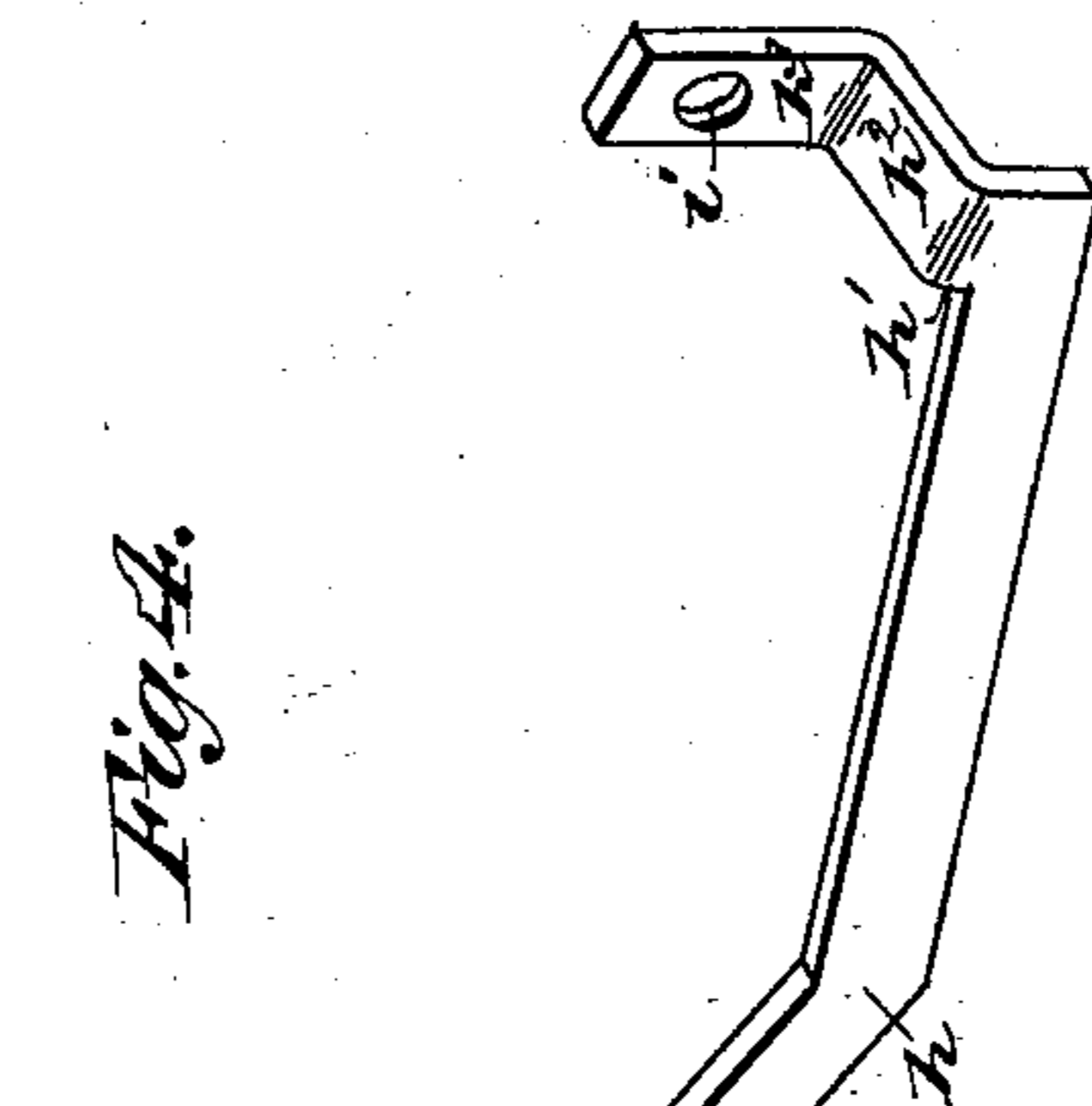
