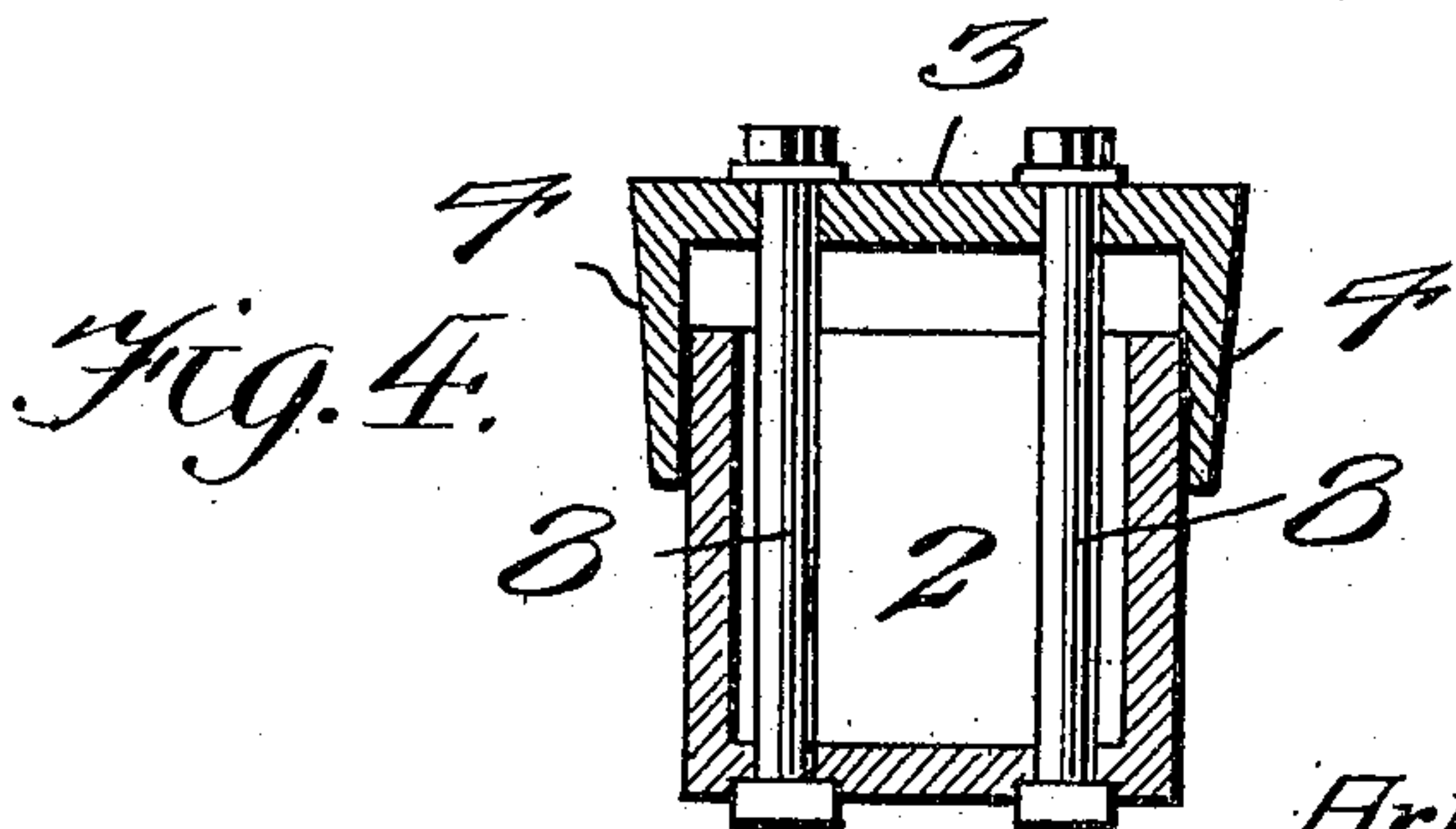
