

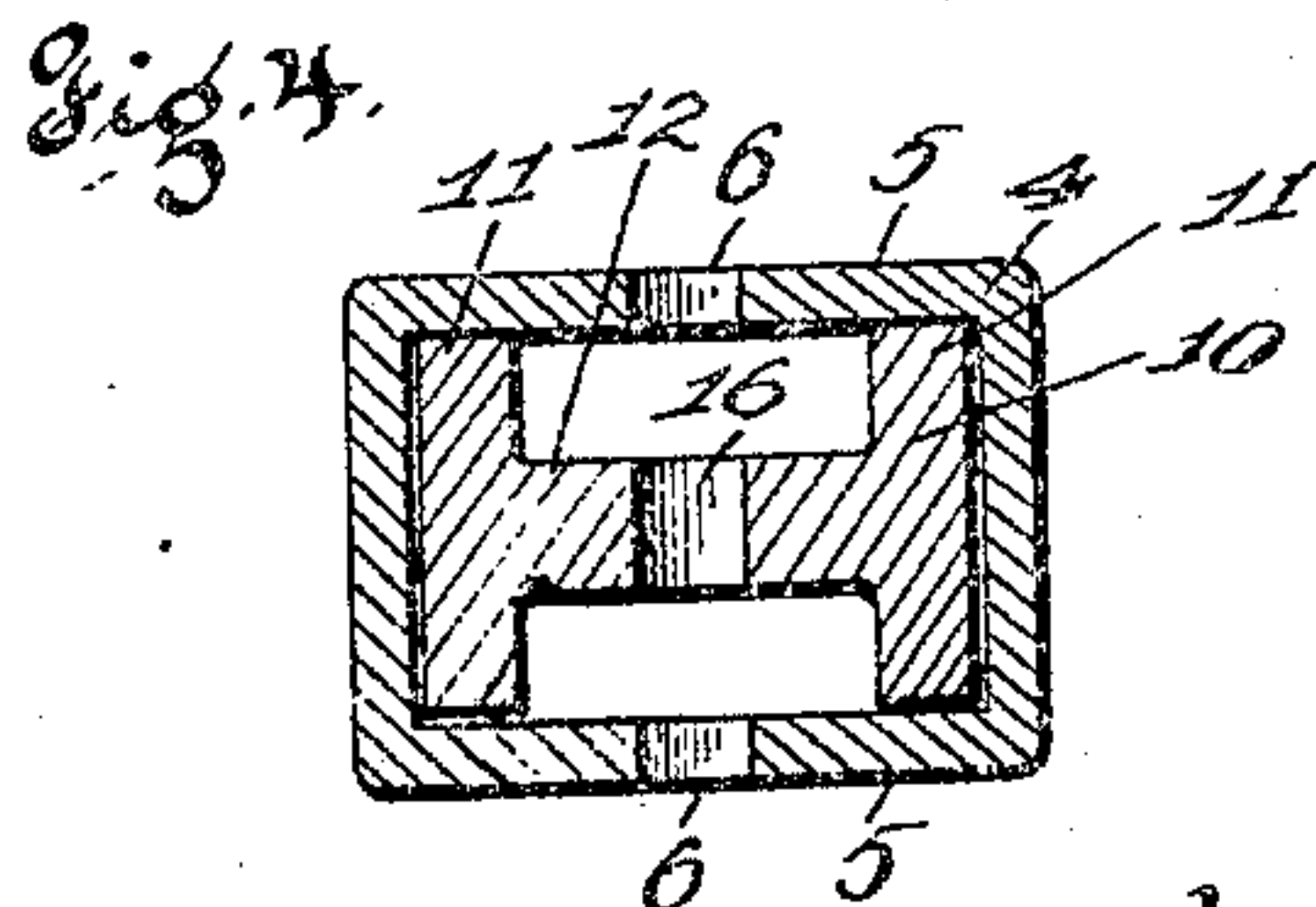
