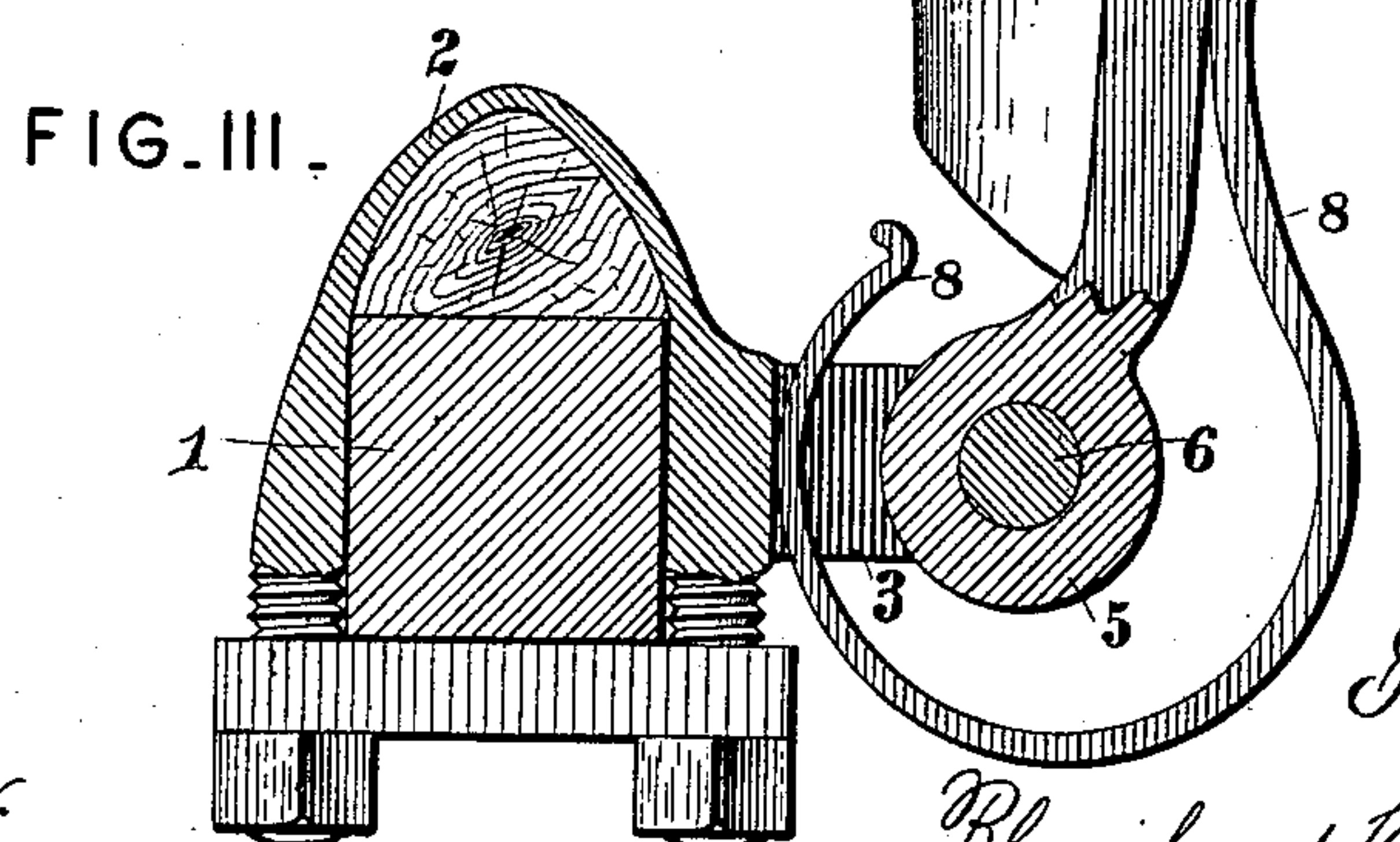
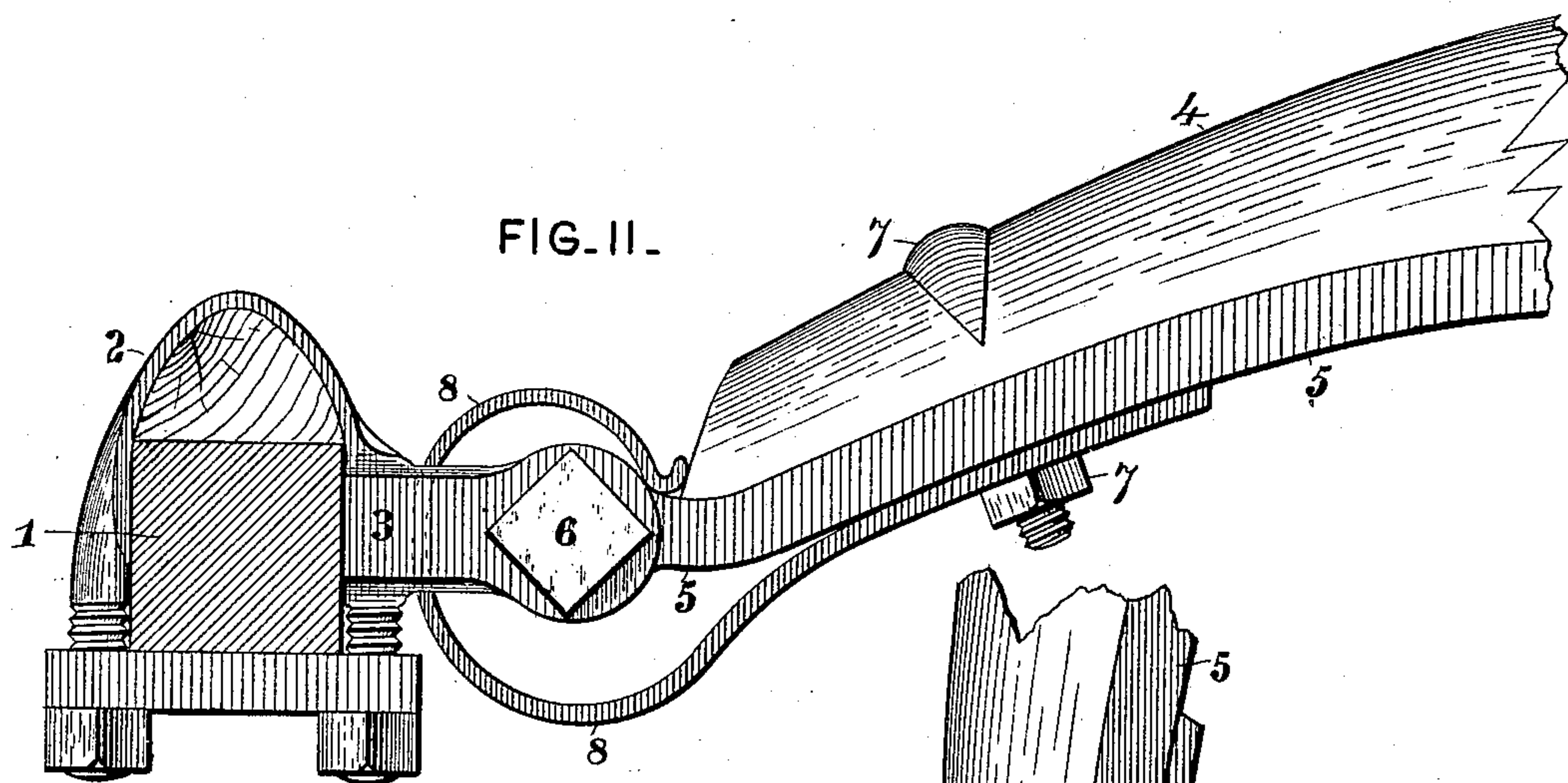
