

No. 881,440.

PATENTED MAR. 10, 1908.

W. E. PORTER.

WATCH.

APPLICATION FILED JUNE 17, 1907.

Fig. 1

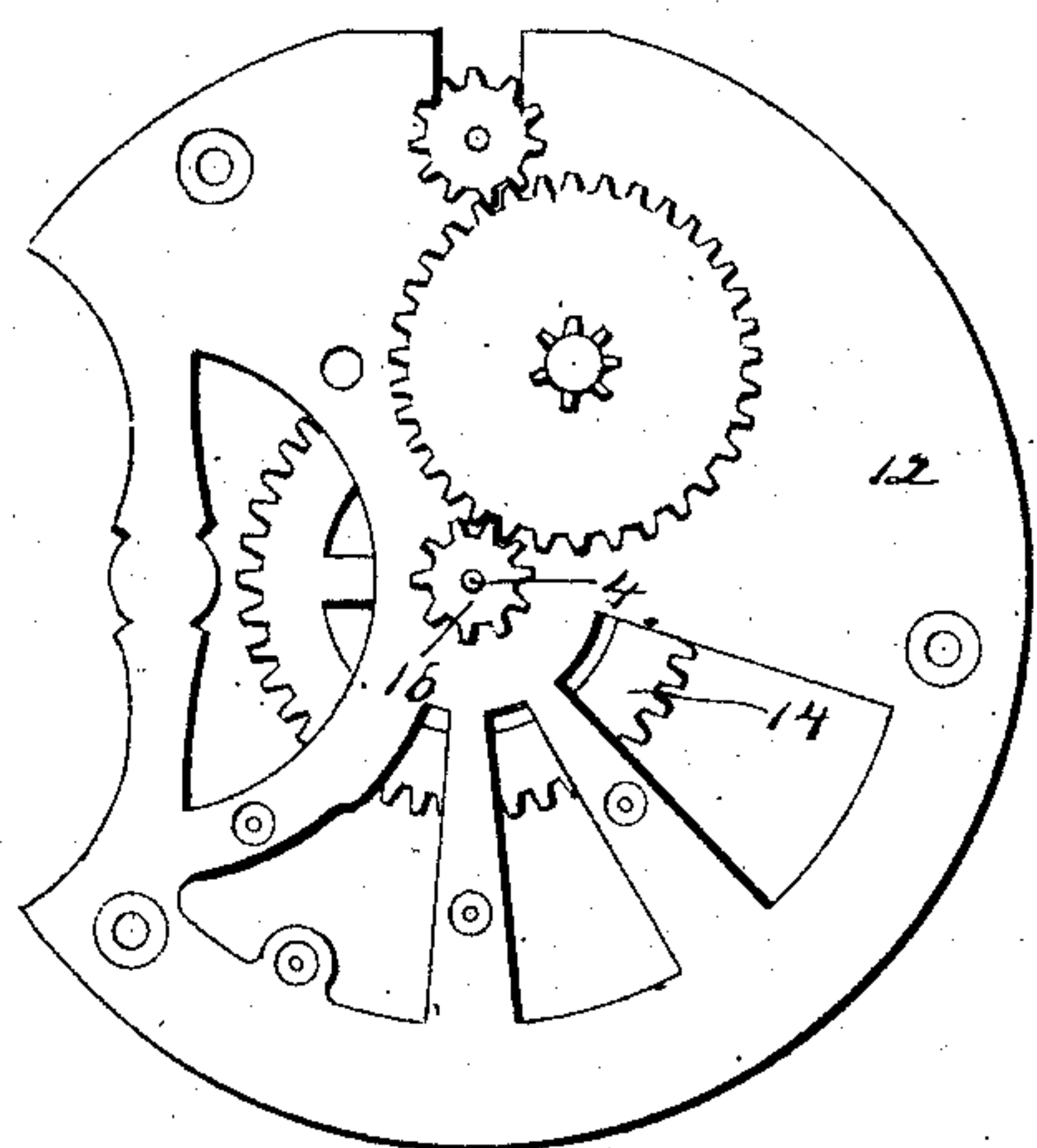


Fig. 2

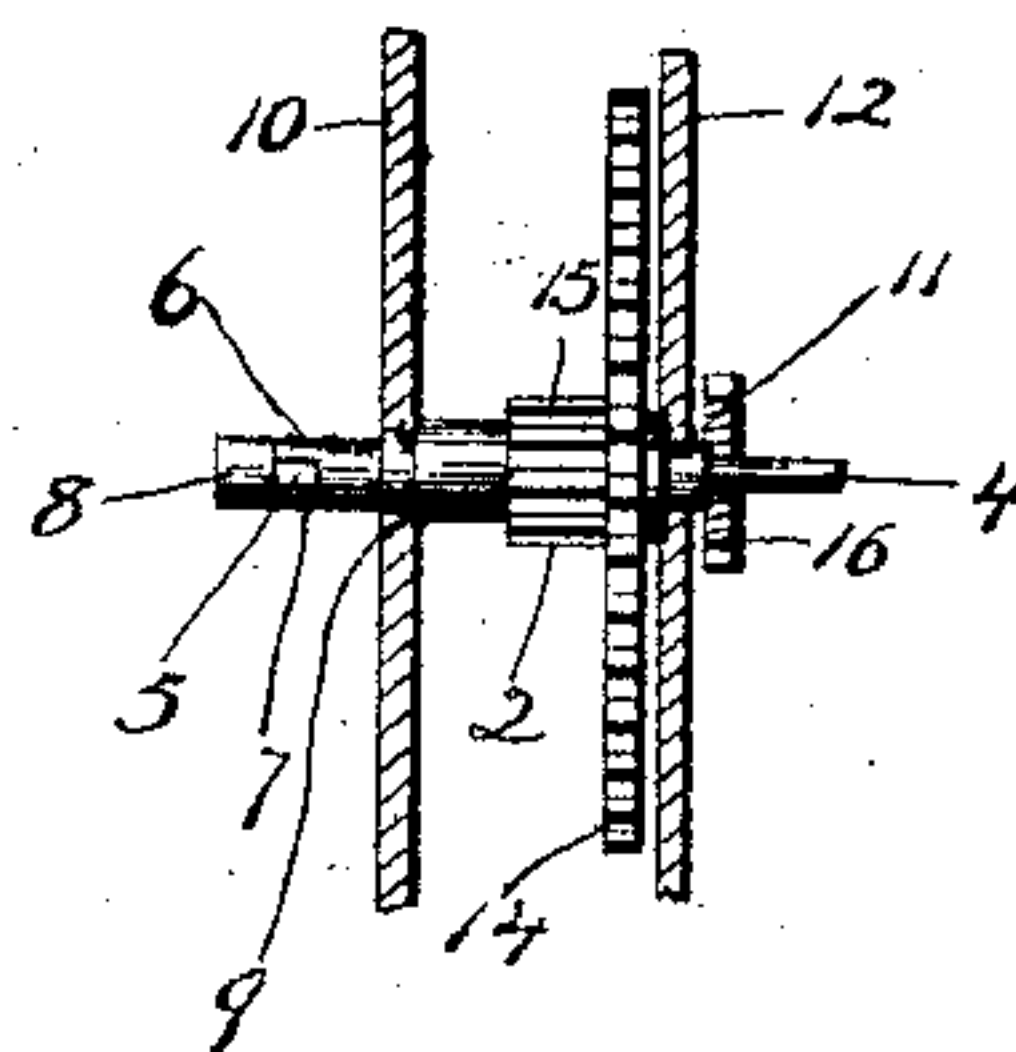


