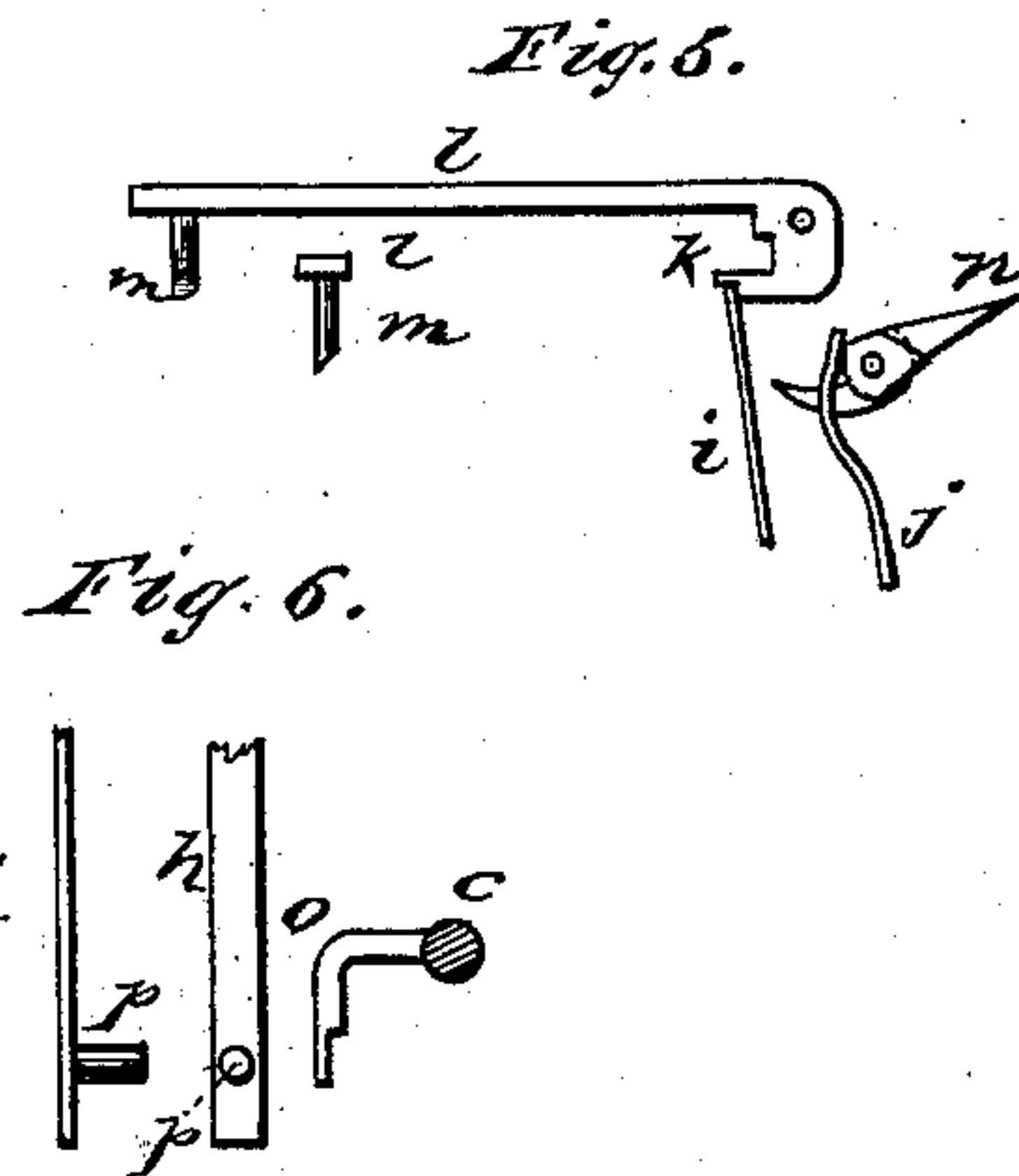
