

(No Model.)

2 Sheets—Sheet 1.

C. W. CLAYBOURNE & D. W. SHIEK.
BICYCLE BELL.

No. 585,022.

Patented June 22, 1897.

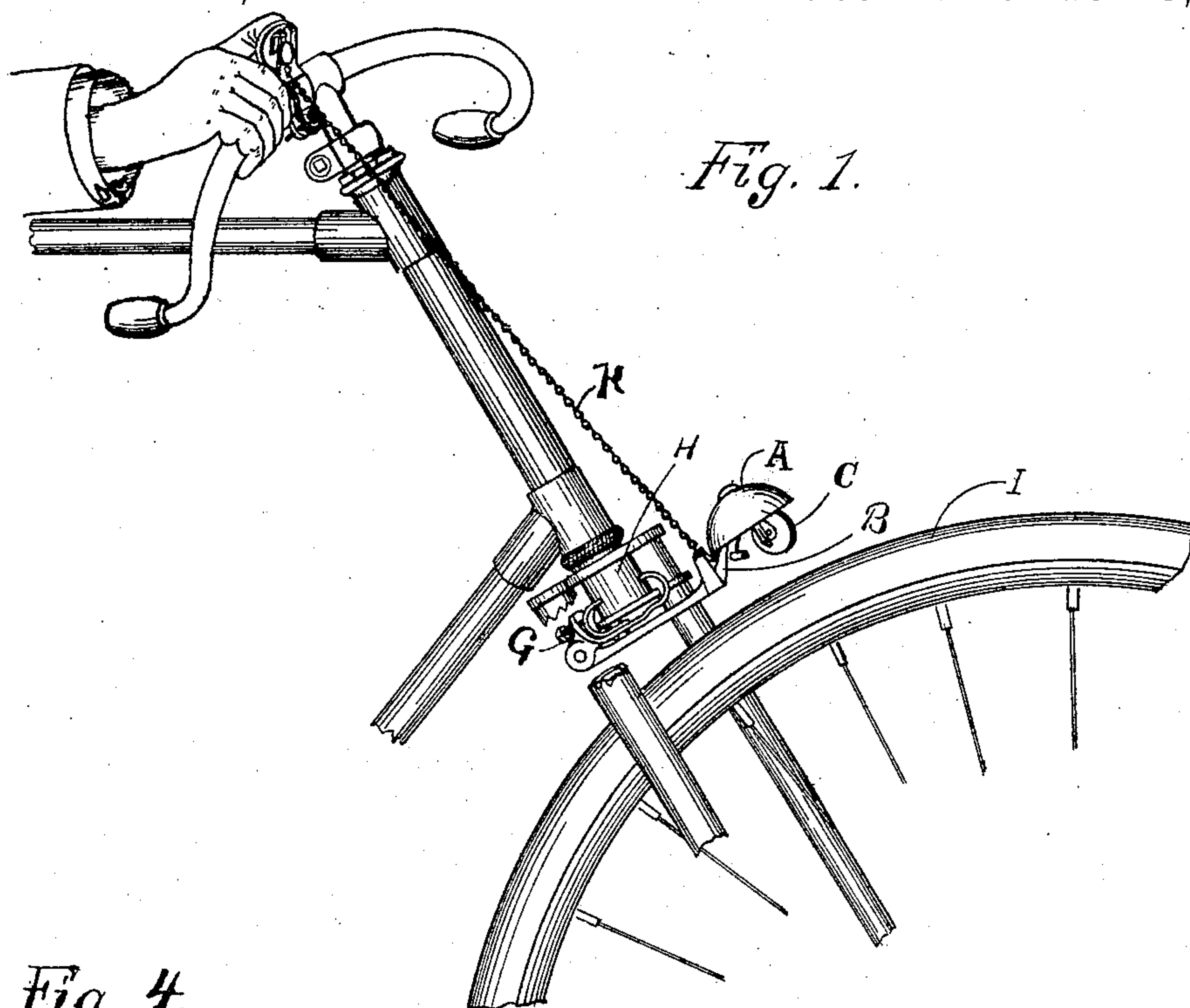


Fig. 1.

Fig. 4.

