

No. 815,989.

PATENTED MAR. 27, 1906.

A. WAGNER.
WATCH.

APPLICATION FILED JULY 1, 1904.

Fig. 1.

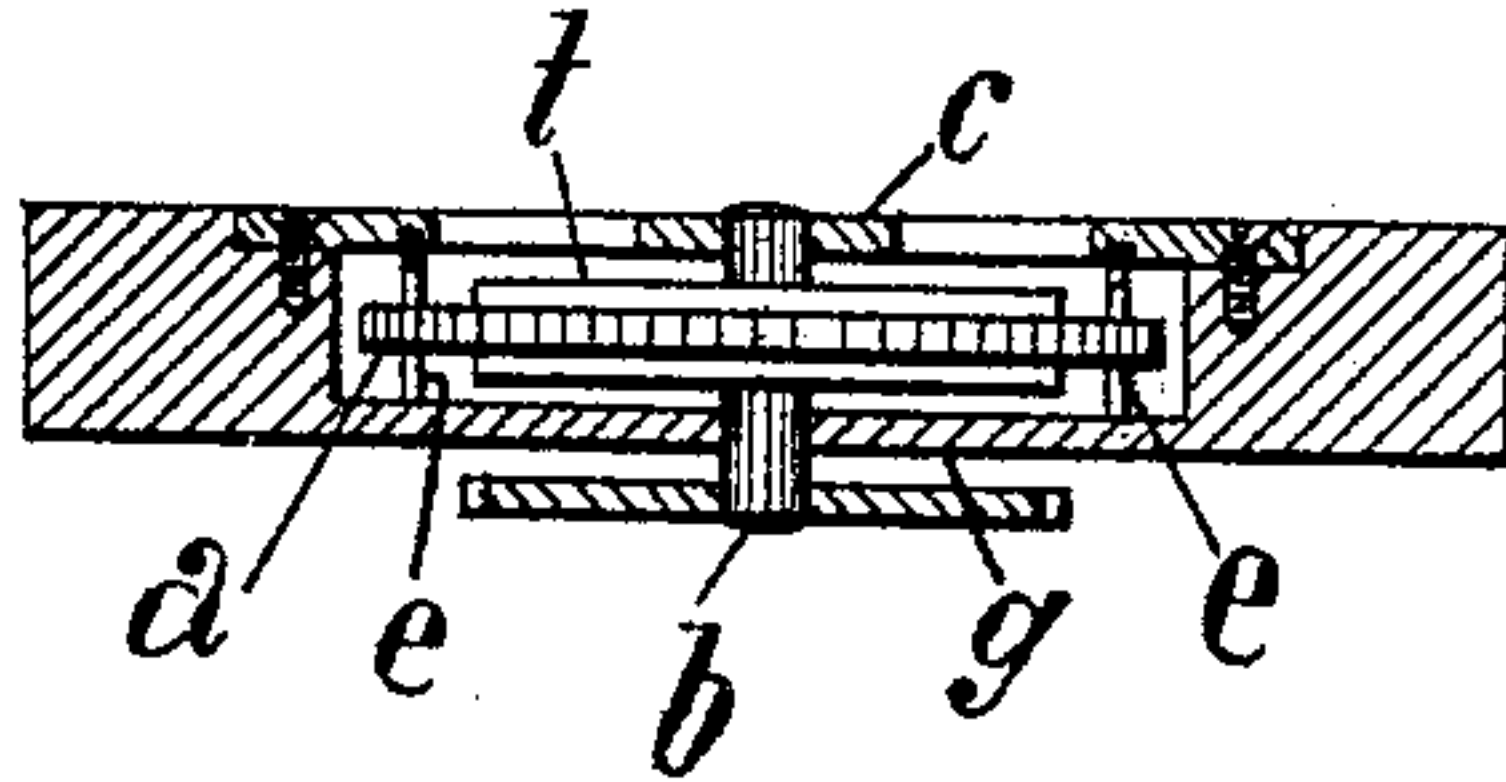


Fig. 2.

