

No. 708,364.

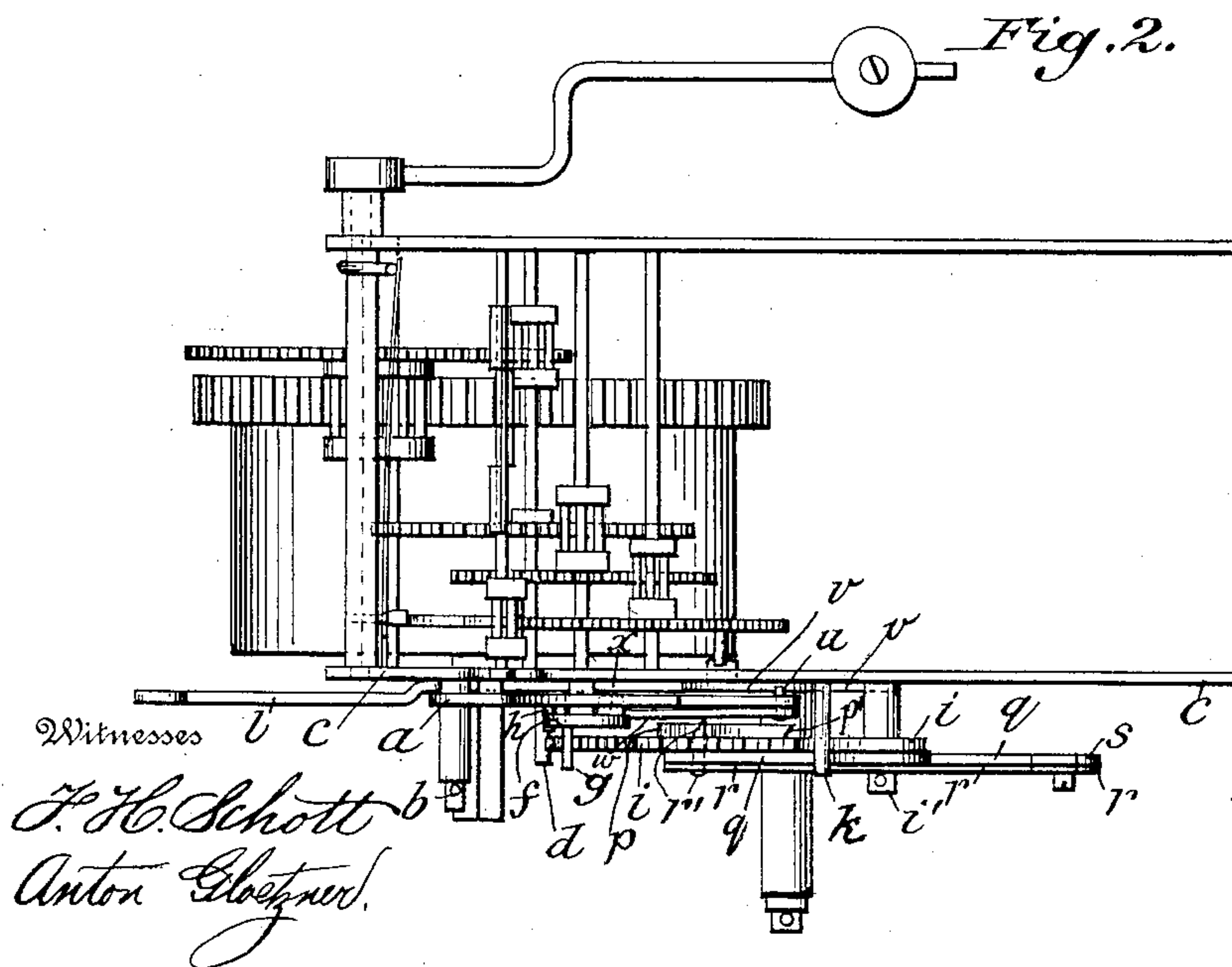
