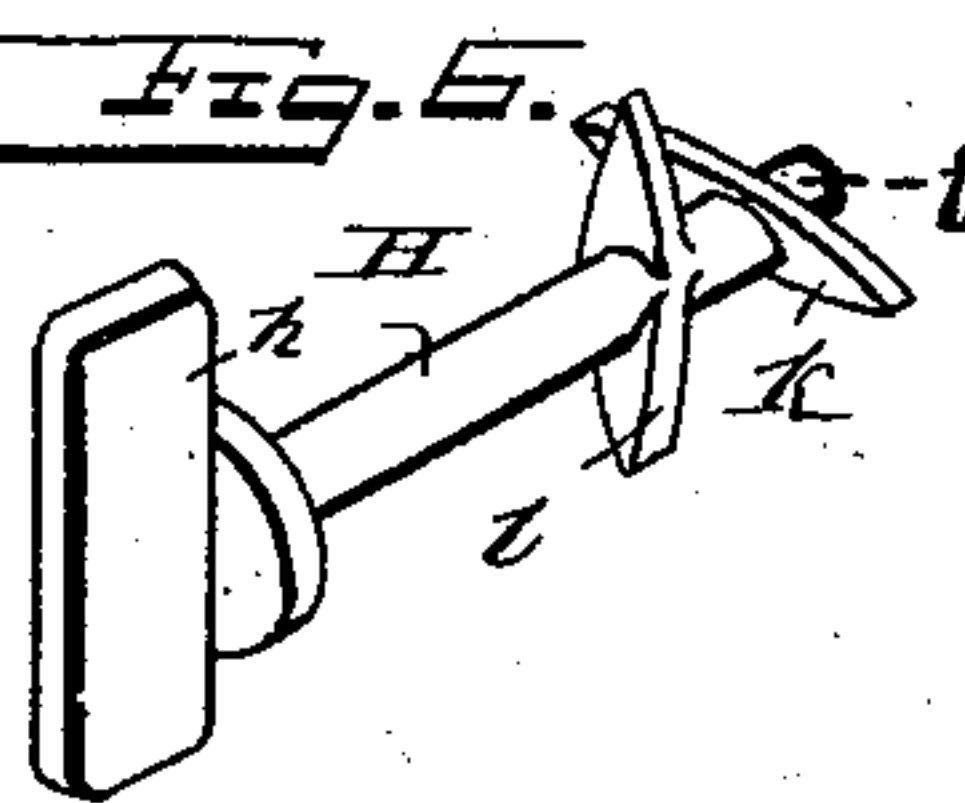
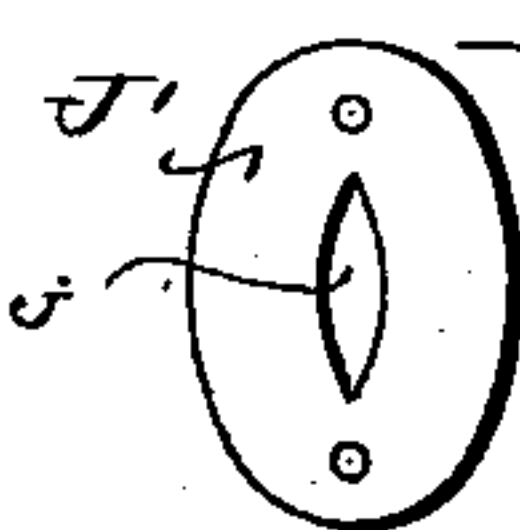
