

H. REDDÖHL.
BALANCE ESCAPEMENT.
APPLICATION, FILED OCT. 3, 1903.

NO MODEL.

Fig. 1.

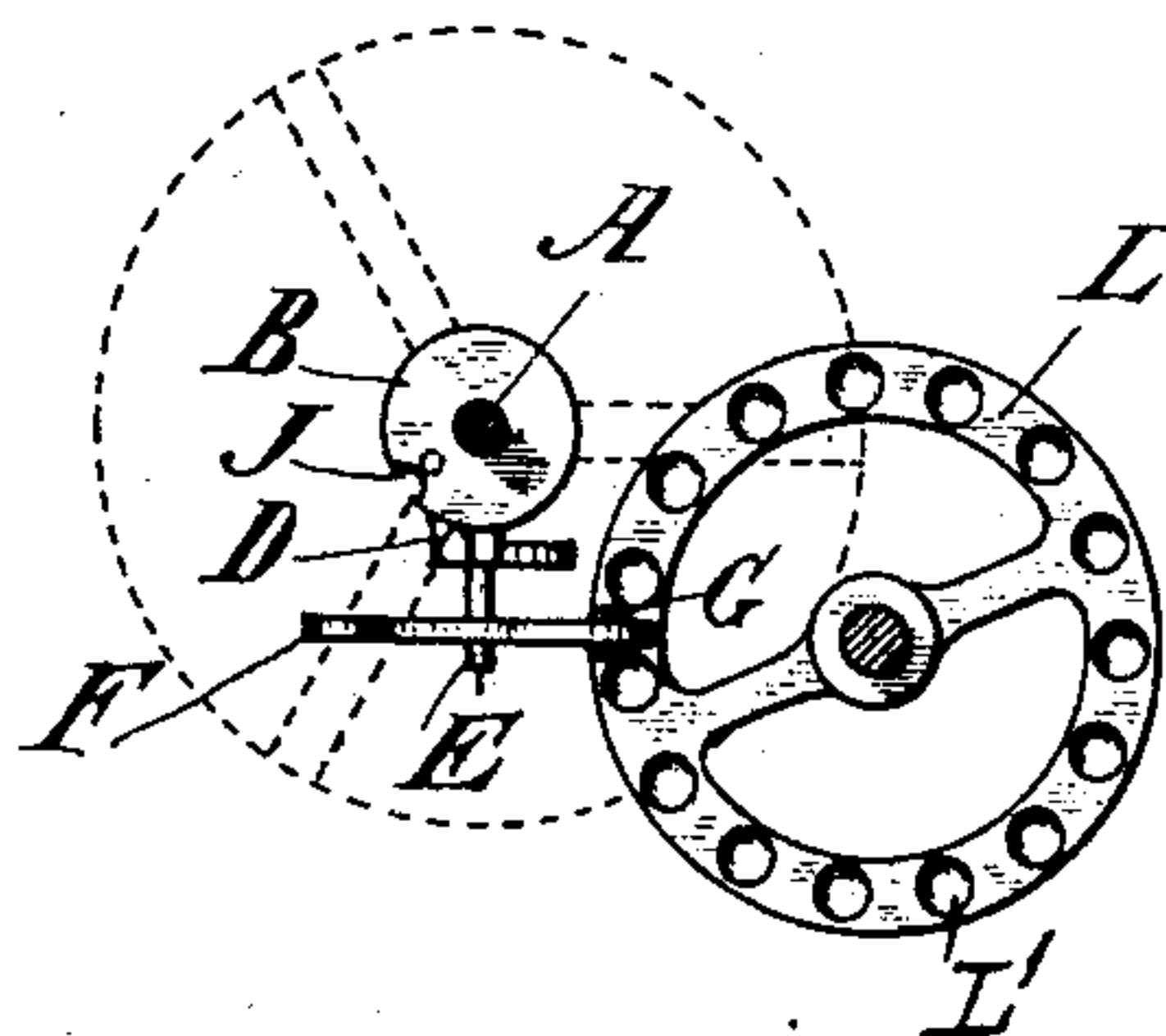


Fig. 3.