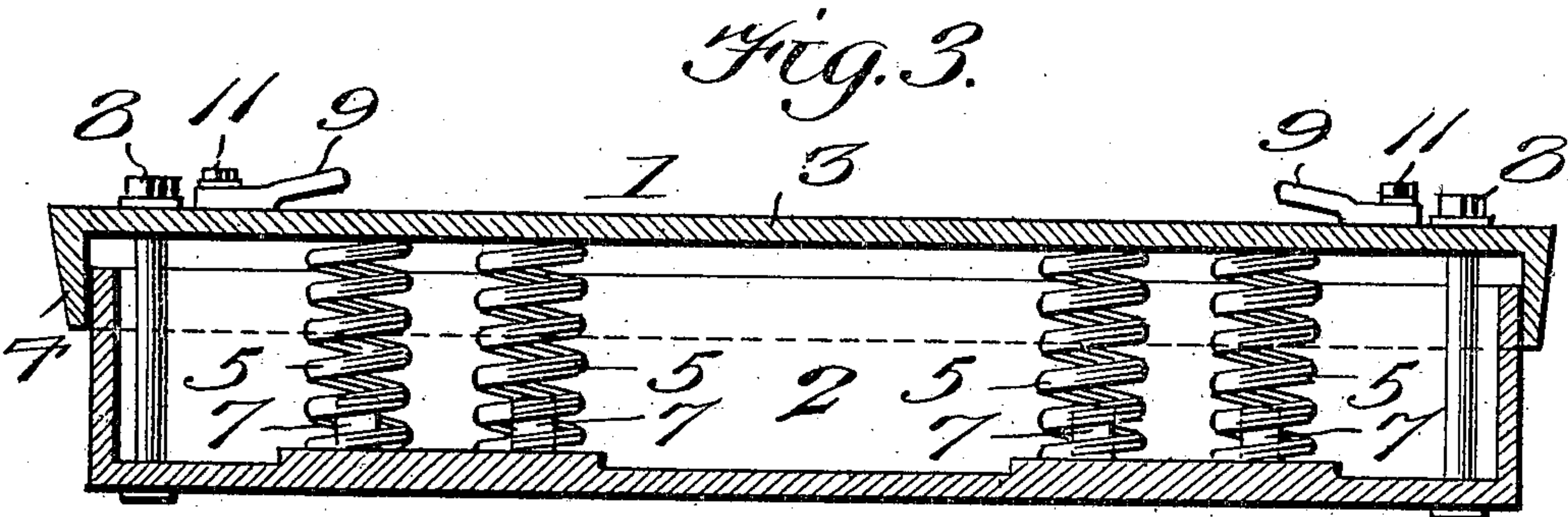
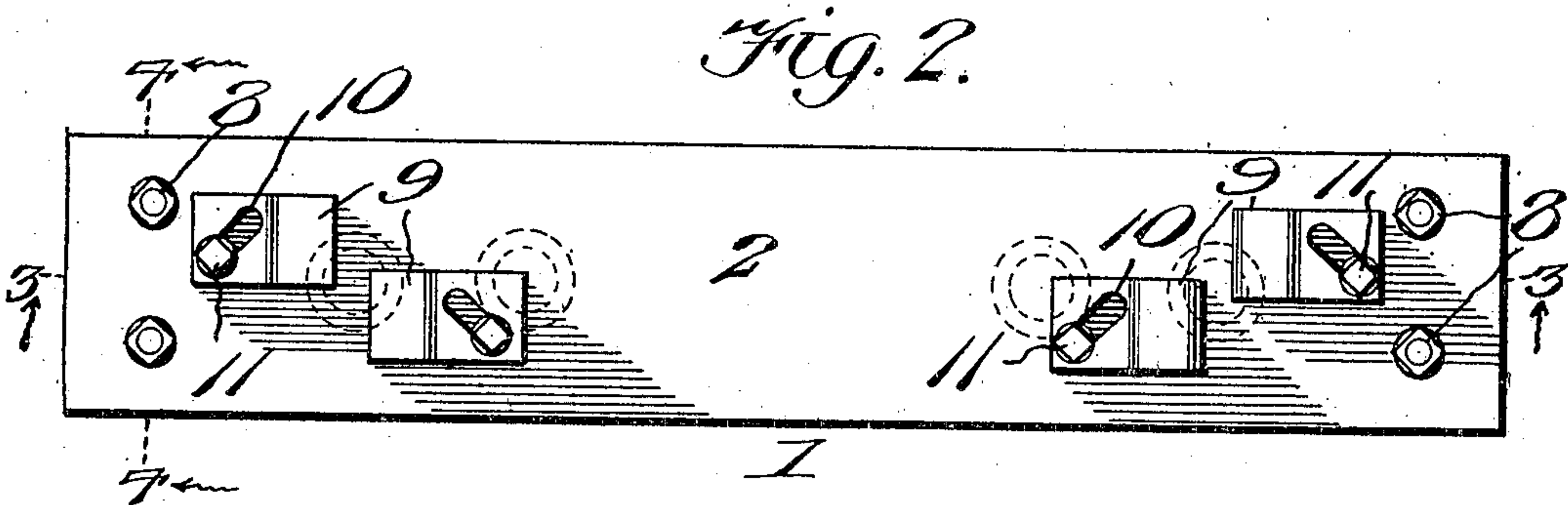
