

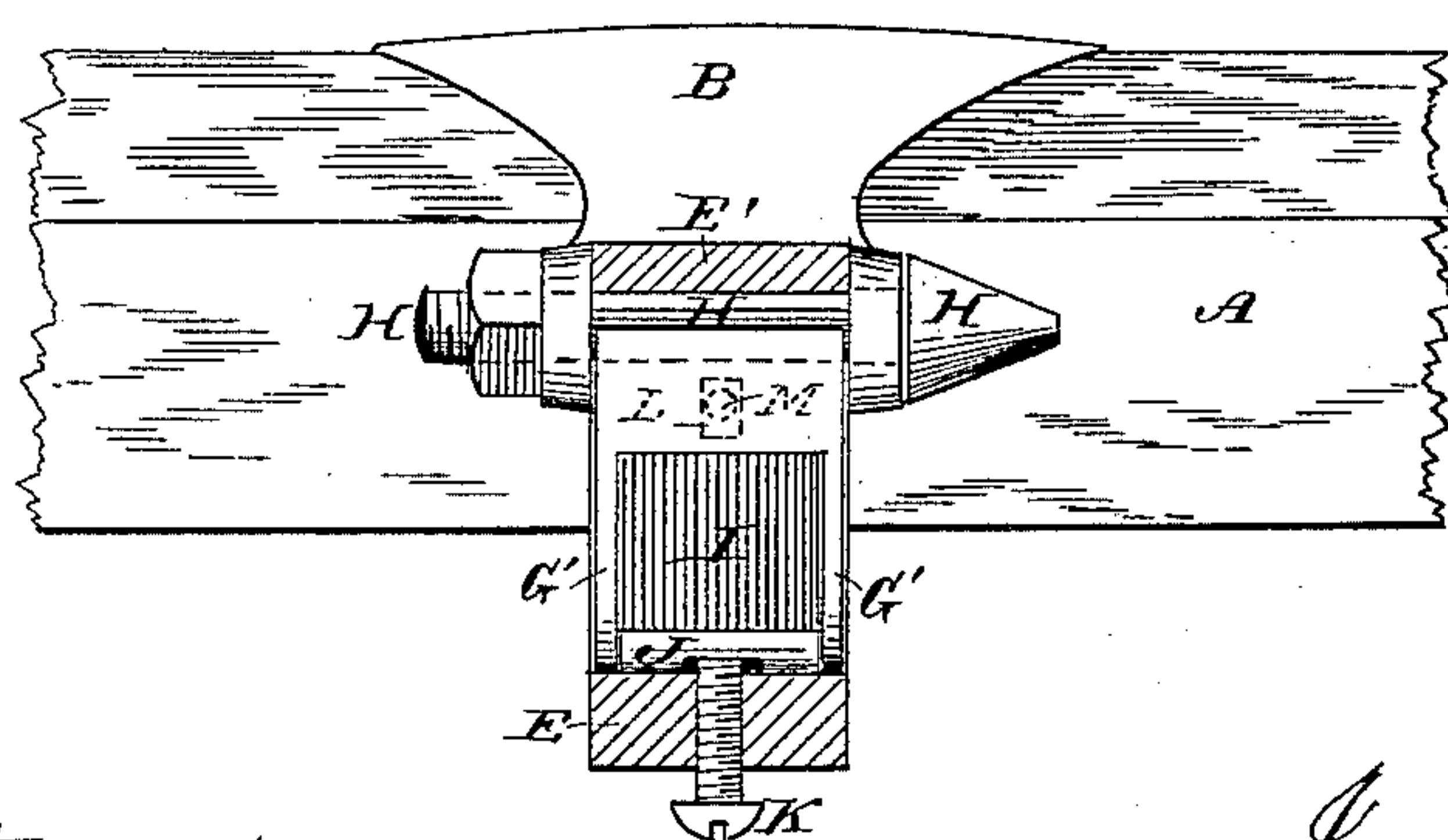