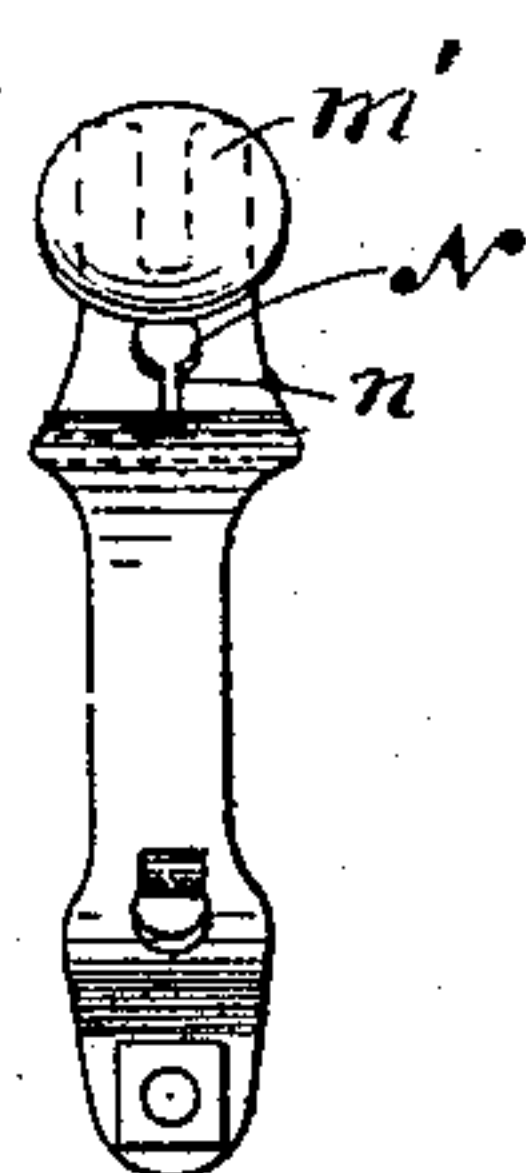
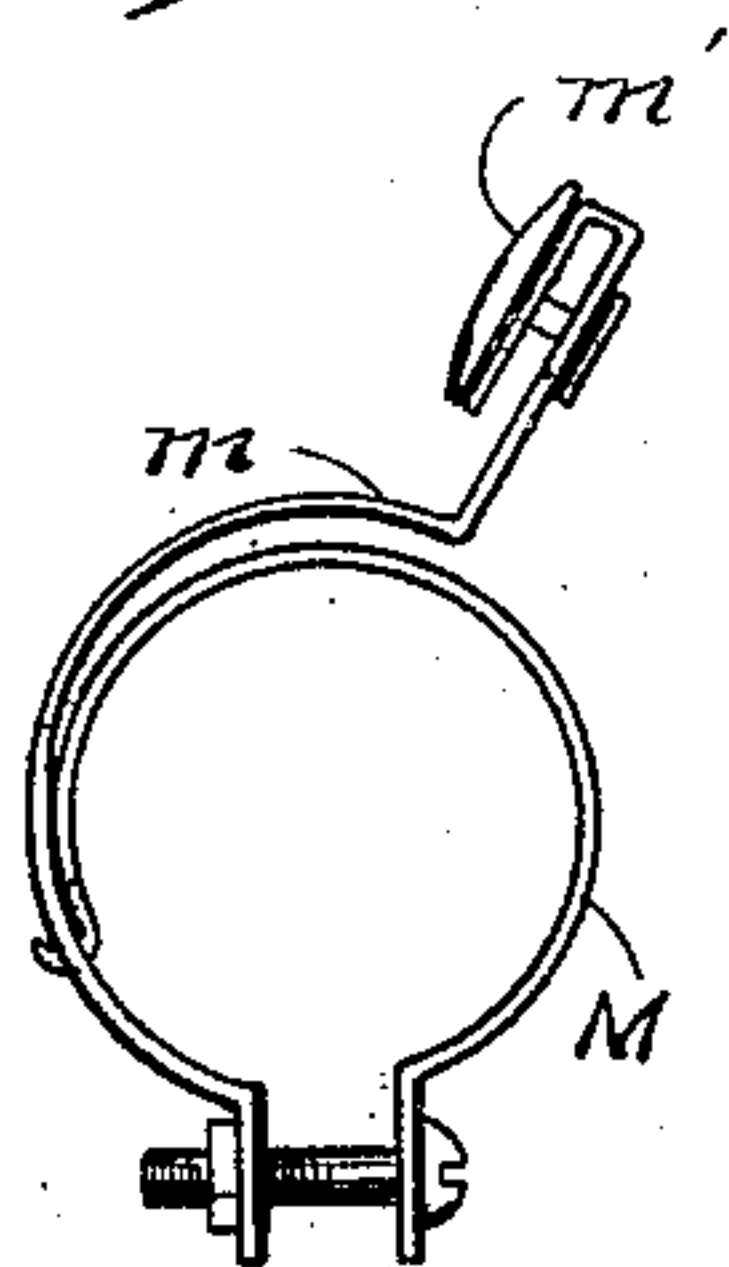


Fig. 5.

Fig. 2.

