

T. CONLEY.  
 DISTANCE SPACING DEVICE FOR FREIGHT CARS.  
 APPLICATION FILED MAY 4, 1909.

958,368.

Patented May 17, 1910.

2 SHEETS—SHEET 1.

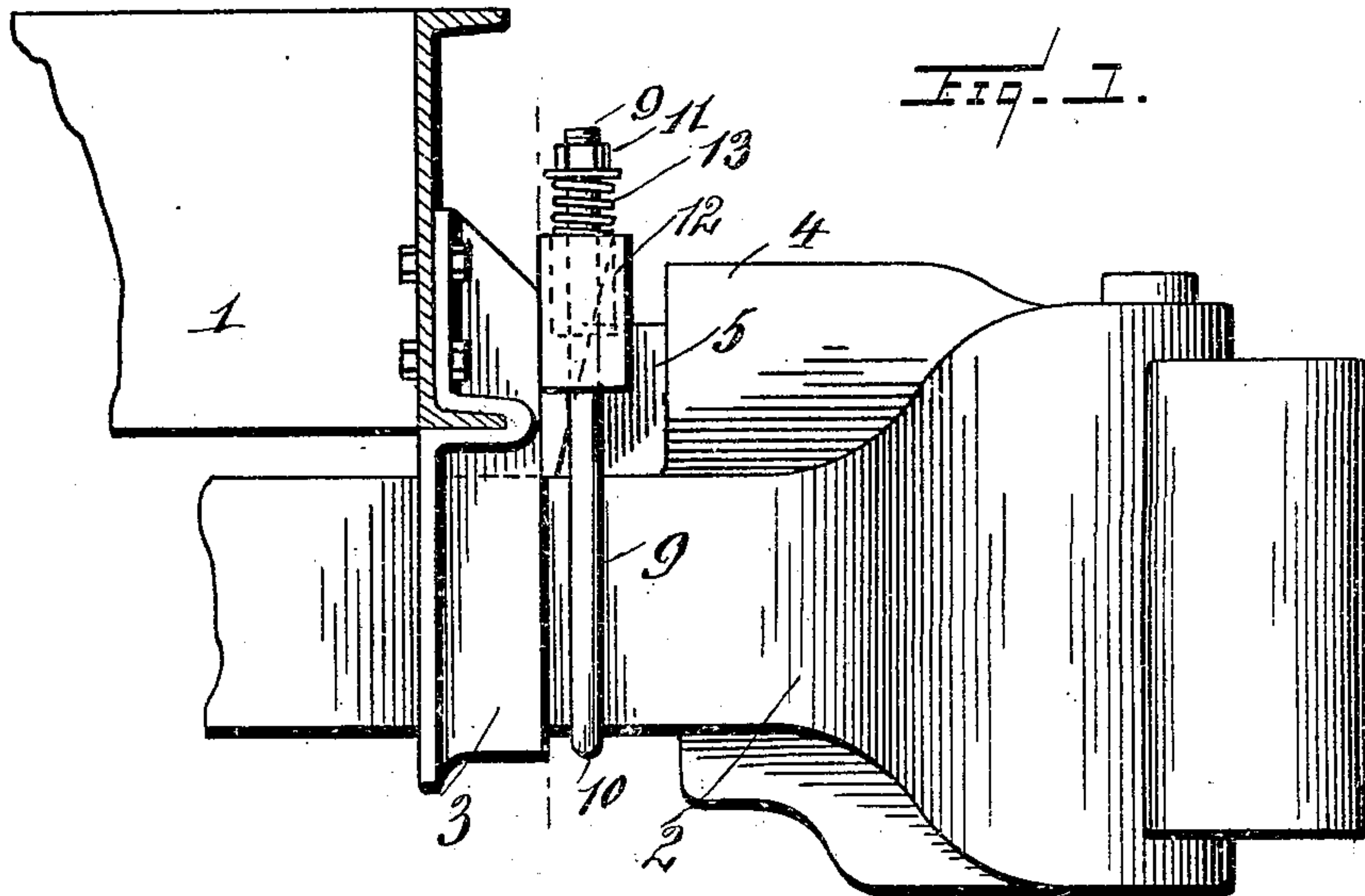


Fig. 7.