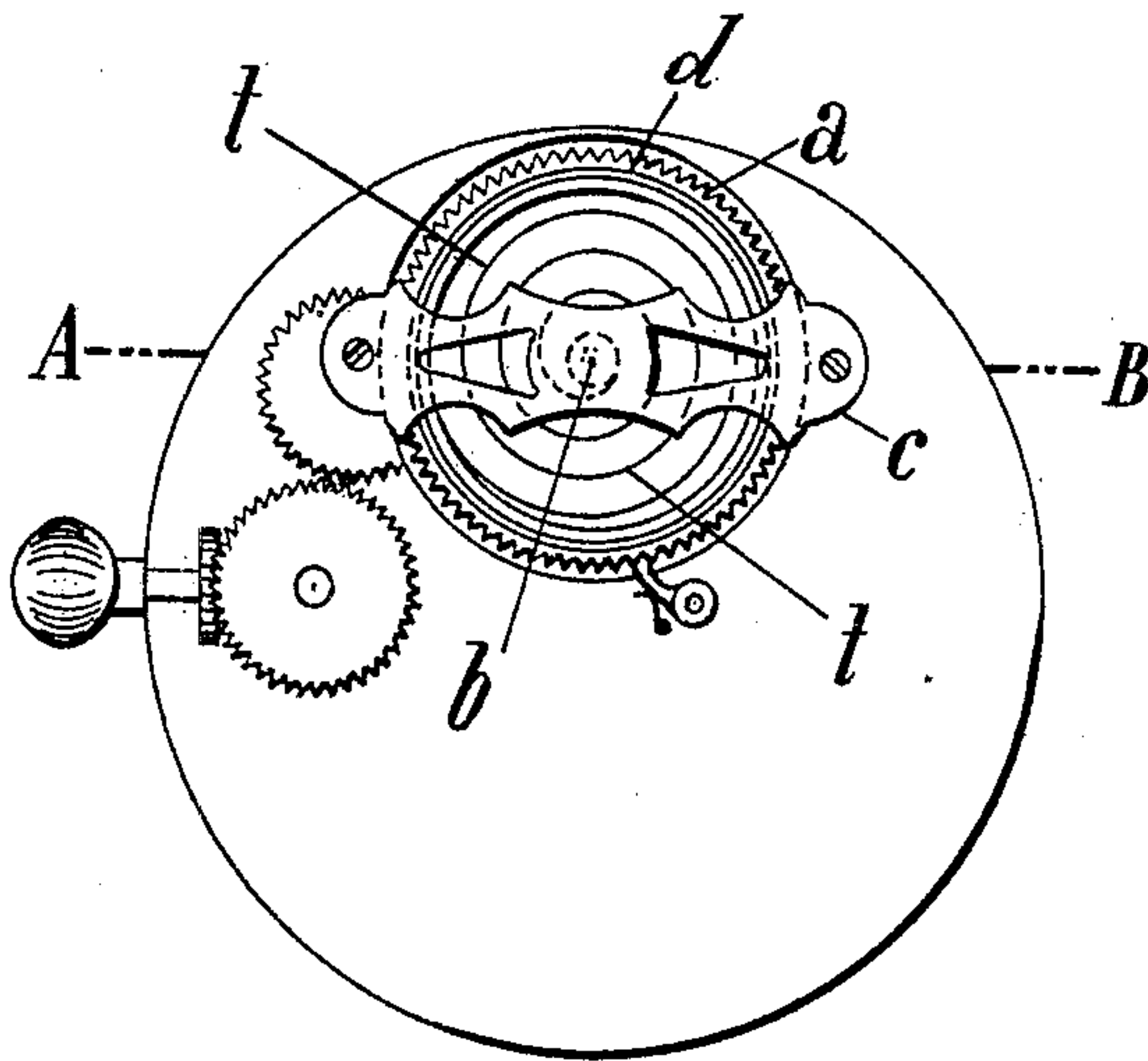


Fig. 3.