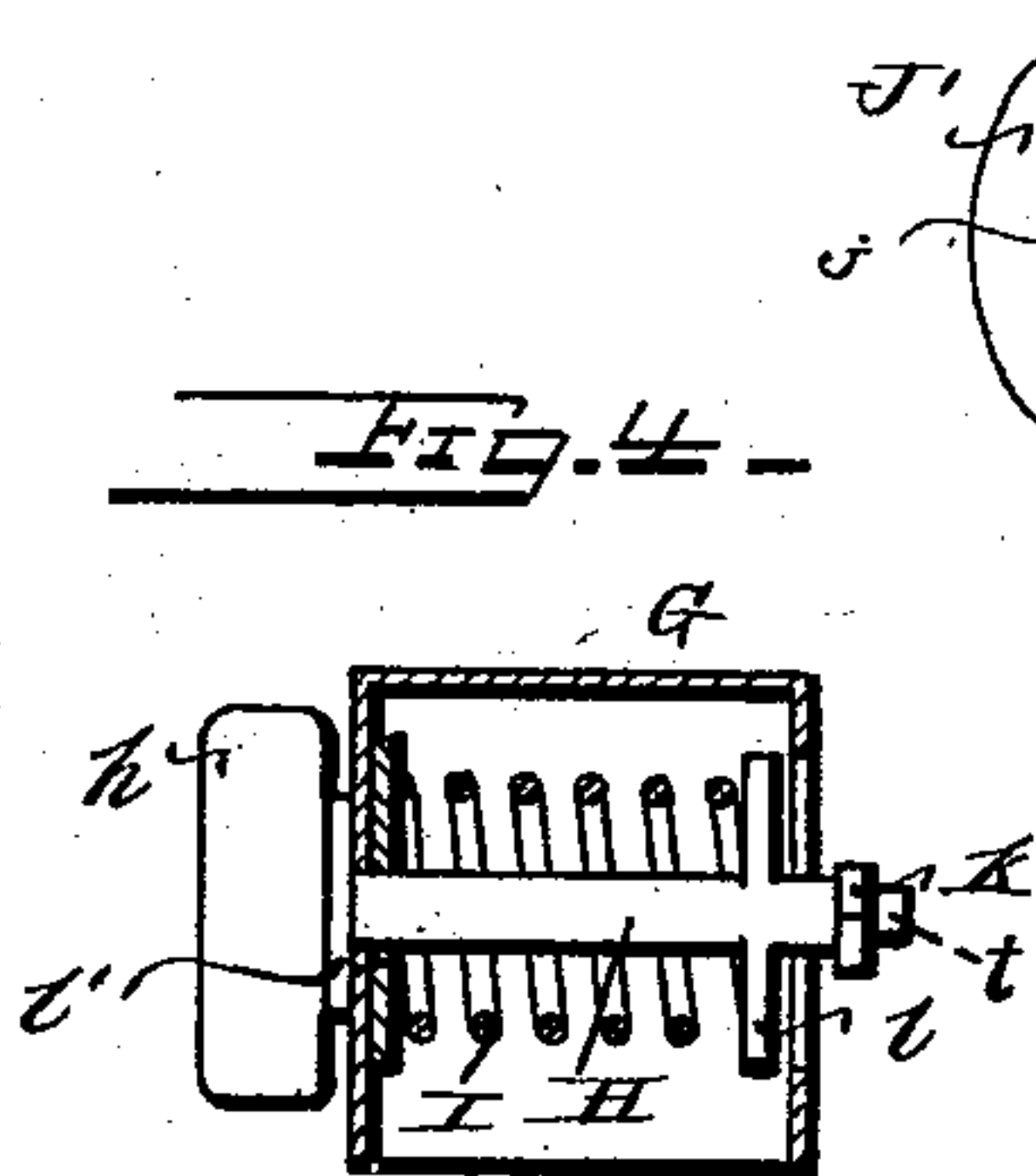
