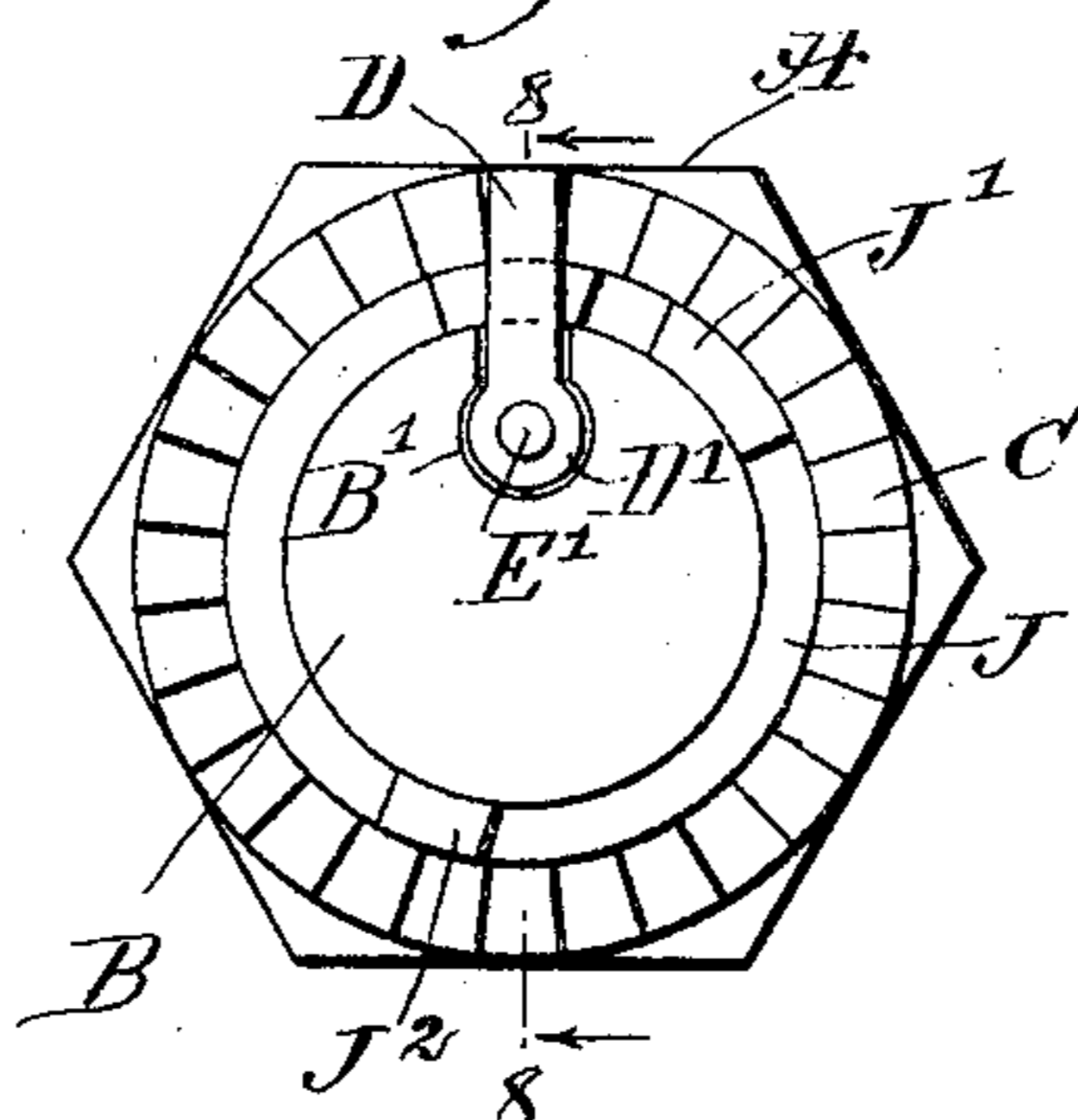


Fig. 9.



WITNESSES:

Edward Thorpe,
Neely Hester

INVENTOR

Ira J. Griffin

BY

Munn

ATTORNEYS

UNITED STATES PATENT OFFICE.

IRA J. GRIFFIN, OF OSSINING, NEW YORK.

NUT-LOCK.

No. 827,629.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed July 3, 1905. Serial No. 268,104.

To all whom it may concern:

Be it known that I, IRA J. GRIFFIN, a citizen of the United States, and a resident of Ossining, in the county of Westchester and State of New York, have invented a new and Improved Nut-Lock, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved nut-lock arranged to allow convenient screwing up of the nut on the bolt to the desired position, to securely hold the nut against accidental return movement, and to permit the operator to unlock the nut for unscrewing the same whenever it is desired to do so.

The invention consists of novel features and parts and combinations of the same, which will be more fully described, and pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement. Fig. 2 is a longitudinal sectional side elevation of the same. Fig. 3 is an end elevation of the same. Fig. 4 is a longitudinal sectional elevation showing the nut-lock ready for unscrewing. Fig. 5 is a perspective view of the tool for holding the pawl temporarily out of engagement with the ratchet-wheel to allow unscrewing of the nut on the bolt. Fig. 6 is a side elevation of the tool employed for pulling the pawl out of engagement with the ratchet-wheel. Fig. 7 is a plan view of a modified form of the improvement. Fig. 8 is a longitudinal sectional elevation of the same on the line 8 8 of Fig. 9, and Fig. 9 is an end elevation of the same.

