

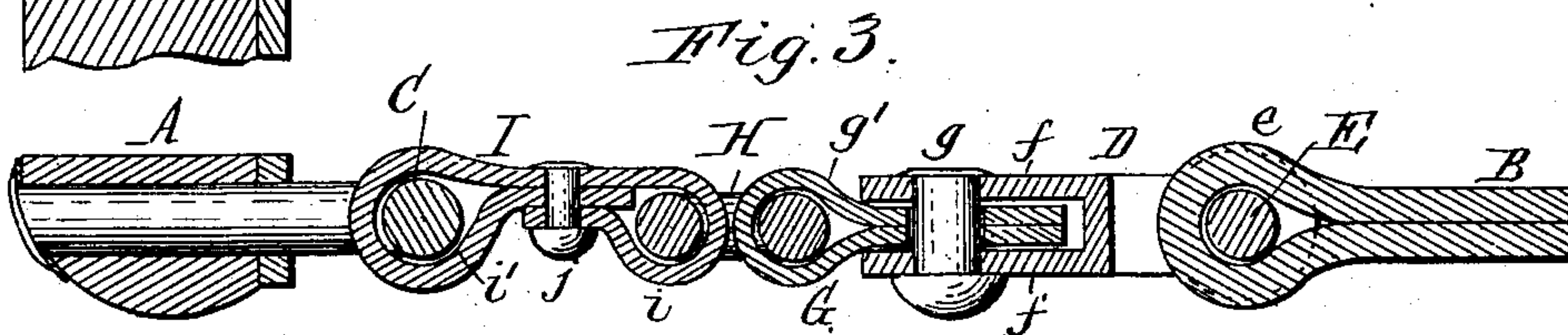
