

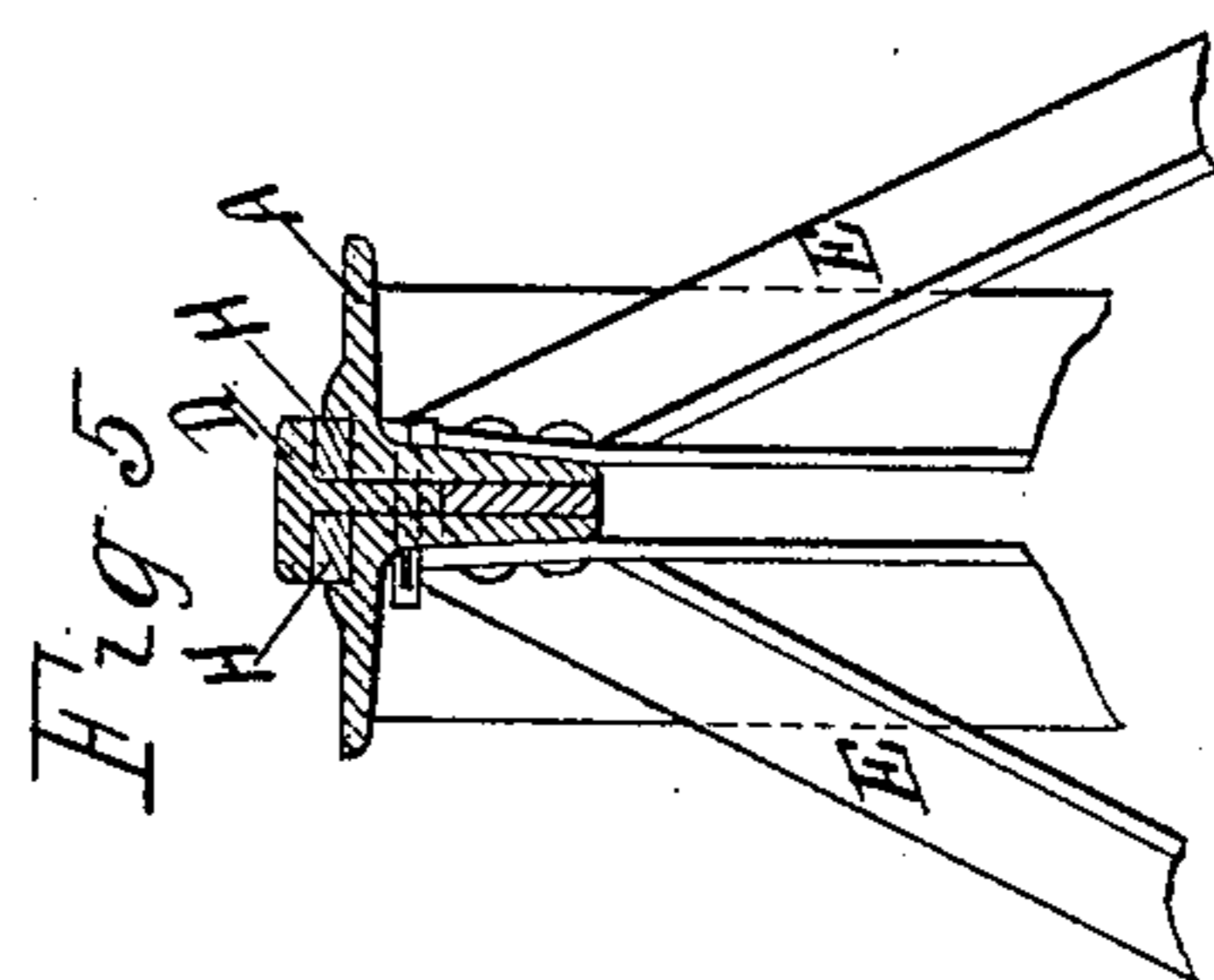
