

(No Model.)

J. A. AWALT.

SAFETY PINION FOR WATCHES.

No. 248.127.

Patented Oct. 11, 1881.

Fig. 1.

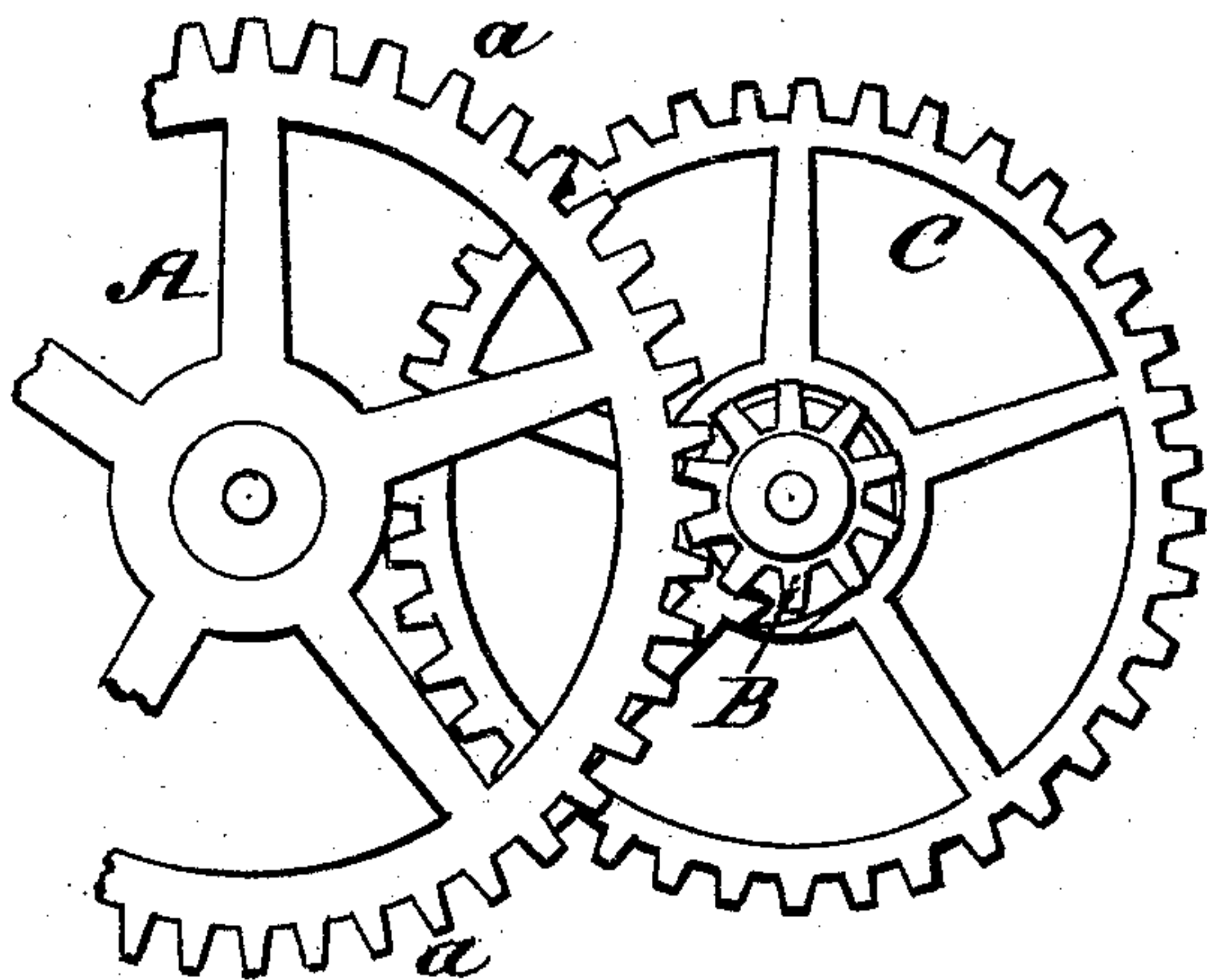


Fig. 2.

