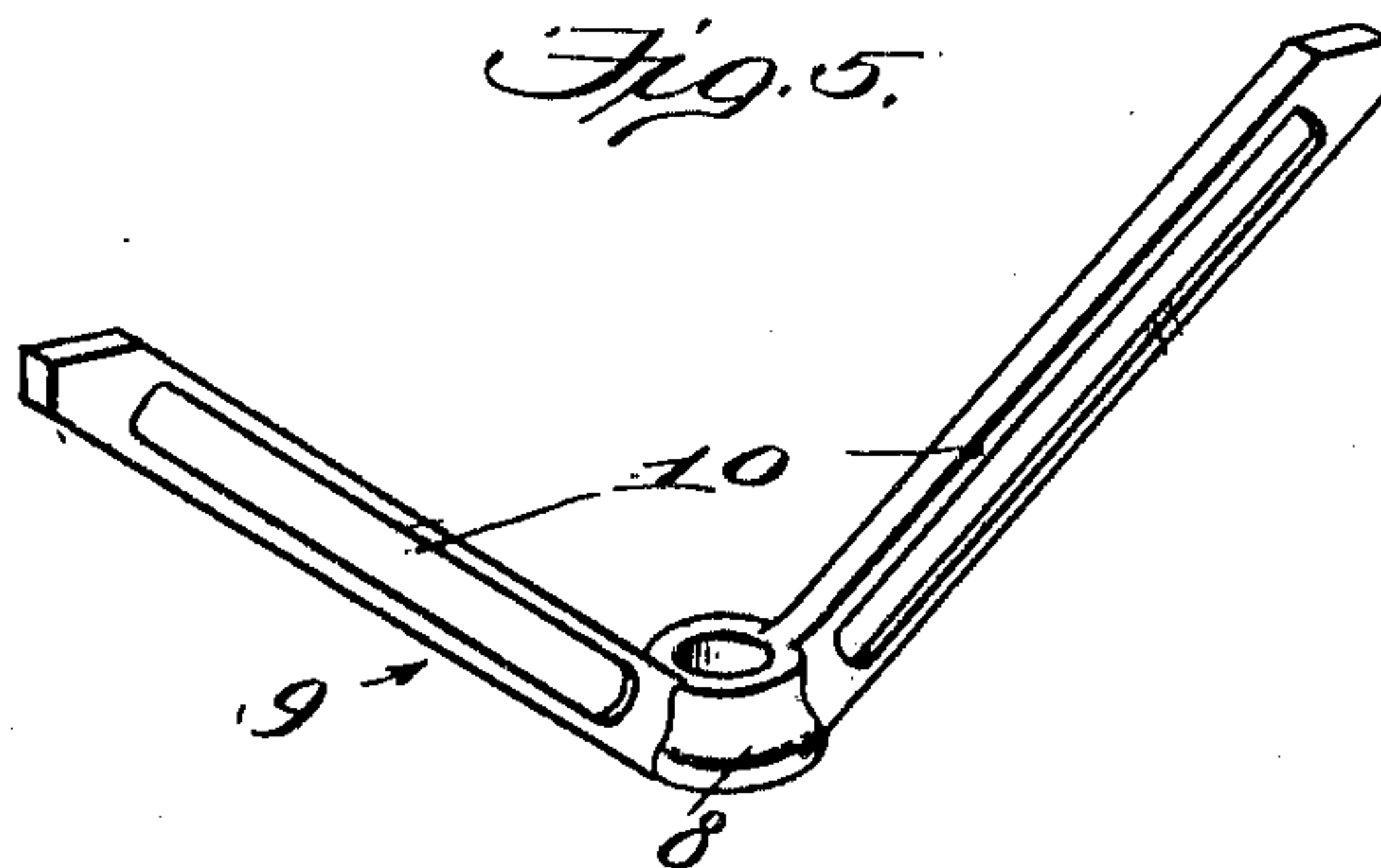
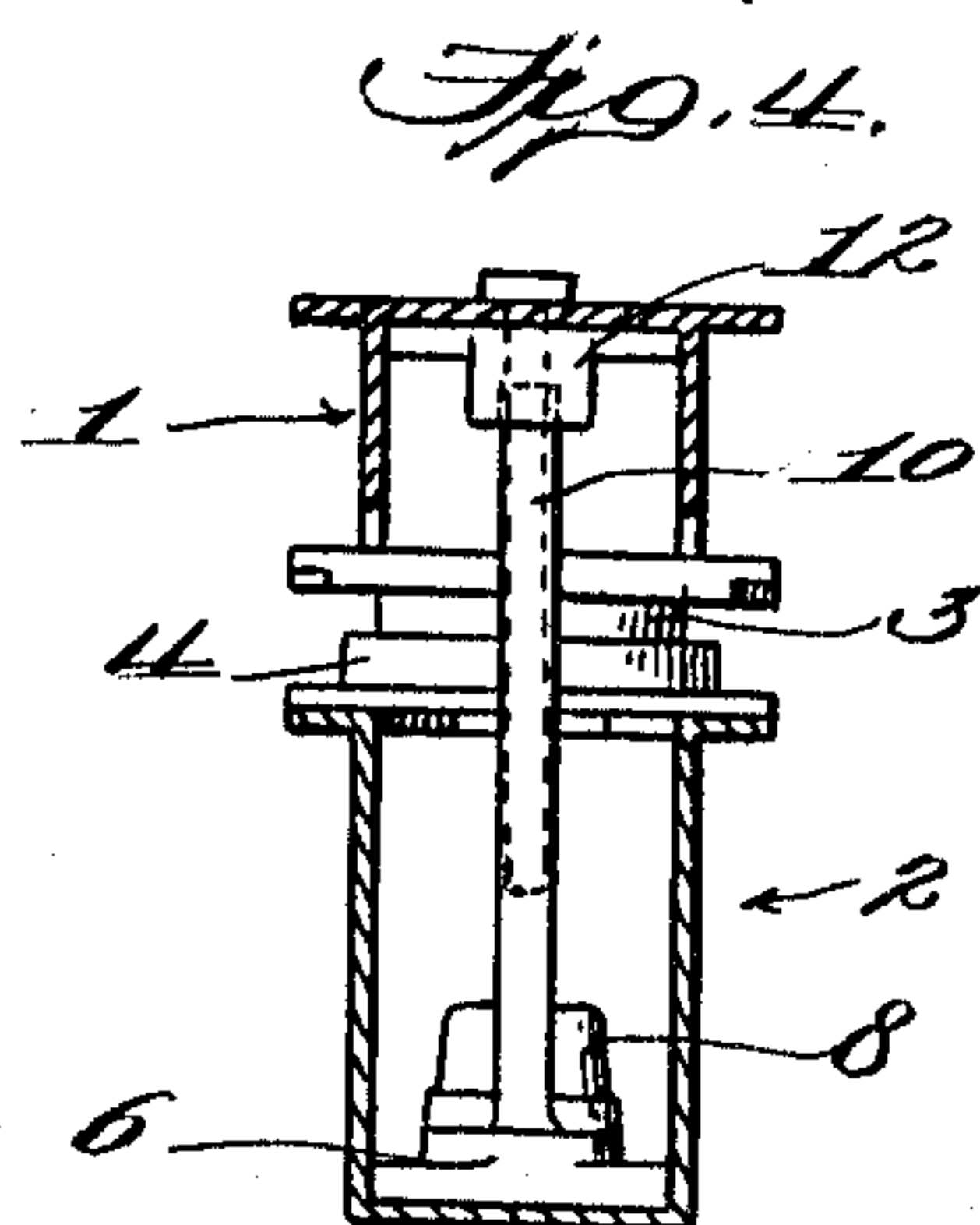
