

(No Model.)

T. F. SHERIDAN.

STEM WINDING AND SETTING WATCH.

No. 376,015.

Patented Jan. 3, 1888.

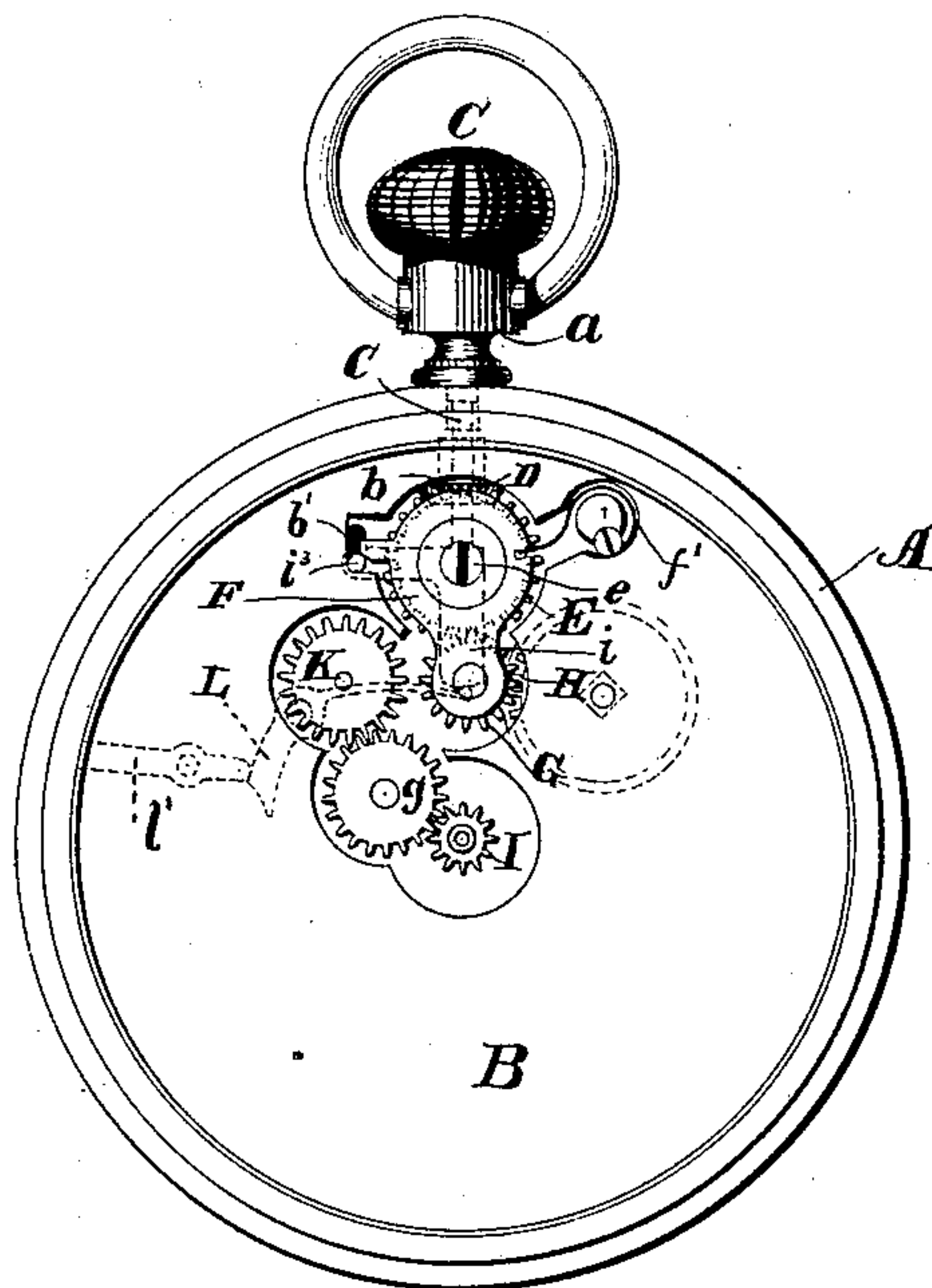


Fig. 1.