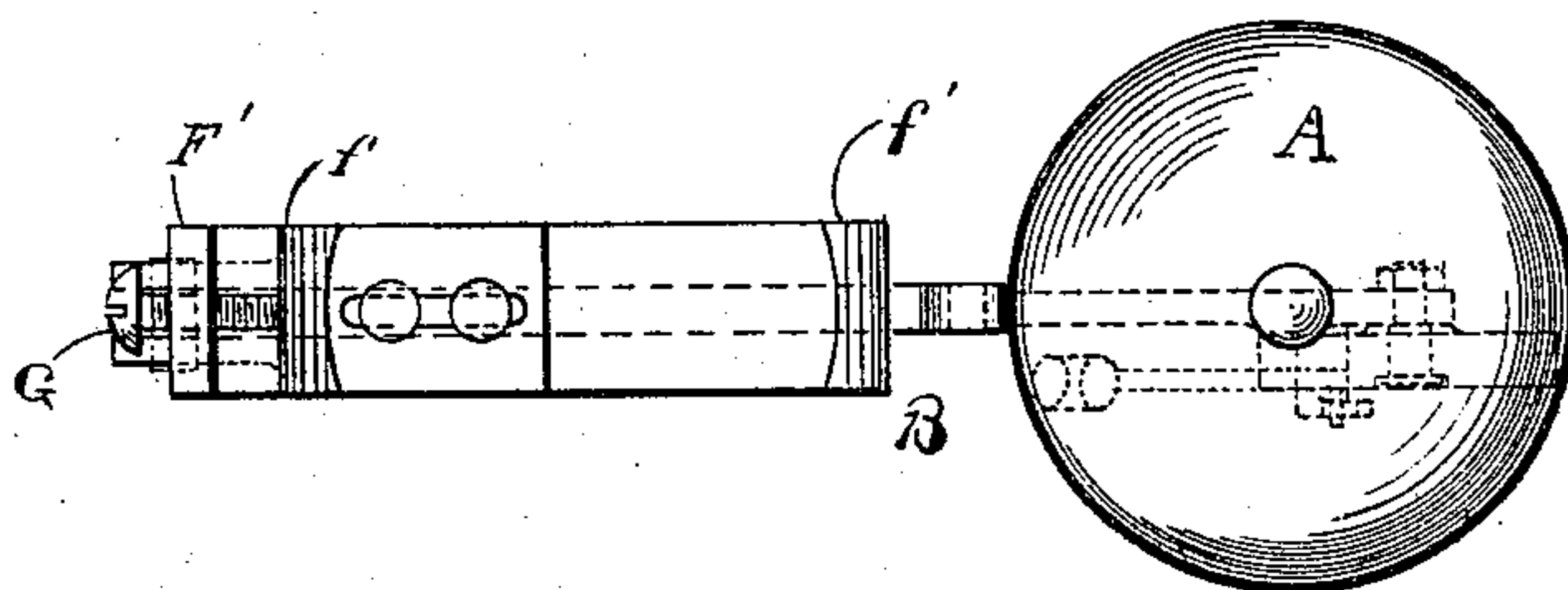
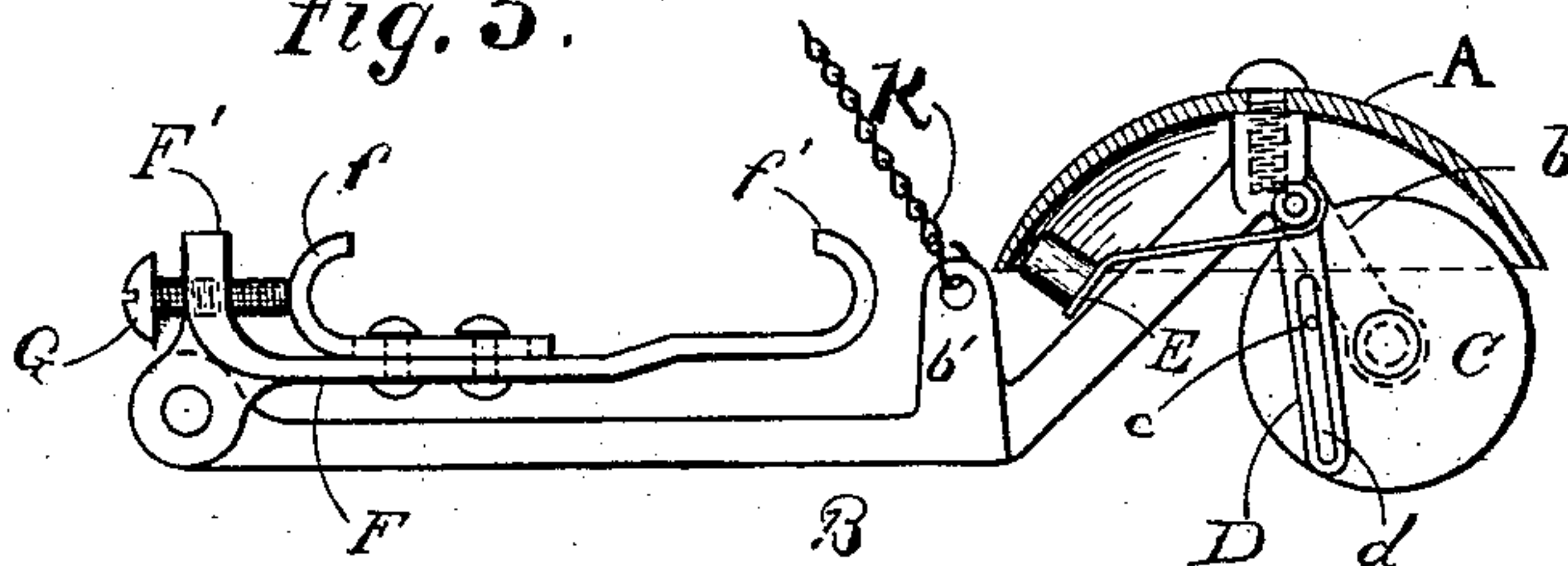