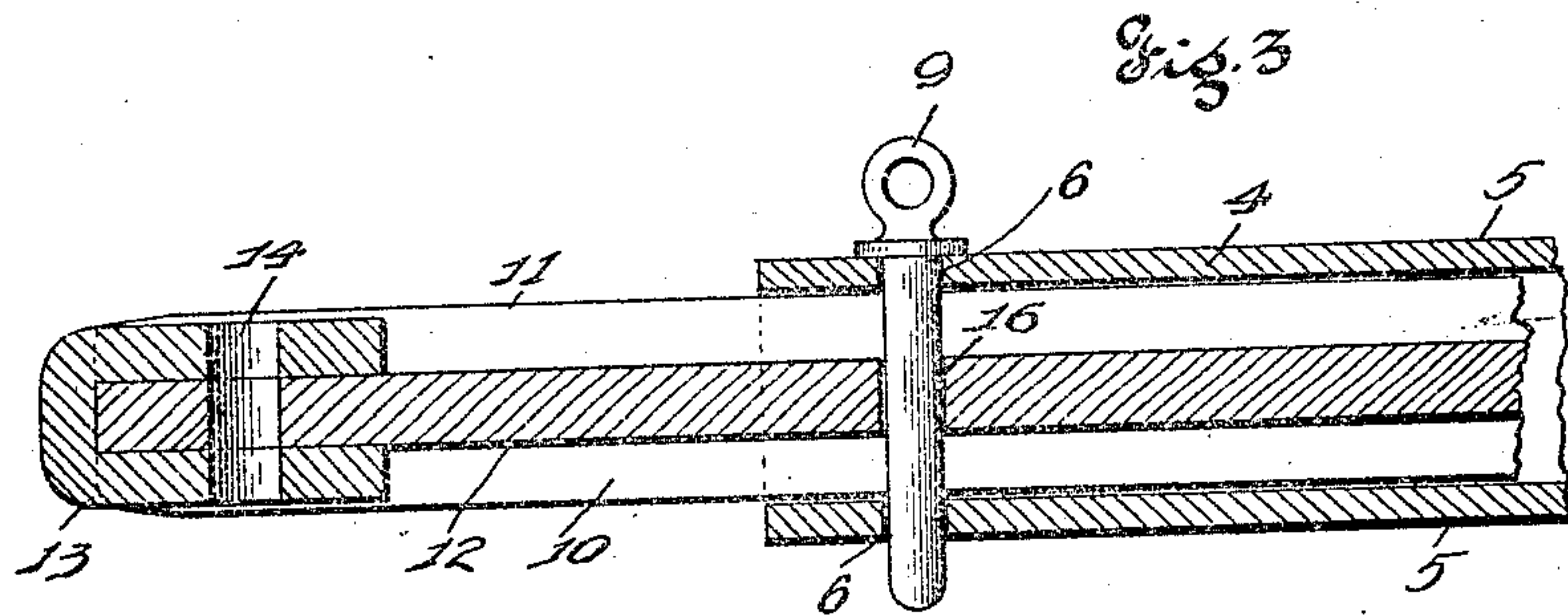
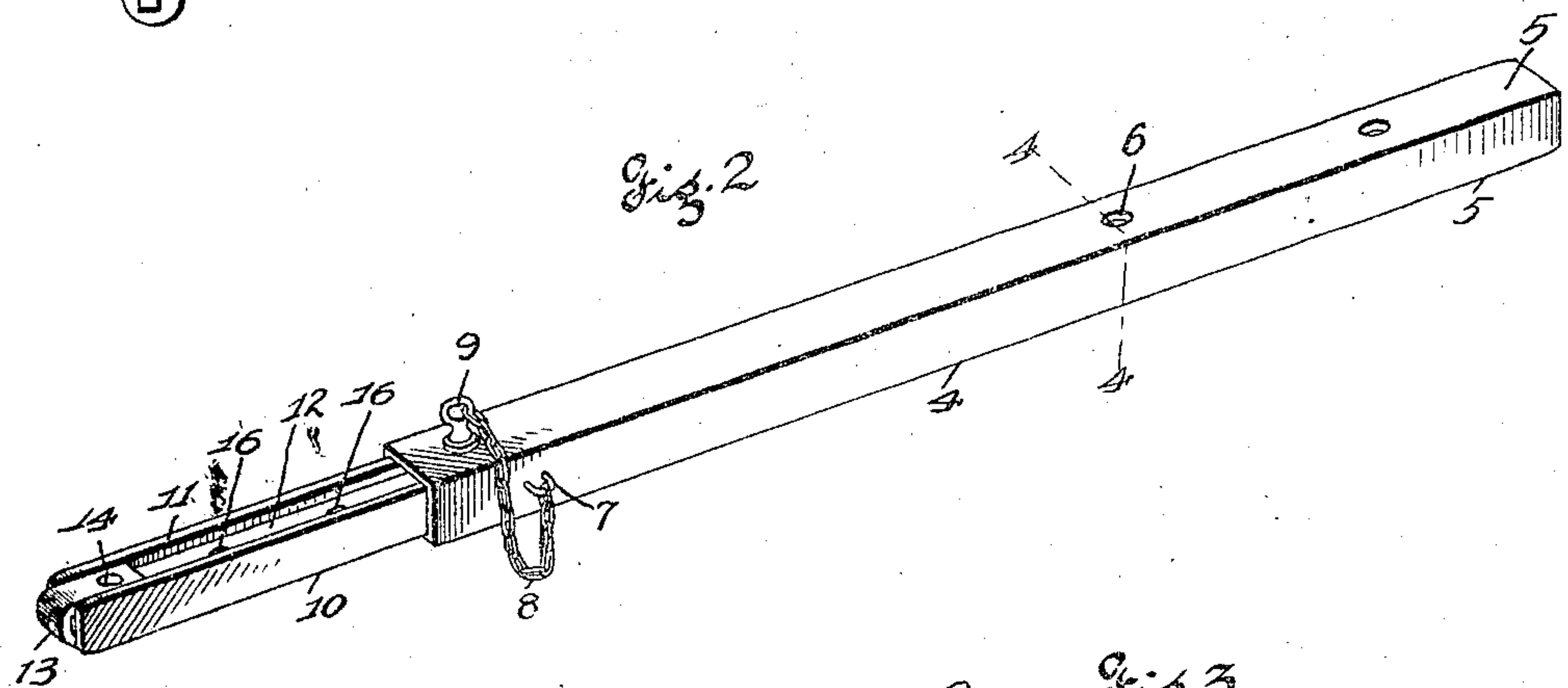
