

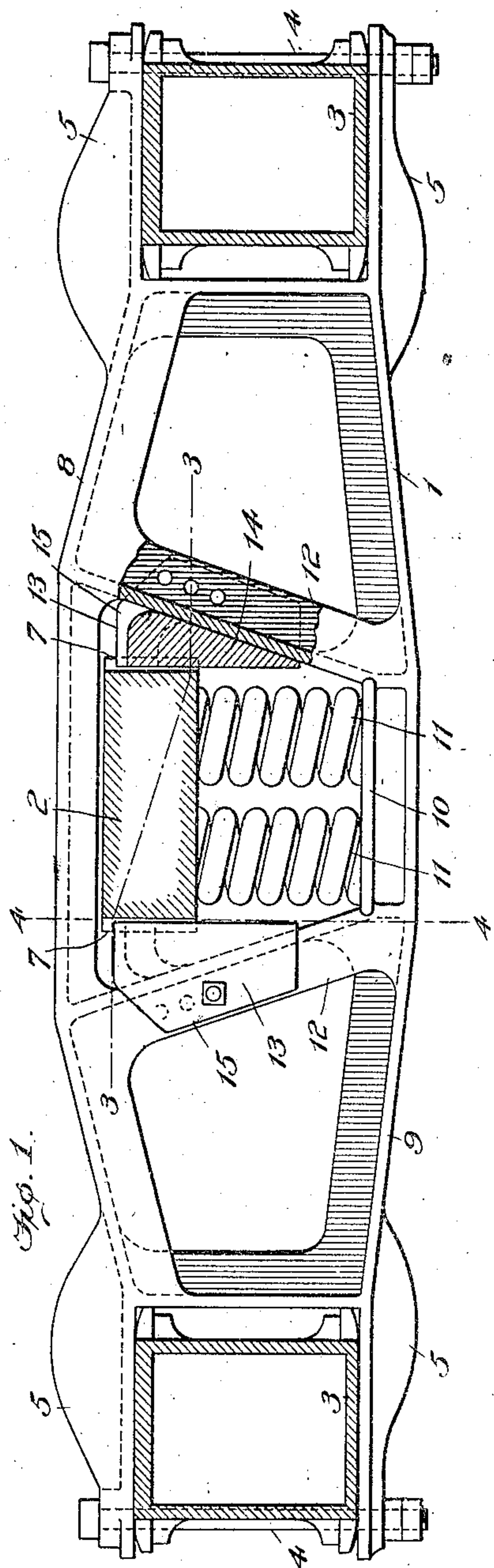
No. 891,402.

PATENTED JUNE 23, 1908.

H. C. BUHOUP.  
CAR TRUCK.

APPLICATION FILED DEC. 23, 1907.

3 SHEETS—SHEET 1.



Witnesses

Edwin L. Bradford

*E. L. Bradford*

Fig. 5.

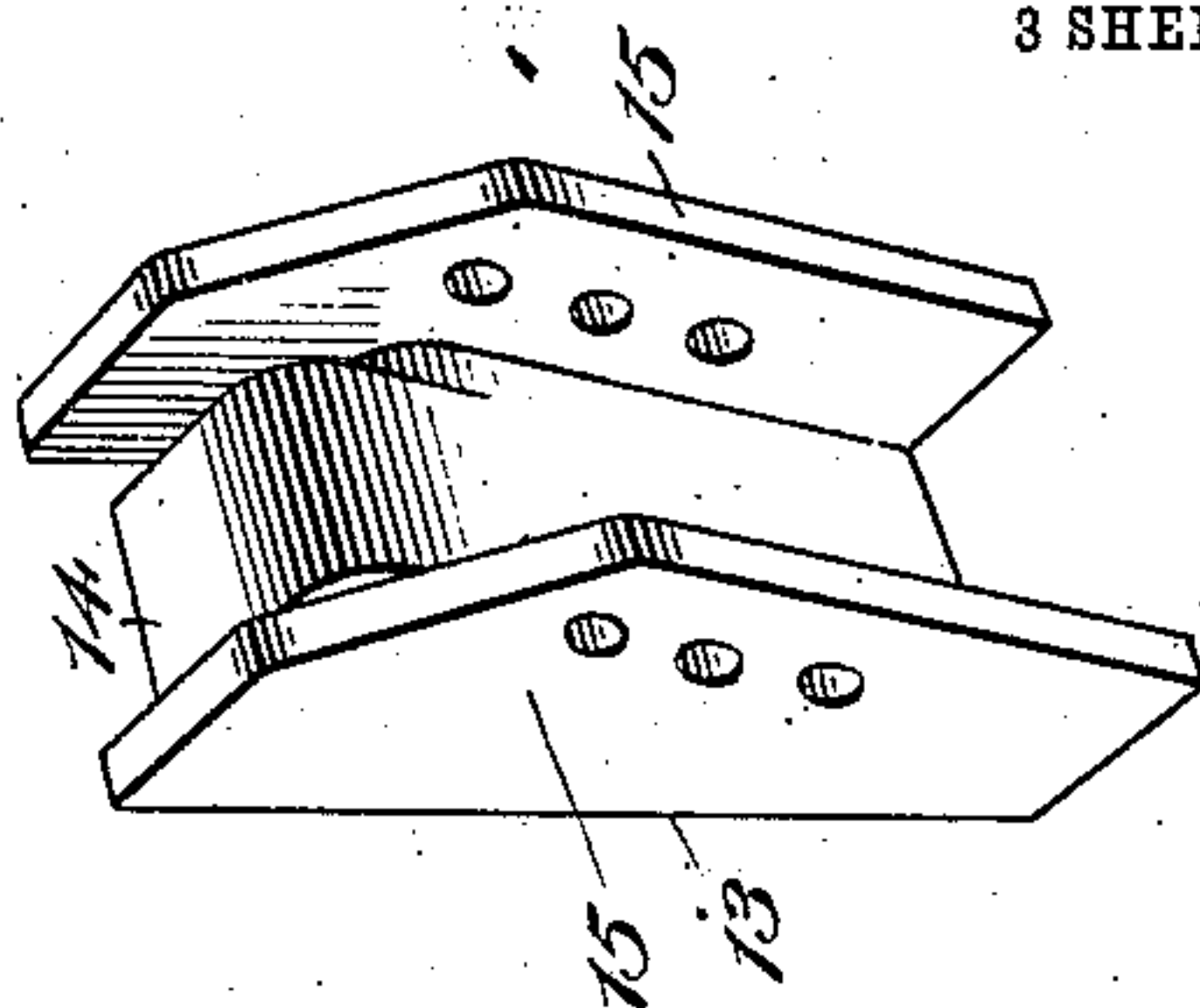


Fig. 2.