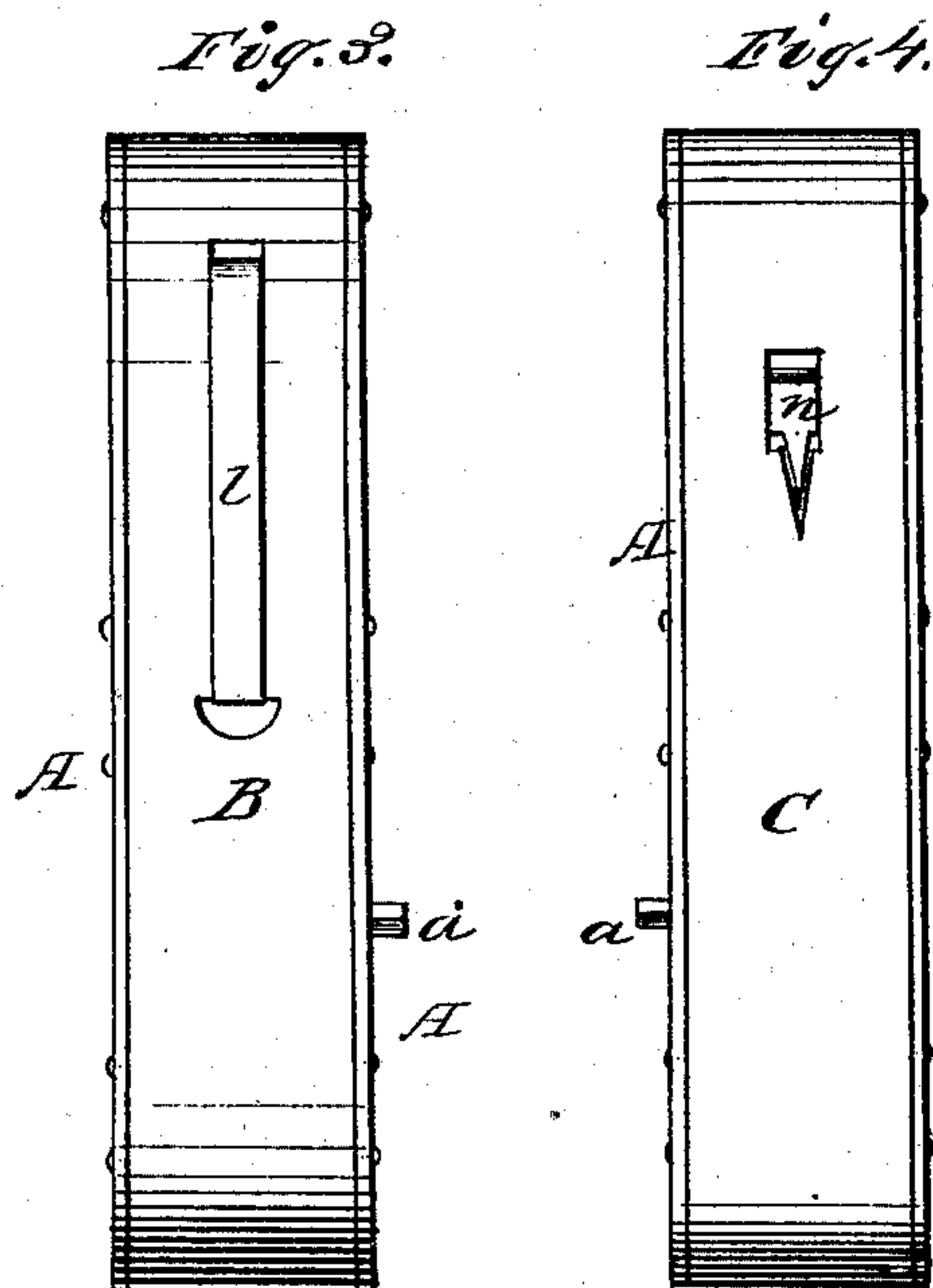
