No. 880,270. PATENTED FEB. 25, 1908.

C. R. BOWEN.

DRAW HEAD FOR RAILWAY CARS.

APPLICATION FILED MAY 1, 1907.

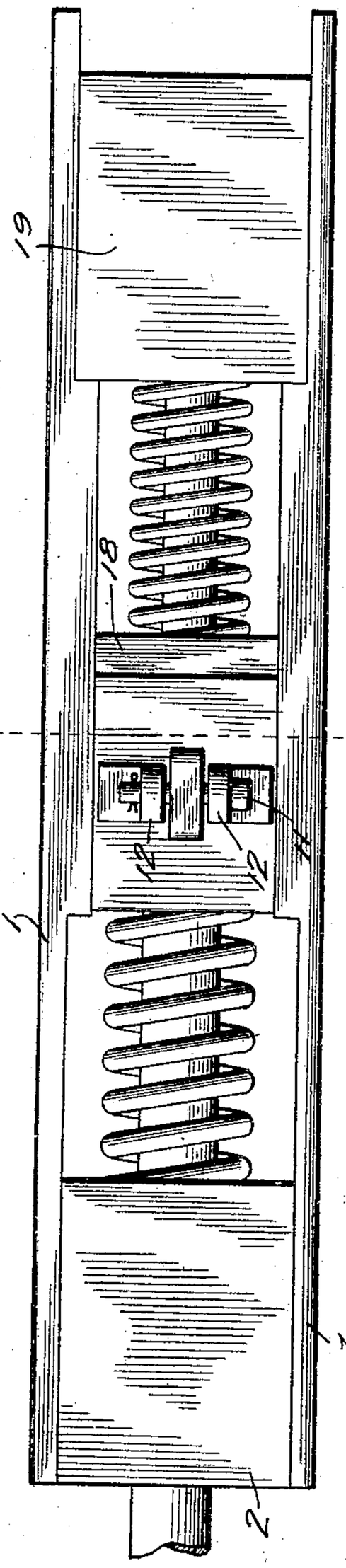

Fig. 1.

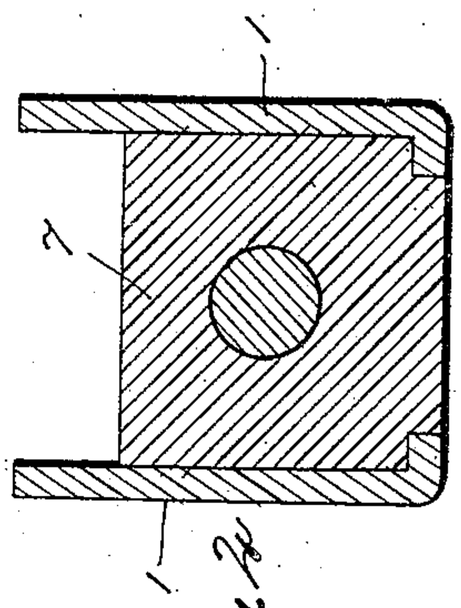

Fig. 2.

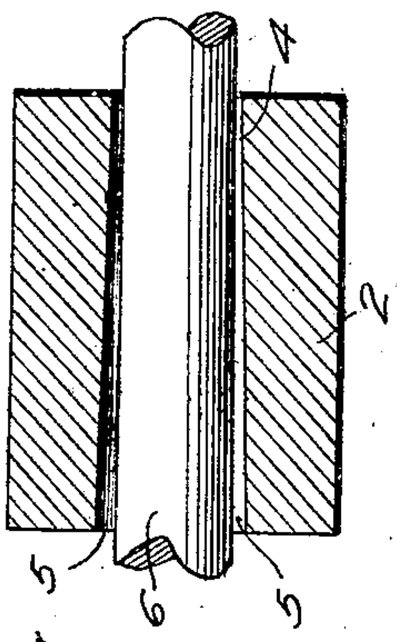

Fig. 3.

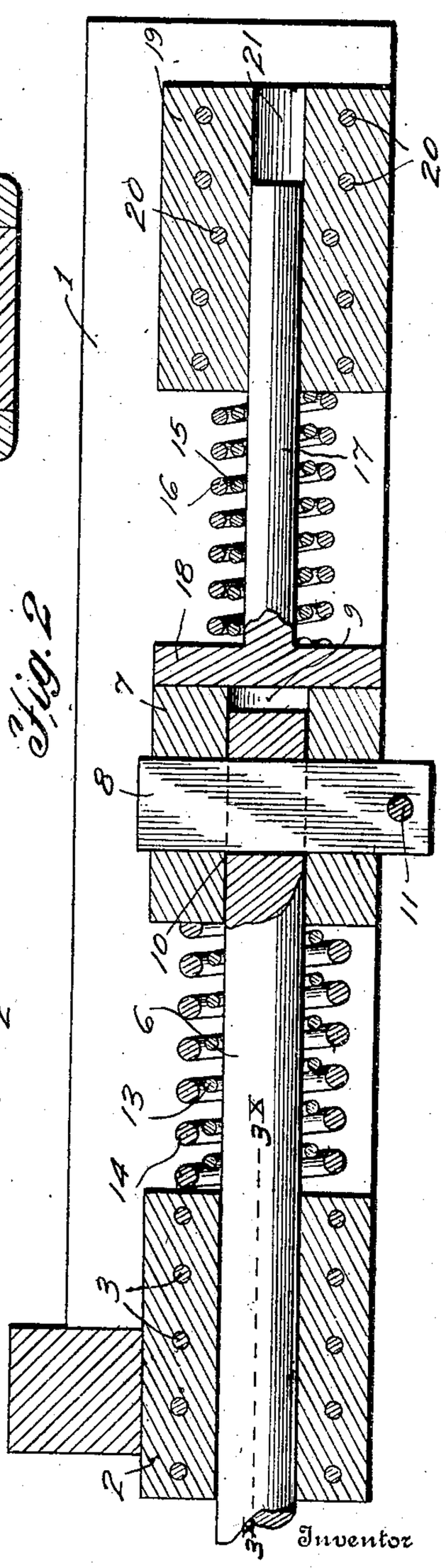

Fig. 4.