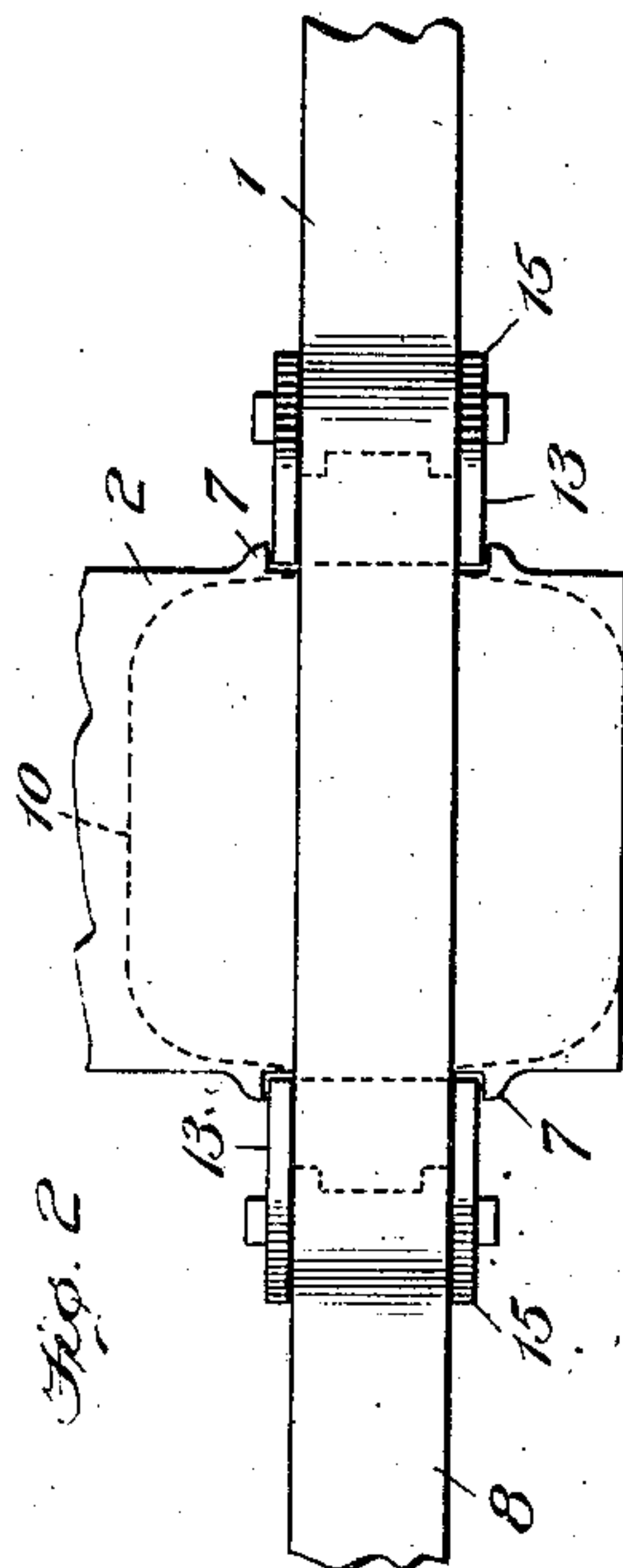


Fig. 4.

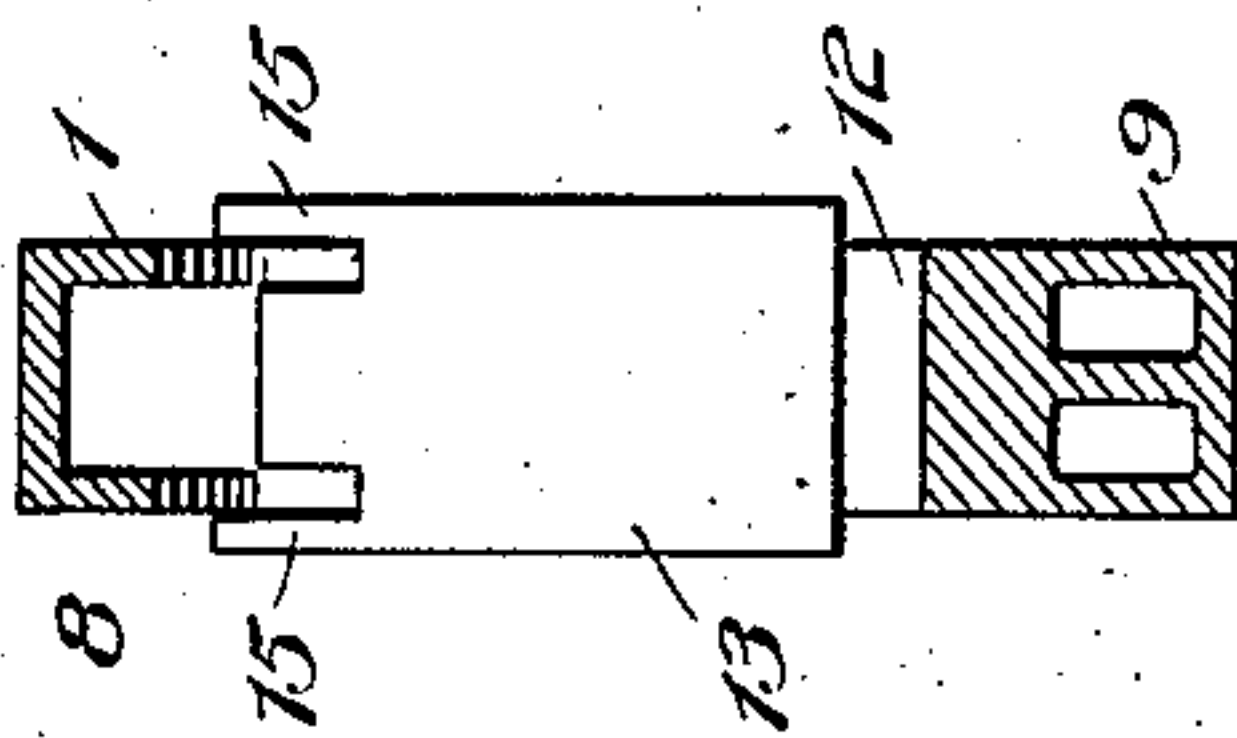
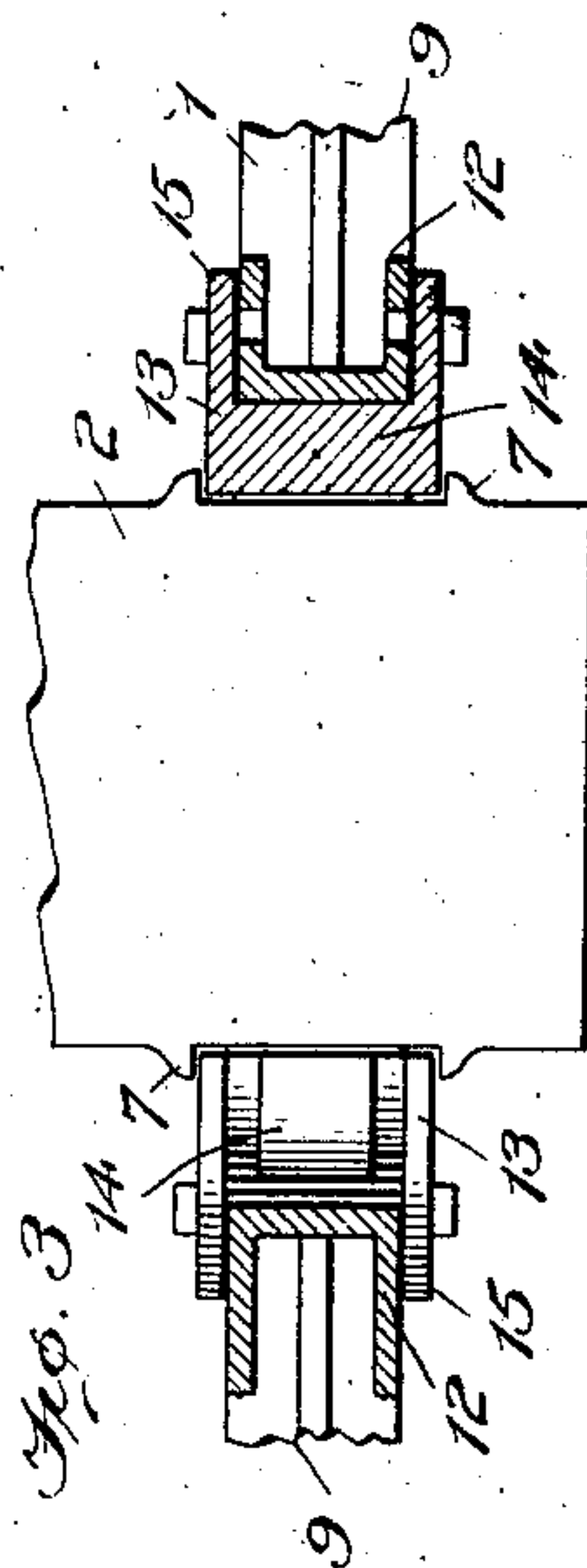