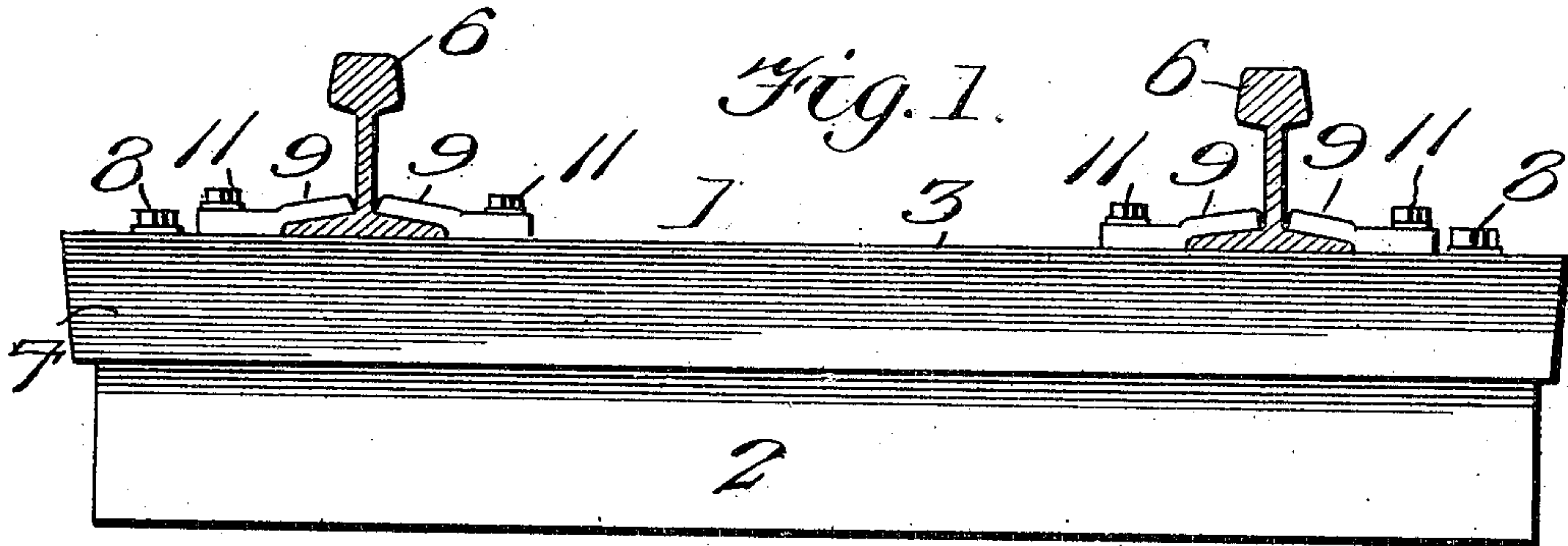