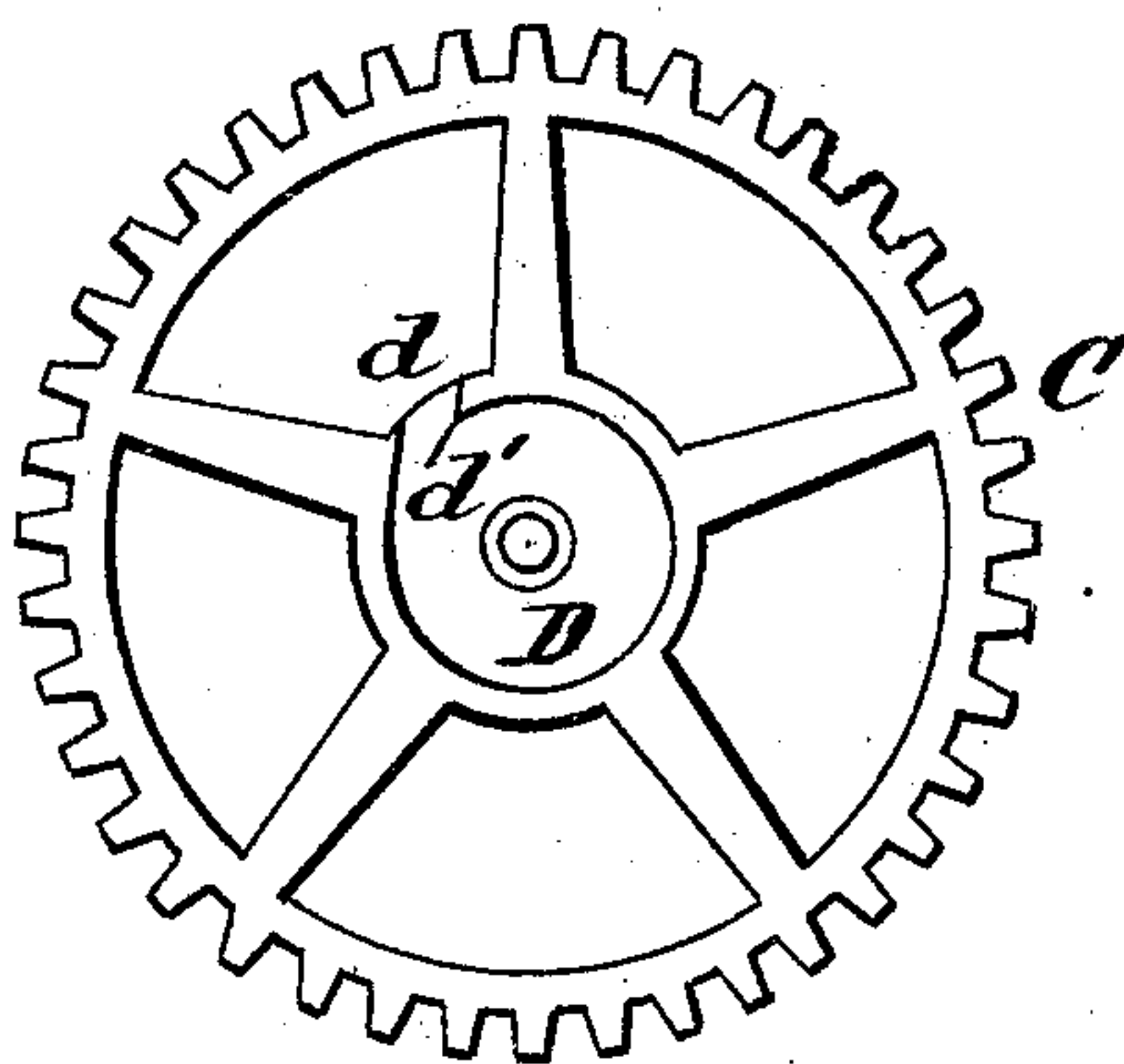
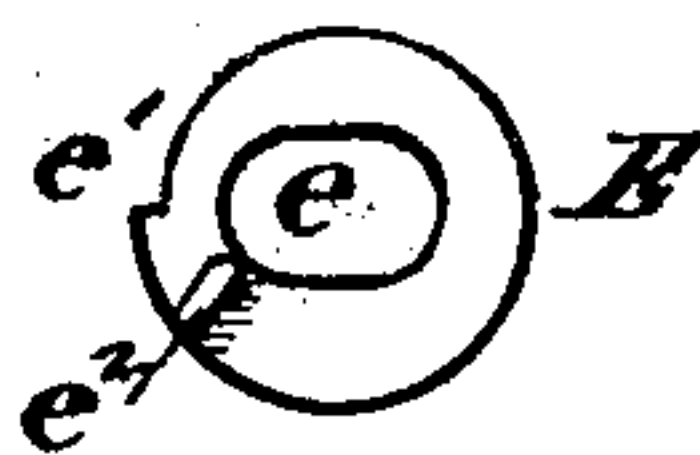