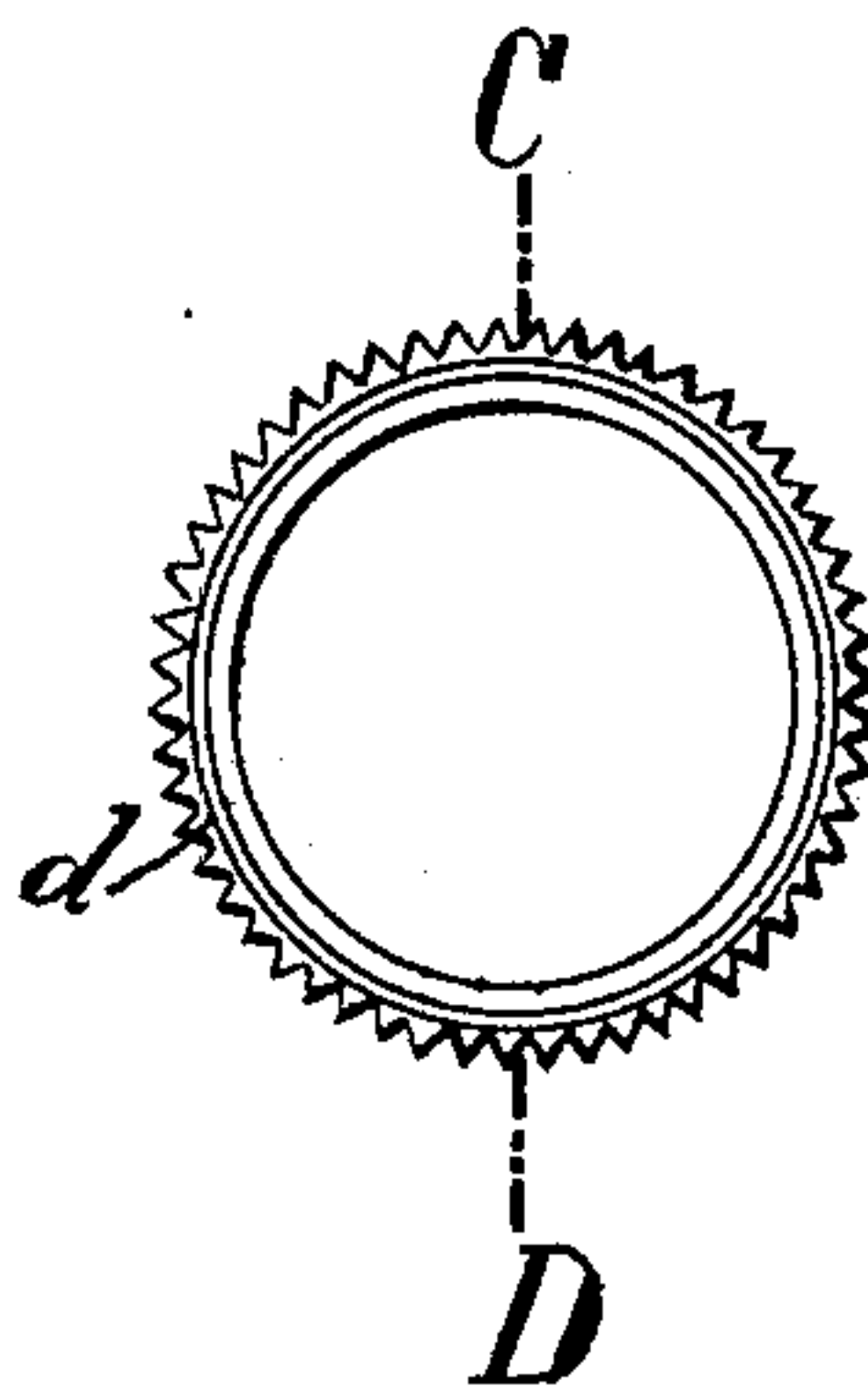
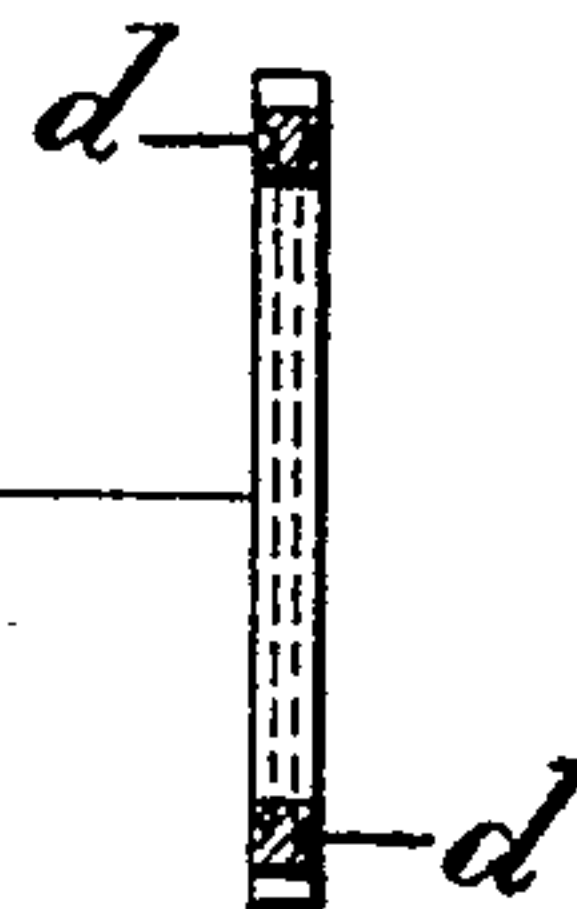