Fig. 3.



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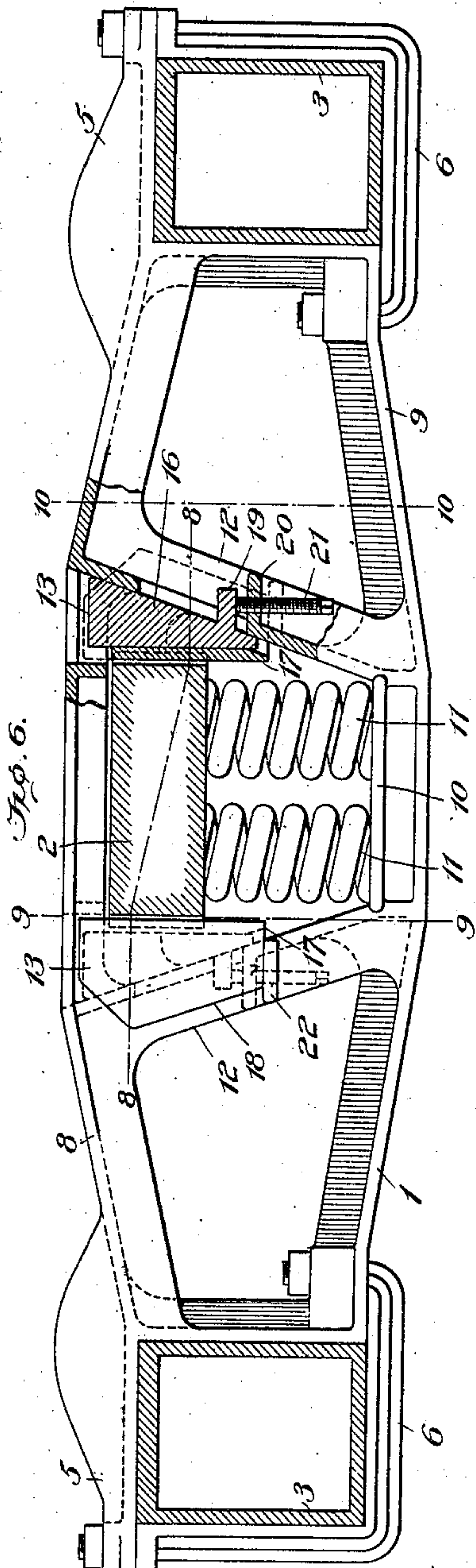
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