

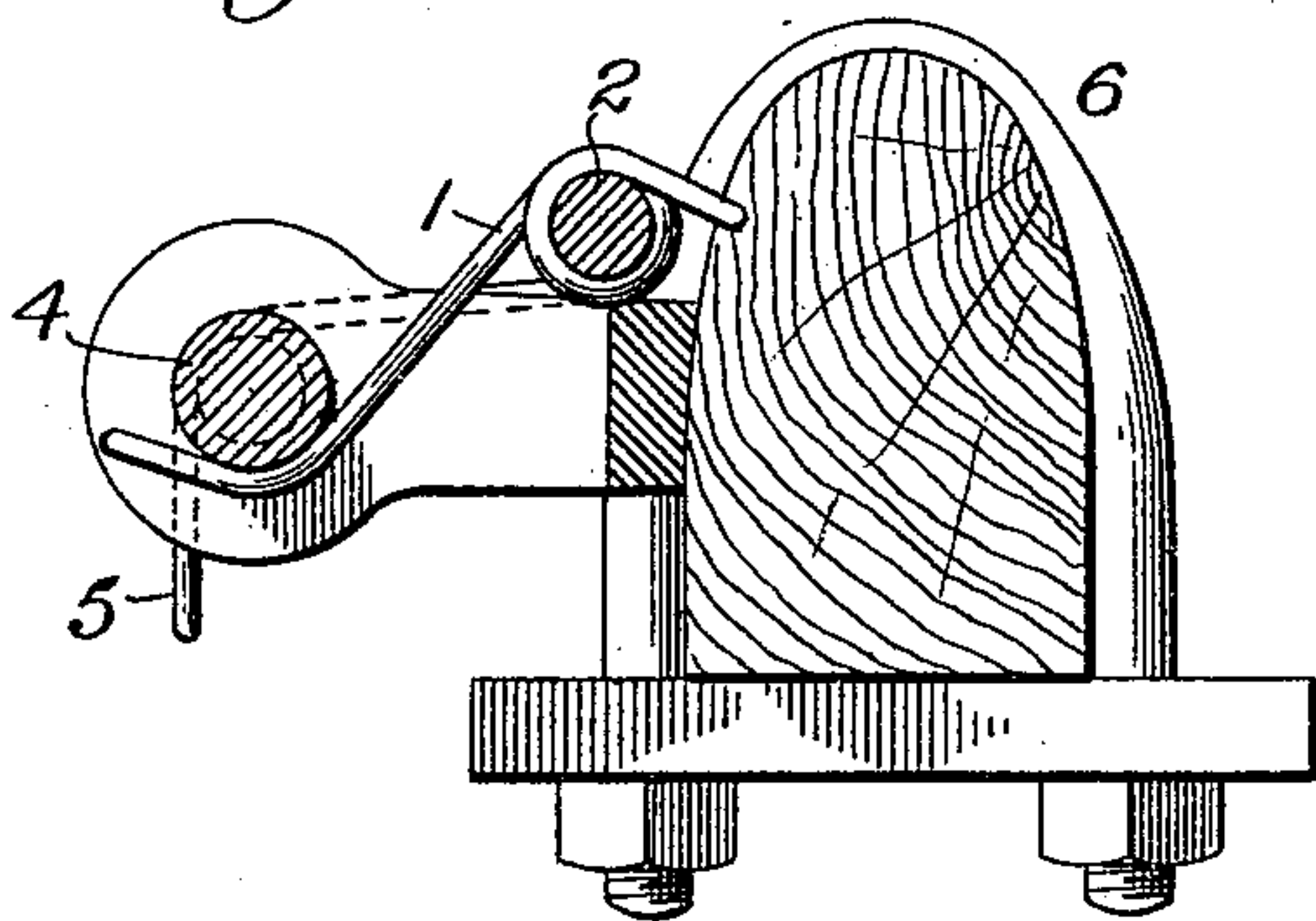
(No Model.)