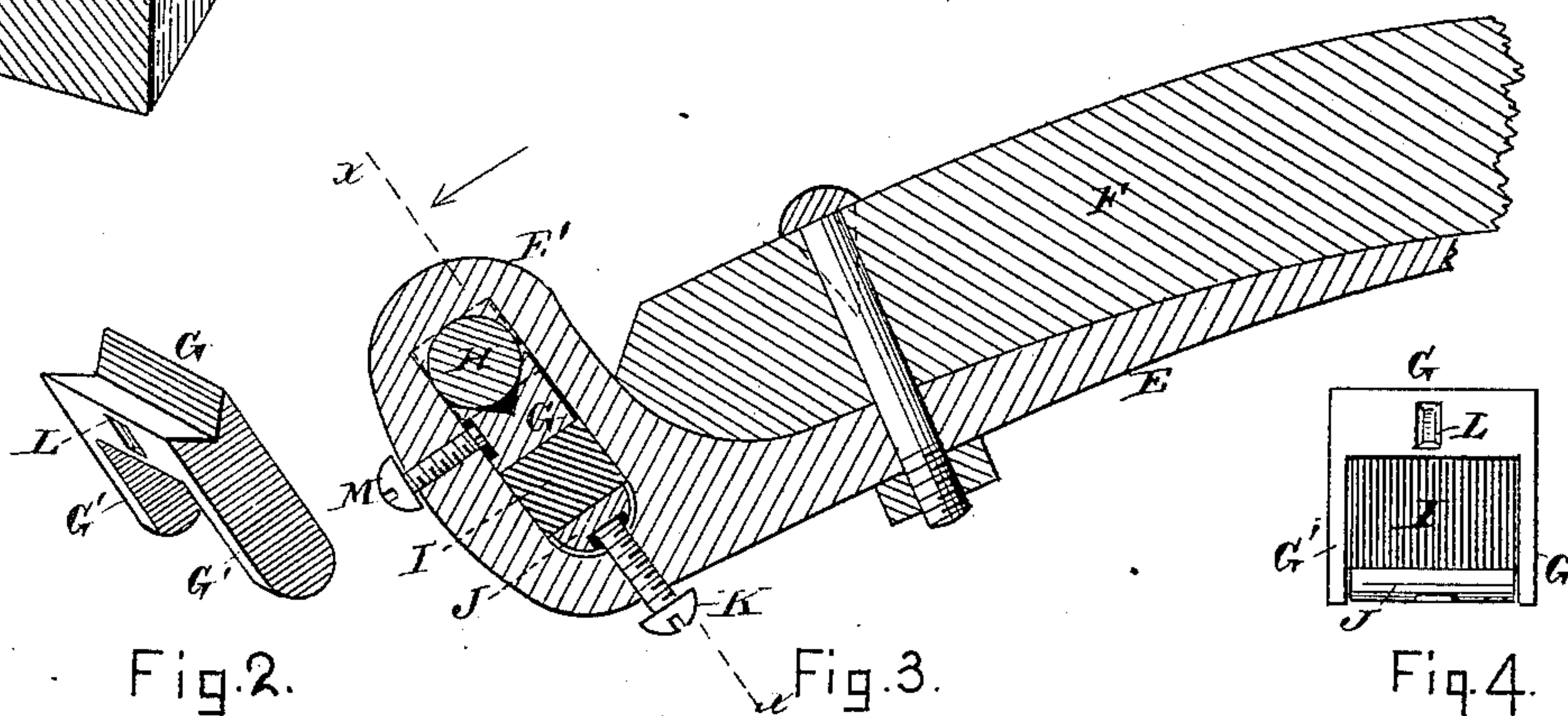