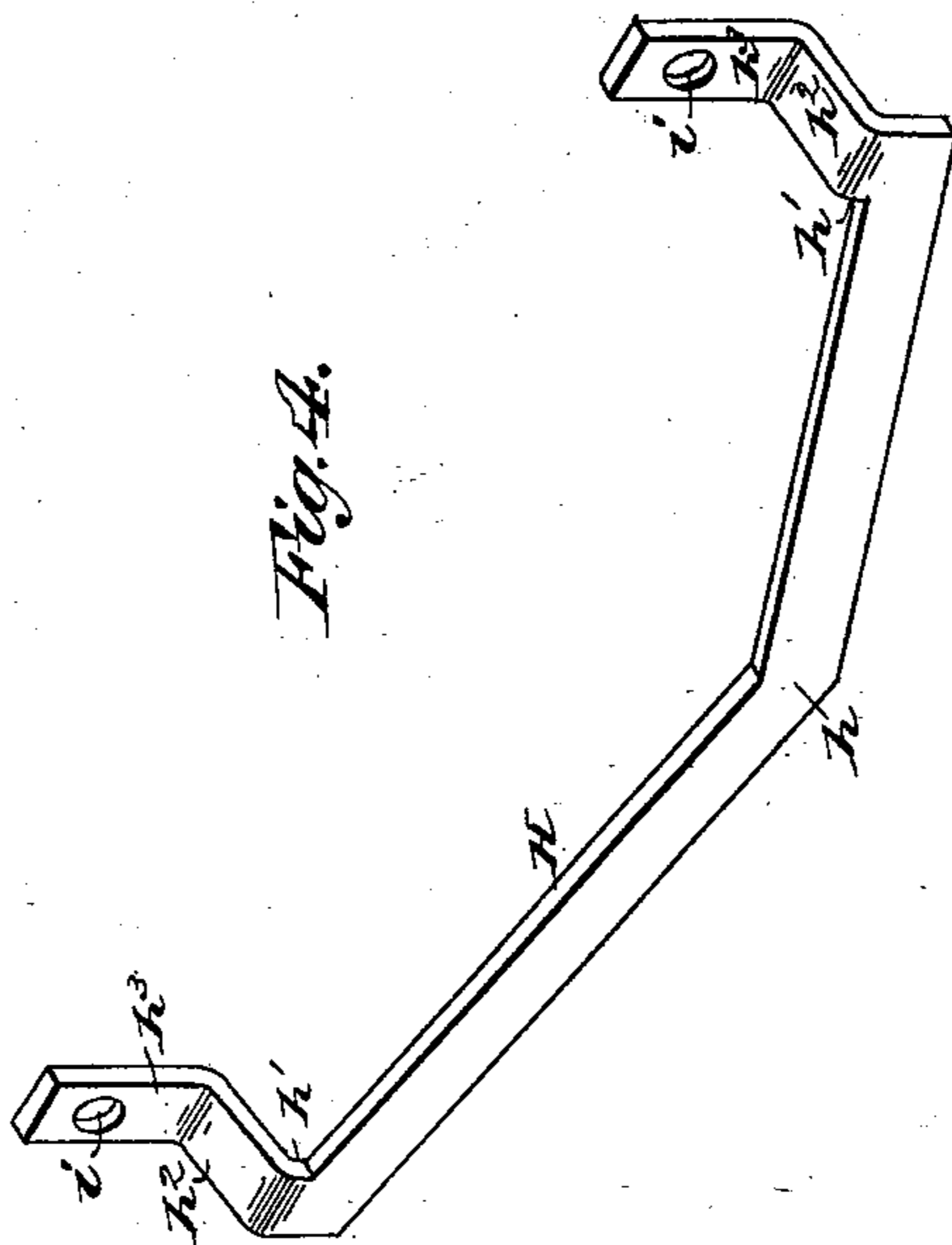
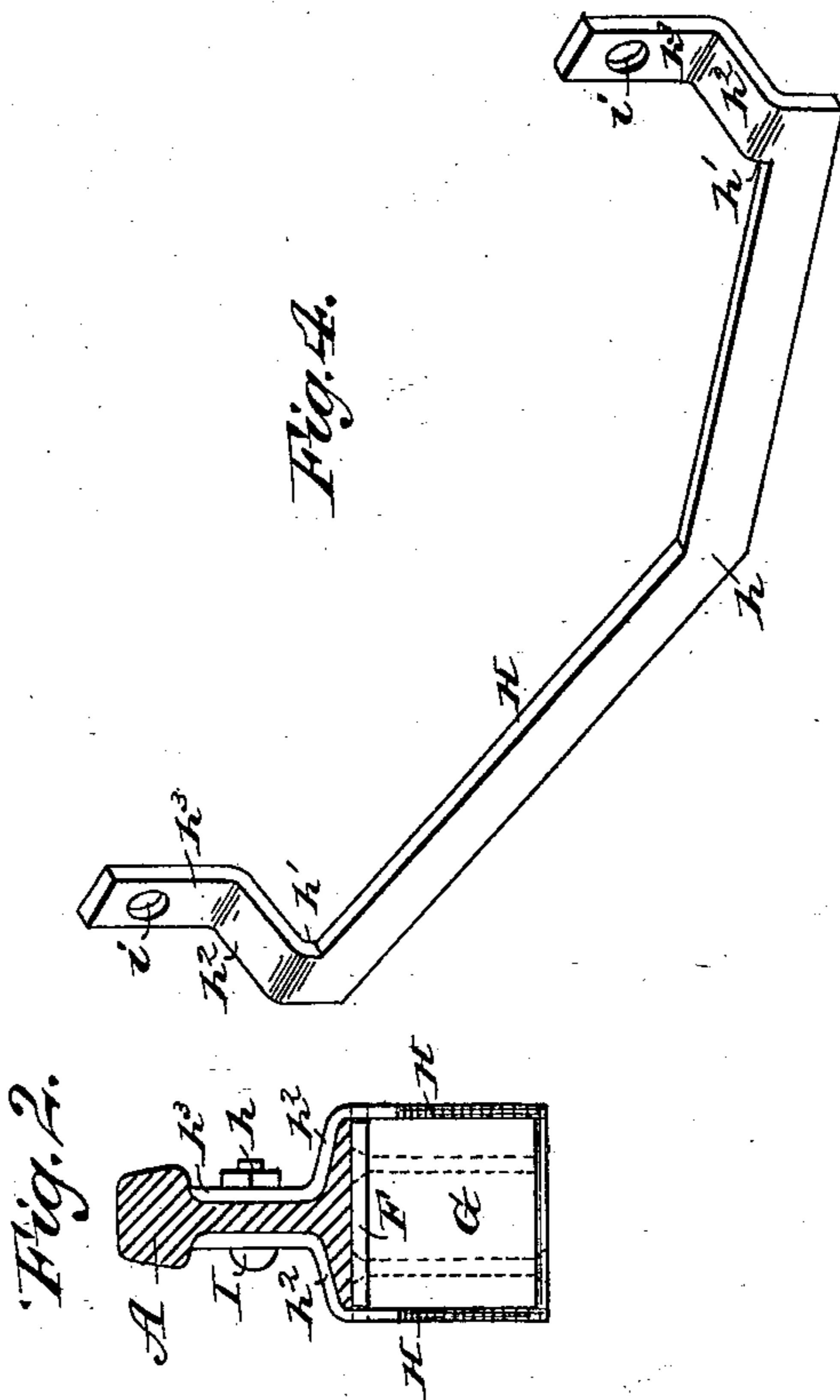
