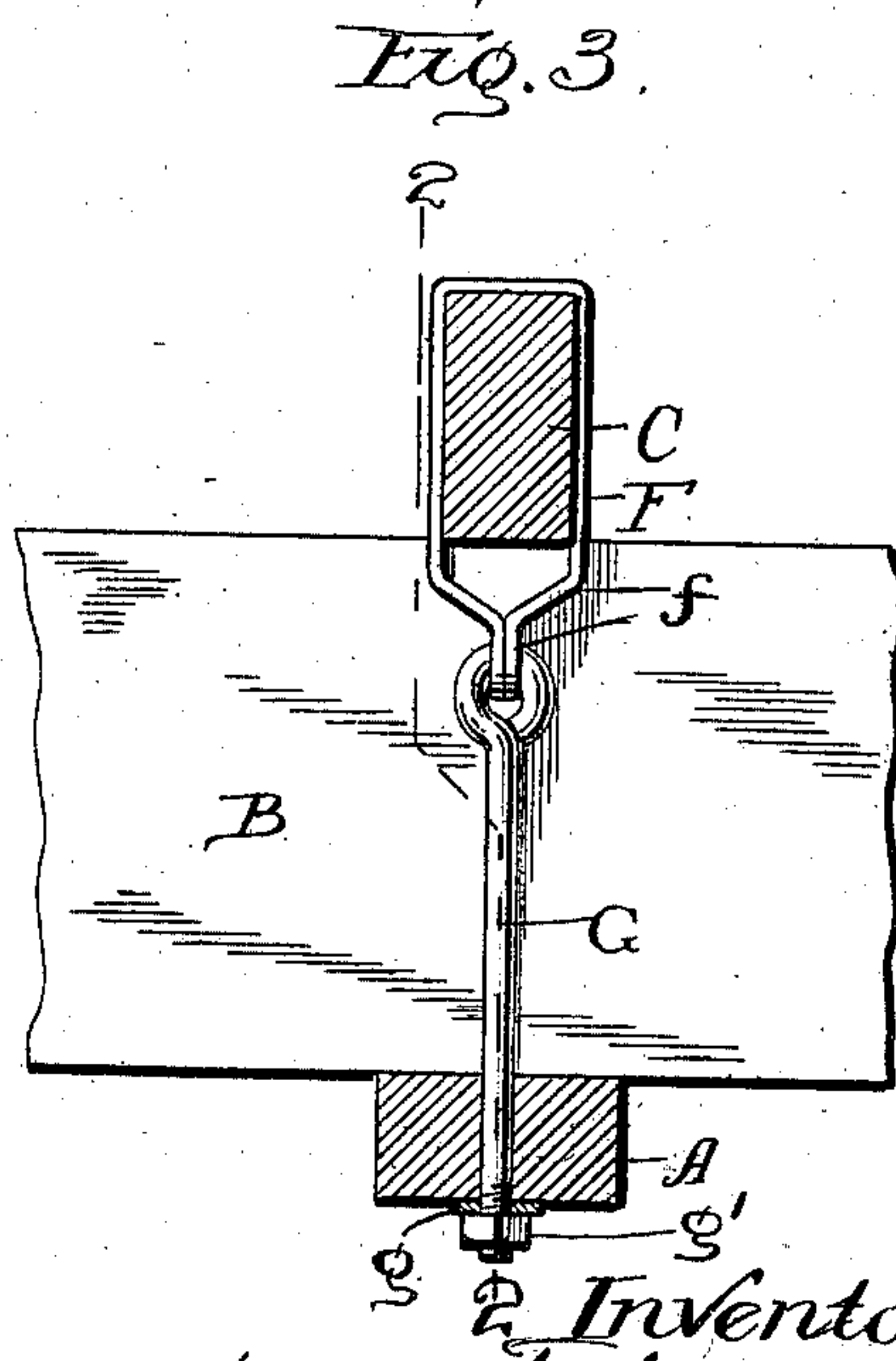