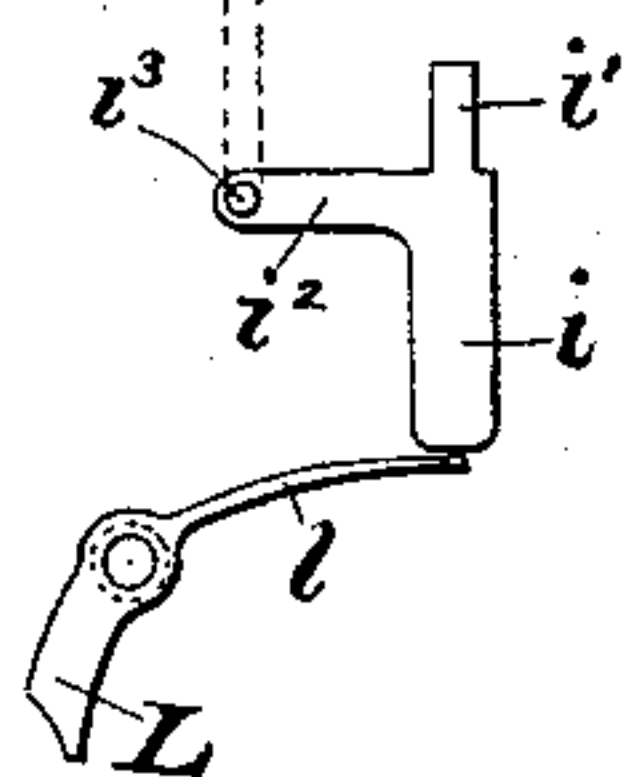
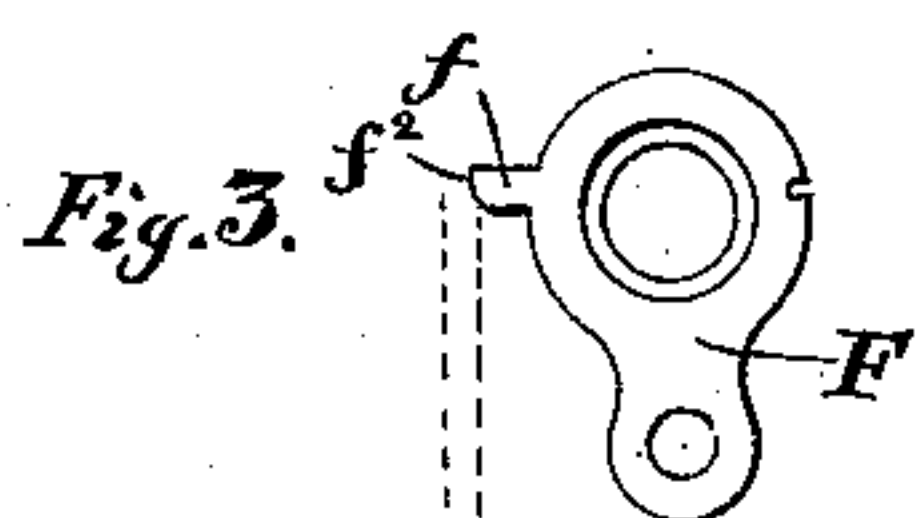


Fig. 4.

