

No. 767,361.

PATENTED AUG. 9, 1904.

T. B. STEPHENSON, JR.
RATCHET WHEEL FOR CLOCKS.

APPLICATION FILED MAR. 24, 1904.

NO MODEL.

Fig. 1.

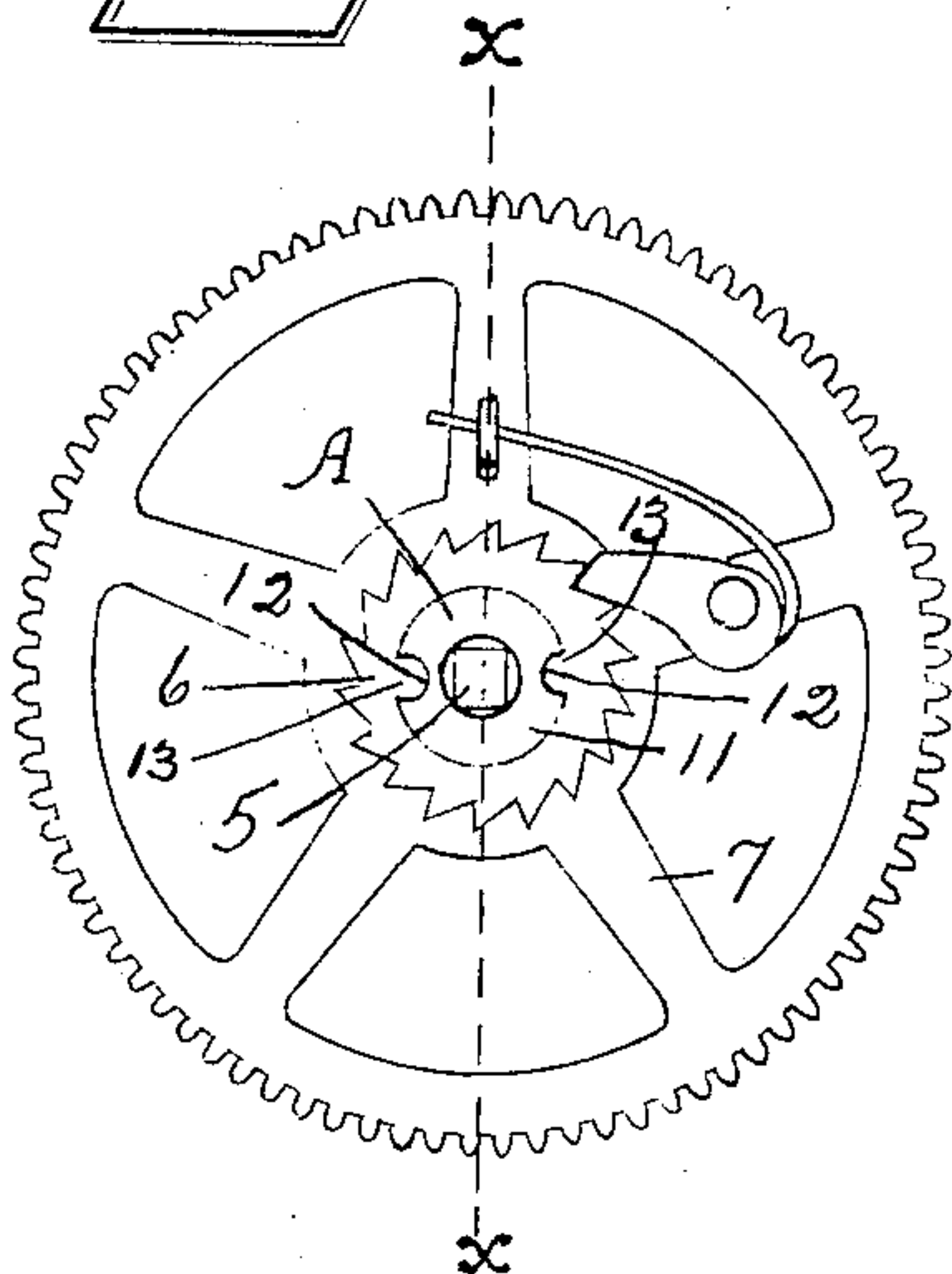


Fig. 2.

