

(No Model)

H. H. VAUGHAN.

LEVER SUPPORT FOR INTERCHANGEABLE BRAKE BEAMS.

No. 585,725.

Patented July 6, 1897.

Fig. 1.

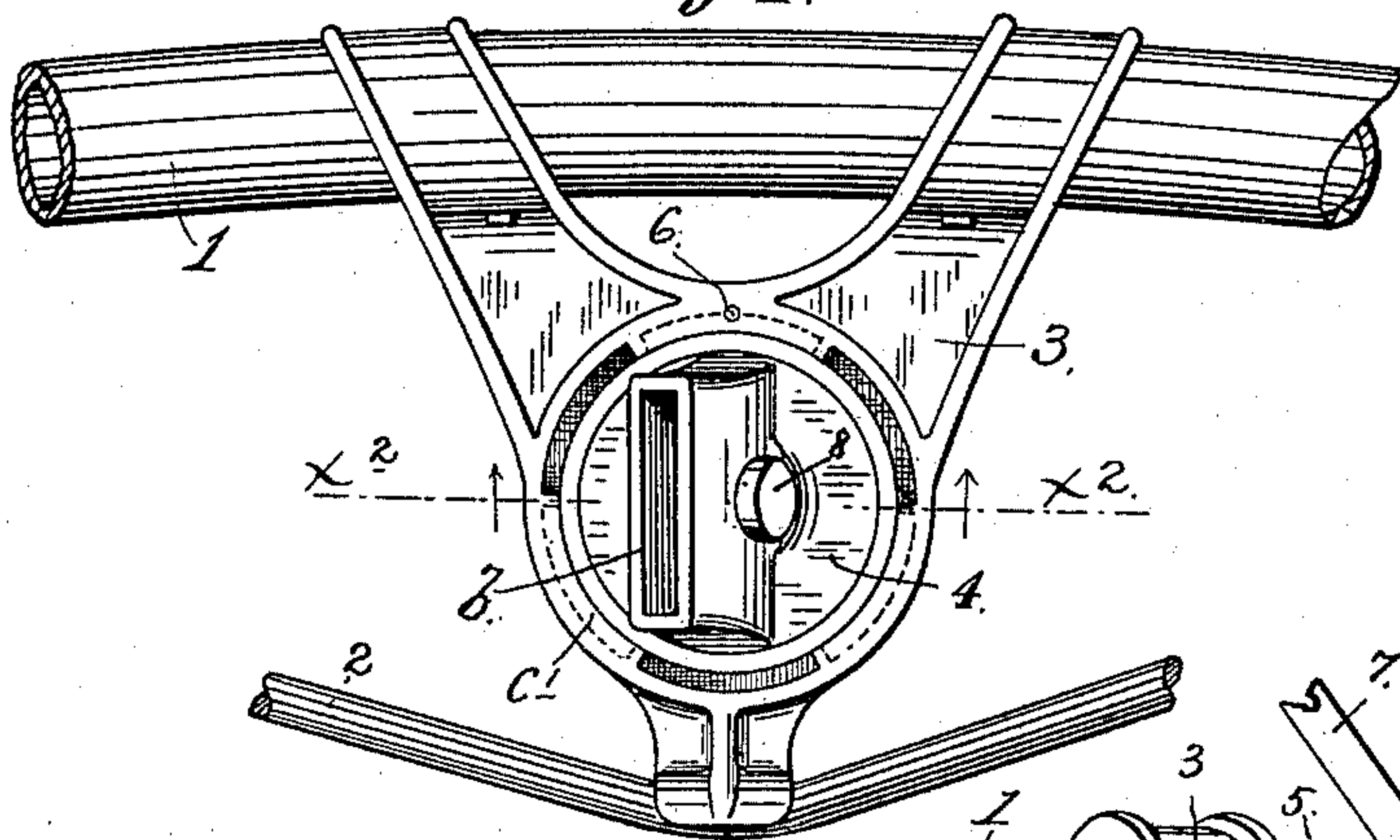


Fig. 3.