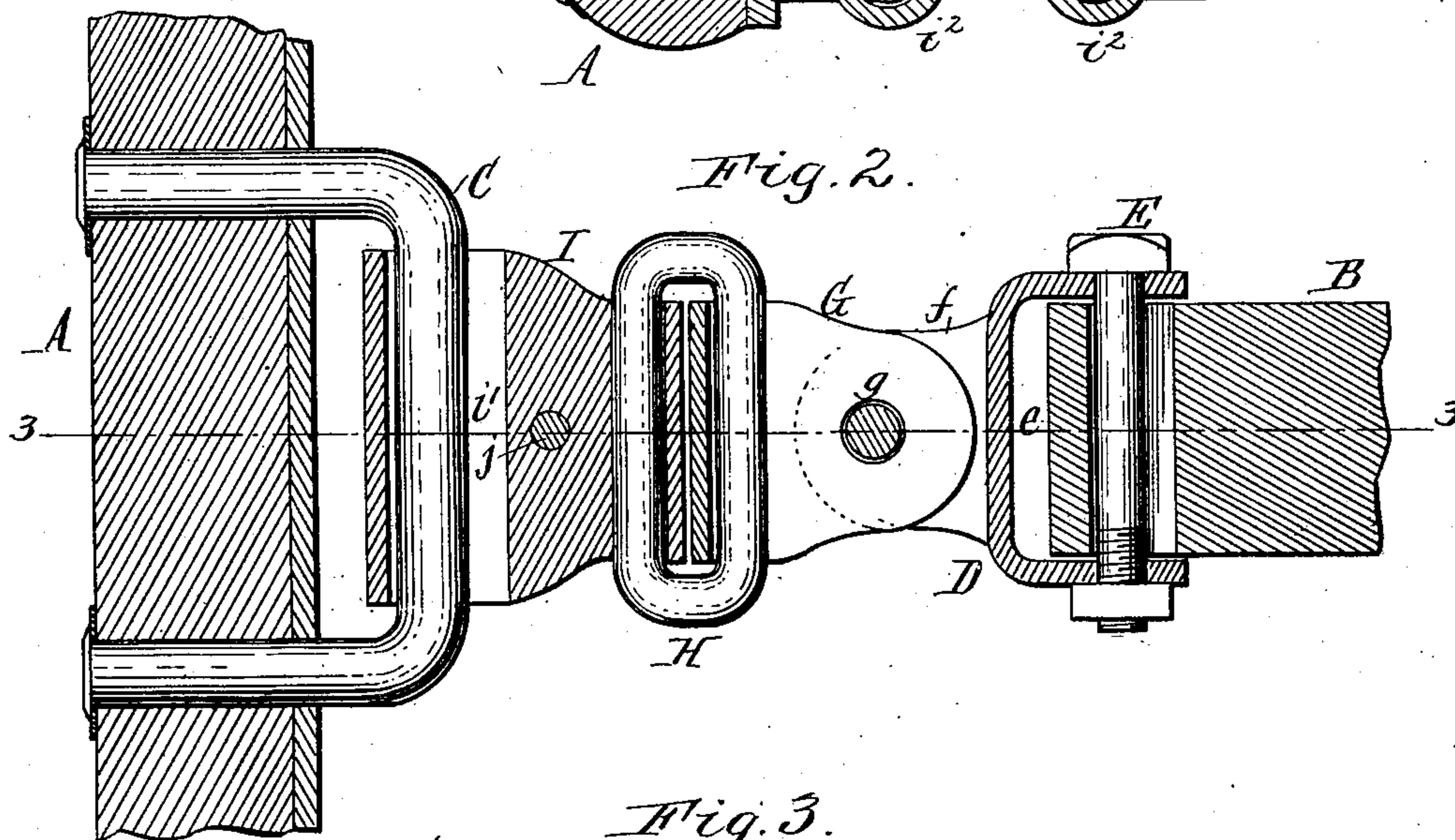
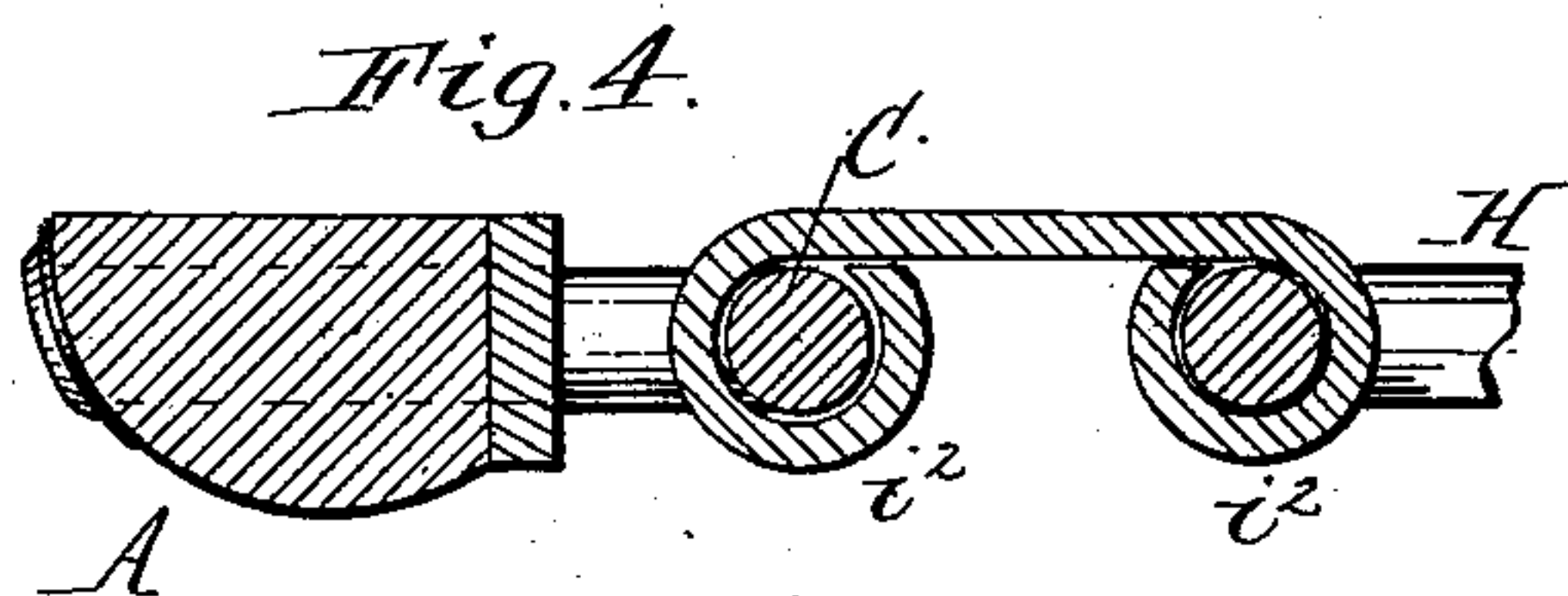
