

No. 639,438.

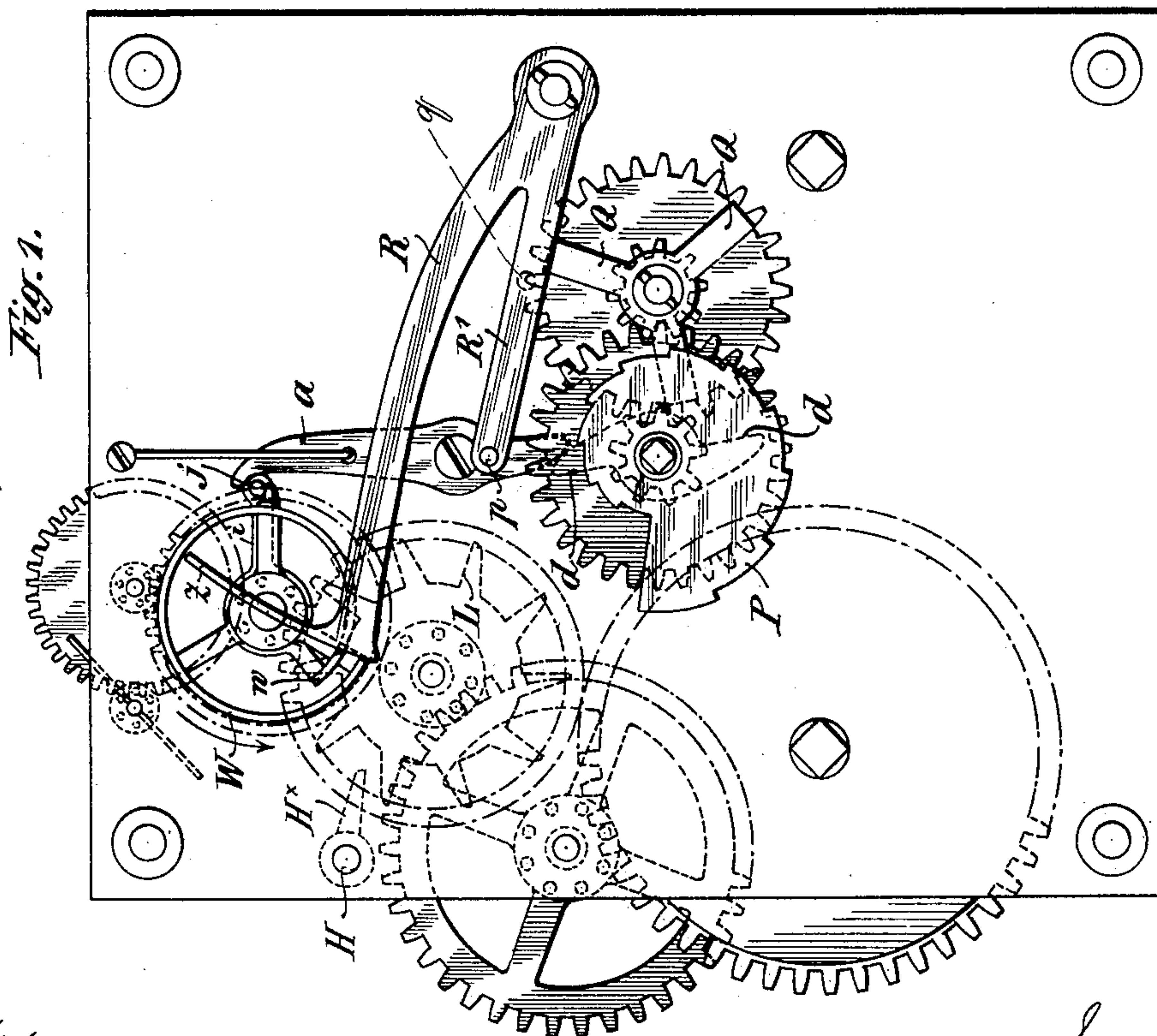