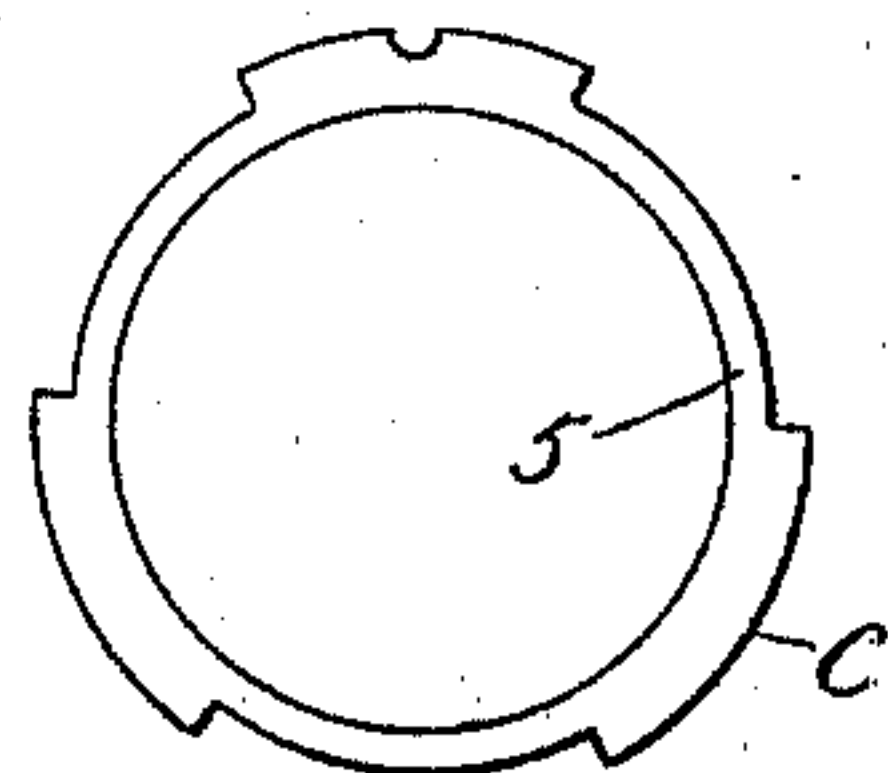


Fig. 2.

