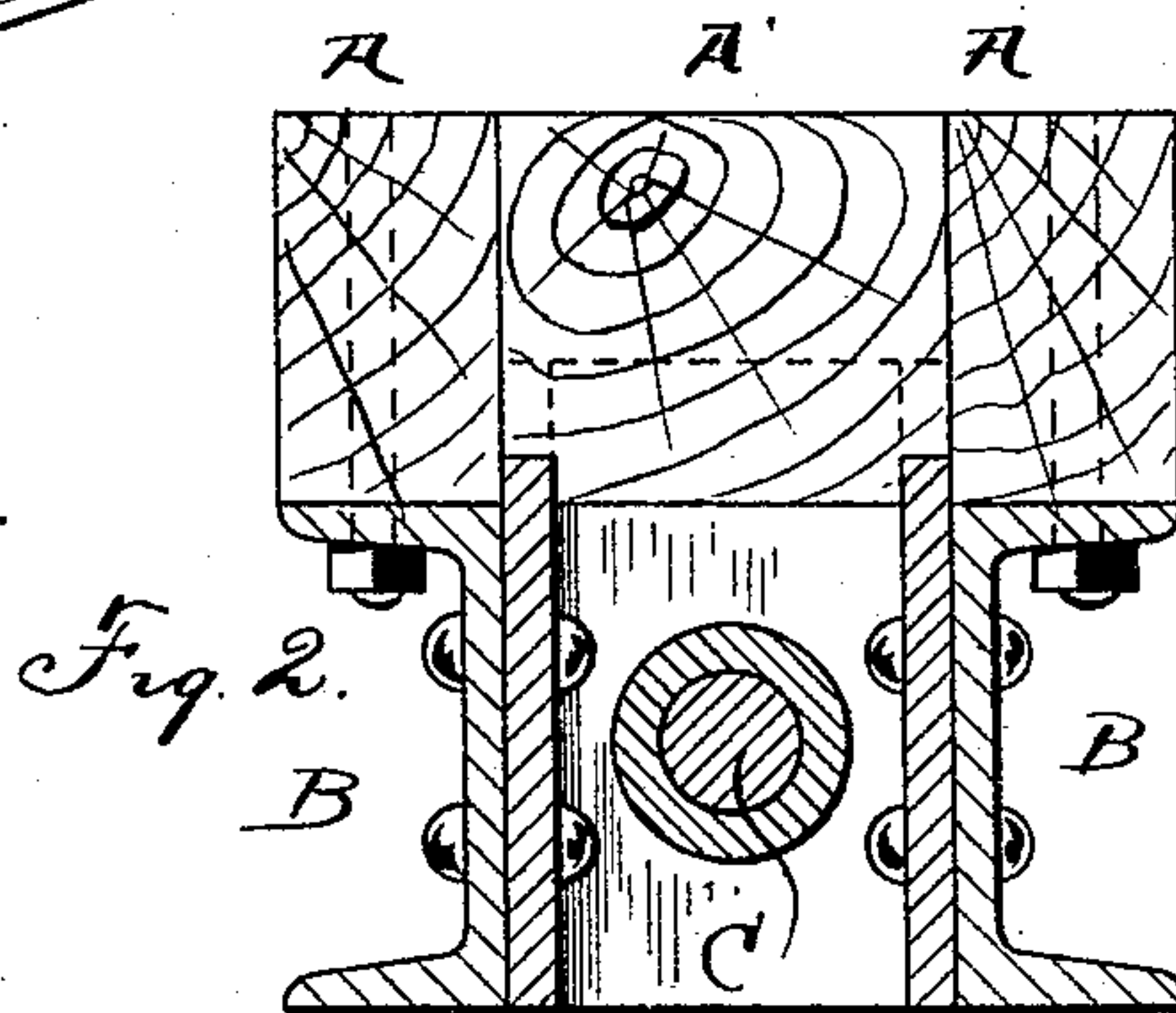