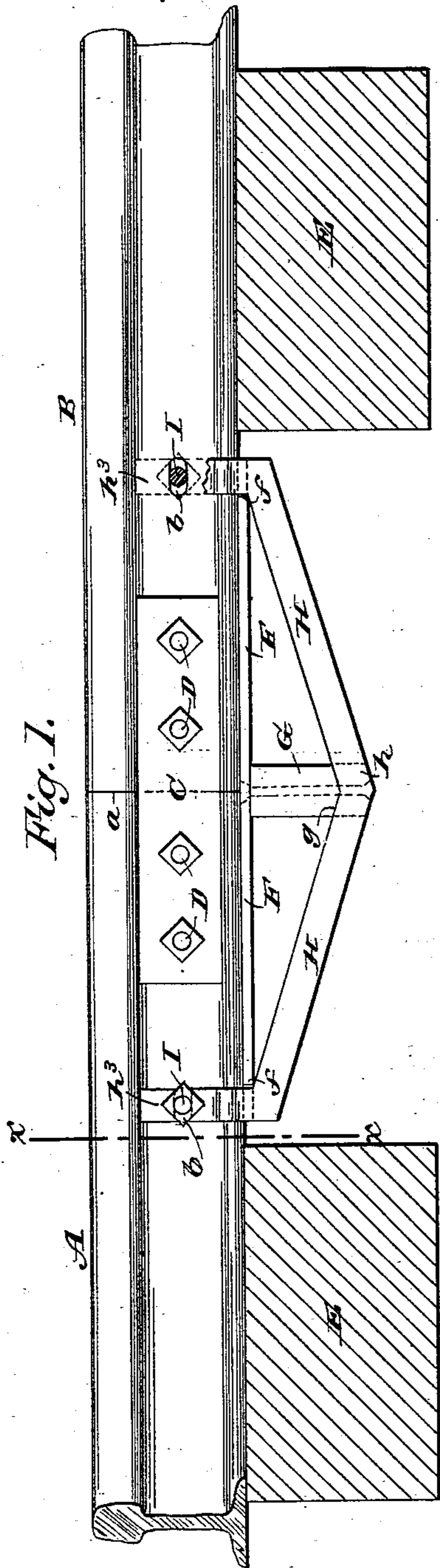