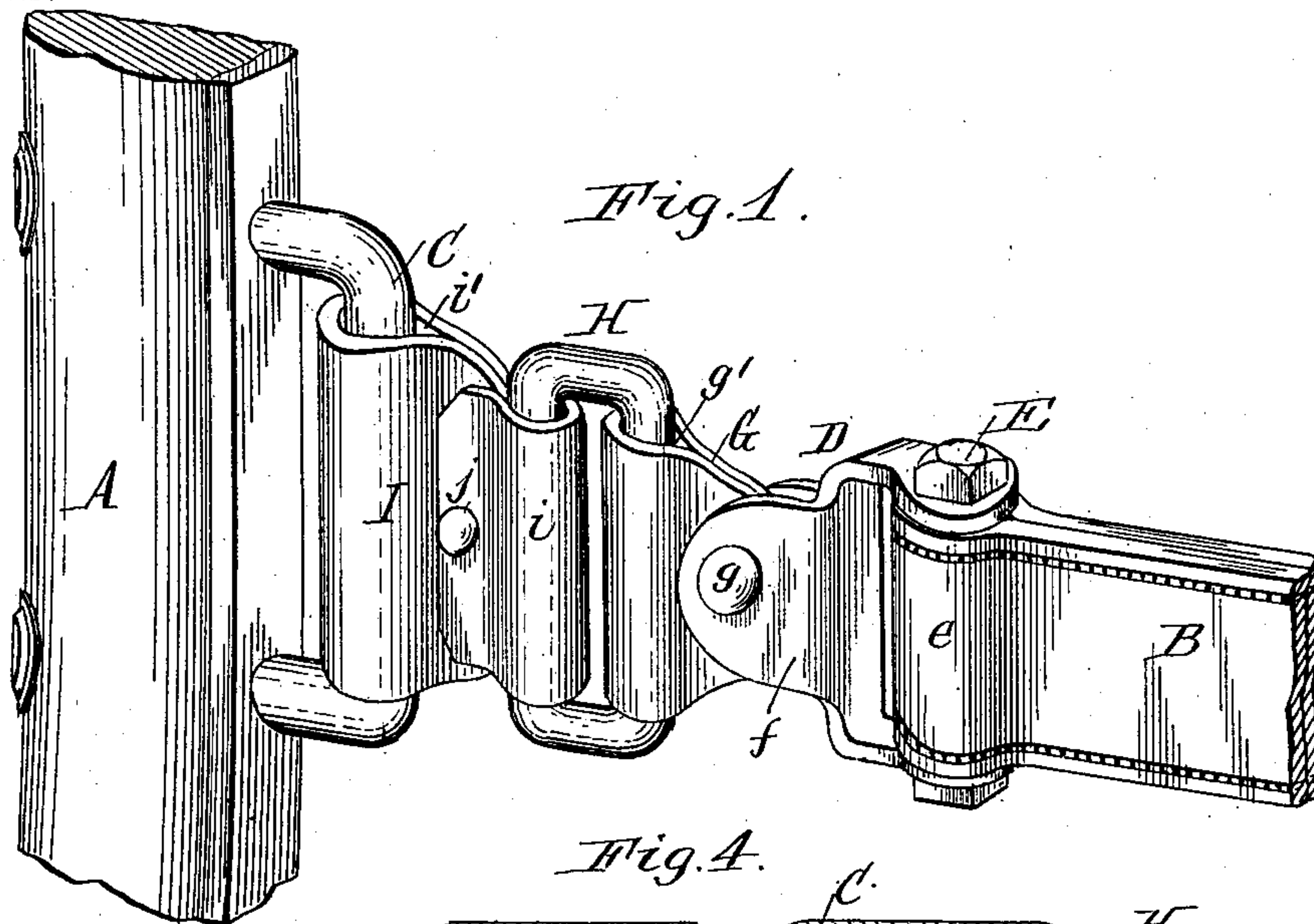
No. 755,894.