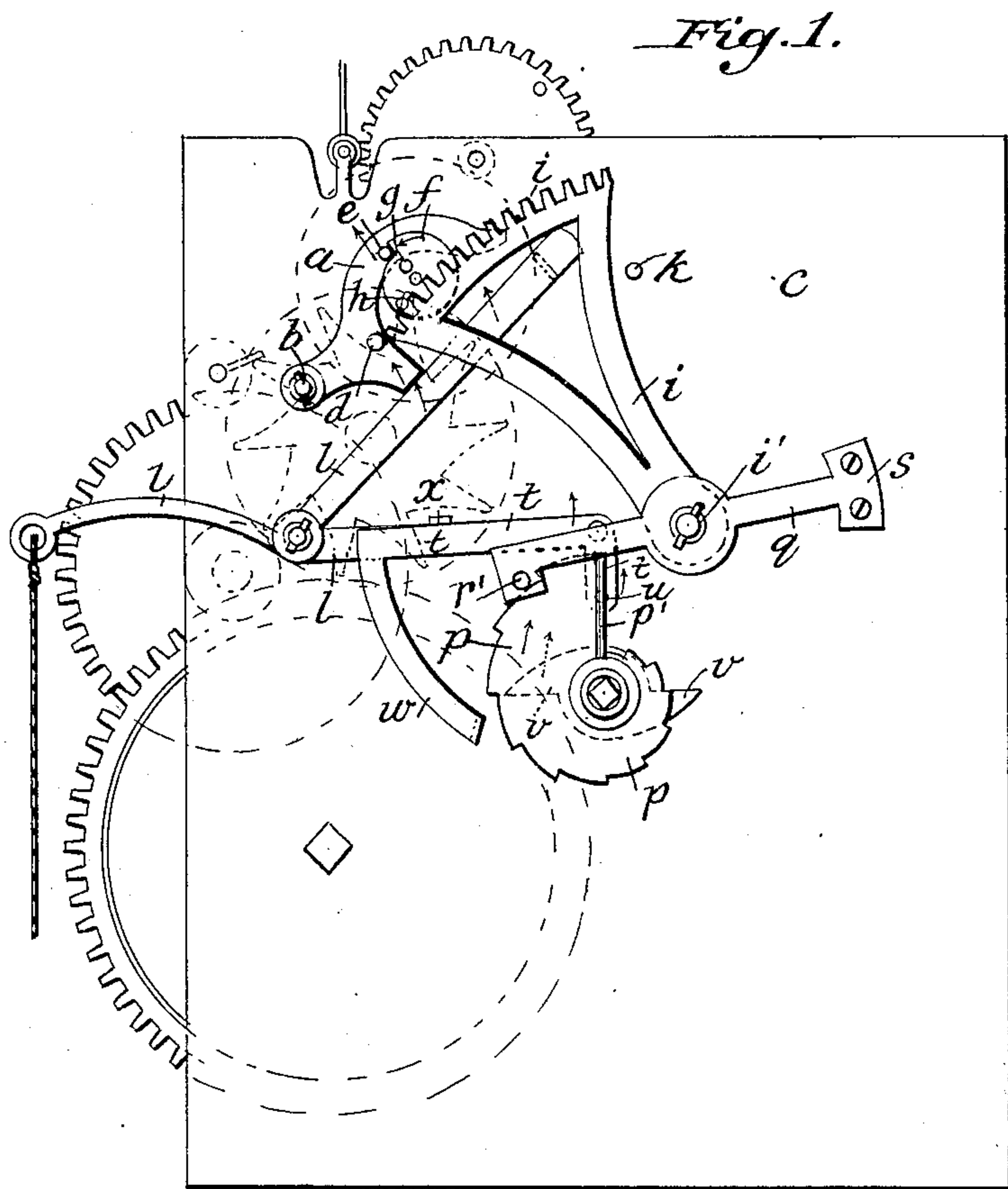
Patented Sept. 2, 1902.