Fig. 4

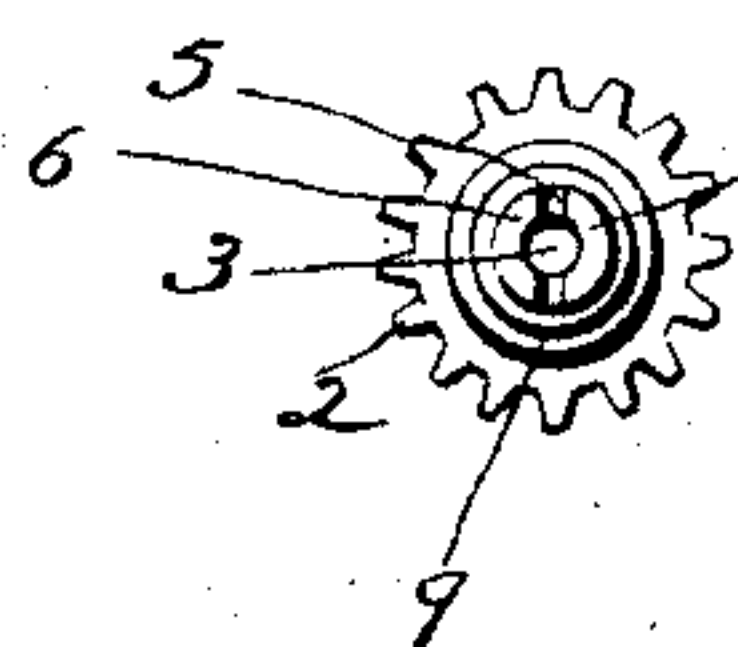


Fig. 3

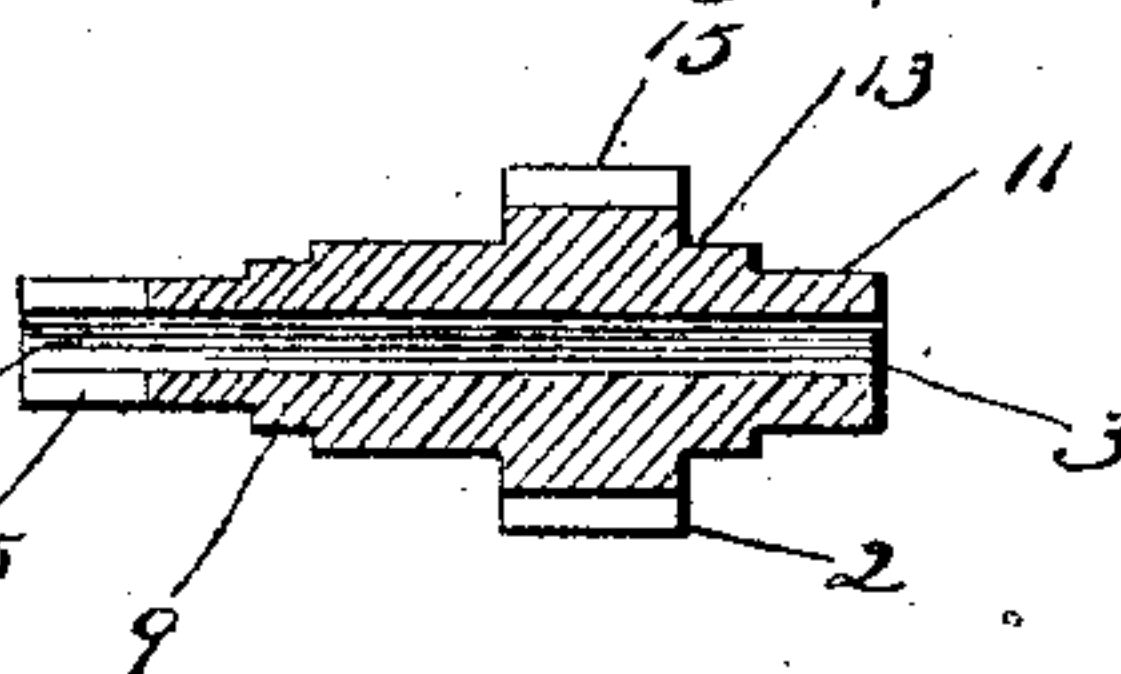
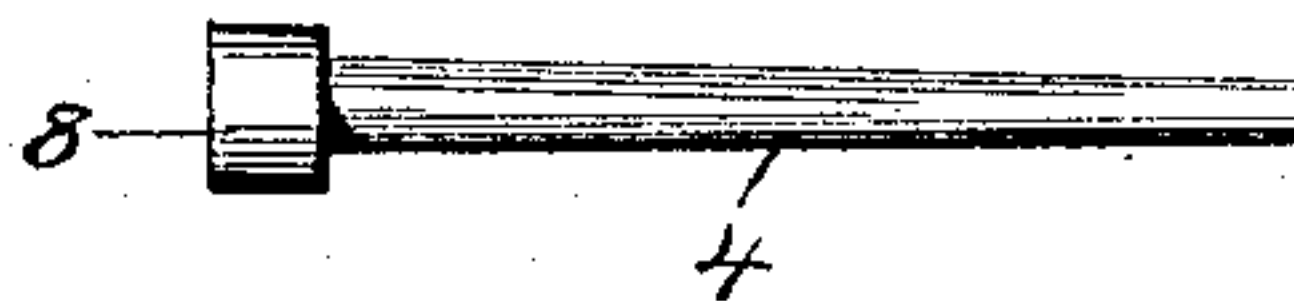


Fig. 5



Witnessed.

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UNITED STATES PATENT OFFICE.

WILSON E. PORTER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO NEW HAVEN CLOCK CO.,
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WATCH.