PATENTED MAR. 29, 1904.

O. P. LETCHWORTH.  
HAME AND TRACE CONNECTOR.

APPLICATION FILED AUG. 19, 1899.

NO MODEL.



Witnesses:  
E. A. Volk.  
Henry L. Deck.

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# UNITED STATES PATENT OFFICE.

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## HAME AND TRACE CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 755,894, dated March 29, 1904.

Application filed August 19, 1899. Serial No. 727,736. (No model.)

*To all whom it may concern:*

Be it known that I, OGDEN P. LETCHWORTH, a citizen of the United States, residing at Buffalo, in the county of Erie, in the State of New York, have invented a new and useful Improvement in Hame and Trace Connectors, of which the following is a specification.

This invention relates to that class of hame and trace connectors which are composed of several sections flexibly connected and provided with pivots arranged at right angles to each other, so that the front end of the trace has considerable freedom of movement both laterally and vertically.

The object of my invention is the construction of a simple and strong connector of this kind which possess sufficient flexibility to conform to the horse-collar, so as to relieve the hame from strains which tend to displace it on the collar.

In the accompanying drawings, Figure 1 is a perspective view of a hame and a trace provided with my improved connector. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a horizontal section in line 3 3, Fig. 2. Fig. 4 is a horizontal section of a modified construction of the metallic strap which connects with the hame-staple.

Like letters of reference refer to like parts in the several figures.

A is the hame, which may be of any ordinary construction, and B is the trace. The hame is provided at its back or outer side with a staple C.

D is a yoke attached to the front end of the trace and having its arms arranged horizontally one above the other and provided with openings for the reception of a removable upright bolt E, which passes through the usual loop *e* at the front end of the trace.

*f* represents ears which project forwardly from the yoke and are arranged side by side.

G is a clip consisting, preferably, of a doubled strip of sheet metal and having its rear end portion arranged between the ears *f* and pivoted thereto by a horizontal pin or rivet

*g*. The clip G is provided at its front end with an upright eye *g'*, which loosely receives the rear side bar of an upright metallic loop or link H. The front side bar of this loop is connected with the hame-staple C by a metallic strap or clip I, provided at its ends with upright eyes *i i'*, which loosely encircle said side bar and the cross-bar of the hame-staple, respectively.

In the construction shown in Figs. 1 to 3 of the drawings the strap I consists of a strip of sheet metal having its end portions doubled upon themselves to form the eyes *i i'* and the ends of the strip overlapped and secured in place by a rivet *j*, passing through the three thicknesses or layers of the strip. If desired, the eyes of the strap may be formed by simply bending or curling the end portions of the strip into circular form, as shown at *i<sup>2</sup>* in Fig. 4.

The yoke D, clip G, link H, and strap I form a flexible connection between the trace and the hame, which contains three vertical joints, formed, respectively, at the hame-staple C, and the two side bars of the link H, and a horizontal joint formed by the pivot between the yoke D and the clip G. This construction permits the connector to adapt itself readily to the convex surface of the horse-collar and to lie closely against the same, thereby relieving the hame from any leverage or strain tending to pull the same off the collar, while at the same time permitting the trace to assume different inclinations and accommodate itself to the line of draft or to hang closely to the hame when the harness is not in use.

I claim as my invention—

In a hame and trace connector, the combination with a hame having a staple, of a yoke having a body portion, separated vertical ears extending forwardly from the sides of said body portion, and horizontal arms projecting rearwardly from the upper and lower ends of said body portion, a bolt connecting said yoke-arms and adapted to pass through a loop at

the front end of the trace, a clip consisting of a flat doubled piece having an eye and parallel end portions extending between and pivoted to said separated vertical ears of the  
5 yoke, a metallic strap bent to form upright eyes at its front and rear ends, said front eye loosely encircling the cross-bar of the hame-staple, and a link engaging loosely in the ad-

jacent eyes of said strap and said clip, substantially as set forth. 10

Witness my hand this 8th day of August, 1899.

OGDEN P. LETCHWORTH.

Witnesses:

JNO. J. BONNER,  
ELLA R. DEAN.