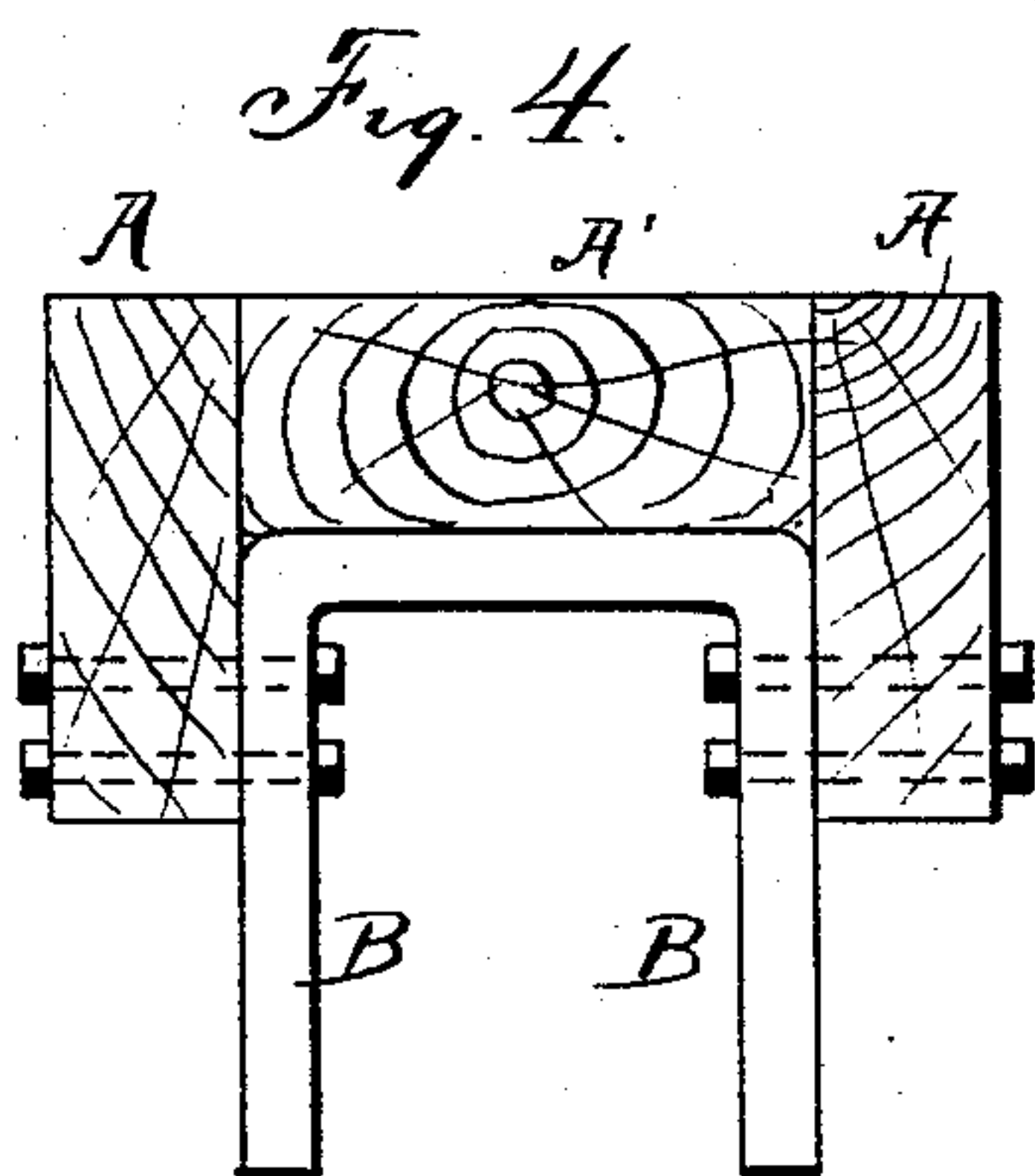