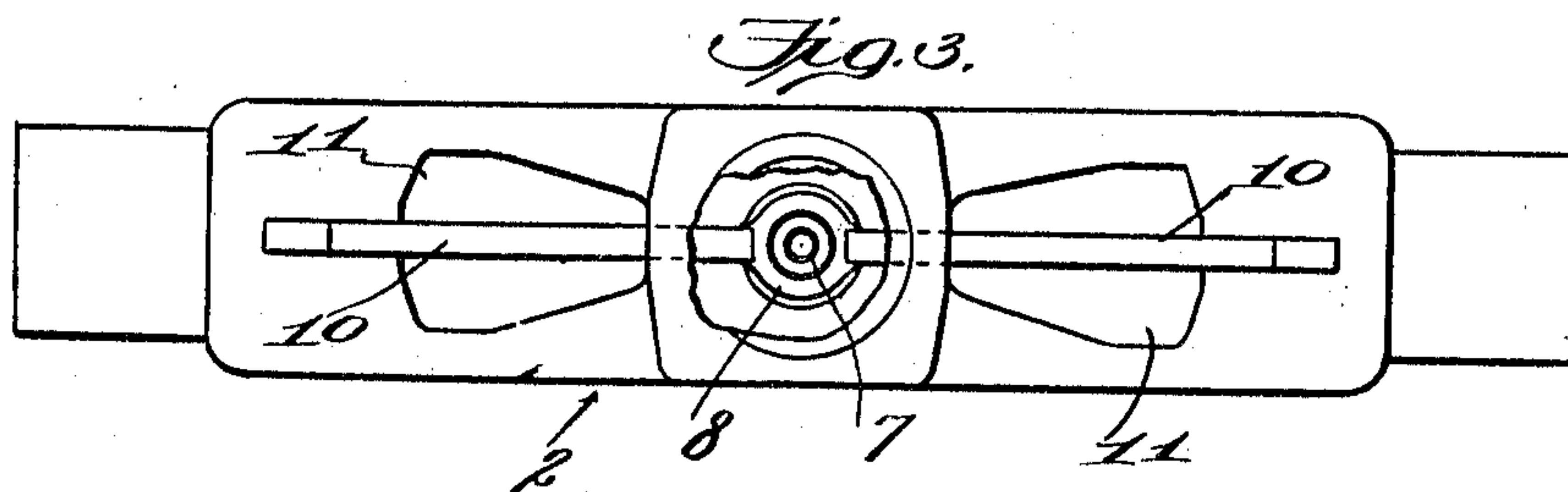