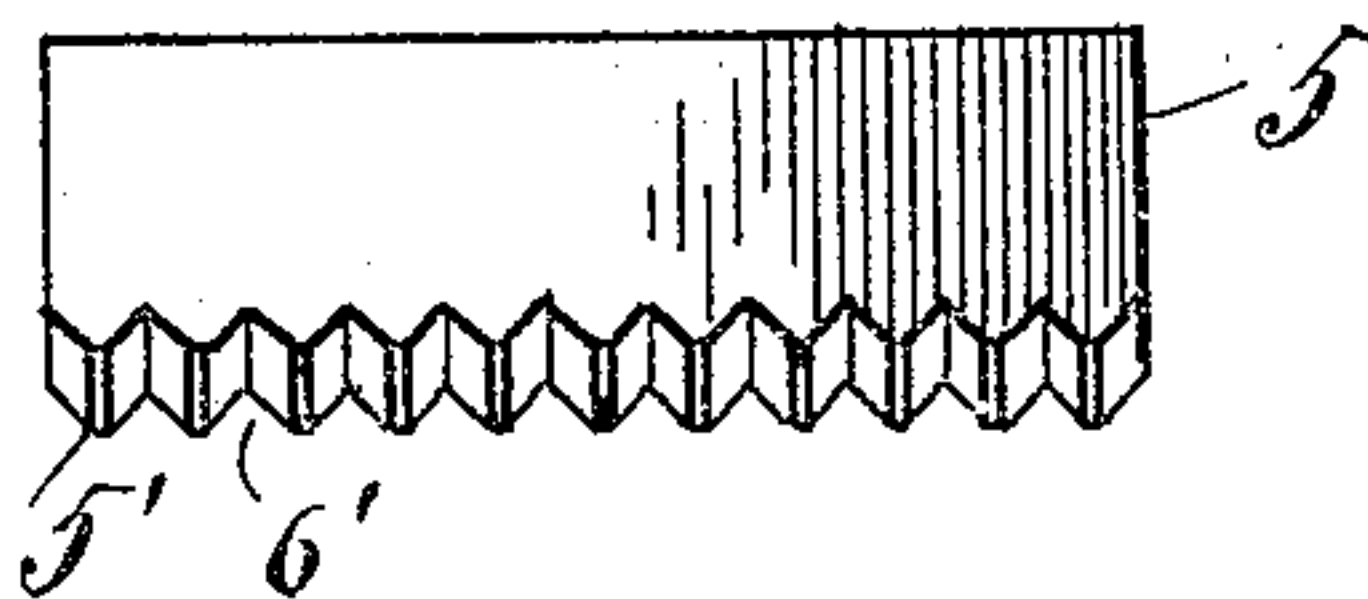
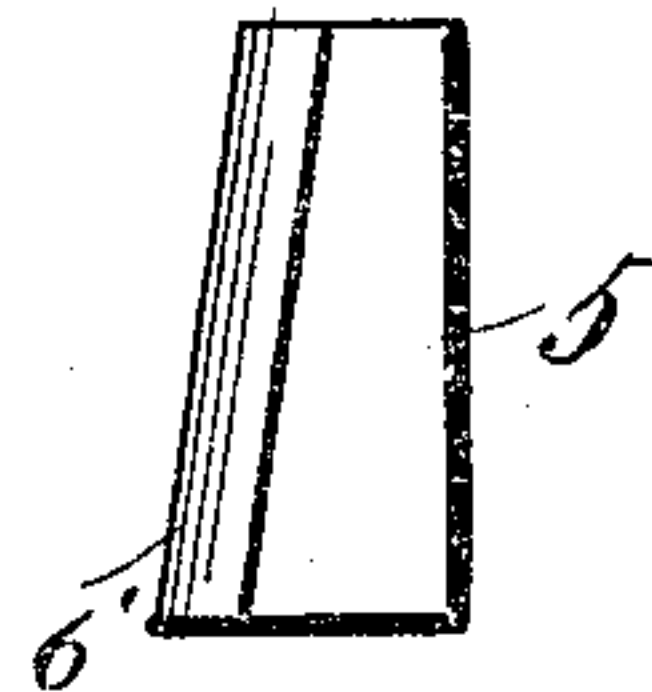


Fig. 8.