Fig. 3.



Witnesses

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Fig. 6.

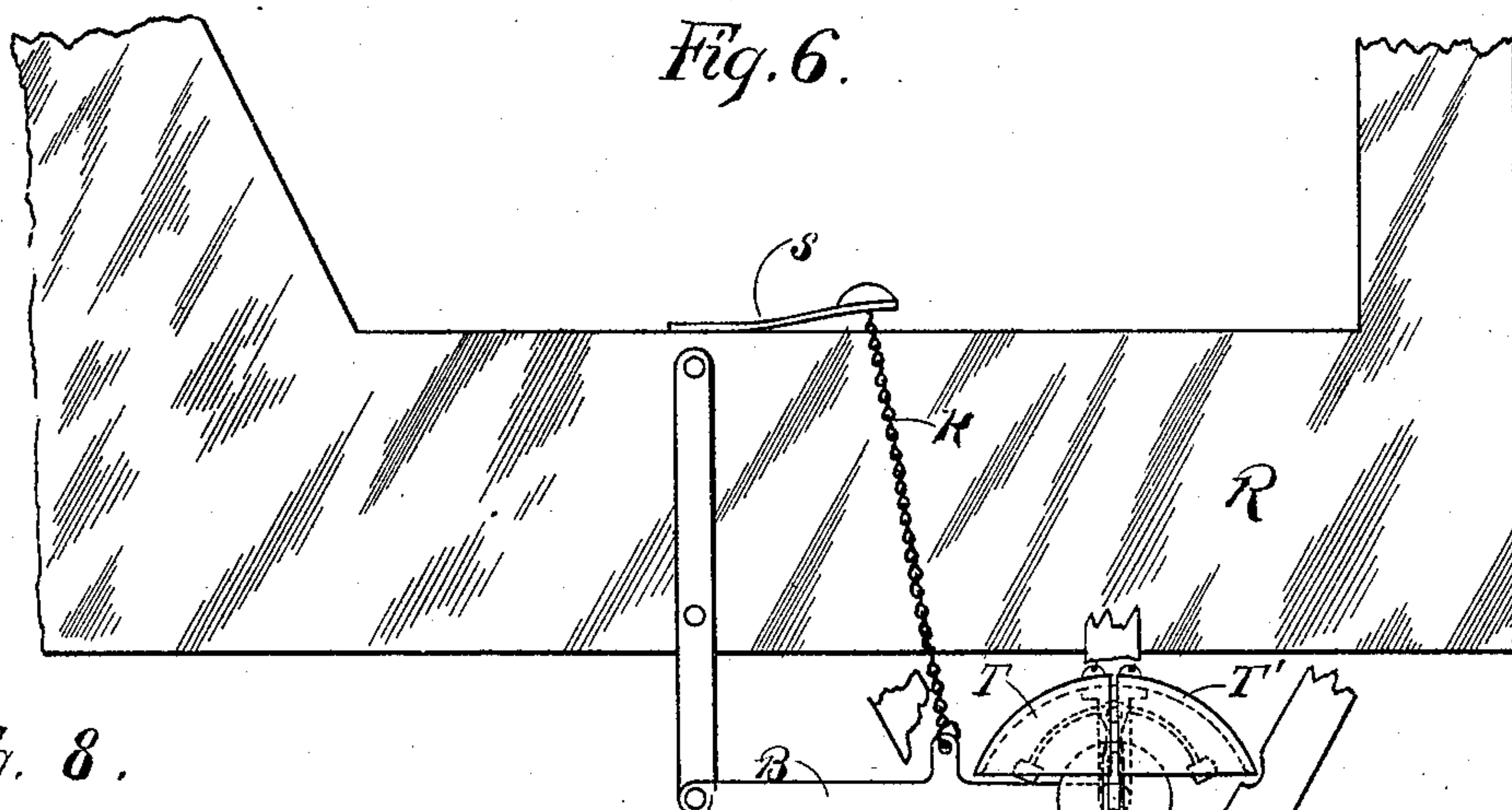


Fig. 8.