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALBIN WAGNER, OF OBERPLANITZ, GERMANY.

WATCH.

No. 815,989.

Specification of Letters Patent.

Patented March 27, 1906.

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To all whom it may concern:

Be it known that I, ALBIN WAGNER, a subject of the German Emperor, and a resident of Oberplanitz, Germany, have invented certain new and useful Improvements in the Manufacture of Watches, of which the following is a specification.

In the manufacture of watches an effort is made to simplify parts difficult in making or dispense with them altogether in order to find place for striking-works and the like and to increase the strength of the driving-spring. Up to the present closed drums have mostly been used for the springs and an attempt has been made to construct open spring-cases in the form of drums in which a circular opening provided in the plate serves as a supporting-surface to the spur-gear which forms one piece with the spring-drum, while the drum itself is guided in the said opening. Constructions are also known in which the spring-drum is replaced by pins arranged in a circle on a wheel against which the spring rests or sets when its tension decreases. In order to make the space which in the first construction is occupied by the drum and the space occupied in the second construction by the pins also available for the spring, the usual spring-drum and the winding-up wheel forming one piece with the same are with the exception of the spur-gear of the latter quite dispensed with.

As can be seen from the drawings, in which similar letters refer to similar parts throughout the several views, Figure 1 represents a cross-section; Fig. 2, a top view of the same; Fig. 3, a top view of the angular winding-up wheel, and Fig. 4 is a cross-section of the same.

The winding-up wheel *a* is of the shape of a narrow toothed ring, the interior of which serves to hold the moving spring *t*, which is projecting on either side. Through pointed pins *e*, which engage a groove *d* on the ring *a*, this ring is under check motion. Instead of the pins *e* small balls, screws with round heads, polished pieces of steel, and the like

may also be used. The winding-up ring *a* is stamped of thin sheet metal. It is therefore much lighter and more easy to manufacture than hitherto, especially as the spring-case is quite dispensed with. The moving spring is fastened with one end in the inside of the ring *a* and with the other end to the shaft *b*, which is journaled in the plate *c* and the cross-piece *g*, so that the shaft may in the most simple manner be journaled in bearings. On this shaft *b* is fixed the wheel which engages with the minute-wheel.

The winding up is made easy and smooth, as there is very little friction in the annular groove. The stronger moving spring can be easily replaced. It has more space to move in or more free play and does not require to be wound up so often, as hitherto, and, with the exception of the inner end, it is independent of the works, so that when it breaks the works are not influenced by it. The shaft of the spring may be journaled in bearings. So much space is gained (one-third of the whole plate) that this offers the advantage that the watch may be kept going for eight days without any winding up, or striking-works, alarm-works, and so on may be put in.

What I claim as my invention, and desire to secure by United States Letters Patent, is—

In a device of the character described, the combination with angular winding-up wheel *a* having grooves *d* on both sides thereof, a spring *t* for operating said wheel and inclosed therein, and means projecting from the casing and engaging with said grooves for guiding said wheel, substantially as shown and described.

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

ALBIN WAGNER.

Witnesses:

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