Fig. 9.



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2 SHEETS—SHEET 2.

Fig. 2.

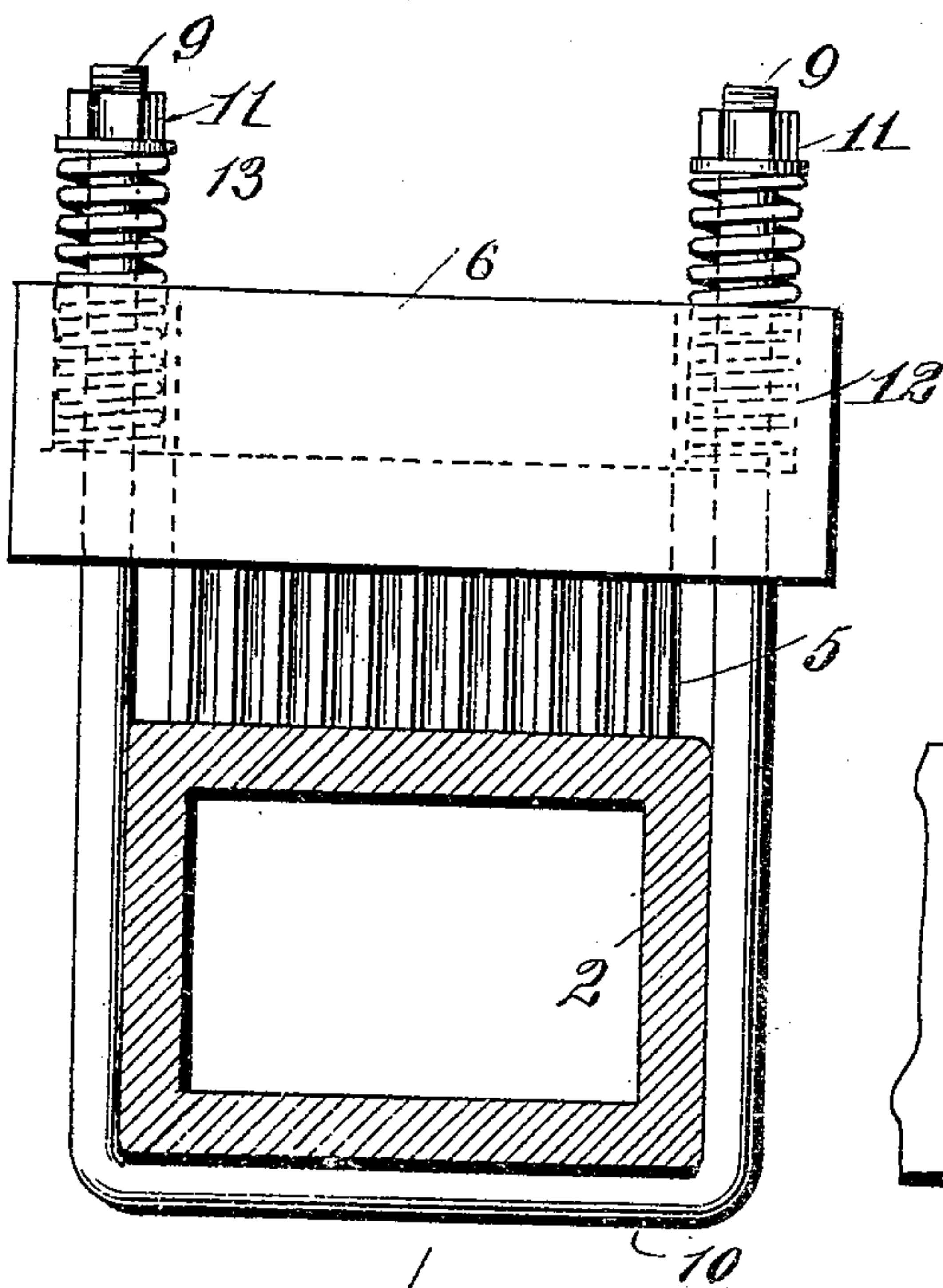


Fig. 3.