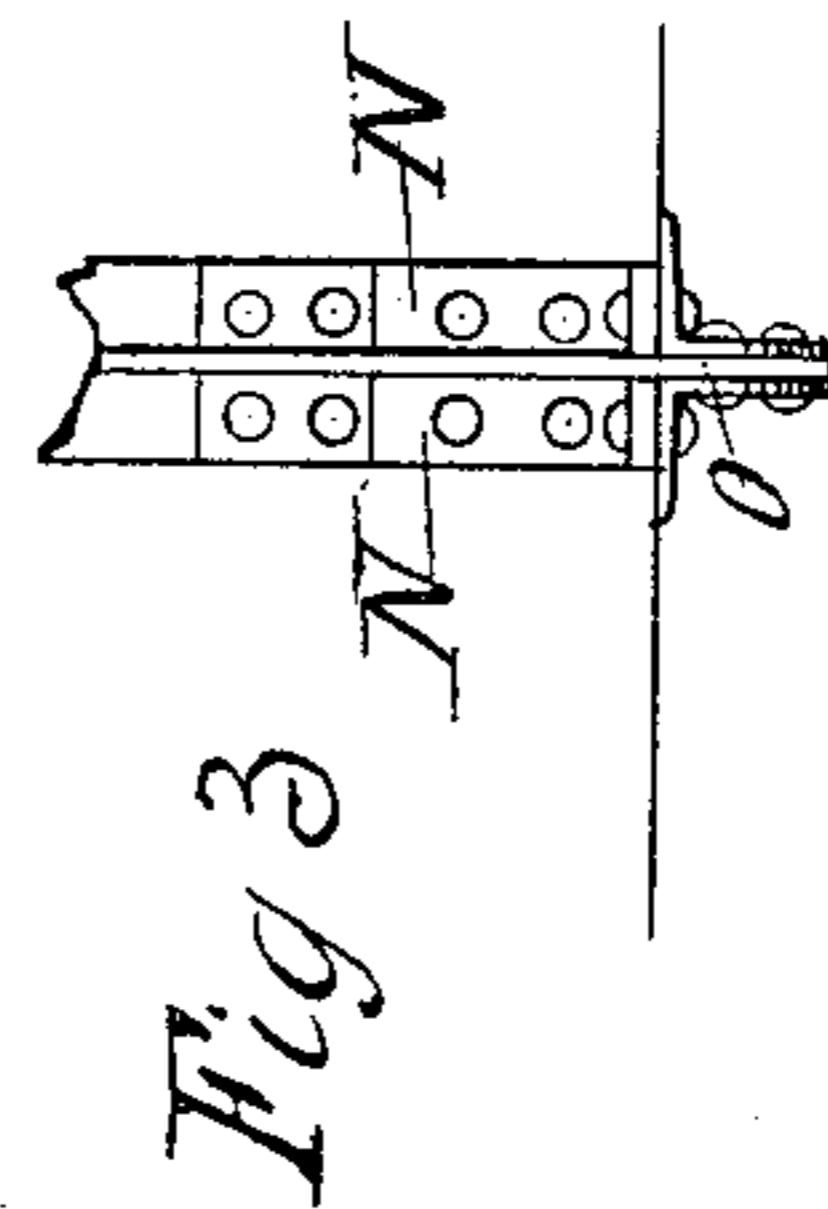
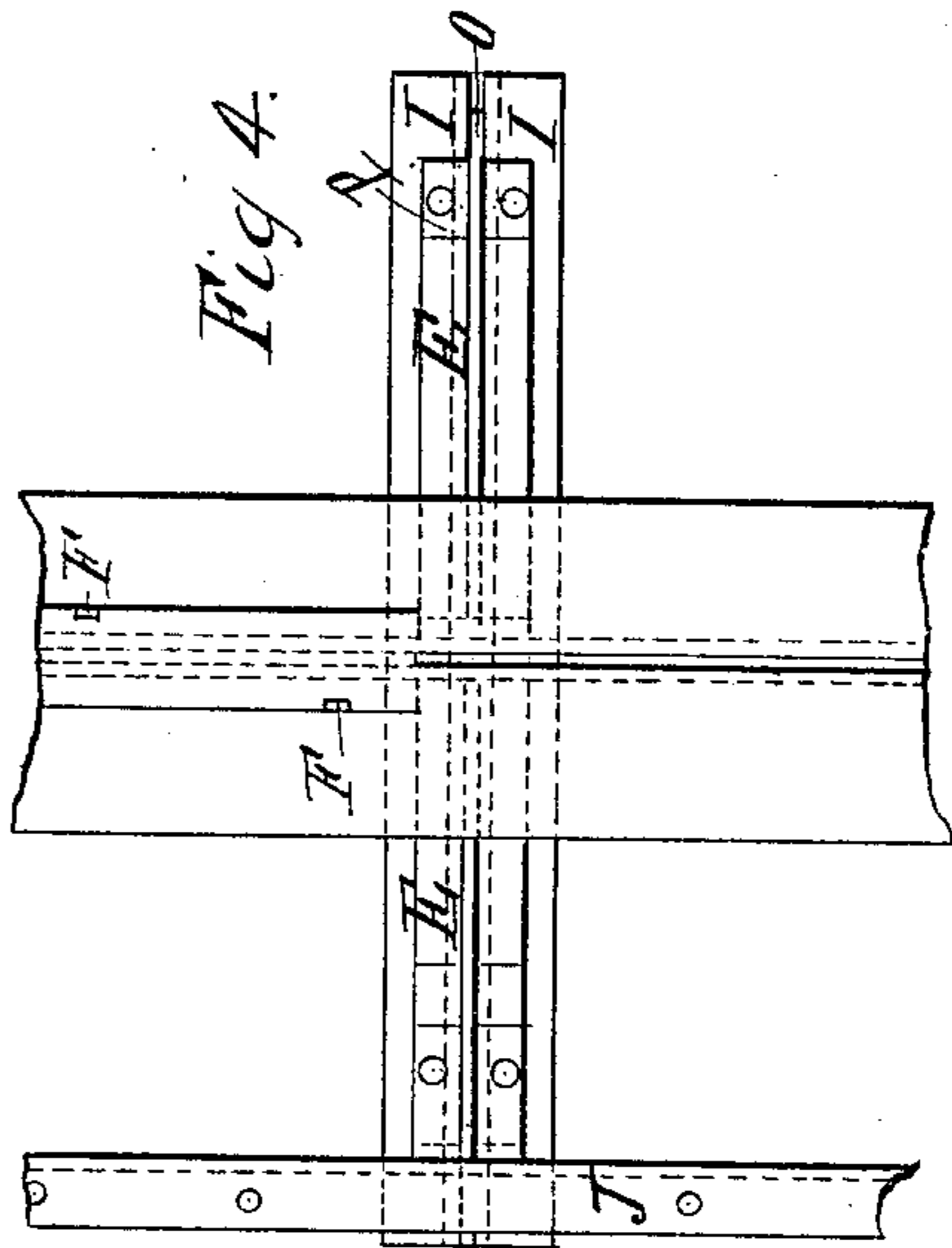