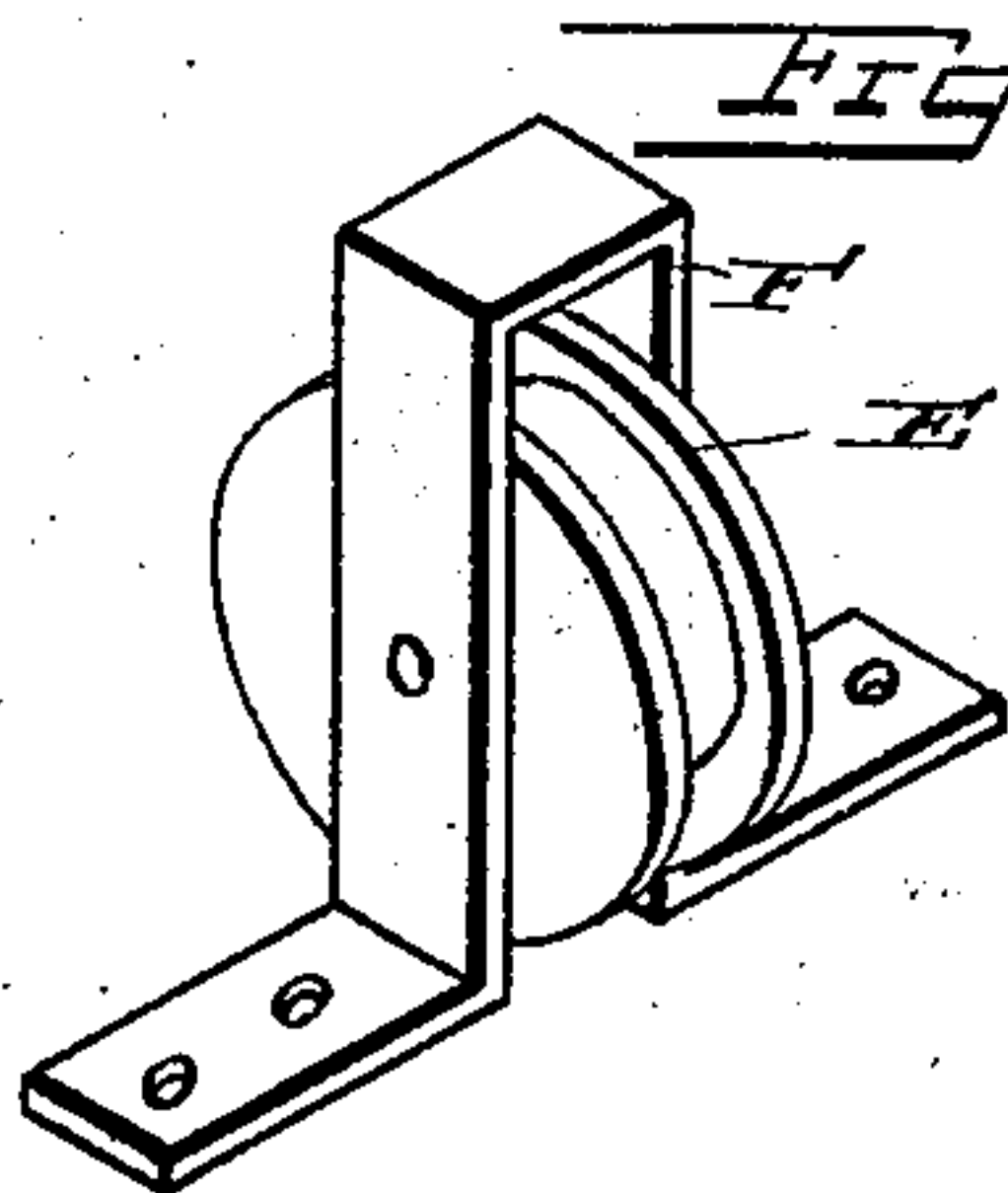
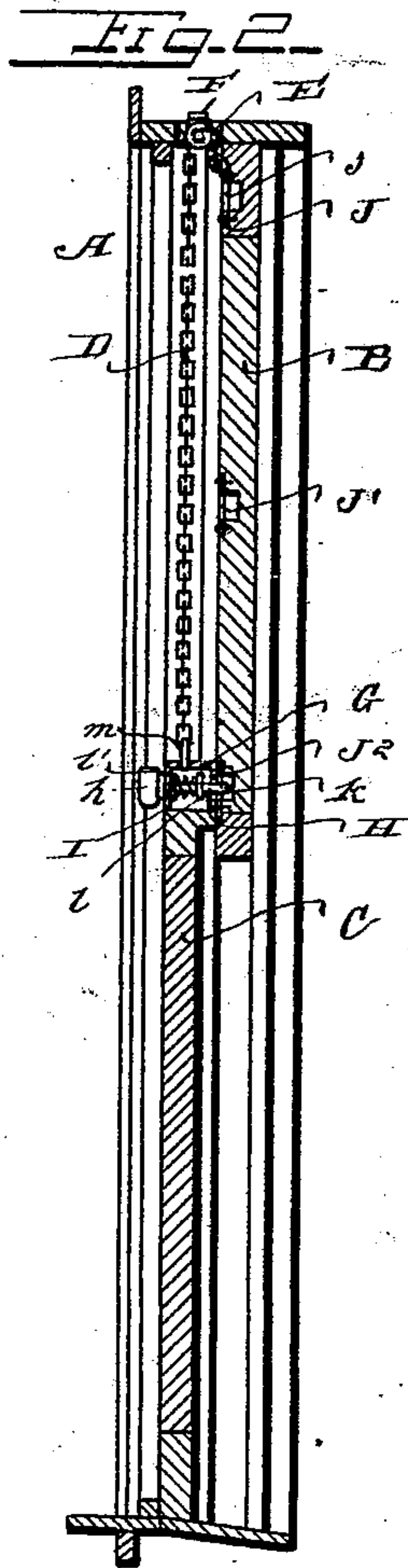