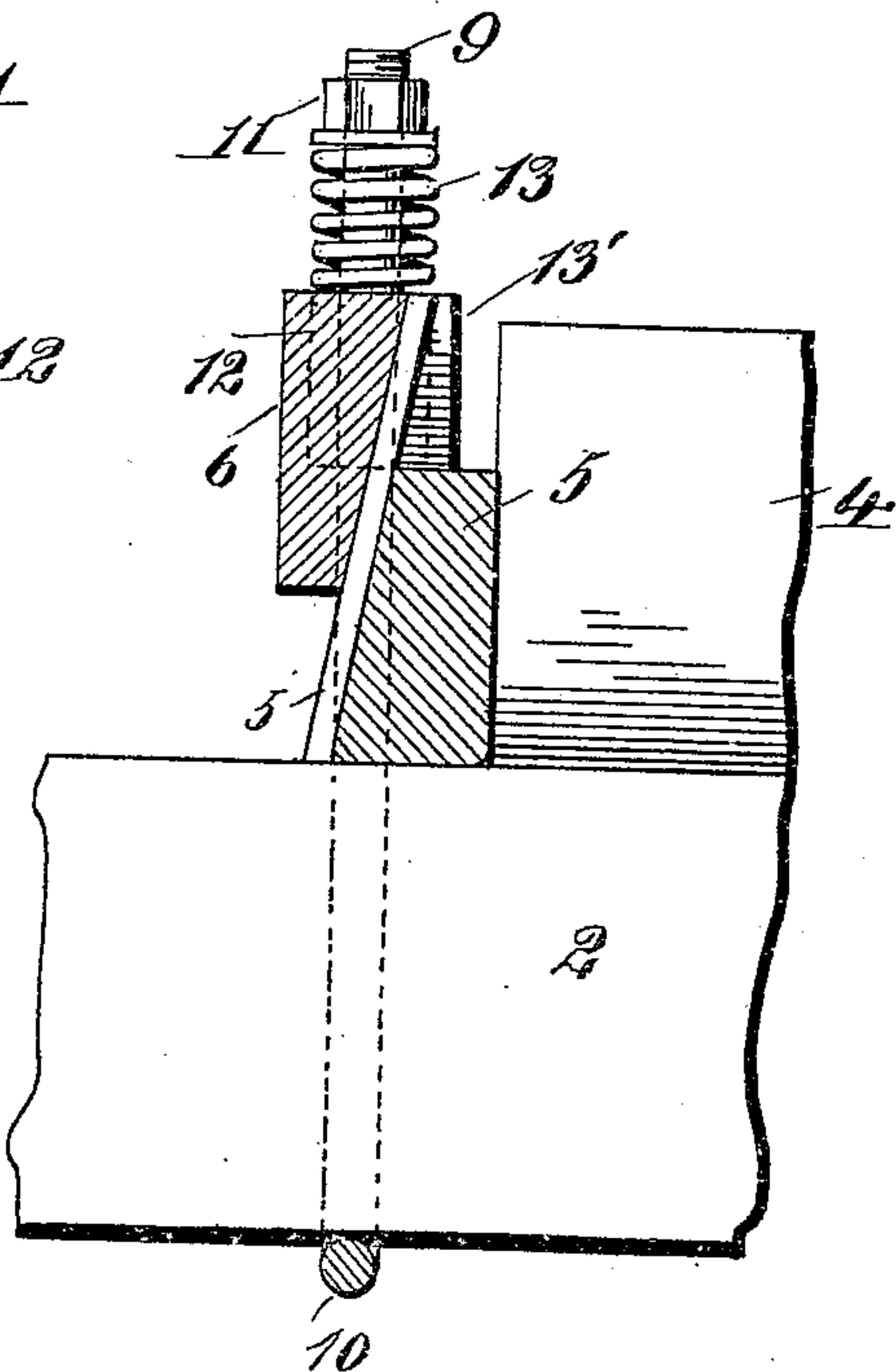


Fig. 4.