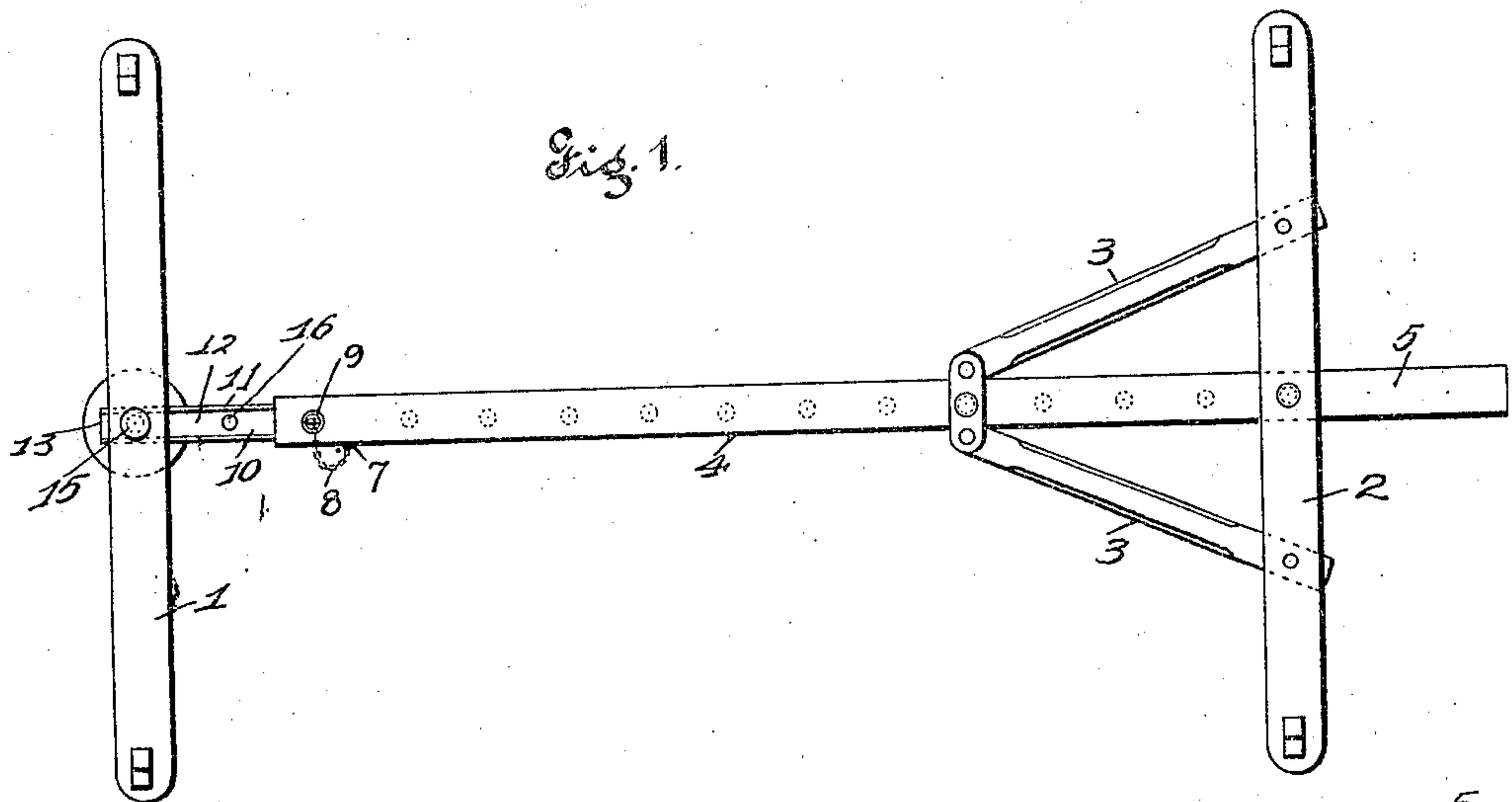
No. 754,318.