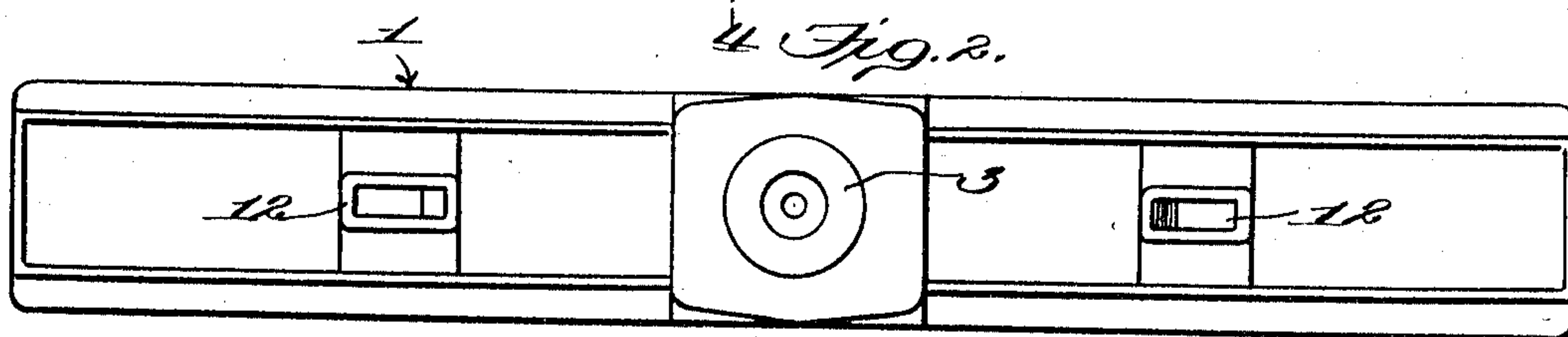
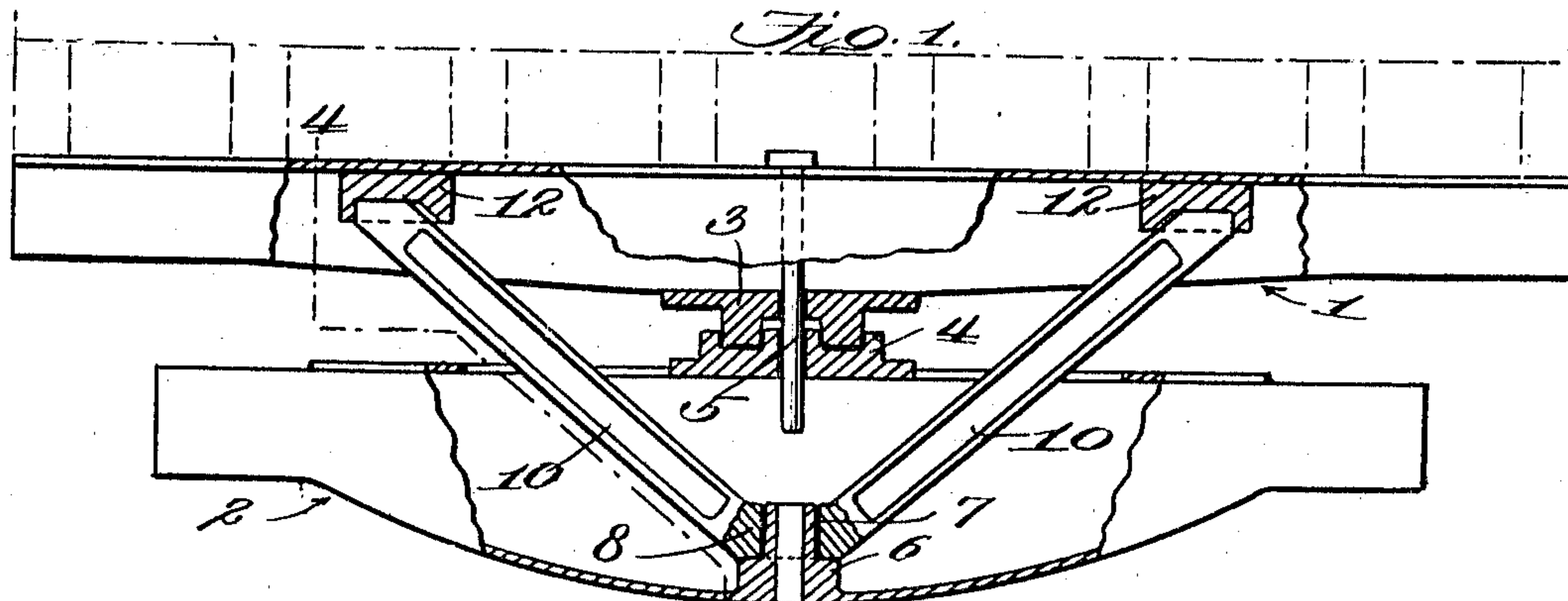