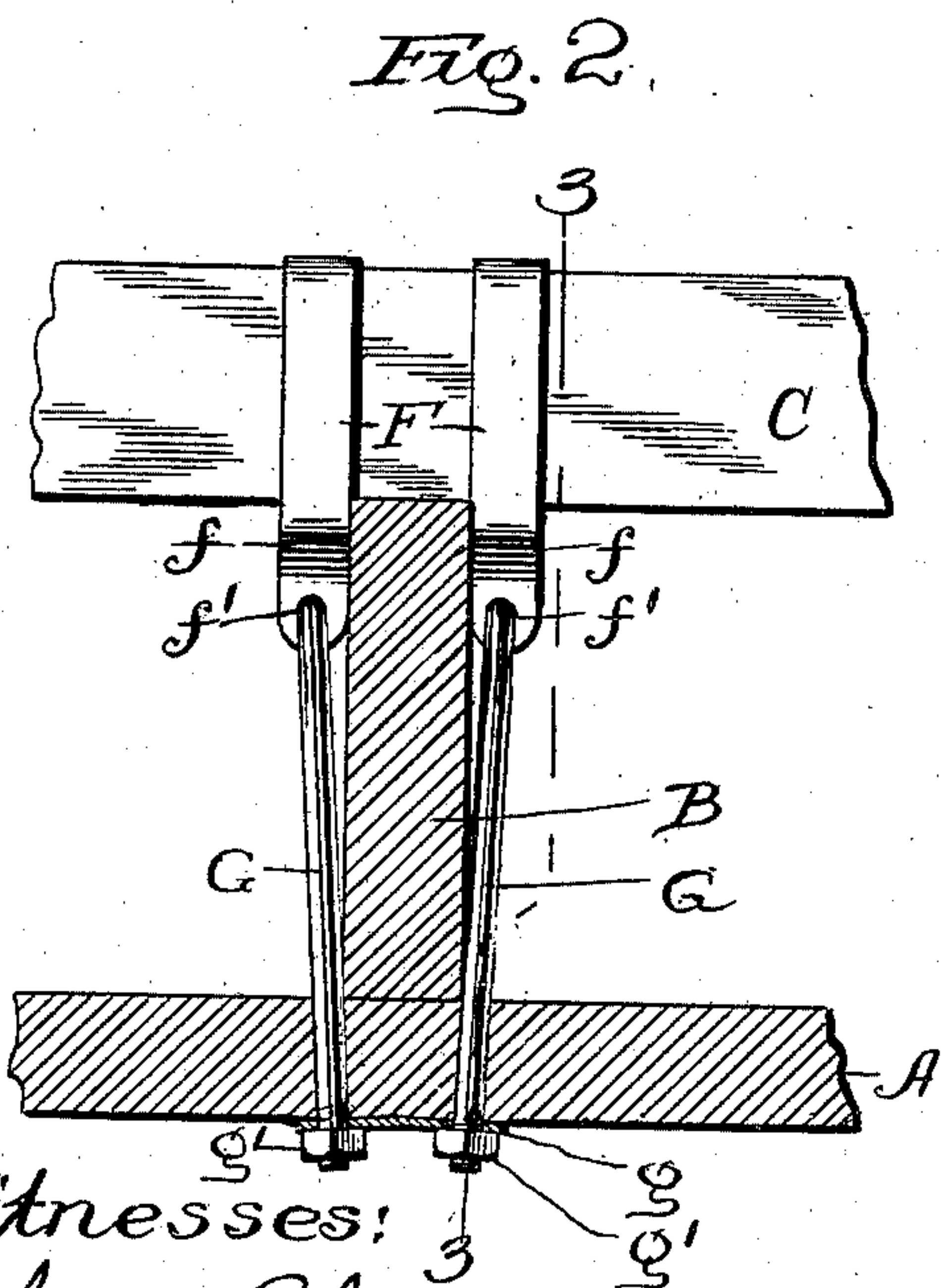