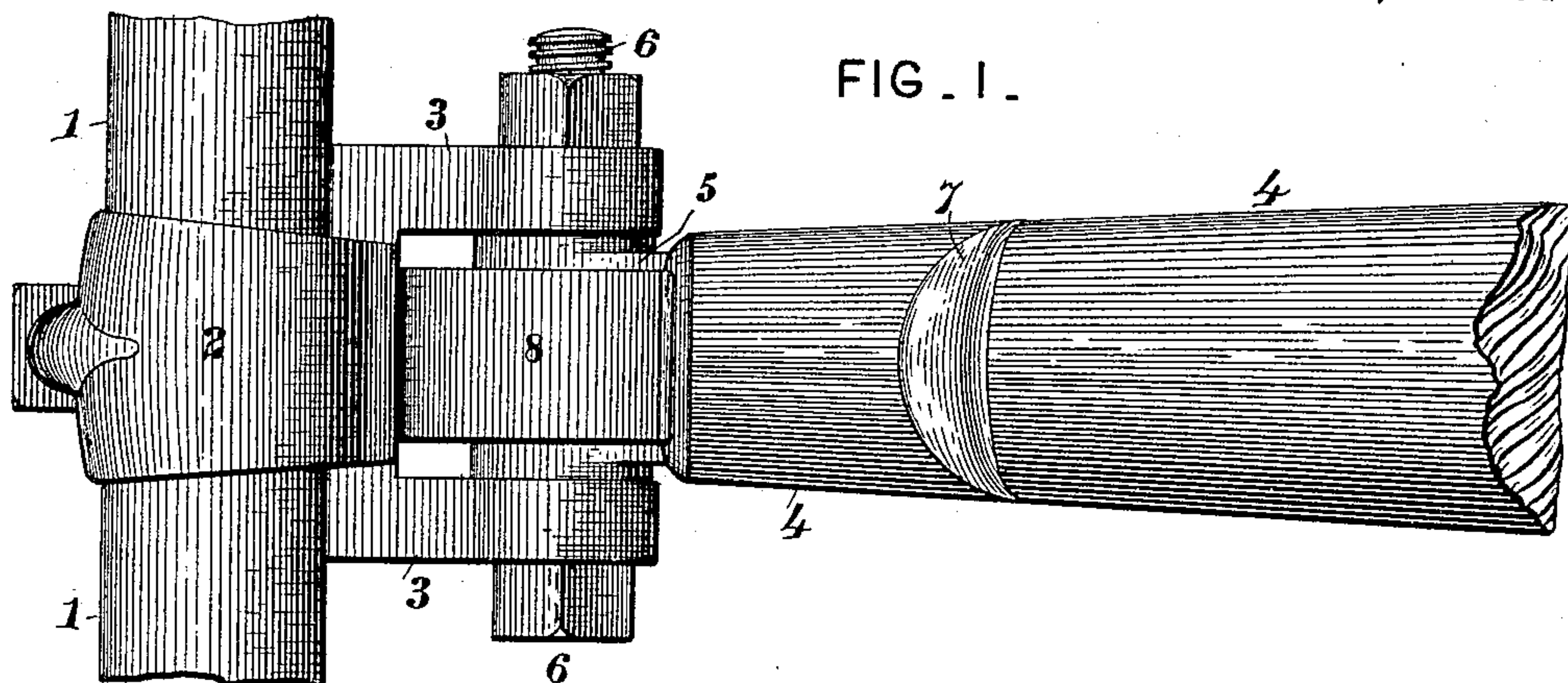