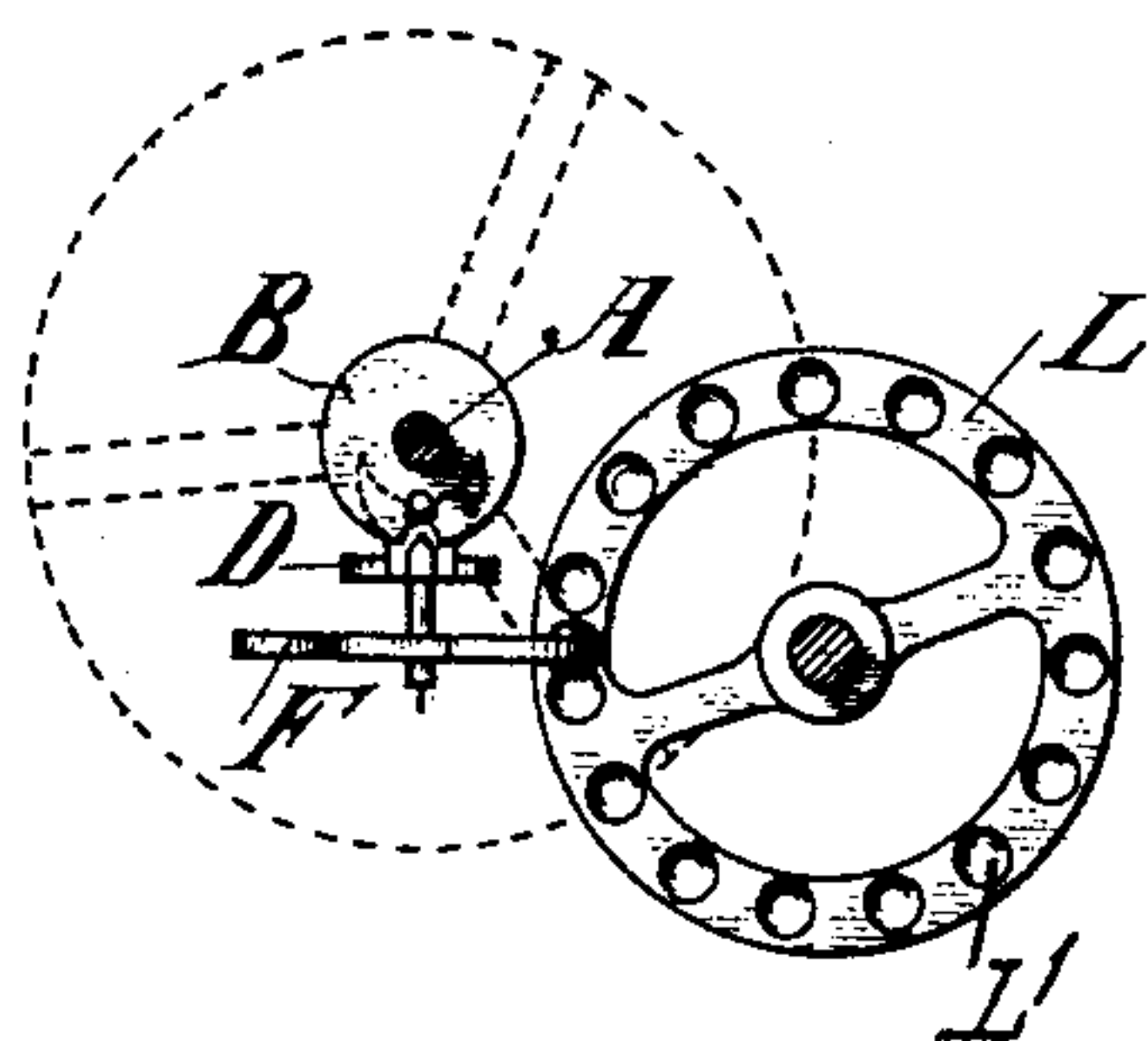


Fig. 2.

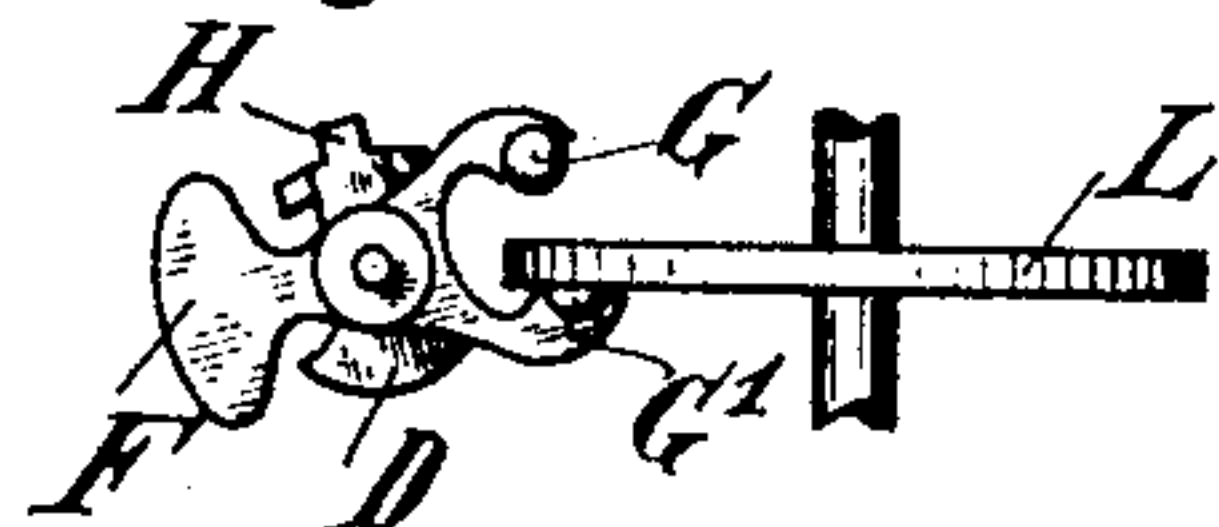


Fig. 4.