J. R. CARMER.
BOLSTER CONSTRUCTION FOR RAILWAY CARS.
APPLICATION FILED APR. 4, 1910.

970,302.

Patented Sept. 13, 1910.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES R. CARMER, OF WILMINGTON, DELAWARE.

BOLSTER CONSTRUCTION FOR RAILWAY-CARS.

970,302.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed April 4, 1910. Serial No. 553,229.

To all whom it may concern:

Be it known that I, JAMES R. CARMER, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented new and useful Improvements in Bolster Construction for Railway-Cars, of which the following is a specification.

The present invention relates to improvements in bolster constructions for railway cars.

It comprehends, generally, a construction wherein the two bolster members are directly connected by a truss bearing, the arrangement being such that the weight of the car body is sustained centrally of the truck, thereby maintaining the car perfectly balanced and at the same time, permitting free swinging movement of the truck, even though under a very heavy load, when traveling on a curve or tangent. In certain of the known constructions, it has been proposed to utilize a diagonal brace for the purposes specified; this structure is, however, in the forms hitherto employed, extremely faulty by reason of the fact that the pressure exerted upon the lower ends of the braces by the load will occasion excessive friction due to the contact of said ends with each other and with the heel against which they rest, with the result, not only that wear takes place rapidly at such point, but also that the movement of the truck is seriously impeded, while the continued torsional strain upon the braces will quickly bend or twist the latter out of shape.

It is the essential object of this invention to produce a diagonal truss bearing so constructed that while all of the advantages of such a bearing are retained, the objectionable friction above referred to is obviated to a great extent, and the entire device is materially strengthened.

A structural embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a front elevation of the improved truss applied to a bolster construction, the latter being shown partly in section. Fig. 2 is a bottom plan view of the car bolster. Fig. 3 is a top plan view of the truck bolster, with the truss applied thereto. Fig. 4 is a section taken on the line 4-4 of Fig. 1. Fig. 5 is a perspective view of the truss.