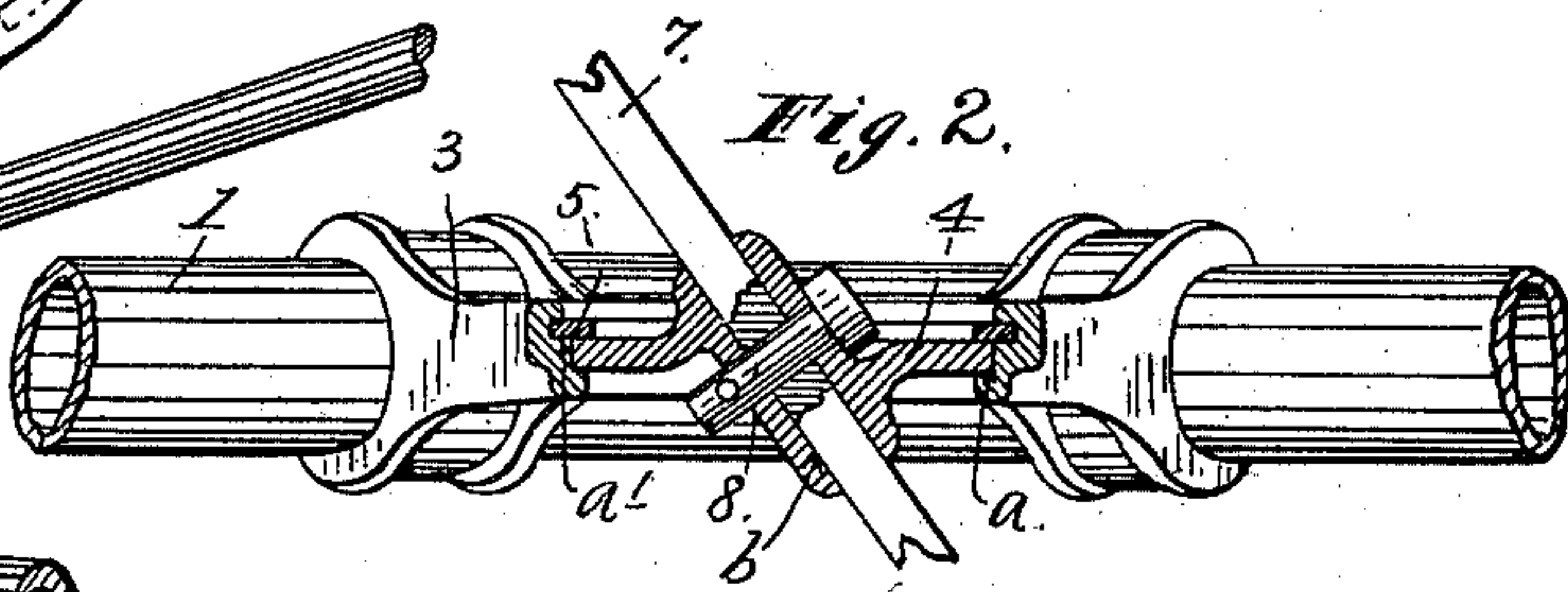


Fig. 4. x 5

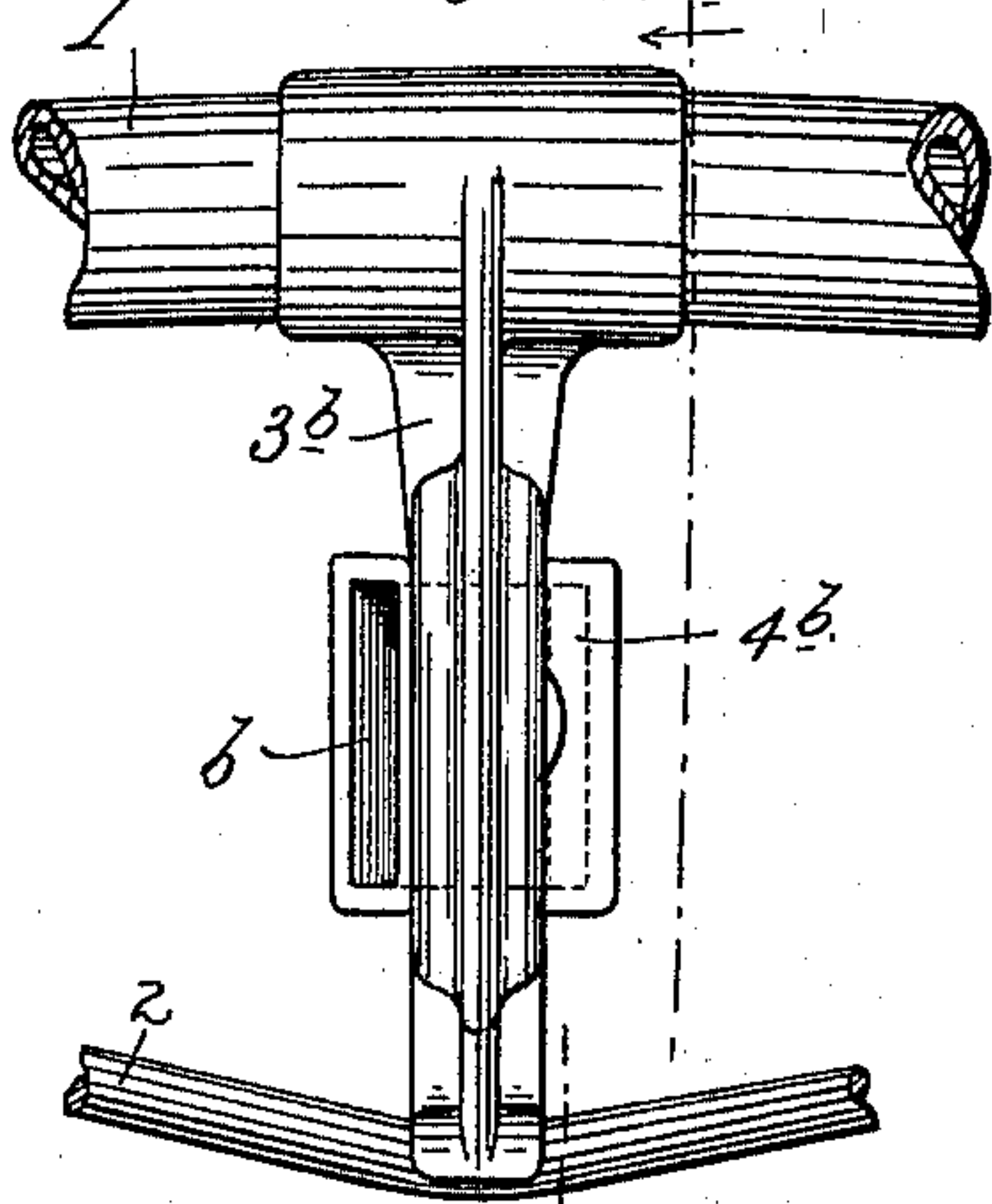