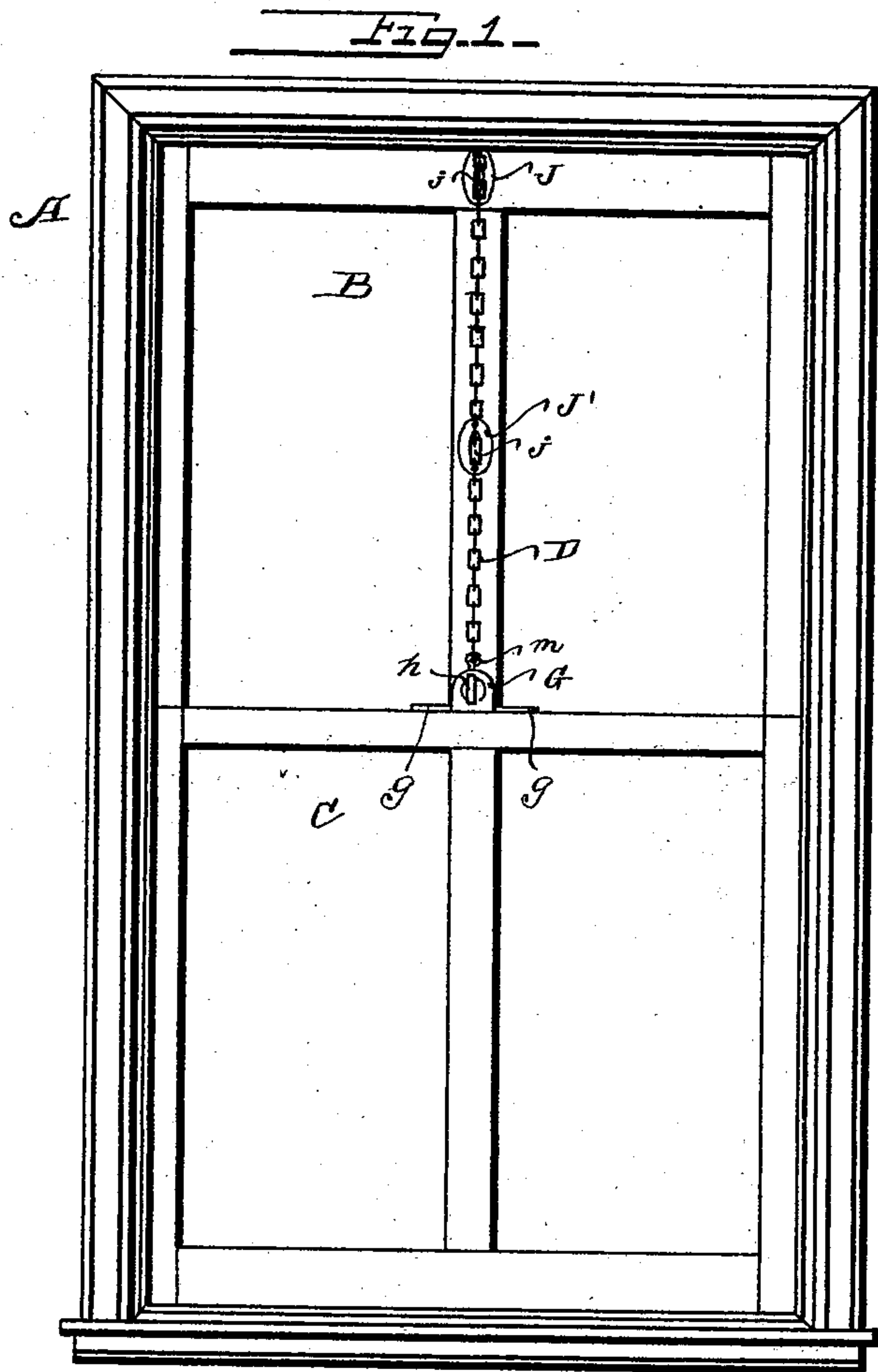


