

No. 619,772.

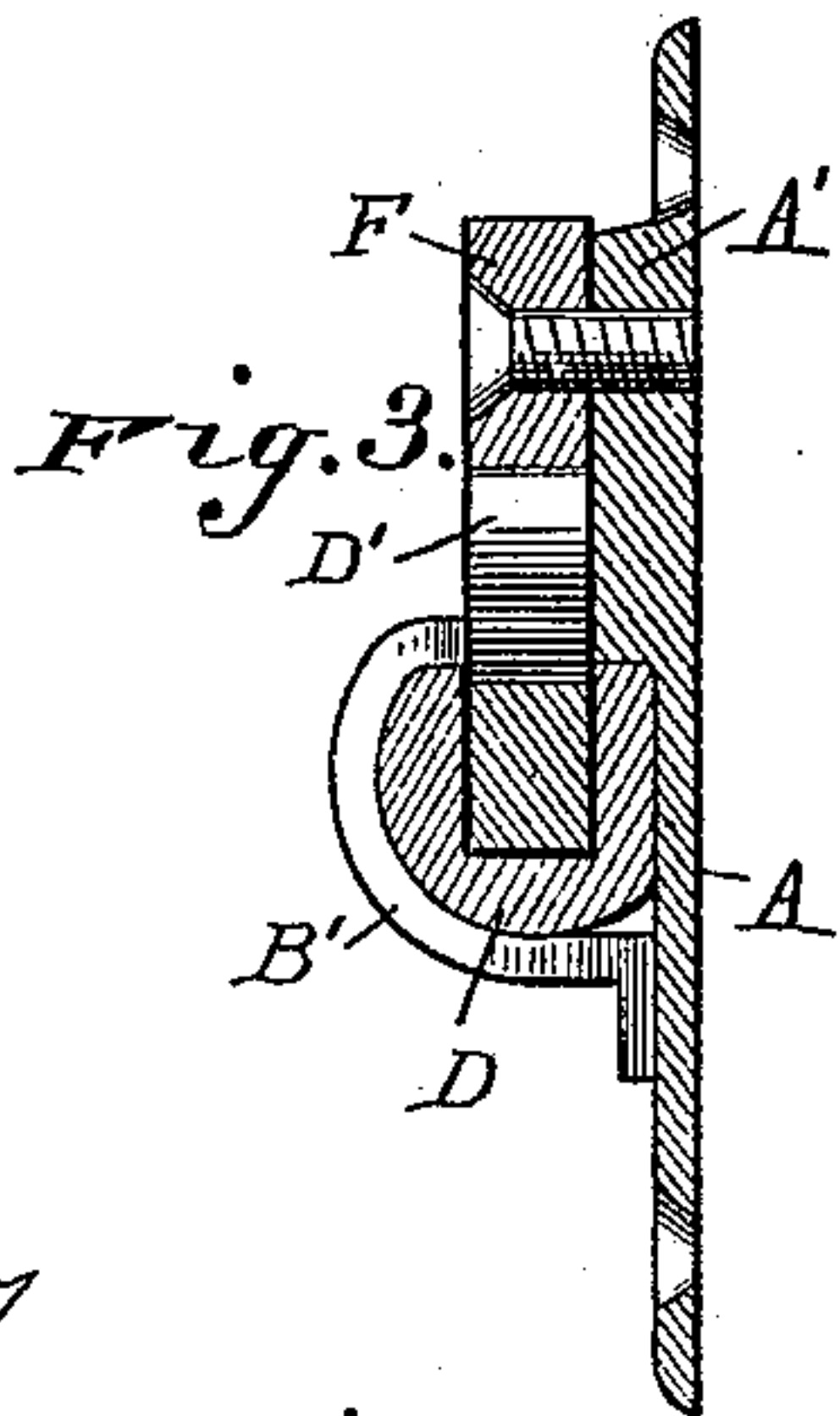