Fig. 5

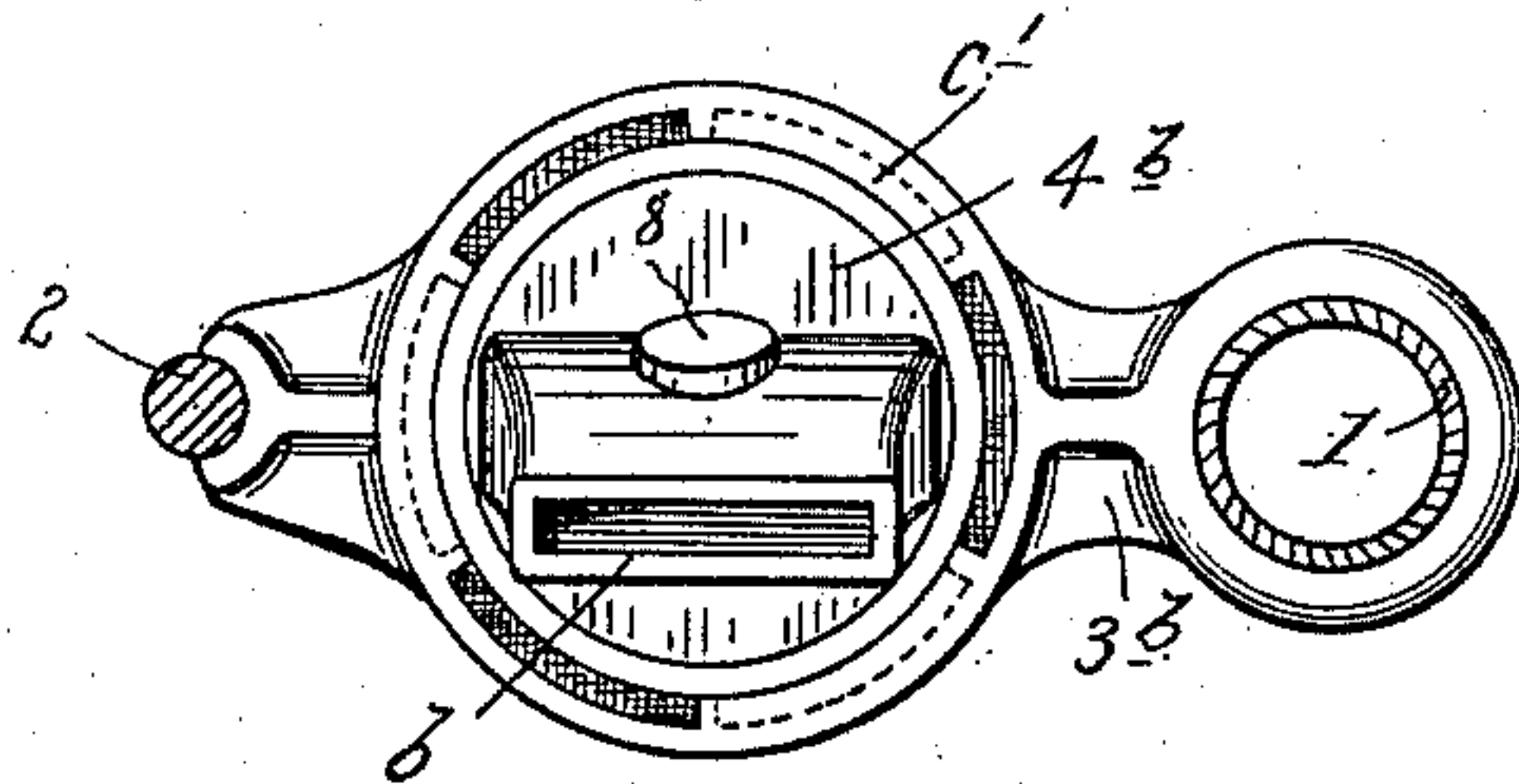


Fig. 6.