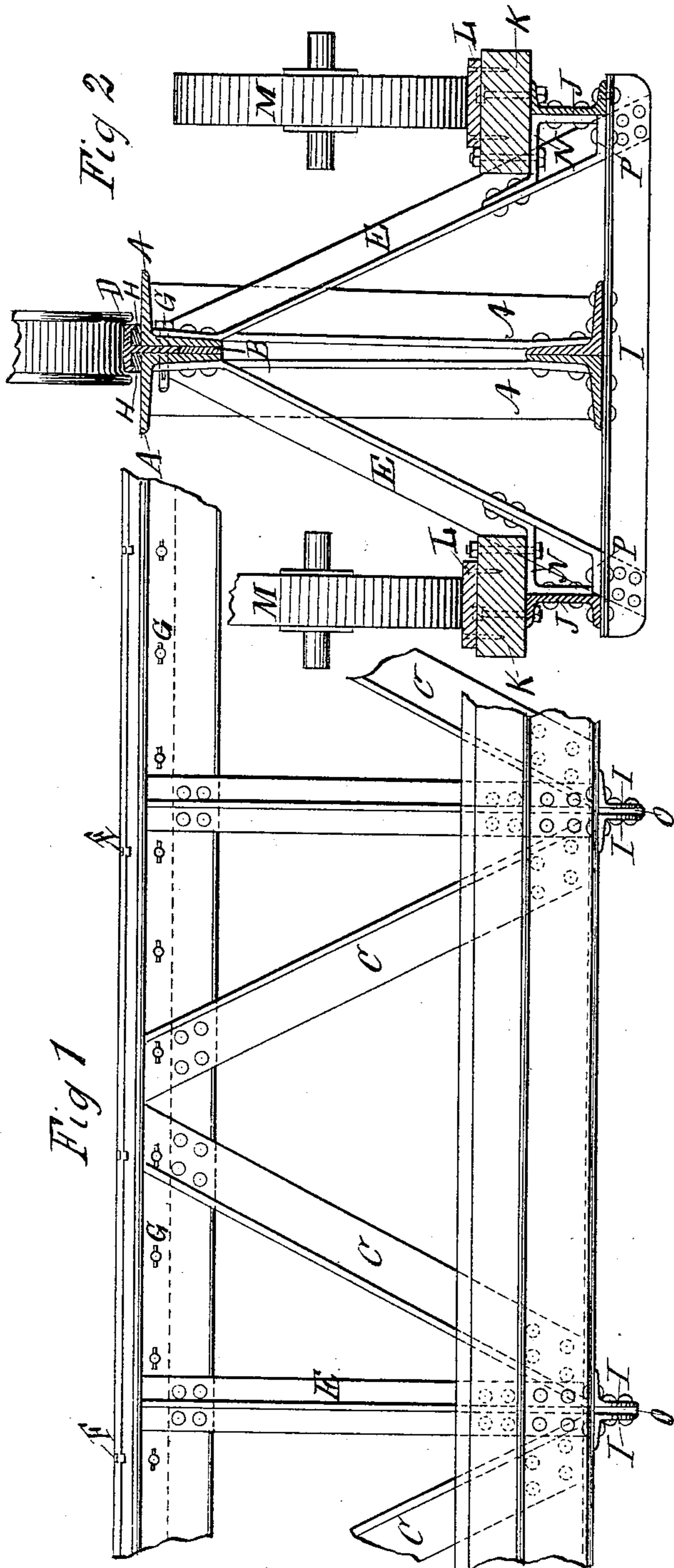
(No Model.)