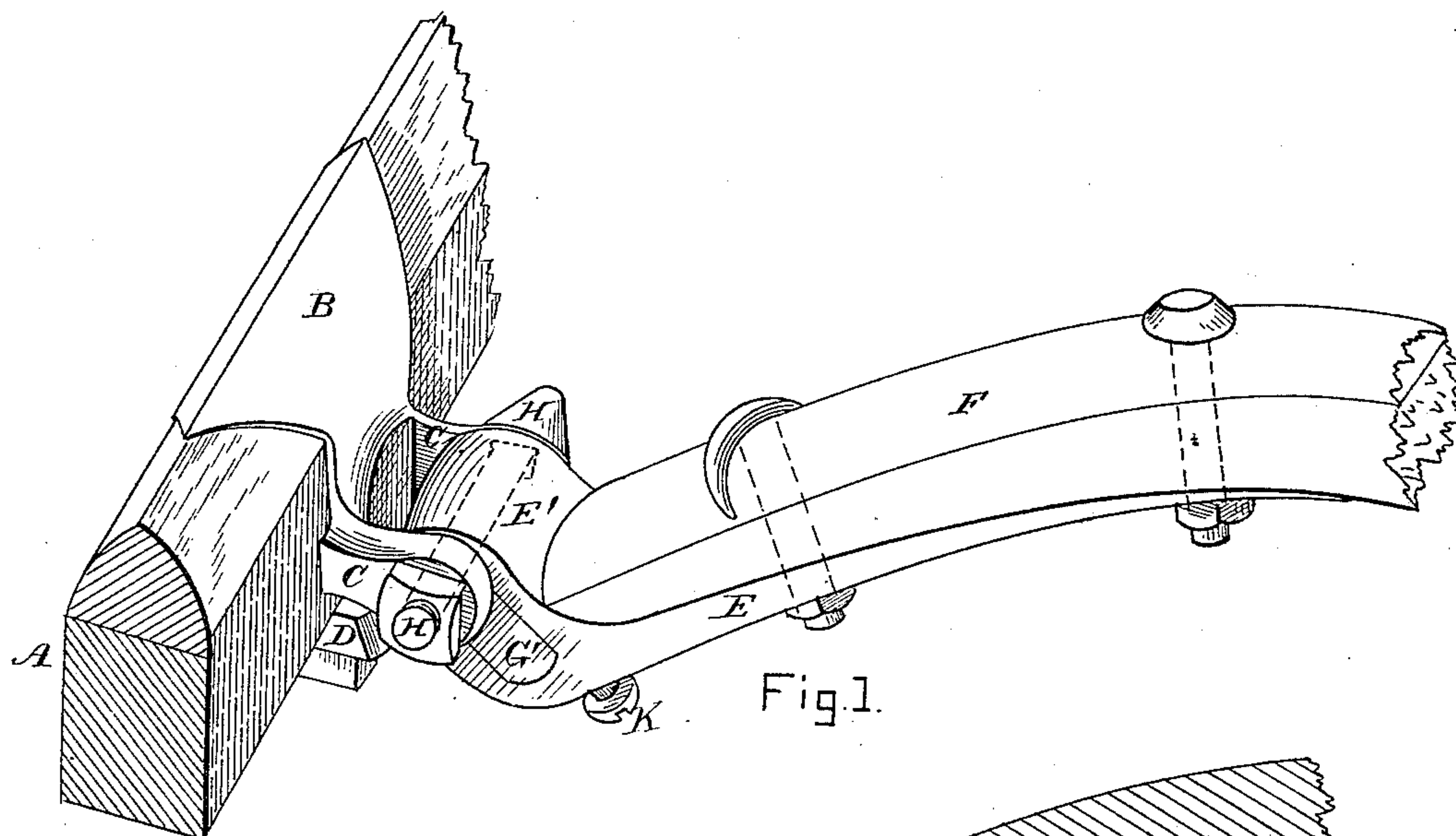
(No Model.)