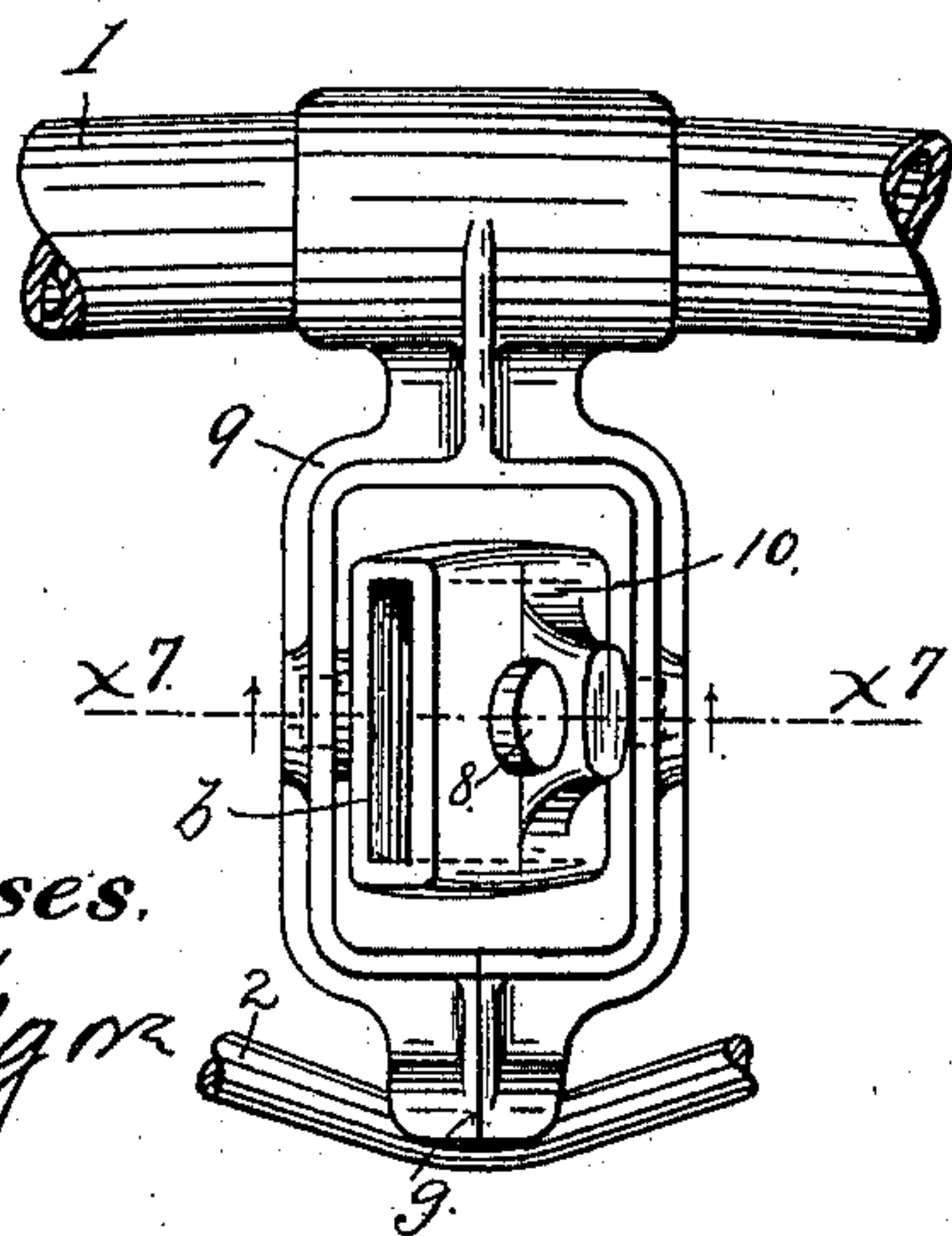