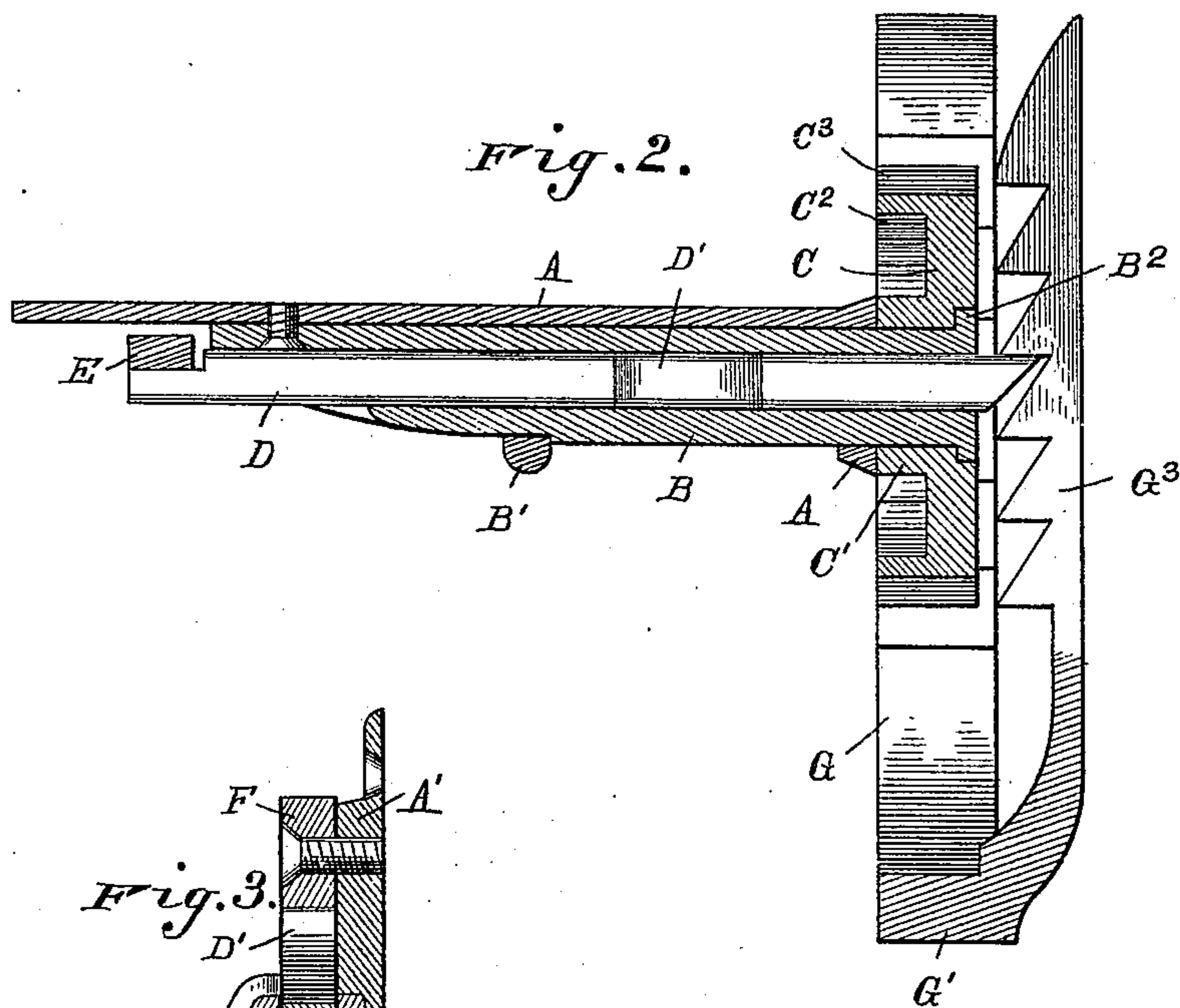