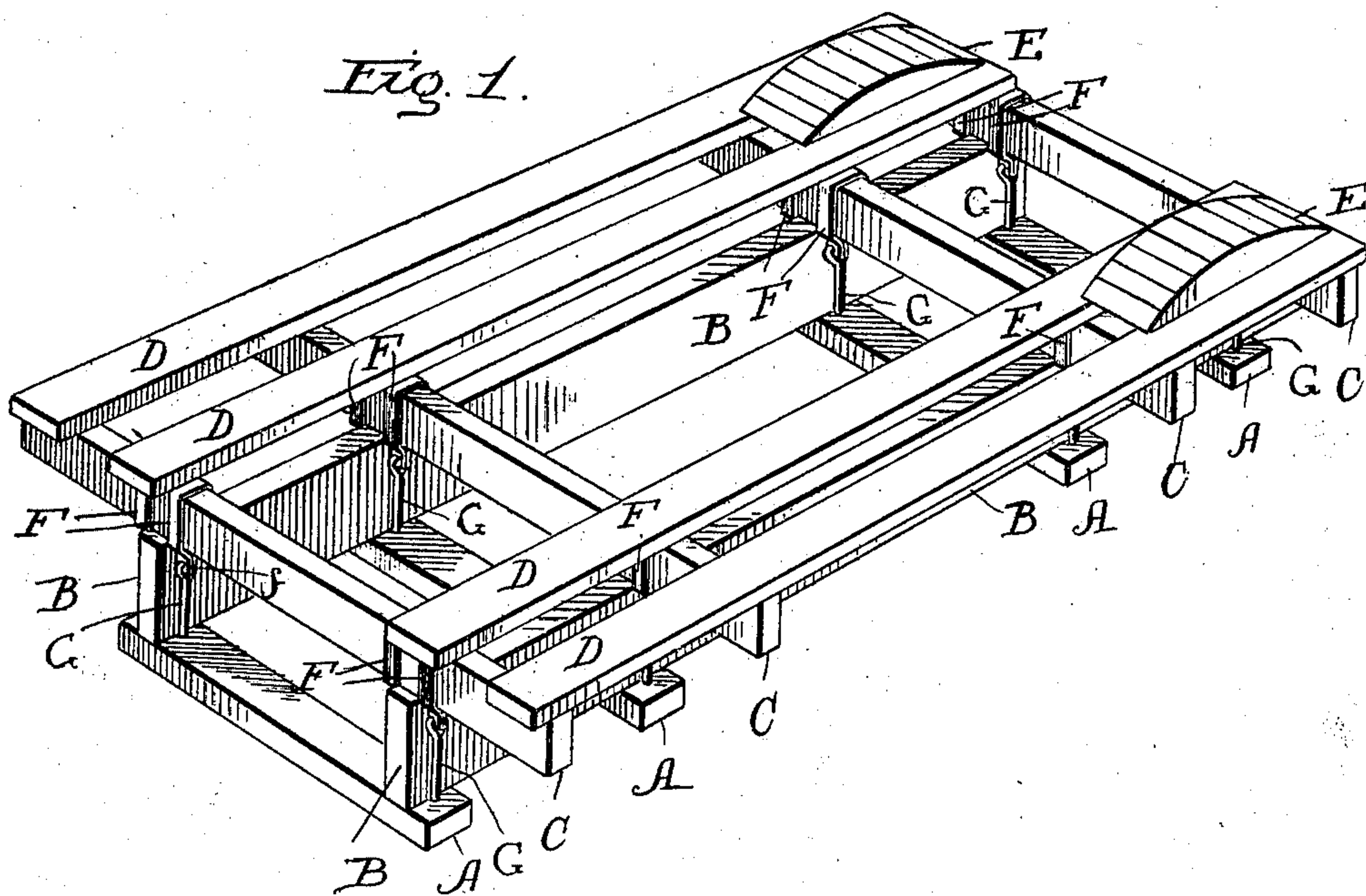