W. ABRAHAM.  
ANTIRATTLING THILL COUPLING.

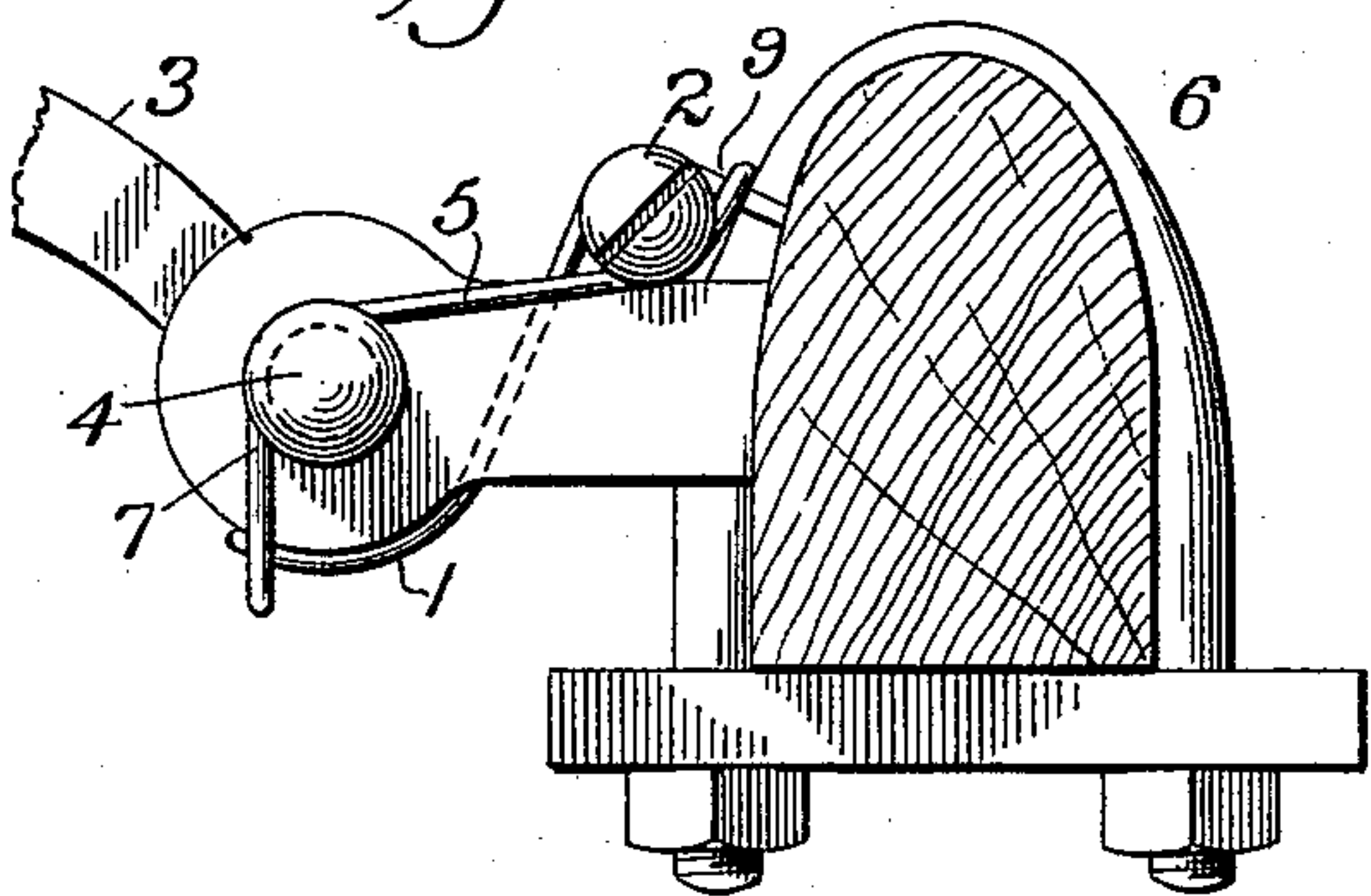
No. 587,355.

Patented Aug. 3, 1897.