J. FISH.

SINGLE RAIL ELEVATED RAILROAD GIRDER.

No. 328,395.

Patented Oct. 13, 1885.



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JOHN FISH, OF SUMMIT, NEW JERSEY.

SINGLE-RAIL ELEVATED-RAILROAD GIRDER.

SPECIFICATION forming part of Letters Patent No. 328,395, dated October 13, 1885.

Application filed January 15, 1885. Serial No. 152,944. (No model.)

To all whom it may concern:

Be it known that I, JOHN FISH, a citizen of the United States, residing at Summit, in the county of Union and State of New Jersey, have invented a new and Improved Lattice-Girder for Single-Rail Elevated Railroads, of which the following is a specification.

My invention relates to improvements in lattice-girders as used for single-track elevated railroads; and the object of my invention is, first, to attach the T-track rail to the upper member of the girder, formed of two angle-irons in a secure and efficient manner, and at the same time not to weaken either the rail or the angle-iron by drilling holes in the top flanges of either; second, to form a supporting-bracket for the track of the outer bearing-wheels, which will give lateral stiffness to the girder. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of part of the girder; Fig. 2, a cross-section taken through *a b* on Fig. 1. Fig. 3 is an outside view of angle-brackets *N N*, attached to supporting-bar *E*, and also the attachment of supporting or suspension bar to angle-struts *I I*. Fig. 4 represents plan of top view of girder. Fig. 5 represents a section of angle-iron, *A A*, in Fig. 2, in which is a recess for receiving wooden packing-strips *H H*.

Similar letters refer to similar parts in the several views.

In the drawings which illustrate my invention, *A A A' A'* represent angle-irons, forming the upper and lower members of the girder. Interposed between the vertical flanges of the upper angle-irons of the girder is a strip of iron, *B*, of about half the depth of the angle-flange, and slightly thicker than the web of the T-track rail upon which the center wheels of the engine and cars run.

The lattice angle-bars *C C C C* and suspension T-bars *E E* are riveted securely at their upper ends to the angle-bars, and the flat bar *B* placed between them. This leaves a channel-way above bar *B* and between angles *A A*, into which the web of the track-rail *D* fits when secured in position. Under the

flanges of track-rail *D* are placed liners of wood to deaden the noise and jar, as the engine and cars run over the track. To keep the wooden liners in position, and to prevent them from working out sidewise, channels are formed in angles *A A*, as shown in Fig. 5, or indentations *F F*, in the flanges of the track-rail by a punch forming dowels, as shown in Figs. 1 and 2. These fit into the wooden liners and secure them. A draw-bolt, *G*, with split cotter, is used to draw the track-rail down upon the wood liners *H H*, so that if it is necessary to replace a worn out or broken rail, by simply backing out the draw-bolts *G G* and lifting the rail out of its recess another rail can be placed in position without disturbing any other part of the structure. The lower parts of the lattice-bars *C C* are riveted to the lower angle-irons, *A' A'*, nothing being interposed between them. The flanges of the end of suspension T-bars *E E* are cut from the web and bent up at a suitable angle to meet the flanges of the strut angle-bars *I I*, and riveted thereto, while the web of the suspension-bar is interposed between the vertical flanges of strut-bars *I I*, and the three parts are also riveted together, forming a stiff, strong, and secure junction at these outer points of the strut. The struts *I I* are also securely fastened to the lower angles by riveting.

Outside of and above the junction of the suspension-bar *E* and strut-bar *I* is the channel-bar *J*, resting upon and riveted to the strut-bar *I*. The channel-bar *J* supports and carries the longitudinal wooden beam *K* with its wearing-piece *L*, upon which run the outer bearing-wheels, *M*. Upon each side of the web of the suspension *E* is placed an angle-bracket, *N N*, which gives support to the wooden beam *K*, and braces the channel-bars *J J*.

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

1. In the upper member of a girder for a single-rail elevated railroad, the combination of the angle-irons *A A*, with a recessed channel for holding wooden or other packing in place, and plate *B*, with the track-rail *D*, sub-

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stantially as constructed and arranged, and for the purpose as herein set forth.

2. The indented track-rail D, in combination with the packing-strips H H, substantially
5 as arranged and specified.

3. In a single-rail elevated-railroad girder, the combination of the strut angle-bars I I,

with the suspension-bars E E, substantially as constructed and arranged, and for the purpose as herein set forth.

JOHN FISH.

Witnesses:

F. H. CRUM,
JAMES H. ACKERMAN.