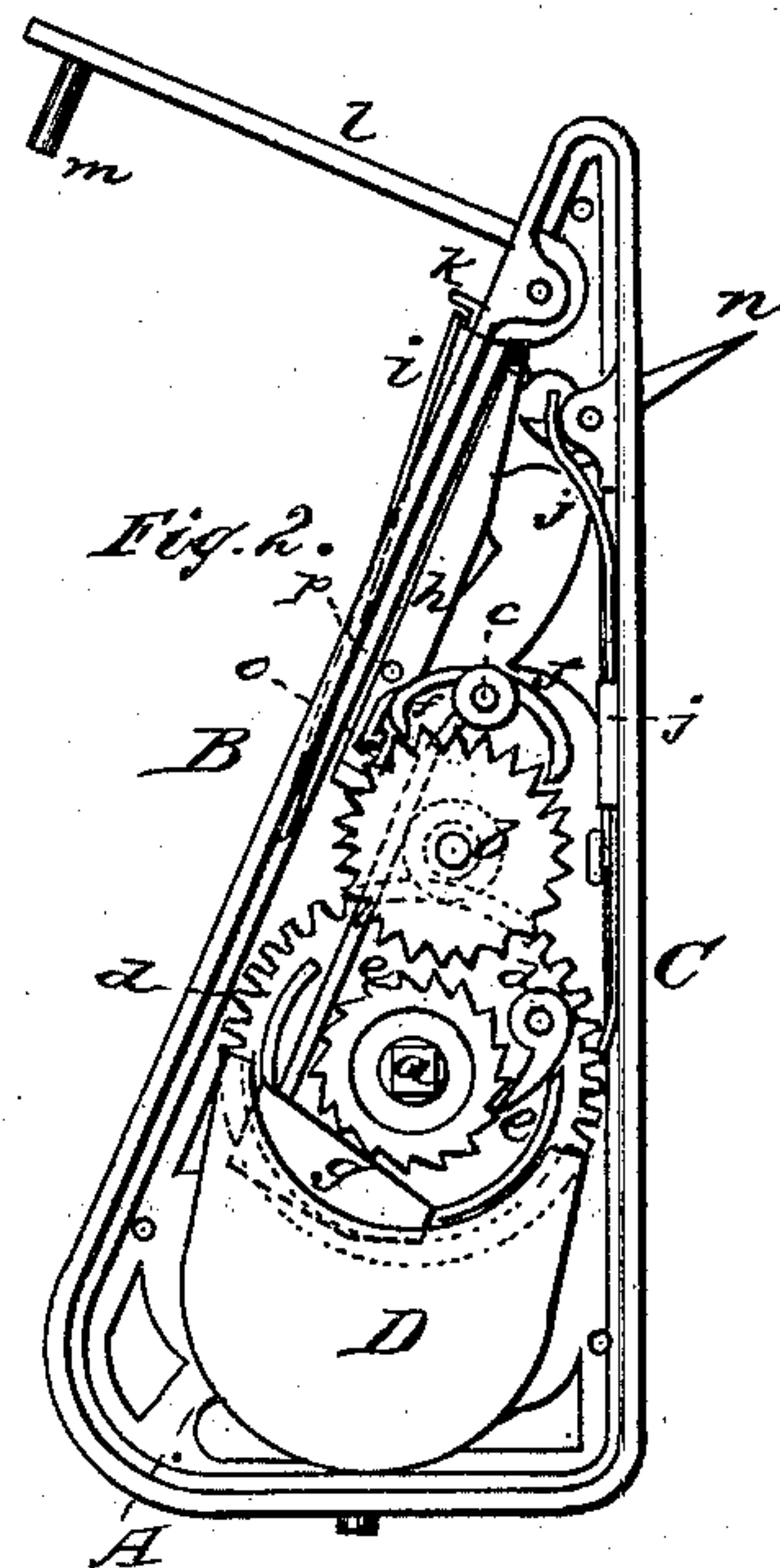