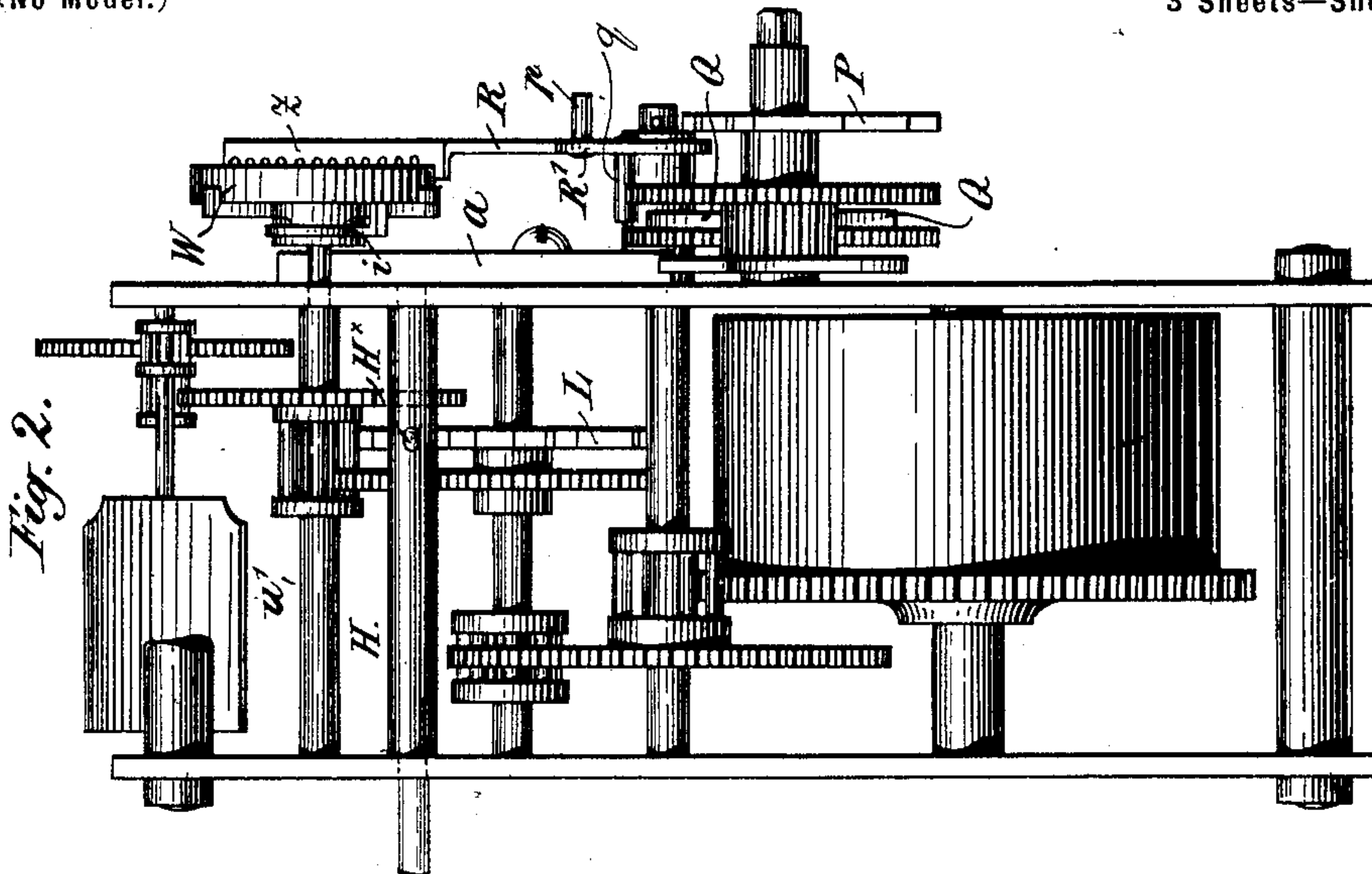
Patented Dec. 19, 1899.