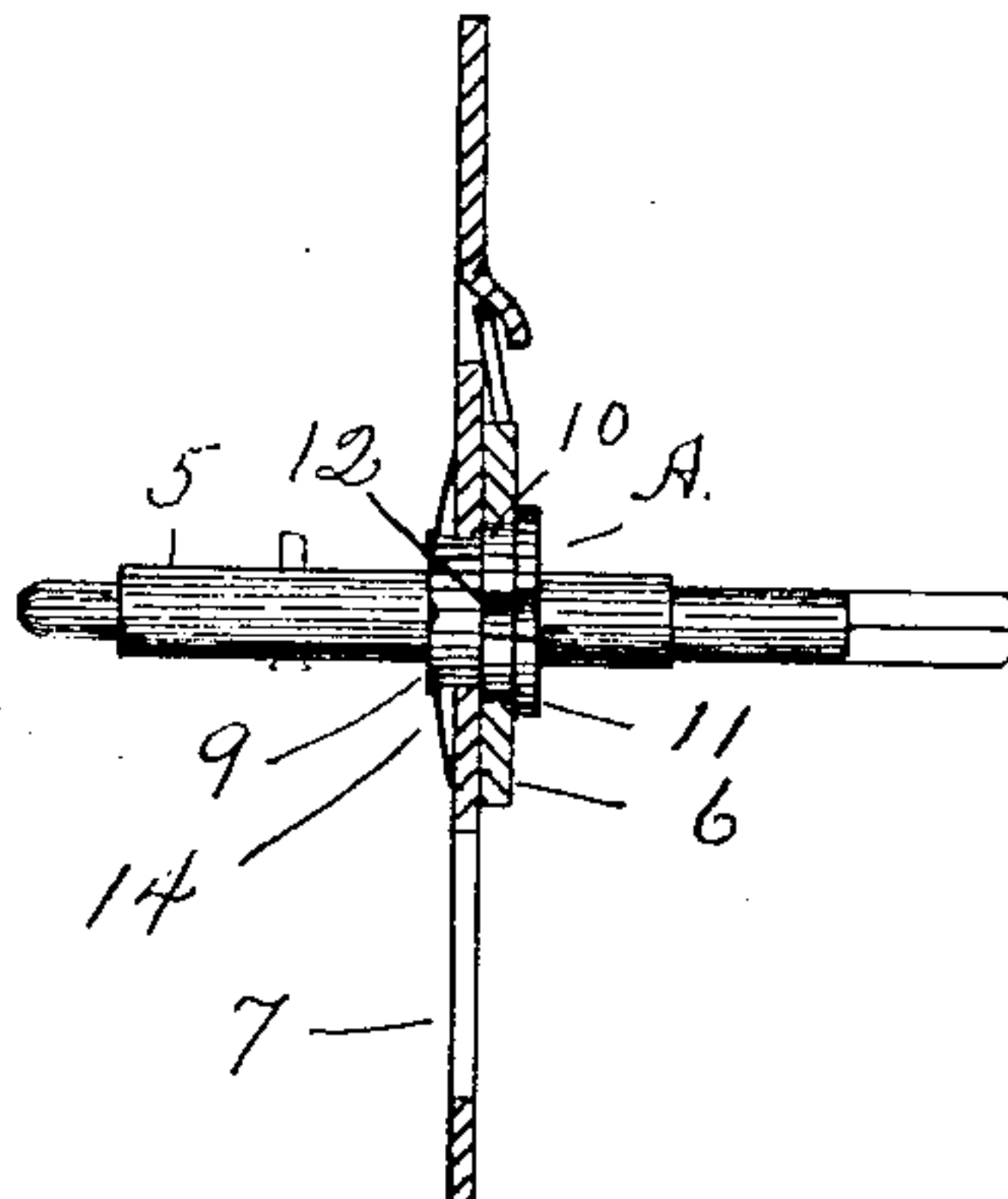


Fig. 3.