In said drawings, the upper, or car-car-

ried, bolster and the lower, or truck-carried, bolster are indicated, respectively, in a general manner, by the numerals 1 and 2. Both bolsters are hollow, and the presented walls thereof are provided with suitable interengaged centrally-located bearings 3 and 4 formed with registering apertures through which the connecting king-bolt 5 extends. The lower end of said bolt extends toward a bearing member or heel 6 arranged centrally of the floor of the truck bolster, said heel and floor being preferably of integral construction. The upper portion of the heel is reduced, as shown, thereby constituting a neck or step which is indicated in Figs. 1 and 3 by the numeral 7. Upon this step there is loosely or pivotally fitted the eye portion 8 of the truss 9, the preferred form of the latter being shown in Fig. 5. The two arms 10 of the truss are arranged at an angle to each other, and are integrally connected at their lower ends by the eye, said eye thus forming the apex of the angle. In effect, therefore, the truss comprises a pair of oppositely inclined or diagonal members of integral construction, having an aperture at their point of intersection.

While the specific form of truss illustrated in Fig. 5 is preferred, no limitation thereto is contemplated or intended, provided that the truss present the features of construction above enumerated.

The roof of the truck bolster 2 is formed with a pair of alining longitudinal slots which are substantially sector-shaped, their smaller ends confronting each other, so as to provide for the play of the truss arms therein during the turning movements of the truck. The said arms project through these slots into the interior of the car bolster and toward the ends thereof, their upper ends being removably received in suitable open pockets 12 rigidly connected in any preferred manner to the under face of the roof of the bolster, the major portion of the floor of the latter being open or cut away. This arrangement admits, as will be apparent, of the car body being jacked up when repairs are necessary, thereby disengaging the ends of the truss arms from said pockets, so that the truck may be run out from beneath the car.

The employment of the angle truss, above described, has the obvious effect of sustaining the car body centrally of the truck by supporting the car bolster adjacent its ends,

and, in consequence, of perfectly balancing the car, this being due to the symmetrical construction and arrangement of the truss arms. The integral formation of the truss 5 affords it maximum strength, and, further, necessitates a synchronous movement of the truss arms. This construction, coupled with the pivotal fit of the truss eye upon the cylindrical step 7 of the heel 6, insures a free 10 swinging movement of the truck. Finally, the strain upon the truss arms is relieved by their integral connection, and the strain and wear upon the king-bolt and any parts associated therewith are likewise diminished.

15 I claim as my invention:

1. The combination, with the operatively-associated superposed car and truck bolsters; of a truss connecting said bolsters and comprising a pair of diagonally-arranged members and an eye integrally connecting the 20 convergent ends thereof; a pivot secured to the truck bolster and extending through said eye; and retaining devices secured to the car bolster toward the ends thereof and engaged 25 with the divergent ends of said members, whereby the said car bolster ends are supported against sagging.

2. The combination, with the operatively-associated superposed car and truck bolsters; 30 of an angle truss of integral construction connecting said bolsters, said truss being pivoted at the meeting ends of its arms to the floor of the truck bolster and having the divergent ends of said arms connected with 35 the roof of the car bolster toward the ends

thereof, whereby said car bolster ends are supported against sagging.

3. The combination, with the operatively-associated superposed car and truck bolsters, the latter bolster being provided with a centrally-located up-standing pivot; of an angle 40 truss of integral construction connecting said bolsters, said truss having an aperture at its apex through which said pivot loosely extends, and having the divergent ends of 45 its arms removably engaged with the car bolster toward the ends of the latter, whereby said car bolster is supported at its ends against sagging and may be jacked up to disengage said truss arm ends therefrom. 50

4. The combination, with the operatively-associated superposed car and truck bolsters, the latter of which has a slotted roof; of an angle truss connecting said bolsters, said 55 truss being pivoted at its apex to the floor of the truck bolster and having its arms extending through the slots in the roof thereof toward the ends of the car bolster; and open pockets secured to said car bolster for the 60 reception of the divergent ends of said arms, whereby said car bolster may be jacked up to withdraw said pockets from engagement with said arm ends.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES R. CARMER.

Witnesses:

ALTON C. PYLE,
W. C. DRAPER.