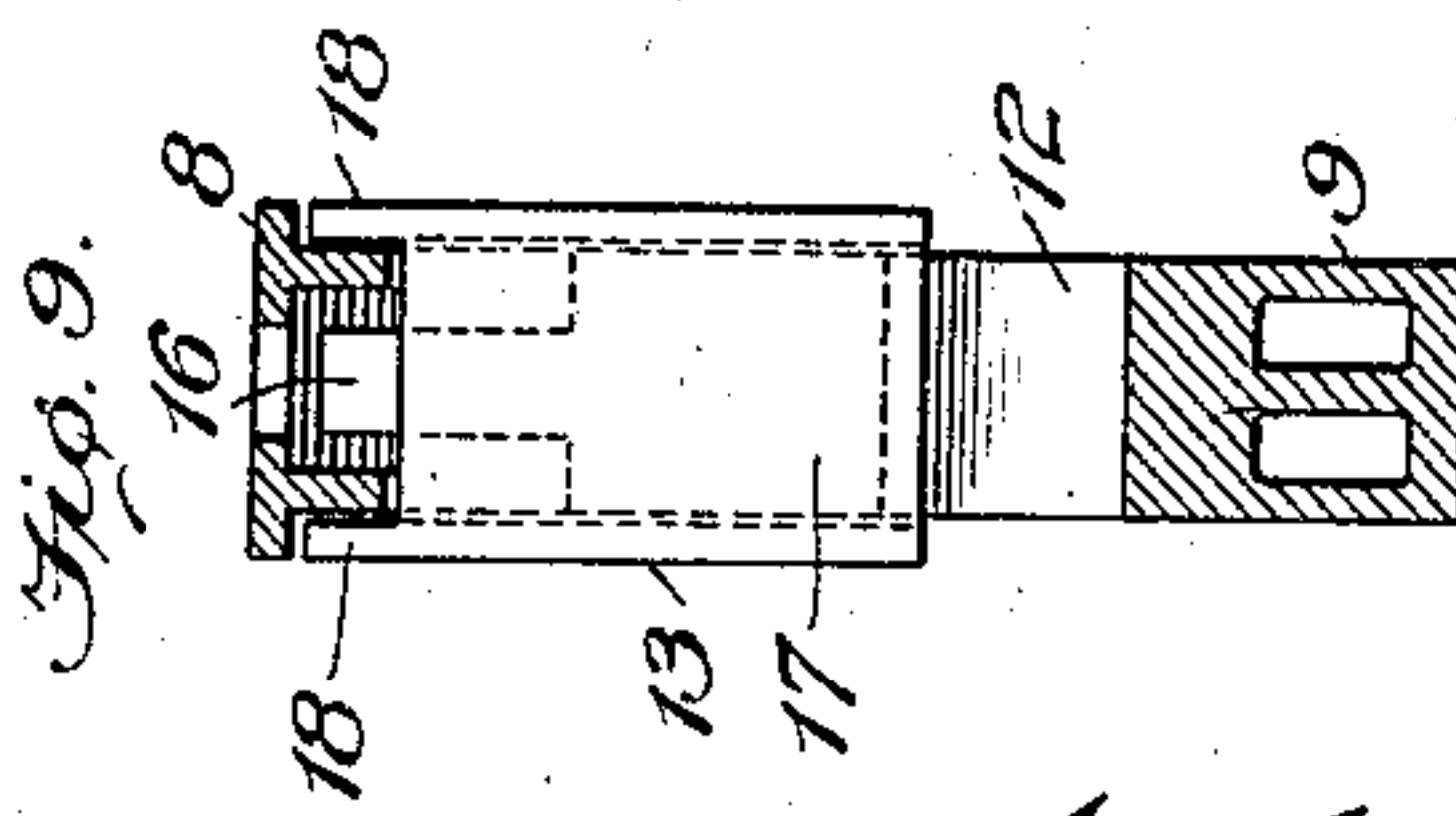
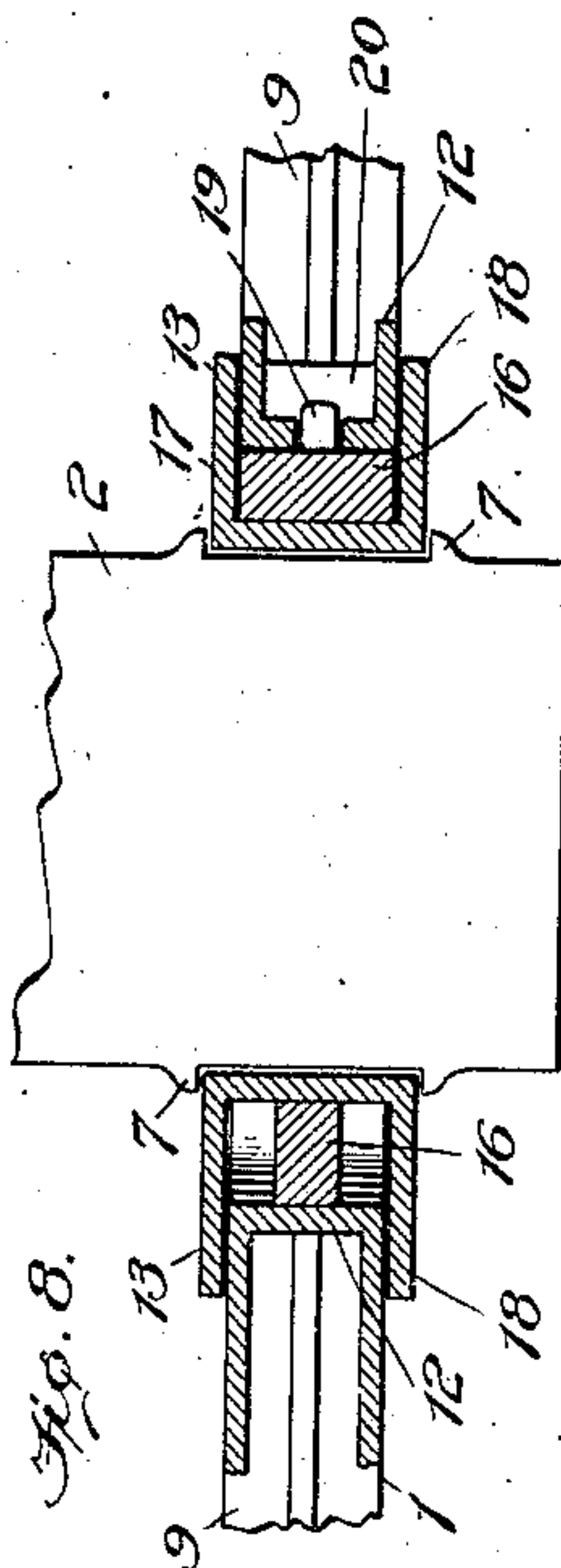
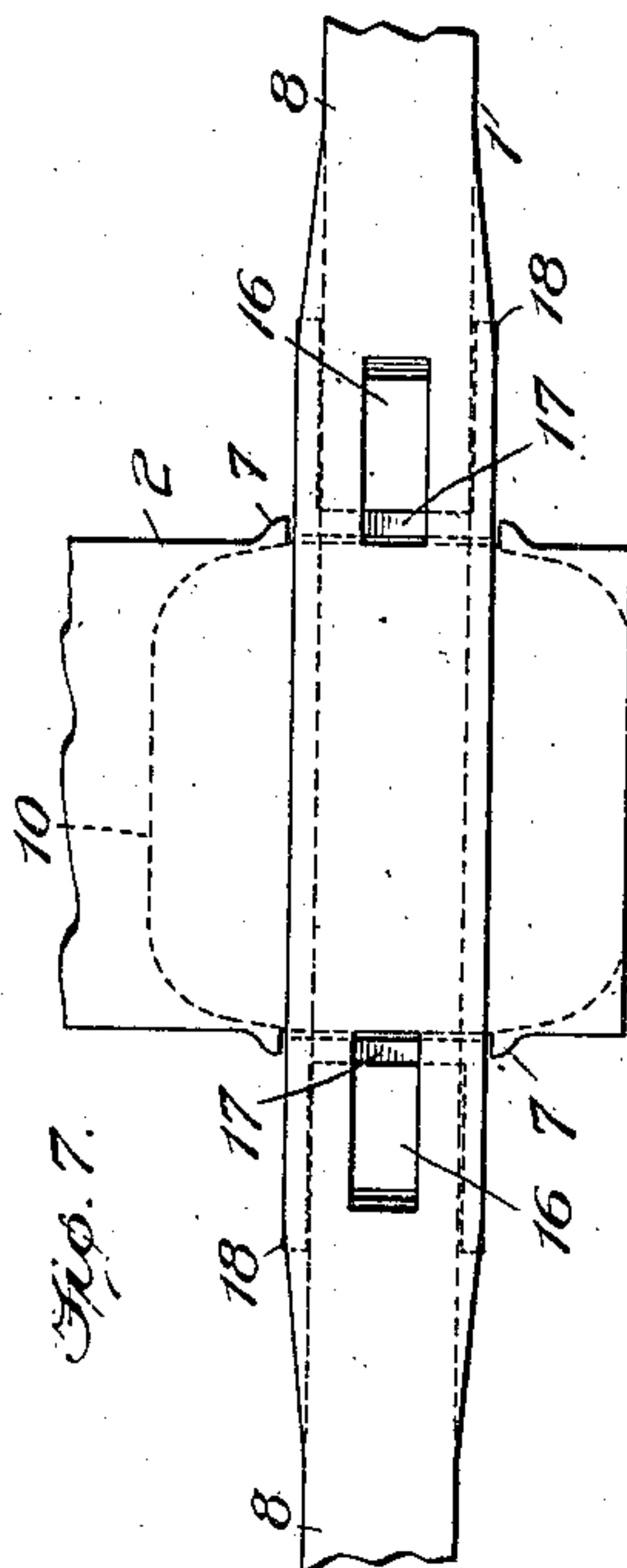
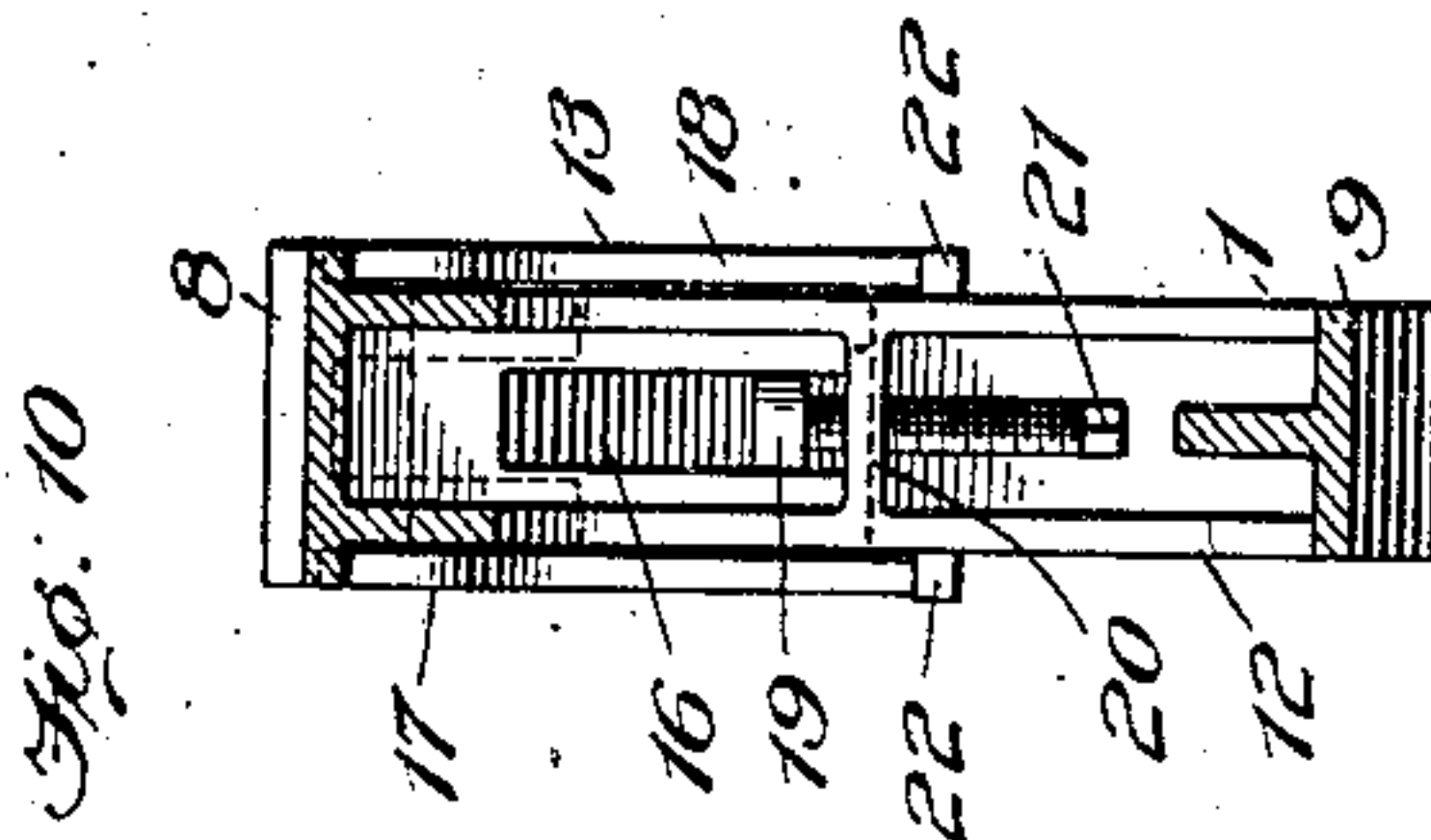
3 SHEETS—SHEET 2.