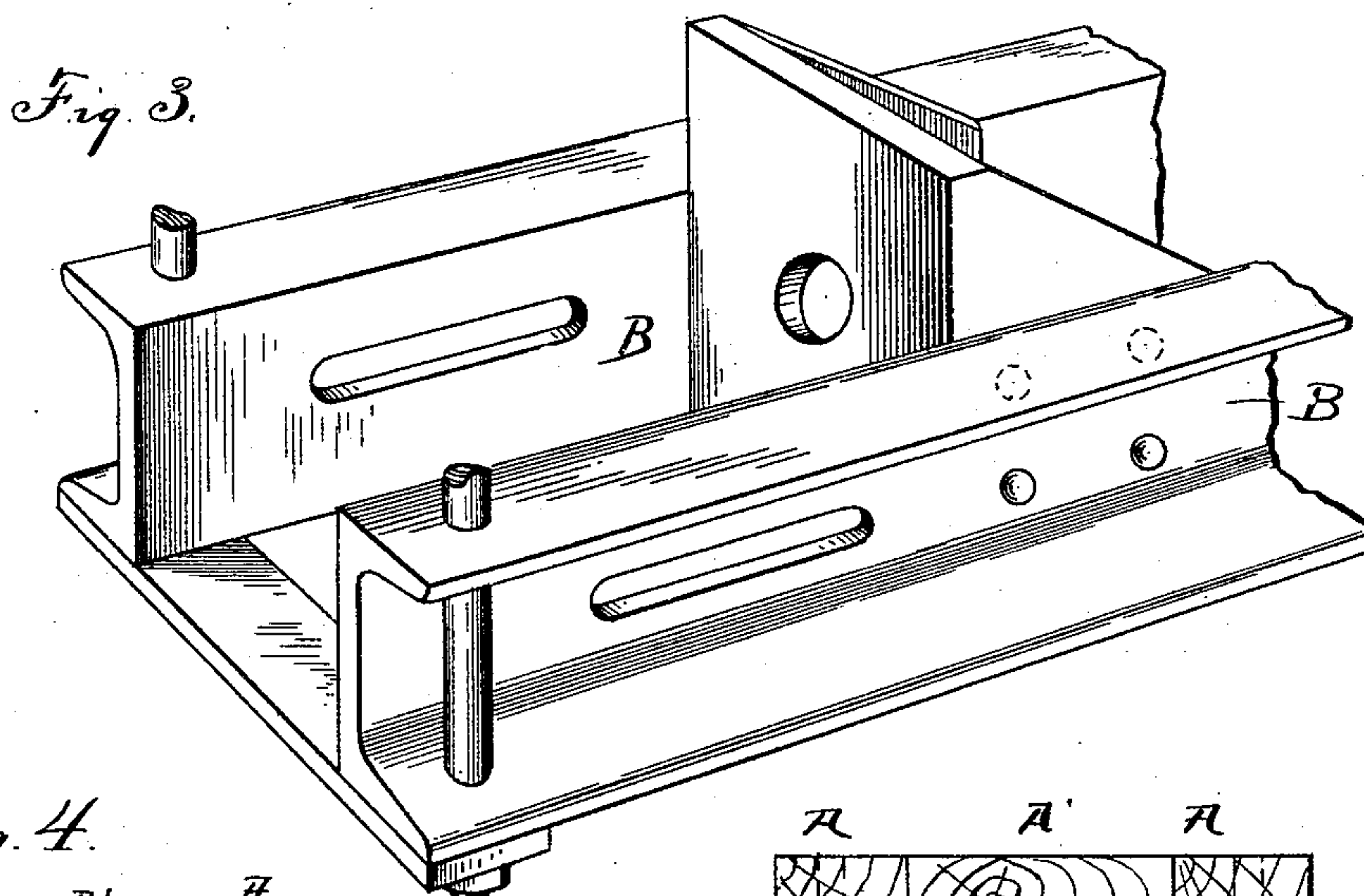