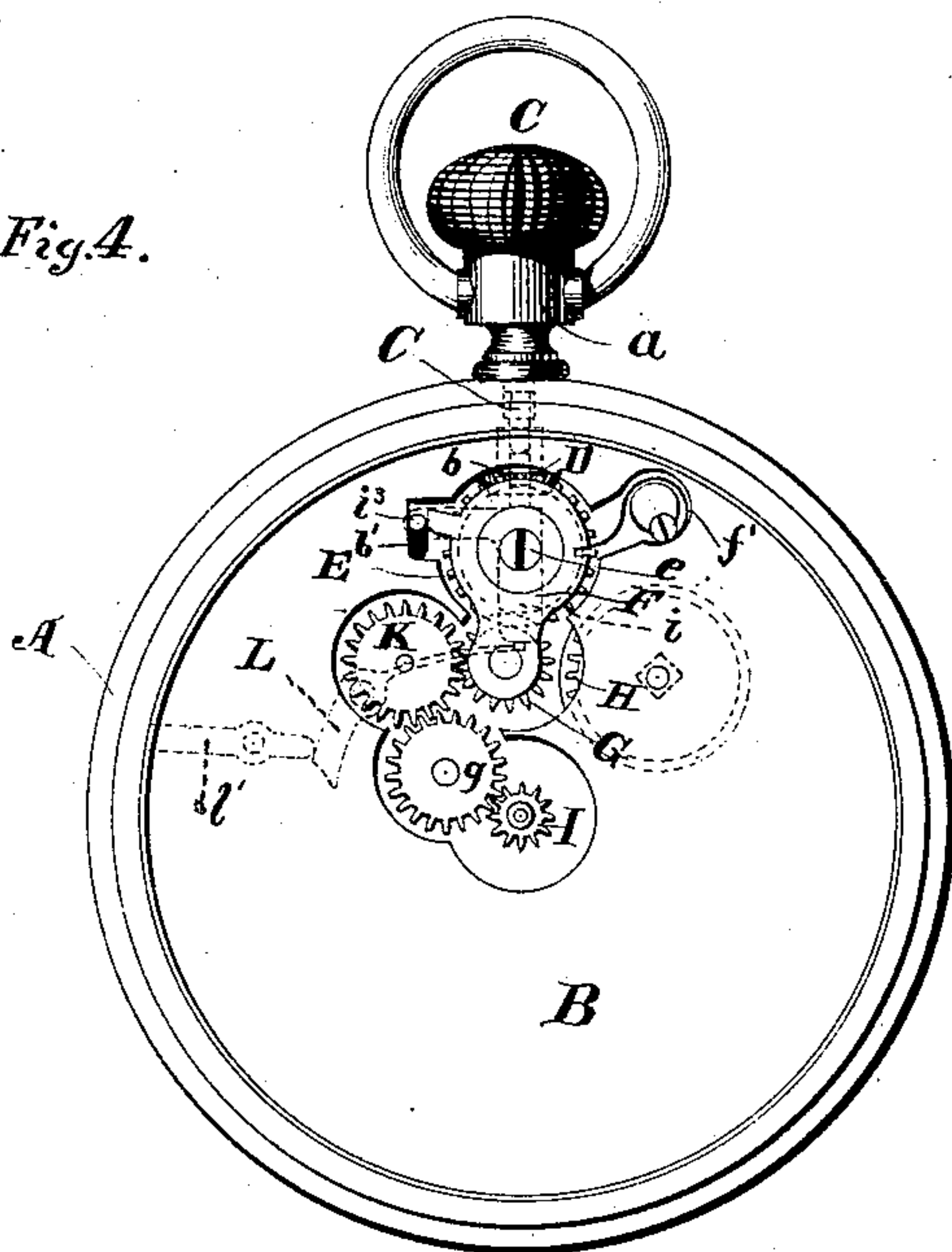


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS F. SHERIDAN, OF SPRINGFIELD, ILLINOIS.

STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 376,015, dated January 3, 1888.

Application filed August 13, 1887. Serial No. 246,887. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. SHERIDAN, a citizen of the United States, resident at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Stem Winding and Setting Watches; 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 or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of a watch-movement with the yoke F in engagement with the wheel H. Fig. 2 is a plan view with the yoke in engagement with the wheel K. Figs. 3 and 4 are detail views.

My invention relates to watches in which the winding and hands setting train is moved into engagement with the winding-wheel or dial-wheels by operating the stem-arbor; and it consists in the novel construction and combination of parts, as hereinafter set forth.

One of the principal objects of the invention is to provide a winding and hands-setting train which is normally in engagement with the dial-wheels when the movement is cased, and is adapted to be placed in engagement with the winding-wheel by the movement of a stem arbor.

A further object of my invention is to provide a winding and hands-setting train which is adapted to be placed in engagement with the winding-wheel by the movement of a stem-arbor, and is normally held in engagement with the dial-wheels by the action of a spring and a swing-bar which is operative for such purpose when the movement is cased; and, further, the invention has for its object to provide a winding and hands setting train which, when the movement is cased, is normally held in engagement with the dial-wheels, and which can, only when said movement is removed from its case, be relieved from constraint and left free to engage with the winding-wheel.

This invention has also for its object to provide, in combination with a winding and hands-setting train, a spring and swing-bar which operate to hold said train normally in engage-

ment with the dial-wheels when the movement is in a case, and can be made inoperative for such purpose only when said movement is removed from its case.

A further object of the invention is to provide a stem-driven train having a pivoted yoke and a slide-bar which by its rectilinear motion is adapted to connect or disconnect said stem-driven train with the winding-wheel; and the invention is further designed to provide a stem-driven train having a pivoted yoke and a slide-bar having a rectilinear motion, whereby the said yoke is caused to carry the said train out of engagement with the winding-wheel and into engagement with the dial-wheels and become locked in such position; and the invention finally has for its object to provide, in connection with a stem-driven train, a pivoted yoke, a slide-bar provided with a projection or pin, and an actuating-spring, these parts being arranged and combined as shown, in order that when said train is engaged with the winding-wheel it is automatically disengaged from the dial-wheels; and when engaged with said dial-wheels it is by the same operation disengaged from the winding-wheel.