H. W. J. ROSIN.
CLOCK STRIKING MECHANISM.

(Application filed Feb. 17, 1899.)

(No Model.)

3 Sheets—Sheet 1.



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3 Sheets—Sheet 2.

Fig. 3.

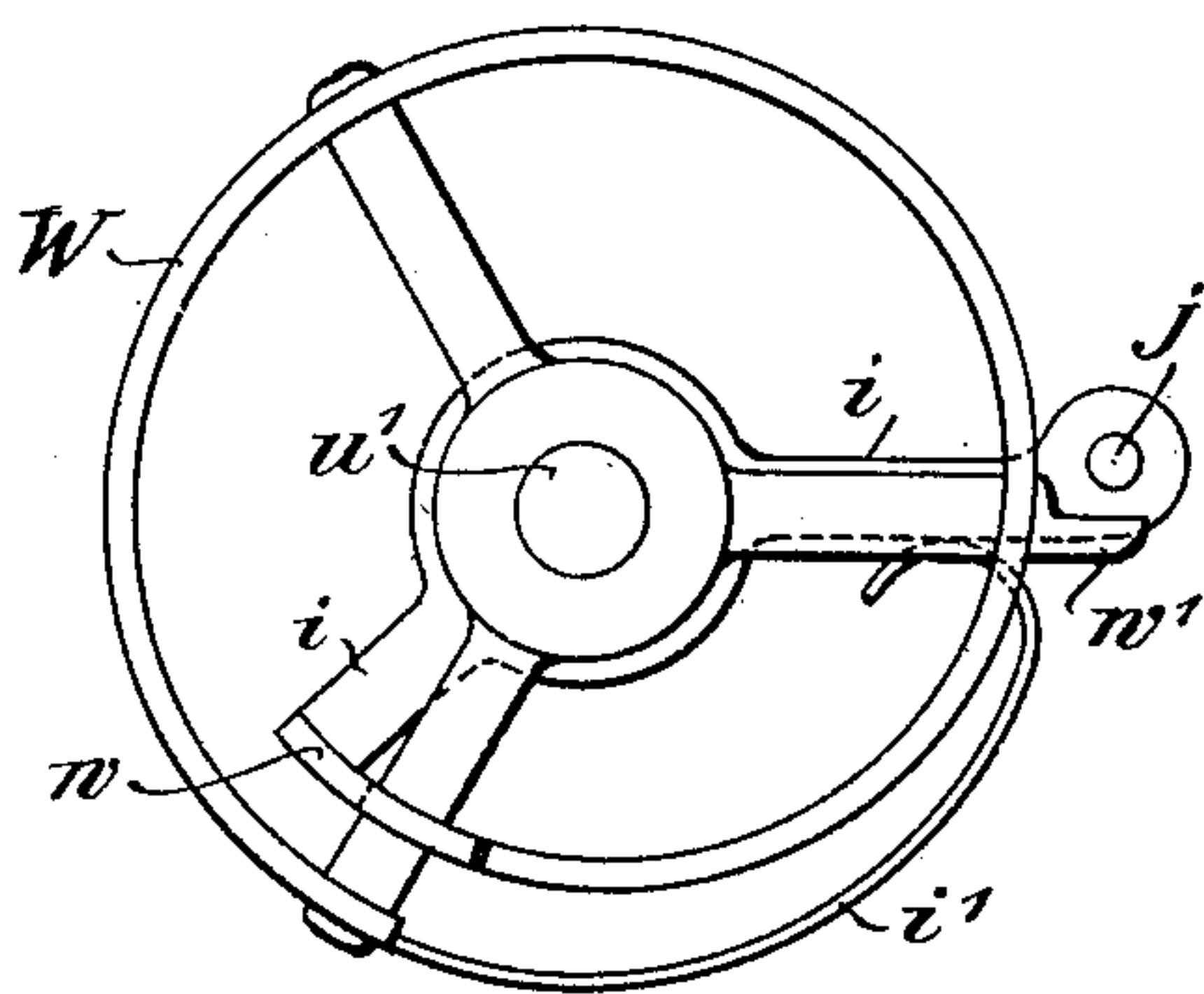


Fig. 4.