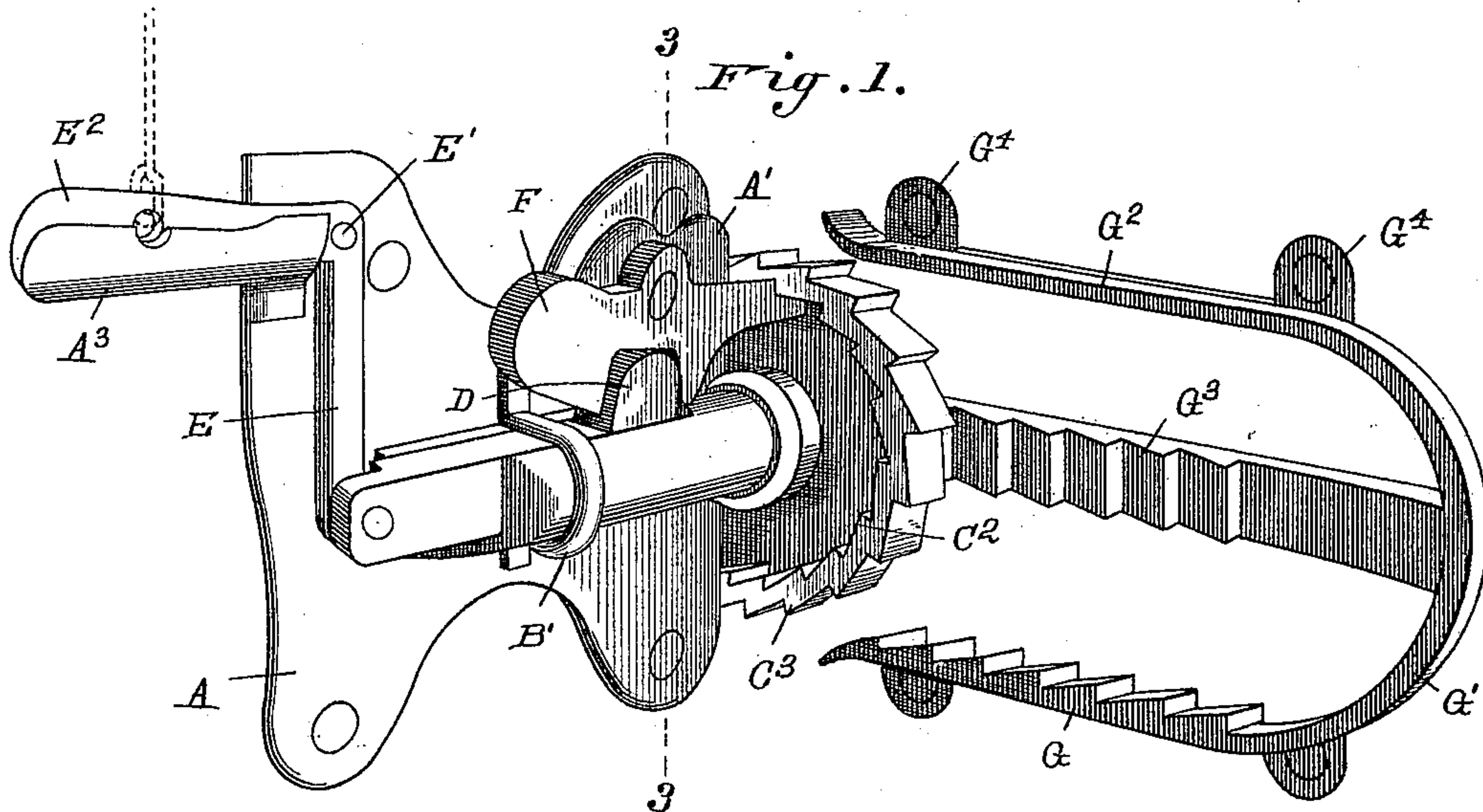
Patented Feb. 21, 1899.