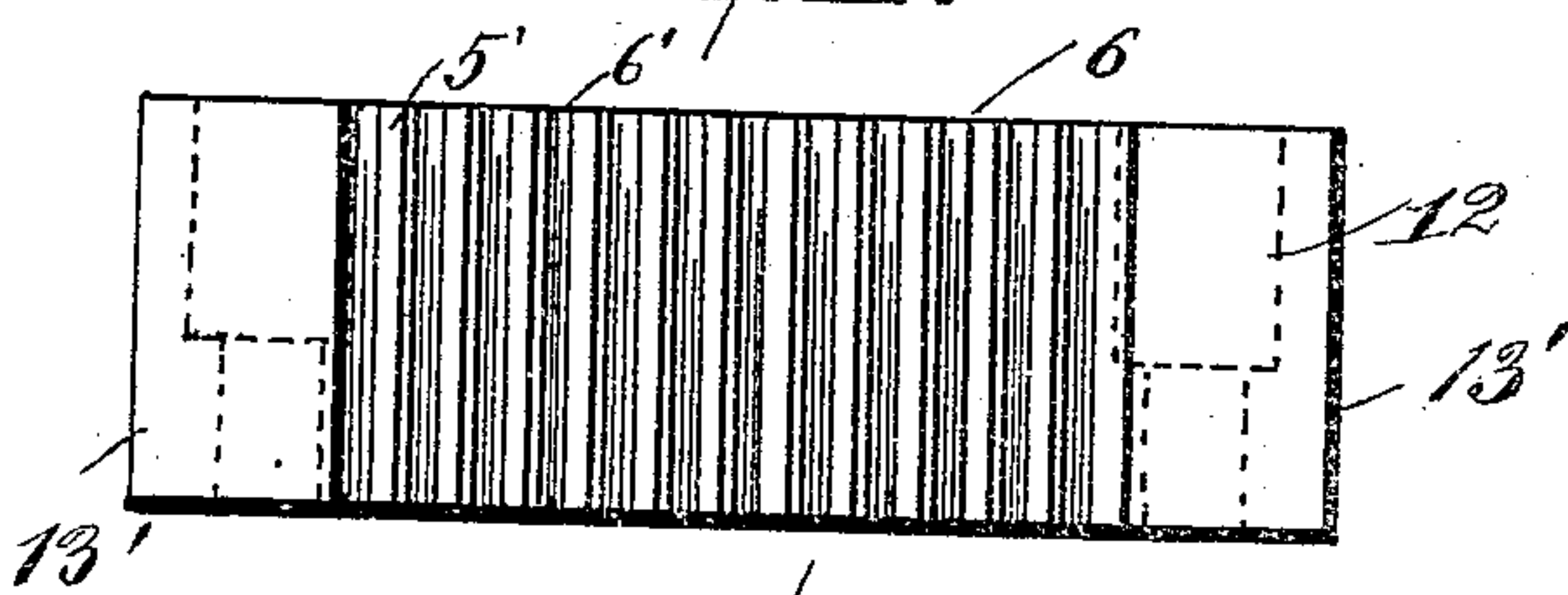


Fig. 5.