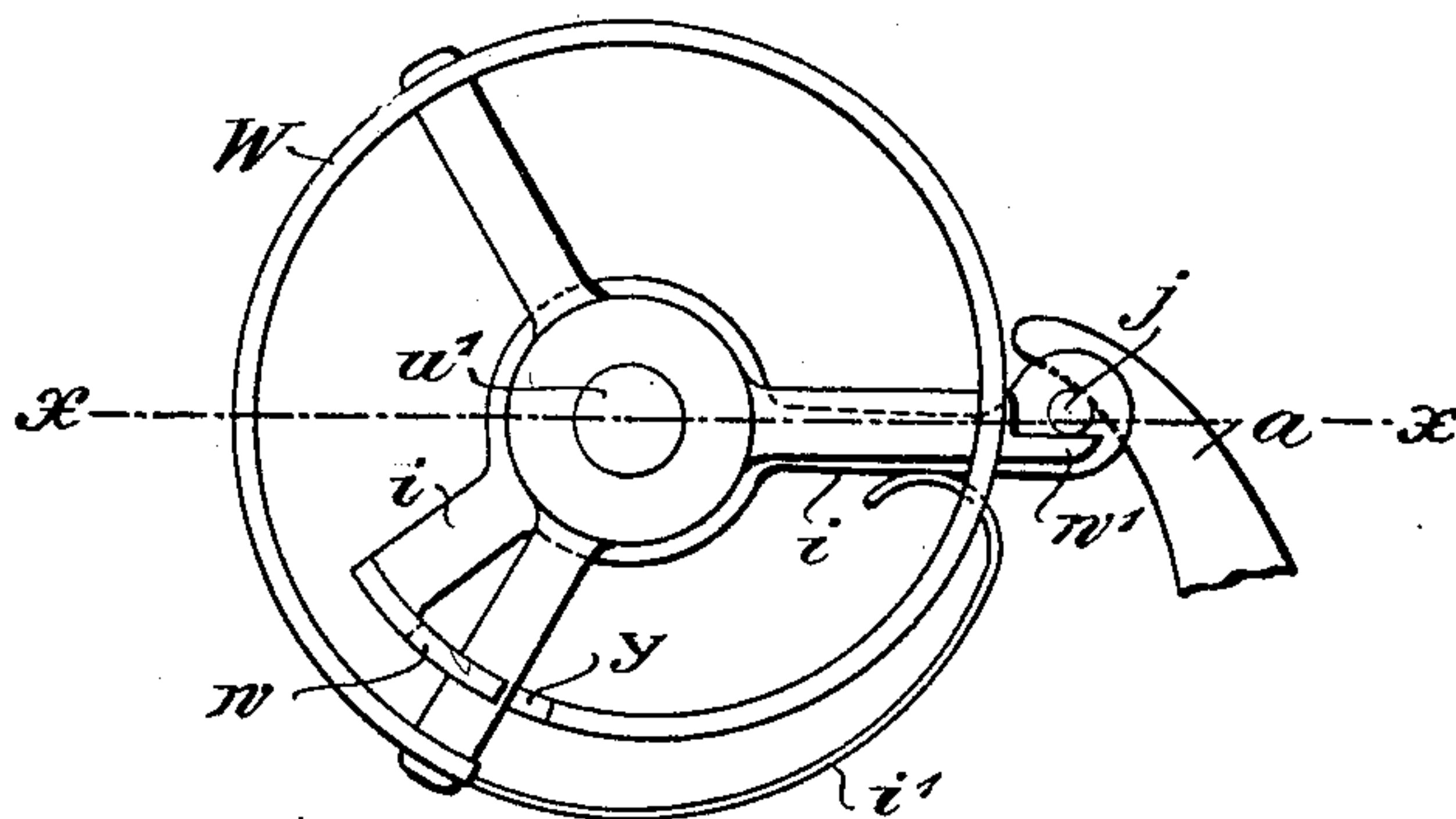