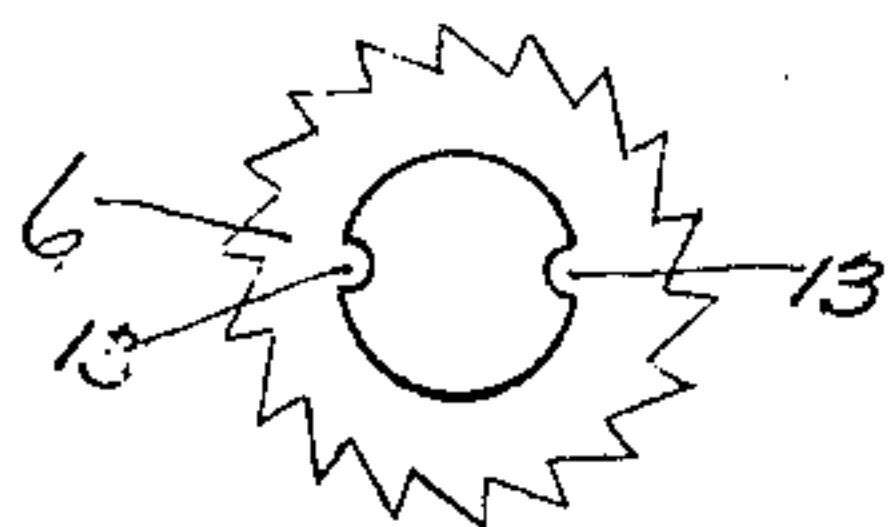
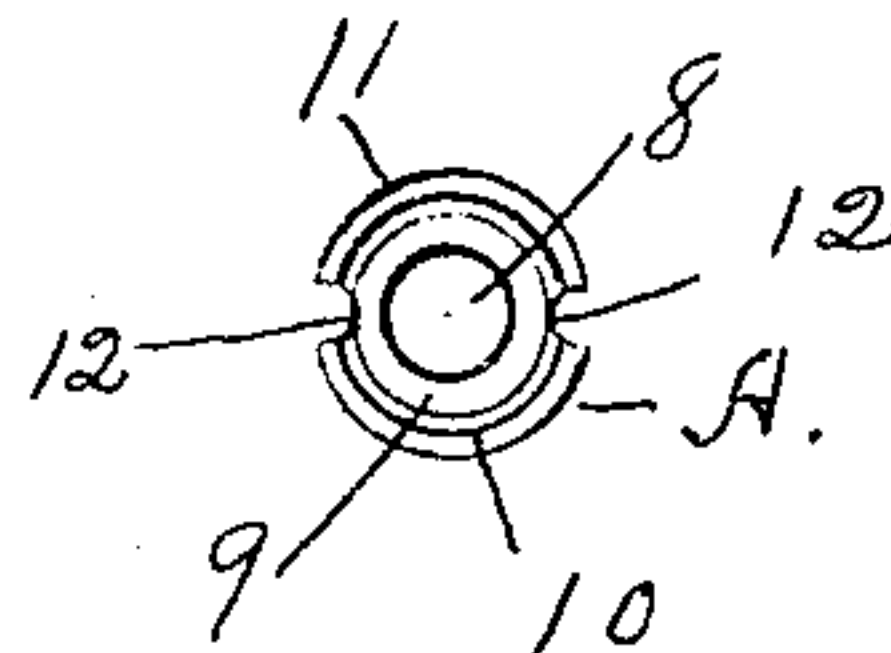


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS B. STEPHENSON, JR., OF BRISTOL, CONNECTICUT, ASSIGNOR TO
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RATCHET-WHEEL FOR CLOCKS.

SPECIFICATION forming part of Letters Patent No. 767,361, dated August 9, 1904.

Application filed March 24, 1904. Serial No. 199,769. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. STEPHENSON, Jr., residing at Bristol, in the county of Hartford and State of Connecticut, have invented
5 new and useful Improvements in Ratchet-Wheels for Clocks, of which the following is a specification.

My invention relates to improvements in ratchet-wheels for clocks; and the objects of
10 my improvement are economy in construction and efficiency in use.