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN A. AWALT, OF ANDERSON, INDIANA.

SAFETY-PINION FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 248,127, dated October 11, 1881.

Application filed July 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. AWALT, a citizen of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Safety-Pinions for Watches; and I 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, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to a safety-pinion for use in watches; and the novelty consists in the construction and arrangement and adaptation of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claim.

The object of the invention is to produce a simple and efficient pinion for watches, particularly of that class known as "Geneva" or "Swiss" watches, or "American" watches, the same being adapted to mesh with the teeth on the mainspring-barrel; and the invention consists in the mechanism illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view, partly in section; Fig. 2, a view with the pinion removed, and Fig. 3 a detail view.

To enable others skilled in the art to which the invention relates to make and use the same, I will describe the construction and mode of operation of the same, reference being had to the said drawings, in which similar letters of reference indicate like parts in all the figures, and in which—

A represents the mainspring-barrel, having teeth or cogs *a*, which mesh in the pinion B.

C represents the center wheel of a watch, in the hub of which, around the post upon the pinion side, I form an annular recess, D, leading from which outward is an inclined recess, *d*, forming a shoulder, *d'*.

E represents a lock-wheel, which is adapted to operate in the recess D, having an oblong central aperture, *e*, which receives the center-wheel post, a tooth, *e'*, adapted to operate against the shoulder formed by the recess *d*, and an inclined lug, *e''*, upon the pinion-surface, which acts, in conjunction with a projection or friction-surface, upon the contiguous surface of the pinion to force the lock-wheel back and forth on the post—i. e., in locked position with the tooth *e'* in the recess *d*, or out of locked position, and riding idly in the recess D.

The force of the mainspring automatically forces the locking-wheel over through the pinion until the tooth *e'* engages the shoulder *d'*, and the center wheel is thus locked with the pinion B, and revolves with it, transmitting motion to the train of mechanism.

If by accident the mainspring should break, the recoil shock would tend to break some of the teeth of the cogs or injure the leaves of the pinion; but with this construction the lug *e''*, upon the recoil of the pinion, forces the wheel E over until the locking-wheel tooth *e'* is disengaged from the recess *d*, and the said wheel turns idly in the recess D until the shock is over, and the center wheel is undisturbed and uninjured.

What I claim as new, and desire to secure by Letters Patent, is—

The center wheel, C, having annular recess D and shoulder *d'*, and the pinion B, having projection, combined with the locking-wheel E, having elongated central aperture, *e*, tooth *e'*, and inclined lug *e''*, and with the mainspring-barrel A, as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. AWALT.

Witnesses:

A. CALMESE,
W. ROTH.