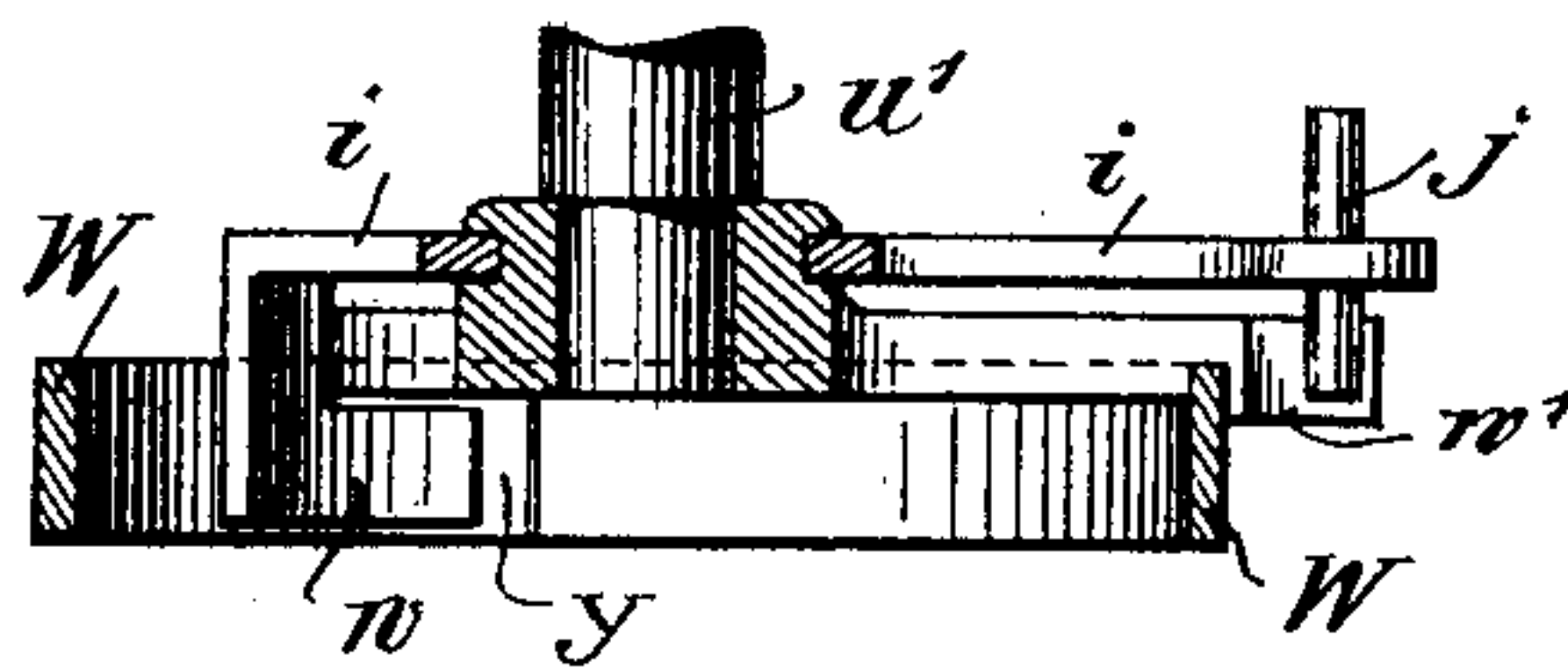