Witnesses

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DRAW-HEAD FOR RAILWAY-CARS.

No. 880,270. Specification of Letters Patent. Patented Feb. 25, 1908.

Application filed May 1, 1907. Serial No. 371,341.

To all whom it may concern:

Be it known that I, CARL R. BOWEN, a citizen of the United States of America, residing at Fordyce, in the county of Dallas and State of Arkansas, have invented new and useful Improvements in Draw-Heads for Railway-Cars, of which the following is a specification.

This invention relates to draw-heads for railway cars, and one of the principal objects of the same is to provide simple and efficient means for cushioning the draw-bar and for providing an efficient buffer for the same.

Another object of the invention is to provide means for readily detaching the draw-bar from the draw-head for the purpose of repairs or renewals in case of injury or breakage to any of the parts of the draw-head or bar.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which:

Figure 1 is a bottom plan view of a draw-head made in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a detail sectional view on the line $3^{\times}$—$3^{\times}$ of Fig. 2. Fig. 4 is a vertical sectional view on the line $4^{\times}$—$4^{\times}$ of Fig. 1.

Referring to the drawing for a more particular description of my invention, the numerals 1 designate the two side bars of the draw-head, and rigidly secured at one end between said two members is a bearing block 2, said bearing block being composed of metal and being connected to the members 1 by a series of bolts or rivets 3. Extending through the bearing block 2 is an opening 4, said opening being extended laterally, as at 5, on the outer end of said block so that the draw-bar 6 may have a slight lateral play to compensate for the lateral vibration of the cars. The inner end of the draw-bar 6 is connected to sliding block 7 by means of a key 8, said sliding block 7 having an opening 9 therein for receiving the end of the draw-bar 6, and the key 8 extends down through the block 7 and through a slot 10 in the end of the draw-bar 6, said key 8 being secured in place by means of a pin 11 which passes through the key 8 and through a pair of brackets 12 formed on or secured to the block 7. A compound spring comprising the inner spring 13 coiled around the draw-bar 6 and the outer spring 14 surrounding the inner spring 13 and being of larger gage, said two springs being seated between the fixed block 2 and the sliding block 7, as shown more particularly in Fig. 2. A buffer spring consisting of an inner coil 15 and an outer coil 16 encircles the shank 17 of a buffer rod provided with a head 18 which bears against the sliding block 7, the opposite ends of said springs bearing against a fixed bearing 19 secured by bolts 20 to the side members 1 of the draw-head, and said bearing having an opening 21 therein to permit the shank 17 to move back and forth therein.

The operation of my invention may be briefly described as follows: When the draw-bar 6 is drawn outward against the tension of the compound springs, 13, 14, any lateral movement of the draw-bar, owing to the vibration of the cars, is provided for by the spaces 5 at the opposite sides of the draw-bar in the block 2. Any backward movement of the draw-bar will be received upon the buffer springs 15 and 16. Should the draw-bar 6 be injured or broken, the key 8 may be removed and the draw-bar 6 withdrawn and replaced by a new one or the injury repaired.

From the foregoing it will be obvious that a draw-bar made in accordance with my invention is comparatively simple in construction, can be quickly taken apart for repairs, that lateral vibration is provided for and that compound buffer springs permit endwise movement in opposite directions of the draw-bar.

Having thus described the invention, what I claim is:

1. In a draw-bar, the combination of side members, a block rigidly secured at opposite ends of said side members, a draw-bar extending through one of said blocks and connected at its end by means of a key to a sliding member, springs interposed between said member and said block, a buffer comprising a shank mounted in one of said blocks, and buffer springs surrounding said shank and interposed between said block and said member.

2. In a draw-head, the combination of side members, a bearing block secured to said side members, a draw-bar extending through said block, a sliding member mounted between said side members, a removable key for connecting said draw-bar to said sliding member, and springs interposed between said block and said sliding member.

3. In a draw-head, the combination of side members, blocks secured at the opposite ends of said members, a draw-bar mounted to

slide through one of said blocks, a sliding member, a key for securing said draw-bar to said sliding member, buffer springs secured between said sliding member and said block, a buffer provided with a shank mounted in the other block, and springs surrounding said buffer, substantially as described.

4. In a draw-head, the combination of side members, a bearing block secured to said members, said bearing block provided with an opening therethrough for a draw-bar, said opening being wider at one end of said block than the other, in combination with a sliding member and a key for holding said draw-bar to said sliding member, and buffer springs interposed between said block and sliding member, substantially as described.

5. In a draw head, the combination of side members, a bearing block rigidly secured to said side members, a draw bar mounted to slide through said bearing block in combination with a sliding member to which said draw-bar is secured by a key.

In testimony whereof, I affix my signature in presence of two witnesses.

CARL R. BOWEN.

Witnesses:
J. E. MORRISSEY,
W. E. FORD.