W. T. MASON.

THILL COUPLING.

No. 318,487.

Patented May 26, 1885.



Witnesses:
Chas. D. Stone
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UNITED STATES PATENT OFFICE.

WILLIAM TROW MASON, OF WEST ACTON, MASSACHUSETTS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 318,487, dated May 26, 1885.

Application filed April 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM TROW MASON, a citizen of the United States, residing at West Acton, in the county of Middlesex and State of Massachusetts, have invented an Improved Anti-Rattler Thill-Coupling Connecting the Thills to the Axle of a Vehicle, of which the following is a specification.

The object of my invention is to produce a durable, inexpensive, and easily-adjustable aggregation of devices organized to be employed in the ordinary form of thill-coupling, so as to effectually prevent all rattling of the same.

My improved invention comprises a rectangular vertically-chambered thill-iron eye receiving an adjustable removable supporting-block provided with an interchangeable elastic cushion of caoutchouc sustained by a metal bearing or shoe of segmental form adjusted and securely locked by the screws K and M, respectively, all of which organized parts are upheld by the square-hole bolt passing through the forward-projecting lugs of the axle-clip saddling the axle-bar, and secured to the same by the axle-block in the ordinary manner.

The function of the various parts and their relation and construction will be fully comprehended by referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 illustrates my improved invention in perspective attached to the carriage-axle by the ordinary clip and block. Fig. 2 shows the supporting-block in perspective removed from the thill-iron, with the elastic cushion or its equivalent and metal bearing detached. Fig. 3 is a longitudinal vertical section through the thill, thill-iron, bolt, block, cushion, and shoe. Fig. 4 indicates a rear side elevation of the supporting-block and its adjusted parts. Fig. 5 exhibits a transverse vertical section of the connected parts on the dotted line *x*, Fig. 3.

Similar letters of reference indicate corresponding parts in the various figures of the drawings, referring to which—

A is the axle-bar, and B the axle-clip surrounding and secured to the same by the axle-block D.

C C are the ears or lugs forwardly projecting and supporting the thill-iron E, which is

confined to and sustains the carriage-thill F. Said thill-iron eye E' is vertically chambered to receive a removable block, G, which conforms in width to and closely fits the side walls of said vertical chamber in the thill-eye. The upper bearing-surface of said block G is V-shaped to receive and press against the square-hole connecting-bolt H, the pressure being augmented by and through the interchangeable elastic cushion I, which is confined by the block end partitions, G' G', and upheld by the metal shoe J, which protects and compresses said cushion when pressure is applied by turning in the screw K to raise the supporting-block G against the connecting-bolt H. The under or convex side of said shoe J bears a depression centrally with its length, to receive the end of the screw K. The rear face of the supporting-block G also has an elongated vertical recess or depression, L, fitted to receive the rear binding-screw, M, Fig. 3. Said depression L is in length sufficient to allow a slight vertical play of the supporting-block G, to compensate for the diminishing elasticity of the rubber or wear of the parts.

To avoid friction or attrition of the rubber cushion, the connecting-bolt H has the ordinary square shoulder, preventing its rotation, while the uniform upward pressure of said cushion I insures the safety of the bolt from rattling or displacement should the bolt-nut work loose or off.

In the construction of the supporting-block the end partitions, G' G', confining the rubber cushion I, also serve as a protection to said rubber, the immunity from oil and moisture perpetuating the elastic qualities and durability of the caoutchouc in a marked degree.

In the application practically of my simplified invention the removable supporting-block receives its elastic cushion closely filling the intervening space between the end partitions. Against the bottom of said cushion is laid the metal shoe or plate, its convex side downward. The combined parts are now forced into the chamber through the eye of the thill-iron in a position to present the smooth face of said block forward. The thill is now lifted to its position between the projecting lugs of the axle-clip, the connecting-bolt is forced through

said supporting-lugs and thill-eye and secured by its nut, while the lifting and locking screws are adjusted to the required distance to insure the desired pressure of the parts, and the union of the clip and thill is effected by an absolutely noiseless coupling.

Having fully described my improved invention and its construction and operation, what I desire to secure by Letters Patent of the United States, and claim, is—

1. In an anti-rattler coupling for carriage-thills, a thill-iron eye, E', constructed with a vertical chamber, in combination with a removable supporting-block, G, confining an elastic cushion, I, and segmental bearing J, with bearing and adjusting screws K and M, substantially as described, and for the purpose set forth.

2. In an organized assemblage of devices constituting an anti-rattler coupling, the adjustable supporting-block G, having an upper V-shaped bearing-surface inclosing end walls, G' G', and depression L, to permit the vertical

play of said block, in combination with a perforated chambered thill-iron eye, E', all substantially as herein described.

3. In an anti-rattler thill-coupling, the combination of the recessed supporting-block G with an interchangeable elastic cushion, I, metal bearing or shoe J, and operating-screws K and M, as herein set forth.

4. In combination with a chambered thill-iron eye, E', and organized devices G I J, constituting an anti-rattler coupling, the bearing-screw K, and adjusting-screw M, controlling, respectively, the vertical and horizontal movement of said organized parts, as herein described and illustrated.

In testimony whereof I have subscribed my name to this specification in presence of two witnesses undersigned.

WILLIAM TROW MASON.

Witnesses:

SIMEON F. WEBSTER,
F. D. K. HAAR.