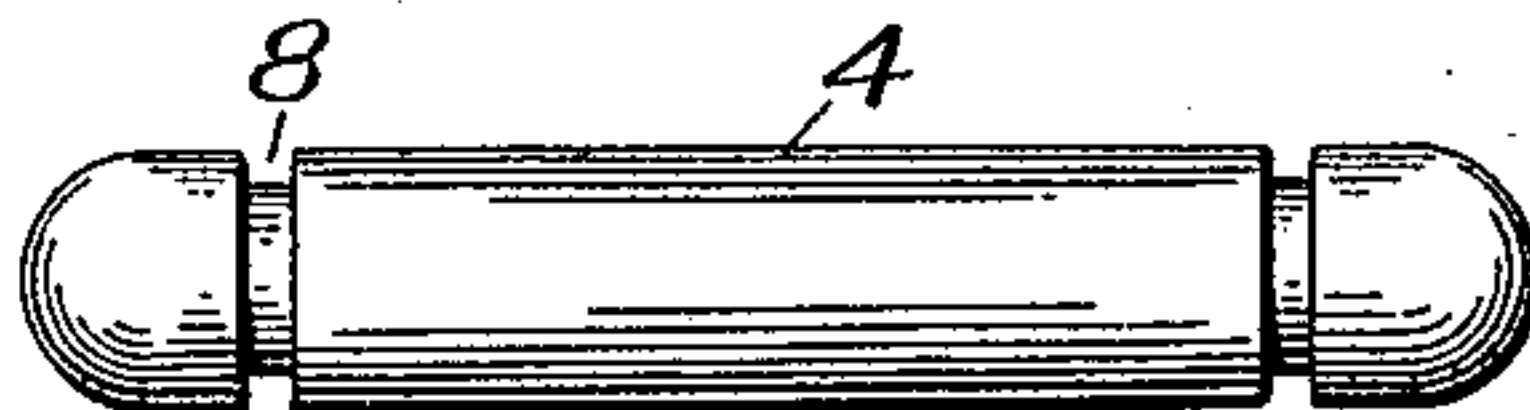
*Fig. 1.*



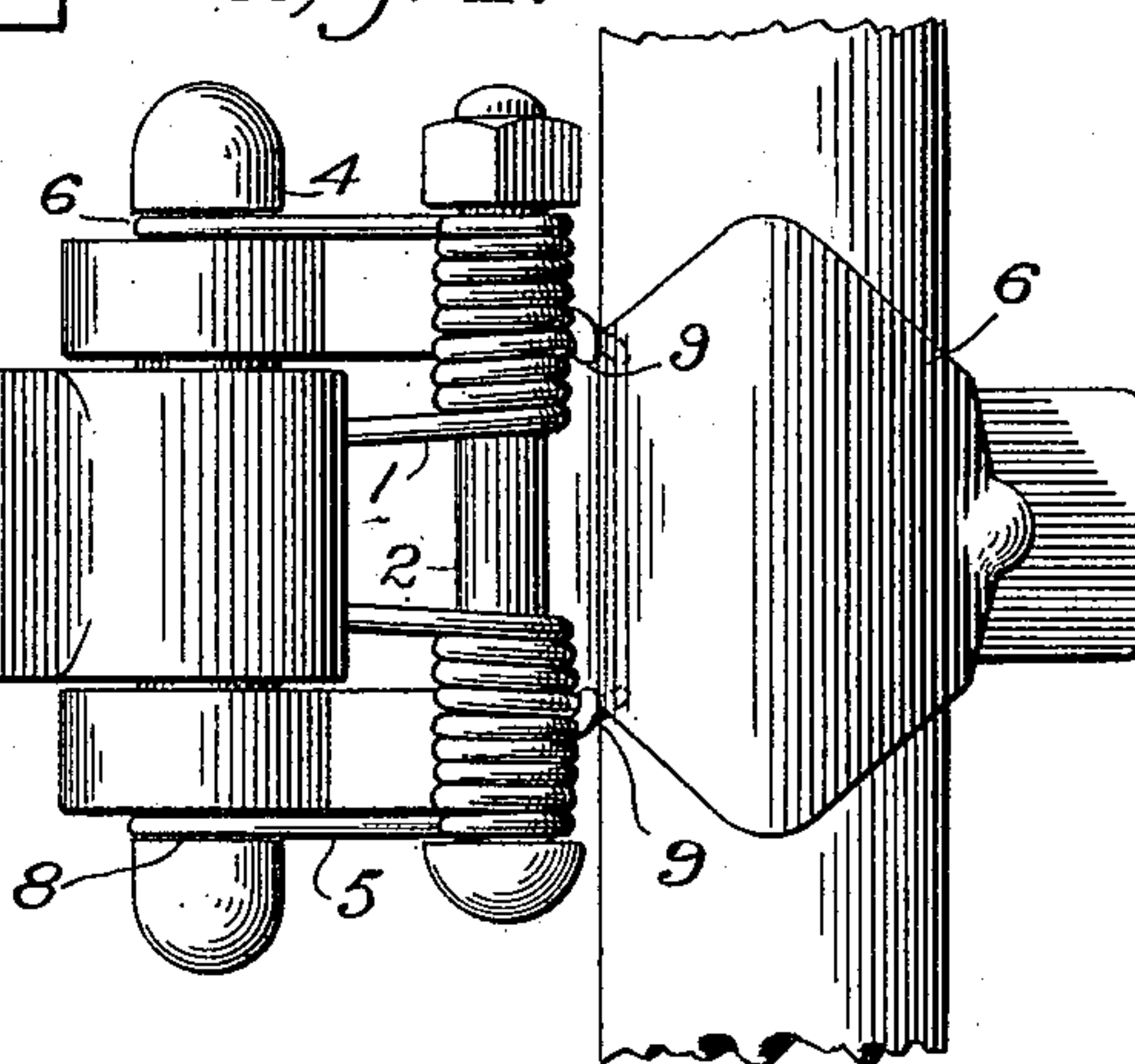
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## ANTIRATTLING THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 587,355, dated August 3, 1897.