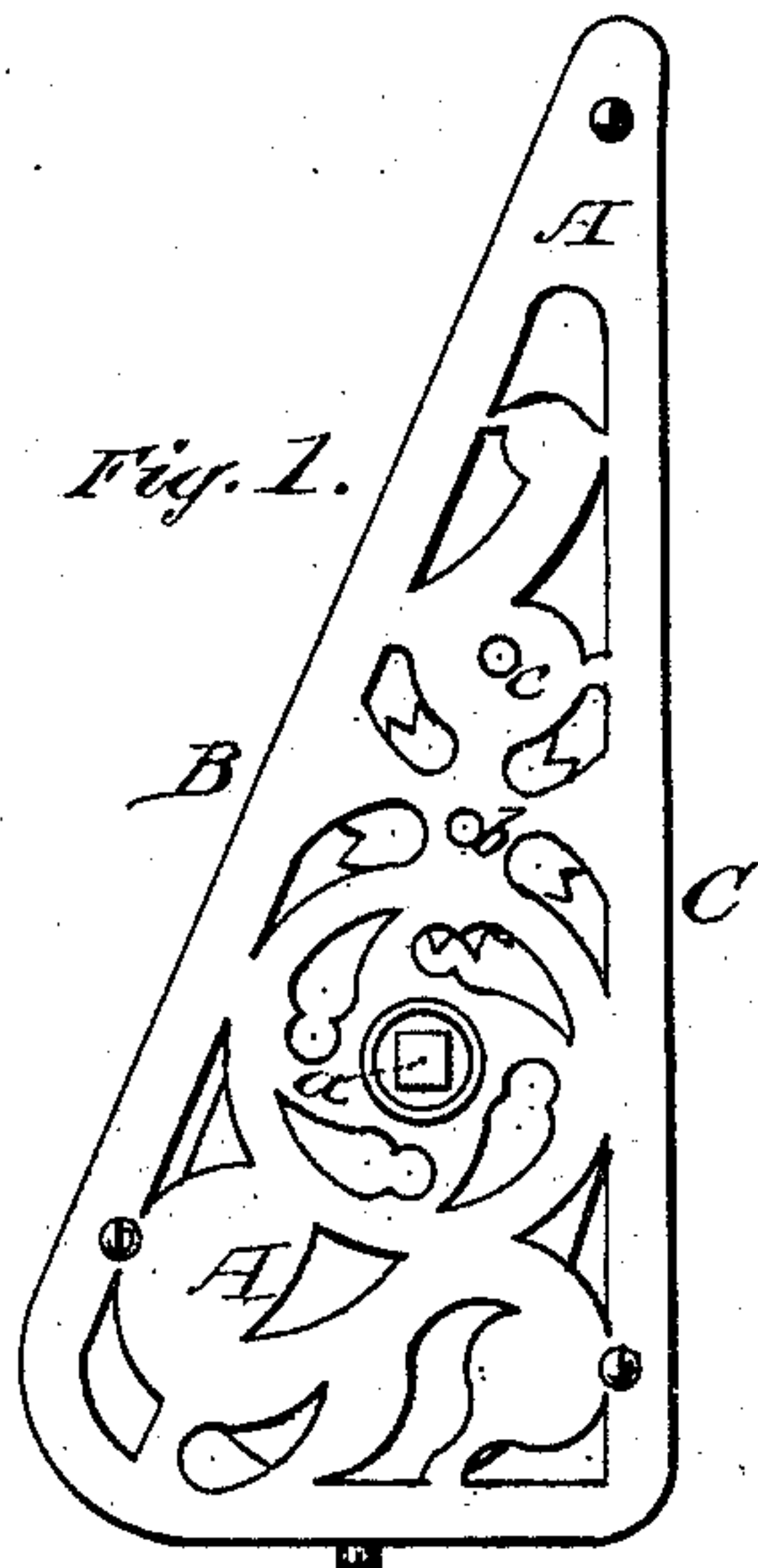