Witnesses

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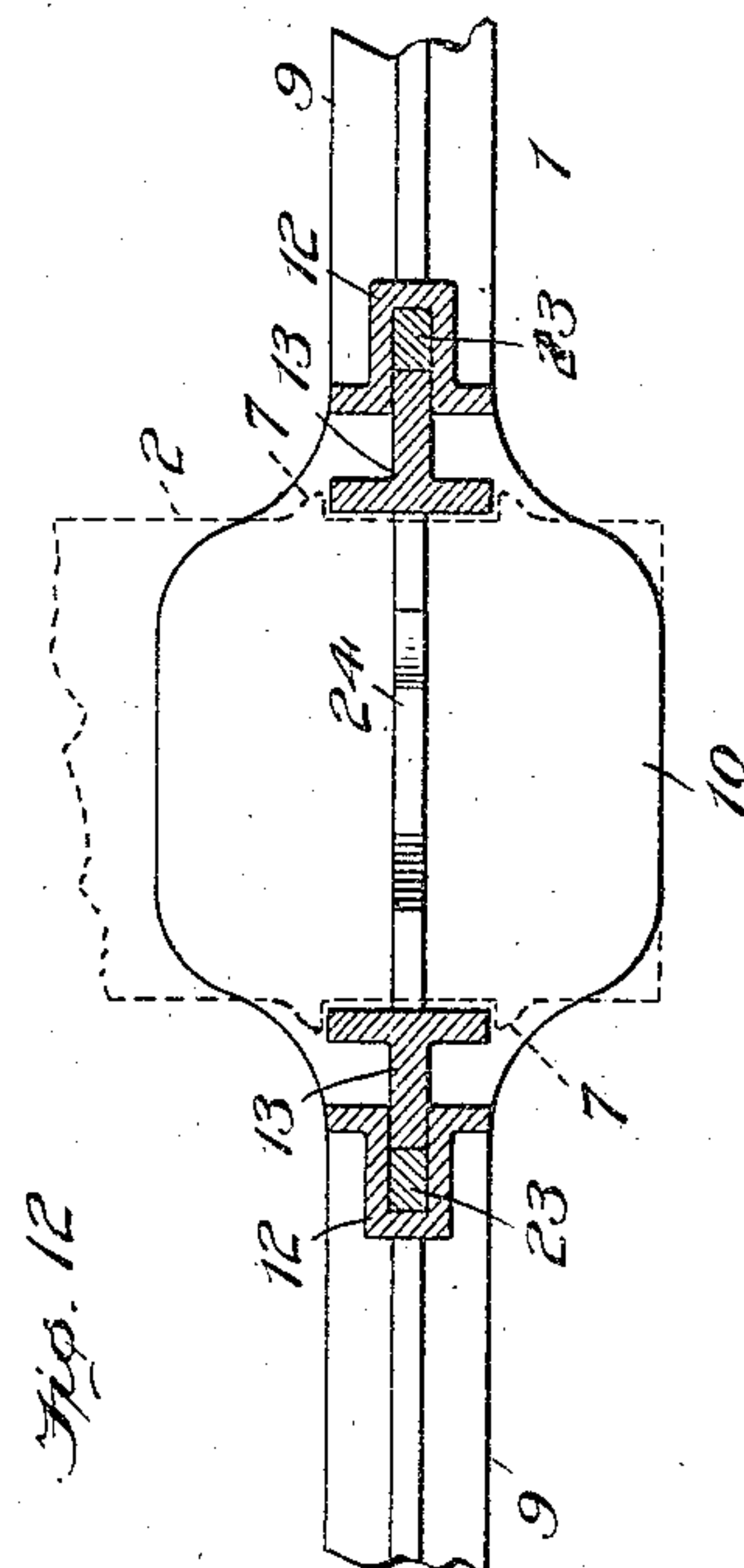
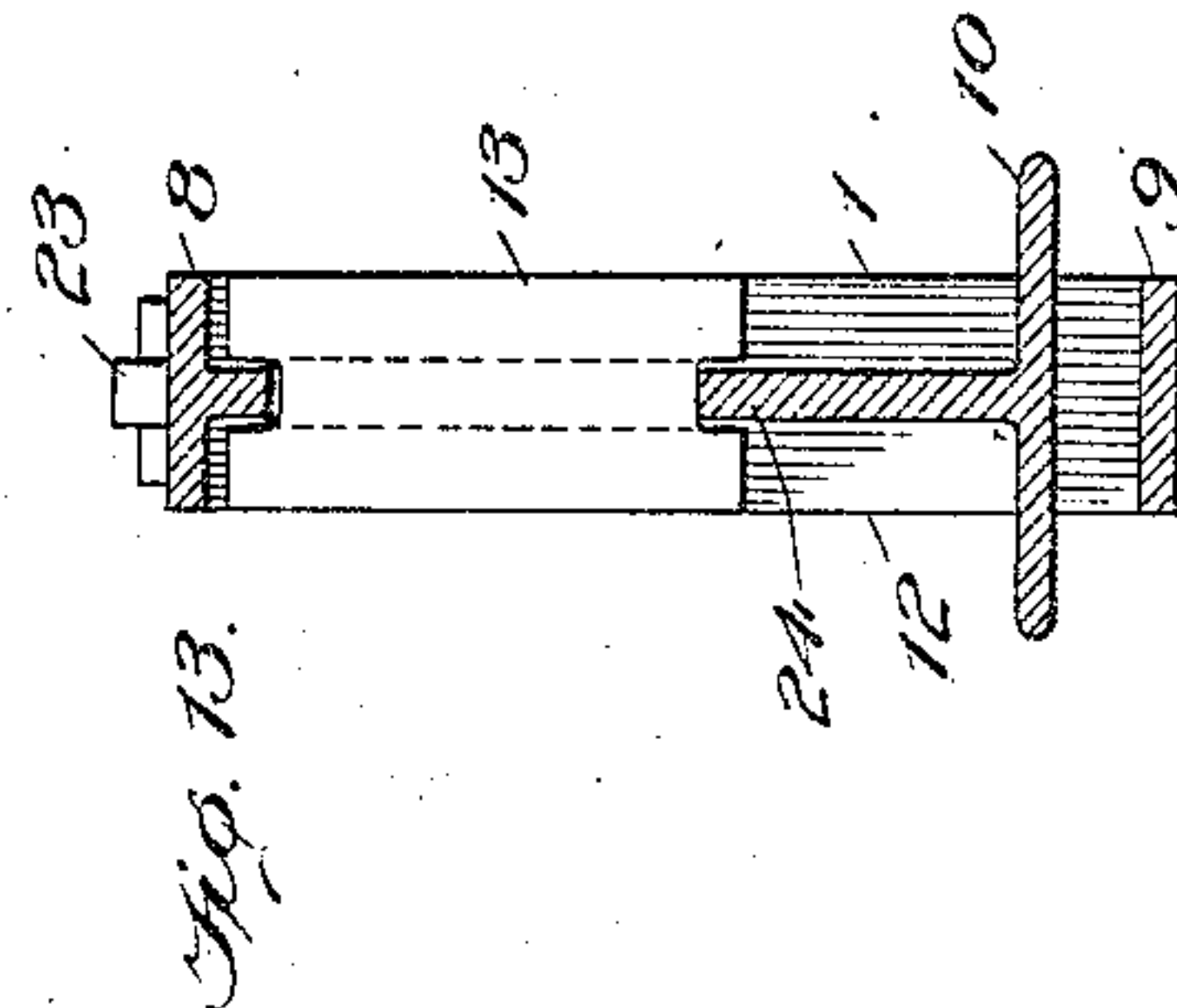