J. KIENZLE.
REPEATING CLOCK.

(Application filed June 3, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Fig. 3.

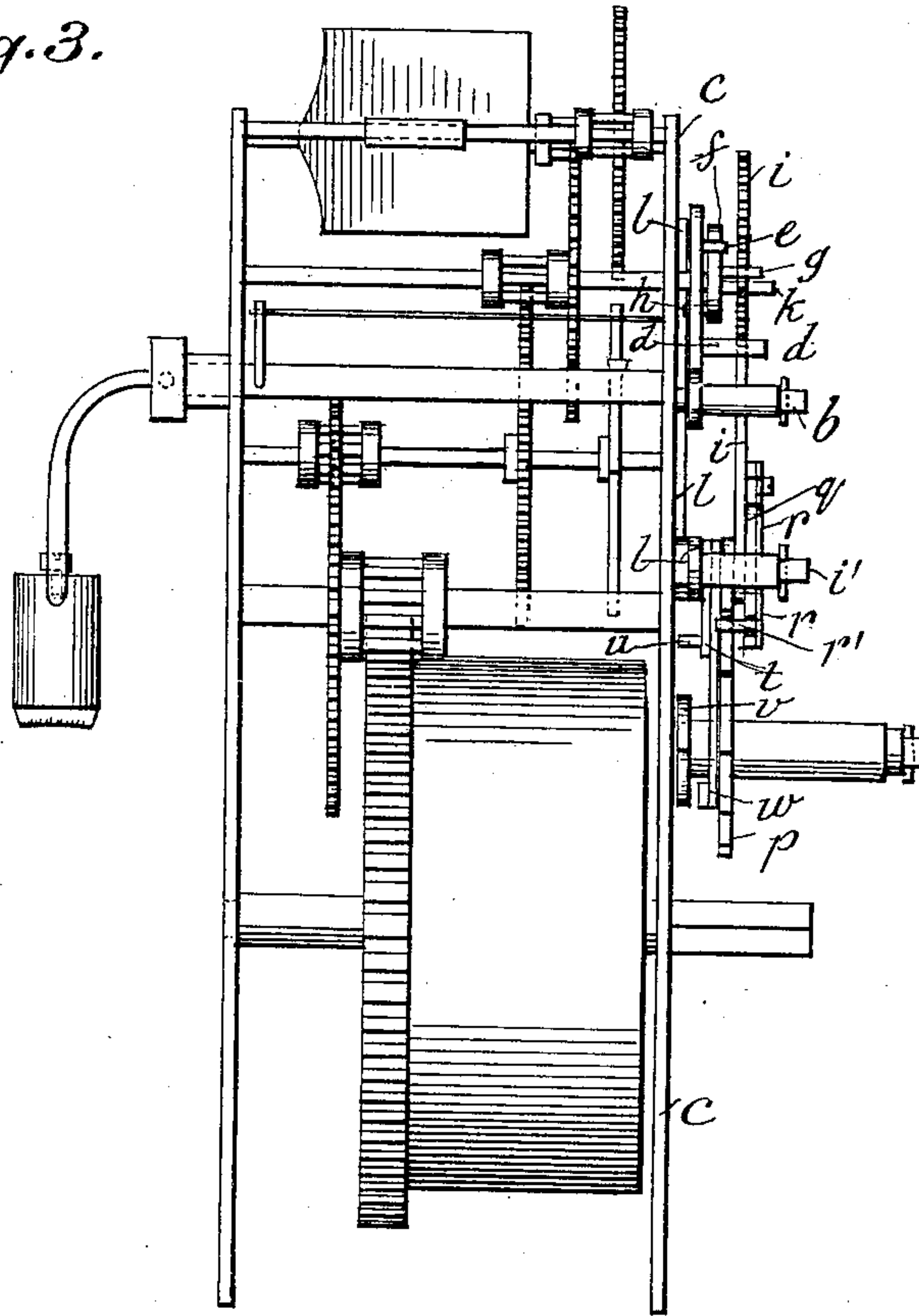


Fig. 4.