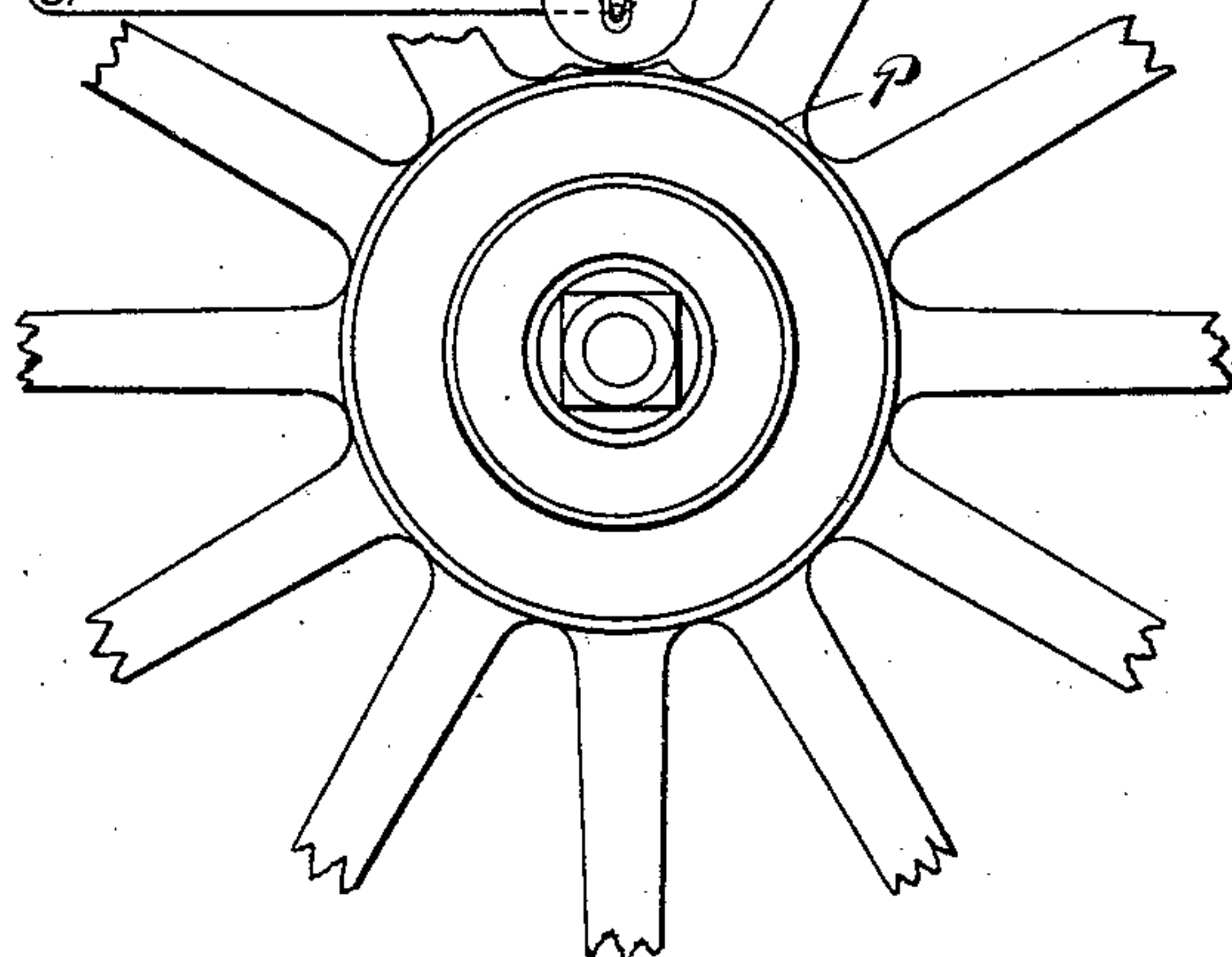
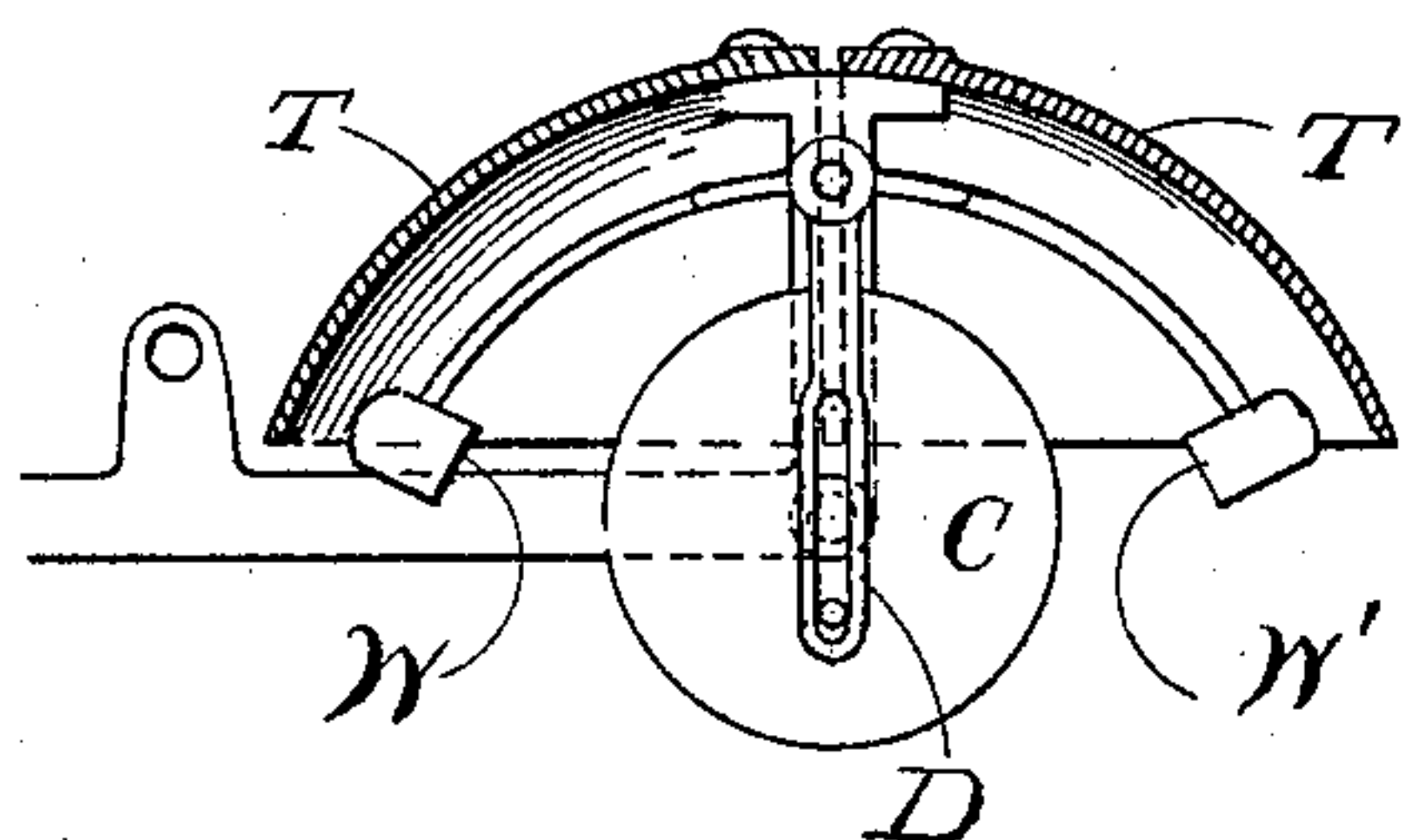