In the accompanying drawings, Figure 1 is a side elevation of my ratchet-wheel, together with its hub and shaft and the main wheel of
15 a clock. Fig. 2 is a sectional elevation of the same on the line *xx* of Fig. 1. Fig. 3 is a detached side elevation of the rim of the ratchet-wheel. Fig. 4 is a like view of the hub of the ratchet-wheel.

20 The shaft 5 is or may be of any ordinary construction. Instead of mounting a ratchet-wheel directly on this shaft I form a ratchet-wheel hub of a special construction and mount the said hub on the said shaft 5 and then mount
25 a separately-formed ratchet-wheel rim 6 on the said hub with the main wheel 7, which is also mounted thereon.

The hub A is provided with a central bore or hole 8, Fig. 4, to receive the main shaft 5
30 and is or may be secured on the said shaft in any ordinary manner. It is provided at one end or side with the ordinary round tenon 9 to receive the main wheel 7, at its middle portion with a second tenon 10 of a little larger
35 diameter to receive the ratchet-wheel rim 6, and at the end or side opposite the tenon 9 with a flange 11 of a larger diameter than the second tenon 10. This second tenon 10 is at first formed of a round or cylindrical form and
40 is afterward changed into a non-cylindrical form to convert it into a driver—that is to say, a form that will necessitate the rotation therewith of a part mounted thereon and fitted thereto. In the present example and as preferred this driving form is given to the said
45 second tenon 10 by means of one or more driving portions in the form of recesses 12, which are made as deep as they can be and not cut into the tenon 9, although the depth is not

material. As shown, the recesses 12 extend 50 continuously through the second tenon 10 and adjacent flange 11; but this is only for convenience of construction, the portion of the said recesses that are within the said flange having
55 no function.

The inner edge of the ratchet-wheel rim 6
is mainly circular and of a diameter to fit the cylindrical portion of the second tenon 10 and in addition to this circular form is provided
60 with as many inward projections or driving portions 13 as there are recesses 12 in the tenon 10, the said projecting portions being located and shaped to fit the said recesses 12 of the tenon 10 when the said ratchet-wheel rim
65 is mounted thereon.

After the ratchet-wheel hub A is mounted on or secured to the shaft 5 the ratchet-wheel rim 6 is placed on the second tenon 10, with its inwardly-projecting portions resting within the driving-recesses 12. The main wheel
70 7 is then placed on the tenon 9, together with the ordinary spring-washer 14, and secured thereon in any ordinary manner—as, for example, by “staking” or upsetting the outer portion of the said tenon. The ratchet-wheel
75 rim is then securely held in place on the hub A, so as to move therewith substantially as if formed in one and the same piece.

By my improvement the complete ratchet-wheel is cheaply produced, and by making the
80 ratchet-wheel rim separately from its hub the said rim may readily be formed by a die and punch and, if desired, of a different or harder material from that employed for the ratchet-hub.
85

I claim as my invention—

1. The herein-described ratchet-wheel for clocks consisting of the ratchet-wheel hub having a tenon for the main wheel, a second tenon for the ratchet-wheel rim and a flange larger
90 than the said second tenon, the said second tenon having a driving portion, and the separately-formed ratchet-wheel rim having a driving portion, and mounted on the said second tenon of the said ratchet-wheel hub with
95 the driving portions of the said hub and rim in engagement with each other.

2. The combination of the ratchet-wheel hub

having a tenon for the main wheel, a second tenon, a driving portion and a flange of a larger diameter than the said second tenon, with a separately-formed ratchet-wheel rim mounted
5 on the said second tenon and having a driving portion, and the main wheel mounted on the said hub and by which wheel the said ratchet-wheel rim is held against the said flange, on the said ratchet-wheel hub, substantially as
10 described.

3. The herein-described ratchet-wheel for clocks consisting of a shaft, the separately-formed ratchet-wheel hub mounted on the said

shaft and having a tenon for the main wheel, a second tenon for the ratchet-wheel rim and
15 a flange of a larger diameter than the said second tenon, and the separately-formed ratchet-wheel rim, the said second tenon and the hole in the separately-formed ratchet-wheel rim
20 being of a non-cylindrical form fitted to each other to necessitate their simultaneous rotation substantially as described.

THOMAS B. STEPHENSON, JR.

Witnesses:

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