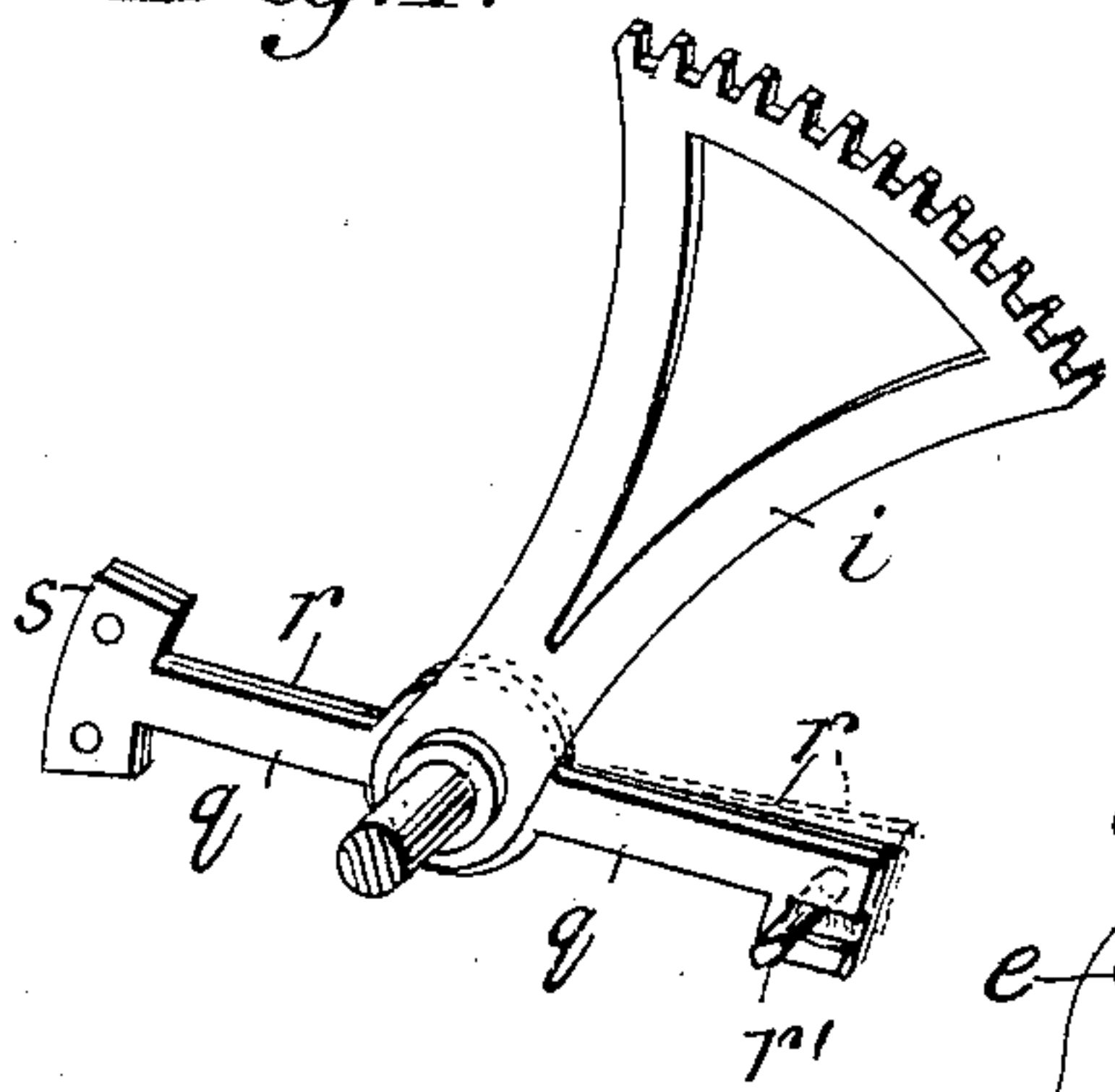