(No Model.)

B. CHAMBERLAIN.  
ANTI RATTLER AND SHAFT SUPPORT FOR THILL COUPLINGS.  
No. 321,190. Patented June 30, 1885.



Attest:  
Geo. P. Smallwood.  
Jas. K. McLaughlin.

Inventor:  
Blanchard Chamberlain.  
By Knight Bros.  
attys.



# UNITED STATES PATENT OFFICE.

BLANCHARD CHAMBERLAIN, OF BELLEFONTAINE, OHIO, ASSIGNOR OF ONE-HALF TO FRANK J. SCARFF, OF SAME PLACE.

## ANTI-RATTLER AND SHAFT-SUPPORT FOR THILL-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 321,190, dated June 30, 1885.

Application filed April 24, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, BLANCHARD CHAMBERLAIN, a citizen of the United States, residing at Bellefontaine, in the county of Logan and State of Ohio, have invented a new and useful Combined Anti-Rattler and Shaft-Support for Carriages, of which the following is a specification.

The object of my invention is to provide a combined anti-rattler and shaft-support for buggies and other carriages, of simple and effective construction, and not liable to get out of order. My improved anti-rattler dispenses entirely with the need for gum springs.

It consists, essentially, of a steel spring of a partial helix or scroll form, fastened to the under side of the shaft-iron by the same bolt which secures the heel of the shaft thereto, and by reason of the helical or gradually-increasing curvature from its heel to its free end adapted, when the shafts are elevated, to be partially relieved of pressure, but apply sufficient friction to support the shafts in the elevated position, and when the shafts are drawn down to press with increasing force against the face of the axle-clip, partially supporting the weight of the shafts and serving as an effective anti-rattler.

In the accompanying drawings, Figure I is a plan or top view of the heel portion of a buggy-shaft and a part of the customary axle-clip and shaft-coupling with my improved anti-rattler applied. Fig. II is a side view of the same, the axle being shown in transverse section, and the shaft in position for use. Fig. III is a section of the same parts with the shaft elevated.

The axle 1, clip 2, with its jaws 3, the shaft 4, shaft-iron 5, and coupling-bolt 6, may all be of usual construction. By the bolts 7, which attach the shaft 4 to its coupling-iron 5, I secure beneath the shaft-iron 5 my anti-rattler spring 8, which is formed of a plate of steel bent in helix or scroll shape, or with a curve lessening in radius toward its free end. The

helical or scroll bend imparted to the anti-rattler spring adapts it to bear against the face of the clip 2 with increasing force as the shafts are drawn down to position for use, as illustrated in Fig. II, the pressure of the spring against the face of the clip forcing its end down upon the eye of the shaft-iron or against the heel of the shaft, so that it holds the parts firmly in place and forms a perfect anti-rattler. When the shafts are elevated, the spring is relieved from the cramped position necessary to make it serve effectively as an anti-rattler, but still presses at a point nearer its outer or free end sufficiently hard against the lower part of the face of the clip to hold the shafts in their upright position until they are drawn down by force greater than their own weight.

It will be observed that the anti-rattler spring, when once fixed in position, never needs to be moved, and that it offers no obstruction or difficulty in applying or removing the shafts or the pole, as the case may be.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. An anti-rattler and shaft-support consisting of a metal spring bent in scroll or helix form to adapt it to exert pressure to hold the shafts against rattling when they are drawn down in position for use, and to support them when they are elevated, substantially as herein set forth.

2. In combination with the shaft-iron 5 and axle-clip 2 3, the scroll-spring 8, bolted by its base to the shaft and shaft-iron, bearing in one direction against the face of the clip to support the shafts when elevated, and contracted by the drawing down of the shafts so as to bear also against the heel of the shaft or shaft-iron, as explained.

BLANCHARD CHAMBERLAIN.

Witnesses:

R. F. TREMAIN,  
S. A. JOHNSTON.