Fig. 5.



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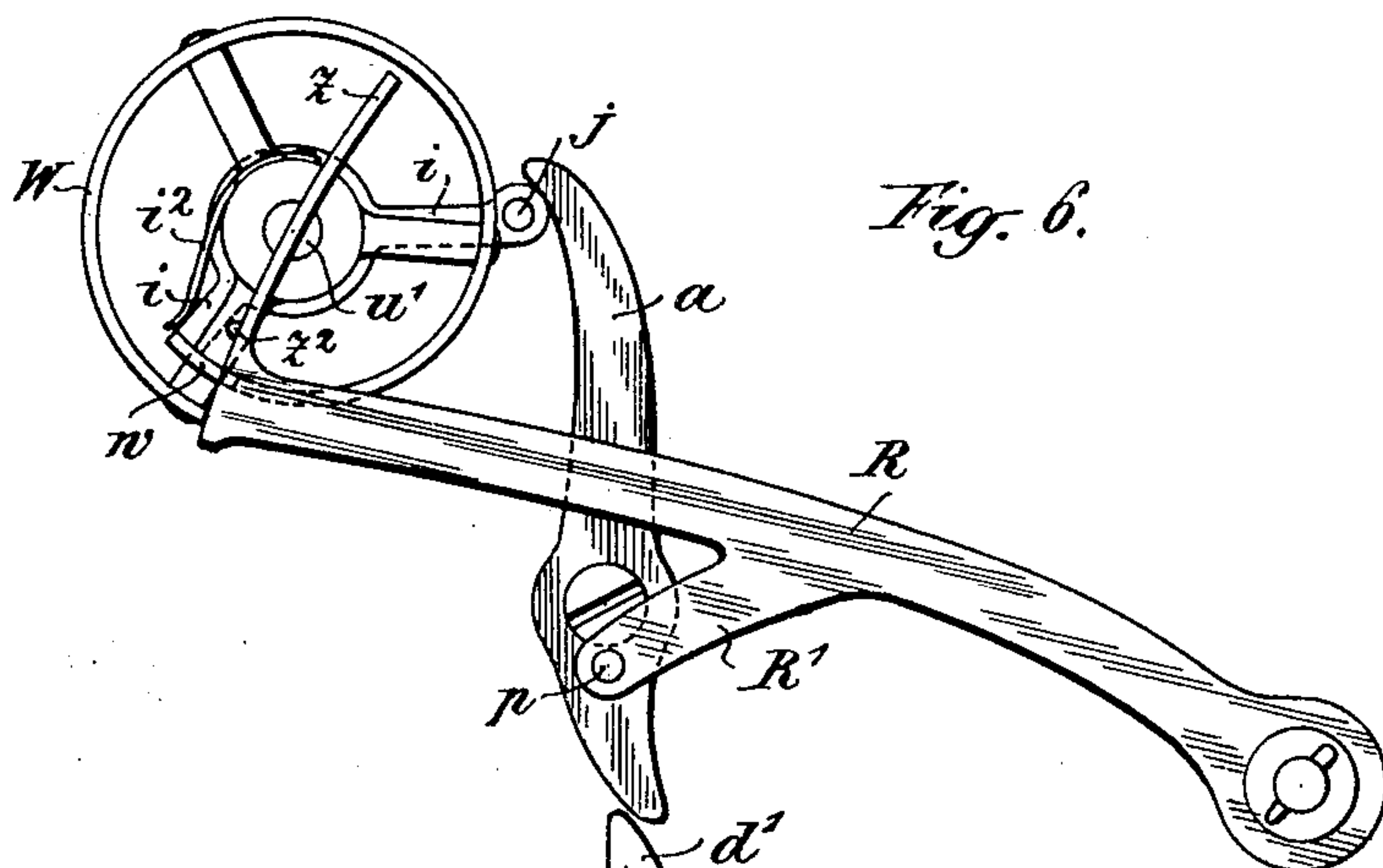