No. 881,440.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed June 17, 1907. Serial No. 379,340.

To all whom it may concern:

Be it known that I, WILSON E. PORTER, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Watches; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in front elevation of a watch provided with my improvement. Fig. 2 a broken sectional view on an enlarged scale, showing my improved center-pinion split at its rear end for frictionally coupling the center-shaft with it. Fig. 3 a detached sectional view of my improved center-pinion on a greatly enlarged scale. Fig. 4 a view thereof in rear elevation on the same scale. Fig. 5 a view on the same scale of one form of center-shaft which may be used with my improved pinion.

My invention relates to an improvement in watches, the object being to provide for watches of the cheaper grades a cheap, convenient and reliable means for frictionally coupling the center-shaft with the center-pinion.

With these ends in view my invention consists in a watch having certain details of construction as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ a center-pinion 2 having a longitudinal bore 3 extending throughout its length for the passage through it from rear to front of a removable center-shaft 4. A transverse slot 5 formed in the rear end of the said pinion results in the production of two semi-circular spring fingers 6 and 7 which grip the rear end of the said center-shaft so as to frictionally couple the same with the pinion. In this way I dispense with the use of the friction washers commonly employed in the cheaper grades of watches for this purpose. Preferably and as herein shown the center-shaft 4 is provided with a head 8 to prevent it from working forward, though the same object might be attained by tapering it as also shown. The said pinion is formed at its rear end with a rear movement-plate bearing 9 larger in diameter than that

portion of the pinion which is split so that the splitting of the pinion will in no wise affect the said bearing which runs in the rear movement-plate 10. At its forward end the pinion is formed with a front movement-plate bearing 11 running in the front movement-plate 12. Just back of the bearing 11 the pinion is formed with a shoulder 13 upon which the center-wheel 14 is mounted. Directly back of the said shoulder 13 are the leaves 15 forming the center-pinion proper. After the center shaft 4 has been pushed from rear to front through the passage or bore 3, an ordinary cannon-pinion 16 is driven upon its projecting forward end. By slotting the rear end of the center-pinion, as described, I secure a very cheap and effective friction for coupling the center-shaft with the center-pinion of a cheap watch.

I am aware that it is old to split the outer end of an ordinary barrel-like cannon pinion to adapt it to grip the forward end of a solid center-arbor. I am also aware that it is old to split the rear end of a solid center-arbor for the frictional engagement of the same with an ordinary center-pinion in a construction in which a barrel-like cannon pinion is driven on the front end of the center-arbor. I do not therefore broadly claim the splitting of a part or member of a watch movement for frictionally coupling the part so split with another part of the watch movement.

I claim:—

1. In a watch, the combination with a center pinion having a longitudinal passage or bore throughout its length and having its rear end split for the production of spring fingers; of a removable center-shaft adapted to be inserted into one end of the said pinion the spring fingers of which grip the rear end of the said shaft and thus frictionally couple the said shaft and pinion; and a flat sheet-metal cannon pinion driven upon the projecting forward end of the said shaft.

2. In a watch, the combination with a center pinion having a longitudinal passage or bore extending throughout its length, and formed at its rear end with integral spring fingers constituting the rear terminal of the said passage; of a removable center-shaft adapted to be inserted into one end of the said pinion the spring fingers of which grip the rear end of the said shaft when the same is in its home position and thus frictionally couple the shaft and pinion; and a flat

sheet-metal cannon pinion driven upon the projecting forward end of the said shaft which is held against longitudinal movement by the spring fingers of the pinion.

5 3. In a watch, the combination with a center pinion having a longitudinal passage or bore extending throughout its length, and formed at its rear end with integral spring fingers constituting the rear terminal of the
10 said passage; of a removable center shaft adapted to be inserted into one end of the said pinion and formed at its rear end with a taper for engagement by the said spring fingers whereby the shaft and pinion are
15 frictionally coupled together; and a flat sheet-metal cannon pinion driven upon the forward end of the said shaft.

4. In a watch, the combination with a center pinion traversed throughout its

length by a longitudinal passage and formed 20
at its rear end with integral spring fingers constituting the rear terminal of the said passage; of a removable center-shaft adapted to be inserted into the rear end of the said pinion and formed at its rear end with a head 25
and with a taper for co-action with the said spring fingers which couple the said shaft and pinion; and a flat sheet-metal cannon pinion driven upon the projecting forward
end of the said shaft. 30

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILSON E. PORTER.

Witnesses:

FREDERIC C. EARLE,
CLARA L. WEED