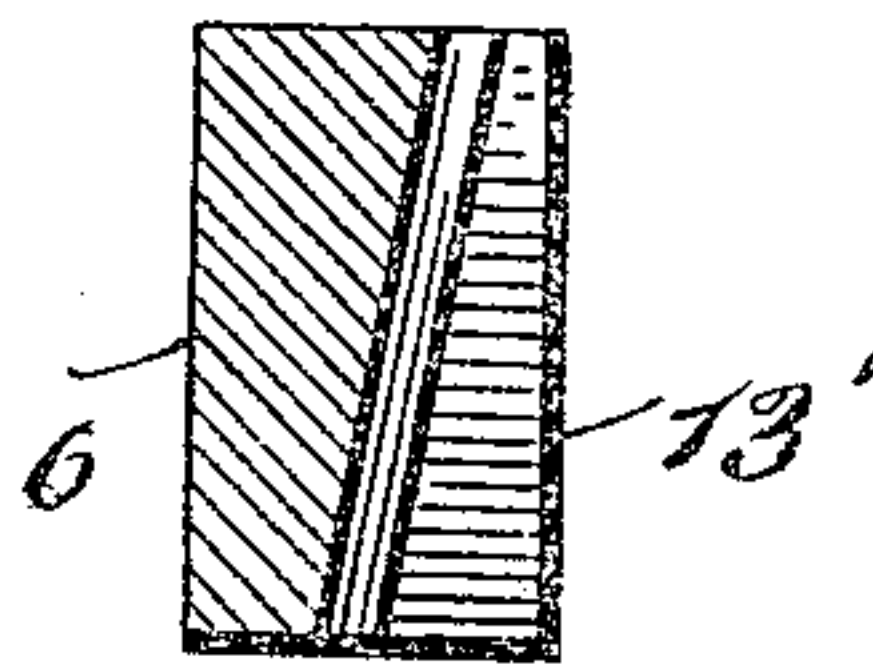
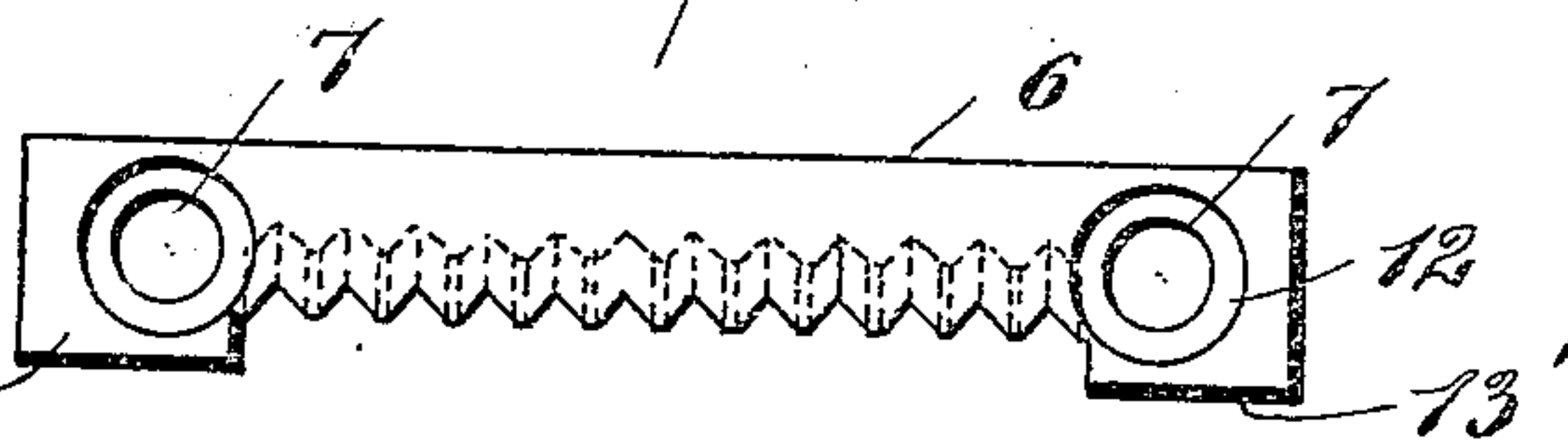


Fig. 6.



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# UNITED STATES PATENT OFFICE.

THOMAS CONLEY, OF PITTSBURG, PENNSYLVANIA.

DISTANCE-SPACING DEVICE FOR FREIGHT-CARS.

958,368.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed May 4, 1909. Serial No. 493,948.

*To all whom it may concern:*

Be it known that I, THOMAS CONLEY, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Distance-Spacing Devices for Freight-Cars, of which the following is a specification.

This invention has relation to distance spacing blocks for railway freight cars, and has for its object the provision of novel means for automatically taking up the slack of the couplers of flat cars, when two or more cars are to be used together for carrying such loads as structural material, bridge or building material, long lumber telegraph poles or other freight too long to be carried on a single car.