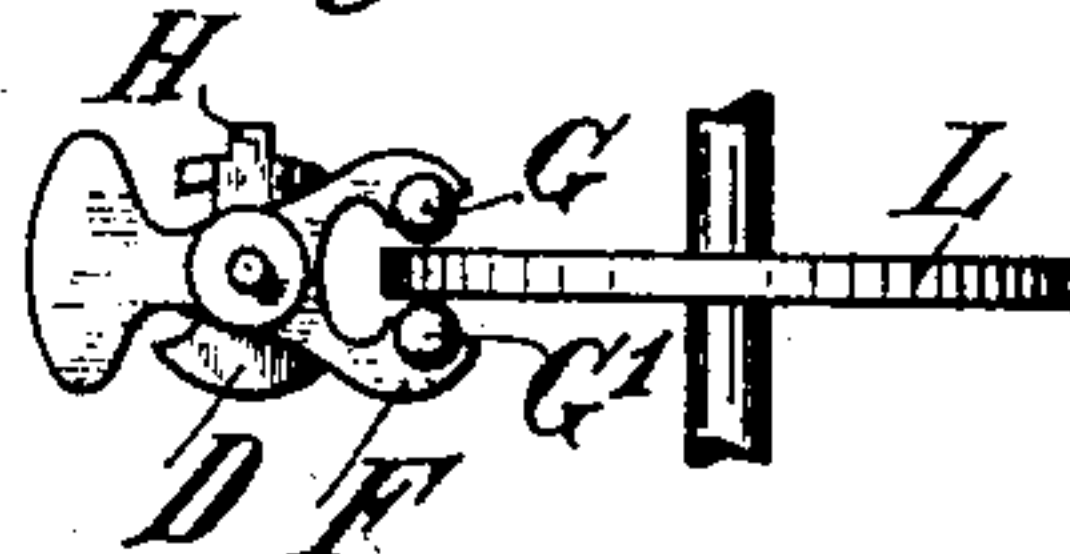


Fig. 5.



Fig. 6.



Fig. 7.

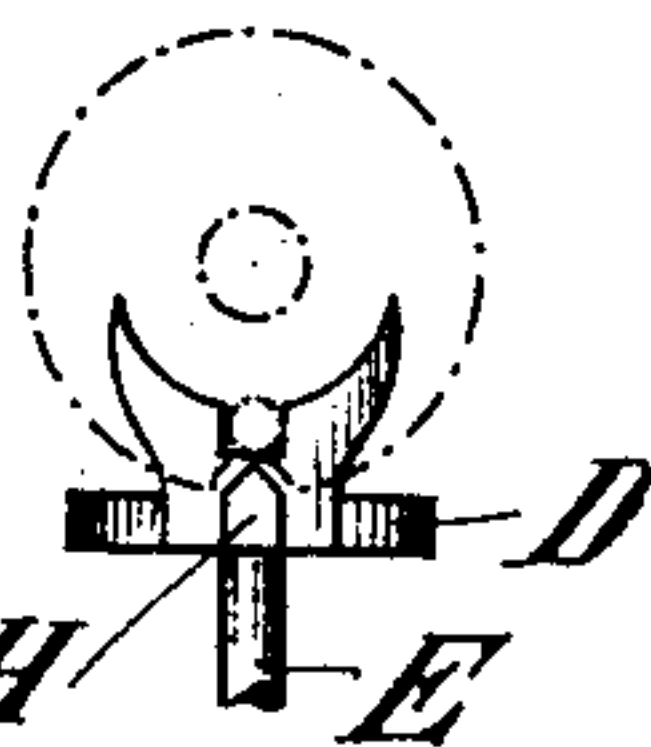


Fig. 8.

