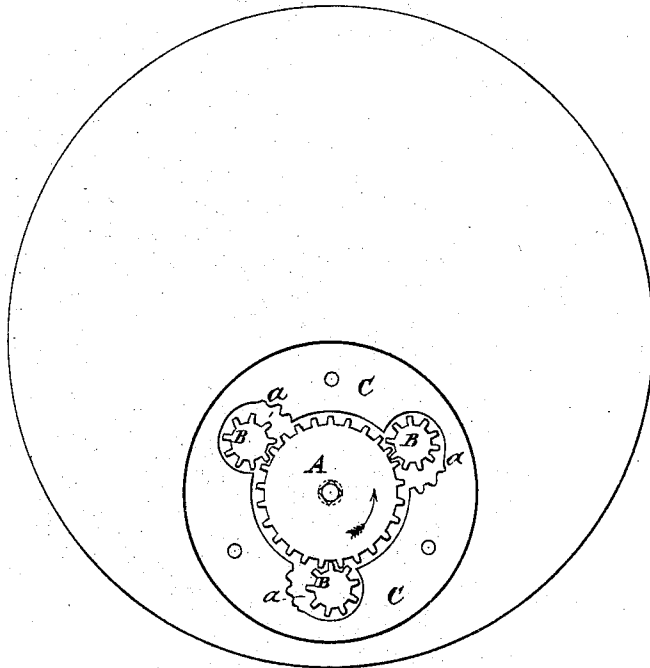


J. D. McANLIS.

RATCHET-STOP FOR WATCHES AND OTHER MACHINERY.

No. 177,139.

Patented May 9, 1876.



WITNESSES:

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JAMES D. McANLIS, OF BEAVER FALLS, PENNSYLVANIA.

IMPROVEMENT IN RATCHET-STOPS FOR WATCHES AND OTHER MACHINERY.

Specification forming part of Letters Patent No. **177,139**, dated May 9, 1876; application filed April 10, 1876.

To all whom it may concern:

Be it known that I, JAMES D. McANLIS, of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented a new and Improved Ratchet-Stop for Watches, &c., of which the following is a specification:

The accompanying drawing represents a top view, with cap-piece detached, of my improved ratchet-stop for watches, clocks, and other mechanism.

The invention is mainly designed as a substitute for the spring-pawls for ratchet-wheels in watches, clocks, and other machinery in which strong springs and other devices have to be retained at one point or tooth of the wheel, so that the tooth click or spring is liable to break and get worn to the injury of the watch or the spring. The device is also applicable to ratchets of any kind, being stronger, more reliable and effective than common pawls, that act on one side of the ratchet only.

The invention consists of a ratchet-wheel, in combination with one or more small pinions that slide in a recessed and toothed encircling frame, and allow the turning of the ratchets in one direction, while stopping them positively in the opposite direction.

In the drawing, A represents the ratchet of a watch, clock, or any other machinery where at present pivot-pawls or dogs are applied. The ratchet is arranged in connection with one or more (preferably three) pinions, B, that gear with the ratchet and turn jointly with the ratchet, being allowed to slide in recesses *a* of a circular band or frame, *c*, extending around the ratchet. The sliding and turning pinions are preferably equidistant from each other, to bear with equal pressure on the ratchet when retaining the same.

The recesses *a* are made concentric to the pinions at one end, but decrease in width toward the other end, to be of less width than the diameter of the pinions. The narrower ends of the recesses are toothed to mesh with the cogs of the pinions. When the ratchet is turned in one direction the pinions slide into the wider parts of the recesses and turn jointly with the ratchet. The ratchet is prevented from turning in opposite direction, as the pinions will be instantly carried toward the narrower parts of the recesses, so as to produce the reliable and positive locking of the ratchet by the joint action of the pinions on the teeth of the ratchet, and on the teeth of the narrower recessed parts. A covering cap-piece may be applied over the ratchet and pinions, and fastened by suitable screws.

The stop-pinions bear equally from different sides on the ratchet-wheel and shaft, and produce less wear and strain thereon, while furnishing a superior and stronger stop device for ratchets of all kinds.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

An improved stop device for ratchets of all kinds, consisting of the combination of the ratchet-wheel with sliding and turning pinions and locking-recesses of a retaining band or ring, substantially as specified, for the purpose set forth.

JAMES D. McANLIS.

Witnesses:

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JNO. A. B. PATTERSON.