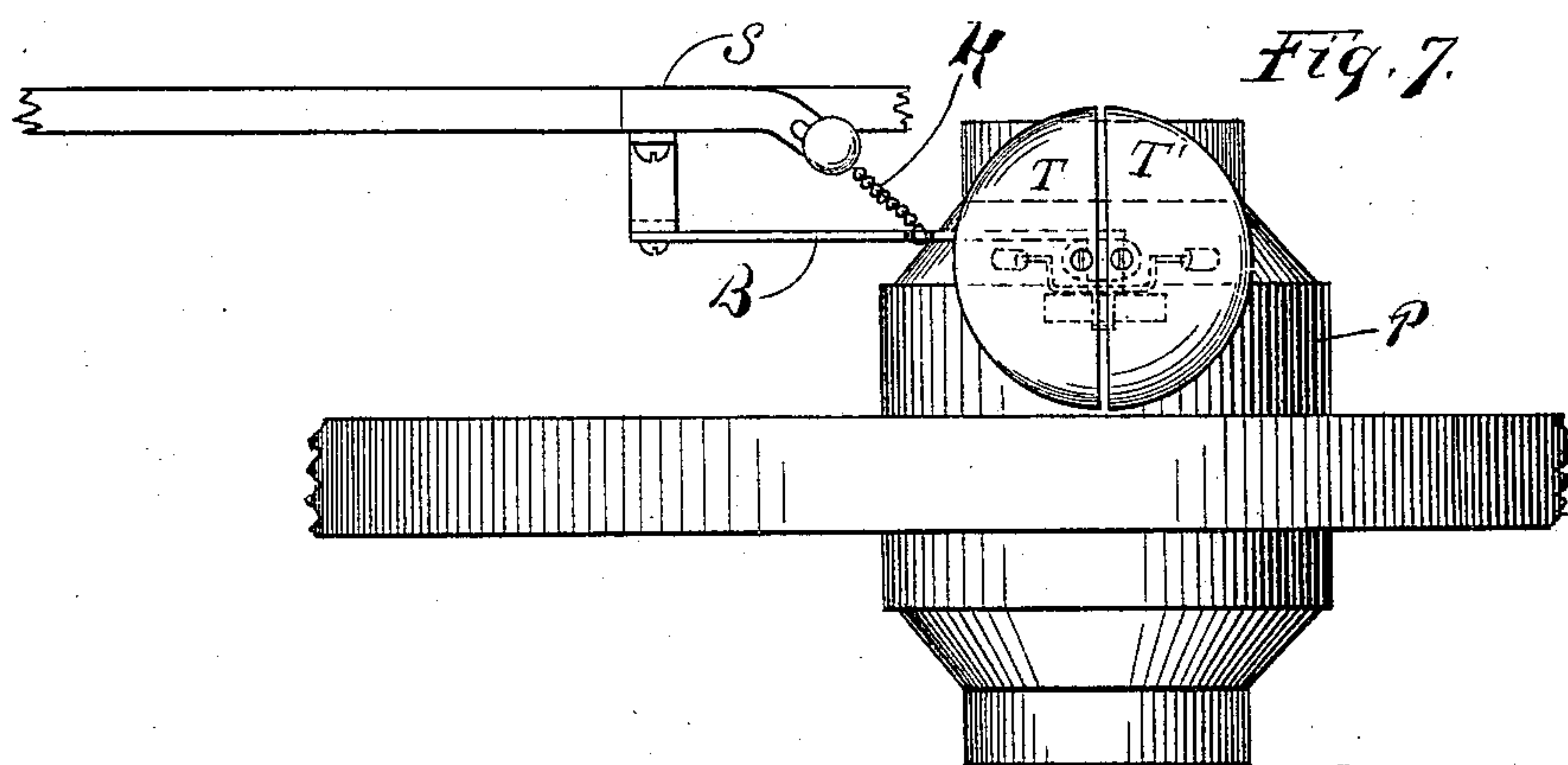