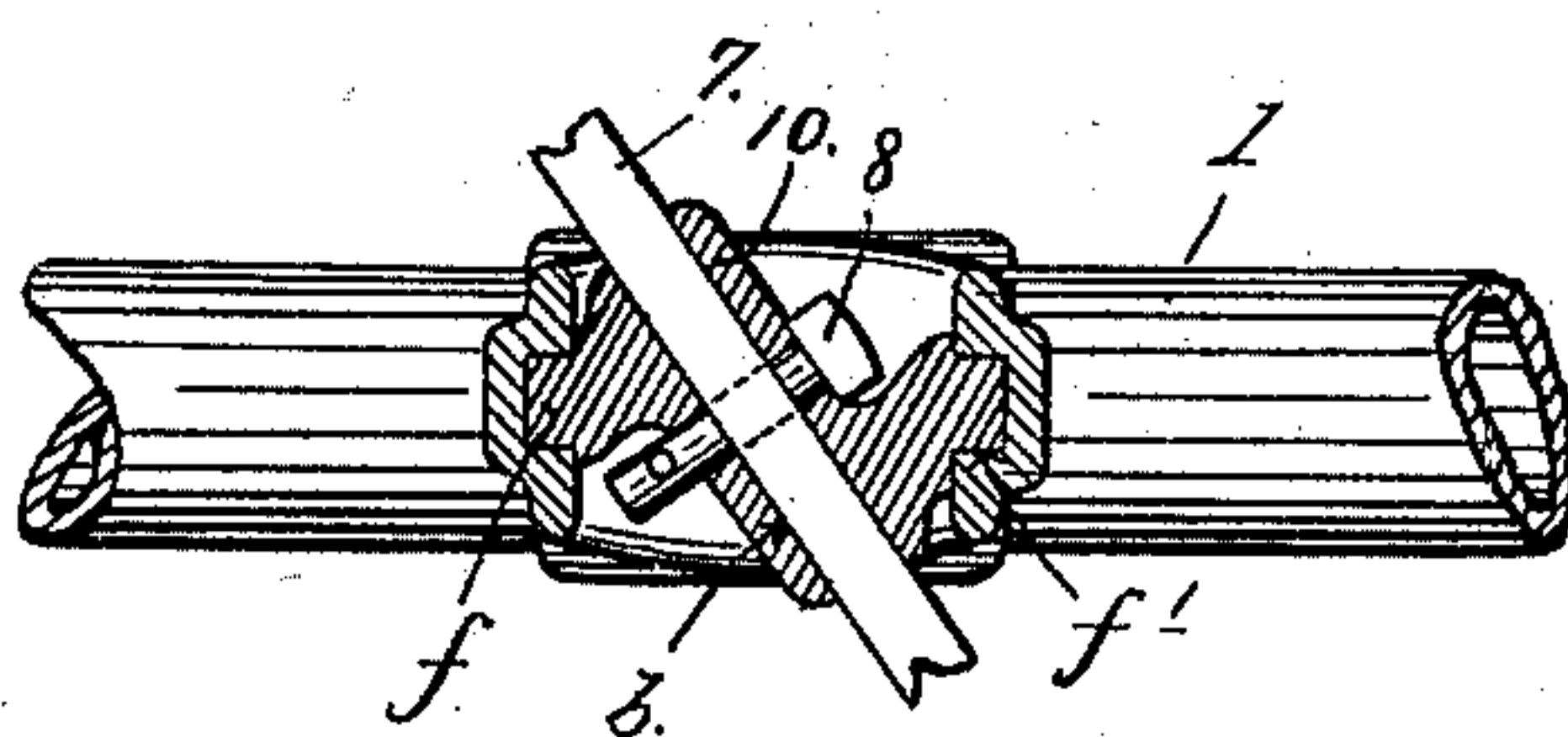


Fig. 7



Witnesses.