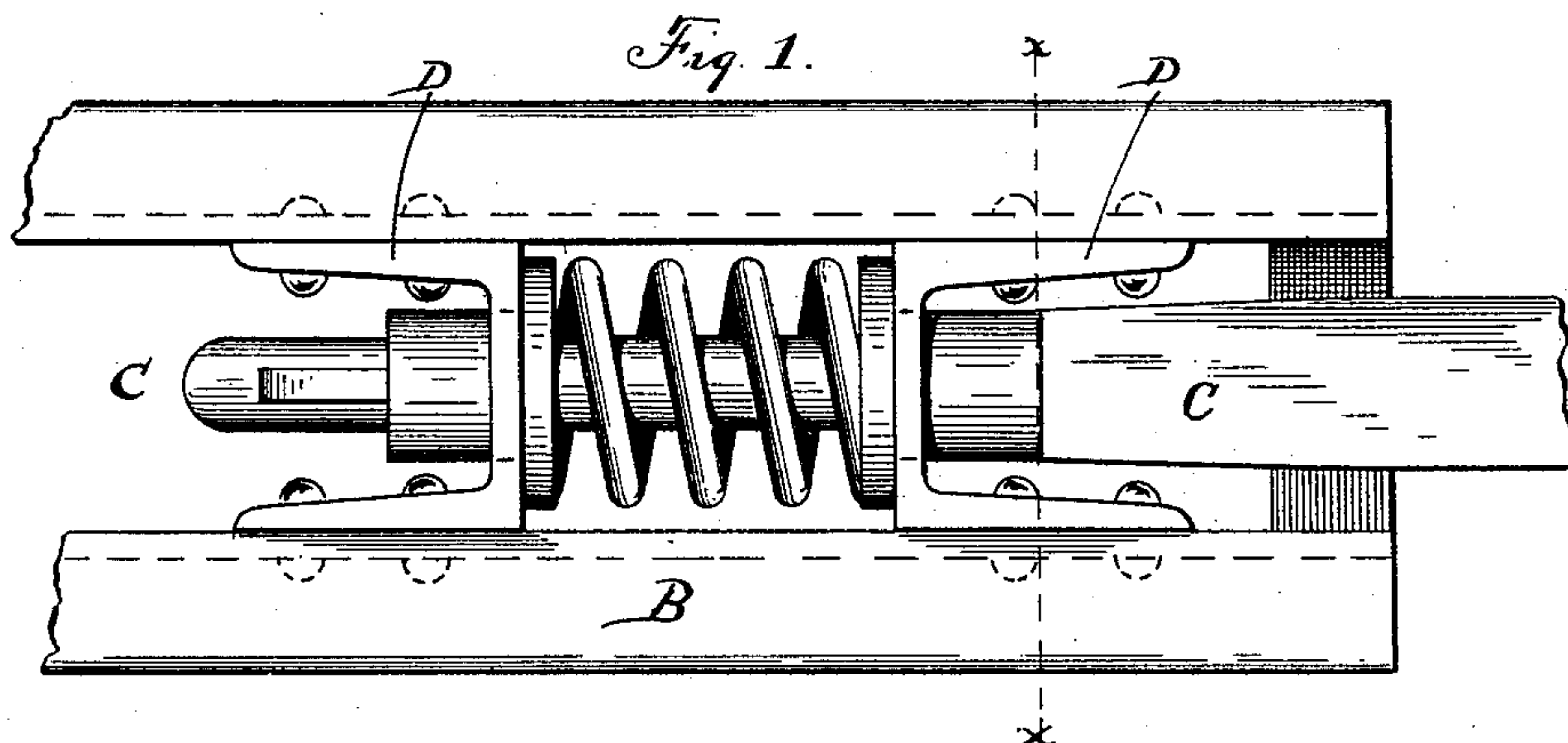