Fig. 7.



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UNITED STATES PATENT OFFICE.

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BICYCLE-BELL.

SPECIFICATION forming part of Letters Patent No. 585,022, dated June 22, 1897.

Application filed July 3, 1896. Serial No. 597,960. (No model.)

To all whom it may concern:

Be it known that we, COLIN W. CLAYBOURNE, residing at Indianapolis, county of Marion, and State of Indiana, and DANIEL W. SHIEK, residing at Chicago, county of Cook, and State of Illinois, citizens of the United States, have invented certain new and useful Improvements in Alarm-Bells, of which the following is a description.

Referring to the accompanying drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is a perspective view of our improved bell as applied to a bicycle. Fig. 2 is a top plan of our improved bell and one means for connecting the same to such devices as bicycles, &c. Fig. 3 is a vertical section of the same. Fig. 4 is a side view of a spring device that may be used in connection with our bell when used on bicycles, &c. Fig. 5 is a front view of the same. Fig. 6 is a side view of our improved bell as applied to the hub of one of the wheels of a wagon, motorcycle, or similar device. Fig. 7 is a top plan of the same. Fig. 8 is a detail view of the preferred form of our bell.

An alarm-bell for vehicles should be so constructed and arranged that it may operate continuously when the vehicle is in motion or may at will be caused to operate only at such times as may be thought advisable or necessary. It should also be so arranged that it may be operated at any time when the vehicle is in motion without the necessity of depending upon any outside source of power—such as springs, electricity, &c. It should also be so constructed that the sound produced is an indication of the approximate speed at which the vehicle is moving.

The object of our invention is to produce a bell embracing the above desirable features, together with others hereinafter set forth, which shall be efficient in its operation and most simple, durable, and economical in its construction.

To this end it consists in the novel construction and combination of parts shown and described, and more particularly pointed out in the claims.

In the drawings, A represents the bell,

mounted on a pivoted support B. The support B is provided with an extension or arm *b*, to which is secured the friction or contact wheel C, partly inclosed by the bell. A slotted arm D, pivotally supported at its upper end to the arm *b*, extends downward on the side of the wheel C opposite to the arm *b*, while the crank-pin *c* on the wheel C protruding into the slot *d* of the pivoted arm gives it a swinging or vibratory movement at each revolution of the wheel C. A hammer E is suitably connected to the swinging arm D, and at each revolution of the wheel C the hammer strikes the bell A, as shown, Fig. 3.