Fig. 6.

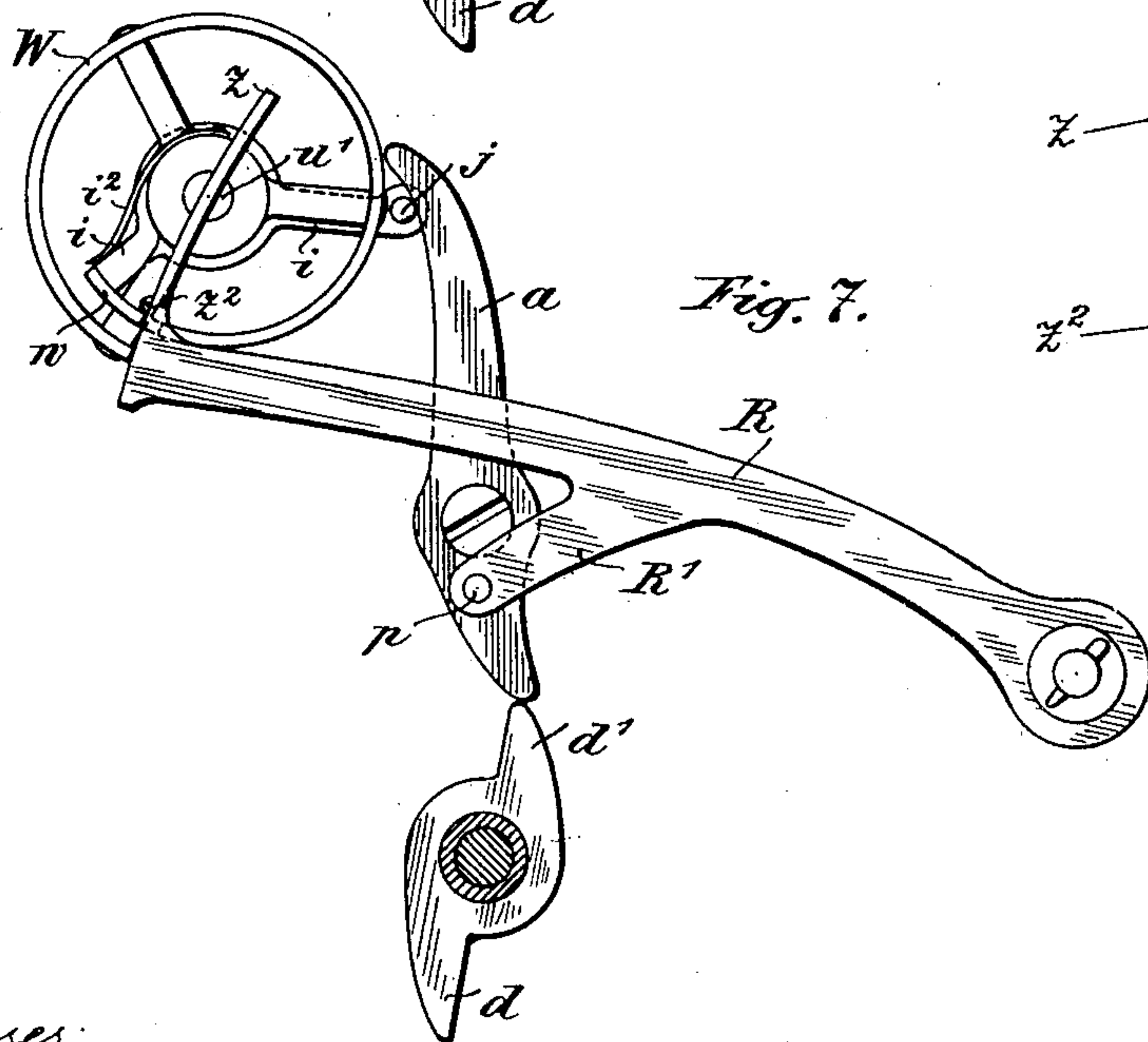


Fig. 7.

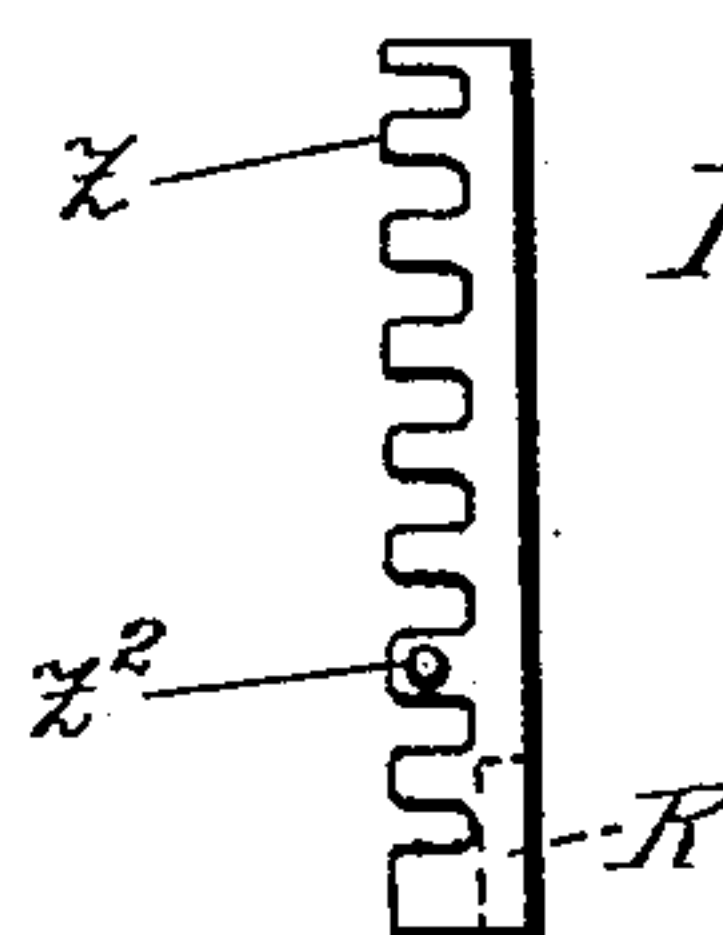


Fig. 8.

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UNITED STATES PATENT OFFICE.

HERMANN WILHELM JULIUS ROSIN, OF SCHRAMBERG, GERMANY.

CLOCK STRIKING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 639,438, dated December 19, 1899.

Application filed February 17, 1899. Serial No. 705,885. (No model.)

To all whom it may concern:

Be it known that I, HERMANN WILHELM JULIUS ROSIN, watchmaker, a subject of the King of Prussia, Emperor of Germany, residing at Schramberg, Kingdom of Württemberg, German Empire, have invented certain new and useful Improvements in Striking Mechanism for Clocks; 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 striking mechanism for clocks; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a front view of portions of a clock provided with striking mechanism according to this invention. Fig. 2 is a side view of the same. Figs. 3 and 4 are detail front views of the volute wheel, showing it in different positions. Fig. 5 is a section taken on the line xx in Fig. 4. Figs. 6 and 7 are front views of the controlling-lever and the parts coöperating with it, showing them in different positions. Fig. 8 is a detail view of the rack z , showing the projection z^2 .