(No Model.)

W. PENNOCK.  
DRAW GEAR FOR CARS.

No. 480,827.

Patented Aug. 16, 1892.



Witnesses:  
E. Byron Gilchrist  
*[Signature]*

Inventor.  
Willard Pennock  
By *[Signature]* *[Signature]*  
Attorneys



# UNITED STATES PATENT OFFICE.

WILLARD PENNOCK, OF MINERVA, OHIO.

## DRAW-GEAR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 480,827, dated August 16, 1892.

Application filed February 19, 1891. Serial No. 382,061. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD PENNOCK, of Minerva, in the county of Stark and State of Ohio, have invented certain new and useful  
5 Improvements in Means for Attaching Draw-Bars to Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains  
10 to make and use the same.

My invention relates to draw-bars for passenger and freight cars, and more especially to the manner in which the draw-bar is attached to its car; and it consists in securing  
15 to the center or draft sills of the car one or more metallic plates, preferably of iron or steel, that shall offer two vertical faces, between which faces the draw-bar apparatus is secured.

20 My invention also consists in certain features of construction hereinafter to be pointed out.

In the drawings, Figure 1 is a view from beneath of a draw-bar and its method of attachment to the car according to one form of  
25 my invention. Fig. 2 is a view in vertical cross-section taken through the lines *xx* of Fig. 1. Fig. 3 is a view showing in one form the metallic plates designed to be attached  
30 below the draft-sills of the car and between the vertical and opposing faces of which plates the draw-bar is to be secured. Fig. 4 shows a modified form of my invention, wherein a  
35 single metallic piece is so bent, forged, or cast as to present two vertical and opposing faces between which to secure the draw-bar.

A A are the center or draft sills of a car. These sills are generally made to run the entire length of the car-body, and it is to each  
40 end of these sills that the draw-bars are attached. Hence the term "draft-sills" has been applied to these members of the car structure.

A' is the so-called "filling-block," which is  
45 merely a strengthening-piece of timber of some five or six feet in length, usually placed between the ends of the sills A, where the draw-bars are located.

B B are my vertical metallic plates, between  
50 which the draw-bar is to be secured. In Fig. 1 of the drawings these plates consist of two pieces of channel-iron bolted to the sills A above them. It is not, however, essential

that two separate metallic plates should be used, as shown in Fig. 1, inasmuch as a single sheet may be bent, substantially as shown  
55 in Fig. 4 of the drawings, and bolted to the sills A, so as to present, in effect, the same vertical attaching-faces for the draw-bar as is done by the arrangement illustrated in Fig. 1.  
60

It has been the custom heretofore, so far as I am aware, either to fasten the draw-bar apparatus directly to the sills of the car or else to bolt to the sills wooden blocks and to attach the draw-bar apparatus to said blocks,  
65 and it is the principal object of my invention to dispense with both of these methods, to each of which there are certain objections, and to secure the draw-bar apparatus to and between iron or steel plates or surfaces, which  
70 may be placed either below or between the draft-sills, according to the requirements of the case.

C represents the draw-bar apparatus as it may be secured between the metallic plates  
75 B. Any special construction of draw-bar apparatus may be employed, as I do not limit my invention in this direction.

Figs. 1 and 2 of the drawings illustrate one convenient and effective method of attaching  
80 a draw-bar apparatus to the plates B. In the construction there shown two U-irons D D are bolted to the faces of the plates B, and these irons serve to contain and sustain the working parts of the draw-bar apparatus.  
85

What I claim as my invention is—

1. The combination, with the center or draft sills of a car and filling-block located between these sills, of a plate or plates B, secured to the sills, and U-shaped irons secured  
90 between the latter, the upper ends of the U-irons projecting above the lower edges of the filling-block, substantially as set forth.

2. The combination, with center or draft sills, of plate or plates secured to said beams,  
95 filling-block located between the sills, and draw-bar apparatus connected with the plates, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this  
100 16th day of January, 1891.

WILLARD PENNOCK.

Witnesses:

L. L. LEGGETT,  
ALBERT E. LYNCH.