C. F. Kellogg

R. D. Merchant.

Inventor.

Henry H. Vaughan.

By his Attorney.

Jas. F. Williams.

UNITED STATES PATENT OFFICE.

HENRY H. VAUGHAN, OF ST. PAUL, MINNESOTA.

LEVER-SUPPORT FOR INTERCHANGEABLE BRAKE-BEAMS.

SPECIFICATION forming part of Letters Patent No. 585,725, dated July 6, 1897.

Application filed May 8, 1897. Serial No. 635,625. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. VAUGHAN, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Lever-Supports for Interchangeable Brake-Beams; 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 appertains to make and use the same.

My invention has for its object to provide an improved lever-support for application to interchangeable brake-beams and other uses. The convenience and value of an interchangeable brake-beam for railway-cars is well understood. Thereby only one style or pattern of brake-beam is required, repairs and substitutions are greatly facilitated, and a much smaller number of beams need to be carried in stock for repairs or supplies. Hence a large economy is effected.

The object of my invention is to provide a lever-support which will render the beam interchangeable and which will be of simple and cheap construction. Although my invention was especially designed for interchangeable brake-beams, it will be understood that the same may be elsewhere used wherever the corresponding functions are desired.

The accompanying drawings illustrate the invention as applied to an interchangeable brake-beam, wherein, like notations referring to like parts throughout the several views—

Figure 1 is a plan view of a brake-beam equipped with my invention, some parts being removed and others broken away. Fig. 2 is a transverse section on the line $x^2 x^2$ of Fig. 1. Fig. 3 is a plan view of the keeper-ring detached. Fig. 4 is a plan view of a single-strut brake-beam equipped with my invention, some parts being removed and others broken away. Fig. 5 is a vertical section on the line $x^5 x^5$ of Fig. 4. Fig. 6 is a plan view of a single-strut brake-beam, showing a modification of my invention; and Fig. 7 is a transverse section on the line $x^7 x^7$ of Fig. 6.

The numeral 1 represents the body of the beam.

The numeral 2 represents the truss-rod or tension-rod for the beam.

The numeral 3 represents a divided or two-part strut, as shown in Figs. 1 and 2, which strut bears the ordinary relation to the body 1 and the truss-rod 2 of the beam. The said strut 3, however, instead of being of the ordinary construction is of the proper form to afford a seat a in the horizontal plane for a fulcrum-block 4. This fulcrum-block 4 is of disk-like form and is provided with a lever-passage b at an oblique angle to the plane of the said block's rotation when in working position on the seat a . The said strut 3 is also provided with a flange-seat a' for a keeper-ring 5 of larger diameter than the diameter of the fulcrum-block. The keeper-ring 5 and the flange on the seat for the same in the strut are interrupted to afford interlocking flanges or lugs $c c'$ for permitting the said parts to engage with each other, as shown in Figs. 1 and 2, for holding the fulcrum-block in working position on its seat. When the said keeper-ring 5 has been applied and turned into its locking position, a pin 6 or other suitable device may be applied to hold the same in its locking position. With this disposition of the parts it is obvious that the fulcrum-block 4 is rotatively mounted in the strut 3 or fixed holder for the same. The lever 7 is secured in the passage b by a suitable pin 8, extending through the walls of said passage and the said lever at right angles thereto, as best shown in Fig. 2. In virtue of the fact that the lever-passage in the fulcrum-block extends therethrough at an oblique angle to the plane of the block's rotation it is obvious that by rotating said block through one hundred and eighty degrees the direction of the lever 7 will be reversed, thereby changing the lever from right to left or reversely, as the case may be. With the construction shown in Figs. 1 and 2 this change can be made without the removal of the brake-lever 7.