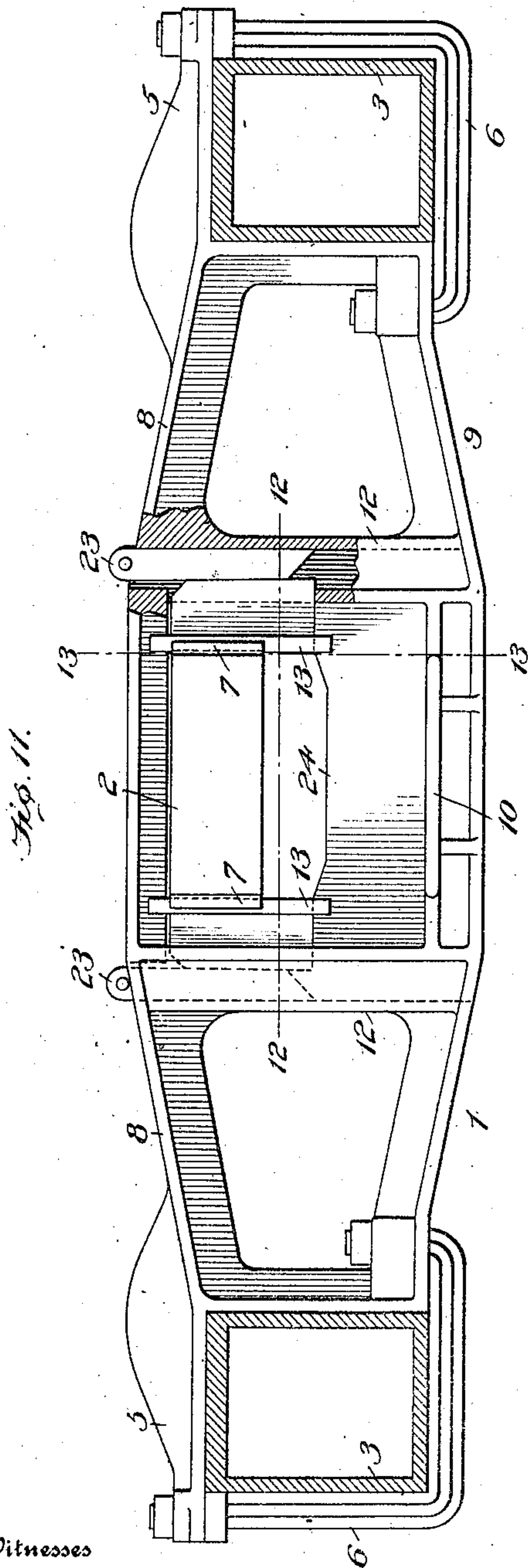
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3 SHEETS—SHEET 3.