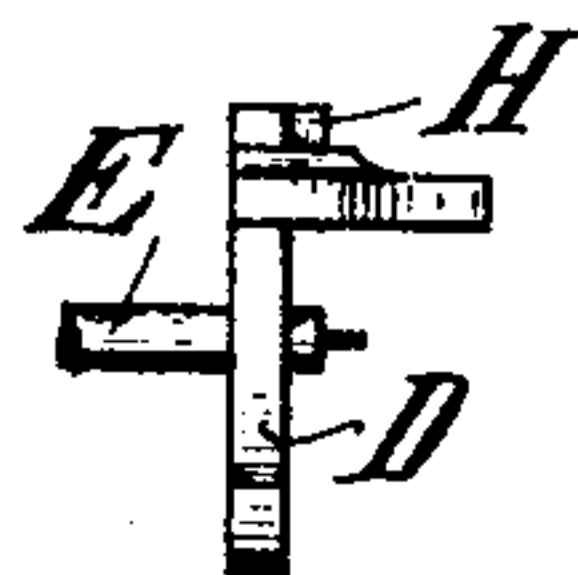
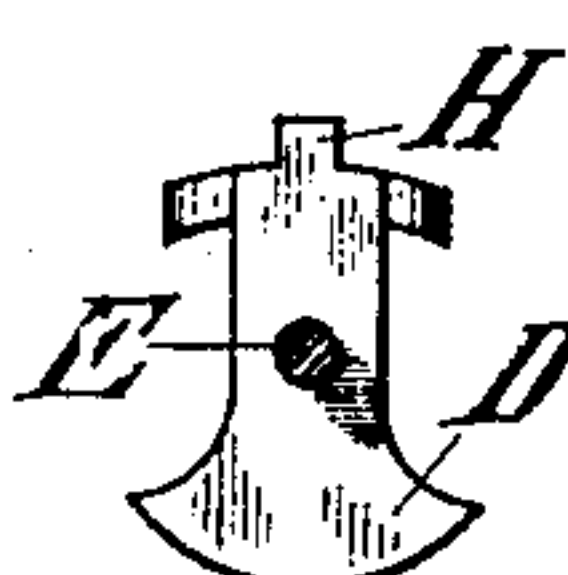


Fig. 9.



Witnesses:

A. J. Nathan
E. M. Moore

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UNITED STATES PATENT OFFICE.

HEINRICH REDDÖHL, OF HANOVER, GERMANY.

BALANCE-ESCAPEMENT.

SPECIFICATION forming part of Letters Patent No. 765,678, dated July 26, 1904.

Application filed October 3, 1903. Serial No. 175,614. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH REDDÖHL, a subject of the German Emperor, residing at Hanover, Germany, have invented certain new and useful Improvements in Clock-Escapements, of which the following is a specification.

This invention relates to an escapement for timepieces of all kinds and clockwork mechanisms generally, in which in place of the ratchet or other form of escapement-wheel hitherto used an escapement-disk is used with staggered hemispherical recesses at its circumference instead of teeth.

In the annexed drawings, Figures 1 and 3 are plans, and Figs. 2 and 4 corresponding elevations, showing the escapement in two positions. Figs. 5 to 9 are detail views thereof.

L is the disk, with the said recesses L' L² being arranged alternately on the two sides of the disk, as shown more particularly in Fig. 6 of the annexed drawings, which is a section of part of the circumference following the line of recesses. The said hemispherical recesses can also be arranged at the periphery in the thickness of the escapement-disk.

The escapement comprises also the following parts: To the balance axle or arbor A is fixed a disk B with a projection C, Fig. 5, so that the said disk B takes part in the oscillations of the balance. The said oscillations are transmitted by a rectangularly-bent fork D, Figs. 7, 8, 9, to a horizontal axle E, to which is affixed another fork, F, with pallets G G' in its ends. The fork D is provided with a pointed projection H, which takes into a semicircular recess J in the disk B.

The action of the escapement is as follows:

When the balance and the projection C move to the left, the fork D is moved laterally. At the same time the fork F is lifted and the lower pallet enters one of the recesses on the under side of the escapement-disk L. Thereupon the balance moves back, taking the fork D with it, so that the fork F moves downward and the upper pallet enters a recess in the upper surface of the escapement-disk.

The advantages of this escapement over the arrangements hitherto known are the following: With other escapements it may occur that owing to inaccurate manufacture or wear of single parts the operative force ceases to be usefully or efficiently directed to the balance and the timepiece stops. That is quite impossible with this invention. Even if the recesses are unequally made or worn one of the pallets must enter the next recess. The manufacture of the escapement-disk is also considerably easier, more exact, and less expensive than that of a toothed wheel as used in the escapements hitherto generally used.

I claim—

In an escapement for timepieces of all kinds and clockwork mechanism, the combination of an escapement-wheel having hemispherical recesses staggered with regard to each other on two opposite faces of its circumference, a fork and pallets upon the ends of said fork for coöperating with said recesses substantially as set forth.

In witness whereof I have signed this specification in the presence of two witnesses.

HEINRICH REDDÖHL.

Witnesses:

ANNA DIPPEL,
LEONORE RASCH.