When two or more cars are to be used to carry lengthy masses of material extending over two cars, it is necessary that the slack in the couplers of the adjacent cars be taken out, and the couplers so blocked as to prevent their yielding lengthwise, and form between the cars a substantially solid connection with reference to longitudinal movements, as otherwise the security and firmness of the load will be jeopardized. To provide this solid connection between coupler cars, the method and means now adopted is to first jack the coupled cars apart as far as the couplers or draw bars will permit, and to then insert and secure between the usual horn or lug on the top of the coupling head and the end of the car, a block or log of wood or other material, which is intended to keep the coupler drawn out and prevent any relaxation of the same, or any variation in the distance between the ends of the two cars. This method has many advantages. As the space between the lug or horn of the coupling member and the end of the car varies on different cars, it is difficult in the first instance to obtain a close fit of the distance maintaining block and again, no matter how far the cars are jacked apart, and firmly held in the first instance, the jolting and straining occasioned by the motion of the train causes more or less slack and interferes with the most desirable conditions of solidity between cars.

To obviate the difficulties and disadvantages of the ordinary method of blocking the cars apart, I propose the use of and provide a self adjusting device comprising two blocks or members preferably of cast metal,

which are adapted to be fitted into the space between the lug or shoulder of the coupling head and the end of the car, and which are so shaped relatively to each other, *i. e.*, constructed in the form of opposing wedges that the space to be occupied and blocked can be accurately filled when the cars are jacked apart, by reason of relative adjustability of the blocks to conform to the width of the space and which are moreover adapted to automatically take up any additional slack which may occur under the motion of the train.

In the accompanying drawings in which I have illustrated a preferred embodiment of my invention:—Figure 1 is a side view of a coupling member standard type having applied thereto my improved spacing blocks. Fig. 2 is a front elevation of the spacing blocks applied to a coupling, shown in a transverse section. Fig. 3 is a vertical sectional view through both wedge shaped blocks. Fig. 4 is a face view of the movable self adjusting block. Fig. 5 is a top view and Fig. 6 is a vertical sectional view of the same. Fig. 7 is a top view of the stationary block. Fig. 8 is a face view and Fig. 9 an end view of the same.

1 designates the end of a flat car and 2 a coupling member of standard type, supported by the bracket and bumper or guard 3, attached to the car. Such coupling members 2 are formed with a lug, enlargement or shoulder 4, which, when the cars are coupled, or when forcibly brought together under motion, strikes the bumper or guard 3.

5 and 6 designate respectively the stationary and adjustable blocks of my device. The block 5 is of a shape on its outer face and bottom to rest snugly on the coupling member. The outer face of the block 5 is inclined or beveled so that the block has the form of an inverted wedge, with one side perpendicular to the base. The block 5 at its base occupies nearly the entire width of the space between the lug 4 and the guard or bumper. The block 6 is also wedge shaped, the bevel or inclination of its inner surface being the opposite of that of the block 5 which it matches, so that both blocks when brought together at the same height form a mass rectangular in cross section. When the cars have been sufficiently jacked apart and the block 5 dropped or fitted into its appropriate place back of the lug 4, the block 6 is placed in position with its thinner edge



downward and allowed to sink as far as the space between block 5 and the end of the car will allow, with the block 5 filling the space between the lug 4 and the car. The  
 5 block 6 is to be secured to the coupler shank, and for this purpose the block is formed with vertical holes 7 at its ends for the passage of the limbs 9 of a loop or stirrup 10 which embraces the coupling shank. The  
 10 ends of the limbs 9 are threaded for the reception of nuts 11. Sockets 12 are formed in the upper half of and at the ends of the block 6, concentric with the holes 7 and spiral springs 13 arranged therein and below  
 15 the nuts 11, the springs rising some distance above the top of the block 6. These springs are intended to exert a downward pressure on the block 6 so that as the space occupied by the blocks widens under the strain of the  
 20 jerking motion of the cars, the block 6 will be forced downward and thereby fill the space and increase the rigidity of the connection between the cars. The block 6 is formed with abutments 13', 13' at its ends  
 25 between which the block 5 rests and by which it is prevented from moving laterally. The opposing inclined surfaces of the blocks 5 and 6 are preferably formed with interlocking channels and grooves 5' 6' from top  
 30 to bottom, by which the blocks are held in proper relation to each other and the block 6 maintained always in a horizontal position, so that it will not tilt or bind at any point that would interfere with its free de-  
 35 scent.