PATENTED MAR. 8, 1904.

E. KEFFER.  
WAGON REACH.

APPLICATION FILED SEPT. 25, 1903.

NO MODEL.



Witnesses  
Alfred A. Evers  
Medison

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# UNITED STATES PATENT OFFICE.

EDWIN KEFFER, OF MADISON, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
RAYMOND BECK, OF ST. LOUIS, MISSOURI.

## WAGON-REACH.

SPECIFICATION forming part of Letters Patent No. 754,318, dated March 8, 1904.

Application filed September 25, 1903. Serial No. 174,637. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN KEFFER, a citizen of the United States, residing at Madison, Madison county, Illinois, have invented certain new and useful Improvements in Wagon-Reaches, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in wagon-reaches; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of my invention is to provide an improved metallic reach which may be used interchangeably with the common wood reach now in use, so that when it is desired to use the metallic reach it will only be necessary to detach and slide out the wood reach and insert the metallic reach, and all of which shall be accomplished without in any manner altering the hounds or running-gear of the wagon.

In the drawings, Figure 1 is a top plan view of my invention. Fig. 2 is a perspective view of the same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a transverse section taken on the line 4 4 of Fig. 2.

Referring to the drawings, 1 indicates the front bolster, 2 the rear bolster, and 3 the ordinary hounds.

My reach is constructed of an angular tube or shell of rolled steel 4, the top and lower walls 5 of which are provided with holes 6, which coincide or are in alinement. Secured to the forward end of the tube or shell 4 is a staple 7, and secured to said staple 7 is a chain 8, and mounted on one end of said chain 8 is a pin 9. Located in the shell or tube 4 is an I-shaped steel beam or bar 10. Said I-shaped beam is provided with the usual vertical flanges 11 and the central connecting portion 12, and said I-beam is located in the shell or tube 4, so that the vertical strain is received by the vertical flanges 11. Secured to the front end of the I-beam 10 and located between the verti-

cal flanges 11 of the same is a cleat 13, and said cleat 13 is welded to the I-beam or forced in between the flanges of the same, so as to strengthen this portion of the I-beam. Formed in the cleat 13 and through the I-beam is a hole 14 for the king-pin 15.

The portion 12 of the I-beam has formed in it at suitable distances a series of holes 16, by means of which the same may be adjusted in the shell 4. By the use of the pin 9, the holes in the shell 4, and the holes 16 in the I-beam the wagon-reach is made adjustable to any desired length.

Having fully described my invention, what I claim is—

1. The improved straight wagon-reach adapted to be inserted and withdrawn in place of the ordinary wooden reach, and comprising a straight steel shell 4 angular in cross-section the bottom and top walls of which are provided with two holes 6 to be engaged by the usual hounds and bolster-pins, also provided near its front end with another hole, a straight steel I-beam 10 provided at its front end with the strengthening-cleat 13 which extends between the flanges of said beam and beyond the front end of the same, said I-beam and said cleat having a hole 14 to receive the wagon king-pin, said I-beam having a series of holes 16 and mounted to slide within said shell 4, and a pin 9 by means of which said I-beam and shell are held in relative adjustment, substantially as described.

2. The improved straight wagon-reach adapted to be inserted and withdrawn in place of the ordinary wooden reach, and comprising a straight steel shell 4 angular in cross-section the bottom and top walls of which are provided with two holes 6 to be engaged by the usual hounds and bolster-pins, also provided near its front end with another hole, a straight steel I-beam 10 provided at its front end with the strengthening-cleat 13 which extends between the flanges of said beam and beyond the front end of the same, said I-beam and said cleat having a hole 14 to receive the wagon

king-pin, said I-beam having a series of holes 16 and mounted to slide within said shell 4, a pin 9 by means of which said I-beam and shell are held in relative adjustment, a staple 7 secured to said shell, and a chain 8 secured to said staple and to said pin 9, substantially as described.

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

EDWIN KEEFER.

Witnesses:

M. G. IRION,

ALFRED A. EICKS.