P is the striking-snail. L is the star-wheel, that operates the hammer. H is the hammer-shaft, provided with a projection H^x , with which the wheel L engages. These parts and a clock mechanism are combined, as shown in the drawings, and all the parts are of approved construction.

R is a pivoted controlling-lever provided with a pin p on its arm R' , which drops onto the snail periodically when the lever is released.

W is a volute wheel secured on a shaft u' and revolved continuously in any approved way. The inner end part or end piece w of the volute wheel is formed separate from the body of the wheel and projects from one end of a lever i , which is pivoted concentric with the volute wheel. The other end of the lever i is provided with a laterally-projecting pin j , and w' is a stop on the body of the wheel W for limiting the movement of the lever i in

one direction. A spring v' is provided and operates to hold the pin j clear of the stop, with the end portion w substantially continuous

with the main portion of the volute wheel, as shown in Fig. 3.

The controlling-lever R is provided with a toothed rack z , which engages with the volute wheel W .

A pivoted lever a is provided for depressing the pin j at intervals. This lever a is operated by a revolving cam or tappet d , driven in any approved manner.

When the cam d turns the lever a on its pivot, the lever i is also turned on its pivot and the end piece w is moved away from the main portion of the volute wheel, leaving a gap y , Fig. 5, through which the toothed rack is free to drop, thereby letting the pin p of the controlling-lever fall onto the striking-snail. The striking mechanism operates in the ordinary approved manner when the controlling-lever is thus released.

The half-hours are struck when the lever R is allowed to drop a short distance. This may be effected by a stop Q , which is secured on a revoluble shaft of the clock and which is brought under a pin q , projecting from the controlling-lever at appropriate intervals.

A preferred means for permitting the lever R to drop a short distance consists of a projection z^2 on the rack z . This projection projects from the side of the rack next to the end piece w , as shown in Fig. 6. A cam or tappet d' is provided, which is shorter than the cam d , so that it moves the levers a and i to a less extent. When the lever i is moved by the action of the cam d' , the end piece w is moved to a small extent, forming a narrow gap through which the rack falls until the projection catches on the end piece w of the volute wheel, as shown in Fig. 7.

What I claim is—

1. In a striking mechanism, the combination, with a revoluble volute wheel provided with a separable end piece, of a pivoted controlling-lever provided with teeth which engage with the said volute wheel and its end part, and tappet mechanism operating periodically to separate the said end part from the body of the volute wheel thereby releasing the said lever, substantially as set forth.

2. In a striking mechanism, the combination, with a revoluble volute wheel, and a separable end piece pivoted concentric with the said wheel; of a pivoted controlling-lever pro-

vided with teeth which engage with the said
volute wheel and its end part, tappet mech-
anism operating periodically to separate the
said end part from the body of the volute
5 wheel thereby releasing the said lever, and
means for moving the said separable parts
toward each other automatically when re-
leased from the action of the tappet mechan-
ism, substantially as set forth.
10 3. In a striking mechanism, the combina-
tion, with a revoluble volute wheel, and a sep-
arable end piece; of a pivoted controlling-le-
ver provided with teeth which engage with
the said volute wheel and its end piece, said
15 lever having also a lateral projection; and
tappet mechanism operating periodically to
separate the said end piece from the body of
the volute wheel to a small extent to permit
the lever to drop a short distance and to be
20 supported by the said projection, and to a
greater extent to permit the said projection

to pass through the opening, substantially as
set forth.

4. In a striking mechanism, the combina-
tion, with a revoluble volute wheel, and a sep- 25
arable end piece; of a pivoted controlling-le-
ver provided with teeth which engage with
the said volute wheel and its end piece, tap-
pet mechanism operating periodically to sep-
arate the said end piece from the body of the 30
volute wheel thereby releasing the said lever,
and means for arresting the said lever after
it has dropped a short distance between the
said separable parts at prearranged times and
at other times permitting the said lever to drop 35
freely, substantially as set forth.

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

HERMANN WILHELM JULIUS ROSIN.

Witnesses:

WM. HAHN,

N. WAGNER.