On the outer face of the nut A, screwing on the bolt B, is secured or formed a ratchet-wheel C, engaged by a pawl D for allowing the nut A to be turned in one direction, but to be held against unscrewing or return movement. This pawl D is provided with a hub D', screwing on the outer threaded end E' of a rod E, extending longitudinally in a groove B', formed lengthwise in the bolt B, and on the said rod E is held loosely a collar F, having a head engaging an annular shoulder A', formed on the inner face of the nut A.

The collar F is pressed on by one end of a spring G, coiled on the rod E and resting with its other end on a nut E², screwing on the inner threaded end of the rod E, so that the

spring presses the collar F toward the pawl D to hold the head of the collar in engagement with the annular shoulder A' and to hold the pawl D in engagement with the ratchet-wheel C, at the same time allowing the pawl D to yield sufficiently for gliding over the teeth of the ratchet-wheel when the nut A is turned and screwed up on the bolt B. By adjusting the nut E² the tension of the spring G can be regulated.

By the arrangement described the pawl D, rod E, collar F, and spring G travel lengthwise relative to the bolt B when the nut A is screwed up to the desired position, it being understood that when the nut reaches this position the pawl D holds the nut against accidental unscrewing or return movement, owing to the pawl D engaging a tooth of the ratchet-wheel C. When it is desired to unscrew the nut A, it is necessary to pull the pawl D first out of engagement with the ratchet-wheel C and then to lock the pawl in the disengaged position to permit unscrewing the nut A. For the purpose mentioned tools H and I are employed, (shown in Figs. 6 and 5,) the tool H being in the form of a hook adapted to be engaged with an aperture D², formed in the pawl D, to allow of pulling the pawl outward out of engagement with the ratchet-wheel C. When this has been done, the tool I is engaged with the pawl D in such a manner that one end of the tool rests on the outer face of the nut A and the pawl D is held by the tool I out of engagement with the ratchet-wheel. (See Fig. 4.) When the several parts are in this position, the nut A can be readily unscrewed, as the pawl D is held out of engagement by the tool I sliding on the outer face of the nut A. When the outer face of the nut A coincides with the outer end of the bolt B, then the pawl D is given, say, a half-turn (see dotted lines, Fig. 3) to permit complete unscrewing of the nut from the bolt.

Instead of the tool I a ring J may be employed for holding the pawl D out of engagement with the ratchet-wheel C whenever it is desired to unscrew the nut A, (see Figs. 7, 8, and 9,) the ring J being in the form of a split ring fitting into an annular recess on the outer face of the nut A. The pawl D extends through the split in the ring to engage the ratchet-wheel C, and the split ring is provided adjacent to its ends with raised portions J', on either of which the pawl D may be pulled by the use of the tool H to hold the pawl D out of engagement with the ratchet-

wheel C, as illustrated in Figs. 8 and 9. The split ring J is also provided with a projection J², serving as a handle for conveniently turning the ring so as to bring the split end thereof in register with the pawl D whenever it is desired to reengage the pawl D with the ratchet-wheel C.

The nut-lock shown and described is very simple and durable in construction, is not liable to get easily out of order, and securely holds the nut against accidental unscrewing on the bolt and allows unscrewing of the nut by the operator whenever it is desired to do so.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A nut-lock, comprising a ratchet-wheel on the nut, a pawl engaging the ratchet-wheel, means on the opposite side of the nut for constraining the pawl to travel therewith, a spring independent of the pawl, and constraining means for maintaining said pawl and constraining means in contact with the opposite sides of the nut, and means whereby to vary the tension of the spring.

2. A nut-lock comprising a ratchet-wheel formed integrally on the outer face of the nut, a pawl engaging the said ratchet-wheel and having a rod mounted to slide in a groove formed lengthwise in the bolt, a collar held loosely on the said rod and in engagement with the inner face of the nut, and a spring on the said rod and pressing the said collar.

3. A nut-lock comprising a ratchet-wheel on the nut, a spring-pressed pawl engaging the said ratchet-wheel and mounted to slide lengthwise on the bolt and to travel with the nut, and manually-controlled means for retaining the pawl out of engagement with the ratchet-wheel to permit unscrewing of the nut.

4. A nut-lock, comprising a ratchet-wheel

formed integrally on the outer face of the nut, a pawl engaging the said ratchet-wheel and having a rod mounted to slide in a groove formed lengthwise in the bolt, a collar held loosely on the said rod and in engagement with the inner face of the nut, a spring on the said rod and pressing the said collar, the pawl being provided with means whereby to engage the same to move it out of engagement with the said ratchet-wheel, and means for retaining the pawl in its outward position.

5. A nut-lock comprising a ratchet-wheel formed on the outer face of the nut, a pawl for engagement with the said ratchet-wheel and having a hub, a rod on which the said pawl-hub is adjustably secured, the rod extending in a groove formed lengthwise on the bolt on which screws the nut, a collar held loosely on the said rod and in engagement with an annular shoulder formed on the inner face of the nut, and a spring on the rod and pressing the said collar toward the said pawl.

6. A nut-lock comprising a ratchet-wheel formed on the outer face of the nut, a pawl for engagement with the said ratchet-wheel and having a hub, a rod on which the said pawl-hub is adjustably secured, the rod extending in a groove formed lengthwise on the bolt on which screws the nut, a collar held loosely on the said rod and in engagement with an annular shoulder formed on the inner face of the nut, a spring on the rod and pressing the said collar toward the said pawl, and a ring mounted to turn in an annular recess on the outer face of the nut and having a notch for the passage of the said pawl.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

IRA J. GRIFFIN.

Witnesses:

J. BURTRAM FARREN,
GRIFFIN S. HILLIKEE.