The form shown in Figs. 4 and 5 is substantially the same as that shown in Figs. 1, 2, and 3, with the exception that in Figs. 4 and 5 the fulcrum-block 4^b is shown as applied to a single strut 3^b for rotation in the vertical instead of in the horizontal plane, as in Figs. 1 and 2. Otherwise the constructions are identical. The fact, however, of the different mounting for rotation in different planes

makes it necessary to remove the brake-lever when shifting the fulcrum-block in the form shown in Figs. 4 and 5. Otherwise stated, by rotating the fulcrum-block 4^b in its fixed holder or strut 3^b the direction of the brake-lever will be reversed; but in order to bring the lever right the lever must be removed and be reinserted after the block has been rotated from the opposite side of the block.

10 In the modification shown in Figs. 6 and 7 the beam-strut 9 is of the proper construction to afford clearance for the rotary movement in the vertical plane of a fulcrum-block 10, having trunnions *f* resting in suitable
15 trunnion-seats *f'*, formed in the strut 9. The strut 9 is a malleable casting or of other suitable material and is divided on the line *g*, thereby permitting the divided parts to be sprung apart a sufficient distance to enter the
20 trunnions *f* in their seats *f'* and then be brought together to hold the fulcrum-block 10 in its proper working position. The lever-passage in the fulcrum-block 10 is at an oblique angle to the plane of the block's rotation, just as in the other cases. Hence with
25 this modification shown in Figs. 6 and 7 the fulcrum-block 10 rotates in the vertical plane, as in Figs. 4 and 5, but instead of being of disk-like form and rotating on its perimeter the block 10 rotates endwise on central trunnions *f*. By turning the block 10 through
30 one hundred and eighty degrees the direction of the lever-passage will be reversed, as in the other cases; but before the same can be
35 thus rotated the lever must be removed, and after rotation the lever must be reinserted from the opposite side of the block.

It will be noted that in all the forms the fulcrum-block is rotatively mounted, that
40 the lever-passage is at an oblique angle to the plane of the block's rotation, and that in all the forms the change can be made without loosening the truss-rod or removing the block from the strut. All the forms are applicable
45 either to single or to double struts; but I prefer the form shown in Figs. 1, 2, and 3 as being the most convenient and satisfactory.

It must be obvious that the lever-holder herein disclosed is extremely simple and
50 cheap to make.

It will be understood that some of the details of the construction might be changed without departing from the spirit of the invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A lever-support for interchangeable brake-beams or other uses, comprising a fixed holder and a fulcrum-block mounted for rotary movement in said holder and having a lever-passage at an oblique angle to the plane of the said block's rotation, substantially as described.

2. A lever-support for interchangeable brake-beams or other uses, comprising a fixed holder and a fulcrum-block of disk-like form rotatively mounted on said holder and having a lever-passage at an oblique angle to the plane of said block's rotation, substantially as and for the purposes set forth.

3. In a brake-beam, the combination with the beam-body and the truss or tension rod, of a strut constructed to serve as a lever-holder, and a fulcrum-block mounted for rotary movement in said holder and having a lever-passage at an oblique angle to the plane of said block's rotation, substantially as described.

4. In a lever-support, the combination with a fixed holder, of a fulcrum-block rotatively seated on said holder and having a lever-passage at an oblique angle to the plane of the block's rotation, and a keeper-ring constructed to interlock with a flanged seat for the same on said holder, for securing said block in working position, substantially as described.

5. In an interchangeable brake-beam, the combination with the beam-body 1 and the truss-rod 2, of the divided or double strut 3 constructed to afford a seat *a* for the fulcrum-block 4 and a flanged seat *a'* for the keeper-ring 5, of said fulcrum-block 4 rotatively mounted on said seat and having the lever-passage at an oblique angle to the plane of the block's rotation, the lever 7, the pin 8 and the keeper-ring 5, provided with the lock-flanges *c*, for engagement with the lock-flanges *c'* on the ring-seat flange *a'*, with the said ring and its seat of larger diameter than the seat for the fulcrum-block, all substantially as described.

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

HENRY H. VAUGHAN.

Witnesses:

B. B. NELSON,

JAS. F. WILLIAMSON.