No. 819,725.

PATENTED MAY 8, 1906

A. E. CASKEY.
RAILROAD CROSS TIE.
APPLICATION FILED SEPT. 13, 1905.



Witnesses

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ARTLEY E. CASKEY, OF PARKERSBURG, WEST VIRGINIA.

RAILROAD CROSS-TIE.

No. 819,725.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed September 13, 1905. Serial No. 278,283.

To all whom it may concern:

Be it known that I, ARTLEY E. CASKEY, a citizen of the United States, residing at Parkersburg, in the county of Wood and State of West Virginia, have invented new and useful Improvements in Railroad Cross-Ties, of which the following is a specification.

This invention relates to metallic rail-ties, and has for its objects to provide a comparatively simple inexpensive device of this character presenting the requisite strength and durability and one possessing a determinate amount of elasticity or yieldability, thus combining the desirable qualities of metal and wooden ties.

A further object of the invention is to provide simple and efficient devices for detachably securing the rails to the ties and one wherein said devices may be properly and conveniently adjusted for rails of varying widths.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a tie embodying the invention and showing the rails in section thereon. Fig. 2 is a top plan view of the same with the rails removed. Fig. 3 is a vertical longitudinal section taken on the line 3 3 of Fig. 2. Fig. 4 is a vertical transverse section taken on the line 4 4 of Fig. 2.

Referring to the drawings, 1 designates the improved tie comprising a lower box-like section 2 and an upper section 3, the latter having a depending continuous marginal flange 4, adapted to overlap the vertical walls of the section 2, for which the section 3 constitutes a cover. The walls of the section 2 are smooth and unbroken by projections or shoulders, and the marginal flange 4 of the section 3 has unrestricted movement over the said walls and is limited in a downward direction under maximum pressure by the top of section 3 striking or contacting with the upper edge of the section 2.

Housed in the tie 1 is a plurality, preferably four, vertically-disposed normally expanded cushioning members or springs 5, arranged in pairs beneath the overlying rails 6 and designed for yieldably sustaining the cover or section 3 in slightly-elevated position relative to the section 2, as shown, and for a

purpose which will presently appear, these springs being seated at their lower ends on studs or projections 7, formed on the inner face of the bottom of the tie and serving to maintain the springs in proper position while the sections are secured together and movement of the section 3 under influence of the springs limited by vertical bolts 8, extended transversely through the tie. The bolts 8 are arranged in parallel pairs at opposite ends of the tie, as shown by Fig. 4, to render the movement of the section 3 regular and avoid any tendency to rocking, the said section loosely moving or sliding over the upper extremities of said bolts. These bolts also prevent the section 3 separating from the section 2. The rails 6 are detachably fastened to the tie by means of clamping members 9, adapted to engage over the bases of the rails and each provided with a diagonal slot 10, formed to receive fastening devices or bolts 11, by which the clamping members are in turn secured to the tie. The diagonal slots 10 are formed in the flat bodies of the clamping members, fitted closely against the top of the section 3 at diagonally opposite points, and projecting inwardly from said bodies are upwardly-inclined arms to fit over the rail-bases. The diagonal slots 10 in the contiguous pairs of clamping members are reversely disposed or the two slots inwardly converge to effect a positive adjustment to clamp a rail and permit a ready release by a sliding motion to and from the rail.

In practice the springs 5 yieldably support the section 3, on which the rails bear, thus permitting slight vertical downward movement of the rails under the influence of the weight of a load passing thereover, as in the instance of wooden ties, it being particularly noted in this connection that the position of the springs relative to the rails is such as to afford proper support for the rails. It is also to be observed that the cleats 9 will clamp the rails firmly and securely in place on the tie and that the cleats may be quickly adjusted for engagement with rails of varying widths.

From the foregoing it is apparent that I have produced a simple inexpensive device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be

resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim as new is—

- 5 A rail-tie having pairs of oppositely-disposed clamping members near the ends of the top thereof, each pair of members having flat bodies with oblique slots convergingly ar-

ranged, and upwardly-inclined arms to fit over a rail-base.

In testimony whereof I affix my signature in presence of two witnesses.

ARTLEY E. CASKEY.

Witnesses:

G. W. CARY,

M. H. FLOWER.