Application filed February 17, 1896. Serial No. 579,579. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ABRAHAM, of Fairchild, county of Eau Claire, and State of Wisconsin, have invented a new and useful Non-Rattling Buggy-Clip Attachment and Bolt-Lock Combined; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to improvements in thill-couplings, and has more particular relation to antirattling devices for the same.

The invention consists of certain other novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 represents a central vertical section through a thill-coupling embodying my invention. Fig. 2 represents a side elevation of the same, a portion of the clip being broken away. Fig. 3 represents a detail top plan view of the pivot-pin of the coupling, and Fig. 4 represents a top plan view of the entire coupling.

The main portion of the coupling is of ordinary construction and comprises a suitable axle-clip 6, provided with the usual spaced lugs, between which the rear end of the shaft-iron 3 is pivoted by a pin 4, which extends through said iron and said lugs, respectively, and is provided at each end with a head and a spring-receiving groove 8. A spring 1, constructed of a single piece of wire the ends of which are passed under the clip 6, is wound about a lateral supporting-pin 2 at points between its center and ends, so as to form spring-coils thereon, and is then bent downward to form a curved segmental loop that passes under and embraces the circular pivoted end of the shaft-iron. Springs 5, each of which is constructed of a single piece of wire, are also wound in coils about the said pin 2. Each of said springs has one of its ends bent to form an angular hook 7, which catches over the end of the pin 4 and lies in a groove 8 formed therein. The opposite end of each of said springs 5 is bent to form a hook 9, said hooks being adapted to rest upon the tops of the apertured lugs and prevent the springs from turning on the pin 2.

It will be observed from the foregoing description that the coils of the respective wires 1 and 5, which surround the pin 2, are both fixed firmly at their inner ends, so that said coils act as coil-springs to force the wires firmly against the surfaces which they engage. By this construction the pivoted portion of the shaft is always held firmly up against the pivot-pin no matter how much it becomes worn, and the pivot-pin in the top is always held firmly in the apertured lugs of the clip no matter how much said apertures or said pin may become worn. By this means all wearing of the coupling is instantly and automatically taken up by the respective springs and a perfect antirattling joint is thus provided.

The construction and operation of the several parts of my coupling are very cheap and simple and thus not liable to become injured or disarranged, and if so disarranged or injured being easily replaced with very little expense.

The device may be attached to couplings ordinarily in use by simply inserting my improved form of pivot-pin through the apertured lugs and shaft-iron and applying the respective springs in position.

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

In a thill-coupling, the combination with an axle-clip having forwardly-projecting apertured lugs, of an apertured shaft-iron, a pivot-pin passed through said lugs and said iron and having extended grooved ends, an auxiliary pin, a spring formed of a single piece of wire having its ends passed under said clip, and wound around said auxiliary pin and formed into a loop adapted to bear upon the under side of the shaft-iron, springs coiled about said auxiliary pin and having their respective opposite ends engaging the clip and grooves in the ends of the pivot-pin, substantially as described.

WILLIAM ABRAHAM.

Witnesses:

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