C. H. WILLIAMS.  
Burglar-Alarm.

No. 165,967.

Patented July 27, 1875.



WITNESSES:  
John W. Munday  
C. W. Bond -

INVENTOR:  
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By West & Bond  
Atty.



# UNITED STATES PATENT OFFICE.

CARMI H. WILLIAMS, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **165,967**, dated July 27, 1875; application filed May 22, 1875.

*To all whom it may concern:*

Be it known that I, CARMI H. WILLIAMS, of the city of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Burglar-Alarms, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view; Fig. 2, a similar view, with the side plate removed; Fig. 3, a top view; Fig. 4, a bottom view; and Figs. 5 and 6, details.

The nature of this invention consists in providing a wedge-shaped case, which shall also form the casing of the inclosed movement; in providing the case with a folding arm and tooth, and in the several combinations hereinafter set forth and claimed.

In the drawings, A represents the side plates; B, the top plate, and C the bottom plate or bands; D, the bell; *a*, the main shaft, to which the spring and main wheel are attached; *b*, the intermediate shaft, with verge-wheel attached; *c*, the escapement-shaft; *d*, the main wheel; *e*, the pawl and ratchet on the main wheel; *f*, the escapement; *g*, the hammer; *h*, the detent-spring; *i*, the spring operating the hinged arm; *j*, the spring holding the folding tooth; *k*, a projection or tumbler on the arm; *l*, the hinged arm; *m*, a pin on said arm *l*; *n*, the folding tooth; *o*, a pin on the escapement-shaft; *p*, a pin on the detent-spring.

The case is made of any suitable material, and the top and bottom may be made of one piece or strip of metal cast or bent into form. The movement has its bearings in the side plates, and, with the exception of its arrangement, is not materially different from ordinary alarm-movements. The bell D is placed in the broad end. Next to this is placed the main wheel, which is provided with a main or other suitable spring, wound by an ordinary key, and provided with the usual ratchet and spring-pawl *e*. Next to this is the intermediate shaft *b*, provided with the usual verge-wheel, and then the ordinary escapement. The hammer *g* is attached to the escapement-shaft *c*, and to this shaft I also attach a short pin, *o*. (Seen in Fig. 6.) This pin

engages with the pin *p* on the detent-spring *h*, which locks the escapement and prevents the train from running down; but it only operates as a lock when the arm *l* is in the position shown at Fig. 2. The arm *l* is pivoted in the case, and is provided with an arm or tumbler, *k*. This tumbler, at its end, is provided with a shoulder, (shown at Fig. 5,) on which the end of the spring *i* rests when the arm is elevated. When the arm is depressed the spring *i* slips over the tumbler and rests on its inner face, so that by one spring the arm *l* is held in position when it is either open or closed. Below this folding arm *l* is placed a folding tooth, *n*, which is also provided with a spring, *j*, to hold it either open or closed. It is provided with a projection on the inside, which folds over the tumbler *k* when the arm *l* is closed, so that the opening of the arm will open or partly open the tooth *n*. The pin *m* is beveled off, as shown at Fig. 5, and when the arm *l* is folded, this pin crowds the pin *p* on the detent-spring *h* to one side, and away from the arm or pin *o* of the escapement-shaft, when the train is put in motion.

In use the alarm is opened, as shown at Fig. 2, and placed on the floor, with the point under or close to the door, and the tooth pressed sufficiently in the floor or carpet to hold the alarm firmly when the arm *l* is closed. On opening the door it strikes the arm *l* and folds it, when the pin *m* releases the detent and starts the train. This alarm also acts as a wedge to prevent the opening of the door. For this purpose, additional teeth may be added, if desired, to prevent it slipping.

I am aware that wedge-shaped alarms have heretofore been made by forming a wedge-shaped case around the ordinary alarm-movement, which is made for a clock attachment. This necessarily makes it of a considerable size, and so large that it cannot be carried in the pocket, or conveniently carried when traveling. By making the movement-case wedge-shaped, which I believe has not before been done, I reduce the alarm to a small size, and by making the projecting arm *l* and the holding tooth or teeth folding, it can be carried in the pocket or elsewhere without inconvenience, and without catching in the cloth.

What I claim as new is as follows:

1. The folding tooth *n* and spring *j*, substantially as and for the purposes described.
2. The combination of the lever *l*, provided with the lip *k*, with the tooth *n*, provided with a projection for starting or opening the tooth, substantially as set forth.
3. The folding tooth *n* and spring *j*, in com-

bination with the lever *l*, and inclined pin *m*, and the case A B C, substantially as and for the purpose specified.

CARMI H. WILLIAMS.

Witnesses:

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