Referring to the accompanying drawings by letter, A represents the center band of a watch-case, having a pendant, *a*; and B, the pillar or lower plate of a watch-movement, said plate being fitted to and secured within said case in the usual manner. Within the pendant *a* is a stem-arbor, C, provided with a corrugated cap at its outer end, and at its inner end engaging axially a pinion, D, that is journaled in a suitable bearing upon the lower face of the plate B, and has its toothed periphery extending through an opening, *b*, which is provided in said plate where it engages the toothed wheel E, which is pivoted to the latter by means of a screw, *e*, so that said wheel E can be rotated in either direction by rotating the stem-arbor. Upon the upper end of the screw *e* is pivoted a yoke, F, which has pivoted upon its lower face at one end a spur-wheel, G, which is in gear with the wheel E, and by the oscillation of said yoke upon its pivotal bearing may be moved into or out of gear with the wheel H, which is attached to the barrel or mainspring-arbor, or with the

wheel K, that is constantly in gear with one of the dial-wheels *g*, as the case may be.

On the lower surface of the plate B is fitted a slide-bar, *i*, having its outer projecting end, *i'*, entering a recess in the pinion D, and its laterally-projecting arm *i''*, carrying the pin *i'''*, which extends through an opening, *b'*, in the plate B, and acts on a lug, *f*, of the yoke F, which lug is formed with a locking angle, *f''*, the arrangement of the parts being such as will enable said yoke to be oscillated, thus carrying the stem-driven train into or out of action with the winding-wheel or dial-wheels by the longitudinal motion of the stem-arbor C and the action of the spring *l*, which engages the slide-bar *i*, as shown. The spring *l* is pivoted in a suitable recess upon the lower surface of the plate B, and has a broad end or head, L. Pivoted on the same side of the plate B is a swing-bar, *l'*, the end of which is adapted to engage the head of said spring. The outer end of the swing-bar extends laterally to engage the wall of the case, so that when the movement is in the case the action of said bar on the spring *l* causes the stem-driven train to be normally in engagement with the dial-wheels. When, however, the movement is removed from the case, the bar *l'* can be moved out of engagement with the spring, thus removing the tension and permitting the yoke F to be acted on by the spring *f'*, whereby the stem-driven train is disengaged from the dial-wheels and engaged with the winding-wheel.

I am aware that there are other devices that accomplish similar purposes--as, for example, a loose pin fitted in the winding-pinion to operate a vibratory lever, which in turn is connected with a swing locking-bar to operate the train-yoke; but this has its objection, as it requires several intermediary parts between the stem-arbor and the train-yoke. This objection is not found in my invention, which requires but one piece between the stem-arbor and the yoke.

In regard to letting down the tension of the spring *l*, it may be stated that it is often de-

sirable, when the movement is removed from the case, to allow the stem-driven train to rest normally in engagement with the dial-wheels. In my invention this can be readily done; or, when desirable, the stem-driven train can be disconnected from the dial-wheels and left free to engage with the winding-wheel.

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

1. In a stem winding and setting watch, the combination of the stem-driven train, the yoke F, having a projecting lug formed with a locking-angle, the slide-bar *i*, having the projection *i'* to enter a recess in the pinion D, and a lateral arm, *i''*, carrying the pin *i'''*, the spring *l*, pivoted to the plate B and having the head portion L, the swing-bar *l'*, pivoted to the plate and adapted to engage the head of the spring, substantially as specified.

2. The combination, with a stem-driven train and its pivoted yoke F, of the slide-bar *i*, substantially as described, the stem-arbor and the spring *l*, whereby said yoke may be moved to connect or disconnect said train with reference to the winding-wheel, substantially as specified.

3. The combination, with a stem driven train, which is provided with a pivoted yoke, F, having a projecting lug, *f*, formed with a locking-angle, *f''*, of the slide-bar *i*, having an arm, *i''*, and a projection or pin, *i'''*, extending through the pillar-plate to engage the yoke-lug *f*, substantially as specified.

4. In combination with a pivoted yoke, F, the slide-bar *i*, substantially as described, and a spring, *l*, and swing-bar *l'*, of a stem-arbor, the stem-driven train, the winding-wheel, and the dial-wheels, substantially as and for the purpose set forth.

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

THOMAS F. SHERIDAN.

Witnesses:

A. E. BENTLEY,
J. BUNN, Jr.