Witnesses  
Edwin L. Bradford  
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*[Signature]*

Attorney



# UNITED STATES PATENT OFFICE.

HARRY C. BUHOUP, OF CHICAGO, ILLINOIS.

[CAR-TRUCK.]

No. 891,402.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed December 23, 1907. Serial No. 407,800.

*To all whom it may concern:*

Be it known that I, HARRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Trucks; 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 relates to the construction of trucks for railway cars and has for its principal objects to strengthen, cheapen and simplify the construction of the truck side frames, and to render possible the ready connection of the bolster and side frames in a simple manner.

Generally stated, my invention may be said to reside in a car truck upon the side frames whereof are mounted adjustable column guides which may be separated to permit the introduction of a bolster between them, and which may be afterwards moved towards each other to engage the bolster-guides of the bolster, to thereby connect said side frames and bolster.

In the drawings chosen for the purpose of illustrating my invention, the scope whereof is pointed out in the claims, Figure 1 is a view, partly in side elevation and partly in central section, showing a car truck embodying my invention; Fig. 2 is a plan view of the central portion of the truck shown in Fig. 1; Fig. 3 is a section on the line 3—3, Fig. 1, the bolster, however, being illustrated in plan; Fig. 4 is a vertical transverse section taken on the line 4—4, Fig. 1, showing the relation of the side-frame column to one of the adjustable column-guides; Fig. 5 is a detail perspective view of one of the adjustable column-guides shown in the preceding figures of the drawings; Fig. 6 is a view, partly in side elevation and partly in central section, showing a car truck embodying my invention in a modified form; Fig. 7 is a plan view of the central portion of the truck shown in Fig. 6; Fig. 8 is a section on the line 8—8, Fig. 6, the bolster being shown in plan; Fig. 9 is a vertical transverse section on the line 9—9, Fig. 6; Fig. 10 is a vertical transverse section taken on the line 10—10, Fig. 6; Fig. 11 is a view of a car truck, partly in side elevation and partly in central section, showing a further modification of my invention, the bolster-springs being omitted;

Fig. 12 is a horizontal section taken on the line 12—12, Fig. 11; the bolster being shown in dotted lines; and Fig. 13 is a vertical transverse section on the line 13—13, Fig. 11, showing the relation of the side frame to one of the adjustable column guides.

Like symbols refer to like parts wherever they occur.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, 1 is the truck side frame, 2 the bolster and 3 the journal-boxes. The form of the journal boxes and their manner of attachment to the side-frames are not material features of my invention.

In Fig. 1 of the drawings a construction is illustrated wherein journal-box bolts 4 confine the journal-boxes between upper and lower horizontally extending jaws 5 formed integral with the side-frame 1.

In Figs. 6 and 11 the lower journal-box jaw 5 is omitted from the side-frame, the journal-box being secured to said side-frame by means of a yoke 6 which extends beneath the journal-box and along the outer side thereof, as will be readily understood.

