

C. E. EVARD.

Watchmakers' Chain-Clamps.

No. 143,131.

Patented September 23, 1873.

Fig. 1.

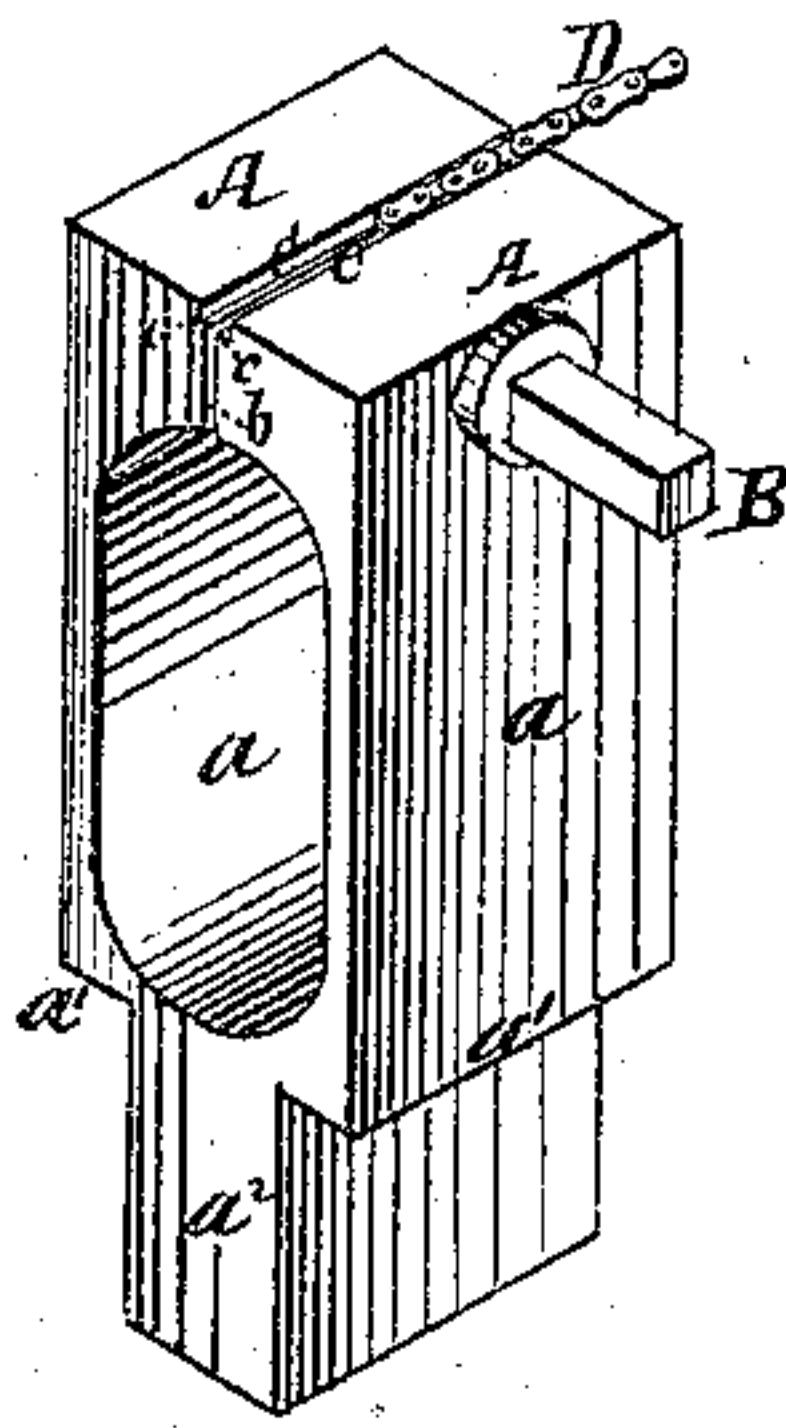
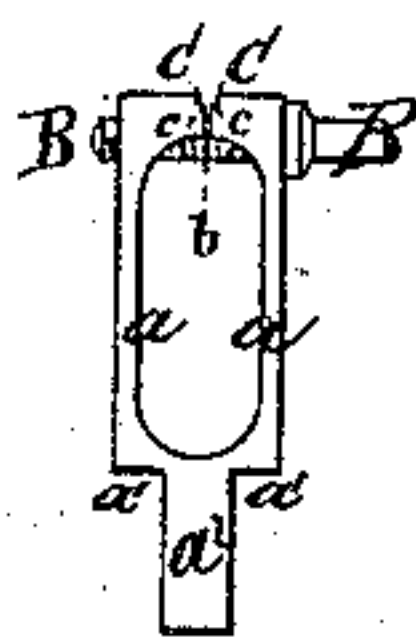


Fig. 2.



Witnesses.
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IMPROVEMENT IN WATCHMAKERS' CHAIN-CLAMPS.

Specification forming part of Letters Patent No. **143,131**, dated September 23, 1873; application filed August 5, 1873.

To all whom it may concern:

Be it known that I, CHARLES E. EVARD, of Leesburg, in the county of Loudoun and State of Virginia, have invented a new and Improved Chain-Clamp; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view, and Fig. 2 is a side elevation.

The invention relates to a method of holding the steel chains used inside of watches when the same are undergoing repair by the expulsion of a rivet preparatory to the replacement of a broken link. Heretofore they have been held and handled with a pair of pinchers, and the rivet and broken link removed by prying the latter apart with a screw-driver or other wedged-shaped tool, the chain being first annealed.

It is found in practice that, not only are great care and skill required to repair a chain in this way, but, by reason of the preliminary annealing, the chain is always weakest where it has been mended.

To obviate these difficulties I construct a clamp with two movable jaws A A, having elastic shanks *a a*, which are angled at the base *a*¹ to form shoulders for the tenon *a*² that fits the vise or table which holds the clamp. B is a right or left hand screw, which brings

the jaws together or separates them. C C are open and right-angled recesses made transversely across the upper corners of the jaws, so as to make flat horizontal surfaces *c c* that form the rest or anvil on which the chain is supported while the rivet is being driven out. The recesses C C are not of sufficient width to allow the jaws A A to come quite together, but necessitate an intervening vacant space, *b*, sufficiently large to admit of the easy passage downwardly of the rivet as it is punched out.

The operation is as follows: A chain, D, is first placed with the links flat on the rest *c c* and clamped between the jaws A A, so as to bring the rivet in a vertical position over the open space *b*. The punch is then applied and the rivet readily expelled. By holding the chain immovable between my clamps A A the annealing which injures the link next adjacent to the broken one and causes it to break readily afterwards is rendered unnecessary.

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

A watchmakers' chain-clamp, provided with jaws A A, having recesses C C forming chain-rest *c c*, as and for the purpose described.

CHARLES ED. EVARD.

Witnesses:

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