When designed for use upon a bicycle or similar device, the support B is preferably pivotally connected to the clasp F, consisting of two parts *f f'*, moving one on the other and provided on the ends with opposing hooks or clasps, a bolt G, seated in the extension F', forcing the two clasps *f f'* toward each other to clasp the lower end of the standard H, Fig. 1. As thus arranged the bell will be brought to a position directly above the front wheel, the contact-wheel resting on the tire I of the wheel. In use upon bicycles it is not probable it will be necessary or desirable to give a constant alarm. Hence we have provided a simple and effective means of placing the operation of the bell under the control of the rider. In the preferred form a lug *b'* is constructed upon the support B near the bell, to which is secured a chain K extending up to the handle-bar. On the handle-bars close to the standard is secured the clip M, which is provided with a spring *m*, terminating in the button *m'*. Near the button is an opening N, terminating in a slot *n*. Extending from the arm *b'* to the opening N is the chain K, which when adjusted to the proper length may be dropped into the slot *n* and retained at such length.

It will readily be seen from the drawings that the chain may be adjusted to support the bell just clear of the tire I, but that a slight pressure on the button *m'* will depress the bell, when by force of gravity alone the friction-wheel C will be brought in contact with the tire I and the bell will sound the

alarm. Upon removing the pressure on the button the bell will be again lifted clear of the tire and the alarm will cease.

In using our improvement upon such vehicles as wagons, motorcycles, &c., we prefer to secure contact with the hub P of one of the wheels in substantially the same manner as described, (see Figs. 6 and 7,) the chain passing to a connection on the body of the vehicle in any preferred manner. In such cases the form of spring may be modified, as shown at s in Figs. 6 and 7. If preferred, the bell may be supported from the axle.

In the preferred form of our improved bell we construct the bell proper of a plurality of parts, as T T', Figs. 6, 7, and 8, each so constructed as to give a different tone when struck and provide a hammer W W' for each section, each operated by the same means before described. As clearly shown in Fig. 8, the two hammers are secured to the arm D, and as the arm oscillates back and forth the hammers are successively brought in contact with their respective sections of the bell. It will readily be seen that this construction will result in a partial chime when the bell is in operation.

It is obvious the rapidity with which the individual hammers strike the bell depends entirely upon the speed at which the vehicle is moving. Hence when the vehicle is moving slowly the blows of the hammer will be measured and distinct, while as the speed increases the blows increase in rapidity until at high speeds the sound resembles that of an electric bell, almost like a "buzzer," in the rapidity of the blows.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an alarm for vehicles, the combination of a bell, a supporting-arm therefor pivotally supported from the vehicle to act by gravity to lower the bell toward the vehicle-wheel, an actuating-wheel carried by said arm and adapted to engage and be rotated by the vehicle-wheel, a hammer mounted on said arm and adapted to be operated by said actuating-wheel, and means acting normally to hold said friction-wheel out of contact with the vehicle-wheel.

2. The combination with a bell for vehicles, a support for the bell adapted by gravity to place the bell in operative position, and means for causing the bell to ring, a spring-operated lever on the vehicle within reach of the op-

erator, and a connection from the latter to the bell-support, said lever adapted to hold the bell normally out of operative position.

3. In an alarm for vehicles, the combination of a bell, a supporting-arm for the bell pivotally supported from the vehicle and provided with an inwardly bowed or bent portion projecting into and secured centrally to the hollow body of the bell, and having the outwardly-extending arm portion b, an actuating-wheel mounted on said arm portion, a hammer loosely mounted on said bowed portion of the support within the bell-body, a slotted arm secured to said hammer and situated beside the actuating-wheel, a crank-pin on the wheel engaging in said slot, and means controlling the position of the bell, substantially as described.

4. An alarm-bell consisting of the following elements in combination: a friction-wheel supported on a pivoted bar and provided with a crank-pin, a bell composed of a plurality of independent sector-shaped sections, also supported by the bar and partially inclosing the wheel, a pivotally-depending slotted arm so arranged that the crank-pin is positioned within the slot, and a plurality of hammers corresponding to the bell-sections connected to the arm, whereby, upon permitting the friction-wheel to come into contact with a rotating part, the hammers will successively strike the bell-sections, substantially as described.

5. The combination with a movable bell, of a clip arranged to be secured to the handle-bar of a velocipede, provided with a spring-arm, and a connection from the latter to the bell for operating the same, substantially as described.

6. In an alarm for vehicles, the combination with the vehicle, a support for the bell having a pivotal connection with the vehicle adapted to normally remain in a lowered or downward position and to carry the bell-actuating means against the vehicle-wheel to place the bell in operative position, means to cause the bell to ring upon the movement of the wheel, a spring-controlled lever on the vehicle within reach of the operator, and a holding-up connection between the lever and bell support.

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