The form of the truck bolster 2 is also immaterial, saving only that it be provided with bolster-guides which are adapted to cooperate with the adjustable column-guides to form an interlocking connection which shall permit vertical movement of the bolster with respect to the side-frames. In the particular applications of my invention illustrated in the drawings, a form of bolster-guide 7 which is in common use is employed.

Each of the truck side frames 1, which may be of cast steel, is preferably formed with a continuous top chord 8 and a continuous bottom chord 9, it being desirable to fashion such chords as flanged members in order to impart stiffness to the side-frames without unduly increasing their weight. At its center the lower chord of each side-frame is preferably provided with an integrally attached spring-seat 10 which forms a support for the bolster springs 11.

Extending between the upper and lower chords, 8 and 9, respectively, of the side frame, and preferably integrally united with both, are columns 12 which guide and support the adjustable column-guides 13 carried thereby, said columns also serving to stiffen the side-frame. Upon each of the columns



12 is mounted a column-guide 13 which is provided with a face that is suitably formed to engage and interlock with the corresponding bolster-guide 7 in a manner permitting vertical movement of the bolster 2 with respect to the side-frame. The column-guides on each side-frame are preferably mounted on their respective columns 12 so that they may be adjusted toward and from each other to vary the width of the bolster opening between them; but if a very wide range of adjustability is not required one column-guide upon each side-frame may be integrally connected to its supporting column.

In the construction shown in Figs. 1 to 5, inclusive of the drawings, the columns 12 diverge from the bottom upwardly to form a central opening in the side-frame which is wider at the top than at the bottom, the adjustable column-guides employed in this construction being formed as wedges 14 having guide-flanges 15 between which the columns 12 pass. When the truck is to be assembled, the column-guides 13 are separated by sliding them upwardly upon the columns 12, the bolster-springs 11 and bolster 2 are then inserted and the column-guides are permitted to move into position against the sides of the bolster, as shown, or other suitable fastening device, being used to secure the said column-guides in adjusted position.

In Figs. 6 to 10, inclusive, the columns 12 of the side-frame also diverge, as in the construction just described, but the column-guides 13 are formed in two parts, a wedge portion 16 and a shoe 17 having guide flanges 18 between which the columns 12 pass. In order to permit the shoes 17 to separate so that the bolster 2 may be inserted between them, the following construction is provided. The columns 12 are slotted on their opposing faces to permit the passage of lugs 19 which are formed on the rear faces of the wedges 16 near the bottom thereof, and at the base of each slot each of the several columns 12 is provided with a lug 20 having threaded engagement with a screw rod 21 the upper end of which bears upon the under side of the lug 19 formed upon the adjacent wedge member 16. Openings are formed in the top chord 8 directly over the wedges 16 in order to permit the latter to be freely raised by the screw-rod 21, and in order to limit the downward movement of the shoes 17 the lateral faces of each column 12 are provided with stops 22 which engage the respective guide flanges 18 of said shoes when the several parts are assembled. When it is desired to assemble the truck, the wedges 16 are elevated by the screw-rods 21, the shoes 17 are separated, the bolster-springs 11 and bolster 2 are inserted, the shoes 17 are moved into engagement with their respective bolster-guides 7, and the screw-rods 21 are then turned to permit the wedges 16 to assume positions in which they

firmly support said shoes against lateral separation.

In Figs. 11 to 13, inclusive, I have shown a construction embodying some of the features of my invention. In this construction the column-guides 13, which are of general tee form, are mounted upon vertically disposed columns 12, said columns being provided with pockets or recesses which permit the said column-guides to be moved toward and from each other. For the purpose of maintaining the column-guides 13 in engagement with the bolster-guides 7, keys, such as 23, may be employed. These keys, which are inserted through apertures formed in the top chord 8 of the side-frame, as will be readily understood, may have a much greater taper than shown in the drawings, if desired, or they may be made of uniform cross-section throughout their length, in which case, of course, the corresponding faces of the column-guides 13 will be made vertical and keys of appropriate thickness will be employed to maintain said column-guides in proper engagement with bolsters of different widths.

For the purpose of further strengthening the side frame shown in Figs. 11, 12 and 13, a vertical web 24, which is cast integral with the spring-seat 10 and columns 12, may be employed. This web, it will be observed, forms a support for the column-guides 13, which are rounded or beveled at their upper inner corners so that they can be readily placed in position when brought over the portion of the web which is of least height.

Heretofore it has been impossible to construct a single side-frame which could be used with the various widths of bolsters in service, each different width of bolster necessitating a side-frame having a particular width bolster opening; but side-frames constructed in accordance with my invention are capable of being used with any of the many widths of bolsters.

While I have shown and described only one side-frame and its bolster connection, it will be understood that the other side of the truck is constructed in the same manner.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a car truck, the combination with a bolster, of side-frames having column-guides which are capable of movement toward and from each other, and means for supporting said column-guides against lateral separation.

2. In a car truck, the combination with a bolster, of side-frames having columns, and column-guides mounted on said columns, said column-guides being adjustable in the direction of length of the said side-frames.

3. In a car truck, the combination with a bolster, of side-frames provided with columns, and column-guides adjustably mounted



ed on some of said columns, the columns of each side-frame being disposed at an angle to each other.

4. In a car truck, the combination with a 5  
bolster, of sideframes provided with columns, the columns of each side-frame having their opposing faces disposed at an angle to each other, and column-guides mounted upon each of said side-frames, the column-guides 10  
on each side-frame being capable of movement toward and from each other.

5. In a car truck, the combination with a bolster, of side-frames each of which is provided with diverging columns, and separable 15  
column-guides supported by said columns.

6. In a car truck, the combination with a bolster, of side frames, and column-guides having wedges whereby they may be adjusted. 20

7. A car truck side-frame having column-guides which are adjustable toward and from each other.

8. A car truck side-frame having a bolster opening the sides of which are formed by col-

umns the opposing faces whereof are disposed 25  
at an angle to each other, said bolster opening being adapted to permit a bolster to project therethrough.

9. A car truck side-frame provided with diverging columns forming an opening into 30  
and through which a bolster is adapted to project.

10. A car truck side-frame having column-guides provided with wedges whereby said column-guides may be adjusted toward and 35  
from each other.

11. A car truck side-frame having a continuous upper chord, a continuous lower chord, columns extending between said chords, and adjustable column-guides car- 40  
ried by said columns.

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

HARRY C. BUHOUP.

Witnesses:

D. B. MASON,  
G. TRUMAN.