(No Model.)

W. K. MORGAN.
SASH BALANCE.

No. 517,760.

Patented Apr. 3, 1894.



WITNESSES

Jesse Heller.
Phil. Massi.

INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM K. MORGAN, OF EUREKA SPRINGS, ARKANSAS.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 517,760, dated April 3, 1894.

Application filed March 31, 1893. Serial No. 468,479. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. MORGAN, a citizen of the United States, and a resident of Eureka Springs, in the county of Carroll and State of Arkansas, have invented certain new and useful Improvements in Sash-Balances; and I do 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a front elevation of window casing and sash with invention applied. Fig. 2 is a vertical section of same; Fig. 3 a perspective view in detail of pulley and bracket. Fig. 4 is a sectional view in detail of the casing. Fig. 5 is a detail view of the plate and Fig. 6 is a perspective view of the rod or bolt.

This invention has relation to certain new and useful improvements in combined sash locks and hangers, and it consists in the novel construction and combination of parts, all as hereinafter described and pointed out in the accompanying claim.

Referring to the accompanying drawings, the letter A designates a window casing, B the upper or outer sash, and C the lower or inner sash, arranged to slide in grooves or ways in said casing in the customary manner. Said sashes are connected by a cord or chain D, connected at its ends to the central portions of the upper rails of the respective sashes, and at its intermediate portion passing over a pulley E, hung in the central top portion of the casing. Said pulley is carried by a U-shaped bracket F, which is set into a slot or cut-away portion in the under face of the top piece of the casing, the end portions of said bracket being bent horizontally outward, and screwed, or otherwise suitably secured to the casing. By this connection of the sashes, it will be apparent that they are enabled to mutually counterbalance each other, thus doing away with the necessity for counterbalancing weights. This arrangement may also be easily applied to sashes and casings, in which it would not be possible or convenient to use counterbalancing weights.

In order to lock the sashes in different positions, I provide the locking arrangement now to be described.

Secured to the upper face of the top rail of the inner sash at the central portion thereof, is a chambered or hollowed casing G, having lateral base flanges *g*, by means of which it is secured to the sash rail. Extending horizontally through said casing, and having loose bearings in its end walls, is a short rod or bolt H, which at its outer projecting end has a thumb head *h*, and at its inner projecting end a T-head *k*. Coiled around said rod or bolt within said casing, between a lug *l* on the bolt and a washer *l'*, is a spring I, the tension of which acts to normally project the T-head *k*. Secured to the inner face of the top rail of the outer sash, at its central portion is a plate J, having therein an elongated vertical slot *j*, the length of which is greater than that of the T-head of the bolt H, but whose breadth is less than the length of said head. The face of the sash rail back of this slot is recessed to receive the T-head. A similar plate J' is secured to the intermediate portion of the center rail of said outer sash, and a third plate J² is secured to said rail near where it joins the bottom rail.

When the two sashes are in such position as to afford the greatest extent of opening at top and bottom, the T-head of the bolt H will be projected by its spring into engagement with the outer sash through the upper plate J, and upon giving said bolt a one-fourth turn, the two sashes will be locked fast to each other. When the sashes are opened to a less extent, the bolt is engaged through the slot in the intermediate plate J', and when the sashes are both closed, they are locked by the engagement of the bolt through the slot in the lower plate J'. In order to release the lock, it is only necessary to give it a one-fourth turn and pull outwardly thereon. The bearing aperture in the outer end of the casing is of the same shape as are the slots *j* in the plates J, J', J², so that the bolt may be withdrawn until its T-head is entirely within the casing, when a quarter turn will lock it against being projected out of the casing. By means of this provision, the sashes may be raised and lowered freely without locking.

Projecting beyond the T-head is a small stud or extension *t* which serves as a journal for the bolt when it is so withdrawn. Inasmuch as the spring is so arranged as to normally project the bolt with engagement with the other sash, it is not necessary in operating either sash to observe that the bolt is exactly opposite a slot, for immediately upon reaching this position, the spring at once throws the bolt into engagement.

A small hook or eye *m* is usually formed on the top portion of the casing G for the attachment of the chain or cord D.

The device does not in any way disfigure the appearance of the sash or casing, and the entire arrangement is simple, inexpensive, and convenient.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combination with a pair of mutually counterbalancing and sliding sashes, of the lock therefor, said lock comprising a casing

adapted to be secured to the top rail of the lower sash, a rotary bolt journaled in said casing, a T-head on the engaging end of said bolt, a bearing stud projecting beyond said head, a lug or collar on said bolt within said casing, a spring coiled around said bolt and confined between said lug or collar and the inner end wall of the casing and acting to normally project said bolt, an opening in the outer end of said casing of such a shape as to permit the passage of said T-head when the latter is turned parallel therewith, but not when at an angle thereto, and a series of plates secured to the upper sash and having each an opening therein corresponding to the opening in the inner end of said casing, substantially as specified.

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

WILLIAM K. MORGAN.

Witnesses:

T. J. GORDON,

W. H. ELLIOTT.