J. F. MARTIN.

GATE LATCH.

(Application filed Sept. 15, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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GATE-LATCH.

SPECIFICATION forming part of Letters Patent No. 619,772, dated February 21, 1899.

Application filed September 15, 1898. Serial No. 691,036. (No model.)

To all whom it may concern:

Be it known that I, JAMES FRANKLIN MARTIN, a citizen of the United States, residing at Stanford, in the county of Lincoln and State of Kentucky, have invented a new and useful Gate-Latch, of which the following is a specification.

This invention relates generally to gate-latches, the object being to provide a latch which will be cheap and simple in construction and thoroughly efficient and reliable in operation.

Another object of the invention is to provide a gate-latch, the fastening or securing of which will be accomplished from two points, thereby insuring safety in the fastening.

Another object of the invention is to provide a gate-latch which can be so arranged as to raise the end of the gate in the act of fastening, if so desired.

With these objects in view my invention consists, essentially, of a gate-latch carrying a toothed wheel, a locking-bolt extending through the toothed wheel, and a toothed keeper adapted for engagement with both the toothed wheel and bolt, thereby insuring a locking at two points.

The invention consists also in providing a catch or pawl adapted for engagement with the toothed wheel, whereby the said toothed wheel is locked or unlocked, as desired; and the invention also consists in providing means for connecting the catch or pawl with the bolt, so that as said bolt is thrown in or out the catch is made to engage the toothed wheel.

The invention consists also in certain details of construction and novelties of combination, all of which will be fully described hereinafter and particularly pointed out in the appended claims.

In the drawings forming a part of this specification, Figure 1 is a view showing in perspective the various parts of my invention arranged in the positions they are intended to occupy when placed upon a gate and gatepost. Fig. 2 is a horizontal section taken through the center of the latch, the bolt being shown in full lines and a portion of the keeper in elevation. Fig. 3 is a vertical section on the line 3 3 of Fig. 1.

In carrying out my invention I employ a

base-plate A, which is intended to be secured to the end batten of the gate, and this plate may be of any required size and shape, and at the forward end is constructed with a boss A' and a ring A², while at the rear end a guard or handhold A³ is projected rearwardly. A barrel B is passed through the ring A² and rests beneath the boss A', said barrel being secured to the base-plate by means of the ring A² and a staple B', passed around said barrel near the rear end and connected in a suitable manner to the base-plate. The forward end of the barrel B is constructed with an annular shoulder or collar B², which serves to retain the toothed wheel C upon the end of said barrel which projects beyond the base-plate, the hub C' of said wheel being held between the collar B² and the ring A², as clearly shown in Fig. 2. A latch-bolt D slides in the barrel B, the rear end being opened and the bolt projected through said opened end in order to permit of the attachment of an elbow-lever E to the rear end of the said bolt, said elbow-lever being pivoted to the base-plate at E' and having the handle portion E² extended rearwardly and adapted to rest over or upon the rearward extension guide or handhold A³, said handle, however, projecting somewhat beyond the end of said guide in order that the said handle may be quickly and easily grasped and raised in order to throw the bolt rearwardly, said operation being accomplished by simply raising the handle E², which immediately trips the elbow-lever upon its pivot, and thereby draws the bolt backward. The upper portion of the barrel is slotted to permit the operation of a lug D', carried upon the bolt and either integral therewith or attached in any suitable manner, said lug being adapted for engagement with a catch-pawl F, pivoted upon the boss A' and adapted to engage the internal teeth C² of the toothed wheel C, while the external teeth C³ are adapted to engage with a rack-bar G, forming part of the latch or keeper, said rack-bar being extended, as shown at G', and brought back above the bar G and parallel therewith, as shown at G², in order to act as a guard or guide for projecting the toothed wheel into engagement with the toothed bar, and another toothed bar G³ extends from the