No. 731,351.

PATENTED JUNE 16, 1903.

H. L. FERRIS.  
HAY RACK CONSTRUCTION.  
APPLICATION FILED FEB. 2, 1903.

NO MODEL.



Witnesses:  
Chas. O. Shovey  
Russell Miles

Inventor:  
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Att'y.



# UNITED STATES PATENT OFFICE.

HENRY L. FERRIS, OF HARVARD, ILLINOIS, ASSIGNOR TO HUNT, HELM, FERRIS & COMPANY, OF HARVARD, ILLINOIS, A CORPORATION OF ILLINOIS.

## HAY-RACK CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 731,351, dated June 16, 1903.

Application filed February 2, 1903. Serial No. 141,556. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY L. FERRIS, a citizen of the United States of America, and a resident of Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Hay-Rack Constructions, of which the following is a specification.

My invention relates to certain new and useful improvements in hay-rack constructions. Its object is to produce a hay-rack which while as strong in every way and as serviceable as other devices will be easier to put together, and therefore cheaper to construct.

To this end my invention consists in certain novel features, which are clearly shown in the accompanying drawings and described in this specification.

In the aforesaid drawings, Figure 1 is a perspective of the hay-rack embodying my invention. Fig. 2 is a section in the line 2 2 of Fig. 3, showing the means for securing the members of the rack together; and Fig. 3 is a section in the line 3 3 of Fig. 2.

Referring to the drawings, A represents the four flat transverse horizontal members, such as are usually found in hay-racks. Upon these four members A are two horizontal longitudinal stringers B on opposite sides of the rack. Upon the top of the stringers B are four other transverse cross-pieces C of greater length than the pieces A, to which members are secured the longitudinal boards D, constituting the top of the rack. The stringers B and top members C are placed on edge. Upon the boards D are the ordinary wheelguards E. This much of the construction is the ordinary construction of any hay-rack. The features which differentiate my rack from the racks heretofore in use lie in the means which secure the various members thereof together.

Each of the members C is surrounded by four rectangular straps F, one on each side of and adjacent to each of the stringers B. The lower parts of the straps F are prolonged downward to form projections *f*, which are

perforated at *f'*. An eyebolt G is hooked through the perforation *f'* of each strap, and the opposite ends of these bolts extend downward through perforations in the transverse members A and through perforated plates *g*, each of which is provided with two perforations to serve as a washer for the two similar bolts and is secured in place by a nut *g'*. This method of securing the members together is exceedingly simple and strong and very cheap. It has heretofore been customary to secure the parts together by bolts passing through holes bored through the members A, B, and C. It is very difficult to bore these long holes, as the total thickness of the three pieces is about sixteen inches. Such a method of construction, therefore, makes the device when so secured together unnecessarily expensive. It is obvious that a great saving in cost is effected by my improved device.

I claim as new and desire to secure by Letters Patent—

1. The combination with the flat lower transverse members, the longitudinal stringers laid on edge, and the upper transverse members also laid on edge, of straps surrounding said upper transverse members adjacent to the stringers, the straps being so bent as to form downwardly-projecting portions, said portions being suitably perforated, eyebolts passing through said perforations, said bolts being passed, at their opposite ends through suitable perforations in the lower transverse members, and suitable nuts upon the lower ends of said bolts adapted to hold the parts firmly together, substantially as described.

2. The combination with the flat lower transverse members, the longitudinal stringers laid on edge, and the upper transverse members also laid on edge, of straps surrounding said upper transverse members adjacent to the stringers, the straps being so bent as to form downwardly-projecting portions, said portions being suitably perforated, eyebolts passing through said perforations, said bolts being passed, at their opposite ends, through suitable perforations in the lower transverse members, suitable plates of metal below said

lower transverse members provided with two perforations, and surrounding two adjacent bolts, and suitable nuts upon the lower ends of said bolts adapted to hold the parts firmly  
5 together.

In witness whereof I have signed the above application for Letters Patent, at Harvard, in

the county of McHenry and State of Illinois, this 12th day of January, A. D. 1903.

HENRY L. FERRIS.

Witnesses:

BLAKE B. BELL,  
E. B. HUNT.