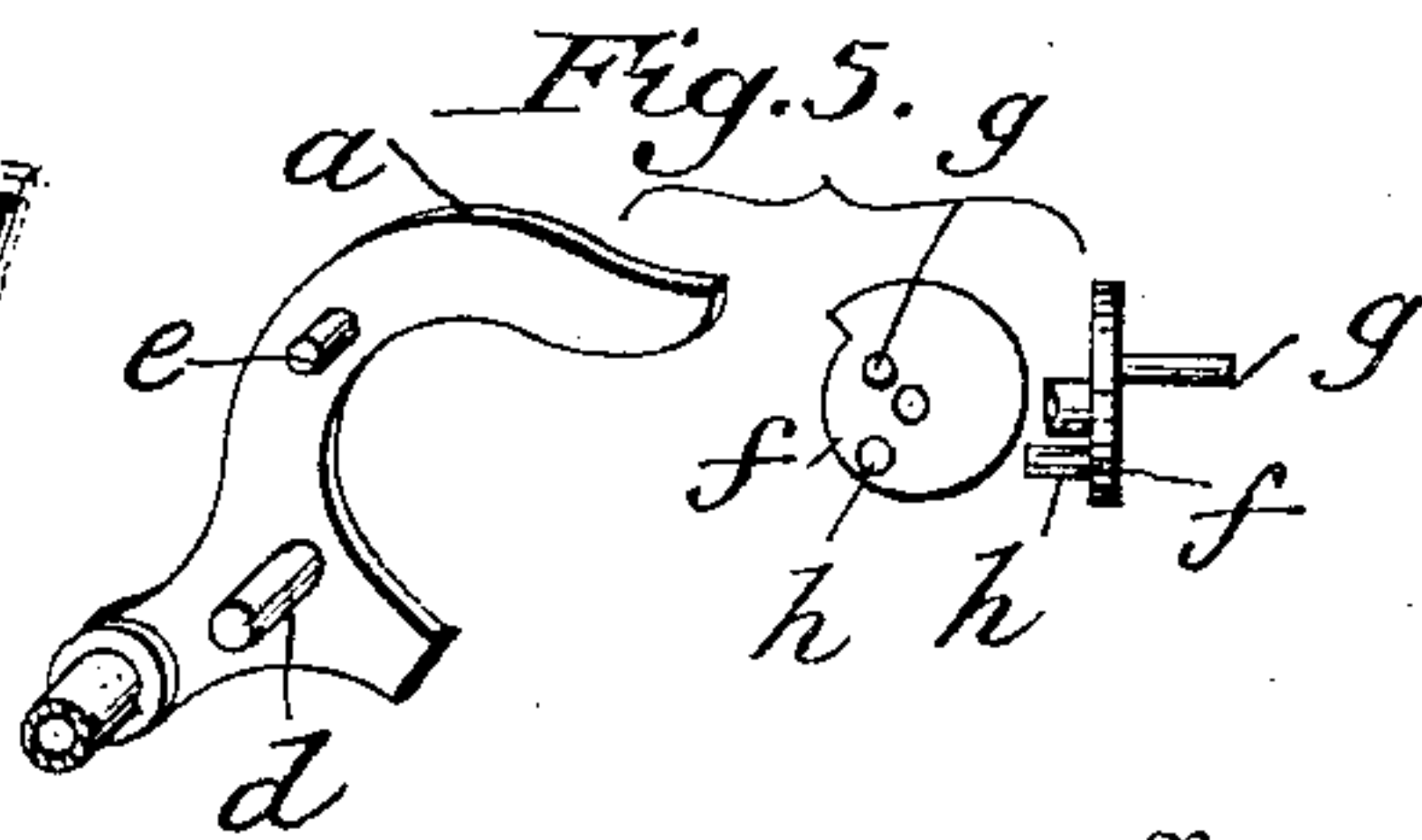