bowed portion G' about midway between the
 toothed bar and the guide and has its teeth
 arranged vertically, in contradistinction to the
 horizontal teeth of the bar G , and these teeth
 5 are intended for engagement with the beveled
 end of the locking-bolt, it being clear that
 as the gate is closed the toothed wheel will
 ride upon the lower rack-bar G , while the
 beveled end of the bolt will ride upon the
 10 teeth of the rack-bar G^3 , and as the bolt is
 worked back and forth by passing into and
 out of the teeth the lug D' , engaging the catch-
 pawl F , will alternately throw the said pawl
 into or out of engagement with the internal
 15 teeth of the toothed wheel, thereby locking
 or releasing the said wheel, so that so long
 as the bolt is disengaged from the bar G^3 the
 wheel can revolve in either direction, and
 it will be noticed that the wheel can al-
 20 ways revolve in a direction which will pro-
 ject it toward the bowed portion G' , or, in
 other words, the toothed wheel can always
 operate to latch the gate and likewise the
 bolt; but in order to unlatch the gate it will
 25 be necessary to raise the handle of the lever,
 which will cause the bolt to be withdrawn
 and the pawl-catch to be thrown down, there-
 by releasing both the bolt and the wheel.

It will thus be seen that I provide an ex-
 30 ceedingly cheap and simple construction of
 gate-latch which will latch the gate from two
 points of contact—namely, the engagement of
 the bolt with the bar G^3 and that of the toothed
 wheel with the toothed bar G , the catch-pawl,
 35 of course, being necessary in both instances to
 hold both the bolt and the toothed wheel in a
 fixed position. The keeper, comprising hori-
 zontal and vertical toothed bars and the upper
 guide-arm, is provided with suitable ears or
 40 lugs G^4 for attachment to the gate-post, and
 by arranging the keeper at a slight angle, so
 that the bowed portion is higher than the open-
 ing, the end of the gate can be raised in the
 latching operation, thereby elevating the sag-
 45 ging end of the gate, and, furthermore, by ar-
 ranging the keeper at a slight inclination the
 toothed wheel will immediately roll down the
 incline the moment it is released, thereby

tending to make the opening of the gate au-
 tomatic.

Having thus fully described my invention,
 what I claim as new, and desire to secure by
 Letters Patent of the United States, is—

1. In a gate-latch, the combination with a
 toothed bar attached to a gate-post, a sliding
 bolt mounted upon the gate and adapted to
 engage said bar, a second toothed bar also at-
 55 tached to the gate-post, and a toothed wheel
 adapted to turn about the bolt and engage the
 said second bar, substantially as shown and
 described.

2. In a gate-latch, the combination with a
 toothed bar attached to a gate-post, a sliding
 bolt mounted upon the gate and adapted to
 engage said bar, a second toothed bar also at-
 65 tached to the gate-post, a toothed wheel adapt-
 ed to turn about the bolt and engage the said
 second bar, and means for locking and un-
 locking the said bolt and wheel, substantially
 as shown and described.

3. In a gate-latch, a sliding bolt mounted
 upon a gate, an internally and externally
 toothed wheel turning about the end of said
 bolt, a pawl engaging the bolt and wheel, and
 a keeper adapted for attachment to the post,
 75 and provided with toothed bars for the en-
 gagement of the bolt and toothed wheel, sub-
 stantially as shown and described.

4. A gate-latch comprising a base-plate car-
 rying a barrel, an internally and externally
 80 toothed wheel mounted upon the forward end
 of said barrel and projecting through said
 wheel, a hand-lever pivoted to the plate and
 adapted to operate the bolt, a pawl pivoted
 to the plate and adapted to engage the toothed
 85 wheel and a lug on the bolt, and a keeper com-
 prising a horizontal toothed bar for the
 toothed wheel, a vertical toothed bar for the
 bolt, and a guide-bar or guard to guide the
 wheel into contact with the bar, substantially
 90 as and for the purpose described.

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Witnesses:

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