The gist of the invention herein described consists in the employment of the two wedge shaped relatively movable, detachable and  
 40 replaceable blocks forming an automatically expansible key, to block and brace the coupling members of cars so as to keep the cars at a substantially unvarying distance apart and prevent the coupling members or draw bars from yielding under strain. The con-  
 45 struction and arrangement of these blocks may be modified and I do not restrict myself to the exact form or arrangement herein shown and described.

Modification in details and in arrangement  
 50 of parts conforming to various conditions in the construction of cars, couplings etc., may be made within the scope of and without departing from the principle of my invention.

55 What I claim and desire to secure by Letters Patent is:

1. A distance spacer for draw bars of freight cars, comprising a plurality of wedge shaped blocks, adapted to be sup-  
 60 ported by a coupling member and constituting an automatically expanding key between a projection on the coupling member and the end of a car.

2. The combination with a car and a nor-  
 65 mally yielding coupling member, of an au-

tomatically expanding key adapted to rest on the coupling member, and to block the latter against longitudinal movement toward the car.

3. The combination with a car and a coup- 70  
 ling head, of a blocking device consisting of two opposed wedge shaped bodies, one of which is stationary and the other vertically movable, the movable member being at-  
 75 tached to the coupling head.

4. The combination with a car and its coup-  
 ling member the latter being formed with a lug or shoulder at the rear of its coupling head, of a pair of wedge shaped blocks, one  
 80 of which rests loosely on the coupling member and against said lug or shoulder as an inverted wedge, while the other block is movably arranged between the said inverted wedge and the end of the car, and is posi-  
 85 tively connected to the coupling member.

5. The combination with a car and with a coupling member having a lug or shoulder at the rear of its head, of an inverted wedge shaped block resting on said member and against said lug, a correspondingly wedge  
 90 shaped reversely tapered or beveled block located between the first named block and the end of the car, and formed with vertical openings, a stirrup embracing the shank of the coupling member, and having its limbs  
 95 screw threaded and passed through said vertical openings, nut on the ends of said stirrup and springs arranged between said nuts and the block, said block being vertically  
 100 movable to take up slack in the coupling and said springs being arranged and adapted to force the movable block downward.

6. The combination with a car and its coupling member, of a key to take up slack in the coupling comprising a pair of wedge  
 105 shaped blocks located between a projection on the coupling member and the end of the car, one of said blocks being vertically movable in relation to the other and formed with vertical holes and with spring holding sock-  
 110 ets; a stirrup embracing the shank of the coupling member and having its limbs extended through said holes, nuts on said limbs and springs resting in said sockets below said nuts.  
 115

7. An attachment for freight cars to take up slack in couplings, comprising a pair of coinciding wedge shaped blocks constituting a key between a coupling head and a car, one of said blocks being attached to  
 120 the coupling head and adapted to move automatically in relation to the other to increase the thickness of the key and make up for increase in the width of the space between the car and coupling member.  
 125

8. An attachment for freight cars, designed and adapted to prevent variation in the distance between coupled cars, comprising a stationary wedge shaped block supported and braced by the coupling member,  
 130



a reversely beveled block, movable in contact with the stationary block and having vertical holes, a stirrup embracing the shank of the coupling member with its limbs extending through the holes of the movable block, nuts carried on the ends of the stirrup limbs and springs located between said nuts and the movable block and adapted to press the block downward, said movable block being of greater length than the stationary block and having abutments which embrace and form guards to the stationary block.

9. The combination with a car and coupling member, of an automatically expansible key between a shoulder or lug of the coupling head and the end of the car, to take up slack produced by the longitudinal movement of the coupling member. 15

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

THOMAS CONLEY.

Witnesses:

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