Fig. 5. g



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UNITED STATES PATENT OFFICE.

JAKOB KIENZLE, OF SCHWENNINGEN, GERMANY.

REPEATING CLOCK.

SPECIFICATION forming part of Letters Patent No. 708,364, dated September 2, 1902.

Application filed June 3, 1901. Serial No. 62,985. (No model.)

To all whom it may concern:

Be it known that I, JAKOB KIENZLE, a citizen of Württemberg, residing at Schwenningen, Württemberg, Germany, have invented certain new and useful Improvements in Repeating-Clockworks; 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.

This invention relates to improvements in repeating clocks, and has for its object to simplify the construction and to provide means for setting the clock even when it is striking without any danger of deterioration.

My invention will be fully understood on reference to the annexed drawings, which form a part hereof, and in which—

Figure 1 is a front elevation of a clock mechanism fitted with my improvements. Fig. 2 is a plan view of the same. Fig. 3 is a side view of the parts appearing in Fig. 2. Fig. 4 is a detail view of the segment and the lever and spring at the lower end thereof, and Fig. 5 is a detail view of the arresting-lever and the cam for operating the same.

The arresting and releasing lever *a*, of a nearly semicircular form, rotates about a pin *b*, fixed upon the side wall *c*, and is provided with two pins *d* and *e*, fixed near its lowest and highest points, respectively. In the curve or bend of the arresting-lever is arranged a snail-formed cam *f*, carrying pins *g* and *h* on its front and rear sides, respectively. The pin *h* by impinging against the lower edge of the curve or bend of the arresting-lever serves to raise said lever when the cam is rotating, and thereby prevent the pin *e* from falling into engagement with the cam and stopping the gear. The other pin *g* during the rotation of the cam engages the teeth of the segment *i* and advances the same. This segment has its movement in one direction limited by a pin *k*, fixed on the front plate or wall *c*, and in the other direction by the pin *d* of the arresting-lever.

The release of the arresting-lever is effected by drawing down the lower arm of the repeat-

ing lever *l*, and thereby causing the upper arm of said lever to swing outward in contact with the arresting-lever, and consequently carry the pin *e* out of engagement with the cam *f*, so that said cam will be rotated.

In the ordinary construction of repeating clocks the segment *i* after the release fell upon the hour-snail *p*. If the clock was set while striking, it was liable to be deteriorated by the knocking of the hour-snail against the pin of the segment. In the present invention this inconvenience is overcome by a lever *q*, fixed upon the axis *i'* of the segment. At the extremity *s* of this lever *q* is secured a spring *r*, provided at its opposite end with a pin *r'* passing through a notch in the end of the lever and falling upon the hour-snail after the release of the segment. The hour-snail is beveled at its edge *p'*, so that when during a turn of the hour-snail—as, for instance, when the clock is being set—the said edge pushes against the pin *r'* the said pin is pressed backward, and the hour-snail passes by without disturbing or damaging any of the parts.

In the ordinary operation of the clock the inner end of the releasing-lever is actuated by the striking-cam at the close of the hour or half-hour, as will be readily understood. Should it be desired to so sound the hour between the beginning and close of these periods, the said lever is actuated manually.

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

1. In a repeating clock, the combination with the segment, of an arresting-lever, adapted to arrest the movement of the segment, and a cam controlling the striking mechanism and engaging said lever.

2. In a repeating clock, the combination with the segment, of a forked arresting-lever, and a cam forming a part of the striking mechanism and arranged within the fork of said lever provided on one side with a pin adapted to engage the lever and on the other side with a pin adapted to engage the segment, the said lever being provided with a pin adapted to

engage the segment and with a second pin adapted to engage the shoulder of the said cam.

3. In a repeating clock, the combination
5 of the segment, the repeating lever, an arresting-lever bearing on the repeating lever, and adapted to engage the segment, and a cam forming a part of the striking mechanism

and adapted to engage both the segment and the arresting-lever.

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

JAKOB KIENZLE.

Witnesses:

AUGUST DRAUTZ,
WALTER SCHWAEBSCH.