(No Model.)

J. McEWEN.  
RAIL JOINT TRUSS.

No. 335,292.

Patented Feb. 2, 1886.



WITNESSES:

*Geo Beyer*  
*Co Bedgwick*

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN McEWEN, OF LAWRENCE, KANSAS.

## RAIL-JOINT TRUSS.

SPECIFICATION forming part of Letters Patent No. 335,292, dated February 2, 1886.

Application filed June 10, 1885. Serial No. 168,279. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN McEWEN, of Lawrence, in the county of Douglas and State of Kansas, have invented a new and Improved Rail-Joint Truss, of which the following is a full, clear, and exact description.

My invention relates to railway-rail joints; and it has for its object to prevent settling of the end of one rail below the other at rail-joints between the ties, and obviate hammering of the car-wheels at these joints, and also to promote the durability of the rails and their ordinary fish-plate and bolt fastenings.

The invention consists in the construction and combination of parts forming a rail-joint truss, hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the joined ends of two railway-rails, with the joint-truss partly broken away and the rail-ties in cross-section. Fig. 2 is a cross-sectional elevation taken on the line  $x x$ , Fig. 1. Fig. 3 is a top perspective view of the base-plate of the truss, and Fig. 4 is a perspective view of one of the truss-bars.

The letters A B indicate the meeting ends of two railway-rails, which are connected by the fish-plates C and bolts D in the usual manner; and E E indicate adjacent ties, to which the rails are fastened in any approved way.

The rail-joint shown at  $a$  comes between the ties E E, and it is to strengthen these joints and prevent the settling or springing of the ends of the rails and racking or straining of the fish-plate and bolt connections that my truss is employed. The truss comprises a base plate or bar, F, to which at one side and center is fixed or held the block G, and a pair of opposite truss-bars, H H, each of which inclines or is bent edgewise and upward opposite ways from a central point or angle,  $h$ , and which bars fit at these angles into side notches or recesses,  $g$ , at the lower end of block G. The ends of the truss bars are bent upward a short distance, as at  $h'$ , and thence inward at  $h^2$  to fit over the base-flange of the rail at one

side, and thence upward at  $h^3$  to lie against the web of the rail, and bolts I are passed through holes  $i$  in the ends of the opposite truss-bars H and through holes  $b$  in the rails A B, to bind the truss to the rails across the joint  $a$  between them, as in Fig. 1.

When the truss is bolted to place, the angles  $h$  of the bars H fit the angular notches  $g$  of block G, and the short bends  $h'$  of the bars enter the end notches,  $f$ , in the base-plate F, to effectually prevent shifting of the base-plate, and as the block G comes directly beneath and across the joint  $a$  the truss will effectually support the rail-joint under continuous and heavy traffic over the road, and at the same time will promote the durability of the rails and the security of the ordinary fish-plate and bolt-fastenings of the rails to each other.

The holes  $b$  in the webs of the rails, through which the truss-fastening bolts I pass, are elongated lengthwise of the rails, to permit free expansion and contraction of the rails without strains on the truss.

The block G preferably is made fast to the base-plate F of the truss; but the block may be separate from said plate, and be held to place beneath the rail-joint  $a$  by the side truss-bars, H H, when the truss is applied to the rails, as will readily be understood.

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

1. The combination, with the joined ends of railway-rails, of a truss applied beneath the rails across the joint, said truss consisting of a base-plate, F, a block, G, and opposite truss-bars H H, secured to the rails by bolts I, substantially as herein set forth.

2. A rail-joint truss comprising a base-plate, F, having notches  $f$ , a block, G, having notches  $g$ , and opposite truss bars H H, fitting the notches  $g f$ , and bolted at I I through their upturned inwardly-bent ends to the joined rails, substantially as herein set forth.

JOHN McEWEN.

Witnesses:

DANIEL S. ALFORD,  
JOSEPH R. TURNER.